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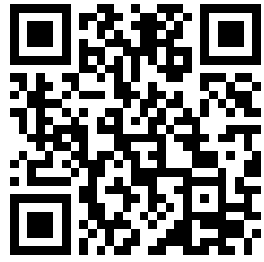
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THE LANCET.

74 763

A Journal of British and Foreign Medicine, Surgery, Obstetrics, Physiology, Chemistry, Pharmacology, Public Health, and News.

IN TWO VOLUMES ANNUALLY.

VOL. II. FOR 1897.

SEVENTY-FIFTH YEAR.

EDITED BY THE PROPRIETORS:

THOMAS H. WAKLEY, F.R.C.S. ENG.,

AND

THOMAS WAKLEY, JUN., L.R.C.P. LOND.

LONDON:

PRINTED AND PUBLISHED BY THE REGISTERED PROPRIETORS, AT THE OFFICES OF "THE LANCET," No. 423, STRAND, AND Nos. 1 & 2, BEDFORD STREET, STRAND.

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END OF THE SECOND VOLUME FOR 1897.

PRINTED and PUBLISHED by the REGISTERED PROPRIETORS at No. 423, Strand, and Nos. 1 and 2, Bedford-street, Strand, in the Parish of St. Martin-in-the-Fields, Westminster, in the County of London.—Saturday, Jan. 1st, 1898.

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The Croonian Lectures

ON

THE MEANS BY WHICH THE TEMPERATURE OF THE BODY IS MAINTAINED IN HEALTH AND DISEASE.

Delivered before the Royal College of Physicians of London, on June 15th, 17th, 24th, and 29th,

BY W. HALE WHITE, M.D., F.R.C.P. LOND.,
PHYSICIAN TO, AND LECTURER ON PHARMACOLOGY AND THERAPEUTICS AT, GUY'S HOSPITAL.

LECTURE III.[1]

Delivered on June 24th.

MR. PRESIDENT AND GENTLEMEN,—We now pass on to the second method which has been used in the endeavour to find out whether or not in fever the production of heat is increased—namely, calorimetry. The difficulty of the subject is very great, for although many experimenters have worked at it, if any reliable results have been published they are few, and I can well understand this, for I have been working at calorimetry for the last six years and have not yet satisfied myself that a trustworthy instrument has been made.

The calorimeter, which has hitherto been most frequently employed for measuring the heat given off by animals, is the well-known water calorimeter. Such an instrument was described by Crawford in 1788; and after reading the account of his experiments I doubt whether any of his successors have taken more elaborate precautions to ensure the greatest attainable accuracy. Other experimenters who have used water calorimeters are Dulong, Despretz, Senator, Wood, Desplats, Evans, Hare, Ott, Carter, Reichert, and Kemp. One of the most recent patterns of water calorimeter is that used by Reichert. It consists of two concentric boxes of sheet metal, which are fastened together so that there is a space of about one and a half inches between them filled with water. In the inner box the animal is placed, there being a suitable opening through both boxes for this purpose; the opening has an air-tight door. The inner box has leading into it two tubes—one for the entrance of air and the other for its exit. The outer box has a hole in it, through which passes a stirrer to stir the water between the two metal boxes, and another in which is fixed a thermometer to take the temperature of the water. The whole apparatus is surrounded by a thick packing of wool, feathers, or some other non-conductor, so that it is protected as far as possible from the effects of variations in the external temperature. The instrument is standardised before it is used for experiments on animals. This is done by burning in it enough of either hydrogen or alcohol to raise the temperature of the water 1°. It is known how many calories of heat are set free in the combustion of this quantity of hydrogen or alcohol, and therefore it is known that this number of calories is always given off to the instrument when the temperature of the water in it rises 1°. The temperature of the air entering and that of the air leaving the calorimeter is taken, and so any heat given off by the animal and expended in warming the air is estimated. Lastly, the moisture given off by the animal is determined, so that the heat expended in volatilising its aqueous vapour can easily be calculated. All water calorimeters are unreliable, chiefly because, firstly, as I have often found, even with the most careful mixing, it is impossible to get a large mass of water to a uniform temperature, and a slight error as to temperature means an enormous error in the result of the experiment. Secondly, water calorimeters act very slowly. For instance, in some of Senator's experiments at the end of an hour the temperature of the water had only risen 0·2° C., and after this the further rise was trifling. Many observers have not used water calorimeters. In 1780 Lavoisier and Laplace used an ice calorimeter, and Dr. Marcet showed one not long ago at the Physiological Society, but I cannot criticise it as he has not yet published an account of it.

In 1849 Scharling used a form of air calorimeter. Vogel and Hirn each employed instruments very like Scharling's. Rosenthal described an air calorimeter in 1878 and Richet published an account of an air calorimeter in 1885. This was employed by Langlois in 1887, and Mosso used a very similar instrument in 1890. Sapalski and Klebs also used an air calorimeter. The following objections can be urged against all these calorimeters: 1. The calorimeters which have been previously standardised are faulty, for the method employed to standardise is open to considerable sources of error. Thus Richet in standardising his got figures varying from 66 to 91 from which to strike an average, and Langlois obtained figures varying from 59 to 74; and I think, as I shall be able to show, that even where the figures are apparently more satisfactory they are not really of value if the instrument is to be used for animals. 2. Many conditions may not be the same during the standardising as during subsequent experiments. 3. All non-differential calorimeters are open to serious sources of error from the varying influence of the external air in abstracting heat from the instrument. Some experimenters have tried to allow for these and other errors (e.g., that due to variations of barometric pressure), but the correction is a very large percentage of the whole amount of heat produced. 4. In many calorimeters the ventilation is quite inadequate. 5. In some, as Richet's, if for any period during an experiment the production of heat decreases, this decrease is not measured by the instrument. In 1886 D'Arsonval gave an account of several calorimeters, including his differential air calorimeter, which presents evident advantages over those described up to this date. My own apparatus embodies D'Arsonval's principle, but chiefly differs from his differential instrument in that there is a source of heat in both chambers of the calorimeter. Since the publication of this paper by D'Arsonval, and since I began to work at calorimetry, other calorimeters, for the most part modifications of D'Arsonval's differential instrument, have been described by Rosenthal, Ansiaux, and Rubner and his pupils. Calorimeters such as those described by Liebermeister and Leyden, in which a part only of the body is inserted, are obviously unreliable, and so are the attempts made by Liebermeister, Kernig, and Hattwig to estimate the amount of heat produced by a man by immersing him in a water bath.

As differential air calorimeters have been most used, and have appeared to most observers to hold out the greatest promise of utility, I will describe in detail the one I have made. In making it I have derived much help from my friends, Dr. Haldane, Dr. Washbourn, and Mr. F. G. Hopkins. It consists of several parts (see Fig. 1).

The copper chambers.—These are two precisely similar cylindrical chambers made of thin sheet-copper and provided with convex roofs. The inside height of each is 18 in., and the inside diameter is the same. Each chamber has two walls (see diagram—A, A′ and a, a′), between which is an air space 1½ in. across and closed at the bottom by copper. Each chamber is by means of flanges turned out from its outer wall, A, a, firmly screwed on to a strong wooden table which stands on four wooden legs that are fixed to the floor of the laboratory. These legs are about 5 ft. high, so that it is easy with a little stooping to pass under them and open and shut the floor of the chambers. The floor of each chamber is a thick wooden disc (B, b) covered on its upper surface with copper. It is made of several layers of hard, well-seasoned wood, so arranged that it does not warp under variations of temperature and moisture. These two floors are similar in all respects. Each disc has on its upper surface and near its circumference a deep trough (C, c) cut in it all round. The inner wall A′ a′ of the copper chambers is prolonged down into the trough. The trough C, c, in each disc is filled with resin ointment, in which, when the disc is pushed up as far as it will go, the prolongation downwards of the inner wall of the copper chamber is embedded, the chamber being thus closed air-tight. Resin ointment was chosen after many trials of various substances as being the best for rendering the chamber air-tight. Many varieties of screws were tried for keeping the discs in position, but we found that if a deep trough with plenty of resin ointment is used the chambers would keep shut absolutely air-tight for an indefinite time if the discs were kept in place against the wooden casing of the chambers by a simple button. It is very necessary that the parts of the instrument should be so arranged that the bottom of the trough does not, when the disc is pushed home, touch the prolongation of the copper

[1] Lectures I. and II. were published in THE LANCET of June 19th and 26th, 1897, respectively.

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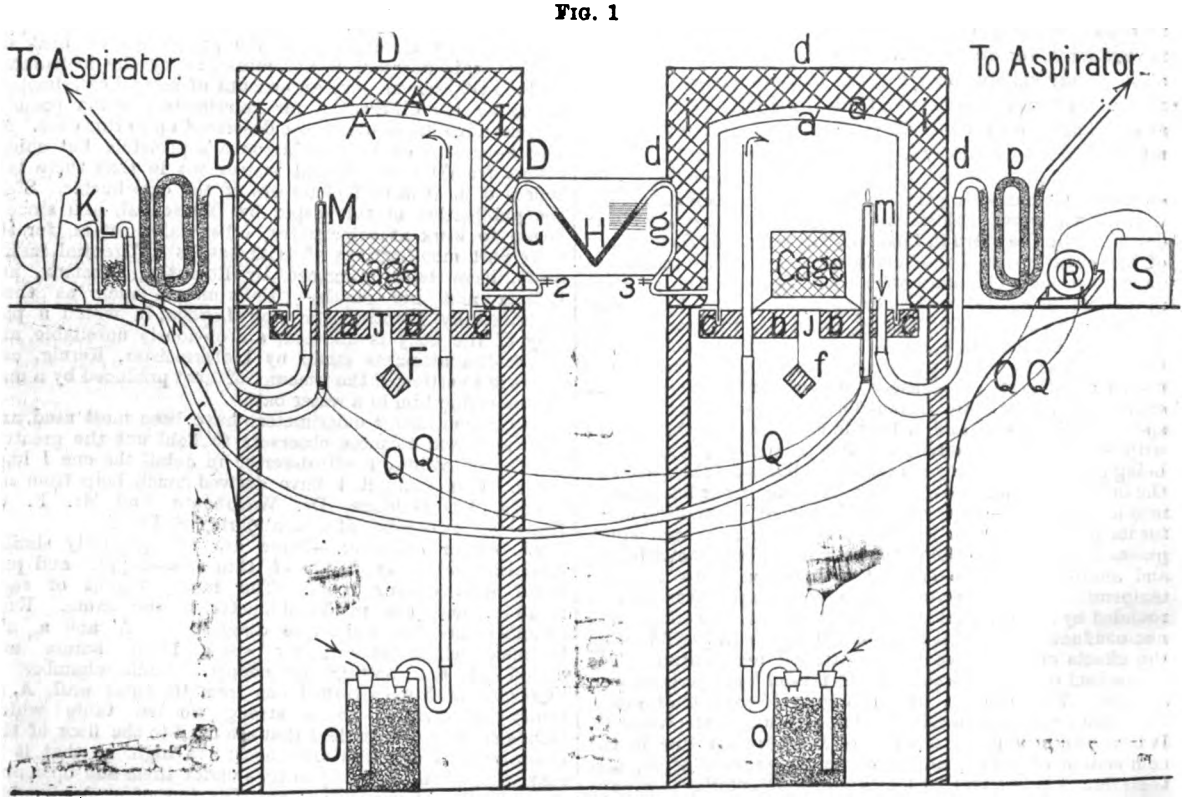
into the trough, and that the disc itself presses at the wooden table, and not against the copper air-tight space, for as the copper of which this is made is thin any pressure on it is liable to make the air-tight joints of the air-space between the outer and inner copper walls of each chamber give, and if they are not absolutely air-tight the instrument is quite useless. Leading off from each air-space is an indiarubber tube, G, g. The two rubber tubes are connected with the two limbs of a manometer H.

The calorimeter is used in the following way. In one copper chamber the animal, the heat production of which we require to know, is placed. In the other hydrogen is burnt, both chambers being shut. The heat given off from the animal warms its chamber, and thus increases the pressure of the air in the air-space between the two copper walls of its chamber. This would lead to movement of the fluid in the manometer but that the heat given off by burning the hydrogen increases at the same time the pressure in the space between the walls of the other chamber. This latter increase of pressure tends to make the fluid move in the other direction. If the fluid in the manometer is stationary the amount of heat given off by the animal is, other things being equal, equal to that produced by the burning of the hydrogen. During an experiment the manometer is kept stationary by turning up or down the hydrogen flame. The amount of hydrogen burnt is estimated, and knowing the heat of combustion of hydrogen we can calculate the calories produced by the quantity used in the experiment, which equal those given off by the animal.

The casing.—The knowledge that fluctuations in the temperature and barometric pressure are a most important source of error in many air calorimeters led to our adopting the compensating principle of D'Arsonval, for it is clear that variations of temperature and barometric pressure in the air of the laboratory would affect both air spaces equally and, therefore, not move the fluid in the manometer. We found, however, that temporary draughts, &c., were apt to act somewhat unequally on the two chambers, and thus cause a certain amount of error, which might in extreme cases amount to as much as 0·5 calories per hour. After very many trials we discovered that this difficulty could be obviated by covering the chambers with three layers of felt each an inch thick. When this was done the level of the fluid in the manometer remained practically stationary unless some source of heat were introduced into one of the chambers. The felt is in the plate marked I, i, and is of the kind used for refrigerators. It is all covered in with the wood casing D, d. There is a small window in the floor of each chamber. It is closed air-tight by a piece of glass, J, j. The object of these windows is that the experimenters may see that the hydrogen flame is burning properly and that the animal is comfortable. During an experiment when the window is not in use it is covered with a thick pad of felt, F, f. We have sometimes used a variety of slag wool instead of felt—it is quite as efficient a non-conductor.

The manometer.—After many trials of different fluids and slopes of tubes we found the best manometer to be one (H in the diagram) in which the limbs are sloped at an angle of 45° with the horizon. The bore of the tube is one tenth of an inch in diameter. It is filled with oil of erigeron, as the specific gravity of that is very low and it moves readily. Behind one limb of the manometer is a ruled scale. The lines are one-thirtieth of an inch apart and each is numbered. The scale is so placed that the lines on it are parallel with the upper surface of the fluid in the manometer. At the beginning of an experiment a note is made of the line which corresponds to the upper level of the fluid, and by turning the hydrogen up or down the fluid is kept on this line during the whole experiment. The openings 2, 3, which are kept clamped, on the manometer tube are useful; for if at any time the fluid in one limb has from any cause got much higher than that in the other, opening the clamps immediately brings the fluid in the two limbs to the same level.

FIG. 1



The hydrogen.—The hydrogen is produced in a Kipp's apparatus, K, and is dried in the bottle L. It will be noticed that there is a hydrogen burner (M, m) in each copper chamber. A great advantage of this is that a control experiment can be done at any time, for if both copper chambers are shut air-tight, and hydrogen is burnt in each, one or other of the two flames being kept at such a height that the fluid in the manometer remains stationary, and it is then found that in the same time the same amount of hydrogen has been burnt in each chamber, it is evident that the instrument is not leaking. Some examples of this mode of control will be given immediately. Another reason for having a hydrogen burner in each copper chamber is that it is important for the fittings of the two chambers to be

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similar in all respects, so that those of one may not absorb more heat than those of the other. Therefore, also, there is in the hydrogen chamber a wire cage exactly similar to that used for the animal in the other chamber. The cages have a floor to catch the urine, and feet to raise them from the floor of the chamber and so prevent loss of heat by direct conduction from the animal to the floor of the chamber. The indiarubber tubes which conduct the hydrogen to the burners each pass under a screw clamp N, n, by means of which the size of the hydrogen flame can be very accurately adjusted. The amount of hydrogen burnt is estimated by determining the amount of water produced. This is effected by passing a current of dry air into the calorimeter and estimating the moisture present in the outgoing air. The air entering the chambers is dried by means of Woulff's bottles (O, o), charged with pumice soaked in sulphuric acid. The air leaving the chambers is dried by being passed through the tubes P, p, which are filled with pumice soaked in sulphuric acid. Before the amount of moisture produced by burning the hydrogen in its chamber can be estimated the air in the chamber must be perfectly dry. To ensure this the chamber is shut up air-tight, the hydrogen not being lit, and then air which has been passed through a pumice and sulphuric acid bottle (O, o) is drawn through the chamber until a tube containing pumice and sulphuric acid placed in the outgoing air-current no longer increases in weight. Six experiments of this nature showed that in order to completely empty all the moist air out of the chamber, and to replace it by dry air, 300 litres of dry air are required to be passed through. The following are the results of one of these experiments. The gains in weight of the pumice and sulphuric acid in the outgoing air-current after successive portions of dry air had been passed into the chamber are given.

Gain in weight after 92 litres of dry air were passed through	0·52 grms.
Further gain after 107 additional litres of dry air were passed through	0·17 ,,
,, ,, 90 ,, ,, ...	0·05 ,,
,, ,, 87 ,, ,, ...	0·00 ,,
,, ,, 90 ,, ,, ...	0·00 ,,

Thus when 92 + 107 + 90 litres had been drawn through the air in the chamber was perfectly dry.

It is of great importance that the inner walls and floor of the chamber should present no hygroscopic surface. For this reason the floor is covered with copper. The employment of a painted surface gave endless trouble in the case of the first calorimeter in which the hydrogen method was employed.

Having dried the closed chamber the next thing is to light the hydrogen in it. This is effected by means of an electric spark. The wires Q, Q, proceeding from, and returning to, an induction coil R, connected with an accumulator S, are so arranged that a spark can be made to pass across the orifice of each hydrogen burner. The air in the chamber being dry a carefully weighed sulphuric acid and pumice tube is placed in the path of the outgoing current of air at P or p, as the case may be, according to which hydrogen burner is being used. The hydrogen is turned on; by passing the spark it is lit; and the aspiration through the chamber which had been stopped to put in the newly weighed bottle is started. The moisture is absorbed by the tube at P or p, as the case may be. In an experiment with an animal, at the time that the hydrogen is lit, the animal in its cage is put in the other copper chamber, which is then shut up, and air is drawn through it to provide for the creature's respiration. In order to make the conditions similar air is drawn through the two chambers at an equal rate, which must be sufficiently rapid to prevent condensation of moisture. During an experiment the hydrogen is kept by means of the screw clamp N or n at such a height that the fluid in the manometer remains stationary. When the experiment has lasted as long as is desired the hydrogen is turned out and the animal is taken out of its chamber. But as the air in the hydrogen chamber now contains moisture, and as we have already shown that to get rid of all the moisture in the chamber 300 litres of previously dried air must be drawn through it, this is done after the hydrogen is turned out. Then the increase in the weight of the tube at P or p will give the amount of moisture produced by the burning hydrogen. Suppose, for example, this were 4 grammes, then $\frac{1}{9}$ grammes = the weight of hydrogen burnt; and as the combustion of 1 gramme of hydrogen produces 34·2 kilogramme calories, $\frac{4}{9} \times 34{\cdot}2$ equals the number of calories produced by the combustion of hydrogen in this experiment. This heat, however, is not all given up to the calorimeter, since the moisture produced is not allowed to condense inside the chamber. The heat of condensation of this moisture is $9 \times 0{\cdot}59 = 5{\cdot}3$ calories for each gramme of hydrogen. Hence the heat given up to the calorimeter is $34{\cdot}2 - 5{\cdot}3 = 28{\cdot}9$ calories per gramme of hydrogen burnt, and this, in the instance we are supposing, multiplied by $\frac{4}{9}$ equals the heat given off by the animal. A calorie is taken to be the amount of heat necessary to raise one kilogramme of water through one degree Centigrade.

For turning out and lighting the hydrogen we found it convenient to have a spring clamp, T, t, on the hydrogen tubes, for then the hydrogen could be lit or turned out instantly; the screw clamp, N, n, is only used for adjusting the flame. It is absolutely necessary to show that the chamber and all the connexions are air-tight after the floor is pushed up at the beginning of an experiment. This is done by closing the inlet tubes to the bottles, O, o, and the hydrogen tubes, and then drawing a little air out of the apparatus and thus producing a negative pressure within, and then ascertaining—by means of the meter or a water manometer if the aspirating vat is used—whether this negative pressure is maintained. It will be noticed that the tube by which air enters the copper chamber is carried up to within an inch of the roof, while the orifice of the outlet tube is nearly flush with the floor. The object of this is to distribute the heat from the flame, and secure that by reflection from the roof the dry air entering the chamber shall be broken up as thoroughly as possible and so mixed with the moisture produced by the combustion of the hydrogen. A point we investigated was how much of the heat given off either by the burning hydrogen or by the animal was lost to the calorimeter, because it warmed the air drawn through the chambers. To determine this accurate thermometers were placed in the ingoing and outgoing currents of air, close to the copper chamber, by being inserted in an air-tight opening in the indiarubber tubes. It was found that after the animal had been in place, or the hydrogen had been burning an hour, the temperature of the outgoing air was never more than 0·4° C. higher than that of the ingoing. Now, usually 300 litres—that is to say, 400 grammes—of air were drawn through in an hour. The specific heat of air is 0·23; therefore, to warm 400 grammes of air through 0·4° C. would take $0{\cdot}4 \times 0{\cdot}23 \times 0{\cdot}4 = 0{\cdot}037$ calories. But as a large rabbit gives off about nine calories an hour the heat given off by the animal or hydrogen flame, and not felt by the calorimeter because it is expended in warming the air, is only 0·4 per cent. of the total amount produced by the animal. As this amount is so small and is the same on the two sides of the calorimeter it may safely be neglected.

The instrument I have described to you is not quite the same as that which Dr. Haldane, Dr. Washbourn, and I described in the *Journal of Physiology*, but the principle is the same. The calorimeter of which I have now given an account is one that I made with Mr. Hopkins. It possesses several minor advantages over the instrument described in the *Journal of Physiology*. Its wooden casing is better than a casing of American cloth. The absence of pressure on the copper by the floor is very important, and it saves much trouble to dispense with the old arrangement for screwing the floor into position. It is much easier to ensure an air-tight space by having the window in the floor rather than in the walls of the air-tight space, and it is a great advantage to have the chambers so high from the ground that it is easy to pass under them. In the old instrument both chambers were fixed to one table, which made the whole very cumbersome and unwieldy, but as in the present instrument the manometer board is only on hooks the chambers with their casings are easily separated, the pumice tubes, the Kipp's apparatus, the induction coil, and the accumulator can easily be removed from the flaps on which they stand and the flaps let down. The long legs take off, and so the instrument can be easily moved. Lastly, we used a tube of pumice and sulphuric acid instead of a Woulff's bottle in the outgoing current, as that is easier to weigh.

Now I will bring forward some experiments to show that the instrument is correct in principle. In seven experiments both chambers were shut and shown to be air-tight. It was not necessary to empty them of the moist air they contained, for as both had been left open to the outside air before being shut the air in each contained the same amount of moisture. A sulphuric acid and pumice bottle was put in the path of the entering air and a weighed sulphuric acid and pumice

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tube was placed in the path of the air leaving each chamber. The hydrogen was simultaneously lit in both chambers, and the flame was kept in each at such a height that the fluid in the manometer was stationary. Aspiration at an equal rate through each chamber was carried on, and at the end of a given time, usually about an hour, both hydrogen flames were simultaneously turned out. Aspiration was then continued through both the chambers till 300 litres of air had been drawn through each after the hydrogen was turned out. By this means the equal amounts of moisture originally in each chamber and all the water produced by the burning hydrogen in each were absorbed. But as the fluid in the manometer had been kept stationary, or as nearly so as possible, it is clear that if the instrument is efficient equal amounts of hydrogen should have been burnt—that is to say, equal amounts of water should have been produced. Therefore, if the increase of weight of the sulphuric acid and pumice bottles attached to the exit tubes of each chamber was identical the instrument was working satisfactorily. The following table shows the results of these seven experiments (see Table XVIII.).

TABLE XVIII.

Grammes of water produced by hydrogen burning in west chamber.	Grammes of water produced by hydrogen burning in east chamber.	Error per cent.	No. of experiment.
3·98	3·83	3·7	1
4·4	4·32	1·8	2
3·1	3·15	1·5	3
2·04	2·01	1·9	4
1·52	1·52	—	5
3·27	3·37	2·9	6
3·0	3·06	1·9	7

West in excess three times—viz., 3·7, 1·8, and 1·9 per cent.
East in excess three times—viz., 1·5, 2·9, and 1·9 per cent.
West and east equal once.
Average error that the west is in excess 0·17 per cent.

It will be seen that on no occasion was the error greater than 3·7 per cent., and in five out of the seven it was under 2 per cent. The great advantage, as I have already insisted, of these controls in which hydrogen is burnt in both chambers is that as each chamber is fitted with a hydrogen burner a control can be done at any time in the course of a series of animal experiments. As far as I know, no large number of observations on animals have been carried out with such a calorimeter as I have described. I have only done, with the help of some friends, a few on rabbits and guinea-pigs. While the animal is being weighed and its temperature being taken the chamber in which the hydrogen is going to be burnt should be shut up air-tight, and then 300 litres of air, which has previously passed through a pumice and sulphuric acid bottle, should be drawn through it. When this is done the air in it will contain no moisture. A weighed sulphuric acid and pumice tube is then put in the outgoing current of air from the hydrogen chamber. The cage for the animal is then taken out of its chamber, the animal is put in it, and the cage is replaced. The chamber is then shut up, the hydrogen in the other chamber is lit simultaneously, and the flame is kept at such a height that the level of the fluid in the manometer is stationary. An equal quantity of air is drawn through each chamber, care being taken that enough is drawn through to prevent a deposit of moisture in the chamber. At any given moment the animal may be taken out, but at the same moment the hydrogen must be turned out, the aspiration is continued through the hydrogen chamber for 300 litres, so that all the moisture produced by burning the hydrogen is collected in the exit sulphuric acid and pumice bottle. The latter is then weighed, and from the increase of weight we can easily calculate the number of calories given off by the burning hydrogen to the calorimeter, which must, as the manometer has been kept steady, equal the number of calories given off by the animal to the calorimeter. The following are the details of an actual experiment:—

	Grms.
Weight of sulphuric acid and pumice tube at exit of hydrogen chamber before experiment	3608·34
Weight of sulphuric acid and pumice tube at exit of hydrogen chamber after experiment	3607·92
Water produced by hydrogen flame =	1·58

$$\text{Hydrogen burnt} = \frac{1{\cdot}58}{9} = 0{\cdot}176 \text{ grammes.}$$

Calories produced in the chamber = 28·9 × 0·176 = 5·08 grammes.

The time the hydrogen was burning—that is to say, the time the animal was in its chamber of the calorimeter—was exactly one hour, so that the creature gave up to the calorimeter 5·08 calories per hour. The following are the results of four experiments made upon different days upon the same animal, a healthy brown male rabbit weighing 3080 grammes. The rectal temperature was always taken before and after the experiment (see Table XIX.).

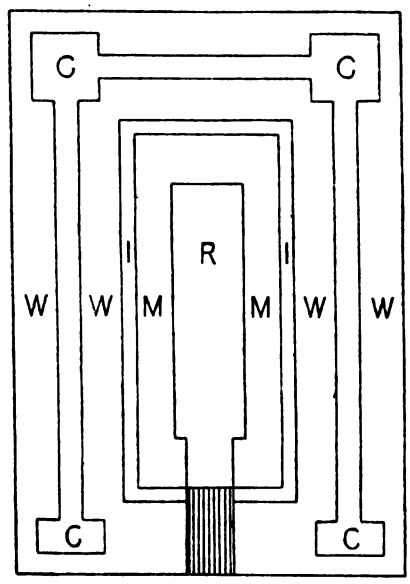
TABLE XIX.

Calories given off per hour by the rabbit to the calorimeter.	Number of experiment.
7·37	2
6·89	4
6·64	1
5·08	3

Now these figures do not represent all the heat given off by the animal. I have already shown that the heat expended in warming the air drawn through the apparatus may be neglected, but that which is employed in volatilising the aqueous vapour given off from the animal is not included. The quantity of this aqueous vapour is determined by means of a pumice and sulphuric acid tube in the path of the air coming from the exit of animal chamber. The heat required to evaporate a gramme of water at the temperature of the rabbit is a known constant (0·57 calorie), so that the heat expended by the animal in volatilising aqueous vapour can easily be obtained by multiplying 0·57 by the number of grammes of moisture given off by the animal. Thus when two guinea-pigs were in the calorimeter they gave off in an hour 1·74 grammes of moisture and $1{\cdot}74 \times 0{\cdot}57 = 0{\cdot}99$, so that they gave off 0·99 calories by evaporation, which turned out to be nearly a fourth of what they gave off by radiation and conduction.

Rubner and Nebelthau have worked with very similar instruments to that which I have described. I show you a diagram of a section of Rubner's calorimeter (see Fig. 2).

FIG. 2.



It consists of a copper chamber R, in which the animal is placed; the chamber is closed by a non-conducting air-tight door. The copper chamber R is surrounded by an air space M, M, just as the copper chamber in the calorimeter I first described is surrounded by an air space; the air in this space, M, M, is warmed by the animal, and as it expands it moves the dial of a registering apparatus, with which M, M, is connected by a tube. (This is not shown in the diagram.) I, I, is an air space closed on all sides by copper. The object of it is to surround the calorimeter with a good non-conductor, such as air. The whole is surrounded by a vessel containing a quantity of water, W, W, W. This also is

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to prevent the variations of external temperature from influencing the calorimeter. This mass of water is automatically kept at a constant temperature, for there is a gas flame under it, and if it gets too warm more cold water automatically flows in from a tap and replaces some warm water which automatically flows away. I need not bother you with the details of this arrangement. The registering apparatus is under the influence of variations in barometric pressure, and therefore there is a very irregularly shaped copper chamber, C, C, C, in the water W, W, W. This copper chamber is connected with a separate registering apparatus of its own and shows variations in the barometric pressure, and these are allowed for when calculating the heat given off by the animal by observing the registering apparatus connected with the air space, M, M. Of course, the animal chamber is ventilated. The apparatus is standardised by placing a spirally coiled tube in the animal chamber, letting warm water flow through the coil for a given time, and at the same time observing the movement of the registering dial connected with the air space around the animal chamber. The temperature of the water is taken before it enters and after it leaves the coil, and from these data it is easy to determine that the loss of so many calories of heat by the water corresponds to the movement of the hand of the registering dial through a certain distance. The ventilation of the animal chamber goes on during the experimental standardising of the instrument just as it would if an animal were in it, and the loss of heat from the water in the coil to the air drawn through is allowed for by taking the temperature of the air as it enters and as it leaves the chamber. It is impossible to take the temperature of the water immediately before it enters the coil or immediately it leaves it, for the tubes leading to and from the coil must pass through the water W, W, W, the air space I, and the air space M, before they can reach the coil. By preliminary experiments allowance is made for this. Now it appears to me that the disadvantages of this instrument are:—1. If there is any error in the original standardising all the results obtained with the instrument are wrong. 2. As allowances are made in the original standardising there may well be some errors in it. 3. Any variation in the temperature of the water jacket will seriously affect the results, and it is a very difficult matter to keep a large mass of water at a constant temperature for a long time. 4. In every experiment all the conditions ought to be the same as during the standardising, but with this instrument this is impossible. 5. In every experiment allowance has to be made for variations in the barometric pressure. It will hardly be disputed that an instrument which avoids all these possible fallacies is more likely to be accurate than one which does not, and therefore I cannot help thinking that the differential instrument I first described can be made to give more reliable results. Further, in general, the differential method is superior to that of primary standardising.

Nebelthau has worked with an instrument which is in principle the same as Rubner's, as it is an air calorimeter, and is standardised before it is used for an animal. It differs chiefly in that the chamber which shows the allowance to be made for variations of barometric pressure is quite detached from the animal chamber. We saw when I was describing the calorimeter I have made that if we want to calculate the whole heat produced by the animal we must include that which does not affect the calorimeter, but is employed in volatilising the water given off in the animal's breath. It is therefore necessary always to estimate the amount of aqueous vapour given off by the animal. This Nebelthau does with a hair hygrometer. I cannot help thinking that this is not so reliable a method as that of absorbing the water with sulphuric acid and pumice, and inasmuch as the heat lost in this way may be a fourth of that produced by the animal it is clear that it is of the utmost importance to estimate it accurately. Nebelthau has made a series of most laborious experiments. He has considered the influence of season, of time of day, of rapidity of ventilation, of moisture in the air, and of the size of the animal upon the heat production; I cannot for want of time stop now to consider the results he obtained, but must pass on to his experiments on fever. He used rabbits and produced fever in them by the injection of cultures of swine erysipelas. He estimated the heat production before and after the injection, and from the results obtained drew conclusions as to the production of heat in fever. He rightly points out the great importance of having the air entering the animal chamber of the same temperature during all the experiments on the same animal, for if it is not some of the variations in the creature's heat production may be due to the variation of the temperature of the air around it. If the air is not of the same temperature Nebelthau following Rubner makes a correction of 2·5 per cent. of the total heat lost for each degree of variation in the temperature. It is clear that if in any fever the rise of temperature were slight, the correction for variations of external temperature might bear a considerable ratio to the alteration in the loss of production of heat due to the fever, and, further, although no doubt the figure 2·5 per cent. was obtained from very careful experiments it is in the present state of our knowledge only an assumption that the figure is the same for all members of the same species. For these reasons I cannot help thinking that it would be better instead of making this correction to ensure that the temperature of the air, and, if possible, its humidity, were the same, at least during all experiments on the same animal. Nebelthau's results are far too voluminous to give in full, but I show you two of them:—

TABLE XX.

Number of animal.	Weight.	Day.	Temperature of rabbit.	Calories. Loss of heat by evaporation.	Loss by radiation and conduction.	Total.	Warmth lost per kilogramme per hour.	Per cent.
	Grms.		Deg. C.					
4	1703	1	39·0	17·75	91·93	109·68	2 683	100
	1625	2	41·7	19·17	109·29	128·46	3·294	122
	1545	3	40·5	18·08	113·64	131 72	3 544	132
7	2327	1	38·6	17·33	106·62	122 95	2·201	100
	2229	2	40·7	20·62	104·32	124·94	2 335	103
	2139	3	40·7	22·52	118·96	141·48	2·756	125

The first point to which he properly directs attention is that no air calorimeter really represents how much heat the animal produces. Air calorimeters are merely large air thermometers which are carefully protected from outside influences, so that any expansion of the air in them must be due to heat given off from the animal, and the amount of this heat lost by the animal is known either because the instrument has been previously standardised in calories by cooling water or because it can be estimated in calories from the hydrogen burnt in the opposite chamber. To obtain in calories the increased heat produced by the fevered animal in a given time (say, an hour) we must know its weight, the rise of its temperature, and its specific heat. (Nebelthau puts this at 0 8, which is, I think, a little too low; 0 95 is probably more accurate.) For instance, to take the first experiment I have quoted, the mean weight of the animal between the first and second days was the mean between 1703 grammes, its weight on the first day, and 1625 grammes, its weight on the second day; that is, 1·664 kilogrammes. Now, the temperature of an animal of a weight of 1·664 kilogrammes and of a specific heat of 0·95 rose 2·7°; therefore, if the loss of heat were unaltered, it must, to have raised its temperature 2 7°, have increased its heat production by 1·664 + 2 7 + 0 95 = 4·268 calories; but we see from the table that from the first to the second day its heat loss to the instrument was increased from 2·683 to 3·294—that is, 0·611 calories per kilogramme of its body weight per hour. Therefore, its heat production must have increased not only the 4·268 calories necessary to raise its temperature from 39·0° to 41·7°, but also enough to compensate for an increased loss in calories equal to 0 611 kilogramme per hour.

Those of you who have followed me so far may be inclined to say that while it appears there are many sources of error to be guarded against if a calorimeter which has been previously standardised is used, yet if the differential calorimeter with hydrogen in one chamber and the animal in another be used, if the temperature and humidity of the air during all experiments on the same animal are the same, and if an accurate means of estimating moisture be employed, we ought to be able to find out from such a calorimeter whether or not the heat production is increased. I am afraid, however, that I fear I shall show you that the difficulties of the subject are not yet

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ended. The first difficulty we can see by looking at the table I have shown you of some figures obtained by Nebelthau. You will see that in the case of the first animal on the third day it was 80 grammes lighter and its temperature was 1·2° lower than on the second day. Either of these facts would constitute a reason why the creature should give off fewer calories on the third day than the second, but, as a matter of fact, it gave off more. Again, the second animal was on the third day 90 grammes lighter than on the second, and its temperature was the same on both days, yet when it was lighter it gave out considerably more calories than when it was heavier. Now all the instrument does is that it estimates the heat loss by radiation and conduction, because a mass of cooling water in losing a certain number of calories moved the indicator of the recording instrument through a given distance. But the water was losing heat uniformly, and it would be impossible for a mass of water which had decreased in weight and the temperature of which had fallen to give off more calories by radiation and conduction than it did before its weight had diminished or its temperature had fallen. Clearly, therefore, we are not comparing similar processes when we infer the amount of loss of heat from an animal because it moves the registering apparatus of an instrument standardised by cooling water. We cannot tell whether the first animal, for instance, was on the third day, by having altered its power of radiation and conduction, losing heat more rapidly, the production being the same, or losing it still more rapidly with an increased production. The falling temperature at first sight looks like a diminished production, but on the other hand, the increased radiating power points in the direction of an increased production. It is true that when, as in the contrast between the first two days in each animal, the temperature rises and the loss also increases, the production of heat must be increased, but we cannot even then say whether the increased loss of heat is due solely to an increased production, the radiating power of the animal remaining the same, or an increase of both, but the increase of the production being relatively greater, for in either case the number of calories lost would be greater and the temperature of the animal would rise. I am afraid this criticism applies equally to the calorimeter with double chambers, hydrogen being burnt in one and the animal placed in the other. The fallacy is essentially the same in both—namely, we are taking as a standard in both a source of heat (a hydrogen flame or a mass of cooling water) the loss by radiation and conduction from which is dependent solely upon the amount of heat in it, but the animal has the power of automatically altering its radiating and conducting power quite independently of the amount of heat in it, and also has the power of varying from time to time the rate of production of heat in it. These calorimeters measure the amount of heat lost; but as the animal can vary both the rate of production and rate of loss we cannot with them determine quantitatively the variation of production, and this is exactly the problem to be solved in fever. It is true, as I have shown, that we can get qualitative results, and often, as furry animals do not vary much in their powers of radiation and conduction, we can get rough quantitative results; but as man can by vascular dilatation and sweating vary his power of loss by radiation, conduction, and evaporation so enormously, we must be extremely careful how we apply results obtained from calorimetric experiments on furry animals to man.

The next difficulty I have to consider is that due to convection currents. When Mr. Hopkins and I were working at calorimetry we thought the instrument would be more easy to manage if it were so made that the top of it, rather than the bottom, took off, for then the weight of the lid would help to keep it well down in the grease trough. We therefore made such an instrument and suspended the animal from the lid. The hydrogen burners and the inlet and outlet tubes all came through the lid, and the hydrogen burners were so turned up as to make the flame turn upwards. Except for these alterations the instrument was precisely the same as I have already described, but of course it follows that there was no air-space at the top, for the lid contains no air-space; on the other hand, there was an air-space at the bottom. I should add that the position of the animal cages and hydrogen flames relative to the walls of the chamber was precisely the same when the lid was at the top as when it was at the bottom. We at once noticed that the instrument was not nearly so delicate when there was no air-space at the top as when there was one there. It was quite clear, therefore, that we had to deal with some factor, besides radiation and conduction, which influenced the instrument, and this could only have been convection currents. We next turned the instrument back again to its original position with the lids at the bottom, and we found that if a rabbit was in one chamber and no hydrogen burning in the other the manometer moved readily, and also if hydrogen was burnt in one chamber and there was no animal or other source of heat in the other it also moved readily. Further, if hydrogen was burning in one chamber and a rabbit was placed in the other, and the hydrogen flame was kept at such a height that it exactly balanced the rabbit for a few minutes, during which no air current passed through either chamber, and then an equal current of air was drawn through each chamber, then the hydrogen had to be turned up at least 30 per cent. before a balance could be again obtained, and this although no condensation of water due to the burning hydrogen had taken place. This clearly shows that the convection currents from the rabbit and the hydrogen flame are affected unequally by an equal current of air passing through each chamber. It is certain, therefore, that convection currents are a very important factor, and they are different from a minute point like a hydrogen flame, and a considerable surface like a rabbit's body; that this is so anyone can prove for himself by noticing the difference between the feeling of warmth he experiences when he holds his hand over a hydrogen flame and that which he experiences when he holds it the same distance over a rabbit, although the two about balance one another. The importance of convection is also seen by noticing how much hotter a hydrogen flame feels when the hand is held above it than it does when the hand is held equally far off it but at the side of it, although in both cases the radiant and conducted heat is the same, but the hand in the first case meets with more convection currents. This last observation corresponds to that in which we noticed that the instrument is so much more sensitive when the lid is at the bottom and the top is part of the air space than it is when the lid which contains no air space is at the top. When we first began making a calorimeter we tested its accuracy by putting a corked flask of cooling water of a temperature of from 40° to 50° C., but different at each experiment, on cork supports in one chamber and keeping the manometer steady by burning hydrogen in the other, both chambers being shut, and an equal air current drawn through each. When the water was taken out of the chamber its bulk was measured, and its bulk in litres at this temperature multiplied by $\frac{0.9}{1.0}$ gave its bulk at 4° C.—that is to say, its weight in grammes. Its weight in kilogrammes, multiplied by the number of degrees Centigrade through which the water had cooled, gave the number of calories given off by it, and this, together with the small quantity of heat given off by the cooling of the glass of the flask, represents approximately the heat given off by the water to its chamber of the calorimeter. To obtain an exact measure of this heat corrections would have to be made for the specific heat of water at from 40° to 45° and for the period (in all, about a minute) which elapsed between the time of reading the temperature of the flask and the time when it was placed in or removed from the chamber The latter correction, which is small, and a correction for the loss of heat from the glass of the flask were made, but the values given by recent observers for the specific heat of water at about 40° vary from 0·98 to 1 04, a difference of 6 per cent. We were, therefore, unable to make an exact comparison in absolute units between the number of calories given off by the flask and its water and those given off by the hydrogen flame. The following table shows the results of the six experiments (see Table XXI.).

TABLE XXI.

No. of experiment.	Number of calories produced by burning of hydrogen.	Number of calories given off by the flask.	Percentage excess on the part of the flask.
1	16 6	17·7	6·6
2	13·2	14·3	8 3
3	12·8	13·4	4·7
4	14·1	15 1	7·1
5	14·7	15·8	7·5
	14·2	15 3	7·

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It will be seen that there is a considerable error. At the time these experiments were made we were inclined to the opinion that the cause of this error lay in the fallacies just mentioned, but having since learned the importance of convection currents I cannot help thinking that a considerable part of the error was in each case due to the fact that the convection currents from the hydrogen flame and the water were different. I think there is no doubt, therefore, that because the convection currents from the hydrogen and animal are so different, because they are affected unequally by ventilation currents, and because so much of the effect of a source of heat on the calorimeter is the result of convection, no instrument is satisfactory which does not provide against the errors which may arise from unequal convection currents. I have already shown that the air drawn through the instrument is heated so little, and warmed air gives up its heat so slowly, that I do not think the difficulty would be satisfactorily met by taking the air, leaving the chamber through a spiral tube winding round in the air space connected with the manometer. The error due to convection is probably much less in Rubner's or Nebelthau's instrument than in mine, for it is likely that the convection currents from a spiral coil of warm water are much more like those from an animal than are those from a hydrogen flame, but it would make their instruments more trustworthy if they had been standardised with a coil of water the shape of the animal about to be experimented upon.

To sum up, I think we may conclude by saying:—1. No animal calorimeter that holds out any prospect of being workable can give exactly the amount of heat produced by an animal, for when it shows an alteration in the number of calories lost it does not show what proportion of them have been lost because the creature's radiating power has been altered, and what proportion have been lost because the production has varied, but if we know the variation in the internal temperature of the animal, its weight and its specific heat, we can often say whether or not the production of heat is increased or diminished. In other words, we can get a qualitative but not an accurate quantitative result. 2. As in man alterations of loss of heat probably depend sometimes almost entirely on variation of production, and at other times almost entirely on variations in radiating and conducting power of the skin, we must be very careful in drawing conclusions from animals to man. 3. A differential instrument is very much better than one which has been standardised. 4. But the source of heat in the differential instrument must in shape resemble the animal which is to be observed, and the instrument, before the results it yields can be trusted, be proved to register equally on both sides heat lost by radiation, conduction, and convection. I think it follows that no instrument has yet been devised which gives trustworthy results. I need hardly add that I say this with great regret, for I have for the last six years devoted all my spare time to calorimetry.

Before leaving this subject I should like to remind my hearers of two facts that are frequently lost sight of. The first is that we are too apt to talk of fever as though the process were the same whatever the cause of the fever, while really (as I have shown in the case of man) it is extremely probable that with all animals in some fevers the rise of temperature is chiefly due to variations in the production of heat, and in others it is chiefly due to variations in the loss, and any set of experiments only holds good for the particular animal and for the particular fever under consideration. Secondly, no calorimeter can register heat which is in the body converted into some other form of energy—e.g., motion. For instance, if we were to light a fire in a little locomotive and set it running up a spiral in our calorimeter, the instrument would only register such of the heat as is lost from the locomotive by radiation, conduction, and convection—it would not show that which was produced in the engine but at once converted into motion. If any heat in the living body is converted into motion we have no means of estimating it.

Many attempts have been made to make calorimetrical observations on parts of the human body, and as a rule the results are of little value; but lately Rumpel [2] has published some results which are so very interesting that it will be well to give an account of them. His experiments were all carried out on an arm placed in an air calorimeter for it. From what I have already said it follows that I do not think the results have more than a rough quantitative value. Rumpel shows, by putting first the clothed and then the unclothed arm in the calorimeter, that the loss of heat is greatly diminished by clothing, and he says that Rubner, working with a thermopile, has shown that if the radiation of heat from the naked skin be taken at 100, with a vest on it is 73; shirt and vest, 60; waistcoat, shirt, and vest, 46; and coat, waistcoat, shirt, and vest, 33; and if a guinea-pig's hair is cut off its loss of heat increases 33 per cent. In the first series of experiments a contrast was made between the arm clothed with dry clothes, that clothed with wet clothes, and the naked arm. Table XXII. shows the results.

TABLE XXII.

No. of experiment.	Naked arm gives off calories per hour.	Arm clothed with two layers of dry flannel gives off calories per hour.	Arm clothed with two layers of wet flannel gives off calories per hour.
1	7·92	4·25	—
2	7·41	—	7·45
3	8·39	—	7·96

These figures strikingly confirm the well-known fact that wet clothing is of no use in keeping the body warm. Indeed, it is worse than no clothing at all, for, in addition to the loss by radiation, there is the loss of heat from the evaporation of the water in the wet flannel, which in each of the above two cases was 15 calories, so that the total loss of heat was in the second experiment 7·45 + 15 = 22·45; and in the third experiment it was 7·96 + 15 = 22·96. The arm lost, therefore, when covered with wet clothing about three times as much heat as it would have done if it had been naked. The next experiments proved that the loss of heat in water is much greater than that in air at the same temperature (Table XXIII.).

TABLE XXIII.

Temperature of air or water Centigrade.	Calories lost per hour when the arm is naked in water.	Calories lost per hour when the arm is naked in air.	Calories lost per hour when the arm is clothed but in air.
Deg.			
11·5	157·0	12 5	8·4
16·2	103·0	10·9	7·6
20·9	81·0	7·8	5·6
24·7	54·0	7 9	5·0

If to the figures representing the loss of heat to the air we add the loss which is due to the evaporation of the perspiration it works out that at least eight times as much heat is lost in cold water as in air. As might be expected, cold water is worse than wet clothes. In one experiment in which the arm was clothed in wet clothes of a temperature of 20·6° C. the loss per hour was 29·8 calories, but in a bath of a temperature of 20·9° C. the loss per hour was 81 calories. The next table that I should like to quote shows in figures what is, I think, a well-acknowledged fact—namely, that the lower the temperature of the air the more valuable is clothing in saving heat (Table XXIV.). Another interesting table illustrates very well that the addition of clothes diminishes the loss of heat (Table XXV.). It will be noticed that a linen

TABLE XXIV.

Temperature of air Centigrade.	Calories given off per hour from the unclothed arm.	Calories given off per hour from the clothed arm.	Difference.
Deg.			
6·6	14·27	10·69	3·58
10·6	12 84	8·64	4·20
15·8	11·05	7 69	3 36
20·8	7·79	5·59	2·20
23·6	4·92	4·23	0·69

[2] Ueber den Werth der Bekleidung und ihre Rolle bei der Warmeregulation, Archiv für Hygiene, Band 9, S. 51.

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TABLE XXV.

Temperature of air C.	Naked arm lost calories per hour.	Arm clothed with wool vest and glove lost per hour.	Plus another wool vest.	Plus a linen vest.	Plus a coat.	Plus an overcoat.
Deg.						
15 5	9·71	8·73	—	—	—	—
16 7	9·30	—	8·18	—	—	—
15 9	10·0	—	—	8 18	—	—
15·8	10·2	—	—	—	6·89	—
15·2	—	—	—	—	—	6 81

vest is of no use in saving warmth. The last table that I shall quote illustrates that the same person may vary considerably at different times (Table XXVI.).

TABLE XXVI.

No.	Temperature of air Centigrade.	Naked arm gave off calories per hour.	Clothed arm gave off calories per hour.	Difference.
	Deg.			
1. Frau G....	21·3	7·41	4·68	2·73
Ditto	20·3	6 57	3 97	2·60
2. Frau D....	19·2	6·54	4·65	1 89
Ditto	18 1	7·41	4·65	2·76

CASE OF INTESTINAL OBSTRUCTION COMPLICATED WITH MALPOSITION, APPARENTLY CONGENITAL, OF THE COLON.[1]

BY FLORENCE NIGHTINGALE BOYD, M.D. BRUX., L.R.C.P. & S. IREL.,
SURGEON TO THE NEW HOSPITAL FOR WOMEN.

A WOMAN, aged thirty-nine years, was admitted into the New Hospital under the care of Miss Walker, M.D. Brux, on Oct. 27th, 1896, complaining of pain in the epigastrium immediately on taking food, followed and relieved by vomiting, constipation and tenesmus with the occasional passage of a small amount of blood, and marked loss of flesh and strength for the last few months. The patient had suffered for six years from indigestion, and for four years had eaten no solid food without pain. For these symptoms she was under treatment at the London Hospital for a period of three months, and in the out-patient department of the New Hospital on two separate occasions. She had been distinctly relieved by treatment, but had relapsed. On admission it was noted in addition that the abdomen was distended and the movements of the colon were plainly visible, there was marked tenderness in the epigastrium, and the respirations were almost entirely abdominal. The patient was put on Salisbury diet without medicine or aperients, and improved very markedly. She took the diet well and ceased to vomit. The bowels acted either spontaneously or by enema. The diet was strictly adhered to up to Nov. 16th, when she had lost weight. It was then modified, and pounded rice and cream were added. On Nov. 25th she had gained weight again, and was so much better and more comfortable in every way that she was allowed to sit up and gradually to resume a less restricted diet in preparation for shortly going out. On Dec. 2nd she was given for dinner a mutton chop, rice pudding, baked apple, and bread. This was followed almost at once by severe pain and much distress, apparently from distension. By 10 P.M. the abdomen was distended and drum-like and the patient was still in great pain. There was no fever. Carminatives were given. On the 3rd the abdomen was a little less distended, but there was still a good deal of abdominal pain. The bowels were open. The temperature was 99·4° F. and the pulse 120. The abdomen moved imperfectly with respiration. On the 5th the patient looked very ill, with drawn and pinched face. The abdomen was unequally distended, chiefly on the right side. She was sick three times, there being typical "coffee-ground" vomit. The bowels were not open and no flatus passed per rectum. The temperature rose to 100° and the pulse ranged between 120 and 130. Rectal feeding was commenced and one-eighth of a grain of morphia was given hypodermically. On the 6th the patient vomited once (vomit of the same character) after the rectal feeding was begun. The tongue was cleaner, the pulse was better (108), and the temperature was 99·4°. On the 7th the patient had a bad night with much pain; she was sick once, the vomit consisting chiefly of mucus with a little brown sediment. I was asked to see the patient in Miss Walker's absence, and found the abdomen distended unequally, and chiefly over the seat of the cæcum, as before; moving badly with respiration. Just above the umbilicus, to the right of the mid-line, on fairly deep palpation between coils of distended intestine a distinct firm mass was felt. This was said not to have been palpable previously. There was no mass in the cæcal region, although the distension was so marked there. I inclined to the diagnosis of a gastric ulcer of the posterior wall, which had perforated into a localised area walled in by adhesions, although this did not account for the cæcal distension, unless the transverse colon were involved in inflammatory matting. Another alternative seemed to be some growth deep in the abdomen involving primarily or secondarily the right half of the transverse colon and partially obstructing it. Hot fomentations were applied to the abdomen and a simple enema was given with no result in either fæces or flatus. Nutrient enemata with brandy were administered. The temperature ranged between 98·4° and 99·2° and the pulse between 108 and 120. On the 8th she seemed a little better and passed some flatus. The abdomen was still much distended in the cæcal region and noticeably flattened in the epigastrium. The temperature ranged from 98·6° to 100° and the pulse from 92 to 108. On the 9th she had much pain through the night. The bowels were open and flatus was passed, but the distension was more general. There was no further sickness. I was again asked to see the patient. There was now clearly to be outlined a rounded mass on a level with, and rather to the right of, the umbilicus, dull to deep percussion, fixed and not tender. On the 11th she was given small quantities of food by the mouth without causing sickness. The abdomen was much distended. The pulse was 120 and less good in quality, and the temperature was below 100°. As she was certainly losing rather than gaining ground Mr. Boyd was asked to see her in consultation. He considered that whether she had a gastric ulcer or not the great distension of cæcum and small intestine indicated obstruction somewhere in the colon, probably about the hepatic flexure, and advised an exploratory incision. The patient was therefore transferred to my care for operation the following morning. She had a better night, and the temperature had fallen from 100·4° to 98·4° in twenty-four hours. On the morning of the 12th the temperature was 97·6° and the pulse was 92°. She had a loose, normal-looking action of the bowels. It had been intended to photograph the abdomen on account of the peculiar and marked distension of the cæcum; but when the patient was placed on the operating table this had so far disappeared as to leave nothing but a moderate general distension. Mrs. Berry, M.D. Lond., gave gas and ether, and I opened the abdomen in the mid-line above the umbilicus. The small intestine, deeply injected and distended, at once presented. There was no exudation. On introducing the hand a tight arch was felt towards the right side, from beneath which was withdrawn a short length of collapsed small intestine absolutely pale from compression, and not more than half an inch in diameter. The mass felt before operation was found to consist of much thickened mesentery in which enlarged glands were felt. The bowel corresponding to this thickened mesentery was drawn out of the abdomen on to hot sterilised towels and carefully examined for growth or ulceration. So far as could be made out it appeared healthy

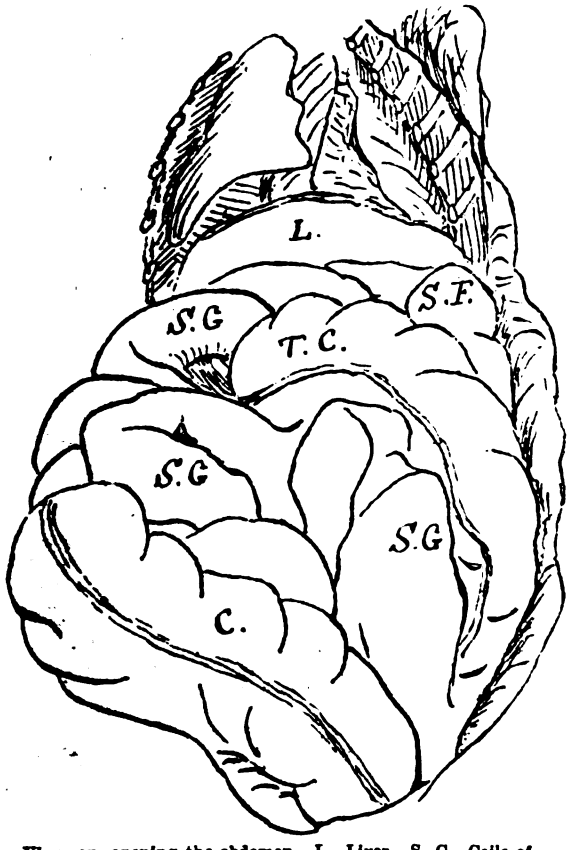
[1] A paper read before the Association of Registered Medical Women on March 2nd, 1897.

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though deeply congested. The cæcum was examined and no marked distension was found. The liver was discovered to be pushed up under the diaphragm by the distended intestines and the stomach was completely covered by them. At this point the patient's condition was such that no further search for any primary focus of disease appeared justifiable, especially as the immediate cause of obstruction was thought to have been removed by the release of the compressed coil of gut. So far no adhesions had been found anywhere. The operation lasted three-quarters of an hour and the patient was put back to bed with a pulse of 148. She was almost immediately sick—copious "coffee-ground" vomit—and this continued throughout the next thirty-six hours, the vomiting becoming more and more frequent and the collapse more marked. Ergotin hypodermically and ice to the epigastrium failed to check it. At 12 noon on the day following the operation the bowels acted; there was no blood in the stool. She died at 9 30 P.M. on Dec. 13th, thirty-six hours after operation. The ante-mortem diagnosis was some disturbance of adhesions about a gastric ulcer with secondary septic peritonitis.

Necropsy.—The post-mortem examination was made thirty-six hours after death by Mrs. Flemming, M.D. Lond., pathologist to the hospital. The body was found to be much emaciated. On opening the abdomen the most prominent objects were the much-distended cæcum and the ascending colon, extending from the pelvis along the right side of the abdomen (Fig. 1). Towards the left, part of the transverse

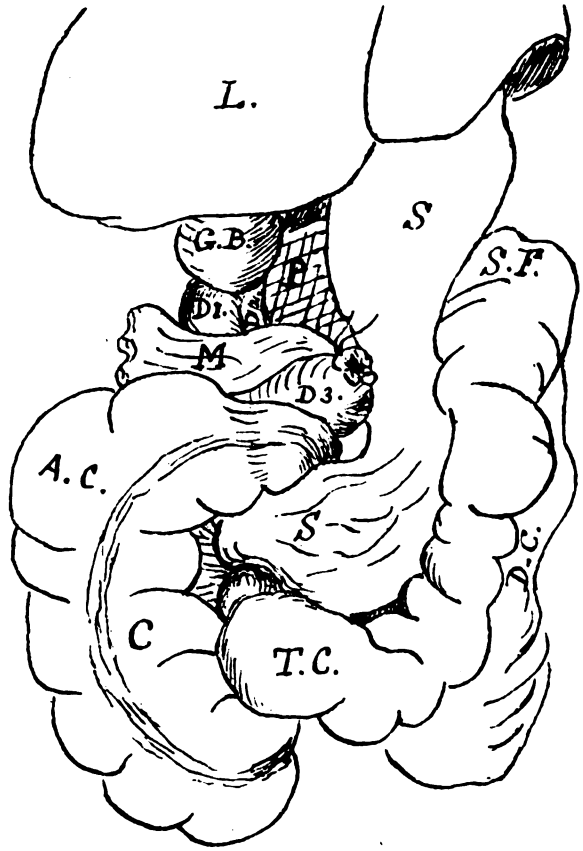
FIG. 1.



View on opening the abdomen. L., Liver. S. G., Coils of small gut, more or less distended and congested. C., Cæcum. T. C., Transverse colon. S. F., Splenic flexure.

colon was seen, and nothing else was visible but coils of small intestine, some being deeply congested. There was no peritonitis. The cæcum could be lifted out of the pelvis and was quite free, being, as well as most of the ascending colon, surrounded entirely by peritoneum; extending upwards on the posterior surface and bound down to it was the vermiform appendix. The liver was completely under cover of the ribs from the fourth to the seventh; the gall-bladder was adherent to the first part of the duodenum. The free cæcum, ascending colon, and the greater part of the small intestine had made a complete revolution from left to right, and from behind forwards. It was this torsioned portion of small bowel that was noted from the first as so congested. Continuous with the lower and left edge of the mesentery was a short, well-marked ascending meso-colon (the cæcum and part of the ascending colon, as above stated, being quite free), which formed the arch felt at the operation. The stomach was pale in colour, of an hour-glass shape, and extending far down into the abdomen. On following it down the pyloric end was found to pass downwards in front of, then upwards and behind, the right end of the transverse colon (see Fig. 2),

FIG. 2.



View after removal of small gut. L., Liver. G. B., Gall-bladder. S., Stomach. D 1, D 2, D 3, The first, second, and third parts of the duodenum. C., Cæcum. A. C., T. C., D. C., Ascending, transverse, and descending colon. S. F., Splenic flexure. P., Pancreas.

the two viscera thus constricting one another. The duodenum was next examined; the second and third parts bore the normal relation to the right kidney and pancreas, but the first part, owing to the faulty position of the pylorus, was too long, and ascended vertically in front of the second part (see Fig. 2). The jejunum turned as usual sharply forwards and to the right; the peritoneum covering the first coil was adherent to the peritoneum covering the pancreas. The mesentery appeared at the upper border of the right end of the transverse colon in front of the junction of the stomach and duodenum (see Fig. 2) and to the outer or right side of the colon. The origin of the superior mesenteric artery was normal. The small intestine was now removed. For twelve feet of its extent it was not injected; the remainder was of a purple colour, and the mesentery of this part (the part involved with the cæcum in the volvulus) was thickened and contained swollen glands, which formed the firm mass felt on Dec. 7th, the volvulus having brought it down behind and to the mesial side of the ascending colon, where it was found at the operation. There was a constriction just beyond the dilated hepatic flexure of the colon (see Fig. 2). The transverse colon here passed in front of the vertically placed pyloric end of the stomach and then from above down behind the stomach to gain its normal position

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with regard to the greater curvature. The splenic flexure was very acute and there were adhesions between the transverse colon as it passed up to the splenic flexure and the descending colon. As the colon thus hooked round the stomach its calibre was diminished, and this seemed to be a cause of chronic obstruction. There was no ulceration of the stomach or intestines. The congested part of the intestine contained dark grumous material similar to that vomited. In relation to the operation the following note was made. No sign was seen in the length of the small intestine of the nipped portion found at the operation. Before disturbing the parts examination was made as to the nature of the arch or hole felt at the operation from which the compressed coil of gut was released. It was found to be formed by the twisted mesentery, dragged down and fixed by the pelvic position and distension of the cæcum.

Remarks.—This case presents features of unusual interest, both pathologically and clinically. The interlocking of the transverse colon and stomach appears to be unique; at least, I have not been able to find a record of a similar case in the writings of Ahlfeld, Toldt, Treves, Lockwood, Kelynack, Talamon, or in Quain's Anatomy. It is difficult to account for such a relation of parts otherwise than by supposing an abnormal intertwining of the stomach and the primary intestinal fold at a very early stage of development. In connexion with this one notes the free position of the cæcum and part of the ascending colon, which no doubt favoured the volvulus that took place later, and which involved also all the lower half of the small intestine. Further, the distension and pelvic position of the cæcum appear to have been the cause of the stretching of the mesentery and meso-colon into an arch, beneath which the small intestine slipped and became compressed. Mr. Treves refers to this possible cause of internal strangulation, but regards it as extremely exceptional where no adhesions exist. In this case there were none, and the cæcum could be pulled up out of the pelvis. Thus there were present three causes of obstruction—narrowing of the transverse colon by pressure of the stomach and interference with the stomach by pressure of the transverse colon; volvulus of a large mass of intestine, to which the engorgement of the mesentery and the grumous vomit were no doubt due; and compression of a coil of small intestine beneath the mesentery, which apparently gave rise to no characteristic symptoms, and which probably was of little importance, as its release gave no relief. If we conclude that the relations of the stomach and transverse colon were of congenital origin, the question arises why the patient should have reached the age of thirty-three years before any signs of hampering of the stomach appeared. The most marked symptom during the last six years of her life was pain on ingestion of food, relieved by vomiting. There was also a fixed tender spot in the epigastrium, and these symptoms were relieved by the ordinary treatment for gastric ulcer, in which, no doubt, a restricted diet and diminution in the bulk of the food passing through the stomach and intestine played a large part. A larger meal than had been taken for some time appeared to induce the final attack, and one inquires to which of the three causes of obstruction were the acute symptoms due. I have stated above that one of these was probably of little importance. I am inclined to think that it was at this early period that the volvulus of the cæcum took place. True, the pain which followed the meal was referred to the stomach, just in the same way as earlier in the case, but the distension, although general at first, later localised itself more distinctly in the cæcum and ascending colon, while the black vomit appeared on the fourth day and the mass formed by the swollen mesentery was detected on the fifth day; at the same time, the greater the distension of the colon became the more did the constriction where the stomach crossed it increase, thus bringing another factor into play. The obstruction, it will be noted, was at no time absolute, and it is interesting that a spontaneous action of the bowels occurred on the tenth day, the morning of operation. In looking back on the case then, one sees in favour of the view that the volvulus was the dominating cause, the sudden onset of acute symptoms, the appearance of signs of engorgement, grumous vomit and a palpable tumour of swollen mesentery, localised distension, and the partial nature of the obstruction. The combination of gastric symptoms, due apparently to chronic compression of the stomach by the colon, with intestinal symptoms was throughout misleading, as was also the varying distension of the cæcum, and it is hardly wonderful that the operation failed to set matters straight when a careful and elaborate post-mortem dissection of the abdominal viscera was necessary to elucidate the true relation of the parts. At the same time I cannot help reflecting that had I succeeded at the operation in recognising and rectifying the volvulus the patient might have been relieved of the acute symptoms and have continued indefinitely her course of chronic indigestion and constipation.

I am indebted to Miss Walker for the earlier notes of the case, and to Mrs. Flemming for the extreme care with which she made the post-mortem dissection. The diagrams given were drawn from the post-mortem specimen before removal from the body. The specimen itself is at the Royal College of Surgeons of England; further examination will, I hope, throw more light on the cause of the malposition, or at any rate on its mode of production.

Harley-street, W.

TUBERCULOUS ULCERATION OF CÆCUM GIVING RISE TO SYMPTOMS OF DISEASE OF THE APPENDIX.

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I WISH to place the following instructive case on record, for the simulation of the common symptoms of disease of the appendix was such as to leave little room for doubt as to the nature of the ailment for which the patient had sought relief, and for which operation was undertaken. Nevertheless, the appendix was free from disease, and tuberculous ulceration and narrowing of the cæcum were alone found after death to account for the symptoms. The case is therefore of further value in demonstrating that disease of the cæcum, and of the cæcum only, may cause symptoms likely to be attributed to the appendix, and that positive diagnosis may be very much in error. Happily, increase of experience is adverse to infallibility. In a recent paper in the *Clinical Journal*, entitled "A Demonstration on a Case of Appendicitis," Mr. Lockwood refers to a similar case which had been under his care, where he operated upon a youth who had had what everyone considered to be two typical attacks of appendicitis. When the abdomen was opened it was found that he had acute tuberculous peritonitis, which was localised in the cæcum, in the vermiform appendix, the end of the ileum, and the mesentery. Pain, which had been severe, was entirely relieved by the operation, but the patient ultimately died from acute general tuberculosis. The following is my own case.

A woman, aged thirty-six years, admitted to the obstetric ward of St. Mary's Hospital on Feb. 18th, 1897, gave a history of having suffered from abdominal discomfort more or less for the past eighteen months. In May, 1896, she had an attack of pain in the right iliac fossa, accompanied with vomiting and constipation. Attacks of the same kind, two or three in number, but of less severity, followed at intervals, and in one which occurred shortly before her coming to the hospital a distinct lump had been felt in the iliac region. Uterine and ovarian disease having been excluded, I was asked to see her by Dr. Handfield-Jones, and under anæsthetics we both were able to feel a small hardish lump in the cæcal region. Local indications and history seeming thus to point to disease of the appendix the patient was transferred to my care, with a view to operation as soon as the temperature became normal and quiescence should be re-established after her last attack. With careful dieting and rest in bed this was accomplished, and she became comparatively free from pain. The patient, although emaciated and pale, seemed to be in a favourable state for operation, but I must acknowledge that I did not like the persistent hardness of the lump. There were scars on her neck from old gland suppuration, but there was no present reason to suspect that she was the subject of tuberculous disease. The exploration was undertaken on March 30th, the cæcum being exposed in the usual way and by the usual incision. It was at once obvious that we had to deal with no ordinary condition of things. Adhesions, old and firm, bound a tolerably hard lump which involved the cæcum, the size of a hen's egg, both to the abdominal wall and to the iliac fossa. The appendix was found and removed, but I could see no trace of disease in it, and further exploration

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had to be abandoned by reason of the impossibility of separating the adhesions. Successful removal of the hard cæcal lump seemed to be out of the question: bleeding was therefore stayed and the wound was closed. The patient went on perfectly well for a couple of days and then without apparent reason began to vomit. Local indications of wrong were markedly absent, but on the third day she suddenly collapsed and died in a few hours without attempt at rally. We suspected perforation, and I deemed it useless to interfere.

I have to thank Dr. Poynton for the notes of an exhaustive post-mortem examination from which the following extracts must here suffice. The cæcum was much ulcerated and thickened by chronic inflammation, and at its junction with the ascending colon was a stricture half an inch in length of almost cartilaginous hardness and so tight as only to admit the passage of a small probe. Circumferential thickening and contraction accounted for this, and section showed that the induration passed into the surrounding areolar tissue after the manner of an infiltrating growth. On the cæcal side of the stricture there was extensive ulceration, and perforation had taken place at a point contiguous to it. No ulceration was found elsewhere. In front of the duodenum, in the position of one of the meso-colic glands, was a gland of the size of a small flattened orange, which on section presented the aspect of caseous material, but was not soft. Another smaller gland lay close beside it. There was an old scar just below the apex of the right lung. Microscopical examination of the several diseased parts was made, and the appearances in the gland very strongly suggested tuberculous disease in the neighbourhood. The bowel showed chronic inflammation, without sign of either sarcomatous or carcinomatous growth, and although not definitely tuberculous it was almost certainly of this nature. The stump of the appendix showed nothing more than some inflammatory thickening. Commenting on the notes Dr. Poynton remarks: "The case would appear to be one of chronic tuberculous ulceration of the colon and its junction with the cæcum resulting in stricture, with secondary ulcers, which, from the slight amount of induration, were perhaps not tuberculous, but the result of the obstruction. The glands were affected in the same chronic way."

There is, of course, nothing very uncommon in this condition of things discovered after death, but in its surgical aspect the case appears to me to be worthy of record.

THE VALUE OF AN EXCLUSIVE RED MEAT DIET IN CERTAIN CASES OF CHRONIC GOUT:

A CONTRIBUTION TO THE STUDY OF AUTO-INTOXICATION.[1]

BY WILLIAM ARMSTRONG, M.R.C.S. ENG.

ABOUT seven years ago I saw two patients, one suffering from severe chronic gouty arthritis and the other from recurrent uric acid calculi, in both of whom, after all routine treatment had failed, cure was effected by the so-called "Salisbury" treatment, prescribed and directed by a lady. Taking for many weeks nothing but red meat and hot water, these patients certainly made wonderful improvement, which, in spite of a gradual return to an ordinary dietary, persists to this day. It seemed to me that this treatment possessed some element of usefulness, but that it ought neither to be used indiscriminately nor without medical guidance. The only English book on the subject, which quickly obtained and still has a large circulation among the laity, was written in a tone and spirit which did not encourage the medical profession to give this method a thorough trial; but the patients whom I had tried in vain to help, and for whom I had sought the best special advice without good result, were so evidently benefited that I have since then given this diet a careful trial, more especially during the last three and a half years, when I have been afforded in Buxton exceptional opportunities for selecting suitable cases for its use and for watching its effects. The indefatigable and painstaking work of Dr. Alexander Haig and the careful and ingenious experiments of Dr. A. P. Luff, which latter, placed before us in the recent Goulstonian Lectures,[2] have excited so much interest, indicate that the red meats or their salts are in themselves harmful to the gouty. Having for the last three years been working on the subject of auto-poisoning in relation to the causation of gout, some forms of rheumatoid arthritis, and allied ailments, I had been led to doubt whether that is so, or whether it is not the admixture of food of other classes with the red meat which causes complex chemical changes leading to the formation (whether in the blood, tissues, or kindeys) of an excessive quantity of uric acid. The able and suggestive work of Dr. Lauder Brunton has done much to stimulate medical opinion on this subject, and has given us a better understanding regarding the chemical changes which take place during digestion and their clinical significance; while the researches of Gautier and Bouchard have added to our knowledge of "the self-poisoning of the individual."

The course of treatment, which lasts from four to twelve weeks in its strict form, is as follows—subject, of course, to such modifications as the condition of the patients and their progress demand. The bowels having been thoroughly relieved the patient begins to drink from three to five pints of hot water daily; the temperature of this should be from 100° to 120° F.; a little lemon juice may be added, and it should be drunk in sips. One pint should be taken at least one hour before each meal, and the same quantity at bedtime. The food should consist at first of beefsteak from which all fat, gristle, and connective tissue have been removed; this should be thoroughly minced, a little water being added, and then warmed through with gentle heat until it becomes brown in colour and perfectly soft and smooth; it can be eaten thus or else made up into cakes and cooked on the grill. On the minced meat may be put the poached whites of from two to four eggs per day. The only bread allowed is a half slice, cut very thin, and thoroughly torrified in the oven, with each meal. A little salt or pepper may be added to the meat, or a little mustard freshly mixed with lemon juice. As the treatment progresses a little of the steak may be given grilled, or a lean mutton chop; very little or no fluid should be given with the food. The quantity of the meat given is from one pound to four pounds in the twenty-four hours. During the latter part of the treatment a grilled cod-steak is often ordered. Alcohol should be avoided; if absolutely necessary a little good whisky with cold water may be given with food; or a cup of weak tea with a slice of lemon, or a cup of black coffee may be taken. The immediate results experienced are a feeling of hunger and a difficulty in drinking so much hot water; these difficulties soon disappear, although the feeling of "emptiness" due to the stoppage of the carbohydrates often persists. There is also a marked diminution of the abdominal girth and a more or less rapid loss of flesh, especially in those who are fat and flabby; but walking is much easier and the breathing is often greatly relieved. The urine at first is often scanty and loaded with urates, which indicates either the necessity for adding some freshly prepared citrate of potash to the hot water given in the early morning and late evening, or else an increase in the quantity of water drunk. The bowels become constipated, the motions being scanty and dark coloured. An aperient is often necessary. After the first two or three weeks the patient begins to feel weak and easily tired, and it is wise at this stage to limit the amount of exercise taken, substituting in some cases a little massage; but before the conclusion of the course the strength returns, and stout patients especially feel the benefit of the diminished weight.

The changes due to the treatment are very marked. The swelling of the joints diminishes, the aching and soreness are greatly relieved, and the mobility is considerably increased. The patient becomes brighter, and work, both mental and bodily, is done with pleasure instead of with trouble and effort; acidity, pyrosis, heaviness, distension, and oppressed feelings after food disappear, flatus is greatly diminished in quantity and becomes much less offensive, and the perspiration loses the disagreeable odour so frequently present in these cases. The urine becomes more copious and clearer, and does not give the reactions to nitric acid and ferric chloride mentioned later, and the oxalates and uric acid are materially decreased. The indications for

[1] A paper read before the Medical Society of London on April 26th, 1897.

[2] THE LANCET, March 27th and April 3rd and 17th, 1897.

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the adoption of this treatment seem to me to be: (1) obstinate and refractory chronic gouty arthritis; (2) recurrent uric acid calculi; (3) frequent and intractable migraine; and (4) obstinate gouty dyspepsia. The treatment appears to be indicated more especially if any of the following symptoms are present: (*a*) amylaceous and intestinal dyspepsia; (*b*) acidity, pyrosis, and flatulence; (*c*) heaviness and irritability after food; (*d*) excessive formation of sulphuretted hydrogen in the large intestine, disagreeable smelling perspiration, and offensive breath; and the following conditions of the urine: (*e*) persistent lithiasis; (*f*) oxaluria; (*g*) excessive formation of indican; (*h*) purple or red reaction with nitric acid; and (*i*) wine-red reaction with ferric chloride.

I am sure that where either damaged kidneys or a weakened heart are present exceptional care should be taken; in fact, many of these cases are quite unfit for the treatment. I do not say all, advisedly, as I have seen several cases in which both unsound kidneys and heart have been greatly relieved, but such patients require daily watching and the exhibition of great care, experience, and discretion. The above mentioned symptoms, I would venture to submit, bring us face to face with the great question of auto-poisoning. I have been greatly impressed by the sudden subsidence of severe chronic gouty arthritis in five cases. In three of these it followed what were described as "very severe bilious attacks"; and in two it came on after severe and spontaneous attacks of diarrhœa; the relief was immediate and complete, and for several weeks the patients kept better, but gradually the old symptoms began to return, and in three months after the sudden improvement they were as bad as ever. No doubt also many of us have observed how severe attacks of deltoid rheumatism of many weeks' standing have been at once removed by a mercurial purgative. These facts seem to me to point to the possibility of poisons generated in the alimentary canal setting up affections of the joints. Bouchard describes certain articular enlargements which he contends are almost always present, more or less, in cases of gastric dilatation. That a very considerable number of ptomaines, leucomaines, and toxins are formed in the alimentary canal seems to be beyond doubt, as is also the fact that they are taken up by the blood and appear in the urine. A most important discovery was made by Gautier in 1885, when he found that poisonous alkaloids were continuously being formed in healthy men and animals by decomposition in the intestinal canal during the process of digestion or in the blood and tissues generally by the metabolism which occurs during the functional activities of life. It seems to me that if we have either an excessive formation or a deficient elimination of these toxic products we get a condition of self-poisoning, which may be either slight and transient, severe and lasting, or, what I believe to be more common still, a daily storage of small quantities of noxious matter which gradually undermines the health, leads to deterioration of the nervous system, and disturbance of the nutrition of some or all of the structures of the body; and it seems likely that vital action is much more quickly interfered with through the accumulation of waste products within the organs than by any want of nutriment of the organs themselves. Aitken, writing on gout and rheumatism, says: "They are such diseases as become developed under the influence of agents generated within the body itself through the continuous exercise of its functions in the daily course of nutrition, development, or growth." That marked symptoms of poisoning do not more frequently occur is due to the physiological processes continually going on in our bodies: (*a*) the elimination of the poisons by the kidneys, liver, skin, lungs, and the lining membrane of the bowels; and (*b*) their destruction by oxygenation, the leucomaines being burned up in the blood. That the urine contains toxic products was made clear by the researches of Mr. Reginald Harrison, our esteemed President, concerning so-called "catheter fever" when he gave his adhesion to the following important conclusions: (1) In health alkaloids exist in the living subject; (2) these arise in the intestinal canal through the action of putrefactive intestinal organisms; (3) the alkaloids of normal urine represent a practical part of these alkaloids absorbed by the intestinal mucous membrane and excreted by the kidneys; and (4) diseases augmenting intestinal alkaloids augment in consequence the urinary. Dr. Lauder Brunton suggests that one set of poisons is probably allied to uric acid, and includes guanidine, methyl-guanidine, xanthine, and other derivatives of urea. A very interesting statement has been made that while the greatest part of the products of albuminous waste is in health secreted by man in the form of urea with very little uric acid, in disturbance of nutrition (as by self-poisoning, affections of the nervous system, &c) the quantity of uric acid is enormously increased. It has also been suggested that as pyrocatechin, a body of the aromatic series frequently found in urine, is known to have a poisonous action on the spinal cord it may probably interfere with the joint centres, an thus set up reflex trouble in the articulations.

To those who entertain the opinion, so generally held, that the various toxins are formed from the decomposition of animal food it will not be at all clear how a meat dietary, even with the aid of hot water, can alter this condition; but Brunton and Macfadyen have shown that "the same bacteria which form a peptonising enzyme on proteid soil can also produce a diastatic enzyme on carbo-hydrate soil"; and, further, that "the same bacilli, when grown in starch-paste instead of in gelatin or in beef-tea, produced a different ferment, which would convert starch into sugar, but which would not act upon gelatin." Bouchard, again, strongly condemns bread, with the exception of the outer crust, on the ground that the process of baking, although it has interrupted the fermentation, has not stopped it altogether, and that this fermentation re-appears when moisture and temperature are again favourable to it, and from this are formed acetic and butyric acids, leucin, tyrosin, and phenol in large and poisonous quantities. The difficulties of a mixed diet of meat and carbo-hydrates in the gouty state are that the latter are so much more easily oxidised, and are therefore more readily consumed in the system than the albuminous compounds, and thus prevent the disintegration and oxidation of the latter; and also that vegetable albumin less easily undergoes disintegration than animal albumin. In gout disintegrative changes in the albuminates are arrested, and insufficiently oxidized substances remain in the blood; and in this connexion it is of importance to note that under a diet of animal food more oxygen is retained in the system than when starchy foods are taken in excess. The microbes subsisting on starchy food, milk, and cheese may be got rid of by a purely meat diet and *vice versâ*, the offending microbes being starved out.

I would now ask the question whether, from the foregoing facts and theories, it is possible to suggest any scientifically satisfying reason for using this dietary. And in reply I would submit that meat taken as suggested is easily and readily digested; that the process of digestion is more complete and perfect, and is almost entirely free both from the processes of fermentation and putrefaction and from the toxic products thereof; and also that there is a more complete oxidation of the food taken, and therefore less waste and morbid material remaining in the system. Whatever poison does remain is more promptly eliminated by diuretics than by any other means, and no diuretic is more efficient than a free supply of water, especially when taken into a comparatively empty stomach. The exceptional power of water as an eliminator has been well shown by the researches of Sanquirico into the lethal doses of various drugs. There can be no doubt also that water has a direct flushing effect on the stomach, kidneys, and liver. It has been suggested to me that, while a very much improved condition of the general health might be brought about by the stimulating effects of a diet of red meat, the uric acid in the system would be driven into the joints to their great detriment, and that when this diet was discontinued most serious relapse would occur, the last state of the patient being much worse than the first. I have watched this point most carefully, and in a number of cases I have gradually brought the patient down from a meat diet to a carefully arranged mixed dietary, and in eight cases still further to the meat-free dietary recommended by Dr. Alexander Haig, without any such result being observed. Had space permitted I should like to have submitted the detailed notes of cases of chronic gout and recurrent renal calculi treated by this method. In some respects the latter cases are the more interesting, for in spite of the continuous taking of solvents they were, up to the time of taking this dietary, frequently passing uric acid calculi. With the exception of a few small stones passed shortly after the commencement of the treatment (in less than half the cases only) no further formation took place, although the use of all solvents was discontinued.

My experience of the so-called "Salisbury" dietary has led me to form the following conclusions, which I venture to submit for consideration and criticism: (1) that a certain

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number of cases of chronic gouty arthritis, recurrent uric acid calculi, and gouty dyspepsia, with fermentative changes, which have proved refractory to ordinary methods of treatment and dietary, may be treated by means of an exclusively red meat dietary, *plus* hot water drinking, with excellent results; (2) that this method of treatment is irksome and trying, and as, unless it is carried out strictly in the first instance, it is apt to do harm it should only be used in those cases where other methods have failed or are thought likely to do so; (3) that the cases require careful selection and close medical supervision, the details being modified according to the needs of each individual patient; (4) that those who suffer from persistent albuminuria or organic heart disease are in most instances unfit for this treatment—when, however, it is prescribed for them its course should be watched daily; (5) that certain cases of chronic gouty arthritis which fail to improve while on a mixed diet recover equally well whether on this dietary or on the meat-free dietary suggested by Dr. Alexander Haig; (6) that it is of the utmost importance that no addition, however small, of carbohydrates, saccharine matters, or fruit be made to the dietary during the first few weeks of treatment, very slight acts of carelessness in this respect having often caused disappointment and failure; and (7) that used with due care and discretion this method is a most efficient, and sometimes even a brilliant, addition to our therapeutic resources, but that it is only necessary in some 3 or 4 per cent. of gouty cases treated.

Buxton.

ON THE CONNEXION (IF ANY) BETWEEN MENTAL AND NON-PUERPERAL UTERINE DISEASES.

BY JAMES BRAITHWAITE, M.D. LOND.,
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MY attention was drawn to this subject by the following case. A single woman had spasmodic dysmenorrhœa of a very severe type. Her own medical attendant, who was a homœopath, not having given her any relief, she came to me as long as eight or ten years ago. I found her to be a delicate woman with some traces of old tubercle in the right apex. I dilated the cervix moderately, as I found that all medicinal treatment was useless. This dilatation gave her great relief from the pain, but it was only temporary, and in three months' time the pain was as bad as ever. The uterus was what I call "a sitting-down womb," as the sound first passed forwards, then backwards a little, and then forwards again. At her request I re-dilated the part, but did it extremely thoroughly, passing a laminaria tent the first day and dilating successively by Hegar's and Reid's dilators on the second and third days. The canal would then admit an index finger. This permanently cured the dysmenorrhœa, and the patient remains to this day perfectly well as regards this disease. Some years after this other symptoms led to a re-examination, when retroflexion was found. As the patient apparently suffered from this displacement it was rectified by a Hodge's pessary, No. 1 size, as the vagina was very small. This answered extremely well, and the periods, which had been rather profuse, became quite normal in amount. I again saw nothing more of her for some time, except that at regular intervals of about eight months I inserted a fresh pessary. In the autumn of 1896 she had begun to be in a desponding mental condition. She was, to use her own words, "unutterably miserable." Nothing could overcome her dejection of spirits. She was perfectly sane, and talked reasonably, but hopelessly, of what she called her unaccountable misery. In her letter to me she used the following expression: "The miseries of this extraordinary illness are breaking my heart." I will not say here what I thought was the real cause, or what I recommended in the treatment, as the patient went up to London on the advice of a relative and consulted a London physician, not, however, a gynæcologist. He at once made a vaginal examination without removing the pessary, if the statement of the patient is to be relied upon on this point. He made her "breathe down," to use her own words. He then told her that the cause of her mental condition was the state of her womb. He did not treat her himself for this, but sent her to a well-known electrician and gynæcologist. This gentleman recommended electricity and baths in the treatment. He wrote to her mother, and the following sentence is taken from his letter: "The local condition is a hardened condition of the womb due to the bend, for which the dilatation does but temporary good. Electricity followed by the baths will, I believe, certainly allow of a complete cure." The patient then returned home to consult with her mother, and I was sent for and told about the opinion which had been given, and was shown the letter from which I have quoted. The next morning I examined the patient carefully myself. There was absolutely nothing abnormal, the uterus was in good position, there was no flexion or displacement of any kind, and the roof of the vagina on every side of the uterus was perfectly soft and normal. I may here say that I believe the physician who first examined her was perfectly honest in the opinion he gave her—that the mental condition was owing to some uterine disease. He did not verify this by his vaginal examination, as he did not remove the pessary. He seemed to think that such a condition must *necessarily* arise from uterine disease. With regard to the letter from the gynæcologist, it will be noticed that he referred to the dilatation, and said that this did but temporary good, whereas it made an absolute cure of the dysmenorrhœa. The bend referred to in the letter did not exist at the time I dilated for dysmenorrhœa, nor did it exist at the time of his examination, for I examined her myself a few days afterwards, and there was not the least trace of flexion, and there had been no flexion for at last eight months previously, when I last changed the pessary. He must only have inferred that there was a bend because he found a Hodge's pessary in the vagina. The real cause of the mental condition I believe was as follows, and this is also the patient's own explanation. In the summer of last year she had an attack of syncope at a menstrual period, not from pain, but simply from debility. She fell down upon the ground, as she was standing at the time. The next month she expected another attack, and she thought it possible that at any time she might fall down in the street. The dread of this kept her confined to the house and in a state of mental misery. I had recommended her to be sent from home to Cornwall or Devonshire in order that she might have frequent change of scene and air. When asked my opinion about the proposed electricity I said to the mother, the daughter not being present, that although I entirely disagreed with the idea that the mental condition was caused by a hardened condition of the womb, because no such hardened condition existed, and the case could be easily explained by the mental anxiety caused by the dread of another attack of syncope, still, I would not dissuade them from the electrical treatment, as the season of the year was winter, and the complete change of scene to a London nursing home, with the feeling that something great was being done for her, would probably act almost, if not quite, as beneficially as my plan of a tour in the South of England. The patient accordingly went to London and had electricity applied three times a week for five weeks, and then five times at rather longer intervals. She then went to Brighton for three weeks, and returned home about the middle of April perfectly cured as regards her mental condition. I feel absolutely certain that the electricity merely acted in the way I have named, and possibly the remedy is thought more of when it is very expensive.

This case it is which has drawn my attention to the subject which forms the title of this paper, especially as the physician who first saw the case in London, according to the patient's account—and I have nothing else to rely upon, for I have not had any communication from him or from the electrician—at once came to the conclusion that such a mental condition must be necessarily uterine in origin. A few years ago I altered and improved my plan of indexing my private cases. Since then I have full notes of about 2000 gynæcological and obstetric cases, the latter, however, being relatively few in number. I therefore at once referred to my index, and I have not one case at all like that which I have described, but I do not include in this cases of puerperal origin. A great many of the patients with retroflexion complained of curious feelings in the head, often described as a weight on the vertex. There are also a considerable number of cases of menstrual and inter-menstrual neuroses, often of a very severe type, but unattended with any mental affection. I must make, however, an exception to this statement, as I had one case of a girl who was overworked at school; menstruation ceased, and the girl ceased to speak or take any notice of anything around her. She

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was not insane. This appeared to be simply mental and physical exhaustion. After about two years' treatment this girl is again beginning to menstruate, and she is able to answer questions.

On referring to perhaps what is one of the best works on mental diseases—that of Mr. Bevan Lewis—I find he makes no reference whatever to any connexion between uterine and mental diseases. He says, however, that there are two forms of insanity connected with menstruation—the first known as climacteric insanity, accompanied by gloomy forebodings, especially of a religious nature; the second known as the insanity of adolescents, characterised by religious exaltation. These cases, however, come to the mental physician and not to the gynæcologist. On looking over my notes of infirmary cases, which are also well indexed, I find I have had one case bearing upon the subject. This woman, who was thirty-four years of age and unmarried, suffered from the most intractable retroflexion along with mental depression of a severe type. No Hodge's pessary would keep the uterus in position, and I have a letter from a gentleman who saw her once or twice only, and who recommended that the operation of ventro-fixation should be done. He attributed her mental and neurotic symptoms to pressure on the ovaries by the flexed uterus. I performed this operation for her in the Leeds Infirmary on Jan. 21st last, and have no doubt that the uterus still remains in good position. I received, however, a letter about two months ago in which the patient's mother stated that her mental condition remains just as before. At the time of the operation I ascertained that the flexed fundus just touched the left ovary without pressing upon it, the ovary being to the outer side of, not behind, the fundus. The right ovary was not touched at all. My verdict, therefore, in the whole matter is that there is very little connexion, and only in rare and accidental cases, between genuine mental affections and ordinary non-puerperal uterine or ovarian diseases, but that there are any number of cases of neuroses of various kinds. In other words, the sensory portion of the nervous system, but not the thinking part, is liable to be upset. At the same time it must be remembered that there are often two points of view from which the same subject may be regarded, and taking it from the mental physician's point of view there is more evidence of a connexion between the two diseases. Dr. Charles Hood, formerly resident physician of Bethlem Hospital, in one of the decennial statistical reports of that hospital, says, when the process of menstruation is insufficient and painful, that there are often symptoms which may be said to foreshadow insanity—an irritable and quarrelsome disposition, a marked waywardness, a disposition to despond, and so on; and these symptoms are still more marked where the menses are altogether suppressed. Amenorrhœa, there is reason to believe, is frequently one of the causes of insanity; certainly, the menses are often suppressed in insanity, and their re-appearance is often contemporaneous with recovery. He then gives some statistics, but these are quite unreliable for my purpose, as cases of aggravated hysteria and those originating in puerperal mania and over-lactation are included. Dr. Hood concludes his review of cases of insanity from all sources with the following sentence: "The only general conclusion which can be drawn from a consideration of the causes of insanity is that they are more or less obviously of an exhausting or depressing character, a conclusion which shows indirectly what is now generally allowed, that insanity is a disease of depression, exhaustion, and irritation." It seems to me that it is only in this indirect way that there is a connexion between mental and non-puerperal uterine disease.

Leeds.

AURAL HYPEROSTOSES.

BY GEORGE P. FIELD, M.R.C.S. ENG.,
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As regards the subject of aural hyperostoses, to which I have for some years past devoted a considerable amount of attention, I would urge on all practitioners the desirability of taking careful note of all cases that come under their observation. It is true that these growths are the reverse of common, but they are of great pathological interest, and the complications to which they give rise may be most serious. During last year I operated on nineteen patients with aural exostoses. That of these only one was a hospital case seems to me inexplicable, unless it is due to the prevalent dislike among the poorer classes to contact with water; for, as I first pointed out many years ago, and my surmise has been repeatedly borne out by the histories of my patients, cold water may be looked upon as a usual factor in the production of these growths. My attention was earliest drawn to this point by their occurrence in three men—I have now operated on all of them for double exostosis—who were accustomed to bathe together in the sea twice a day.

The expectant treatment of these ivory-like excrescences is attended with much risk because not only do they increase insidiously to a large size, filling up the meatus, but they also, by pressure on its bony wall, give rise to painful inflammation, and the attendant pus being pent up behind the growths may cause severe brain symptoms and may lead to the death of the patient. I well remember two cases in which, although I strongly urged the necessity of operation, pointing out the hazard of delay, active interference was deferred to a more convenient season, as other advisers had maintained that the exostoses might "atrophy," the outcome being death in both instances before help could be given. I have removed aural exostoses both by chisel and by dental drill, and after a large experience have unhesitatingly decided in favour of the latter, as I have never witnessed a single failure where it has been employed. One striking result of the operation is that the benefit received is lasting—i.e., there is no recurrence of the obstruction, so that a favourable prognosis in case of removal is always fully justified. Thus the three men before alluded to are all perfectly well at the present time. The return of hearing after operation for exostosis may be delayed for six or eight weeks by persistent granulations in the meatus. These should be carefully removed with fine forceps; silver nitrate can then be applied on a probe. Subsequently a spirit lotion with boracic acid and glycerine should be used.

For this paper I have selected records more particularly of cases of medical men, as their testimony appears to me to be professionally more valuable than that of other persons. Incidentally in my recital will be observed additional confirmation of my theory that aural exostoses are occasioned with comparative frequency by the practice of bathing in cold water.

CASE 1.—I received recently from a medical man the following summary of his own case: "I consulted an aurist some years ago and he told me I had an exostosis in either ear, and that if it got worse I should do well to place myself under your care. In my youth I went in for diving a great deal and remaining under water for a long time. In later years I used to get deaf whenever I caught cold, and latterly on three occasions had a dull pain in the ears. When I consulted you eighteen months ago you told me that the exostoses were marked, and on my return from Egypt last year I submitted to a double operation at your hands. I was more or less deaf for two months afterwards—while, in fact, the granulations remained. After that time my hearing returned, and it is now as good as ever it was."

CASE 2.—Early last year I operated on a medical man in practice for large ivory growths in both ears. He had become so deaf that his continuance in practice as he was would have been quite impossible. After the operation he regained his hearing. There was nothing noteworthy in his case except that he also had been in the habit of bathing constantly in cold water. He had never been the subject of either gout or syphilis.

CASE 3.—A patient was sent in March, 1896, by Dr. Ferrier to consult me, and is remarkable for the age of the patient, which was only twenty-two years. In 1892 he first noticed irritation of the ears after bathing frequently. When I saw him both ears were occluded by large exostoses. After my operation on March 24th he remained at a surgical home for three weeks. He came again to see me on April 30th last, and he could then hear perfectly well with both ears.

I received communications a few weeks since from the first and second of my patients of the bathing trio already referred to. The first reports himself thus: "My hearing in both ears is excellent. I can use the stethoscope and hear a watch at arm's length. I suffer no inconvenience; I am, however, careful in bathing to protect my ears when under water, as you thought that bathing had possibly somewhat to do with originating the growth of the exostosis. It was at the end of the year 1877 that I was under your care, so that you operated on me now nearly twenty years ago." The

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other patient says: "I have had no return of deafness since the last operation. I can hear equally well with either ear and can use a stethoscope as well as ever. I consider my hearing is as acute at present as it was before the growth of the exostoses."

CASE 4.—From yet another medical man I have received the following: "I am thirty-seven years of age and have, I believe, a slight gouty-rheumatic diathesis. About the middle of February, 1896, coming down the East African coast from Durban, I suffered suddenly from great pain alternating in both ears, with almost complete deafness. I had never suffered from deafness before this sudden attack, but for some time back, say, fifteen years, I had been susceptible to draughts at night time, waking up occasionally with a slight pain in the ear exposed. At Cape Town I was examined and both ears were found constricted, apparently by some growth, the constriction being aggravated by a highly inflamed state of the mucous membrane. Palliative measures were adopted, to which the inflammatory condition yielded, and before reaching Southampton on March 14th I had quite recovered. But I was aware that there was something radically wrong, and I consulted a surgeon, who diagnosed exostoses in both ears, and prescribed an ointment to be painted on the growths at specified times. This treatment I pursued for a month, with what result I am naturally unable to state. At that time I happened to describe my condition to a brother practitioner, and he, having examined the growths, strongly recommended me to see Mr. Field. He pointed out that the growths would most probably not decrease in size, and that I should be at any time liable to a similar inflammatory condition with its accompanying deafness. On April 17th I consulted Mr. Field, and he at once decided to drill out the growths. The operation was performed on April 21st. I was under anæsthesia for, I believe, nearly three-quarters of an hour. I suffered no pain and very slight discomfort. I left the private hospital on May 4th, having walked out with a protection to my ears for three or four days previously. In my case the granulations were particularly exuberant, and a slight discharge continued till the end of May, accompanied by deafness. The deafness was much relieved on my return from a short trip to Hamburg on June 22nd, and on July 2nd, when I last saw Mr. Field, it had entirely disappeared. I have been passionately fond all my life of bathing, and have lived in the water whenever possible. I have never taken the precaution to put cotton-wool in my ears."

CASE 5.—A patient, aged sixty years, was sent to me by Dr. Henry Green. There was a history of bathing in cold water, but, curiously enough, the ivory growth was in only one ear, the left. As there had been loss of hearing in the right for many years it was very important to obtain relief. I drilled in May, 1896. His hearing did not return for two months, for granulations in the meatus, the most annoying obstacle in the treatment subsequent to operation, were extremely persistent. However, after treatment with saturated solution of silver nitrate, applied by means of wool twisted on a fine probe, they by degrees disappeared, and audition in the left ear was completely regained.

CASE 6.—A patient, aged forty-seven years, another sufferer from exostoses, was sent to me by Sir William Broadbent. He had been deaf in the left ear for many years owing to an abscess, and both this and the other ear showed ivory growths when he consulted me. As he was in a large way of business it was of the utmost importance to him to recover his lost sense. He thus describes his case: "You performed the operation in March, 1896. Neither ear gave me any actual pain afterwards. The left ear is still deaf, and always has been so, but in the right I have regained my hearing." The granulations were troublesome also in this case, but were treated successfully in the way just referred to.

CASE 7.—In May, 1896, I operated on a man, aged forty-four years. The right tympanum had been destroyed by scarlet fever during babyhood. Hearing in the left was acute till near the end of 1895. This patient suggests that, as his father was always deaf in the right ear, and for some years in both ears, the exostosis from which he, the son, suffered may have been inherited. He confesses, however, that when about twenty-nine years of age, he bathed daily during six months, and that he generally had a little sea-bathing every year in the summer, floating a good deal without wool in the ears.

CASE 8.—In the case of a man on whom I operated in September, 1896, there was an ivory-like growth in the left ear only. There was but slight pain after treatment, and that merely for a short time on the third night, and recovery was complete within seven weeks.

In conclusion of what I have at present to say on the subject of aural exostoses, I will briefly refer to two instances of a pedunculated growth in one ear, and not the usual broad-based ivory-like mass.

CASE 9.—A man, aged thirty-six years, was sent to me by Mr. Hearnden, of Leatherhead. I followed with him the procedure I have found best in such cases—namely, to drill through the tumour at its base and then to seize and extract it with dentist's fine stump forceps. A year after the operation I received the report: "I have not had one moment's discomfort or any difficulty in hearing since I left your hands."

CASE 10.—The other patient, a woman, I had in the surgical home at the same time as the last. Pedunculated aural exostoses, I should mention, are very uncommon in women and are generally confined to one ear. I have never in hospital met with an instance among female patients, and I can remember a total of but five altogether. Of true ivory exostoses I have as yet seen no example among women, possibly because, as they object to wetting the hair, their ears are seldom exposed to a flow of cold water.

Wimpole-street, W.

DISTRICT NURSING ON A PROVIDENT BASIS.

BY JAMIESON B. HURRY, M.A., M.D. CANTAB.

IT was a singularly happy decision of Her Majesty's to devote the Women's Jubilee Offering of 1887 to the encouragement of district nursing of the poor in their own homes, and the nation will ever be grateful for that wise and unselfish gift, which has given such an impulse to district nursing and indirectly has brought comfort and relief to thousands of the suffering poor. This memorable year of 1897, with its celebration of the Diamond Jubilee, will give a further impulse to the movement, since in many parts of the country district nursing has been selected as the form of memorial most likely to benefit, both now and in the future, our large wage-earning population and to remind generations yet unborn of Her Gracious Majesty's never-failing sympathy with the suffering and poor.

The present occasion is therefore an opportune one for the inquiry—Has district nursing been organised on the wisest basis? Has it been made to benefit even the poorest, and at the same time to promote the providence and independence of the working classes? Is it possible to adopt a plan of work which, while meeting the above requirements, will render the movement self-supporting?

Unhappily, as usually managed, institutes of district nursing, instead of increasing the independence and self-reliance of the working classes, exert the opposite effect and encourage the poor to depend on the gratuitous help of the rich. In other words they tend to demoralise, instead of fostering a spirit of self-help and thrift. Moreover, the voluntary subscriptions given by the well-to-do in the neighbourhood are generally insufficient for the purpose, in consequence of which the utility of the work is curtailed and an inadequate staff of nurses endeavours to cope with an overwhelming amount of sickness. Even when the sick poor are encouraged to contribute towards the maintenance of the nurse (e.g. a few pence per visit), experience proves that it is almost impossible for them to do so, when illness comes and swallows up every penny of the weekly earnings.

These difficulties and objections will vanish if district nursing is organised on a provident self-supporting basis—on such a basis as is adopted by provident dispensaries and medical clubs. The latter supply medical attendance and medicines on condition that a small annual payment be made in advance, and the supply of skilled nursing may be organised on the same principle. Of course, the annual subscription must be on a most modest scale, and in proportion to the means of those to be benefited. For the sake of argument the sum may be stated at 1*s.* per annum per individual, but this, like other details, may be modified to suit local requirements. The sum of 1*s.* is equivalent to about a quarter of the amount usually paid annually for the dispensary or club medical man, and is probably as much as can

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be collected from a member of the wage-earning class. Moreover, it is adequate for the purpose of making district nursing self-supporting, as will be shown hereafter. In the case of a family, 2*s.* 6*d.* per annum would probably be a sufficient charge, as the mother can, as a rule, do what nursing is required for the children, and only rarely will need more skilled assistance. When feasible, the collection of the annual contributions may be undertaken by the machinery of the local dispensary or benefit societies, which will, after deducting the cost of collecting, hand over the balance to the District Nursing Association, and in return have their members enrolled on the register of that Association. Another plan would be to include the services of the district nurse amongst the benefits a provident dispensary offers to its members, a small capitation charge being levied for the purpose. The total sum contributed towards the expenses of the nursing association per 1000 persons would vary somewhat, according to the relative proportion of unmarried persons and families, and according to the amount charged to each. But, on the basis suggested above, approximately £25 per annum would be collected. Thus 4000 members would yield £100 towards the expenses of the district nurses, and so on in like ratio. The annual cost of a trained district nurse is roughly estimated at from £80 to £100 a year, so that 4000 members would in the aggregate contribute a sufficient sum for her support. In addition, experience proves that one district nurse is amply sufficient for 4000 persons. Indeed, in many towns with a large artisan population, one nurse suffices for a population of 6000 or 8000. Hence it follows that upon this provident basis district nursing may readily be made self-supporting. In order to encourage payment in advance of the annual subscription, it would probably be desirable to exact an extra fee of perhaps 5*s.* from any person who had neglected to make himself "free of the nurse," and yet desired her services when sickness came.

One objection to this scheme may be raised—viz., that in some homes there is such extreme poverty that even 1*s.* a year cannot be paid, and yet the visits of the district nurse may be eminently required. This difficulty, which only applies to exceptional cases, may be met, if thought desirable, by adopting such a plan as that in vogue at some provident dispensaries, where subscribers, in return for their contributions, are entitled to free nomination tickets to be reserved for cases of extreme poverty. The recipient of such a ticket would be entitled to the gratuitous services of the nurse. Probably for an annual subscription of £1 about four such tickets might be given. Where there is actual destitution, the guardians of the poor have power, under an order of the Local Government Board dated Jan 27th, 1892, to apply the rates for the purpose of nursing the out-door paupers, as is already done in the case of over 100 unions in various parts of the country. Such a course obviously tends in the long run to keep down the rates by diminishing the number of sick who would be compelled to go to the workhouse infirmary and also by helping to restore to health those who are dependent upon out-door relief. It is probable, therefore, that the guardians of the poor will frequently avail themselves of the occasional services of the district nurse and subscribe to her support.

The question may perhaps be asked, What need is there for the capital fund that is being raised in various localities towards establishing an institute of district nursing, if this can be worked on a provident, self-supporting basis? The reply is that such a fund, although not absolutely necessary, will help to give the movement a good start, by acquiring and furnishing a home for the nurses without deducting anything for the purpose from the contributions of the provident members. Moreover, there are various sick appliances, such as air-cushions, feeders, clinical thermometers, &c., which should be provided, and which can be lent gratis to provident members when the need arises.

In dealing with rural districts and a scattered population, some modification of the details of this scheme will be required, in adaptation to local circumstances. If on the one hand, the distances to be traversed by the nurse are greater and the number of visits she can pay is consequently reduced, this, on the other hand, will be to some extent compensated for by the more healthy condition of our rural population, which will less often require her services. But even if the details are altered, it is equally important to maintain a provident basis of work as preferable from its moral and economic aspects to a charitable one. The above remarks have referred especially to localities in which district nursing is being established in commemoration of Her Majesty's sixty years' reign. But there can be no great difficulty in introducing this scheme, even where the basis of work has hitherto been a charitable one. The two methods may for a time be worked side by side until the provident system is gradually substituted for the less desirable one.

In conclusion, this method of organisation presents several distinct advantages. First, the institute of district nursing, when once started, will be independent of charity, and can be maintained on a self-supporting, and therefore healthy, basis. Secondly, the working classes, instead of being encouraged to depend on the gratuitous help of others, are encouraged to make provision against the day of sickness, and a habit of thrift is promoted. Thirdly, the services of the district nurses will be more appreciated than if rendered gratuitously. Experience teaches that people value most what they pay for, and assuredly this applies to the question under discussion. The cumulative weight of these arguments must be readily apparent. No laments will be heard that the funds are insufficient for the work, and that an inadequate staff of nurses vainly endeavours to cope with an overwhelming amount of sickness. The institution becomes a help-myself nursing organisation, and enables the poor, by voluntary combination and at a trifling cost, to provide for skilled nursing, just as, by means of a provident dispensary, they now provide for medical aid and medicine. Such an institution, established on a provident, self-supporting basis, will be a power for good in a district, and will minister to the social welfare of the working classes.

Reading.

ANOTHER METHOD OF AMELIORATING BY OPERATION OTHERWISE INCURABLE INCONTINENCE OF URINE.

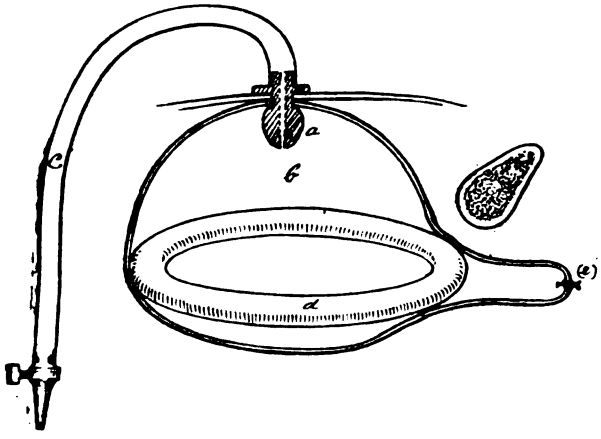
BY WM. ALEXANDER, M.D.R.U.I., F.R.C.S.ENG.,
SURGEON TO THE ROYAL SOUTHERN AND WORKHOUSE HOSPITALS, LIVERPOOL.

IN the fourth volume of the *British Gynæcological Journal*, p. 215, an uncorrected paper of mine appears, entitled "A Method of Treating Incontinence of Urine in the Female in Cases hitherto considered to be Beyond the Resources of Surgery." In that paper a fair amount of success was obtained by turning a paralysed urethra into the rectum, the latter viscus being able to retain the urine so long as to make the patient comfortable. This patient died about twelve months after operation, but not before she had put beyond doubt the practical use of this method of relief. Her condition was much inferior to that of nature, as she was practically in a condition resembling diarrhœa, having from six to eight evacuations daily, but at the same time the condition was a great improvement on her previous state, where she was continually wet and "reeking" with a urinous odour. In the same paper another case is described where an attempt was made to relieve a patient whose urethra had sloughed away. The same principle was adopted of depending on the rectal sphincter, but although we were on the verge of success the patient left the hospital before the urethral opening was closed.

Two years ago, on April 30th, 1895, a woman, aged thirty-four years, came into the Royal Southern Hospital suffering from incontinence of urine that had existed for the past fourteen years. She had always been delicate (tuberculous), and fourteen years ago she had diseased bone removed from the sacrum. It was after this operation that her urinary troubles began. At first she could not pass urine, then it began to dribble away, and she could not retain it for any length of time, and soon it flowed away constantly except when she was asleep, and then she would keep fairly dry for short periods. Examination on admission showed that she had no control over the rectum or urethra, the sphincters were quite flaccid, and the mucous membrane everted and congested. The uterus dropped down, and the lower part of the vaginal walls was everted. The whole vulva and perineum were congested, excoriated, and covered with salts and mucus that adhered to the hairs and skin, and the whole region looked, smelt, and felt very unpleasant. The idea of

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diverting the urine from the imperfect vesical reservoir into a rectal one, as had been done in the previous cases, was not applicable here, as the rectal sphincter was, in this case, paralysed, and would not hold water. I could find no reference to such a case in the manuals of surgery or in monographs on urinary diseases, and it was only after much thought that I determined to close the urethral opening, and make a permanent suprapubic opening as high as possible and to which an appliance could be fixed that would carry off the urine. How this idea was successfully carried out I will now proceed to show. The formation of a suprapubic opening did not present any difficulties, as the bladder could be pushed up into the wound by the aid of a catheter. The bladder wall was stitched to the wound in the skin, and the wound allowed to heal before the urethra was closed. The closure of the urethra is apparently a simple operation, but in practice I found it very difficult. Suprapubic drainage is very imperfect. The tube in the bladder becomes surrounded by mucous membrane and is practically closed, whilst the urine issues by the side of the tube, and, worst of all, the forces of nature tend to send the stream by the old channel, the urethra. Hence union of the plastic wound to close the urethra is not always or often sound along the whole line of suture the first time, and several operations were required in this case before closure was complete Experience suggests the following directions to the operator who wishes to close the urethra: First, insert a thin elastic ring pessary into the bladder through the suprapubic opening, which, when it expands, is to lie in the fundus vesicæ, with part of its circumference over the inner orifice of the urethra. This ring keeps the bladder from contracting, converts it into a pool that can be drained by a syphon, stops the natural tendency that exists to force the urine into the urethra, and blocks that opening. This extraordinary procedure was of great value, and I would certainly adopt it again. Its insertion, retention, and removal did not present any difficulties or inconveniences, although, theoretically, it should have produced both. The urethra is best closed by splitting the mucous and muscular coats, turning the former in towards the bladder, and stitching together its raw and now external surfaces with numerous fine catgut sutures. The raw surfaces of the muscular coat are simply brought together by fine silkworm gut sutures. The method of drainage is simplicity itself. It consists in the ivory nozzle of a Higginson's syringe with the curves of the neck and



The diagram represents the ivory nozzle (*a*) in the bladder (*b*), with its tube and stopcock (*c*), the pessary (*d*) lying in position in the bladder during the closure of the urethra, and the method of closure of the urethra (*e*).

body of the nozzle exaggerated so as to have the shoulder below the neck more pronounced. A rubber tube with a tap at the end that can be brought through the dress and so allow the bladder to be empted with more than usual facility completes the apparatus. It is really self retaining, but a bandage round the body prevents the ejection of the tube under any great strain or awkward twist of the body. When the tap is closed the urine collecting distends the bladder and the tube, and as these become distended the internal hydraulic pressure keeps the shoulder of the nozzle applied to the inner margin of the opening until the patient feels the distension and lets the water flow away. Dr. J. A. Craig and I were planning all sorts of apparatus to fit the aperture and keep the patient dry, but we found that the Higginson's nozzle was more effectual than all our perfect theoretical notions, and it took us some time to realise theoretically how such a simple contrivance was effectual. The patient left the hospital on Aug. 8th, 1896. She came to show herself on March 17th, 1897, with the apparatus in good working order, her skin quite dry, and healthy, no urinary odour about her, and her linen clean and unstained. She can manage quite well, no urine escaping except a little sometimes at night when she is asleep. Her uterus is protruding, and we have recommended an advancement of the perineum to support it, but as far as the incontinence is concerned the results have exceeded all our expectations. It supersedes completely the rectal reservoir idea, and does not come far short of affording all the advantages of the natural condition.

Liverpool.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON THE INJURIES IN THREE CASES OF PERSONS STRUCK BY LIGHTNING.

BY E. POCKLINGTON, M.R.C.S. ENG., L.S.A.,
AND
R. T. POOLE COLLYNS, M.R.C.S. ENG.

As cases of injury from lightning are comparatively rare in this country the following may be of interest, having recently occurred in our practice.

On June 24th, at about 6 P.M. we were informed that one man and two boys had been injured on Wimbledon Common. The boys were aged respectively nine and eleven years, and had taken refuge from the storm in a temporary wooden structure without a roof, but they had apparently taken a sheet of galvanised iron, and propped it up on the wood as a shelter. When seen they were cold and collapsed, with a slow pulse, and seemed dazed; hearing was much impaired, but the eyesight was not affected; the elder one had a patch of hair, 1 in. by 3 in., over the left parietal bone singed and a red bruise on the left forearm; he complained of shooting pains in both wrists, the right being the worse. During the night both of the patients were violently sick, but in the morning they seemed but little the worse for the accident, except that they were slightly deaf. On examining the clothes after they were dry a dark round patch, the size of a shilling, was seen on the cap of the elder one, and two singed lines on the inner side of the left shirt sleeve.

The man was aged nineteen years, and was quite dead when found. A necropsy was made twenty-one hours after death. The body was well nourished. Rigor mortis was just commencing. The hair over the left parietal bone and on the left half of the body and the left leg was singed; there was a burn over the left clavicle where the brace buckle had rested, and there were also small round burns corresponding to the eyelet holes of the boot on the dorsum of the left foot. Arborescent lines were present over the whole of the body, being most marked on the left side of the chest and on the left thigh. On removing the skull cap a minute fissure which corresponded with the singed patch of hair was found; the vessels of the dura mater were gorged and the left ventricle of the brain contained much fluid, while the right contained only a normal quantity; the blood throughout the body was fluid and there was only one small clot on the left side of the heart; all the organs were much congested. On examining the clothes a small hole was found in the cap and the inside lining was much torn. The left sock was in rags and the left boot was burst open along the outer side. The sole was intact; the nails round the sole were brass, but there had evidently been three large steel nails as in the usual place for these there were holes with charred edges.

Wimbledon.

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A NOTE ON TWO UNUSUAL COMPLICATIONS OF MIDWIFERY.

BY J. B. PIKE, M.R.C.S. ENG.

ON Oct. 2nd, 1896, I attended a multiparous woman. On arriving I found a tumour protruding from the anterior part of the vagina. It was somewhat difficult to ascertain its nature. In consistence it was something like dough, covered by mucous membrane, but with an indistinct feeling of fluctuation. It was almost plum-coloured, and about 2 in. long by 1 in. broad. Emptying the bladder had no effect upon it, and on making a complete examination it was found to be continuous with the os uteri. The head of the fœtus was lodged on the pubes of a somewhat narrow pelvis. I delivered with forceps under chloroform, and the elongated and œdematous anterior lip of the os, for it was this which formed the swelling, gradually receded without any serious symptoms.

On Jan. 15th, 1897, I attended a married woman. A midwife was in charge of the case, and her history of it was that it was something "she had never seen before." There was a contraction of the vaginal outlet so great that one finger could only be inserted with some force, and then only up to the middle joint. The woman had already borne a child with a natural labour. The contracted band, which was probably cicatricial, was divided by multiple incisions under chloroform, until sufficient room was gained to dilate with the hand, and the case was completed with forceps. Posteriorly a finger could be passed under the mucous membrane, between the vagina and the rectum, but owing in great measure to the excellent nursing of our district nurse the case went on very favourably.

Loughborough.

NOTE ON A CASE OF ACUTE ASCENDING PARALYSIS.

BY E. CECIL WILLIAMS, M.B. CANTAB.,
PHYSICIAN IN CHARGE OF OUT-PATIENTS, HOSPITAL FOR SICK CHILDREN AND WOMEN, BRISTOL.

THE probable diagnosis of the following case rests almost entirely on the history given by the mother, as the child was seen only twice just before death. The mother refused to allow the child to be admitted into the hospital, and it was impossible to obtain permission for a post-mortem examination. There had been seven children, the fifth and sixth of whom had died at ten weeks. The mother said that both had appeared perfectly healthy at birth. At the end of the first week she noticed that they did not kick when they had their baths, they gradually got weaker, the paralyses extending upwards, and both died at ten weeks, with inability to swallow or cry and failure of respiration—symptoms of bulbar paralysis. The elder children were perfectly healthy. The youngest, a full-time male child, appeared at birth to be quite healthy. At the end of the first week the mother noticed that the child did not use his legs. She said that he gradually got more feeble, but not so rapidly as the two previous children had done. At six weeks the mother noticed the breathing to be peculiar. When I first saw the child two weeks before his death he was in the following condition. The arms were slightly flexed, the forearm and hand were in a position of hyperpronation. It was impossible to fully extend the forearm on the arm; the tendon of the biceps could be felt perfectly tense when an attempt was made to extend the forearm. It was also impossible to fully supinate the hand and forearm; the fingers were slightly flexed into the palm. The intercostals were paralysed; there was diaphragmatic breathing. The abdominal muscles did not move. The legs and feet lay motionless and perfectly helpless; there were no contractures of the feet. The knee-jerks were abolished, and the plantar reflexes were almost absent. There was no muscular wasting, and sensibility did not seem to be impaired. The child did not have any difficulty in passing urine or motions; the latter were very offensive. He rapidly became worse, was unable to swallow, there was difficulty of respiration and inability to cry, and he died aged four months and two weeks. From the mother's account, which I have every reason to believe is a correct one, there seems to be no doubt that it was an ascending paralysis. There had not been any difficulty at birth; the labour was natural. There was no history of syphilis; the mother was perfectly healthy. She never noticed any sore on the cord that could have been the means of entry of any poison. There did not appear to be any swelling of the spleen or any of the mesenteric glands. They lived in a perfectly healthy house in the country; there was no history of malaria.

Landry's paralysis has occurred very rarely in children.[1] A case has been recorded in a boy aged eleven years, but it may possibly have been a case of peripheral neuritis; the boy recovered.[2] A case of ascending paralysis after whooping-cough has been recorded in a boy aged three years. The case recovered. It was regarded as of toxic origin.[3] Landry's paralysis is now regarded as being caused by a toxin. The occurrence of the disease in three successive children, commencing in the same way and running an almost identical course would in this case seem to suggest a common cause, possibly of toxic origin. The progress of this case was perhaps somewhat slow, but the symptoms fit in extremely well with those of Landry's paralysis, as given by Diller and Meyer.[4]

Clifton, Bristol.

NOTES OF TWO CASES OF DERMATITIS FROM CONTACT WITH THE PLANT "ANGELICA."

BY DAVID WALSH, M.D. EDIN.,
PHYSICIAN TO THE WESTERN SKIN HOSPITAL, LONDON.

THE dermatitis venenata set up by contact of the skin with various drugs and plants is interesting from various points of view. In this country perhaps the most common form in recent years is that due to the "primula obconica." A short while since two cases of acute dermatitis caused by gathering the plant "angelica" came under my notice.

A youth, aged eighteen years, a confectioner, pale, but apparently well-nourished, presented himself at the Western Skin Hospital on May 24th, complaining of an irritating rash on the forearms. He himself attributed the attack to the gathering of the plant "angelica," which he called "cow's parsley," in Regent's Park six days previously. When cutting the plant he had his sleeves rolled up and the leaves and juices came freely into contact with the front of the forearms. Next day he was attacked with an intensely burning and itching pain. On examination the parts indicated were found to be in an acutely inflamed condition and the inflammation was rapidly spreading both round to the back of the forearms and down to the hands. On the right forearm was a broken bleb the size of a shilling. The patient stated that a friend who helped him in gathering the plant was attacked in a similar fashion. In the friend's case, however, there was much more blistering and less pain, and the patient recovered in a few days under treatment with a simple zinc ointment. This rapid cure is interesting when compared with the intensity of the process in the patient who came to the hospital, and in whom the dermatitis persisted for several weeks.[5]

I have been unable to find any record of similar cases, although the plant, or rather its resin, is mentioned by Fernie as a skin stimulant. In the present case it was gathered for the purposes of preserving. When candied it is used very largely by confectioners for ornamenting cakes, and is not unlike fine green stalks of celery in appearance. In his book on "Herbal Simples" Fernie gives the following account of "angelica" (or "master-wort"): "The wild Angelica grows commonly throughout England as an umbelliferous plant, with a tall, hollow stem, out of which boys like to make pipes. It is purple, furrowed, and downy, bearing white flowers tinged with pink. But the herb is not useful as a simple until cultivated in our gardens, the larger variety being chosen for this purpose, and bearing the name Archangelica. It came to this country from northern latitudes in 1568. The aromatic stems are grown abundantly near London in moist fields for the use of confectioners. These stems when candied are sold as a favourite sweetmeat; they are grateful to the feeble stomach and will relieve flatulence promptly. The roots of the garden Angelica

[1] Starr's American Text-book of Diseases of Children.
[2] Ashby and Wright: Diseases of Children, Medical and Surgical.
[3] Brit. Med. Jour., Aug. 13th, 1887.
[4] American Journal of the Medical Sciences, April, 1896.
[5] The patient was shown at the meeting of the Dermatological Society of Great Britain and Ireland on May 26th.

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contain plentifully a peculiar resin called "angelicin," which is stimulating to the lungs and to the skin. The infusion will relieve flatulent stomach-ache and will promote menstruation; it is also of use as a stimulating bronchial tonic in the catarrh of aged and feeble persons. Angelica is said to cause a disgust for spirituous liquors. In high Dutch it is named the root of the Holy Ghost. The fruit is employed for flavouring some cordials, notably Chartreuse. Gerard says: 'If you do but take a piece of the root and hold it in your mouth; chew the same between your teeth; it doth most certainly drive away pestilent aire.'"

Pump-court, E.C.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ROYAL FREE HOSPITAL.

A CASE OF CONGENITAL SHORTNESS OF METACARPAL AND METATARSAL BONES.

(Under the care of Mr. E. W. ROUGHTON.)

A DOMESTIC servant, aged thirty years, applied for treatment on account of an inflamed corn on the third toe of the left foot. It was noticed that the fourth toe was much shortened. The right foot at first sight appeared normal, but on closer examination it was seen that the big toe was shortened owing to the metatarso-phalangeal joint being



further back than usual. The hands presented a similar deformity. When the fingers were extended the tips of them were very nearly in line owing to relative shortness of the middle and ring fingers. When the fingers were flexed at the metarcarpo-phalangeal joint the knuckles presented an irregular line owing to shortness of two of the metacarpal bones. The accompanying skiagraph demonstrates very clearly the nature of the malformation. The fourth metatarsal bone of the left foot, the first metatarsal bone of the right foot, and the three inner metacarpal bones of both hands are stunted, being about two-thirds of their normal length. The heads of the bones are curiously mis-shapen, somewhat resembling the changes met with in large joints affected with Charcot's disease. The patient presented no other deformity and knew of no similar condition in any other member of her family. She complained that her hands were somewhat weak, but her feet caused her no trouble with the exception of the inflamed corn, which was due to an ill-fitting boot.

Remarks by Mr. ROUGHTON.—The patient attributed the deformity of the hands to an injury she had received in childhood, but she could offer no explanation of the condition of the feet. I think there can be no doubt that the deformity is of congenital origin, but I am unable to offer any further explanation of it.

BRISTOL GENERAL HOSPITAL.

A CASE OF MULTIPLE ANEURYSM; NECROPSY; REMARKS.

(Under the care of Dr. J. LACY FIRTH.)

A MAN, aged sixty-eight years, was in September, 1896, admitted to the Bristol General Hospital under the care of Dr. J. Lacy Firth. The patient complained of a cough which he had had for twenty years, of weakness, of some difficulty in swallowing, and of pain and numbness in the arms and fore-arms. He first noticed pain in the arms, chiefly in the axillæ, fifteen months previously. The pain led him to examine the axillæ and he found a swelling in each. He ceased to work twelve months previously. The swelling in the right axilla, he said, had diminished latterly, and the severe pain, which used to shoot down the arm and fore-arm had also diminished. In fact, on admission he said he considered that there was very little amiss with the right arm. No history of syphilis or other venereal disease was obtainable. He had worked as an ordinary labourer all his life since boyhood, with the exception of a year or two at first, when he had acted as stoker on a steamer. He was thin, sallow, and broken-down in appearance, with a weak and hoarse voice. His cough was very troublesome, and examination of the chest revealed signs of bronchitis and emphysema. There was deficient expansion of the chest and prominence of the sterno-mastoids in the neck. Numerous râles were audible over the lungs and the cardiac dulness was replaced by resonance. Careful inspection revealed a slight degree of pulsation in the second right intercostal space close to the sternum, and the first, second, and third spaces on this, the right side, had impaired percussion resonance near the sternum. Occasionally, and only with difficulty, a faint systolic bruit could be heard in the same area. The apex beat was in the fifth left space and half an inch internal to the nipple line and was feeble and the heart sounds were weak. No cardiac bruits were heard. Beneath the right sterno-mastoid with the fingers and thumb passed deeply behind its internal and external borders respectively, the carotid artery could be grasped and was felt to be dilated into a fusiform swelling, extending two and a half inches upwards from the clavicle. With the arms abducted there was seen protruding downwards between the axillary folds on each side a globular swelling with expansile pulsation. Palpation showed these to be the lower extremities of oval pulsating tumours extending upwards in the axillæ towards the clavicles, and the upper ends could not be reached from below. The left one was a good deal larger than the right, and produced conspicuous bulging in the sub-clavicular region. The cephalic veins in both arms were distended and there was a network of distended veins in the right sub-clavicular region. The right radial pulse was weaker and smaller than the left. The patient died from bronchitis and exhaustion a few weeks after admission.

Necropsy.—The heart, thoracic aorta, and branches of the arch, the axillary arteries and portions of the brachials were removed *en masse*, with the trachea and œsophagus. There were found an aneurysm of the second and third parts of each axillary artery of the mixed fusiform and saccular type, a fusiform aneurysm of the right carotid, a mixed aneurysm of the innominate artery, and dilation of the ascending aorta. Of these the innominate was the largest. It involved the whole of the artery and was four inches long

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and two and a quarter inches in diameter. The right subclavian and carotid arteries sprang from the convex upper surface of the aneurysm and were a third of an inch apart at their origins. The axillary aneurysms were closely surrounded by the branches of the brachial plexus of nerves. The left was four inches long, and the right two and a half inches. The carotid aneurysm was two inches long and purely fusiform. The right bronchus was concealed behind the innominate aneurysm. There were no valvular heart lesions or conspicuous renal changes.

Remarks by Dr. FIRTH.—Aneurysms are usually single. It is not, however, uncommon to meet with symmetrical aneurysms of each popliteal artery. The similarity of the anatomical relations of the two arteries and the equal functional activity of the affected parts render each of these arteries equally liable to form an aneurysm. But symmetrical aneurysm of each axillary or subclavian artery is rare. In these arteries aneurysm is almost always single, and much commoner on the right side than on the left, no doubt by reason of the greater functional activity usually of the right arm. For the same reason one would expect a right aneurysm of the axillary artery to be larger than the left in a case of double aneurysm, but in my case the right was the smaller. Probably the diminution in size of the right aneurysm and the amelioration of the pressure symptoms were due to the development of the innominate aneurysm, and the weaker pulse on the right side, the side of the smaller axillary aneurysm, is similarly explainable. Erichsen[1] stated that he was acquainted with only one case in which both axillaries were aneurysmal. The same writer mentions two cases in which symmetrical intracranial aneurysms formed on the internal carotid arteries, and Mr. Pearce Gould[2] has alluded to examples of aneurysm in each vertebral artery within the skull, and even of one in each hepatic artery. Identity of anatomical relationship will again explain the symmetry of these aneurysms. Multiple aneurysms are sometimes developed in patients with rheumatism and malignant endocarditis, and are of embolic origin. Spontaneous aneurysm in young people under twenty years of age is probably always embolic and found in association with valvular heart disease, and is frequently multiple. A special aneurysmal diathesis is sometimes spoken of as explaining the existence of multiple aneurysm. But there is no advantage gained by using such an expression. Multiple aneurysms obviously form, because the degeneration of the arterial walls has advanced sufficiently far, in more than one place, to yield before the blood pressure. As degeneration of arteries is a widespread change, it is remarkable that multiple aneurysm is not more frequently met with. Perhaps the infrequency of its occurrence points to the frequent operation of other accessory and immediately exciting causes in the production of the aneurysm, in addition to the predisposing cause of arterial degeneration—e.g., of injury, which ruptures an atheromatous abscess in the middle, or middle and internal coats of the artery. Erichsen mentions an extraordinary case of Pelletan's, in which there were no less than sixty-five aneurysms present.

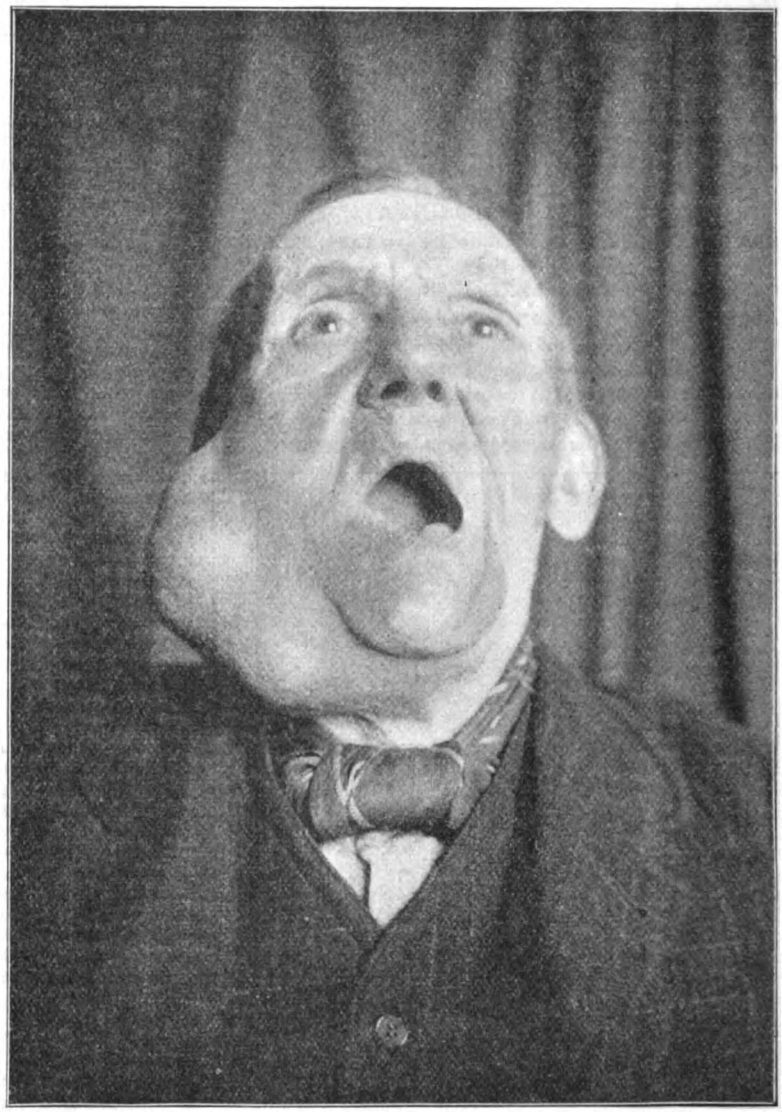
[1] Science and Art of Surgery, vol. ii., p. 205.
[2] Treves's System of Surgery, vol. i., p. 589

ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE.

A CASE OF LARGE PAROTID TUMOUR SUCCESSFULLY REMOVED FROM AN OLD MAN.

(Under the care of Mr. FREDERICK PAGE.)

THE complex new-growth of the parotid gland, which is often called the "glandular parotid tumour," is on the whole possessed of but little malignancy; in most cases these growths are readily removed after having existed for years and having attained a large size.[1] Their structure has claimed for them the cacophonous title of chondro-myxo-fibro-adenoma, for they frequently contain all these tissues. The



malignancy which they sometimes possess is apparently dependent on the presence of sarcomatous elements amongst the fibrous tissue.

Some eight years ago Mr. Page was consulted by a man with a large parotid tumour of many years' growth and recommended its removal. The patient refused to undergo an operation on account of his age. In July, 1896, Mr. Page again saw the man, who was then seventy-one years old. The tumour had grown a good deal, protruding into the

[1] Paget: Lectures on Surgical Pathology of Tumours, third edition, p. 521.

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mouth and throat so as to seriously interfere with his swallowing and his breathing. The illustration shows very well the condition. An operation had become necessary. On Aug. 1st a long incision was made through the skin from the right ear nearly to the angle of the left jaw, and the tumour was enucleated in one mass without injury to the mucous membrane of the mouth and throat. The growth was somewhat firmly connected with the base of the skull, and it was necessary to plug the upper part of the deep wound in order to check bleeding from a vein which could not be tied. Very little constitutional disturbance followed, and the patient made a rapid recovery. In consequence of injury to the facial nerve the cornea of the right eye sloughed, and the eye was removed in the following October. The patient was in good health till a week ago, when he died at the age of seventy-two years.

Remarks by Mr. PAGE.—The case illustrates the uncertainty as to the difficulty in removing these large chronic parotid tumours. Great difficulty was anticipated in this case, but the tumour shelled out quite readily, and very little blood was lost. The old man, too, bore the operation well.

FYZABAD SADR DISPENSARY.

A CASE OF CIRSOID ANEURYSM OF THE SCALP; LIGATURE AND ACUPRESSURE FOLLOWED BY IMMEDIATE AND COMPLETE EXCISION; RECOVERY.

(Under the care of Surgeon-Major J. J. PRATT, I.M.S., Civil Surgeon, Fyzabad.)

CIRSOID aneurysm is a comparatively rare condition, and its treatment presents great difficulties to the surgeon. Should the incision invade the diseased tissue the hæmorrhage is so profuse as to endanger the life of the patient, and, further, the thinning of the arterial walls often extends much beyond the apparent swelling, so that the disease is very liable to return and progress after the original mass has been destroyed or removed. The procedure adopted by Surgeon-Major Pratt promises well to be the best method of treatment, as the preliminary ligature of the supplying arteries prevents any great danger of hæmorrhage during the operation, and the complete excision of the diseased vessels offers the best guarantee against recurrence. Mere ligature of the arteries entering the tumour is of very little benefit. It would be of interest to learn the condition of the patient when a longer period has elapsed since the operation.

A Brahman, aged thirty years, was admitted into the dispensary on Jan. 4th, 1897, suffering from a typical cirsoid aneurysm of the left side of the scalp. The arteries affected were the temporal, both anterior and posterior branches, and the occipital. The tumour, which was prominent and lobulated on the surface, occupied practically the whole of the left side of the head above and behind the ear, and was made up of a number of dilated and tortuous arterial branches, the largest of which in their most dilated parts were equal in size to an average forefinger. Pulsation could not be entirely checked by compression of the temporal in front of the ear and the occipital immediately above the nape of the neck, where in its enlarged condition it first became visible. It was consequently evident that to some extent, as was to be expected, the tumour was fed by the supra-orbital and frontal arteries of the same side and the temporal artery of the opposite side, and, as a matter of fact, on careful examination these were found to be slightly enlarged. A thrill was detected over the centre of the growth and for some distance along the larger feeding vessels. The patient stated that three years ago he noticed a small, rounded swelling on the left side of the top of his head, which pulsated and was painful. It slowly but steadily increased in size until it attained its present dimensions. Four months ago he lost a considerable quantity of blood from it and nearly died. Fearing a recurrence of this mishap he sought surgical aid in the hope of a cure being effected. He was unable to assign any cause for the growth, and could not recollect having sustained any local injury prior to its first appearance. The skin over the most prominent part of the tumour in the posterior parietal region was atrophied and thinned to a dangerous extent and in one spot showed signs of having given way not long before, thus bearing out the truth of the patient's statement regarding the hæmorrhage which had occurred. The case was manifestly one in which immediate operative interference was called for. Accordingly, on the morning of Jan. 7th, the patient, who was in fair condition but decidedly anæmic, was placed under the influence of chloroform, the scalp having first been carefully shaved and cleansed. An incision was made over the left temporal artery immediately in front of the tragus and the vessel at once ligatured. At the other end of the tumour a harelip pin was passed underneath the occipital artery and a ligature tightly applied round it. The pulsation in the tumour was then found to have almost entirely stopped; in one or two places only was it faintly perceptible. An incision was then made gradually around the whole mass of the tumour, commencing at its posterior border about an inch above the spot where the needle was passed under the occipital artery. Forcipressure was applied in fourteen places in the course of the incision. The tumour was then dissected off the pericranium, ligatures of carbolised catgut were applied round the different bleeding points, and the forceps removed. Three vessels in the pericranium which could not be tied gave considerable trouble; finally, the bleeding from them was arrested in two by acupressure and in the third by the application of a pair of bulldog forceps, both needles and forceps being left for the time being *in situ*. The edges of the wound, which measured five and a half inches in length by a maximum of three and three-quarter inches in breadth, were then brought together as far as possible by harelip pins and sutures, its surface was swabbed with a solution of perchloride of iron and a compress and bandage were firmly applied. The loss of blood during the operation was considerable, but, taking the nature of the case into consideration, no more than was to be expected. The patient was kept in absolute quiet and rest and on liquid diet. A mixture containing small quantities of quinine and opium was administered with a view to checking the rise of temperature so common in malarial subjects after surgical operations of any kind. The progress of the case was as follows. On the 7th, 8th, and 9th he was doing well. There was no pain or hæmorrhage. The dressings were left undisturbed. On the 10th the compress and bandage were removed. The surface of the wound in the scalp was covered with iron scab. It was dressed with iodoform and carbolised lint. The incision over the temporal artery had practically healed. The morning temperature was normal, the evening temperature being 100° F. A saline diaphoretic and laxative mixture was ordered to be given every four hours. On the 11th there was no fever and he was doing well. On the 14th the temperature was normal. Two harelip pins and several sutures were removed. On the 15th the margins of the wound were granulating. The acupressure needle from beneath the occipital artery and the remaining stitches were removed. On the 17th the progress was maintained. The patient was on full diet and was putting on flesh. On the 19th the ligature on the temporal artery came away; the wound was contracting. On the 26th progress had been uninterrupted during the past week. By Feb. 6th the wound had become considerably reduced in size and was rapidly healing. There was no pulsation in any vessel in the neighbourhood. The arteries of the front and the opposite side of the scalp had returned to their normal size. On the 22nd the patient was discharged to the out-patient department with a healthy granulating ulcer of the scalp two and a quarter inches long by one and three-quarter inches broad at the widest part.

HOSPITAL REFORM AT BRISTOL.—A meeting of the Hospital Reform Association was held at Bristol on June 16th under the presidency of Dr. Markham E. Skerritt. The discussion which took place brought out the fact that while the medical profession at Bristol are agreed that reform of some sort is necessary, they are not quite unanimous as to the direction in which reform should go. The following resolution, proposed by Mr. Garrett Horder, was passed: "That in the opinion of this meeting it is most desirable that the medical charities of Bristol and Clifton should be restricted as far as possible to the wants of the necessitous poor, and it is further of opinion that the recommendations of the Hospital Reform Association for the prevention of the abuse of the out-patient and casualty departments are deserving of consideration by the governing bodies and acting medical staff of the various hospitals and dispensaries."

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Medical Societies.

BRITISH GYNÆCOLOGICAL SOCIETY.

Carcinoma of the Cervix treated by Curettage and Chloride of Zinc Paste.—Puerperal Peritonitis treated with Anti-streptococcic Serum.—Exhibition of Specimens.

A MEETING of this society was held on June 10th, Mr. A. W. MAYO ROBSON, the President, being in the chair.

The Secretary read a paper by Dr. JOHN MEEK (Canada) on two cases of Advanced Carcinoma of the Cervix treated by Curettage and Chloride of Zinc Paste. The first patient made a good recovery. In the second case the patient went on well for four days with no rise of temperature and passing plenty of urine; then suppression of urine supervened; the bladder was empty. There were no uræmic symptoms after the stoppage for forty-eight hours, then there was a tendency to stupor and occasional slight delirium for twenty-four hours preceding death. There was no post-mortem examination, but it was probable that the ureters had become obstructed from pressure of the eschar, the result of the zinc cauterisation.—Mr. BOWREMAN JESSETT and Dr. PURCELL, speaking on the paper, said that they had now treated about fifty or sixty cases at the Cancer Hospital by this method with one death. There were about a dozen patients operated upon from one and a half to two and a half years ago who presented so far no recurrence. Though the treatment could not be considered curative it prolonged life and rendered it much more comfortable.

Dr. R. T. SMITH read a paper on a case of Puerperal Peritonitis treated with Anti-streptococcic Serum. The patient, a primipara, had been the subject of tubal mischief. The labour was normal, and so was the puerperium for two days, after which symptoms of septicæmia set in, and it was thought that this might be due to rupture of the diseased tube. The question of abdominal section was considered, but it was decided against. On the fifth day 10 c.c. of anti-streptococcic serum were injected, repeated on the seventh day. There was temporary improvement, after which the patient became worse, and on the ninth day abdominal section was again considered, but it was thought that the patient was too weak for it, so stimulants were pushed and the serum treatment persevered in. Alternations of improvement and relapse succeeded, but eventually the patient began to gain ground, and finally recovered. Dr. Smith concluded that abdominal section in the first instance would probably have been the wiser plan. The serum treatment certainly did no harm, and probably in this case prevented a fatal issue; he thought that it was well worth trying in such cases.—Dr. JOHN SHAW said that he had used the anti-streptococcic serum in one case. The puerperium was normal for three days, then fever developed. He at once began with 20 c.c. of the serum; in six hours another 10 c.c. were given, and this amount was then repeated twice daily. He noted that the temperature always seemed to be higher just after the injection. Streptococci were found in the vaginal secretion. Eventually an abscess formed in the left Fallopian tube.—Dr. GRANVILLE BANTOCK thought that there was no distinct evidence that the serum played any important part in the favourable result.

Dr. MACNAUGHTON JONES showed a specimen, together with a microscopical preparation, of Carcinoma of the Kidney for which nephrectomy was performed. The patient made a good recovery.—Mr. BLAND SUTTON said that the malignant tumours of the kidney were—(1) carcinoma, like the present specimen, which was extremely rare; (2) sarcoma arising in the connective tissue of the pelvis of the kidney; and (3) sarcoma associated with the suprarenal capsules, which was probably the least malignant form.

Mr. R. H. HODGSON showed a specimen of Fibro-myoma of the Right Broad Ligament. It was so closely associated with the uterus that he performed panhysterectomy. The patient made a good recovery.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

Election of Officers.—Climatic Treatment of Phthisis.—Gouty Liver and Sulphur Spas.

THE second general meeting of this society was held at the rooms of the Medical Society of London on June 9th, the President, Dr. ANDREW S. MYRTLE (Harrogate), being in the chair.

The officers for the ensuing year were elected, Dr. William V. Snow (Bournemouth) being the President-elect.—Dr. HYDE read the report of the Council. The total number of Fellows was now 340.

The adjourned discussion on Dr. SNOW'S paper dealing with the Climatic Treatment of Phthisis was resumed.—The following took part in the discussion: Dr. SYMES THOMPSON, Dr. WILLIAM EWART, Dr. CARL RUEDI, Dr. ROBERT LEE, Dr. ST. CLAIR THOMSON, and Dr. SEPTIMUS SUNDERLAND.—Dr. SNOW, in replying, said that he believed that treatment by altitude in suitable cases would secure more permanent and better results than by treatment in the South of France, England, or anywhere else. There were few cases he would send to South Africa other than young men whose friends could provide moderate means and who were likely to be satisfied with the open-air life on farm land.

The PRESIDENT then read a paper entitled Gouty Liver and Sulphur Spas, giving the results of his treatment of certain cases of enlarged liver occurring in gouty subjects by the use of the Harrogate sulphur waters. He never resorted to deep massage until the congestion and enlargement of the liver had been much relieved by the waters.

Reviews and Notices of Books.

Materia Medica, Therapeutics, and Pharmacology. By GEORGE FRANK BUTLER, M.D. Pp. 858. London: The Rebman Publishing Company. 1897. Price 22s. 6d.

THIS book is dedicated to the medical students of the United States, and the author is Professor of Materia Medica and Clinical Medicine in the College of Physicians and Surgeons, Chicago, hence for English readers it necessarily contains much that extends beyond the range of English practice in relation both to pharmacopœial drugs and pharmaceutical preparations. The author excuses the omission of reference to many new and comparatively untried remedies on the ground that they are as yet too imperfectly known to warrant association with remedial agents bearing the sanction of exhaustive scrutiny, but to balance matters, he has also excluded a few official drugs (U.S.P.), because they are practically never used or are employed only in isolated instances.

The arrangement of the material in this book differs considerably from that which is ordinarily adopted. The early pages comprise a classification of medicines and also the usual tables of weights and measures, and these are immediately followed by a detailed consideration of pharmaceutical preparations. In connexion with these the author aims at presenting in brief form the results rather than detailed descriptions of processes. A large number of elixirs are enumerated, and they are defined as being a class of "elegant preparations similar to wines or cordials, composed of water, sugar, alcohol, and aromatics." The list of elixirs extends over four pages, and they are obviously intended to act as vehicles to mask or modify the taste of nauseous drugs. The details given respecting these are scarcely sufficient to enable them to be dispensed, and the lists of these and of other official preparations indicate more the relative strength of the preparations than the exact constituents. Doubtless the author has exercised a wise discretion in thus eliminating mere technicalities of dispensing and preserving only those facts which it is important for the prescriber to remember.

The consideration of drugs employed in medicine naturally occupies the greater portion of the book, and drugs are for descriptive purposes considered under the headings of Disease Medicines, Antiseptics, Symptom Medicines, and Topical Remedies. It must be admitted that this classification

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is extremely arbitrary. Thus, in the first class of Disease Medicines the author includes restoratives comprising digestants, fats and oils, mineral acids, vegetable acids, alkalies, mineral waters, bitters, and hæmatics; while under the heading of Symptom Medicines he groups together such remedies as antispasmodics, antipyretics, anæsthetics, hypnotics, and the like.

The general plan of the consideration of each drug is as follows. First, its origin is given with as few technicalities as possible, then the drug is described and its physical properties are dealt with briefly. The dose follows, and after this is placed a list of incompatibles, wherever it is possible for these to be enumerated; and having thus indicated with what remedies the particular drug cannot be given, the author next enumerates the synergists, or drugs which it is convenient to prescribe at the same time. These preliminaries are followed by a description of the physiological action, and this description necessarily varies in length according to the importance of the drug and according to the knowledge of the action upon the different physiological systems. With some drugs—as, for instance, with the compounds of arsenic—the physiological actions externally, locally, and internally upon the digestive system, circulatory system, nervous system, respiratory system, &c., are given in detail. The mention of this drug will serve to indicate one valuable innovation to be found in this work. After the physiological action, the author describes under a separate heading of Untoward Action the undesirable effects produced by medicinal doses in very susceptible persons. The description of these symptoms we greet with satisfaction, as they are in so many cases the indications for diminishing the dose, or for discontinuing the administration of the drug, and they are the symptoms which mark the border-line between beneficial and prejudicial actions of medicines, and should therefore be recognised before true toxic effects are to be expected. The paragraph upon Untoward Action is followed by a description of poisoning, both acute and chronic, together with a very brief account of the treatment of cases of poisoning.

Under the heading of Therapeutics the author describes the application of the drugs to particular diseases. In some cases he appends a short list of the contra-indications to the employment of the remedy, and also supplies sundry hints connected with the administration of the drug, these hints including such questions as the time of administration, the mode of administration with regard to dilution, and the reasons for selecting one official preparation rather than another.

After this detailed account of the various drugs employed in medicine, much space is devoted to the rules which govern prescribing in Latin. These rules extend to the language and grammatical construction of prescriptions, and some of the pages look very much like those of a Latin grammar, in which the names of drugs replace the old familiar variations of what Balbus did with a wall. It may be doubted whether in a work of this description it is necessary to give a half page to the declension of the numerals *unus*, *duo*, and *tres*. The author, however, defends the introduction of such very elementary facts by his concluding sentence, which runs thus:—"No matter how able a diagnostician, pathologist, or bacteriologist the new doctor may be, if his first effort in prescription writing be illegible, poor Latin, or for a hopelessly incompatible mixture, the druggist will label, classify, and measure him with the keenness of professional insight. The judgment will go forth quietly, and years of successful practice may not serve to eradicate that first unfavourable impression."

The information conveyed in this book is sufficiently up to date, and it is expressed in simple language under headings which facilitate reference and study.

Traité de Chirurgie clinique et opératoire. Par A. LE DENTU, Professeur de Clinique chirurgicale à la Faculté de Médecine de Paris, Chirurgien de l'Hôpital Necker, et PIERRE DELBET, Professeur agregé à la Faculté de Médecine de Paris. (*A Treatise on Clinical and Operative Surgery*). Tome I., pp. 822. Paris: J. B. Baillière et Fils. 1896. Price 12 francs.

THIS is the era of "Systems" of Surgery and the allied sciences. At the present time there are appearing five or six works, each devoted to surgery, and each consisting of several volumes, from four to as many as ten. Some claim to be "international," but most represent one country only. There are obvious advantages in having the various portions of a subject so large as surgery dealt with by several writers, for no one surgeon can represent adequately all its branches. Though the advantages are great, there are disadvantages no less certain and obvious. The great difficulty is that it is practically impossible to secure any real uniformity in the fulness with which the various departments of the subject are treated. It is the duty of the editor to attempt to reduce all the contributions to one uniform level and to remove any inconsistencies between the statements in different articles, but even when all possible care has been exercised it is never found that anything really resembling uniformity has been attained.

This treatise on clinical and operative surgery is intended to extend to ten volumes. With the names of Professor Le Dentu and Professor Delbet as editors we have a guarantee that the work will be well done. The distinguishing characteristic claimed for this treatise is that it contains an account of the surgery of the present day, not that of times which are past. Very little space is devoted to the history of the subject, and discarded methods of treatment are ignored. It is intended that it shall contain a full account of recent advances in pathological anatomy and in bacteriology, with all the important modifications which they have brought about in surgical therapeutics—those operative methods which have extended so much the field of surgical activity. This, the first volume, deals only with general pathology and the surgical diseases of the skin. The section devoted to general pathology is by several writers, and the most important article in it is that on Neoplasms by Professor Delbet, one of the editors. He gives an excellent account of the pathology of neoplasms, and treats with especial fulness the question of the etiology of malignant growths, which has of recent years received so much attention. After a very complete presentation of the views of all observers, with copious references to the work that they have done, Professor Delbet comes to the conclusion that, though it is possible that malignant tumours may be due to parasites, yet no satisfactory proof has up to the present time been given of any such origin. This is an opinion in which the majority of English pathologists will concur.

Cases have from time to time been observed, in which tumours, diagnosed as sarcomatous in nature, have either disappeared or undergone great diminution during an attack of erysipelas. These facts have naturally greatly impressed surgeons, and various attempts have been made to utilise the influence of erysipelas as a therapeutic agent in malignant disease. The first attempt was made by Fehleisen in 1882, and he was followed by many others, who employed the method both in sarcomata and in carcinomata, but in the former alone have the results been worthy of notice. Solutions of streptococci have been used in some cases, and in others sterilised and filtered cultures, and in others again streptococcic serum has been the agent employed. The results obtained differ greatly in the practice of different surgeons, but the conclusion to which Professor Delbet comes is that, though in most cases the injections have a

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marked effect upon the growth, yet the effect is nearly always merely temporary, and in some cases death has resulted.

In the section on Cicatrices, by Dr. Lyot, an account is given of an operation of an exceedingly ingenious nature. Dr. Guermonprey (of Lille) had a patient in whom a large cicatrix, which had recently become sarcomatous, occupied the postero-lateral portion of the body and had commenced to invade the axilla. To cover in the large surface left after removal of the growth, the operator decided to sacrifice the upper arm while keeping the forearm and hand. The integuments of the upper arm, with some muscular substance, were raised in two flaps (anterior and posterior), with their bases at the shoulder, and were laid down on the bare surface resulting from the extirpation of the tumour. The shaft of the humerus was removed, and the two epiphyses were sutured together, the skin of the forearm being stitched to that of the shoulder. Unfortunately, we are not told what was the ultimate result of this heroic performance.

The surgical diseases of the skin are satisfactorily treated; but there are several other lesions of the skin which might have been considered surgical.

It is decidedly a pity that the volume has no alphabetical index; no doubt there will be an index in the final volume, but it adds much to the convenience of the reader if each volume in a treatise of many volumes has an index of its own. The illustrations are hardly satisfactory, they are scanty and crude. If the succeeding volumes equal the one before us, this treatise on Surgery will be excelled by none of those which have hitherto appeared.

Guy's Hospital Reports. Edited by E. C. PERRY, M.A., M.D., and W. H. A. JACOBSON, M.A., M.Ch. Vol. LII. London: J. & A. Churchill. 1896.

MANY besides "Guy's men" will read with sympathetic appreciation the tribute paid by Mr. Jacobson to Arthur Edward Durham. This memoir, to which is prefixed an admirable portrait, for fulness, for keen and loving analysis of a most lovable and gifted character, deserves a high place in biographical writings. It is surely inspired by no common affection, and it gives a picture of its subject which is worthy both of him and of his friend. Of the other contents of the volume we note three interesting contributions from the pen of Dr. F. Taylor, all of which are of considerable clinical interest. One is a record of a case of Shingles followed by Paralysis of Abdominal Muscles—a sequel so rare as to suggest the possibility of its being sometimes overlooked in an affection that is obviously neurotic in origin. Dr. Taylor also records some cases of Cirrhosis of the Liver in Children, in which he discusses the significance of the enlarged cirrhotic liver, its association with a greatly enlarged spleen, and the difficulties in the way of accepting any other satisfactory etiology than that of alcoholism. The subject is one of great interest, not only in regard to the dependence of cirrhosis upon alcoholism, but on the alleged distinction of biliary cirrhosis, and it is a question that can hardly be yet said to be solved. Dr. Taylor's third paper is on Splenic Anæmia, in which a case is recorded of marked splenic enlargement without leukæmia. The later stages of the case do, however, seem to show a decided increase in the white blood cells, whilst the decrease in the red corpuscles was very marked. In this case splenectomy was proposed, but was declined by the child's parents. Death occurred three months after leaving hospital, and no post-mortem examination was obtained. Mr. Davies-Colley writes a useful practical paper on Hallux Flexus, Claw Toe, and Pes Cavus, and Mr. Newland-Pedley one on Some Acquired Maxillary Defects and their Treatment. Dr. W. J. Tyson, in a paper on Cases of Appendicitis, distinguishes between the cases of simple perityphlitis (of which he thinks 2 or 3 per cent., or more, are due to fæcal accumulation in the cæcum), which recover under medical treatment, such cases forming the majority met with in practice; cases of perityphlitic abscess that demand surgical intervention; and those of acute general peritonitis, from necrosis of the appendix. There are notes of several cases in which operations were successfully had recourse to. Dr. C. R. A. Sutton writes on Albuminuric Retinitis, dealing with its pathology and its prognostic significance. He attributes the retinal changes to blood deterioration rather than to any uræmic condition, and points out that in acute nephritis and in early cases of pregnancy the retinitis often disappears with the albuminuria, and further gives reasons for believing that it is of far graver significance in chronic tubal than in interstitial nephritis. There are also papers by Dr. T. G. Stevens on Laceration of the Female Perinæum; by Dr. J. Fawcett on the Urinary Excretion in Gout, and the effect of treatment with colchicum and salicylate of soda; and by Mr. L. A. Dunn on a successful case of Pylorectomy for Carcinoma, in which Murphy's button was employed to unite the duodenum and stomach.

Reports from the Laboratory of the Royal College of Physicians of Edinburgh. Edited by J. BATTY TUKE, M.D. Edin., and H. NOEL PATON, M.D. Edin. Vol. VI. Edinburgh: W. F. Clay. 1897. 8vo, pp. 303, with eleven Full-page Illustrations. Price 8*s.* 6*d.* net.

THE present volume is stated in the preface to contain abstracts of longer papers which record the results of work done in the laboratory, but which have been published elsewhere, and also shorter communications which have been published in various journals. The old laboratory was founded in 1888, and consisted of an old house which was equipped at a cost of about £1000. It was situated close to the Royal Infirmary, and was immediately frequented by numerous workers, whose researches, represented by 114 papers, are contained in the five antecedent volumes of these reports. More space being urgently required, a new laboratory has been obtained, situated in Forrest-row and Bristo-street, and was occupied in June, 1896. The objects in view have been to provide a research laboratory for bacteriological, histological, chemical, physiological, and pathological work; to make provision for examining and reporting on specimens sent by medical men; to provide a photographic department for macro- and micro-photography; and to make suitable provision for carrying on the preparation of curative antitoxins. Several plates are given showing the ground plan and the interior of the laboratory, and the arrangements seem very convenient and complete. It is not practicable to mention all the articles contained in this volume, since there are no less than thirty-six. Many of them have appeared in other journals, but amongst the most important are, Observations on the Changes in the Mucous Membrane of the Corpus Uteri and in attached Fœtal Membranes during Pregnancy, by Dr. J. C. Webster, which was published *in extenso* in the *American Gynæcological and Obstetrical Journal* of New York. It is a valuable contribution to this subject, giving the characters of the decidua at different periods; and a Note on the Development of the Clitoris, Vagina and Hymen, by Dr. D. Berry Hart. The Anatomy of the Cæcum and of the Vermiform Appendix is given by Dr. Richard Berry, of Edinburgh. Dr. Noel Paton contributes articles on the Physiology of the Fats, on the Relationship of the Liver to Fats, and, in conjunction with Dr. G. Lovell Gulland, on the Absorption of Carbo-hydrates by the Intestinal Epithelium. Dr. James Dunlop investigates the Excretion of Oxalic Acid in Urine and its bearing on

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oxaluria, and also the Action of Large Doses of Dilute Mineral Acids on Metabolism. He shows that these acids have a marked diuretic action, that they increase the total acidity of the urine, and produce an increase in the excretion of nitrogen and of soda. There are twelve articles on pathological subjects, amongst which may be mentioned the following:—Dr. Ralph Stockman on Iron in the Liver and Spleen in Various Diseases; a case of Pernicious Anæmia; the Experimental Production of Anæmia in Dogs; and the Treatment of Chlorosis by Iron. The pharmacological articles include one on Catha Edulis, and another on Viburnum Prunifolium (Black Haw) by Dr. Theodore Shennan; one on Carbonic Acid Gas in Diseases of the Alimentary Tract, by Dr. A. L. Gillespie; and one on Malayan Arrow Poisons by Dr. Ralph Stockman.

JOURNALS AND REVIEWS.

Birmingham Medical Review.—Mr. T. L. Webb contributes a practical paper on Preserving Pathological Specimens for the Museum and for Microscopical Examination. He recommends Tores's fluid for large masses, perchloride of mercury for small portions requiring careful study, and dilute formalin where the process must be rapid.

Scottish Medical and Surgical Journal.—Dr. James Rorie, of the Dundee Royal Lunatic Asylum, publishes the first portion of a paper on Homicidal Insanity, describing some typical cases. Dr. A. H. F. Barbour (Edinburgh) writes on Bleeding in Pregnancy and Labour, and its Mode of Arrest. Dr. Robert Jardine (Glasgow) records a case of Persistent Hymen in a woman in labour; "the husband, who was a young man, did not seem to be aware that there was anything wrong."

Edinburgh Medical Journal.—Mr. W. Bevan Lewis, of the West Riding Asylum, contributes a long and elaborate histological paper on the Structure of the First or Outermost Layer of the Cerebral Cortex. Dr. P. McBride and Dr. A. L. Turner continue their articles on Naso-pharyngeal Adenoids. Altogether there are eight original communications.

Dublin Journal of Medical Science.—This number contains a further instalment of Dr. J. Knott's article on Angina Pectoris. Dr. H. S. Purdon (Belfast) has a short note on Ecphyma Globulus, a contagious skin affection of rare occurrence.

Revue Philanthropique.—The opening paper is by M. Jules Siegfried, who takes Working-class Dwellings for his subject. He first gives a short account of the work of numerous associations formed for the purpose of erecting low-rented dwellings, commencing with the Société des Cités Ouvrières de Mulhouse, founded in that town in 1851, and making a brief reference to English building societies and the operations of the Peabody Trustees. The greater part of his article is devoted to the Société Française des Habitations à Bon Marché, founded in the end of 1889. Professor Grancher, of the Hospital for Sick Children, writes on Disinfection in Home Nursing.

The Intercolonial Medical Journal of Australia.—The number of this journal bearing date April 20th, 1897, has among other interesting articles one describing a form of nerve degeneration in horses, especially of the optic nerves. The disease closely resembles tobacco amblyopia as seen in the human subject, and is most probably due to the eating of the native tobacco plant, though this point has not yet been satisfactorily settled. Dr. J. W. Barrett, who contributes the paper, sums up as follows: "The chief symptom of the disease is blindness, and the blindness is due to degeneration of the optic nerve. Tobacco would readily produce these symptoms, and apparently the tobacco plant grows in the affected areas." Dr. A. J. Wood relates a case of a Half-penny Impacted in the Œsophagus removed after localisation by the x rays.

In the *Phonographic Record* for June Dr. Lundie points out that flat-foot is not exclusively an affection of adolescence. Dr. Colborne sends notes of Ophthalmic Work in China; Dr. Given narrates a case of Paralysis of the Second, Fifth, and Sixth Cranial Nerves; and Mr. Peyton Beale, in a suggestive paper on Perforating Ulceration of the Appendix Vermiformis, draws attention to œdema of the skin over the region of the cæcum as pathognomonic of the lesion. As such cases are never seen before perforation this localised œdema, in Mr. Beale's opinion, is a sure guide to the source of the acute peritonitis which is present. Immediate laparotomy, quickly performed, with removal of the appendix, is the only possible treatment. Mr. Beale deprecates washing out the abdomen, and after allowing the pus to well out he plugs the wound lightly with iodoform gauze.

WE have received from Messrs. Henry Graves and Co., of Pall Mall, London, an artist proof of one of their recent publications—"Inasmuch as." The subject is a nurse holding a child in her arms. It is admirably executed, and likely to be popular. The price is one guinea per impression for the artist proofs, and 10*s.* 6*d.* per impression for the prints.

Analytical Records
FROM
THE LANCET LABORATORY.

ANTIKAMNIA AND SALOL TABLETS.
(J. M. RICHARDS, 46, HOLBORN-VIADUCT, E.C.)

ACCORDING to our analysis, antikamnia contains as its chief constituent acetanilide, or antifebrin—a well-known antipyretic—in association with caffeine, which may be supposed to exert a modifying and favourable influence over the action of the former drug, chiefly in counteracting its depressing effect upon the heart. Valuable as this formula may be as an analgesic and antipyretic in the treatment of neuralgia, rheumatism, &c., it has been further modified recently by the addition of salol, which, as a milder agent than salicylic acid, has been employed in acute rheumatism. The combination is doubtless a useful one, and we are glad to find that it is "offered to the profession" and not for indiscriminate use.

CHINOSOL SOAP AND POWDER.
(B. KUHN, 36, ST. MARY-AT-HILL, E.C.)

A year ago we expressed the opinion that chinosol, in view of the many advantages which it presented, would become of special service as an antiseptic, disinfectant, and deodorant. Since that time it has been somewhat extensively employed with excellent results. It presents the important advantages that it is not caustic, corrosive, or poisonous, while it is free from objectionable odour and it does not coagulate albumin. It will serve as an admirable substitute for iodoform, carbolic acid, or even the powerful antiseptic corrosive sublimate. Chinosol is a bright yellow powder, freely soluble in cold water, and possessing a faintly aromatic odour. It may be employed in the form of tablets for making up solutions of definite strength, and recently it has been incorporated with soap adapted either for medicinal or toilet purposes. The soap basis proved on examination to be perfectly neutral. Still more recently, crude chinosol powder and chinosol disinfecting powder, for ordinary domestic disinfecting purposes, have been prepared. Bacteriological experiments have shown chinosol to be a very powerful antiseptic, while practical experience has proved that it may safely be employed.

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SERRAVALLO'S BARK AND TONIC WINE.

(ROBERTS AND CO., 76, NEW BOND-STREET, W.)

From clinical results published on the Continent this wine would appear to be of distinct value in chlorosis and anæmia. Its value in this connexion depends most probably on the assimilable nature of the two medicinal constituents, the presence of which our analysis has confirmed. The iron is present as an organic combination, while in spite of the presence of the principles derived from Peruvian bark the wine is commendably free from excess of astringent matters and is not at all styptic. It is a sweet, somewhat syrupy liquid of peculiar purplish colour, with a slightly bitter taste. Iron was found in important quantity in the mineral matter obtained on incineration of the residue, while ether extracted a bitter substance, which proved to be fluorescent in sulphuric acid, and which responded to the ordinary tests for alkaloids. Analysis gave further results as follows: Extractives and sugar, 21·05 per cent.; mineral matter, 0·25 per cent.; alcohol, by weight 13·0 per cent., by volume 17·17 per cent. The wine affords an agreeable way of presenting two valuable tonic agents.

HUMANISED MILK (GAERTNER'S PROCESS).

(FRIERN MANOR DAIRY FARM, LTD., 20, FARRINGDON-STREET, E.C.)

Nothing could be more satisfactory than the composition of this product or more excellent than its condition. It presents a composition practically identical with mothers' milk, and a sample kept some months in the laboratory remained sterile and perfectly sweet. The results of our analysis were as follows: Water, 88·65 per cent.; total solid matters, 11·35 per cent., of which 3·10 consisted of fat, 6·43 of milk sugar, 1·82 of casein, and 0·35 of mineral matter. The milk is prepared on the following excellent plan. Milk fresh from the cow is diluted with an equal quantity of sterilised water. The diluted milk is then submitted to rapid centrifugal force in such a manner as to effect the separation of two streams, one containing practically all the cream, and the other the skim milk along with objectionable particles such as hairs, dirt, sand, &c. To the creamy milk thus separated milk sugar is added in the proportion of from 3 to 4 grammes per 100 c.c. The result is then a product with an excellent proportion of fat, and of other constituents in accordance with the proportions found in mother's milk. It obviously presents very distinct advantages over cow's milk that has been merely diluted with water, and, what is of further importance, the process yields a milk which is free from objectionable impurities such as may act as sources of infection. We are not surprised to learn that this milk has given satisfactory results in actual experience of infant feeding.

ST. RONAN'S TABLE WATER.

(ST. RONAN'S WELLS AND MINERAL WATER CO., INNERLEITHEN, N.B.)

Excluding salt, this well-aerated water shows a remarkable freedom from dissolved mineral matter. It is peculiarly soft and fresh to the taste. Our analysis of the water was as follows: Total solid matter, 1·05 grammes per litre; common salt, 0·90 gramme per litre; bicarbonate of soda, *nil;* calcium carbonate, a distinct amount. The water is thus only slightly mineralised, while it is free from organic impurity.

OLD SCOTCH WHISKY (BRIG O' PERTH BLEND).

(MATTHEW GLOAG, 24, ATTWEL ATHOLL-STREET, PERTH.)

The flavour of whisky is entirely a matter depending upon the skill in blending, while its wholesomeness may be measured by the time the spirit has been allowed to mature. The above whisky, though of full alcoholic strength, possesses a delicate and soft flavour. It is further free from any excess of colouring matters and extractives. Analysis gave the following results: Alcohol, by weight 44·64 per cent., by volume 52·29 per cent., equal to proof spirit 91·64 per cent.; extractives, 0·12 per cent.; mineral matter, *nil;* acidity reckoned as acetic acid 0·016 per cent. This whisky is clearly a wholesome and well-blended spirit, possessing age, and is desirably smooth and mellow to the taste.

BYNIN AMARA.

(ALLEN AND HANBURYS, LIMITED, PLOUGH-COURT, LOMBARD-STREET, E.C.)

This excellent preparation is a distinct advance on Easton's syrup. Not only does it contain the phosphates of iron, quinine, and strychnine unimpaired, but the vehicle for their palatable administration is, as our experiments have shown, a powerful digestive of farinaceous food. This vehicle is bynin, or liquid malt, which exhibits a powerful liquefying and converting action upon starch. Bynin amara is a thin brown syrup of not unpleasant though decidedly bitter taste. It contains no objectionable preservatives, and presents the medicinal ingredients of the excellent formula of Easton's syrup in correct ratio and in approved form. We succeeded in proving the presence of each and all of the tonic constituents indicated. The formula is such as is admirably adapted for the administration of one of the best tonic combinations known.

SOLVEOL.

(BURGOYNE, BURBIDGES, AND CO., 12 AND 16, COLEMAN-STREET, E.C.)

According to our examination solveol is a neutral solution of pure cresol. It is a clear, brown, thin liquid, perfectly miscible with water. On adding hydrochloric acid to solveol a crystalline buff-coloured precipitate results. Solveol on burning yields an ash of carbonate of soda. Its advantages as an antiseptic in midwifery and gynæcological practice, and for antiseptic irrigations generally, are evident when foremost amongst its properties are that it is non-poisonous and non-caustic, while it is said to be not incompatible with albumin, &c. The merit of the preparation appears to be that it represents for the first time a neutral aqueous solution of cresol, the practical application of which hitherto has been made inconvenient and unsatisfactory by reason of its insolubility.

BYRRH WINE.

(VIOLET FRÈRES, 68, CHEAPSIDE, E.C.)

Our analysis of this wine was as follows: Alcohol, by weight 16·46 per cent., by volume 20·24 per cent.; extractives with sugar, 13·86 per cent.; and mineral matter, 0·23 per cent. Byrrh is a pleasant, somewhat full-bodied wine, with a distinctly bitter flavour. On further examination this flavour would appear to be due to the presence of tonic bark extractives. On extraction with ether a powerfully bitter residue was obtained which responded to tests characteristic of cinchona constituents. The wine is free from injurious bitters and serves as an agreeable and wholesome tonic and stimulant.

VAN HOUTEN'S PURE SOLUBLE COCOA.

(C. J. VAN HOUTEN & ZOON, WEESP, HOLLAND.)

It is a widespread but very erroneous notion that certain of the excellent cocoas manufactured in Holland contain added alkali. This impression has been mainly due to an error of interpretation of certain results afforded on analysis. As is well known, cocoa in its natural state or in the form of crushed bean is quite unfit for food. Cocoa, therefore, must be prepared. The first step in this process is to eliminate as far as possible the excess of highly indigestible fat, which is generally done by expression in hot bags. After this process the cocoa generally contains about 30 per cent., instead of over 50 per cent., of fat. It may still be considerably improved for dietetic purposes by so preparing it that it may be made more soluble in, but in reality more miscible with, hot water, milk, or other fluids. With this end in view the simple addition of an alkali, as carbonate of potassium, or, as in the German method, of ammonia, has been suggested. From the dietetic point of view, as was pointed out in THE LANCET

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of June 20th, 1896, this resource is distinctly objectionable. By Van Houten's process (the original Dutch method) a real improvement in the manufacture of cocoa which considerably added to the dietetic value of the product was effected. In this process the cocoa is not at any time or in any way prepared or treated with carbonate of potash, ammonia, or other alkali. The impression that it was so treated arose from the fact that on burning the cocoa so prepared a strongly alkaline and an increased ash was obtained. As a matter of fact, the decoction of Messrs. Van Houten's cocoa shows a faintly, though distinctly, acid reaction. It is just as logical to conclude that claret contains free alkali. Claret is of course strongly acid, but on burning the acid residue of the wine a strongly alkaline ash consisting of potassium carbonate remains. The important improvement in the dietetic properties of Messrs. Van Houten's cocoa consists in the enrichment of the cocoa by the addition of a trifling quantity of certain neutral salts, which, it is important to add, are perfectly normal constituents of the cocoa itself. Far from being objectionable, this procedure is fully justified by the evidence of experience as to the increased dietetic value of the cocoa so prepared. In a recent analysis which we have made the results distinctly indicate the advantage of this method. Thus this cocoa yields a decoction containing a maximum proportion of the valuable food constituents of the bean; and, of more importance still, these are presented in a condition more easy of assimilation and digestion than in cocoa not so prepared. The addition of a free alkali is, we hold, objectionable, because we have reason for believing that it would act unfavourably on the nourishing and stimulating cocoa substances. When cocoa, for example, is treated with alkali, an ammoniacal smell is at once evolved, which is probably due to the decomposition of the nitrogenous stimulating substances, as theo-bromine. In Messrs. Van Houten's cocoa, on the contrary, there is absolutely no free alkali, while the method of preparation undoubtedly adds to its nourishing properties and, more important still, to its digestibility. It has been said that one of the objects of adding alkali to cocoa is to partly saponify the fat and thus give the decoction a rich and frothy appearance. There is absolutely no trace of soap, we find, in Van Houten's cocoa. The important effect of Van Houten's process is, however, to increase the miscibility of the cocoa with water or milk, and to enrich it by the addition of a small proportion of its own natural constituents. An important economy is thus ensured. This treatment further tends to develop that fine aroma and flavour which make cocoa an acceptable beverage.

"APPLE JUICE."

(THE APPLE JUICE CO., 143, CANNON STREET, E.C.)

This is a fermented beverage like cider with a small alcoholic strength. Analysis gave the following results: Alcohol, by weight 5·25 per cent., by volume 6 55 per cent., equal to proof spirit 11·49 per cent.; acetic acid, 0·39 per cent.; malic acid, 0·43 per cent.; total extractives, 8 55 per cent.; mineral matter, 0·31 per cent. The excessive amount of volatile acid or acetic acid is an objectionable feature in this analysis. This result is borne out by the unpleasant sour taste, which is quite different from that of the fixed acids of the apple. Acetification has evidently set in, in spite of the juice being preserved, as we found, with salicylic acid. This fact, coupled with the quantity of saccharine matters present, renders this preparation not as wholesome as it might be.

EASTON'S SYRUP PALATINOIDS.

(OPPENHEIMER, SON, AND CO., 14, WORSHIP-STREET, E.C.)

Palatinoids containing the equivalent of half a drachm of Easton syrup have recently been prepared. The contents consist of a bluish-grey, finely divided powder, containing phosphate of iron in an unoxidised condition, together with quinine and strychnine. The advantages of Easton's syrup in this form (that is, in a jujube, excluding the deteriorating influences of the air) are obvious. The formula is excellent and the constituents are preserved in their original state.

"CYMRALIS" TABLE WATER.

(R. ELLIS AND SON, RUTHIN, N. WALES.)

This effervescing water is bright, well aerated, and commendably soft to the taste. The water-supplies of North Wales are admirably adapted for the preparation of aerated waters since they are so pure. Cymralis, we find, is slightly and agreeably mineralised. The total solid matter amounted to 0·88 gramme per litre. It is slightly alkaline, the degree of alkalinity being equivalent to 0·25 gramme of bi-carbonate of soda per litre. This, coupled with the purity of the gas employed, accounts for the peculiarly soft flavour of the water.

SANITAS DISINFECTANT SOAP.

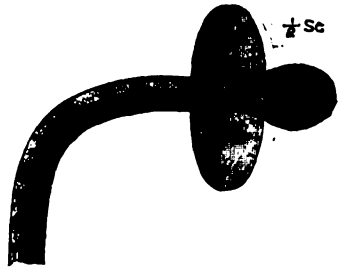
(THE SANITAS CO., BETHNAL GREEN, E.)

Sanitas has the distinct merit that though a decided disinfectant it has an agreeable smell. Further, it is quite compatible with soap. A specimen of sanitas soap recently submitted to us had somewhat the appearance and character of soft soap, but it proved to be a neutral soda soap, free from irritants. It evidently contains a good proportion of sanitas oil. For cleansing and detergent purposes it should answer admirably.

New Inventions.

AN EFFICIENT DRAINAGE PLUG.

FOR some two years past in cases where it has been necessary for me to make a permanent opening into any of the viscera, my attention has been specially directed towards devising some plan to relieve patients from the extreme discomfort which arises from lack of proper plug or conduit, and after repeated experiments I have now decided upon a very simple plan, which has proved so eminently satisfactory that I am sure it will meet the well-known difficulties of such cases. As shown in the diagram it consists of a tube with a flange and a pear-shaped expansion at the end, which is inserted into the viscus. This with a plug or clip answers well for gastrostomies. For the gall-bladder, &c., it is only necessary to attach a receiver. My experience with this plug has been so satisfactory in the already mentioned operations that recently I have tried it in a case of left inguinal colotomy, simply dispensing with the tubing portion and keeping it in position by a hollow padded colotomy truss; it is answering most satisfactorily. Simple as the contrivance is, it has only been arrived at after numerous experiments as to shape, &c., and correctness in these details is essential. I now find I can effectually plug without distending the opening, so that it is not necessary to be constantly changing the size; and, again, the action is in some respects automatic, as a sudden impulse, such as coughing and the like, tends to expand the pear-shaped extremity so that it neither allows of its own expulsion nor the escape of fluid by its side. The particulars I have mentioned govern the construction of the plugs when employed for any purpose, but it is essential to have them made of a suitable size and with suitably shaped necks to meet the requirements of each case. Such details can be had from Messrs. Down Brothers, 21, St. Thomas's-street, London, S.E., who have afforded me invaluable assistance in carrying out the experiments.



Cavendish-square, W. W. ARBUTHNOT LANE.

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EMERGENCY INFUSION CANNULA.

MOST obstetricians carry with them the plain syphon douche as used at the Rotunda and other leading maternity hospitals. This douche is easily kept aseptic, it can be used with any vessel or receptacle and it reduces to a minimum the risk of air passing with the stream. All that is necessary to make it available for intravenous injection is to have a cannula to fit into the syphon tube. The cannula now described is enlarged at the upper end to prevent it from slipping, and the opening at the extremity which enters the vein is terminal instead of at the side, so as to avoid risk of air remaining in the blind end. Its case being made of metal can be rendered aseptic by boiling, and contains a couple of specific gravity beads indicating 1030 and 1028. The cannula is simple, inexpensive, and easy to carry. Its shape ensures its lying easily in the vein, it is always ready for instant use, and can be employed without a skilled assistant. The requisites for the operation are the syphon douche, the cannula, large and small jugs, a spoon, boiling water, cold boiled water if available or tap water, and, lastly, common salt. Scald thoroughly all utensils to be used and boil the spoon. Make a saturated salt solution in the small jug. In the large jug mix two or three quarts of water as near 98·4° F. as possible, tested by aseptic thermometer, or by pouring on the back of the hand. Add a specific gravity bead and pour in the salt solution till the bead rises to near the surface, mixing thoroughly with the spoon. The solution is now ready for infusion. Put the syphon end of the tube into the jug and start it running, then put the catch on the lower end of the tube, leaving it full and ready to run. Now expose the median cephalic vein, but do not open it. Next insert the cannula into the tube with the following precautions: First, let the stream run into the warm water in the basin to ensure all air being out of the tube. While still running insert the cannula under water.

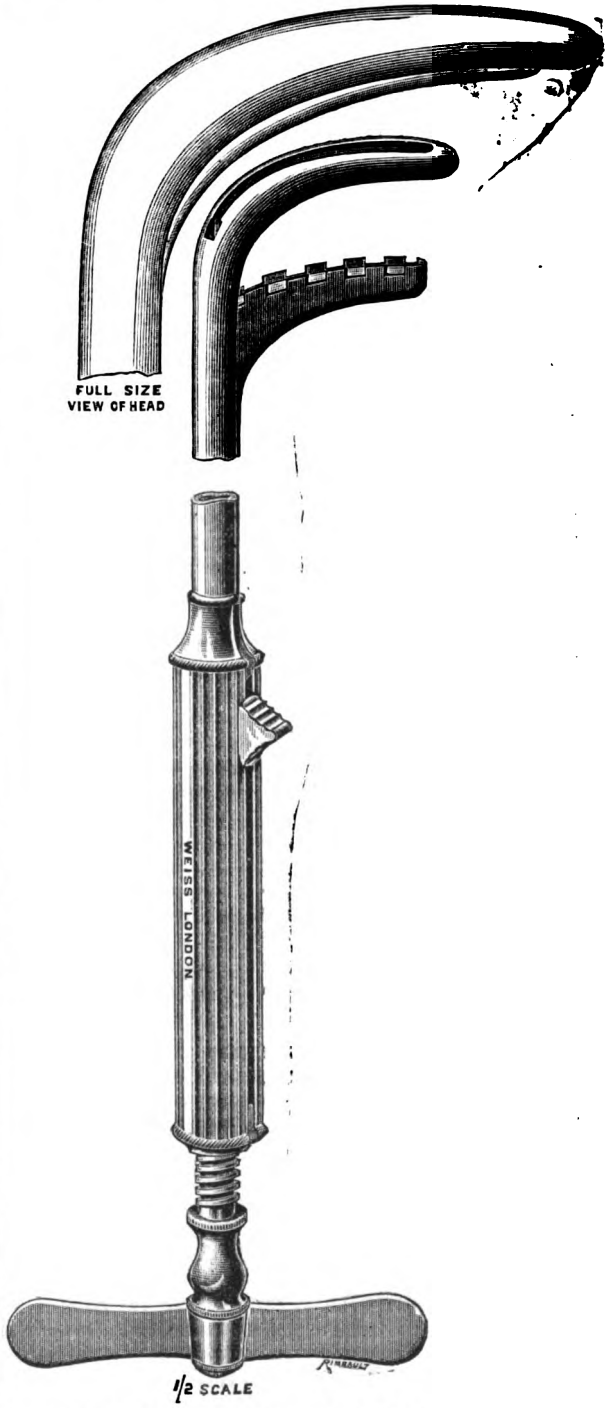


That these precautions are necessary is proved by the fact that at any gynæcological clinique the ordinary vaginal glass nozzle may be seen at any time half full of air when the douche has been running some little time. With the cannula running, open the vein rapidly and insert the cannula still running; tie in if necessary. Observe the level in the reservoir and allow to flow till a pint and a half or two pints have entered the vein. Whisky or brandy should be added to the douche in the proportion of a teaspoonful to a pint. Messrs. Arnold and Sons, of 31, West Smithfield, are the makers.

W. C. HOSSACK, M.B., C.M. Aberd.

AN IMPROVED PATTERN OF "GIANT" LITHOTRITE.

I WOULD direct the attention of those interested in the surgery of stone in the bladder to an improved "giant" lithotrite, which at my suggestion, Messrs. Weiss and Son have devised and constructed, for dealing with very large calculi by perineal lithotrity. Surgeon-Captain Henry Smith, Civil Surgeon, of Jullundar, when stationed at Guzerat in the Punjab, devised the "giant" lithotrite described by me in my recent notes on stone in the bladder.[1] Some defects were found in this instrument, which have been remedied in the improved pattern figured in the annexed plate. Experience has taught us that suprapubic lithotomy has not fulfilled the early promise of the days of its revival, for the mortality which has followed it in cases of very large calculi occurring among males at the middle period of life is very considerable. There is therefore a growing consensus of opinion among surgeons practising in the East, where cases of very large calculi are of frequent occurrence, that perineal lithotrity, whether median or lateral, will in the near future supersede suprapubic lithotomy in dealing with this very important class of cases of stone in the bladder. There need, however, be no rivalry between perineal lithotrity and litholapaxy; rather should they be considered complementary one to the other. This improved instrument is made on the model of an ordinary Thompson's lithotrite, with the following exceptions. The male blade, instead of being joined to the screw at the handle end, is for greater strength left in two parts, the one terminating at the button, by means of which it is withdrawn, the other or screw portion working independently through a fixed collar at the end of the handle instead of by means of the usual forceps catch. In the place of the wheel it has a large winged handle 4¼ inches across, which gives an extra purchase in working. The dimensions of the instrument when closed are: Size over all, 18 in.; size of blades, 11 in.; size of hollow handle, 5 in.; size of stem, No. 20; size of stem at angle, No. 25½; size of point, No. 16. The jaws stand 2¼ in. for female



[1] THE LANCET, Jan. 30th, 1897.

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and 2 in. for male blade above the shaft, and open sufficiently wide to take a stone of a diameter of over four inches. This instrument can be readily passed into the bladder through a small lateral incision in the prostate, or through an incision made as in median lithotomy, and it will readily break up a hard calculus weighing between six and eight ounces. The calculus thus crushed can be withdrawn from the bladder by forceps, or removed by means of an aspirator attached to a very large evacuating cannula, according to the predilection of the surgeon. The operation is completed in a short space of time, a matter of vital importance in such cases, and the neck of the bladder and prostate are not strained and bruised in an endeavour to extract a large calculus whole through the perineum. I feel confident that the mortality which has hitherto followed suprapubic lithotomy in dealing with very large calculi occurring among men at the middle and advanced periods of life will be greatly diminished by carrying out a perineal lithotrity in such cases.

St. James's-square, S.W. D. F. KEEGAN, F.R.C.S. Eng.

ASYLUM REPORTS FOR 1896.

Nottingham Borough Asylum.—On Jan. 1st, 1897, the number of patients amounted to 601. The accommodation provides for 585 patients, so that the asylum is overcrowded, and the position so created constitutes a serious difficulty to the management. Plans for enlarging the buildings have been passed, the asylum committee are anxious that the work should be commenced, but the Council refuse to move in the matter. In his report Mr. Powell, the medical superintendent, remarks that if the present progressive rate of admissions continues it will be necessary either to refuse fresh cases or to transfer chronic cases to some other asylum, although he confesses he does not know where the requisite accommodation is to be found. Every effort is made to discharge suitable cases to the care of relatives, but, as in all large towns, the conditions are unfavourable for maintaining and caring for chronic lunatics in their own homes, and it frequently happens that they are speedily returned to the asylum as unmanageable. In referring to the recent special report of the Lunacy Commissioners regarding the alleged increase of insanity, Mr. Powell states that, taking into consideration the whole of the causes of accumulation adduced by the Commissioners, he is unable to satisfy himself that they altogether explain the very large increase in the population of his asylum, and he is reluctantly obliged to conclude that in Nottingham there has undoubtedly been a substantial increase in the incidence of insanity in recent years. During the year 1896 there were 168 admissions, 65 recoveries, and 49 deaths. A feature in the admissions was the large preponderance of melancholiacs, both male and female, and 26 of the cases were directly attributable to mental anxiety due to adverse circumstances, domestic trouble, &c. Intemperance in drink accounted for 32 cases; 21 patients died from general paralysis; and 44 post-mortem examinations were made. The Commissioners in Lunacy report favourably on the management of the asylum.

James Murray's Royal Asylum, Perth.—Dr. Urquhart's remarks are always instructive, and this report forms no exception to the rule. He favours early discharge, and states that in face of a threatening relapse in a convalescent patient the question must be anxiously considered whether immediate removal from asylum surroundings is not the best course in his interests. In discussing the question of chronic alcoholism Dr. Urquhart makes some pertinent remarks, and in view of pending legislation his words may be quoted with advantage: "Twelve patients suffering from the results of chronic alcoholism were admitted. This is a larger number than usual. To it should be added one whose treatment was necessary on account of her succumbing to opium habit. There is no practical difference between these two classes—they seek oblivion, and it matters little whether the poison be whisky or morphia. A few were habitual drunkards, but the great majority were driven to excess by worry and consequent failure of mental health. The usual train of causes, in fact—first, an inherent weakness; second, a period of stress; third, a consciousness of failure and an endeavour to mend matters by calling in the powers of darkness to aid—excess and ruin in the end. A new heaven and a new earth must arise before this tale of misery is complete. I offer no suggestion other than has been approved by experience—the amelioration of social conditions. This includes a wider and deeper recognition of the laws of health, a wider and deeper appreciation of the interests of humanity. It cannot be in the interests of humanity that habitual drunkards are permitted to work their own destruction and the ruin of their families without such legal restraints as are imposed upon other dangerous members of society; and it bears especially hard upon those who become inebriates by reason of the inherited weakness of their physical and mental constitution. The times are ripe—indeed, over-ripe—for the wholesome restraint of those who are thus bent on ruin"—The value of the use of thyroid extract is exemplified by the recovery of a patient who suffered from a sharp attack of mania, followed by secondary dementia of sixteen months' duration. The Lunacy Commissioners (Scotland) record their appreciation of the excellent order of all parts of the asylum and the satisfactory condition of the patients.

Glasgow Royal Asylum, Gartnavel.—During the year 1896 there were 112 admissions, 41 recoveries, and 31 deaths. Brain diseases were, as usual, by far the most frequent cause of death. The mean age at death was fifty-four years. Dr. Yellowlees is of opinion that the apparent increase of insanity is due to the fact that many brain conditions—such as imbecility, senility, and childishness following paralysis—which were not formerly regarded as insanity are now classified under that category. His conclusions regarding the prospect of recovery in insanity, omitting cases of imbecility or of mere senility, are broadly stated thus: Of twelve persons attacked by insanity, one half will recover and the other half will not recover; of the six who recover, one half will remain permanently well, while the other half will become insane again once or oftener in the course of their lives, and will eventually die insane. This is in accordance with the views expressed by the late Dr. Hack Tuke after a minute study of available statistics. The Commissioners state that the asylum is conducted with great ability and that it well deserves the confidence of the public.

Royal Lunatic Asylum, Montrose.—In his report Dr. Howden complains that many of the patients were admitted in a dying condition, and expresses the hope that the new Form of Certificate of Emergency issued by the General Board of Lunacy (Scotland), in which a medical man is required to certify that the patient is in a sufficiently good state of health to be removed to the asylum, will prove a check to the practice of sending patients in a dying condition. With regard to the allegation sometimes put forward that asylum attendants are liable to become insane, Dr. Howden's experience leads him to believe that this is an entirely erroneous impression. He has met with cases, however, outside asylums where the association of the sane with the insane seems to have had a prejudicial effect on the former. He gives several instances where this has occurred. The death-rate amongst the male patients was higher than usual, but was due to the causes already stated. The wards are somewhat overcrowded, but the resulting evils are diminished as far as possible by careful attention to ventilation and sanitation, and by giving the patients abundant exercise in the open air. Since the publication of this report Dr. Howden has retired from the active management of the asylum. He has had a long, useful, and distinguished career, and during his tenure of office the Montrose Asylum has occupied a leading position amongst the institutions for the care and treatment of the insane in Scotland.

Aberdeen Royal Asylum.—During the year 1896 the admissions numbered 207, the recoveries 95, and the deaths 55. Dr. Reid, in his report, calls attention to the large number of deaths at this asylum from general paralysis and from phthisis. On Aug. 3rd, 1896, a new hospital, without which no asylum can now be called complete, was opened. Its design and arrangements seem to be admirable in all directions, and provision has been made in a most efficient and liberal manner for the care and treatment of the sick, the acute cases, and the infirm. Dr. Reid, in directing attention to what may be termed borderland cases, very properly remarks that there are many such at large in the world who do not overstep the limit between sanity and insanity, as at present legally recognised, but who might, with much advantage to themselves and the community, be placed under some suitable supervision. "The institution continues to be managed with great ability and success" (Commissioners' Report).

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THE LANCET.

LONDON: SATURDAY, JULY 3, 1897.

THE two English Medical Colleges have been appealed to by the medical men of Norwich and others, who are impressed with the conditions of medical practice as revealed in the existence of new combinations of friendly societies, of commercial companies that know no more of medicine than they know of law or divinity, catering wholesale for the medical attendance of the working classes and for many comfortable people who cannot be included in such classes. The Royal College of Surgeons of England has not yet given its opinion on the subject of canvassing and advertising for patients. It has excited hope, inasmuch as it has referred the question of its own powers in such matters for legal opinion and advice. But both it and the Royal College of Physicians of London have shown a marked reluctance to use their powers of censure and remonstrance against methods which, if used by any private and individual member of the profession, would render him clearly obnoxious to those by-laws of the Colleges which are supposed to provide punishment for unprofessional ways of procuring practice. Of such by-laws the following are specimens.

The Royal College of Physicians of London has this by-law:—

"No Fellow or Member of the College shall officiously or under colour of a benevolent purpose offer medical aid to, or prescribe for, any patient whom he knows to be under the care of another legally qualified medical practitioner."

It has another by-law, which enacts, among other things, "that if it shall appear that a Fellow or Member or Licentiate has ..... acted in any respect in a dishonourable or unprofessional manner ..... the President and Censors may call the offending Fellow, Member, or Licentiate so offending before them, and having investigated the case may admonish or reprimand or inflict a fine not exceeding £10," or for graver offences may report to the College, which may proceed to deprive the offending person of his Fellowship, Membership, or Licentiateship, as the case may be.

The Royal College of Surgeons of England has this by-law:—

"If any Fellow or Member of the College shall, after due inquiry, be judged by the Council to have been guilty of disgraceful conduct in any professional respect, he shall be liable to removal by resolution of the Council from being a Fellow or Member of the College."

The by-laws of other Colleges are not dissimilar. Thus the Royal College of Physicians of Edinburgh has the following:—

"Any Fellow, Member, or Licentiate who shall, after due inquiry, be judged by the Fellows to have acted in an unbecoming or unprofessional manner may be censured, or may be deprived for such time as the Fellows may determine of all the rights and privileges which, as Fellows, Members, or Licentiates, they may enjoy."

The other Scottish Corporations have similar by-laws.

And a by-law of the Royal College of Physicians of Ireland says:—

"Every candidate before admission as a Licentiate engages not to endeavour to obtain practice or to attract public notice by any unworthy means, nor to sanction the use of his name by any other person for such purposes, and in case of doubt to submit to the judgment of the College."

The Royal College of Surgeons in Ireland by Ordinance 36 enacts that: "No Fellow or Licentiate of the College shall seek for business through the medium of advertisement or by any other disreputable method."

There are two great evils complained of by medical men, which have been powerfully exposed in the series of communications by our Special Commissioner under the title of "The Battle of the Clubs." The one is the crowding of huge numbers of persons into one Association, to be attended by one or two medical officers for a low sum and under conditions in which proper attendance, and even diagnosis, is impossible. The other is the system of canvassing and touting by which crowds of persons are attracted to such associations, often from the care of their own private medical man, to whom they are quite able to pay reasonable fees. We admit that *primâ facie* it is a difficult thing for a medical corporation to dictate the pecuniary terms on which its Licentiates shall give their medical services, but it surely must be admitted that the corporations can judge of the conditions under which medical diagnosis and treatment are possible, and it is not unreasonable to require of them, in any given case where the conditions are such as to make them impossible, to use some of their powers of remonstrance and of censure. In regard to the offence of canvassing and touting their duty seems still more plain, whether we regard the letter or the spirit of the above by-laws. We anticipate the objection that the medical officers do not personally canvass or instruct the canvasser, but they are the servants of those who do use means to draw all sorts and conditions of men away from their advisers and into associations which make a sort of trade of medical practice. They accept from such associations appointments which constitute an introduction to practice—often to the patients of other medical men who are undersold. It is difficult to deny that this system of canvassing by associations threatens great branches of general practice with ruin or that the medical man who acts for the association is morally responsible for the system. Without his help it would be inoperative and ineffective. We do not wish to see the corporations act with haste, but we do wish to see them act with more force and firmness than they have hitherto displayed. Suppose these evils were to spread to the upper ranks of practice—that consultants to attract numbers lowered the guinea or the two-guinea fee to 2*s.* 6*d.*, and that they put themselves under commercial companies which canvassed and touted for them, would the corporations be as apathetic as they are? We think not. We do not doubt that they would find ways of maintaining the dignity of medical duty and of medical remuneration. They have a far larger obligation to use what powers they have, and if these are inadequate to seek stronger ones, to compel their Licentiates in the larger field of general practice to refuse appointments which turn medical practice into a farce, and

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which involve canvassing and foul play to the private practitioners of the country.

IN India there is no such thing as medical registration, nor is there any Medical Act in that country to govern or regulate the conduct of practitioners of medicine, to protect them in the exercise of their calling, or to defend the public from the practices of quackery in its many guises. That such a state of confusion and irregularity should exist and continue in a dependency of the British crown where medical education has been more or less supervised by the State for the past fifty years is most surprising, and it is all the more regrettable in view of the fact that the medical societies and medical associations, as well as the medical and lay journals of India, have one and all from time to time during the past decade represented to the Government of India the urgent need that exists for some form of medical registration in the mutual interests of the profession and of the people.

Medical education in India aims at providing the public and the State with varying classes of practitioners. Thus, the Indian Universities, the qualifications of which are recognised by the General Medical Council of Great Britain and are registrable in this country, confer on their graduates the degrees of M.D., M.B, and L.M.S. Their preliminary educational standard is a degree in arts, and their professional curriculum, which is a very complete one, has always required a five years' course of study. Outside the Universities, India provides no other qualification which ranks as a registrable diploma, nor indeed, is there any other diploma which from its intrinsic merit could at present deserve the status of a British registrable qualification. So that for the present, so far as registrable qualifications on the basis of the General Medical Council's requirements are concerned, we have only to deal with the graduates of the Indian Universities. Having obtained what are State passports to practise medicine, having paid into the State coffers the cost of a full curriculum for a period of five years, and possessing a guarantee from the Government of India as to their ability as physicians and surgeons, it seems only reasonable to expect that they should receive some protection from the State, such as is afforded to duly qualified practitioners in this country by the provisions of our Medical Acts and system of registration. There ought to be no difficulty in legislating specially for medical practitioners in India, but if there are obstacles in view of the varying grades of otherwise orthodox practitioners and the confusing number of unorthodox indigenous classes of the Vaid, Kobiraj, and Hakimi sects, then an easy way out of the difficulty would be to extend the Colonial Section of the British Medical Register to India, and enforce entrance to its rolls on all Indian University graduates by making the enjoyment of certain rights and privileges conditional on registration. If, for example, the Government of India were to promulgate an order in its *Gazette* that for the future no registrable practitioner in India could obtain any State appointment or have any legal status unless his name was to be found in the Colonial Section of the British Medical Register an immediate blessing would be conferred on both the public and the medical profession in India, without any additional legislation. A Section of the Medical Act is now applicable to India, so that registrable qualifications have the right to immediate registration, and therefore it is only necessary, as it seems to us, for the Government to enforce submission to the conditions of the existing British Medical Register. The Indian medical profession would thus obtain a definite status in the body politic. This step would place the professional conduct of Indian medical graduates under the cognisance of the General Medical Council, and prove a salutary measure, raising the tone of Indian medical practice. It seems clear that this is a matter in which the General Medical Council might legitimately take action by inviting the Government of India to consider this method of registration in the interests of medical education and for the advancement and protection of the medical profession in that country. This necessary interference by the General Medical Council may, with some show of justice and urgency, be claimed for a body of our brethren who number some thousands on the rolls of the Indian universities, and who from the absence of specific legislation in medical matters in our Indian Empire are virtually devoid of legal status and absolutely without legal protection of their rights and privileges as properly educated and duly qualified medical men.

With regard to the extension of a system of registration to a large and important class of practitioners who are educated for employment in the subordinate services of the Indian Government, and to those who work chiefly among the poorer sections of the Indian people, they might still find suitable recognition and protection by their inclusion in a purely Indian Medical Register. It would, of course, be always open to these grades of medical workers to be admitted to the British Medical Register when their education and qualifications had been improved up to the necessary standard. We notice that in 189 a "Medical Register and Directory of the Indian Empire" was compiled by Dr. JAMES R. WALLACE, of Calcutta, in which all the various sections of the medical profession in India were embraced in their different grades. Some such compilation as this, if brought out under State authority or cognisance, would pave the way to a State system of registration. The question seems to us worthy of the consideration of the Government of India and of the provincial Governments of the Indian Empire.

COMPLAINTS reach us from time to time of the insanitary way in which some night shelters are conducted, and from private investigations which we have made we fear that these complaints rest upon a substantial basis. The Public Health and Housing Committee of the London County Council have on several occasions dealt with the matter casually, and with a view of obtaining more information they instructed Dr. C. W. YOUNG to inspect premises in London where the homeless are temporarily provided with night accommodation in rooms which they occupy in common. Dr. YOUNG'S report has now been printed with a prefatory note by Mr. SHIRLEY MURPHY, the medical officer of health of the administrative County of London, and the document is one which deserves careful perusal. A

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mass of important information is presented in a succinct and orderly manner, and the fact that it comes from a body like the London County Council must disarm the criticism of those who assert that complaints made by private individuals in this connexion are actuated by bias and prejudice.

In addition to the large number of common lodging-houses which come under the provisions of the Acts applying to them there are in London a number of night shelters for the homeless poor where either gratuitously or at a charge ranging from 1*d*. upwards sitting or lying accommodation can be procured under cover for the night. These institutions are generally conducted by some religious body from the best of philanthropic motives, though not in all cases in the best of sanitary methods, and though good results may sometimes follow they are often attended with evils which far outweigh them. Although a charge may be made for the accommodation provided, the proprietors of these shelters do not professedly run them for a profit, and the buildings are exempt from the same sanitary supervision which obtains in the case of the registered common lodging-house. Of course, a medical officer of health can treat them as he does private premises, but practically he can only demand admission between the hours of 6 A.M. and 9 P.M.—a period during which the buildings are necessarily empty. He can obtain an order from a magistrate for a right of entry at any time it is true, but the process of applying for an order may give the shelter officials, if they are so disposed, ample opportunity of frustrating the good which might result from such order.

It cannot be denied, however, that whatever the evils of these institutions may be, they certainly do provide a home for those who cannot avail themselves of the better-class lodging-house, and who would otherwise either have to find shelter in the casual ward or remain throughout the night in the streets. If the shelters provided by philanthropic bodies were subject to the same supervision as the registered common lodging-houses it must be quite evident to all who have visited these institutions and listened to the statements of the officials themselves that accommodation for the homeless would be less adequate than it is even at present; for there is no doubt that some of the shelters are overcrowded, and consequently the existing provision would have to be lessened. By some it may be urged that the State has made provision for the absolutely destitute, and to a certain extent this is true. But the State provision at present is perhaps not all that could be desired, and it is an open question whether, after all, the casual system does not tend in the long run to aggravate an evil which it is intended to remedy. On the other hand, we must consider not only the individual but the community at large, and if some of these shelters are liable, as we believe they are at times, to become hotbeds of infection, owing to insanitary conditions both of the house and its inmates, the sooner these shelters are brought under more efficient control the better for all concerned. We have it on the authority of one who, if not the absolute head, holds an important position with regard to the management of a large proportion of night shelters, that the body with which he is connected is willing to loyally abide by whatever Acts are passed by Parliament to regulate the control of these shelters. This statement is significant; and it is to be hoped that the London County Council will adopt the suggestion of their medical officer of health and apply to Parliament for the amendment of the definition of a common lodging-house so as to bring shelters within the provisions of the Acts which apply to common lodgings let for profit.

WE wish to call attention to the very temperate and accurate description given by a correspondent in a letter in another column of the difference between the intention of the founders of the examination for the Fellowship of the Royal College of Surgeons of England some fifty years ago and the practical result at the present time. When founded the Fellowship was expected to be merely a higher grade for Members who wished to give a longer period to surgical study, to work hard at surgical anatomy, and to show themselves quite proficient in practical surgery. At the present time the primary examination for the Fellowship is at once the most difficult and the most uncertain examination in its results at which any candidate in the kingdom can be tempted to present himself. In the first place, the constitution of the Board of Examiners is quite anomalous. The examiners in anatomy are all Fellows of the College, and are, to a certain extent, unconsciously biased towards a limitation of the number who should also enjoy their privileges. The privileges of a Fellow are very obvious ones. He can vote for those Fellows who desire to sit on the Council of the College and can alone be elected to a surgical office in most of the London and provincial hospitals. Candidates with University degrees in surgery who are not Fellows of the Royal College of Surgeons of England are debarred by the by-laws from holding office as surgeons or assistant surgeons in the largest and most important of all our English hospitals. This rule at once secures a close corporation. In the next place, not being able apparently to find amongst its own Fellows a sufficient number of advanced physiologists to examine at a high standard for this qualification, the College enlists from outside some of the latest investigators into this ever-progressing, or at any rate ever-changing, branch of science, and with what result it is easy to imagine. Further, another element of confusion is the inclusion of comparative anatomy. Attendance on a course of lectures on this subject is required from every candidate, but no syllabus is drawn up for his or his teacher's guidance. Generally none is required, but any examiner, acting on his individual knowledge and proclivities, may ask any morphological or developmental question that he may choose. The candidate must be possessed of an encyclopædic memory, for the practical examination is *nil*, and the *vivâ voce* depends on the personal equation of each examiner, whilst the written part is the great feature of the competition, and the questions set have rarely any bearing on surgery or practical surgery, but are based on questions of pure anatomical and physiological details. Can we wonder that under such circumstances over 70 per cent. of the candidates are rejected? Everything in the examination is against the examinee, and the time limit in the *vivâ voce*, with the limited numbers of

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the questions—four in each paper and no choice—proves the last straw to many a deserving and hard-working student and practitioner. Surely such an education in "cram" is the worst that could be devised for our future surgeons, and would cause the surgeons of the past generation to "turn in their graves" if they could only know what had become of their excellently practical scheme. The examination is at the present time only a field for intellectual gladiators in competitive examinations to exhibit their abilities, and is absolutely devoid of consideration as a training ground for practical surgeons. It is now quite an anachronism, and the examination has still more glaring defects than those which we pointed out some twenty years ago. Collegiate privileges should be divorced from a pure examination test, and the surgical appointments at our hospitals should not be restricted within such narrow limits as those which seemed expedient to our predecessors in the earlier days of the century.

Annotations.

"Ne quid nimis."

THE DIAMOND JUBILEE COMMEMORATION.

THE rejoicings and spectacular displays commemorative of Her Majesty's reign of sixty years have ended, and the nation may look back upon the occasion with sincere satisfaction. Such a spontaneous demonstration of affectionate loyalty and of unity has probably never taken place before in the world's history. Responsibility and power must go hand-in-hand, and it would ill-become the people of this country to recognise the power and forget the responsibility of the British Empire. What have been the most striking reflections to which this Jubilee has given rise? In the first place, we owe it to the peoples and Governments of the rest of the world to state that the most gratifying and brightest fact in the history of this commemoration has been the sympathetic magnanimity which they have displayed towards the Queen and this country. On all sides the expressions have been most generous and cordial on the part of other powers and peoples, and the fact has left behind it a peculiar sense of grateful appreciation; and, in truth, there was nothing aggressive or of menace in all the display that has been exhibited. This is a free country, and its inhabitants are a law-abiding people with a keen love for freedom and good government everywhere. It is not a mere phrase, it is a fact, that the British Empire is peace. The admirable organisation and excellent arrangements by which everything has passed off so well, and the splendid conduct of the people—their enthusiasm, cheerfulness, good temper, and forbearance—must have struck everyone. The Queen is a wise sovereign and a good woman, and her people were determined, so far as their conduct was concerned, that nothing should frustrate or mar the effect of the expression of their loyalty and trust, and Her Majesty manifestly must have felt in full force the pride and pathos of her position as the vast crowd spontaneously burst forth in singing the National Anthem and compelled the bands to adopt and follow their lead. The people felt that the Queen had never for dynastic or selfish purposes, deceived or distrusted them, and the throne of England, supported on the shoulders of a democracy, is not only the most stable throne in the world, but the occupants of all the others really owe it a debt of gratitude in this respect for the strengthening influence of the fact. Then, again, there was a unity of sentiment, spirit, and purpose running through all classes, from the costermonger to the peer, as they recognised the emblems and tokens of the vast Empire in the streets of London—the roots extending from Great to Greater Britain—of which the Queen was the representative and symbolised embodiment. That the President and people of the United States should have been foremost in their expressions of kindly sympathy was to be expected and could be counted upon, but that France, our nearest neighbour, should indulge in no word of envy, jealousy, or cynical coolness towards this country, but, in the spirit of that old chivalric generosity which has always characterised her, should have "let herself go" in kindly expressions of friendly admiration was most gratifying. The easy, pleasant manner in which the crowd obeyed the police, protected women, and showed their kindly disposition to children; the way in which they abstained from smoking in order to diminish danger and annoyance; the fact that the number of cases at the London police courts following the Jubilee procession did not exceed those of an ordinary Monday morning; and the absence of crime, and of all panic and serious accidents, may well make us proud of the conduct of those present in the streets of London on that occasion. The police, the navy, the military, the London County Council, and the people have, one and all, played and performed their allotted parts most creditably; nor do we believe that the effect of all that has taken place during the acute stage of jubilation fever through which we have just been passing will be lost on those from abroad who have honoured us with their presence in this country.

THE ATTITUDE OF THE MEDICAL PROFESSION TOWARDS THE PROVIDENT PRINCIPLE.

A THOUGHTFUL and fair paper on Provident Dispensaries and the Medical Profession, by Mr. Charles H. Warren, secretary of the Metropolitan Provident Medical Association, is published in the *Charity Organisation Review* of February, 1897 (Longmans, Green, and Co.), and should be read by all medical men. It deals with the subject of provident dispensaries and the principles on which they should be managed and governed, as well as with the causes which have hindered their success, which may be said to be principally two—first, the competition of free hospitals, and, secondly, lack of support from the medical profession. The first cause of the slow progress of provident dispensaries, the competition of hospitals, is obvious. Such dispensaries are found not to thrive in the neighbourhood of free hospitals, though, by way of proving the rule, there is one exception just opposite the London Hospital. Mr. Warren gives a striking fact in illustration of the unfitness of a large proportion of hospital patients. It is the result of an experiment for which the Hospital Saturday Fund and the Metropolitan Provident Medical Association must have the credit. The Hospital Saturday Fund found the applications for letters for chest hospital treatment so numerous that additional letters had to be purchased. They agreed with the hundred medical officers of the Provident Medical Association to examine cases applying for such letters and to certify fitness for such relief. Each applicant was required to produce a certificate before getting a chest letter. The result was that only 226 returned with the necessary certificate. No less than 238 did not see fit to submit themselves to examination. Of the total number applying for chest letters only 152, or 32 per cent., were considered proper cases for hospital treatment; the remaining 68 per cent. were kept away from hospitals because of their unsuitability, and for those treated at the dispensaries the medical men have received such remuneration as the rules of the dispensaries provide. Mr. Warren is quite right in believing that there has been a coldness of late years on the part of medical men

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towards provident dispensaries and in saying that till this is removed they cannot succeed. The admission of unfit members, the poor terms of remuneration, and the practice of more or less touting or canvassing are the explanations. He asserts that in all the more recent provident dispensaries there is a wage limit. We are glad he entirely approves the wage limit, though he says it must vary in different districts. He thinks medical men in organising provident dispensaries are tempted to make the wage limit too low and the fees too high. Whatever their temptations, they have had no success in getting too high fees. The objection to convassing he meets by saying that more or less of it is indispensable, but that the names of the medical men should not be published. It is a poor satisfaction to a medical man who has lost a private patient that he was captured by an advertisement or handbill of a dispensary not containing the names of the medical officers. As to the fees to be paid, he defends the scale of the committee of which the late Sir Spencer Wells was chairman. But it is too low in these days of high wages and costly medical education. Fourpence-halfpenny or sixpence per attendance is an entirely absurd sum for a medical consultation, and it will only be by making every visit a true consultation, however short, that the character of medical attendance among the working classes will be maintained. It is most essential that the medical profession should accept the provident principle. If they do not they will only play into the hands of competing hospitals and commercial companies. But the advocates of provident dispensaries must conceive more adequately of the value of medical service.

GARBAGE AS AN AUXILIARY SOURCE OF ELECTRICITY.

IT is interesting to notice how problems directed to the disposal of noisome things have been at length grappled with from the point of view of utility also. The enormous waste of material of priceless agricultural value, as sewage must be, has been a standing reproach to that section of our administration which deals with great sanitary questions. There is hope, however, even in this matter that sewage will no longer be ruthlessly disposed of but turned to excellent account. And we have been learning all this time that nature provides us with myriads of engineers in the form of microbes to do this work if only we will give them a chance, or, in more scientific terms, place them under conditions favourable to their operations as scavengers. Dust again has been a source of abomination to the public and to every municipal authority since the days when it was rejected as no longer economically useful by the brickmaker and house builder. At last fire was employed, in the form of the "destructor," to put an effectual end to its tendency to putrefy and hence to corrupt the air. So far, so good; but this method aimed, like the thousand and one methods of chemical treatment in the case of sewage, at mere disposal only, and the removal of a nuisance without the least pretence to utility. The "destructor" was not, however, in all cases a satisfactory machine, since in the energy of combustion a shower of dust and ashes was produced and scattered in the immediate neighbourhood of the shafts. The days of the non-utilitarian "destructor" are, however, numbered. It should give way shortly to a "converter." This at least appears to be the practical teaching recently afforded by the energetic vestry of St. Leonard, Shoreditch. The employment of garbage as auxiliary fuel to feed the engines driving dynamos for the production of electric light has been tried elsewhere before, but not satisfactorily either from the engineering point of view or the point of view of economy. The difficulty has been to utilise all the heat of combustion at all times, and to prevent formation of lava-like clinker. Judging from the satisfactory reports in the press of the Shoreditch installation, which was started by Lord Kelvin, these difficulties appear to have been successfully overcome. As far as we can gather, the success of this plant appears to depend upon an improved system of thermal storage, so that the heat accumulated by day may be stored and turned on to contribute to the increased requirements of the night. Everyone will hail with great satisfaction a step in advance in this direction, and we may take it that the presence of Lord Kelvin at the opening ceremony at Shoreditch on Monday last is some guarantee of a successful issue. In distinctly enthusiastic terms he congratulated the members of the vestry upon the energy and courage they had shown in carrying out ideas which had not previously been tested. It was an example, he added, of the amalgamation of scientific knowledge and forethought with mechanical engineering and skill.

THE PRINCE OF WALES'S HOSPITAL FUND.

A LETTER which appeared in the *Times* of June 29th from Mr. B. Burford Rawlings is well worthy the attention of all those who have the interests of our hospitals at heart, and especially those who, from want of thought more than from want of means, have not contributed at present towards the above fund. The annual subscriptions at present, says Mr. Rawlings, consist of £20,000 contributed by less than 5000 households instead of £112,500 contributed by 225,000 households. Mr. Rawlings pleads for a more personal element to be imported into the matter. The days of mediæval charity, when men gave houses and lands for the support of the poor and needy, have, we fear, gone by, and nowadays the only way of getting subscriptions is by persistent touting. A system of this kind well organised and under "distinguished patronage" would we feel assured open the purse strings of many who now do not subscribe at all. It is curious if we look at any subscription list to see the same names occurring again and again. Well-known wealthy men and a certain amount of anonymous subscriptions, which latter probably always come from the same persons, are to be found, but the rank and file of fairly well-to-do people are absent. It is a hard saying, but the majority of subscribers to-day want a show for their money; and whether they are working men subscribing to a hospital or others who demand letters, the position is the same—there is always the dread present to the hospital secretary's mind of the subscription being withdrawn. Perhaps if a sort of hospital Primrose League could be started it would solve the difficulty.

THE NATURE AND LOCATION OF LUMBAGO.

MR. JONATHAN HUTCHINSON[1] asserts, contrary to prevalent opinion, that the pain of lumbago is not in the lumbar muscles, or, indeed, in the loins at all; he has invariably found it to be in the sacral region, or in the sacro-iliac synchondroses. In the latter position it may be on one side only, but this is exceptional. There is so much peculiarity and definiteness about the pain of lumbago that it is a pity that it should not become an acknowledged type. Probably pain of a similar character occurs in other regions of the body. There are never any objective phenomena, and often there is little or no tenderness. It is a sleeping pain, and the thing that wakes it is not pressure, but movement. In many cases so long as there is no movement the pain is entirely absent, but the slightest attempt to alter the position of the back produces agony. The pain itself may be compared to sheet lightning; it is not exactly a single flash, but it broadens out and quivers from side to

[1] Archives of Surgery, April, 1897, p. 97.

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side across the affected part, and leaves a hot glow behind it. The first attack is often very sudden and disables its victim for the moment. As it is one of the large group of phenomena which go with the inheritance of gouty tendencies and exposure to the exciting causes of rheumatism it will often not be present alone. Sciatica, hip-joint arthritis, and affections of the spinal articulations are amongst its most frequent companions. In these cases we must separate their several elements. Lumbago is variable and transitory, whilst the pain of the other affections is usually more persistent and independent of movements. Lumbago in severe forms may shoot down the back of the hips and simulate sciatica; but unless the sciatic nerve be affected it does not pass far down the limb, nor is it attended by pain over the nerve trunk or wasting of the muscles. The liability to lumbago once experienced usually lasts the rest of life, and is influenced by season, weather, diet, and exposure, just as gout and rheumatic gout are. Its subject may be quite free the greater part of the year, but suffer for a month or more in early spring. The treatment consists of active exercise, care in diet, and warm clothing, especially across the hips. During the presence of pain the sufferer should, if possible, move about, even if he can only do so with assistance and bent almost double. After a time he will find the pain subsiding. In severe cases, unless the patient is unusually resolute, exercise is out of the question. Then recourse must be had, if not to Graves's favourite plan of cupping, to blisters, sinapisms, or the use of heat locally. Internally alkalies, aconite, and colchicum should be given. The patient should drink plenty of hot weak tea. As to the structures actually involved, Mr. Hutchinson has no doubt they are the ligaments of the sacrum and the cartilage between the sacrum and ilium—the latter as the result of self-observation. The pain is too deeply seated to be located in the muscular fascia and too peculiar to belong to a structure so general.

POST-GRADUATE FACILITIES IN RUSSIA.

AT the ten Russian Universities and at the Army Medical Academy in St. Petersburg there are facilities for post-graduate study. Courses varying from one to three months are held in various special subjects, and the fee charged is a small one, averaging about half a guinea. All medical graduates may attend quite freely the wards of the clinical hospital or infirmary attached to the university, and there are abundant opportunities for graduates desiring to do original scientific work in the laboratories attached to the universities, the cliniques, and other hospitals. In St. Petersburg there is in addition a very handsomely equipped hospital reserved entirely for the clinical use of medical men; it is, in fact, a graduates' clinique. This is the Helena Institute, or, to give it its full title, the Imperial Clinical Institute of the Grand Duchess Helena Pavlovna. It is named after a sister of the Emperor Nicholas I., one of the most active, charitable, and philanthropic workers of her time, who among other good deeds introduced the practice of nursing by women into Russia, and whose memory is still green. The Institute has 108 beds; it receives poor patients freely; others pay from 10 to 100 roubles a month, according to the accommodation. The present director of the Institute is Professor Skliffosofski, who has been selected as President of the International Medical Congress in Moscow. Attached to all the Russian Universities and the Army Medical Academy are a considerable number of scholarships (stipendia) either instituted by the Government or by private individuals, the holders of which are entitled to remain attached to the university for one, two, or more years, and to carry on original work in the laboratories and wards. A certain number of graduates are annually sent abroad at the expense of the Government to study at foreign universities and hospitals. This applies not only to recent graduates, but also to men high in the profession, university professors, and others. In addition the *zemstvos*, or local governing bodies, to each of which is attached either a medical board or a medical officer, frequently send (at the expense of the *zemstvo*) their medical officials to St. Petersburg, Moscow, or some other university town to spend three, four, or six months in the wards and laboratories there. This admirable system enables a provincial medical officer to keep in touch with the advances made in medical science. The Government encourages it by granting sums of money from the Treasury to assist the *zemstvos* in carrying out the system.

AFTER MANY YEARS.

THE City has lately had to deplore the loss by death of two medical men who were prominent inhabitants and the holders of important posts. The first, Mr. Charles Hogg, F.R.C.S. Eng., who died at St. Leonards-on-Sea in his eighty-sixth year, was for many years medical officer to Merchant Taylors School, and used to live in Charterhouse-square. The second was Mr. Charles Hope Buncombe, F.R.C.S. Eng., who died in his eightieth year and who had held for more than twenty years the post of medical officer to the City of London Infirmary. It is wonderful to think of the changes, especially in preventive medicine, which these two gentlemen must have seen. Fifty years ago Smithfield and the neighbourhood was a perfect Inferno. The cruelty, the filth, and the absolute want of anything approaching to sanitation which were perpetually present in the market and the slaughter-houses can scarcely be believed nowadays, but if anybody cares for horrors let him read a series of articles which appeared in *Household Words* in the early fifties, entitled the "Cattle Road to Ruin." At present the City is perhaps the best drained, swept, and lighted city in the world, and the other parts of London are for the most part but little in arrear.

"SLY'S PATENT TRUSS."

THE sentence of eighteen months' imprisonment with hard labour passed by the Lord Chief Justice at the Oxford Assizes last week on Samuel Albert Sly, otherwise Albert Hodge, the owner of "Sly's Patent Truss," should prove a useful warning to the other rogues of his class who are daily defrauding the unsuspecting public by means of false and misleading advertisements and circulars. The quack is a firm believer in printer's ink and publicity, as he should be, for he knows full well that there are hundreds and thousands of the gullible public ready to swallow any rubbish that he may be pleased to provide if only he can find mediums to advertise it with sufficient boldness and indecency. The quack is also a firm believer in the written support of "grateful patients," and the majority of these parasites have hundreds of unsolicited "testimonials" in their possession, the originals of which, according to advertisement, can be seen on application. Should anyone be so unbelieving as to want to see the originals they are invariably as difficult to produce as were the man Sly's. Not that Sly's methods were quite bereft of originality. He scorned such stupid trickery as writing his own testimonials—a method which always must lack some little *vraisemblance* and which also requires the trouble of composition. Sly found it a far easier course to extract from the trade circulars of various truss-makers the most approvin criticisms of the medical press and the best genuine testimonials from patients, and to appropriate these as commercial and private testimony to the value of his own "truss." He merely altered the names of the places fro which the testimony emanated and the dates and signatures. Out of ten testimonials on his business circular nine were proved in evidence to have been thus "lifted," and yet,

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humorous man, he put at the head of his circular an offer to show the orig nals on application! There was an extract from THE LANCET impressed into Sly's service, upon the strength of which, by the bye, the prosecutor, a mill manager at Blackpool, sent £5 for a truss. This particular extract appeared in our columns ten years ago, and was a commendation of a different appliance made by a manufacturer who is still in business in London. Sly added to the extract words which never appeared in THE LANCET, but the source of his inspiration was undoubted and indisputable. The value of "Sly's Patent Truss" may be gathered from the evidence given at the trial, one maker stating that it "was perfectly worthless," another that it "was not worth the brown paper it was wrapped in," and another that it "was a very bad thing altogether and not fit to be worn." And for this article £5 was the sum charged—about double the price of an ordinary truss—and to it complimentary things said about other and genuine instruments were calmly applied. Sly is no stranger to prison life, for he was sentenced at the Middlesex sessions, in the name of Albert Hodge, to seven years' penal servitude in 1888. He now goes to prison again, and we hope he will reflect upon the truisms contained in the opening sentences of this advertisement which we quote from an evening contemporary:—

Time proves all things. Honesty is the best policy. A hundred and seventy years ago one Sly set up his Truss Works in Oxford, and from that time down to the present the business has grown. Why? Because Sly's Improved Patent Truss, as worn by Sir Andrew Clark, and recommended by Sir B. W. Richardson, has been proved to be The Best on the Market. 44 Prize Medals, Diplomas, and Royal Appointments awarded. Write for particulars and Prices, Sly Bros., Oxford.—Advt.

The references to Sir Andrew Clark and to Sir Benjamin Ward Richardson constitute an outrage upon the memory of these eminent men; but Sly knew well that he was safe in holding out dead men as decoys. It is this particular piece of blackguardism, almost more than his misuse of our words, which makes us rejoice over Sly's fate and unable to enter heartily into the extravagant fun of the forty-four prize medals, the diplomas, and the Royal appointments. Yet the imagining of "Royal appointments" for a bogus truss shows imagination of no mean sort. This conviction should prove a salutary lesson to the dishonest individuals who do not hesitate to misquote THE LANCET to serve their own ends. They are not a small crowd, and many of them are known to us.

DEATHS OF TWO AMERICAN LEADERS IN MEDICINE.

WE offer our sincere condolences to the profession in America on the unexpected deaths of two of its most distinguished members as was announced in the last issue of THE LANCET. J. Lewis Smith, A.M., M.D., of New York, and William Thompson Lusk, M.D., LL.D., of New York, were equally pre-eminent in their respective departments of medical work. Dr. Lusk's book on the Science and Art of Midwifery has long been recognised as one of the best, if not the very best, treatise on its subject in the language, and it has been translated into several European languages and into Arabic. Dr. Lewis Smith's book on the Diseases of Children, of which there have been eight editions, might be spoken of in the same terms. Each author spared no pains—clinical, pathological, or literary—to arrive at truth in his respective studies, and each became a luminous and recognised authority. Dr. Smith, when asked in 1869 by Lea Brothers of Philadelphia to write a complete treatise on the diseases of children, at first modestly declined, alleging his unfitness for such a task. Fortunately he afterwards complied, and those who have read his work will long remember the faithfulness of his descriptions and the judgment in his treatment. We do not know any better account of the diarrhœa of children and of the enteritic inflammations to which they so often succumb than is to be found in this book, while the accounts of lesions in fatal cases add much to the scientific value of the records. Dr. Lusk was one of the earliest physicians to appreciate the significance of Lister's antiseptic system and to apply it to the art of midwifery with results that are among the triumphs of medicine in the Victorian era. His text-book is, as we have pointed out year by year in the Student's Number of THE LANCET, one of the best works on the subject in the language. In all parts of his great work, "The Science and Art of Midwifery," there is the same thoroughness of information and display of painstaking investigation, while full accounts of the latest work of other authors give to the work an authoritative character of completeness. Both these physicians have disappeared suddenly from the active spheres of labour and practice. Dr. Smith had been in indifferent health and had sustained two recent accidents which deranged his digestion and enfeebled his heart. He died suddenly from cardiac syncope at the age of seventy. Dr. Lusk also died suddenly, but in his case in the midst of apparent health, cerebral hæmorrhage carrying him off at the early age of fifty-nine years. He laid the foundations of his great medical and obstetrical knowledge in the teachings of Flint and Hamilton in his own country, and supplemented his knowledge by much work in Germany and other European countries. Both Dr. Smith and Dr. Lusk were widowers, but leave children to lament their loss. For further accounts of these interesting careers we refer our readers to our contemporary, the *New York Medical Record*.

THE PATHOLOGY OF CONGENITAL CYANOSIS.

DR. G VARIOT has recently contributed a series of articles to the *Journal de Clinique et de Thérapeutique Infantiles* (May 20th, May 27th, and June 3rd, 1897), in which he disputes the existence of any necessary connexion between cyanosis and congenital malformation of the heart and its great vessels. He quotes two cases which have come under his observation, and which presented almost identical anatomical defects, including marked contraction of the pulmonary artery and deficiency of the interventricular septum. In one of these cyanosis was very evident, in the other it was entirely absent. Dr. Variot is therefore disposed to look to other causes than cardiac malformation for the explanation of this symptom. The theory that it is due merely to admixture of arterial and venous blood, he reminds us, has practically been disproved by the experience of numerous observers. The teaching of the two cases reported by him has naturally strengthened a disbelief in contraction of the pulmonary artery as a sufficient cause, and, as he states, his observation in these instances is not unsupported by that of others. He cannot agree with Dr. Grancher, who attributes congenital cyanosis to causes similar to those which produce this symptom in the adult whose heart is not malformed, and which amount to a species of asystolia with associated disturbance of the whole circulatory system. His own view is that it results from the combined action of morbid change in the red blood corpuscles themselves and of vaso-motor paresis. The crowding together of red blood corpuscles characteristic of cyanotic blood, and already noticed by Gibson, Pierre Marie, and others, was well marked in the two cases above mentioned. It was, no doubt, as the writer observes, most evident in parts liable to vaso-motor action and paresis—the lips, conjunctivæ, &c. He acknowledges, however, the difficulty of deciding whether this crowding is not really attributable to reduction of the hæmoglobin in confirmed and congenital cyanosis as well as in the temporary variety

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met with in some transient pulmonary disorders. Probably an admission that in mal-aeration of the red corpuscles we have the true cause of cyanosis will best reconcile the writer's theory with the fact that a more or less incompetent heart, whether malformed or not, is usually associated with congenital cyanosis.

THE DANGER OF MIXED COACHES IN A RAILWAY TRAIN.

THE verdict, coupled with a recommendation, of the jury at the conclusion of the inquest on the bodies of the persons who were killed in the accident on the Cambrian railway, near Oswestry, was in the majority of cases published in a short paragraph in a somewhat obscure corner in the daily papers, and its importance may be lost sight of. It raises, however, a very serious question, and we are concerned to know what notice will be taken of it. The jury returned a verdict of "Accidental death," but as to the precise cause of the accident there was not sufficient evidence to show. They added, however, the recommendation that in future four-wheel coaches should not be attached to trains of a modern and much heavier build. Now, this mixing of old with new coaches is constantly going on, especially with cheap excursions trains, and in view of the frequently crowded state of excursion trains proceeding to seaside places and elsewhere it is just these which require more attention in regard to safety than others which run comparatively slow and local journeys. In the evidence given at the inquest referred to, it was shown that the carriages which left the metalswere of the old type. We are sure that this fact has not escaped the attention of the Board of Trade officials, and we hope they will take some steps with a view of preventing the possibility of a similar disaster happening elsewhere.

DARK LIGHT.

THE occurrence of light radiations, be they light, electricity, or other phenomena, which are so rapid in their vibrations as to permeate more or less opaque substances as illustrated in the x rays, has led to a branch of investigation which already has yielded very remarkable results. It is now known that most substances give off an active radiation of some kind when placed in the dark. These radiations are not visible to the eye, but the more sensitive silver film perceives them, so to speak, and, more valuable still, gives a permanent record of them. In the light of recent facts it is really astonishing that the photographer has been able to produce an absolutely unblurred negative. The very cardboard box containing his negatives has been found to produce a distinct effect upon the sensitive film. A piece of polished zinc produces in a similar way a picture of itself, the unevenesses of its surface being portrayed in the truest possible way. This action in no way depends upon contact, since a dividing sheet of celluloid or gelatine may be interposed without interfering with the result, except as might be expected in regard to a little less definition. Paper again transmits these light but yet dark radiations, though glass is apparently an effectual barrier to their passage. This was illustrated in an amusing experiment by Dr. W. J. Russell, F.R.S., who has recently communicated a most interesting paper to the Royal Society on this curious property of a very great number of substances. One of his methods of experimenting was to place the substance—and there is no better emitter of these dark radiations than uranium and its salts—in a pill-box, which he then placed upon a negative in the dark. The fact of a dark circle appearing on the negative showed that the radiations apparently had passed through the cardboard. In this experiment it was noticed that uranium acted more powerfully when in a pill-box than in other ways, and it proved ultimately that the pill-box itself contributed in no small measure to the action on the plate. Strawboard appeared very active, and certain specimens of printer's ink varied in their intensity. This last observation has thrown an interesting light on the resources of some of our esteemed contemporaries. For example, the *Westminster Gazette* is very active (from the point of view of its printing ink, of course), as also are the *Standard* and *Daily Graphic*, but the *Times* is a little less so. The *Evening News* may not be pleased to learn that it is only slightly active, while the *Morning Post*, *Pall Mall Gazette*, *Echo*, and *Daily News* have not the property at all of acting in this way. These differences are due doubtless to variations in the composition of the printers' inks severally employed. The subject is one of peculiar interest, and we may look for results of a still more remarkable kind.

THE ANNUAL DINNER OF THE EPIDEMIOLOGICAL SOCIETY.

ALTHOUGH Friday, June 25th, was the day preceding the Naval Review at Spithead, and thus a somewhat unfortunate date for many, the annual dinner of the Epidemiological Society was better attended than on any previous occasion, and a large number of guests were present. The President (Surgeon-Colonel Lane Notter) was in the chair, and after the usual loyal toasts had been duly honoured, Sir Douglas Galton, K.C.B., proposed "The Army and Navy," a toast which, in the unavoidable absence of the Director-General of the Army Medical Department, was replied to in most happy terms by Brigade-Surgeon Scriven. The toast of "The Visitors" was proposed by Sir Richard Thorne Thorne, K.C.B., who was very cordially congratulated upon his well-deserved Jubilee honour, and was responded to by Dr. Farquharson, M.P., and by Dr. Collins, the Chairman of the London County Council. Sir Walter Foster, M.P., in proposing "The Epidemiological Society," referred to the early history of the society and to the very valuable contributions which it had made to the science of epidemiology during the Victorian era; and the President, in responding to the toast, accentuated the world-wide character of the society, and pointed out that it had its foreign secretaries in all parts of the empire. It would, he trusted, be always the aim of the society to encourage foreign and colonial contributors. The toast of "The Chairman" was proposed by Dr. Whitelegge and duly acknowledged by the President.

A NEW SPECIALTY: RHINO-GYNÆCOLOGY.

TRULY the mysteries of the body are infinite, or is it that the ingenuity of investigators is inexhaustible? Some such reflections cannot but have occurred to our readers last week when they perused the very latest discoveries of "science," as reported from the city that is wont to be regarded as one of the highest seats of medical learning, Vienna. Of course, we are not going to be so bold as to doubt the accuracy of the somewhat singular observations of Dr. Fliess and Dr. Kleinwächter, but we may be pardoned perhaps if we enter a protest against their being made the basis of practice. If we were to name two organs of the human body which have perhaps suffered more than any other from the meddlesome interference of the specialist we should select the nose and the uterus. Instances must occur to the minds of every medical man where these long-suffering regions have been subjected to mechanical violence on grounds that are, to say the least, very insecure. Now, if these Vienna investigators are to be credited, it would appear as if certain

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disorders of uterine function can be successfully dealt with by a local treatment of the nose! We tremble to think of the perturbation which such a momentous discovery will arouse in the specialistic circle, for who is to decide where the rhinologist shall step in or what are to be the limits of the field of gynæcological operation? In all seriousness we do most earnestly deprecate the practical application of Dr. Fliess's ingenious speculations as being calculated to open the door to an infinite deal of quackery—no other term can be found to indicate such practice—disguised beneath the cloak of so-called science.

SIR JAMES REID, BART., K.C.B.

THE Queen has been pleased, in commemoration of Her Majesty's Diamond Jubilee, to confer the dignity of a Baronetcy upon Sir James Reid, M.D., K.C.B., Resident Physician and Physician in Ordinary to Her Majesty. It is a great pleasure to chronicle this further proof of Her Majesty's high regard for the servant whose personal relations with her are necessarily of the most intimate nature, and we heartily congratulate Sir James Reid upon his well-deserved honour.

THE NEW INFIRMARY AT NEWCASTLE-ON-TYNE.

MR. RILEY LORD deserves the very warmest congratulations. Everyone will remember how about a year ago, when he was the energetic Mayor of Newcastle, he wrote a letter to the public press pointing out the necessity for a new infirmary and urging the fulfilment of the scheme as a fitting memorial of the Diamond Jubilee. Subscriptions flowed in, and the total fund now amounts to the very handsome sum of £100,379 16*s.* 8*d.* This is a result of which Newcastle may well be proud, and the major part of the honours are certainly due to the ex-mayor. We may mention that to finally complete the scheme some £20,000 are still required to be expended on furnishing and sundry other incidental expenses. The number of beds is 400.

"A NON-REGISTERED MEDICAL MAN" AND A "DEATH BY MISADVENTURE."

"I AM a non-registered medical man and not a herbalist. I do not profess any medical or surgical qualification. I am an author and have published five books, one of which is on botany. In that book I tell how one can discover in a minute whether a plant is poisonous or not by examining the bloom. I have travelled in Asia and America. I have practised twenty-four years, fourteen in the house in which I live." Such are the terms in which Mr. Frederick Rawlings, of Willow-grove, Reddish, near Stockport, favours a jury with a little of his interesting autobiography, while giving evidence in a case of injury to the knee which, in the opinion of Mr. G. Passmore, L.R.C.P. Irel., and L.S.A., was one of old injury to the bursa of the patella, and which had been treated by Mr. Rawlings with applications which had set up irritation, followed by absorption of septic material from the inflamed part. The swelling regarded by Mr. Passmore as similar to housemaid's knee was considered by the non-registered medical practitioner as "a tumour" to be broken up and dispersed with irritants, remedies he had used "in over 1000 cases, cases enough to fill the infirmary." We shall not go into the diagnosis of Mr. Rawlings. It is enough to point out that in the judgment of a qualified practitioner Mr. Rawlings's treatment was "bad, wrongful, and ignorant," and that by the coroner and his jury he was let off with a verdict of "Death by misadventure," with this amplification: "The cause of death was septic poisoning from housemaid's knee, and death was caused by misadventure." The coroner carefully instructed the jury that they were not to judge of the case and condemn Mr. Rawlings because he was not a qualified man. We see no reason why the jury should not have done both. It is the privilege of juries and their duty to express free judgments on such lamentable cases where life has been lost for want of proper knowledge and qualification in the attendant. Unless our memory misleads us juries are constantly expressing such judgments to the great advantage and protection of the public. Mr. Rawlings will possibly feel reassured in assuming the airs of a "medical man" and perhaps repeat the treatment which the jury were informed was "bad, wrongful, and ignorant" for twenty years more. What will Mr. Muir McKenzie say with regard to the need for amendment of the Medical Acts in the face of such cases as this?

THE JUBILEE AND THE PUBLIC SAFETY.

DESPITE the appalling prognostications of evil which were so freely made as to the loss of life which would inevitably accrue upon the occasion of the Jubilee, we are happy to say that nothing of the sort occurred. The streets did not fall in under the weight of sightseers; thanks to the admirable inspection of the London County Council no stands collapsed; and, partly owing to the exertions of the police and partly to the common sense of the people themselves, no one was crushed to death in the crowds. The Volunteer Medical Staff Corps, which had some 500 officers and men on duty along the route, report that no serious case occurred under their care. In all 201 cases were attended to, but these were chiefly cases of fainting. In some instances we fancy sightseers followed the example of Mr. Noah Claypole and his amiable wife and pretended to faint, not with the idea of getting brandy during prohibited hours, but so as to get a good place. This was especially the case at the top of Grosvenor-gate, where the St. John Ambulance Society had a station on the refuge in the middle of the road, a place which naturally commanded a good view. The resources of the staff were overtaxed, when some genius suggested removing the station out of sight of the route. After that the epidemic of fainting suddenly ceased. As to the hospitals they had far fewer casualties to treat than on an ordinary day, but all the same, when we think of the possibilities of accident which existed, it is a matter both for congratulation and profound thankfulness that everything passed off so well. Thirty-eight calls to fires were reported to the brigade, in most instances on the line of route of the procession, but none was serious.

MR. W. J. C. MILLER, the lately retired Registrar of the General Medical Council, is, we understand, to be the recipient of a testimonial from some of his friends, contributors to the mathematical columns of the *Educational Times*. His labours on that paper have been carried on for nearly forty years, but the absolute necessity for rest compels him now to resign his interesting and useful work.

THE annual dinner of the Hospital Reform Association will be held at the Holborn Restaurant on Monday, July 26th, at 7.30 P.M., Dr. Ward Cousins presiding. Dr. Ernest Snape, 41, Welbeck-street, London, is acting as honorary secretary, and will be glad to answer all communications. The price of the tickets is fixed at 5*s.* 6*d.*

AT the sixty-third annual general meeting of the Royal Statistical Society, held on June 29th, it was announced that the subject of the essays for the Howard medal, which would be awarded in 1898, with £20 as heretofore, was The Treatment of Habitual Offenders, with special reference to their Increase or Decrease in Various Countries.

HER ROYAL HIGHNESS PRINCESS CHRISTIAN of Schleswig-Holstein will lay the foundation-stone of the new cancer

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wing of the Middlesex Hospital on Thursday afternoon, July 15th, at 5 P.M.

THERE is no foundation for the statement that Mr. Mayo Robson contemplates resigning his hospital appointment at Leeds and removing to London.

Pharmacology and Therapeutics.

THE ELECTRIC LIGHT IN RHEUMATISM.

DR. KOZLOVSKI, a St. Petersburg physician, publishes in the *Vrach* (No. 14, 1897) an account of his method of treatment of rheumatism and neuralgia by means of exposure to the electric arc. He was induced to make these observations by the statement of Dr. Ewald, who is medical officer to some large ironworks, that he had noticed that since the introduction of the system of electric welding there had been a notable diminution in the number of cases of rheumatism, neuralgia, migraine, and other nervous diseases among the workmen, which he attributed to the beneficial effect of the electric light. In order to bring this therapeutic agent within the reach of ordinary patients Dr. Kozlovski has fitted up consulting-rooms with a suitable plant for producing the electric arc, which consists of a six-horse-power oil engine, a dynamo, thirty-five Tudor accumulators, a rheostat, ampère-meter, and electric arc lamp with reflector. With these he obtains an electromotive force of 50 or 60 volts and a current of from 250 to 300 ampères. The patient is placed at a distance of one and a half metres from the light and protected by blue spectacles and also by a screen of cardboard in which an aperture is cut to allow the light to fall on the affected region of the body. To this it is exposed for from three-quarters of a minute to two minutes. At the time the patient feels a slight sensation of heat, though the temperature is never raised more than 4° F. where the light falls on the skin, but nothing more until six or eight hours afterwards, when itching and tingling are felt and the skin becomes reddened. Some forty-eight hours later desquamation occurs, which lasts for two or three days. In the course of three months Dr. Kozlovski has treated thirty-eight patients, varying in age from thirteen to seventy years, by the electric light. There were eight cases of sciatica, all of which recovered; four of neuritis (locality not stated), two of which recovered; eighteen of chronic rheumatism, fourteen of which recovered; three of lumbago, all of which recovered; three of occipital neuralgia, of which two recovered; and two of trigeminal neuralgia, one of which was greatly benefited. In most cases three or four sittings produced an amelioration of the pain. They were continued at intervals of three or four days, according to the amount of cutaneous irritation, but the total number of sittings never exceeded a dozen.

PICRIC ACID IN ECZEMA.

Picric acid, which, as is now known, is a very useful application in burns, has also been employed with success in eczema by M. Grangé and by Dr. W. Maclennan. In a recent communication to the Paris *Société Médicale des Hôpitaux*, Dr. Gaucher reports very favourably of it. He employs a 1 per cent. solution to paint the affected spots, which he then covers with a compress soaked in the same solution, leaving this on for two days at a time. He finds that the irritation is relieved and that the surface becomes more healthy. This method is applicable only to moist varieties, not to acute or to chronic lichenoid eczemas. He thinks also it would be very suitable in many other moist affections of the skin, such as pemphigus. It should be observed that Dr. Maclennan dealt with acute cases, and employed a saturated solution.

AIROL IN LEPROSY.

An Italian physician, Dr. Fornara, of Taggia, reports a remarkable improvement in a case of typical leprosy of five years' standing, consequent on the use of airol dusted on the ulcers and open abscesses, together with a 10 per cent. vaseline ointment applied to the conjunctivæ and injected into localities where softening had commenced. Tonics were also prescribed and general massage was practised, and at the end of a couple of months the nodules disappeared or diminished considerably in size, the conjunctivæ regained their normal appearance, the hair reappeared, and the cutaneous sensation returned. The drug was well borne, but the gums became discoloured by the bismuth in the airol, and when very large doses were given a certain degree of prostration was observed.

EUCAINE B IN OPHTHALMIC PRACTICE.

According to Dr. Silex, of Professor Schweigger's ophthalmic clinic, Berlin, the so-called eucaine B, which is, of course, closely allied to the older eucaine or eucaine A, has some advantages over the latter as well as over cocaine and tropacocaine—to which it is also closely allied—in ophthalmic practice. First of all, it is very much less toxic than any of these substances. Its hydrochlorate stands boiling much better than that of cocaine, thus rendering sterilisation more simple. The hydrochlorate is soluble in water to the extent of 5 per cent. at ordinary temperatures, and it does not irritate the eye as eucaine A often does. Two drops of a 1 per cent. solution induce in from one to three minutes anæsthesia of the cornea which lasts for a quarter of an hour. In about half the cases examined hyperæmia was observed in the conjunctiva, which, however, did not distress the patients at all, and which was in marked contrast to the anæmia usually caused by cocaine. The pupil was unaffected in diameter, the sphincter reacting promptly; the power of accommodation, too, remained intact. No diminution of tension in the eyeball as sometimes noticed with eucaine A could be detected. In the treatment of foreign bodies in the cornea, corneal ulcers, interstitial keratitis with great irritation, episcleritis and iritis, cocaine appears as suitable as eucaine B; indeed, more so in affections such as iritis in which there is hyperæmia of the anterior half of the eye. In cataract operations eucaine B is perhaps better than cocaine, as it is often of advantage to have a normal pupil during the operation. Six drops of the solution are instilled about ten minutes before the operator is ready. It may be remarked also that eucaine B is cheaper than cocaine, so that in hospital practice it is not unlikely to be preferred in suitable cases.

INJECTIONS OF IODINE IN TUBERCULOSIS.

Campanini gives an account of several cases of Durante's method of treatment in cases of surgical tuberculosis. Two cases of joint disease in which cures were obtained are especially mentioned. In one of these fifty-three and in the other forty-five injections were given, some of which were intra-muscular and some intra-articular. Good results were also obtained in cases of tuberculous glands, especially those which were not associated with any suppurative periadenitis. Lupus, tuberculous orchitis, and epididymitis have all been treated with this method, and two cases of tuberculous peritonitis are also said to have improved under it.

EUCHININ AS A SUBSTITUTE FOR QUININE.

This substance, which is said to have the therapeutical qualities of quinine, occurs in fine white needles which melt at 95° C. and are easily dissolved by alcohol, chloroform, and ether, but dissolve with difficulty in water. It forms salts, of which the muriate is easily soluble in water, while the sulphate and tannate are much less so. The advantages which this drug is said to have over quinine consist in the facts that it is almost tasteless and that it does not produce any headache, noises in the ears, &c., which quinine is apt to do. Clinically it has been used in the same classes of cases in which quinine would be applicable, and it is stated that healthy persons can usually tolerate from fifteen to thirty grains without any ill effects. Chemically the drug is closely allied to quinine, and it is prepared by the action of chlor-ethyl carbonate upon quinine.

LYCETOL AS A SOLVENT OF URIC ACID.

Since the discovery of the all-important part which the presence of uric acid plays in health and disease there has been a constant endeavour to find a drug which will promote excretion of this substance when its presence in the body is causing unpleasant symptoms. One of the last of these solvents is named "lycetol." Lycetol is the tartrate of dimethyl-piperazine, and as such it will be seen that it is closely allied to piperazine, which is also claimed to have a definite solvent action on uric acid. It is a white powder, easily soluble in water, and possessing a pleasant acid taste. The administration of this drug is said to be immediately followed by an increase of the amount of uric acid in the urine, while the actual quantity of the urine is increased and the specific gravity lowered. Dr. R. de Jollenaere reviews the action of this drug in *La Belgique Médicale*, and he considers that without being considered a specific, lycetol none the less must be regarded as a valuable help

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in the treatment of chronic gout and rheumatism; for under its influence there is often a rapid diminution of pain, accompanied by an increased flow of urine.

AMYLOFORM AND DEXTROFORM.

A new substitute for iodoform has recently been prepared by Professor Classen, of Aix-la-Chapelle, which he names "amyloform," and which consists of a combination of formaldehyde with starch. It occurs as an almost impalpable white powder, devoid of all smell and insoluble in ordinary menstrua. In contact with the tissues of the living body, however, it breaks up, and when it was applied to extensive suppurating wounds formaldehyde could be detected in the purulent discharge. At the same time the urine was proved to be quite free from it by distillation with dilute sulphuric acid and the addition of fuchsin sulphurous acid, so that whatever formaldehyde enters the system must be fully oxidised therein. However much amyloform is applied no toxic symptoms are produced, though a slight and transient smarting sensation is sometimes complained of locally. The clinical effect of the substance is very similar to that of iodoform, only it is frequently more pronounced. In a number of cases of deep wounds with suppuration of bone from osteomyelitis or tubercle a quantity of the powder very liberally applied caused the suppuration to cease in a very short time—in some instances where iodoform had previously been tried without much result. In varicose ulcers of the leg and in the primary sore of syphilis, amyloform also proved useful. The above clinical observations were made by Dr. Bongartz in the Mariahilf Hospital, Aix-la-Chapelle. It has been mentioned that amyloform is insoluble, but a very similar substance has been prepared from dextrin instead of starch, which Professor Classen calls "dextroform," and this is dissolved without much difficulty by both water and glycerine. Its five, ten, or even twenty per cent. solution has proved very useful, as in injection in gonorrhœa, and the two former of these solutions have been employed with success for washing out the cavity of an empyema. Internally the solution has been prescribed with advantage in a case of cystitis.

The Lancet Special Commission
ON
SICILY
AS A HEALTH RESORT.

III.[1]

Comparative Meteorology and Climatology of Sicily —Contrast between Sicily and (1) Bournemouth, Ventnor, and Torquay; (2) Nice, Mentone, and San Remo; (3) Cairo; and (4) Orotava, Canary Islands.—The Sicilian Flora and its Relation to Climate.—Experiments in Acclimatisation at Palermo.

To complete the survey of the meteorology and climatology of Sicily it will be instructive to institute a comparison between that island and some of the most favourite health resorts of the world. For the purposes of this comparison three of the best-known British resorts will be selected—viz, Bournemouth, Ventnor, and Torquay; three of the best-known Rivieran resorts—viz, Nice, Mentone, and San Remo; Cairo, as representative of the North African sanatoria; and Puerto de Orotava, Teneriffe, as representative of the Canary Islands. It would be easy to enlarge this list, but the exigencies of space place a limit to the range of the survey. As differences, usually slight, but sometimes material, exist in the figures of the meteorological tables furnished by different authorities, it may be well to indicate the writers who have been chiefly relied upon to furnish the data for the following comparisons. For the British resorts "The Climates and Baths of Great Britain," being the report of a committee of the Royal Medical and Chirurgical Society of London, 1895, has been exclusively relied on. For the Riviera the well-known works of Sparks, Marcet, Bennett, and Hassall have been consulted. Sandwith has supplied the figures for Cairo and Samler Brown those for Orotava. The authorities for Sicily have already been fully indicated. Before entering upon the following comparative survey it should be remembered that comparisons between different health-resorts are difficult, and unless made with great caution may be entirely misleading. Climate is a very complex affair, and two sanatoria cannot be fairly compared with regard to one climatological factor without having regard to the others. Thus, if two localities are compared with regard simply to considerations of temperature, the comparison will possess a certain value, but that value will be very limited because the comparison will ignore such vitally important points to the invalid as amount of sunshine, proportion of fine days, amount of rainfall, and character of the prevailing winds. Again, a certain locality may be pre-eminent from one point of view, but quite deficient from another. The island of Monach, in the Hebrides, has one of the most equable climates in the world; but the amount of rain and cloud and the deficiency in sunshine render it useless as a health resort. At Luxor, in Upper Egypt, there is practically no rain, and the sky during winter is usually cloudless; but as a set-off to these great advantages the daily range of temperature is very high and dust-storms from the desert are a serious annoyance. Syracuse has a bright, sunny, equable climate, but the frequency of high winds mars its utility as a health-resort. In fact, as Fonssagrives remarks,[2] "Les climats, comme les caractères, ont les qualités de leurs défauts, et les défauts de leurs qualités." In other words, the value of a health resort must be gauged, not only by its merits, but by its defects and by a judicious appraisement of its *tout ensemble* of meteorological characteristics.

1. *Sicily as compared with the chief British resorts.*—The mean temperature for the whole year at Bournemouth is 49·7° F. (= 9·83° C.); at Catania 64·4° F. (= 18° C.); the mean at Ventnor 50·8° F. (= 10·44° C.); at Palermo 64·6° F. (= 18·1° C.); and at Torquay 49·4° F. (= 9·66° C.). The temperatures for the winter months at the three British resorts and at Catania and Palermo appear in the following table:—

—	Bournemouth.		Ventnor.		Torquay.		Palermo.		Catania.	
	Deg. F.	Deg. C.	Deg. F.	Deg. C.	Deg. F.	Deg. C.	Deg. F.	Deg. C.	Deg. F.	Deg. C.
Nov. ...	45·2	= 7·3	47·8	= 8·7	46·6	= 8·1	60·58	= 15·88	61·05	= 16·14
Dec. ...	39·7	= 4·2	42·3	= 5·7	42·7	= 5·9	54·55	= 12·53	53·76	= 12·09
Jan. ...	39·6	= 4·2	41·6	= 5·3	40·8	= 4·9	51·60	= 10·89	49·51	= 9·73
Feb. ...	39·7	= 4·2	41·9	= 5·5	41·9	= 5·5	52·90	= 11·61	51·67	= 10·93
March ...	41·7	= 5·4	43·1	= 6·2	42·3	= 5·7	56·01	= 13·34	54·52	= 12·51

Dr. Sparks, in his work on "The Riviera," says (p. 2): "On the whole, it may be stated without much want of accuracy that the mean temperature of the Riviera in the winter and spring is from eight to ten degrees higher than that of England." It would appear from the above table that the mean temperature of the Sicilian resorts in the winter and spring is from eleven to fifteen degrees higher than that of England, and consequently from three to five degrees higher than that of the Riviera. The contrast between the British and the Sicilian resorts with regard to the relative humidity of the air is, as might have been expected, great. The figures are as follows:—

Torquay	82·3 per cent.	Saturation = 100 per cent.
Ventnor	81·0 ,,	
Bournemouth ...	77·7 ,,	
Palermo	65·4 ,,	
Catania	61·0	

Not less striking is the contrast between the British and the Sicilian resorts as regards the proportion of rainy days in the year. The following are the figures: Torquay, 187 rainy days per annum; Ventnor, 164; Bournemouth, 158·3; Palermo, 116; and Catania, 86.

The returns from the British resorts do not state the number of days of frost, fog, or high winds, so that any comparison under these heads is impossible. It may, however, be borne in mind with advantage that at Palermo the thermometer touches freezing point about two or three times

[1] Nos. I. and II. were published in THE LANCET of June 5th and 12th, 1897, respectively.

[2] Article, Climat, in the Dictionnaire Encyclopédique des Sciences Médicales, Paris, 1878.

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in the year, at Catania rather less frequently, and that at both resorts fog is practically unknown. In these respects the superiority of the Sicilian resorts is, as might be expected, very decided. The mean daily range of temperature is not given in all the English returns, but it is stated to be only 10·6° at Ventnor, which is rather under the Sicilian average. To sum up, while the British resorts present considerable advantages to patients who are unwilling to face a long journey and expatriation, they are inferior to the Sicilian resorts as regards the general warmth and brightness of the invalid season, the number of rainy days, the amount of cold, frost, and fog; in fact, in most of the essential meteorological features for which the invalid usually seeks climatic change.

2. *Sicily as compared with the chief Rivieran resorts*.—The following is the comparison as regards the mean temperature for the winter and spring months:—

—	Nice.		Mentone.		San Remo.		Palermo.		Catania.	
	Deg. F.	Deg. C.	Deg. F.	Deg. C.	Deg. F.	Deg. C.	Deg. F.	Deg. C.	Deg. F.	Deg. C.
Nov. ...	53·8 =	12·1	54·1 =	12·3	53 54 =	11·9	60 58 =	15 8	61 C5 =	16 1
Dec. ...	48 5 =	9·1	49 7 =	9 8	49 25 =	9·5	54·55 =	12 5	53·76 =	12 1
Jan. ...	47·0 =	8·3	49·0 =	9 4	47·23 =	8·4	51·60 =	10·9	49·51 =	9 7
Feb. ...	48·4 =	9·1	48 6 =	9·2	50·19 =	10·1	52·90 =	11 6	52·67 =	10·9
March ...	51·8 =	11·0	50·7 =	10 4	52·0 =	11·1	56 01 =	13·3	54·52 =	12·5

The higher rate of warmth at the Sicilian resorts during the winter and spring months is thus evident. The number of times that the thermometer touches freezing point in the course of the winter is one convenient gauge of the mildness or severity of the climate. The data for an exact comparison under this head are not available, but the existing evidence would appear to indicate that freezing point is touched much more frequently at Nice, Mentone, and San Remo than at Palermo or Catania. It must also be borne in mind that any considerable degree of cold is unknown in Sicily at the sea level, but well known, although exceptional, at the Rivieran resorts. As regards the relative humidity of the air the figure for Nice—viz., 59·6 (mean of observations taken at 2 P.M.)—may be compared with that of Palermo—viz., 65·4, and for Catania 61 per cent. No one familiar with the Riviera and with Sicily can doubt for a moment that the air of the former is drier than that of the latter, but it would appear from these figures that the difference is considerably less than might have been supposed. If, in accordance with the views of most writers on the subject, the climate of the Riviera be regarded as dry, then the climate of Sicily cannot be called damp, the difference in relative humidity being really small. The Rivieran resorts show very favourably with regard to that which is their chief glory, viz, their remarkably high proportion of fine days and low proportion of wet and cloudy days. The number of rainy days per annum at Nice is 70; at Mentone 80; at San Remo 48; at Palermo 116; and at Catania 86. Here, therefore, is an important point, in which the Rivieran climate has a superiority over the Sicilian, though it will be noticed that Catania is but little below the average of Mentone. Indeed, Professor Ughetti[3] claims an actual superiority for Catania as regards serenity of sky and proportion of fine weather. He quotes the following statements from Schivardi: "From Nov. 1st to March 30th Mentone has on an average 50 days of rain, Catania only 26. From Oct. 1st to April 30th San Remo has 83 days of cloudless sunshine, as compared with 103 at Catania, 95 'mixed' days (days of partial cloud and partial sunshine), as compared with 76 at Catania, and 34 rainy days as compared with 33 at Catania." Readers have probably already appreciated the extreme difficulty of obtaining absolutely precise data with regard to meteorological details. These figures must be allowed to speak for themselves. It appears probable that while Sicily as a whole is inferior to the Riviera in the proportion of fine weather, Catania and its neighbourhood are practically on a par with Mentone and San Remo. It will be found that in the matter of winds sunny Sicily has a decided advantage over the sunny Riviera. It is admitted by every competent authority that cold winds are the grand drawback to the otherwise admirable climate of the Riviera. The old saw remains true as regards the mistral—

> "La Cour de Parlement, le Mistral et la Durance
> Sont les trois fléaux de la Provence."

Much heated argumentation has taken place regarding the



Syracuse from the Sea-front.

[3] Vide L'Inverno a Catania, by Dottor G. B. Ughetti.

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frequency of the mistral, its varying rates of virulence at the different Rivieran resorts, &c. Without touching upon ground that is in any way disputable, it may fairly be assumed that the mistral is somewhat frequent on the Riviera, that it is both disagreeable and dangerous, and that it constitutes a serious objection to the climate. Now, broadly speaking, cold winds are unknown in Sicily, the tramontana and greco being very rarely disagreeable to the healthy individual or hurtful to the invalid. The chief drawback, however, to the Sicilian, as to the Rivieran, climate is a wind, but in the case of Sicily it is a hot, not a cold wind—viz., the sirocco, and, moreover, a wind which, though highly disagreeable, is not injurious to health, and which is, as a rule, better borne by the ailing than the healthy. Summing up, it may be said that the climate of Sicily is warmer, more equable, and more free from extremes than that of the Riviera; that in dryness of the atmosphere and average of fine sunny weather the Riviera has a slight, but only a slight, advantage; and that the hot winds of Sicily are less frequent during the invalid season and less perilous to health than the cold winds of the Riviera.

3. *Sicily as compared with Cairo.*—The contrast of mean monthly temperatures is as follows:—

—	Cairo.	Palermo.	Catania.
	Deg. F. Deg. C.	Deg. F. Deg. C.	Deg. F. Deg. C.
November	64·4 = 18·0	60·58 = 15·8	61·05 = 16·1
December	58 4 = 14·6	54·55 = 12·5	53·76 = 12·1
January	53·3 = 12·0	51·60 = 10·8	49·51 = 9·7
February	57·0 = 13·9	52·90 = 11·6	51·67 = 10·9
March	62·8 = 17·1	56·01 = 13·3	54·52 = 12·5

It will thus be seen that Cairo is about as much warmer than the Sicilian resorts as they in their turn are warmer than the Rivieran resorts. The minimum temperature recorded at Cairo during the winter is usually about 35° or 36° F. (= 2° C.), and freezing-point seems never to be reached (Sandwith). The mean daily range of temperature at Cairo is great. According to Marcet, the mean temperature at Cairo during the winter season at 3 15 o'clock P M (the hottest time) varies from 79 2° F. (= 26 2° C.) to 83 7° F. (= 28 8° C), and the mean temperature at 3 15 o'clock A.M. (the coldest time) varies from 38 7° F. (= 3·7° C.) to 39 9° F. (= 4 4° C.). Here there is a striking contrast to the mean daily range of Sicily, which may be taken as about 12° F. or 13° F., recalling the cardinal defect of the Egyptian climate —viz., its lack of equability. The mean relative humidity of the air at Cairo is 58·4 per cent., which may be compared with the rate at Palermo (viz., 65·4 per cent.) and that at Catania—viz., 61 per cent. A greater contrast would have been expected under this head, but the remark of Sandwith may be recalled: "Although Cairo is exceptionally dry it has its damp moods at times, and several times a year for a few hours reaches saturation on the humidity scale." As regards average of fine weather, Cairo, as might be expected, far surpasses any of the European resorts. Cairo has an average annual rainfall of 1·22 in., and the average number of rainy days per annum is about 12 or 13. Cold winds are not, as a rule, frequent or dangerous in Egypt, but the khamseen wind, blowing from the south or south-south-east, is in many respects comparable to the sirocco of Sicily. It is evident that the climates of Cairo and of Sicily present points both of analogy and contrast. Both have a high proportion of sunshine and fine weather, but in this respect Cairo has much the advantage. Cairo has a dry climate—Sicily a climate of medium humidity. Cairo has a very high daily range of temperature—Sicily a moderate daily range. Both suffer from winds, but from hot, rather than from cold, winds. Both are somewhat dusty places, but this inconvenience and danger is much greater in Egypt than in Sicily.

4. *Sicily as compared with Orotava (Canary Islands).*—The contrast between Sicily and the Canary Islands is in many respects one of peculiar interest, and it is a matter of regret that fuller meteorological tables are not available for the Canary Islands. These islands are situated in 28° and 29° N. latitude, or about 8° or 9° nearer the Equator than Sicily, but the resemblance, meteorological and botanical, between them and Sicily is closer than their relative geographical position would suggest, the explanation, no doubt, being that both feel the influence of the neighbouring African continent.

The contrast of mean monthly temperatures is as follows:—

—	Orotava.	Palermo.	Catania.
	Deg. F. Deg. C.	Deg. F. Deg. C.	Deg. F. Deg. C.
November	64·7 = 18·1	60·58 = 15·8	61·05 = 16·1
December	61·2 = 16·2	54·55 = 12·5	53·76 = 12·1
January	59·6 = 15·3	51·60 = 10·8	49·51 = 9·7
February	60·4 = 15·7	52·90 = 11·6	51·67 = 10·9
March	62·0 = 16·6	56·01 = 13·3	54·52 = 12·5

Orotava is thus seen to be appreciably warmer in winter and spring even than Cairo. The mean daily range of temperature at Orotava during the season is stated to be 13°F., which is very near the Sicilian average. The relative humidity of the air at Orotava is high—viz., 75 per cent.—the climate being thus somewhat damp. The number of rainy days from November to March (inclusive) is about forty, and although there is a considerable amount of cloud the proportion of fine weather and sunshine is high. The analogy between the Canary Islands and Sicily is, on the whole, close, and when the subject of the Sicilian flora is dealt with it will be found that the meteorological resemblance of the two localities is illustrated by the affinity presented by their respective plant life. The chief points of difference appear to be that Orotava is somewhat warmer and damper than Sicily. Considerations of space prevent the analogy between Sicily and the Canary Islands being pursued, and the differences—not unimportant—between Oratava and Santa Cruz and Las Palmas cannot be entered into. The first has been selected as representative of the group of islands because, on the whole, it is the best known and most frequented.

The final outcome of the above comparisons is to illustrate once more the intermediate character of the Sicilian climate —intermediate in meteorological features, intermediate also between Europe and Africa. In Sicily the climate is (during the winter and spring) free from extremes of heat and cold, of medium humidity, decidedly equable on the whole, but showing a fair mean daily range of temperature, possessing a very high average of sunshine and fine weather, practically free from mist and fog, and without any serious drawback, except the sirocco, which is at its minimum during the invalid season. It would seem probable that a climate possessing so much of the "aurea mediocritas" should prove somewhat widely applicable to cases of debility and disease. Before entering upon this question, however, the survey of the subject will be completed by dealing with the exceptionally interesting topic of the Sicilian flora. The following facts are given on the authority of Professor Borzì, Director of the Orto Botanico of Palermo.

The flora of the Conca d'Oro of Palermo is one of the richest and most varied in the world, and attempts at acclimatisation of tropical and sub-tropical plants have been remarkably successful. Warmth and equability of temperature, a considerable rainfall, almost complete freedom from frost or severe cold, and a fair degree of shelter combine to make Palermo the paradise of the botanist. In few places can so many plants belonging to widely-separated regions of the world be found flourishing side by side, and apparently finding in soil and climate every condition necessary for their growth and maturity. Among the foreign species which flourish at Palermo may be mentioned those of the Canary Islands, Northern Africa, Asia Minor, Eastern Hindostan, Java, Australia, Cape of Good Hope, Madagascar, East Africa, Mexico, California, and Brazil. Nearly every variety of ficus comes to maturity here in the open air, also the agave, the arborescent forms of the liliaceæ, and, with a few exceptions, nearly all the cicadaceæ and the musaceæ. As instances of purely tropical plants which have been successfully cultivated in the Orto Botanico of Palermo may be mentioned the following: the Archontophœnix Alexandræ of Australia, the Ficus religiosa of Eastern Hindostan, the Quisqualis indica of Tropical Asia, the Grevillea Hilliana of Australia, the Banhinia acuminata of Malacca, and the Doryanthes excelsa of Australia. Botanists will appreciate the significance of this list, which might be indefinitely enlarged. Highly interesting and important also are Professor Borzì's observations regarding the period of flowering of plants in the

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Orto Botanico. This, it need hardly be remarked, is perhaps the most delicate test of climate, and one absolutely free from every possible source of error that can be devised. Professor Borzì finds that in January (with a mean temperature of 51·6° F. = 10·8° C.) the following plants come into blossom—viz., the Abutilon Thompsoni, the Aloe arborescens, the Bougainvillea aurantiaca, the Euphorbia fulgens, the Strelitzia reginæ, the Aechmea Lindeni, the Albizzia lophantha, the Dombeya ferruginea, the Tecoma capensis, the Impatiens Sultani, the Nicotiana tabacum, and the Spermannia africana. In the month of February (with a mean temperature of 52·90° F., = 11·6° C.) the following plants come into flower—viz., the Abutilon hirtum, the Acacia longifolia, the Guarea coffeæfolia, the Rhaphiolepis indica, the Tropæolum tricolorum, the Cycas revoluta, and the Erythrina viarum. In March (with a mean temperature of 56·01° F.) the following plants come into flower—viz., the Cercis Siliquastrum, the Heliotropium peruvianum, the Livistona australis, the Mesembryanthemum acinaciforme, the Bignonia floribunda, the Chorizema cordatum, the Rondeletia Roezlii, the Begonia ricinifolia, the Eucalyptus amygdalina, the Pelargonium Radula, the Physalis peruviana, the Pæonia moutan, and the Staphylea colchica. The above are selected as some of the most striking examples from a list which contains a much larger number of plants. They amply justify Professor Borzì's allusion to "il rigoglio della vegetazione qui"—i.e., in Palermo—"mentre altrove, in eguali latitudini, la natura è morta o quasi" (the luxuriant growth of vegetation here at a time when in other localities in the same latitude nature is practically dead). Palermo is not less notable for the number and variety of the fruits which there attain maturity. The pineapple (Ananas sativus) ripens without artificial heat, merely demanding shelter. In the open air, without artificial heat or special protection, grow the banana, the monstera, the guava, the anona, the kaki, the eugenia, and the sugar cane. Many species of bamboo, nearly all the agave, and the sanzeviere come to full maturity, cotton grows freely, and the coffee plant, if protected from the winds, brings forth good and aromatic fruit. It need hardly be said that oranges, lemons, figs, and almonds are among the most ordinary fruits abundantly produced upon the Conca d'Oro. This remarkable adaptability of the climate and soil of Palermo to the plant life of the most diverse localities has induced Professor Borzì to make the suggestion that the Sicilian capital should be made the seat of an International Acclimatisation Garden, where botanists from different countries might study the flora of many different regions simultaneously and enjoy the full advantages of the comparative method of observation. He is of opinion that "without excessive or extraordinary care the greater part of the representatives of the tropical flora could be freely cultivated in Sicily." There can be no doubt of the correctness of this opinion, and Professor Borzì's project will have the hearty approval of the scientific world.

The above botanical data bring into strong relief the mildness of the Sicilian climate and its almost semi-tropical character. Bennett, in his well-known work, "Winter and Spring on the Shores of the Mediterranean," makes the statement (p. 416) that "the more southern latitude of Palermo, without mountain protection from the north, gives it as warm a winter climate as the Riviera enjoys with protection from the north, but not a warmer one. The two regions seem to be singularly identical, considering the distance that separates them, as regards the character of their vegetation and its development." The above statements are decidedly erroneous. The winter climate of Sicily is on an average from 3° to 5° F. warmer than that of the Riviera, and the Sicilian flora is much more varied and more sub-tropical than the Rivieran. The wild flowers of Sicily are among the most varied and most beautiful in the world. Although many parts of the once fertile and luxuriant interior of the island are now bare and barren, there are other parts where the hillsides are ablaze with mesembryanthemums and marigolds, lupins, and cornflowers. On the slopes of the higher mountains a great variety of plant and tree may be observed. On Etna three zones are distinguished. First, a lower zone, extending from the sea level to an altitude of 1400 metres. Here grow abundantly olives, oranges, lemons, almonds, figs, pomegranates, vines, apples, pears, &c. This district is described, perhaps with a slight touch of Southern exaggeration, as "la regione più fertile e deliziosa d'Europa" (the most fertile and delicious region in Europe). The second zone ("Boschiva") extends from 1400 metres to 2200 metres of altitude. Here grow the oak, castagna, birch, beech, and various pines. The third zone ("Deserta" or "Scoperta") extends from the limit of the second zone to the summit. The flora is scanty and alpine in character.

The evidence—meteorological and botanical—upon which judgment regarding the general character of the Sicilian climate must be based has now been sufficiently indicated. It remains to inquire what is the general effect of the climate upon the human organism in health and disease—i.e., what is the medical climatology of Sicily. The terms which have to be employed in this connexion leave much to be desired in point of scientific precision, although in a popular way their meaning is clear enough. A climate is *tonic* if it tends to promote digestive vigour and vascular tone. If it has the contrary effect it is *relaxing*. A climate that tends to heighten the activity of the nervous system may be called *stimulating* or *exciting*, while a contrary tendency is called *sedative* or *depressing*. The term *bracing*, which is so often used, would seem to imply that the climate thus designated is both tonic and stimulating. These vague and quasi-popular expressions must be employed because there are literally no others available. The climate of Sicily may be most correctly described as (*a*) *moderately tonic*, and (*b*) *sedative*. It is moderately tonic by virtue of its high proportion of sunshine and fine weather and its general breeziness. It is sedative by virtue of its medium degree of humidity and its equability of temperature. It is often said that the Sicilian climate is relaxing, and it may be admitted that the statement may be true as regards certain localities, certain seasons, and certain individuals, but if put broadly the statement is erroneous. A climate with a relative humidity of only from 61 to 65 per cent., with a very high average of sunshine and cloudless skies, and with a pretty constant though moderate atmospheric movement, could not be relaxing in its main effect. That the climate may be correctly designated as moderately tonic is further demonstrated by the fact that it is found to suit very well in diseases that call especially for tonic influences—viz., tuberculous and glandular affections generally. The sedative influence of the climate upon the nervous system is admitted by all observers, and is, indeed, quite manifest. Nervous irritability is reduced by the soft, soothing, and equable Sicilian air. Sleep improves and excitement subsides. Hence, speaking generally, conditions associated with irritability, such as some forms of neurasthenia, some varieties of asthma, spasmodic laryngeal affections, &c., do well in Sicily.

Though the differences from the point of view of medical climatology between the various Sicilian localities cannot be called great they are quite appreciable. The climate of Palermo is less tonic and more sedative than the climate of Catania and *vice versâ*. Taormina represents one of the most tonic climates in Sicily—i.e., among localities at present available to tourists or invalids—the Conca d'Oro, one of the most sedative, while Girgenti is probably intermediate. When the diseases for which the climate of Sicily is specially suitable are considered in detail it will be found that the problem may be usually stated in this form—What are the morbid conditions likely to be benefited in a climate which, on the whole, promotes digestion and sanguification, and which is moderately soothing to the nervous system? The discussion of this question will be reserved for a future article.

WITH THE PUNITIVE EXPEDITION TO BENIN CITY.

BY R. ALLMAN, L.R.C.P. IREL., &C.,
PRINCIPAL MEDICAL OFFICER, NIGER COAST PROTECTORATE.

THE capture of Benin City and the events which led to it are too well known to need recapitulation, but perhaps a brief account of what occurred there subsequently to the occupation may be of some interest. The city was occupied on the evening of Feb. 18th by the expeditionary force, all of whom, especially the Europeans, were well-nigh worn out by the time the camp was reached. This is not to be wondered at when it is considered that on the final day we had to fight our way through dense bush for nine consecutive hours without any water to drink. I need

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hardly say that very little interest was taken in anything for the remainder of that day, except for the safety of the camp and the care of the sick and wounded, everyone seeming to rest on his oars now that the goal had been reached. As this was the first good night's rest we had had since leaving Ologbo (five days before) it is needless to say that it was appreciated by all. Early next morning (Feb. 19th) a burial party, composed of bluejackets and marines, were told off to bury their dead messmates who had fallen on the previous day. Having disposed of these our next care was to ensure by sanitation of the city the health of the living. This proved a more formidable and offensive undertaking than I had at first imagined, as the city positively reeked with blood and the atmosphere was impregnated with the stench of decomposing human sacrifices, &c. However, there was no alternative but to dispose of the bodies in the quickest manner possible, as the polluted atmosphere had already affected the Europeans and the native troops and carriers; six of the latter died from an acute type of dysenteric diarrhœa, the Europeans suffering from a similar disorder—so between cremation and burials I disposed of upwards of six hundred human corpses. On Sunday, Feb. 21st, a fire broke out in the south-west corner of the city consuming the greater portion of it; owing to the rapidity with which it spread many of us lost nearly all our personal effects. However, it had a most salutary effect in cleansing the polluted atmosphere, a marked improvement being at once observed in the general health.

To convey some idea of the number of crucifixions and sacrifices witnessed in this "city of blood" it will be necessary to enter into a few gruesome details. Facing the principal entrance to the King's compounds stood a large sacrificial tree on which two bodies were crucified, and scattered in all directions around its base lay numbers of decapitated and disembowelled sacrifices in various stages of decomposition, amongst which were the decapitated remains of three Europeans, who had evidently been gagged and their hands bound behind their back before execution. A few hundred yards to the south of the main entrance, already alluded to, stood another sacrificial tree, on which was crucified the body of a woman, and at its base three other eviscerated bodies (also women) were found. Continuing my way to the south I came upon the large plain leading to the Gwato Path, and there witnessed one of the most horrible sights that it is possible for the human mind to conceive—i.e., one hundred and seventy-six newly decapitated and mutilated human sacrifices strewn about in all directions, besides countless numbers of skeletons—truly, a most gruesome sight and one not to be easily forgotten.

I will not describe any more of these horrible details; suffice it to say that sacrifices were found in nearly every portion of the city, some of the bodies being most brutally and cruelly mutilated. Before closing this tale of blood I may, however, give a brief sketch of the huge pits (seventeen in number) found principally in the vicinity of the regal palace. These pits were of enormous dimensions—12 feet in diameter and 40 feet deep. Seven of these contained human sacrifices (from fifteen to twenty in each pit); out of these "foulsome pits" (the stench emitted being intolerable) we rescued with great difficulty seven unfortunate captives, who for several days afterwards could hardly realise what had happened; two of them were carriers on Mr. Phillips's ill-fated expedition.

To change the subject to something more interesting and pleasant I shall endeavour to give a brief account of the Benin capital, its inhabitants and industries. Benin City is a large, straggling, walled-in town of about 20,000 inhabitants, and covers an area of about two square miles; it is situated on a plateau 176 feet above the sea level. The wall surrounding the city is in many places twenty feet high with a base four feet wide, which gradually tapers off to eighteen inches at the top. Judging from its solidity I can well imagine how perfectly secure the inhabitants felt from the raids or weapons of the surrounding tribes; coupling this with the strong belief in their fetiches, it is no wonder they considered themselves invincible. The first things that strike the observer on entering the city are the large walled in compounds, 200 yards square, met with in all the principal quarters of the city; through four of these one has to pass before reaching the King's palace and Palaver house. At one end of each compound stands an altar decorated with large bronzes and enormous carved ivory tusks, the whole being smeared and crusted over with human blood; these altars (seventeen in number) I afterwards learnt from the chiefs who submitted to the Government were the shrines of the defunct kings of Benin. The antiquity of each could easily be traced by the appearance and condition of the carved ivories which decorated them; the most recent one was evidently only in existence about nine years, and it was at this shrine that Duboah the king was making sacrifices to the shades of his father when Mr. Phillips and his ill-fated party sought the interview with him.

The mode in which sacrifices were conducted at these shrines is simple in the extreme. The unfortunate victim is placed on the altar and knocked on the head with a sacrificial club (with which each altar is supplied), and then cast, whether dead or alive, into one of the large pits already mentioned.

The dwelling houses, especially those of the king's harem, were beautifully built and tastefully decorated throughout, some of the mud seats and couches being artistically inlaid with cowries, which had a most pleasing effect. The king's palace and palaver houses were most substantial buildings with metal roofs (yellow metal). Huge bronze snakes were represented wriggling on the roof of the latter with heads downward—in fact, on all their manufactured articles and carvings this reptile is freely displayed, it being their emblem of sovereignty, subtle and treacherous.

From what I saw of the Benin tribe I certainly consider them splendid specimens of the negro race—tall, of fine physique, and not wanting in intelligence, as their industries and arts go to prove. I was not able to learn much about their customs and habits during my stay in the city (five weeks), as they only commenced coming in in numbers on April 17th to tender their submission, one month after the capture of the city. Their chief industries, as far as I could learn, were moulding in bronze, carving on ivory, and blacksmiths' work generally, at all of which they are most skilful and proficient. Some of the bronzes are beautifully designed, moulded, and cast, and the carvings in ivory and wood are most wonderfully contrived and executed. In my wanderings about the city I came across many bronzes and plaques which were evidently designed, if not executed, by the ancient Egyptians; many others were of more modern times and bore traces of the Portuguese, from whom the art has without doubt descended. Amongst others I picked up a bronze figure of our crucified Saviour; this, with other emblems of Christianity found in the city, led me to believe that the custom of human crucifixions as practised by the natives was derived from the representations of the Crucifixion of our Saviour introduced, probably, by the Portuguese. The manufacture of bronzes was evidently carried on under the direct supervision of the kings, as the smelting pots and the clay and beeswax for moulding, &c., were all arranged in a compound adjacent to the palace. Several moulds in various stages of completion were found here; those ready for casting presented when broken the following appearance. A mould of special clay formed the base, over this a likeness of what was required was beautifully modelled in beeswax, and outside this a covering of "potter's clay," the whole being enwrapped in ordinary mud or mortar. I can only conjecture the final process to complete the operation—i.e., the mould, after being sufficiently sun-dried, is transferred to the smelting pot and completely submerged in the molten metal, which takes the place of the wax, and the object is accomplished. Under the able administration of Mr. R. Moor, H.M. Commissioner and Consul-General, there is a great future in store for this lately acquired territory.

Old Calabar.

"A WATER FAMINE IN SOUTH LONDON."

UNDER the above heading the following letter appeared in the *Times* of June 26th:—

"SIR,—Allow me, if you please, to call public attention to the sufferings which are now being endured by a large area of the suburban population—how large I am not able to say—by reason of the non-supply of water by the Lambeth Waterworks Company.

"On Monday not a drop of water came into this house. On Tuesday enough came in just to fill the cistern and no more. On Wednesday the same. To-day not a single drop. Meanwhile the misery we are enduring is indescribable. Horses and dogs are suffering, our sanitary arrangements are in a terrible condition, our drains are unflushed, the luxury of a bath is denied to us, and we live in constant terror of a blow-up in the kitchen.

"I have bombarded the company with letters and telegrams worded as strongly as I could, but, till this morning, with no result beyond the stereotyped printed form acknowledging receipt of my communication, 'which shall receive attention.' Now at last cometh a

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letter from the engineer of the company condescending to inform me—on this the fourth day of the water famine—that the failure of the supply has been due to a breakdown at the Ditton Works which the company 'could not advise consumers of, owing to the fact that we had no forewarning of the occurrence and to the large area affected.'

"Comment on the above is hardly necessary. That such a 'breakdown' should be possible is simply unpardonable. If, as must be the case, for there has been no drought or drying up at the fountain head, the pumping machinery has gone wrong, can there be any excuse whatever for the power not being in duplicate so that the risk of such a frightful stoppage of supply would be at least halved?'

"*An attendant*, with the thermometer standing at 80 deg. in the shade, we are waiting in vain for the welcome inrush into the cistern of the element for which we have paid, and without which we must soon perish. "I am, your obedient servant,

"137, High-street, Sydenham, S.E., June 24th." "A. C. ANDROS.

We have thought the matter of sufficient importance to re-publish this letter *in extenso*. It will be seen that the statements of the correspondent are perfectly definite. The points of interest are that on Monday, June 21st, "not a drop of water" went into the house No. 137, High Street, Sydenham; on Tuesday, June 22nd, only an amount of water "sufficient to fill the cistern" was received; on Wednesday, June 23rd, again only enough water arrived to fill the cistern; on Thursday, June 24th, at the time at which the letter was written no water had been supplied. The hour at which the letter was written is not, however, given. These statements are precise and definite, and they require explanation. The correspondent says that he has received a letter from the engineer of the Lambeth Waterworks Company, and he gives a quotation from it. The engineer said that they could not tell their customers that the water-supply would be deficient—firstly, because they had no "forewarning of the occurrence"; and secondly, because "the area affected was a large one." The statement of the engineer that the area affected was a large one is of considerable interest, and we should be glad to know how many people besides the correspondent who wrote to the *Times* suffered from a deficiency or absence of water-supply. On Monday, June 28th, a letter was published in the *Times* from Mr. H. Wilkins, secretary to the Lambeth Waterworks Company. The letter is as follows:—

"SIR,—With reference to the letter from Mr. A. C. Andros in your issue of to-day under the above heading, will you allow me to say that the normal supply of water was resumed throughout the company's district on Thursday, the date of Mr. Andros's letter, although it is quite possible that the full pressure was not felt at some of the higher levels until the following day? The pumping machinery is in duplicate. The difficulty was with some of our filter beds.

"The average daily supply for the year is about 23,000,000 gallons, and the average for the present week exceeds this quantity. On no day have less than 20,000,000 gallons been sent into the district. Whether the term 'water famine' is fitly applied to such a condition I leave your readers to judge. Probably no inconvenience whatever would have been felt but for the sudden accession of hot weather.

"I need scarcely say that the company extremely regret the occurrence, which, however, was due to causes entirely beyond their control. May I add a word of thanks to our consumers generally, who have been good enough to submit to temporary inconvenience without unreasonable complaint? "I am, Sir, your obedient servant,

"H. WILKINS, Secretary.

"Lambeth Waterworks, Brixton-hill, S.W., June 26th."

It will be noticed that the secretary of the Lambeth Waterworks Company does not deny any of the statements made in the letter of Mr. Andros. We may, therefore, assume that the statements made as to the deficiency or absence of the regular water-supply at No. 137, High-street, Sydenham, existed from Monday, June 21st, up to Thursday, June 24th. We may further assume that the quotation which Mr. Andros gives from the letter which the engineer of the company sent to him is also correct, and that the area affected by the water famine was a large one. The secretary of the company in his letter to the *Times* is not explicit as to the cause of the deficiency of the water-supply. What he does say on the matter is, firstly, that the difficulty was with some of the filter beds; and, secondly, that it was due to causes entirely beyond their control. We do not consider this explanation either ample or satisfactory, and we await further information with interest.

MEDICAL MAGISTRATES. — Mr. Edmund J. Thompson, M.R.C.S. Eng., of Measham, Atherstone, and Mr. William Holder, M.R.C.S. Eng., of Hull, have been placed on the Commission of the Peace for the county of Derby and the city of Hull respectively.—The following gentlemen have been appointed magistrates for their respective colonies—namely, Mr. J. L. M. McCreadie, M.B. Syd., of Gulong, New South Wales; Mr. A. Philip, L.K.Q.C.P., L.R.C.S. Irel., of Surry Hills, Sydney, New South Wales; and Mr. S. S. Richards, M.B., Ch.M. Syd., of Mount Morgan, Queensland.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Enteric fever in the town of Bicester, by Dr. THEODORE THOMSON.[1]—The report presented to the Local Government Board by Dr. Theodore Thomson on this occurrence of enteric fever contains many points of interest. In the first place, it is stated that when the inquiry was ordered no report on the outbreak had been received as to it from the medical officer of health, in accordance with the terms of the order of the Local Government Board. We refer to this because we so often read a similar statement; and this failure to report seems to be one of the most certain methods of bringing about a visit of a medical inspector. In this instance that visit can only have done good, and hence no one really interested in the health of the town can regret it. The story is a very excellent one from the etiological point of view. Bicester had a by no means good record as to enteric fever, and a few years ago there were 56 cases. Odd cases occurred in the early summer of 1895, then came a group of "suspicious" cases, which were obviously, in the main, genuine cases unrecognised; then followed a batch of 28 notifications in four weeks, and a very painstaking research ultimately identified nearly every attack with the use of water from a somewhat famed spring well; indeed, the disease picked out people who used this water even at a distance from the well, near which the great incidence of the disease fell. The well was closed. Then ensued another batch of 10 cases, still in the same portion of the town, and these were connected with the use of water from a second well; and, lastly, came another batch of 11 cases, obviously associated with the use of water from a third well close by the infected area. As already implied, the disease was practically restricted to one portion of the town; and it was quite clear that the houses infected had nothing in common but a polluted water-supply which had opportunities of receiving specific contamination. The first water-supply which became infected after the occurrence of isolated attacks of enteric fever was so contrived that it could not escape sewage contamination. It was situated in a sort of angle formed by two sewers, and the angle was so arranged as to allow the contents to exude and to infiltrate the surrounding soil in the most efficient manner that could be devised. Sunk in the pervious calcareous sandstones of the cornbrash, all was ready for precisely that which did happen. But this was not the only leaky point in the Bicester sewers, which were now getting specifically polluted; and other wells soon followed suit in spreading the disease. Into one of these a drain was found to be visibly percolating, and a third was close to a public-house urinal. In fact, these wells are sunk in pervious strata, which, by reason of negligent sanitary work and still more negligent sanitary administration, have been allowed to become infiltrated with filth; and when periodically the filth is derived from specifically diseased excreta—as doubtless in 1890, and certainly in 1895–96—there follows an outbreak of disease. It must not be assumed that the local authority were ignorant of this state of affairs, for in 1890 Mr. Dyson Wood, their medical officer of health, told them that "a safe water-supply for the district is essential." The effect of this decided advice is seen in the epidemic to which Dr. Thomson's report relates. It was practically ignored. And worse, in October, 1895, when the disease was in full force, the sewer near the implicated well was found "to be leaking freely into the surrounding soil at several points"; but in April, 1896, Dr. Thomson found that these conditions "remained unaltered." So, also, the progress of the enteric fever and of the death it occasioned remained practically unaltered, for other wells soon received the specific pollution; the disease went on in two further batches up to Jan. 4th, and again by the end of March 9 more cases had been recorded, making 49 cases of enteric fever notifications and 11 "suspicious" cases up to Jan. 4th, and then 9 more notifications, or 69 attacks, with 10 deaths, in one small portion of this little town. It still

[1] Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis, and Co., Dublin, 1896. Price 6*d*.

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remains to be learnt what permanent remedy the district council propose to make.

Diphtheria in Huntingfield and Halesworth, by Dr. F. ST. GEORGE MIVART.—These two villages are in the Blything rural sanitary district, where for some time past throat disease of one or another sort has occasioned anxiety; indeed, in the light of the inquiry made it is clear that fatal attacks of croup, croupous laryngitis, and membranous croup were in reality diphtheria. Huntingfield is a parish of only 378 persons; Halesworth, on the contrary, is an ancient market town and contains a population of 2316. In Halesworth diphtheria and allied throat ailments have been occurring ever since 1895, the greatest incidence of the disease being in the periods October–November, 1895; March, 1896; July, 1896; and September, 1896. The disease was essentially limited to the girls' and infants' school, and it would appear that each reassemblage of school children coincided with an increase in the number of attacks amongst those attending school. Dr. F. St. George Mivart enters with much detail into the various sanitary and other circumstances affecting each of the places on which he reports, and also into the local sanitary administration and the measures taken to control and prevent the diffusion of the disease. But, painstaking as the work on his part has been, the story is one, like so many others, in which the identification of the actual condition favourable to the spread of diphtheria is rendered impossible by the many opportunities of conveying the infection from person to person. It is, however, clear from the report that much needs to be done by the Blything rural authority to secure for their population wholesome water at a reasonable distance from their homes, to effect improvement in the local drainage arrangements, to remedy the nuisances arising from defective means of excrement and refuse disposal and other sources, and to deal with faulty conditions in the housing of the poorer classes. In like manner it is to be hoped that the prevalence of an infective disease for so long a period will prove to the authority the need for some means of isolating first attacks, so that these shall not lead to further spread. Dr. Mivart, who was some time since appointed a temporary medical inspector, has shown, in an inquiry that did not easily lend itself to any etiological discovery, that he has distinct capabilities for studying every condition and circumstance likely to elucidate the origin and course of preventable disease.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Brighton Urban District.—The Registrar-General's estimate of the population of Brighton at the middle of 1896 was 120,499, but Dr. Newsholme gives reasons for concluding that the population is somewhat under-estimated, although he takes the Registrar-General's estimate as a basis for the death-rates, &c. The birth-rate for Brighton for 1896 was 25·1 per 1000, being the lowest rate, with the exception of Halifax, of all the thirty-three great towns. Brighton's death-rate was for 1896, the lowest yet recorded for that place, being but 16·1 per 1000, as compared with 18 8 in 1895 and 16·4 in 1894. Dr. Newsholme has worked out the death-rates of the several wards of his district, and in discussing the high rates of certain of the wards he draws attention to the proportion of houses to public-houses, the proportion varying from one public-house to eighteen houses (108 inhabitants) in Pavilion ward, to one public-house to 211 houses (1380 inhabitants) in Preston ward. Dr. Newsholme points out that mortality is indirectly promoted by neglect and partial starvation caused by the waste of money on the part of the bread-winners in the public-houses, while conversely the insufficient accommodation procurable at small rents tends to drive the worker to the public-house for comfort, and so the "evil results of alcoholism and overcrowding act and react in a vicious circle." In treating of the subject of infantile diarrhœa Dr. Newsholme observes that it would be a great gain from a preventive standpoint if sterilised whole milk could be purchased in small sealed bottles during the summer months, and it would seem to us that there can be no doubt that when the risks which milk undergoes in its transit from the cow to the consumer are more fully appreciated by the public, the sale of sterilised milk in the manner suggested will become more common. In the report before us the subject of the prevention of syphilis is touched upon, and Dr. Newsholme reminds his readers that the death records under this head are obviously much understated. He regards syphilis as probably, next to alcoholism, the most fertile cause of ill-health and death. The effects of this disease can only be diminished, Dr. Newsholme considers, "by the enforcement of all preventive measures against known immorality, and of the treatment—and where practicable the segregation—of all men and women who have become infected."

Brighouse Urban District.—Dr. Meredith Young expresses doubt as to whether school closure, for preventing the spread of measles, is a wise measure, and his doubts are founded partly on the contention that children, if relieved from school attendance, spend a large portion of their time outside their houses in all conditions of weather—an exposure which he considers must lower their vitality, and thus their power of resisting infection. He is therefore relying upon the exclusion of infected children and of children from invaded houses. Dr. Young is evidently much impressed with the evils of black smoke in Brighouse, which he regards as a standing disgrace and a danger to public health. He calls attention to the manner in which smoke condenses atmospheric vapour and thus tends to produce a damp and cold climate, while at the same time by preventing the passage of sunlight it deprives the population of the disinfecting property of sunlight and of the stimulating effect which such light produces upon the spirits of the people. The injurious effect of the products of combustion upon architecture and vegetation is also referred to, and it is pointed out that the time limits for "dense" or "moderate" smoke in Brighouse (ten minutes per hour) are much more favourable to the manufacturers than are those in any of the busiest and largest manufacturing towns in the north of England. In reference to the argument that the prevention of black smoke would not prevent the emission of sulphur vapours, &c., Dr. Young insists that these latter are capable of rapid diffusion and are quickly diluted with large volumes of air.

Stoke-upon-Trent Urban District.—The principal trade of the district is that of pottery, and Dr. Samuel Johnson reports that the potters work under much better conditions than heretofore. The workers, however, will not take proper advantage of the respirators which they are advised to use, and the potter, like the Sheffield grinder, regards these devices as eminently irksome. The provisions for preventing lead poisoning are, Dr. Johnson tells us, much improved, as there are now separate mess-rooms for the workers, who are encouraged to wash before taking their meals, and to wear overalls which are left at the works.

Halifax Rural District.—An instance is recorded in Dr. Meredith Young's report for this district of a case of lead poisoning which was apparently due to the consumption of well water which had been in contact with the leaden barrel of the pump. The well water was analysed and found to contain four-fifths of a grain of lead per gallon and to be also organically polluted. It is a somewhat remarkable fact that no symptoms of lead poisoning were observed among several other persons who were habitual consumers of the water in question.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 5709 births and 3310 deaths were registered during the week ending June 26th. The annual rate of mortality in these towns, which had been 15·6 and 15·8 per 1000 in the two preceding weeks, declined again last week to 15·7. In London the rate was 14·6 per 1000, while it averaged 16·5 in the thirty-two provincial towns. The lowest death-rates in these towns were 9·9 in Brighton, 11·1 in Blackburn, 11·8 in Huddersfield and in Leicester, and 12·1 in Bristol; the highest rates were 19·8 in Sunderland, 20·4 in Preston, 20·9 in Liverpool, and 22·3 in Bolton and in Salford. The 3310 deaths in these towns included 404 which were referred to the principal zymotic diseases, against 379 and 354 in the two preceding weeks; of these, 167 resulted from measles, 77 from whooping-cough, 68 from diarrhœa, 46 from diphtheria, 29 from scarlet fever, and 17 from "fever" (principally enteric). No deaths from any of these diseases were recorded last week either in Croydon, Swansea, or Norwich; while they caused the highest death-rates in Bolton, Manchester, Salford, and Preston. The greatest mortality from measles occurred in Burnley, Liverpool, Bolton, Cardiff, Manchester, Preston, and Salford; from whooping-cough in Derby, Sunderland, and Manchester; and from diarrhœa in Preston. The mortality from scarlet fever and from "fever" showed no

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marked excess in any of the large towns. The 46 deaths from diphtheria included 24 in London, 6 in Birmingham, and 3 in West Ham. No fatal case of small-pox was registered last week in any of the thirty-three large towns, and there were no cases of this disease under treatment in any of the Metropolitan Asylum Hospitals on Saturday last, June 26th. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2789, against numbers increasing from 2380 to 2670 on the eight preceding Saturdays; 267 new cases were admitted during the week, against 274, 255, and 274 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 191 and 141 in the two preceding weeks, were 142 last week, and were 71 below the corrected average. The causes of 59 or 1·8 per cent., of the deaths in the thirty-three towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Nottingham, Hull, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Leicester, Preston, Halifax, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·3 and 19·4 per 1000 in the two preceding weeks, was again 19·4 during the week ending June 26th, and exceeded by 3·7 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·7 in Paisley and 15·8 in Aberdeen, to 27·1 in Greenock and 35·8 in Paisley. The 577 deaths in these towns included 21 which were referred to measles, 20 to diarrhœa, 16 to whooping-cough, 6 to "fever," 4 to scarlet fever, and 2 to diphtheria. In all, 69 deaths resulted from these principal zymotic diseases, against 94 and 87 in the two preceding weeks. These 69 deaths were equal to an annual rate of 2·3 per 1000, which was 0·4 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had declined from 30 to 24 in the three preceding weeks, further fell to 21 last week, and included 10 in Edinburgh and 9 in Leith. The deaths from whooping-cough, which had been 37 and 29 in the two preceding weeks, further declined to 16 last week, of which 10 occurred in Glasgow. The deaths referred to different forms of "fever," which had been 8 and 5 in the two preceding weeks, were 6 last week, of which 5 were recorded in Glasgow. The 4 fatal cases of scarlet fever were within 1 of the number in the preceding week, and included 2 in Aberdeen. The deaths from diseases of the respiratory organs in these towns, which had been 108 and 109 in the two preceding weeks, declined to 104 last week, but exceeded by 17 the number in the corresponding period of last year. The causes of 41, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the four preceding weeks from 28·3 to 19·7 per 1000, rose again to 21·8 during the week ending June 26th. During the past twelve weeks of the current quarter the death-rate in the city has averaged 27·9 per 1000, the rate during the same period being 15·7 in London and 25·5 in Edinburgh. The 146 deaths registered in Dublin during the week under notice showed an increase of 14 upon the number in the preceding week, and included 11 which were referred to the principal zymotic diseases, against 14 in each of the two preceding weeks; of these, 5 resulted from diphtheria, 2 from measles, 2 from diarrhœa, 1 from scarlet fever, and 1 from whooping-cough. These 11 deaths were equal to an annual rate of 1·6 per 1000, the zymotic death-rate during the same period being 1·6 in London and 2·7 in Edinburgh. The fatal cases of diphtheria, which had been 1 and 3 in the two preceding weeks, further rose to 5 last week. The deaths referred to measles, which had declined from 5 to 1 in the four preceding weeks, rose again to 2 last week. The mortality from scarlet fever and from whooping-cough was below that recorded in any recent week. The 146 deaths in Dublin last week included 28 of infants under one year of age, and 32 of persons aged upwards of sixty years; the deaths of infants showed a slight decline, while those of elderly persons exceeded the number in the preceding week. Eight inquest cases and 8 deaths from violence were registered; and 52, or more than a third, of the deaths occurred in public institutions. The causes of 8, or more than 5 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN H. I. POCOCK has proceeded to Devonport, and will subsequently proceed to Aldershot for field training. Brigade-Surgeon-Lieutenant-Colonel R. C. Eaton has assumed charge of the Station Hospital, Newcastle-on-Tyne. Surgeon-Captain Corkery has been transferred from Bermuda to the Cork District in exchange with Surgeon-Major Donaldson. Surgeon-Major Johnston has returned from Okehampton to Devonport, and assumed Command of the 1st Field Hospital about to be mobilised.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Captain Jackson, A.M.S., are replaced at the disposal of the Government of India, in the Home Department. Surgeon-Lieutenant-Colonel A. E. R. Stephens, Bengal Establishment, retires from the service subject to Her Majesty's approval, as does also Surgeon-Lieutenant-Colonel S. B. Haliday.

ARMY MEDICAL RESERVE OF OFFICERS.

The under-mentioned Surgeon-Captains to be Surgeon-Majors:—G. Harrison and W. H. Packer, M.D.

VOLUNTEER CORPS.

Artillery: 1st Essex (Eastern Division, Royal Artillery): Surgeon-Captain A. Morris resigns his commission. 1st Glamorganshire: David Arthur Davies, M.B., to be Surgeon-Lieutenant. *Rifle:* 2nd (the Weald of Kent) Volunteer Battalion the Buffs (East Kent) Regiment: Surgeon-Lieutenant H. W. Joyce resigns his commission. 5th (the Hay Tor) Volunteer Battalion the Devonshire Regiment: Surgeon-Major W. G. Scott, M.B., resigns his commission. 1st (Hertfordshire) Volunteer Battalion the Bedfordshire Regiment: Surgeon-Major D. B. Balding to be Surgeon-Lieutenant-Colonel. 1st (Pembrokeshire) Volunteer Battalion the Welsh Regiment: Surgeon-Lieutenant A. J. Anderson, M.B., resigns his commission. 2nd Volunteer Battalion the Durham Light Infantry: Brigade-Surgeon-Lieutenant-Colonel J. Mitchell resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement, vacating at the same time his appointment in the Tyne and Tees Volunteer Infantry Brigade. 1st Dumbartonshire: Surgeon-Lieutenant W. Little, M.D., resigns his commission.

A HOSPITAL WITH A HISTORY.

The military hospital at La Rochelle lately visited by President Faure has a remarkable history, which not only contains an interesting and instructive moral, but is likewise perfectly authentic. Towards the commencement of the thirteenth century M. d'Aufredi, a worthy owner and equipper of privateers, was one of the most important inhabitants of the important haven of La Rochelle. Being very rich and hospitable his list of friends was naturally an extremely lengthy one, and thoroughly satisfied with his lot he thought he was the happiest of men. One morning, however, the alarming rumour spread with characteristic speed that the whole of his fleet had been engulfed during a tempest in the Indian Ocean, and the unfortunate merchant awoke to find himself utterly ruined. The friends to a man turned their backs on him, and the ex-possessor of millions was compelled to become a porter in order to earn a miserable livelihood, while his wife, the incomparable Pernelle, sold fish in the public streets. In this way two years passed slowly by. Then, one fine afternoon, lo! two ships appeared on the horizon making their way towards the harbour, and presently they arrived close enough to be recognised. The returning vessels formed the van of d'Aufredi's squadron, which ere long hove in sight laden to the water's edge with the choicest treasures of the East. Needless to say, the friends were now loud in their offers of

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service and assurances of undying affection, but, like Timon, d'Aufredi would have none of them. He and his admirable wife resolved to devote themseves and their recovered wealth to the cause of the poor and suffering, with whose good qualities they were now acquainted. During their period of trial they had received much kindness from their humble neighbours, and in order to benefit the class whose members did good without any expectation of reward they decided on founding and endowing the hospital that still bears their name. For close on twenty years the devoted pair continued to minister personally to the needs of the patients, and when at length death claimed his dues the whole of their fortune became the property of the institution. An inscription, setting forth the facts as above related, is to be seen in the vestibule of the existing building.

THE LATE ADMIRAL SIR WILLIAM MENDS, G.C.B.

The death at Alverstoke, Hants, on June 26th, of this old and very distinguished officer should not pass unnoticed in our columns, for the late admiral took part in many transactions affecting the medical services, and it is well known that he was greatly interested in the welfare of medical officers generally. He was one of the best type of naval officers of the past generation—single-minded, fearless, independent, and enterprising. Nothing could have exceeded his thoughtful care and consideration in meeting the views and wishes of the Army Medical Service in fitting out the *Victor Emmanuel* as a hospital ship for the first Ashanti expedition under Sir Garnet Wolseley. Admiral Sir William Mends, in order to meet the views of the medical service, executed a number of proposals which had never before been adopted under such circumstances, with the result that the late Professor Parkes said it was altogether the best and most perfectly fitted out hospital ship that had ever left the shores of this or any other country. Admiral Mends also rendered the medical officers of the army very opportune and independent support as a member of the commission of inquiry appointed at the end of the Egyptian war of 1882. On the conspicuous part he played as a naval officer and seaman on several occasions during his active service there is no need to dwell, for this is well known—in fact, a matter of naval history.

HEPATITIS AND ALCOHOL.

In a recent article on the health of the Spanish army Dr. Vantalon draws attention to the remarkable immunity from hepatic affections enjoyed by the European troops quartered in the Philippine Islands. Dysentery, the constant associate, or forerunner, of inflammation of the liver is very prevalent, causing heavy mortality in addition to serious loss by invaliding; but hepatitis is not even mentioned in the returns. Evidently the omission cannot be an oversight; it must be due to the non-occurrence of an affection which elsewhere within the intertropical region, and especially at Tonkin, is so widespread and fatal. The author is inclined to attribute this exemption of the Spanish soldiery from one of the most deadly of Oriental diseases to their admirable and universal sobriety. They one and all eschew the horrible compounds of which such alarming quantities are habitually consumed in French colonies under the fallacious designation of *apéritifs*. The name of these vile poisons is legion; and nothing conduces more to gastro-intestinal trouble than the pernicious custom of "nipping"—that is, of drinking small quantities of undiluted, or very slightly diluted, spirit—at all hours and under any pretext.

THE SURVIVORS OF THE BALACLAVA CHARGE.

Mr. T. H. Roberts, of 158, Fleet-street, had the happy idea of entertaining, on the occasion of the Diamond Jubilee, the survivors, some seventy in number, of the Light Brigade who fought at Balaclava. Twenty of these he found in very needy circumstances, and two of them, we are sorry to say, came out of the workhouse. Mr. Roberts is anxious to raise a fund so as to provide at least food and shelter for these men for the remainder of their lives. They are all about seventy years of age—a time of life when a man may reasonably expect a little rest. If any of our readers feel inclined and are able to send something for this good object Mr. Roberts will gladly receive it, and he has generously undertaken to defray all expenses connected with the collection and administration of the fund.

IMPROVEMENT OF THE FIELD RATION FOR THE NATIVE ARMY OF INDIA.

Among the questions, says the *Pioneer Mail* of the 9th ultimo, engaging the attention of the Indian military authorities is that of improving the rations of sepoys and followers on field service. The experience gained in frontier expeditions shows that a change is necessary, as the ration invariably has to be supplemented with extras. The serious outbreak of scurvy in the Indian brigade at Suakim, where the officers as well as the men suffered, was also too significant to be overlooked.

SURGEON-GENERAL H. T. READE, C.B., V.C. (RETIRED).

We much regret to record the death of this distinguished officer, who was a brave, conscientious, single-minded, and most amiable man. A short obituary notice will be found in another column.

DEATHS IN THE SERVICES.

Surgeon-Captain Christopher Clemons Cassidy, I.M.S., from the effects of the wounds received in the Tochi attack. He entered the service in 1891.

NEW HOSPITAL AT BARRACKPORE.

We learn from the Indian papers that a new hospital for British troops is about to be built at Barrackpore at a cost of Rs. 95,000.

Correspondence.

"Audi alteram partem."

"ON THE MECHANISM BY WHICH THE FIRST SOUND OF THE HEART IS PRODUCED."

To the Editors of THE LANCET.

SIRS,—I read with great interest the able article on the above subject in THE LANCET of June 19th by Sir Richard Quain, and when I had finished reading I said, These views are those of the late Dr. Arthur Leared, with whose writings evidently Sir Richard Quain is not acquainted. I then hunted out Dr. Leared's graduation thesis,[1] which I had not perused for nearly twenty years, and I there found my impressions amply corroborated, but that I may do no injustice either to the dead or the living I shall quote very freely from Dr. Leared's work, and then your readers can readily compare his views with those of Sir Richard Quain. "All sounds formed in connexion with the circulation are produced by and in the blood itself, and their mechanism is virtually the same. If this statement be true it would be found in practice that a sound of one species would be liable to be changed into a sound of another species. And this is the case, for the normal first sound of the heart is under certain pathological conditions converted into a murmur; and, on the other hand, a murmur thus produced may again give place to the natural sound. In short, all the sounds may be regarded as modifications of a typical sound, because under varying circumstances they are convertible into each other." He then gives a series of experiments in support of these views, from which he draws the following conclusions: "Two important principles were established by these experiments. First, that sounds may be formed by the motion of fluids only. Second, that the quality of a sound thus formed is materially influenced by the nature of the fluid. The sounds formed by the circulation of the blood are produced on principles similar to those detailed in these experiments. I shall, therefore, for convenience, and as conveying their true nature, designate them as blood sounds. Blood sounds are divisible into two classes—sounds which give the impression of a shock; sounds which give the impression of a current. Shock sounds (*bruit de choc* of French authors) comprise the normal sounds of the heart, and certain abnormal sounds formed in aneurysmal sacs. Current sounds are formed in the heart, in aneurysmal sacs, and in the larger arteries and veins. These sounds are all abnormal; they are extremely diversified; some closely resemble shock sounds, others are aptly compared to the blowing of bellows, to rasping, sawing, cooing, &c."

It is thus seen that Dr. Leared's theory also accounted for the production of murmurs, and the similarity of his

[1] On the Sounds Caused by the Circulation of the Blood. London: John Churchill, 1861.

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views with those of Sir Richard Quain as to the causation of the first sound will now become apparent. "We are now in a position to comprehend the formation of the sounds of the heart. If the condition of the blood through the heart and arteries were equable no sounds whatever would be produced in a state of health. But the blood is, by the action of the heart, thrown into impetuous and interrupted motions, and these give rise to normal sounds, known as the first and second sounds of the heart. Both are formed in the outlets of the two great vessels,[2] and the mechanism of both is essentially the same. The *first sound* coincides with ventricular systole and is caused as follows: Blood having been forcibly driven from the ventricles into the aorta and pulmonary artery comes into forcible contact with blood in these vessels which, supported by the semilunar valves, had attained a state of momentary repose. The impact between the fluid in motion and that in a state of rest gives rise to the sound. The well known thumping sound heard during the action of the common forcing pump is chiefly due to an analogous cause—that is, to the impact between the water thrown into violent motion and stationary water in the discharge pipe. But the analogy between the conditions causing the heart sound and those causing sound in the experiment with glycerine is more complete than might be at first supposed. The column of glycerine forcibly driven through the glycerine at rest does not, owing to its viscidity, diffuse itself so as to cause friction between its molecules and those of the surrounding fluid sufficient to produce murmur, and an imperfect shock sound results. But enclosure in a tube of both the moving and stationary blood, and their separation by valves, greatly favours the development of sound on the same principles. Four conditions are necessary for the production of the perfect first sound:—(1) Sufficient viscidity of the blood; (2) sufficient force in the circulation; (3) sufficient pressure upon the blood; (4) the absence of obstruction at the outlets of the heart.

"When all these conditions are fulfilled the result is a true shock sound. If, however, the first condition, viscidity, is wanting, we find in place of it the blowing sound of anæmia, as already mentioned. The force of the adult left ventricle has been variously stated, but the estimate of Valentin, that it is sufficient to overcome a resistance of 4 lb. seems probable. It is, at all events, certain that when the force of the heart is much diminished, as occurs in certain fevers and in syncope, the first sound becomes impaired or is altogether lost. The fact that pressure upon the blood prevents murmur by preventing friction need not be here repeated. A common cause of diminished pressure is incompetency of the intracardiac valves, since regurgitation reduces the volume of blood sent into the outlet vessels. The fourth condition, absence of abrupt interference with the current, is resolvable into the third. For any obstruction at the mouth of the aorta or pulmonary artery, whether it be contraction of its calibre or the projection of an atheromatous deposit, must cause diminished pressure in the vessel beyond the obstruction. The principles upon which *bruit de soufflet* is then formed have been already detailed.

"It is highly probable that a deviation in any of these conditions, although too slight to destroy the character of the sound, causes a corresponding modification of it. The water and glycerine used in separate experiments respectively represented exaggerated conditions of thinness and viscidity of the blood, and I have obtained intermediate results by employing fluids of medium viscidity. But the delicate relation between pressure and viscidity that exists in the living body was wanting in the experiments. A close study of this relation will alone throw light on the modifications of all the sounds produced by the circulation. Everyone accustomed to study the heart's sounds must have observed wide variations in these sounds, even regarded as within the limits of health. For instance, in the robust subject we frequently hear sounds of a dull and muffled character compared with the loud and resonant sounds in the delicate. These facts cannot be explained on any prevailing theory of the heart's sounds, but are entirely in accordance with my views—that unusual pressure and viscidity, by which are implied an abundance of blood rich in fibrin as would occur in a vigorous subject, cause the sounds to be relatively low. Probably impairment or loss of the first sound in certain fevers in which the fibrin of the blood is known to be in excess is partly due to consequent increased viscidity. The first sound is always affected in fever before the second, and this circumstance, as well as the fact that the second is much less subject to alterations than the first, will be afterwards seen also to depend on the mechanism of the sounds at present advocated."

Dr. Leared's views were not widely accepted, nor did they perhaps receive that attention which they merited. He, however, held firmly to them, and in a letter which I had from him a short time before his death he said: "We would agree to differ." Sir George Johnson tentatively adopted Dr. Leared's shock theory, apparently because it seemed to explain his theory of the causation of a double first sound, but although he afterwards dropped Dr. Leared's views, and allowed the whole foundation on which his theory was built to be cleared away, yet he adhered with his usual pertinacity to his hypothesis that the auricle produced the first element of a double first sound. Blood is an incompressible fluid, and the sudden impact of a column in motion against one at rest, or the sudden arrest of a column in motion, must set up vibrations, but that the sounds of the heart are thus *directly* caused is quite another matter. A soft tallow candle in a rifle can be driven through an inch board, and no doubt a similar force applied to a column of liquid—a less compressible body—would have a similar effect. A small jet of water at the bottom of a deep reservoir issues with great force, and will produce audible vibrations against any obstructions to its exit, but that the violence necessary to produce an audible shock between the columns of blood in the heart and great vessels is ever present in the heart I very much doubt. A few nights ago I saw with Dr. Murdoch a patient suffering from aortic regurgitation; the violence of this heart and its recoil were sufficient, not merely to shake the body of the patient, but also the bed on which he lay. This rifle heart did not produce any particularly loud first sound.

If I were to accept the views of Dr. Leared and Sir Richard Quain I would be quite prepared to go a step further and express an opinion that the Great Designer had not provided us with a very perfect pump, and I would mildly suggest that He should have followed the lines of water companies, and put something like a screw tap, rather than a stopcock, on the main vessels. The shock produced by a column of blood sufficient to cause the first sound of the heart would verberate and reverberate throughout the whole arterial tree, and I should not like to hazard an opinion as to the strength of tubing which would be required to endure such repeated shocks for three score years and ten. It is true Dr. Leared advances a similar view against the valvular theory.

"Dr. Markham asks, 'Can membranes and chords be suddenly and forcibly stretched and remain toneless?' I venture to ask, Is it possible that we constantly suffer so much internal violence and survive?"

I quite accept this idea of violence to the valves, and think that in disease we are often called upon to modify it. I believe it is mechanical violence which determines the much greater frequency of diseased valves in the left than in the right side of the heart in cases of acute rheumatism. The violent impact of the mitral cusps sets up a proliferation of the sub-endothelial layer, which bursts through the endothelium and gives rise to a row of fine vegetations along the auricular surface of the edges of the valve, just where the cusps are brought into violent apposition. In the case of the aortic valve the vegetations first occur on the ventricular surface just where the semilunar segments are brought into forcible contact by high tension in the aorta. In order to prevent heart lesions in acute rheumatism I always see that the arterial tension is kept low by the use of salines, &c. Again, the long-continued strain on the mitral valve in cases of granular kidney leads to thickening of the cusps and often to narrowing of the orifice. If the right side of the heart was subjected to the same strain it is probable that its valves would not so frequently escape. I have long been in the habit of diagnosing the condition of the valves from the character of the sounds, and my treatment has been much influenced thereby. I have at present no intention of bringing forward any constructive theory as to the cause of

[2] "On this point the assertion of so competent an authority as Cruveilhier is worth quoting. In his examination of the remarkable case of an infant born with heart exposed he found that the maximum intensity of both sounds was at the same place—the base; and he observes, 'Hence it is at the base of the organ we are to look for the cause of these sounds.'"—Cruveilhier, Gazette Médicale de Paris, 1841.

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the first sound of the heart. My object now is purely destructive; and if I have contributed in any way towards the demolition of the theory set up by Sir Richard Quain I shall feel satisfied. No doubt this theory has already received the *imprimatur* of Dr. Pettigrew, but that neither establishes its accuracy nor its originality.

I am, Sirs, yours faithfully,

Liverpool, June 20th, 1897. JAMES BARR.

THE TEETH OF TO-DAY.

To the Editors of THE LANCET.

SIRS,—Caries of the teeth is by no means a new disease, as the examination of Egyptian mummies 2000 years old shows; but taking modern times and civilised communities there can be no doubt as to its increasing prevalence in the present generation. This statement is based upon the results of a series of examinations of the teeth and jaws in skulls of different periods, both British and foreign, by clinical observation and the law of supply and demand, the number of dentists increasing in a ratio out of all proportion to the increase in the population. Some think, and perhaps with a certain amount of truth, that this increase in disease is more apparent than real, as so much more importance is attached to the teeth both from a health and æsthetic point of view; but that former generations appreciated good teeth may be gathered from the works of Smollett, Fielding, Mrs. Radcliffe, and others, in which the heroine is invariably described as having "pearly teeth." Our premisses being granted, it behoves us to endeavour to discover the causes of this degeneration with a view to their removal where possible. "Degeneration may be defined," says Ray Lankester, "as a gradual change of the structure in which the organism becomes adapted to less varied and less complex conditions of life; whilst elaboration is a gradual change of structure in which the organism becomes adapted to more and more varied and complex conditions of existence. In elaboration there is a new *expression* of form corresponding to new perfection of work in the animal machine. In degeneration there is *suppression* of form corresponding to the cessation of work." Degeneration is doubtlessly taking place in the teeth and jaws of man.

In structure and character the teeth are becoming more and more faulty, having, perhaps, pits in the enamel and jagged edges—honeycombed teeth—fissures, grooves, and other imperfections not traceable to disease. Microscopically, the dentine often presents cavities in its substance known as "interglobular spaces" and due to imperfect calcification, all of which lesions render them liable to caries. It was until quite recently believed that teeth which easily fall a prey to caries were deficient in lime salts, but the elaborate experiments of Black in America and Charles Tomes in this country have disproved this view. Numerically the teeth are becoming less, the wisdom tooth often failing to make its appearance, and perhaps the absence of the superior lateral incisor is more frequently observed. The shape of the jaw is changing from the square to the V-shaped, the so-called "educated jaw," and this is generally associated with irregularity, which is a potent predisposing cause of caries. The main factor of this degeneration and the prevalence of caries is to be found in the modern mode of living and civilisation generally. Let us take the life-history of a tooth temporary and permanent. First, in its embryonic stage, the mother while pregnant, if in the lower class, must necessarily go about her work as usual, and added to that there are those frequent strikes entailing so much privation and anxiety. What sort of children does one expect these women to bear? Weak, sickly, puny, probably rickety, and certainly with mal-developing teeth. And if in the higher ranks of life the future mother still pursues her round of gaiety and fulfils her social obligations. Now, would Lord Rosebery or any breeder of horses allow his mares when in foal to work? Moreover, it is becoming less and less common for mothers in the upper classes to suckle their children, and all this must have a deleterious effect on the developing teeth.

Later, when the second set are erupting or not yet fully calcified, our children lead a very different life to those of our ancestors—far more excitement, late hours, cultivation of the intellect at the expense of the physique, and cramming at school all tend to injure the developing teeth both by interfering with nutritional changes and locally by bringing about an unhealthy condition of the mouth. By the way, I think that sweets as a cause of decay have been much maligned. Sugar is the natural food of children; if not, why should the taste be so universal and why sugar in mother's milk? I believe they do harm only when causing dyspepsia. And now I come to adults, in whose teeth it is generally maintained that vital action in the pulps has no influence upon the courses of caries, although I am somewhat of a sceptic on that point. Here, again, the high pressure of modern civilised life is an important factor, both as to the occurrence of caries in the individual and the transmission of degenerate teeth to the offspring. The constant whirl of excitement, whether in the pursuit of pleasure or gain, accompanied too often by the neglect of physical exercise, brings about a state of nervous exhaustion and frequent attacks of dyspepsia. And during all these periods how little work the teeth and jaws have been called upon to do with our modern cooking! This disuse of the masticatory apparatus acting through successive generations has produced degeneration and consequent proneness to disease. I have still one more predisposing cause to mention which ought not to be overlooked from a scientific point of view, though of little value from the practical side, and that is "natural selection." Men marry women with the ovoid face with narrow jaw, and not those with square massive jaws, and, further, those teeth of an azure colour and translucent appearance, which are so frail, are generally admired, not the strong yellow teeth.

I am, Sirs, yours faithfully,

W. SCOTT THOMSON, M.R.C.S., L.D.S. Eng.

Bentinck-street, W., June 1897.

CANCER AND "MORBUS MISERIÆ."

To the Editors of THE LANCET.

SIRS,—In most modern text-books on gynæcology reference is made to the alleged greater prevalence of cancer among the poor and ill-nourished than among those more fortunately circumstanced. This doctrine has lately received its apotheosis at the hands of Dr. Sinclair, who says[1]: "My experience is that uterine cancer occurs only among the working classes; the apparent exceptions are so few that they are hardly worth discussing." Elsewhere he adds: "Cancer of the uterus is most frequently met with in the lower ranks of the people of all countries. So marked is the difference of incidence that it might be reasonably affirmed that if we could place all the lower orders who suffer from privation and depressing environment for a generation or two in the position of the more favoured, we should stamp out cancer." Against the acceptance of this misleading doctrine I would urge the following considerations:—1. During the last half-century the wealth of the country has more than doubled; its pauperism has diminished more than one-half; crime has steadily declined; sanitary conditions have greatly improved; the mortality from zymotic, tuberculous, and many other diseases has markedly diminished; wages have gone up, while the prices of most commodities have fallen to an extraordinary extent; the consumption of meat per head has more than doubled, having now reached the amazing total of 126 lb. per year; the bulk of the people are better paid, better housed, and better fed than ever they have been before—in short, just such conditions have prevailed as Dr. Sinclair alleges are necessary to stamp out cancer; but instead of having decreased during this period the *cancer mortality has more than quadrupled*, the uterus participating in due proportion. 2 The Registrar-General's reports show that the cancer mortality is *lowest* where the struggle for existence is hardest, where the conditions of life are most squalid, the density of population greatest, the tubercle mortality highest, the general mortality highest, and where sanitation is least perfect,—in short, among the industrial classes in our great towns; whereas among the wealthy and well-to-do, and among the agricultural community, there the cancer mortality is *highest*. The experience of those engaged in prisons, workhouses, and lunatic asylums points in the same direction, for cancer is comparatively rare among the inmates of such institutions, as it is also among the intemperate. Of like import is the great frequency of the disease in civilised communities, whereas among savages it is almost unknown. 3. The *ensemble* of facts relative to the life-history of cancer

[1] Allbut's System of Gynæcology, 1897, p. 657.

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patients shows that they have almost invariably led regular, sober, and industrious lives. Persons of drunken and dissolute habits are comparatively seldom affected. Of 160 uterine cancer patients under my observation not a single one, so far as I could ascertain, had ever been addicted to prostitution; and, what is still more remarkable, only one presented undoubted signs of having had syphilis. The marked fecundity of uterine cancer patients, the rarity of sterility and abortion among them, all point in the same direction, for such conditions are of frequent occurrence in prostitutes and in the syphilitic. Such considerations as the foregoing seem to me to negative the doctrine of cancer being *morbus miseriæ*. They point to the greater prevalence of the disease among the well-to-do and easy-going, who habitually eat more than is good for them.

I am, Sirs, yours faithfully,

June 24th, 1897. W. ROGER WILLIAMS, F.R.C.S. Eng.

"UNQUALIFIED PRACTICE IN CORNWALL."

To the Editors of THE LANCET.

SIRS,—Referring to your leading article in THE LANCET of June 26th, will you kindly allow me to indicate two points which the President of the General Medical Council and his colleagues may press upon the President of the Local Government Board? The first is that the Select Committee of the House of Commons appointed to inquire into the subject of death certification reported some years ago, their first recommendation being that no death should be registered without a certificate from a duly registered medical practitioner or from a coroner after inquest. It is well known that the registrar has power to accept the best information he can get when no medical certificate is forthcoming and there are no grounds for referring the case to the coroner. It would surely only be reasonable to urge that the Registrar-General should give effect to the recommendation of the committee, and instruct his officer to refer every death not certified by a duly registered medical practitioner to the coroner. This would effectually close what is at present a most dangerous loophole for irregular practice. The second point is that which you have indicated near the end of the article: "It is high time that the whole system of unqualified practice in all its forms was more systematically studied by the General Medical Council." Liverpool has, like most seaports, swarmed with advertising quacks for the last forty-five years to my knowledge. These men practise and advertise with an effrontery which is evidently their strong point, and which would appear to recommend them to the public. One of these men was convicted some years ago of obtaining money by fraud, and was sentenced by Mr. Justice Day (who lamented that it was the highest sentence he could give him) to five years' penal servitude. His qualification consisted of a conviction for theft and of his having been for years a bill-sticker for another local quack, who fled to escape justice some years ago. Shortly after his conviction the name of a duly registered surgeon who had been associated with him in his infamous work was erased from the Medical Register; but so far from the establishment being broken up, as might have been expected, it flourishes more than ever, being kept up by the convict's wife, assisted by the ex-registered surgeon, whose name appears boldly on a brass plate as Mr. ——, surgeon, and by a Dr. ——, whose name also appears on a brass plate with the words physician and surgeon. The first name also appears as surgeon in two places in the local directory. It was stated at the trial that the convicts' receipts for years past had amounted to several thousands annually, and at a recent inquest on the body of a woman who had been under the care of Dr. —— and Mr. —— the weekly cash receipts were given and were very large. Is there no remedy for such a state of things?

I am, Sirs, yours faithfully,

Liverpool, June 28th, 1897. FRED. W. LOWNDES.

CYCLING FOR WOMEN: ITS EFFECTS ON PARTURITION.

To the Editors of THE LANCET.

SIRS,—Two cases that I have recently attended show that frequent bicycle exercise and continued pressure of a hard saddle may act as a cause of delay in the second stage of labour. Both were primiparæ, of good physique, and accustomed to daily riding, in some cases long distances. The presentation was natural in each case and the labour easy until the head rested on the perineum, which was unusually tough and unyielding. The bowels and bladder had previously been emptied, and the child's head was of moderate size. After applying the usual remedies and waiting a considerable time delivery was quickly effected with short forceps without tearing the perineum in the slightest. It seems quite probable that long rides and the use of hard saddles caused the difficulty in these two cases, and it is as well perhaps that attention should be directed to the possible inconvenience and trouble which may result from an immoderate use of the wheel, and that care should be exercised in the choice and position of the saddle.

I am, Sirs, yours faithfully,

June 28th, 1897. J. W. MCVITIE, M.R.C.S. Eng.

THE COUNTRY HOLIDAY FUND: AN APPEAL TO COUNTRY PRACTITIONERS.

To the Editors of THE LANCET.

SIRS,—Many of your readers are country readers. They must know of cottages where grown-up children have left empty places or where for other reasons there are rooms ready for guests. Would they tell of such rooms to the secretary of the Country Holiday Fund, 10, Buckingham-street, Strand? There are now some thousands of town children ready for holidays. They will enjoy them in the country, but they will enjoy them much more if they can, during their country visit, share the life of a country family, experience the different habits of living, and get familiar with the talk and life of those who have to work with growing things. The payment for each child is 5*s.* a week, and every precaution is taken that the child shall be free from all disease. I am, Sirs, yours faithfully,

Toynbee Hall, Commercial-street, E. SAMUEL A. BARNETT.

*** If any of our country readers can give Canon Barnett the information he desires they may benefit some of their own poorer neighbours as well as the little people in whose particular behalf he writes.—ED. L.

"OBSERVATIONS UPON RE-VACCINATION."

To the Editors of THE LANCET.

SIRS,—In the "Observations upon Re-vaccination" which he communicated to THE LANCET of June 12th Dr. Robert Carter advocates that in small-pox epidemics every child in whose case four years have elapsed since primary vaccination should be re-vaccinated. I should not be disposed to question this conclusion of Dr. Carter's if he had urged in its favour that much vaccination performed in this country is of poor quality, and that in consequence it is expedient in times of small-pox prevalence to re-vaccinate all children after four years in order to secure immunity to those who have not received at the time of primary vaccination the highest degree of protection which vaccinia affords against attack by small-pox. Again, had Dr. Carter maintained his thesis on the ground that, as an occurrence wholly exceptional, children have been known to contract small-pox—though necessarily of the mildest type—within four years of efficient vaccination, the argument would have been sound, if not altogether convincing. But the reason which Dr. Carter gives is of a different nature. It is that he has found children susceptible to vaccinia, in greater or less degree, as early as four years after their primary vaccination. It would have been interesting to know whether any difference was observed in the reaction of these children to re-vaccination according as they presented good, bad, or indifferent marks of primary vaccination. But, setting this question aside, has it ever been seriously claimed that the duration of the insusceptibility to vaccinia which a vaccinated person acquires is the same as the duration of that individual's insusceptibility to attack by small-pox? The distinction between the two cases was pointed out by Jenner, and has been illustrated again and again in small-pox epidemics. It would be curious if evidence of the greater duration of the protection against small-pox attack could

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not have been found, for instance, in the outbreak to which Dr. Carter refers. I am, Sirs, yours faithfully,

London, June 15th, 1897. G. S. BUCHANAN.

A CASE OF SUDDEN DEATH.

To the Editors of THE LANCET.

SIRS,—In Dr. Dixon Mann's interesting article on Unexpected Deaths from Natural Causes he includes gall-stone colic among those diseases which when fatal do not usually end suddenly, but may exceptionally do so. The following case, which came under my notice in October, 1895, is, I think, of some interest in this connexion. I was called from bed at night to attend a patient whom I had not previously seen, a woman, some fifty-five years of age, living alone in lodgings. She was dead before my arrival, and the people of the house feared that she had died from the effects of poison, self-administered. Their story was briefly as follows. She had complained all day of feeling unwell and had remained in bed secretly solacing herself with brandy. Shortly after twelve o'clock, when the household had retired, she rang her bell furiously, and was found rolling upon the bed in great agony. She complained of severe pain in the abdomen and chest and said: "Give me something to make me sick; if you don't give me something to make me sick I shall die." She repeated these words more than once, was violently sick, and died. A bottle half filled with brandy lay on the bed and several empty bottles were concealed in the room. I took away with me some of the vomited matter and tested for the more common irritant poisons. It contained alcohol in abundance, but I could detect nothing else. By the coroner's order I made a post-mortem examination. The gall-bladder was greatly distended by calculi of all sizes to the number of a hundred or more. One of the smaller stones was impacted in the common bile-duct. There was extensive fatty change in the heart muscle. At the inquest a verdict was returned of death from syncope during an attack of biliary colic.

I am, Sirs, yours faithfully,

Leicester, June 29th. T. V. CROSBY, M.B. Lond.

"DEATHS AFTER OVARIOTOMY": A CORRECTION.

To the Editors of THE LANCET.

SIRS,—My attention has just been drawn to a mistake in my wording of a footnote (No. 5) on page 1538 of THE LANCET of June 5th. The note in question should read as follows: "The hot water used for this purpose has in every instance been obtained from the usual domestic boiler-supply, its temperature being regulated when necessary by the addition of *cold water previously sterilised by boiling*."

I am, Sirs, yours faithfully,

June 28th, 1897. W. A. MEREDITH.

"SURGERY: ITS REMARKABLE PROGRESS DURING THE REIGN."

To the Editors of THE LANCET.

SIRS,—I beg to call attention to a slight error in your valuable journal of June 19th under the above heading. You state in your article that "the introduction by *Leiter* of the cystoscope has greatly facilitated the diagnosis and treatment of diseases of the bladder." The *introducer was my late master, Nitze, of Berlin.* Leiter was only the manufacturer of this instrument. Hoping you will find space for this correction, I am, Sirs, yours faithfully,

Budapest, June 25th, 1897. DR. SAMUEL BAUMGARTEN.

THE LUNACY ACT, 1890, AND ITS AMENDMENTS.

To the Editors of THE LANCET.

SIRS,—The principal objects of the Lunacy Act, 1890, were stated in the "Memorandum" to be to furnish safeguards against the improper confinement of persons as lunatics; to remove the difficulty then felt in securing the speedy treatment of mental disease; to amend the law as to single patients; and to put a check upon the establishment of new licensed houses. A second Amending Bill to the above Act being now before the House of Lords the time seems favourable for considering how far the objects aimed at in the original Act have been attained during the seven years it has been in operation. On the one hand, complaints are daily heard from asylum officials of the great difficulty they experience in carrying out the numerous, and, as some think unnecessary, provisions of the Act, and of the vastly increased amount of clerical and other labour which it entails; whilst, on the other hand, it is said that the Act is evaded, that secret, illegal, and irresponsible "treatment" of the insane, and those threatened with insanity, flourishes and increases. A very influential deputation have just waited upon the Lunacy Commissioners and appear to have spoken strongly and frankly upon the latter facts.

Dr. Blandford, a member of the deputation, is reported to have said: "The intervention of the magistrate presented the greatest difficulty; the friends of the patient make every possible objection to going before the magistrate; and medical men are getting more and more afraid of signing certificates." Dr. Savage said: "At the present moment every person, whether he is a decayed gentleman or a decayed person, thinks he is justified in taking a person of unsound mind into his house, and applications are made by hundreds and hundreds of them. He believed that if it were known that there was a possibility of the cases being occasionally visited most of those people would not apply to have persons of this kind in their houses." He believed that "the present circumstances tended to secrecy." Mr. Bagot, chairman of the Commissioners, said: "There was another side to this question; he would ask, which is best—for the patient to be treated in a scientific way in an asylum, or casually in a private house?" He drew attention to the legal aspect of the case—Is certification protection against false imprisonment? and thought that all would be agreed that "any feasible plan for putting an end to what must be called the illegal treatment of lunacy was desirable." Dr. Needham, a Commissioner, thought that the strong point of the whole matter existed in the fact that there was a large amount of illicit treatment of insane people going on.

The question seems to arise, under the circumstances here narrated, whether the evils complained of would not be best met, not by further repressive legislation, but by rendering the whole machinery for reception and treatment into legally and properly constituted asylums, as into other hospitals, as little difficult as possible, a vigilant supervision, of course, being maintained upon all fresh admissions by the medical staff attached to each of them, working loyally and hand in hand with the Commissioners in Lunacy as the supreme authority.

Practically, this state of things already exists, for, under whatever Act a patient is received, once removed from the care of family and friends the medical staffs, supervised by the Lunacy Commissioners, must of necessity assume the full responsibility for any necessary detention. It is hopeless to expect that under any Act, however carefully framed, outcries of illegal detention will not arise from time to time, but such outcries should be at once silenced by the combined testimony of the Commissioners in Lunacy and the medical staffs of the present admirable institutions, both public and private, situated in every county in England.

I am, Sirs, your obedient servant,

FORMERLY A COUNTY ASYLUM SUPERINTENDENT.

THE RECENT PRIMARY FELLOWSHIP EXAMINATION AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—Over 70 per cent. of "plucks"! Over eighty of the most hardworking and intelligent of senior medical students and young practitioners told that they do not know anatomy and physiology in a manner to qualify them for responsible and accurate surgery. This is the outcome of the last primary Fellowship examination at the English College. Something is wrong somewhere. To a plain-thinking surgeon of the old school there appear to be three cardinal faults in the examination. *Fault No. 1*—The College has departed from the original scheme of the Fellowship designed by the great leaders in surgical practice and surgical thought of fifty years ago—Brodie, Green, Lawrence,

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Stanley, South, and such like. And what was the scheme? No one could at that time go in for the Fellowship examination until he was twenty-five years of age, or, in other words, until he had spent a long period in study after obtaining the Membership, which was usually taken at twenty-one or twenty-two. If this rule still held the College would not be besieged by such numbers that in order to restrict them and give a fictitious value to the Fellowship the examination has to be made eliminative by the ingenuity of the questions set. *Fault No. 2.*—Whereas the Fellowship is presumably a mark of special fitness for practising surgery, the questions in anatomy, both in the "written" and in the "*vivâ voce*" examination, have about as much to do with surgery as playing the German flute has to do with learning the German language. The anatomy questions set in the recent examination are about as useless to a surgeon as human ingenuity could devise; and if report does not belie the examination it is deemed ridiculous to suppose that Fellowship anatomy takes any cognisance of practical surgery. *Fault No. 3.*—In physiology candidates are liable to be questioned on any part of this overgrown subject, full as it is of speculation, much of which in a year or two may be cast to the winds, based upon an infinite number of experiments, and specialised to such a degree that probably no individual specialist could pass an examination in the whole range demanded of these young men. None but those possessing an encyclopædic memory can be approximately sure of passing, and the rest, the majority, and probably the most original in thought and observation, have to take their luck in a mere lottery of questions.

To my mind all this has a serious bearing on the future of surgery. These young men, at a time when their minds should be free to devote themselves to clinical study, to original observation, to self-education, and to spontaneous study in directions suggested by their work and opportunities, have to spend their time and waste their brain energy and to dwarf their outlook by devoting themselves to work, half of which no doubt may be of value, whilst the other half is little better than cramming up so many pages of a dictionary. Numbers are tempted to fritter away their energies in passing, or trying to pass, this exacting examination, who never can become surgeons, and who would profit infinitely more by serving as assistants to a general practitioner. The temptation is great, seeing that the F.R.C.S., by sheer dint of the difficulty in obtaining it, has achieved a value far beyond its educational worth.

Let the College have the courage to go back to the original idea of the Fellowship and allow no one to go up for the "primary" examination until he has been qualified for two years. Let the "primary" be an examination really in surgical anatomy, and let it test anatomy learned by dissection, not transcendentalism got up from books. In physiology let the examination be in a carefully selected branch or area of the subject, with a certain option of selection by the candidate.

I am, Sirs, yours faithfully,

"OVER THIRTY YEARS A HOSPITAL SURGEON."

June 25th, 1897.

THE BATTLE OF THE CLUBS.[1]

(FROM OUR SPECIAL COMMISSIONER.)

(*Continued from p. 1711.*)

LEICESTER.

Successful Formation of a Medical Union.—Partial Reforms Obtained.

THE members of the medical profession practising at Leicester have made an effort to deal with the grievances arising from contract or club work. The situation has already been fully described.[2] It will be remembered that the great majority of the population of Leicester belong to medical aid organisations of one sort or another, but that the largest of these institutions is the Leicester and Leicestershire Provident Dispensary. This society was established in 1833, and became a provident institution in 1862. It has now some 39,000 members and employs twenty-six medical men, including some of the most distinguished practitioners in the town. Though the subscriptions paid amount to 4*s.* 4*d.* per annum for adults, the medical men only receive 1*s.* 9½*d.* per annum per member. There are also a great number of benefit societies in Leicester, and several financial companies which combine medical aid with a general insurance business. Shortly after the publication by THE LANCET of the full details concerning the abuses that accompany this contract work the Leicester Medical Society took the initiative, convoked meetings of the entire profession, and a medical union was constituted as a fighting body to deal with all economical questions. It was decided to subdivide the union into sections which were to meet separately. The medical men who worked for benefit societies were to form one section, those who were employed by insurance companies another section, and the twenty-six medical men who belonged to the Provident Dispensary formed another section. It is doubtful whether this was a wise course to follow. The interests and the circumstances of each group certainly differed greatly, and time might be economised by discussing separately these various matters. But, on the other hand, the prime object of a union is to engender a strong sense of solidarity between all members of the profession, however the position of individuals or of groups of individuals may differ. Medical men cannot be too well informed as to the position, the difficulties, and the opinions of other medical men. In Leicester there is considerable hostility felt against the medical staff of the Provident Dispensary. There is a tendency to look upon them as privileged individuals; and therefore their first object should have been not to meet privately, but, on the contrary, to seek to associate on every possible occasion with the other medical men so as to dispel any and every existing misunderstanding.

When the union was formed nearly every medical man in the town joined, but the sectional meetings tended to disunion. Each section strove for its own interests, instead of coming to a common agreement to commence by fighting on the line of least resistance. In fact, the true sense of unionism has not yet arisen; the members showed too much anxiety to better their own position instead of ascertaining which was the worst case or the weakest point and fighting that first. With from eighty to ninety medical men in union everything was possible had better statesmanship and greater discipline been displayed. So strong was the union that the clubs and societies met its representatives in a most conciliatory manner. The Provident Dispensary was approached and an increase of payment for the medical staff equal to about 30 per cent. demanded. Thereupon a few of the dispensary medical officers conceived the idea that the main object of the union was to attack the dispensary and that the other medical men were desirous of shattering that institution so as to pick up the fragments. The majority, on the contrary, had a better opinion, and were convinced that this was not the case. On the other hand, it could very well be urged that the dispensary medical officers were not actuated by altruistic motives. Instead of receiving 1*s.* 9*d.* per member per annum they wanted 2*s.* 6*d.* This was all very well in its way, but it touched no general principle. Such a request, if granted, would improve the financial position of the dispensary staff, but it would not do away with any of the grievances that affect the profession as a whole. The point of common interest to all is the wage limit. Doubtless, to the dispensary medical officer it is very important that out of the 4*s* 4*d.* paid by the members he should receive 2*s.* 6*d.* instead of 1*s.* 9*d.*; but what effect would this have on the other members of the profession and on the public at large? So long as a patient is not able to afford more than 4*s.* 4*d.* a year for medical attendance, the sub-division of that sum between the collectors and organisers of the dispensary and the medical staff of the dispensary is altogether a secondary question. What interests the medical profession at large is that they should not lose their patients by persons being allowed to join the dispensary when they are in so good a financial position as to be able to pay the ordinary medical fees. The public, on its side, is interested in seeing that the high-standing and efficiency of the medical profession shall be maintained and not compromised as at present by excessive club practice and the careless, hasty work it involves. The dispensary medical officers should then have demanded on behalf of the profession at large and of the entire public, that the abuse of the dispensary should be checked. When this had been secured by the

[1] A reprint of the previous articles on the above subject has been published in book form entitled, "The Battle of the Clubs," and can be obtained from THE LANCET Office, price 1*s.*

[2] See The Battle of the Clubs, THE LANCET, Feb. 15th and 22nd, 1896, and page 123 of the reprint.

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imposition of a strict wage limit it would have been time enough to discuss the sub-division of the 4*s*. 4*d*.

Unfortunately this was not done. The dispensary medical staff did not stand to the wage limit. The dispensary committee said they were ready to expel anyone whom the medical men might denounce, and argued that as the medical men went into the rooms of the patients they were best able to tell whether the members were able or not to pay proper fees. But this is not the case—first, because the vast majority of patients are out-patients; and secondly, because medical men can ill afford to make themselves unpopular in the town by causing people to be expelled from the societies to which they have subscribed. Nevertheless, the Dispensary Committee was on the point of yielding when some of the dispensary medical men became alarmed, and this rendered the position of the majority untenable. They were therefore obliged to accept the suggested compromise. The share of the 4*s*. 4*d*. to be paid to the medical staff has consequently been raised from 1*s*. 9*d*. to 2*s*. 2*d*. instead of 2*s*. 6*d*. as demanded. This is equal to an increase of about 15 per cent. instead of the 30 per cent. which had been claimed. Then the subscriptions for family tickets will be raised from 3*d*. to 3½*d*., instead of 4*d*. as proposed. Further, the medical staff will now obtain a guinea fee for first accouchements and 15*s*. for second accouchements. They are also to receive 7*s*. 6*d*. for miscarriages under three months, whereas formerly no extra allowance was made for these latter cases. Altogether, it is calculated that the medical staff of the Leicester Provident Dispensary will receive between them something like £600 per annum more than they formerly obtained.

Inspired by the example of the Provident Dispensary and alarmed by the strength of the Medical Union, the Foresters' benefit society also made some concessions. They raised their scale of pay to that of the Oddfellows—namely, 2*s*. 9*d*. to all medical men and 1*s*. 3*d*. to the dispensing chemists per member. Had the dispensary medical officers held out for an increase to 4*d*. for the family tickets the benefit societies would also have moved in this respect; but as the increase obtained only amounted to a halfpenny the benefit societies did not think it worth while to make any alteration. In all this, however, it is encouraging to note that some solid advantages have been acquired. The agitation has also served to make the grievances of the medical profession known to the general public and has awakened the public conscience. A great many respectable people have now withdrawn from their clubs and have become private patients. This is a material benefit to the profession and an advantage to those who are really entitled to belong to clubs. It is also easier now for medical men to call the attention of well-to-do club and dispensary patients to the fact that they ought not to belong to such institutions, but should become private patients. In a word, in spite of mismanagement, enough has been done to conclusively demonstrate the advantage of unionism. The partial failure which the Leicester Medical Union has experienced should not, therefore, discourage its members. Instead of harping on this less pleasant side of the picture it is better to think of the partial success which has been achieved. The solid advantages gained should stimulate the members of the union to redoubled efforts. Taught by experience, they ought now to be able to perfect their organisation and improve its ethical basis so as to imbue its members with the true spirit of unionism, and thus ensure for their next effort, not a partial, but a complete success.

THE DWELLINGS IN BOMBAY.

(FROM A CORRESPONDENT.)

ALTHOUGH scientific research has not yet recognised the plague bacillus in the air, in water, or in food, and although its existence in the dejecta of the human body is still contested, Bombay has made an important step towards better sanitary conditions, for whilst deaths from plague still continue, the death-rate has fallen below the normal line, and few people can doubt that the cleansing that has been carried out so energetically during the past few months in the streets and dwellings of Bombay has had an important influence in diminishing the mortality. The magnificent main thoroughfares and public buildings of the city produce a totally false impression on the mind of the visitor who may pass a few days or weeks of the cold season in some hotel or private bungalow, the latter an isolated house in one of the best quarters of Bombay. There is nothing to attract him to the scores of miles of dirty, squalid streets or to the filthy houses which line them. It is, however, the class which lives in such quarters whose habits give the sanitary note to Bombay. It includes all Indian domestic servants; and until the Plague Commission, with its military president, by a sanitary crusade such as has no parallel in the history of India took action, the above class triumphed over every effort that was made by the municipality to improve its condition. It is true that the municipal effort did not take a very energetic form. Conservancy, drainage, and water-supply were provided, but the by-laws of the Municipal Act were not enforced, and the people did not give that personal assistance to the authorities without which no sanitary system can possibly succeed. Filth is still thrown with impunity upon sanitary inspectors from upper windows in narrow streets. A few days ago a parcel of nightsoil in paper was thrown by an office messenger from the window of a consulate into the street, and recently a bucket of water that had washed a floor and was of the colour of sewage was thrown from a balcony of the best hotel into the principal street of Bombay. These examples will illustrate the influence of the class already mentioned in the interest of disorder. Its members are not particular how they live so long as the cost is low, and as their sense of smell was dulled ages ago to all ordinary odours they are, as a rule, quite indifferent to their surroundings. Such people are very easy-going tenants, a fact that house proprietors quickly recognise, and it may safely be stated that there is no place so dark or unsavory that it cannot find a tenant. Much of what is known as the Fort and the City was built before the creation of the municipality, and before the ideas of ventilation or perflation had any place in the schemes of house building. The dominant idea of the landlord was to get the utmost accommodation upon his land, and the four-storey house with 10 to 30 ft. of frontage and a depth of 100 ft., flanked on each side by a gully not more than from 2 to 2½ ft. wide, may now be found in hundreds. The gully is, of course, an open sewer into which all house refuse is thrown, including nightsoil, which frequently adheres to the opposite walls. The air supply and light of rooms opening from the gully come through that channel. The common stair of such a house is dark and has not even a skylight; there is no exit to the roof, which is tiled, and thus the only possible ventilating shaft is inoperative. The common stair, being common property, is never cleaned; no Indian proprietor considers this to be any part of his duty. Such a house consists of a series of rooms, each of which may at any time contain a family. The only permanent fittings are a *nahni* or sink, raised a few inches above the floor and discharging through the wall into a downtake pipe which terminates at the gully, and also a low platform of masonry or mud to serve as a fireplace for cooking. There is no chimney, and wood fuel or cowdung cakes are used twice a day. The interior is thus blackened in a short time and remains black. It is the same if a special room is set apart for cooking, or even if there is a cookhouse adjoining; there is no chimney. The *nahni* is intended to receive sulliage only, but it is regularly used as a latrine, particularly by women and children; and as air currents pass frequently at night from the discharge pipes into the rooms, the latter being warmer than the night air, much sickness has resulted from this cause. Wall syphons were fixed by the municipality in great numbers to the downtake pipes with a view to arrest the foul air currents, but the people persisted in putting sand, leaves (off which they eat), rags, and other solid matter into the pipes, and a staff of men was and is kept constantly employed cleansing them. There is no penalty for blocking a syphon. If no syphons are used, the descent of a small quantity of liquid from an upper floor drives foul gases from the downtake pipe into the rooms below. The indigenous channel for waste water in a storeyed house is an open groove or gutter down the face of the wall; it is common in Lucknow and Cawnpore, and its advocates say that being open to the sun and air there is no putrefaction within it as is the case in all downtake pipes. During the session of the "House Connections Committee" appointed by the corporation to inquire into the best form of connection between dwellings and sewers I

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made certain experiments to ascertain the effect of falling water in vertical downtake pipes and also the effect of flushes to remove obstructions in wall syphons. The same instrument was used as in the experiments on gas pressure in the sewers, described in a previous article.[1] The experiment on the effect of falling water in a vertical downtake pipe was made at a three-storey house. The pipe was three inches in diameter at the third storey and five inches at the two lower storeys. It was open at the top of the house and sealed at the foot. The gauge was attached above the seal, and there were no wall syphons. The compression of the air at the foot of the pipe varied with the quantity of water thrown down, and with the time it took to disappear from the third storey *nahni*. Twenty pounds of water discharged in twenty seconds produced a maximum pressure of 0·88 in.; 10 lb. in sixteen seconds produced a pressure of 0·16 in. Each discharge caused a whiff of foul air to enter the lower storeys through the *nahni*. A 2½ in. pipe was next fixed to a wall to represent the height of a single storey. It was sealed at the foot and had a funnel at the top, 13 ft. 10 in. above the seal. The gauge was fixed 2 ft. above the seal. One quart thrown down the funnel produced a maximum pressure equal to 0·64 in. of water. Two quarts produced an effect almost similar, and four quarts produced an increased effect. The pressure corresponded to velocities of 26, 26, and 29 miles per hour.

Experiments to ascertain the rate of current of water required to carry all solid matter through a wall syphon, or to wash it out if it became blocked, showed that fragments of brick were washed out from a 2½ in. syphon with water flowing at a rate not less than 77·76 ft. per minute. Road metal (macadam) was washed out from a 4 in. syphon with a current at the rate of 82 ft. per minute. This syphon was then choked with gravel, sand, mud, leaves, and coir yarn, rammed in with a hammer shaft. Two flushes of three gallons each cleansed the syphon. The flushes were applied in five and five and a half seconds. Although it was clearly demonstrated that wall syphons could be cleansed by small flushes of water applied suddenly, the construction of the *nahni* precludes the possibility of a rapid flush. If fine gratings are placed on the *nahni* outlet they are broken by the people. The wall syphon is therefore a failure in Bombay because the people will not modify their habits and because municipal rules have not been enforced. The state of the atmosphere of a room which is kitchen, latrine, and bedroom all in one in a city the mean temperature of which is 79·13° F., and the shade temperature of which at the time of writing is 89°, with a relative humidity of 71 per cent., may be imagined. Only people whose sense of smell is very defective could tolerate it. Within doors the people are nearly naked; they are thus able to bear an amount of heat and an absence of ventilation that would otherwise be intolerable.

Many of the wealthy Indians have their dwellings in narrow, crowded streets, where houses reach a height of six storeys, and as rich and poor live in close proximity the result is a very high mortality. A scarcity of houses and high rents have given a permanent character to overcrowding, and should any of the schemes recently discussed for the extension of the city be realised it will probably be very difficult to overcome the habit among people whose ideas of domestic comfort would not be understood by any European. A scheme is at present in course of development by one of the leading mill managers of Bombay to provide better house accommodation for mill coolies, whose dwellings have recently been destroyed in considerable numbers as unfit for habitation. The new dwelling is of corrugated sheet-iron, each room is 12 ft. by 10 ft. with two windows, a door, and a verandah. There is a ridge ventilator and an opening below the eaves, a fireplace, and a *nahni*. It is intended to charge about one-third of the usual rent for these *chawls*. Five hundred of them are to be ready for occupation before the end of this month. The Bombay Port Trust is also building a number of well-designed labourers' dwellings, which are much needed. Hundreds of the dock labourers have no dwelling of any kind, sleeping in the streets all through the fair season and under the shop-fronts in the bazaars during the rains.

There is ample experience to prove that the dwellings of the labouring classes should have no *nahni* within the living-rooms and no water-supply indoors. They will tie any water-tap open, and let it run night and day, regardless if it produces a swamp at their door, and they will use the *nahni* for natural purposes in spite of every warning. Public latrines, well designed and well kept, are the only suitable provision for them. Their constant endeavour is to maintain the habits of the jungle while enjoying the good pay and the excitements of a large city.

The approaching monsoon and the necessity for careful legislation on the subject have put a stop for the moment to projects of wholesale alterations among the solid mass of hovels in which many thousands of the people live and die. All through the dry season they sleep in the streets, on the side-walks, but in the rains they must go indoors. The small ratio which the street area bears to that of the houses indicates that all the roofs should be flat for the sake of the healthy open-air space they would provide in congested quarters. The only remedy, short of pulling them down, that could be applied to the unventilated and unlighted blocks of dwellings would be to cut shafts through them from to top bottom of a diameter based on the height. The shaft might be used as a stairway. The distance from the outer walls to the shaft could be determined on well-known rules. Europeans, although their death-rate has been actually less during the plague than before, are awakening to the anomaly of having lived for 236 years—since the Island of Bombay was ceded—in houses utterly destitute of systematic ventilation and built by and for nations having very few of the conveniences required by Europeans. Few people arriving in Bombay from London are aware that the difference in mean temperature between the two places is 30° F., nearly one-third of the temperature of the human body; or that the principal difference between comfort and discomfort in the tropics consists in the rate at which the air in contact with their bodies is changed. The only kind of house they can hire is full of doors and windows, but has not a single opening through its roof, which extends over wide verandahs; and although pleasant during a light breeze, it is hot and stuffy during the frequent periods of dead calm. In a dead calm, which occurs every night, the only natural current possible is that due to the difference of temperature between the building and the outer air, and it can only work usefully through large openings in the roof. This arrangement is only feasible in single-storey houses. It is possible to use the sun's heat directly to produce a ventilating current through a roof. In Cawnpore I fixed a light sheet-iron chimney 22 in. square and 10 ft. high on the flat roof of a single-storey bungalow; another opening 22 in. square was made into the same room but at the opposite end. The influence of the sun's heat on the black iron heated the column of air within it 16° F. and produced a current equal to 133 ft. per minute. The circulation of air through the room by the roof openings was 26,853 cubic feet per hour, and it was free from the smell of moist earth that is often noticed in air coming through doorways from a garden. The circulation continued night and day varying in velocity and direction but always producing a sense of freshness unknown before in the house. The range of temperature and of relative humidity of the air in India produce changes to which the European constitution accommodates itself with difficulty, for the escape of surplus heat from the body must continue with unfailing regularity in all weathers. Agitation of the air, such as is obtained by the aid of a punkah, affords some relief, but is only a partial remedy. The constant renewal of the air from some pure source is one of the chief essentials of healthy life in India. In a city like Bombay it can only be realised by the aid of special mechanism, but, properly carried out, it offers a solution to the problem of providing cheap and healthy dwellings for Europeans. The high cost of land in Bombay and the excellent foundations that are to be found in and about the city are both favourable to the construction of buildings of not less than six or eight storeys, or one hundred feet high. At this elevation the air is very pure and free from insects of all kinds; it also contains very little dust, but as the wind is quite unreliable for the purposes of ventilation in Bombay a constant supply of air from the roof would have to be provided by means of a fan and probably an oil motor, and distributed through every room in the building. The upper part of the corridor, separated by a partition, would serve as a convenient air-duct to supply each room, and in this manner the ground floor would have the same advantages as the top floor, and the tenants at all times would be able to depend on a constant and uniform supply of fresh air. The restorative value of being able to sleep under such conditions cannot be

[1] THE LANCET, March 27th, 1897, p. 917.

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over-estimated. The superior cooling power of the air, even at a small distance from the ground, was proved at Cawnpore at the time of some ventilation experiments. Two similar porous water-bottles were filled with water and placed one on the ground and the other on a parapet wall twenty-five feet above the ground at sunset. In the morning at 5 30 the temperature of the water on the ground was 72° F., and that on the parapet wall 68° F. A house ventilated with air taken at a hundred feet above the ground would accumulate very little dust; and as a fan engine would work well with a dynamo, electric lights might be combined with the ventilating apparatus. With regard to lifts, it is probable that the cheap manual labour of Bombay would provide a satisfactory motive power with a simpler mechanism than any of the steam and hydraulic lifts at present in use.

Once the circulation of air is assured health and comfort might be enjoyed in much smaller rooms than are now considered necessary, and in this way rents might be kept at a moderate figure; and if the details of construction were carefully adapted to European requirements the number of native domestics might be cut down to the lowest figure. This is most important, as each servant is a living nucleus of dirt and disorder unless under constant supervision. Each year as soon as the rains are over a considerable area of open park ground adjoining the Fort is covered with tents by Europeans who cannot find suitable houses. This is an annual reminder of the inadequacy of house accommodation such as has just been proposed. We must not, however, look to the native capitalists to provide such buildings. It would be unreasonable; and even were they to attempt it they would certainly ruin the internal arrangements by meddling. Such a project offers an excellent investment for English capital, as it would meet the urgent need of middle-class Europeans in a city which has for long been noted for its high rents and the abnormal profits of its house proprietors.

Bombay, June 3rd, 1897.

THE GERMAN CONGRESS OF INTERNAL MEDICINE.

(FROM OUR BERLIN CORRESPONDENT.)

THE fifteenth annual meeting of the German Congress of Internal Medicine was held in Berlin from June 9th to June 12th. An abstract of the President's address has already appeared in THE LANCET of June 19th (page 1713). On the conclusion of this inaugural discourse several speakers delivered addresses welcoming the Congress to Berlin, after which the practical work of the meeting commenced.

Chronic Rheumatism and its Treatment.

Professor Baumler (Freiburg) read a paper on Chronic Rheumatism, in which he said that the name of rheumatism has been applied to the most dissimilar pathological conditions. Properly speaking, only the chronic form of polyarticular rheumatism should have this name, whilst the other monarticular forms caused by mechanical injuries, gonorrhœa, &c., should be distinguished as traumatic arthritis, gonorrhœal arthritis, &c. The so-called "arthritis deformans" is only a progressive and advanced form of chronic polyarticular rheumatism. The etiology of the disease remains very obscure; atmospheric influence undoubtedly is of great importance, though this is denied by some physicians. The term "arthritis pauperum" is a misnomer, as the disease is not confined to the poor, but is frequent in well-to-do people also. Women are more easily affected than men; Dr. Ord has therefore suggested that the disease may be due to reflex irritation originating in the reproductive organs, but an infection originating in these organs and propagated from them into the joints would be a more probable explanation. Several physicians have suggested, chiefly on bacteriological grounds, that rheumatic polyarthritis might be an infectious disease; in 1892 Schüller discovered a bacillus in the arthritic joints; in 1894 Bannatyne and Wohlmann found a bacillus in the fluid obtained by puncturing a joint; and Blaxall has even succeeded in cultivating the bacillus.—Professor Ott (Prague) pointed out that any acute inflammation of the joints should at the outset be treated in an antiphlogistic way. The patient should stay in bed, the joints should be kept motionless, and opiates and salicylate compounds should be given. When the acute symptoms have disappeared baths are very useful. Ordinary baths are indicated when nervous irritability accompanies the affection of the joints, the water of saline and sulphurous springs is to be preferred in other cases, whilst mud baths prove useful in more torpid forms. Sand baths and Russian baths, although useful for robust persons, must not be employed for delicate or anæmic patients. Massage, electricity, and mechanical exercises are of great use in ankylosis. The general state of the patient should never be neglected, and a nourishing diet, together with iron and other roborant medicines, should be prescribed in chronic cases.—In the ensuing discussion Dr. Chvostek (Vienna) denied that bacilli are present in chronic rheumatism. He has found that the fluid in arthritic joints is sterile.—Dr. Singer (Vienna) said that he had observed staphylococci and streptococci in the urine of patients suffering from acute rheumatism, and that some micrococci were found in three necropsies. He was of opinion that streptococci and staphylococci are the causes of acute rheumatism, and argued that the acute swellings of the joints which are a well-known symptom in pyæmic affections lend support to his views.—Professor Schüller (Berlin) recommended the injection of iodoform mixed with guaiacol.—Dr. V. Noorden (Frankfurt) said that he had tried the so-called lemon cure. Theoretically there was no reason for expecting any influence on metabolism, but temporary improvement nevertheless sometimes occurred.

Epilepsy.

Professor Unverricht (Magdeburg) read a paper on Epilepsy, in which he said that he would confine his remarks to the pathology of this disease and would abstain from therapeutical questions. Experiments on animals had led him to believe that the cerebral cortex is in every instance the region from which the fit derives both its origin and its perpetuation; he therefore found himself in opposition to Kussmaul and Nothnagel, who held that an epileptic fit originated in an irritation of the medulla oblongata. The epileptic attack caused by an electric irritation of the cortex of animals consists of two parts: first, the muscles of one side and then those of the other side begin to contract. If the fits follow one another very quickly clonic convulsions of the whole muscular system occur, just as in genuine epilepsy. When parts of the motor region of the brain are removed the muscles actuated by these centres no longer take part in the convulsions; if one side of the brain is completely removed the convulsions are hemilateral only. With respect to the circulation he has discovered that during the epileptic fit the pulse is at first accelerated and the blood-pressure increased; in the second stage the pulse is retarded, in the third stage it is again accelerated, whilst in the fourth stage it returns to the normal. Professor Unverricht pointed out that there is no difference between cortical epilepsy and genuine epilepsy; they are each of them only different degrees of the same illness, and when the anatomical conditions of the fits are better known the word "epilepsy" will become a more distinctive term, just as it is customary to speak of alcoholic poisoning and lead poisoning or syphilitic and uræmic convulsions. In the course of the paper it was mentioned that there are 100,000 epileptics in Germany.—In the discussion Professor Flechsig (Leipzig) remarked that bromine is retained in the organism for a considerable period. Of 80 grammes given within eight days, 41 grammes were retained; and of 24 grammes within three days, 21·5 grammes were retained. After a certain time the organism is saturated with bromine. When the bromide employed has ceased to be efficacious it must be combined with opiates.—Professor Binswanger (Jena) and Professor Jolly (Berlin), in opposition to Professor Unverricht, maintained that epilepsy might also be induced by subcortical irritation.

Etiological Therapeutics.

Professor Behring (Marburg) said that the treatment of disease with drugs had failed because it was based on experiments made on healthy animals. Allopaths err when they endeavour to correct symptoms, and their theory "*contraria contrariis*" is not more reasonable than the "*similia similibus*" of the homœopaths. Cellular pathology has proved useless as far as therapeutics are concerned. Natural therapeutic processes include—(1) phagocytosis; (2) removal of the virus by the perspiration, the urine, and the fæces; and (3) the protection afforded by the epidermis

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and the epithelium. Etiological therapeutics are based upon the circumstance that the animal organism, when invaded by certain kinds of pathogenic virus, has the power of forming antidotes which not only render the particular individual immune against such virus, but are also available for administration to other individuals. The antitoxic power present in the organism of highly immunised animals is specially concentrated in the blood serum. The antitoxins hitherto discovered are not all of similar efficacy. Diphtheria antitoxin has been clearly proved to be successful, but tetanus antitoxin sometimes fails, owing to the fact that it is not usually kept in hospitals and consequently is not at hand for sufficiently early administration. Marmorek's anti-streptococcic serum is very doubtful, whilst Maragliano's tuberculosis serum contains no antitoxin at all. The antitoxins themselves are innocuous, and the removal of the causes of such undesirable symptoms as urticaria, &c., is a mere matter of improving the practical details of the manufacture. All attempts to produce a chemically pure antitoxin have failed, and must necessarily do so, owing to the fact that antitoxin is not a definite chemical compound, but is rather a quality inherent in certain albuminous substances, somewhat as magnetism is in iron. Passive immunisation by means of antitoxin is preferable to active immunisation by direct toxins. Experiments are at present being made in the hope of discovering a method of prolonging the immunising power of antitoxins. When the virus of the disease is unknown, as in the case of septicæmia, the production of antitoxin is impracticable. Professor Behring finally announced that he was carrying on researches with the view of discovering a new anti-tuberculous serum. Alluding to Professor Koch's new tuberculin, he declared it to be very valuable for the lower animals—in fact, more suitable for them than for the human subject. In concluding his address Professor Behring remarked that the prophecy that bacteriology would have no application or utility in the practice of medicine had been disproved by the introduction of the antitoxin treatment.

Graves's Disease.

Professor Eulenburg (Berlin) pointed out that the three leading symptoms of Graves's disease—thyroid enlargement, exophthalmos, and cardiac palpitation—have been supplemented in the course of time by a series of other phenomena. He mentioned specially the ophthalmic conditions described by Graefe, Stellwag, and Moebius, the so-called Marie's tremor, the diminished resistance to galvanic currents observed by Charcot, Vigouroux, and himself, the special glycosuria discovered by Chvostek, and finally all those neurasthenic and hysteric troubles which are so characteristic of this affection. Not every one of those symptoms is present in each instance of Graves's disease. There are cases where some one or other of them is but little developed or disappears during the course of the disease. Three etiological theories of Graves's disease have been advanced—the hæmatogenic, the neurogenic, and the thyreogenic. The first-mentioned is based on the prevalence of the disease among females, its commencement during adolescence, its connexion with dysmenorrhœa, and the beneficial effect of pregnancy observed in some instances. Discussing the neurogenic theory Professor Eulenburg said that all attempts to localise the affection in either the vagus or the sympathetic nerve have been unsuccessful, for its clinical symptoms, its development after severe injury, and its connexion with other constitutional neuroses, such as epilepsy, hemicrania, chorea, and diabetes, prove that the disease is a constitutional neurosis. Gauthier was the first to suggest an alteration of the chemical composition of the thyroid gland as a cause of Graves's disease, and Moebius drew attention to the contrast between its symptoms and those of myxœdema. Tachycardia, exophthalmos, mental excitement, and emaciation were caused apparently by hypertrophy, and slowness of the pulse, mental apathy, and obesity by atrophy of the thyroid gland. The gland undergoes alteration in function as well as in size, and it probably produces a toxic substance which acts on all the parts of the nervous system. On the subject of treatment Professor Eulenburg said that the hæmatogenic theory required the administration of remedies directed against anæmia and chlorosis, whilst the neurogenic theory suggested the use of electrical, psychical, dietetic, climatic, and hydropathic methods. The supporters of the modern thyreogenic theory have recommended thyroidectomy combined with the internal use of thyroid preparations, but this operation should be reserved for cases where the local symptoms preponderate, and it is found that general treatment gives very favourable results with many patients.

(To be continued.)

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The New Hospital.

As the nearness of the time approaches considerable interest is being evoked in the advent of Prince and Princess Christian to open the new hospital on July 7th. Additional zest is given to the public enthusiasm by the liberality of the licensed brewers who have arranged for the decorations which lately adorned St. James's-street, London, to be transferred to the main street of Birmingham for this opening ceremony. A few distinguished persons have been invited by the Lord Mayor of the city to meet their Royal Highnesses, whose stay will be short, and whose duties will be impressive and important.

Mason College and the Diagnosis of Diphtheria.

The health committee of the town council have made an important arrangement with the authorities of Mason College for the bacteriological examination of the products in cases of suspected diphtheria. By placing also a supply of serum for treatment at the disposal of any medical practitioner without fee an opportunity is given for the early treatment of this malady which cannot fail to afford the best chances of dealing with it in the light of the most advanced cientific discoveries.

General Institution for the Blind.

The fiftieth annual meeting of this institution was held on June 16th. The report showed that the total number of blind people who had directly benefited during the year was 518. The turnover for the sale of goods had realised over £3000, while the deficiency in income was £487. Instances were given of the value and character of the training employed, and an earnest appeal was made for more funds.

Royal Institution for the Deaf and Dumb.

Not less interesting was the annual meeting of the friends of this institution, when the opening of the new buildings with extensive improvements was declared by the Hon. Somerset Calthorpe. One hundred and eighty pupils are now educated in lip language, whose progress was markedly illustrated in the course of the meeting. Special attention is paid to physical training and various industrial pursuits, so much as to call forth high praise from the Government inspector and experts, whose testimony was appended to the report.

Government Grant to Mason College.

The additional grant of £2700 to Mason College made by the Chancellor of the Exchequer under a recent report has given rise to much satisfaction. Opportunities will thus be given for advanced work and research, which will promote the efficiency of the college in a marked degree. Money could not be better spent than in such a direction in the cause of education.

June 29th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Health of Liverpool.

THE deaths registered in the city during the week ending June 19th were 244, making a rate of total mortality equal to 19·7 annually per 1000 of the population. Of the total deaths 110 were of children below five years of age, and of these 64 were of infants below one year. In view of the prevalence of diarrhœa, which is so common at this season among children and infants, especially of the lower classes, the medical officer submitted a memorandum of precautions. Dr. Hope lays special stress on cleanliness of person, clothing, and surroundings. All water required for drinking purposes should be taken direct from a main, but if from a cistern it should be boiled before using. No filth or dirt should be allowed to accumulate within or near the house; the ash-pit should be frequently emptied, no slop water should be thrown into it, and animal

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and vegetable refuse should be burned. Windows should be kept open every day for some hours. The water-closet should be frequently flushed. Other important directions as regards food are also given. Measles still continues prevalent in the city.

The Sanitary Condition of Birkenhead.

Dr. Marsden, the medical officer of health of Birkenhead, has issued his annual report on the sanitary condition of the county borough of Birkenhead. He explains that each succeeding report deals with the various agencies which are acting deleteriously upon the public health, and which tend in many ways to reduce the vitality of the community, and thus act injuriously on the well-being of the town. For the purpose of awakening sympathy with the agencies at present in operation for the improvement of these conditions, publicity is given in each successive report to the weak spots in the administration of the borough and to the unnecessary waste of life which is constantly going on and which it is the object of the report to disclose. Dr. Marsden again draws attention to the unsatisfactory homes of the working classes and to the condition of the sewerage in the older parts of the borough, with the object of stirring up the municipal authority to afford facilities for ameliorating this state of things. Dr. Marsden goes on to say that the public health of the borough during the year 1896 has been satisfactory in every way. The borough has an area of 3849½ acres—a little more than six square miles—with an estimated population of 108,818. The death-rate in 1896 was 19·44 per 1000, compared with 19·90 in 1895. The zymotic death-rate was 3·32 per 1000. In the appendix to the report are tabular statements of the year's mortality within the borough, classified as to the disease, ages, and localities, a weekly register of deaths and of meteorological results, and a monthly summary of deaths from all causes. Dr. Marsden also deals with illegitimate children, of whom 39·2 per cent. died within twelve months of birth; these numbers are higher by 3 per cent. than the rate of mortality of the previous year. Dr. Marsden also refers to certain "insanitary areas" within the borough, and hopes for improvement in their condition.

Liverpool and Ormskirk Jubilee Commemoration Funds.

Of the £30,000 necessary to complete the augmentation of the Liverpool district nursing scheme, alluded to in a former number of THE LANCET, upwards of £7000 are still required, the amounts received to date being £22,970 10*s.* 8*d.* It is also pleasing to record that Ormskirk is not to be behindhand in the matter of providing nurses for the benefit of the sick poor of that district in their own homes; it is proposed in commemoration of the Jubilee to make accommodation for five or six nurses in the enlarged Ormskirk Cottage Hospital, who services will be given free of charge to those who, by reason of their poverty, cannot afford to pay for them.

Clerical Victims of Typhus Fever in 1847.

A service was held a fortnight ago in commemoration of the ten Roman Catholic clergymen who died from typhus fever within six months of each other in the discharge of their religious duties in 1847, when that disease broke out among the Irish immigrants who flocked to Liverpool owing to the famine in Ireland. The numbers arriving from Ireland were so large that the lower parts of the city became greatly overcrowded, typhus fever spreading with alarming rapidity and being followed by a high rate of mortality. Monsignor Nugent, the well-known Liverpool philanthropist, preached the sermon and described from personal recollection the sufferings and privations of the poor of Liverpool during that dreadful time. He also dwelt on the heroic conduct and self-sacrifice of the victims whose memory they were then met to honour. A comparison of the Liverpool of the year 1847 with that of to-day affords an instructive object lesson; in the former year were rows of streets with fœtid courts enclosed, to the consequent exclusion of light and fresh air, which are now occupied by healthy artisans' dwellings with salubrious surroundings. The contrast is, indeed, striking, and is a matter for much thankfulness and congratulation. In this connexion it may be interesting to note that typhus fever has been almost stamped out in Liverpool, the disease being now comparatively rare.

New City Magistrates.

Dr. Thomas Clarke and Dr. William Cross have been placed on the Commission of the Peace for the city of Liverpool.

June 29th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Typhus Fever in Ireland.

IT was thought for the last few years that typhus fever, for a long time a sanitary disgrace to Ireland, had practically disappeared. Some cases have, however, been recently admitted to the Cork-street Fever Hospital from Dublin. In Athlone Union typhus fever has broken out in the Castlesampson division, and five deaths have already been recorded. The prevalence of this fever in Belmullet Union was the subject of a question in the House of Commons on June 28th.

The Jubilee Nursing Scheme in Ireland.

The movement to supply nurses to take charge of the sick poor in their own homes is certain to prove a success. Since the influential meeting held in Dublin last month a number of subscriptions have been received, including £100 from the Roman Catholic Archbishop and £500 from Sir John Arnott.

Mercer's Hospital, Dublin.

As was mentioned many weeks ago the candidates for the vacancies on the staff of this hospital were obliged to enter their names before June 18th. Some twenty candidates have applied, including one well-known medical man—viz., the present master of the Coombe Hospital. Of the members of the staff recently dismissed by the board Dr. M. Ward is the only one to be found among the candidates. Dr. T. Mason will probably be given a consultant position in connexion with the hospital. Mr. O'Grady and Mr. Auchinleck have not applied, and intend to contest at law the power of the board of governors to dismiss their medical staff. The election will take place on July 6th, when it is proposed to elect three physicians and four surgeons.

Irish University Education.

The Irish Roman Catholic Bishops have just issued an important statement on this question. They say: 1. With regard to the constitution of the governing body of a Catholic University that if in other respects it is properly constituted they do not ask for a preponderance, or even an equality, in the number of ecclesiastics upon it, but are prepared to accept a majority of laymen. 2. As to theological teaching, they accept Mr. Morley's suggestion that a theological faculty should not be excluded from the Catholic University provided that the chairs of the faculty are not endowed out of public funds. They are prepared to agree that the moneys voted by Parliament shall be applied exclusively to the teaching of secular knowledge. 3. As to the appointment and removal of professors they think that all reasonable protection for the position of the professor may be met by submitting questions concerning him to the decision of a strong and well-chosen board of visitors, in whose independence and judicial character all parties would have confidence. 4. As to the application of the University of Dublin Tests Act of 1873 they say that, with some modification in the Act in the sense of the English Acts of 1871 and the Oxford and Cambridge Acts of 1877, they have no objection to the opening up of the degrees, honours, and emoluments of the University to all comers. They ask not for a college, but for the foundation of a university.

June 30th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

A New Method of Treating Aneurysms.

M. LANCEREAUX recently showed at the Academy of Medicine a patient the subject of an enormous dissecting aneurysm of the aorta, which he had treated successfully by a new method introduced by M. Dastre. This method consists in the injection into the veins of a sterilised solution of gelatin, of a strength of 1 per cent. The doses vary in quantity and are continued for some days. Cure is brought about by the formation of a clot. This procedure is absolutely harmless, and would appear to be of great service in these cases of deep-lying aneurysms which are not amenable to surgical treatment.

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Deaths under Chloroform.

The daily press is making a great to-do about two cases of death which have recently occurred in the hospitals during the administration of chloroform. The first fatality occurred in an infant, a year old, at the Trousseau Hospital, where the child had been anæsthetised for the purpose of a congenital club foot being operated upon. Heart failure set in and the child died despite all the efforts made to restore him, including a tracheotomy. The second case was that of a man, aged thirty years, who was anæsthetised at the Tenon Hospital for the purpose of having a badly set fracture of the leg rectified. The police officials have commenced an inquiry as to the responsibility of the medical men in these two cases.

An Explosion at the Sorbonne.

A rather grave accident happened on the evening of June 28th during one of a course of lectures given by M. de Lacaze-Duthiers, Professor of Zoology, Comparative Anatomy, and Physiology at the Paris Faculty of Science. Just as M. Lanceplaine, who is nephew and prosector to the professor, was arranging the lantern so as to throw some micro-photographs upon the screen a violent explosion occurred and the fragments of the lamp wounded M. Lanceplaine in the face. A splinter of glass from the manometer also wounded another demonstrator, M. Brumpt, in the leg. Care had been taken not to use the vapour of ether in the lamp, and probably the explosion was due to the defective condition of the manometer. It is only by a happy accident that none of the students present were hurt, for the débris was scattered as far as the topmost rows of seats in the theatre. M. Brumpt is going on as well as possible, but M. Lanceplaine is seriously wounded in the right eye, and the medical men in attendance say it will be some days before they can definitely pronounce as to the result.

Death of M. Schützenberger.

At the last meeting of the Academy of Sciences signs of mourning were apparent owing to the death of M. Schützenberger, the celebrated biological chemist, Professor at the College of France, member of the Institute and member of the Academy of Medicine. The deceased professor, who was born at Strasburg, commenced his career by being demonstrator of chemistry at the Conservatoire of Arts and Crafts. He was afterwards professor at the high school at Mulhouse, joint director of the laboratory at the Faculty of Sciences at Paris, and head of the chemical department at the College of France. M. Schützenberger has left behind him a number of important works bearing on the most diverse questions of organic chemistry. His admirable studies in fermentation are worthy to be the work of Pasteur himself. M. Berthelot, the permanent secretary of the Academy, reported its loss to the Academy in a speech recalling the services rendered to science by the deceased, who had been successively demonstrator to Dumas and Balard and who never ceased throughout his whole career to take an interest in the work of younger men.

The Monument to Duchenne of Boulogne.

On Sunday, June 27th, a monument was unveiled in the square of the General Infirmary of the Salpêtrière to the memory of the celebrated Duchenne, who was born at Boulogne in the year 1806, and is universally known by the title of Duchenne of Boulogne. M. Barthou, the Minister of the Interior, presided at the ceremony, and Professor Joffroy, physician to the Asylum of St. Anne and president of the memorial committee, pronounced an eulogium on Duchenne. He recalled the two great names of Trousseau and Charcot: of Trousseau, who made generally known the work of Duchenne with regard to locomotor ataxy, and of Charcot, who was, he said, the great worker in the science of modern neuro-pathology and one who had rendered the greatest possible service to the study of affections of the nervous system. On the pedestal of the monument is the following simple inscription: "1806–1875. To Duchenne of Boulogne. Localised electrisation; Physiology of movement; Neuro-pathology." Professor Raymond, physician to the Salpetriere, charged himself in his official capacity with the duty of demonstrating in their midst the innumerable labours of Duchenne. Dr. Lerboullet, of the Academy of Medicine, read a paper by Professor Mathias-Duval upon the works of Duchenne, and after an address by Dr. Motet, of the Academy of Medicine, who spoke in the name of the Medical Society of Paris, M. Barthou concluded the series of speeches. In the most brilliant fashion the Minister of the Interior tendered his respectful homage "to the marvellous unity and modesty of the great *savant* to whom they that day, perhaps somewhat tardily, were giving his well-deserved tribute of glory." A point to which the Minister did not refer at this official ceremony, at which the faculty and a host of medical office-holders were present, was that Duchenne never at any time was either a professor or a hospital physician. He worked all alone, going round the wards every morning examining and questioning the sick himself, and was looked upon as a madman by all the officials. Only by the worth of his works, and that at a long time after his death, has he attained his right position, for during his life he met with nothing but scorn from the official scientific world.

Congrès National d'Assistance at Rouen.

This congress has just finished its labours. M. Budin read a remarkable report upon infant feeding in crèches. According to him the chief cause of infantile mortality is diarrhœa brought on by bottle feeding such as has been in use during recent years. If cow's milk is sterilised this diarrhœa disappears. The milk should be given pure; it is useless and even dangerous to dilute it. Dilution increases the amount of fluid taken and the amount of urine passed by the infant, but stops growth. What is important is to avoid over-feeding. The amount of milk given with each bottle should be carefully limited and only increased very slowly, and in this way all digestive troubles will be avoided. Since the infants' department was instituted by M. Budin in June, 1892, at the Charity Hospital results have been obtained which exceeded his hopes. During these five years, even during the hottest weather, not one child has died from diarrhœa so long as they have been exclusively milk-fed, either on breast milk, or that of the cow sterilised, or a mixture of the two. The proceedings at the last sitting of the congress, presided over by M. Peyron, the head of the Assistance Publique, were most interesting. The first speaker took for the basis of his paper the system employed at Rouen, a system showing a remarkable progress. The organisation of the dispensaries had saved the hospitals great expenses, and by the establishment of dispensaries in various quarters of the town advice and treatment were brought to the very doors of the necessitous without their having to lose a day's work. M. Hendle, prefect of Rouen, continuing the debate, asked the congress to pass a resolution that home medical treatment should be developed on the largest possible scale and that dispensaries should be multiplied. Dr. Cerne argued that there should be some provision for rational treatment outside the hospitals, but not, he thought, at the patient's home. Experience showed that it was not necessary for every case, even though home treatment was impossible, to become an in-patient; it was quite sufficient to have an out-patient department of the hospital where treatment could be carried out and necessary operations performed. The surroundings would be better than those of the patient's home, and when he had been treated he could return there.

Dr. Boisleux and Dr. de la Jarrige.

Dr. Boisleux, who has recovered his health, has been transferred to the central prison at Melun. Dr. de la Jarrige remains at the Conciergerie, where he awaits the result of the appeal for a commutation of his sentence.

June 29th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Bacteria in Yellow Fever.

DR. HAVELBURG, a German medical man residing at Rio de Janeiro, in Brazil, and well known by his researches on leprosy, has recently published in the *Berliner Klinische Wochenschrift* a communication on bacteria in yellow fever. Having found in necropsies of yellow fever patients great masses of a special micro-organism in the contents of the stomach, he endeavoured to isolate it in order to ascertain whether it was pathogenic or not. He found that from 1 to 2 c.c. of the contents of the stomach injected into the skin of guinea-pigs caused the death of the animals, and great masses of the above bacilli were discovered in the blood, while control experiments in which portions of the gastric contents obtained from patients who had died from other

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diseases were injected into guinea-pigs had no fatal result. The alleged yellow fever bacillus is very small, its length being about 1 μ, = $\frac{1}{25000}$ of an inch, and its breadth from 0·3 μ to 0·5 μ. It is straight, and is for the most part isolated, the cohesion of two individuals being rather rare. The outlines of its extremities are especially well marked. It is easily stained by basic aniline colours, but not by Gram's method. It has not yet been ascertained whether it is motile or not. It can be grown on a gelatin plate, forming in twenty-four hours a white spot which in from twenty-four to forty-eight hours becomes larger and assumes the form of a pin's head. The gelatin is not liquefied. In a test tube the bacillus penetrates into the gelatin, giving the appearance of a white thread, and forms a thick white coating on the surface. On agar round white discs are developed, which may either remain isolated or may join together. Koch's bouillon is rendered opalescent by the bacillus in twenty-four hours, with formation of a grey, cloudy sediment. Broth containing sugar undergoes fermentation. In agar mixed with sugar a gas is produced which causes fissures in the agar. The bacillus coagulates milk within twelve hours; on potatoes its growth is rather slow; on blood serum it grows without any characteristic feature, producing opalescence and a sediment; on coagulated serum a pale grey film is formed.

Further Observations on the X Rays.

Professor Roentgen has again made a communication to the Royal Academy of Sciences on his great discovery. He states that while the x rays are passing through the air they traverse it in every direction. When a plate impervious to the rays is placed between a fluorescent screen and a source of the rays, so that the screen is overshadowed by the plate, the platinocyanide of barium nevertheless becomes luminous, and this luminosity is visible even when the screen lies directly upon the plate, so that one might imagine that some rays had traversed the plate; but if the screen placed on the plate is covered by a thick piece of glass the fluorescence becomes weaker and disappears completely when the glass is replaced by a cylinder of lead 0·1 cm (= $\frac{1}{25}$ of an inch) in thickness surrounding the fluorescent screen. Professor Roentgen's explanation of this phenomenon is that x rays emanate from the irradiated air. He considers that if our eyes were as sensible to the x rays as to ordinary light the appearance would be as if a candle were burning in a room filled with tobacco smoke. Professor Roentgen has, moreover, invented a new apparatus for measuring the intensity of the x rays. He has succeeded in ascertaining by means of this apparatus that the intensity of the rays is influenced: (1) by the course of the primary current; (2) by the interposition of a Tesla transformer; (3) by the rarefaction of the air in the tube; and (4) by some other agencies not yet known. He concludes (1) that the rays issuing from a discharging apparatus consist of a mixture of rays of different absorbability and intensity; (2) that the combination principally depends on the course of the discharging current; (3) that the absorption of the rays varies according to the absorbing medium; and (4) that as the x rays are produced by the kathode rays, and have similar fluorescent, photographic, and electrical qualities, it is very probable that they are both phenomena of the same nature.

The late Pastor Kneipp.

Pastor Kneipp, the founder of the therapeutical system called the Kneipp cure, died last week at Wörishofen, in Bavaria. He must not be confounded with the ordinary quacks—unfortunately so numerous in this country—firstly, because he took no fees for his attendance, but was recompensed only by donations given by his patients to charities under his patronage; and, secondly, because many persons really derived some benefit from his advice. His injunctions of plain diet, cold bathing, walking barefooted on wet grass, and early going to bed and early rising were undoubtedly useful to patients with nervous troubles brought on by an injudicious way of life; but as he paid little attention to diagnosis his treatment often did harm to patients with organic diseases, whom he caused to live like the robust peasants of the Bavarian mountains. Nevertheless, the number of people coming from every part of the world increased from year to year, so that the little village of Wörishofen in course of time was changed into a modern health resort, provided with large and comfortable hotels. With the money he received Pastor Kneipp founded asylums, infirmaries, and other benevolent institutions, which, however, according to an inquiry conducted by the Munich Medical Society, did not by any means fulfil the requirements of modern hygiene. He never left his village except when he was once summoned to attend the Pope and on the very rare occasions when he visited some of the cities of Germany for the purpose of addressing public meetings and propagating his views. His theoretical knowledge of medicine being far beneath that of a first year's medical student, the speeches which he delivered at these meetings were a source of amusement to the medical men who happened to be present; but, strange to say, many sanatoria have, nevertheless, been formed throughout Germany by medical men and others where his treatment is fully carried out. His personal character was recognised as blameless even by his adversaries. Although raised to the high rank of a prelate of the Church of Rome, he continued to live as an ordinary country clergyman, and died without having made any personal pecuniary profit out of the great popularity he enjoyed.

June 28th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Bacillus Icteroides.

THE LANCET has already told its readers the circumstances under which Dr. Giuseppe Sanarelli, sometime *privat-docent* at the University of Siena, now Professor of Hygiene in the Medical School of Montevideo, set himself to discover the bacillus of yellow fever;[1] how he conducted his observations, clinical and bacteriological, at the Lazzeretto of the Island of Flores and at the hospital of S. Sebastiano at Rio Janeiro; and how, after having himself contracted the fever and fortunately recovered, he continued his researches until, in the later months of last year, he satisfied himself that he had found the bacillus, and embodied his conclusions and the investigations that led up to them in a monograph which he deposited with the Accademia Medica di Roma. Thereafter, having by fresh studies checked his previous ones and confirmed his conclusions, he thought fit to give the result to the profession and the world. This he did lately before a scientific audience at Montevideo, and the substance of his lecture, first announced in the lay press by telegraph, I can now supplement by minuter details. It was at the Lazzeretto on the Island of Flores that he first came upon the "microbe of yellow fever." At the outset he had difficulty in distinguishing among a varying number of microbes the unvarying one of which he was in quest; but at last he found it—never, indeed, unaccompanied by others, but always preserving its characteristic features, while its occasional companions were protean. Contrary to expectation, it was not in the alimentary canal that he came upon it. Never, indeed, has he detected it there; but in the circulation and in the tissues he found it invariably, and so was able to correct the current belief that the poison of yellow fever resides in the intestinal tract, showing, on the contrary, that it is formed in the *vie intime* of the tissues and in the circulation itself. Morphologically, the microbe, to which he has given the name of "Bacillus Icteroides" presents at first sight little or nothing characteristic. Closer investigation identifies it as a very small "baston-cino" (rod) with rounded extremities, generally combined in pairs in the cultures and in little groups in the tissues; in length from two to four thousandths of a millimetre, and for the most part twice or thrice as long as it is broad. It is pathogenic for the majority of the domestic animals—a conclusion arrived at by Professor Sanarelli after experiments made on 2000 of these. Few microbes, indeed, have a wider diffusion, every mammal on which he experimented having shown itself more or less sensitive to its pathogenic action, while the feathered tribe, on the other hand, were quite irresponsive. White rats it kills in five days, the infection gaining a foothold through every channel, including that of respiration. Once admitted into the organism the microbes collect in greatest force in the spleen, where they remain during the whole evolution of the malady without noteworthy multiplication. After from six to seven days they all at once pass into the circulation, enter on a period of proliferation, and kill by septicæmia. The rabbit is highly sensitive to this pathogenic action, dying in from four to five days if the poison has entered by the subcutaneous tissue, and in

[1] THE LANCET, Jan. 9th and April 3rd, 1897.

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two days if it has been injected into the blood. In the dog are obtained results showing the fever to be "an infective malady due to a micro-organism well defined and susceptible of being cultivated by means of the ordinary artificial nutrients." The bacillus, moreover, may be isolated, not only from the corpse, but even during the life of the patient. Once isolated, its bacteriological diagnosis can be completed in twenty-four hours, possessing as it does characters so distinct as to make it readily recognisable among all the microbes hitherto brought to light. The scanty number in which it is found in the organism and the violence of the symptoms point to its action as that of a very energetic poison. The dog, as already stated, illustrates this action most significantly—scarcely less so the goat, the ass, and the horse; while the cat is curiously refractory. The fever which he claims to have reproduced in man has not a few points in common with typhoid fever, and he emphasises the fact that the diffusion of the virus may be effected through the air as well as by water, contagion being possible through the respiratory system. The bacillus favours the entrance into the organism of septic microbes while its own action on the liver is peculiarly energetic, inducing rapid atheromatous degeneration with other anatomical lesions, to which is due, in some measure, the icterus characteristic of the disease. The liver loses all functional activity. Performing a conservative *rôle* against the poisons and microbes which would otherwise attack the organism from the intestines, that *rôle* fails when these microbes overcome its resisting power. They thus conquer and eliminate from the organism the bacillus icteroides, and in this way Dr. Sanarelli explains those cases in which the bacillus is no longer found on post-mortem examination, or, if found at all, found only in a medley of other species of microbes.

The bacillus acts on the kidney by inducing inflammation of peculiar intensity. This is followed by lesions evinced by the albuminuria characteristic of the last period of the yellow fever; then anuria supervenes, the result of a "true and idiopathic uræmia." Thus it happens that patients when they do not directly succumb to the poison and the lesions caused by the "bacillus icteroides" may die by the secondary infection or by uræmia.

The *modus operandi* of the bacillus having thus been demonstrated Dr. Sanarelli next investigates its mode of entering the organism. As already stated, he denies that its "sede elettiva" (elective seat) is the alimentary canal. He is even inclined to doubt (what elsewhere he provisionally granted) that it may find admission through the water. Atmospheric transmission is the channel he favours. While denying that the alimentary canal is the "elective seat" of the malady, he is far from ignoring the possibility of its being a mode of entrance for the bacillus. "The catarrhal processes of the liver," he maintains, "to which new-comers in tropical regions are subject, and the apparently trifling disturbance of the digestive tract may in this case facilitate the passage of the bacillus into the organism. At this point he enlarges on another "fenomeno biologico," which illustrates the action of the bacillus and the genesis of yellow fever on board-ship. Badly-aired vessels are impregnated with a "fetida umidità" which, with heat and the want of ventilation, forms the "coefficient of epidemics developed at sea." This atmosphere, on experiment, proved particularly favourable to the energising effect of the bacillus icteroides. In certain cultures, continues Dr. Sanarelli, when this micro-organism, sown for some time, seemed not to have "caught on," the "muffa" (or air mildew) sufficed to develop the "colonie caratteristiche" of the bacillus of yellow fever, and it is probable that on board-ship the preservation and "pullulazione" (germination) of the bacillus are due less to moist heat considered as a physical agent than to the generation of "muffe" favoured by the condition of temperature and humidity prevalent in ships at sea. On the other hand (Dr. Sanarelli proceeds), the notable resistance the bacillus icteroides offers to the principal factor of natural disinfection, desiccation, to wit, and the great longevity it achieves during voyages, sufficiently explain the ready acclimatisation of yellow fever and its stubborn persistence on seaboards which have been visited by it.

On the prophylactic and therapeutic aspects of yellow fever Dr. Sanarelli promises special work. In the latter field he has, I believe, a serum in contemplation from which he anticipates results not less satisfactory than those yielded in diphtheria. Meanwhile, we may echo the congratulations voiced by his compatriot, Dr. Alberto Guidi (whose notes from Dr. Sanarelli's monograph I have freely made use of), and record our admiration for the thoroughness, the patience, and the courage with which the young Sienese physician has "broken ground" in a difficult and dangerous field.

June 26th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Pilgrims and Quarantine.

THE Quarantine Board at Alexandria has had plenty to occupy it during this month. The discovery of typhus fever among several flocks of recently imported sheep necessitated the destruction of many hundreds in the quarantine parks. If it is true that typhus fever or rinderpest can be introduced into Egypt as easily by sheep as by cattle it is a pity that stringent measures are not adopted to prevent the importation of all sheep from infected ports. In 1884 regulations of this kind were made in Egypt for cattle, and it is noteworthy that bovine typhus fever has never appeared in this country since that date, the last epidemic having been in 1883. But veterinary diseases are as nothing compared to human cholera and plague. The Board, after several meetings and much anxious deliberation, decided not to interfere with this year's pilgrimage in spite of the presence of cholera bacilli at El Tor. This decision was apparently based on the idea that when clinical symptoms do not coincide with the bacteriological diagnosis the latter is to be entirely disregarded. This is a dangerous precedent and somewhat subversive of the modern system of allowing bacteriologists to have a casting vote in cases of doubt. Imagine a man with a cough, but all other symptoms and signs of doubtful obscurity. If tubercle bacilli are found in his sputa the case would surely be treated for the time being as one of tubercle. It does not seem irrational to expect that a man with diarrhœa and cholera bacilli in his dejecta should be considered—temporarily at least—as suffering from cholera. But the Board decided otherwise, and the Bosnian and Herzegovinian pilgrims in question passed on to Turkey unmolested. The Egyptian Government, in spite of the absence of suspicious cases among Egyptian pilgrims, noted the names and addresses of all returning pilgrims, and had them visited for five days by the medical man of their own district. Hardly had the cholera scare died away than some cases of plague were reported at Jeddah, and this time the Board promptly settled that the pilgrimage must be declared "unclean." It is unknown how the plague reached Jeddah, but one of the obvious possibilities is that it was brought there from Assir, the plateau between Hedjaz and the Yemen, where plague is said to be always endemic. The existence of this district is an additional reason for starting some bacteriological work in Jeddah or Mecca. A Mussulman might be sent there this autumn to begin preliminary investigations. In the meantime Egypt is free from cholera and plague and in many ways prepared to receive these unwelcome visitors if necessary.

Infectious Diseases.

During the last six weeks three specific fevers have been reported from the provinces. Small-pox has broken out in most of the Lower Egypt provinces and half those of Upper Egypt; 795 cases have been reported and 183 deaths. Typhus fever, including probably a few cases of relapsing fever, has occurred in ten places, causing 35 deaths out of a total of 195 cases. Measles has been present in five provinces, accounting for the high death-rate of 122 out of 178 cases. It must be remembered that the native doctors' diagnosis is often made after death, and should always be received with suspicion.

Cairo, June 20th, 1896.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Deaths of Dr. J. Lewis Smith and Dr. Wm. Lusk.

DURING the last week the medical profession of this city and country has lost by death two of its most prominent members. Dr. J. Lewis Smith died on June 9th at the

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ripe age of seventy years. His health had been impaired for several years, but he still continued the active duties of his profession until within a day or two of his death. Dr. Smith adopted the diseases of children as a specialty at the commencement of his professional career in 1853, and was the pioneer in this department of medicine in the United States. His first contribution to the literature of this subject appeared in 1854, and from that date to his death he was a prolific contributor to the current medical periodicals, the total number of his papers exceeding one hundred and fifty in number. His work on "The Diseases of Children" appeared in 1869 and passed through eight editions, the last of which was recently issued under his personal revision. For a quarter of a century this work has maintained its position as the accepted text-book of the schools and the favourite authority of the profession. Dr. Smith was for twenty years Clinical Professor of Diseases of Children in Bellevue Medical College. Dr. Lusk died suddenly on June 13th from an apoplectic attack at the age of sixty years. He was dean of the Bellevue Medical College and Professor of Midwifery in that institution. His reputation in the department of obstetrics rests on his treatise on midwifery, which took the highest rank on the issue of the first edition. It has been translated into several languages.

Medical Schools fail to Consolidate.

The attempt to consolidate the University Medical College and the Bellevue Medical College has not succeeded. The trouble seems to have arisen when the scheme reached the point of making up a faculty out of the existing faculties. The friends of the schools are greatly disappointed at the result, for they anticipated the creation of the best equipped medical school in the United States.

Food Adulteration in the United States.

According to Dr. Fremkel the extent to which food adulteration is carried in the United States is a matter of doubt. The estimates of competent authorities on the subject vary between from 2 to 15 per cent. There is no question that the first figure is too low. The last is given by the special agent of the Department of Agriculture, who has examined the subject very exhaustively. Good judges estimate the value of the food supply of the United States at a minimum of $4,500,000,000 annually. If we take the very onservative estimate of 2 per cent. the loss to the consumer by adulteration amounts to $90,000,000 per year. Dr. McNeal, of Ohio, estimates the annual loss to the people of the United States at one and one-third billion dollars; and to the state of Ohio as the result of three years' investigation, a loss of $78,000,000 annually, or $232,000 per day.

The Treatment in a Case Decided to be "Hearsay Evidence."

In a recent case where it was desired to prove that the plaintiff suffered a severe injury to the spine the attempt was made to prove that fact, not by the testimony of the physician who had attended her, but from the treatment that she had received. Such proof, the appellate division of the Supreme Court of New York think, was in the nature of "hearsay." The treatment of the plaintiff for a particular disease, it maintains, was no more than a declaration of the physician that she was suffering from such a disease; and as the declaration would not be competent the court holds that the proof of the treatment was not competent.

The Anti-vivisection Bill in the United States Senate.

Senator Gallinger has reported the Bill to regulate vivisection in the district of Columbia. He accompanies the Bill with a very full report which discusses the subject for and against the Bill from the evidence presented to the committee. He appends a most impressive list of names of some of the most influential people in the country who favour and urge the passage of the Bill. It is very plain that the efforts of the vivisectionists to defeat the Bill have attracted unusual attention to this measure, thus arousing a large opposition from very prominent persons who evidently do not clearly understand the situation, but whose expressed wish and great numbers have influenced the Senate committee. The Bill provides—(1) for the use of anæsthetics in all painful experiments on living vertebrate animals, the so-called inoculation experiments, test of drugs and medicines and cases of recovery from surgical procedure being expressly exempted from this requirement; (2) for the licensing of all experimenters by the district commissioners, except those who are duly authorised officers of the Government of the United States or of that of the district of Columbia; (3) for the prohibition of vivisection in the public schools and in exhibitions for the general public; and (4) for the inspection of all places of experiment by inspectors to be appointed by the President of the United States.

Prosecution of Quacks.

It appears that since April, 1895, when the law providing for the criminal prosecution of quacks was restored, the New York County Medical Society has caused the arrest of eighty-three persons for practising illegally, and it has obtained convictions in fifty-one cases. These persons have paid $3690 in fines, and a number of them have been sent to gaol besides. The legal department of the society has a large number of cases pending. This fact alone is deterrent of much illegal practice, and not only tends to prevent the pretenders from trying to establish themselves in New York City, but also drives some of them to other localities where the duty of prosecuting offenders is not undertaken by the profession.

The Hospital Fund of New York.

The Hospital Saturday and Sunday Association, the receipts of which for this year amounted to $61,500, have distributed of this sum $50,000 among 35 institutions. The sum of $8200 was designated for special purposes and $3300 was reserved for expenses. The collections were $2500 more than last year, and the number of "free hospital days" was 690,841.

June 16th.

MONTREAL.

(FROM OUR OWN CORRESPONDENT.)

Victorian Order of Nurses.

EVERYTHING just now is tinctured with Jubilee, from politics to postage stamps. The chief scheme for a Canadian Colonial commemoration is that of the Victorian Order of Nurses. This ambitious but somewhat visionary project is greatly exercising the colonial mind, both lay and medical. The main feature of the project is to dot the cities in the Dominion with "training centres," and the sparsely populated parts with "residential centres," in which a supply of trained nurses would be housed, to be in readiness to go to sick calls where skilled nursing is not now available; the remuneration of the nurses to be from an endowment, the friends of the sick to pay what they are able. The project is receiving the backing of our highest social circles, and it will need it all to make it go. From a pamphlet dealing with the duty and charm of nursing the sick, issued under the ægis of Lord and Lady Aberdeen, I take the following: "Some of the chief objects of the order will be: To provide skilled nurses in sparsely settled and outlying country districts; to provide skilled nurses to attend the sick poor in their own homes in cities; to provide skilled nurses to attend cases in cities at fixed charges for persons of small incomes, the charges being paid to the funds of the order; to provide small lying-in rooms and wards in cottage hospitals or homes; to prepare trained nurses thoroughly qualified to carry out these objects. It would not be a prudent thing to have the order started unless provision be made for perpetuating it. It would take an endowment of about £200,000 to insure revenue to make this benefaction a lasting one for all the needy districts of Canada. Shall we confess ourselves helpless in the presence of this urgent need and dismiss the cry for help with the remark, 'But a million of dollars is a great sum to raise'? Certainly a million of dollars is a great sum to raise, but if the people of Canada can be fully informed and thereby awakened to the greatness and goodness of this movement, a million dollars will be forthcoming for the commemoration of the Diamond Jubilee of Her Majesty by such means as will cause gratitude to grow continually in the hearts of the people of Canada towards the memory of Victoria the Good and her representatives and subjects in Canada who promoted the order." The following paragraph from the pamphlet has given offence to some sensitive ones in the medical profession: "In the sparsely settled parts of Canada what is needed now more than ever before is the presence in scores of localities of skilled physicians who have forgotten the meaning of personal ease—men who believe that the nobility of living is to help others

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and not to roll up riches. These country sections call for competent medical men; and if the medical men are supplemented by trained nurses they could each cover more ground. The trained nurses would also carry valuable knowledge of a most practical sort into the homes of the people." At first there was a chorus of praise of the scheme from the leaders of the medical profession, but now murmurs of dissatisfaction are heard. Two provincial medical bodies have given public expression of disapproval of the scheme. One association in annual session felt moved to express its "most unqualified disapproval ..... on account of its dangers to the public."

A Millionaire's Will.

The body of the late Mr. J. H. R. Molson, the millionaire banker and brewer, who died last week, was taken to Boston, U.S., for cremation. Mr. Molson was one of the members of a family whose name is indissolubly connected with the McGill University by reason of frequent and vast benefactions. Among the many of Mr. J. H. R. Molson's contributions were the land on which is erected the Redpath Library and £15,000 for the extended buildings of the medical faculty. Mr. Molson's will contains a bequest to the McGill University of £20,000 as an endowment for general purposes; £2000 for the Montreal General Hospital; £2000 for a crematorium to be erected in Mount Royal Cemetery, the bulk of the vast fortune going to relatives, there being no direct heirs.

Montreal Meeting of the British Medical Association.

In my last communication reference was made to the work of the Museum Committee of the British Medical Association, and among other things I stated that some disappointment had been felt on account of the comparatively few applications for space by exhibitors up to that time. It appears now that the tables have been much sought after, and in consequence the exhibitors will be more numerous than was originally anticipated by the committee. It is further expected that the successful work of this committee will result in augmenting the funds of the executive by some £300 or £400. Altogether the Montreal meeting promises to be in every respect a success.

Provoked Gangrene.

Two interesting cases were shown recently at the Medico-Chirurgical Society in which this diagnosis was reached. Both were young women; in one case there was on the lower third of the calf a round sore with a black crust the size of a silver dollar. The patient stated that she had had typhoid fever, and also that she had had a similar sore once before. The sore was a long time in healing, but ultimately the patient went out well. The hospital physicians, though not unanimous, were mostly of the opinion that the case was as stated. The patient had acted rather queerly, and on one occasion succeeded in setting fire to her clothing. The agent used was thought to be carbolic acid, and the reason of the slowness in healing was the constant irritation of the part by the patient. The other case was that of a hysterical young girl who had destroyed the little finger of the left hand, also by carbolic acid.

An Easy Diagnosis.

The liberty of the individual is well safeguarded in the province of Quebec, so that when one wants to get a patient in an asylum much formality is required. Lengthy papers have to be signed by two practising physicians who have made independent visits to the patient. One of our asylum officers recently stated in a discussion that he was once requested to accept a man as an inmate on a document in which the attending physician gave as the only basis of his diagnosis of dangerous lunacy the following: "He tells lies."

A Medical Association's Jubilee.

The meeting of the American Medical Association of Philadelphia held from June 1st to June 5th was a notable one, being its fiftieth. The attendance was very large. The oratorical and scientific parts were excellent, and the hospitality was lavish. The serum typhoid test was discussed at length at one of its sessions. Wyatt Johnston, of Montreal, supported his dried blood method by enlarged experience. There is a tendency now to consider the agglutination as a symptom rather than a test of typhoid fever. The normal blood of negroes frequently agglutinates.

June 12th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Hospital for Phthisical Patients, New South Wales.

LADY HAMPDEN has proposed that the record reign of Queen Victoria should be commemorated in New South Wales by the establishment of homes or hospitals for phthisical patients, and at a meeting held at Government House it was decided to carry this proposal into effect. As has been pointed out in previous communications, the need for such institutions is beyond question, and their establishment now would be a very excellent permanent memorial of the Queen's reign, and one in accord with her own wishes.

Inadequacy of Quarantine Arrangements at Port Phillip.

The resources of the quarantine station at Port Phillip Heads have been somewhat taxed recently, as two mail steamers, the *Nineveh* and the *Himalayeh*, have come into port with small-pox on board and the Melbourne passengers have been quarantined. As usual, they have grumbled, said the case alleged to be small-pox was not small-pox, and that the arrangements for their reception at the station were inadequate. Dr. Gresswell, the chairman of the Board of Health, admits that the equipment of the quarantine station is not all that is desirable, but that the arrangements must be always of a more or less temporary character, and all the convenience of a first-class hotel cannot be expected. The mail steamer *Polynesian* arrived at Adelaide with two alleged cases of small-pox on board, and was quarantined there pending investigation. The cases, however, proved to be chicken-pox.

Outbreak of Dengue Fever.

An epidemic of dengue fever has occurred at Normanton, Queensland, to such an extent that nearly every inhabitant has been affected. The warders in the gaol succumbed to the disease, and the prisoners have been released and the gaol turned into a temporary hospital. Those who had been long resident in the district enjoyed immunity for a time, but at last were affected like the others.

The Diet of Australians.

Mr. P. Muskett, in the first of a series of lectures at the School of Arts, Sydney, on the "Alimentary Properties of Vegetables," said that an Australian annually would eat as much meat as two Englishmen, three Canadians, four Germans, and ten Italians, and that the health of Australians was suffering in consequence. Indigestion was the Australian national malady. He advocated a much more extended use of vegetables. Excessive tea-drinking was another cause of much ill-health among Australians.

New South Wales Medical Union.

The fourth annual meeting of the New South Wales Medical Union showed that this society was in a flourishing and vigorous condition. Its members' roll had steadily increased and it had a good balance in the bank. In several instances during the year members had been threatened with legal proceedings, but on the council intimating its intention to defend the cases the proceedings were dropped. The council had taken legal advice as to whether any form of indemnity given to a medical practitioner was binding in law, and the opinion obtained was that all such agreements are void in law. The following resolution was carried unanimously at the meeting: "Where any society, syndicate, or organisation exists having amongst its objects the affording of medical aid to its members or to the public, or both to its members and the public, and the council shall by resolution have decided that such society, syndicate, or organisation is prejudicial to the interests of the medical profession, no person pecuniarily interested in, or otherwise connected with, such society shall be eligible for membership of the union, and if such a person be a member he may be expelled. No person who practises as a homœopath shall be eligible as a member."

St. John Ambulance Association.

The annual demonstration of the Victoria Centre of the St. John Ambulance Association was held recently in the Town-hall, Melbourne. The President, Sir William Clarke, Bart., was in the chair, and His Excellency the Governor addressed the meeting. The work of the association had steadily progressed and it had now about 10,000 members, more than half of whom were qualified to render first aid.

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Litters were now available in all cases of emergency. The number of pupils for the year was 747, of whom 497 passed the examination.

Death of William Gardner, M.D., C.M. Glasg.

By the death of Dr. William Gardner Australia has lost one of her most notable surgeons. A bold and dexterous operator, he also contributed largely to surgical literature, and was especially identified with the subject of the surgical treatment of hydatid disease. He originated the operation of neurectomy of the posterior divisions of the spinal nerves for spasmodic torticollis. His operation for this affection was very similar to that devised by Mr. W. Keen, but was quite an independent suggestion, and, indeed, really somewhat prior in point of time. Dr. Gardner was also a pioneer in renal surgery in Australia, and was the first to perform Loreta's operation and excision of the larynx in these colonies. In 1892 he was President of the Section of Surgery at the Inter-colonial Medical Congress of Australasia, and delivered an admirable address, which received especially favourable commendation from the members who heard it. He, in 1894, founded the *Inter-colonial Quarterly Journal of Medicine and Surgery*, which was subsequently amalgamated with the *Australian Medical Journal*. Dr. Gardner made his reputation in Adelaide, where he had a very large practice, and was for many years senior surgeon to the hospital and lecturer on surgery at the university. In 1892 he removed to Melbourne, and in 1895 his health began to fail. In 1896 he took a holiday in Europe, but died at Naples on his return voyage to Australia Dr. Gardner was a man of intense energy and great decision of character, and was also sympathetic with his patients, who trusted him implicitly. No doubt, like many another man of strenuous temper, he had many controversies and made not a few enemies, but he worked hard with no ambition other than the advancement of his profession, for which he had a consuming enthusiasm.

Operating Theatre at Prince Alfred Hospital, Sydney.

The operating theatre at the Prince Alfred Hospital, Sydney, has been considerably enlarged and altered so as to bring it into conformity with the very latest aseptic ideals. The floor is of Belgian tiles, and the walls have a dado of marble. Sterilised water is laid and the furniture is of glass and iron of the most modern and approved pattern. The lighting and ventilation have received special attention, and also the arrangement of the seats for students, and it is claimed that the theatre is now the most perfect in Australia.

Thyroid Gland Extract as a Galactagogue.

The *Inter-colonial Medical Journal* for April contains a paper by Dr. R. R. Stawell on Thyroid Gland Extract as a Galactagogue. He publishes notes of cases where he administered this substance for the purpose of increasing the metabolism in the mammary gland. On the assumption that thyroid extract increased metabolism generally, and as the secretion of milk is typical of metabolism, it was reasonable to suppose thyroid would act as a galactagogue. Nine cases are given in which it was tried, and Dr. Stawell says: "While very fully alive to the danger of making generalisations based on only a few clinical observations, it seems to me that there is sufficient evidence that thyroid extract is an apparent galactagogue in certain cases."

Epidemic of Infantile Paralysis.

In the *Australasian Medical Gazette* for April Dr. C. A. Altmann describes a series of fourteen cases of acute anterior polio-myelitis which occurred in the district of Port Lincoln, South Australia, during the months of March and April, 1895. The last case before the series was an isolated one in 1887, and no cases have occurred since. The proportion of cases to population amounted to 1 in 108. In two instances two members of the same family were attacked in rapid succession. All the patients but one were over three years of age; eight were males and six females. The season was hot and dry, and excessive exertion seemed to be a predisposing cause in one case. One patient had retention of urine, one had hemiplegia, and one had paralysis of the seventh nerve.

Case of Acromegaly.

At the April meeting of the Medical Society of Victoria Dr. J. W. Barrett exhibited a well-marked and typical case of acromegaly. The patient had optic atrophy, hemianopsia, and proptosis, obvious enlargement of the hands and great toe, and a suggestion of kyphosis. A skiagram of the hands of the patient showed marked enlargement of the middle of the phalanges.

May 12th.

Obituary.

SURGEON-GENERAL HERBERT TAYLOR READE, C.B., V.C.

HERBERT TAYLOR READE, who, in addition to the much coveted distinction of the Victoria Cross, also held the post of Honorary Surgeon to the Queen, died at his residence, Park Gardens, Bath, on Wednesday, June 23rd, 1897. The deceased officer was born in 1828 and qualified as M.R.C.S. Eng., in 1849. The following year he joined Her Majesty's Service as an army surgeon and was appointed to the 61st Regiment. With this regiment he was present at the siege and capture of Delhi from July to September, 1857. The following is the official account of the act for which he received his Victoria Cross:—"During the siege of Delhi on Sept. 14th, 1857, while Surgeon Reade was attending to the wounded at the end of one of the streets of the city, a party of rebels advanced from the direction of the Bank, and having established themselves in the houses in the street, commenced firing from the roofs. The wounded were thus in very great danger, and would have fallen into the hands of the enemy had not Surgeon Reade, drawing his sword and calling upon a few soldiers who were near to follow, succeeded under a very heavy fire in dislodging the rebels from their position. Surgeon Reade's party consisted of about ten in all, of whom two were killed and five or six wounded. Surgeon Reade also accompanied the regiment at the assault of Delhi, and on the morning of Sept. 16th, 1857, was one of the first up at the breach in the Magazine, which was stormed by the 61st Regiment and the Belooch Battalion, upon which occasion he, with a sergeant of the 61st Regiment, spiked one of the enemy's guns." In 1856-1857 Surgeon-General Reade was principal medical officer of the Southern District. At the end of 1857 he retired from active work, and in 1895 was made an honorary surgeon to the Queen.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men have been announced:—Dr. Stocquart, Chief Demonstrator in the Anatomical Department of the University of Brussels.—Dr. Dominik Hofer, for many years Professor of Anatomy in the Munich Veterinary School. He was eighty-nine years of age and qualified as a medical man in 1845.—Dr. Martin Wilckens, who had formerly been in practice as a medical man in Hamburg, but who for many years had occupied the chair of Animal Physiology in Vienna, has shot himself in consequence it is said, of increasing paralysis which was due to calcification of the arteries.—Dr. Giuseppe Fissore, Extraordinary Professor of Medical Pathology in Turin.—Dr. Thomaz de Carvalho, Emeritus Professor of Surgery in Lisbon.—Dr. Cernea, Professor of Internal Pathology in the Jassy School of Medicine.

"QUEEN'S DAY" AT THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.—The President of the hospital, the Duke of Westminster, has fixed Saturday, July 10th, for "Queen's Day," and the Duchess of Albany and Duchess of York have promised, if possible, to be present. In the afternoon there will be an inspection of the wards and a musical conversazione, and in the evening a "Dream of Flowers."

THE RAINY SEASON IN INDIA.—The forecast issued by the Indian Meteorological Department relative to the monsoon has prognosticated that the rains would probably commence on the Bombay coast about the second week and on the Bengal coast about the third week of June. The *Times of India* says that the heat at present prevailing in various parts of India is abnormally great, and the rains will be greatly welcomed. Looking to the late famine, arising from the failure of crops, a good monsoon is of the greatest importance to the country. Severe thunderstorms, attended with heavy falls of rain, have occurred at various places in India.

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Medical News.

CAMBRIDGE UNIVERSITY.—At the examinations for medical and surgical degrees, Easter term, the following candidates were successful in the subjects indicated:—

FIRST EXAMINATION.

Part I.

Chemistry and Physics.—Birks, King's; Brailey, Downing; Buckle, Conville and Caius; Burroughes, Trinity; Cardew, Clare; F. J. Child, B.A., Christ's; Cooper, Jesus; Crowfoot, Emmanuel; Crowther, St. John's; Cunnington, non-collegiate; Daly, St. John's; Day, Gonville and Caius; Day, Christ's; Dodd and Donnell, Gonville and Caius; Elliott, Emmanuel; W. I. Evans, St. John's; Freshwater, Trinity; Goss, Jesus; C. H. Gregory, Emmanuel; Gubbins, Clare; Guthrie, King's; P. Hardy, Trinity Hall; Harnett, St. John's; Harrison, Clare; Heald, non-collegiate; Hepburn and W. H. Hills, Pembroke; Hocken and Hudson, Clare; Kidd and Lidward, Trinity; Leech and Lucas, Clare; H. B. McCaskie, Gonville and Caius; C. G. Martin, Downing; Mathias, Trinity; Nicholson, King's; Panton, Trinity; Pellier, B.A., Clare; Pellow, St. John's; Pennington, B.A., Gonville and Caius; Pipkin, Emmanuel; Pope, Trinity; Rickett, King's; Riddle, Peterhouse; Robbins, Trinity; C. T. Y Robson, M.A., St. John's; Rolfe, Clare; Scott, Sidney-Sussex; Sidgwick, Clare; Simpson, King's; W. H. E. Stewart, Gonville and Caius; Strong, B.A., and H. C. Taylor, Trinity; Thurlow, Gonville and Caius; Tuck, Emmanuel; Watson, Gonville and Caius; Ward, Clare; Williams, B.A., Pembroke; Wollaston, B.A., King's; Young, Christ's; and Young, Emmanuel.

Part II.

Elementary Biology.—H. Akroyd, Gonville and Caius; Armitage, Emmanuel; Bain, Trinity; Barton, Pembroke; Birks, King's; Brailey, Downing; Breakey, Jesus; Burroughes, Trinity; Cardew, Clare; Clapham and Cohen, Emmanuel; Cooper, Jesus; Cooper, Emmanuel; Courthauld, Trinity; W. R Creighton, Emmanel; W. L. Cripps, Trinity; Crowther, St. John's; Cunnington, non-collegiate; Davidson, Gonville and Caius; Day, Christ's; Dodd, Gonville and Caius; T. R Elliott, Trinity; Elliott, Emmanuel; W. I. Evans, St. John's; Frere, Pembroke; Gardner, Gonville and Caius; Gardner-Medwin, Trinity; Goss, Jesus; Goulden, non-collegiate; Goyder, St. John's; C. H. Gregory, Emmanuel; Gubbins, Clare; Guinness, Emmanuel; Guthrie, King's; Haldane, Jesus; Hardwich, Trinity; Hardwick-Smith and Harnett, St. John's; Harrison, Clare; Harry, Jesus; A. G. Harvey, St. John's; Haynes, Downing; Hocken, Clare; Holtzman, Christ's; Iles, Gonville and Caius; E. G. Kellgren and Kidd, Trinity; Kirk, King's; Ledward, Trinity; Leveaux, St. John's; H. B. McCaskie, Gonville and Caius; J. C. Matthews, Downing; Morris, Gonville and Caius; R. C. Mott, Trinity; Murphy, St. John's; Muspratt, Christ's; Nicholson, King's; Norman and Paramore, St. John's; Parry, Gonville and Caius; Pellier, B.A., Clare; Phelps, Trinity; G. L. Ranking, Pembroke; Rickett, King's; Robbins, Trinity; C. T. Y. Robson M.A., St. John's; Rolfe, Clare; Salzmann, Pembroke; Scarborough, St. John's; Scott, Sidney-Sussex; Sidgwick, Clare; Simpson, King's; Snell, Gonville and Caius; Strong, B.A., and H. C. Taylor, Trinity; Thurlow, Gonville and Caius; Tonge and Tuck, Emmanuel; Ward, Clare; B. B. Watson, Trinity; L. G. A. West, St. John's; Whitaker and L. E. Wigram, Trinity; H. M. Wilson, Trinity Hall; Wiltshire, St. John's; Woolley, King's; and E A. Wright, H. Selwyn.

SECOND EXAMINATION.

Part I.

Pharmaceutical Chemistry.—J. F. Alexander, Trinity; Beck, Clare, S. Bennett, Downing; Bennion, St. John's; H. C. Brown, Emmanuel; Bulstrode, Trinity; Bryan and Byles, King's; Candler, B.A., Corpus Christi; E. R. Clarke, St. John's; Cole, Trinity; de Havilland, M.A., Peterhouse; W. H. Dickinson, B.A., Trinity; Edwards, Downing; Etherington-Smith, Trinity; H. R. Fisher and W. H. Fisher, Emmanuel; W. S. Fox, Trinity; Heath, Downing; H. T. James, B.A., Trinity; Jeudwine, H. Selwyn; J. H. Kellgren, Trinity; Lambert, St. John's; McBryde, B.A., King's; Mart, St. John's; H. W. Masterman, Christ's; C. M. Murray, Pembroke; S. H. Natban, Inc., and Noon, Trinity; Payne, Peterhouse; Rischbieth, Rix, Robinson, and E. A. Ross, Trinity; Sapwell, B.A., Corpus Christi; A. V. Sedgwick, Gonville and Caius; Shone, Emmanuel; Spicer, Trinity; Stiebel, Trinity Hall; Stocker, Trinity; Trigg, Christ's; Wales, Sidney-Sussex; Wild, Jesus; and Wilson, H. Selwyn.

Part II.

Human Anatomy and Physiology.—A. P. M. Anderson, B.A., Trinity; Barnicot, B.A., Pembroke; Brenan, B.A., Trinity; Candler, B.A., Corpus Christi; E. R. Clarke, St. John's; Cooke, B.A., Sidney-Sussex; Dunne, Queen's; Eve, B.A., Emmanuel; Gillespie, St. John's; Glenn, B.A., Pembroke; Glover, St John's; D. C. Hall, Emmanuel; Heath, Downing; Helms, B.A., Magdalene; Hulbert, B.A., Izard, B.A., C. Killick, B.A., and Knobel, B.A., Trinity; Linnell, B.A., H. Selwyn; Malim, Christ's; H. N. Matthews, St. John's; Micklethwait, B.A., Trinity; Mullings, B.A., Christ's; Murison, B.A., Trinity; Nixon, B.A., Gonville and Caius; Pearson, B.A., Emmanuel; Philbrick, B.A., and L Reynolds, B.A., Trinity; Scott, Christ's; Sellon, B.A., and Stiff, B.A., Gonville and Caius; Taylor, Downing; Timmins, B.A., Emmanuel; Topham, B.A., Christ's; Walker, B.A., King's; Walker, B.A., Clare; R. F C. Ward, St. John's; D. P. Watson, B.A., Trinity; West, B.A., Christ's; Whitmore, Gonville and Caius; Wilkinson, B.A., Pembroke; T. Wood, B.A., Gonville and Caius; and H. C. S. Woodward, M.A., Downing.

THIRD EXAMINATION.

Part I.

Allfrey, Trinity; B. H. Bell, Trinity; Coleman, St. John's; A. W. Daniel, Emmanuel; Deller, Trinity; Forbes, Christ's; Greg, Trinity; H. L. Gregory, St. John's; Harrison, Magdalene; Heilborn, Gonville and Caius; Irving, Gonville and Caius; Jephcott, Gonville and Caius; Lindsay, Sidney-Sussex; W. F. Lloyd, Clare; Lowe, Jesus; Mathias, Christ's; E. A. C. Matthews, Trinity; H. D. O'Sullivan, Emmanuel; Prest, St. John's; Roderick, Emmanuel; Rowland, Downing; B. H. Slater, Trinity; C. White, Christ's; E. A. Wilson, Gonville and Caius; W. R. Wilson, Corpus Christi; and Yeld, Trinity.

Part II.

A. M. Barraclough, Christ's; H. J. Bumsted, St. John's; F. P. Cayley, Trinity; H. G. Cooper, Emmanuel; Delbruck, King's; W. B. Dove, Christ's; W. B. Heywood, Emmanuel; Houseman, Clare; Hughes, Gonville and Caius; L. T. R. Hutchinson, Trinity; W. McDougall, St. John's; Mackenzie, Gonville and Caius; J. C. Muir, Emmanuel; W. Myers, Gonville and Caius; Pendlebury, Pembroke; Porter, Emmanuel; Robinson, Gonville and Caius; Stead, Gonville and Caius; B. R. Turner, Emmanuel; Twigg, Christ's; F. F. Ward, H. Selwyn; and Watson, Peterhouse.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, whose names are arranged in order of seniority as Members in accordance with the provisions of the Charter, having passed the necessary examination and conformed to the by-laws and regulations have been admitted Fellows of the College:—

Howse, Neville Reginald, L.R.C.P. Lond., London Hospital; diploma of Membership dated July 23rd, 1888.

Luard, Hugh Bixby, M.B., B.C. Cantab., L.R.C.P. Lond., Surgeon-Captain I.M.S., Cambridge University and St. Thomas's Hospital; Aug. 4th, 1887.

Kelly, Charles Ernest Mackenzie, M.B., B.S. Lond., L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester; July 30th, 1891.

Watkins-Pitchford, Wilfred, M.B. Lond., L.R.C.P. Lond., St. Thomas's Hospital; Nov. 12th, 1891.

Stack, Edward Hugh Edwards, M.B. Cantab., L.R.C.P. Lond., St. Bartholomew's Hospital; Feb. 11th, 1892.

Paterson, Herbert John, M.B., B.C. Cantab., L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital; Nov. 10th, 1892.

Hulke, Sydney Backhouse, L.R.C.P. Lond., Middlesex Hospital; Feb. 9th, 1893.

Wace, Cyril, L.R.C.P. Lond., King's College Hospital; July 27th, 1893.

Crowley, John Henry, M.B., B.S. Melb., Melbourne University and King's College Hospital; Feb. 8th, 1894.

Duffett, Henry Allcroft, L.R.C.P. Lond., Guy's Hospital; Feb. 8th, 1894.

Fox, George Raymond, L.R.C.P. Lond., St. Bartholomew's Hospital; May 10th, 1894.

Lee, William Edward, M.D., M.B. Lond., L.R.C.P. Lond., St. Bartholomew's Hospital; May 10th, 1894.

Drake, Courtenay Henry, M.B. Lond., L.R.C.P. Lond., St. Bartholomew's Hospital; Nov. 8th, 1894.

Gullan, Archibald Gordon, M.B. Lond., L.R.C.P. Lond., University College and Royal Infirmary, Liverpool; Nov. 8th, 1894.

Handley, William Sampson, M.D., M.S. Lond., L.R.C.P. Lond., Guy's Hospital; Feb. 7th, 1895.

Thomas, Thomas Morrell, M.B., B.S. Lond., L.R.C.P. Lond., Guy's Hospital; Feb. 7th, 1895.

Clark, William Gladstone, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital; May 9th, 1895.

Legg, Thomas Percy, M.B. Lond., L.R.C.P. Lond., St. Bartholomew's Hospital; May 9th, 1895.

Cook, John Howard, M.B., B.S. Lond., L.R.C.P. Lond., University College Hospital; July 29th, 1895.

Going, Robert Marshall, M.B., B.Ch. Univ. Dub., L.R.C.P. Lond., Trinity College, Dublin, and London Hospital; Aug. 4th, 1896.

Twenty-two gentlemen were referred for six months and three for one year.

FOREIGN UNIVERSITY INTELLIGENCE.—*Algeria:* Dr. Brault has been appointed Professor of Tropical Diseases.—*Berlin:* The very important chair of Physiology lately occupied by the illustrious Professor du Bois-Reymond has been offered to Professor W. Th. Engelmann, of Utrecht, and accepted by him. He is a German both by birth and education. He has been, however, professor at Utrecht for the last twenty-four years. His contributions to physiology have been very numerous, especially researches on the action of muscle and nerve.—Dr. Paul Frosch, assistant in the Institute for Infectious Diseases, has been granted the title of Professor; a similar distinction has been conferred on Dr. Gustav Behrend, *privat-docent* of Dermatology.—*Budapest:* Dr. A. Irsai and Dr. A. Onodi, *privat-docenten* of Laryngology, have been promoted to Extraordinary Professorships.—*Naples:* Dr. Francesco Campione has qualified as *privat-docent* in Midwifery.—*Philadelphia (Medico-Chirurgical College):* Dr. Charles E. Sajous has been appointed Professor of Laryngology.—*Rome:* Dr. Enrico D'Anna has qualified as *privat-docent* in Surgical Pathology.

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THE LIFE SAVING SOCIETY.—At the West India Docks, on July 3rd, at 3 P.M., the Life Saving Society will hold an international championship gala in the presence of T.R.H. the Duke and Duchess of York. In addition to the performance of the best amateur swimmers at home, representatives from Australia, New Zealand, America, Belgium, and Sweden have promised to take part in the display. The visitors will be entertained at the Holborn Restaurant at 7 P.M., when the distribution of prizes will take place by the acting President, the Hon. Sydney Holland. Tickets can be obtained at the offices of the Society, 8, Bayley-street, W.C.

PEKING HOSPITAL.—The annual report of the Peking Hospital in connexion with the London Missionary Society, 14, Blomfield-street, E.C., shows that during 1896 there were 26,000 attendances of male out-patients and 5000 of females; 362 visits were paid to patients in their own homes, and 174 men and women have been under more continuous treatment in the wards. The income was 992 Kung-fa taels (about £160) and the expenditure 902 Kung-fa taels (about £146); the average cost of each patient was 320 Peking cash, or about one penny. The operations included two amputations of the leg and one of the arm. The present annual report is the thirty-fifth; the medical officer is Dr. Eliot Curwen. The hospital provides ward accommodation for thirty-eight men and four women.

DIPHTHERIA IN LONDON.—In each of the weeks of the fortnight ended on Saturday last, the registered deaths from diphtheria in London were below the corrected decennial average for the corresponding periods of the years 1887-96. In the three weeks ended with June 12th the deaths from the disease registered in London had been 36, 33, and 39 respectively, but in the week next succeeding they fell to 29, and were 7 below the corrected average, 4 belonging to Limehouse, and 3 to Poplar sanitary areas. All the 29 deaths were of young persons aged under twenty years, 4 being of infants. In the outer ring the deaths from diphtheria were 7, including 3 in the Edmonton Union. In the following week, ended with Saturday last, June 26th, there were only 24 deaths from the malady registered in London, this total being 12 below the corrected average, 4 deaths belonging to St. Pancras, 4 to Camberwell, and 3 to Battersea sanitary areas. Again, all the deaths were of young persons aged under twenty years, none being of infants. The admissions to hospital during the week numbered 119, and 836 patients were still under treatment on Saturday last. In the outer ring the registered deaths from diphtheria last week numbered 8, of which 4 occurred in the West Ham union.

NATIONAL SOCIETY FOR EMPLOYMENT OF EPILEPTICS.—The annual meeting of Governors was held on June 30th at the offices, 12, Buckingham-street, Strand, the chair being taken by Mr. C. Montefiore Micholls. In the report presented by the Honorary Medical Staff a very satisfactory account is given of the improvement of the patients at the Society's "Colony" at Chalfont, both as regards the frequency and severity of their fits, while as regards their general health it is stated that without exception the condition of each "colonist" has materially improved. In the report of the executive committee reference is again made to the deplorable condition of the numerous applicants, who are compelled through lack of room to wait a long period for admission, and of whom one in every ten drops out of the list each year through insanity or death, while at the colony itself since its establishment in 1894 only one death has occurred and only one patient has had to be transferred to an asylum. The report concludes by pointing to future developments of the colony, for which special donations have been given or promised. These include a sanatorium for patients needing special care, another home for male "colonists," two homes for children, and a home for patients able to pay on a higher scale. But while so much help is forthcoming it is available, as the report points out, only for these special purposes; and as regards the general funds the position of the society is stated to be most serious and critical, and the committee make an urgent appeal to the charitable public for assistance, without which they will not be able to accept with safety the increased responsibilities which the before-mentioned developments will bring.

THE RE-ORGANISATION OF THE HEALTH DEPARTMENT IN BOMBAY.—Bombay is learning, says the *Times of India*, the lessons of the plague. An amendment of the Municipal Act is engaging the serious attention of the Government, and meanwhile the Municipal Commissioner has submitted a scheme for the re-organisation of the health department of that city.

PRESENTATIONS TO MEDICAL MEN.—At a meeting of the Federated Ball Committees of Portsmouth, held on June 9th, Mr. John Mulvany, L.R.C.P. Edin., Town Councillor, the chairman of the committee, received a presentation from his colleagues, as a token of their esteem, of a handsome gold medallion, enamelled with the red cross of St. John and the Borough Arms, with an appropriate inscription. The Ball Committees of the town federated for the purpose of organising a public ball in aid of the Mayor's Hospital Fund. The result was so satisfactory that the movement has been made permanent with a view to giving a charity ball every year. — Mr. B. Stewart Cowen, M.B. Glasg., of Charlton, Victoria, Australia, on the occasion of his leaving the district was the recipient from the residents of a handsome present.—Mr. Wm. C. Little, M.D. Ont., L.R.C.S. Edin., of Warracknabeal, Victoria, on his departure for Canada, was presented by the residents with a handsome travelling bag.—Mr. Reginald H. Noott, M.B. Edin., of the State Criminal Lunatic Asylum, Broadmoor, has received the gift of a handsome smoker's cabinet from the members of his psychological class. The male and female attendants who were successful in passing the examination made the presentation.—Mr. Wm. C. Faulkner, M.B. Edin., on resigning the position of resident medical superintendent to the Rockhampton Hospital, Queensland, was presented by the members of the nursing and working staff of that institution with an illuminated address and two cases containing dessert- and fish-knives and forks.—Mr. R. Bevan, L.R.C.P. Lond., D.P.H., was presented on June 11th by the Lydd, Kent, Ambulance Class with a malacca cane walking-stick suitably inscribed.—On June 25th last at the Cardiff railway station the employés of the Great Western Railway who have attended the recent lectures of the St. John Ambulance Association, presented Mr. Arthur Ernest Taylor, M.B., C.M. Edin., &c. with a tastefully worked, gilded, and oxidised inkstand, bearing a suitable inscription, in appreciation of his services as honorary lecturer to the class.—A valedictory banquet has been given to Mr. Hugh A. Deravin, M.B., Ch.B. Melb., of Pyramid Hill, Victoria, Australia, the residents also presenting him with an illuminated address.—Mr. Alfred J. Hamilton, L.R.C.P., L.R.C.S. Edin., of Mansfield, Victoria, Australia, has received a testimonial and purse of sovereigns from the residents of Mansfield, Jamieson, and Wood's Point, Victoria, on his leaving the district; and a complimentary banquet, presided over by the mayor of the borough, was given on April 27th last to Mr. A. E. Perkins, M.B., Ch.M. Syd., of Marrickville, near Sydney, New South Wales.

METROPOLITAN HOSPITAL SUNDAY FUND.

WE continue below our record of some of the principal amounts received at the Mansion House, the lists of which have been received at THE LANCET Office up to the time of our going to press on Thursday, when the total sum received amounted to £23,000. At the corresponding period last year the total was very nearly £31,500.

	£	s.	d.
St. John's Presbyterian Church, Forest-hill	75	14	6
New College Congregational, Avenue-road, N.W.	28	10	0
St. George's Presbyterian, Brondesbury	26	10	8
Rectory-place Congregational, Woolwich	27	0	0
St. Peter's, Vere-street	392	3	0
St. John's, Downshire-hill	43	19	4
Ilford Parish Church and Chapel of Ease	23	4	10
St. Philip's, Kensington	83	2	4
Gordon-square Catholic Apostolic Church	22	8	8
Rosslyn-hill Unitarian, Hampstead	112	1	2
St. Mark's, Hamilton-terrace	252	17	4

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	£	s.	d.
Dartford Parish Church and Mission, and Christ Church and St. Albans	40	0	0
St. John's, Notting-hill	29	10	9
St. Mary, Aldermary, St. Thomas Apostle, St. Antholin, and St. John Baptist Apostle, Walbrook	88	0	0
St. Mark's, Reigate	64	10	10
Essex Church, Unitarian, Kensington	160	14	10
St. Marylebone Parish Church and Parish Chapel... ...	217	5	8
St. Andrew's, Wells-street	147	14	6
St. Mildred's, Lee	38	2	9
Holy Trinity, Paddington	118	19	9
St. John's, Paddington	188	11	5
All Soul's, Langham-place	47	16	3
The Dutch Church, Austin Friars	92	7	8
Highgate Presbyterian Church	33	11	10
Miss Morice (further donation)	25	0	0
St. John at Hackney Parish Church	46	18	9
St. Saviour's, Denmark-park	26	9	0
St. James's, Kidbrook	121	12	6
St. Katherine's Royal Collegiate Chapel	25	12	9
St. Peter's, Dulwich Common	54	1	10
Waltham Abbey Parish Church	31	1	0
Christ Church, Lee	34	12	8
Royal Military Chapel, Wellington Barracks	103	15	7
St. Stephen's, Avenue-road, N.W.	49	0	11
St. Luke's, Chelsea Parish Church	55	11	0
St. Barnabas, Pimlico	32	16	2
St. Paul's Presbyterian, Westbourne-grove	77	0	0
Park Church, Presbyterian, Highbury	33	0	0

Other amounts have been received and will be published in our next issue.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ELECTION OF MEMBERS OF COUNCIL.

THE ninth election of Fellows to fill the vacancies in the Council of the College under the new regulations, was held in the Library of the Royal College of Surgeons, Lincoln's-inn-Fields, on Thursday, the 1st inst., between 1.30 P.M. and 4 P.M. The result of the voting was as follows:—

	Votes.	Plumpers.
MR. EDMUND OWEN	323	28
MR. H. G. HOWSE	307	2
MR. RICKMAN J. GODLEE... ...	312	2
MR. W. WATSON CHEYNE... ...	290	7
DR. J. WARD COUSINS	259	9
MR. BENNETT MAY	236	6
MR. J. H. MORGAN...	236	5
MR. R. CLEMENT LUCAS	225	1
SIR W. B. DALBY	173	10
MR. ANDREW CLARK	104	8
MR. GEORGE JACKSON	89	5

Mr. Howse and Dr. Ward Cousins were therefore re-elected, and Mr. Owen, Mr. Godlee, and Mr. Cheyne elected members of the Council.

609 Fellows voted by proxy, 4 votes were received too late, and 4 were found to be invalid; 46 Fellows voted in person.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The London Water Question.

ON Monday, June 28th, the House of Commons gave a second reading to the Bill of the Government to strengthen the hands of water consumers in London in seeking redress of grievances from the supplying companies. In the debate which preceded the second reading Mr. Chaplin spoke of the Bill as a more or less temporary one, pending the report of the Royal Commission on the water supply of the metropolis.

Prisons Bill.

This Bill has been withdrawn by the Home Secretary on the ground that he saw no prospect of passing it during the present session.

Burial Grounds.

The Committee of the House of Commons on burial grounds began its inquiry at Westminster on Tuesday, June 29th, when it received from Mr. Adrian, Assistant Secretary of the Local Government Board, evidence as to the state of the law with regard to burial grounds and the powers and duties of the Local Government Board in the matter.

HOUSE OF COMMONS.

THURSDAY, JUNE 24TH.

Rural Postmen and Medical Advice.

Mr. Luttrell asked the Secretary to the Treasury, as representing the Postmaster-General, whether he would take steps to supply all rural postmen with free medical attendance in the same way as postmen in towns, or, in the event of the Department being unable to grant free medical attendance where there were not sufficient postmen to warrant the employment of a medical officer, whether an allowance could be paid to rural postmen when they had to seek medical advice.—Mr. Hanbury replied that rural postmen who resided in, or started from, a town where the Department had a medical officer were entitled to free medical attendance, and those who resided more than three miles from the town could obtain advice and medicine free at the surgery, but beyond this the Postmaster-General was not prepared to go.

Rabies.

Mr. Hazell asked the President of the Board of Agriculture whether he was aware that considerable dissatisfaction was felt at the order for the muzzling of dogs in the borough and county of Leicester upon the ground that there had been no proved case of rabies in that county for several years, and that the order would cause much inconvenience to the agricultural residents; and whether, under these circumstances, he could hold out any hope of an early revocation of the order.—Mr. Walter Long replied that he was aware that some dissatisfaction had been expressed at the inclusion of any portion of Leicestershire in the area in the Midlands to which muzzling orders had been applied, but in view of the fact that two cases of rabies had been reported during the last few months, and that there had been others in adjoining counties close to the Leicestershire boundary, he felt it his duty, in the interest of the extirpation of the disease from the country as a whole, to adopt the course which had been taken. He regretted that he did not see his way to the revocation of the order as suggested.

The London Water-supply.

On the report stage of the Southwark and Vauxhall Water Bill Mr. James Stuart moved to refer the measure back to the committee which had considered it. He said that for a number of years the quantity of water which had been drawn by the Southwark and Vauxhall Water Company from the River Thames had been considerably in excess of that which they were legally entitled to take from that source, and the Thames Conservators had consequently applied for, and had obtained, an injunction to restrain the company from continuing such illegal action, which injunction they had intimated they intended to enforce. The company had accordingly brought in a Bill to authorise them to legalise their overdraft in order that they might be enabled to supply the requirements of the poorer portion of the population of South London. The measure had been opposed on the ground that other water companies, if duly authorised by Parliament, were willing to supply the district in question with water. The London County Council were willing that a temporary measure should be passed which would authorise the company to obtain the water from the Thames which would enable them to meet the demands of the locality for an efficient water-supply; but they thought that the provisions of the Bill should be restricted to maintaining the *status quo* of the company until the Royal Commission now sitting to inquire into the whole subject of the water-supply of London had reported, and should not confer upon them any new powers of a permanent character. The measure, however, went further, and directed the company to bring in a new Bill next session which would confer new permanent powers upon them. To this proposal the London County Council decidedly objected, and he now proposed that the Bill should be re-committed to the former committee in order that the objectionable clauses should be struck out, and the measure converted into a strictly temporary one, merely preserving the *status quo* and regularising the action of the company until the Royal Commission should have made their report.—Mr. Rankin, one of the members of the committee, explained that he and his colleagues had passed the Bill in its present shape because in consequence of the injunction against the company having been obtained it was necessary that such a measure should be passed in order to prevent a water famine in the south of London. The committee were desirous that the measure should be a temporary one only, and if it were sent back to them they would have no objection to amend it in that direction.—Sir F. D. Dixon-Hartland, Chairman of the Thames Conservancy Board, said that the injunction against the company was granted to take effect at the end of twelve months, the interval being allowed to enable the company to come to Parliament and legalise their action and avoid the risk of water famine. The principle upon which the Thames Conservancy proceeded was this, that there was ample water in the Thames for the whole of London, but the companies must take it in a proper way in the winter months and store it in reservoirs, not withdrawing it in the summer against the interests of navigation when the water was low. If the House re committed the Bill now it would in all probability tend to the loss of the Bill, and for the danger of a water famine next year the House would be responsible.—Mr. Stuart Wortley assured the House that the only desire of the company was to legalise their position and to secure power to supply their customers.—Mr. Chaplin said that as President of the Local Government Board he dare not take the responsibility of action which might contribute to a water famine in South London next summer, and if the motion were pressed to a division he must vote against it.—After some further discussion Mr. Stuart asked and obtained leave to withdraw his motion.

FRIDAY, JUNE 25TH.

Boarding out Pauper Children.

Lord Edmund Talbot asked the President of the Local Government Board whether, in November, 1881, the Local Government Board decided that the boarding-out orders did not refer only to children boarded out by the guardians from the workhouse, but whenever the guardians granted out-relief to a child living with a person not legally liable for its support, that that child would come under the said orders.—Mr. T. W. Russell, who replied for the President, said that he had no doubt that the Local Government Board expressed the opinion as stated in the question with reference to the effect of the order issued in 1877 as to boarding out, but as there was some doubt on the subject the order subsequently issued in 1889 was in consequence somewhat differently worded as regards this matter.

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MONDAY, JUNE 28TH.

Remarkable State of Things in Ireland.

Mr. Gerald Balfour, Chief Secretary for Ireland, said, in reply to a question by Mr. Crilly with regard to the state of affairs in the Union of Belmullet, that on May 12th Mr. Lavan, the dispensary medical officer, reported that sixteen cases of fever had occurred on the Inishkea Islands in this Union, and he attributed the cause of the outbreak to the islanders' habit of keeping cattle and sheep in their houses and having cesspools at their doors. The Local Government Board thereupon directed the medical officer to furnish weekly reports as to the progress of the sick and as to the precautions taken to prevent the spread of the disease. On May 30th he reported that the sixteen cases were those of people in good circumstances and not fit subjects for poor relief. The Board informed him that whether they were subjects for relief or not he should visit the houses and see that all necessaries were supplied and that disinfection was properly carried out. On June 3rd Mr. Lavan reported the type of fever to be very mild, that the disease appeared to be on the decline, and that he had thoroughly disinfected the houses. On June 7th he reported that, with the exception of a few people on the islands who were destitute, the rest were in fairly good circumstances, but that they laboured under the impression, which it was difficult to remove, that fever patients should be given nothing but cold water. The destitute were provided with all necessary nourishment and stimulants; and the services of two trained nurses from Dublin were requisitioned in addition to two local nurses. Three of the patients had died, and removal of the sick to the hospital on the mainland was out of the question. The trained nurses were landed on June 11th. On June 22nd the medical inspector of the Local Government Board visited the islands in company with Mr. Lavan. He stated that there were thirteen cases of fever of different kinds on the south island, but that the north island was free from fever. The inspector considered that the attendance on the nursing of the sick had been sufficient up to the present. He also attended a meeting of the board of guardians and pointed out to them that it was imperative on them to enforce measures for lime-washing, cleansing, and disinfection of all infected houses, and that the remedies must be continued until satisfactory results were attained. The guardians recognised their responsibilities as the sanitary authority, and were taking measures to comply with the inspector's recommendations. He (Mr. Balfour) was not aware of any famine on the island, nor could the outbreak of fever be attributable to any want of food.

TUESDAY, JUNE 29TH.

Corporal Punishment in Prisons.

Sir Matthew White Ridley, in answer to Mr. J. A. Pease, said that during the last six years forty-four prisoners in local prisons in the United Kingdom and twenty in convict prisons had received corporal punishment twice, and six in local prisons and seven in convict prisons had received it more than twice during the same period. Mr. Brodrick, in reply to Mr. Pease, said that during this period eighty-two prisoners in military prisons abroad received corporal punishment. One prisoner in the military prisons at home was twice corporally punished, but returns on this point from the prisons abroad had not yet been received.

WEDNESDAY, JUNE 30TH.

Plumbers' Registration Bill.

This sitting of the House was occupied with the discussion of the Plumbers' Registration Bill as amended by the Standing Committee. A motion was made to throw out the Bill, but it was rejected by 200 to 77 votes, and thereafter some progress was made with the consideration of the amendments to the clauses. Strong objection was taken in several quarters to the machinery of the Bill.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

AITKEN, WM. B., M.B., Ch.M. Glasg., has been appointed Senior Resident Surgeon to the Women's Hospital, Melbourne, Australia.

BEATTIE, ROBERT M., M.B., Ch.M. Edin., has been appointed Medical Superintendent to the Lunatic Asylum, Auckland, New Zealand.

BETHELL, A., M.R.C.S., has been appointed Medical Officer by the Bridgnorth Rural District Council.

BOWKER, ROBERT S., M.R.C.P. Lond., L.R.C.P. Edin., M.R.C.S. Eng., has been appointed an Honorary Surgeon to the Sydney Hospital, New South Wales.

COATES, J. MANDALL, M.B., C.M. Edin., has been appointed Assistant House Surgeon to the Northern Hospital, Liverpool.

COOK, H. W. I., M.B., Ch.B. Durh., has been appointed Officer of Health for Winchelsea Shire, Victoria, and a Public Vaccinator at Birregurra, Victoria, Australia.

COX, FRED. H., M.B., Ch.M. Syd., has been appointed a Medical Officer for the Hospital at Goodooga, New South Wales.

DENNEHY, P. R., L.R.C.P. Irel., L.R.C.S. Edin., has been appointed Medical Officer for the Lismore Dispensary District.

EATON, J., M.D. Glasg., F.F.P.S. Glasg., has been re-appointed Medical Officer of Health for the Cleator Moor Sanitary District of the Whitehaven Union.

EGCLES, W. MCADAM, M.S. Lond., F.R.C.S. Eng., has been appointed Examiner in Anatomy to the Society of Apothecaries of London.

EDWARDS, H. N., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Markyate Sanitary District of the Luton Union, vice F. W. D. McGachen, resigned.

FLEETWOOD, THOS. F., M.B. Dubl., L.R.C.S. Irel., has been appointed Officer of Health for Warrnambool Town, Victoria, Australia.

FOX, HERBERT, M.B. Lond., has been appointed Junior Medical Officer (*pro. tem.*) to the Fisherton House Asylum, Salisbury.

GEE, T. ERNEST, F.R.C.P. Edin., L.R.C.S. Edin., L.S.A., F.C.S., has been appointed Honorary Anæsthetist to the Hospital for Epilepsy and Paralysis, Regent's-park.

GOODE, ARTHUR, M.B., B.S. Adel., has been appointed a Medical Officer for the Local Board of Health, Dundas, Western Australia.

GREIG, WM. C., M.B., Ch.M. Edin., has been appointed an Assistant Medical Officer for the Lunatic Asylum, Seacliff, New Zealand.

HAGENAUER, A. G., M.B., Ch.B. Melb., has been re-appointed a Medical Officer to the Women's Hospital, Melbourne, Australia.

HARBISON, WM. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Medical Officer for the Destitute Poor and Aborigines at Georgetown, South Australia.

HARGREAVES, J. A., M.B., C.M. Aberd., has been re-appointed Medical Officer of Health by the Wetherby Rural District Council.

HILL, ALFRED W., M.D. Brux., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed a Member of the Central Board of Health, South Australia.

HOWARD, ARTHUR DASHWOOD, B.A. Cantab., M.D. Brux., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed District Medical Officer for the Parish of Hampton Hill.

JOHNSON, JOS. H., M.B., Ch.M. Edin., has been appointed Officer of Health for Alexandria Shire, Victoria, Australia, and a Public Vaccinator for Alexandria.

JOHNSTON, J., M.B., Ch.M. Glasg., has been appointed a Junior Medical Officer for the Lunatic Asylums Department, Victoria, Australia.

KEENAN, T. F., M.B., B.S. Durh., has been appointed Medical Officer for the Feragh Dispensary District of the Carrickmacross Union.

KELLY, HORACE G., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Officer of Health for the Shire of Gordon, Victoria, Australia.

LOW, CHAS. W., M.B. Durh., L.R.C.P. Lond., D.P.H., M.R.C.S. Eng., has been appointed Medical Officer of Health by the East Stow Rural District Council.

MCCOMB, WM. T., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Borough of Beccles.

MOLE, HAROLD FREDERICK, F.R.C.S. Eng., L.R.C.P Lond., has been appointed House Surgeon and Senior Resident Officer at the Bristol Royal Infirmary.

MORIER, CHAS. G. D., L.K.Q.C.P. Irel., L.R.C.S. Irel., has been appointed a Medical Officer for the Destitute Poor and Aborigines at Mount Barker, South Australia.

PEARCE, F. H., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to the Northern Hospital, Liverpool.

PERRY, W. D., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed a Relieving Medical Officer to the Lunatic Asylums of the Colony of New Zealand, as occasion requires, and Assistant Medical Officer for the Lunatic Asylum at Wellington, New Zealand.

PLAYER, CHAS. R., M.B., Ch.B. Melb., has been appointed a Public Vaccinator at Sunbury, Victoria, Australia.

PURSLOW, C. E., M.D. Lond., M.R.C.P. Lond., has been appointed Ingleby Examiner, Mason College, Birmingham, for the ensuing year.

RENDLE, RICHARD, F.R.C.S. Eng., has been appointed House Surgeon to the Knowle Hospital, Freemantle, Western Australia.

RITCHIE, ROBERT H., M.B., Ch.B. Melb., has been appointed a Surgeon to the Horsham Hospital, Victoria, Australia.

RUTTER, G. F., M.B., Ch.M. Syd., has been appointed Registrar and Pathologist for the Sydney Hospital, New South Wales.

SCOTT, JOHN A., M.B., Ch.M. Edin., has been appointed Assistant Resident Surgeon to the Women's Hospital, Melbourne, Australia.

STEPHENS, L. B. W., M.R.C.S., has been appointed Medical Officer for the Third Sanitary District of the Havant Union, vice T. P. Stephens.

TALBOT, ALFRED G., M.B., M.S. Edin., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed a Resident Surgeon for the Nelson Hospital, New Zealand.

TAYLOR, P. C. P., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed as Surgeon and Agent to the Admiralty for the Hastings and St. Leonards District.

WATSON, GEORGE G., M.B., Ch.M. Edin., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Public Vaccinator at Warracknabeal, Victoria, Australia.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

BOROUGH OF SHREWSBURY.—Medical Officer of Health. Salary £200 per annum. Applications to the Town Clerk, Guildhall, Shrewsbury.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Assistant Physician.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—House Surgeon and Assistant House Surgeon for twelve months. Salary of the House Surgeon £100 per annum, with furnished apartments, board, and washing. That of the Assistant House Surgeon £50 per annum, with furnished apartments, board, and washing.

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DISTRICT ASYLUM, Mullingar.—Medical Woman as Junior Assistant Medical Officer, unmarried. Salary £100 per annum, with board, furnished apartments, attendance, and laundry.

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Assistant House Surgeon for six months. Board, residence, and washing provided.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Senior House Surgeon for six months. Salary at the rate of £60 per annum, with board, lodging, and washing in the hospital. Also Junior House Surgeon for six months. Board, lodging, and washing in the hospital.

HULL ROYAL INFIRMARY.—Junior Assistant House Surgeon for one year. Salary £40, with board and lodging.

LONDON HOSPITAL MEDICAL COLLEGE, Turner-street, Mile-end, E.—Demonstrator of Biology. Salary £75 per annum.—Bacteriologist to the Hospital, and Lecturer on Bacteriology and Pathological Chemistry.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer for six months. Residence, board, and lodging are provided, and an honorarium given at the termination of the appointment.

LONDON THROAT HOSPITAL, 204, Great Portland-street.—Two Assistant Surgeons.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer, unmarried, for one year. Salary £150 per annum, with board and residence.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer for six months. Salary at the rate of £30 per annum, with board, attendance, and washing.

PLYMOUTH BOROUGH ASYLUM.—Locum Tenens from July 8th to 23rd. Terms three guineas weekly, with board, &c. Applications to Dr. Davis, Blackadon, Ivybridge.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon for six months. Board, lodging, and washing provided.

ROYAL HALIFAX INFIRMARY.—House Surgeon, unmarried. Salary £80 per annum, advancing £10 per year up to £100, with residence, board and washing.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE, London, E.C.—Demonstrator and Assistant Demonstrator of Chemistry.

ST. GEORGE, HANOVER-SQUARE, PROVIDENT DISPENSARY, Little Grosvenor-street, W.—Resident Medical Officer. Salary £100, with allowances, about £30, and residence at the Dispensary.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Assistant Lectureship on Chemistry and Physics. Salary £100, rising to £125.

TOTTENHAM HOSPITAL.—Assistant Surgeon.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Surgeon.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Assistant House Surgeon, for six months. Board, lodging, and washing provided.

Births, Marriages, and Deaths.

BIRTHS.

APPERLY.—On June 24th, at Redhill, the wife of Herbert Apperly, L.D.S. M.C.S. Eng., of Chandos-street, Cavendish-square, W., of a son.

BOWMAN.—On June 21st, at Ulverston, the wife of R. O. Bowman, M.D., of a son.

EDRIDGE-GREEN.—On June 23rd, at Ravensfield-villas, Hendon, N.W., the wife of F. W. Edridge-Green, M.D., F.R.C.S., of a son.

FOTHERINGHAM.—On June 23rd, at Skelmorlie, Ayrshire, the wife of M. B. Fotheringham, of a son.

HOFFMAN.—On June 21st, at Goddenden, Farnborough, Kent, the wife of Arthur H. Hoffman, L.R.C.P., L.R.C.S. Edin., of a daughter.

VISICK.—On June 26th, at Brownswood-park, N., the wife of Hedley C. Visick, M.R.C.S., L.R.C.P., of a son.

MARRIAGES.

DRURY—RITCHIE.—On June 19th, at St. Anne's, Wandsworth, by the Rev. Norman Campbell, W. H. Drury, L.R.C.P. Edin., &c., of Otley, Yorkshire, to Maie, third daughter of the late Dr. Ritchie, Otley, and Mrs. Ritchie, Wandsworth.

HOOPER—WILLS.—On June 28th, at All Saints', Highgate, George H. Hooper, M.R.C.S., L.R.C.P., to Kate Haydon, youngest daughter of T. Haydon Wills, of Highgate.

WILSON—WHITE.—On June 24th, at All Saints, Kenley, Surrey, Norman O. Wilson, F.R.C.S., of Kingston-hill, to Margaret Louise, fifth daughter of George T. White, of Malvern, Kenley.

DEATHS.

DORAN.—On June 23rd, at Mill-road, New Brompton, Kent, James Doran, M.D., late 2nd Battalion 60th Royal Rifles.

ENGLAND.—On June 25th, at Pencester-road, Dover, Richard Edward England, M.D.

HOOD.—On June 25th, at Laleston Cottage, near Bridgend, Archibald Hood, M.B., aged 36 years.

LEWIS.—On June 19th, at West Malling, Charles Lewis, M.R.C.S., L.S.A., formerly of Sandgate-road, Folkestone, in his 51st year.

READE.—On June 23rd, at Sunnylands, Park-gardens, Bath, Surgeon-General Herbert Taylor Reade, C.B., V.C., Hon. Surgeon to the Queen.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 1st, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
June 25	30·02	N.E.	58	57	73	65	57	0·02	Overcast
,, 26	30·03	S.E.	60	59	118	74	57	...	Overcast
,, 27	29·95	E.	63	60	105	71	60	0·21	Cloudy
,, 28	29·91	S.W.	68	64	124	79	61	0·05	Cloudy
,, 29	29·91	S.W.	65	63	127	77	63	...	Overcast
,, 30	29·99	W.	68	60	117	80	60	...	Fine
July 1	29·99	S.E.	66	62	116	73	62	...	Fine

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (7th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (8th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (10th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (7th).—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Lewers and others. Papers:—Dr. Giles and Dr. Maclean: Two Unusual Cases of Tubal Gestation; he one causing Chronic Intestinal Obstruction and associated with Hæmatosalpinx of the Non-gravid Tube, the other simulating Retroversion of the Gravid Uterus.—Dr. Lewers: A Case of Primary Sarcoma of the Body of the Uterus (Deciduoma Malignum), in a patient twenty-four years of age, treated by Vaginal Hysterectomy.

THURSDAY (8th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Specimen:—Mr. S. Keith: Pyosalpinx complicated by a Uterine Fibroid. Papers: Prof. H. Treub: The Mechanism of Uterine Inversion.—Dr. Snow: Escharotics in the Treatment of Uterine Cancer.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

MONDAY (5th).—ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

TUESDAY (6th).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.).—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Horsley: Clinical Demonstration.

WEDNESDAY (7th).—WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Robinson: Obstetrical and Gynæcological Cases.

THURSDAY (8th).—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square).—5.30 P.M. Dr. Morgan Dockrell: Syphilides.

FRIDAY (9th).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.).—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Ballance: Surgery of the Nervous System.

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Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which was completed with the issue of June 26th, is given in this number of THE LANCET. It is intended, in future, to include the Index and Title page for each past half-yearly volume in the first number of the succeeding volume, as in the present case, instead of in the last number of the volume itself, as heretofore.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1897 will be ready shortly. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers will also be ready in a few days. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

PELLAGRA?

To the Editors of THE LANCET.

SIRS,—Would any of your readers kindly inform me if the case described below is one of pellagra? Owing to the fact that my interpreter was not particularly well up in either English or modern Greek, I was unable to learn as much as I wished about the history, &c., of the patient.

A healthy-looking woman brought her child, a little girl aged four years, on board for treatment and showed me a slightly elevated flat patch a little below and behind the left ear. The diseased part was pale in colour, and, I think, confined to the skin. It appeared to be painless, and contained about a dozen apertures filled with hard, yellowish matter. The whole patch was about an inch in diameter, and each orifice about one-tenth of an inch. The mother stated that the child, although four years old, could neither speak nor walk; that the illness had been of only eight months' duration; that many other patches like those described had appeared on the head and face, and after a time had disappeared. I examined one cicatrix on the bridge of the nose; the colour was like the surrounding parts, with which it was also level, but it was dotted all over with small pin-point punctures, from which there was no discharge. Beyond the facts mentioned above this child appeared to be in perfect health. Skin, nails, and glands appeared normal. Although the child could not speak or walk she did not seem to be in the least idiotic.

I have since met with another case of the same kind at another village in Crete, but this time the child spoke and walked.

I am, Sirs, yours faithfully,

Crete, June 23rd, 1897. VAGAMUNDO.

"A GOOD WAY BACK."

To the Editors of THE LANCET.

SIRS,—If your correspondent, Mr. W. T. Lynn, writing from Blackheath, will refer to vol. ii. of THE LANCET, 1832 and 1833, pp. 186 and 187, he will not only find a biographical sketch of the life of his father's uncle (William Lynn), but also a likeness of him, which, if as good as that of Sir Charles Bell in the same volume (whose lectures my late father attended, and he told me that it was a first-rate likeness), must be a very good one.

I am, Sirs, yours faithfully,

Allendale, Northumberland, June 26th, 1897. GEORGE ARNISON.

Practitioner.—1. It is now believed by the best authorities that the poison of scarlet fever when conveyed to a puerperal patient produces scarlet fever and not puerperal septicæmia. "Practitioner" speaks, however, of "any infectious disease." We should say that it would be highly dangerous to attend confinements while attending cases of erysipelas or diphtheria. Though we believe satisfactory disinfection of the attendant to be perfectly possible, it would involve much care, trouble, and time to make it really efficacious. Practically, therefore, it is better not to attend lying-in cases when attending such infectious cases. 2. There are several oils of erigeron. We presume our correspondent refers to Erigeron Canadense, or Canadian flea-bane. This has been used as an internal hæmostatic. Our correspondent should consult the "Real-Lexicon der Medicinisch-Pharmaceutischen Naturgeschichte und Rohwaarenkunde" and the Proceedings of the American Pharmaceutical Association (Vol. XIV.). The physiological action is that of oil of turpentine, but less irritant. 3. There is no objection at all to the dilution. A mixture of equal parts by weight of glycerine and water is probably the best preservative known for vaccine lymph.

GOOD ADVICE.

WE extract the following from the *Canadian Journal of Medicine and Surgery* for June, 1897. The verses are in the nature of a suggestion to a brother editor in his treatment of a recent voluminous correspondence, but although topical their wisdom is of universal application. The most usual blemish in the communications which reach us is diffuseness, and although we do not hold in its entirety with the editorial "boiling down" recommended in the verses, without some such process many useful papers would not see the light. As it is, diffuseness remains by far the most frequent cause of rejection.

If you've got a thought that's happy,
Boil it down;
Make it short, and crisp, and snappy,—
Boil it down.
When your brain its coin has minted,
Down the page your pen has sprinted,
If you want your effort printed,
Boil it down.
Take out every surplus letter,—
Boil it down.
Fewer syllables the better,—
Boil it down.
Make your meaning plain,—explain it
So we'll know, not merely guess it;
Then, my friend, ere you address it,
Boil it down.
Boil out all the extra trimmings,—
Boil it down;
Skim it well, then skim the trimmings,
Boil it down.
When you're sure 'twould be a sin to
Cut another sentence into,
Send it on, and *we'll* begin to
Boil it down.

F. K.—The climate is extreme, summer being bright and hot and winter long and cold. The island is mountainous, well-timbered, and salubrious, but a very delicate person should not be sent there, as the comforts of life may not be easy to obtain and the conditions of life are necessarily a little rough. We know of no book giving exact information, but think our correspondent might write to one of the medical men settled there.

THE TREATMENT OF WRITER'S CRAMP.

To the Editors of THE LANCET.

SIRS,—Would any of your readers be good enough to give me hints as to treatment which has been found beneficial in "writers' cramp" beyond that of rest and general hygiene?

I am, Sirs, yours truly,

Beyrout, Syria, June 21st, 1897. SCRIBO, M.D.

"AN APPLIANCE FOR THE DEAF."

IN reply to "J. W. W." in THE LANCET of June 26th, Messrs. W. H. Bailey and Son, of 38, Oxford-street, write to say that they manufacture an ear trumpet of the nature indicated by our correspondent which, though not made of aluminium, is very light. The appliance leaves the hands quite free.

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WANTED SUGGESTIONS FOR TREATMENT.

To the Editors of THE LANCET.

SIRS,—I have a case of progressive muscular atrophy which has, so far, only attacked the limbs of my patient, who is forty-five years of age, and otherwise in good health. I have been using subcutaneous injections of strychnine, which, while they appear to have stopped the disease attacking the trunk, have in no way prevented the gradual but steady loss of power in his limbs. Can any of your readers suggest anything further? I am, Sirs, yours faithfully,

June 30th, 1897. F.R.C.S.

L.R.C.S. will find in "Hygiene for Beginners" by Reynolds, and published by Messrs. Macmillan and Co., Limited, the kind of information he requires.

THE GROWING INCREASE IN THE USE OF DRUGS IN THE UNITED STATES.

"IN America," writes a correspondent, "there are more drugs taken than in any other part of the world. The consumption of patent and proprietary medicines is enormous. Happily for the health of the inhabitants at large many of these are more or less harmless, but of late years a most alarming increase has occurred in the use of deleterious drugs. Opium, cocaine, and chloroform are stated by those competent to speak with authority to be used on a very large scale. The habit is increasing with females at a much more rapid rate than with males, and is giving rise to alarm throughout the country. The fault for this state of affairs is by many laid at the door of the medical man. It is asserted that it is through his prescriptions that the victims of the habit first acquired the taste which eventually developed into a perverted appetite. On the other hand, the majority of physicians strenuously deny that such is the case now, although they admit the fact that sufficient care was not taken in this respect in bygone days. At the present time among all practitioners of experience great discretion in prescribing is observed, and a wise intolerance has grown up of the careless methods of the past, when the harmful effects that might result had not become so exactly ascertained or so widely recognised. A cure is shunned which may be followed by something far worse than the original disease, and except when such treatment is absolutely indicated the use of powerful opiates is avoided. Nevertheless, the disastrous truth remains that narcotism in all forms is greatly on the increase, and if the medical profession are not to be held accountable for spreading the evil the cause must be looked for in some other direction. This cause, probably lies between the general public and the laxity of the laws in reference to the sale of dangerous drugs. With the general public it is the case of a little knowledge. Everyone in these days knows something of the action of many drugs, particularly of the dangerous ones, and if a person suffers from a pain or some slight complaint, advice is quickly given by friends to try a remedy which has relieved them in a like situation. As for the drug stores, the law prohibiting the sale of dangerous drugs is practically a dead letter, so easily can it be evaded; and there are few shops where almost any poison cannot be bought without the authority of a physician. Some of the proprietary medicines, too, contain anodynes and intoxicants, so that it is possible for the morphine habit, liquor habit, or cocaine habit to be developed unconsciously. This is a danger to which children are especially subjected. Many of the soothing compounds contain opium, and a latent tendency can be instilled into a child which may break out into a strong passion at the first legitimate contact with the drug. As in all countries, it is the very poor and the very rich who are most addicted to the use of drugs and intoxicants. The native-born American woman is from her mode of life and habits more highly strung and neurotic, probably, than women of any other race, and in consequence falls an easier prey to the slavery of narcotism."

Tibia.—If the assistant's agreement is so worded, practice at a future date can be barred within a reasonable radius. It is a matter of the wording of the agreement, and the assistance of a solicitor should be obtained.

WANTED A HOME.

To the Editors of THE LANCET.

SIRS,—Can any of your readers assist me to find an institution to receive the following case for a small payment of £13 per annum—a woman, aged forty-one years, daughter of a tradesman, who has been in an institution for unmanageable women for the past two years, but has been discharged as she is so obstreperous. She fights with the inmates and incites them to mischief, and cannot be controlled where she is. Her health is excellent, and she can do any amount of hard work. I am, Sirs, yours faithfully,

W. H. WILLIAMS.

The Cedars, Sherborne, Dorset, June 27th, 1897.

COLONIAL REGISTRATION.

To the Editors of THE LANCET.

SIRS,—Is it necessary or advisable to become registered as a "colonial practitioner" previously to going out to South Africa (with special reference to the country about Kimberley, Mafeking, and Buluwayo)? If so, will you be good enough to give me such information as to how and where I am to do so. I have already written to the General Medical Council Office, but they are unable to supply any information there.

I am, Sirs, faithfully yours,

June 29th, 1897. C. F. H. W.

"*" Persons desirous of practising in Kimberley and Mafeking should make written application to the Secretary, Colonial Medical Council, Colonial Secretary's Office, Capetown. In the case of Buluwayo written application should be made to the Administrator, Salisbury, Rhodesia. The applications should be accompanied by the original diplomas, together with sworn declarations of identity. The licence to practise in either colony is £5.—ED. L.

Catheter.—The best lubricant for gum elastic catheters is a solution of perchloride of mercury in glycerine 1 in 1000. To keep them aseptic when not in use they should be stored in a jar containing either a 1 in 1000 solution of perchloride or a 1 in 20 solution of formalin, as bought. The commercial solution of formalin is a 40 per cent. solution. Even with these solutions, however, the catheters do not last long.

A SALUBRIOUS STATION.

ALTHOUGH it is not clear whether the *νησοι μακαρων*, or Islands of the Blest, of the ancients were the Cape Verde or the Canaries, the claim of the latter to rank as one of the most salubrious portions of the world receives strong confirmation from the vital statistics of the Spanish troops who are fortunate enough to be stationed there. It would probably be difficult to excel, or even to equal, the following figures taken from the last annual report (the rates for the entire army are shown in brackets):—Admissions to hospital, 288·75 per 1000 of strength (443 82, not including slight cases); typhoid fever, *nil* (6·96); pulmonary tuberculosis, 2 84 (7 42); pneumonia, *nil* (12 10); paludism, *nil* (15 57); syphilis, 0 95 (11·36); venereal affections, 55·60 (71·80); small-pox, *nil* (3 09); death-rate, 0 96 (8 41).

H. A. C. is entitled to proper payment for his services. There is no onus upon the principal in question to call, although to do so would be usual.

COMMITTAL OF A QUACK.

AN inquiry into the circumstances attending the death of Miss Elizabeth Blacker, of Grange Farm, near York, has recently been held by the York district coroner, with the result that a quack has been committed for trial in custody. The evidence at the inquest showed that the deceased was the victim of malignant disease of the breast, and that she had been treated by a person of the name of F. C. Hudson. The jury found that death was due to poisoning by arsenic absorbed into the system from a plaster applied by Hudson. Hudson, who gave evidence, said his name was W. L. Watson, and gave an address in the Adelphi, London. He was, as we have said, taken into custody and committed for trial.

P. C. S.—The communication loses its authority by not having the name and address of the writer appended.

ERRATUM.—In our issue of June 12th we announced that Mr. Edwin Arthur Gibson, M.B., C.M., had been admitted a Fellow of the Faculty of Physicians and Surgeons of Glasgow. The gentleman so elected was Mr. John R. Gibson.

During the week marked copies of the following newspapers have been received:—*Devon Gazette, Derby Daily Telegraph, New Zealand Herald, South Wales Daily News, Scotsman, Dundee Courier, North Eastern Daily Gazette, North Devon Herald, Birmingham Gazette, Newcastle Journal, Times of India, Pioneer Mail, Sheffield Daily Telegraph, Builder, Leicester Post, Sussex Daily News, Bradford Observer, Leek Times, Pulman's Weekly News, Architect, Liverpool Daily Post, Western Morning News, Leamington Advertiser, Manchester Courier, Bristol Mercury, Citizen, Yorkshire Post, Coventry Times, Lowestoft Standard, Huddersfield Examiner, Leeds Mercury, Worcester Daily Times, Coalville Times, Darwen News, Sanitary Record, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, City Press, Mining Journal, Local Government Chronicle, Rangoon Times, Local Government Journal, Australian Medical Gazette, Surrey Advertiser, Newbury Weekly News, Royal Cornwall Gazette, Durham City Advertiser, Ormskirk Advertiser, Kelso Mail, Glasgow Evening News, Ilfracombe Gazette and Observer, New York Herald (Paris), West Briton Advertiser, Le Temps (Paris), Weekly Sun, Walsall Advertiser, Western Mail, Jackson's Oxford Journal, Heywood Advertiser, Garston Weekly News, Chesham Examiner, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Dr. J. Adam, Lond.; Miss G. Anderson, Lond.; Mr. H. Athill-Cruttwell, Lond.; Messrs. Allen and Hanburys, Lond.; Apollinaris Co., Lond.; Messrs. Armbrecht, Nelson, and Co., Lond.; Rev. J. H. Acheson, Lond.

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The Croonian Lectures

ON

THE MEANS BY WHICH THE TEMPERATURE OF THE BODY IS MAINTAINED IN HEALTH AND DISEASE.

Delivered before the Royal College of Physicians of London, on June 15th, 17th, 24th, and 29th,

BY W. HALE WHITE, M.D., F.R.C.P. LOND.,
PHYSICIAN TO, AND LECTURER ON PHARMACOLOGY AND THERAPEUTICS AT, GUY'S HOSPITAL.

LECTURE IV.[1]

Delivered on June 29th.

MR. PRESIDENT AND GENTLEMEN,—The third method which has been used in the study of the amount of heat produced under different conditions may be called the chemical. It need not detain us long, for the study of the chemistry of the heat-production of the body is so beset with difficulties that up to the present time not very much work has been done at this subject. There are two divisions of it—namely, the chemistry of the heat-production in the non-febrile and in the febrile states, and we will consider them in that order.

The breaking down of any chemically complex substance, such as a proteid or a fat, always leads to the liberation of energy. Various observers have, by burning these substances in a calorimeter, calculated the amount of heat set free by their destruction. In such a case the whole of the liberated energy appears as heat. Some of the most careful and recent results are Stohmann's.[2] His figures are gramme calories, and they represent the amount of heat necessary to raise one gramme of water from 17° to 18° C. They are shown in the following table.

TABLE XXVII.

—	Gramme calories.
The heat value of one gramme of most albumins is	5298 to 5941
The heat value of one gramme of meat is...	5662
The heat value of one gramme of albuminoids is	4650 to 5961
The heat value of one gramme of chondrin is	5130
The heat value of one gramme of animal fat is	9509
The heat value of one gramme of olive oil is	9500
The heat value of one gramme of carbohydrates is...	4381 to 3714
The heat value of one gramme of cane sugar is	3955

These figures are, as we shall see in a moment, of great value; but I need hardly remind you that we cannot calculate the heat production of an animal from its diet. In the first place we do not know what proportion of any meal is absorbed from the gastro-intestinal tract; secondly, not all the energy set free in the body is manifested as heat; some takes the form of mechanical work, and therefore in calculating the heat value of any particular diet we should have to deduct the energy which in the body takes the form of motion; but this is very difficult to estimate accurately, and therefore the deduction to be made from the total heat value of the food would be uncertain; and, thirdly, the food may be stored up in the body and not broken down for some time. The value of figures, like those of Stohmann, which show the amount of heat produced by the breaking down of the albumins and fats of the body lies in the fact that we can, by observing the amount of nitrogen and carbon excreted, calculate what must have been the amount of proteid and fat which had to be broken down to produce these amounts of nitrogen and carbon, and then, by looking at Stohmann table, we find how many calories the breaking down of these proteids and fats gave rise to. But in these calculations we must remember that although the fats are completely broken down yet the proteids are not. Nearly all the proteid is, however, broken down to urea and uric acid; the excretion of these can be measured and the number of calories resulting from their complete destruction estimated; if this is done and the calories of energy remaining in the urea and uric acid are deducted from those set free if a gramme of albumin is broken down as low as possible, we, of course, easily obtain the energy value to the body of a gramme of albumin, and this is found to be about 4000 gramme calories.

Rubner[3] has in animals, by careful analysis of the expired air, the urine, and the fæces, observed the amount of nitrogen and carbon excreted, from which he calculates the quantity of each in proteids and fats, which corresponds to such an amount of nitrogen and carbon. Then he compares the heat given off by the animal to an animal calorimeter with the heat that he would, from his knowledge of the number of calories set free by the breaking down of these quantities of proteids (after allowance for the urea and uric acid) and fats, expect to be produced by the animal during the time it was in the calorimeter. Table XXVIII. shows how the calories

TABLE XXVIII.

Diet.	Number of days.	Total of calculated heat.	Total of heat estimated by calorimeter.
Starving	5	1296·3	1305·2
	2	1091·2	1056·6
Fat	5	1510·1	1495·3
	8	2492·4	2488·0
Meat and fat	12	3985·4	3958·4
	6	2249·8	2276·9
Meat	7	4780·8	4769·3

reckoned by each method correspond. It gives in kilogram me calories the results of experiments on a small dog which was observed for five days starving, five days on a fat diet, eight on a diet of meat and fat, and six on meat; and on a big dog observed two days starving, twelve days on meat and fat, and seven on meat. Each twenty-four hours was observed separately, and the table gives the total results for each dog for each diet. Rubner's experiments are very carefully performed, and therefore we must all look forward with great interest to their confirmation. If they are confirmed they will prove that he has successfully overcome many great difficulties, and the agreement between his chemical and calorimetrical results will be remarkable, for, firstly, we have seen that animal calorimeters may be very inaccurate instruments and unless very carefully constructed will give rise to all sorts of errors. Secondly, the chemical method gives the heat produced, but the calorimeter only indicates that lost, and I have in the last lecture shown that we cannot infer quite accurately from that the amount produced by the animal, for we do not know whether during the experiment it varies its rate of loss, and, further, we cannot tell, unless we know the variations of its temperature during the twenty-four hours an experiment lasted, how much of its heat production has been expended in raising its temperature, and if any has been so used it would not be shown by the calorimeter. In these experiments the dissipation of energy as mechanical motion does not interfere with the results, for the animals keep quiet in a cage which just fits them; and, further, such mechanical work would tell equally in both sets of figures, as also would the work done by the heart and respiratory muscles, most of which work becomes heat as it has to overcome friction.

We now pass on to a consideration of the experiments in which an attempt has been made to calculate the heat production of starving animals suffering from fever by observing the amount of nitrogen and carbon excreted. It is always necessary to use starving animals, for it is well known that

[1] Lectures I., II., and III. were published in THE LANCET of June 19th and 26th and July 3rd respectively.

[2] Ueber den Wärmewerth der Bestandtheile der Nahrungsmittel, Zeitschrift für Biologie, Band xxxi., Heft 3, S. 384.

[3] Die Quelle der Thierischen Wärme, Zeitschrift für Biologie, 1893-94 Band xxx.

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the ingestion of a meal increases the production of heat, as, indeed, the table just quoted from Rubner shows. This method can give us some idea of the chemical processes involved in fever, but in applying the results to man we must remember that as human patients are given food during a febrile illness, and as man has, by his sweating and hairless skin, far better means than the lower animals of varying his loss of heat, the processes may be somewhat different in man from the processes in a starving animal. By far the best experiments are those of May,[4] and I am the more disposed to quote some of his results as I found when Professor Burdon Sanderson's article on Fever in Professor Clifford Allbutt's System of Medicine appeared that the high opinion I had formed of their value was confirmed. May begins by giving a history of the subject, and comes to the conclusion that the balance of evidence is that in febrile pyrexia the respiratory quotient is unaltered, that the excretion of CO_2 is not much increased, and that the brunt of the destruction falls on the proteids. He used rabbits in whom he induced swine erysipelas. For some days before the production of this fever they were starved so as to get their excretion of urea steady, and during the fever May most carefully observed the output of nitrogen and carbon both in the urine and the breath for more than twenty hours at a time, and he calculated what must have been the original amount of proteid and fat tissue which would, when broken down, correspond to the nitrogen and carbon he found excreted. Using Stohmann's heat values of proteid and fat, he was able to estimate the number of calories which would be set free by the destruction of these amounts of proteids and fat. The following experiment may be quoted (Table XXIX.). It shows distinctly that when a starving

TABLE XXIX.

Day.	Mean weight of rabbit.	Temperature of rabbit.	Calories. Nitrogen.	Sugar.	Fat.	Total.	Per kilogramme of animal.	Remarks.
	Grms.	Deg. C.						
3	2832	38·5 38·2	47·56	—	105·1	152·66	53·8	—
4	2737	38·2 38·6	50·5	—	97·44	147·94	54·0	—
5	2632	38·6 38·6	54·25	—	91·55	145·80	55·4	—
6	2522	38·7 40·1	70·50	—	83·88	154·38	61·2	Fever
7	2384	40·1 38·1	64·75	—	99 87	164·62	69·1	Fever

rabbit is suffering from swine erysipelas there is an increased heat production, and that this is due entirely to an increased destruction of proteid.

The following table of the results obtained by experiment upon three starving rabbits shows very well also how strikingly the destruction falls upon the proteids (Table XXX.).

TABLE XXX.

—	Day of observation.	Calories. From nitrogenous substances.	Calories. From non-nitrogenous substances.	Remarks.
Rabbit B	3rd	18·0	44 0	
	4th	19 0	45·0	Fever began.
	5th	27·0	46 0	Fever.
Rabbit G	3rd	16·8	37·0	
	4th	18·5	35·6	
	5th	20·6	34·8	Fever began.
	6th	27·9	33·3	Fever.
Rabbit H	3rd	10·7	53·8	
	4th	10·4	53·7	
	5th	11 8	54·0	Fever began.

[4] Zeitschrift für Biologie, Band xxx., S. 1.

May's next experiments are of the greatest interest to clinical physicians. He gave a starving rabbit a known quantity of grape sugar and made—both before and after the administration of the grape sugar—observations similar to those I have just described. After the observations the animal was immediately killed, and the glycogen in the body and the grape sugar in the urine, alimentary canal, and fæces were estimated, and from the figures obtained May was able to learn how much had been used in the body. The following table shows very well how the administration of sugar saves the destruction of albumin and fat which goes on in starvation (Table XXXI.).

TABLE XXXI.

Day.	Mean weight of animal.	Calories. Nitrogen.	Sugar.	Fat.	Total.	Per kilogramme of animal.	Remarks.
	Grammes						
4	2434	39·75	—	84·61	124·36	51·1	—
5	2394	30·00	92·93	—	122·93	51·3	Sugar given.

And the next table shows, too, how the administration of sugar effects a similar saving in fever (Table XXXII.).

TABLE XXXII.

Day.	Temperature of animal.	Mean weight of animal.	Calories. Nitrogen.	Sugar.	Fat.	Total.	Per kilogramme of animal.	Remarks.
	Deg. C.	Grms.						
4	39·5 40·4	2560	60·75	—	171·32	232·07	90·7	Fever
5	39·6 39 8	2462	32·25	94·56	45·17	171·98	70·0	Fever and sugar

Experimental medicine here shows strikingly why it is, as clinical medicine has found by experience, that milk and farinaceous diet is best for fever, and, further, as all May's experiments show conclusively that in starving rabbits suffering from swine erysipelas the heat production is increased, and that this increased production is due entirely to a greatly increased destruction of proteid, we are probably correct in concluding that in most fevers the greater part of any increased production of heat is due to an increased destruction of proteid rather than to an increased destruction of fats. It is true that May has not been able to allow for any energy which, resulting from the breaking down of tissue, manifested itself as mechanical work; but the increase of proteid destruction he found was so great that even if the fevered starving rabbit did a little more mechanical work than it did before the fever was induced the increased energy taking this form can have been only a small proportion of the whole energy resulting from the increased destruction of proteids. It is almost impossible to make any such observations on man, but some attempts have been made to find out whether in man the amount of CO_2 exhaled is increased during fever. Many more observations will have to be made on different fevers before the results can be accepted as final, but as far as they go they show that in man the amount of CO_2 excreted during fever is not increased. I will quote the results of two observers. Loewy[5] gives the following table of observations made on a case of typhoid fever (Table XXXIII.). It is noteworthy that not only is there no increase in the output of CO_2, but also that the respiratory quotient is low for man, whose normal is 0·8 or rather over this, although, according to May, the balance of evidence is that in fever it is unaltered.

Kraus[6] has also made a number of observations. He comes to the following conclusions: (1) That fever is possible when the oxidation processes (measured by determining the gaseous exchange) are not perceptibly increased,

[5] Virchow's Archiv, Band cxxvi., S. 218.
[6] Zeitschrift für Klinische Medicin, Band xviii., S. 160.

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and this even during a long period in which the patient wastes; and (2) that the metabolic processes of fever do not markedly influence the respiratory quotient, which depends entirely on the condition of the patient. I ought to add that Zuntz, in a communication made to the Berlin Physiological Society, showed that different men under the same conditions varied very much in the amount of oxygen inhaled and the amount of CO_2 exhaled. Loewy and Kraus were, however, aware of this.

My work in this direction has been slight, for the only experiments I have done relate to the gaseous exchange of rabbits in which pyrexia had been induced by cerebral lesions and that of hybernating dormice. Mr. Hopkins and I investigated the question of whether the output of CO_2 and and H_2O from the lungs was increased when pyrexia was induced by cerebral lesions. We used the differential calorimeter I have already described. The animal was shut in one chamber, no hydrogen was lit in the other chamber, but it was closed and an equal amount of air was drawn through each chamber. The outcoming air from each was passed through a pumice and sulphuric acid tube to absorb the water, then through a U tube containing pumice soaked in caustic potash, and then through two U tubes each containing dry caustic potash. The sulphuric acid tube was weighed before an experiment, and each set of three caustic potash tubes was also weighed, and the tubes were then again weighed after an experiment the duration of which was

TABLE XXXIII.

CO_2 output per minute in cubic centimetres.	O intake per minute cubic centimetres.	Respiratory quotient.	Body temperature.
			Deg. C.
183	280	0·653	38·3
221	285	0·853	39·3
190	279	0·682	39·5
205	291	0·706	39·8
198	320	0·620	39·7
248	323	0·706	39·2
277	325	0·851	Normal three weeks after last observation.

TABLE XXXIV.

Animal.	Date.	Hour.	Temperature of animal degrees F.	Grammes of CO_2 given off by the animal per hour.	Grammes of CO_2 in an amount of air equal to that breathed by the animal.	Grammes of H_2O given off by the animal per hour.	Grammes of H_2O in an amount of air equal to that breathed by the animal.	Remarks.
	1896							
Rabbit A	Feb. 25th	5 to 6 P.M.	100·8	2·945	0·85	1·19	0·61	—
	Feb. 26th	5 to 6 P.M.	100·8	3·26	1·01	1·34	1·21	—
	Feb. 27th	5 to 6 P.M.	99 8	2·64	0·21	1·25	1·30	6.30 P.M.: right corpus striatum punctured.
	Feb. 28th	10½ to 11½ A.M.	102·4	2·98	0·22	0·97	2·05	—
	March 2nd	5 to 6 P.M.	100·1	2·88	0·58	1·03	0·67	—
	March 3rd	10½ to 11½ P.M.	101·3	2·97	0·38	1·32	1·31	1.45 P.M.: left corpus striatu punctured.
	March 4th	10½ to 11½ A.M.	100·3	2·91	0·21	1·25	0·59	—
Rabbit B	March 23rd	5 to 6 P.M.	100·2	2·91	0·30	0·96	0·13	—
	March 24th	10½ to 11½ P.M.	101·7	3·07	0·32	0·75	0·18	2 P.M.: right corpus stria punctured.
	March 26th	10½ to 11½ A.M.	100·8	2·86	0·23	0·89	0·21	4.30 P.M.: left corpus striatum punctured.
	March 27th	1 to 2 A.M.	102·4	3·06	0·13	1·47	0·20	—

TABLE XXXV.

Dec. 22nd, 1895—Male Dormouse.				Dec. 22nd, 1895—Female Dormouse.			
Temperature of air.	Rectal temperature of mouse.	Time P.M.	Remarks.	Temperature of air.	Rectal temperature of mouse.	Time P.M.	Remarks.
Deg. C.	Deg. C.			Deg. C.	Deg. C.		
5·5	9·0	3.40	Quiet; coiled up.	5·5	9·0	3.40	Quiet; coiled up.
10·0	11·0	3.55	,, ,,	10·0	10 5	3.55	,, ,,
12·0	14·5	4.10	,, ,,	12·0	14·25	4.10	,, ,,
18·0	26·0	4.25	Awake.	18·0	18·5	4.25	Awake.
17·0	28·0	4.40	,,	17·0	23·0	4.40	,,
20·0	33·0	4.55	,,	20·0	30·0	4.55	,,
20·5	33 0	5.10	,,	20 5	32 5	5.10	,,
18·5	33·25	5.25	,,	18·5	32·25	5·25	,,
7·0	30·0	5.45	Very lively	7·0	36·0	5.45	Very lively.
7·0	31·0	6.0	,,	7·0	34·0	6.0	,,
7·0	31·0	6.30	,,	7·0	33·0	6.30	,,
6·5	29·0	7.0	,,	6·5	33·0	7.0	,,
6·5	30·5	7.30	,,	6 5	31·0	7·30	,,
6 0	34·0	8.30	,,	6·0	34·0	8·30	,,

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usually an hour. Of course, the sulphuric acid tube and caustic potash tubes on the animal side gained more than those on the other side, for these only showed the H_2O and CO_2 in the air drawn through, while those on the animal side showed this, and in addition the H_2O and CO_2 exhaled by the animal in one hour and taken up in the air current passing through the chamber. By subtraction we found how much H_2O and CO_2 were produced by the animal. The following table (Table XXXIV.) shows the results of four experiments on two rabbits.

It will be seen that the excretion of CO_2 was not in Rabbit A strikingly increased by the pyrexia due to the cerebral lesion, for although after both operations it was a little higher than immediately before, yet after neither was it so high as on two days before any operation. In Rabbit B there does appear to be a slight increase after each operation, but I think you will agree with me that the variations in both animals are so slight and so well within the normal variations that we may conclude that damage to the corpus striatum does not increase the output of CO_2, and in this respect the pyrexia which follows it is similar to the pyrexia which accompanies those fevers in which the excretion of CO_2 has been investigated. Inspection of the figures also shows that the pyrexia caused no constant alteration in the amount of aqueous vapour exhaled. It will be noticed also that it is impossible to trace any relationship between the CO_2 and H_2O in the air and that exhaled by the animal. I need hardly add that the position of the lesion in the brain was always confirmed by a post-mortem examination.

Dr. Pembrey and I have performed a number of experiments upon hybernating dormice.[7] When these creatures are hybernating their temperature is very low, the rectal temperature usually being about 9° or 10° C.; if they are brought out of a cold into a warm atmosphere their temperature slowly mounts at about the same rate as that of an equal weight of water (for their specific heat is very little less than that of water) until it reaches about 16° C., when it suddenly mounts many degrees in a few minutes to between 33° and 36° C.; at the same time the sleepy animal becomes active and runs about. The following table shows this rise (Table XXXV.). And it also shows that mere lowness of external temperature will not cause the animal to sleep or its temperature to fall. This will only happen when lowness of external temperature causes the creature to become inactive. This fact is very well shown in Table XXXVI.

TABLE XXXVI.—*Dec. 29th, 1895: Female Dormouse.*

Temperature of air.	Rectal temperature of mouse.	Time P.M.	Remarks.
Deg. C.	Deg. C.		
21·25	33·5	12.15	Wide awake and running about.
9·5	34·5	12.30	,, ,,
9 5	29·0	1.0	,, ,,
9·25	30·5	1.45	,, ,,
9·25	18·0	2.30	Coiled up, begun to sleep, eyes still open.
9·25	14·5	3.0	Coiled up, fast asleep, eyes shut.
9·25	14·5	3 30	,, ,,
10 0	14·5	4 30	,, ,,
9 25	11·0	7.0	Coiled up, very fast asleep.

Our observations brought out the interesting fact that this characteristic sudden rise of the animal's temperature was always associated with an equally sudden increase in the output of carbonic acid. The animal was placed in a chamber through which air was drawn, and the temperature of the air in the chamber was varied by alterations in the temperature of a water bath. As the air left the chamber the CO_2 in it was determined, a separate determination being made for each variation in the temperature of the air in the chamber. The following table (Table XXXVII.) shows very well this great increase in the output of CO_2; and the next table shows that, like the temperature, the output of CO_2 depends, not upon the external temperature, but upon the activity of the animal (see Table XXXVIII).

[7] Journal of Physiology, vol. xix., Nos. 5 and 6.

TABLE XXXVII.—*Dormouse No. 1, Sept. 21st, 1894.—The active dormouse was in the ventilated chamber—water-bath = 25° C.—for thirty-five minutes before the first period. Temperature of the air of the room = 15° C. Consecutive periods of fifteen minutes.*

Temperature of water-bath.	CO_2 discharged in decigrammes.	Remarks on the dormouse.
Deg. C.		
25·0	236	Active; washing itself.
23·75	173	Quiet.
25·5	188	Quiet, coiled up, apparently asleep.
15·0	183	Woke up for a moment, then quickly coiled itself up.
15 0	59	Quiet, coiled up.
24·25	23	,, ,,
25·0	20	,, ,,
24·5	159	Awakes towards the end of this period.
25·0	336	Awake, but fairly quiet.

TABLE XXXVIII.—*Dormouse No. 1,* Sept. 24th, 1894.—The sleepy dormouse was in the ventilated chamber—water-bath = 25° C.—for thirty minutes before the first period. Temperature of the air of room = 15° C.; consecutive periods of fifteen minutes.*

Temperature of water-bath.	CO_2 discharged in decigrammes.	Remarks on the dormouse.
Deg. C.		
25·0	113	Coiled up.
24·75	112	,,
15·0	220	Active at first; then coiled up.
15·0	68	Coiled up.
15·0	21	,,
25·0	17	,,
25·0	14	,,
25·0	20	,,
24·5	25	,,
24·75	20	,,

* The dormouse was coiled up and fast asleep at the end of the experiment.

We learn, therefore, that the rise of temperature which occurs when hybernating dormice become active is unlike the rise of temperature which occurs when a rabbit is afflicted with swine erysipelas or has its temperature raised by damage to the corpus striatum, for it is accompanied by an enormous increase in the output of carbonic acid. This goes to show what is probably true—namely, that the metabolic processes of the pyrexia due to cerebral lesions and of that due to fever are quite different from those of health, and not merely an exaggeration of these.

I think now we have come to the end of our discussion of the problem of the variations in the production and loss of heat in pyrexia, and the three great main conclusions to which we seem to have come are:—1. In man at least pyrexia is not produced by the same method in all fevers; sometimes the rise of temperature is due to an increased production of heat, and sometimes to a diminution of the loss. 2. In the present state of our knowledge animal calorimetry is very difficult, and the results obtained from calorimeters must be received very guardedly, especially when they are applied to man. 3. In some forms of pyrexia in which the production of heat is increased the metabolism leading to this takes place in the proteid tissues of the body, and probably the metabolic processes concerned in a pathological rise of temperature are different from those of health.

A very difficult problem which has been much occupying the minds of the profession lately has been that of why almost all micro-organisms which are harmful to the body raise its temperature, and the suggestion has been made that the rise of temperature is a defensive mechanism, or, in other words, pyrexia is, like phagocytosis or chemiotaxis, in some way harmful to the fever-producing micro-organisms, or

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their toxins. Of course, it does not follow from this view that the higher the temperature of the body the better the prognosis, for the higher temperature might be taken to indicate that the dose of infection was very severe, and that therefore the body did all it could to resist the invasion, nor, on the other hand, would it follow that if the temperature did not rise much the dose of infection was slight, for it might be that the body was feeble and had but little power of raising its temperature and therefore defending itself. We see, therefore, that clinical observation can hardly settle the point, but in passing I may mention that I have seen a severe case of typhoid fever in which during the second week of the illness the temperature was very irregular; the patient, however, always felt better and had a better pulse when her temperature was high than when it was low.

A few years ago much was hoped from the antipyretic drugs—antipyrin, acetanilide, and phenacetin; and if it could have been shown that they distinctly improved the condition of the fevered patient it would have been a strong argument against the view that pyrexia is a defensive mechanism. The reverse, however, is the case, for they are not now often employed as antipyretics, and in a discussion on pyrexia and its treatment which took place at the Bristol meeting of the British Medical Association held in 1894, speaker after speaker got up and said that, as a general rule, it did more harm than good to treat the pyrexia of fever.

Some few fevers are treated by agents which lower the temperature, but these very fevers are instances of the exception proving the rule. Ague is treated by quinine, the temperature falls and the patient is better. This, however, is not because the quinine is an antipyretic, but because it is a poison to the plasmodium malariæ; the patient's temperature falls because the pyrexial agent is destroyed. The same is true of syphilis. If a patient is suffering from syphilitic fever his temperature falls when he takes mercury, not because mercury is an antipyretic, but because the cause of the pyrexia is destroyed. Again, it is almost certain that any benefit that follows in rheumatic fever from the administration of salicylates is not due to their antipyretic action, but because they are specifics for rheumatic fever, for other antipyretics are not equally efficacious, and salicylates benefit other symptoms than the temperature—viz., the pain. It is generally believed, and in all probability correctly, that many cases of typhoid fever are benefited by cold sponging or by a cool bath. Many have hastily concluded that the bath does good because it lowers the temperature. But this is probably incorrect. In the first place we must remember that the cold sponging or bath does more than lower the temperature; it diminishes the delirium, the tremor, and the prostration. In any of these ways it would do good. But, further, Roque and Weil claim to have shown that "in typhoid fever left to itself the toxic products manufactured by the bacillus and organism are eliminated in part during the illness. The urotoxic coefficient is double the normal, but this elimination is incomplete and is only completed during convalescence, for the hypertoxicity continues for four or five weeks after the cessation of the fever. In typhoid fever treated by cold baths the elimination of toxic products is enormous during the illness. The urotoxic coefficient is five or six times the normal. The hypertoxicity diminishes as the general symptoms mend and as the temperature falls, so that when the period of pyrexia and convalescence sets in the elimination of toxins has ceased." So we learn that it is by no means certain that in typhoid fever the benefit of cold baths is due to their antipyretic influence, and we see that clinical medicine affords no evidence that antipyretics are useful in fever.

I had hoped to be able to lay before you some original observations bearing on the question of whether or not pyrexia is a protective mechanism, but, unfortunately, I have not had time to carry them out, and therefore I must content myself with giving you briefly those of others. The best collection of the literature of this subject is given by Max Muller,[8] and many of the following references are quoted from him. Heydenreich[9] found that the spirillum of relapsing fever lost its mobility quicker at 40° C. than at 37° C., while at from 15° to 22° C. it retained it a long time. Then in 1880 Pasteur[10] made the observation that fowls which were ordinarily refractive against anthrax bacilli succumbed to them if their temperature had been artificially lowered by their being cooled, and in the same publication next year he said he had found that the virulence of anthrax bacilli is diminished by a temperature of from 42° to 45° C. Wagner[11] infected fowls with anthrax bacilli and spores, and kept down the temperature of some of them by partially immersing their bodies in water; these succumbed, but others left at the ordinary temperature did not. He also infected a series of eleven in whom the temperature was kept down by antipyrin; of these eleven six were taken ill; and of these six five died. This, he thought, was due to a lowering of the temperature by antipyrin. Rovighi, in a paper abstracted in volume vii. of the same *Centralblatt*, gives an account of how he infected three series of rabbits with saliva; one lot were placed in an incubator the temperature of which varied from 37° to 42°, another lot were left at the ordinary temperature, and the third lot were artificially cooled. He found the mortality to be highest among those artificially cooled and least among those artificially warmed; and in the same periodical for the year 1891 it will be found to be stated that Walther observed that after infecting rabbits with the pneumococcus those placed in a warm oven lived longer than those placed at the ordinary temperature of the room. Koch found that if tubercle bacilli were kept at a temperature of 42° C. for three weeks their development was much hindered, while the best temperature for their development was from 37° to 38° C. We thus see that this bacillus, the scourge of the human race, flourishes best at the internal temperature of man, and it is quite possible that if a phthisical patient's temperature could be safely kept at 108° F. for a month he might be cured. Fränkel[12] finds that the pneumococcus named after him loses its influence on rabbits in twenty-four hours if they are kept at a temperature of 42° C. Both Bumm and Finger have observed that the temperature at which the gonococcus flourishes best is between 33° and 37° C., and that higher temperatures stop its development. Max Muller came to the conclusion that the higher the temperature the less rapidly typhus bacilli multiplied. Welender and Berlien[13] have been treating soft sores by means of a thermostat, an instrument which keeps the sore at a temperature of 41° C., and they claim excellent results for this treatment. Filehne, at a meeting of the Physiological Society held at Oxford on August 11th, 1894, gave an account of some experiments in which he infected rabbits with erysipelas and studied the changes at the seat of infection, the ear. In animals kept in a warm chamber the reaction in the ear was slight, and attained its height in two days and the animal was soon well. In animals kept at the ordinary temperature the reaction was much more severe, and lasted ten or eleven days. In animals kept in a cool chamber nothing happened so long as they remained there, but as soon as they were taken out and left at the temperature of the room they had a very severe attack of erysipelas.

Loewy and Richter[14] caused a rise of temperature in rabbits by puncture of their corpora striata; they then infected them with the bacilli of diphtheria, fowl cholera, swine erysipelas, and pneumonia. They came to the following conclusions: (1) that with very large fatal doses the animals whose corpus striatum was punctured lived longer than the control animals; (2) if the animals whose corpus striatum was punctured had a dose two or three times as large as that necessary to kill an ordinary animal they recovered; and (3) when a local injection of swine erysipelas was made into a rabbit's ear the local reaction was most marked in those animals in whom the corpus striatum had been punctured, but they invariably got quite well.

I quite admit that all these observations do not prove that pyrexia is a protective mechanism, but they certainly suggest that it is, and many who have thought about the subject have given their adhesion to this view; such, for instance, are Roy,[15] Cantani,[16] and Sanarelli.[17]

It struck me some time ago that if pyrexia is a protective mechanism it might be a good thing to administer to fevered patients drugs that would raise their temperature, if before doing this it could be shown by laboratory experiments that such drugs have the power of diminishing the severity of fevers. There are many pyretic drugs. The

[8] Wirkung der Fiebertemperatur auf den Typhusbacillus, Zeitschrift für Hygiene und Infectionskrankheiten, 1895, S. 244.
[9] Centralblatt für die Medicinischen Wissenschaften, 1876, No. 28.
[10] Charbon et Septicémie, Comptes Rendus, 1880.
[11] Centralblatt für Bakteriologie und Parasitenkunde, 1891, Band ix.
[12] Grundriss der Bacterienkunde, 1887.
[13] Norddeutsches Medicinisches Archiv, 1895, No. 12.
[14] Ueber den Einfluss von Fieber und Leucocytose auf den Verlauf von Infectionskrankheiten, Berliner Klinische Wochenschrift, 1895, No. 15.
[15] Brit. Med. Jour., vol. ii., 1893.
[16] Transactions of the International Medical Congress at Berlin, 1890.
[17] Annales d'Institut Pasteur, April, 1894.

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temperature may rise to 104° F. as a result of belladonna poisoning. In animals, at least, large doses of cocaine will cause a rise of temperature. It is said the best dose for producing this effect is a subcutaneous injection about eight milligrammes per kilogramme of the animal, the dose to be frequently repeated. Strychnine and caffeine, too, will both raise the temperature a little. But by far the most important drug for raising the bodily temperature in β-tetrahydronaphthylamine. Some remarkable experiments concerning this drug are given by Stern.[18] For instance, he took a rabbit weighing 1600 grammes, the temperature of which was 40° C., and at 10.42 A.M. injected subcutaneously 0·075 grammes of β-tetrahydronaphthylamine. The temperature was taken every few minutes afterwards with the following results:—At 10.55 A.M. the temperature was 40° C.; at 11.0 A.M. it was 40·2°; at 11.8 A.M. it was 40·9°; at 11.20 A.M. it was 41·4°; at 11.40 A.M. it was 43·0°; at 11.52 A.M. it was 44·5°; and at 12.2 P.M. the rabbit died. So that the drug actually raised the temperature 4·5° C. in an hour. By giving a smaller dose of the drug he was able to obtain a considerable rise of temperature without killing the animal.

Such a remarkable drug appeared to me to be worthy of further investigation, and Dr. J. Fawcett agreeing with me we made some experiments. We employed a 3 per cent. aqueous solution and always gave it subcutaneously. We performed several experiments; the following are the details of one.

The rabbit weighed 2400 grammes. At 1.30 P.M. the rectal temperature before injection was 38·7° C.; at 1.35 P.M. 3 c.c. of solution were injected; at 1.55 P.M. the temperature had risen to 39 3°; at 2.10 P.M. it was 40·5°; at 3.5 P.M. it was 41·5°; at 4 P.M. it reached 41·9°; and from 4.30 to 7 P.M. it gradually fell to 39·3°, and the following table (Table XXXIX.) shows the results of all our experiments.

TABLE XXXIX.—*Showing the result of injecting a 3 per cent. solution of β-tetrahydronaphthylamine subcutaneously in five rabbits.*

Number of experiment.	Weight of rabbit in grammes	Dose injected.	Time taken to attain maximum temperature.	Temperature at beginning in degrees F.	Temperature at end in degrees F.	Rise in degrees F.	Rise in degrees C.	Remarks.
1.	2400	3 c.c.	3 hrs.	101·6	107 4	5·8	3·2	—
2.	2050	3 c.c.	1¾ hrs.	102·7	112 6	9.9	5·5	This animal died; greatest rise.
3.	3570	4 c.c	2 hrs.	103 1	106·8	3·7	2·1	—
4.	2200	3 c.c.	2¼ hrs.	101 4	104·3	2·9	1·6	Least rise.
5.	2200	3·5 c.c.	4 hrs.	101·8	105·0	3·2	2·2	—

It will be seen that in one animal a rise of 5·5° C. took place. This died, but all the others recovered, and in one of them there was a rise of as much as 3·2° C. In all five experiments the pulse and respiration were enormously increased in rapidity, often both were so quick that they were quite uncountable. We never observed any of the variations in the size of the pupil or the vessels of the eye that Stern mentions. As animals which, like rabbits, do not perspire much must lose most of the heat they part with by the lungs, the rise of temperature produced by β-tetrahydronaphthylamine cannot have been due to a diminution of the loss of heat. Indeed, judging by the rapidity of respiration, this must have been much more rapid than usual, and probably the creature was by increasing its heat loss struggling against the rise of temperature produced by the drug. The animals for an hour or two after the drug was injected were usually rather restless, frequently shifting their position and turning round, but they never ran about or made any prolonged severe muscular movement. This restlessness was always followed by marked loss of muscular power, but nevertheless the temperature continued to rise. The only animal that had convulsions was the one that died, and they did not appear until shortly before death. These facts seem to me to be strongly in favour of the view that the drug has in some way greatly increased the production of heat, and that this increased production is not due to muscular movement, for the rise is altogether too great and too rapid for it to be caused even in large part by the increased muscular movement due to the greater rapidity of the respiration and pulse. In support of this view I may mention that Stern was also of opinion that the muscular movements were not sufficient to explain the rise of temperature, for in his experiments this sometimes occurred in animals which were quiet without any drug being given to keep them quiet, and also in those which were kept quiet by morphia. Further, the rise of temperature that is seen in animals convulsed with strychnine is never nearly so great as that produced by β-tetrahydronaphthylamine, although rabbits under the influence of this drug never show muscular contractions comparable to those produced by strychnine. Then, too, some experiments performed by Mosso go to show that even the comparatively slight rise of temperature in strychnine poisoning is not due solely to muscular contractions. I cannot help thinking, therefore, that we have in β-tetrahydronaphthylamine a drug which stimulates the thermogenetic without exciting the motor function of muscle, and that therefore we see—as we have already seen in the patients afflicted with hemiplegia—that the two functions are distinct.

I have already pointed out in these lectures that damage to the corpus striatum produces a considerable rise of temperature. The rise produced by β-tetrahydronaphthylamine so resembles in extent and rapidity that caused by these injuries that it is at least likely that the drug acts on the muscles through the central nervous system. Dr. Fawcett and I tried to find out whether this was so, but all the experiments we could devise necessitated fixing the animal down and performing artificial respiration, and, as I have already pointed out, this interferes so much with the animal's temperature that we were unable to obtain any satisfactory answer to the question we attempted to solve.

I have not yet had time to see whether the administration of this drug increases the resistance to any febrile diseases, but it is clear that even if it does it will have to be given very cautiously to man on account of its marked effect on the heart.

The only duty that now remains to me is to thank you for having listened to these lectures, and to express my regret that they should have been so imperfect and fragmentary. This is, for the most part, my fault, but it is also due to the difficulties of the subject. I have not referred to the work of many to whom reference should be made were I writing a full account of pyrexia; this is because I believed the founder's wish to be that lecturers should relate what they themselves had done and thought rather than that they should give a condensed account of what others had done and thought.

[18] Virchow's Archiv, 1889, S. 14.

A SECOND SERIES OF FOURTEEN CASES OF EXCISION OF THE RECTUM.

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A PAPER on the first series of fourteen cases was read at a meeting of the Liverpool Medical Institution two years ago.[1] They were all malignant; thirteen were carcinoma and one was sarcoma. The present series is comprised of two cases of syphilitic stricture, two of villous tumour, and ten of carcinoma.

The minute structure.—I make it a rule to examine with the microscope all tumours removed, and it is strange how frequently one finds deviations from the normal type of growth, or something altogether unexpected. The first example of this in this series was Case 17. The patient was a spare, anæmic woman, aged fifty-six years, who had five years' history of constant desire to defæcate, with passage of mucus and blood. On examining her a very large mass of what was supposed to be soft fungating carcinoma was felt two and a half inches from the anus. It surrounded the

[1] Vide THE LANCET, Feb. 23rd, 1895.

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bowel and extended up out of reach. Six inches of rectum were removed by the "sacral route." She made a slow but good recovery, and is still well. I only discovered something unusual about this tumour when, on putting a piece into the fixing solution, villous fringes floated out in the fluid. Further investigation showed that the whole of this mass of growth, which involved more than three inches of the whole circumference of the bowel, and was upwards of an inch thick, consisted of branching villi covered with a single layer of long columnar cells having small nuclei placed near their bases. Villous tumours of the rectum are supposed to be rare, and I have never seen a report of one so extensive as this. The patient was operated on in July, 1895, and she was still quite sound in April, 1897. The other case of villous tumour was much smaller and was recognised as a probably innocent growth before operation. It occurred in Case 25, in a woman also aged fifty-six years, and occupied an oval patch on the anterior wall of the rectum about 2 in. by 1 in., and was situated two inches above the anus. It was excised with the whole thickness of the bowel through a posterior median incision. The parts were sutured, and a normal rectum resulted. She has left her old address, and I cannot find her; but in such a case recurrence is practically out of the question. The microscopical structure is like the last—essentially innocent.

The next two cases worthy of attention on account of their pathological interest are those of a man aged twenty-seven years, and a woman aged forty-six years (Cases 23 and 26). Both were admitted with malignant stricture, and both had a history of the previous removal of a polypus—the man in New York seven months previously, and the woman in London in St. Bartholomew's Hospital by Mr. Willett three years previously. The polypus in the man's case may have been malignant, for the tumour had the usual characteristics of colloid cancer; but that in the case of the woman was probably, nay, almost certainly, innocent, for the entire piece that I took was pure villous tumour, in which the other coats of the bowel, including the sub-mucous coat, were absolutely normal. Another part, however, examined by Mr. Robert Bickersteth, was cancerous. Of course, we knew the tumour was in part malignant, for there were cancerous glands in the meso-rectum. No doubt the part I examined was some of the original disease—a simple villous tumour. But the original growth in time became malignant, and thus furnishes another example to those who doubt that innocent tumours may become malignant. Another point of interest in the man's case was that he had a malignant gland (of the same character) in the left groin. This is the only time that I have seen cancer in a gland in the groin secondary to a growth placed well within the rectum. During my absence last year another case of villous tumour becoming malignant was admitted. It consisted of three polypoid masses, one of which has the appearance of villous tumour, but the others of cylindrical-celled carcinoma. It was very successfully excised through a posterior median incision by Mr. Robert Bickersteth. The man left with a normal rectum and has remained well since. Thus no less than four (possibly five) cases of villous tumour of the rectum have been met with in one year, though only two retained their innocent features at the time of examination. I can quite understand that those who have not the opportunity of seeing these specimens may feel a little sceptical at such an extraordinary percentage, but in about fifty cases of tumour of the rectum which I have examined microscopically these are the only examples of villous tumour met with.

In the first series of cases I called attention to one of squamous-celled epithelioma, which started in the mucous membrane of the bowel (Case 8). In this series there is another (Case 21). It occurred in a woman aged forty-seven years, and caused a tight stricture one-and-a-half inches above the anus. It infiltrated the vagina, but evidently did not originate there, as the vaginal mucous membrane was intact. Such abnormal forms of carcinoma probably grow in "rests" or in tracts of tissue such as give rise to rectal dermoids. Finally, in this connexion, the evidence is again in favour of colloid being decidedly more malignant than cylindrical-celled carcinoma. I mention this, as the contrary opinion seems to prevail.

The operation.—The methods used may be arranged as follows: (1) perineal incision, which suffices for the removal of about three inches of bowel—more in the female; (2) the same, combined with excision of the posterior wall of the vagina, which gives a great deal of room—the vagino-perineal operation; (3) posterior median proctotomy for the removal of small growths with subsequent suture; and (4) the sacral operation of Kraske. In none of these cases has the upper part of the rectum been removed by abdominal section.

Partial excision of the rectum through the perineum is a very successful operation. It is generally in these cases, in which the growth is small and situated near the anus, that we may hope for a long immunity. Growths higher up are longer in attracting the patient's attention, and the glands of the meso-rectum are often involved before they are recognised and sent for operation. If the patient is able to bear the complete operation, it is always better to excise the entire circumference of the bowel in all cases in which the removal is too extensive to permit restoration of its calibre by suture. In those cases in which I have removed a growth from the posterior wall and left part of the anterior wall and anus, the discomfort from mucous discharge and prolapse has been considerable, and I have found it desirable to subsequently cut away all exposed mucous membrane. In fact, the subsequent discomfort from these slight operations has generally far exceeded that of the removal of six or seven inches of bowel.

The vagino-perineal operation is a good one, but it is, of course, essential to restore the vagina and perineum. I once saw a patient upon whom this operation had been performed without restoration, and the result was deplorable, for the whole of the pelvic organs prolapsed from want of support. When the diseased parts have been excised the stump of the rectum is brought out at the posterior end of the wound attached to a glass tube; the remains of the elastic wall of the vagina are sutured in front, and deep silver sutures are passed between the two and a very long perineum procured. Generally the anatomical result is excellent, and as a corroborative detail it may be mentioned that two of my younger patients married after this operation, but, perhaps fortunately, did not become pregnant.

The posterior median proctotomy for the removal of small growths with subsequent restoration of the bowel is perhaps the most interesting operation. A long backward incision is made, carried up over the sacrum if the tumour is in the middle third, and the bone is cut across and turned as a flap to the left side. The rectum is then opened in the middle line, and the disease examined with the finger. If it is a short stricture the entire circumference is excised; if an oval patch then only the affected part. In either case restoration is best effected by sutures and not by Murphy's button. Having sewn up the wound made in the bowel for the removal of the growth the posterior lineal incision is closed, the sacral flap restored, and the anus forcibly dilated to paralyse the sphincter. In some cases the result of this operation is nearly perfect.

The sacral operation of Kraske is, of course, the most serious. The incision is made as in the last case, the coccyx, or coccyx and lower part of the sacrum, being cut across and turned to the left. It is important to retain these bones, as when their support is lost the bowel may prolapse badly unless the special truss recommended in my former paper is worn. Having exposed the bowel, if the growth is high up it may be cut across below, and the anus left intact; if not, dissect it entirely up from below. There is no value in the lower piece of bowel, only its removal makes a larger wound. Next, with constant use of compression forceps and aneurysm needle before the knife or scissors, clear the bowel until the meso-rectum is cut away and the peritoneum freely opened; then draw down as much as is necessary to insert a glass tube above the growth, ligature it in, and cut off the latter. Enough bowel must be drawn down to allow the end to be brought out of the wound without tension. The sacral flap is then restored, the bowel connected to the skin with sutures, and the rest of the large wound in front packed with cyanide gauze.

I have tried various ingenious methods, including Murphy's button, to approximate the upper and lower ends after extensive removal, and I am now persuaded that any such attempt is bad practice when the excision exceeds two, or at most three, inches of bowel. The healing is longer and more dangerous and the result little, if any, better. It would occupy too much space to go into the reasons, but I have tried approximation after extensive removal several times, and I regard it as a failure. It is certainly more dangerous than the glass tube method I formerly recommended, and to which I have decided to return. On the other hand, the use of a sacral flap in place of cutting away

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the bones is a distinct improvement, and I believe at the present time only one patient is wearing a truss, and that is for the partial perineal operation. All the Kraske cases describe themselves as having little or no loss of control over their bowels. In fact, they are more inclined to stricture than a patulous anus with prolapse.

Results.—The anatomical results have been referred to in describing the operations. The best result is obtained when a small growth or short segment has been removed and the parts have been satisfactorily united by suture. The next best is after the complete removal of the lower end of the bowel, whether by the perineal, vagino-perineal, or sacral operations; it does not matter how much is removed so that a clean end is brought out and the natural support of bones or perineum is made good. The worst anatomical results follow when a lot of exposed mucous membrane is left with a long slit-like anus, or when the support of the perineum or sacrum and coccyx is wanting.

Clinically there are many circumstances which influence the success of the operation, apart from the physical powers of the patient and the skill of the surgeon. The chief of these are: 1. Early recognition of the disease.—This means that either it is low down or has rapidly formed a ring stricture. In the majority of cases the early symptoms are slight, and when the patient seeks advice the tumour is already large. 2. The nature of the growth.—In innocent tumours the result should of course be cure, though in operating through the anus this does not appear to be the case with villous tumour. A villous tumour is generally a sufficiently serious affection to call for posterior median proctotomy. Of malignant tumours the usual cylindrical-celled carcinoma of the part offers the best prospect; squamous-celled epithelioma perhaps the next best; colloid and sarcoma the worst. 3. Involvement of glands.—Wherever I find malignant glands in the meso-rectum I always regard the case as certain to have a recurrence. Occasionally the glands may be recognised before operation, but usually they are concealed by the tumour. 4. Age.—

TABLE OF TWENTY-EIGHT CASES OF EXCISION OF THE RECTUM

Case.	Date.	Sex.	Age.	Site of tumour.	Operation.	Amount removed	Result.	Died later.	Still living.	Remarks.*
1	1881	M.	47	Lower third of rectum, small.	Through perineum.	2¼ in.	Recovered.	—	10 or more years.	Shown at Liverpool Medical Institution, 1885. Left in good health for America, 1891.
2	1888	F.	56	Lower third, small.	Through perineum.	2½ in.	Recovered	2½ years.	—	Had stricture of rectum.
3	1890	F.	37	Middle third; sarcoma.	Kraske (tube).	7 in.	Recovered.	One year.	—	Died of recurrence in internal organs and skin at distant parts.
4	1890	M.	46	Middle and lower thirds.	Kraske (tube).	6½ in.	Recovered.	Ten months	—	Previous colotomy. A small piece of growth left in ureter.
5	1891	M.	41	Middle and lower thirds.	Kraske (tube).	7 in.	Recovered.	4 years.	—	No recurrence for three years. At work all the time.
6	1891	F.	55	Middle and lower thirds.	Kraske (tube).	5 in.	Died.	—	—	Died on the eleventh day. Exhaustion.
7	1892	M.	56	Middle third.	Kraske (tube).	8 in.	Recovered.	2½ years.	—	At work for two years as agent.
8	1892	F.	29	Lower third.	Vagino-perineal incision.	4 in.	Recovered.	2½ years.	—	Removed part of vagina. Very well for some time. Got married.
9	1893	M.	59	Lower third, small.	Through perineum.	3 in.	Recovered.	—	4 years.	Working all the time. Very well.
10	1893	M.	64	Middle third, small.	Kraske (approximation).	2 in.	Recovered	Lost sight of	after 2 years.	Perfectly normal rectum.
11	1893	F.	42	Lower third.	Vagino-perineal incision.	4 in.	Recovered.	10 months.	—	Rapid recurrence owing to infected lymphatics. Part of vagina removed.
12	1893	M.	56	Lower third.	Kraske (approximation).	4 in.	Recovered.	—	3½ years.	Normal rectum.
13	1893	M.	64	Middle and lower thirds.	Kraske (approximation).	4½ in.	Recovered.	2½ years.	—	Anus incomplete behind.
14	1894	M.	60	Middle third.	Kraske (tube).	4 in.	Died.	—	—	Patient greatly reduced by previous complete obstruction and colotomy.
15	1895	M.	60	Lower third.	Through perineum.	4 in.	Recovered.	1 year.	—	Adherent to bladder.
16	1895	M.	64	Lower and middle thirds.	Kraske (approximation)	7½ in.	Recovered.	6 months.	—	Had malignant glands.
17	1895	F.	55	Middle third (villous).	Kraske (tube)	6 in.	Recovered.	—	20 months.	Good anus.
18	1895	F.	23	Lower and middle thirds.	Kraske (tube).	4½ in.	Recovered.	?	—	Very well for some time. Married. Recurrence after one and a half years. Not seen lately.
19	1895	F.	34	Entire rectum (syphilitic).	Kraske (tube).	5 in.	Recovered.	—	17 months.	Much better.
20	1896	F.	64	Lower third.	Through perineum.	3 × 2 in.	Recovered.	—	13 months.	No recurrence.
21	1896	F.	47	Lower third.	Vagino-perineal.	3 in.	Recovered.	—	12 months.	No recurrence; good anus.
22	1896	F.	25	Lower third (syphilitic).	Through dilated rectum.	½ in.	Recovered	—	11 months.	Diaphragm stricture; perfect restoration.
23	1896	M.	27	Middle and lower thirds.	Kraske (tube).	4 in.	Recovered.	—	10 months.	Glands infected.
24	1896	F.	57	Middle and lower thirds.	Vagino-perineal.	4½ in.	Recovered.	—	10 months.	Colloid growth; glands.
25	1896	F.	56	Middle third (villous).	Post. median proctotomy.	2 × 1½ in.	Recovered.	—	8 months.	Normal rectum.
26	1896	F.	46	Middle and lower thirds.	Kraske (approximation)	4 in.	Recovered.	—	6 months.	Cancer following villous tumour.
27	1896	M.	63	Middle third, extensive.	Kraske (approximation).	3½ in.	Died.	—	—	Localised peritonitis; shock.
28	1896	F.	34	Lower third.	Vagino perineal.	3½ in.	Died.	—	—	Cancer very foul. Exhausted patient. Shock and septic wound.

* The tumours were malignant where not otherwise mentioned.

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The younger the patient the less the chance of permanent cure. I have now seen quite a dozen cases under twenty-five years. The rectum is, I think, the earliest of all sites for true carcinoma, though a majority of the patients are between fifty and seventy years of age.

In regard to the survival of my cases after the operation I can speak with some degree of certainty, as I have taken considerable pains to keep them under observation. Of the first series of fourteen all were cases of malignant disease. One was certainly cured; several survived for from one to four years, and I predicted that one if not two more would prove to be cured. I am glad to report that so far this prediction seems likely to be fulfilled. One is a patient of Dr. Peirce, of Hoylake, and I hear that he is sound and well, working every day on his farm at the age of sixty-three years. The other is a patient of Dr. Gwynn, of Whitchurch, and he writes me that this man is "so well that he has not seen him for months," and having now re-examined him reports that "there is no appearance of a return of the disease, and the control over the parts is good." In the former the operation was done rather more, and in the latter rather less, than four years ago. Of the first fourteen cases of malignant disease, the last of which was operated on more than three years ago, I can now make the following definite report. Two died from the operation; three are cured; one was under observation for ten years and the other two for four years. One more I am almost certain is cured, but I lost sight of him after two years, when he was perfectly well. He lives in the heart of Wales, and all my letters come back without having reached him. The remaining eight averaged just two years of life after the operation, all of them dying from recurrence. In my judgment there are very few parts of the body where better results can be obtained when dealing with cancers of considerable dimensions.

In regard to the second series of fourteen cases four are non-malignant. They are all well and likely to remain so. Of the ten cancer cases two died from the operation, and two more have died since from recurrence, one at the end of twelve months and the other at the end of six months. This has been rather an unlucky series of cases, many of them having had enlarged glands in the meso-rectum at the time of the operation. I dare only predict that one may prove a cure—Case 20, a woman aged sixty-four years, who had a cylindrical-celled carcinoma 2½ in. by 1½ in. on the posterior wall of the rectum about two inches from the anus. In Case 21 I examined the patient in May, and she is quite free from recurrence twelve months after operation; but her tumour proved to be squamous-celled carcinoma, and I have less hope of cure in this form of growth. However, things may turn out better than I expect. Six of the ten operated on during the last two years are well and, so far as I can tell, without fresh growth. The case in which Mr. Robert Bickersteth operated for me, which is not included in the table, has probably a better prospect of permanent cure than any of the others.

Fatal cases.—The mortality is exactly the same for both series—namely, 14 per cent. In the first series the two deaths occurred in elderly patients and were the result of shock, one dying gradually on the eleventh day from exhaustion and the other rapidly soon after the operation. In the present series I had no death until the last two cases—the first in an old man, aged sixty-three years, who died on the sixteenth day from chronic septic poisoning, and in whom localised peritonitis was found. I blame the result here upon approximating the bowel after an extensive removal. The union was imperfect and the wound became septic before the peritoneum had healed. Had I brought the stump out and connected it with the glass tube the operation would have been shortened by perhaps half an hour and the wound would not have been contaminated with fæces until the peritoneum had closed. The second death occurred in a young woman with a remarkably foul cancer. It was so virulent that every little crack in the skin of my hands became poisoned, and I had five sores which refused to heal till I left home. No wonder that her wound was septic and that she, being in a very anæmic and exhausted condition at the time of the operation, gradually died on the twenty-fifth day. The peritoneum was not opened in her case.

Although the cancer cases are, on the whole, less favourable in this series than the last, I continue to thoroughly appreciate the value of the operation of excision of the rectum. In the less severe cases one has an excellent chance of obtaining a cure, and in many of the bad ones there is a considerable period of immunity during which life is by no means a burden to the majority.

The syphilitic cases.—Having included two cases in which I operated for syphilitic stricture, it is right that I should say a word respecting them. Case 22 offered such a tempting opportunity for a "radical" cure that I at once suggested that we should excise the stricture without attempting dilatation with bougies. She had a diaphragmatic stricture about an inch above the anus, and after dilating the latter I was able to draw it outside and excise it without the least difficulty. The wound was carefully sutured, it healed by first intention, and when examining her a month or two subsequently I could not detect the site of the operation. Case 19 was a very different business. Here we had an anæmic patient who had suffered for years from incurable syphilitic stricture. I had done what I could with bistoury and bougies, and it was her own desire that stronger measures should be taken. Under these circumstances, as life was really a burden to her I made the Kraske's incision and attempted to excise the whole rectum. But it was a more difficult and dangerous operation than I anticipated, owing to the dense adhesions contracted by the bowel with all neighbouring structures, and I found when I had got five inches freed that her condition was such as to make it imperative to conclude the operation at once. A glass tube was consequently ligatured in, the wound was packed with gauze, and the patient was sent back to the ward. Convalescence was slow, but in the end she recovered. There are still some two or three inches of strictured bowel, but it is not so narrow as that which was removed and yields to bougie treatment, which she is now carrying out herself. I have no reason to suppose that this patient is dissatisfied with the result of her operation, and she is certainly much better pleased in having the artificial anus near the old spot than she would be if it were in the groin, but knowing now myself the difficulties and dangers to be encountered in bad cases of syphilitic stricture I should in future have no hesitation in recommending colotomy when it was impossible to obtain relief by simpler measures. This, of course, does not apply to special cases like Case 22. Here no danger whatever is run, and there is no reason to object to excision if the surgeon thinks it to be the best method of relieving his patient.

Liverpool.

THE LOCALISING VALUE OF OPTIC NEURITIS IN INTRACRANIAL TUMOUR.

BY J. M. MARTIN, B.A., M.B., B.C. CANTAB.

DURING the last thirty years general opinion has wavered greatly as regards the certainty and frequency with which optic neuritis is produced by a growth within the cranium, and the greatest authorities from time to time have made diametrically opposite statements with regard to this condition. At various times it has been stated that optic neuritis has no localising value as regards the seat of disease, and at other times the directly contrary opinion has been put forward. Thus Dr. Hughlings Jackson in 1880 stated that "optic neuritis is of no value in localising disease in any part of the cerebrum or cerebellum," and Mr. Horsley now holds that optic neuritis is of distinct value in locating the position of the disease, more particularly as regards the side on which the disease is situated. But it is when we come to the question of unilateral optic neuritis that we find the greatest difference of opinion. For some observers state that in a case in which optic neuritis appears only in one eye, or appears in one eye before the other, or is more marked in one eye than in the other, the seat of lesion is on the opposite side of the brain; whereas others equally positively state that the lesion is on the same side as the eye in which the optic neuritis first appears or is more marked. It is as an attempt to try to arrive at the true facts of the case by examining rather a larger number of reports than has been presented before that I now bring forward the results of my analysis of 600 cases, which I have collected from various sources. Before I begin the discussion of the special subject

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of this paper it will be of some value—if only to confirm the researches of former investigators—to give a general analysis of my series of cases and then consider the question of the localising value of optic neuritis. The result will not be so complete as I had hoped it would be, as in very few cases comparatively has it been noted in which eye the optic neuritis appeared first or was more marked.

It has always been stated that the male sex is more liable to intracranial growths than is the female sex. The numbers in my series are as follows :—

TABLE I.

Position of tumour.	Male.	Female.	Sex not stated.	Total.
Frontal	31	17	13	61
Temporo-sphenoidal	13	10	5	28
Motor area	77	22	22	121
Parieto-occipital	19	10	8	37
Multiple	18	9	1	28
Basal ganglia	20	12	4	36
Corpus callosum	7	5	1	13
Centrum ovale	19	10	1	30
Corpora quadrigemina	12	3	0	15
Pituitary	13	9	4	26
Crura	3	1	1	5
Pons and medulla	29	11	4	44
Cerebellum	82	34	22	138
General	10	7	2	19
Total	353	160	88	601

So that of 513 cases of intra-cranial tumour 68·8 per cent were males and 31·2 per cent. were females; that is, the male sex is more than twice as liable as the female sex to intra-cranial growth.

Having here given my first table it will perhaps be well at this point to define the regions I have adopted. Frontal—those tumours situated in front of the ascending frontal convolution externally, and as far back as the genu of the corpus callosum internally. Temporo-sphenoidal—those situated in the part of the cerebrum below the fissure of Sylvius and limited posteriorly by a line drawn from the posterior end of the fissure of Sylvius above to the lower end of the ex-occipital fissure below on the outer surface, and by the calcarine fissure on the mesial surface. Motor area—those situated in the precentral, post-central, and paracentral convolutions and their immediate neighbourhood. Parieto-occipital—those situated in or near the remaining cortex of the brain. As regards the remainder, all that need be said is that they affect only or chiefly the structures under the names of which they appear. Those included under "general" were either too diffuse to be put under any more definite heading or else their actual position was not stated in the report from which I obtained my abstract.

TABLE II.

Nature of tumour.	Tuberculous.	Sarcoma.	Glioma.	Glio-sarcoma.	Cystic.	Carcinoma.	Gumma.	Hydatids.	Other tumours.	Total.
Frontal	31	16^{3}	8	5^{2}	2^{2}	2	6^{2}	3	16^{1}	61^{11}
Temporo-sphenoidal	1	8^{2}	5	0	2	1	3	2^{1}	6^{4}	28^{7}
Motor area	8^{3}	29^{12}	13^{3}	6^{1}	5^{1}	3	13^{3}	3	40^{21}	120^{49}
Parieto-occipital	1	11^{3}	6	1	1^{1}	1	2	3	11	37^{3}
Multiple	8^{4}	6	2^{1}	0	1	1	4^{2}	2	4^{2}	28^{9}
Basal ganglia	7^{2}	3	7^{1}	5^{2}	1	0	0	1^{1}	12^{3}	36^{9}
Corpus callosum	0	4^{3}	0	2^{1}	0	0	0	0	7^{4}	13^{8}
Centrum ovale	2^{1}	6^{3}	3^{1}	1	3^{2}	0	1	3	11^{5}	30^{11}
Corpora quadrigemina	2	5	2	0	1	0	1	0	4	15
Pituitary	2^{1}	5^{1}	2^{1}	0	2	2^{2}	1	0	12^{3}	26^{8}
Crura	0	1	0	0	0	0	0	0	4	5
Pons and medulla	12^{7}	5^{1}	12^{2}	1	1	1	2^{1}	1^{1}	10^{3}	45^{14}
Cerebellum	25^{5}	20^{3}	21^{3}	9^{2}	25^{2}	0	3	3	32^{3}	138^{18}
General	1	7^{2}	1	0	0	0	0	0	10^{1}	19^{3}
Total	72^{36}	126^{32}	82^{15}	30^{8}	44^{8}	11^{2}	36^{8}	21^{3}	179^{49}	601^{151}

The nature of the growths in each position will be found in the next table (Table II.); the significance of the small figures in the top right-hand of some of the figures will be explained subsequently (see Table VI.). From this it will be seen that of the 442 named tumours 126 were sarcomata, 82 were gliomata, and 72 were tuberculous—a result which differs from Starr's[1] as below.

	Starr.	J. M. M.	
Sarcoma	22·6	28·5	percentages.
Glioma	17·2	18·5	
Tuberculous	36·4	16·3	

While I was abstracting my cases it seemed to me worth while to notice the chief position of the headache in each case where it was mentioned, as, so far as I am aware, there are no statistics on this point: but the result is only to confirm the prevailing idea that the position of the headache is of no value in determining the position of the tumour (see Table III.). The only points to which I will draw attention are the number of cases of tumour of the motor area and of the corpus callosum in which headache was stated to be absent, the frequency of occipital headache in cerebellar tumours, and of frontal headache in all kinds of tumours.

TABLE III.

Position of tumour.	Position of headache.								
	Stated to be absent.	Frontal.	Frontal and occipital.	Occipital.	Vertical.	Temporal.	Fronto-temporal.	Parietal.	Fronto-vertical.	Occipito-vertical.
Frontal	1	12	2	5	—	1	—	1	1	—
Temporo-sphenoidal	1	3	—	—	1	1	1	—	—	—
Motor area	5	12	2	1	3	—	4	5	2	—
Parieto-occipital	*	5	1	3	—	—	—	—	1	1
Basal ganglia	—	6	—	1	—	1	—	—	2	1
Corpus callosum	4	—	—	1	—	1	—	—	—	—
Centrum ovale	2	5	1	3	1	1	—	—	1	—
Corpora quadrigemina	1	1	—	3	—	—	—	—	—	—
Pituitary	—	1	—	—	—	1	—	2	—	—
Pons and medulla	2	3	2	3	1	—	—	—	—	1
Cerebellum	—	18	7	23	1	—	—	2	4	3
General	—	5	—	—	1	1	—	1	—	—

The results of my analysis of these 600 cases as regards the presence of optic neuritis are in accord with the generally accepted statements, but I have gone rather more into detail than has usually been the case; thus I have separated the cases in which optic neuritis was noticed into four groups, with the idea of seeing whether any new facts would be brought out; these groups are—(1) those cases in which the optic neuritis was stated to be unilateral; (2) those in which the optic neuritis was beginning late in the course of the disease; (3) those in which the optic neuritis was early and marked; and (4) those in which the optic neuritis went on to atrophy or in which atrophy was first noticed (see Table IV.). Before I go fully into the table I will draw attention to the comparatively small number of cases which go on to atrophy in the following groups:—(1) the pons and medulla; (2) the temporo-sphenoidal; (3) the motor area; (4) the corpus callosum; and (5) the corpora quadrigemina (here notice the large proportion of cases in which optic neuritis is found). The number of cases of tumour of the crura is too small for me to draw any general conclusion from them. Optic neuritis is constantly present in tumour of the corpora quadrigemina, so that in the absence of optic neuritis we can

[1] Nervous Diseases, edited by F. X. Dercum, p. 471.

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exclude this position for the tumour. The cerebellum and parieto-occipital regions come second with optic neuritis in 39 per cent. of cases, but a marked difference is noticeable in the two groups when we come to Table IV., column iv., excluding optic atrophy; here the cerebellar region leads by 13 per cent. The only other special point to which I will draw attention is the comparatively small proportion of cases in which optic neuritis is found in tumours of the corpus callosum and of the pons and medulla—a fact which is still more marked when we exclude "atrophic" cases. If we exclude the eight cases of the pons series in which internal hydrocephalus was produced, and in every one

TABLE IV.—*General Table for Optic Neuritis.*

—	Totals.	No optic neuritis.	Unilateral.	Optic neuritis beginning late.	Optic neuritis marked.	Atrophy.	Not mentioned.	Percentages (see footnote). I.	II.	III.	IV.
Frontal	61	10	3	7	31	10	0	84	33	67	61
Temporo-sphenoidal	28	9	0	5	10	2	2	68	50	50	46
Motor area...	121	46	3	16	48	6	2	62	54	46	43
Parieto-occipital ...	37	4	3	4	22	3	1	89	30	70	68
Multiple	28	9	1	4	8	5	1	68	50	50	39
Basal ganglia	36	9	0	3	17	6	1	75	33	67	60
Corpus callosum ...	13	7	0	2	3	1	0	46	69	31	25
Centrum ovale... ...	30	10	1	4	11	3	1	67	50	50	40
Corpora quadrigemina	15	0	0	3	11	1	0	100	20	80	79
Pituitary	26	9	0	0	8	9	0	65	35	65	47
Crura	5	0	0	2	1	0	2	100	40	60	60
Pons and medulla ...	44	14	4	8	15	3	0	68	59	41	36
Cerebellum	138	15	2	4	91	25	1	89	15	85	81
General	19	3	1	5	7	3	0	84	47	53	44
Total	601	145	18	67	283	77	11	76	38	62	56

PERCENTAGES.—I., in which optic neuritis was present some time in the course of the disease. II., in which optic neuritis was late, absent, or unilateral. III., in which optic neuritis was present early in the disease. IV., in which optic neuritis was present, excluding atrophic cases.

of which optic neuritis was found, the figures will stand:—Cases, 36; no optic neuritis, 14; unilateral, 4; late, 6; marked, 9; and atrophy, 2 (special reasons), which will make the percentages as follows: Cases in which optic neuritis was present some time during the disease, 56; cases in which optic neuritis was present early in the disease, 26·4. Thus the absence of optic neuritis early in the disease is a characteristic of tumour of the pons. Before leaving this point I will arrange the groups in their order—(1) according to the percentage of optic neuritis (all cases); and (2) according to the percentage of cases in which optic neuritis is late, absent, or unilateral.

(1)	(2)
1. Corpora quadrigemina.	1. Cerebellum.
2. Crura.	2. Corpora quadrigemina.
3. Cerebellum. / Parieto-occipital.	3. Parieto-occipital.
4. Frontal. / General.	4. Basal ganglia. / Frontal.
5. Basal ganglia	5. Pituitary.
6. Multiple. / Pons and medulla. / Temporo-sphenoidal. / Centrum ovale.	6. Crura.
7. Pituitary.	7. General.
8. Motor area.	8. Centrum ovale. / Multiple. / Temporo-sphenoidal.
9. Corpus callosum.	9. Motor area.
	10. Pons and medulla.
	11. Corpus callosum.

I come now to the table of the cases in which optic neuritis was unilateral or more marked on one side than on the other, and among them I have included three (motor area) which were clearly diagnosed at the National Hospital for the Paralysed and Epileptic, Queen-square, but which have not been operated on and have not reached a fatal termination (see Table V.).

TABLE V.—*Unilateral Neuritis.*

Tumour.	Optic neuritis more marked on the side of the lesion.	Optic neuritis more marked on the side opposite to the lesion.	Totals.
Frontal	8	2	10
Temporo-sphenoidal	4	0	4
Motor area	14	3	17
Parieto-occipital	2	4	6
Multiple	2	0	2
Basal ganglia	1	0	1
Centrum ovale	1	2	3
Corpora quadrigemina ...	1	0	1
Pituitary	0	1	1
Pons and medulla...	3	2	5
Cerebellum	3	1	4
General	0	1	1
Total	39	16	55

From this it will be seen that I have been able to collect only 55 cases useful for this purpose, but in future a much larger proportion will be available, as the amount of swelling of the papilla is being measured in each eye much more accurately than has been done in the past. Yet even here there are quite sufficient data to justify one in stating absolutely that the seat of lesion is probably on the side on which optic neuritis is more marked in the proportion of 71 to 29. If we take the first three groups in the table among which we have the largest number of cases the results are as follows: total on the side of the lesion, 26; on the side opposite to the lesion, 5; total, 31. The percentage in favour of the lesion being on the side of the optic neuritis is 84.

Turning now to the question of the effect of the nature of the tumour in producing optic neuritis, I have in Table II. (small figures above referred to) included the number of cases in which optic neuritis was absent or very slight in connexion with each kind of tumour in each region. The individual numbers are too small to give any satisfactory results, but on taking the totals the percentages are sufficiently striking to be worth noticing (see Table VI.).

TABLE VI.

—	No. of tumours.	Optic neuritis absent.	Percentage.
Tuberculous	72	26	36
Sarcomata	126	32	25
Gliomata	82	15	18
Glio-sarcomata ...	30	8	27
Cystic	44	8	18
Carcinoma	11	2	18
Gumma	36	8	22
Hydatids	21	3	14
Total ...	422	102	24

The conclusions then are: (1) that optic neuritis is most often absent if the tumour is tuberculous; and (2) that optic neuritis is most frequently present if the tumour is a glioma, is cystic, or is a hydatid.

The last set of statistics I have worked out is that in relation to strabismus in cases of intra-cranial tumour; there were only thirty cases in which I could get a clear idea of this condition from the reports; the result is as follows (see Table VII.). Hence in cases in which internal strabismus is noticed the tumour is generally on the same side.

Before bringing my paper to a close I will sum up the general results which I have obtained:—1. That 68·8 per cent. of all cases of intracranial tumour are among males. 2. That the most common form of intracranial growth is sarcoma; gliomata and tuberculous tumours are of about equal frequency, but less common than sarcomata. 3. That headache is more likely to be absent in cases of tumours of the motor area and of the corpus callosum than when the

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tumour is situated elsewhere. 4. That the tumour is generally situated on the side on which internal strabismus is noted.

Has, then, optic neuritis any localising value in intracranial tumour? It has, yet only to a limited extent at present; but under the improved methods of examination now adopted it will be of more value in the future. Where a difference in the amount of the optic neuritis in each eye is noted it is more than twice as probable that the tumour is on the side of the more marked optic neuritis. Beyond this little can be said, but at the same time it should be remembered: (1) that optic neuritis is constantly present in tumours of the corpora quadrigemina; (2) that it is present in 89 per cent. of cases of cerebellar tumour and of tumours of the posterior part of the cerebrum; (3) that it is absent in nearly two-thirds of the cases of tumour of the pons and medulla and of the corpus callosum; and (4) that it is least frequently met with in cases of tuberculous tumour and most common in cases of glioma and cystic tumour.

TABLE VII.

	Internal strabismus.		External strabismus.	
	On the same side.	On the opposite side.	On the same side.	On the opposite side.
Multiple	2	—	—	—
Corpora quadrigemina	2	1	—	—
Basal ganglia	—	—	1	—
Parieto-occipital	3	1	—	—
Crura	1	—	—	—
Pons and medulla	5	—	—	—
Temporo-sphenoidal	3	1	—	—
General	1	—	—	1
Cerebellum	5	—	1	—
Motor	—	1	—	—
Centrum ovale	1	—	—	—
Total	23	4	2	1

Brighton.

A CASE OF DRY GANGRENE OF BOTH LOWER EXTREMITIES COMPLICATING ORDINARY SCARLET FEVER; DOUBLE AMPUTATION; RECOVERY.

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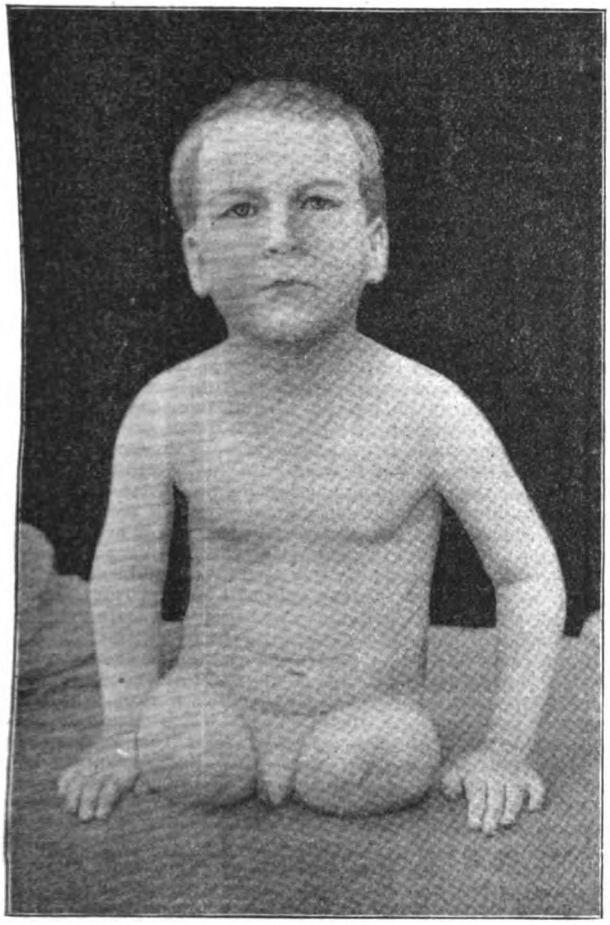
A BOY, aged four years, was admitted to the Leeds City Infectious Diseases Hospitals on Sept. 14th, 1896, suffering from scarlet fever. Malaise, headache, vomiting, and sore-throat occurred on Sept. 9th, the rash being first seen on the 10th. He had suffered from chicken-pox twelve months previously, and from measles three years before. It was elicited from the friends that the family were strongly susceptible to rheumatic affections, the father having died during an attack of acute rheumatism. A sister also had suffered from severe rheumatic fever. On admission the child presented nothing beyond the ordinary symptoms. The tongue was swollen, reddened, and showed enlarged papillæ. The tonsils were congested and œdematous, with small necrotic patches. There was also general faucial and pharyngeal congestion. The submaxillary glands were moderately affected, and a characteristic eruption was noted in the usual situations. On the 17th, being the ninth day of the disease, it was noticed that there were numerous small discolourations (which seemed to be subcutaneous hæmorrhages) extending in both lower limbs from the toes to within two or three inches of the knees anteriorly and posteriorly. At this time the faucial disturbance had very considerably abated, though congestion was still evident, a clean ulcer being noticed on each still slightly inflamed tonsil. The temperature was 101° F. Desquamation of cuticle was observed at the upper part of the chest and neck. Day by day the discolouration of the limbs became more marked, though still continuing to be somewhat patchy, lividity being most intense at the toes and feet, and becoming less so from below upwards. On Sept. 20th, a note informed us that the limbs retained a considerable degree of warmth, probably somewhat exaggarated by the more or less continuous application of artificial heat, and that in neither limb could pulsation in the femoral arteries be distinctly felt. The condition now appeared to give the patient considerable pain, apparently of an intermittent character, and the discolouration had spread to some four inches above the knees anteriorly and to slightly above the centre of the popliteal space posteriorly, the distribution being almost exactly similar in both limbs. From the 20th to the 25th the temperature subsided to normal, and the upper parts of these areas were less discoloured. On the 30th (twenty-second day) an oblique line of demarcation had formed, roughly extending in both limbs to three inches above the knees in front and to the centre of the popliteal spaces behind. At this time there was noticed some slight degree of cardiac dilatation, and a suspicion of roughness of the first sound at the apex. Mr. Littlewood saw the patient on this date, and advised amputation. On Oct. 3rd, after a brandy and milk injection per rectum, the patient was put under ether, and Mr. Littlewood amputated the right thigh by a modified circular operation. All the available healthy skin above the gangrenous part was retained, an incision being carried upwards on the outer side for some four inches. The femur was divided at about the junction of the middle and upper thirds. The blood was very thin, coagulating slowly and imperfectly. The femoral artery was patent. The patient tended several times to collapse, requiring subcutaneous injections of brandy. Silk-worm gut was used for stitches, and the dressings were cyanide gauze and iodoform. The patient recovered well from the operation, and though some rise of temperature was noted on subsequent days, it would appear to have been due to ulceration and some septic inflammation present at the line of demarcation separating the healthy and diseased parts in the other limb. The operation wounds of this amputation healed almost entirely by the first intention except at the outer angle formed by the flaps, where some slight sloughing took place. The parts were drained by indiarubber tubing for some ten days. On Oct. 10th, a week after the first operation, amputation through the left thigh was performed by Mr. Littlewood. The like anæsthetic precautions and incisions were taken and made. The patient bore this operation much better than the first. The wounds were similarly drained and stitched and they also healed by first intention. After the second operation the patient made rapid progress and was allowed to be wheeled about in the ward on Nov. 3rd. When seen later at his home the stumps were found to be well padded and furnished. The patient had free power of flexing, extending, abducting, and adducting the stumps, and would shortly be able to wear artificial limbs. The illustration represents the condition of the patient nine months after operation.

Description of the parts removed.—Both legs were dry and mummified, the skin having a yellowish translucent appearance. Just below the amputation line there was an ulcerated area of skin about half an inch wide and nearly surrounding the limb. On dissecting the vessels they presented similar appearances on both sides. The coats of the vessels appeared normal. In the popliteal arteries, about the middle of the popliteal space, was a soft, reddish-white clot, which did not fill up the whole lumen of the vessel. It could be easily separated from the intima, the clot being about an inch long. Below this to the bifurcation of the vessel there was some loose clot of similar appearance, but above the vessel was empty. There was no clot in the posterior tibials at the ankles. There was a clot in the popliteal veins at the same level as that found in the arteries. It was more like a venous clot, darker in colour, and quite filling up the lumen. It was not adherent to the intima. The clot in the right side appeared to be undergoing some decomposition changes. Both clots occupied about an inch of the lumen. Below this, in the tibial veins, there were some coagula of the same colour, but not filling up the

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vessel. Above the clots the veins were empty, as also were the veins at the ankles.

Remarks.—This case appears to us to be of very considerable interest, and almost unique in its occurrence. It is of interest from two points of view—firstly, as an extremely rare complication in connexion with scarlet fever, and, secondly, from the infrequent occurrence of dry gangrene in so young a subject apparently free from diseased blood-vessels. We have been unable in searching the literature of the subject to find records of a similar case. Osler, however, incidentally mentions that symmetrical dry gangrene is a rare complication of scarlet fever, and there is to be found recorded in Holmes's "System of Surgery" a case of gangrene of the left leg complicating scarlet fever in a woman aged forty years. As to the *causa causans*, there would appear to be two factors which operated—an extremely thin and poor state of the circulating fluid and a debilitated condition



of the circulatory system from the specific febrile illness. The former was noted during the operation, and the latter was observed from physical signs during the illness and before amputation. It will be noted in the preceding account of the dissection of the limbs that the thrombosed clot was of some considerable extent in both the arterial and venous vessels of the popliteal areas. It might be urged that the clot was of embolic origin, occurring in a patient whose family were strongly predisposed to rheumatism. In this argument it should be remembered that though there was evidence of circulatory enfeeblement and cardiac dilatation there were no signs of gross valvular lesion, and that the clotting, though extending to the bifurcation, would seem to have commenced at the middle of the popliteal arteries. The vessels in the dissection showed no evidence of disease. Another point of some interest was the absence of any inflammatory disturbance in the wounds after amputation of the limbs, both operations having been performed whilst the patient himself was in an infective state and in close proximity to other cases of scarlet fever. The patient was, however, isolated in a disinfected room for the operations.

Leeds.

A NEW AND EASY METHOD OF EXAMINING MALARIAL BLOOD.

BY NEIL MACLEOD, M.D. EDIN.

FOR diagnostic purposes the examination of fresh malarial blood films immediately after preparation is without doubt most to be relied on. It is not always convenient, and in the midst of a large practice often very inconvenient, to make these examinations when the films are fresh, and thus one is driven to the examination of stained films at more convenient times. The staining of these films is to me, and I find to not a few others, an uncertain and troublesome process—that is, so far as results that can be relied on for diagnostic purposes are concerned. Dr. Reid, of Shanghai, two years ago suggested to me the examination of the dried, unstained film, having tried, but not having himself succeeded, in finding malarial parasites in this way. Drawing a cover glass across a drop of blood on the finger tip, as he suggested, I did not succeed in my quest; but some months later I did so without any difficulty by drawing across one cover glass the edge of another square cover charged with a blood drop. Since last August I have discarded the cover glass for a strip of ordinary notepaper for the purpose of spreading the film. I now carry in my pocket-book a sheet of notepaper one edge of which is snipped with scissors at intervals of half an inch, each snip being one and a half inches deep. The snipped edge is folded inwards to the middle of the sheet, the other half of the sheet being folded over all to keep the strips clean and ready for use. The straight edge of one of these strips is drawn its full half inch through a drop of blood on the finger tip not larger than the head of a pin, the finger tip and the cover glass being previously thoroughly cleansed in the usual way. If too much blood be taken on the strip the film will be too thick and useless. The edge of the strip is quickly drawn across the cover glass, the strip being held nearly at right angles to the surface of the glass and before the blood has had time to dry on the paper. In this way is spread on the cover glass (or slide, if preferred) a fine blood film which dries very quickly, and in it many excellent fields will be found with the corpuscles lying on the flat and practically unaltered. The cover glass must not be fixed to the slide by any medium which will run between the two, causing everything to disappear from view. It must be mounted dry. It can be gummed to the slide by a strip of thin paper with a window exposing the blood smear, when the latter can be examined with dry or immersion lens. With a good quarter inch objective crescents and the larger pigmented parasites, and with an oil twelfth the smaller pigmented forms, can easily be seen. The examination of a few specimens will acquaint anyone with their appearance, so that even beginners have little difficulty in finding these organisms. The specimens being thus preserved can be again and again examined, whereas with wet, fresh preparations a few hours alter them beyond recognition, and the cases are not at hand when study of the organism is convenient. It is well to compare the appearance of these organisms in the dried and undried state. *Particular* organisms can be studied in the dry film on the *slide*, their position located by means of a finder, and the organism in question stained and re-examined—a procedure, so far as I am aware, not yet recorded. The film on a slide can be examined with a dry lens without the intervention of a cover glass; then stained, dried, and examined without cover glass, or with a cover glass with or without balsam. If an oil immersion lens is to be used the film when dried and unstained ought to be on the cover glass, as the air layer intervening between the cover glass and slide, if the film is on the latter, prevents the oil lens working at its best.

The films should be carefully preserved from dust before they are mounted. Pill boxes serve this purpose well. The colour of the protoplasm of the parasite is not quite the same dried as undried, and, of course, no movement of parasite or pigment is possible in the dried state, but this presents no difficulty with pigmented forms. The unpigmented parasites cannot be detected even in the fresh undried film with certainty unless they are seen to move; but even these I have detected in the dried form as rings or signets and then stained them. This method, however, cannot be relied on for the detection of unpigmented forms of these organisms without very considerable experience.

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and should be supplemented by staining or the examination of fresh undried films. For satisfactory work with either dry or wet lenses in examining these parasites a good sub-stage condenser saves much time and trouble.

Blood films treated as I have recommended are subjected to less interference than when fixed by heat, alcohol, ether, or other means, or when treated with one or more staining solutions, washed, dried, &c.—procedures which I have found to so alter and obscure parasites distinctly visible in the dried untreated film that they could not be recognised as the parasite previously seen except by their surroundings previously registered. While this may not matter in the histological study of these organisms it is somewhat different when diagnosis is concerned, where, as is not infrequently the case, the number of organisms circulating in the peripheral blood is small, and the less they are altered or obscured the better. I have specimens of these parasites of the most typical character preserved for demonstration purposes—no small advantage where demonstrations are wanted and no cases are at hand for that purpose.

Shanghai.

NOTE ON AUTO-INTOXICATION DURING PREGNANCY.

BY J. CHRISTIAN SIMPSON, M.D. EDIN.

IN Dr. Clifford Allbutt's interesting paper on "Albuminuria in Pregnancy"[1] some strong reasons are brought forward in favour of the toxic origin of this condition. Perhaps I may refer to some other points which seem to me to strengthen this position, more especially in connexion with two conditions—namely, salivation and eclampsia. In ordinary persons "a rush of saliva into the mouth usually precedes the act of vomiting," and the nausea or vomiting of pregnancy naturally has this as an accompaniment. But in certain cases the amount and persistence of the abnormal salivation are so marked that it seems to be an independent phenomenon rather than the accompaniment of the emesis. Without going into physiological details one may remark that according to Ludwig[2] "the saliva is really secreted from the lymph present in the lymph spaces of the gland." On the one hand "we may have secretion without a blood stream" through the glands; while, on the other hand, "if atropia be given to an animal, stimulation of the chorda tympani nerve produces dilatation of the vessels, but no secretion of saliva." It must also be noted that the secretion of saliva "is not a mere process of filtration, such as, perhaps, occurs in the glomeruli of the kidney."

The amount of saliva secreted by some pregnant women may reach many quarts in the twenty-four hours. This usually persists during the early months of pregnancy only, but in some instances it lasts up to the confinement and then disappears in the course of a few days usually, but Green[3] noted a case in which it persisted for two weeks. In any case its persistency marks a difference between this hyper-secretion from that known as "paralytic secretion," which only lasts about eight days. The hyper-secretion of pregnancy contains no ptyalin and a lesser amount of sodium salts than is in normal saliva; it thus resembles what is called "chorda saliva" rather than what results from stimulation of the sympathetic, except when this has been prolonged, for the saliva resulting from moderate stimulation of the sympathetic is scanty and contains a very large proportion of solids. Stimulation of some distant sensory nerves causes a secretion of saliva, and certain uterine conditions—even menstruation—have been considered to be a starting-point of this; in fact, such salivation is usually described as "a purely nervous disorder" which is not readily controlled by any antisialic or nervine sedative.

When one tries to explain salivation on a toxic theory what is found? According to Bouchard[4] one of the toxic principles in normal urine is a sialogogue, but salivation is not seen in experiments with ordinary urine as "the total quantity of urine sufficient to kill does not contain the sialogogue in sufficient quantity to produce its physiological effect"; but if urine deprived of a part of its toxicity, say, by decolouration, be injected salivation is one of the symptoms produced. By a process of exclusion, the details of which it is unnecessary to allude to, he has defined this toxin to be "a stable organic substance, not fixed by charcoal, soluble in alcohol, and distinct from the diuretic (urea) or the narcotic toxin." It is found in much greater amount in the blood, liver, and muscles than in the urine, but so far it has not received a name, and its chemical nature is unknown. Its effects are well seen in rabbits after intravenous injection of the alcoholic extract of normal urine, for salivation appears during the comatose state, persists for three-quarters of an hour, and is apparently equal to that produced by jaborandi. If alcoholic extract of blood be injected, muscular weakness, convulsions, and rapid salivation supervene. As this toxin is found in much greater amount in the blood, liver, and muscles than in the urine it is concluded that it is "from the blood that the kidneys get this substance which causes salivation."

In the case of eclampsia it must be noted that two convulsive principles are found in normal urine. One is a "fixed stable organic body, destroyed by carbonisation, yet retained by charcoal; it is insoluble in alcohol, as either a base or a salt, and may belong to the group of colouring substances." The other is fixed and inorganic, and is, in fact, potash. It is thus evident that faulty elimination of these products might be sufficient to induce eclampsia, but there are possibly other waste products which accumulate during the course of pregnancy, as will be seen later. In this relation it may be well to consider two primary and certain secondary sources of auto-intoxication. On the one hand, there may be a primary derangement of the liver, with secondary intestinal decompositions, and in due time renal irritation and insufficiency from absorption and excretion of toxins may appear and aggravate matters. On the other hand, a primary renal insufficiency may be so marked that if the hepatic and intestinal functions are slightly deranged serious symptoms may arise which might not have been induced had the kidneys been acting normally. The question whether intestinal derangement is an active factor in the case might perhaps be determined if it were possible to estimate the ratio between the free and aromatic sulphates in the urine. Hunter[5] in his researches on the causation of pernicious anæmia, showed that an increase in the ratio of aromatic over free sulphates is evidence of intestinal decomposition and putrefaction, and that "the destruction of blood was effected by the action of such poisons absorbed from the gastro-intestinal tract." But at the same time there must be a considerable latitude for both forms of insufficiency, for it is not every case with an inefficient liver or kidney or intestine that is attacked with eclampsia. As examples of these types one may quote Clark and Skelton,[6] who observed one case of eclampsia in which there was no marked renal insufficiency until after the seizures, though there was at the same time acetonuria. In another case there was marked renal inadequacy, but no fits occurred. They assume that the first case was due to hepatic derangement, as indicated by the presence of acetone in the urine. Vicarelli,[7] however, examined 137 patients and found acetonuria in 9, all of whom were delivered of a dead fœtus. The acetonuria disappeared in four days, but no mention is made of any eclamptic symptoms. Again, in close relation with acetonuria Stumpf[8] found that "the urine of eclamptic cases even before the attacks contains much more sugar than the ordinary urine of pregnant women," which doubtless results from hepatic derangement. An example of convulsions resulting from intestinal disturbance is given by Hirst,[9] who states that a young woman had violent convulsions the day after her confinement. There was coma, suffused face, very rapid and feeble pulse, and an elevated temperature. On examination of the urine nothing abnormal was found, and there was nothing locally abnormal per vaginam. She had been constipated for two days, however, so a purgative was administered; a good motion resulted, and she felt better very soon after.

As one of the convulsive toxins in the urine probably belongs to the group of colouring substances, the relation between hepatic and intestinal derangement and convulsions is intimate. Van der Velde[10] has recently recorded some

[1] THE LANCET, Feb. 27th, 1897.
[2] Landois and Stirling: Human Physiology, vol. i., p. 246, et seq.
[3] Boston Medical and Surgical Journal, April 12th, 1894.
[4] Auto-intoxication in Disease, p. 62, et seq.
[5] Brit. Med. Jour., vol. ii., 1890, p. 81.
[6] American Journal of Obstetrics, February, 1897.
[7] Prager Medicinische Wochenschrift, No. 33, 1893.
[8] Winckel's Text-book of Midwifery, p. 593.
[9] American Journal of Obstetrics, July, 1896.
[10] Revue Obstétricale Internationale, Oct 11th, 1896.

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experiments undertaken with a view of elucidating "auto-intoxication gravidique." He found that pregnant rabbits were very much more sensitive to the action of normal human urine than non-pregnant animals. Thus clonic convulsions of the neck appeared after 23 c.c. of urine were injected, whereas 51 c.c. of the same urine produced no effect on non-pregnant animals. Again, the defibrinated blood of a pregnant rabbit induced convulsions when 18 c.c. per kilogramme had been injected, while with blood from a non-pregnant animal nothing happened until 25 c.c. per kilogramme were injected. When the urine of the same animals was injected, that of the pregnant one caused convulsions with 18 c.c. per kilogramme, while no convulsions followed the injection of the non-pregnant animal's secretion to the extent of 30 c.c. per kilogramme. He concludes that there is not only an exaggerated activity during pregnancy, but also an increased susceptibility of the nervous system to convulsive toxins, and that this does not cease immediately after labour. That this is so, and that the blood is the source of the toxicity, are shown by the facts that in one instance there was still rapid reaction to the injection of blood taken three days after labour, though the urine was not more convulsive than normal; and in another case the effects of the injection of blood were detectable even up to the eighteenth day after delivery. "There is thus a renal insufficiency which causes accumulation of toxins in the blood during pregnancy in addition to those found in normal urine, and the combined results may be seen in the symptoms of eclampsia." The occurrence of various neuroses in the puerperium has to be taken into consideration with this fact—namely, the toxicity of the blood developed during pregnancy does not disappear for nearly three weeks after the confinement. This term practically coincides with the involution of the uterus, which of necessity argues a great increase in the amount of waste products, which should be eliminated with the greatest possible efficiency. Therefore, any renal insufficiency will be a very important factor so long as the process of involution is taking place. The toxic theory of eclampsia is also supported by the occurrence of other affections of the nervous system in connexion with pregnancy or the puerperium. Whitfield[11] records a particularly interesting association in the case of a woman who had severe vomiting during the whole course of pregnancy. This ceased the day after delivery, but three days later symptoms of neuritis appeared. It was non-alcoholic in origin and the patient recovered completely. Desnos also noted "a case of muscular atrophy of the limbs of rapid evolution coming on during pregnancy after severe vomiting."[12] It seems to me possible that the severe muscular exertion during labour may in some cases be sufficient to determine such a puerperal neurosis. Given renal inadequacy, to a slight extent even, it is quite possible that a sudden accumulation of waste products may result from the severe muscular exercise in such a comparatively limited period of time. The altered constitution of urine after "fatigue drill" and the difference between the urine secreted during the day from that secreted during the period of sleep and rest are well known, and if neuritis can be caused by the faulty metabolism of gout, rheumatism, and diabetes, such an explanation of the origin of some cases of puerperal neurosis may be held. Some eleven years ago I saw a case of (?) progressive muscular atrophy in a woman. The symptoms began in the lower limbs, and she distinctly attributed the onset of the affection to the excessive muscular exertion and straining of the legs during labour, more especially as they were cramped up against the foot of the bed. Whether this might not have been an instance of puerperal neuritis I have now no means of determining, but it seems possible, and "some facts show that an ascending neuritis is able to be the starting point of progressive muscular atrophy,"[13] which has also been known to follow certain acute infectious diseases such as measles.

Seeing that the source of the auto-intoxication is in the blood, liver, and muscles, and that the symptoms arise in some cases apparently from primary hepatic and intestinal derangement and in others from a primary renal insufficiency, with or without marked hepatic and intestinal defection, what is a rational line of treatment? Practically it may be assumed that the majority of cases suffer from a combination of these morbid processes, and it may be advisable to regard salivation as one of the early danger signals in the course of the case. This is supported by the facts that Robin[14] has observed salivation in uræmia, Nothnagel[15] has seen salivation precede the convulsions of epilepsy, and Winder reports two cases of eclampsia, in both of which "the salivation was extreme, the bedclothes and pillows being absolutely wringing wet." The urine was albuminous and the placenta adherent in both instances.[16] Bouchard believes that "the skin and lungs cannot vicariously aid the kidney which has become incapable of accomplishing elimination." He has calculated that one litre of water per intestine is simply one litre less per kidney, which would have eliminated fifty times more urea as urine in the healthy state, but though diarrhœa does not remove urea from the blood it removes other poisons from it.[17] The line of treatment by hydragogues in uræmia is therefore based on a good foundation, but in no case should salts of potassium be used.

It has been shown that the toxicity of the bile and also of the urine is diminished by decoloration, hence the administration of charcoal is of value, as it acts by decolouring some of the pigments and by fixing others, thus removing a constant source of readily absorbable toxins. My experience of the administration of charcoal in colotomy and other cases has been most satisfactory. In addition to charcoal some other intestinal antiseptics may be used, such as naphthalin, &c., and if the liver is especially inefficient a mercurial will be of double service. As to diet, milk in small quantities and suitably given has the reputation of "being opposed to all sources of intoxication."[18] The lowered temperature such as occurs in instances of uræmia, especially in the comatose stage, is really an evidence of imperfect oxidation; Jaccoud[19] highly recommends inhalations of oxygen in such circumstances, and Macalister has recently reported a case.[20] Perhaps the best effects will be obtained in the case of eclampsia with marked renal insufficiency by combining oxygen inhalations with bleeding. Bleeding in uræmia and during pregnancy was common many years ago as a matter of routine, and after having been ignored more or less completely for some time it has again attained a certain position in therapeutics. It has been found that 32 grammes of blood contain 50 centigrammes of extractive substances, and as the daily elimination of these by the urine is 8 grammes this is equal to one-sixteenth of the daily total,[21] and probably even more in the pregnant state. It is certain that more extractives can be removed by bleeding than by any other channel except the renal, though even then it is somewhat indirect and takes more time. A loss of 32 grammes, which can be effected by two leeches, removes as much toxic matter as can be done by means of 280 grammes of a liquid diarrhœa, or by sweating to the extent of 100 litres.[22] Thus in emergencies bleeding is a most efficient remedy, and possibly the loss of blood which takes place naturally during labour may to some extent account for the more or less sudden disappearance of some toxic symptoms which have persisted during the course of pregnancy.

Cambridge.

11 Ross and Bury: Peripheral Neuritis, p. 356.
12 Ibid., p. 360.
13 Laveran and Teissier: Pathologie Médicale, vol. i., p. 507.
14 Bouchard, p. 67.
15 Fagge: Practice of Medicine, vol. i., p. 751.
16 Medical Press and Circular, vol. i., 1897, p. 379.
17 Bouchard, p. 132.
18 Ibid., p. 130.
19 Ibid., p. 135.
20 THE LANCET, Dec. 7th, 1895, p. 1423.
21 Ibid., p. 133.
22 Ibid., p. 133.

TWO CASES OF FRIEDREICH'S DISEASE.

BY T. ARMSTRONG BOWES, M.D. CANTAB.

ALTHOUGH a considerable number of cases of this disease have lately been recorded in medical literature, the two following cases are worthy of addition to the number, as one of them presents two features of interest—namely, a confinement and a fracture of the femur during the progress of the disease.

CASE 1.—In a woman, now aged twenty-nine years, symptoms of the disease commenced at the age of thirteen years with difficulty in walking, and although she was for some time an out-patient at a hospital she has since then become progressively more feeble. She is by no means undersized, and she has fair hair and blue eyes. Her features are a little coarse. Mentally she is inclined to hysterical symptoms, as evidenced by a desponding tendency as regards her condition, and she is apt on slight provocation to dissolve into tears, but in spite of this she is able to

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appreciate a good laugh. She reads, writes, and crochets a little, and she is able to use a knife and fork, although there is some difficulty in accurately gauging the position of the mouth when food is conveyed to it on the fork. Sensation is generally good, and the patient considers that of the right half of the body to be more acute than that of the left. The only abnormality seems to be a deficiency of sensation in the feet and in the lower half of both legs, this being due apparently to the local condition of the skin and to deficient circulation. She cannot walk even with help, and on attempting to do so she drags her legs along the floor. The thighs can be flexed but not the ankles, the foot is extended, and flexion by manipulation of the ankle-joint is deficient. Irregular, jerky movements of the head and neck are present, but none of the legs, and none of the arms except on attempted action to lay hold of anything, when the object is often missed, and the same non-success attends an attempt to touch the tip of the nose with the finger, and the attempted approximation of the corresponding finger-tips of the two hands with the eyes closed, while she has sufficient control over her hands to be able to crochet fairly well. Her speech, though thick, laboured, and hesitating, is perfectly intelligible. The tongue is protruded straight, though there is the same jerky irregularity of it as is present in the head and neck. The plantar reflexes are increased, the knee-jerks are absent, and there is no ankle clonus. The rectal sphincters are natural, the bowels requiring an occasional aperient. The bladder shows no loss of control, but there are occasional attacks of retention of urine lasting for two or three days and requiring the use of the catheter, and her mental condition at these times has a tendency towards hysterical manifestations. These attacks of retention have been present for years, sometimes following menstruation, an otherwise natural function. There is no implication of the pupil, but nystagmus of slow character is present, being lateral in direction, brought into play by lateral movements, and not present when the eyes are fixed. Most of the power in the muscles of the lower extremities remains in the extensors of the thigh. The joints move freely except the ankles, flexion of these being deficient from shortening of the calf muscles. Knee-joint flexion and extension are easily performed by manipulation of the limb. The muscles are wasted, their place being apparently supplied intrinsically and extrinsically by a deposit of fat, which is present in good quantity over the external surfaces of the buttocks. The feet and the greater part of the legs are congested, thickened, and a little puffy, this condition being apparently induced by the helplessness of the limbs. The second and third left toes are a little webbed. The fingers share in the deficiency of circulation, but not to nearly so great an extent as the feet.

CASE 2.—The patient is thirty-four years of age and is the sister of the patient in Case 1. The symptoms commenced at the age of ten years with difficulty in walking. The patient is dark-haired, her complexion is muddy and thick, and she is of slighter build and less stout than is her sister. Clinically the patient resembles her sister in all respects as above detailed, but she differs in that her feet are less blue and œdematous, the condition extending only about three inches above the ankle-joint and not reaching nearly to the knee as in Case 1, and also that she has no attacks of retention of urine. Her grasp is strong when she lays hold of anything and she is able to make trimmings for the dead. She was confined on July 27th, 1882, the child, a male, being stillborn. Labour was premature (at the eighth month) and was followed by considerable hæmorrhage. At this time she could walk with difficulty. On Dec. 25th, 1895, she fell and fractured the neck of the left femur. It united firmly, but she has not recovered the previous use she had of the limb and it is now practically helpless, whereas the right limb can be flexed at the hip-joint. On examination the leg is an inch and a quarter shorter than the right. Flexion, eversion, and rotation outwards of the hip-joint are all deficient, and when lying on the bed the foot is everted. The great trochanter is a little prominent and somewhat thickened, and its upper extremity is higher than it should be. There is little difference in the circumference of the two limbs, as the right and left calves in greatest circumference measure respectively ten and three-quarter inches and ten and a half inches.

In both cases the heart, lungs, abdomen, and urine are natural, there are no visceral crises, and ocular paralysis is absent.

Herne Bay.

LOCAL HOT DRY-AIR TREATMENT IN ACUTE AND CHRONIC GOUT.

BY W. KNOWSLEY SIBLEY, M.A., M.D., B.C. CAMB., M.R.C.P. LOND.,

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THIS new treatment of joint and other affections by the localised application of very hot dry air I fully described in THE LANCET of Aug. 29th of last year. Further experience has confirmed the promising results obtained in the variety of cases then recorded, and the opinion expressed with regard to them. I now wish to draw attention to the action and results of this treatment in a consecutive series of cases of gout, with the belief that the profession will welcome any advance in the present unsatisfactory method of dealing with a disease which directly or indirectly affects such numbers of individuals. The affected limb is left in a temperature of up to 300° F. from half an hour to an hour. During this time, first the limb treated, and then the whole body breaks out into a profuse perspiration, and the pulse, and to a lesser degree the respirations, are increased in frequency. The general effect on the system is considerable, and is evidenced by the fact that the body temperature is raised often one, two, or even more, degrees Fahrenheit, as shown by a thermometer placed in the mouth. In the series of cases of gout which follow no selection of patients has been made; all, therefore, which came for treatment are described in chronological order.

CASE 1. *Acute gout*.—The first case was a man, aged sixty-five years, who came under observation on June 3rd, 1896. The patient had suffered from acute attacks of gout on and off for many years, the attacks often lasting for several months. A year and a half previously he had had a bad attack of pneumonia followed by a prolonged attack of gout in both feet and one knee, which lasted for three months. The present attack had commenced a few days before in the left elbow, which became swollen and the skin tense, red, and very painful; the back of the hand was also swollen, the knuckles being hardly visible and the veins much engorged. After the first treatment by the hot air the parts about the elbow were not so tense, there was less œdema over the back of the hand, and the veins were not so distended. The patient had a return of the attack in the evening in the elbow, accompanied by severe pain; after a bath on the following day the elbow appeared less inflamed and could be moved better; the pain was also greatly relieved. On the evening of June 5th the arm again became more painful, but the patient had a good night; the following day there was some effusion into the tissues below the elbow. Treatment again produced considerable improvement of the parts. By June 8th the gout had quite subsided in the elbow; there was no pain or effusion left, and the joint could be freely moved. During the night the index finger became inflamed; this became more comfortable after treatment and the swelling rapidly subsided. The patient went into the country for a change. In April, 1897, the patient had remained quite well and had been free from attacks of gout since the treatment. During the treatment he was taking alkaline medicine and a saline aperient

CASE 2. *Acute, sub acute, and chronic gout associated with eczema*.—This patient was a lady, aged fifty years, who commenced this treatment on June 25th, 1896. There was no history of gout or rheumatism in the family; her father lived to the age of ninety years, and her mother lived seventy-three years and suffered from eczema. Her paternal great-grandfather lived to the age of 105 years. The patient when young had excellent health till the first attack of gout, twenty-four years ago, in the right great toe, when she was laid up for a fortnight. From this time she had recurrent attacks of acute gout every three or four months. For many years it was confined to the feet. It first appeared in the knees twelve years previously and in the hands for the first time seven years previously. The attacks had been much worse the last six years; she was often laid up in bed for from six to ten weeks, and in acute pain. Five years previously she had an attack of eczema in the feet, and this had troubled her on and off ever since, never having disappeared. Eight years ago the chalky gouty deposit in the right great

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toe broke down and discharged for twelve months, and this place had reopened on and off several times since. In October, 1895, the deposit in the left index finger discharged for four months, and about the same time the left great toe also discharged. From October, 1895, to June 25th, 1896, the patient had been laid up in bed, being unable to move because of pain, although taking large quantities of medicine. The left index finger was much deformed, and chalky deposit was seen beneath the thinned skin. The little finger of the right hand was also much deformed; there was chalk stone deposit in the middle finger of the left hand. The left knee was extremely painful and tender, movement was very limited on account of pain, and there were some deposits to be seen and felt on the anterior surface of the patella. Both the feet were swollen and covered with an irritable form of eczema, which, especially on the left, extended some way up the leg; both great toes were much deformed, tumid, and inflamed, very red and acutely painful; they were both dislocated outwards and the left was discharging thick pus and chalky matter and looked very angry. There was considerable puffiness about the ankles and pain on the slightest attempt at movement. There were deposits in both ears. On June 25th the left leg was placed in the cylinder. The pain was soon relieved by the heat, and when taken out she was able to move the limb freely and could even walk on it without pain; the eczematous condition was also better. The next day she reported that she had slept all night, that the knee was almost well and the foot much less painful, and that there had been no irritation from the eczema, although for the first time for four months she had not used any ointment. She had a second bath and was again much relieved. She returned for a third bath on July 6th, when she reported that she had had another attack of eczema which was very distressing. After treatment the intense irritation was much relieved; the toe continued to discharge freely. The patient's foot was too bad to allow her to come for a bath from July 8th to 22nd, when, after a bath, the part was much better, and she felt very comfortable. By Aug. 20th the patient had had ten baths. The fourth finger was now decidedly smaller, and the chalky deposit in the knuckle of the second finger was dispersing. On the 25th the patient had her eleventh bath, and said she was able to play the piano for the first time for six months. On the 26th, after the twelfth operation, the following note was made: "The various chalky deposits are decreasing quickly and becoming much softer; the fingers are more flexible and the whole hands are of a much better shape." On Sept. 2nd the patient informed me that she had been trying her voice and had found that it was quite restored; she had not sung for eighteen months. She was also able to run up and down stairs; the hands continued to improve. On the 29th the patient had her twentieth bath. She had had a bad cold, and on the previous day, after doing some needlework, she felt a sudden sharp pain from the right shoulder to the tip of the second finger on the right hand, and this had become stiff and painful. Now the elbow was also painful, the tissues about it being tense and swollen, and tender to the touch. All these symptoms were much relieved by another application of the hot air. The next day she reported having had a good night, and there had been no pain in the finger or elbow since; she had been able to dress herself. On Dec. 16th the patient again presented herself, not having attended since September owing to numerous domestic worries. She had been well with the exception of an attack of pain under the knees and down the calves (? phlebitis) in November. At this time the patient was fairly well in herself, but had some gout about the ankles and heels; the eczema had quite disappeared from the feet. The right elbow was enlarged, red, and painful. On the 24th the swelling about the left elbow, which was present last time, had increased and had become extremely painful. On the 29th the patient reported that her left elbow was much less painful for two days after the last bath, but it had then again become worse; the right elbow had not since been painful. On the 30th the left elbow was very red, swollen, and painful over the olecranon process; there was also a good deal of pain up the arm (lymphatic) and also in the axilla. The pain and congestion of the whole was much relieved by the bath. The next day the patient reported that the elbow again became painful during the evening, but she had had a good night and was feeling much better. During the next few hours the left elbow kept very painful and the skin broke on Jan. 5th, 1897, and it then discharged slightly. A day or two afterwards the right arm became painful, then the left became still more inflamed, and the patient had to keep in bed. She had had no sleep for several nights, so she was taken in for treatment on Jan. 13th. The left arm, which was greatly inflamed and red from the elbow to the middle of the arm, was placed in the cylinder, after which the patient fell asleep. Having slept for three hours, she awoke feeling much more comfortable. She did not have a good night, the elbow discharged very freely a thick chalky material, but in the morning the swelling and inflammation had considerably subsided. The whole condition rapidly improved during the next few days. By Jan. 21st the patient was well and she returned home. The elbow had ceased to discharge and the movements of the joints were unimpaired. She stated that the last time her finger discharged it continued to do so for six months. In April, 1897, the patient had continued quite free from gout since January, and there had been no return of the eczema; her general health had also greatly improved.

CASE 3. *Sub-acute gout, chronic bronchitis, and albuminuria.*—This patient, who was first seen on Sept. 21st, 1896, had probably inherited gout from his mother's side of the family. This patient, a painter by trade, had had severe colic fourteen years ago, and was sixty-one years of age. The first attack of gout occurred ten years ago in the right foot, when he was laid up for a fortnight; a second attack came on three years later, and for the last three years he had had repeated attacks, especially in the ankles. When he came to the hospital the right foot was swollen, very tender, and painful, the skin being red and much inflamed; both legs were œdematous. Internal remedies were prescribed. On Oct. 12th the general condition was much the same. The cough and bronchitis continued troublesome, with a good deal of expectoration in the early morning. There were general bronchial rhonchi, especially at the right apex. The urine was clear, of specific gravity 1012, and contained albumin. The second heart sound was accentuated. The condition of the foot was much about the same, the patient being hardly able to get about, and then only with great pain. On the 13th the first hot-air application was given, no change being made in the medicines. The foot was much easier and he could move it more fully after treatment. By the 19th he had had three baths. The foot was much better, and the bronchitis was also much improved; there appeared to be less albumin than formerly. He had slept much better since the baths were administered. On the 20th the patient stated that his foot felt quite well; he had no pain whatever. He took a mixture of gentian and bicarbonate of soda all through the treatment.

CASE 4. *Acute gout.*—This case of acute gout in a man, affecting the left ankle, was greatly relieved by three baths.

CASE 5. *Acute gout.*—A man, aged forty-three years, was first seen on Nov. 13th, 1896. His father died from rheumatism and Bright's disease. Gout occurred for the first time ten years ago, and the attacks had been repeated at least once a year ever since. This attack came on two days previously with great pain, chiefly in the left foot. He was given an alkaline mixture of soda and gentian and the hot-air baths. The patient felt great relief from the first bath—he could bend the foot with comfort afterwards and the pain was much less. On the 15th the foot had been much better. There was no pain but some stiffness about the ankle when walking. After another bath the foot felt quite well and the stiffness had disappeared and did not return. On April 3rd, 1897, the patient wrote to say that he had not had a return of gout in the feet and had continued at work ever since the previous November.

CASE 6. *Acute gout.*—A man, twenty-four years of age, came under observation on Dec. 7th, 1896. There was no family history of gout or rheumatism. Fourteen weeks previously the patient had suffered from inflammation of the eyes, which lasted three weeks, followed by pain in the back, which kept him in bed for three weeks; afterwards the pain settled in the knees, the left big toe, and then in the left hand and arm. Between Dec. 7th and 21st he had four baths, and in addition a mixture containing bicarbonate of soda and iodide of potassium. By Jan. 4th, 1897, he was quite free from gout.

CASE 7. *Gout, bronchitis, heart disease, albuminuria.*—This patient, who was a woman, aged sixty-five years, came under observation on Nov. 23rd, 1896. Her maternal grandmother, who suffered from gout, died when over eighty, and her mother died at ninety-three years of age. She was quite

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well till forty-three years of age, when she had the first attack of gout in the left great toe. She had had frequent attacks since in the feet, ankles, knees, elbows, and hands. For the last eighteen years she had also suffered much from bronchitis. On Dec. 8th she was admitted into the hospital. At this time the patient was very weak and suffered much from dyspnœa; the pulse was rapid (120) and small; the cardiac dulness was increased; there was a soft systolic murmur at the apex and a much louder one at the base, which murmur was readily heard in the vessels of the neck; the heart sounds were very feeble; there were general bronchial rhonchi over both the lungs. The urine was of specific gravity 1010, acid, and clear, and there was some albumin present. The feet were much distorted from old standing gouty changes; there was a large nodule in the left metatarsal phalangeal articulation of the big toe. There was very little movement in the knee-joints, and there was thickening about the heads of the tibiæ. The joints of all the fingers were enlarged, and the fingers deflected to the ulnar side. There was a large firm nodule over the right olecranon and hard nodules on the outer side of the olecranon of the left elbow. The patient had had little or no sleep for weeks, and the breathing was rapid and shallow. On Dec. 11th, after the first bath, the patient seemed to be a little easier. By the 14th the breathing was better after the bath, but she had not slept much. By the 21st the right hand was not so painful and the cough was a little easier; the patient still felt very weak, and her skin did not act well. She gradually improved, and left the hospital on Jan. 7th, 1897.

CASE 8. *Sub-acute gout.*—The patient, who was a cab-driver, thirty-eight years of age, was first seen on Jan. 4th, 1897. He was treated in the same way as the patient in Case 6, being given two baths, and by Jan. 14th he was free from pain.

CASE 9. *Acute gout.*—The patient, a woman aged sixty-two years, came to the hospital on Feb. 22nd, 1897, and gave no family history of gout or rheumatism. She had congenital absence of the first, second, and third fingers of the left hand. Eighteen years ago she had her first attack of gout in the right great toe, and she had had repeated attacks, often twice a year, ever since. The present attack came on a week ago in the left shoulder, then the right leg, and three days later the right hand became involved. The whole hand was much swollen, very red, and the skin much inflamed and acutely painful; there was some inflammation of the left ankle. She also suffered from chronic bronchitis. The first hot-air application was administered on the 23rd, with the result that the hand was less swollen and felt much easier after the bath. A second bath was given on the 25th. The fingers continued to be very stiff, but there had been much less pain in them. A third application was given on March 1st, when the patient said that she had slept much better and the pain had been much relieved. After this she considered herself cured and returned to her occupation on March 10th. On admission to hospital she was ordered 5 grains of iodide of potassium three times a day and ten drops of colchicum vine every night, and on March 1st she had an alkaline mixture containing five grains of iodide of potassium three times a day.

CASE 10. *Acute gout.*—This patient was a salesman, who came to the hospital on March 21st, 1897, suffering from acute gout in both hands, which was quite relieved by three baths and an alkaline mixture.

It is important to note that nearly all of the above cases were treated as hospital out-patients, and that therefore it was impossible to regulate or in any way control their daily habits as to diet, &c. Most of the patients were also only treated during an attack of gout; it was difficult to persuade them to undergo treatment by the hot air between the attacks, even with a fair expectation of keeping off a return of the disease. For instance, in Case 2, although many promises were made, something always interfered to prevent the continuance of regular treatment. In spite of the considerable shortening of the attacks and of the improvement in her general condition, freely admitted by the patient, only the return of pain would persuade her of the need to continue with the hot-air applications. My experience with these cases is that directly the pain subsides the patient returns to work, and neglects to take medicine or the ordinary diet precautions. The cases above described contain examples of gout in its various stages, from the most acute, through the sub-acute, to the very chronic, these latter, sometimes with acute exacerbations, occurring from time to time. Taking first the very acute attacks (Cases 1, 4, 5, 6, and 9), in all of these the local intense pain and congestion were almost immediately relieved by the hot air; very obvious difference in the appearance of the part was seen after the application, and the relief from the intense agony of an acutely inflamed gouty joint was most marked. But gout, like rheumatism, is always prone to reappear; and it was found in Cases 1 and 6, that the acute inflammation in the part first affected rapidly improved under the local treatment, and in the course of a few days another deposit, but one not necessarily so severe, appeared in another part, sometimes the corresponding limb of the opposite side. Treatment would again rapidly disperse this second deposit, and in no instance did it afterwards follow in another joint. It would seem that in nearly all the cases the attack under hot-air treatment was very much shorter than the previous attacks which had been treated only by internal remedies (Cases 1, 2, 4, and 5). Often, in fact, the attack which previously had lasted for weeks under this method lasted only for the same number of days. In some (Cases 2, 6, 8, and 9) internal medicines, such as small doses of colchicum and iodide of potassium, were also given; in others only a simple alkaline mixture (with possibly a slight aperient such as Condal water) was administered, as in Cases 1, 3, 5, and 10. Nevertheless, in all of these cases the relief from pain and the rapid and complete disappearance of the gout were most marked. Case 2 very well illustrates the treatment of very chronic gout, with gouty or chalk stone deposits; the deposit in one finger, for instance, being so bad that at one time the medical attendant had wished to amputate the digit, and yet after several applications of heat the deposit gradually disappeared, and so also the deposits about the heads of the larger bones became distinctly lessened.

A few remarks are necessary with regard to the mode of action of this treatment. The heat applied locally to the inflamed gouty part causes an increased circulation in the area, bringing a larger quantity of blood to the seat of the lesion and at the same time taking away a larger quantity of blood probably more or less saturated with the bodies causing the local deposits. These deleterious products being in the general circulation, so to speak, dissolved out of the seat of the inflammation should in the normal course of events largely find their way out of the body through the kidneys, hence all should be done during the course of treatment to assist these organs to act as freely as possible. Some interesting observations on this part of the subject have recently been made in the clinics of Professor Landouzy at the Laënnec Hospital, and Dr. Déjerine at the Salpêtrière Hospital, in Paris, who are experimenting with the Tallerman treatment, the results of which were published by Dr. Chrétien.[1] They found, for instance, that in one case of ordinary gout the daily elimination of uric acid, which after the fourth bath was 57 centigrammes, rose after the ninth bath to 89 centigrammes; and in another case of arthritis the daily co-efficient of urea had changed from 20 grammes 97 centigrammes before treatment to 25 grammes 50 centigrammes after the treatment had been administered. They also found an increased excretion of all the salts, especially the chlorides. This increased excretion through the kidneys is probably the explanation of the great benefit of this hot-air treatment in cases of gout. The results in the French hospitals were obtained entirely by this external method and without the exhibition of drugs of any kind. I feel no doubt of the great benefit this treatment will show in cases of what are described as "constitutional goutiness," without necessarily any local objective lesion.

Upper Brook-street, W.

[1] La Presse Médicale, Dec. 26th, 1896.

PAUPERISM IN THE WEST OF ENGLAND.—In the first half of 1896 a sum of £206,609 was spent upon in-door and out-door relief in the five south-western counties. This is an increase of £1250 for the corresponding period of 1895. Devonshire is the only county which shows a decreased expenditure, the decrease amounting to £1224. Devonshire spent £14,378 on in-door and £58,426 on out-door relief. Cornwall expended £5689 on in-door and £23,502 on out-door relief. Somerset's total represents an increase of 2·9 per cent. over the beginning of 1895, the sum in 1896 standing at £12,807 for in-door and £41,931 for out-door relief.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. BARTHOLOMEW'S HOSPITAL.

A CASE OF PYÆMIA AND ACUTE SUPPURATIVE ARTHRITIS WITH COMPLETE RECOVERY OF THE JOINTS.

(Under the care of Mr. BUTLIN and Mr. LOCKWOOD.)

OF the many varieties of streptococcus infection our present knowledge seems to suggest that the serum treatment is of more value in the local forms, such as erysipelas,[1] than in those cases such as pyæmia, in which the infection is probably more general. In the following case, however, the earlier injections were distinctly followed by marked improvement. The result of the active treatment of the joints affected is extremely satisfactory, and contrasts greatly with the treatment of pyæmic joints a few years ago, when ankylosis was generally the best result that could be looked for after the infection of a joint with pyæmia. For the notes of the case we are indebted to Mr. J. Preston Maxwell, house surgeon.

A married woman, aged thirty-three years, was admitted to St. Bartholomew's Hospital on Feb. 13th, 1897, at the end of an attack of acute suppurative tonsillitis, which, she said, began three weeks previously. Almost from the beginning of her illness she had had various complications. The left knee-joint was acutely inflamed and full of fluid, but the skin over it was normal, and the slightest movement caused her intense pain. All the other joints were healthy. There was slight dulness with some pleural friction at the right base, indicating a pleurisy of the right side, which was said to have commenced soon after the tonsillitis, and was now subsiding. The heart was particularly examined and no murmur or dilatation could be discovered. The urine was acid, of normal specific gravity, and without any trace of albumin. Her temperature was 101·5° F., her pulse was 132, and her respirations were 34. It was clear that the disease in the knee-joint was both acute and progressive, and therefore it was decided to ascertain the nature of the fluid contained in it. In the evening of the day of admission an anæsthetic was given, and, the skin having been disinfected, the needle of a sterilised exploring syringe was introduced. Pus was withdrawn; it was thin and quite odourless (two peptone broth tubes and an agar-agar tube were inoculated with the pus, but nothing grew). An incision on each side was made into the knee-joint and the remainder of the pus washed out; the joint was syringed first with a solution of biniodide of mercury (1 in 500), and then with a weaker solution of the same antiseptic (1 in 4000). The synovial membrane was seen to be inflamed and the articular cartilages felt velvety. A rubber drainage tube was inserted on each side of the joint, a large dressing of iodoform, iodoform gauze, and sal alembroth wool was applied, and the limb was placed on a straight back splint. On the following day (Feb. 14th) the patient's condition was about the same, though her temperature was slightly lower (101°); the joint was still very painful. This was attributed to the continuance of septic inflammation and to the fact that the splint had to be removed for dressing and irrigation with biniodide of mercury solution (1 in 4000), which was done twice daily. Therefore on Feb. 15th an anæsthetic was again given and the knee-joint thoroughly irrigated with the weaker biniodide solution, a determined effort being made to disinfect the cavity of the joint. The limb was then swung on a straight back splint with a foot-piece, the splint being covered with a mackintosh to allow of daily irrigation without disturbing the limb. Before the anæsthetic was given it was noticed that there was a well-marked systolic murmur at the heart's apex. On the 16th the patient was worse. She was not sleeping well and her temperature had risen to 104·6°, the pulse was 140, and the respirations were 32. The pleural friction could no longer be heard at the right base, but it was very distinct at the left apex in front. In addition to the systolic murmur there was a distinct diastolic bruit to be heard at the heart's apex. She was taking fluid food fairly well and the bowels were acting naturally. On the 17th it was clear that her condition was becoming highly critical. Hitherto the absence of rigors had been a peculiar feature of the case, and even now she did not have a distinct shivering fit; she had felt alternately hot and cold during the night, and her temperature, which had rapidly fallen to normal, was again rising fast. Her tongue was dry, and since the early morning she had been retching and vomiting. Slight subsultus tendinum was observed, and purpuric spots were noticed over both hands and forearms and the right leg. Her mind was clear, and delirium was absent. Although there was no clear evidence that it was a case of streptococcus poisoning, yet the probability seemed so strong that it was decided to commence the administration of antistreptococcic serum. At 2.45 P.M. the first injection of the serum was given into the substance of the rectus abdominis, with marked effect. The temperature fell half a degree, to 99·6, the vomiting and retching ceased, the colour and aspect improved, the subsultus tendinum disappeared, and the tongue became moist. The respirations came down from 34 to 28 per minute, and the patient volunteered the statement that she "felt better." The knee looked well. (At this time blood cultivations were taken from the finger, but no growth was obtained.) At 8 P.M. another injection of 10 c.c. of the antistreptococcic serum was given. She was keeping better, but during the night the temperature rose steadily, and the injection seemed to have had but little effect. She did not sleep well. At 3 A.M. on the 18th a third injection of 10 c.c. of the serum was given into the rectus. At the time she was delirious, and the injection did not prevent the temperature rising steadily. At 8 A.M. a fourth injection of a similar quantity of serum was given with no apparent result, and at 4 P.M. a fifth injection of the same amount was administered. The patient was now delirious, passing everything under her, refusing medicine, but taking liquid food fairly well. The temperature was 102°, the pulse was 140, and the respirations were 28. The knee was still irrigated daily, and looked well. On the 19th she was still going down hill; the delirium continued and fresh purpuric spots had appeared on the right leg. Her face was sallow, and her eyes were sunken. The systolic murmur was still audible at the apex. At 11.30 A.M. 20 c.c. of antistreptococcic serum were injected into the rectus, but as this injection had no effect whatever on her condition, injections were now discontinued. She was ordered 5 grains of sulphate of quinine in half an ounce of brandy, to be given every four hours. She continued to grow worse during the day, and at 4 P.M. sudden paresis of the right side of the face appeared, with slight twitching of the muscles of the face and neck. She was semi-comatose. The knee, which was still irrigated daily, looked well. On the 20th slight improvement had set it, she was rational, the paresis and twitching of the face had quite disappeared, and there were no fresh purpuric spots. She had taken the quinine well and had no signs of cinchonism. The temperature was 103°. The improvement was maintained, and she slept fairly at night, and her temperature, pulse, and respiration hardly changed for the next three days. On the 23rd the right knee became full of fluid. It was explored, opened, and drained in the same way as the left. The pus was of the same kind and yielded no growth on cultivation. A splint like that used for the left leg was used for this knee also. Both knee-joints were irrigated daily. From this time the patient steadily improved. The temperature came slowly down to the normal, which it reached on March 12th. The quinine was discontinued on Feb. 26th. The drainage-tubes were removed from both knees between March 1st and 5th and the wounds were allowed to close. As soon as they were healed the splints were removed and she was encouraged to use and bend the knees as much as possible. Massage was also employed. After the falling of the temperature she began to put on flesh and rapidly improve in her general health. By April 15th she could walk round the ward unaided, except by a stick, and could bend her knees through an angle of 70°; all the purpuric spots had quite disappeared, and no heart murmur could be heard. She was then discharged from the hospital; about the middle of May she was

[1] Marmorek: Annales de l'Institut Pasteur, Nov. 7, 1895, and Tison: Journal de Médecine de Paris, April 26th, 1896.

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seen again, when she walked well without a stick and no defect was noticeable in her gait.

Remarks by Mr. LOCKWOOD.—It would hardly be right to draw any conclusions from this case as to the value of the serum which was given. I had not the opportunity of seeing the case when the joints were incised, or of seeing specimens of the pus. The fact that nothing grew in the cultures must not be taken to be evidence of the absence of streptococci. At times these organisms are exceedingly difficult to cultivate, although known to be present. Nevertheless, in this instance, some entirely different microbe may have caused the suppuration. The point of interest is the wonderfully complete recovery of function in the suppurating joints. This is due to the prompt treatment which the house surgeon, Mr. Maxwell, applied, and to the care which was afterwards taken to avoid any fresh infection from the wounds. Perhaps I may add that antistreptococcic serum was quite unavailing in a case of pyæmia which I saw with Dr. Samuel West and Dr. J. A. Smith, although streptococci were seen in the pus.

CANNING TOWN MEDICAL MISSION HOSPITAL.

A CASE OF ULCERATIVE ENDOCARDITIS TREATED WITH ANTISTREPTOCOCCIC SERUM.

(Under the care of Dr. MARGARET PEARSE.)

THE ordinary medicinal treatment of ulcerative endocarditis is so extremely unsatisfactory, and the rarity of recovery is so great, that any method which offers better prospects of cure is sure of a careful and extended trial. Though for years the causal connexion of streptococci and staphylococci with the disease has been recognised, it is only recently, since the introduction of serum therapy, that any hopes have arisen of combating successfully this most deadly disease. The use of antistreptococcic serum is still on its trial, and therefore every case in which it is employed should be put on record to assist in the formation of an opinion as to the value of the treatment. A case very similar to the following was published in THE LANCET last autumn.[1]

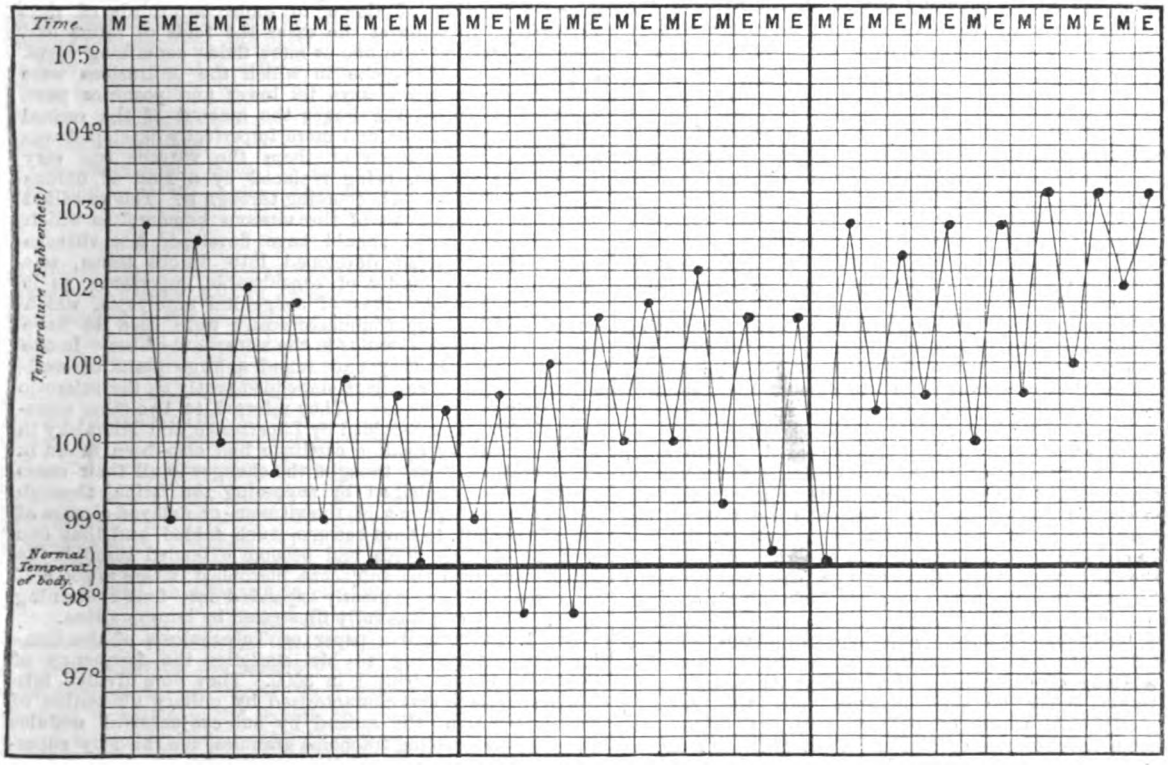
A girl, aged sixteen years, attended as an out-patient on Nov. 27th, 1896, complaining of having "had a cold" for three weeks and of her "breath being tight." There was marked dyspnœa, the pulse and respiration rates were increased, and the temperature was 101° F. Examination revealed rapid and exaggerated cardiac action, a loud mitral systolic murmur, and a faint diastolic murmur at the aortic area. The patient was put on salicylates and treated at home for a week. The temperature remained high, one evening rising to 105°. No improvement taking place she was admitted into the hospital on Dec. 4th. The history of the case obtained after admission was as follows. She had felt quite well till the commencement of November, when she "caught a bad cold that left her chest choked up." She kept at her work, though feeling ill, till Nov. 23rd, when she complained of aching pains in the left shoulder, and on the 25th of palpitation and shortness of breath. On the 27th she visited the out-patient department for advice. No previous history of rheumatism was obtainable, or of any rheumatic manifestations beyond a transient erythema a year before. On admission the patient did not seem to be very ill, being bright and lively. There was considerable dyspnœa, but she was able to lie down. She complained of palpitation and of slight pain in the left shoulder. There was considerable perspiration without acid odour. No nodules, no rash, and no anæmia were present. On examining the heart the apex beat was seen and felt in the fifth interspace, three inches from mid-sternum. The area of cardiac dulness was increased to the right. The sounds were muffled at the apex, but a mitral systolic murmur was distinguishable, as well as a diastolic aortic murmur, and some pericardial friction sounds. At the base of the right lung dulness on percussion and diminished breath-sounds indicated a small effusion. During the first week after admission, from Dec. 4th to 10th, the patient showed signs of marked general improvement. The dyspnœa lessened, the slight joint pains disappeared, and the temperature gradually fell from 103° to 100·4° in the evening, and reached the normal in the morning. The pulse-rate fell from 114 to 84 and the respirations from 36 to 24. Some progression was apparent in the physical signs, however, indicating especially increase of fluid in the pericardium. The apex beat was indistinctly felt in the fourth interspace, the area of cardiac dulness extended up to the second interspace, and the sounds at the apex became more muffled. A systolic aortic murmur was heard as well as the diastolic aortic murmur. The edge of the spleen was indefinitely felt below the costal margin. The patient during this time was at first taking ten-grain doses of salicylate of soda every six hours, and then every four hours. During the second week, from Dec. 11th to 17th, the general condition of the patient remained much the same, except that the temperature again gradually rose to reach 102° in the evening and an erythematous rash appeared which by degrees spread over the limbs and face, disappearing after three days. The fluid in the pericardium and at the right base diminished slightly in amount. The urine was normal, and continued so throughout the whole illness. During the third week, from Dec. 18th to 24th, she did not complain of feeling more ill, but the temperature now remained persistently between 101° and 103°, and the pulse-rate again rose to 116. She complained of tenderness on palpation of the spleen. The physical signs remained much the same, but for again indicating slight increase of fluid in the pericardium. As the salicylate treatment seemed to be useless the patient was given five grains of salol twice a day, but the treatment had to be discontinued after two days on account of the severe abdominal pains felt immediately after each dose. On the 24th she was seen in consultation by Dr. Schorstein, and as the increasing severity of the symptoms suggested the probability of the endocardial mischief having assumed a malignant type, it was decided to try the effect of treatment by antistreptococcic serum. An abstract of the daily notes is as follows, and the accompanying chart indicates the wide range of the temperature.

The serum used was obtained from the British Institute of Preventive Medicine, and the injections, with two exceptions, were made under the skin of the abdomen. All other drugs were discontinued. On Dec. 26th the patient complained of pain over the præcordium. Many fresh friction sounds were heard. The area of splenic dulness was increased downwards and forwards, and there was tenderness on palpation. At 6 P.M. 2½ c.c. of antistreptococcic serum were injected. She felt no discomfort either generally or locally afterwards. During the evening sharp pleuritic pains were felt in the left axilla, and many friction sounds were heard. On the 27th all pains had disappeared. At 8.30 P.M. 5 c.c. of the serum were injected. On the 28th the patient was much the same. At 6 P.M. 10 c.c. were injected. On the 29th her general condition was good, though the temperature remained high, and there was no improvement in the physical signs. There was still a considerable amount of fluid in the pericardium, and some effusion at the right base as well as the recent pleurisy on the left. On the 30th her general condition was not so good. She slept during the greater part of the day, but complained of pain over the præcordium and of very sharp pleuritic pains in the left side. Many friction sounds were heard. At 11 A.M. 20 c.c. were injected. There was no discomfort. On the 31st the temperature had made a decided drop, falling to 100°, and at 11 A.M 10 c.c. were injected. On Jan. 1st, 1897, there was an erythematous blush over the abdomen at the site of the last three punctures. Some improvement had taken place in the physical signs; the upper limit of the cardiac dulness was half an inch farther down, and there was less pericardial friction. The breath sounds were louder at the right base. Dulness and bronchial breathing at the angle of the left scapula and many friction sounds in the axilla were noted. On the 2nd the rash over the abdomen had not faded, and a rash showed itself on the limbs and face similar to that which appeared before. It was much more raised than that upon the abdomen which followed the injections, and was very irritable. On auscultation the second sound at the apex was found to be reduplicated. On the 3rd the temperature fell for the first time to normal. The injections were resumed after having been omitted for two days on account of the rash. At 10 A.M. 20 c.c. were injected, and within four hours the temperature rose to almost 104°. On the 4th there was marked general improvement in the patient. Her appetite was increasing. She felt no pains except a little at the site of the previous puncture in the gluteal region. On the 5th the temperature was normal during the greater part of the day, and did not rise beyond 101·6°. On the 6th the rashes had almost disappeared. The patient seemed to be decidedly stronger. There was marked

[1] THE LANCET, Oct. 17th, 1896, p. 1079.

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improvement in the physical signs. The apex beat was now in the fifth interspace and the sounds at the apex were much less muffled. Much pericardial friction was heard. The breath sounds were distinct to the base of the right lung and the patch of bronchial breathing left had disappeared, but some friction and moist sounds were still heard. At 4 P.M. 10 c.c. were injected. On the 7th there was a slight rise of temperature in the evening and the pulse and respiration rates increased. During the night the patient was disturbed by uncontrollable cough; there was no expectoration. On the 8th the temperature fell below normal and the patient perspired profusely. At 10 A.M. 10 c.c. were injected and much pain at the site of puncture was complained of afterwards. Between 10 and 12 P.M. the temperature rose to 105° and the cough again became troublesome. On the 9th there was further improvement in the physical signs. The area of cardiac dulness was practically normal, except that the right limit was at the right sternal border. The apex beat was in the fifth interspace three inches from mid-sternum. The sounds at the apex were no longer muffled, and a faint



presystolic murmur was distinguishable. On the 11th the patient was very well and felt no pains. The temperature remained subnormal all day and did not again rise above normal. On the 23rd the patient was practically well and said she felt quite strong. There was no dyspnœa or palpitation. On examination all that was found was that the cardiac dulness still extended to the right border of the sternum, and that a double aortic and a mitral systolic murmur were present. The presystolic mitral murmur had quite disappeared. The patient was allowed to get up on this date, and on Feb. 5th she was discharged perfectly well.

Remarks by Dr. MARGARET PEARSE.—The foregoing account speaks for itself of the value of having adopted the serum treatment. Salicylates, after producing temporary improvement, proved useless. Salol could not be borne, and the case assumed an increasingly serious aspect until the injections were commenced and persevered with, for improvement even then was slow and gradual, though ultimately ending in perfect recovery. As to the diagnosis of the case it was difficult to arrive at any other. The illness was distinctly rheumatic in origin, as evidenced by the joint pains and the implications of both pericardium and endocardium. With the diminution of joint pains temporary improvement occurred, but this was soon replaced by progressive increase in the seriousness of the patient's condition. The temperature persistently rose and failed to be accounted for by the appearance of fresh rheumatic manifestations (beyond an erythema), or sufficiently increased severity of those already present, except as regards the endocarditis. Here, as the notes show, soon after the patient's admission into hospital a systolic aortic murmur gradually appeared, and later a presystolic mitral murmur, which afterwards gradually disappeared as the serum treatment was persisted in. This marked alteration in the murmurs, coupled with the high temperature of a hectic type and increase in the size of the spleen, led to the conclusion that the endocarditis was of the ulcerative rather than the simple type. Unfortunately, a bacteriological examination of the blood was only made on Jan. 11th, when, as the report said, "the case having been under treatment so long it was not surprising that no streptococci were found." The verification of the diagnosis by the appearance of infarcts was fortunately averted by putting the patient under the serum treatment immediately the diagnosis seemed in the least warrantable. The possibility of typhoid fever was readily excluded by absence of all the characteristic symptoms except high temperature and slight increase in the size of the spleen. Acute tuberculosis was still less closely simulated, and the issue of the case decided against the possibility, even had there been any doubt.

CITY ORTHOPÆDIC HOSPITAL.—The forty-sixth anniversary festival dinner in aid of the funds of this institution was held on June 30th at the Holborn Restaurant. The chairman, Baron Ferdinand de Rothschild, in proposing the toast of the evening, "The City Orthopædic Hospital," said the institution was face to face with the fact that it had to renew a mortgage of £6000, the committee having acquired the freehold of the hospital; they had, further, to appeal for funds to enable them to open additional wards. During the forty-seven years that the hospital had been in existence it had relieved upwards of 70,000 indoor and outdoor patients. It was also a free hospital and one that specially treated children. Subscriptions and donations were announced amounting to £1400, including 50 guineas from the chairman, 100 guineas from Baroness Hirsch, and 50 guineas from the City Corporation.

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Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Spontaneous Dislocation of the Lens into the Anterior Chamber.—Demonstration of Tscherning's Theory of Accommodation. — Microphthalmos with Cystic Protrusion from the Globe.—Tuberculosis of the Conjunctiva.—Exhibition of Specimens and Cases.

A MEETING of this society was held on July 2nd, Mr. E. NETTLESHIP, President, being in the chair.

Mr. BICKERTON read notes of two cases of Spontaneous Dislocation of the Lens into the Anterior Chamber. In the first case (a woman, aged sixty-five years) the right eye had been lost by an injury twenty-five years before. The sight of the remaining eye failed suddenly one afternoon without any injury being received. She was not seen till seventeen days later, when there was raised tension, vision *nil*, the anterior chamber being occupied by a partly opaque lens. The lens was removed without difficulty by a vectis through a corneal incision. In the second case (a man, aged sixty-six years) cataract extraction had been performed on the left eye in 1891, a preliminary iridectomy being done on the right at the same time. In March, 1897, the lens was found filling the anterior chamber of the right eye, no injury having been received. Tension was + 3, and vision equalled doubtful perception of light. The cataractous lens was removed through a corneal incision; the cortex was fluid. The vision with correction after eighty-one days was $\frac{6}{9}$.

Mr. PRIESTLEY SMITH showed a model illustrating Tscherning's Theory of Accommodation, and reviewed the evidence for and against the theory. Helmholtz proved an increase of lens convexity in the area of the undilated pupil; he inferred a general increase of sphericity due to slackening of the zonula. He put forward his theory as provisionally the most feasible, not as proved. Tscherning, following Thomas Young, shows that during accommodation the refraction and the convexity of the lens increase chiefly at the central area of the pupil, less and less towards the periphery, and in the peripheral zones not at all; the lens surface changes from a spherical to a hyperboloid curvature. He shows further that this change can be produced in animals by tightening the zonula. Tscherning's observations relate to:—*1. Spherical aberration:* Did the sphericity of the lens increase during accommodation, the spherical aberration, other things being equal, would increase also. But a study of diffusion circles and shadows cast upon the retina shows no such increase, but the reverse; the peripheral zones of the lens do not increase in refraction as does the central area. *2. Scheiner's experiment:* Looking at a point of light through two adjacent pinholes placed before the pupil, the eye sees it single at the distance for which it is focussed and double at any greater or less distance. With an instrument based on this principle the refraction is estimated in different parts of the pupillary area at the same time. During accommodation the increase of refraction, measured in this way, is much greater at the centre than at the periphery. *3. Reflection from the lens surface in the living eye:* A series of electric lamps placed in a horizontal line before the eye are seen reflected by the lens. The varying degrees of displacement which these reflections undergo during accommodation are an index to the change of curvature in the lens surface. The convexity increases chiefly at the centre, less and less, or not at all towards the periphery. *4. Reflection from the surface of the exposed lens and traction of the zonula:* The zonula being seized and rendered tense at two opposite points of the circle, the change of curvature occurring in the lens surface is studied by means of images reflected from it in several zones. It is of the character already described. Tscherning holds, therefore, that in the act of accommodation the ciliary muscle contracts so as to increase the tension of the zonula, and to alter the lens surface from a spherical to a hyperboloid form. A given increase of convexity in the central area involves much less change the general form of the lens than it would according to the assumption of Helmholtz. Tscherning founds his study on the work of Thomas Young, and does full honour to that eminent man of science. Hess, on the other hand, shows that during strong contraction of the ciliary muscle, especially under eserine, the lens becomes tremulous, and this he declares is incompatible with an increased tension of the zonula. Tscherning confirms the observation, but attributes the trembling of the lens to spasmodic action of the ciliary muscle. Hess replies that the lens, besides being tremulous, is displaced laterally, the displacement in all positions of the head being governed by gravity. This, he urges, can only be explained by assuming that contraction of the ciliary muscle slackens the zonula.

Mr. TREACHER COLLINS and Mr. J. R. ROLSTON read a paper on Microphthalmos with Cystic Protrusion from the Globe, based on the pathological examination of seven eyes in which it was present. It was pointed out that though all the specimens were alike in one particular—namely, in being microphthalmic eyes with a protrusion of retinal tissue through a gap in the choroid and sclerotic—they presented great differences as regards the degree of development of the eyeball. The amount of the protrusion of retina varied from a small knuckle of tissue to quite two-thirds of that membrane. In some of the cases the folds of retina had become distended into one or more fluids containing cysts. The region of the globe in which the protrusions were situated was nearly always its lower and posterior part. Speaking generally, the larger the amount of the retinal protrusion the smaller and more imperfectly developed was the eyeball. In some of them the vitreous was very imperfectly formed, being replaced by a kind of fibrous tissue with blood-vessels coursing through it. This so-called "atypical development of the vitreous humour," in which the mesoblast which should have developed into vitreous humour had instead developed into fibrous tissue, was thought to be a matter of considerable importance, as it served to elucidate cases of congenital amblyopia, which when examined ophthalmoscopically were seen to have fibrous membranes or bands in the vitreous chamber. In one of the specimens they had found a large plate of well-developed hyaline cartilage embedded partly in the sclerotic and partly in the cornea. They referred to two other somewhat similar cases recorded by Lapersonne and Mitvalsky in which nodules of hyaline cartilage had also been found in the sclerotic. It was thought the changes in all their cases could be best explained by supposing the retina, through imperfect development of the vitreous or delayed closure of the ocular cleft, to have become much folded, and that one or more of these folds had become extended through the ocular cleft into the subjacent mesoblast, where in some of the cases it had subsequently expanded into fluid-containing cysts. The paper was fully illustrated by lantern slides.

Dr. J. EYRE read a paper on Tuberculosis of the Conjunctiva. According to his statistics the frequency of these cases was about 1 in 3000. They were divided into five groups—the first characterised by miliary ulceration of the conjunctiva, the second by sub-conjunctival nodules somewhat resembling trachoma granules, the third by superabundant papillary granulations, the fourth appeared as lupus of the conjunctiva, and the fifth as papillomatous tumours of the palpebral conjunctiva. The affection was to be regarded as the result of direct inoculation and not as an expression of general tuberculosis. The age limit varied from ten months to thirty years, the most common time of appearance being about puberty; females were more often attacked than males. The conjunctiva of the lower lid was the most common seat of the affection; glandular enlargement was generally present. Eight cases were described in detail. In group 1, 1 case; group 2, 2 cases; group 3, 2 cases; group 4, 1 case; and group 5, 2 cases. Special attention was directed to group 5 on account of the difficulty in diagnosis without microscopic examination. The necessity of early complete removal of the disease was insisted on.

The following cases and card specimens were shown:—

Mr. JESSOP: Sarcoma of Choroid.

Dr. BATTEN: Case of Spontaneous Hæmorrhage into the Vitreous.

Mr. J. GRIFFITH: Case of Probable Thrombosis of the Cavernous Sinus.

Mr. HOLMES SPICER and Mr. DEVEREUX MARSHALL: Specimen of Tubercle of the Iris.

Mr. THOMPSON: Unusual Type of Corneal Infiltration.

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Reviews and Notices of Books.

Manual of Bacteriology. By ROBERT MUIR, M.A., M.D., F.R.C.P. Edin. (Lecturer on Pathological Bacteriology, University of Edinburgh; Pathologist, Edinburgh Royal Infirmary), and JAMES RITCHIE, M.A., M.D., B.Sc., (Lecturer in Pathology, University of Oxford). Pp. 519. 108 Illustrations. Edinburgh and London: Young J. Pentland. 1897.

BOOKS for students and practitioners on bacteriology now abound, and it is difficult to recommend any particular text-book. Some are too large for the general use of students and others are too meagre, and, in order to publish the work at a low price, illustrations are omitted. Without suggesting a slight to other similar works, we can strongly advise those who desire a text-book of convenient size, with lucid descriptions and good illustrations, to obtain the book now under consideration. The authors state in their preface that they have made an endeavour to render the work of practical utility for beginners, and have considered only those bacteria which are associated with disease in the human subject. This is, of course, all that is required by the student, and we congratulate the authors on having so successfully carried out their intentions.

To quote again from the preface: "In the systematic description of the various bacteria an attempt has been made to bring into prominence the evidence of their having an etiological relationship to the corresponding diseases, to point out the general laws governing their action as producers of disease, and to consider the effects in particular instances of various modifying circumstances." As regards this, also, the authors have produced most satisfactory results. The first chapter deals with General Morphology and Biology of Bacteria, and an interesting account is given of the structure of the bacterial cell, the modes of multiplication, and the chemical composition of micro-organisms. Then follow in succeeding chapters the modes of cultivation of bacteria, microscopic methods employed, the methods of inoculating animals, and general considerations of bacteriological diagnosis. The manner of preparing artificial culture media are duly described, and the student ought to find no difficulty in carrying out the instructions given, although, of course, a written description can never satisfactorily displace practical instruction.

The chapter on the Relations of Bacteria to Disease and the Production of Toxins by Bacteria, will well repay perusal, as will also the section on Immunity. The various theories of acquired, artificial, and natural immunity are clearly set forth and discussed, and the authors conclude the subject by admitting that the whole question is still an open one and cannot be fully explained. The descriptions of the individual bacteria are very clear and concise, and will be found useful not only by students, but also by practitioners as a means of acquiring practical knowledge which was not taught at the schools when they were students, but which, as given in this work, they will have no difficulty in adapting to their every-day work, so far as simple appliances will enable them to do.

Separate chapters are devoted to Acute Pneumonia, Tuberculosis, Glanders, Leprosy, Actinomycosis, Anthrax, Typhoid Fever, Diphtheria, Tetanus, and Cholera, whilst other pathogenic bacteria such as those of influenza, relapsing fever, plague, measles, &c., do not require such a long description. A good account is given of the micro-organisms associated with gonorrhœa and syphilis. Suppuration and allied conditions also receive due attention.

The authors "are convinced that to any one engaged in practical study photographs and photomicrographs supply the most useful and exact information"; they have consequently used these almost exclusively in illustration of the systematic description. We quite agree with the authors in the above statements. The photomicrographs are beautifully reproduced and greatly add to the general value of the work.

A Guide to the Clinical Examination of the Blood. By RICHARD C. CABOT, M.D. With coloured plates and engravings. London, New York, and Bombay: Longmans, Green, and Co. 1897. Pp. 405. Price 16*s.*

ANYONE who had been told twenty years ago what important diagnoses or aids to diagnosis can be derived to-day from the minute study of a single drop of blood might well have stood excused for incredulity. A new branch of pathological science has grown up, and its literature is so large and so rapidly increasing that practical workers will be grateful to Dr. Cabot for a book of moderate size in which may be found a good description of the methods which are in use, the main facts which have been ascertained, and their clinical significance. The plan of the book is strictly clinical, and the statistics given are largely from American sources. The author's extensive practical experience of the subject is everywhere apparent, and has been gathered, we read, chiefly at the Massachusetts Hospital. The clinical study of the blood is, indeed, much more extensively practised in America and on the Continent than is the case in this country, and it may be hoped that the appearance of so thoroughly practical a manual as the present work—the first of its kind, so far as we know, in the English language—may give an impetus to a study not merely interesting in itself but of profound value and importance to the physician or surgeon. Part I. deals with the technique of clinical examination of the blood, and the details given are clear and adequate. The author gives good reasons for preferring the lobe of the ear to the finger as the source of the drop of blood. The examination of the fresh blood, the use of the hæmocytometer, and of Fleischl's hæmometer are described in full, together with the best methods of preparing and staining blood-films. Part II. is devoted to an account of normal blood and its variations—a very necessary prelude to the study of pathological conditions. The description is in most respects admirable, but we cannot follow the author in his assumption that the varieties of leucocyte present in normal blood represent merely phases in the life-history of individual corpuscles. It is, of course, possible that such may be to some extent the case, but the relative infrequency of intermediate forms is an argument in the other direction. To describe the eosinophile cells as leucocytes in a state of senile decay is in our opinion unwarrantable, and is opposed to what we know alike of their physiological properties and of their history in animal phylogeny. In Part III. the author treats of the general pathology of the blood, anæmia, leucocytosis, and so forth.

The second and larger part of the book is occupied by the special pathology of the blood. The primary anæmias and leukæmia receive very full and thorough attention. These chapters are followed by an account of the blood in acute and chronic infectious diseases and in diseases of the different organs of the body. Here, though absolute diagnosis can rarely be made by the examination of the blood, yet very important indications are not seldom afforded by it, and the book is a useful work of reference in this connexion. The parasites of the blood are dealt with in a succeeding chapter and the book concludes with a section on the blood in infancy. Throughout the work very extensive references are given to the statistics and observations of European workers in the field, whereby the mass of information is much increased. It is to us a matter for regret that Englishmen have contributed so little, but we think that perhaps more attention might have been paid to some very valuable work which has emanated from this country. The

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book is illustrated by a number of excellent coloured plates and is well got up. It supplies a distinct want in our literature and the author deserves hearty congratulation upon the success with which he has accomplished his task.

Practical Points in Nursing, for Nurses in Private Practice. With an Appendix Containing Rules for Feeding the Sick, Receipts for Invalid Foods and Beverages, Weights and Measures, Dose List, and a Full Glossary of Medical Terms and Nursing Treatment. By EMILY A. M. STONEY Superintendent of Training School for Nurses, Carney Hospital, South Boston, Massachusetts. London: The Scientific Press, Limited. Pp. 456. Price 7*s.* 6*d.*

"IN preparing the subject-matter of this volume, whose title-page clearly indicates its design, the author has attempted to explain, in popular language and in the shortest possible form, the entire range of private nursing as distinguished from hospital nursing, and to instruct the nurse how best to meet the various emergencies of medical and surgical cases when distant from medical or surgical aid, or when thrown on her own resources, studiously refraining, however, from advising the nurse to act upon her own responsibility or to assume personal treatment of the patient except under circumstances of great urgency."

This extract from the preface sufficiently indicates the scope and aim of the volume. The preface proceeds in a curiously complacent way to point out various excellencies in the work, with a self-confidence on the author's part which, we admit, is not entirely misplaced, for the book is the best of several good books on nursing which have recently reached us from America. It is brightly written, the subject being presented from the nurse's standpoint, and by one who takes a consistently high view of the position and duties of her calling. Though avowedly limited in its scope the book contains a very complete exposition of practical nursing in its various branches, including obstetric and gynæcological nursing. The instructions given are full of useful detail; indeed, we have not met with many books on the subject in which so few omissions can be pointed out; especially do we note the sensible way in which plain physiological reasons are given for the various modes of treatment enjoined, reasons so often withheld, and without a knowledge of which it is impossible for a nurse to work intelligently. The chapters on the Administration of Baths, Packs, and Douches, and those dealing with enemata and injections in general are particularly good in this respect. Throughout the book an admirably high standard of asepticism is advocated, the details given of the various antiseptic methods being most accurate and up-to-date. Errors, of course, there are, but they are not numerous. It is probably by a slip that the air is described on page 289 as being composed "mainly of oxygen and nitrogen, *there being more oxygen than nitrogen.*" On page 45 it is stated that "the Cheyne-Stokes respiration ..... is a fatal symptom"—a much too sweeping statement when thus unqualified. The composition of a nutrient enema is given on page 64 with ingredients amounting to from four ounces to six ounces. This is too large as a general rule, and no mention is made of the use of peptonising agents in this method of feeding. Full directions are given on page 271 for administering an enema to a young baby for ordinary constipation; but it is not pointed out that at this age the actual injection of fluid is seldom necessary, the insertion of the enema nozzle, a twist of soft paper, or the lubricated finger being generally all that is required. On page 276 the nurse is told to "snip" the frænum in a tongue-tied baby, no directions being given except the placing of a little sugar on the lower lip to cause the baby to put out its tongue. It is added that "no anæsthetic is required, neither is there any loss of blood." If nurses are to divide the frænum linguæ—an operation, in our opinion, better left to the surgeon—they should at least be taught the importance of keeping the scissors' point directed close to the jaw-bone rather than towards the base of the tongue, or they will find that hæmorrhage is by no means impossible, even in so simple an operation as this, if performed without due skill. And this is one of several instances in which, in spite of the disclaimer in the preface, the nurse is led beyond her province, and it is the only real fault we have to find with the book. The nurse is instructed, for example (p. 152), how to administer anæsthetics, and advised to use hypodermic injections of one-sixth of a grain of morphia, without medical direction, under a great variety of circumstances, including commencing appendicitis and acute scarlatinal nephritis. The author discusses the morphia question as an open one, and decides that the nurse is justified in initiating the treatment on her own responsibility. This is a doctrine which may perhaps have some justification in America, where it is possible that a nurse may have to work occasionally at a very great distance from medical advice, but it is one which we consider altogether untenable in England. A nurse should under no circumstances whatever administer morphia hypodermically except under orders. To allow her to do so is unfair both to herself, the patient, and the medical man; it invests her with a responsibility which she should in no wise be called upon to assume, and it is a definite infringement of that line which should distinctly divide the provinces of the physician and the nurse. The same remarks apply to the administration of anæsthetics by nurses.

More than twenty pages of the book are occupied by an exhaustive dose list, which, as it suggests prescribing, seems somewhat out of place, and there is a full and useful glossary of medical and nursing terms in which the only error we find is the definition of "pupil" as "the iris, or centre of the eye." The recipes for sick room cookery of all kinds are admirable and trustworthy. The book is handsomely got up, the type is excellent, and the illustrations are good. With due regard to the modification indicated above it will be a reliable text-book for nurses.

The Vertebrate Skeleton. By SIDNEY H. REYNOLDS, M.A. Cantab. Cambridge University Press. 1897. Pp. 527. Price 12*s.* 6*d.*

THIS work, which is one of the Cambridge Natural Science Manuals, should prove valuable alike to the beginner and to the more advanced student. It commences with an introductory account of the skeleton in general, in which the structure of the various exoskeletal tissues—such as claws, hair, teeth, horns and feathers—is described; then the methods of ossification are discussed; and afterwards the general development of the cranium and the rest of the endo-skeleton is briefly and very clearly described. The second chapter contains the classification which the author decides to adopt in the succeeding pages. Probably every worker at zoology would or could criticise every system of classification not his own; but the present one has at least the merit of showing the reader exactly what the author means, while it has also the advantage of indicating the relationship which various extinct animals bear to those at present inhabiting the Earth. The rest of the work describes the skeletal structures in the different divisions of vertebrata, beginning with amphioxus and balanoglossus, and ending with the primates, certain animals being wisely selected as types and their bones described in detail, it then only remains to point out how other animals in the class or order differ from them. A considerable number of references to recent literature is given in the form of footnotes; these, though undoubtedly valuable, might have been more representative.

The book is illustrated by 110 clear, straightforward

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figures, each of which has the points of interest indicated by numerals which correspond to names under the illustration. It would be quite possible to get a very fair knowledge of comparative osteology from a study of the figures alone in this book The printing and paper are all that can be desired, while the author's style, always clear, is perhaps as attractive as the condensation of a large mass of osteological facts will allow. We feel sure that the book is well worth the attention of all who are interested in the subject.

LIBRARY TABLE.

The Administration of Nitrous Oxide and Oxygen for Dental Operations. By FREDERIC W. HEWITT, M.D. Cantab. London: Claudius Ash and Sons. Pp. 88. Illustrated.—After a brief *résumé* of the history of the employment of nitrous oxide gas, and of that body mixed with oxygen, the writer describes his apparatus and gives directions for the effective use of this mixture of gases. Hillischer, of Vienna, was the first to introduce the method in his well known pamphlets on "Schlafgas" as he called nitrous oxide and oxygen, and his experience of over ten years confirms his favourable opinion of this anæsthetic. Dr. Hewitt, however, found Hillischer's apparatus unsatisfactory, and with considerable ingenuity devised one of his own. He claims that by its use a more prolonged anæsthesia (forty-four seconds) can be obtained, all asphyxial symptoms can be abolished, and a safe and reliable anæsthetic for use in minor surgery obtained. He justly remarks that the mixture requires more experience for its use than does nitrous oxide, and the apparatus is more complicated and more liable to get out of order. The descriptions are clear and thoroughly practical, and should form a satisfactory guide to those who are interested in this branch of surgery.

Encyclopädisches Englisch-Deutsches und Deutsch-Englisches Wörterbuch. Zweiter Teil: Deutsch-Englisch. Bearbeitet von Professor Dr. DANIEL SANDERS. (*Encyclopædic English-German and German-English Dictionary.* Part II.: German-English. By Professor Dr. DANIEL SANDERS.) Berlin: Langenscheidtsche Verlagsbuchhandlung. London: H. Grevel and Co. New York: The International News Company. 1897.—This valuable and comprehensive dictionary is being published in parts, of which there will be about twenty-four, and from four to six will appear annually. Each part contains from 96 to 112 pages, and costs 1*s.* 6*d.* The German-English portion will occupy about 2500 pages, and will be completed in the year 1900. The English-German portion, by Professor Ed. Muret, has been brought out in the same way, and is now on the point of completion; the first half-volume extends from A to K, the second half-volume (L-Z) is promised for July, 1897; and these two together will contain about 2500 pages. The first part (A-Anbannen) of the German-English portion is before us; it shows that the work is carried out with conscientious thoroughness and is quite in accordance with the most advanced development of lexicography.

Report relating to the Registration of Births, Marriages and Deaths in the Province of Ontario for the year ending Dec. 31st, 1896. Printed by order of the Legislative Assembly of Ontario. Toronto: Warrick Brothers and Rutter. 1897. Pp. 36 and cxviii.—In the year 1895 the province of Ontaria contained 2,211,101 inhabitants; for each 1000 of this population the birth-rate during the same period was 18·8, the marriage-rate 6·3, and the death-rate 10 1. A copious and detailed summary of the registration returns is now published in a conveniently arranged volume which comprises upwards of 234 pages of tabular matter and will commend itself to those who are interested in the study of vital statistics. A new Registration Act which came into operation in May, 1896, is here printed in full.

La Nature et la Vie: Régénération de l'Homme par le Végétal. Par GABRIEL VIAUD. Paris: Charles Mendel. 1897. Pp. 255.—The author of this well-written book is a veterinary surgeon in a French artillery regiment, who has much to say on the physical advantages of a vegetarian diet as well as on the elevating influence of a fondness for flowers. The work consists of two essays, "Thérapeutique Végétarienne" and "Littérature Végétarienne," the first of which is of some medical interest, being an account of the author's experiments with a view to the medicinal administration of mineral tonics, such as iron, in the form of salads. For this purpose young plants of lettuce and endive were watered with a weak solution of tartrate of iron and potash, containing at first five grammes of the salt in four or five litres of water (= from seventy to ninety grains per gallon), but after a certain period about two or three times as much. Also when the fully-grown plants were taken up for use the cut ends of the stalks were immersed in the same ferruginous solution for twenty-four hours. M. Viaud states that plants treated in this way contain a large amount of iron which is not in the form of a definite chemical salt absorbed by capillarity, but is in actual organic combination with the vegetable tissues, and is therefore much more readily assimilated when the salad is eaten than any pharmaceutical preparation could be. With the same object he grew cress on a coarse cloth kept in contact with water contained in a large tub in which pieces of rusty iron were placed, some of the tartrate of potassium and iron being subsequently added. At a farm in Vienne in the east of France he found that cows and horses were greatly benefited by lucerne and clover which had been treated with a solution of sulphate of iron, phosphate of soda, and nitrate of lime.

Climbing in the British Isles: Wales and Ireland. By W. P. HASKETT SMITH, M.A., and H. C. HART. London and New York: Longmans, Green, and Co. Pp. 197. Price 3*s.* 6*d.*—Holiday-makers with mountaineering tastes will find this little volume an excellent companion on an excursion to Wales or Ireland. The authors, both of whom are members of the Alpine Club, have brought together in a compact narrative an extensive collection of practical information relative to mountain climbing in each of these countries. The ascent of steep rocks and dangerous enterprises upon cliffs have an especial charm for them; so it happens that the grassy hills of South Wales are dismissed with a brief notice, while, on the other hand, the Carnarvonshire mountains are described in much detail, forty pages being given to Snowdon alone. The section on Ireland is the work of Mr. Hart, who gives a survey of the whole country from the mountain-climber and cragsman's point of view. The highest summits in Ireland are found in Macgillicuddy's Reeks in County Kerry; Beenkeragh having an elevation of 3314 ft. Many views, both in Wales and Ireland, are given in the illustrations.

Black's Guide to Bournemouth and the New Forest Edited by A. R. HOPE MONCRIEFF. London: Adam and Charles Black. Pp. 72.—The descriptions of this picturesque and popular portion of the south coast are copious and well-selected. They include several places of interest at a distance of some miles from Bournemouth, and are amply illustrated with maps and plans.

The Fernley Observatory, Southport, Report for the year 1896. By JOSEPH BAXENDELL, F.R.Met.S. Printed for the Southport Corporation by Wm. Milne, Nevill-street.—The increased attention which is being paid to climatology gives special interest to this report, and the example of the borough of Southport in appointing a borough meteorologist might be followed with advantage. A like series of reports issued annually from all our watering places and balneological

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resorts would prove of immense value to medical men in all parts of the kingdom.

The *Cyclist's Pocket Book and Useful Memoranda*, 1897. London: Archibald Constable & Co., Whitehall-gardens.—This is a little book for cyclists that will go into the breast pocket, containing useful information and memoranda, with a cyclist's almanack and telegraph code and an abstract of the law relating to horseless carriages. A few short pages are devoted to medical hints for purposes of first aid, which will be found useful in cases of slight accident or ailment. For the more severe forms, and for general instructions as to the safe and sensible use of the bicycle, riders should be guided solely by their medical advisers.

JOURNALS AND REVIEWS.

In the medical reports published by order of the Inspector-General of Customs in China for the half-year ended March 31st, 1896, are several important papers, besides that by Dr. J. Matignon on Typhus Fever, which we reserve for notice at greater length. In his report on the Health of Hankow Dr. J. D. Thomson reports two cases of death from heatstroke which occurred to workers in some iron-works. During 1894—Dr. Thomson's report is for the nineteen months ended Sept. 30th, 1895—enteric fever of a severe type prevailed during the summer and autumn. Out of sixteen cases treated in hospital there was one death. A hospital sister, aged sixty-seven years, was seized with acute cholera and only saved by saline injections into the cellular tissue. Dr. H. M. McCandliss, in his report on the Health of Hoihow for the year ending March 31st, 1896, mentions that in five months there were 3000 deaths from plague, the mortality being from 70 to 75 per cent.

The *Practitioner* for July, apart from the scientific interest of its contents, has a special value for ourselves because the "Hero of Medicine" for the month is Thomas Wakley, the Founder of THE LANCET, while a well-informed paper upon the duties of the medical man to the State takes as its text the Parliamentary achievement of the same reformer. Both articles to some extent owe their inspiration to Dr. Sprigge's recent volume, "The Life and Times of Thomas Wakley," concerning which book terms of compliment are used that cannot fail to be highly pleasing to the author, as they are to ourselves, under whose editorial supervision the work was issued serially. We have been much gratified by the generous appreciation of Thomas Wakley's services that has been manifested by the press and the public recently; and the straightforward testimony to the value of those services contained in the current *Practitioner* has touched us nearly because of its obvious emanation from well-informed pens. Mr. W. Rose has a paper in this issue on Early Colotomy in Malignant Disease of the Rectum in which he favours the iliac incision and complete division of the bowel. Dr. Litteljohn's instructive paper on Contagious Disease in a Poor-law School we notice at length in another column. There is also an amusing paper by a ship's surgeon upon the eccentricities of Quarantine before to the late Venice Conference.

The *Medical Magazine* for June has two exhaustive articles on the Progress of Medicine and Surgery during the past sixty years, the fifth instalment of Dr. W. Bruce's articles on Medical Reform, and a very admirable and practical paper by Mr. H. E. Counsell, F.R.C.S. Eng., upon Aseptic Surgery.

In the *Scottish Medical and Surgical Journal* for July one of the most interesting articles is a case of Simple Duodenal Ulcer, in which the symptoms pointed rather to its being a case of appendicitis; death followed in nineteen hours. The case occurred in the practice of Dr. G. M. Cullen. Another interesting paper is a digest of the details of some 300 cases of duodenal ulcer collected by the same practitioner. Dr. Graham Brown describes an ingenious modification of the pantograph for taking tracings of curved surfaces such as the thorax or cranium.

In the *Edinburgh Medical Journal* for July Dr. Byrom Bramwell commences a series of lectures on Aphasia, founded on the cases the details of which have recently appeared in our columns. Dr. Alexander Robertson gives some interesting examples of the use of Hydropathy in Practice, and Dr. Kanthack and Dr. H. M. Tickell contribute a paper upon the Etiology of Infective Endocarditis, which paper they modestly call "brief notes." As, however, it contains a fairly exhaustive analysis of eighty-four cases we think it deserves a larger name.

In the current number of the *Cornhill Magazine* Dr. E. T. Withington gives some curious details of mediæval trials of animals, insects, &c. The animal most frequently arraigned was the sow for the crime of eating babies, but as late as the eighteenth century a colony of ants was successfully exorcised as an alternative to legal proceedings in South America.

In the *Westminster Review* is a curious paper by Mr. H. J. Keene drawing a parallel between Byron and Napoleon. There have been many views of Waterloo, but to learn that it was not a battle is certainly the most startling theory we have come across.

The *Contemporary Review* contains a paper by Mr. R. H. Heath upon the similitude between Bunyan's "Holy War" and that orgie of mysticism the Anabaptist movement in Münster. Mysticism is a frame of mind always liable to excess, but mysticism unrestrained by authority or tradition is simple mania.

The current number of the *Leisure Hour* is full of interesting reading. "Puffs and Drugs" is an amusing article on the ways of the nostrum vendor, by Prebendary Harry Jones, and exposes some of the tricks of trade which are resorted to by a class of people who make a living out of the gullible public.

Sunday Hours still continues to maintain the standard of excellence with which it started a few months ago, and no more healthy and instructive magazine could be placed in the hands of girls and boys for Sunday reading.

The *Girls' Own Paper* and the *Sunday at Home* are also magazines which maintain their high tone of excellence.

New Inventions.

A WATER ANALYSIS CASE.

IN THE LANCET of Jan. 23rd, 1897, reference was made to a simple method of water analysis so devised that analytical operations could be carried out with a fair degree of accuracy upon the spot or at home without the need of special or complicated apparatus. This departure was due to Dr. Thresh, the medical officer of health of the county of Essex, and recent experimental trials in THE LANCET Laboratory enable us to say that the method places within the reach of medical officers of health, water engineers, and others a convenient, easy, and tolerably accurate means of sorting good waters from bad. All the apparatus and reagents required are contained in a mahogany case measuring ten by twelve inches and five inches deep. The case is now supplied complete, with printed forms for filling up the ascertained results, by Messrs. Burroughs, Wellcome and Co., Snow-hill-buildings,

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E.C., for two guineas. The case comprises the following reagents:—Capsules of Nessler's reagent, soloids of silver nitrate each corresponding to two milligrammes of chlorine; soloids of potassium chromate; soloids of acid sulphate of sodium; soloids of potassium iodide and starch; soloids of zinc dust; soloids of soap each corresponding to 5 milligrammes of calcium carbonate; soloids of potassium ferrocyanide; and soloids of potassium permanganate, each corresponding to 0·10 milligramme of oxygen. The apparatus consists of a boiling flask of 100 cubic centimetres capacity with cork, a glass cylinder to contain 100 cubic centimetres and graduated in cubic centimetres, a small nickel evaporating dish, three glass cylinders of a capacity of 100 cubic centimetres and graduated at 70 cubic centimetres, stirring rods, tripod, a cleaning mop, spirit lamp, small glass funnel, filter paper, and a stoppered bottle to hold 120 cubic centimetres. The *modus operandi* and the measure of reliability of the results will be best understood from the data furnished below, first by employing the apparatus and the reagents in the case, and then by carrying out the analysis of the same water in the laboratory in the ordinary way. The water under examination was a specimen obtained from the new waterworks at Worthing. Analysis No. 1 gives the results obtained with the apparatus of the water analysis case, and Analysis No. 2 the results obtained by the ordinary methods of analysis in THE LANCET Laboratory.

RESULTS OF ANALYSIS 1.

Colour in 6 inch column ...	Bluish green.
Turbidity	Very slight, turbid on boiling.
Odour	None.
Residue on evaporation	Moderate.
Free ammonia	None.
Chlorine	1 soloid required, equal, say, to 2 grs. per gallon.
Equal to common salt	3·3 grains per gallon.
Nitrites	None.
Nitrates	Estimated just under 0·5 grain per gallon.
Hardness	Just 4 soloids required, equal to over 14 but under 18 grains per gallon.
Lead, zinc, iron, and copper	None.
Oxygen absorbed	Decidedly under 1 soloid (equal 1 grain).

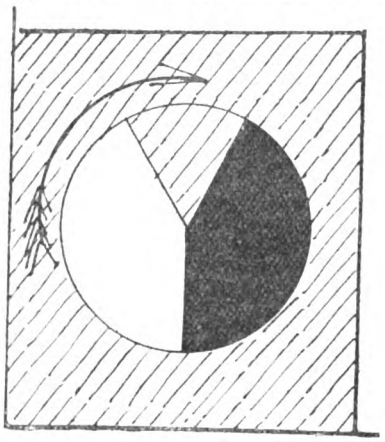
RESULTS OF ANALYSIS 2.

Colour	Slight greenish tint.
Turbidity	Very slight, increased on boiling.
Odour	None.
Residue on evaporation	19 60 grains per gallon.
Free ammonia	None.
Chlorine	1·82 ,, ,,
Equal to common salt	3·00 ,, ,,
Nitrites	None.
Nitrates	0 35 ,, ,,
Hardness	16·5 ,, ,,
Lead, zinc, iron, and copper ...	None.
Oxygen absorbed	0 02 ,, ,,

These results fully establish the reliability of the simple method in affording a means of discriminating waters of bad, good, or indifferent character. The operations involved do not require much time to be spent on them, and they may be conveniently carried out at the source of supply. Medical officers of health have not, as a rule, the time or appointments to carry out the analysis of water at any length, in consequence of which they are led to recommend that an analysis should be made by a recognised official, a recommendation which is seldom carried into effect by the authorities advised. By the simple method described the medical officer is enabled to derive an opinion based upon the fairly reliable results obtained by himself at very little sacrifice of time and without much complicated apparatus being required. The introduction of the method is, therefore, important as adding very materially to the armamentarium of the sanitary officer. It should prove also of eminently useful service (as, for instance, in determining quickly the degree of hardness of waters) to water engineers and others concerned in providing a water-supply free from reproach.

AFTER IMAGE.

AMONG the exhibits at the last conversazione of the Royal Society was a piece of apparatus producing some very striking effects by means of after images. The exhibito was Mr. Shelford Bidwell, F.R.S., who has given much attention to phenomena of this class and who has succeeded in designing a simple and most beautiful mechanism for producing them. He uses a thin metal disc, originally circular in form, and of, perhaps, a foot in diameter, but from which a sector of about 60° is cut away. The front surface of the remainder of the disc is divided radially into two equal portions, one of which is made black and the other white. The disc is illuminated by a good light, and is caused to rotate in such a direction that the open sector is preceded by black and followed by white. The accompanying wood-cut shows the shape and direction of rotation as so defined.



If now a coloured object be placed behind this rotating disc and viewed intermittently through the open sector it will appear to assume a tint complementary to its actual hue. Thus, for example, a picture of a rose painted with a green flower and red leaves is seen correctly tinted as a pink blossom surrounded by green leaves. The significance of these very striking phenomena has been discussed by Mr. Bidwell in two papers which have been published in the Proceedings of the Royal Society.[1] That the after image, seen as it is upon a white disc as background, should exhibit colours complementary to those of the original picture is in no way surprising; that is, indeed, a familiar observation and susceptible of easy explanation. But what is less easy to understand is the fact that at a certain speed of rotation, varying slightly with various individuals, but lying generally between six and eight turns to the second, the after image so completely masters the primary impression that the eye is perfectly unconscious of the original object. Two considerations suggest themselves in this connexion. In the first place the white sector occupies a much larger angle of the disc than the sector cut away, so that it is possible that the duration of the after image is longer than that of the original stimulus, and in the next place the visible colours, more or less complementary, are distinctly paler than the hues of the original picture. It is quite possible that what is perceived is not the true complementary image any more than the true original image, but a blend of the two in which by reason of its longer duration or some other circumstance the hues of the complementary image prevail. The obvious paling of the tints tends to confirm this suggestion.

Even more interesting to the physiologist than the experiments exhibited at Burlington House are some described by Mr. Bidwell in his last communication to the Royal Society, in which black objects were submitted to examination by means of the rotating disc and red or green appeared as complementary hues to the black, according to the varying conditions of illumination and frequency of revolution. They are, no doubt, as Mr. Bidwell points out, susceptible of more or less complete explanation upon the Young-Helmholtz theory of vision, but the explanation is by no means simple, and leaves enough still obscure to stimulate the ingenuity of observers, whether in devising crucial experiments or elaborating theories.

[1] Proceedings of the Royal Society, vol. lx., p. 368, and vol. lxi., p. 269.

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THE LANCET.

LONDON: SATURDAY, JULY 10, 1897.

ON the occasion of the QUEEN'S Diamond Jubilee procession on June 22nd last our foreign visitors and all of us were greatly impressed with the self-government of the crowds of spectators in our streets—with the patience, good temper, and orderly behaviour of the masses of people who came out to do homage to a great Sovereign and a good, large-hearted woman. It was a striking phenomenon, and we had not to go far to seek for an explanation of it, for it was founded on mutual trust, sympathy, and goodwill, and on the recognition that all had a common purpose and were sharers in a spirit of common pride and interest in the celebration of events of which the pageant was but an outward sign, symbol, and token. All present were sufficiently intelligent and educated to share in one and the same community of feeling. This has not been the growth of a day, but the result of progressive development—of a slow but sure process of evolution in civilisation and freedom. Nothing of this kind exists in Eastern countries, and it would be well, we think, if people in this country would pause to consider the fact in connexion with the occurrences that have been recently taking place in India—at Poona and Calcutta. It is very easy to give these occurrences an exaggerated significance out of all proportion to their real importance, and it is difficult to dispel the fears of impulsive timid people who are always ready to discover the germs of another Indian Mutiny in every expression of discontent. But there is, happily, no evidence whatever to prove that the outrages and assassinations at Poona and the riots in a suburb of Calcutta are attributable to a common cause or connected with one another. The alleged, and probably the real, cause of the occurrences at Poona was connected with the measures adopted by the Government for dealing with the epidemic of bubonic plague; those at Chitpur and Calcutta were mainly attributable to a tumult among low-class Mahommedans, who made a pretext of an alleged desecration of the site of a mosque for creating a disturbance. Still, it cannot be denied that there are manifestations of a spirit of unrest in India at the present time sufficient to cause some anxiety.

Those who have resided in India for any time and are acquainted with the native population are perfectly well aware that the people generally are a patient, quiet, law-abiding, and, on the whole, contented people and well satisfied with our rule. There is no "public opinion" in the country. What pretends to be so is in no way representative of the mass of the people, but is commonly the outcome of a comparatively small, disaffected, noisy, and very cowardly class who have little respect for truth and a passion for strife and discord. The masses are very poor, very ignorant, and intensely conservative. They want, above all things, to be let alone, and they would sooner run the risk of disease and death than alter any of their customs or depart from their traditional beliefs and habits. They do not want to rule themselves and are unfit to do so, they are ignorant of all sanitary laws, and do not believe in their efficacy. The Government of India probably knows quite well what to do in cases of epidemic disease, but the difficulty is how to do it in the face of all the ignorance, popular prejudice, and poverty to be contended with. The effect of all this is more or less paralysing, of course; still, progress is made, but it must of necessity, under such circumstances, be very gradual and slow. The trust and confidence of the people have, as far as practicable, to be cultivated, but it is, of course, occasionally necessary to take prompt and decided steps to meet cases of emergency, and the support of the more enlightened, educated, and responsible classes in India is commonly with the Government on such occasions. The late epidemic of bubonic plague was indubitably an occasion of this kind. There are many people who think that had the more active and decided measures, which had to be ultimately followed, been adopted earlier, the spread and dimensions of the evil would have been greatly reduced. The difficulties of the Government of Bombay were obviously very great, and consideration for the feelings and prejudices of the people probably caused them to hesitate. They were compelled, however, in the general interest to adopt decided measures, and these have proved successful, as everybody foresaw they would. It has been urged that these measures were carried out in a needlessly harsh and cruel way, and allegations of gross misconduct on the part of the troops have been made, of which the recent outrages at Poona are said to be the natural outcome. It seems to us most mischievous and reprehensible for people in this country to bring charges of this kind against a Government engaged in stamping out a virulent epidemic without first of all making themselves thoroughly acquainted with the facts. India can never be governed properly in this way. The task is hard enough as it is, but it will be attended with insuperable difficulties if the British authorities and soldiers in that country are to be misrepresented and maligned by ill-informed and irresponsible politicians and faddists here. Systems of government are, no doubt, all the better for being exposed to the keen but healthy breeze of public criticism. It is to them what ventilation is to our houses and habitations, and we need not say that we hold no brief for the defence of the Indian Government or of the British Army in that country. Such attacks and criticism must be fair and just, however, if they are to have any wholesome effect and to avoid being positively injurious. It seems, however, far less likely that India will be taken from us by some foreign Power than that we shall lose it by our own ineptitude for its government through the application of measures and methods that are not adapted to it.

Lord GEORGE HAMILTON had no difficulty in carrying conviction to the minds of all reasonable men that the facts had been grossly misrepresented and exaggerated. He read in the House of Commons the full reply he had received from the Government of Bombay to the allegations that had been made, and

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we need not trouble our readers with it. But we ask, Is it conceivable that, in carrying out absolutely necessary sanitary measures among a people altogether ignorant of all sanitary science, the authorities should have acted in the way they are accused of having done? Seeing that a number of female medical practitioners, nurses, native gentlemen, and others were present; that the work was carried out under the supervision of the Governor and General Officer commanding, the Surgeon-General, and numerous medical and other officers; and that the troops had been expressly cautioned to act with every consideration, it is incredible that preventive measures were carried out with an absolute disregard for decency and for the caste and religious feelings of the natives. The soldiers forming the search parties bravely undertook a dangerous and most disagreeable duty, and discharged it, we make no doubt, with all proper care and delicacy; all independent testimony is to that effect, and they could not, indeed, have done otherwise under the circumstances in which they were placed.

THE Lumleian Lectures on Some Problems in Connexion with Aphasia and other Speech Defects, recently delivered before the Royal College of Physicians of London by Dr. CHARLTON BASTIAN and published in our columns,[1] are worthy of the most careful attention on the part of everyone who is interested in the more abstruse problems of nervous disease or in the physical aspects of psychological processes. Dr. BASTIAN is to be congratulated upon the graphic manner in which he has re-enunciated the views on this subject which are so closely associated with his name and upon the striking array of evidence in favour of his views which he has marshalled before his readers. Those views as to the nature of the functions of the so-called "motor areas" of the cortex are well known. According to Dr. BASTIAN these are to be regarded as not really motor but as "sensory centres of kinæsthetic type by means of which movements are guided," the true motor centres being situated in the medulla oblongata and the spinal cord. In a similar way he believes that there are two centres, also of kinæsthetic type, one related to articulatory processes, a glosso-kinæsthetic centre, and the other in relation to the movements connected with writing, a cheiro-kinæsthetic centre. Besides these sensory centres there are also an auditory word centre and a visual word centre, devoted to the reception and consequently to the revival in thought of impressions of words. The existence of those is generally recognised, although the position in the cortex which they respectively occupy is still a matter of at least some uncertainty. But with reference to the two kinæsthetic centres already alluded to, Dr. BASTIAN thinks there is less doubt, and he himself believes that the part of the cortex so long and closely associated with the name of BROCA—the posterior part or foot of the third frontal and the inferior part of the ascending frontal convolutions—is the part alluded to as the glosso-kinæsthetic centre, while the cheiro-kinæsthetic centre is by no means so definite, although it is probably to be looked for in the vicinity of the posterior part of the second frontal gyrus. Besides these four centres—the auditory and visual word centres and the glosso- and cheiro-kinæsthetic centres—there must also be supposed to be fibres connecting these, and accordingly lesions relating to speech defects are to be looked for in four different situations—in the word centres themselves, in the commissures connecting those, in the fibres connecting the two kinæsthetic centres with their related motor centres, and in the motor centres themselves. Such is the strong and apparently sufficient foundation upon which the lecturer has constructed a system capable, he believes, of explaining cases of defect of speech.

One very much disputed question amongst writers and thinkers on disorders of speech is the question whether conception or ideation takes place in a centre altogether apart from that related to perception. The view that such was the case was first enunciated by Sir W. H. BROADBENT, who distinguished in the process supposed by Dr. BASTIAN to be carried on in the perceptive centres already alluded to two stages—a primary one, in which the external cause of a given set of sensations is recognised in its simple form, colour, hardness, &c., and another stage in which there is a higher degree of elaboration and a conception or idea of an object as a whole is obtained. This centre for concept was also called the "naming centre," and a related higher centre was postulated—a "propositionising centre"— in which words other than names were supposed to be registered, and in which sentences were supposed to be formulated preparatory to their utterance through the instrumentality of Broca's convolution. This view is, of course, entirely different from Dr. BASTIAN'S, according to whom an impression of an object on reaching the cerebral hemispheres, although it strikes first on the related perception centre, immediately radiates so as to impinge upon functionally related structures, all this taking place so rapidly that the several excitations are practically simultaneous, and so the combined effects are fused into one single perceptive act. Thus, Dr. BASTIAN and those who agree with him regard the work which Sir W. BROADBENT and his supporters suppose to be done in the "naming" centre as effected by the simultaneous activity of the different perceptive centres and of certain annexes. The lecturer further fails to find any clinical phenomena rendering the existence of such a centre necessary.

A certain degree of reconcilement between these conflicting views seems possible in Dr. BASTIAN'S association with his perceptive centres of "certain annexes." FLECHSIG has directed attention to certain areas in the cortex which differ from sensory areas, and he assumes that these subserve the higher mental functions. He terms them "association areas," and, as Dr. BASTIAN points out, they are really the areas which long ago were indicated by Sir W. BROADBENT as the probable seat of the more purely intellectual operations, and presumably, therefore, the areas in which was to be placed his propositionising centre. All recent knowledge of cerebral functions has tended to show that anything like hard-and-fast lines circumscribing any particular centre are at least not the rule, and even granting that combined sensory areas together with the annexes are accustomed to be thrown into functional activity more or less simultaneously, and that the processes of perception and conception and the

[1] THE LANCET, April 3rd, 10th, and 24th, and May 1st, 1897.

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revival of linguistic symbols are inseparable in every relation, yet it may be thought by some that it conduces to clearness to associate this higher function with something to which the name "centre" is applied for convenience only.

Having thus devoted the first lecture to a full setting out of the physiological first principles in reference to speech defects, Dr. BASTIAN proceeds to discuss the various defects that are met with in the speech functions, dealing first with the structural defects met with in the glosso- and cheiro-kinæsthetic centres. He brings forward much evidence to show that, contrary to the views of DÉJERINE and others, agraphia is not produced by any isolated lesion of Broca's centre, a contention incidentally demonstrating the necessity for the recognition of a cheiro-kinæsthetic centre The various defects met with in the auditory and visual centres are next dealt with, and much fresh light is thrown upon the problems discussed by the numerous cases which are quoted in this connexion. The nomenclature at present in use is also criticised in several particulars.

It is a curious coincidence that almost simultaneously with the publication of these lectures there should have been appearing in our columns, from the pen of Dr. BYROM BRAMWELL, detailed accounts of one of the most wonderful series of cases of aphasia ever published. These cases cannot fail to have impressed all who read them on account of the extreme care with which they had been observed clinically, and also on account of the importance given to them by the careful record of the pathological condition which was found in those examined. It is also noteworthy that one of Dr. BRAMWELL'S professed objects in publishing those cases was to support the view that the right hemisphere must be regarded as taking an important part in relation to the mechanism of speech, a view also strongly insisted upon in Dr. BASTIAN'S lectures. It is further of interest that in at least two of his cases Dr. BRAMWELL finds reason for arriving independently at the view which Dr. BASTIAN has so clearly enunciated—that complete destruction of Broca's convolution does not necessarily produce agraphia.

In studying Dr. BASTIAN'S lectures and Dr. BRAMWELL'S clinical cases, with the conclusions he deduces from them, the reader cannot but be struck with the admirable lucidity which characterises both contributions. The lectures are necessarily to some extent controversial; but the facts are presented with the utmost fairness, and the views enunciated in them will, we believe, long remain as an authoritative exposition of Dr. BASTIAN'S theories. Dr. BRAMWELL'S series of accurately observed and carefully recorded clinical and pathological facts forms, we are glad to know, only a preliminary contribution to the fuller and more systematic discussion of a subject on which his views will be awaited with interest and received with consideration.

THE PRINCE OF WALES spoke with much sense and moderation of his Hospital Fund for London on the occasion of the dinner of the Master and Elder Brethren of the Trinity House on Saturday last. He has the faculty of condensing into a few words the gist of a question. His words on this subject were, indeed, so few and so well ordered that we may with advantage bring them to the memory of our readers:—

"In my efforts for the hospitals I trust that in time I may be successful. The work does not progress as fast as we could wish; but we must have patience. I hope that the hospitals will be set on a firm basis, and that the public will come to feel that the money spent on them is not spent in vain."

We recognise in these words proof that the PRINCE realises that he has undertaken no easy task and that the public will have to be convinced that the money given to him for this purpose will be well expended. And in this sober judgment of the case we see the best security of the ultimate success of his labours. His Royal Highness will have at any rate this consolation—that if he does not succeed nobody else is likely to do so, and that even if he does not get the full sum which he proposed to raise he will have conferred a very great favour on institutions and earned the gratitude of all who are responsible for their maintenance. The Jubilee year is little more than half gone, and yet large sums still continue to flow into the Fund in a way to justify that fine note of faith in his speech that eventually he would succeed. He began this movement with a deep desire to engage large numbers in the support of hospitals and on the theory that small sums from them would solve the problem. He estimated that the deficiency in the ordinary income of hospitals as compared with their ordinary expenditure — amounting to £70,000—would be met by exciting the interest of the many who do not give and yet who could afford to give at least 10*s.* a year to hospitals. He explained that there were three reasons why this large number of persons—representing at least 225,000 metropolitan households—did not subscribe: firstly, the difficulty of choosing among so many deserving objects; secondly, the lack of any definite opportunity for giving annual subscriptions to the cause as a whole; and thirdly, the feeling that small sums were scarcely worth contributing. The PRINCE excluded indifference or want of sympathy as possible explanations why so many who could afford to subscribe did not do so, and we have no desire to be less charitable in our own theory. We shall look anxiously to the remaining weeks of this eventful year for the confirmation of the PRINCE'S theory that there are 225,000 households which only need the suggestion and the opportunity to take their hitherto neglected share in maintaining institutions which alleviate pain and cure disease among classes that are too poor to provide the necessary skill for themselves. There still remain the rich in this metropolis, those who can find an opportunity of contributing to this cause whenever they please. It is not only those of comparatively small means who have failed to subscribe to hospitals, but the rich. Many rich men either do not subscribe at all or do so in a half-hearted way that does more harm than good. The only doubt we have about the original letter of His Royal Highness is the prominence given in it to the subscription of small sums "from a shilling per annum and upwards." The object no doubt was to encourage the humblest to do what they could. But, after all, the maintenance of our hospitals has always chiefly depended on the rich or the comparatively rich, who derive immense indirect benefits from hospitals as places where medical and surgical skill is perfected. We live in an age

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when an ever-increasing number of men accumulate wealth beyond their need or that of their families. Splendid acts of generosity testify that the possession of such wealth is often consistent with sympathy for others who are lame and ill and in much need of help. The endowment of hospitals is the most direct way of showing such sympathy, and we cannot doubt that before this memorable year is ended the patience and labours of the PRINCE OF WALES and his colleagues will be rewarded by rich men casting into the treasury sums that will raise this capital Fund to £500,000 at least. The PRINCE'S recent speech and the composition of the Committee lead us to hope that the money so raised will be well spent. We are sure there is much in this. The PRINCE has ably refuted the miserable attempt to associate hospitals with acts of cruelty to the lower animals, which, in truth, largely benefit by every advance in medical science. He will do equal service in using his endeavours to convince the public that the money they give to him for this Fund will be spent on those who need it, and that any proved abuses of hospital charity will be regarded as demerits in the hospitals which permit them.

Annotations.

"Ne quid nimis."

THE HEALTH OF THE QUEEN

WE are glad to be able to state, on excellent authority, that certain rumours to which publicity was given last week with reference to Her Majesty's eyesight were grossly exaggerated. It is a fact that for some years her eyesight has been affected owing to changes incidental to her advanced age, but, although in the nature of things this condition may be slowly progressive, there is no truth in the statement that it is rapidly becoming worse. The deterioration of her vision naturally causes the Queen some inconvenience, but not to the extent of interfering with her ordinary course of life or of preventing her from discharging her multifarious and onerous duties. Her Majesty's health is, for a lady of her age, perfectly satisfactory. Indeed, there are probably but few ladies contemporary with her who could have borne so well the fatigue and strain of the recent Jubilee celebrations.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE total sum collected for the Metropolitan Hospital Sunday Fund now amounts to £31,000, including a donation of £500 from Sir Savile Crossley, the most regular and generous supporter of the Fund. This sum does not compare favourably with the amount collected last year at the corresponding date, but it is yet too early to make real comparisons, as many of the collections have not been made. The middle Sunday in June is usually chosen for the collection of the Fund, as being most convenient for the larger number of churches and chapels in the metropolis, but unfortunately this year the date clashed with the Sunday set apart for the special service in commemoration of Her Majesty's Diamond Jubilee. Special efforts, too, are being made this year to increase the subscriptions for the Clergy Sustentation Fund, and the day appointed for the collection of this latter fund also unfortunately fell upon the same date. Many of the churches have not yet had their Hospital Sunday Fund collection, the whole of the deanery of Fulham, for example, holding it as a matter of Church discipline to postpone their collection till later in the year. Among the legacies which have recently been bequeathed to the Fund is the munificent bequest of the late Mr. William Vokins, of Hove. In his will he bequeaths the sum of £15,000 upon trust, to be transferred at the death of his wife to the president and treasurer for the time being of the Metropolitan Hospital Sunday Fund, out of any £2 15*s.* per cent. Consolidated Stock standing in his name at the time of his death.

EXPOSING A SCARLET FEVER PATIENT.

A MAN named Thomas and his wife were on June 28th summoned at the Ystrad police-court for exposing their daughter while suffering from scarlet fever. The case was notified by the medical attendant, Mr. Evan Jones, of Pentre, on May 22nd, and on June 15th the sanitary inspector found the child out in the street. Mr. Evan Jones is reported as having said in evidence that by June 15th the infection was over. We suppose that the rash was out when Mr. Jones notified the case, so he must have considered that the child became free from infection in the space of twenty-four or at the most twenty-five days, a period, in our opinion, a great deal too short. No scarlet fever patient should be considered free from infection until the expiration of at least forty-two days from the appearance of the rash, and the medical officer of health, Mr. Herbert Jones, urged this point in court. The stipendiary, however, is reported as saying: "Dr. Jones has given us an instance of a case of infection having ceased in four weeks, so there was no danger." After this the case was dismissed. We see that according to Mr. Herbert Jones's last report, dated June 16th, 1897, the mortality for the fourteen years, 1882–1895, per 1,000,000 from scarlet fever was for England and Wales 267, but for the district of Ystradyfodwg 608, and if from three to four weeks is to be generally considered a sufficient period for isolation we are not surprised thereat.

THE ILL-HEALTH OF MOLIÈRE AND ITS CAUSE.

THE mysterious Boulanger de Chalussay, author of the libellous "Élomire Hypochondre, ou les Médecins Vengés"—who is described by Dr. A. M. Brown in his recently published work[1] as "a personage little known, but possessing no mean talent as a writer, and dangerous as an assailant on his own account or as a mercenary in a literary plot, where a rival's character and reputation were at stake"—endeavoured to brand the great French dramatist as a prating hypochondriac; psychologically, morally, and physically repulsive; a corrupter of morals and a buffoon, who regarded his medical advisers as assassins aggravating his malady by their vengeful treatment when as a patient they had him in their power; but after an exhaustive study of his theme Dr. Brown has come to the conclusion that in reality Molière was a victim of chronic phthisis. The passage in which this opinion is expressed runs as follows:[2] "The nature of the malady, which for years he had been nursing like a wolf within his breast, is far too strongly marked to leave a doubt upon our minds. The condition in which some profess to see thoracic aneurysm or cardiac disease, is much more easily explained; in his case these terms have more attraction than reality to recommend them. Rare diseases are not reserved for rarest men—here nature is impartial. Molière was an ordinary *poitrinaire*, the victim of that malady which the statistics of mortality have vulgarised. In every allusion, personal or narrated, respecting his health and sufferings we can trace a faithful record of a chronic ulceration of the lungs, continually masked by ailments peculiar to his high-wrought mind and constitution

[1] Molière and His Medical Associations. London: The Cotton Press, 1897. [2] Ibid., p. 200.

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morbidly affected, destructive processes internally at work, and easily misread. To his worshippers it is the genius struggling with mental affliction, rather than the mortal suffering from bodily disease, that shows throughout the melancholy history of his illness. The characteristic cough, emaciation, constitutional debility, and occasional pulmonary hæmorrhage, present the veritable portraiture of those organic ravages, indefinitely prolonged, which receive the name of phthisis. It is rarely that we see that amount of constitutional resistance which the great comedian's case exhibits; the all unequal contest between life and death generally terminates much sooner, but, terminate when it may, the victory is never doubtful—the patient must finally succumb." Dr. Brown is no doubt correct in his views regarding the disease from which Molière suffered, and unquestionably he has thrown considerable light upon the inner life of the poet and the motives that actuated him in his raids against the medical profession. Whatever the cause may have been that prompted Chalussay to pen his ignoble satire, it is satisfactory to find that the Faculty did not consider itself honoured by his service, but, on the contrary, cordially disapproved of the libeller's caricature, which was universally thought to display animus as virulent as it was merciless.

MEDICAL SERVICE IN BRITISH CENTRAL AFRICA.

IT is generally allowed to be no empty boast that the Briton makes the best coloniser, but even if this is so it is no reason for wasting our material and it would seem that in British Central Africa at least we do not do as much as we might to avoid a sacrifice of valuable lives. Tropical diseases run so rapid a course that prompt treatment is needed if any good is to be done, and this means the presence of a medical man. The protectorate in question is about the size of England and Wales, has a population of 850,000, of whom some 600 are Europeans or subjects of British India. The number of medical men is only four, while in the German sphere, which is smaller than our own, there are no less than eighteen. During the year 1897 seven officials and sundry missionaries have died from hæmaturic fever and there have been seven or eight fatal cases of ordinary malarial fever. Of course, it cannot be said that these lives would have been saved had the patients been promptly attended to, but it would, at any rate, have given them a better chance. We do not know how much of the blame to apportion to the Imperial Government and how much to the British South Africa Company, who are the two governing bodies of the district, but in our opinion the supply of medical men should be at least trebled. It would seem that the deadly Crimean traditions of getting glory cheaply, or apparently so, for it is very dear in the long run, still hold good in many a department. We are ready enough to spend money on fads; let us give a little of it to life-saving.

WOOL-SORTERS' DISEASE AND ITS PREVENTION.

AN inquest recently held at Queensbury upon a man who died from wool-sorters' disease, and the proposed new regulations for the carrying on of that trade, have been the text of a correspondence and a leading article in the Bradford press. Shortly, the matter seems to stand as follows. The wool is sorted upon wire "hurdles," and underneath these is a tube, down which a current of air is driven by means of a fan. The minimum amount of air passing should be, according to the Government suggestion, 25 cubic feet per minute, while the operatives themselves wish for 75 cubic feet. It is also allowed that many firms have fans which give a great deal more than the Government minimum. But, as Dr. J. H. Bell pointed out in the *Bradford Observer* of July 1st, even supposing the dust and germs are removed from the neighbourhood of the sorter a certain amount is distributed broadcast, and the rest which falls into the receptacle has to be removed, a process which may be fatal to him who has to remove it. Dr. Bell suggests that all wool, hair, and skins should be disinfected at the port of entry. In our issue of May 22nd, 1897, in commenting upon a death from anthrax at Bradford, we said that the right thing to do was to disinfect the suspected goods before opening them. It is surely worth while to make some experiments upon this question. Anthrax is so deadly a disease, the vitality of the bacillus is so lasting under ordinary circumstances, and the loss to agriculturalists from its prevalence is so considerable, that it would seem to be the height of folly to leave any means untried which offer a way of escape, for even if the experiment failed the loss of a few bales of wool and of sundry hides would not ruin the Treasury when it was called upon to pay for them.

THE TREATMENT OF PERFORATION IN TYPHOID FEVER BY LAPAROTOMY.

AN important communication on this subject has recently been made to the Johns Hopkins Medical Society[1] by Dr. Finney. Laparotomy has now been performed in 47 cases with 13 recoveries. The best time for operating is as soon as the patient has recovered from the shock attending the perforation. This is usually in a few hours. Dr. Finney first examines the ileum and sutures any suspicious-looking patches. He removes the appendix if at all abnormal. Excision of the edges of the perforation is unnecessary. Should the intestine be in such a condition as to make suture impossible the loop may be pulled out and left until the patient has recovered from the fever. The peritoneum should be thoroughly cleansed by wiping. The small intestines may be irrigated, having been pulled outside the abdomen, but the abdominal cavity should not be irrigated if the inflammation does not involve the whole peritoneum for fear of spreading the infection. The worst or sutured coil is placed next the abdominal wound and packed with strips of gauze to ensure good drainage, for which a small opening is left. The necropsies show that healing was always taking place. Death usually resulted from septic absorption, but the records show some other complications—intestinal obstruction, a second perforation, or defective drainage of an abscess. The diagnosis of perforation is often a matter of difficulty; in 8 of the cases it was wrong. Dr. Finney places most reliance upon severe continued abdominal pain with nausea and vomiting and on a new sign—marked increase in the number of leucocytes. During typhoid fever there is no leucocytosis, but it occurs immediately after a perforation. Thus in 3 cases the numbers before and after were 8300 and 24,000, 6500 and 10,600, 3000 and 16,400. Another recent publication, by Dr. Francis R. Gairdner, in which the subject is treated from a different point of view, is also valuable.[2] He analyses the reports of 47 fatal cases of typhoid peritonitis which occurred in the Belvidere Fever Hospital, and compares them with published cases in which operation has been successful. By this ingenious method he obtains evidence of the success likely to attend laparotomy in general. He divides the cases into four classes. The first, the very favourable, contains 9 cases (19·1 per cent.). Here the perforation occurred in a quiescent stage of the disease or in the course of a mild attack, and the necropsy showed very slight affection of the gut. In many the perforated ulcer was the only considerable one present, and in all it was surrounded by sound gut. The second class, cases not quite so favourable, but none less favourable than successful cases already published, contains 14 cases (29·8 per cent.). The third, unfavourable, consists of 9 cases (19·1

[1] Bulletin, May, 1897.
[2] Glasgow Medical Journal, February, 1897.

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per cent.). Many of these, however, would be submitted to operation if van Hook's dictum, "the only contra-indication is a moribund condition of the patient," were acted on. The fourth, altogether unfavourable cases, contains 9 (19·1 per cent.). There remain 6 cases in which peritonitis was not due to intestinal perforation. As these cannot usually be distinguished during life from cases of perforation they would, if operation become the practice, be submitted to it. But this would probably be beneficial in many. In 23, or nearly half the cases, the disease was in full activity at the onset of the peritonitis, while in the remaining 24 convalescence was nearly or quite reached. The duration of life after the onset of the peritonitis was in 3 cases less than 24 hours—viz., 8 12, and 18; and in 7 less than 36 hours. Thus all but 10 lived for at least 36 hours. Only 10 lived longer than 48 hours, and only 3 longer than 3 days—viz., 3½, 5, and 18. In the last two the peritonitis was not due to perforation. The analysis of the symptoms is valuable, showing the deviations which may occur from the typical condition. The mode of onset was usually sudden, but in 12 it was gradual. Of 39 cases the temperature was considerably raised after the onset of the peritonitis, in 22 either immediately or early, and in 8 it was lowered. The pulse was invariably quickened, though sometimes in the early stages not very much so. Pain was an initial symptom in 26 of 42 cases; it was absent throughout or very slight in about 8. Vomiting and hiccough were prominent in 14, but occurred at the onset in only 2. Meteorism occurred in about half the cases. As perforation is almost invariably fatal under medical treatment we consider that the success so far attained, though moderate (it will probably be greater in the future), should prevent the question of laparotomy being regarded any longer as *sub judice*. Every case should be given the chance afforded by operation where the general condition does not absolutely contra-indicate it.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE introduction of voting papers which can be sent by post for the election of members of the Council has completely changed the aspect of election day at the Royal College of Surgeons of England. Time was when on this day Fellows gathered from all parts of the kingdom, and nearly every Fellow in London recorded his vote. It formed a very pleasant occasion for renewing old friendships, for Fellows met there who did not see each other at any other time during the year; but though at the conclusion of the ballot the library was almost filled with Fellows anxious to hear the result of the poll, yet the total number of voters was not large, as so many were unable to be present. Nine years ago voting papers were introduced, and very soon the effect on the personal attendance of Fellows was seen; the numbers of those who came to the College to vote steadily diminished, but voting papers had to be asked for, and this restricted their use. Three years ago the plan of sending voting papers to all Fellows was commenced, and immediately the numbers of non-personal votes almost doubled, surpassing slightly even the numbers of the present year, when 607 voting papers were received by post. As the votes by proxy increased the personal votes fell off; 1894 was the last occasion when they exceeded 100, and this year they amounted only to 46. The chief effect of voting by post has been to increase the influence of provincial Fellows at the elections. The result is good, and there is no chance of a return to the ancient method of voting; it is, indeed, almost a question whether it will not be necessary to abolish personal voting altogether, as every year there is a greater difficulty in obtaining a quorum. At the election held last week the President had to wait ten minutes before there were six Fellows present, apart from members of the Council, so that he might declare the opening of the election. The results of the recent election may be considered as, on the whole, not unsatisfactory. We are glad to see that Mr. Howse was re-elected. Dr. Ward Cousins was re-elected also, and we may attribute this in part at least, to the very general, and very natural, disinclination which exists to decline to re-appoint retiring members of the Council who are applying for re-election. Mr. Edmund Owen headed the poll with 323 votes, thanks chiefly to the very large number of plumpers, 28 in all, which he received. No other candidate received many plumpers except Sir William Dalby, who had 10. Mr. Rickman Godlee came next to Mr. Owen with 312 votes, Mr. Howse followed with 307, and Mr. Watson Cheyne and Dr. Ward Cousins completed the number of successful candidates with 290, and 259 votes respectively. Mr. Bennett May and Mr. Morgan received each 236 votes, and Mr. Clement Lucas had 225. None of the other three candidates received more than 200 votes. We may express the hope that at the next election Mr. May, Mr. Morgan, and Mr. Lucas will again stand, and that the result of that election will bring them success. All the elected candidates may be regarded as valuable additions to the Council; how they will vote in the interesting questions of College politics time alone can show; but we may venture to hope that none of them will in any way retard, but rather help on, the progress of the College in the performance of the important duties with which it is intrusted.

THE PLAGUE IN BOMBAY.

WE have received a copy of the proceedings of the monthly meeting of the Bombay Medical and Physical Society held in May last, together with some voluminous charts showing the meteorological conditions that prevailed during the late epidemic of bubonic fever in the city and island of Bombay, and the mortality caused by the disease from September to March last, to which we have already adverted. The papers read before the society were upon the Clinical Types of Plague with Urinalysis, by Surgeon-Captain J. G. Hojel; Remarks on the Pathology of Plague, by Surgeon-Captain B. H. F. Leumann; and an Outline of Symptoms of Plague, by Surgeon-Major W. R. Lyons, M.D. The papers are valuable because hey embody the observations and results of those who have so recently had a practical experience of the disease, and the charts will form a useful record of the epidemic. The deaths from plague in September, October, and November were relatively few. These increased in December, and went on increasing greatly in January and February, in which month the epidemic was at its maximum, and began to decline in March. We may add that according to the latest telegraphic despatch from the Governor of Bombay the deaths from plague last week in Bombay city were only twelve, and no cases of, or deaths from, plague had occurred in the city of Poona. The mortality in all the affected areas was also steadily decreasing.

PSEUDO-BULBAR PARALYSIS IN CHILDHOOD.

IN a recent issue of the *Deutsche Zeitschrift für Nervenheilkunde* Dr. Brauer, of Heidelberg, has published the case of a girl, aged fourteen years, who had an illness characterised by fever and muscular pains, and after a few days was found to have symmetrical affection of the tongue and lips, with difficulty in articulation and in swallowing and slight paralysis of the right side. There was also afterwards interference with the development of the right arm. On examination about a year after the onset of the illness the skull was found to be normal, there was a symmetrical affection of the orbicularis oris, of the depressors of the lower lip, of the levatores menti, the pterygoids, the tongue, and

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the palate. There was, however, no atrophy of these muscles, but the tongue, which was not well developed, was not moved in speaking. There were no fibrillary contractions, no electrical changes in the muscles, and no sensory impairment. The palate was paralysed, the palatal reflex lost, the jaw-jerk increased, the speech almost unintelligible, and the intonation distinctly nasal. The right arm was shorter and generally smaller than the left, there was slight weakness of the peroneal muscles of the right leg, and increased reflexes also on this side. The good condition of the muscles, the absence of fibrillary twitchings, the presence of the reflexes and the absence of electrical changes all speak in favour of there not being any nuclear lesion, and Dr. Brauer regards the condition as resulting from a supra-nuclear lesion, apparently the result of acute encephalitis.

CAMBRIDGE GRADUATES' MEDICAL CLUB.

THE annual meeting and dinner of this club, on Tuesday, July 6th, at Limmer's Hotel, Conduit-street, W., was attended by members and their guests to the number of fifty-nine. Dr. Howship Dickinson was elected to the office of president in the room of the late Sir George Murray Humphry, and occupied the chair at the dinner. After giving the loyal toasts of "The Queen" and "The Prince of Wales," he reviewed the chief events of the year in connexion with the Medical School of Cambridge. The death of Sir G. M. Humphry, the appointment of Mr. Joseph Griffiths as reader in surgery, of Professor A. A. Kanthack to be deputy professor of pathology, and the fact that in the person of Dr. Alexander Hill, Master of Downing, the University of Cambridge is for the first time in history under the rule of a medical vice-chancellor, were all alluded to in graceful terms. "The Guests" was proposed by Dr. Norman Moore in a speech characteristically full of humour and curious knowledge—a speech which brought out responses from Sir Samuel Wilks, Professor R. C. Jebb, Sir Joseph Fayrer, and Sir George Scott Robertson. The health of the chairman was eloquently given by Mr. Herbert Page.

CONGENITAL AND HEREDITARY OPHTHALMOPLEGIA.

IN a recent number of the *Revue Médicale de la Suisse Romande* Dr. Gourzein describes a family in which this peculiarity occurred. The paper is abstracted in the last number of the *Neurologisches Centralblatt*. The peculiarity occurred in the father of the family and in five sons, while the three daughters were unaffected. It was ascertained from the father that his mother had had the same affection and a sister had convergent strabismus. Examination of the father revealed almost complete ptosis, so that in order to see he had to throw the head back. There was complete inability to move the eyeball, but accommodation and the light reflex were present and the discs and fundi were normal. There was rotatory nystagmus, but no other affection of the nervous system. A similar condition was found in the eldest boy, aged twelve years, and in the second, aged nine and a half years, although in the latter there was retained some movement of the external and internal recti. The third child, a boy who died at the age of eight months, suffered in exactly the same way. The remaining two boys, aged respectively four years and eight months, presented exactly the same condition, while the girls were all normal. With the exception of the hereditary tendency no distinct etiological factor could be discovered. There was no specific taint or any form of toxic condition so far as could be ascertained. Dr. Gourzein believes that these cases of congenital ophthalmoplegia differ from the ordinary form due to nuclear degeneration in the fact that the ptosis is much more marked, that nystagmus is present, and that a greater or less degree of amblyopia co-exists, and he regards the condition as a purely muscular affection.

ROYAL COMMISSION ON TUBERCULOSIS.

MEETINGS of this Commission were held at 7, Whitehall-place, on June 30th and July 1st and 2nd, the Right Hon. Sir Herbert Maxwell, M.P., being in the chair. The other Commissioners present were Sir Richard Thorne Thorne, K.C.B., F.R.S., Professor Brown, C.B., Mr. Shirley F. Murphy, Mr. Cooke-Trench, and Mr. John Speir. Evidence was heard from Mr. C. Stephenson, F.R.C.V.S., representing the Royal Agricultural Society, Veterinary Inspector of the city of Newcastle and county of Northumberland, as to the extent of the disease in his district and the necessity for uniformity in any legislation so as to cover every channel by which the disease may be conveyed; from Mr. Samuel Rowlandson and Mr. Christopher Middleton, both representing the Central Chamber of Agriculture, the former also the Royal Agricultural Society; from Mr. Sessions, F.R.C.V.S., and Mr. Hunting, F.R.C.V.S.; from Sir T. D. Gibson-Carmichael, M.P., and Mr. Dobbie, representing the Scottish Chamber of Agriculture, the former of whom gave details as to the results of testing with tuberculin his Castle Craig herd.

RIVER POLLUTION AND WATER-SUPPLY.

THE following state of affairs may possibly account for the discrepancy that frequently exists between private analyses and the published reports of the water companies. Sunbury-on-Thames, with the sylvan surroundings that are still spared by the utilitarian hand of the water companies, is well known as a health resort or summer home to many a jaded City man. In the forty or fifty houses, the gardens of which extend to the river, a numerous colony annually congregates. These gardens are small and are more or less honeycombed by cesspools, there being two or three in each, many only a few feet from the river. These cesspools are apparently unprovided with any overflow, and not only do they receive the contents of the water-closets and sinks, but also the rain-water from a considerable area. When full their liquid contents must soak through the highly polluted gravel soil into the river just above the intakes of the water companies. During the recent heavy rains some of these cesspools have overflowed the surface of the gardens and paved courts, giving rise to an indescribable effluvium. When the river is in flood the condition of the water is too awful to contemplate. In addition to these pollutions certain poor nomads wash their foul linen on Sunday mornings by the river bank in this diluted sewage, so that even apart from overflow fouling pity must be extended to the Londoner who has to drink the water taken from such a source.

ŒSOPHAGOTOMY IN THE INFANT.

THE operation of œsophagotomy is happily so seldom called for that any case in which it has been performed may still prove instructive. One such described by Dr. Lemaistre of Limoges in the *Journal de Clinique et de Thérapeutique Infantile*, June 10th and June 17th, 1897, is peculiar, inasmuch as the patient was the youngest whose age has been recorded—an infant of six months. The foreign body was a leaden brooch 3 centimetres long by 1½ broad, which had been swallowed and had lodged in the gullet just below the cricoid cartilage, where it could be felt with the finger passed down the throat. After it had caused more or less irritation for fourteen days the child was put under chloroform, and the œsophagus, which was found at a depth of 4 centimetres, was opened at its left side opposite the seat of obstruction, the brooch extracted, the wound united with deep sutures—a gauze drain being left

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in its lower extremity,—and a dry antiseptic dressing applied. After a fortnight the wound had healed. Dr. Lemaistre notes in connexion with this case the tolerance of foreign bodies shown by the œsophagus as compared with the pharynx, and also its great distensibility during life. He gives as the results of dissection of the dead subject approximate measurements of the œsophagus. According to these the total length of this structure at birth is 12 centimetres, that from the cricoid to the interclavicular notch of the sternum 3½ centimetres. At six months of age 1 centimetre has been added to each of these measurements. He advocates a long primary incision from the cricoid to the sternum for this operation, and following the example of H. Schramm,[1] he prefers not to include the mucous membrane in stitching the wound, but would allow its divided surface to unite naturally, thus ensuring a more rapid closure.

CONTAGIOUS DISEASES IN A POOR-LAW SCHOOL.

IN the current number of the *Practitioner* is a very interesting paper by Dr. S. G. Litteljohn upon the above subject. The school in question is the Central London District, and the space of time covered by the paper extends from Jan. 1st, 1871, to the present time. The ages of the children vary from three to sixteen years, and about 14,000 children passed through Dr. Litteljohn's hands in the period. Amongst these 3274 cases of disease occurred; but this does not mean that that number of children were affected, for one child, of course, often had the same disease twice, or had two or more different fevers. As regards seasonal influence, small-pox and diphtheria were diseases of March, April, and May. Chicken-pox was pretty uniformly distributed throughout the year; scarlet fever was most prevalent in December, January, and February, and measles in February, March, June, August, and November. Whooping-cough was most frequent in December, March, February, and April, while influenza was far more common in January than in any other month. Of the deaths 162 in all were due to small-pox, 1 to influenza, 6 to diphtheria, and 20 to scarlet fever. The one fatal case of small-pox, a boy aged ten years, bore no trace of a vaccine scar. Dr. Litteljohn, naturally enough, interpreted the clause of the Poor-law that it is the duty of the medical officer to "vaccinate all children requiring vaccination" as including re-vaccination, and acted on this idea for some years, when he discovered his action was illegal; so the school is now less protected than formerly, but there has been no case of small-pox for thirteen years. We have not space enough to deal with the whole of this valuable paper, but we recommend every medical man to read it.

THE STATE OF THE STREETS.

WE are glad to see that of late there have been various growls in the daily press as to the various dangers and objectionable features to be met with in the streets. They are many and various and we can only notice a few of them. The first and most important from a medical point of view is the abominable custom which is allowed to go on quite unchecked of collecting what is euphemistically known as "waste"—i.e., every kind of kitchen refuse which gives out a filthy odour—at a late hour in the morning. A flagrant instance of this came under our notice the other morning in St. James's-square at 10 A.M. Traffic of this kind should be strictly forbidden except between 1 and 7 A.M. At present—and this brings us to another cause of complaint—the traveller in a crowded street like Piccadilly may easily get blocked on an omnibus just behind one of these pest carts and be nearly poisoned. Progress is constantly being checked by the omnibuses in front and so the nuisance is more or less constant. The number of omnibuses will have to be limited, and in any case they should not be allowed to stop anywhere and as many times as those in charge of them like. A third point, which is rather a matter for the vestries, is to see that there is some reason exercised in watering the streets. We constantly see the steep end of Bedford-street sprinkled with water, rendering it so slippery that for a horse to get up with a heavy load is a terrible struggle, and has often to be given up. The Strand in the meantime, which is just as dusty, is seldom watered. No steep street should ever be watered artificially except for the purpose of being washed. The evils of traffic are increasing, and those we have mentioned are inimical to the health and temper of the community. As to street noises, we suppose something will be done some day, but at present the plague of organs and newspaper "runners" is unabated.

[1] Wiener Medicinische Wochenschrift, 1895.

ARREST OF HÆMORRHAGE IN HÆMOPHILIA BY THE APPLICATION OF HEALTHY BLOOD.

DR. BIENWALD has employed this very original method in the case of a child, aged two years, the subject of hæmophilia.[1] Having failed to arrest the hæmorrhage from a small wound on the face by the application of perchloride of iron, he obtained some blood by aspiration from a healthy subject and deposited it on the wound. In a few minutes it coagulated, and the hæmorrhage at once ceased. His explanation of the action of the remedy is that it supplies the ferment necessary for thrombosis in the small vessels. Whether this is correct or not is impossible to say in the absence of definite knowledge of the pathology of hæmophilia. As affording his explanation some support we may mention the success obtained by Dr. A. E. Wright in his experiments with a solution of fibrin ferment and chloride of calcium as a styptic. Dr. Bienwald's ingenious method certainly deserves a trial.

IN a telegram to Lord George Hamilton the Governor of Bombay has stated that the deaths from plague in Bombay city during the week ending June 25th were 22 out of a total from all causes of 520. In Poona during the same period the total deaths from all causes were 108. One death from plague was reported. The high rate of mortality was due to cholera. In most districts there were either not any, or very few, deaths from plague, with the exception of Cutch, where there were 83 cases and 60 deaths.

MR. W. W. ASTOR has given the munificent annual subscription of £1000 to the Prince of Wales's Hospital Fund, being the largest hitherto received, and another generous person has given an annual subscription of £250. The total receipts up to the present time are, in round numbers, £20,500 in annual subscriptions, £133,150 in donations, and commuted subscriptions to be invested £20,550.

THE treasurer of Guy's Hospital has received a Jubilee gift of £3000 towards the re-endowment fund from a lady who desires to remain anonymous. The interest on this sum will be applied towards the maintenance of beds in Queen Victoria Ward recently re-opened by the Prince of Wales.

AT a meeting of the Council of the Royal College of Veterinary Surgeons, held on the 2nd inst., for the appointment of officers, Professor Pemberthy was unanimously

[1] La Semaine Médicale, May 5th, 1897.

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elected President, and Sir F. Fitzwygram, Messrs. Simpson, Trigger, Wragg, Mason, and McFadyean Vice-Presidents.

AT a special meeting of the Council of University College, Bristol, held on the 29th ult., Mr. Charles Alexander Morton, F.R.C.S. Eng., L.R.C.P. Lond., and Mr. James Swain, M.D. M.S. Lond., F.R.C.S. Eng., were appointed Joint Professors of Surgery in the Faculty of Medicine.

WE are glad to note that Dr. John Thomas Arlidge has been granted a Civil List Pension of £150 per annum "in consideration of his valuable labours in the cause of public health, and especially his investigation into the hygienic results of particular industries and occupations."

H.R.H. THE DUKE OF CAMBRIDGE has accepted the invitation of the Mayor and Corporation of Harrogate to open the new Royal Baths. July 13th is the day provisionally fixed for the ceremony.

SOME NOTES ON THE LATE GRECO-TURKISH WAR.

ONE of the most lamentable things about the recent war between Greece and Turkey was the inadequacy of provision which the Greek nation made for their wounded, and had it not been for the kindheartedness of foreigners Greece must have borne the stigma of treating her wounded in a way which would have almost discredited a nation far lower in the scale of civilisation. It is on record that a man with a broken femur was strapped straddlewise across the back of a mule and thus carried for several miles, and this is by no means an isolated instance of the barbarity of the methods adopted. For men to be conveyed from a cart to an open boat, again to a wagon, and again to a large steamer was a common occurrence on the Arta side, and many injuries proved fatal or were made much worse by the absence of any efficient means of transport. One man with a bullet wound through the thigh who was brought to the English hospital nearly died in consequence of this means of transport. The wound of exit at the back had been so rubbed by the constant friction of the splint that a large sore or sloughing wound the size of the palms of both hands was the result.

The military hospitals, in which there were no Greek women nurses, were for the most part dirty and quite ill-adapted to the needs of war; the soldiers were put to bed in their regimentals, just as they had come from the war; and operations were performed without chloroform, not from lack of the anæsthetic, but from some occult reason only known to the Greek surgeons. The hospitals, however, which were under the patronage of the Princess were everywhere more clean and well looked after. The English hospital in the Piræus was made up of only about twenty-seven beds; the other one had one hundred. These were the two hospitals organised by the *Daily Chronicle* fund. As regards the situation, the hospital at Piræus was an ideal one situated at the corner of a promontory overlooking the open sea, surrounded by picturesque scenery and pure air.

The cases in the English hospitals were selected on account of their severity and to prevent the further suffering which a removal to the hospitals in Athens would intensify, but they do not call for any special notice. The number of wounded, which in Athens alone amounted to about 3000, was unduly large in proportion to the number killed outright in the battlefield, which, it is stated, was comparatively small. No cases of bayonet wounds were seen in the English hospital, but one-fifth of the cases was produced by shells, or by stones, &c., thrown up by the bursting of shells. The large number of gunshot wounds (Martini) presented an extraordinary similar appearance, the round black holes with white charred edge of entrance and exit being so alike that they might have been painted by the same brush. The chief interest of the wounds lay in the direction taken by the bullets: some passed in the neighbourhood of dangerous or important parts without doing any damage; others passed through joints, and rendered the question of resection a debatable one; whilst those striking bone always produced extreme comminution because of the flat-headed shape of the missiles. These weighed about 1 oz. 1 gr. and resembled 1¼ in. of uncut cedar pencil. Those perforating the abdomen all proved fatal, the bladder, stomach, as well as many parts of the intestine being perforated. It was noticeable that the larger number of men were wounded in the lower extremities, probably the result of long-distance firing or nearly spent shots.

A glance through the following list of 110 cases from the military hospital at Corfu, where the cases were not selected, shows that nearly 50 per cent. were injuries to the hands, the actual figures showing injuries to the left hand 22, and to the right hand 23, total 45. To comment on the peculiar nature of these injuries would perhaps be uncharitable, but the fact is nevertheless significant.

1. Bullet wound in upper arm. 2. Injury to right thumb. 3. Bullet wound through right shoulder. 4. Left first finger. 5. Left first finger. 6. Bullet wound through right thigh. 7. Bullet wound through right shoulder. 8. Amputation of first finger right hand. 9. Amputation of top of first finger left hand. 10. Bullet wound through left hand. 11. Bullet wound through left hand. 12. Bullet wound of left thumb. 13. Amputation of second finger left hand. 14. Bullet wound through right shoulder. 15. Shell wound of right hand. 16 Grazed wound of left side. 17. Amputation of middle finger left hand. 18. Amputation of top of little finger left hand. 19. Amputation of top of first finger right hand. 20. Bullet wound through right wrist. 21. Amputation of top of first finger right hand. 22. Amputation of whole of first finger right hand. 23. Amputation of half of middle finger right hand. 24. Injury and amputation of top middle finger right hand. 25 Gunshot wound and fracture left forearm. 26. Shell wound and amputation of middle finger left hand. 27. Bullet wound through left hand. 28. Amputation of half first finger right hand. 29. Bullet wound and fracture of right hand. 30. Bullet wound through right shoulder. 31. Shell wound instep right leg. 32. Amputation of half first finger right hand. 33. Amputation of first finger left hand. 34. Amputation of half of first finger right hand. 35. Grazed wound of middle finger right hand. 36. Bullet wound transversely across neck and back. 37. Amputation of half of first finger right hand. 38 Amputation of top of thumb left hand. 39. Bullet wound through lower leg right side. 40. Grazed wound of left thumb. 41. Bullet wound through chest (no spitting of blood). 42. Bullet wound right arm to elbow. 43. Bullet through palm of left hand. 44. Grazed wound of right side of head. 45. Amputation of top of finger left hand. 46. Amputation of top of little finger right hand. 47. Amputation of half of index finger left hand. 48. Wound of top of left thumb. 49. Amputation of half of index finger left hand. 50. Amputation of top index finger right hand. 51. Bullet wound through left shoulder. 52. Bullet wound through right upper arm. 53. Bullet wound through left hand. 54. Grazed wound of right side of chest. 55. Bullet wound through left palm of hand. 56. Bullet wound through left foot; amputation of toe. 57. Grazed shell wound of right foot. 58. Grazed bullet wound of left forearm. 59. Amputation of top of little finger right side. 60. Bullet wound between fingers left hand. 61. Contused wound of shell of face right side. 62. Contused wound of shell on left foot. 63. Amputation of first finger left hand. 64. Bullet wound through left upper arm. 65. Grazed wound between thumb and first finger left hand. 66. Amputation of finger right hand. 67. Grazed wound first finger right hand. 68. Amputation of top of first finger of right hand. 69. Bullet through the right foot. 70. Bullet wound through left thigh. 71. Bullet wound across and through shoulders and back. 72. Amputation top of first finger right hand. 73. Amputation top of first finger right hand. 74. Bullet wound through right hand. 75. Bullet wound through right forearm. 76. Bullet wound through left ham. 77. Grazed wound third finger right hand. 78 Compound comminuted fracture of left patella. 79. Bullet wound through back of neck. 80. Amputation top of little finger left hand. 81. Bullet wound through left upper thigh. 82. Bullet wound through left shoulder blade. 83. Bullet wound through left upper arm. 84. Bullet wound graze right chest (no spitting of blood). 85. Bullet wound through left forearm. 86 Bullet wound through upper left forearm. 87. Bullet wound of face (a very interesting case). 88. Bullet wound of left toes. 89. Grazed bullet

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wound of back of head. 90. Grazed wound between fingers left hand. 91. Bullet wound through left shoulder. 92. Bullet wound across back. 93 Amputation of top of first finger right hand. 94. Bullet in left thigh; no fracture; removed. 95. Penetrating bullet wound left foot. 96. Penetrating bullet wound across right side of face and eye. 97. Bullet wound of left buttock. 98. Bullet wound of right calf. 99. Bullet wound across abdomen; flesh wound. 100. Grazed wound across top of head. 101. Bullet wound across right knee joint (officer). 102 Meningitis, after bullet wound across back of head. 103. Knocked down, and bruising of left side. 104. Incised wound of left foot. 105. Contused wounds of both calves. 106. Swollen and burst feet. 107. Fell from mountain, graze of head, and spat blood. 108 Amputation top of first and second finger right hand. 109. Penetrating bullet wound left upper thigh. 110. Bullet wound through left foot.

It is only right to state that the success of the arrangement of the larger English hospital was due to the experienced aid of Mr. S. Osborn, F.R.C.S., chief surgeon to the St. John Ambulance Association.

STATISTICS OF CHOLERA.

OUR Special Correspondent in Egypt sends us the following figures showing how cholera was distributed throughout the various districts of Egypt during the epidemic which lasted from October, 1895, to November, 1896:—

Town or province.	Number of villages attacked.	First case.	Last case.	Total cases.	Total deaths.
Cairo	—	Dec. 7th	Oct. 21st	1519	1349
Alexandria	—	Dec. 28th	Nov. 3rd	1072	914
Port Said	—	July 14th	Sept. 24th	23	20
Suez	—	May 3rd	Oct. 11th	23	15
Ismailia	—	June 12th	Aug. 31st	14	14
Damietta	13	Oct. 11th	Sept. 16th	528	467
Gharbieh	143	Dec. 1st	Oct. 20th	4425	3503
Dakahlieh	52	Oct. 13th	Sept. 29th	1359	1127
Charkieh	96	Oct. 26th	Sept. 25th	1446	1137
Menoufieh	35	June 3rd	Oct. 23rd	800	662
Béhéra	73	May 12th	Oct. 29th	982	828
Kalioubieh	28	June 5th	Oct. 11th	528	434
Ghizeh	28	Jan. 8th	Oct. 14th	616	533
Beni Souef	21	May 16th	Sept. 31st	372	285
Fayoum	58	June 9th	Aug. 24th	2183	1986
Minieh	35	May 31st	Oct. 5th	575	483
Assiout	32	April 16th	Oct. 9th	957	792
Guergueh	60	June 14th	Oct. 10th	2242	1916
Kenah	27	June 27th	Sept. 30th	927	804
Frontier	—	June 12th	Sept. 11th	1103	836

THE METROPOLITAN WATER SUPPLY.

The Royal Commission.

A MEETING of the Royal Commission was held at Trafalgar-buildings, Charing-cross, on Tuesday last, Lord Llandaff presiding. Matters relating to procedure were discussed, and the commissioners have had under consideration the question of the appearance of counsel before them, a proceeding to which they are willing to consent within limitations.

The County Council and the Royal Commission.

The Water Committee of the London County Council have had before them a communication from the Royal Commission stating that the commissioners will be prepared to receive evidence from the Council upon the points referred to them for consideration. The Water Committee are now considering the evidence which is to be presented by witnesses on behalf of the Council, and have prepared a series of resolutions which, they believe, will represent the opinion of the large majority of the Council, and which they hope that the Council will pass at the next meeting.

These resolutions are to the effect that (1) the water-supply of the metropolis should not continue in the hands of private companies; (2) that the undertakings of the metropolitan water companies should forthwith be purchased at a fair and reasonable valuation; (3) that the management of the water-supply should be effected either (*a*) by the London County Council supplying its own area directly and outside authorities in bulk at a fixed price; or (*b*) by the London County Council supplying its own area only, and the outside authorities supplying their areas; or (*c*) by a new body supplying directly the whole area both within and without the county; and (*d*) that, in any case, it is desirable that the London County Council should, in the first instance, be the purchasing authority on behalf of the population of the whole area concerned.

A further resolution suggests that if the undertakings of the water companies are not acquired, it is essential that effective powers of control should be given to the London County Council, and that the legal position of the companies should be re-considered.

"The Water Famine in South London."

The area affected by the recent break-down in the water-supply in the Lambeth Company's district was certainly a large one. The break-down, it will be remembered, was said to be due to a difficulty with the filter beds at Ditton. The engineer of the company wrote to one of the customers who complained of the failure of the company to supply him with water, and in his letter he mentioned that the area affected by the break-down was a large one, and gave that as one of the reasons why every customer could not be informed that the water-supply would for a time be deficient. As far as we have seen, Mr. Andros, the writer of the original letter of complaint, is the only customer in the Lambeth district who has made a public complaint on the matter, but many letters on the subject were received by the Penge Vestry. The Lewisham Board of Works in a debate upon the subject did not mince matters; but the board had before them evidence to show that the sudden stoppage of water had placed certain workmen in grave peril. On the motion of the chairman of the board it was agreed that a very strong letter should be written to the company especially complaining that the company did not give notice of the failure of the supply. The dearth of water lasted three or four days, and it would have been easy for the company to have given notice to the public on the first day. Then the public could have economised what water they had and have taken precautions against accident.

East London Waterworks.

We understand that the East London Waterworks Company are now supplying water from their new reservoirs, the East and West Warwick. We lately gave a full description and plan of these reservoirs in THE LANCET. The water from them passes through a meter house which has been recently erected, and is fitted up with a Venturi meter capable of registering an amount up to 60,000,000 gallons a day.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MEETING OF FELLOWS.

THE half-yearly meeting of Fellows of the College was held on July 1st, immediately after the election to the Council, the result of which was published in our issue of last week, *vide* p. 67; the President, Sir WILLIAM MAC CORMAC, Bart., was in the chair.

Forty-eight Fellows, including fourteen members of the Council, were present.

The PRESIDENT reported that the Council had received a letter from Lord Lister in which he requested that his

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warmest thanks might be expressed to the Fellows for their kind congratulations.

Mr. R. B. ANDERSON moved:—

"That, as asked in a memorial dated May, 1897, of Fellows and Members practising in Plymouth, Devonport, and Stonehouse and the neighbourhood, and in reference to resolutions of previous meetings of Fellows and Members, the Council be requested to afford the College some explanation as to the rights referred to in Section XV. of the College By-laws; and particularly why Fellows and Members are in error in regarding the violation of the right to practise their profession as a disturbance in the exercise of a right acquired by them as Members of the College, and the Council's undertaking to protect and defend Fellows and Members so disturbed as a binding obligation."

He said that the Council had been requested by the memorialists to subscribe to the fund for obtaining a rescinding of the judgments which had been given against him, but that they had said that Section XV., which promised to maintain the rights of Fellows and Members when interfered with, did not apply to his case. The Council was then requested to explain what were the rights referred to in the by-law, but they had replied "they did not think it incumbent upon them to give explanations of the conclusions at which they might arrive, but were of opinion that Mr. Anderson's case did not come within the terms of Section XV. of the by-laws." The resolution he was bringing forward was to ask the Council to give some explanation of the rights and privileges which were mentioned in the by-law. It was most important that the Fellows and Members should know what were the rights which the Council would maintain. So far as he could see, the only right to which the by-law could refer was the right to practise surgery; this was acquired by becoming a Fellow or Member of the College. The silence on the part of the Council was very significant, and he urged the meeting to carry this resolution, which formally requested the Council to give the explanation of what rights were referred to in Section XV.

Mr. GEORGE JACKSON seconded the resolution.

The PRESIDENT said that Mr. Anderson's case had been before the Council many times. They all felt the greatest sympathy with him for the way in which he had been treated, but they had come to the conclusion that the College funds could not be employed for such a purpose, and that help for Mr. Anderson must come out of their own pockets. The College was for the promotion of surgery, and the good work it had done in its museum, its library, and its laboratories was acknowledged by all; it would be an entirely new departure to contribute to the maintaining of actions at law, however deserving the Fellow or Member affected might be. He would like to ask Mr. Anderson if it were true that there was no part of the British Empire where he could not practise?

Mr. F. J. GANT said that he had always taken a very warm interest in Mr. Anderson's case, but the College had no right to contribute from its funds to such a purpose; he would move an amendment:—

"That having heard the President's explanation in reference to the action of the Council in Mr. Anderson's case, this meeting, while expressing sympathy with Mr. Anderson, suggests [to the Council] that no further action be taken in this case."

Sir ROBERT CRAVEN seconded the amendment.

Mr. ANDERSON thanked the meeting for the offered sympathy, but urged that sympathy afforded no relief from his persecutions. The explanation of the President did not really touch the question of the meaning of the by-law. As to the question which he had been asked, it was not a fact that he could practise in Tobago in the same way as other Fellows of the College could; the judgments against him were still in force, and until these were rescinded it was practically impossible for him to practise there. About £900 would be required to carry his appeal to the Privy Council.

On being put the amendment was carried by 25 votes to 4, and on being put as a substantive motion, it was carried by 29 to 1.

Mr. ANDERSON then moved his second resolution, which was as follows:—

"That this meeting desires to call the attention of the Council to the published reports of the proceedings of the General Medical Council at the recent session in the matter of a petition of a Fellow and Member praying for the defence by the General Medical Council of his rights guaranteed under the Medical Acts, and to Mr. Bryant's action in the matter; and to inquire whether, in voting against the reception of the petition and its entry on the minutes, and in accepting the advice of the Council's legal adviser without considering it in relation to the merits and prayer of the petition, Mr. Bryant (*a*) correctly construed the views of the Council on the subject, or (*b*) acted satisfactorily as the representative of the Council on the General Medical Council."

Mr. GEORGE JACKSON seconded.

The PRESIDENT said that Mr. Bryant had been asked to represent the College on the General Medical Council; that no course of action had ever been dictated to him, but he was expected to act according to his own judgment, and that no other arrangement would be satisfactory to the College or to Mr. Bryant.

Sir ROBERT CRAVEN suggested that Mr. Anderson should appeal to the profession for the money necessary to carry on his actions.

The resolution was put and lost.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Enteric Fever in the City of Chichester, by Dr. T. BULSTRODE.[1]—This occurrence took place in the months of May to September of last year, and it has interest because it seems most clearly to have been brought about in the main by conditions of pollution of soil apart from the question of the influence of such pollution upon the water-supply. Chichester has long had a bad repute as regards the prevalence of enteric fever. It was inspected by the late Dr. Seaton in 1865 and again by Dr. Airy in 1879, and for some twenty years its "fever" death-rate has been largely in excess of that of the county in which it is situated, and also in excess of that for England and Wales. Among the points which are worked out with much care by Dr. Bulstrode is the fact that the locality invaded—namely, one situated outside the old walls—is the same as that which had been invaded before. Then it is shown that the incidence of the disease could not have been due to imperfections in a new system of sewerage—indeed, only one house inside the walls that was drained became infected; and, lastly, it appears that the public and private water services could not have induced the disease. Thus, of 494 houses inside the walls which receive the public service of water only 3 were invaded; and taking all the well waters it appears that of 76 houses invaded within and outside the city walls the rate of attack on well-water drinkers was 2·9 per cent., and that on town water drinkers was 2·6; in other words, it was practically equal. But the fouling of soil about houses, and this notably in the locality infected, is about as bad as it could be. Everywhere cesspools and cesspits, disused or still in use, abound. Chichester is "riddled with them," and when houses are sewered or have proper closets provided all the reeking filth of the past is merely covered in and left there to foul and infect the soil. The case is one in which the perpetuation of enteric fever seems to have been ensured by reason of maintaining the foul condition of the soil, and in this sense the report, which is well illustrated, has distinct interest for students of epidemiology.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Southampton Port District.—During 1896 the Admiralty selected Southampton as the port of the embarkation and disembarkation of troops, and although, as Mr. Wellesley Harris observes, this step may be held to be good for the port in a commercial aspect, it undoubtedly increases the risks to Southampton of the importation of exotic diseases, a risk which has been very materially increased during the recent trooping season, owing to the presence of bubonic plague at Bombay, whence came a large number of troops. Each troopship carries on an average, Mr. Harris tells us, some 1250 troops, together with a crew of about 170 Lascars. Arrangements have, it appears, been made by which an officer of the Army Medical Department assists Mr. Harris in his duties in connexion with troopships, and the courtesy of the military authorities, as also of the Customs, is a matter of grateful acknowledgement on the part of Mr. Harris. We expect, too, that no inconsiderable share of the success of the arrangement is due to the valuable assistance which Mr. Harris is able to afford and to the tactful manner in which he carries out his arduous duties. The trade of the port of

[1] Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis, and Co., Dublin. 1897. Price 6d.

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Southampton is rapidly increasing, and the net tonnage of the vessels entering the port during last year amounted to 3,596,945, as against 2,562,549 in 1892; and it is a fortunate matter, having regard to the increased risk which this amount of shipping entails, that the Southampton Port Sanitary Authority have adopted a liberal, far-seeing policy in their arrangements. An interesting instance of the danger of eating raw mussels procured from near the main sewer outfall is recorded by Mr. Harris. Three sailors who had thus eaten were attacked with vomiting and diarrhœa, and two of them subsequently developed what appears to have been enteric fever. A somewhat unique point in connexion with the attacks of gastritis is that the symptoms did not develop until some six days after the consumption of the mussels, while in the majority of cases of a similar nature the onset of the symptoms has been within a few hours of the ingestion of the mussels. Under any circumstances it would be well, it seems to us, if a notice were erected near to the sewer outfall warning persons as to the danger of consuming mussels found in its vicinity.

Worcester Urban District.—The chief feature in the sanitary history of Worcester during 1896 was an epidemic of diphtheria which caused 49 deaths among 317 notified cases. The outbreak is the more interesting inasmuch as there is no record of a previous epidemic in the city, the deaths in any one year from 1873 to 1889 having never exceeded 8 in number, while the total for the whole seventeen years was but 43. Since 1892 the deaths have been somewhat more numerous, but no outbreak has occurred. From the monthly notification returns it seems that diphtheria commenced to be epidemic in May, but it has to be noted that in the first quarter of the year sore-throat was prevalent in the district, and that there occurred in addition 16 cases, with 5 deaths, from diphtheria. Of these 16 cases, 3 only were of school age. In April 3 cases occurred, and 2 of these were children attending an infant school; while in May, out of the 11 cases notified, 8 were of children attending school, and other 2 in families members of which went to school, the remaining case having presumably no relation to school attendance. Throughout the epidemic there were 155 scholars, from 21 schools, who suffered from diphtheria, figures which do not include secondary cases which occurred in the houses primarily invaded by school attending cases. There were but five schools which were invaded by the disease in a marked degree, none of the other schools having contributed more than 10 cases each; and amongst the scholars attending school in the poorest and most unhealthy part of the town there was but one notified case. In all there were 254 houses invaded, and in 58 the first notified case was of a person not attending school. Dr. Mabyn Read thinks that "the aggregation of children in schools is the main factor in the spread of this and other diseases." It is, of course, necessary to be careful in the use of the term "main factor," inasmuch as it is obvious that in certain outbreaks of diphtheria it is by no means easy to demonstrate, or even legitimately to infer, that "school influence" is the "main factor"; and it is perhaps more precise to say that under certain conditions, and when the disease is exhibiting a high degree of infectivity, the aggregation of children at susceptible ages in schools may be, and often is, a very potent, or even the main, factor in disseminating the disease. If this be a correct thesis it is to be expected that, as these opportunities for the favourable operations of infectivity increase, even so will what may be termed the natural variations of the diphtheria in any given locality tend to be influenced. By natural variations we mean here those remarkable ascents and descents of diphtheria prevalence for which we have as yet found no adequate explanation, and it is further necessary to insist that these variations often manifest opposite tendencies in different localities. The history of Birmingham may be taken as a good example. Here prevalence of the disease has been falling since 1873, but in the autumn of 1894 a rise commenced which has reached in 1896 a point hitherto altogether unknown in the district. Dr. Read remarks that his "experience goes to show that it is not the pronounced cases of diphtheria that spread the disease, but those ill-defined sore-throats seldom seen by medical men." This is surely the key, in a sense, to much that has been affirmed and denied in reference to school influence, and all of us who have had experience in outbreaks of diphtheria can recall numerous instances where the first *notified* case was not attending school, but where he or she had been infected by a school-attending brother or sister who was found to have been the subject of mild but unrecognised diphtheria. In a word, notification tells us only of that which is recognised, and not necessarily of that which may have been the origin of the outbreak, and which may still be causing its spread. School closure in the Worcester outbreak appears to have been attended with good results, but it would have been of interest had Dr. Read furnished the daily and even weekly notification returns in connexion with each school area, together with the dates of closure and of re-opening of each school.

Coventry Urban District.—THE LANCET of April 17th, 1897, contained an obituary notice of Dr. Mark Anthony Fenton, the medical officer of health of Coventry, and since that date his annual report for 1896 has reached us. Dr. Fenton was compelled to relinquish his life's work on March 27th, but he had prior to this completed his annual report, and the town clerk has been able to edit it. The year 1896 was for Coventry one of unexampled prosperity for the cycle and allied industries; large numbers of mechanics were attracted from other districts, while the employés from the Coventry watch and ribbon trades came over to the cycle industry, movements which, Dr. Fenton observed, changed the character of the working population and led to a marked diminution in outdoor relief and in the number of inmates in the workhouse. During the year under review the compulsory notification of measles, which has been in force in Coventry for the last five years, was abolished, and it has to be noted that from 1877 until the adoption of compulsory notification a system of voluntary notification was in force for this disease. The following table will be of interest:—

Period of Voluntary Notification.

—	Cases notified.	Deaths.	Death-rate per 1000 population living.
Five years ending 1881	774	43	1·0
" " 1886	2872	87	2·0
" " 1891	2556	82	1·6

Period of Compulsory Notification.

—	Cases notified.	Deaths.	Death-rate per 1000 population living.
Five years ending 1896	4020	95	1·7

There were epidemics in 1882, 1884, 1886, 1889, 1891, 1894, and 1896. The measures adopted were the distribution of printed instructions and the prohibition from school attendance of children from invaded houses. The conclusion to be drawn from the experience at Coventry is, Dr. Fenton added, that notification without isolation is not of much practical value, and he thought that the provision of hospital accommodation for a small number of cases so as to isolate the initial centres of infection might do good. The Gloucester outbreak of small-pox proved a temporary benefit to Coventry in the matter of vaccination, and the guardians, who previously had refused to prosecute, rescinded the resolution embodying that determination. The result was that the percentage of children vaccinated rose from 4·5 in 1895 to 41 in 1896. Dr. Fenton was of opinion that if the pseudo-voluntary system suggested by the Vaccination Commissioners becomes law vaccination in Coventry will soon disappear.

Norwich Urban District.—Dr. H. Cooper-Pattin welcomes the formation in Norwich of a "Sanitary Aid Association," which he thinks will do useful work in the direction of stimulating public opinion, and thus in aiding the efforts of the sanitary authority. Clergy of all creeds have joined the association, and its constitution is such as to command respect. The isolation hospital at Norwich seems to be popular, but unfortunately the accommodation is inadequate for the needs of the city, and instead of there being one bed to every 1000 of the population there is but one to every 2250. As a result of this deficiency first cases of scarlet fever occurring in a house were often during last year unable to be removed, and hence other children contracted the disease.

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Dr. Cooper-Pattin thinks that damp, foggy weather, particularly when it is associated with low barometric pressure, tends to produce a congested state of the tissues lining the fauces and thus predisposes to attacks of diphtheria. There were 196 cases of enteric fever notified in Norwich last year, and Dr. Cooper-Pattin has gone very thoroughly into the distribution of the cases in regard to the several factors which may have been concerned in their causation. The chief conclusions at which he arrives are these: that enteric fever has been prevalent in Norwich for the last sixteen years, and that the endemicity of the disease is connected n some degree at least with the methods of excrement disposal which obtain in the city; that emanations from sewer gratings, untrapped gullies, &c., exert a predisposing influence on those exposed to them; and that the thousands of fixed and movable "bins" pollute the soil and air in the vicinity of dwellings, and thus afford a favourable nidus for the disease germs. As evidence of soil pollution Dr. Cooper-Pattin calls attention to the high proportion of chlorides and nitrates to be detected in the soil of the city.

Maidstone Urban District.—During last year the water in one of the reservoirs supplying the town became polluted in rather an unusual and interesting fashion. Attention was first called to the fact that the water in question was polluted through the regular analyses which are made of the public water-supply, and an illustration is thus afforded of the value of these analyses. It seems there are two reservoirs, one known as the new and the other as the old reservoir, situated one on either side of the road and of the sewer which passes along it. The new reservoir is at a higher level than the sewer, the old reservoir at a lower level. The springs furnishing water to the reservoirs rise to the west of the new reservoir, and the water thus traverses the road containing the sewer before reaching the old or low-level reservoir. In explaining how the pollution took place Mr. M. A. Adams points out that when the level of the spring water is, as it usually is, at a higher level than the sewer the water tends to pass through any leak in the sewer pipes into the sewer; but, on the other hand, when, as was recently the case, the water is at a lower level than the sewer the reverse process takes place, and the sewage tends under certain circumstances to pass out into the surrounding soil, and subsequently to be carried with the spring water into the lower reservoir. All this, Mr. Adams adds, exactly fits in with the facts and circumstances of the case, and the water from the lower reservoir has not since been used.

Plympton St. Mary Rural District—Mr. Noy Scott complains of the nuisance caused in his district by the refuse from Plymouth know as "Plymouth dung." This refuse is stated to be stored by the contractor until it becomes offensive, when it is sold to farmers, who spread it on the land for manure. Mr. Noy Scott reports that the refuse causes sickness in people who are brought in contact with it, and he urges that something should be done to abate the nuisance. It seems that the most effectual and probable remedy is the provision of a destructor by the Plymouth Corporation. Proposals for the erection of a joint isolation hospital in connexion with this district have fallen through, but the district council have obtained permission to lease a piece of ground on which a small pox hospital can at any time be erected, and the medical officer of health has been empowered to purchase a temporary hospital if necessary. We trust the building will be in place in time for the isolation of the first case, but it would be surely better if the council followed the advice of their medical officer of health and procured the site and hospital before this case arises.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 7115 births and 3106 deaths were registered during the week ending July 3rd. The annual rate of mortality in these towns, which had been 15·8 and 15·7 per 1000 in the two preceding weeks, further declined last week to 14·7. In London the rate was 13·5 per 1000, while it averaged 15 6 in the thirty-two provincial towns. The lowest death-rates in these towns were 10·3 in Croydon, 11·4 in Halifax, 11·5 in Leeds, and 11·6 in Derby; the highest rates were 20·1 in Liverpool and in Burnley, 21 0 in Salford, 21·9 in Plymouth, and 25·4 in Preston. The 3106 deaths in these towns included 409 which were referred to the principal zymotic diseases, against 355 and 404 in the two preceding weeks; of these, 156 resulted from measles, 82 from diarrhœa, 77 from whooping-cough, 41 from diphtheria, 34 from scarlet fever, and 19 from "fever" (principally enteric). No deaths from any of these diseases were recorded last week in Swansea, in Derby, or in Halifax, while they caused the highest death-rates in Manchester, Salford, Burnley, Preston, and Plymouth. The greatest mortality from measles occurred in Bolton, Newcastle-upon-Tyne, Birmingham, Manchester, Salford, Burnley, and Preston; from scarlet fever in Leicester; from whooping-cough in Norwich, Oldham, and Plymouth; and from diarrhœa in Burnley and Plymouth. The mortality from "fever" showed no marked excess in any of the large towns. The 41 deaths from diphtheria included 32 in London and 2 in Liverpool. No fatal case of small-pox was registered last week in any of the thirty-three large towns, and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2821, against numbers increasing from 2380 to 2789 on the nine preceding Saturdays; 310 new cases were admitted during the week, against 255, 274, and 267 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 140 and 142 in the two preceding weeks, declined again to 127 last week, and were 70 below the corrected average. The causes of 35, or 1·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Nottingham, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Wolverhampton, Birmingham, Norwich, and Leicester.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·4 per 1000 in each of the two preceding weeks, declined to 18·7 during the week ending July 3rd, but exceeded by 4·0 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 11·3 in Aberdeen and 17 0 in Perth to 21·7 in Paisley and 33·2 in Leith. The 557 deaths in these towns included 23 which were referred to diarrhœa, 21 to whooping-cough, 16 to measles, 10 to "fever," 5 to scarlet fever, and 2 to diphtheria. In all, 77 deaths resulted from these principal zymotic diseases, against 87 and 69 in the two preceding weeks. These 77 deaths were equal to an annual rate of 2·6 per 1000, which was 0·7 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had declined from 40 to 16 in the four preceding weeks, rose again to 21 last week, of which 10 occurred in Glasgow, 6 in Leith, and 3 in Edinburgh. The 16 deaths from measles showed a further decline from the numbers recorded in recent weeks, and included 9 in Leith, 4 in Edinburgh, and 3 in Glasgow. The deaths referred to different forms of "fever," which had been 5 and 6 in the two preceding weeks, further rose to 10 last week, of which 9 occurred in Glasgow. The 5 fatal cases of scarlet fever included 2 in Glasgow and 2 in Edinburgh, and the 2 deaths from diphtheria were recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 109 and 104 in the two preceding weeks, declined again last week to 86, but exceeded by 11 the number in the corresponding period of last year. The causes of 47, or more than 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 19·7 and 21·8 per 1000 in the two preceding weeks, declined again to 20·3 during the week ending July 3rd. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 27·3 per 1000, the rate during the same period being 15·5 in London and 24·9 in Edinburgh. The 136 deaths registered in Dublin during the week under notice showed a decline of 10 from the number in the preceding week, and included 11 which were referred to

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the principal zymotic diseases, against 14 and 11 in the two preceding weeks; of these, 4 resulted from diphtheria, 2 from measles, 2 from scarlet fever, 2 from diarrhœa, and 1 from whooping-cough. These 11 deaths were equal to an annual rate of 1·6 per 1000, the zymotic death-rate during the same period being 1·5 in London and 2·0 in Edinburgh. The fatal cases of diphtheria, which had increased from 1 to 5 in the three preceding weeks, declined to 4 last week. The mortality from measles, whooping-cough, and diarrhœa corresponded with that recorded in the preceding week, while that from scarlet fever showed an increase. The 136 deaths in Dublin last week included 22 of infants under one year of age, and 25 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked decline from the numbers returned in the preceding week. Five inquest cases and 5 deaths from violence were registered; and 55 or more than a third, of the deaths occurred in public institutions. The causes of 11, or more than 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR HERBERT J. R. MOBERLEY will shortly join at Woolwich. Surgeon-Captain Alfred P. Blenkinsop proceeds to Dublin for duty.

ROYAL HORSE GUARDS.—Surgeon-Lieutenant-Colonel H. F. L. Melladew, M.D., is placed on retired pay. Surgeon-Captain Henry Mitchell, from 2nd Life Guards, to be Surgeon-Major, in succession to Surgeon-Lieutenant-Colonel Melladew.

INDIA AND THE INDIAN MEDICAL SERVICES.

Brigade-Surgeon-Lieutenant-Colonel Moore, A.M.S., has been directed to proceed to Poona to officiate as Principal Medical Officer, Poona District, vice Surgeon-Colonel Atkins, A.M.S., proceeded on leave. Brigade-Surgeon-Lieutenant-Colonel Charles John Walford Meadows, Bengal Establishment, retires from the service, subject to Her Majesty's approval.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain James Cagney, M.D., 20th Middlesex Volunteer Rifle Corps, to be Surgeon-Captain.

MILITIA.

Infantry: 3rd Battalion the Connaught Rangers: Honorary Surgeon-Major G. W. Hatchell resigns his commission, also is permitted to retain his rank and to wear the prescribed uniform on his retirement.

VOLUNTEER CORPS.

Artillery: 1st Essex (Eastern Division, Royal Artillery): Charles Forsyth, M.B., to be Surgeon-Lieutenant. *Engineers:* 2nd West Riding of Yorkshire (Leeds): Henry Waite, gent., to be Surgeon-Lieutenant. *Submarine Miners:* The Tees Division: John Watkin Edwards, M.B., to be Surgeon-Lieutenant. *Rifle:* 4th Volunteer Battalion the Durham Light Infantry: The under-mentioned Surgeon-Lieutenants to be Surgeon-Captains: T. Benson and H. A. Collinson, M.B. 1st Dumbartonshire: David Christie, M.B., to be Surgeon-Lieutenant. 18th Middlesex: Surgeon-Major Anthony Hickman Morgan, D.S.O., retired, late Army Medical Staff, to be Major.

VOLUNTEER MEDICAL STAFF CORPS.

The Glasgow Companies: Surgeon-Lieutenant J. B. McKenzie Anderson, M.B., to be Surgeon-Captain.

THE MOSCOW CONGRESS.

As an inducement to Service members of the profession to attend the Twelfth International Congress at Moscow from August 19th to 26th next, the organising committee of the tenth Section (military medicine and hygiene) offer free lodging in the wards of the Surgical Clinique to a limited number of their foreign colleagues. The institution was evacuated on June 1st in order that the whole of the interior might be repainted, washed, and thoroughly cleansed, and all the beds and bedding are to be scrupulously disinfected. There is room in the building for seventy-five persons, of whom eighteen can have separate apartments, the remainder being accommodated in wards containing from four to eight beds. Lodging in Moscow is no doubt both hard to find and expensive when found, so probably medical officers will be glad to avail themselves of the kind and thoughtful invitation of their Russian *confrères*.

OUTBREAK OF CHOLERA AT MUTTRA.

We learn, on the authority of the *Times of India* of June 18th, that there has been a sharp outbreak of cholera among the men of the 5th Lancers at Muttra, fifteen deaths having occurred out of twenty-three seizures.

It is estimated that there are at present some fifty vacancies in the Army Medical Service to be competed for at the next examination, the same number in the Medical Service of the Navy, and eighteen are notified in the Indian Medical Service.

Correspondence.

"Audi alteram partem."

"THE LUNACY ACT, 1890, AND ITS AMENDMENTS."

To the Editors of THE LANCET.

SIRS,—Your correspondent, "Formerly a County Asylum Superintendent," I am glad to see, suggests as a remedy for the present evils the *abolition of lunacy certificates*. I have long maintained that the lunacy certificate should be abolished as constituting a grievous interference with the liberty of the subject in obtaining medical treatment. That a person suffering from disease of the brain must obtain, or have obtained, the authorisation of a magistrate before going to a sanatorium for treatment would be grotesquely absurd if it did not cause such serious evil. The public would rebel at once if the lawyers demanded that a man with a broken leg should be haled before a magistrate prior to being taken to a hospital. The broken leg can be seen, but unfortunately the broken brain is not so visible.

If there is danger of asylums admitting or retaining sane persons these institutions should be so supervised as to render this impossible, and this supervision should be accomplished by supervisors appointed and paid by the State. If the medical profession possessed any solidarity it would not tolerate for a moment the present position of matters. The duty of signing certificates and of making reports in regard to these sick persons is not only thrust upon medical men by law, but these laws are conceived and directed against the profession very much as if against the habitual criminal class.

The result of all this insane legislation, as it may appropriately be called, is that to avoid certification, or from fear of it, patients are kept from appropriate treatment, with the consequence that homicides and suicides are rife, while cases that might have recovered become chronically insane. A second result is that asylum medical officers have half their time occupied in filling up endless forms, reports, statements, &c., many of them utterly absurd and useless, but one at least, the periodical certification form, positively prejudicial, having often resulted in the discharge of dangerous lunatics. The proportion of medical officers in asylums is wofully small, and with the ever-increasing addition to the always heavy duties of administration little time or energy is left them for the treatment of their patients. The Lunacy Laws, indeed, are probably the most efficient cause in preventing that popular subject, "the increase of insanity," becoming "the decrease of insanity." The disease is clear, but what is its cause and what the remedy? The cause is patent and obvious. The Lord Chancellor is at the head of the lunacy system. Hence the anomaly of a Lunacy Commission, entrusted with the supervision of the treatment of insanity throughout the kingdom, being mainly composed of barristers. This ridiculous state of affairs is about comparable to what should obtain if the Lord Chancellor were supreme over the Admiralty, when no doubt we should see an equal number of barristers and naval officers commanding our fleets, while our captains

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of ships would spend all their time in forms and correspondence in regard to why Jack had had his grog stopped.

For many years past I have taken part in representations, petitions, and deputations to successive Lord Chancellors in regard to lunacy legislation, and I am fully convinced that this is waste of energy. The remedy for the present wretched state of affairs is to approach Parliament directly, with a view to have the Lord Chancellor's jurisdiction only over the property of the insane, but to place lunatics for their care and treatment under the charge of a Minister of Public Health. I would suggest the formation of an association to promote this object, and should be glad to hear from others interested in, and willing to work to, this end.

I am, Sirs, your obedient servant,

July 5th, 1897. HENRY RAYNER, M.D. Aberd.

THE GENERAL MEDICAL COUNCIL AND THE QUESTION OF MEDICAL REGISTRATION IN INDIA.

To the Editors of THE LANCET.

SIRS,—It will please hundreds of your readers, both at home and in our great Indian Empire, if your excellent proposals for definite action being taken by the General Medical Council are followed out by that august body. There is a simple task before our medical legislators, and, in common fairness to our brethren in the East, they ought to take it up most cheerfully. Could not the registrar of the Council invite the kind attention of the president to the subject, or, failing that, would not some member of the Council befriend India's cause by placing a motion with reference to medical registration in India before the next meeting of that body? Meanwhile I should like to draw further public attention to the able article on this question in THE LANCET of July 3rd by placing before the profession the following article taken from the *Indian Medical Record*, a journal that has worked hard for years to obtain a Medical Registration Act for India:—

"Any Act of the legislature which contemplates the protection and registration of medical practitioners in India has a very complex problem to solve. Side by side with the large body of orthodox doctors, is an innumerable host of indigenous practitioners, whose methods, widely differing as they do from western medicine, still command a very wide sphere of employment and confidence with the purely Indian communities. Kobirajes, hakims, vaids, &c., are acceptedly medical practitioners of certain systems, and any Act contemplating registration of medical practitioners must deal with these classes also. They are part and parcel of the domestic life of the people of the country, and they cannot, and must not, be ignored. That their varied systems possess much that is effectual and commendable in the treatment of disease is freely admitted by Western physicians. But that their practices are often based upon most imperfect and distorted suppositions of the anatomy and physiology of the human organism, are facts still more patent. It is to this deficiency in their systems of a fundamental knowledge of pathology, that most of the fatal errors of these indigenous practitioners are due. A little knowledge is admittedly a dangerous thing. And yet it is a glaring fact that these men are often absolutely illiterate and utterly devoid of the faintest knowledge of the position of the organs they are supposed to be treating, and have only traditional ideas of the virtues and actions of the drugs they prescribe. It is as reasonable and right to expect the man who poses as a healer of disease to possess a knowledge of the organs he is dealing with as it is to compel efficiency in mechanical and engineering science in the man who takes charge of a steam engine. It is as reasonable and right to raise standards of efficiency for medical servants of the public as it is to demand and enforce education, training, and experience in engineers, boiler-makers, ship captains, plumbers, and every other practitioner of every other art. It does not follow, because centuries of public or State neglect and indifference have left medical practitioners to ply their art without let or hindrance in this country, that such neglect and indifference towards the public should continue for ever. We have endeavoured by repeated articles upon the subject of medical practice in India to prove that no excuse exists for the withholding of a Medical Registration Act by the Government. The only objection that has been raised has reference to the question of the incorporation of indigenous practitioners within the scope of any such enactment. We would most cordially commend in the first instance that legislation should embrace all practitioners. That kobirajes, hakims, vaids, &c., be enrolled into separate lists and that registration be most carefully and exhaustively made of each and all of them, with a distinct understanding that after the date of registration no man shall be permitted to practise medicine by any system whatever, except he can produce evidence of a fair standard of general preliminary education and proof of attendance for a certain period at a recognised college of medicine for the study of human anatomy, physiology, the pathology of diseases, and also the practical instruction of a hospital or of some registered practitioner of medicine. Surely this is a reasonable demand. We only ask that the kobiraj, the hakim, or the vaid, who seeks to attend the public, should be able to provide that public with some guarantee of his knowledge of his profession. It would be essentially necessary in the case of all these practitioners to demand a certain number of years of practical study with a member of his craft, and his examination by a duly appointed body of his particular system, to ascertain his fitness to practice his art. After undergoing such education and examination as the State would enact, he would be registered as a kobiraj, hakim, vaid, &c., as the case might be.

"The rapid growth and development of medical education in India, as seen by the thoroughly well-equipped medical schools and hospitals to be found in every province, and, indeed, in almost every large subdivision of such province throughout this country, has rendered the acquirement of a practical, intelligent, and reliable knowledge of anatomy, physiology, pathology, and materia medica—the fundamental studies on which the superstructure of rational medicine is built up—a very easy and cheap accomplishment. Men of the country possessing the necessary preliminary educational requirements may go through the whole curriculum of a medical collegiate training of five years' duration by the expenditure of the modest sum of five rupees monthly in any Government college. Surely this is cheap enough!

"With these easily accessible and inexpensive means of obtaining an education in anatomy and physiology, it would be no hardship to compel every candidate for medical practice, by any and every particular system, to acquire such knowledge.

"If the indigenous systems of medicine are worth anything, this process of compulsory education would certainly put them on their mettle. It would cause research into their hidden virtues, reform of their defects, and ultimately lead to their due and proper recognition in the interests of humanity at large. In time, all that is good and useful in them would find its way into other systems. Hence the adoption of a uniform plan of preliminary education and medical training would, in all probability, cause a coalition of the now diverse and imperfectly understood indigenous systems into a harmonious and regulated standard of medical practice throughout the Indian Empire.

"Our object in advocating the early adoption of State regulation of medical practice is not to deprive the poor of their present methods of medical relief, or to exclude the older systems, and in their place force *nolens volens* upon the people the system we represent. Our cry is reform; our object is the advancement of the public good. Regulation, not lawlessness in practice; growth and development, not stagnation; improvement, not annihilation. This is our policy. And in this we claim the sympathy and good judgment of all practitioners of medicine, be they Western or Eastern. Upon the lines we have here enunciated, a complete and comprehensive system of medical registration may at once be enacted, without clashing with any of the social customs of the people of the country, or in any way conflicting with the varied interests of the present complex community of medical practitioners in India."

This article makes out a strong case for medical registration, and it is to be hoped that the General Medical Council will not object to stretch forth its powerful hand to help our brethren in the East as far as it can do so under the provisions of the Medical Act.

I am, Sirs, faithfully yours,

Otley, July 5th, 1897. R. E. WILLIAMSON, M.B. Edin.

To the Editors of THE LANCET.

SIRS,—I have read with much pleasure and interest your leading article in THE LANCET of July 3rd, dealing with the question of medical registration in India. I am sure that all who feel concerned in the well-being of our medical brethren in that country, whether British or Indian, will cordially welcome the valuable suggestions you have made with a view to dealing effectually with a much needed legislative measure, which, if carried out in some form or other, will prove a great blessing, not only to qualified medical men, but to the people of that land. Your suggestions amount to:—1. The incorporation of Indian graduates in the Colonial section of the British Medical Register. 2. A local or Indian register on the basis of the Medical Register and Directory of the Indian Empire (a compilation due entirely to private enterprise), brought out under Government authority, in which all classes of medical men in India, including the various medical subordinate services and minor grades of practitioners, should be carefully incorporated.

With regard to Indian medical graduates, the question of registration need not, as you clearly point out, involve any difficulty. Their qualifications are registrable in the United Kingdom under the Medical Act. They have but to avail themselves of the privilege of registration. But here a difficulty arises. In Great Britain and in every other British colony except India registration confers certain rights, protection, privileges, and status, for no qualified man is recognised as qualified unless his name is held on the official register. He has no legal status, he cannot claim the protection of the law courts, he cannot obtain a State appointment, and he cannot be regarded as a genuine member of the medical profession, unless his name can be found within the covers of the Medical Register. If it is honourable to be on the Register, it is akin to being dishonourable not to be on it.

Unless some such privileges are conferred on Indian graduates they can hardly be expected to indulge in the expense which registration involves. This difficulty can, however—as you further suggest—be very easily removed by a *Gazette* Order of the Government of India, promulgating a Notification that henceforth State appointments, open to

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Indian University graduates in Medicine, shall be given only to duly registered candidates, and that the Government and the law courts of the country will not recognise the legal status of any but registered graduates. Such a measure would immediately settle the question of registration in India in so far as it concerns registrable diplomas. In this matter also you offer a very feasible solution to another phase of the difficulty—namely, the one of getting the General Medical Council to move in the way suggested here. Clearly the General Medical Council has a perfect right to urge the question of advancing and encouraging the registration of registrable qualifications by virtue of the fact that the Medical Act has been made applicable to India so far as registration (under the control of the Council) is concerned. May I suggest that the General Medical Council be asked to take such steps as will advance and encourage medical registration in India at its next session?

With regard to the junior grades of practitioners whose qualifications are not admissible to the British Medical Register, there is the remedy of the local register, referred to in your article; but I certainly agree with you that it is time that such powerful aid as our British General Medical Council is capable of giving to that section of our profession in India, which is entitled under the Medical Act to claim and to receive the same, should not be withheld now that the subject has received the approbation and support of the medical press in England, and the attention of our Council has thus been publicly invited to it.

I am, Sirs, yours faithfully,

London, July 4th, 1897. "FORTY-ONE YEARS IN INDIA."

THE SALISBURY TREATMENT.

To the Editors of THE LANCET.

SIRS,—Could you or any of your readers explain to me why I have received two or three letters like the enclosed asking me if I practise "the Salisbury treatment"? What is the "Salisbury treatment," and who does practise it?

I am, Sirs, your obedient servant,

THE DOCTOR OF GROSVENOR-STREET.

Grosvenor-street, W., July 2nd, 1897.

[ENCLOSURE.]

"June 26th, 1897.

"Dr. ———, Grosvenor-street.

"DEAR SIR,—I understand you recently attended a Mr. ——— and also a Mr. ———, of B———, and that you practise the Salisbury treatment. Kindly let me know if this is so and whether you could see me on Tuesday and at what time. I purpose returning to B——— on that day. I may state that I have been trying more or less strictly the Salisbury treatment, but wish before continuing it further to have medical advice as to its suitability to my case, &c. I got your name out of a Medical Directory, but am not quite sure that it is the same as mentioned by Mr. ——— at B———, not having the address by me. If it is a mistake kindly excuse.—Yours faithfully,

"A. A. A———."

"THE RECENT PRIMARY FELLOWSHIP EXAMINATION AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—By the courtesy of those responsible for the management of the first examination for the diploma of Fellow of the Royal College of Surgeons of England I was permitted to be present, not for the first time, at the recent examination which is so severely criticised in the columns of THE LANCET of July 3rd. As I have been engaged in teaching anatomy for some fifteen years I may lay claim to some knowledge of the value of the examination, and as I am not, nor am ever likely to be, a Fellow of the College, I hope I may be considered to be capable of taking a perfectly impartial view of its merits and demerits. The first contention of your correspondent is that the paper questions "have about as much to do with surgery as playing the German flute has to do with learning the German language." Now, I have at hand the papers set at the last six examinations, and have been looking them through with the view of seeing how far they substantiate this startling assertion. I am bound to say that they appear to prove the opposite contention. In the last paper the pubic bone with the part which it plays in the mechanism of the pelvis, the structures between the skin and deep fascia of the lower extremity, and the topographical anatomy of the liver are surely subjects quite germane to the work of a practising surgeon. In former examinations such questions have been asked as the anatomy of the rectum from the middle of the sacrum to the tip of the coccyx—clearly with an eye to Kraske's operation—the arches of the foot and the method of their maintenance, the thyroid body, the curves of the spinal column and the movements of its various parts, the ligaments of the knee-joint, the broad ligament of the uterus, the nasal septum, the subclavian artery, the fissures of Rolando and Sylvius and their relations to the skull. Can it for a moment be argued that these questions have no bearing upon practical surgery? It would be tedious and useless to give all the questions, but a dispassionate consideration of them would, I think, show that in every case they involve facts of direct practical value, and that in no sense do they belong to the regions of transcendental anatomy. Again, your correspondent finds fault with the questions asked at the *vivâ-voce* examination. Would it be fair to inquire whether his knowledge of these questions is based upon hearsay evidence, or whether he has ever taken the trouble to find out by a visit to the examination what is the real nature of this part of the examination? From my own experience at that examination as an onlooker I can affirm that I have never heard any unreasonable question asked, nor has any question been put to a candidate which would require more than very ordinary knowledge to answer until that candidate has made it abundantly evident by his replies that he has already established his right to pass the examination.

What is required, so far as I have been able to form an opinion, is a really accurate knowledge of general anatomy, and this is precisely what most of the candidates fail to show. This is more especially the case in connexion with the subject of the bones, to which the first ten minutes or so of the *vivâ-voce* is usually directed. Surely your correspondent is not prepared to argue that the attachment of the muscles and the true position of a bone as it lies in the body are questions which should not be put to students? Yet it is precisely over questions of this kind that I have frequently seen students come to grief. Not once, but several times have I seen a candidate unable to show the examiner with any accuracy how the pelvis and os calcis lie in the body. I will conclude my remarks upon this part of the examination by affirming that I have seen and heard nothing in the anatomical part of the examination to which any fair-minded teacher of anatomy has any right to object. Your correspondent also finds fault with the physiological part of the examination, and here, as I am not a physiologist, I cannot reply with the same confidence. At the same time I may say that I have listened to the *vivâ voce* portion of the examination in this subject, and that I have not heard any questions asked thereat which in my opinion pre-supposed a greater amount of knowledge than the candidate might reasonably be expected to possess. Your correspondent's remedy is the suggestion that the examination should be postponed until a period of two years has elapsed from the taking of the Membership. He must be very ignorant of the facts of the case if he does not know that this would be tantamount to reducing the number of possible candidates by probably three-fourths. How many students are there who care or can afford to go back to the school of medicine for a winter session after having been two years qualified? And yet how few are there who, even at the time that they take their Membership, possess that knowledge of applied anatomy which would or ought to allow of their obtaining the higher diploma? Many students suppose erroneously that the same amount of knowledge which carries them through the anatomical and physiological examination for the Membership justifies them in having what they call "a shot at the Fellowship." The same kind of knowledge is required, but in the higher examination a much greater accuracy is, and in my opinion rightly so, expected from the candidate. The fact is, Sirs, that the earlier years of the student's course are so overloaded with subjects that he cannot find time for the acquisition of that amount of anatomy and physiology without which a sound knowledge of his profession is impossible. Subjects such as elementary biology, chemistry, and physics, which ought to be studied before a student enters a medical school, and materia medica, the greater part of which might with advantage be discarded altogether, are crammed into the same eighteen months, during which the student is expected to master those sciences upon which all the superstructure of his knowledge is to be erected. There is a further explanation of the large percentage of

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failures which I have never seen offered, but which must be patent to all teachers of experience. Contrary to the custom with regard to the examinations for the Membership, no evidence of further study is required from candidates who have failed for the primary Fellowship before they are allowed again to present themselves for that examination. Hence we have the recurring failure of men who never go near a medical school from one examination to another, but who continue to present themselves in the hope, the forlorn hope, that by luck or by their exceeding importunity they may some day come safely through the ordeal. All teachers must know instances of such men, and all will agree that they are precisely the sort of persons who ought not to obtain the diploma of Fellow. In conclusion, may I suggest to your correspondent that he should take the trouble to visit the examination next November? If he does I venture to prophecy that he will come away with a very different opinion of it, and of those who present themselves for it, from that which he now holds. I must apologise for the length of my remarks—an answer is proverbially longer than its provocation.

I am, Sirs, your obedient servant,

July 5th, 1897. ANATOMIST.

MEDICAL HONOURS FOR INDIA.

To the Editors of THE LANCET.

SIRS,—Among the deserving members of our profession who were decorated by the Queen on the occasion of her Diamond Jubilee there was one who by an oversight was omitted from the list published by THE LANCET and by every other medical journal of this great metropolis. I refer to His Highness Sir Bhagvat Sinhjee, K.C.I.E., M.D., F.R.C.P., LL.D., Thakore Saheb of Gondal, Kattiawar, the most enlightened of all the princes of India. He was created a Grand Commander of the Indian Empire, a reward most well deserved for his unswerving loyalty to the British Crown and his beneficent rule over a contented, happy, and prosperous State.

I am, Sir, yours faithfully,

London, July 4th, 1897. ANGLO-INDIAN.

THE BATTLE OF THE CLUBS.[1]

(FROM OUR SPECIAL COMMISSIONER.)

(*Continued from p. 54.*)

NOTTINGHAM.

Strength of the Medical Union.—Negotiations with Insurance Companies.—The Establishment of a Four-shilling Minimum.—Future Policy.

IT will be remembered that in the spring of last year the Nottingham Medico-Chirurgical Society took the initiative in forming a local medical union so as to deal with the question of club practice and other ethical and economical problems.[2] A little more than a year has now elapsed since the union was constituted, and it is satisfactory to report that great progress has been accomplished. Out of 105 practitioners in and about Nottingham 85 are in union. Nor does this mean that the remaining 20 will act in hostility to the union. At least half of the twenty are in nowise opposed to the objects of the union. They do not care to be attached to an association and to submit to its discipline. One or two have an objection—a political objection—to what appears to them in the light of trades unionism, but they are nevertheless strongly in favour of the reforms which the union strives to accomplish, and will not do anything to thwart its action. Thus, out of the 20 outsiders about half may be considered as friends, though they are not adherents; but, on the other hand, it must be recognised that some are actuated solely by interested motives. It was a remarkable fact that no sooner had the union been constituted than several young practitioners mysteriously made their appearance in Nottingham. It is alleged that they had no friends in the town, so it was shrewdly suspected that they had been induced to come to Nottingham by the insurance companies. These institutions seem to have imagined that, as a medical union had been formed, a strike against the medical aid companies would ensue at an early date, and they were anxious to have medical practitioners on the spot who could take up the work abandoned by the unionist medical men. In any case the new men arrived within a month of the formation of the union Of course, the union officials waited upon them as soon as they arrived, explained the situation, and urged that if they had not come in opposition to the interests of the medical profession they would join the union. One of the medical men in question did so at once, but three others absolutely refused, and the remainder hesitated.

The first action taken by the Nottingham Medical Union was with regard to the two great life insurance companies—the London and Manchester Industrial Assurance Company, Limited, and the Liverpool Victoria Legal Friendly Society, Limited. The former of these two insurance companies does a large business in Nottingham. It advertised its medical officers and sent out agents to tout for them. Well-to-do private patients were induced to insure their lives and obtain medical aid for which the medical men were paid only 4*s.* a year when they had been accustomed to receive the usual fees.[3] These matters were discussed by the committee of the medical union, and one of the medical officers in the service of the London and Manchester Industrial Assurance Company offered to write on his own account, but with the assent and approval of the medical union, to that company. In his letter he explained the various objections entertained by the profession and asked for alterations. In response the company sent one of their principal agents or inspectors down to Nottingham, and a conference was held between the members of the medical union committee and this agent. The agent explained the methods and policy of the London and Manchester Industrial Assurance Company, and sought to demonstrate that they were actuated by philanthropic motives, and that they worked for the benefit of the medical profession. Of course, it was objected that as they advertised and canvassed for a few medical men, to the exclusion and detriment of all the others, they could not be taken as working for the advantage of the profession as a whole. The members of the medical union committee further complained that the medical officers in the service of the London and Manchester Company only received a penny a week for the persons insured, though the latter paid three-halfpence per week. Something might be taken for the cost of collecting and managment, but a third of the total subscribed was too large a proportion, particularly as the money paid for life insurances, in which the medical officers were in nowise interested, was collected at one and the same time. It might therefore be considered that a profit was sweated out of the work done by the medical officers, both directedly—namely, the halfpenny per week per member—and indirectly—namely, the money made by the life insurances which the services of the medical officers enabled the company to effect. Then all persons insured for a sum not exceeding £20 were admitted without medical examination. The company is careful to guarantee itself against any serious loss through the ill health of its subscribers, but its medical men are in nowise protected, and in effect they are obliged to accept persons who are obviously in bad health, so long as they do not insure for more than £20. This entails a great amount of work on the medical officers, for which the penny per week paid cannot be considered anything like an adequate compensation.

In answer to these complaints the agent of the London and Manchester Industrial Assurance Company explained that though members were accepted who insured for less than £20 without any medical examination, still these subscribers had to sign a declaration to the effect that they were in good health when they first subscribed. If any medical officer could prove that this declaration was not true then the subscriber's premium would be struck off. The agent also declared that if the medical officer denounced anyone as being too rich to belong to the society, such a person would likewise be struck off the lists. Finally, the agent promised that the names of the medical men printed on the back of the company's handbills which were circulated broadcast would be removed. The distribution of these handbills constituted an advertisement, not only of the company, but also

[1] A reprint of the previous articles on the above subject has been published in book form entitled, "The Battle of the Clubs," and can be obtained from THE LANCET Office, price 1*s.*

[2] See THE LANCET, March 21st, 1896, or the reprint of "The Battle of the Clubs."

[3] See for full details THE LANCET, April 4th, 1896, and the "Battle of the Clubs" reprint.

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of the medical men in its service. The bills now published no longer bear the names and addresses of the medical officers, therefore this grievance at least has been settled. The agent further promised that the canvassers or collectors of the company should no longer tout on behalf of their medical staff.

In view of all these assurances the medical union determined to defer further action in the matter for seven months. It soon, however, became evident that these promises were not faithfully kept. Practitioners wrote to the medical union to complain of the continued aggressiveness of the canvassers, and that some among them were touting on behalf of new medical men who had mysteriously appeared in the town since the formation of the medical union. Some of the medical officers in the service of the London and Manchester company wanted to resign at once, but the medical union dissuaded them because isolated resignations would be of no use, and in the face of the number of medical men imported into the town it would not be safe to proceed to extremes without careful preparations. So to feel their way the medical union invited all the medical practitioners in the town to sign the following declaration:—

"I hereby agree after June 30th not to hold office to any combined medical aid and insurance society, or to have a private medical aid which employs a canvasser; and I also agree not to meet in consultation or in any way assist professionally any medical man who is connected with such medical aids."

A large majority of the Nottingham practitioners assented to this agreement, but they were not unanimous, so that probably the work of organisation and persuasion will have to be pushed further forward before action can be taken.

Another circular, by which all the members of the profession were asked not to accept any club or contract work for less than 4*s.* per member per annum, met with a much better response. It was signed, not only by the medical union, but even by the non-unionists. Out of 110 medical men only 5 refused to sign. One of these five gave as his reason, not that he was opposed to the proposal, but that it was his habit never to sign anything. Another refused to sign because the matter did not concern him, for he had no clubs and never meant to have any, and he has kept his word. Thus it may be said that the profession in and about Nottingham is, practically speaking, unanimous in maintaining a 4*s.* minimum.

In view of a possible conflict with the insurance companies which organise medical aid for their subscribers, the medical union has discussed the feasibility of organising a public medical service to be managed exclusively by the medical men themselves. The chief objection to such a scheme was that its success would be doubtful if canvassers were not employed, and, on the other hand, the members of the medical union were much opposed to the idea of sending out canvassers. It was thought preferable to enlarge the scope and action of the existing Nottingham Provident Medical Aid Society, which is not a sweating or speculative institution, but can be considered more in the light of a charity. This society was founded in 1859, and should be almost entirely managed by medical men, but the latter have neglected their duties, so laymen had to be placed on the committee. Within the last year, and under the impulse of the medical union, a branch has been opened out in the suburb of Hyson-green, but the local medical men have failed to push this movement, so that the Hyson-green branch barely pays its own expenses. Doubtless it would be very useful if a general medical strike occurred, but if greater energy is not shown it may not live till then. This branch dispensary is also, unfortunately, situated in a back street and difficult to find.

Viewing all these facts together it must be acknowledged that the medical profession at Nottingham have set an excellent example in the formation of their medical union. The proportion of medical men who have joined as compared to the number in the town and neighbourhood is very high, and in having thus so well filled up its ranks the Nottingham Medical Union deserves the warmest praise. The Nottingham Medical Union may be felicitated, not only on its numbers and strength, but on its prudence and circumspection. Though a union to be of any service must be a fighting union, there can be no greater folly than to rush into a struggle without very elaborate and patient preparation. Now it is very evident that the Medical Union has not yet made up its mind how to act with regard to the great insurance companies. In the meanwhile there must be no isolated resignations and no individual struggles. But why attack the strongest first? Why not commence with the "sick and annual clubs" held in public-houses? That the skill of medical men should be utilised to enable a publican to sell his beer and gin is surely the greatest of all scandals, and the Nottingham Medical Union might find in these public-house slate clubs the weakest line of resistance. Certainly this grievance does not affect so large a population, but it would be better for the union to first try its 'prentice hands in a skirmish before attempting a pitched battle. Besides, in its struggle to prevent hospital abuse the union has already a very big question in hand.[4] Also a strike against the great insurance companies would disturb the habits of a large section of the population, and it is first necessary to carefully and fully inform all concerned what are the points at issue. Above all, the Nottingham Medical Union must make it very clear that it is acting in the interests of the public as well as of the profession. This can be done if enough trouble is taken; otherwise the mass of the population will certainly not understand what are the grievances. They will simply conclude that the medical men are only striving to get more money, and will probably take sides against the profession. It must, on the contrary, be rendered clear to everyone that when people who can afford to pay avail themselves of clubs, &c., intended only for the poor, this is to the disadvantage of the latter. Further, it must be shown to the rich and poor alike that everything which tends to degrade the medical profession is to the disadvantage of the entire community. The first object of a medical union should be to educate the public at large to the comprehension of these facts, and it is only when public sympathy has thus been enlisted that a big struggle may be attempted.

The joint secretaries of the Nottingham Medical Union are Mr. Paul (Derby-road) and Mr. Laws (East Circus-street), while Mr. Mackie (Shakespear-street) is secretary of the sub-committee appointed to deal with the question of hospital abuse. Dr. W. B. Ransom is the president and Dr. Mutch the treasurer of the union. The objects of the Nottingham Medical Union are: "(1) To encourage cordial relations between medical men practising in the district; (2) to give opportunities for discussion and interchange of views on the business side of medical practice; (3) to obtain the combined action and consolidated influence of members of the union upon points of difficulty which may arise in medical aid, contract, and hospital practice; and (4) generally to safeguard and support the interests of the medical profession in the town and district."

The Rules of the Nottingham Union are as follows:—

1. This society shall be called the Nottingham and District Medical Union, having for its object to safeguard and support the interests of the medical practitioners in the town and district.
2. Every registered medical practitioner shall be eligible for membership if approved by the council.
3. Each member shall pay an annual subscription of 5*s.*, due on May 1st in each year.
4. The affairs of the union shall be managed by a president, two secretaries and treasurer, and a council of fifteen members for the towns and ten for the district. Nine shall form a quorum.
5. The officers shall be elected at the annual meeting in May of each year, except that three of the town and two of the district members of the Council shall be co-opted by the Council.
6. The Council shall have power to fill up vacancies in their own body.
7. The Council shall meet once a quarter, and when convened by the hon. secretaries, to consider applications for advice or assistance, and generally to carry out the policy of the Union, and may call a general meeting of the Union at any time if considered necessary.
8. A special general meeting shall be called by the president at any time upon a requisition signed by six members, such special meeting to consider no other topic than that for which the meeting was called.
9. *No member of the Union shall oppose any practitioner in any course of action which he may take with the previously expressed sanction of the Council for the general good of the profession.*
10. Any member acting, in the opinion of a special meeting called for the purpose, contrary to the laws and regulations of the Union, shall, upon a majority of at least three-fourths of the members present, be suspended or expelled, and without appeal, from the Union.
11. A special meeting called for the purpose of considering the conduct of any member of the Union shall only be convened after fourteen days' written notice has been sent to the last-known address of each member, and such notice shall state clearly the purpose for which such meeting is convened.
12. No new law shall be adopted and no existing law shall be altered or rescinded except at the annual general meeting or at a special meeting called for the purpose, and fourteen days' notice of such proposed alterations, signed by at least three members, shall be sent to every member of the union in a circular convening the meeting.

[4] See THE LANCET, June 5th, 1897.

THE HERMITE PROCESS AT BOMBAY.—The Municipal Commissioner of Bombay and some members of the Plague Committee with General Gatacre recently inspected the Hermite process as applied to Bombay sewage.

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BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Opening of the New General Hospital, Birmingham.

ON Wednesday, the 7th inst., amid a scene of much enthusiasm, the New General Hospital was declared open by the Princess Christian on behalf of Her Majesty the Queen. The day was observed as a general holiday in the town, and favoured by fine weather large crowds of people availed themselves of the opportunity to witness the decorations in the streets, and the preparations made for receiving the distinguished visitors. Her Royal Highness Princess Christian was accompanied by Prince Christian and the Princess Victoria. On their arrival, being met by the Lord Mayor (Councillor James Smith), a procession was formed to the Council House, where an address was read by the Recorder, expressing the deep sense of honour conferred upon the city of Birmingham by a Royal visit in the auspicious year of the Jubilee. It seemed, said the address, "most fitting that the object of the visit of Her Royal Highness should be to open one of those noble hospitals for the sick and suffering, the growth and development of which institutions constitute one of the most interesting features of Her Majesty's reign." The Princess having formally replied, luncheon was given by the Lord Mayor to a select party at the Council House. After this the procession re-formed and proceeded to the site of the new buildings, which were declared open by the Princess amid a flourish of trumpets. The senior physician and senior surgeon and the chairman of the medical committee were, among others, presented to the Princess. The Royal party returned to London by a special train at 4 45 P.M. The work of the new hospital was begun in 1892, the total cost being calculated at £210,000. The foundation-stone was laid by the Duke of York on Sept. 8th in that year. The great feature of the undertaking—one upon which the committee congratulate themselves with well-earned merit—is that it has been opened free from debt. The response made to the final application for funds has been liberal, and effectual in producing this much-desired culmination of their efforts. The hospital is replete with every modern improvement; no trouble or exertion has been spared to render every department complete. The zeal and energy of the architect, Mr. W. Henman, has been rewarded by a monument of his untiring interest and exceptional ability in providing an institution so well calculated to meet the most advanced requirements of the present age.

A Feat of Endurance.

While Princess Christian was opening the New General Hospital an athletic feat was being performed in Birmingham by a young cricket professional which would have been witnessed by many more people if it had not been contemporaneous with the royal and charitable function. Tyldesley, a Lancashire cricketer, made 100 runs in both of his innings against the home county—a feat which has only been performed by five other men, and which requires vigour, precision, and resourcefulness to a degree that can with difficulty be over-estimated.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Meeting of the Lancashire and Cheshire Branch of the British Medical Association at Owens College.

THE annual meeting of the Lancashire and Cheshire Branch of the British Medical Association was held on Wednesday last at Owens College. There was a large attendance. The retiring President, Dr. Vernon, of Southport, took the chair, and after a few words of graceful introduction gave place to Dr. S. Woodcock, the new President. Dr. Woodcock's address was listened to with great attention and many passages were warmly applauded; it dealt chiefly with medical reform. He believed that "a review of sixty years of effort and result would be more accurately expressed by the term 'miserable failure' than even by that of 'modified success.'" He spoke of the great efforts of Thomas Wakley, "the pioneer of medical reform," but said that in spite of all he did for its suppression quackery was still rampant; "advertisements imposing upon the credulity of the public appeared on the pages of nearly all our periodical literature; unqualified men practised with impunity, the present law only taking cognisance of the assumption of titles; and there were still twenty gates opening into the avenues of professional life." The Medical Act of 1886, he thought, was more entitled to attention for what it omitted than for what it accomplished. "It gave the practitioner of medicine ..... a miserably small share of representation on the General Medical Council." The accession of five direct representatives had some effect on that "lethargic body," but this was due more to the quality of the men than to their number. He criticised the constitution of the British Medical Association, and wished it, without abandoning its scientific work, to become a more efficient organisation for promoting and defending the interests of the profession. He wanted increased and improved local government, and would have all members joining the Association compelled to enter through the branches in which they practised or resided. If the nearly 35,000 members of their profession could approach agreement "they could make their own terms with Parliament," and "the end he had in view was such amendment of the Medical Acts as would afford protection both to the public and the profession." The report of the council and financial statement read by the secretary, Dr. Barr, showed the membership to be 1059—the highest number yet reached. There was a balance in hand of £394. The following appointments were approved:—President-elect, Mr. W. Berry of Wigan; vice-presidents, Mr. J. Holden and Dr. C. J. Renshaw; honorary secretary, Dr. Barr; representatives on the Parliamentary Bills committee, Dr. A. Godson, Dr. A. Brown Ritchie, Dr. G. E. Shuttleworth, and Dr. S. Woodcock. On the motion of Dr. J. B. Brierley, seconded by Dr. Holden (Preston), a resolution was passed expressing regret that the Midwifery Nurses Bill had not been carried through Parliament. The business proceedings were carried through with promptitude and so some little time was gained for the scientific work, which at these meetings is so often pushed aside in favour of warm discussions on medical politics. The dinner was attended by the Dean of the Medical Department of Owens College, the Deputy Lord Mayor of Manchester, Alderman Lloyd, and Sir Bosdin T. Leech, Dr. S. Woodcock presiding. In proposing "The Owens College and other Medical Schools," Dr. Vernon contrasted the facilities offered here for medical education in 1848 with the present magnificent school, "where there were 400 students gathered under one roof and taught by professors of European reputation." Professor Delépine responded. Mr. W. Berry, president-elect, proposed "The Branch and its Office Holders," to which Dr. Barr responded.

The St. John Ambulance at the Royal Agricultural Show.

What with the Jubilee celebrations, into which Manchester entered with enthusiasm, the Royal Agricultural Show at Old Trafford, and the visit of the Duke of York, there has been enough to break through the ordinary routine of life in this busy commercial centre. For the last few years the St. John Ambulance Association has had a well appointed hospital at the Show. This is due to the indefatigable energy of Surgeon-Major Hutton, who was on the ground the whole time. He was ably assisted by Surgeon-Captain Darwin, M.D., 2nd V.B. M.R., and Surgeon-Captain Fairclough, M.D., V.M.S., two St. John nurses, and seven St. John Ambulance Brigade men, under the supervision of Mr. Superintendent Goodwin, and most valuable first aid has been given. Besides numerous minor cases, as burns, scalds, cut fingers, sprains, faints, &c., several serious cases were attended to, and then removed to the Salford Hospital. When H.R.H. the Duke of York paid a special visit of inspection yesterday week, he seemed much pleased with what he saw, and said a few kindly words to the patients.

The Explosion at a Chemical Works.

At the adjourned inquest respecting the deaths of two men from the explosion mentioned in my last communication some light was thrown on its cause. The still was charged with about twenty tons of coal tar, which was added to about ten tons of oil, which had been left after an oil-distilling process thirty-six hours previously. The engineer said that after the fire was lighted, about 8 A.M., he saw Duddle, one of the men killed, who said the still "was going on all right." He thought the explosion must have

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been due to a block in the coil or in the pipe leading from the still. In answer to Mr. Rogers, factory inspector, the witness said they took no steps to ascertain that the courses were clear before charging. The manager of a branch works said there was only one possible explanation—a blocking of the coil or a stoppage of the pipe between the still head and the condenser, which, in his opinion, could have been discovered before the explosion. The verdict was that the explosion was due to the accidental stoppage of the worm. Mr. Rogers said that he would make recommendations "in the direction of seeing that the pipes and passages were clear before the commencement of operations." The coroner made the very sensible remark that "it was not sufficient to say to men that they must do this or that; it was better to require them to make an entry in a book certifying that they had done it."

July 6th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Society of Edinburgh.

AT the meeting of the Royal Society of Edinburgh, held on Monday, July, 5th, Professor Fraser made a further communication on antidotes for snake-bite, the title of his communication being "The Anti-venomous Properties of the Bile of Serpents and other Animals, and an Explanation of the Insusceptibility of Animals to the Poisonous Action of Venom introduced into the Stomach." He had made experiments with the bile of the African cobra, the puff-adder, the rattlesnake, and the grass-snake, testing them against the venom of the African and the Indian cobra. Rabbits were used for the experiments. The results showed that the bile of venomous serpents when mixed with venom prevented lethal doses of the latter from producing death. A quantity of bile smaller than the amount of venom was sufficient for this purpose. Bile introduced hypodermically was itself poisonous, but he had succeeded in separating from the bile its antidotal constituent. He had experimented with this, and there was strong evidence to show that not only was bile able to render serpent's venom inert, but also to suggest that from bile there might be produced an antidote for snake-poisoning which was at least equal to the most powerful anti-venene or anti-venomous serum obtained from immunised animals.

Convalescent Home for the Victoria Infirmary, Glasgow.

The directors of the youngest of the Glasgow general hospitals have never been wanting in the enterprise and energy necessary to secure the reputation and practical success of the institution under their care. In many respects a model infirmary, the Victoria has now acquired the valuable complement of a convalescent home. The home, which is situated at Largs and will accommodate forty patients, was opened on June 27th by Sir Renny Watson, the chairman of the infirmary. Among those present were Professor Gairdner, Dr. Ebenezer Duncan, Dr. Alexander Napier, Dr. A. E. Maylard, and Mr. R. H. Parry. The total cost of the home and grounds has been £5000.

Glasgow University.

The clinical portion of the final examination for degrees in medicine and surgery has now been completed, and the written examinations commence to-day. The "orals" will continue for the greater part of the month, and the graduation ceremony is fixed for the 22nd inst. The medical classes closed for the summer session on the 25th ult. The prizes awarded by the directors of the Ear Hospital for competition among the students attending Dr. Barr's class have been gained by Mr. J. B. Miller and Mr. David Sloan Harvey. At the June meeting of the University Court sketch plans for the new botanical and engineering laboratories to be placed on the frontage of the university avenue near the gymnasium were submitted. The court approved of the report which had been adopted by the General Medical Council in reference to the powers of sanitary inspectors under the Public Health (Scotland) Bill, and ordered copies of their decision to be forwarded to the Lord Advocate and others.

Handsome Donations to Glasgow Charities.

In commemoration of the Queen's Diamond Jubilee ex-Lord Provost Sir James Bain has given the sum of £3000 to various medical institutions in Glasgow. The Royal Infirmary receives £1000, the Western Infirmary £750, and the Victoria Infirmary £500.

Insanity in Scotland.

Mr. John Carswell in his annual report as certifying physician in lunacy to the Glasgow Barony Parish Council, again notes an increase in the number of persons placed on the lunacy roll. The number for the last year was 263, as compared with 237 in the preceding year. Mr. Carswell, however, argues against the conclusion that these figures justify the view that lunacy is increasing. He states that in his district imbecile children are placed on the list of registered lunatics, and notes a greater tendency on the part of guardians to apply to the inspector in connexion with weak-minded children. In a similar manner he observes that there is less reluctance than was formerly the case to place elderly persons who have become "weak-minded" under asylum treatment. In this way the increased numbers on the lunacy roll are at least largely explained. Mr. Carswell allows that there has been a considerable increase in the number of patients suffering from general paralysis, but even here he declines to adopt pessimistic views, and expresses an opinion that the cause of the increase is a "temporary" one.

St. Andrew's Ambulance Association.

At the annual meeting of the members of this association, held in Glasgow on June 30th, it was decided, on the motion of Dr. George T. Beatson, to make application for incorporation by Royal charter, and a committee was appointed to carry this resolution into effect.

Proposed Memorial to William and John Hunter.

The movement so energetically promoted by the late Dr. Mather is now taking definite shape, and at a recent meeting in Glasgow, summoned by a circular signed by the Lord Provost, the Principal of the University, and the President of the Faculty of Physicians and Surgeons, an executive committee was appointed to collect subscriptions; it is hoped that from £3000 to £4000 may be raised. Dr. Oswald Fergus was appointed secretary to the executive committee. It was intimated that Mrs. Mather has a sum of £850 which she is willing to add to the fund now proposed to be raised.

July 6th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Mercer's Hospital.

AT a meeting of the governors of this institution, held on July 6th, the following were elected physicians to the hospital:—Mr. E. Ledwich and Dr. J. Lumsden. The surgeons elected were as follows:—Dr. Montgomery Ward, Mr. J. D. McFeely, and Mr. Henry Moore. Dr. E. Stamer O'Grady, a member of the former surgical staff, entered a protest against the proceedings on the ground that "there was at present a sufficient surgical and medical staff in the hospital." The Rev. Dr. Tisdall also handed in a protest against the proceedings. It will be noticed that Dr. Montgomery Ward was the only member of the old staff who has been re-elected.

Vaccination in Belfast.

At the weekly meeting of the Belfast Board of Guardians, held on June 29th, a letter was read from the Local Government Board enclosing extracts from a report of their inspector, Dr. Clibborn, which pointed out that, taking Belfast and Castlereagh dispensary districts together, there were over 600 children who seemed to be unprotected by vaccination. A committee was appointed to inquire into the matter.

The Infectious Diseases Hospital, Belfast.

The public health committee of the Belfast Corporation have recommended that the Local Government Board be requested to give their sanction to the council's borrowing £20,000, being the amount estimated as being required for the erection of an infectious diseases hospital, containing between sixty and eighty beds, capable of extension as may be required from time to time, on the site already approved by the council at Purdysburn. This matter will come up on

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July 15th at the Local Government Board inquiry to be held in Belfast on that date.

The Royal Victoria Hospital.

The sum (£100,000) aimed at as the amount required by the promoters for the building fund of the new Royal Victoria Hospital having been subscribed, it has been decided that any further sum will be placed to the credit of the endowment fund, and already a considerable amount has been acknowledged.

Belfast Asylum.

Dr. Merrick, the resident medical superintendent of the Belfast Asylum, has resigned his post. He has been a most capable and efficient administrator, and it is a source of great regret to his friends that his state of health obliges him to retire.

Sudden Death of a Cork Medical Man.

The members of the medical profession in Cork experienced a painful shock last Sunday on learning that Dr. Michael J. Murphy had died suddenly. Dr. Murphy was a man of splendid physique, only about thirty-three years of age, and, as far as his relatives and friends knew, had enjoyed excellent health. Last Saturday he discharged his professional duties with his usual energy. The following morning his sister, noticing that he had not come downstairs, entered his room, and, failing to arouse him, became alarmed. She at once sent for medical aid, and two medical men were promptly in attendance, but only to find that he had been dead for some hours. Dr. Murphy was an enthusiastic bicyclist, and it is believed he suffered from some latent form of heart disease, which became aggravated by over-exertion. He had a distinguished collegiate career, and graduated at the Royal University in the year 1886. Soon afterwards he was appointed resident physician to the Cork Union Hospital. He resigned that position in 1892, and was elected consulting sanitary officer to the Cork Union. During the past four years he was one of the physicians of the Mercy Hospital, and had established a reputation as a clinical teacher. Some few years ago he was unanimously elected honorary treasurer of the Cork Medical and Surgical Association, and his genial, unobtrusive manners made him a great favourite with his professional brethren.

Some Cases of Typhus Fever in Cork.

At a meeting of the public health committee of the Cork Corporation, the medical general superintendent of health reported an outbreak of typhus fever in a few tenement houses in the city; twelve of the inmates were attacked and were promptly removed to the Union Fever Hospital. The houses were disinfected, and other measures adopted to prevent the spread of the disease. Some twenty-five years ago the occurrence of typhus fever was tolerably common in the city, but, thanks to improved sanitary conditions and to the greater facilities for grappling with it at once, it has become a rare disease in Cork—so much so that many of our younger medical men have probably never seen a case.

July 6th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Resection of the Cervical Sympathetic.

TWO cases of resection of the cervical sympathetic for exophthalmic goitre have just been published by two surgeons, and each operation has resulted in complete success. The first case was reported to the Academy of Medicine by M. Reclus, and the operation was performed by a young surgeon, M. Faure. The patient was a woman, aged twenty-one years, who developed exophthalmic goitre after her third pregnancy. She suffered from salivation, polyuria, crises of diarrhœa, marked tremblings, sensations of heat and cold, feebleness of the legs, very marked exophthalmos, and tachycardia. Electrical treatment brought about some amelioration of the symptoms, but soon all the phenomena reappeared. The eyelids failed to cover the eyes and corneal ulceration commenced; the thyroid was enormously hypertrophied, the apex beat so markedly as to raise the chest wall, the pulse-rate increased from 120 to 130, and her hair began to fall off. At length the presence of tuberculous masses in the neck and chest was clearly to be made out. M. Faure accordingly performed the following operation after the method laid down by M. Jaboulay, of Lyons. An incision twelve centimetres long was made on the right side of the neck just behind the sterno-mastoid muscle, the cervical branch of the spinal accessory was divided, and the superficial and deep cervical plexus came into view. The vascular and nervous structures lying in front of the vertebral column were separated and pulled forwards, and behind them the great sympathetic came into view. The superior cervical ganglion was picked up and the afferent branches as far as the middle ganglion removed. Then some seven centimetres of the great sympathetic were resected. A similar operation, but complicated by the removal of some tuberculous glands, was performed upon the left side. During the operation there was no change noticeable in the pulse or in the condition of the thyroid, but by the evening the pulse was less rapid and the patient slept. On the seventh day after the operation the exophthalmos was much less, and, the patient being able to close her eyes, the corneal ulcers began to heal. The circumference of the neck had diminished from 39 centimetres to 36; the pulse-rate had fallen to 90; and the tremors, the salivation, and the diarrhœa disappeared. The second case was reported to the Academy of Medicine at the next meeting by M. Gerard Marchant. The patient was a woman with a neurotic family history. In March, 1896, exophthalmos appeared after a pregnancy, in August thyroid hypertrophy commenced, and in January, 1897, tremors. The exophthalmos was extreme and the eyelids did not cover the eyeballs. The goitre was specially marked on the right side. The pulse-rate was 80 while the patient was at rest and became 100 on moving. The heart was normal, and at this time the tremors were well marked. M. Marchant then operated. An incision was made in the line of the sterno-mastoid muscle, the various vascular and nervous structures were lifted up, and the great sympathetic was found lying on the deep muscles of the neck. To make certain, the nerve was exposed as far as the superior cervical ganglion. Four centimetres of the nerve were then resected from above the superior ganglion to below the level of the middle ganglion, which is often absent. The nerve was cut on each side successively. The operator began on the left side, and a sub-conjunctival ecchymosis appeared in the right eye, due probably, as in the experiments of Dastre and Morat, to excitation of the central end of the nerve by the forceps. After the operation the pupils contracted, the eyeballs diminished, and the goitre disappeared by about the twelfth day. Later, some of the phenomena returned in a much less marked form, but still obvious. As M. Marchant says, there is still much to be learned.

X Rays in the Diagnosis of Thoracic Affections.

MM. Beclere, Oudin, and Barthelemy have recently shown at the Hospitals' Medical Society a series of most interesting x ray photographs, forming the best results hitherto obtained in France. The first two photographs were taken from the same patient, a man affected with a large pleural effusion on the left side, one print being obtained before and the other after thoracentesis. The difference between the opacity of the fluid and the transparency of the lung tissue after paracentesis was well shown. The photographs also show that in this patient, aged sixty-six years, the thoracic aorta at its junction with the arch is somewhat dilated and bulges towards the left of the vertebral column just at the level of the fifth dorsal vertebra, a condition observed before by radioscopy to be more or less pronounced in those subjects whose peripheral arteries are hardened and tortuous. Another print showed the thorax of a child suffering from a tuberculous affection of the tracheal and bronchial glands, and made it evident that besides the retro-sternal mass, which is alone capable of diagnosis by the ordinary means, there existed, also deep in the substance of the two lungs around the roots, numerous other masses, and that on the right side they extended along the various ramifications of the bronchi. In another case, that of a patient with pyo-pneumothorax, the level of the effusion was plainly seen as well as the shrunken lung, and the bodies of the vertebræ, together with an apical adhesion. The left lung, which appeared sound to auscultation, showed by the x rays a multitude of opaque patches due doubtless to scattered masses of tubercle. In another case, that of a young girl whose chest had been carefully examined by

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M. Rendu, and in whom only very indefinite results had been obtained, the x ray photograph showed a dark patch at the apex of the lung and another at about the middle.

Quackery at Angers.

The tribunal of Angers have just decided that a man named Mouroux, who set up as a magnetiser, cannot be proceeded against under the law to restrain unqualified medical practice. The Syndicate of Medical Men at Angers have accordingly appealed against this judgment.

The Manufacture of Theses.

A political journal has just started an active campaign on the subject of theses for the degree of doctor of medicine, which some students buy all ready written from their companions. Latterly this occupation has become a real industry, and a library has had the impertinence to send round among the students a regular prospectus, which runs as follows: "This house will supply manuscripts for a thesis to any candidate who will apply for one." The editor of the journal in question having read this went to the library as a student and commenced negotiations for the purchase of a thesis. He was offered an excellent ordinary thesis "for 200 francs; for one still better 500 francs was asked; and for one of the very first class," about which everyone will talk, 1000 francs. The journalist asked for a very ordinary and short thesis and obtained a decrease in price of 150 francs. The story, which is probably exaggerated, has greatly excited the lay public, and has given an additional argument to those who are agitating for doing away with the thesis altogether. As a matter of fact, however, the only new features are the effrontery of the library and its prospectus. There are always some theses written by needy and clever young men for medical men who have to get through their studies quickly so as to return to the district where they mean to practise; and, in addition, foreign medical men often find it impossible to write a long medical treatise in really good French, and often have to get the help of the residents at the hospitals, who are always willing to make a little money in this way. As a fact, these theses are very often better than those which the candidate has written himself, and which the Faculty has nevertheless accepted.

July 5th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Brazilian Government and the Bacillus of Yellow Fever.

NATURALLY enough Dr. Sanarelli's discovery of the bacillus icteroides awakens the keenest interest in the South American communities, where, according to Dr. Jacopo Mantegazza (in a letter to a Tuscan contemporary written just after his return last week from Rio Janeiro), a concurrent series of investigations by the Brazilian Dr. Felipe Caldas goes far to confirm the findings of the Sienese pathologist. With a view, it would appear, to a final judgment on these findings, a Bill just brought before the Brazilian Legislature and now agitating the Chamber of Deputies at Rio, "offers a prize of 400 contas de Reis (£44,000), divided into two equal parts, first to the author of a work demonstrating the existence of the bacillus icteroides and the surest and readiest means of its bacteriological diagnosis; second, to the discoverer of the effective clinical treatment of the bacillus so ascertained, and of the best prophylactic mode of dealing with it. The court of adjudication by which the prizes are to be awarded shall consist of the Medical Institute of Rio Janeiro, the Koch Institute at Berlin, and the Pasteur Institute at Paris. Another provision of the Bill authorises the Government to reserve the sum of 200 contas de Reis for the founding of an establishment for the preparation of the serum destined to antagonise the bacillus of yellow fever, and conceding to the discoverer of the serum in question the organisation of the serotherapeutic institute established *ad hoc*. Dr. Mantegazza concludes his letter with the remark that in Brazil the award of the prize (or rather prizes) to Dr. Sanarelli is considered a foregone conclusion. All the same, the action of the Brazilian Government in making its legislative recognition of the "bacillus icteroides" contingent on the confirmatory verdict of its own highest professional tribunal, sustained by the Koch and Pasteur Institutes, is both reasonable and right.

Another "Incredible Scandal."

In THE LANCET of June 12th I drew attention to the maladministration of the Foundling Hospital at Naples, by which, in two years, out of 856 admitted only three of the little inmates survived, and I remarked that the Neapolitan institution was but a specimen—"though an exceptionally ghastly one"—of the many establishments of the kind in the great cities. Now Venetia, as the result of recent inquiries, claims the second place after Naples for its "slaughter of the innocents." A Paduan correspondent says: "The eight provinces making up the Venetian territory (Verona, Vicenza, Belluno, Udine, Venice, Rovigo, and Treviso), occupying a superficies of 24,000 square kilomètres, and having a population of nearly three million inhabitants, send annually to their respective 'Brefotrofi' (foundling hospitals) a mean of 140,000 infants, the vast majority (it need hardly be said) illegitimate. The mortality among them is 52 per cent.—rather more than half—the cause of this frightful death-rate being, primarily, want of sufficient nourishment, and, secondly, neglect of every description. To attain this result, the hospitals in question spend every year 15,000,000 francs derived from the bequests of benefactors and the contributions of the provinces and communes." Padua is prominent for the death-rate of the infants in her "Brefotrofio," and what wonder when in that establishment one wet-nurse is expected to give the breast to two, and even three, babes per diem? In Naples, it will be remembered, the same wet nurse suckled from three to four a day.

The Boycotting of British and American Practitioners.

In the Chamber of Deputies on the 3rd inst. Dr. Santini, promoter of the Bill to exclude English-speaking medical men from practising in Italy, asked what were the intentions of Government as to Article 23 of the "Legge Sanitaria" which he proposes to modify in the above sense. Signor Serena, on behalf of the Government, replied that medical practitioners of non-Italian nationality would be allowed to practise among Italians in Italy if Italian medical men had the same privilege conceded them by the other nationalities in question. Signor Serena added that Article 23 of the "Legge Sanitaria," still in force, allowed foreign medical men to practise among their compatriots resident in Italy if they did not extend their *clientèle* to Italians. The abuse of this privilege (he said) the Government had hitherto guarded against, and would, he added, continue to guard against, with increased vigilance. This did not satisfy Dr. Santini, whose object is to confine English-speaking practice in Italy to Italian practitioners, and to make it as impossible for British or American medical men to pursue their profession among compatriots in the kingdom as it is now in Switzerland and France. Manifestly, this was more than the Government, represented by Signor Serena, were prepared to grant. As THE LANCET has pointed out, the presence of the English-speaking colony in Italy is (to Italy) so pecuniarily important that any legislation calculated to deter or even diminish it would on Italy's part be distinctly suicidal; and the legislation sought by Dr. Santini partakes of that character.

July 4th.

THE LIFE SAVING SOCIETY: A SUCCESSFUL FETE.—During the six years of its existence the Life Saving Society has organised no such important gathering as that of the "Diamond Jubilee International Gala," which took place at the West India Docks on Saturday afternoon last. The gala had been timed to commence at 3 o'clock, but long before that hour spectators began to occupy every coign of vantage from which a view of the proceedings, however limited, was obtainable. The dock was gaily decked with flags, and a most enthusiastic welcome was given to H.R.H. the Duke of York, the President of the society, who arrived punctually at the appointed hour of 3 o'clock, accompanied by the Duchess. The programme was then gone through without a hitch. The most important event, the mile amateur championship, was secured by J. A. Jarvis, of Leicester, who is reported to have raced untrained, but the diving exhibition of the Swedish representatives was the most popular item on the card. The Hon. Sydney Holland presided over the festival dinner of the society which followed at the Holborn Restaurant.

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Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations, have been admitted Licentiates in Dental Surgery:—

Ackland, Donald, Charing-cross and the Dental Hospital of London.
Arnold, John Cressey, London Hospital and the National Dental Hospital.
Austen, Harold William Colmer, M.R.C.S. Eng., St. Bartholomew's and the Dental Hospital of London.
Bell, Robert John, Charing-cross and the Dental Hospital of London.
Brown, Charles Every, Guy's Hospital.
Brown, Ernest Chodwick, Guy's Hospital.
Brown, James Warburton, Charing-cross and the Dental Hospital of London.
Canton, Loftus Henry, Middlesex and the National Dental Hospital.
Coates, Frederick Arthur, University College.
Cook, Percy Herbert, Guy's Hospital.
Cooper, Albert, Guy's Hospital.
Cooper, Percy Henry Rogers, Charing-cross and the Dental Hospital of London.
Douglas, James Carfrae, Charing-cross and the Dental Hospital of London.
Duncan, Frank Hubert, Charing-cross and the Dental Hospital of London.
Everett, Charles, Middlesex and the National Dental Hospital.
Floyd, Walter, Guy's Hospital.
Forsyth, William Frederic, Charing-cross and the Dental Hospital of London.
Harrison, Sydney, Guy's Hospital.
Heath, Arthur Reginald, Charing-cross and the Dental Hospital of London.
Hey, Stephen Daniel, Charing-cross and the Dental Hospital of London.
Holmes, Robert Gabriel Stuart, Guy's Hospital.
Jacobs, Jacob Michael Cecil, Guy's Hospital.
Jones, William Henry, Middlesex and the Dental Hospital of London.
Lees, Charlie, Charing-cross and the Dental Hospital of London.
Lishman, James, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester.
North, Benjamin, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester.
Oddy, Alfred Ernest, Guy's Hospital.
Picnot, Ernest, Guy's Hospital.
Poundall, Alfred Ben, Middlesex and the National Dental Hospital.
Powell, Matthew Pearce, Charing-cross and the Dental Hospital of London.
Reading, George Frederick, Charing-cross and the Dental Hospital of London.
Robertson, Arthur Edwin, St. Bartholomew's and the National Dental Hospital.
Robinson, Robert Percy, University College, Royal Infirmary, and the Dental Hospital, Liverpool.
Rogers, David de Sola Cohen, Charing-cross and the Dental Hospital of London.
Roper, John Langdon, Middlesex and the Dental Hospital of London.
Rowe, William Francis, Charing-cross and the Dental Hospital of London.
Sadler, Bernard Frederick, Mason College, Queen's and General Hospitals, and the Dental Hospital, Birmingham.
Shedden, Arnold Ward, Mason College, Queen's and General Hospitals, and the Dental Hospital, Birmingham.
Smart, Edwin Herbert Jacob, Charing-cross and the Dental Hospital of London.
Smith, Edward Percy, Charing Cross and the Dental Hospital of London.
Smith, Edwin Wylde, Guy's Hospital.
Smith, Thomas William, Charing-cross and the Dental Hospital of London.
Stoner, John Walton, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester.
Styer, Albert St. John, Guy's Hospital.
Summers, Gilbert Hamilton, Charing-cross and the Dental Hospital of London.
Thew, Thomas Wilton, Middlesex and the Dental Hospital of London.
Tidswell, Oswald, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester.
Wallis, Charles Edward, M.R.C.S. Eng., King's College and the Dental Hospital of London.
Wallis, Elton George Whishaw, Guy's Hospital.
Westron, Henry, Charing Cross and the Dental Hospital of London.
Williams, Sidney Herbert, Charing-cross and the Dental Hospital of London.
Willis, Stuart, Mason College, Queen's and General Hospitals, and the Dental Hospital, Birmingham.
Wilson, Charles Albert, Guy's Hospital.
Wilson, George Edward, Charing-cross and the Dental Hospital of London.
Woodhouse, William Barnabas, M.R.C.S. Eng., Middlesex and the Dental Hospital of London.

Fourteen gentlemen were referred back to their professional studies for six months.

The following gentlemen, having previously passed the necessary examinations and having now conformed to the by-laws and regulations, have been admitted Members of the College:—

Dantes, Augustus Paul, L.M. & S. Bombay, Grant Medical College, Bombay, and Charing-cross Hospital.
Gandier, Augustine, M.D., C.M. Kingston, Queen's University, Kingston, Canada, and Middlesex Hospital.

ROYAL INSTITUTION.—At the general monthly meeting of the members of the Royal Institution, held on Monday, July 5th, Sir James Crichton Browne, M.D., F.R.S., treasurer and vice-president, presiding, the special thanks of the members were given to Sir Andrew Noble for his donation of £100 to the Fund for the Promotion of Experimental Research at Low Temperatures.

THE PROPOSED CONVALESCENT HOME FOR BRISTOL.—The progress of the fund for providing a convalescent home for Bristol has not been quite equal to the anticipations of the proposers of this scheme. According to the list published on June 26th, the unconditional subscriptions are under £18,000; £50,000 is the sum required. There are also conditional promises of £7446; £20,000 has been raised for an endowment fund conditional upon the sum of £50,000 being first raised.

PRESENTATIONS TO MEDICAL MEN.—Mr. F. E. Haydon, M.B. Glasg., L.R.C.P., L.R.C.S. Edin., of Littlehampton, has been presented by the local ambulance class with the two volumes of Nansen's book, "Farthest North," and also a silver-mounted umbrella, in appreciation of his services as honorary lecturer to the class.—Mr. R. A. Prichard, M.R.C.S. Eng., L.R.C.P. Edin., of Conway, has been the recipient, from the Conway ambulance classes, of an honorary Life Certificate, in recognition of his instructive lectures on First Aid.

MR. LEWIS A. TALLERMAN has presented the North-West London Hospital with a Tallerman-Sheffield apparatus for the localised application of super-heated dry air. We understand that this present was made in response to a request from the secretary of the North-West London Hospital to be allowed the free use of the apparatus under hire at the hospital at the time as a Jubilee donation, and that Mr. Tallerman is willing to extend the same generosity to five other hospitals if applications are made to him at 50, Welbeck-street, Cavendish-square, W.

THE POPLAR HOSPITAL FOR ACCIDENTS.—The annual dinner of the supporters and friends of this charity was held for the forty-second time on June 29th at the Holborn Restaurant. Mr. Thomas Catling was in the chair. The chairman, in proposing the toast of the evening, "Success to the Poplar Hospital," referred to the good work which the hospital had carried on during the forty-two years of its existence. The Hon. Sydney Holland, the energetic former secretary, who responded to the toast, said that in the six years previous to 1890 they received from the public £23,000, but in the six years ending 1895 they had received no less a sum than £60,000. Subscriptions amounting to £1650 were announced.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—An ordinary meeting of this society was held on June 30th, Dr. J. F. Payne, President, being in the chair.—Several interesting cases were brought forward by Dr. Abraham, Dr. Savill, and others.—A case of Multiple Lupus in a little girl, six years of age, shown by Dr. Abraham, excited much comment. There were a dozen or more isolated tuberculous-looking nodules about the size of a pea, or a little larger. There were a few scattered nodules about the body generally and the limbs. Slight enlargement of the lymphatics, of the axillæ, and of other regions was noticed.—Dr. Payne considered the possibility of the lesions being those of congenital syphilis. The child had a swelling of one of the finger joints, (?) "strumous dactylitis." The mother gave a history of several miscarriages.—Dr. Abraham promised to examine the growths. The nodules had existed in their present condition for about a year, and it was stated by the mother that they all "came out at once."—Dr. Ryan showed a case of X Rays Dermatitis; the skin of the shoulder and bosom was affected; exposure forty-five minutes. The photograph had not been successful. Hair was still growing over part of the affected region.—Mr. Pernet stated that he knew of a hairy mole which had been subjected to an exposure of [illegible] without destruction of the hair follicles hav[illegible]

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MEDICAL MAGISTRATE.—His Excellency the Governor of New South Wales has appointed Mr. Thomas Arthur Grieves, L.R.C.P. Lond., M.R.C.S. Eng., of Wyalong, New South Wales, a magistrate for that colony.

MR. RUDYARD KIPLING'S "Our Lady of the Snows" and "Hymn before Action" have been set to music, and will be sung by special permission for the first time at the musical conversazione arranged by Miss Janotha to-day (Saturday), "Queen's Day," in the National Hospital for the Paralysed and Epileptic, Albany Memorial, Queen-square, Bloomsbury.

THE DWELLINGS OF THE POOR.—The report of the Mansion House Council for the year ending Dec. 31st, 1896, states that in presenting its thirteenth annual record of work done to further the interests of sanitation in London and the suburbs the council feel that there is even a stronger necessity than in the past for keeping a steady watch upon the work of the local authorities, upon whom is devolved the serious responsibility of making and keeping their various districts in sound sanitary condition. During the past twelve months 10,684 inspections dealing with 7545 houses in all parts of London have been made. Of these the defects have been remedied in 3624 cases, while 2108 are still under consideration, and 1813 have been dismissed.

THE NATIONAL ASSOCIATION OF MASTER PLUMBERS.—The annual meeting of the London branch of the above association was held on June 29th, followed by a dinner at the Holborn Restaurant. Though the matters discussed were devoid of any general interest, yet such associations must have a very pronounced influence for good, if an indirect one, upon the sanitary condition of the community. It is understood that this association does not exist simply for the purpose of benefiting the masters alone, but extends its operations to the improvement of the status of the trade as a whole. One object is to establish boards of conciliation, composed jointly of masters and operatives, in order to promote a better general understanding, and arrive at an amicable settlement in any matter of dispute.

EAST SUFFOLK AND IPSWICH HOSPITAL.—The anniversary Court of Governors of this institution was held at the town-hall on Wednesday, June 30th, when the chair was occupied by the Mayor. A most satisfactory report was unanimously agreed to. It was shown that the work of the hospital had considerably increased, the number of in-patients being augmented by 48 and the out-patients by 1191. The expenses, however, had been reduced. Considerable discussion took place on a resolution proposed by the Mayor to the effect that it is desirable that the secretary should devote his whole time and attention exclusively to the affairs of the hospital, and that he should reside within the hospital, unless specially exempted from so doing by the committee of management. Eventually it was decided that the board of management should consider and report upon the matter.

DIPHTHERIA IN LONDON.—In the four-weekly period ended with June 19th the notified cases of diphtheria in London were much in excess of the total of the preceding like period ended on May 22nd. In the May period the total was 777, yielding a weekly average of 194, all the sanitary districts except two being invaded. In the June period the like number of sanitary areas were invaded, but the total of notifications reached 895, a number which yields a weekly average of 224. In May only one district had upwards of 50 cases notified; in June two districts were so circumstanced, with an aggregate of 141 notifications. Other five districts in June had only 17 notified cases in all. In the May period the registered deaths from the disease in London numbered 142, a weekly average of 35, with a resulting per case mortality on notifications of 18·3 per cent. In the June period the deaths fell to 137, or 34 weekly; and in the circumstance of an increased amount of disease the per case mortality rate fell to 14·1 per cent. Thus, whilst in the June period the quantity of diphtheria prevalent was in excess of the four preceding weeks, the nature of the malady, as judged by the mortality data for the corresponding weeks, was milder. Compared with the June period of 1896, the current year's data show favourably. In 1896 the cases amounted to 1060, or 265 weekly; the deaths to 196, or 49 weekly; and the per case mortality rate was 18·5 per cent. In the two weeks of the current year completed since June 19th the deaths from diphtheria in London have been 24 and 32 respectively. The latter total during last week was 3 below the corrected decennial average for the twenty-sixth week of the years 1887–96. Three deaths belonged to each of the following sanitary areas:—Battersea, Camberwell, Chelsea, and Lambeth. Two of the 32 deaths were of persons aged upwards of 20 years, and 3 were of infants. Last Saturday found 869 diphtheria patients still under treatment, the admissions during the week having been 152. In the outer ring, only 5 deaths were registered from diphtheria last week, namely, one in Chiselhurst, Chiswick, Barnet, Hornsey, and Enfield districts respectively.

Parliamentary Intelligence.

HOUSE OF COMMONS.

THURSDAY, JULY 1ST.

Classification in County Asylums.

MR. WEIR asked the President of the Local Government Board whether it was the practice within the metropolitan area to classify as paupers patients who were under treatment in county asylums, notwithstanding the fact that the cost of maintenance was provided by the relatives or friends of the patients; and, if so, whether it was proposed to take any steps to amend the present system of classification.—Mr. Chaplin replied that he was informed that all patients in county asylums were classed as paupers whose maintenance was paid for by the guardians, although it might be that in some cases the guardians were partially recouped by sums received from relatives. He had no information which would lead him to think that a grievance existed, but he would make further inquiry.

Ventilation of the Metropolitan Underground Railways.

Mr. Ritchie, in reply to Mr. Weir, said that the Committee on the Ventilation of the Tunnels of the Metropolitan and Metropolitan District Railways hoped to conclude the taking of evidence on July 6th. They had arranged to visit the Severn Tunnel to inspect the ventilating arrangements on July 12th, and the report would be made as soon as possible after that date.

Poona Plague Administration.

Lord George Hamilton answering questions on this subject said that the measures taken at Poona to prevent the spread of the plague had been attended by a remarkable amount of success, the deaths from plague having fallen from 177 per week to 7 per week within the last two months. While that was so they had been the subject of much misrepresentation and exaggeration in a portion of the vernacular press. He was confident that the Governor of Bombay had been and was most careful to confine the action of the authorities to what was absolutely necessary for checking the plague, and to show all possible consideration to the religious opinions and customs of the inhabitants. He had no reason to think, as at present advised, that any inquiry into the administration of Poona during the plague was necessary or desirable.

Indian Famine Statistics.

Lord George Hamilton said, in reply to a question, that the Indian Government had reason to believe that deaths were frequently reported as due to starvation when they were really due to other causes, and had in consequence issued orders to prevent the famine statistics from being vitiated by inaccuracies of this kind.

FRIDAY, JULY 2ND.

Viewing the Body at Inquests.

Mr. Yoxall asked the Secretary of State for the Home Department if his attention had been drawn to the fact that jurymen at coroners' inquests often took grave objection to the statutory task, always unpleasant, and frequently repulsive or dangerous, of viewing the body, and if he would consider the subject in order to devise some alternative method, leaving the coroner or jury to decide in difficult cases whether such viewing was necessary, and abolishing such viewing in ordinary and well-attested cases where the medical evidence was conclusive.—Sir Matthew White Ridley said, in reply: Yes, objection is taken occasionally, I believe, to the performance of this duty, and the question of relaxing the requirement was some years ago under the consideration of this House. I am afraid there is no prospect of my being able to deal with the matter at present, even if it should appear on consideration to be desirable to do so, but I will look into it and ascertain from the coroners what views are held by them upon the subject.

MONDAY, JULY 5TH.

Cattle Disease.

Sir Arthur Forwood asked the President of the Board of Agriculture whether British steamers which call at Havre to receive cargo on their outward voyage for America were precluded from conveying from America to England live cattle for slaughter on landing unless a period of twenty-one days had elapsed between the time of call at the French port and their arrival at the English port, on the ground that infection from the cargo received in France but landed in America might be conveyed to the beasts subsequently received on the vessel in America and landed in England; and whether, as there was no restriction on the direct importation and distribution of merchandise from France into England, he would reconsider the regulations of the Board as regards vessels.—Mr. Walter Long replied that the landing of foreign animals had for very many years past been subject to the requirement that the vessel in which they were brought should not before taking them on board have touched within a specified period at a port in a country from which the importation of animals was entirely prohibited. This requirement was rendered necessary by the fact that some of the diseases against which this country legislated could be transmitted,

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not only directly from animal to animal, but also through the medium of persons, substances, and things, and actual experience had shown that the danger was a very real one. He regretted, therefore, that he was unable to withdraw the requirement, and with regard to the particular period to be prescribed, he would say that some years ago it was reduced from twenty-eight to twenty-one days, and that he did not think it could be further reduced consistently with safety.

Poona Plague Administration.

Lord George Hamilton read to the House at this sitting a categorical reply by Lord Sandhurst, Governor of Bombay, to certain allegations with reference to the plague administration in Poona contained in a memorial addressed to the Bombay Government. This reply stated, among other things, that people were only sent to hospital after careful medical examination and if showing symptoms indicative of possible plague; that the greatest care was taken not to remove to the segregation camp any but those necessary to keep under observation, time being allowed for preparation and one person being allowed to stay behind to look after property; that Lord Sandhurst had not yet heard any allegations of indignity being substantiated; that native gentlemen were asked to accompany search parties, and did so to the very end; and that they were specially desired to bring to notice all complaints which reached them, and to mark down any offending soldier and report to officers that the search parties were instructed to have regard to religious feelings, and that the possibility of abuse of those feelings was minimised by the presence of the native gentlemen, and that Lord Sandhurst did not believe the possibility of indignity to native women owing to the presence of lady doctors and other ladies with the search parties.

BOOKS, ETC., RECEIVED.

APPLETON, D. AND CO., New York.
The Menopause. By A. F. Currier, A.B., M.D., New York City. 1897.

BAILLIÈRE, J. B., ET FILS, Paris.
Traité de Médecine et de Thérapeutique. Par P. Brouardel et A. Gilbert. Tome quatrième. 1897.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.
Outlines of Veterinary Anatomy. Part I.: The Anterior and Posterior Limbs. By C. C. Bradley, R.C.V.S. 1896. Price 10*s.* 6*d.*
The Analysis of Food and Drugs. Part I.: Milk and Milk Products. By T. H. Pearmain and C. G. Moor, M.A. Cantab. 1897. Price 5*s.*
The History and Technique of the Vaginal Radical Operation. By Drs. L. and T. Landau. English translation by B. L. Eastman, M.D., and A. E. Giles, M.D. 1897. Price 7*s.* 6*d.*

CHURCHILL, J. & A., Great Marlborough-street, London.
The Westminster Hospital Reports. Edited by R. G. Hebb. Vol. X. 1897.
Recent Materia Medica and Drugs occasionally Prescribed. By F. Harwood Lescher, F.C.S. Fifth Edition. 1897.

CLAY, W. F., Teviot-place, Edinburgh.
The Cæcal Folds and Fossæ, and the Topographical Anatomy of the Vermiform Appendix. By R. J. A. Berry, M.D. 1897. Price 6*s.* net.

KARGER, S., Berlin.
Mittheilungen aus der Gynäkologischen Klinik des Prof. C. Engstrom. Band 1. Heft 1. 1897.
Cystitis und Urininfektion. Von Dr. Max Melchior. 1897.
Die Geschichtliche Entwickelung der sogenannten Hippokratischen Medicin im Lichte der neuesten Forschung. Von Dr. Franz Spaet. 1897.

LEHMAN, J. F., Munchen.
Atlas und Grundriss der Ophthalmoscopie und Ophthalmoscopischen Diagnostik. Von Prof. Dr. O. Haab. 1897.

MACMILLAN AND CO., London.
Lectures on the Action of Medicines. By T. Lauder Brunton, M.D., D.Sc. Edin. 1897. Price 10*s.* 6*d.* net.

MASSON ET CIE, Paris.
Archives de Physiologie. No. 3. Juillet, 1897.

SAMPSON LOW, MARSTON, AND CO., Fetter-lane, Fleet-street, London.
Twentieth Century Practice. Edited by T. L. Stedman, M.D. Vol. IX. Diseases of the Digestive Organs. 1897.

SMITH, ELDER, AND CO., Waterloo-place, London.
Dictionary of National Biography. Edited by S. Lee. Vol. LI Scoffin—Sheares. 1897.

SOCIÉTÉ D'EDITIONS SCIENTIFIQUES, Paris.
De l'Intervention Chirurgicale dans le cours et les suites de l'Ulcère Simple de l'Estomac. Par G. Marion. 1897.
Contribution au Traitement des Fractures du Maxillaire Inferior. Par Dr. Camille Leblanc. 1897.
Physiologie et Pathologie de la Respiration Nasale. Par Dr. Henri Mendel. 1897.
Le Traitement de l'Inflammation Cérébrale Aiguë. Par Dr. A. Luyten.

THE REBMAN PUBLISHING COMPANY, Adam-street, Strand, London.
Archives of Skiagraphy. Edited by S. Rowland, B.A. Camb. No. 4, Vol. 1. April, 1897.

THE SCIENTIFIC PRESS, Southampton-street, Strand, London.
Burdett's Hospitals and Charities. 1897. Price 5*s.*

WRIGHT, JOHN AND CO., Bristol.
The Pocket Therapist: A Concise Manual of Modern Treatment. By T. S. Dowse, M.D. 1897. Price 5*s.* net.

Inter-colonial Medical Congress of Australia: Transactions of the Fourth Session, held in Dunedin, New Zealand, February, 1896 (the Otago Daily Times and Witness Newspapers Company, Dunedin, 1897).—The Science of Speech: by Alex. M. Bell (The Volta Bureau, Washington, 1897).—Ergänzung zu die Farbenblindheit und ihre Diagnose: von Dr. M. Ohlemann; 1897 (Joh. H. Meyer, Braunschweig, 1897).—The Spas of Wales: their Medicinal and Curative Properties: by T. R. Roberts (John Hogg, Paternoster-row, London); price 1*s.*—Magazines, &c., for July: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Sunday Hours, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, English Illustrated Magazine, Knowledge, and Humanitarian.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAMS, ALEX. S., M.B., C.M. Aberd., has been appointed Medical Officer for the Rillington Sanitary District of the Norton Out-relief Union.

BEATTIE, ROBERT, M.D., M.Ch. Irel., M.R.C.S., has been re-appointed Medical Officer of Health by the Soothill Upper Urban District Council.

BROWNE, ADA M., L.S.A. Lond., has been appointed Assistant Anæsthetist to the New Hospital for Women, Euston-road, London.

BURNETT, JOHN R., M.D., M.R.C.S., has been appointed Medical Officer of Health for the Urban District of Keswick, vice C. Gore Ring, deceased.

BYFORD, W. F., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer for the Workhouse of the Nottingham Parish.

COLEMAN, J. G. B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Sutton Bridge Urban Sanitary District.

DICK, ARCHIBALD S., M.B., C.M. Glasg., has been appointed House-Physician to East London Hospital for Children, Shadwell, E.

DICKSON, J. D., M.D., M.Ch. Irel., L.R.C.S. Irel., has been appointed Medical Officer of Health for the Marlow Urban Sanitary District.

DINGWALL, ARCHD., M.B., C.M. Aberd., has been appointed Medical Officer of Health by the Prestcign Urban District Council.

DYER, C. H., M.B., C.M. Aberd., has been re-appointed Medical Officer of Health by the Cleckheaton Urban District Council.

FISHER, J. A., L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Garston Urban District Council.

FREMLIN, H. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer by the Tiverton Rural District Council.

GARDNER, H. BELLAMY, L.R.C.P. Lond., M.R.C.S., has been appointed Anæsthetist to the Male Lock Hospital, Dean-street, Soho.

GIBBES, C. C., M.D., M.R.C.P., D.Ph. Camb., has been appointed Assistant Physician to the National Hospital for Diseases of the Heart and Paralysis, Soho-square, W.

GIBB, W. ALEXANDER, M.B., M.S. Edin., has been appointed House-Surgeon to the Isle of Man General Hospital, Douglas.

HARRIS, F. D., M.B., Lond., L.R.C.P., M.R.C.S., D.P.H. Lond., has been appointed Medical Officer of Health and Public Analyst for St. Helens, Lancs.

HARRISSON, J. W., M.B., C.M. Aberd., has been re-appointed Medical Officer of Health by the Sandwich Town Council.

HILLS, W. E., L.R.C.P. Lond., M.R.C.S., has been appointed a House Physician to Guy's Hospital, London.

KAUFFMANN, C. J., M.D. Lond., M.R.C.P., M.R.C.S., has been appointed an Honorary Physician to the Queen's Hospital, Birmingham, vice C. W. Suckling, resigned.

LOYND, WM., L.R.C.P. Irel., M.R.C.S., has been re-appointed Medical Officer of Health for the Oswaldtwistle Sanitary District of the Blackburn Union.

MARSHALL, J. R., M.B., C.M. Glasg., has been appointed Medical Officer of Health by the Carriden Urban District Council.

MORTON, CHAS. A., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Joint Professor of Surgery in the Faculty of Medicine, University College, Bristol.

NICOLL, GEO., M.B., C.M. Glasg., has been appointed Medical Officer of Health by the Clyne Parish Council.

ORFORD, R. J., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health to Market Bosworth District Council, vice J. A. Turner, resigned.

RICHARDS, H. M., M.D. Lond., L.R.C.P., M.R.C.S., has been re-appointed Medical Officer of Health by the Chesterfield Town Council.

SHILLITOE, ARTHUR, M.B., B.C. Camb., F.R.C.S. Eng., has been appointed Surgeon to Out-patients at the London Lock Hospital, vice Jonathan Hutchinson, jun., resigned.

SNELL, E. H., M.D. Lond., L.R.C.P., M.R.C.S., D.P.H. Camb., has been appointed Medical Officer for the Borough of Coventry.

STILES, A. J., M.D. Edin., M.R.C.S. Eng., has been appointed Medical Officer for the Spalding West District of the Spalding Union.

STOKES, RONALD M., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Monmouth District of the Monmouth Union, vice Brandram Jones, resigned.

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SYDENHAM, FREDK. W., M.B., C.M. Edin., D.S.Sc. *Vict.*, has been appointed Honorary Physician to the Walsall and District Hospital.

SWAIN, JAMES, M.S., M.D. Lond., F.R.C.S. Eng., has been appointed Joint Professor of Surgery in University College, Bristol.

WELLS, JAMES, M.R.C.S., L.S.A., has been appointed Medical Officer and District Vaccinator for the Lacock District of the Chippenham Union, vice J. H. Crisp, resigned.

WOODHOUSE, W. M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer by the Wantage Rural District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BOROUGH OF SHREWSBURY.—Medical Officer of Health. Salary £200 per annum. Applications to the Town Clerk, Guildhall, Shrewsbury.

BRADFORD EYE AND EAR HOSPITAL.—Vacancy on the Honorary Medical Staff.

CHORLTON UNION.—Junior Resident Medical Officer at the Workhouse Hospitals, Withington, Manchester, for twelve months. Salary £120 per annum, with furnished apartments and attendance (but not rations) in the workhouse. Applications to the Clerk to the Guardians, Chorlton Union Offices, All Saints, Manchester.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W. — Clinical Assistant. Tenable for three months, on payment of a fee of £5 5*s*.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—House Surgeon and Assistant House Surgeon for twelve months. Salary of the House Surgeon £100 per annum, with furnished apartments, board, and washing. That of the Assistant House Surgeon £50 per annum, with furnished apartments, board, and washing.

GARTLOCH ASYLUM AND HOSPITAL FOR MENTAL DISEASES, Glasgow.—Assistant Medical Officer. Salary £150 a year, with all found.

GENERAL HOSPITAL, Nottingham.—Assistant House Physician for six months. Board, lodging, and washing in the hospital, and an honorarium of £10 10*s*. will be given conditionally.

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Assistant House Surgeon for six months. Board, residence, and washing provided.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Senior House Surgeon for six months. Salary at the rate of £60 per annum, with board, lodging, and washing in the hospital. Also Junior House Surgeon for six months. Board, lodging, and washing in the hospital.

GRIMSBY AND DISTRICT HOSPITAL, Grimsby.—Resident House Surgeon. Salary £80 per annum, with board, lodging, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—House Surgeon for six months, unmarried. Salary £20, with board and residence in the hospital.

HULL ROYAL INFIRMARY.—Junior Assistant House Surgeon for one year. Salary £40, with board and lodging.

KENSINGTON UNION.—Second Assistant Resident Medical Officer for the Workhouse and Infirmary. Salary £80 per annum, with apartments, board, and washing, subject to the statutory deduction under the Poor-law Officers Superannuation Act, 1896.

LONDON HOSPITAL MEDICAL COLLEGE, Turner-street, Mile-end, E.—Bacteriologist to the Hospital, and Lecturer on Bacteriology and Pathological Chemistry.

LONDON LOCK HOSPITAL, 91, Dean-street, Soho.—Registrar. Applications to the Secretary, Harrow-road, W.

MACCLESFIELD GENERAL INFIRMARY.—Senior House Surgeon. Salary £100 for the first year, with board and residence. Also Junior House Surgeon. Salary £70 per annum, with board and residence at the institution.

MEMORIAL HOSPITAL, Jarrow-on-Tyne.—House Surgeon. Salary £80, rising £10 annually to £100. Board and residence provided in the hospital. Applications to Mr. J. Campbell, Surgeon, Ivy Bank, Jarrow-on-Tyne.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Assistant Surgeon. Also Surgeon.

NATIONAL DENTAL HOSPITAL, Great Portland-street, London.—Anæsthetist.

NORTH WALES ASYLUM, Denbigh.—Second Assistant Medical Officer. Salary £100, with board, washing, and apartments. No beer allowance, and no pension given. Applications to the Clerk to the Visitors, Denbigh.

RIPON DISPENSARY AND COTTAGE HOSPITAL.—Resident House Surgeon and Dispenser, unmarried. Salary £70 per annum, with board and lodging.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon. Salary £30 per annum; board, lodging, and washing provided.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Board, lodging, and washing provided.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiners.

ROYAL HALIFAX INFIRMARY.—House Surgeon, unmarried. Salary £80 per annum, advancing £10 per year up to £100, with residence, board and washing.

ROYAL INFIRMARY, Aberdeen.—Medical Superintendent. Salary £350 per annum, without residence.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Assistant Lecturer on Chemistry and Physics. Salary £100, rising to £125.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston-road, London.—Resident Medical Officer. Salary £105, with residence and attendance. Applications to the Hon. Sec., Mr. H. P. Bodkin, 23, Gordon-street, Gordon-square, W.C.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—House Surgeon for two years. Salary £100 per annum, with board, lodging, and washing.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Assistant House Surgeon, for six months. Board, lodging, and washing provided.

Births, Marriages, and Deaths.

BIRTHS.

BRODIE.—On June 29th, at Lindfield, Uxbridge-road, Surbiton, the wife of Dr. T. G Brodie of a son.

BUCK.—On July 1st, at Beswick House, Beswick, Manchester, the wife of Walter Buck, L.R.C.P., L.R.C.S., of a daughter.

CARRUTHERS.—On July 3rd, at Central-hill, Norwood, the wife of S. W. Carruthers, M.B., C.M., of a son.

CARVELL.—On June 30th, at the residence of her mother, Leicester-Villa, Burgess-hill, the wife of J. Maclean Carvell, M.R.C.S., of a daughter.

DOWN.—On July 4th, at 14, Mount Edgcumbe-terrace, Stoke, Devonport, the wife of Elgar Down, M.R.C.S., of a daughter.

DRURY.—On June 30th, at Landon House, Halifax, Yorks, the wife of Arthur Drury, M.B., C.M. Edin., of a daughter.

EMERSON.—On July 3rd, at The Nook, Oulton Broad, the wife of P. H. Emerson, B.A., M.B. Cantab., of a son (Ralf Billing).

MATHESON.—On July 3rd, at Gibson-square, N., the wife of John Matheson, M.A., M.D., of a daughter.

SMITH.—On June 28th, at Eltham, Kent, the wife of H. Sandford Smith, M.R.C.S., of a son.

WALLIS.—On July 2nd, at Old Stone House, East Grinstead, the wife of P. E. Wallis, L.R.C.P., of a daughter.

MARRIAGES.

BAKER—WALLIS.—On July 1st., at St. Michael's, Basingstoke, by the Rev. E. F. Russell, M.A., Assistant Priest of St. Albans', Holborn, assisted by the Rev. H. R. Cooper Smith, D.D., vicar of the parish, John Charles Baker, M.B., B.A. Lond., M.R.C.S., L.R.C.P., of Witley, Surrey, to Charlotte Sterry, eldest daughter of Arthur Wallis, J.P., of Coombehurst, Basingstoke.

BOND—WRINCH.—On June 30th, at All Saints' Church, Ipswich, Bertram William Bond, M.B., B.S., of Godalming, to Elsie Kate, younger daughter of Alderman Alfred Wrinch, J.P., of Ipswich.

COOKE—CLARKE.—On June 30th, at Christ Church, North Kensington, Frederick Arthur Cooke, M.D., M.R.C.S., son of John Cooke, M.B., F.R.C.S., of Tettenhall, Wolverhampton, to Stella Mary, daughter of the Rev. E. Wrangles Clarke, B.A., Vicar of Christ Church, North Kensington.

DOUGLAS—FISHER.—On July 5th, at the parish church, Rowsley, Derbyshire, Archibald Robertson Douglas, L.R.C.P., L.R.C.S., H.M. Prison, Portland, to Ada, daughter of the late Frederick Fitz-Henry Fisher, of Camden-road.

FAIRRIE—FISHER.—On July 6th, at St. John's Church, Stratford, Essex, Septimus Harold Fairrie, Army Medical Staff, son of James Fairrie, The Cedars, Hoole, Chester, to Florence, daughter of the late Thomas Fisher, of Maldon House, Romford-road, Stratford, Essex.

HALL—OLIVER.—On July 1st, at St. Paul's Church, Finchley, by the Rev. S. B. Mayall, James Arthur Thomas Hall, L.R.C.P., L.R.C.S., of Hinckley, Leicestershire, third son of the late Christopher Hall, M.D., of Swadlincote, Derbyshire, to May Maud, only daughter of Henry Oliver, of Alexandra Grove, North Finchley, Middlesex.

HOWDEN—CAMPBELL.—On June 30th, at St. Thomas's Episcopal Church, Edinburgh, Ian Howden, M.B., Dover, to Violet, youngest daughter of the late Lieutenant-Colonel J. P. Campbell, 72nd Highlanders.

HUTCHINSON—LINNELL.—On July 3rd, at St. Nicholas's, Potters Pury, Jonathan Hutchinson, F.R.C.S., eldest son of Jonathan Hutchinson, F.R.S., to Caroline, second daughter of the late James Edward Linnell, of Potters Pury.

JONES—CROSLAND.—On June 30th, at St. Luke's Church, Southport, Arthur Jones, L.R.C.P. Edin., M.R.C.S., of Hoghton-street, Southport, to Helen Maud, widow of George Crosland, of Huddersfield.

THOMPSON—GOWANS.—On June 30th, at St. Cuthbert's Church, Edinburgh, Charles Gurney Thompson, M.B., C.M., only son of Charles H. Thompson, Oatlands, Norwood, to Ellen Chisholm (Nelly), youngest daughter of the late Sir James Gowans.

THOMSON—ROSENBERG.—On June 29th, at St. Augustine's, Queen's-gate, A. E. Thomson, B.A., M.B., of East Molesey, to Maude, only daughter of the late F. Rosenberg, Queen's-gate-gardens, S.W.

WHITE—NEWINGTON.—On July 1st, at Ticehurst, William Robert White, M.D., of Benenden, Kent, to Ethel Dora Oakeley, youngest daughter of the late Samuel Newington, M.D., of Ridgeway, Ticehurst.

DEATHS.

BULTEEL.—On June 30th Christopher Bulteel, F.R.C.S., of Jennis-combe, Tiverton, and formerly of East Stonehouse, Devon, aged 65 years.

CHANCE.—On July 1st, Frank Chance, M.B., F.R.C.P., of Burleigh House, Sydenham-hill, S.E., aged 71.

CUTTS.—On July 3rd, at London, Wm. Henry Cutts, M.D., J.P., of Melbourne, Victoria, in his 69th year.

N.B.—A fee of 5*s*. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 8th, 1897.

Date.		Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
July	2	30·11	E.	61	59	76	65	59	...	Overcast
,,	3	29·99	S.W.	63	59	114	75	59	...	Cloudy
,,	4	30·09	N.W.	64	54	116	70	55	...	Cloudy
,,	5	29·89	W.	64	59	128	77	54	0·02	Cloudy
,,	6	29·72	S.W.	61	60	121	75	60	...	Cloudy
,,	7	29·76	WNW	60	52	124	71	55	...	Cloudy
,,	8	29·96	S.W.	60	53	115	70	52	...	Fine

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (14th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (15th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (17th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (12th).—SOCIETY FOR THE STUDY OF INEBRIETY (Medical Society's Rooms, 11, Chandos-street, Cavendish-square, W.).—4 P.M. Paper: Mr. J. J. Pitcairn: Alcoholism and the Penal Law in Europe and the U.S.A.

FRIDAY (16th).—BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION (Medical Society's Rooms, 11, Chandos-street, Cavendish-square, W.).—3 P.M. Annual General Meeting. Cases:—Dr. Stokes: Oxygen Cure of Ozæna and Otitis Media Suppurativa.—Dr. Milligan: Nasal Exostosis.—Mr. Bark: Epithelioma of Vocal Cord.—Mr. L. Browne: Epithelioma of Soft Palate.—Dr. Law: Lupus of Nose. Dr. Grant, Dr. Whistler, Mr. Mayo Collier and others will also show cases. 5 P.M. Discussion on Preliminary Training and Methods of Operating on Laryngeal Growths per *vias naturales*.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

TUESDAY (13th).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.).—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Horsley: Clinical Demonstration.

WEDNESDAY (14th).—WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Aldren Turner: Neurological Cases.

THURSDAY (15th).—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square).—5.30 P.M. Dr. J. Vinrace: Alopecia.

FRIDAY (16th).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.)—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Ballance: Surgery of the Nervous System.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which was completed with the issue of June 26th, was given in the last number of THE LANCET. It is intended, in future, to include the Index and Title page for each past half-yearly volume in the first number of the succeeding volume, as in the present case, instead of in the last number of the volume itself, as heretofore.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18*s*., carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s*., by post 2*s*. 3*d*.

To be obtained on application to the Manager, accompanied by remittance.

A NEW DEPARTURE AT AN INQUEST.

AN inquest was recently held at the Hove Town Hall relative to the death of a man named Jackson, who was found dead in a garden outhouse. There was nothing remarkable about the case, death being due to the rupture of an aneurysm of the first part of the aorta; but what we do think worthy of notice is that the medical man who gave evidence is reported as "having the heart produced and practically demonstrating to the jury the exact nature of the injury." We take it that this is a new departure and not one to be followed. Possibly in the future we may see the jury invited to attend the post-mortem examination and being duly edified by the medical man addressing them as follows:—"You will observe, gentlemen, that the deceased suffered from a new growth of the pancreas; the growth is carcinomatous in nature and has eroded the cœliac axis, thus giving rise to a sudden hæmorrhage, which proved fatal." From showing pathological specimens at an inquest to such a procedure as we have endeavoured to indicate above is but a short step, and we hope that the pathological demonstration will not be repeated.

Mr. S. Scott is recommended to make enquiry of the family practitioner.

AN ARTIFICIAL LARYNX.

To the Editors of THE LANCET.

SIRS,—Can you or any of your readers inform me who are the makers of an artificial larynx, with cardboard discs simulating diseases, for laryngoscopic practice, also an artificial fundus for ophthalmoscopy?

I am, Sirs, yours faithfully,

July 1st, 1897. MAGGIORE.

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DR. STEELE'S JUBILEE ODE.

AT the request of some of our readers we append a literal translation of Dr. Steele's Jubilee Ode which appeared in THE LANCET of June 19th:—"From what source the British people derive their moral worth and the lustre of their empire, tell us, oh, Muse, who surveyest the world from the rising of the sun to his western decline, who hast skill to burst the barrier of time and to disclose the humble beginnings of our power, when the Silurians were bound with Roman fetters and their chief, Caractacus, before the tribunal of the Emperor Claudius, gave utterance to the prophecy: 'Not for ever will the haughty sway of the Romans endure; not for ever will Father Jove from his lofty shrine, or Mars the Avenger, provide for the City; four centuries will glide away and the Mistress of the World will collapse before the barbarians of the North. For Ulysses, having threaded the Pillars of Hercules on his last voyage to see the Islands of the Blest, was carried out of his course to the British strand, and there, having found a kindly host in the chief, after recruiting himself and his crew, he again put to sea, gratefully leaving behind him a forecast of the blessings in store for our Albion, which, he said, would one day be the mother of high-souled heroes, rich in a twofold empire, and continuing to subjugate lands and seas withheld from the Romans, until, lifted higher by their ruins, she would reign supreme—a QUEEN upheld by a purer faith, an EMPRESS formed to play a mightier part than Cæsar's." This prophecy, borne by the Ithacan king to the Britons, delivered by Caractacus to an all incredulous Rome, how tested it has been, how thoroughly fulfilled, let the world declare; let peace and civilisation, with their triumphs, declare, and freedom won for the people in harmony with law, and religion the boon-mother of salvation; let art declare, and the gifts dear to the Muses, as shown in the animation given to marble, in the eloquence given to painted canvas, in the inspiration given to the printed page; let the far-seeing statutes of a fatherly senate declare, and courts of justice equitable to the humblest of the accused, and the reverend order of the priesthood, loyal in its allegiance to the Cross. Nor, amid so many witnesses, let the confirmation of Æsculapius be withheld—Æsculapius, a soldier fighting a battle of his own and winning trophies denied to military leaders; Æsculapius, who, when charged with the interests of the State, strengthens its resisting power till epidemic disease and its agents drawn up for battle are put to the rout, giving back even before the trumpet sound; Æsculapius, who with the balm that by evaporation confers unconsciousness, lulls to sleep the patient, thus exempting him from dread of Machaon's inexorable knife and salutary severity; Æsculapius who, a nature-student, daring yet reverential, knows how to penetrate the sanctuary of life hitherto veiled from the uninitiated gaze; who knows in its intimate recesses, to surprise Disease, like the sleeping Proteus, who will presently reveal his strategy, the weapons he has mocked, the weapons he has come to fear; from which revelation there is derived for us a habit and rule of life ever more conducing to health and to the development of the race and the family alike, until we are renewed into a yet mightier generation and are carried up again into the Golden Age. Thrice propitious monarch, descended from so long a line of kings, VICTORIA! vouchsafed to the world, like a returned Astræa, and destined to be enrolled among the celestials; late be thy departure from thy foster-children! For, under thy providential sway ever more present, our good fortune will flow down in yet ampler volume, wafting us to that goal which is the aspiration of all pious natures, who, when once they have reached it, will behold Islands Blest in a truer sense that those beheld by the errant Hercules when he dared, across the Atlantic, to seize and carry off the golden fruit."

H. W. (Talgarth).—We agree that the information must have been sent to the paper by some one who knew, but it did not emanate necessarily from the person mentioned. Indiscreet friends generally make these communications.

"PELLAGRA?"

To the Editors of THE LANCET.

SIRS,—I venture to reply to "Vagamundo's" query from Crete in THE LANCET of July 3rd because I have had the opportunity of treating some 400 cases of pellagra in Cairo, and of studying the disease in Italy. The site of the eruption is suggestive of pellagra, but the "apertures filled with hard yellowish matter" are sufficient to negative that diagnosis. Pellagrous eruptions usually remind one of symmetrical trophic erythema, psoriasis, or ichthyosis, but pellagra should be diagnosed not only by its skin manifestations, but by diarrhœa, denuded epithelium of tongue, changes in patellar reflex, and tenderness of spinal nerves. The disease is not likely to be present in small children unless distributed among adult peasants in the island. Pellagra exists at Corfu and very probably also in Crete, for the peasants there live partly on maize.

I am, Sirs, yours truly,

Saville Club, W., July 7th, 1897. F. M. SANDWITH, M.D.

ECCENTRICITIES OF SUICIDE.

THE *Evening Standard* in a recent number had an interesting article under the above heading, appropriate to the time of year when, contrary to general opinion, the suicide curve rises. The selfishness of suicides is remarkable and is instanced by the case of a man who committed suicide in the classical way by opening his veins in a bath, a Turkish bath in this case. His thoughtless act ruined the proprietor, for the story got about and no one would use the baths afterwards. Perhaps the most eccentric method of attempted suicide was one which occurred in London not so very long ago. The would be self-murderer filled his mouth with gunpowder, so full that he could not shut it, and then inserted a lighted match. Instead, however, of his head being blown off, as he had hoped, the powder simply blazed out of his mouth, severely burning his lips, and having chosen the neighbourhood of a hospital for his experiment he was at once conveyed thither and treated with success. A somewhat similar instance happened a few years ago when a miner put a dynamite cartridge in his mouth, but in this instance his head was shattered to pieces.

Aphasia has omitted to supply us with his name and address. This proceeding is in keeping with the pseudonym which he has adopted, but we cannot respect his infirmity so far as to excuse the omission.

THE ADMINISTRATION OF CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—Would you kindly ask the profession for information in your widely read journal if any of them have experienced, seen, or heard of any ill effect having followed the use of inhaled pure chloroform, administered, on Snow's method, by means of the regulating inhaler? Over 1000 of these inhalers having been distributed over many different parts of the world, some of which may probably have been employed daily since 1889–1890, it would greatly enhance the value of the information if each correspondent would also give the number of cases in which the inhaler was employed and the amount of chloroform used on an average per minute.

We are, Sirs, yours faithfully,

July 6th, 1897. KROHNE AND SESEMANN.

F.R.C.S., M.R.C.P.—We have been unable to decipher our correspondent's signature.

THE TREATMENT OF URETHRAL STRICTURE BY ELECTROLYSIS.

WE have received a paper by Dr. Ramon Guiteras, Professor of Anatomy and Operative Surgery at the Post-graduate Hospital of New York, upon the subject of the electrolysis of urethral strictures. There is, of course, nothing new in the main treatment, for electrolysis for this condition was practised so far back as 1839 by Crussell, more systematically by Mallez and Tripier in 1867, and comparatively recently by Steavenson and Bruce Clarke in 1886. One new point about Dr. Guiteras' method is, however, the use of an electrode modelled on a Maisonneuve urethrotome, the knife being made of platinum and blunt, so that in use the instrument passes through the stricture before the current is turned on. This method, of course, implies that the stricture is not impassable, and in cases where the obstruction is impassable we do not see that Dr. Guiteras' method has any advantages over the common electrode used by Steavenson and Bruce Clarke.

Practice in Jersey.—According to the definitions given in the Medical Act, 1886, "the expression British possessions means any part of Her Majesty's dominions exclusive of the United Kingdom, but inclusive of the Isle of Man and the Channel Islands."

During the week marked copies of the following newspapers have been received:—*Blackburn Standard, Le Temps (Paris), Hull News, Birmingham Gazette, Baillie, Dover Express, Newcastle Leader, Harrogate Advertiser, Sheffield Independent, Oxford Journal, Southport Visitor, Accrington Observer, Barnsby Chronicle, Liverpool Daily Post, Alnwick Guardian, Times of India, Pioneer Mail, Oban Times, Architect, Goole Times, Yarmouth Advertiser, Folkestone Chronicle, Carnarvon Herald, Salisbury Journal, Bedford Standard, Builder, Wolverhampton Chronicle, Yorkshire Post, Western Morning News, Dundee Courier, Observer and Chronicle (Bournemouth), Hastings Times, Leeds Mercury, Stroud News, Doncaster Chronicle, Woking Mail, Essex County Chronicle, Manchester Courier, Maryport News, Halifax Guardian, Bristol Mercury, Worcestershire Chronicle, Rugby Advertiser, Southampton Observer, Midland Free Press, Leicester Post, Sussex Daily News, Cambrian, Devon Weekly Times, Kent Messenger, Chatham News, Carlisle Journal, Hampshire Telegraph, Tyrone Constitution, Brighton Gazette, Weekly Free Press and Aberdeen Herald, Mining Journal, Hertfordshire Mercury, City Press, Christian World, Reading Mercury, Local Government Chronicle, Blackburn Times, Daily Express (Dublin), Bradford Observer, Surrey Advertiser, Local Government Journal, Norfolk West Standard, Norwood Weekly Herald, Cape Times, West Middlesex Herald, Weekly Times and Echo, Forfar Herald, Devizes and Wiltshire Gazette, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Messrs. Allen and Hanburys, Lond.; Messrs. Armour and Co., Lond.; Mr. H. Astley, Portobello; Mr. W. Adams, Lond.

B.—Dr. M. Bannister, Blackburn; Miss A. M. Browne, Lond.; Miss Margaret Bream, Fleet; Birkbeck Bank, Manager of; Messrs. Burgoyne, Burbidges, and Co., Lond.; Dr. D. Bower, Bedford; Mr. M. H. Bulteel, Tiverton; Dr. Adolph Bronner, Bradford; Dr. W. J. Bond, Brill; Dr. Bottentuit, Plombières, France; Messrs. Blondeau et Cie, Lond.; Messrs. W. H. Bailey and Son, Lond.; Dr. D. Bombardieri, Naples; Mr. J. Baynham, Cotham; Birmingham General Hospital, Secretary of; Mr. R. Baker, Lond.; Brin's Oxygen Co., Lond.; Messrs. Burroughs, Wellcome and Co., Lond.; Dr. L. Bennett, Lond.; Mr. R. J. Beevor, Lond.; Dr. Bury, Manchester; Mr. W. M. Beaumont, Bath.

C.—Mr. H. Chance, Lond.; Cambridge Medical Graduates' Club, Secretary of; Mr. J. Colston, Cambridge; Dr. Casper, Berlin; Chorlton Union, Clerk of; Cantab, Lond.; Messrs. Cassell and Co., Lond.; Chelsea Hospital for Women, Secretary of; Messrs. E. Cook and Co., Lond.; Mr. W. F. Clay, Edinburgh; Mr. W. Carnie, Aberdeen; C. J., Lond.; Mr. T. Cooke, Lond.

D.—Mr. J. M. Dunn, Lond.; Messrs. Deighton, Bell, and Co., Cambridge; District Asylum, Mullingar, Acting Medical Superintendent of; Messrs. W. Dawson and Sons, Lond.; Messrs. Duncan, Flockhart, and Co., Edinburgh.

F.—Dr. J. L. Firth, Bristol; Mr. W. T. Freeman, Lond.; Messrs. Ferris and Co., Bristol; Mr. J. Flannery, New York; Dr. J. A. Fort, Paris; Mr. H. Frowde, Lond.

G.—Mr. R. H. Goldie, Rochester; Mr. J. Galpin, Lond.; Grimsby News Co, Lond.; Dr. H. L. Gill, Brooklyn, N.Y.; Messrs. Gordon and Gotch, Lond.; Mr. J. P. Grieves, Lond.; Mr. F. N. Glew, Lond.; Gartlock Asylum, Medical Superintendent of; Great Eastern Railway Co., Lond., Manager of.

H.—Mr. G. R. Hatton, Fleet; Messrs. Harvey and Co., Halifax; Mr. C. M. Holloway, Lond.; Dr. G. B. Hindley, Benenden; Messrs. Herts and Collingwood, Lond.; Mr. J. Heywood, Manchester; Mr. T. J. P. Hartigan, East Grinstead.

I.—Iowa State Medical Society, Des Moines; *Il Policlinico*, Rome, Editor of; Income Tax Adjustment Agency, Lond.

K.—Messrs. Krohne and Sesemann, Lond.; Mr. B. Kühn, Lond.

L.—Mr. F. Harwood Lescher, Lond.; Dr. B. H. F. Leuman, Bombay; Mr. H. K. Lewis, Lond.; Dr. L. Leibster, Lond.; Leeds General Infirmary, Secretary of.

M.—Mr. H. L. Munson, Montana; Maltine Manufacturing Co., Lond.; Mr. C. M. Mulveeny, Birmingham; Memorial Hospital, Jarrow-on-Tyne, Secretary of; Rev. J. W. Morris, Shooters's Hill; Messrs. Mullock and Sons, Newport, Mon.; Dr. J. M. Martin; Brighton; Macclesfield General Infirmary, Secretary of; Messrs. J. and C. Mort, Stafford; Mr. R. T. Morgan, Clevedon; Metropolitan Asylums Board, Sec. of.

N.—North Wales Couties Asylum, Denbigh, Steward of; Committee of the National Conference of Friendly Societies, Secretary of; National Dental Hospital, Lond., Secretary of; Dr. James Niven, Manchester.

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ABSTRACT OF

The Cavendish Lecture

ON

OVARIAN TUMOUR WITH PREGNANCY.

Delivered before the West London Medico-Chirurgical Society on July 2nd, 1897,

BY SIR JOHN WILLIAMS, BART., M.D., F R C.P. LOND.,

PHYSICIAN-ACCOUCHEUR TO H.R.H. THE DUCHESS OF YORK; CONSULTING PHYSICIAN FOR DISEASES OF WOMEN, UNIVERSITY COLLEGE HOSPITAL.

GENTLEMEN,—The subject which I have chosen for the Cavendish Lecture this year is the complication, Ovarian Tumour with Pregnancy. Although the condition is not one of great frequency, yet it is not one of very uncommon occurrence, while, by reason of the large mortality resulting from it, the importance which must be attributed to it is great. I have collected 375 cases of the complication, with 461 preghancies, several of the patients having been pregnant more than once.

The first question which demands our consideration is: Is pregnancy a cause of ovarian tumours? Does gestation originate such growths in the ovary? I say that this is the first question, because it has been asserted that pregnancy frequently gives rise to these new growths. To prove this statement—that pregnancy is the cause of ovarian tumour in any given case—is, in the present state of our knowledge of the causes of tumour, not possible; but if we put the question in the following form—Does ovarian tumour occur with greater frequency in women who are or have been pregnant than it does in women who are not and have never been pregnant?—I think that I shall be able to produce evidence which will enable us to find a definite answer, and that in the negative. I have taken a series of cases of ovarian tumour in which the patients are divided into the married and the single, and I shall regard the married as mothers and the single as not mothers. This assumption may not be quite accurate, while it is the nearest approach to accuracy that I have been able to obtain. Moreover, the error in it is not so large as would at first sight appear, for the error made by regarding all married women as mothers is balanced by that made by regarding all unmarried women as not mothers.

If, then, we take the 1000 cases of ovarian tumour operated upon by Spencer Wells and divide them into groups corresponding to the age groups into which the Registrar-General divides the married and the single in the population generally, we obtain the following figures. There were in Spencer Wells's 1000 cases—

	Married.	Single.
Between the ages of 20 and 25 years	23	80
,, ,, 25 ,, 35 ,, ...	133	138
,, ,, 35 ,, 45 ,, ...	154	78
,, ,, 45 ,, 55 ,, ...	168	65
,, ,, 55 ,, 65 ,, ...	74	27
Aged 65 ,, upwards	7	6

From these it is seen that between the ages of twenty and twenty-five years ovarian tumour occurs in the single rather more than three times as frequently as it occurs in the married; while between the ages of twenty-five and thirty-five it occurs with almost equal frequency in the two classes. After thirty-five years of age the proportion is reversed, and the disease is met with twice as frequently in the married as it is in the single; between forty-five and fifty-five two and a half times as often; between fifty-five and sixty-five nearly three times as often; but in those above sixty-five years of age it is found in each class with almost equal frequency. Looking at these figures alone it would appear that pregnancy is a potent factor in the causation of ovarian tumours; for from thirty-five to sixty-five years of age, when marriage may be considered to have exercised its full effects, the married contribute a far greater number of ovarian tumours than do the single. Such a conclusion is, however, quite erroneous. This apparent result of marriage arises from the change which takes place in the social condition of the population and the consequent alteration in the number of the married and the single—the number of the married undergoing rapid increase at the expense of the single. To correct the error conveyed by the figures I have given we must take into account the proportion of the number of the married to the single in the population generally at the different periods of life under which they have been grouped.

Turning to the Registrar-General's Report for 1891 I find the proportion of the married to the single women to be:—

	Married.	Single.
Between the ages of 20 and 25 years	30	70
,, ,, 25 ,, 35 ,, ...	67	33
,, ,, 35 ,, 45 ,, ...	83	16
,, ,, 45 ,, 55 ,, ...	87	12
,, ,, 55 ,, 65 ,, ...	89	11
Aged 65 ,, upwards	89	11

By comparing these figures with those derived from the 1000 cases operated upon by Spencer Wells we shall have a more correct idea of the proportional frequency of ovarian tumours at the several periods of life under which they are grouped.

Now in the series of Spencer Wells we find between the ages of twenty and twenty-five years 23 married and 80 single women, or a proportion of rather more than 1 married to 4 single, while, according to the Registrar-General, the proportion of married to single women in the total population at this period of life is from 30 to 70, or 1 to 2·33; that is, speaking in proportion, 1 married woman produces one ovarian tumour, while 2·33 single women produce four, or 3 married women grow three tumours, while 7 single women grow twelve. Did ovarian tumours occur with equal frequency in the married and in the single between the ages of twenty and twenty-five years, the number in Spencer Wells's series would not be 23 married and 80 single, but 34 married and 80 single.

In the next group—between the ages of twenty-five and thirty-five years—this difference in the comparative freedom from ovarian tumour in favour of married women becomes still more marked, for in this group, in the series of Spencer Wells, I find 133 married and 138 single women. According to the Registrar-General's report the total number of married to the total number of single women in the population is as 67 to 33—that is, the married are twice as many as the single, and yet the single women furnish rather more ovarian tumours than the married. This disproportion is still more emphasised in the two next groups.

Between the ages of thirty-five and forty-five years there were 154 married and 78 single women the subjects of ovarian tumour. Here the number of the married is just twice that of the single. But what is the proportion between the number of the married and of the single in the general population? The Registrar-General states that they are as 87 to 12, or more than seven times as many, and yet, instead of producing seven times as many tumours, the married only furnish us with twice as many as the single.

Between the ages of forty-five and fifty-five years in the series of Spencer Wells, the number of the married is 168 and of the unmarried 65, while in the general population at this period of life the married are to the unmarried as 89 to 11, or eight times as many, and yet they show only two and a half as many ovarian tumours. The same remarks apply literally to the next group, while the difference in favour of the married is still more marked in women of sixty-five years and upwards.

Between the ages of fifty-five and sixty-five years there were 74 married and 27 single women operated upon by Spencer Wells, while the proportion of the married to the single in the general population is eight to one; yet the single present nearly a third as many ovarian tumours as the married, or nearly three times their proper share, were both classes subject equally to ovarian tumours. At sixty-five years and upwards there were 7 married and 6 single women in Spencer Wells's series, while in the general population there are eight married for every unmarried woman. At this period of life, then, a number of single women furnish eight ovarian tumours for every single tumour presented by the same number of married women.

I now turn to another aspect of the question. If pregnancy, as has been maintained, is a cause, and a frequent cause, of ovarian tumour, it may fairly be expected that with each successive pregnancy the liability to ovarian tumour would increase. I find, however, among the cases of ovarian tumour with pregnancy which I have collected, in the first place, that of the 228 cases in which the number of the pregnancy is noted 87, or more than one-third of the total

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were primiparæ. Again, not only do primiparæ form so large a proportion of the total number of cases, but ovarian tumour with pregnancy does not only not occur with greater frequency, but it becomes on the whole rarer with each successive pregnancy, for among the cases there are—

In the second pregnancy	... ...	30	instances only.
,, third ,,	... ...	21	,, ,,
,, fourth ,,	... ...	14	,, ,,
,, fifth ,,	... ...	15	,, ,,
,, sixth ,,	... ...	9	,, ,,
,, seventh ,,	... ...	11	,, ,,
,, eighth ,,	... ...	4	,, ,,
,, ninth ,,	... ...	7	,, ,,
,, tenth ,,	... ...	1	,, ,,
,, eleventh ,,	... ...	2	,, ,,
,, twelfth, fifteenth, and nineteenth each		1	,, ,,
and other multiparæ	... ...	26	,, ,,

This shows almost a steady diminution of ovarian tumour with each successive pregnancy, the reverse of what we should expect were gestation a cause of ovarian growth.

These facts—namely, (1) that the proportion of cases of ovarian tumour in the married to the number of married women in the population is far smaller than the proportion of cases of ovarian tumour in single women to the number of single women in the population or, in other words, that ovarian tumour is proportionately far less frequent in the married than in the single; (2) that a large number of the cases of ovarian tumour with pregnancy occur in primiparæ, and that 25 of the cases were known to be the subjects of the tumour before conception had occurred, and that 57 were subjects of dermoid cysts, thus making a total of 82 in which the tumours were present before gestation commenced; and (3) that ovarian tumour with pregnancy is met with on the whole with less frequency in each successive pregnancy appears to show that pregnancy is not a factor in the causation of these growths.

The next question that demands our notice is, Does pregnancy occurring in the subject of an ovarian tumour favour the growth of the tumour? This must be considered under two separate heads—(1) Does the process of gestation itself give an impulse to the growth of the tumour; and (2) Does the tumour grow more rapidly after labour and during the lying-in period?

[Sir John Williams here discussed the first of these questions at considerable length. His conclusions were as follows:]

There is no uniformity in the conduct of the tumour in different cases. The whole of this evidence and the small number of the cases in which the growth of the tumour was rapid appear to show that pregnancy exercises no influence in accelerating the growth of ovarian tumours. The second part of the question relating to the growth of ovarian tumours in connexion with pregnancy is, What is the effect of delivery and lying-in upon it? Is it to accelerate it? It has been held that delivery, by diminishing the intra-abdominal pressure, relaxing the tension of the abdominal walls, and removing pressure from the tumour gives rise to rapid increase in it. I will not discuss this theory, but simply state that I attach no weight to it, and proceed to lay before you the facts which I have collected bearing on the question, and which to my mind furnish the answer to it. After 69 deliveries the tumour appears not to have grown, and after 32 it increased in size. In one of the 32 cases a sudden increase took place on the fourth day; in another a like increase occurred on the ninth day; 9 of the cases are said to have increased slightly, slowly, or gradually (1 during an attack of peritonitis, and 1 suppurated); 11 increased rapidly, 3 of them with peritonitis, or while undergoing suppuration. The sudden increase in 2 cases, the one on the fourth and the other on the ninth day, is probably due to twisting of the pedicle or hæmorrhage into the cyst, while peritonitis or suppuration was probably the cause in 3 cases. This leaves 8 cases in which there was rapid growth of the tumour after delivery, and 69 in which there was no appreciable growth, and 19 in which there was no unusual growth; that is, a total of 88 cases in which there was no unusual increase, and of 8 in which the tumour grew rapidly. These figures seem to show that the influence of delivery and the puerperal processes is not to accelerate the growth of ovarian tumours. There are some observations in the notes which are interesting in this connexion, because they refer to another kind of change in the ovarian tumour after delivery—a diminution in size instead of an increase. In one case observed by Dr. Milne the patient had three children, and the tumour is said to have diminished in size after each pregnancy. In one case the cyst ruptured during labour, and no trace of it could be found during a subsequent labour. In another the cyst burst some time after the puerperal period, and the abdomen was tapped. No trace of the cyst could be found at the following labour. In another the tumour disappeared, and the patient had two children afterwards. In another the tumour disappeared and could not be found in a subsequent pregnancy. In another the tumour was tapped twice and drained after the second tapping; the cyst suppurated, but gave no further trouble. The patient had living children subsequently. In another the cyst suppurated and discharged pus and hair, and gave no trouble at the next confinement; and in a case recorded by Dr. Robert Lee the tumour decreased considerably in size after delivery, and the administration of liquor potassæ. Of the eight cases the tumour is said to have decreased in size after delivery in two, to have disappeared with or without rupture in four, and to have given no trouble after having undergone suppuration in two. The cysts which disappeared not to refill after rupture may have been, and probably were, cysts of the broad ligament.

I pass on now to consider very shortly the question of the relation of pregnancy to malignant disease of the ovary. Leopold has made the extraordinary and startling suggestion that pregnancy is a cause of cancer of the ovary; and Wernich holds that pregnancy occasions malignant degeneration of ovarian cysts. Leopold bases his suggestion upon two cases—one published by Spiegelberg and one observed by himself. Spiegelberg's case is briefly as follows. The patient, who was thirty-six years old, was pregnant for the second time; she was delivered of twins on March 20; one was dead at birth and the other died in the course of a few hours. The tumour was discovered after the delivery. On March 30 the patient died uræmic, with peritonitis, the result of hæmorrhage into the cyst and rupture of it. Both ovaries were changed into masses of myxo-sarcoma carcinomatosum, no trace of ovarian tissue remaining. Leopold's case regards a patient, thirty-six years of age, pregnant for the third time. She bore her second child in her thirty-fourth year, after which she menstruated regularly until her thirty-fifth year, when menstruation ceased, and in December, 1863, she gave birth to a six months' fœtus. After her delivery the medical man discovered an abdominal tumour, the nature of which was not clear. Puncture proved it not cystic. She died about two months after her confinement. Each ovary was of the size of a man's head and a mass of medullary cancer.

These two cases form a very slight foundation for the theory that pregnancy is a cause of cancer of the ovary. Even if it were known that both ovaries had become the seat of disease in the course of pregnancy, Leopold's theory would be almost like a pyramid standing on its apex. But even this meagre knowledge is not forthcoming, for in both cases the tumour was not discovered until after delivery, and the state of the organs at the time of conception is not known, and the inference that the disease began in the course of, and was caused by, pregnancy is a pure assumption. Indeed, the only conclusion which can be drawn from these two cases is that the ovaries were not entirely cancerous at the time of conception, that a portion of the ovarian tissue was healthy and capable of discharging an ovum.

Wernich's view that pregnancy gives rise to malignant degeneration in previously benign growths is based upon an equally slender foundation—namely, two cases—one observed by himself and one by Kursteiner. The original report of Kursteiner's case I have been unable to obtain, and the extracts given from it by Wernich are of too meagre a character to be of any value. Wernich's case was a woman, twenty years of age, who had suffered from pleurisy for a long time, and was known to have a tumour in the abdomen, the nature and point of origin of which were doubtful. Whether there was any relation between the tumour and the pleurisy is not stated. The tumour, however, gave the woman no trouble, and remained indolent for one year. She conceived and miscarried at the eighth month. Shortly before the miscarriage she complained of violent pain in the tumour. She rapidly lost flesh, and died three weeks after her delivery. No marked growth of the tumour was observed during pregnancy or after delivery. Labour was not hindered by it. At the necropsy the right ovary was found to be a mass of medullary cancer, breaking down in places. No trace of the original structure of the ovary was discovered,

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but in the tumour was found a small cyst having glairy contents with papillary growths on its inner surface. The remarks made respecting Leopold's view and the reasons for them are applicable to Wernich's; but, further, in considering Wernich's view it should be remembered (1) that cancer is occasionally found in cystic tumours of the ovary; and (2) that after the removal of cysts which appear to be of a benign character malignant disease sometimes develops in the stump of the pedicle, and in these two well-known facts are to be found, I think, the explanation of Wernich's case, and not in what I must characterise as a far-fetched theory of a malignant influence exercised by pregnancy. Moreover, cancer of the ovary, apart from pregnancy, is not very uncommon, but I have no means of judging of its frequency except by my own experience, and if I may judge by that, cancer of the ovary with pregnancy does not appear to be proportionally more frequent than cancer of the organs apart from that condition.

[Having shown that pregnancy does not originate ovarian tumours, benign or malignant, that it does not accelerate their growth, and that it does not cause malignant degeneration of benign tumours, Sir John Williams proceeded to describe the effects of gestation, delivery, and the puerperal processes upon these growths, the effects being twisting of the pedicle, rupture and laceration of the tumour and their consequences, hæmorrhage into the cyst, and suppuration. He stated that twisting of the pedicle was said to have occurred in twenty-one instances among the cases collected, or about 6 per cent. In the 375 cases of ovarian tumour with pregnancy he found that rupture of the ovarian cyst occurred 13 times, or 3·5 per cent., during gestation. During labour and after parturition it happened 25 times, or in nearly 10 per cent. of the cases and 8 per cent. of the pregnancies. He continued:]

I have now finished what I have to say respecting the influence of pregnancy upon ovarian tumours, and I have yet to consider the influence of the tumour upon pregnancy, labour, and lying-in. We find that abortion or premature labour occurred spontaneously in 58 out of 461 pregnancies. In 24 of the cases the tumour was cystic and in 5 dermoid, the total of cystic tumours being 221, and of dermoid 71, so that abortion appears to be somewhat more frequent with cystic than with dermoid tumours. Abortion or premature labour occurred in 8 out of 14 cases of cancer, and was induced in 1, while nothing is stated upon the point in 5, so that cancer appears to have a baneful influence on gestation The part played by ovarian tumours in labour depends firstly and largely upon the situation of the tumour, and, secondly, and in a less degree, on its size. When the tumour is placed in the pelvis, even when of comparatively small size, it impedes the passage of the child; on the other hand, if it be situated in the abdomen, it depends mainly upon its size whether it does or does not interfere with the progress of labour. Among the cases I have collected there are 178 (or about 2 out of 5) in which the labour was more or less natural—that is, delivery was effected without artificial help. To realise the difficulties caused by these tumours during delivery we must look to the cases which required artificial help, and to the examination of these I now turn. The means which have been employed to overcome these difficulties are reposition, or raising the tumour from the pelvic into the abdominal cavity, so as to place it out of the way of the descending head. In many cases this could not be accomplished, then tapping was resorted to, forceps, version, craniotomy, and Cæsarean section, or ovariotomy, as circumstances dictated.

[Sir John Williams here gave statistical details of the results of these various procedures. He continued:]

The mortality consequent upon ovarian tumour complicating pregnancy is very great, and is only equalled in midwifery by that occurring in severe outbreaks of puerperal fever.

The mortality after tapping is	...	...	26 per cent.[1]
,, ,, ,, forceps is	...	...	29 ,, ,,
,, ,, ,, version is	...	...	33 ,, ,,
,, ,, ,, craniotomy is	...	...	44 ,, ,,
,, ,, ,, abortion and premature labour is	...	...	17 ,, ,,
,, ,, ,, Cæsarean section is	...	...	90 ,, ,,
,, ,, ,, ovariotomy is	...	...	10 ,, ,,

The great mass of this mortality take place after delivery. Comparatively few cases die during pregnancy when not interfered with. It is clear from the record of deaths that little can be done to diminish the danger by the usual obstetric operations, and it seems to me that our efforts should be directed to the prevention of injury to the ovarian growth and the parts adjacent to it, abdominal and pelvic. At present I see but two ways in which this can be accomplished. One is the removal of the tumour during pregnancy or labour, and the other is the anticipation of labour by the Cæsarean section. Small tumours situated in the abdomen, or tumours situated in the pelvis, which can be raised up into and retained in the abdomen do not appear to suffer much injury during labour, but with this exception I think that all cases should be operated upon. I should have recourse to Cæsarean section only in cases in which the removal of the tumour is found to be impossible, be it from adhesions deep down in the pelvis to the uterus or for other cause. On the other hand, ovariotomy during pregnancy is a tried operation, and it has proved as successful during pregnancy as apart from pregnancy, and it gives a mortality of less than half that from natural labour with ovarian tumour; and no other method of treatment has as yet given, nor does any promise, such good results.

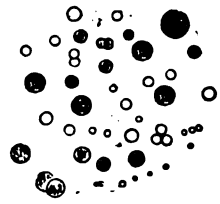
[1] In a large number of the cases operated upon more than one operation was resorted to, such as tapping, forceps, craniotomy, and the same cases appear therefore under each of the operations.

ON THE PATHOGENESIS OF GOUT.[1]

BY DR. C. MORDHORST.

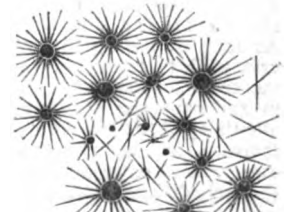
BEFORE proceeding to my actual theme I will refer in a few words to the results of a considerable number of experiments and observations under the microscope, which will shortly be published in the *Zeitschrift für Klinische Medicin*. Whenever uric acid is added to an alkaline fluid the base of the latter combines with the former, producing a uric acid salt (urate). When the solution is over-saturated with the salt it becomes in the first instance precipitated in the form of small globules, which run together and form larger globular masses. On first forming, these globules are so minute that they are invisible even with the highest powers of the microscope. As the drop of fluid on the slide begins to evaporate they soon begin to appear in the microscopic field as barely visible specks. They may attain a variety of sizes and even become fifty, or more, times as large as leucocytes. They may with advantage be called globular urates (Kugelurate). The term "amorphous" is incorrect, as they are invariably distinctly globular in shape (Fig. 1). The quantitative composition of these globular

FIG. 1.



Globular urates, consisting of sodium urate, a 0·6 per cent. solution of soda not saturated with uric acid, evaporated to half its bulk. The large globules were of a pale yellow. The more uric acid these urates contain the darker they become in colour. Enlarged 140 times.

FIG. 2.



Needle urates composed of biurate (acid sodium urate). The sediment from a 1 per cent. solution of soda supersaturated with uric acid, after twenty-four hours. Enlarged 140 times.

urates is very variable. The greater the excess of alkalies, say, sodium, the solution contains, the more base and the less acid enters into the composition of the salt. Properly speaking, a crystalline salt, consisting of two molecules of sodium and one molecule of uric acid, the so-called neutral sodium urate, does not exist. This combination, as well as all others which contain more sodium than uric acid, does not form crystalline salts, but globules, or globular urates, and possesses the property of being decomposed sooner[2] or later

[1] A paper read at the Medical Congress at Wiesbaden in 1896.

[2] I have used the term acid urate of sodium throughout this translation, although the common term is biurate.

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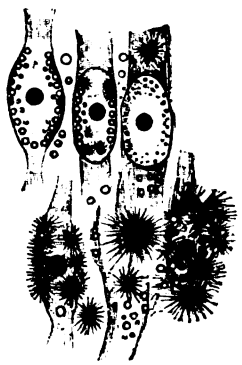
into acid urate of sodium and sodium. In order to have a short term for these urates I have called them "needle urates." The time necessary for the crystallisation of the "globular" forms is longer the more sodium they contain (Fig. 2).

The sole cause for the precipitation of globular urates is the super-saturation of a solution already containing them. Such a super-saturation of a solution saturated with uric acid occurs: (*a*) on adding more uric acid; (*b*) on evaporating some of the water in the solution, either by exposure to air or by boiling, or by the addition of some colloid substance (albumin, starch, or gum), which absorbs some of the water as it dissolves; (*c*) on cooling the solution when it has become saturated, or nearly saturated, with globular urates at a higher temperature, since a warm super-saturated solution can hold more globular urates in complete solution than a cold solution; and (*d*) on diminishing the alkalinity of the solution by the addition of acids or acid, neutral or faintly alkaline salts. This is partly due to their taking up some of the water as they dissolve, as was the case with colloids. The solubility of globular urates is directly proportional to the amount of sodium they contain. The globular urates are always a first stage in the formation of needle urates, and on these latter dissolving the former are a transition stage. The largest amounts of uric acid and needle urates are dissolved in a solution containing between 0·4 and 0·7 per cent. sodium carbonate, sodium bicarbonate, or bisodium phosphate. In the fluids of the body uric acid circulates as a urate in the invisible globular form. After these preliminary remarks I pass on to the more intricate processes leading to the deposition of uric acid.

To begin with, I would remark that sodium urate is only deposited in those organs and tissues which are sparingly or not at all supplied with blood-vessels, and the nutrition of which accordingly takes place only or principally by means of lymphatic vessels or lymph spaces. The connective tissue of muscles, fasciæ, tendons, tendon sheaths, nerve sheaths, ligaments, cartilage, perichondrium, or periosteum are almost exclusively the seat of gouty affections. There must of course be some reason for this. I have already on a previous occasion made the suggestion that the difference in reaction of the fluids of these tissues and of the blood is the only cause producing these results. My recent and numerous experiments have confirmed this belief. Maly has proved that acids filter more rapidly through animal membranes than do alkalies and alkaline salts. That the former diffuse more rapidly than the latter was shown by Hoffmann, Runeberg, Chahrié. Cartilage and connective tissue cells, which lie far removed from blood capillaries, are nourished by processes of filtration, diffusion, and osmosis. This mode of nutrition, however, must of necessity lead to a lessened alkalinity both of the above-mentioned cells and of their intercellular substance. As long as the alkalinity of the blood and the quantity of uric acid in it remain normal there is, even under circumstances otherwise unfavourable, no deposition of sodium urate in the cartilage and connective tissue. But should the alkalinity of the blood diminish and the amount of uric acid increase—as, according to the results of older as well as more recent experiments (Klemperer), is the case in gout—then conditions exist under which a deposition of urates in cartilage and connective tissue can occur. In my opinion the actual process is as follows.

The organ or tissue in question has been rendered very rich in fluids by previous functional activity. Any blood-vessels in the tissue itself or in the immediate neighbourhood are strongly dilated. The lymphatics of the tendons and fasciæ of the muscles, which possess numerous stomata, are likewise distended far beyond their normal state—viz., at rest. The interchange of fluids between the connective tissue cells and the intercellular spaces on the one hand, and the lymph spaces of the tissues and the lymphatic vessels on the other hand, is excessively active, and the difference in their reaction is very slight accordingly. Now if there should be a sudden cessation of this activity in the tissues, and if they are suddenly cooled down by the influence of external cold, then a rapid change takes place in their nutrition. Owing to the irritation due to cold the tissues contract and the blood-vessels and lymphatics do the same. The interchange of fluids is reduced to a minimum; the processes of filtration, diffusion, and osmosis are much slower; the alkalinity of the protoplasm of the cells, of the intercellular substance, and of the synovia of the joints and tendon sheaths decreases. The cooling of the fluids, their loss of water, and their diminished alkalinity all combine to produce a super-saturation with globular urates, and therefore a precipitation of the latter, both in the connective tissue cells themselves, in the intercellular and lymph spaces, and in the synovial fluids. This occurs all the more readily, as, owing to the cooling of the tissue, which up till now had been very full of fluids, the water or less concentrated fluid is forced most rapidly through the cell membranes. The protoplasm of the cells as well as of the intercellular substance contains sodium urate in such quantities that the combined action of the above-mentioned factors leads to their precipitation, first, in the small globular form, possibly even invisible under the microscope. In the cells these accumulate near the cell membrane and enlarge by fusion. But even in the intercellular substance the globular urates accumulate on the outer surface of the cell membranes, or, if the precipitation is copious, are forced towards the lymph spaces. Here they may accumulate to such a degree as to block not only the exits of the lymph spaces, but even the lymphatic vessels, and this, if continuing for some time, may cause obstructive œdema, inadequate nutrition of the tissue with consequent degeneration (Ebstein's necrosis), and finally pain. The subjoined semi-diagrammatic figures are intended to demonstrate this process (Figs. 3, 4, 5, and 6). Now as long as

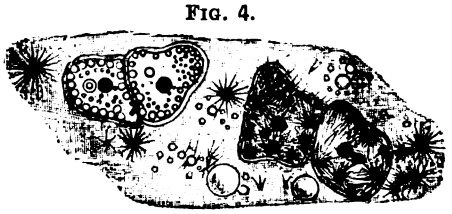
FIG. 3.



Fibro-cartilage. The cells are partly filled with very small globular urates, which in the two lower cells have thrown out needles of biurate (acid sodium urate) in all directions. In the intercellular substance between the longitudinal fibres both globular and needle urates are seen. Early stage; at a later stage the globules completely disappear.

the globular urates retain their forms we have, in my opinion, to deal with "rheumatism," that well-known complaint from which every elderly person probably at some time or other suffers. If within from half an hour to a few hours this "rheumatism," which has arisen from a sudden chilling of the tissues attacked, is properly and efficiently treated—namely, by massage, hot applications, &c.—it will disappear just as rapidly as it appeared. With the

FIG. 4.



Articular cartilage with globular and needle urates in the cells and intercellular substance.

rapidly increased supply of blood to the tissue, warmth, water, and alkaline salts are brought to it. The combined action of these three factors is a solution of the globular urates, which, added to the more rapid circulation of the fluids, in a short time bring the tissue to a normal state.

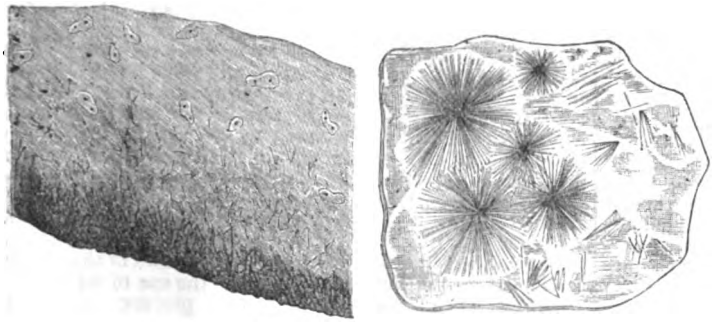
Should the "rheumatism," however, not be treated so rapidly or efficiently, or should the tissue be frequently exposed to such chills, then the globular urates are not completely re-dissolved—a certain amount remains behind in the tissues and produces symptoms of pain on pressure or movement. In those cases of so-called "chronic articular

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rheumatism," where no deposit of acid sodium urate can be demonstrated microscopically after death, the precipitated urates have retained their globular form and have not been recognised as such. Scrapings of the tissues of parts thus affected would no doubt prove the presence of urates far more often if the murexide test were always employed.[3]

Now, why is it that these globular urates do not change into needle urates? In the course of my introductory remarks I referred to the fact that globular urates are converted into needle urates more slowly in proportion as there is more sodium and less uric acid in their composition. My experiments show that even when very poor in acid and very rich in sodium these globular urates may ultimately change into needle urates, often after six or eight weeks, provided they remain in their original fluid. This is not always the

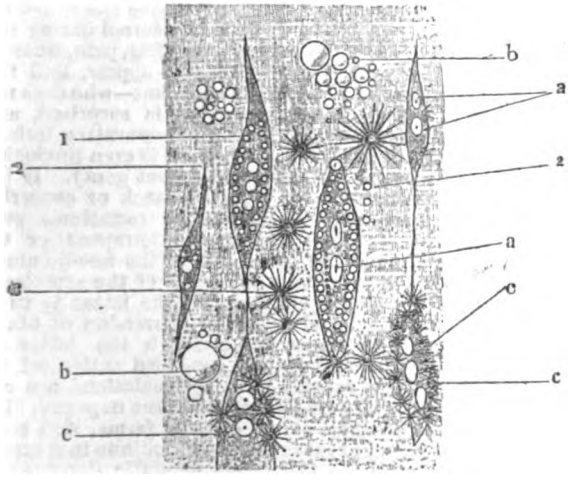
FIG. 5.



Articular cartilage after Garrod, enlarged 220 times. The globular urates have become completely converted into needle urates and stellate groups of needle urates.

case, however, and I only mention the fact without attempting to give any explanation for it. In the living organism the conditions are very different from those existing during experiments outside the body. I take it that in the former, solution and re-formation of globular urates go on side by side, and the globular urates often have no time to change

FIG. 6.



Connective tissue showing deposition of needle urates and globular urates in the cells and intercellular substance. 1, Connective tissue cells with nuclei (a). 2, Intercellular substance; (b) Globular urates; (c) needle urates and stars of needle urates.

into needle crystals. The blood of persons suffering from "chronic rheumatism" is less alkaline than that of a healthy person, as shown by Lepine, but yet is more alkaline than that of a person suffering from well-marked gout. The alkalinity of the blood varies, not only with each individual, but even in the individual it varies according to the time of day; this latter variation is, however, confined within definite limits. Klemperer has quite recently proved that in gouty individuals the alkalinity of the blood is considerably below the normal standard, but here also we find variations. If only slightly below normal we are dealing with gouty patients suffering from so-called "chronic rheumatism." Klemperer's investigations have proved that the quantity of uric acid in the fluids of the body is inversely proportional to the amount of alkaline carbonate they contain. This result is in perfect accord with the results of numerous experiments by F. Walter, F. Chvostek, Kleine, Hartnack, and others, according to whom the protoplasm owes its capacity for taking up oxygen entirely to the presence of alkaline carbonates in its composition.

The more alkaline carbonates a tissue contains the greater is its capacity for taking up and utilising oxygen, and the more active therefore is the oxidation of uric acid. In persons in whom the alkalinity of the blood is only slightly below normal the quantity of uric acid present is only slightly above normal; the globular urates therefore contain relatively little acid in their composition, and so retain their globular form for a long time. Where the alkalinity of the fluids is less, and the quantity of uric acid in the blood greater, the precipitated globular urates contain more uric acid and less sodium, they give up some of this sodium to the surrounding fluids, and themselves become converted into needle urates of acid sodium urate. These are the only deposits of urates which are considered characteristic of gout by most authorities. I am convinced that "chronic gout" arises in the following way. The earliest stage is not distinguishable from chronic rheumatism; the accidental and exciting causes are identical. Whereas, however, in the latter the globular urates contain relatively little uric acid, in gout they contain a large amount. My experience is that globular urates which are rich in uric acid often become converted into needle urates and stars of needle urates within from half an hour to twenty-four hours and even less. Now in chronic gout a similar conversion of globular urates takes place, although under certain circumstances a considerable interval of time may elapse before the process is completed. When completed the acute and spontaneous pains diminish, and the uratic deposits only prove their presence by tenderness felt on pressure or movement. The signs of inflammation, pain, redness, and œdema owe their appearance to the accumulation of, and blocking by, the globular urates in the cells, intercellular substance, lymph lacunæ, and lymphatics. Just as globular urates are a first stage in the development of needle urates, so also the deposition of the former precedes the deposition of the latter; in other words, "rheumatism" often precedes chronic gout.

Let us now investigate more in detail the transformation of globular urates into needle urates and its consequences. I have already mentioned that globular urates tend to be pushed towards the cell membrane of the cells in the cartilage and connective tissue, and here accumulate in number and enlarge in size by fusion. Sooner or later they commence to throw out needles at their periphery, and ultimately form stars of needle urates; these latter pierce the protoplasm and cell membrane, which is also pierced by the needles on its outer surface. The cell membrane and cell become completely destroyed, and in this way necrosis of the tissue commences. As this process of needle formation extends, so the necrosis increases. In this case, therefore, the deposition of globular urates is the primary event and the necrosis is secondary. Von Noorden's "ferments" and Klemperer's "gichtstoff," are accordingly nothing more than globular urates, originally minute, but which have enlarged rapidly, have formed needles in all directions, and so killed the tissues.

It still remains for me to discuss the origin of an acute attack of gout. Before giving my views on this subject I would beg you to picture to your mind the appearances seen under the microscope when a drop of dilute acid is added to some solution of soda saturated with uric acid, which drop has been placed on an uncovered slide. In the centre, which gives an acid reaction, a turbidity soon appears, from which uric acid crystals will have developed in a few minutes. The outer zone gives an alkaline reaction and

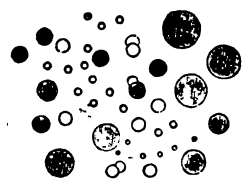
[3] Levison (Copenhagen) examined the metatarso-phalangeal joints of one or both feet, and in some cases other joints also, in forty post-mortem examinations. In twelve cases he was able to prove the presence of uratic deposits by means of the murexide test, although only a few joints were examined.

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contains larger or smaller globular urates. The intermediate zone, giving a neutral or faintly acid reaction, presents long and well-formed crystals often fifty times, or more, larger than white corpuscles. The process in an acute attack of gout I represent to myself as follows: Owing to some incidental circumstance—e.g., a good dinner accompanied by considerable indulgence in wine or beer, or some digestive disturbance—the alkalinity of the blood becomes greatly diminished. Owing to filtration, diffusion, and osmosis the already greatly reduced alkalinity of the tissue fluids becomes further diminished, the fluids are no longer capable of holding the globular urates in solution, and these are accordingly precipitated as minute globules, resembling urates deposited in urine, and their accumulation in large quantities gives rise to those prodromal symptoms so often preceding an acute attack of gout. If the alkalinity of the blood is still further decreased, so that the fluids of the body become either neutral or even faintly acid, then the large crystals above mentioned form and block up the lymphatics of the neighbourhood more or less completely, even if the vessels are of large calibre. The mechanical irritation and the lymphatic obstruction thus produced give rise to severe inflammatory symptoms, œdema, &c. The attack will continue so long as the acidity of the fluids lasts. On renewed increased alkalinity the inflammatory symptoms subside, because the crystals have been again converted into globular urates. Should the alkalinity increase still further the globules become dissolved and the attack has passed off, leaving no sequelæ. If, on the other hand, the alkalinity still remains at a low level the globular urates will persist as such for some time, and finally become converted into needle urates. In this case uratic deposits have formed in the affected tissues. This theory, therefore, also explains the fact that in some cases an acute attack of gout leaves no deposits, whilst in other cases distinct deposits are left.

I still have to mention a phenomenon which until now has never been satisfactorily explained—the exacerbation of gouty symptoms so frequently observed during a course of treatment by baths and the waters here in Wiesbaden. This is a fact so generally recognised that there can be no doubt

FIG. 7.



Globular urates which have developed from needle urates. The preparation (Fig. 2) was washed with water, and two drops of half normal solution of soda (NaHO) were added. In about half an hour, after the fluid had been reduced to about one-half by evaporation, the preparation presented the appearance shown (Fig. 7). The solution of sodium carbonate acts more slowly, but the result is the same. Enlarged 140 times.

as to the correctness of the observation. Both during the bath, and for a short time after, the tenderness on pressure and on movement is lessened. This is almost invariably the case and persists during the whole course of treatment. The use of "Kochbrunnen" baths hardly ever leads to an aggravation of symptoms when these are the result of acute gout or articular rheumatism, the sequelæ of which—viz., swelling and tenderness—may under ordinary circumstances persist for a very long time. A steady and progressive improvement is almost always the rule, relapses and exacerbations occurring only after some error in diet, especially over-indulgence in beer or wine, over exertion, or a sudden chill. Very different indeed is the influence of "Kochbrunnen" baths on persons suffering from chronic gout. Here we find that even after a few baths the symptoms are aggravated, not only in the parts previously affected, but even in parts previously free from pain or which have never been the seat of pain. E. Pfeiffer has had the same experience, but has never attempted an explanation. Such an explanation is, however, by no means difficult after my observations as to the behaviour of globular urates and needle urates as seen under the microscope. As I have already remarked, globular urates form, not only the first stage in the development of needle urates, but also the transition stage in their decomposition and dissolution (Fig. 7).

As already stated, the globular urates retain their globular form both in rheumatism and in chronic rheumatism. Hot baths tend to raise the temperature of the fluids in the tissues, strong alkaline waters, massage, &c., raise their alkalinity, the globular urates take up more of the base and become more soluble. As they dissolve improvement takes place. Attacks of acute articular rheumatism often leave obstinate sequelæ, which, however, gradually disappear under the influence of hot "Kochbrunnen" baths. The great tendency such patients exhibit of developing gouty deposits at a later period is probably due to the nutrition of the affected parts not being quite normal, and the alkalinity of the fluids being somewhat below normal as a result.

In acute gout uric acid crystals have formed during the attack owing to the slightly acid condition of the fluids in the diseased parts. As soon as alkalinity supervenes the bases combine with the uric acid to form globular urates. These may retain their globular form for some time during the continuance of the alkalinity of the fluids, and by accumulating in the lacunæ and lymphatic vessels may give rise to symptoms of inflammation and obstruction such as redness, œdema, &c. The great access of warmth due to the hot baths raises the temperature of the fluids; the large amount of acid salts eliminated by the perspiration and the absorption of alkalies increases the alkalinity of the tissue fluids and a more rapid circulation of the fluids bathing the globular urates occurs. By a further augmentation of these several factors or a long continuance of their action, or a frequent repetition of the same, the globular urates are finally completely dissolved and the last traces of the attack removed. In all the above instances the use of baths and strong alkaline mineral waters, &c., produces a steady improvement, and relapses hardly ever occur.

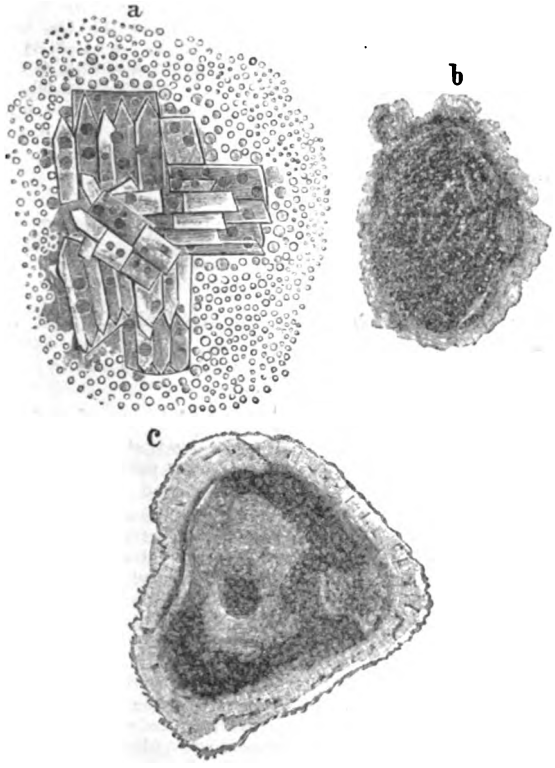
Very different, indeed, are the phenomena observed during the cure of cases where true gouty deposits of acid sodium urate, needle urates (chronic gout), exist. The increase of temperature, alkalinity, and increased circulation of the tissue fluids brought about by hot baths, strong alkaline mineral waters, massage, physical exercise, &c., renders the needle urates capable of combining with more sodium, whereby they become converted into globular urates, which in the early stages of the change are very minute or invisible. By accumulation and fusion they enlarge and may attain a size fifty times larger than a leucocyte. That under these circumstances obstruction of the lacunæ and lymphatic vessels, and hence stasis and its consequences, may be produced, just as occurred during the formation of the deposits, is obvious. Swelling, pain, œdema, and occasionally, though rarely, redness appear, and the patient—and often even the medical attendant—who does not know how to explain these phenomena, is surprised, and thinks that this long-vaunted remedy is aggravating instead of ameliorating his condition; nay, more, is even producing fresh pain in parts so far unaffected (latent gout). If the treatment is persevered with the new attack or exacerbation of symptoms may persist weeks, sometimes even longer. As soon as the treatment is interrupted or the baths only are stopped the dissolution of the needle urates soon ceases and with it the aggravation of the symptoms. The cause of the long continuance of the latter is to be found in the continual and persisting conversion of needle urates into globular forms, for although the latter are gradually being dissolved by the combined action of the above-mentioned factors, still fresh accumulations are constantly occurring in the neighbourhood of the deposits. This formation and destruction of the globular forms, and hence also the inflammatory phenomena, would continue in a greater or less degree until the last traces of uratic deposit have disappeared, provided the treatment is steadily persevered with. As this, however, would entail a course of treatment extending in some cases over several months, or even longer, a continuous course of treatment is not usually insisted on. As a rule the baths are suspended after from four to six weeks, and any deposits of needle urates still remaining are left to be attacked in the following year. In almost all cases a decided improvement takes place sooner or later after the bath treatment, and this is maintained so long as the patient is not exposed to fresh sources of danger. Frequently, however, even the most painstaking attention to a severe regimen is of no avail, fresh attacks constantly occurring as soon as the alkalinity of the tissue fluids falls to far below the normal standard and accidental exciting causes, such as a chill, unaccustomed indulgence in spirituous liquors, dinners, &c., come into play. In order to avoid any such

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fresh attacks as far as possible it is advisable, as a prophylactic measure, to administer so much of some powerful alkaline muriated water from day to day as will suffice to keep the urine faintly acid, and occasionally even neutral or faintly alkaline in reaction.

Naturally the greater the amount of alkali introduced into the blood the more readily is the alkalinity of the fluids maintained at a level as nearly as possible approaching the normal. As, however, the introduction of large quantities of soda into the organism leads to the abstraction of an abnormal amount of salt (NaCl) from the latter (Stadelmann, Kleine, and Hartnack, and many others), it is necessary to add more salt to the ingesta. Finally, since the experience of English authorities (Duckworth, Thin, Moore, &c.) shows that lime salts hinder the elimination of uric acid, it follows that the patient should be ordered a mineral water which contains as much soda and salt and as little lime salts as possible. Of all known mineral waters, the Wiesbaden water satisfies these requirements most completely, as is clearly

FIG. 8.



a, Shows a mass of uric acid crystals from the urine of a man who suffers from renal calculus. After he had taken two bottles of Wiesbaden water daily for several days his urine became strongly alkaline and free from crystals. The mass of crystals was placed on a hollow slide and a few drops of his alkaline urine were added. The preparation was then placed under a glass bell to prevent evaporation. After two hours the mass was seen to be surrounded by innumerable large and small globular urates. *b*, Shows the same preparation two hours later, after the globular urates have been washed away. *c*, Fourteen hours later. The remaining mass consisted of a soft gelatinous mass. Enlarged 140 times.

shown by a comparison of the analysis of different mineral waters. These show, for instance, that the Wiesbaden water contains twice as much bicarbonate of soda, fourteen times as much salt, and one-fifth of the amount of lime salts contained in Vichy water.

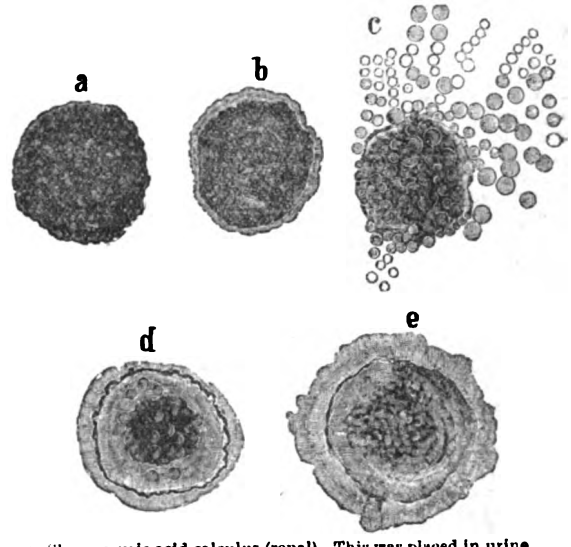
It has often been my experience that an acute attack of gout was completely cut short by drinking daily from three to five bottles of this water; almost invariably such an attack is markedly shortened, a fact easily explained by the mode of origin of the attack (*vide supra*). In order to banish fresh attacks both of acute and chronic gout one bottle of this water daily will usually suffice in the majority of cases.

After the reading of the above paper a discussion ensued on the uric acid diathesis, in the course of which were made the following

Remarks by Dr. MORDHORST.—With regard to the remarks made by Dr. von Noorden, I am glad to find that he also considers an over-abundant meat diet deleterious in cases of uric acid diathesis. In this he agrees with the extensive experience of English authorities on the subject. This cannot, however, be said of him when he recommends calcium carbonate in the treatment of urinary concretions. Of the numerous English authors who warn us against using carbonate of lime and calcareous mineral waters extensively in such cases I will only mention the following. Duckworth, whose well-known treatise on Gout has recently been translated into German, says on page 342 of the English edition verbatim: "Waters much impregnated with lime or iron are distinctly unsuitable or apt to provoke gout. Sulphate of lime in water is especially noxious to the gouty. Both calcic and ferruginous salts tend to check elimination of uric acid and so are badly borne by the gouty." Thin[4] is of opinion that indulgence in waters containing large quantities of lime salts tends to predispose to gout.

Moore[5] points out that cerebral apoplexy, calcification of the aortic valves, and arterio-sclerosis are often the cause of sudden death in gouty patients. German authorities also participate in these views. Posner says[6]: "I have arrived at the definite conclusion, not experimentally, but by clinical

FIG. 9.



a, Shows a uric acid calculus (renal). This was placed in urine which had become alkaline after the use of Wiesbaden water. *b*, Shows it one hour later. *c*, After two hours more. *d*, The same, the globular urates having been washed away. *e*, The same eight hours later. What remains of the stone is a soft transparent mass impregnated with pigment. Enlarged 140 times.

experience, that waters which are rich in soda are borne much better than those rich in lime salts." E. Pfeiffer advises that in cases where the Fachingen water, which is rich in lime salts, is not well borne a less calcareous water should be recommended. Liebreich gives preference to those waters which contain the smallest proportion of lime salts. My own experience fully bears out the observation that waters which are rich in lime salts very often give rise to digestive disturbances, especially loss of appetite and constipation. Finally, when I consider that the urine may often be neutral, nay, even alkaline, at certain periods of the day—for instance, after meals—and that it becomes so all the more readily the greater the dose of calcium carbonate taken, I fail to see the advantage of treating uric acid concretions with carbonate of lime; for as soon as the neutral or alkaline tide in the urine sets in a turbidity due to phosphates and carbonates of lime is observed. What may be the consequences of this is shown by the analyses of 200

[4] Brit. Med. Jour., vol. ii., 1891, p. 31.
[5] St. Bartholomew's Hospital Reports, vol. xxiv., 1888, p. 217.
[6] Zur Therapie des Harnsäureüberschusses (Berliner Klinische Wochenschrift).

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vesical calculi made by Kakula.[7] Nearly all these calculi consisted in the main of phosphates and carbonates of lime.

Finally, I would make a few remarks on Dr. Rosenfeld's fundamental rules for the treatment of uric acid diathesis. Rüdel was the first to draw attention to the solvent action on free uric acid possessed by solutions of urea. His statement, however, that of all the constituents of urine none possess this power, both in watery solutions and in urine, to such a degree as urea does is a direct contradiction to both Fürst's observations and my own. Fürst found that 100 c.cm. of a 0·5 per cent. solution of sodium bicarbonate dissolved 0·16 gramme; I found that 100 c.cm. of a 0·7 per cent. solution dissolved 0·2 gramme of uric acid. That is far more than a solution of urea will dissolve. A 0·7 per cent. solution of neutral phosphate or carbonate of soda has an even greater solvent action. Such being the case, there can be no advantage in administering urea internally with a view to increasing the solving power of the urine on uric acid when this object may be attained with far more certainty by means of sodium bicarbonate. Another ground for the use of urea, which, so far as I know, I was the first[8] to point out, is the property of urea of retarding or preventing the conversion of the urates in the urine into uric acid and sodium. In every solution of urates which does not contain urea the urates are immediately decomposed as soon as the solution is rendered acid by the addition of some acid. If urea be added to the original alkaline solution this decomposition is retarded and partly prevented, even though the solution be rendered decidedly acid. This would, I presume, be a reason for recommending urea to counteract the formation of uric acid concretions; the idea is, after all, rational. Nevertheless, I have not been able nor can I now bring myself to re-introduce into the organism one of its waste products. Rosenfeld has the merit of being the first to introduce urea and ammonium salts as a treatment for concretion. This merit would be all the greater should it be proved after several years' experience that these substances are in no way harmful to the organism and do not accelerate the appearance of uræmic symptoms so common in these cases, where the kidneys are mostly the seat of secondary inflammation. In his papers on the behaviour of ammonia salts in the animal organism Professor Rumpf has reported that ammonium carbonate when retained in the body for any length of time may lead to symptoms of poisoning. But why should we resort to substances whose harmlessness cannot but be doubtful when the normal urine points out to us what direction we should take in order to prevent the formation of concretions? Normal urine is by far less acid than that of people suffering from concretions The morning urine and that passed during digestion may be neutral, nay, even alkaline, provided meat has not entered too largely into the diet. It is the excess of bisodium phosphate over the monosodium phosphate in the urine which renders it neutral or alkaline. If sufficient quantities of sodium bicarbonate are administered we have it in our power to render even the most acid urine alkaline. Why do we not do so then? Because as soon as the urine becomes alkaline there is a precipitation of phosphate and carbonate of lime which may be deposited on any concretion already existing in the kidneys, renal pelvis, or bladder, and so may assist a rapid increase in their size. This can surely be the sole reason why von Noorden does not consider a long-continued alkalisation of the urine advisable. No other reasons can be brought forward. Several pupils of Stadelmann took daily doses of from 20 to 30 grammes (from 5 to 7½ drachms) of bicarbonate of soda or acetate for six weeks or longer. During the whole of this period the urine was alkaline, but no ill-effects were observed. Diarrhœa occurred only after very large doses, but ceased the moment the dose was reduced. The examination of the urine showed an excessive elimination of sodium chloride, proving that too much of this salt was being removed from the organism. This latter result was also obtained by Kleine[9] and Hartnack in their experiments, and they tried to explain it by the combination of the free hydrochloric acid in the stomach with the sodium. When it is desirable to administer large doses of bicarbonate of soda it is necessary to combine with them considerable doses of sodium chloride. Sodium chloride, like other neutral salts, has, in addition, the property of retarding the precipitation of uric acid crystals, a property which cannot be underrated in the treatment of uric acid concretions, as was first pointed out by Sir William Roberts. Large quantities of water tend to remove a great deal of acidity from the tissues, and also reduce the acidity of the urine; it is, therefore, well to recommend some mineral water which contains as much sodium bicarbonate, sodium chloride, and other neutral salts as possible. If, in addition, it contains only small traces of lime salts, and if no other beverage containing lime salts is taken at the same time, the urine thus made alkaline by copious use of such a water will, as a rule,[10] contain no deposit of phosphates. This, at least, is found to be so after using the Wiesbaden water. Other mineral waters, such as those of Fachingen, Bilin, Vichy, and Vals, do not possess this desirable advantage; the former contain too little sodium bicarbonate, all contain too little sodium chloride and other neutral salts, and far too much lime salts. As soon as one succeeds in rendering a slightly acid urine alkaline, or even only neutral, by taking large quantities of these waters, an immediate precipitation of the much dreaded phosphates occurs, whereas, as before mentioned, a copious use of Wiesbaden water produces absolutely no sediment.

Wiesbaden.

[7] Ueber Lithiasis der Harnblase in Böhmen (On Lithiasis of the Bladder in Bohemia). Aus der Dr. K. K. Böhmischen Chirurgischen Klinik des Herrn Professor Dr. K. Meydl in Prag. Wien: Verlag von Jos. Safar, 1894.

[8] Ueber die Bedingungen für die Entstehung Harnsauerer Sedimente (On the Conditions leading to Sediments containing Uric Acid): Münchener Medicinische Wochenschrift, No. 11, 1896.

[9] Ueber die Beeinflussung der Stoffwechselwirkungen des Chloralhydrats durch Kohlensaueres Natrium (On the Influence of Carbonate of Soda on the Metabolic Changes produced by Chloral Hydrate). Inaugural Dissertation, Halle-am-Saale, 1895.

[10] In young people, however, and in people who have little physical exercise or suffer from constipation, one not unfrequently finds some turbidity due to lime salts in the alkaline urine.

RESILIENT STRICTURE OF THE URETHRA AND ITS TREATMENT.

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STRICTURE of the urethra is one of those ailments for which many methods of treatment have been suggested. Some of these are specially applicable for certain varieties—for example, in slight and early cases gradual dilatation is usually adopted; in cartilaginous stricture with fistulæ, external urethrotomy, and in cicatricial stricture near the meatus internal urethrotomy, while very frequently social reasons on the part of the patient and individual preference on the part of the surgeon determine the choice rather than the certainty that one method will give better results than another. In most cases whatever method be ultimately decided on one can confidently anticipate a considerable amount of relief from the distressing symptoms; but there are always certain varieties which are liable to lead to disappointment, and of all these, resilient stricture is perhaps the most annoying to both surgeon and patient. This form frequently comes on in comparatively young men, is very irritable, and associated with spasm, and although of small dimensions—forming, indeed, a mere ring round the urethra—often leads to complete retention, and presents considerable difficulties to the introduction of even the smallest instrument. When, however, an instrument has once been passed it is surprising with what ease larger instruments, even up to a No. 12 or a No. 18, may be introduced, and the patient goes away charmed with the speedy relief of all his discomforts. Unfortunately, in almost every case the result is the same—re-contraction takes place, and the patient returns shortly in the same state as before, whatever method of treatment may have been adopted.

The only two methods which in my experience have attained somewhat better results are those of Holt and Maisonneuve. These might be described as rough but effectual, and I was thus led to consider the special features of this form of stricture and wherein lay the difficulties of its treatment. Now, what strikes one most is the ease of dilatation and the rapidity of re-contraction, and in these respects it may be said to resemble very closely an india-rubber ring. One knows how easily such a ring can be dilated up to any size short of rupture, but how at once, on the removal of the dilating instrument, it returns to its

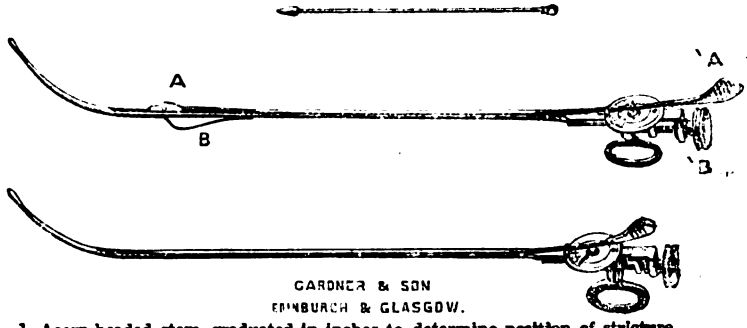
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original dimensions; by analogy, therefore, gradual dilatation is evidently inapplicable to the treatment of this variety of stricture, but, on the other hand, if by any means one can divide such a ring it at once ceases to act. So long, therefore, as it remains whole it will contract concentrically; but divide it and any contractile power it possesses will rather tend to draw the cut ends apart, and so long as it remains severed it can never act as a constricting agent. Turning again to the resilient stricture, one has to consider what is the best method of severing the constricting band. Two methods at once suggest themselves. While gradual dilatation is useless, sudden dilation up to, say, No. 18, English scale, will tend to rupture the band, and of this method Holt's is the best example, not employed as usually recommended, by passing one dilator, followed by another of a larger size, but by dilating suddenly by means of a large dilator. This, though effective for the time being, is rough surgery, and does away with what Holt described as an essential feature of his method—namely, that the mucous membrane should remain intact, the submucous layer in which is situated the stricture being alone affected. If employed as here suggested the mucous membrane is sure to be torn, and one knows that a lacerated wound does not heal kindly, causing as it does a large amount of cicatricial tissue to form, which will reproduce the stricture. This being unsatisfactory the next method is internal urethrotomy, but before considering how this can best be performed let us return to the idea of the indiarubber ring and see how cutting acts upon it. Take a sharp knife and attempt to divide it, and you will be surprised to find how difficult this is to accomplish so long as the ring is unstretched; put it on the stretch, however, and a mere touch with a sharp edge will cause it to fly asunder. It is evident, therefore, that in order to perform internal urethrotomy satisfactorily, stretching the stricture is an indispensable preliminary; any instrument with merely a small concealed knife, however sharp, will not be sufficient.

Now what are the various forms of apparatus at present available? These may be broadly divided into those which cut from before backwards and those from behind forwards, and for accuracy and precision most surgeons will admit that the latter are preferable. It is always easy to make out the anterior end of a stricture, and by means of an acorn-headed stem or by other methods one can generally determine its posterior limit and be thus informed as to its exact position, size, and dimensions; one can therefore be much more accurate and limited in a cutting operation in the latter case than in the former. The disadvantage, however, of nearly all the instruments as yet invented for cutting from behind forwards is that from their size they are unsuited for any except moderately-sized strictures, such as will admit a No. 4 to No. 6 bougie, and that they do not introduce the principle of stretching as well as cutting. There are exceptions to this rule, Otis' urethrotome being excellent, but only for large-sized strictures, and Heron Watson's, on the principle of a Syme's staff, which from the employment of a large knife has the disadvantage of making it difficult to regulate the depth of the incision. It was evident, therefore, that what was required was an instrument which could penetrate the smallest strictures, would introduce the principle of stretching so that the least touch of the knife would thoroughly divide the constriction, while at the same time the cutting edge should be as limited as possible.

Of all the instruments with which a practised hand is likely to be successful in penetrating a tight stricture, none in my experience surpasses Heron Watson's graduated steel probe-pointed bougies and catheters, and I therefore took one of these as the ideal from which my instrument was to be evolved. My first idea was to modify Heron Watson's urethrotome, for undoubtedly the shoulder, as in Syme's staff, is useful in determining the exact site of the stricture, but I then thought that in cases of double stricture the simpler probe-pointed instrument would be more easily introduced, and there is really no difficulty in localising the position of a constriction. The instrument I finally decided on may be briefly described as follows. It is of steel, probe-pointed, and gradually increasing in size up to No. 5, the curve being that of an ordinary bougie; the under side is hollow, but with a slit of about two inches in length, this opening commencing just where the curve joins the straight portion. In this tube is a wire B, flattened like a watch-spring, opposite the slit, and fastened to the instrument at its point by means of a hinge. This can be projected to any desired extent in the form of a loop through the slit, by means of a screw in the handle 'B. On the upper surface is a groove, which becomes deeper just past the slit, and holds a small concealed probe-edged knife similar to that employed by Otis or Maisonneuve A. This can be protruded by pulling on the wire to which it is attached, which runs in the groove 'A. The straight part of the instrument is graduated in inches commencing at the near end of the slit, so that one can be sure that both the cutting and stretching apparatus are behind the stricture. The accompanying drawing, however, will better explain the mechanism of the instrument than any detailed description.

The method of application is as follows. The patient having been prepared for operation by rest in bed, dieting, and the administration of salol, a few drops of castor oil medicated with 5 per cent. of eucalyptus oil and 10 per cent. of cocaine are to be injected so as to render the urethra insensitive and obviate the necessity for a general anæsthetic. The exact position of the stricture having been ascertained, the urethrotome is to be introduced through the stricture so that the mechanism is behind it in the dilated portion of the urethra, the graduated scale on the stem enabling one to do this with accuracy. Then by means of the screw in the handle one projects the dilating loop to any desired extent. This from its shape can now, by slowly withdrawing the instrument, be made to stretch the stricture to its fullest extent, and on projecting the knife the slightest touch of the cutting edge is sufficient to thoroughly divide the stricture, and one is surprised to find how the instrument at once becomes loose in the urethra; the knife being now replaced in its groove, the instrument is withdrawn with the loop still projecting, so that any other constriction can be at once detected and divided. The operation is practically painless, the bleeding



1. Acorn-headed stem, graduated in inches to determine position of stricture. 2. Urethrotome as in use—(A) Probe-edged knife exposed by traction on handle 'A; (B) watch-spring loop, projected by screw at 'B (extent of projection shown at handle). 3. Urethrotome with mechanism concealed, as when introduced. Graduated in inches on shaft or near side of mechanism so as to be certain of being beyond the stricture. (The numbers are counted from above downwards.)

insignificant, and without difficulty graduated bougies of the full stretched capacity of the urethra, generally up to No. 18 or No. 20, can be at once introduced. The further treatment of the case can be carried out according to the individual views of the operator. As a general rule I prefer to tie in a large sized gum elastic catheter for three or four days, but I have also passed a catheter at regular intervals, and even allowed the patient to pass urine as required, with only in one instance urethral fever supervening.

The results of this method of treatment have been eminently satisfactory. I usually pass a large instrument within a fortnight of the operation and again after six weeks, as I am sure that in such cases the frequent passage of instruments only tends to set up irritation. In favourable cases I have been able to pass a No. 15 six months after the operation, no instrument except on the occasions I have already mentioned having been passed in the interval.

In this connexion there is one point in the treatment of stricture which I do not think has been sufficiently emphasised, and that is that whatever be the form we have to deal with or the method employed it is necessary to dilate the constriction up to the full stretched capacity of the urethra.

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In any case the stricture is sure to quickly re-contract two or three sizes below its dilatation, so that if one is content to stop at No. 12, which may be taken as the usual unstretched capacity of the urethra, a rapid re-contraction takes place down to No. 9; but as No. 9 is below the normal capacity, force is required to expel the urine, posterior dilatation and irritation at the seat of stricture follow, and further constriction occurs; while if one dilates the urethra, say, up to No. 18, the rapid re-contraction narrows the lumen only to No. 15, and the urethra thus remains undilated and unirritated by the passage of urine, and further contraction is slow and very gradual.

Were I to have another instrument constructed there are various points in regard to which I think improvements might be made. First, I think it worthy of consideration whether a shoulder, as in Syme's staff, might not be an advantage, so as to rapidly indicate the position of the stricture; this, of course, would be placed at the proximal end of the dilating mechanism. Secondly, it might be advisable to reverse the positions of the dilator and knife, as it seems to be generally considered preferable to cut on the floor of the urethra rather than on the roof. Thirdly, the dilating mechanism is capable of improvement. It would be better if it was fixed, say, by parallel bars, as in a resistant stricture it gives somewhat, and then does not put the part as fully on the stretch as might be desired. And, lastly, although the probe on the edge of the knife is theoretically perfect, I think I have got better results with a knife without any blunt edge, its small size especially, when part of the cutting edge is occupied by the probe, resulting in a firm stricture not being thoroughly divided by the first attempt and requiring re-application.

I have now employed this instrument in about twenty cases of strictures in all parts of the urethra without any complication (except in one case, when slight shivering followed the first passage of urine), and with uniformly excellent results. I can, therefore, with the utmost confidence recommend it to the attention of the profession.

Edinburgh.

ON THE KNEE-JERKS IN DIABETES MELLITUS.

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IT has been known for many years that the knee-jerks may disappear in diabetes mellitus.[1] In a paper published in 1892 I recorded the condition of the knee-jerks in fifty cases of diabetes mellitus; in one-half of the cases both the knee-jerks were absent.[2] I pointed out that previous statistics had varied considerably and that much difference of opinion existed respecting the prognostic value of this sign. Thus Bouchard found the knee-jerks absent in 36·9 per cent. of his cases, Auerbach[3] in from 35 to 40 per cent., Maschka[4] in 30·6 per cent., and Eichhorst[5] in 20·9 per cent. Soon afterwards Dr. Karl Grube, of Neuenahr, recorded[6] the results of the examination of the knee-jerks in a series of cases of diabetes; and an abstract of his paper appeared in THE LANCET.[7] Grube pointed out that in his cases (131 in number) the knee-jerks were absent in 7·6 per cent. only. In a second paper[8] Grube adds other cases, and states that in the combined series the knee-jerks were absent in 13·5 per cent.

The great difference between 7·6 per cent. (Grube) and my own results, 50 per cent., caused me to examine carefully the condition of the knee-jerks in a second series of cases in order to find out, if possible, the reason for this remarkable discrepancy in statistics. My results in the second series of 50 cases were, however, practically the same—the knee-jerks were both absent in 24, both were present in 23, and one was absent and one present in 3 cases. I may point out that the cases have been most carefully examined. In taking the reflexes the skin over the patellar ligament has been well exposed and the ligament struck directly, no clothing intervening. If no knee-jerk has been obtained in the ordinary way then Jendrassik's and Buzzard's methods have always been employed before the knee-jerks have been recorded as absent. (The patient is seated on a chair with his feet well in contact with the floor, and the knees bent at an angle just a little more than a right angle. He is made to look upwards, to link his fingers together and to pull tightly. The observer places one hand on the rectus femoris muscle and strikes the patellar ligament with a percussion hammer or stethoscope. If the slightest knee-jerk be present, a contraction of the rectus muscle will be felt.)[9] In many cases the knee-jerks appeared to be absent when an examination was made in the ordinary manner, but by the above method they were just obtained; and these cases, however feeble the reflexes, were classed amongst those in which the knee-jerks were present. Most of the cases examined were in-patients at the Manchester Royal Infirmary; they were examined repeatedly, often for weeks or months, and were then under the most favourable conditions for examination. Hence I feel justified in believing that my figures represent fairly accurately the condition of the knee-jerks amongst hospital patients who suffer from diabetes mellitus in Manchester. The following are my results in 100 cases:—Both knee-jerks were lost in 49; one knee-jerk was present and one absent in 6; and both knee-jerks were present in 45; total, 100. One of the cases in which the knee-jerks were present came under observation for a second time after an interval of eighteen months, and both knee-jerks were then absent. If this be added to the 49 cases, we have then the knee-jerks absent in 50 per cent. of the cases.

As above stated, Grube found the knee-jerks absent in only 7·6 per cent. of his first series of cases. What is the cause of this remarkable difference in statistics? I know Dr. Karl Grube to be such a careful and reliable observer that I can place the greatest confidence in his observations and, of course, am convinced that his statistics are correct with respect to the cases which he has examined. But I feel justified in believing my own statistics to be also accurate. The difference in results is interesting, and I believe the following to be the explanation. The 100 cases on which I have based my statistics have been almost all hospital patients in Manchester. They have been suffering mostly from a very severe form of the disease, generally with marked wasting. In a large proportion of cases the disease has been in a very advanced condition, and often the observations have been continued practically up to the last. (In 26 out of the 100 cases up to the last few days, and in a large number of cases up to the last few weeks of life.) The majority of the patients have been poor, hard-working people, and amongst the 100 cases there were very few examples of the mild form of the disease, which is met with in stout or gouty old people. As regards age, 81 of the 100 cases were under the age of fifty years. On the other hand, Dr. Karl Grube states[10] that the majority of his patients were over the age of fifty years, and it is well known that the severity of the disease is much less in patients over that age. Then, again, Dr. Grube is engaged in private consulting practice at Neuenahr—a small town in West Germany, much frequented by diabetic patients on account of its alkaline mineral waters, which are regarded as being of great value in diabetes, especially in the diabetes of gouty persons. Also his patients have probably been in a better social position and have lived under more favourable conditions of life than the hospital patients on whom my observations were made. Probably a large proportion of his cases would not be in the very last stage of the disease, otherwise they would not have been allowed to travel to Neuenahr. These I believe to be the causes of the difference of our results. I think it is a point of some interest that the knee-jerks should be absent so much more frequently amongst diabetic hospital patients, who suffer, as a rule, from the disease in its severest form. Eichhorst[11] has previously drawn attention to a difference between his hospital and private patients, the knee-jerks being absent in 42·9 per cent. of the former and 16·7 per cent. of the latter; but his observations were based on 36 private cases and only 7 hospital patients.

[1] This was first pointed out by Bouchard, Le Progrès Médical, No. 41 1884.
[2] Medical Chronicle, November, 1892. This article was afterwards included in the book on "Peripheral Neuritis," by Dr. J. Ross and Dr. J. S. Bury.
[3] Deutsches Archiv für Klinische Medicin, 1887, Band xli., p. 484.
[4] Wiener Medicinische Presse, No. 3, 1885.
[5] Virchow's Archiv, Band cxxvii., p. 1.
[6] Neurologisches Centralblatt, No. 22, 1893.
[7] THE LANCET, March 17th, 1894, p. 689.
[8] Deutsche Medicinische Wochenschrift, June 6th, 1895.
[9] Buzzard, THE LANCET, Jan. 28th, 1888.
[10] Deutsche Medicinische Wochenschrift, June 6th, 1895.
[11] Loc. cit., p. 1.

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In the earliest stage of diabetes, even in its most severe form, I believe the knee-jerks would be found present as a rule; but in these cases they are very often lost later. I have frequently observed that in those severe cases in which the knee-jerks have been present when first examined, they have finally disappeared, if the cases have been under observation for a long period. Thus in the 100 cases which I have examined the knee-jerks, as above stated, were lost in 50 per cent., but in many cases I was not able to continue my observations up to the last. In 26 cases, however, in which I examined the knee-jerks up to the last day or last few days of life, I found they were both absent in 19 (= 73 per cent.), and present in 7; but in 4 out of these 7 cases they were exceedingly feeble. In the majority of cases I have found the knee-jerks to be absent during diabetic coma. Thus in 21 cases of diabetic coma which have come under my observation in Manchester the knee-jerks were absent in 18, but in 3 cases they were present (in 1 case half-an-hour before death, in another three hours before death, and in the third case at the commencement of coma). Generally the knee-jerks were absent for a long period before the onset of coma. In one case, however, they were present the day before the commencement of coma, but disappeared when the early symptoms of diabetic coma were observed. The following table (of 100 cases) shows that the knee-jerks are lost in a much greater proportion of cases under the age of thirty years than in cases over thirty years.

*Table Shewing the Relation between the Presence or Absence of Knee-jerk and the Age at which Diabetes occurs.**

Between the ages of	Knee-jerks absent.	Knee-jerks present.	Remarks.
10 and 20 years ...	13	3	Under the age of 25 knee-jerks were lost in 81 per cent.
20 and 25 years ...	9	2	
25 and 30 years ...	8	4	—
Totals	30	9	Under the age of 30 knee-jerks were lost in 76·9 per cent.
30 and 40 years ...	8	10	—
40 and 50 years ...	5	14	—
50 and 60 years ...	9	4	—
Over 60 years ...	3	8	—
Totals	25	36	Over the age of 30 knee-jerks were absent in 40·9 per cent.

* This table is based on another series of 100 cases.

As regards the cause of the loss of knee-jerks in diabetes, the frequent association of pain, numbness, muscular tenderness, and cramps points to an early peripheral neuritis;[12] and a few cases have been recorded in which well-marked typical motor and sensory symptoms of peripheral neuritis have been present;[13] also in a few cases examined pathologically parenchymatous neuritis of the peripheral nerves (branches of the anterior crural) has been found.[14] But frequently when the knee-jerks are absent there are no other indications of slight peripheral neuritis, and the peripheral nerves may be normal on pathological examination. I have examined the small peripheral nerves in three cases of diabetes mellitus in which the knee-jerks were absent—in two cases the branches of the anterior crural in the thigh, in the third case branches of the anterior tibial. In all three cases the nerve fibres appeared normal. I have found slight changes in the posterior columns of the spinal cord in two cases of diabetes.[15] Similar changes have also been recorded by Sandmeyer,[16] Leyden,[17] and Minor.[18] In one of these two cases the knee-jerks were absent, the peripheral nerves examined (branches of the anterior crural) were normal, but changes were found in the posterior columns extending down to the upper lumbar region. In other cases I have found the spinal cord normal, and many cases have also been recorded in which the knee-jerks have been absent, and yet the cord has been normal on pathological examination. Nonne has reported a case of diabetes complicated with progressive muscular atrophy.[19] Pathological examination revealed chronic anterior poliomyelitis. The nerve cells and fibres of the anterior horns of grey matter were markedly degenerated at all parts of the cord: at the latter stage of disease the knee-jerks were absent. In one case in which the knee-jerks were absent during life, I found both the smallest peripheral nerves (branches of anterior crural) and the spinal cord normal on pathological examination, and others have had similar results.[20]

The changes which have been found in the cases just mentioned—i.e., changes either in the spinal cord or peripheral nerves—have been sufficient to explain the loss of knee-jerks in these cases. But in other cases, in which both cord and small peripheral nerve present no recognisable changes histologically (and probably these are more numerous than the former), some other explanation is needed. Either changes (not yet described) are present in the most minute nerve fibres and motor end-plates or the loss of the knee-jerk is due to some functional change in the spinal cord, peripheral nerves, or muscles. Marinesco[21] has recently recorded a case of diabetes in which both knee-jerks were absent, but after an attack of hemiplegia the knee-jerk returned on the paralysed side, the case being analogous to that of tabes reported by Dr. Hughlings Jackson and Dr. Taylor, in which, after an attack of hemiplegia, the knee-jerk returned on the paralysed side.

Conclusions.—1. In Manchester, amongst hospital patients suffering from diabetes mellitus, the knee-jerks are lost in from 49 to 50 per cent. of the cases. These patients mostly suffer from a severe form of the disease; 81 per cent. are under the age of fifty years; frequently there is great emaciation, and the cases are often at an advanced stage. 2. In private practice, amongst patients who live under more favourable conditions, and in the milder forms of the disease occurring in gouty or well-nourished people over the age of fifty years, I believe the proportion of cases in which the knee-jerks are absent will be much less (knee-jerks were absent in 16·7 per cent. of private patients—Eichhorst; knee-jerks were absent in only 7·6 per cent.—Grube of Neuenahr—the patients being mostly over fifty years). 3. The knee-jerks when present at an earlier period are frequently lost or diminished later. During the last few days of life the knee-jerks are lost in 73 per cent. of hospital diabetic patients in Manchester. 4. They were lost in eighteen out of twenty-one cases of diabetic coma (86 per cent.). 5. Amongst diabetic hospital patients the knee-jerks are more frequently lost under the age of thirty years than over thirty. 6. Since the course of diabetes mellitus depends on so many circumstances, it is somewhat difficult to estimate the exact prognostic value of one symptom, which is occasionally absent even up to the last; but the above facts and considerations seem to show clearly that the loss of knee-jerks is more frequently associated with unfavourable prognostic indications.

Manchester.

CASE OF PYO-SALPINX AND OTHER CASES IN WHICH INJECTION OF SALINE SOLUTION WAS USED.

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CASE 1.—A woman, aged thirty-two years, married, was admitted into the medical wards of the Newcastle Infirmary, under Dr. Philipson. Shortly after her admission the case was diagnosed as pyo-salpinx, and she was transferred to my ward for operation. She was in a very low condition, with high temperature, and nocturnal delirium. The operation

12 Buzzard: THE LANCET, Jan. 28th, 1888.
13 For summary of cases see Medical Chronicle, loc. cit., also Buzzard, Brit. Med. Jour., June 21st, 1890.
14 Pryce: THE LANCET, July 2nd, 1887, and Brain, 1893, p. 416; Eichhorst, loc. cit.
15 Brit. Med. Jour., Feb. 24th, 1894.
16 Sandmeyer: Deutsches Archiv für Klinische Medicin, Band l.
17 Leyden: Society Reports, Wiener Medicinische Wochenschrift, No. 21, 1893, p. 925.
18 Minor: Archives de Neurologie, tome xvii., p. 391.
19 Nonne: Berliner Klinische Wochenschrift, March 9th, 1896.
20 Nonne, quoted by Eichhorst, loc. cit.
21 Marinesco: Comptes Rendus de la Société de Biologie, 1895, p. 691.

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was performed on Feb. 14th, 1896 The abdomen was opened by an incision through the substance of the left rectus muscle. The usual sausage-shaped tumour was found, tense, and freely adherent. The adhesions bled freely, as they were separated, and the cyst burst, discharging very fœtid pus into the sponges placed in the pelvis. After the removal of the left appendage the right was found in the same condition and was removed. It also burst and discharged similar fœtid pus. As contamination of the peritoneum could not be avoided, it was well sluiced with 1 in 10,000 sublimate solution, and carefully cleansed, a glass drainage tube being left after securing all bleeding points. The patient bore the operation well. An hour afterwards three ounces of blood were drawn off through the tube, but after that nothing of consequence came away. Next morning she was apparently going on well, but twenty-four hours after the operation she suddenly collapsed, with an almost imperceptible pulse; the face was pallid and shrunken, and there was every appearance of impending death. Two drachms of an almost colourless fluid were drawn off through the tube, thus proving the absence of internal bleeding. The median basilic vein was promptly opened, and three pints of normal saline solution at a temperature of 112° F. were slowly thrown in by gravitation. The effect was immediate, the pulse became steady and easily counted (150). A quarter of an hour after the injection she vomited some bile-stained fluid; this was followed in half an hour by a well-marked rigor, with sweating. The temperature was 102° F., rising in a short time to 104°. Four hours afterwards the pulse had fallen to 115, the patient had greatly improved, and she said that new life had been put into her. The improvement continued, but her recovery was retarded by the abundant discharge of pus of the same fœtid character as that in the tubes at the operation. The pelvis was repeatedly washed out daily with Condy's fluid, but for some days without effect, when diluted sulphurous acid was tried, yet still without effect; but the fœtor quickly yielded to crystallised iodoform thrown down the tube, which was soon afterwards withdrawn, as the discharge ceased, and recovery went on slowly but without further drawback.

It is worth noting that the loss of blood at the operation was not excessive, and did not continue long afterwards. The collapse on the following day seems to have been due to loss of vaso-motor influence following on the abdominal operation. The patient was, in fact, bleeding to death into the vessels of her own abdominal viscera. The saline injection kept the circulation going until it was able to draw upon the blood temporarily lying in those vessels, and restore it to the general circulation.

The injection of saline solution has been resorted to rather freely at the Newcastle Infirmary, and in most cases with admirable effect. The two following cases are examples taken from several others in my own wards.

CASE 2.—A woman was admitted with a large collection of pus in the knee-joint, following white leg after confinement. The joint was incised in two or three places, washed out, and drained, with relief, but a day or two afterwards she was apparently sinking. After injection she quickly rallied, and for a time improved, but the joint was disorganised and she began to lose ground. Amputation high in the thigh was performed, when she nearly died on the table; but injection of the saline solution, which had been got ready in anticipation, brought her round, and she rapidly recovered.

CASE 3.—A man aged fifty years had his hand caught in machinery and was carried five times round a revolving shaft. He was admitted with fracture of several ribs on the left side, fracture of the sternum, and fracture of nearly every rib on the right side, so that the right side of the chest sank in with each inspiration. There was extensive subcutaneous emphysema on the right side, and the right arm was smashed, so as to require amputation through the humerus. There was extreme pallor and depression, but the pulse was fairly good, so I ventured to amputate; but we had saline solution ready, and before closing the stump forty ounces were poured into the open end of one of the veins, with instant good effect. No bandage or plaster was applied to the chest. A month after the accident he was nearly well, and ultimately recovered perfectly.

I am indebted for the notes of the cases to my late house surgeon, Dr. R. W. Morgan.

Newcastle-on-Tyne.

THE THERAPEUTICAL ASPECTS OF TALKING, SHOUTING, SINGING, LAUGHING, CRYING, SIGHING, AND YAWNING.

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THE respiratory movements have wide-reaching effects. They not only lead to the flow of air to and from the lungs, but they profoundly influence the circulation of the blood and lymph; they also affect the functions of the abdominal and pelvic viscera by rhythmically compressing and dislocating them. Now, these movements are liable to constant modification in the physiological acts of talking, shouting, singing, laughing, crying, sighing, and yawning (as also in the occasional and semi-pathological acts of sneezing, coughing, vomiting, and hiccoughing), and it therefore follows that these acts are more far-reaching in their effects than would at first sight appear, and hence are worthy of our careful study. This will the more readily be granted when it is added that they affect the body, not only by modifying the respiratory movements and thus producing the effects already mentioned, but by involving the expenditure of a considerable amount of neuro-muscular energy, and by inducing definite psychic phenomena which themselves have their physical accompaniments. In brief, any one of these acts—e.g., singing—causes (*a*) a modification in the circulation of blood and lymph; (*b*) an alteration in the functions of the abdominal and pelvic viscera; and further leads to (*c*) a considerable discharge of nervous and muscular energy; and to (*d*) numerous changes (muscular, glandular, and other) throughout the body in consequence of the attendant psychic change.

Seeing, then, how far-reaching are the effects of these several acts, and remembering how large a part they play in normal life, we may safely conclude that they influence the functions of the body beneficially, and that an undue interference with them is injurious. One is apt to forget how strong is the instinct to shout and sing, laugh and cry. It is especially noticeable in the savage and in the child. If these instincts are unduly repressed in the child he is sure to suffer. Crying should certainly be restrained within limits, but there can be no doubt that it is primarily physiological, not only favouring the proper expansion of the lungs and accelerating the circulation, but deadening the effects of pain and relieving nerve tension (especially in woman). Rosbach thinks it not improbable that many evils which manifest themselves in later life, such as chlorosis, contracted chest, and the phthisical habit, "may take their origin in the practice of mothers to stop their infants from screaming by soothing them to sleep in their arms or by stupefying rocking in the cradle."[1] It is well known that children show a strong instinct to chatter and sing the first thing in the morning, and it should be allowed full vent as far as is practicable. The shouting which young people indulge in during their play is quite remarkable and is manifestly physiological. The same tendency to shout is observed in young adults, especially among the poorer classes in holiday time. Though from the physiological point of view justifiable, and even beneficial, the noises they make are certainly not always pleasing, especially to the sensitive nerves of the cultured, amongst whom this instinct is consequently suppressed, though whether altogether to the gain of the individual is questionable.

The various acts referred to will now be considered individually.

Talking.—As regards the psychic aspect of talking, thought becomes much more vivid if it finds expression, whether in speech, writing, music, or artistic production, than if it remains unexpressed. The physical effects of thought are more pronounced in talking than in writing. The cortical nervous discharges underlying it send a stream of energy towards the muscles involved in speech and gesture, and both voice and gesture can be modified to convey subtle shades of thought and feeling which cannot find expression in writing. The very expression of these refinements enhances the vividness and intensity of mentation. Talking is for this reason stimulating, and its influence in

[1] Von Ziemssen's General Therapeutics, vol. iii., p. 581.

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this respect is in a measure proportional to the gesture accompanying it. Few things are more calculated to stimulate the body, to rouse it from lethargy, than "animated" conversation. In talking, as in laughing, shouting, singing, and crying, inspiration is short, while expiration is prolonged, the exit of air being checked partly by obstruction in the glottis and partly, perhaps, by the action of the inspiratory muscles. The actual amount of work done in talking is far more than might at first sight be supposed, and should always be taken into account in reckoning up the quantity of exercise taken during the day. The amount of talking done by barristers, politicians, and others enables them to dispense largely with exercise as ordinarily understood; for not only do they in this way expend a considerable amount of muscular energy, but they experience the manifold advantages of active respiratory movements continued for long periods together; indeed, I believe talking to be distinctly conducive to longevity. That talking involves a considerable expenditure of energy is shown by the exhaustion which it induces in those who are nervously run down. Such are often greatly exhausted, even after a moderate day's talking. This exhaustion is due to mental as well as to muscular expenditure; indeed, in the very neurasthenic the bare process of thought may be an effort and the mere effort to think may alone cause exhaustion; and if such is the case, how much more likely is the putting of thought into speech to do so, seeing that, apart from the muscular expenditure involved in speech, thought is so much more intense when spoken than when unexpressed. Talking is a beneficial exercise in heart disease, especially in those forms in which the blood tends to be dammed back upon the lungs. The good effect is here doubtless due to the increased amplitude of the respiratory movements and to the help thus afforded to the pulmonary circulation. It is for this reason that I always encourage talking in those suffering from passive engorgement of the lungs. "The breathlessness due to dilatation of the heart," observes Sir William Broadbent, "is often relieved by exercise of the voice. I have met with numerous instances in which a clergyman has climbed into the pulpit with the utmost difficulty, and has not only preached a sermon comfortably, but has been all the better for it."[2] The good result, I take it, in these cases is attributable to the deep inspirations required by the loud voice necessary to fill a large building.

Shouting.—The psychic accompaniment of shouting is essentially emotional. Emotion is not only expressed, but sustained, and, indeed, intensified by it. Thus the shouting of children at play, itself the outcome of exuberant emotion and pent-up neuro-muscular energy, enhances the emotional outburst. In like manner the hurrahs of an applauding multitude, the cry of the huntsman, the war-whoop of the savage, the yells of an attacking force, may so exalt emotionality as to induce a condition bordering on ecstacy. A further effect of shouting is to dull sensibility, the emotional exaltation which it provokes, and the voluminous discharge of neuro-muscular energy accompanying it, inducing a corresponding depression in the sensorial sphere. It is on this principle that groaning, and still more the shriek of acute agony, bring relief. The mere sound produces a similar effect by violently energising the acoustic centres.[3] The shouting and gesticulation which accompany an outburst of passion act physiologically by relieving nerve tension; and, indeed, as Hughlings Jackson has suggested, swearing may not be without its physiological justification. Passionate outbursts are generally succeeded by a period of good behaviour, and, it may be, improved health. One frequently notices this in children, and I have also observed it in the adult. It is possible that the outbursts of irritability observed in disease, as, for instance, in gout, have their physiological as well as their pathological aspect. As regards the modifications in the respiratory movements caused by shouting the important practical point to notice is that they are increased in depth. Hence shouting favours the development of the lungs and accelerates the circulation of blood and lymph.

Singing.—Singing, like shouting, is more emotional than intellectual, the degree of emotion called forth depending upon the extent to which the individual throws himself into the spirit of the song. The nature of the attendant emotion varies of course considerably, and there is a corresponding variability in its physical correlatives: if the theme of the song be joyous the proper rendering of it is highly stimulating. In singing there is a great disproportion between inspiration and expiration, the former being much the shorter. Moreover, during these long expirations the glottis is constricted, and the free egress of air being thus prevented intra-pulmonary air tension rises and frequently the flow of blood to and from the right heart is impeded, but this temporary retardation of the blood-flow may be more than compounded for by the acceleration which takes place during the succeeding deep inspiration. The obstruction of the glottis increases as the scale is ascended, and seeing that the expiratory force employed in the delivery of the upper notes is, for the most part, greater than that employed in the production of the lower, it follows that high singing, especially if *fortissimo*, impedes the circulation more than low singing. From the medical standpoint singing is a most important exercise, both by virtue of its influence on the emotions, on the respiratory movements, and on the development of the lungs. The good average health enjoyed by professional singers is in large measure attributable to the mere exercise of their calling.[4] Such therapeutic importance do I attach to singing that I recommend it wherever opportunity affords. It is especially useful in defective chest development and in chronic heart disease. Oertel speaks enthusiastically of the beneficial influence of singing on the general health, and especially on the lungs, and he refers to the fact that almost all eminent singing masters can tell of serious cases of lung disease which have been cured by their method of singing. He thinks there can be no doubt that weak chests of various kinds can be greatly improved by it, and he would even appear to include phthisis. "In consequence of the reports sent in from various quarters on the healthy influence of singing on the respiration and circulation and on the strengthening and nutrition of the lung, the practice of singing has been introduced even into prisons in order to antagonise pulmonary consumption, which generally develops in a short time amongst the convicts. The method of singing devised by Fried-Grell is especially adapted for our national schools and ought to be generally introduced, like gymnastics, from a sanitary point of view."[5]

Laughter.—The psychic accompaniment of laughter being joyous emotion, its effect is stimulating, and it has been truly said that the man who makes us laugh is a public benefactor. Its beneficial effect on the body is illustrated by the saying, "Laugh and grow fat." The expiratory act in laughter is greatly prolonged, and, the glottis being partly closed, intra-pulmonary tension is increased; and thus in excessive laughter there may be considerable impediment to the flow of blood through the lungs, as shown by the turgid head and neck. This disadvantage—for in most cases of heart disease it is a disadvantage—is far more than compensated for by other effects, foremost among which must be reckoned the deep inspirations which separate the individual paroxysms.

Crying.—In thinking of the term "crying" one must distinguish between the mere shedding of tears, and weeping accompanied by sobbing. In the one the effects are limited, while in the other the entire body may be convulsed. I have already referred to the beneficial effects of crying in children. The crying of the infant is peculiar. Expirations are prolonged sometimes for as much as half a minute, and are interrupted by short inspirations. During the expirations the glottis is contracted and the intra-pulmonary pressure rises considerably. Not only is the pulmonary circulation thereby greatly impeded, as shown by the swollen veins of the head and neck, but bronchial mucus, flatus, and other noxious matters are evacuated. The paroxysm is succeeded by rapid deep respirations, which restore the equilibrium of the circulation. Women likewise often derive benefit from "a good cry"—the profuse flow of tears lessens blood-pressure within the cranium; the voluminous discharge of nerve energy relieves nerve tension; the sobbing movements of respiration influence in a very decided and doubtless beneficial way the circulation and the movements of the abdomino-pelvic viscera; while the widespread contraction of the muscle system has probably also a good effect.

[2] THE LANCET, April 4th, 1891, p. 798.

[3] A famous quack extracts his patient's teeth to the blare of trumpets and the boom of the big drum.

[4] The splendid chest development of public singers is, of course, not entirely attributable to the constant exercise of the voice, since no one can attain a high excellence without having a good chest development in the first instance. It must also be observed that every singer who attains to fame is careful to lead a healthy life.

[5] Von Ziemssen's General Therapeutics, p. 582.

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How pronounced are the dynamic effects induced by completely abandoning oneself to a fit of crying is shown by the exhaustion which it entails. It is partly through this exhaustion that crying induces sleep; we hear of "crying oneself to sleep," though this must be but a very crude explanation of the phenomenon. The tendency of women to cry should, of course, be kept within proper bounds, but certainly harm may result from its complete suppression, as Tennyson recognises in the line—

"She must weep or she will die."

It is said that women who are able to find relief in tears keep their youth longer than those who repress them. The internal cankering action "like a worm i' the bud" of pent-up emotion is not only a beautiful poetic conceit, but a profound physiological truth. In short, strong emotion should receive expression—"give sorrow words."

Sighing.—"A sigh is a deep thoracic respiration, with retraction of the abdomen."[6] The retraction of the abdominal muscles leads to a compression of the splanchnic veins. This compression is probably increased by slight descent of the diaphragm. The blood is thus pressed out of those veins into the right heart, and the flow into this chamber is further favoured by the deep inspiration which also aids the circulation through the lungs. Now Hill has pointed out[7] that the blood accumulates in the splanchnic veins in syncope, and that "a deep sigh is the first obvious sign of improvement." That the act of sighing in syncope has the effect maintained is shown by the observation of Stephen Hales. He noticed that the arterial blood-pressure in horses rises considerably on deep sighing and that the same effect is produced in dogs by firmly pressing the abdomen.[8] The sigh of syncope is comparatively rare. A much more common cause of sighing I believe to be shallow breathing, however induced. Thus sadness and a sense of weariness or boredom are wont to be attended by shallow breathing, and in all of them sighing is frequent. In consequence of this shallow breathing blood-aeration lags behind, and the blood tends to accumulate in the right heart and systemic veins. The sigh benefits by promoting the aeration of the blood and quickening the pulmonary circulation, and it is for similar reasons that sighing is apt to occur during a state of "breathless attention"—when the attention, i.e., is so strained that one forgets, as it were, to breathe adequately.

Yawning.—It is difficult to describe accurately this act. A deep and prolonged inspiration is taken through the mouth and nose, the mouth being widely opened and the nares dilated. The opening of the mouth is effected by a strong tonic contraction of the depressors of the lower jaw and by the extension of the head and consequent elevation of the upper jaw. At the same time the limbs and trunk are "stretched." There is, in short, a widespread tonic contraction of the muscle system. This continues and indeed reaches its climax during the expiratory portion of the act, the mouth being kept open till towards the end of it. The expiratory blast is directed solely through the mouth owing to the elevation of the soft palate, and the vocal cords approximate, a characteristic sound being produced in the larynx, while there is a peculiar contraction of the muscles at the back of the throat the nature of which I do not understand. There can be little doubt that one of the objects of yawning is the exercise of muscles which have been for a long time quiescent, and the acceleration of the blood and lymph flow which has in consequence of this quiescence become sluggish. Hence its frequency after one has remained for some time in the same position—e.g., when waking in the morning. Coöperating with this cause is sleepiness and the shallow breathing which it entails. This factor, as well as muscle-quiescence, is apt to attend the sense of boredom which one experiences in listening to a dull sermon. Hence it is that the bored individual is apt to yawn. As in the case of sighing, the deep breath which accompanies the act of yawning compensates for the shallow breathing which is so apt to excite it. I am unable to offer any explanation of the yawning—or, rather, gaping—which is induced by exhaustion from want of food. This mere gaping is, however, quite distinct from yawning, which is a much more complex phenomenon. Allied to yawning is a modification of the breathing which is apt to occur during sleep. A deep breath is taken more or less suddenly, and this is followed by a long-drawn-out expiration with probably closed glottis and a groaning sound. This kind of breathing has certainly some physiological import, but what it is I cannot say.

Wimpole-street, W.

[6] L. Hill: Journal of Physiology, vol. xv., p. 48.

[7] Loc. cit.

[8] Statist Essays (London, 1733), vol. ii., p 33, referred to by L. Hill, op. cit.

AN UNUSUAL CASE OF PARALYSIS OF THE OCULAR MUSCLES.

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THE patient who was the subject of this unusual train of symptoms came to me first on Oct. 31st, 1894, complaining of headache, giddiness, and difficulty of vision, and was accompanied by her sister whose support was necessary to enable her to walk at all correctly. The history of her condition was that headache was the first evidence of any disorder and appeared just thirteen days before, being closely followed by giddiness, and that difficulty of vision was the last symptom to appear. The past history of the patient was practically without blemish, she not having had any serious or prolonged illness in her life. There was no evidence of gout, rheumatism, syphilis tuberculosis, or, indeed, of any dyscrasia, and the patient was not at any time either neurotic or hysterical. There was no history of any injury at all likely to give rise to such symptoms as the patient complained of. The family history of the patient was of the very soundest description, no bodily habit or tendency in any way prejudicial being transmitted, so far as could be found. There had not been any nervous disease in the family. When first seen, the patient, who was about thirty years of age, was, apart from the aforementioned symptoms, in perfect health, neither anæmic nor plethoric, although well nourished; and further she was of sober manner and quiet demeanour. She stated that her headaches were almost entirely frontal, not tending to one side more than the other, and that they generally began with pain in the eyes. They were, further, distinctly worse after using the eyes for a time, ceasing at night, but often being present on waking in the morning, more especially if she had been working at her employment—i.e., dressmaking—the previous night. The vertigo was of a general nature, and there was no inclination to fall to one side more than the other. The patient could stand well with the eyes closed, the feet together, and the hands raised high above the head. She could not "walk a line" at all well, and any effort to hold on to or grasp anything evidently increased the difficulty of the process, which seemed to indicate that visual effort was—in part at least—the cause of the deficiency. The visual disturbance appeared to be difficult to define as it tended in no very special direction but resulted, somehow, in confusion (the patient had never noticed that she saw objects doubled until, by the usual methods, it was pointed out to her). It was manifest, on examination, that there was a nearly complete paralysis of the external rectus muscle of the right eye, this muscle being unable to turn the eye outwards further than the middle line, there being, however, no convergent strabismus at this date. Diplopia was, of course, homonymous and was present even when an object was held 15° to the left of the middle line at 10 ft. distance. Ophthalmoscopic examination revealed neither error of refraction nor change in any degree of the fundus of either eye, and there was no evidence of internal ophthalmoplegia. The fields were normal both for colour and white light. The knee and other reflexes were examined, but no evidence of nervous affection was found in any part. Examination of the general organs proved to be entirely negative, and inquiry failed to elicit evidence of any functional inaccuracy or disorder; indeed, there appeared to be absolutely no signs, other than those before mentioned, of any disease. It seemed highly probable, then, that both headaches and vertigo were the results rather than the companion symptoms of the paralysis. A guarded prognosis was given, complete ocular rest was ordered, and the use for a prolonged period recommended of a mixture containing the iodide and bromide of potassium with nux vomica. As regards the course of the disease it was found to be moderately rapid, for on Nov. 14th the paralysis was complete, there being

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considerable convergent strabismus. The headaches were now, on account doubtless of the cessation of visual effort, much less severe and less frequent, but the vertigo continued in much the same degree. On Dec. 26th the state of matters was entirely changed, for now the right eye had entirely regained its powers of movement, whereas the left external rectus muscle was entirely paralysed, there being marked left convergent strabismus. As the patient could give no account of the date on which the change had occurred, but thought that the right eye was still affected, it is probable that an overlapping, as it were, had taken place, the left eye beginning to be affected before the right was entirely well. The change and the rapidity of its occurrence seemed to justify the giving of a slightly more favourable prognosis, as it was considered probable that any paralysis from a grave lesion would hardly run such a course as this. The left eye ultimately completely recovered its powers of movement, &c., so that by the end of January, 1895, the patient was able to return to her regular work without any inconvenience. She was seen again in March, 1895, in perfect health, and in this state she remained over two years ago, when she was last seen.

Before proceeding to discuss the probable cause of this peculiar train of symptoms it may be wise to review briefly the various causes of ocular paralysis. An ocular paralysis may be of either orbital, basal, nuclear, or cortical origin. Orbital paralyses are almost always accompanied by some local sign, such as pain, swelling, &c.; basal paralyses are exceptionally rarely isolated, but they generally implicate several nerves; nuclear paralyses are characterised by non-recognition of double images and the occurrence of a condition of somnolence; and cortical paralyses are generally or always conjugate—namely, associated movements are implicated. Writers on the subject are agreed that syphilis is the most common cause of ocular palsies, and, further, that in this condition the third nerve is affected in preference to the fourth and sixth. Some writers state that one-half of the total of ocular palsies are syphilitic. Next to syphilis spinal disease is either accompanied or preceded by an ocular palsy; but it must be remembered that spinal diseases are most frequently found among the syphilitic. In spinal affections ocular symptoms are frequently noticed a long time prior to the date of the discovery of the symptom characteristic of spinal disease, and also it is known that such ocular symptoms, although they may be permanent—more especially optic nerve changes and other symptoms in later stages—are often transitory and variable, ultimately passing away completely. Some difference of opinion exists as to which ocular nerve is most frequently affected in such cases, but Gowers, Berger, De Watteville, Landolt, and others are agreed that in tabes and insular sclerosis the rectus extensor—i.e., the sixth nerve—is most frequently paralysed, whereas Pierre Marie states that the third nerve is most frequently affected. The next type of ocular paralysis frequently mentioned is the so-called rheumatic type, the existence of which is doubted by some writers, notably by Jeffries,[1] who states that "in 60 cases or so there is but one which can fairly be considered as belonging to this group, if it exist" and he seems to consider them as syphilitic. Noyes mentions rheumatic paralysis as being difficult to prove. In addition to these general conditions causing, as well as predisposing to, paralysis, many other affections, such as meningitis in children, especially often of tuberculous origin, cerebral abcess, softening, tumour, hæmorrhage, etc., orbital tumour, abscess, injury, etc., may give rise to loss of function of one or more of the ocular muscles. Variable paralyses are usually of central origin and most frequently precede spinal lesions, as Jeffries[2] says "Transitory paralyses in the syphilitic are strongly suggestive of tabes to follow."

Search has failed to bring to light any record of a case exactly parallel to this present one, but it may be mentioned that in July, 1895, I saw at the Eye Infirmary, Glasgow, a young woman suffering from paralysis of the right external rectus muscle, who stated that, "a few weeks before, the left eye had been affected in the same way." No note of this fact could be found, and the patient was ultimately lost sight of. In the present case, then, we have to account for a paralysis of one muscle slowly becoming complete and rapidly recovering, followed by an exactly similar paralysis of the homologous muscle on the opposite side, also ending in complete recovery. Generally speaking, the total absence of any sign of other disease or implication of other nerve, points to freedom of the orbit and base of the skulls from any lesion. The absence of evidence of conjugate paralysis indicates freedom of the cerebral cortex, whilst the variable nature of the paralysis and the non-recognition of the double images seem to indicate that the lesion was of nuclear origin. The history of the patient excludes syphilis, and, to a less degree it is true, spinal disease, for although it is now more than two years since the last symptom of the affection passed away, it is well known that sometimes premonitory symptoms of spinal lesions may be present and may have been present, but have passed away many years before the characteristic symptom appears. In the case, however, of a young female, free from both syphilis and tuberculous disease, spinal disease is, although not unknown, not common. Rheumatism was practically unknown in this patient's family; and further, as a rheumatic paralysis seems to be the result of a periostitis round the foramen or passage whereby the cranial nerve (such as the seventh nerve) leaves the cranial cavity, it is not probable that such a lesion could account for the train of symptoms here present, especially without giving rise to any other symptoms.

A few words may be of service here regarding the position and relations of the sixth nerve and its nucleus. The nucleus of the sixth nerve lies in the floor of the fourth ventricle, superficially, and close to the median line and to its fellow of the opposite side; over it pass the fibres of the intermediary portion of the seventh nerve as they leave their nucleus. From the nucleus the fibres of the sixth nerve pass almost straight through the pons—some of the fibres passing between the bundles of the pyramidal tract—and emerge just below the pons. From this point the nerve passes along the cavernous sinus and enters the sphenoidal fissure, where it lies below the other nerves with only the ophthalmic vein below it—a point which is of importance in consideration of the clinical fact that there was no evidence at any time of congestion of the retinal veins. Remembering, then, the close promixity of both nucleus and nerve to other structures it will be seen that almost any gross lesion affecting either of them would almost certainly affect some other structure, either nervous or vascular; but here there was no evidence of any such implication. In this manner, then, one may practically exclude tuberculous and other meningitis, cerebral tumour, abscess, softening, or hæmorrhage, as well as other causes of ocular palsies, for it would be difficult to imagine that any one of these could act upon one point only—and that one so small—without giving rise to any symptoms other than those referable to that point, first on one side and then on the other. Regarding connexions above the nucleus, fibres from the cortex to the sixth nucleus probably cross in the pons, so that unless two lesions had occurred, one on each side, in the cerebral cortex or in the corona radiata, which is not probable, a lesion would have occurred in that most complicated junction, the pons, without giving rise to any but isolated symptoms of an evanescent character, which would be difficult to imagine possible.

No functional disturbance was found which, acting reflexly, might for a time inhibit the activity of the nuclei of the sixth nerves. Hence, in spite of the facts that the patient was of quiet manner, and that, as Charcot and others have said, hysterical affections of facial and ocular muscles are very unusual, this case came to be looked upon as one of hysterical origin, and unless the future history of the patient brings to light further facts or manifestations, it is probable that in that convenient receptacle for unaccountable cases, hysteria, it will remain until further investigation throws new light upon the etiology and pathology of temporary paralysis of the ocular muscles.

Glasgow.

[1] Eye Paralysis, by John Amory Jeffries (late of Boston), 1892.
[2] Ibid.

ICE-CREAMS AT CARDIFF.—Before the stipendiary magistrate at Cardiff on July 6th an Italian was summoned at the instance of the sanitary authority for having neglected to keep his premises used as a common lodging-house in a clean and fit condition. The sanitary inspector stated that the houses were in a filthy condition, the yard was covered with animal refuse, and yet a number of organ-grinders and ice-cream vendors lodged there. The medical officer of health also described the dirty condition of the place in which ice-cream was made. The magistrate was satisfied that the yard was unfit for the manufacture of any article of human food, and fined the defendant £5 and costs, or one month's imprisonment.

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NOTES ON THREE CASES OF EMPYEMA OF THE MAXILLARY ANTRUM IN WHICH A "BAD SMELL IN THE NOSE" WAS THE ONLY SYMPTOM COMPLAINED OF.

BY ADOLPH BRONNER, M.D., M.R.C.S.,
SURGEON TO THE BRADFORD EYE AND EAR HOSPITAL; LARYNGOLOGIST TO THE BRADFORD INFIRMARY.

DURING the recent epidemics of influenza one of the common symptoms was severe catarrh of the nares, often of a purulent or muco-purulent nature. In many cases one or more of the accessory cavities of the nose became affected—the maxillary antrum, the sphenoidal or the ethmoidal cells, most frequently the former. Very few text-books deal at all fully with the diseases of the sphenoidal or ethmoidal cells, and the descriptions of disease of the maxillary antrum are most misleading and exaggerated. We read of exophthalmos, severe pains in the cheek, extensive swelling, copious discharge of offensive pus, &c. These symptoms certainly do occur in acute or severe cases, but in the large majority of cases the symptoms are not at all well marked. Often the patient complains only of a slight offensive discharge from one side of the nares, and frequently the only subjective symptom is a bad smell in the nose. In the three cases which I am recording the patients complained of nothing else except an occasional bad smell in the nose, which was frequently most offensive and disagreeable. Nor were there any marked changes to be found in the nares except slight hypertrophy of the mucous membrane.

CASE 1.—A woman, aged thirty-five years, single, had a severe attack of influenza three years ago, accompanied by muco-purulent rhinitis. Since that time she had noticed an occasional and sickly smell in the right nostril, which varied in frequency and intensity. It was often so offensive that the patient felt sick and miserable. When I saw her in February, 1896, the right nostril was apparently normal, with the exception of some thickening of the mucous membrane. Trans-illumination gave negative results (as in most cases). An exploratory puncture of the antrum was refused, as the patient said that "she did not wish to be experimented on." In July under chloroform I opened up the antrum through the alveolar process. A few drops of offensive pus escaped. A gold pin was attached to the false teeth, which the patient was wearing, and passed into the antrum. This was syringed out daily, and insufflations of aristol and boric acid were used. The smell disappeared after the operation and has not returned.

CASE 2.—A young woman was sent to me in April, 1897, for "polypi in the right nostril" and an offensive smell in the nose. Eight years previously the patient had all the upper teeth removed because they were loose and painful. Six years ago she first noticed an occasional and offensive smell in the right nostril, which had increased in severity and frequency. There was some hypertrophy of the mucous membrane of the right nostril, but no polypi. I passed a Lichtwitz exploratory trocar through the wall of the lower nasal meatus into the antrum and injected warm boric acid lotion. A large quantity of offensive pus came away through the right nostril, and the patient at once exclaimed, "That is the smell I complain of." The antrum was opened through the alveolar process and treated by insufflations, and recovery followed.

CASE 3.—A married woman, aged sixty-three years, had complained of an occasional and offensive smell in the nose and throat for several years. In the middle meatus of the right nostril there was a pulsating reflex, and on one occasion I could find a little pus in the middle meatus. In May, 1897, I passed a Lichtwitz trocar through the lower nasal meatus into the antrum and injected warm boric acid lotion. A little offensive pus came away; there was no return of the smell until June 4th. On June 10th, under cocaine, I opened up the antrum through the alveolar process. Up to the present there has been no return of the smell.

These three cases seem to prove that empyema of the maxillary antrum often exists without any of the alarming symptoms which are described in text-books. As a matter of fact, cases of disease of the antrum are fairly common, but are in most cases overlooked. I have purposely not entered into the details of the operation or the etiology of empyema of the maxillary antrum. The less severe cases are most frequently due to disease of the mucous membrane of the nares. I have also avoided entering into the details of differential diagnosis between the diseases of the maxillary antrum and those of the sphenoidal or ethmoidal cells. The symptoms are in many cases very similar.

Bradford.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

AN UNUSUAL INCIDENT IN LITHOTRITY.

BY SINCLAIR WHITE, M.D. R.U.I., F.R.C.S. ENG.

A MAN, aged fifty-two years, was admitted to the Sheffield Royal Hospital on June 21st last for the removal of a vesical calculus of many years' standing. Two days later I proceeded to crush it, but after working for a few minutes the lithotrite jammed with the blades three-fourths of an inch apart. A surgical instrument maker was sent for, but he was unable to liberate the blades, which were, of course, much too far apart to allow of the instrument being withdrawn. The only way of escape from the dilemma appeared to be in performing supra-pubic lithotomy. This was accordingly done, and after removing the stone we succeeded in protruding the blades of the lithotrite through the wound. They were then placed in a vice and pressed together until the female blade fractured. The male blade could now be driven home and the instrument was removed. Had the vice failed us we were prepared to file through the projecting end of the male blade. Owing to the lithotrite being in the urethra the bladder could not be distended; but by using a large rectal bag no difficulty was experienced in reaching the bladder.

The stone, with the crushed débris, weighed one and a half ounces, and was a typical oxalate of lime calculus. The lithotrite was an old one which had seen much service. The patient is doing well.

Sheffield.

NOTE ON A CASE OF RUPTURED DUODENUM; DEATH IN SIXTEEN HOURS.

BY NAPIER CLOSE, L.R.C.P. EDIN., &c.,
LATE HER MAJESTY'S CONVICT SERVICE.

ON June 24th last I was called in the evening to see a boy, thirteen years of age, who had been kicked by a horse early in the morning of the same day. I first saw him twelve hours after the infliction of the injury, when his condition was as follows. He was lying in bed upon his back with the hip-joints slightly flexed. His face was pale and wore an anxious expression. He complained of some pain in the lower part of the abdomen, which was slightly distended and very tender. There was no visible bruise or external wound. The abdominal muscles were rigidly contracted, which fact, combined with the tenderness, prevented the acquirement of any information from palpation. The percussion note was quite dull over the whole of the lower part of the abdomen and in the left flank. There was a band of tympanitic resonance below the costal margin and ensiform cartilage, and in the right flank also the note was tympanitic in character. The temperature in the mouth was 102·5°F. The pulse was 140 to the minute, rather small, but not thready. He was quite conscious, and gave me a connected account of the accident. The boy's father, who saw him immediately after the accident, told me that he was soon able to walk some distance up the field in which it had occurred, and then he lay down for some time. Subsequently he was taken home, and after the application of hot flannels he so far recovered that he was able to get about for some hours, and walked upstairs and downstairs. Towards evening he vomited, and I was sent for. Dr. Crosby, of Leicester, who was staying with me, kindly saw the patient, and we passed a catheter, drawing off clear urine without blood. From the symptoms

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and examination we concluded that the boy had in all probability sustained a rupture of the intestine, and that in immediate laparotomy lay his sole chance of life. Accordingly I asked Dr. Balfour, of Chard, to administer chloroform. Before Dr. Balfour's arrival the boy rapidly got worse; the pulse at the wrist became imperceptible, and the temperature fell to 97°. The lad was evidently dying, and under the circumstances it seemed useless to risk the accusation of having killed him. He died about an hour afterwards. Dr. Crosby told me that before death the abdomen became much more distended, with tympanitic percussion note all over, and loss of liver dulness.

By the coroner's order I made a post-mortem examination fourteen hours after death. The peritoneum contained about two pints of cloudy fluid, mixed with partially digested food. There were flakes of recent lymph adherent to the intestines, which were much reddened. On turning back the omentum and coils of small intestine a rent in the second part of the duodenum was revealed, from which the chyme was escaping. It was large enough to admit four fingers, and was distant four and a half inches from the pyloric orifice.

The case seems to me to be of interest from the fact that, notwithstanding the presence of such an extensive lesion in the abdomen, the boy was able to get about for several hours, and apparently suffered little pain. It was, in fact, difficult at first to persuade his parents that he was in imminent danger of death.

Chard.

NOTE ON A CASE OF PUERPERAL ECLAMPSIA.

By JOSEPH JOHN STACK, L.R.C.P. EDIN., L.R.C.S. IREL.

A MARRIED woman expected to be confined of her first child in the first week of September, 1896. During the early part of her pregnancy, which was wholly spent on board ship, she enjoyed the best of health, and was evidently looking forward with pleasurable anxiety to her approaching maternity. On reaching England, however, she seemed very much upset by hearing that her husband would shortly be out of employment. On the night of the bad news she was considerably alarmed at the fact that her ankles were much swollen, and that her boots seemed to be too small for her feet. This happened about the end of June. On July 3rd she consulted me about the condition of her legs, and at my request she sent me a sample of her urine, which was passed scantily, and which upon examination was found to contain albumin to about one-twelfth of the specimen in the test-tube. For a few days after her visit I attended her and strongly advised her not to undertake the long journey to Ireland which she then contemplated for her accouchement. After some days' rest in bed the swelling in the legs more or less disappeared, but the albumin was still present in the urine. She was now affected with an irritable cough; the arms and hands began to swell, as also did her face. She complained of a severe pain over the left half of her head. On the night of July 16th she had a severe attack of diarrhœa and vomiting, and on the following morning she was unable to remain in one position. She was now seized with convulsions, which continued off and on during the day, with only the intervention of the profound coma that succeeded each attack. All available classical medicaments were tried—chloroform was inhaled and chloral in twenty-grain doses was administered per rectum every two hours; but as the fits got more prolonged and the intervals between them began to decrease I, with the approval of a medical friend (Mr. H. J. Dixon), proceeded to bring on labour. This procedure was attended with considerable difficulty and anxiety. A uterine sound was first introduced so as to separate the membranes, and after some waiting I was able to introduce my finger-tip so as to feel the presenting head of the child, when I succeeded in puncturing the membranes with a hairpin straightened out. For some time after this there was an abatement in the symptoms; the fits did not cease, but they were not so frequent. The pains of labour now came on, and with each pain a fresh seizure took place. The patient was kept under chloroform as much as seemed consistent with her safety, but the only course that seemed clear to me was to empty the uterus with all possible speed. I dilated the os uteri with my fingers, and after unsuccessfully attempting to introduce the forceps I turned and delivered her of a living male infant. She had a slight convulsion after delivery. For some days afterwards the patient was in a rather low condition; the pulse was about 120 and the temperature ranged between 100° and 103° F. She was frequently syringed out with lysol, and iodoform was copiously dusted on the vulva. A little trouble with her breasts, which lasted for a week or so, caused her to lose her spirits; but she eventually made a good recovery, and only regretted the loss of her infant. The urine was quite free from albumin two days after delivery.

I know that dilatation of the os and turning are both strongly deprecated by many of the leading lights of the profession; but under the circumstances I felt that I was obliged to have recourse to both measures. Stimulants, nutriments, quinine, and occasional douching were continued until convalescence.

New Cross-road, S.E.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. GEORGE'S HOSPITAL.

A CASE OF ACUTE YELLOW ATROPHY OF THE LIVER IN A GIRL TWELVE YEARS OLD; NECROPSY.

(Under the care of Dr. CAVAFY.)

ACUTE yellow atrophy of the liver in many respects greatly resembles phosphorus poisoning; in fact, so great is the likeness that Munk, Wagner,[1] and others have maintained that all cases of acute yellow atrophy are due to poisoning by phosphorus. It is said that the absence of leucin and tyrosin from the urine is against a diagnosis of acute yellow atrophy and in favour of phosphorus poisoning. The history of the following case is by no means unlike a case of sub-acute poisoning by phosphorus. Apparently no bacteriological examination was made; this would have been of great interest in view of the theory held by many that the disease is bacterial in origin. For the notes of the case we are indebted to Dr. E. T. Fison.

A girl, aged twelve years, was admitted into St. George's Hospital on March 10th, 1897. Three weeks previously she had complained of having general pains, which lasted three days; these were followed by what was thought to be a "bilious" attack, as shown by vomiting after food and headache. Since March 3rd she had been jaundiced. There was no history of fright or mental shock. When admitted the child was very jaundiced and looked ill. The temperature was 101·4° F., and the pulse was 92. The tongue was coated. There was much bile in the urine, but none in the fæces. Physical examination showed that the heart and lungs were normal, but the liver appeared to be enlarged and extended to three fingers' breadths below the costal margin. The child complained of persistent pain in the right hypochondrium, and was occasionally sick; her appetite was bad. The jaundice varied greatly in its intensity from day to day. The case seemed to be rather different from one of simple or catarrhal jaundice on account of the raised temperature and the enlargement of the liver; however, a provisional diagnosis of simple jaundice was made. By March 15th the temperature had reached normal, but the symptoms and jaundice remained the same. On the 20th the liver appeared to be smaller, but the general condition was unaltered. On the 21st, at midday she suddenly became drowsy, she would not perform any action or answer questions, and she was unable to swallow. The reflexes were not abolished, but urine and fæces were passed into the bed. The temperature was slightly above the normal; there was no delirium. On the 22nd she remained in the same state, the liver appeared

[1] Archiv der Heilkunde, 1832, p. 364.

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to be slightly smaller, but there was some uncertainty about this. On the 23rd in the morning hæmorrhages were noticed over the sacrum; in the evening she had an attack of convulsions of the arms followed by rigidity; the temperature was now 102° and the pulse was 160; the tongue was dry and brown. The patient was completely comatose and died at midnight on the 23rd, sixty hours after the onset of acute symptoms. No leucin or tyrosin was found in the urine; the urine examined was not concentrated.

Necropsy.—Dr. Arthur Latham made a post-mortem examination thirteen hours after death. The body was rather wasted, the skin and conjunctiva were stained light yellow, and in the skin there were a few scattered petechial hæmorrhages. Rigor mortis was marked. There was no fluid in the pleural cavities. The right lung weighed 8 oz. and the left was the same weight, and showed a few sub-pleural petechial hæmorrhages. Both lungs were very œdematous, and there was muco-pus in the larger bronchi. The larynx and trachea, the bronchial glands, and the thyroid were all normal. The heart weighed 1½ oz., the cardiac muscle was bile-stained, and the pericardial fluid was bile-stained. The valves were good. There was a considerable quantity of bile-stained fluid in the peritoneal cavity; numerous sub-peritoneal hæmorrhages were present, especially along the greater curvature of the stomach and in the great omentum. The liver weighed 3 lb. 8 oz. and was flabby; the capsule was somewhat wrinkled, especially on the under surface of the right lobe. The organ was not larger than usual, but was displaced slightly downwards. On section the substance was distinctly firm, of a light yellow-ochre tint, but with no red areas, although there were a few minute hæmorrhagic patches. The lobules were indistinctly outlined. The gall-bladder was full of green bile mixed with an excess of mucus. The ducts were normal and there was no obstruction in them, but at the papillary orifice in the duodenum there were some slight inflammation and œdema which prevented the ready expression of the bile. The portal vein was normal. The glands in the portal fissure were slightly enlarged. On microscopic section very few natural liver cells were seen, and they were full of granules. The liver tissue was to a great extent replaced by granular and fatty débris contained in a reticulated, homogeneous, nucleated structure, the nuclei probably being derived from liver cells. There was no leucin or tyrosin observed. The capsule of the liver was slightly thickened; the pancreas was normal; the spleen was very congested and rather soft; the kidneys weighed 3½ oz. each; the cortex was pale; and the adrenals were normal. The stomach contained altered blood. There were patches of submucous hæmorrhages. In the intestines was a large number of submucous hæmorrhages, especially in the cæcal region. The rectum was normal. The bladder was normal. The muscle of the uterus was bile-stained. The brain weighed 3 lb. 2 oz.; the dura mater was bile-stained, and the brain tissue was normal.

Remarks by Dr. FISON.—The diagnosis of the case appeared to rest between cholæmia, biliary cirrhosis, and acute yellow atrophy of the liver. The necropsy showed that the liver was in a condition of acute atrophy. The chief points of interest seem to be the age of the patient, the fact that the acute atrophy was preceded by a temporary enlargement of the liver, and the difficulty in the diagnosis. If there had been any certainty about the apparent diminution in the size of the liver the diagnosis would have presented no great difficulty; there was, however, considerable doubt about this. On referring to the literature of this disease Osler states that the disease is most common between the ages of twenty and thirty years, but is occasionally seen in young children. In St. Bartholomew's Hospital Reports Mr. Freeborn of Oxford and Dr. West[2] report three cases, all occurring in children—two boys aged four and seven years and one girl aged four years. There was no difference in the symptoms from cases of acute yellow atrophy in adults. All of them died within forty-eight hours of the onset of cerebral symptoms, and in two of the cases the liver was temporarily enlarged previously to the atrophy. Moxon[3] noted the same thing in the case of a woman, aged thirty-four years, who died from acute liver atrophy. Merkel[4] also reports a case of a child, six years old, who suffered at first from malaise and loss of appetite and jaundice. Eight days from the commencement of the illness the liver was diminished, the jaundice increased, convulsions came on, and death occurred on the seventeenth day. The temperature was not raised. Greves[5] has collected seventeen cases, all of which occurred in children under ten years old, the youngest being an infant aged three months. Yeoman[6] records a case of acute yellow atrophy in a female child aged ten months. Death occurred on the third day after jaundice was first noticed. F. Lanz[7] reports a case in a boy four years old. Death followed four days after the development of the first symptom. The above cases show that jaundice occurring in children does not invariably lead to a favourable result, and that it is well to bear in mind the rare occurrence of acute yellow atrophy of the liver.

[2] St. Bartholomew's Hospital Reports, vol. x., p. 39.
[3] Transactions of the Pathological Society of London, vol. xxiii., p. 138.
[4] Münchener Medicinische Wochenschrift, Jan., 1894.

STANLEY HOSPITAL, LIVERPOOL.

A CASE OF URÆMIC ECLAMPSIA IN THE SEVENTH MONTH OF PREGNANCY; INHALATIONS OF OXYGEN; RECOVERY.

(Under the care of Dr. C. J. MACALISTER.)

ASPHYXIA is the immediate cause of death in some cases of puerperal convulsions, and for these Dr. Macalister's treatment by oxygen will probably prove very beneficial; unfortunately, the fatal issue in but few cases is the result of respiratory difficulty, and therefore the method can never have a very wide application. Pilocarpine, though in many cases of great value, is decidedly harmful in others.[8] For the notes of the case we are indebted to Mr. F. Deas, house surgeon.

A woman, aged thirty-one years, was admitted to the Stanley Hospital, Liverpool, late on Jan. 20th, 1896, under the care of Dr. Macalister. On admission the patient was absolutely comatose. A note sent with her by her medical attendant stated that she had only been taken ill that morning, that he had seen her in one fit, that she had passed no urine since the previous day, and that she was seven months pregnant. Her husband stated that she had enjoyed the best of health up to the evening of the 19th, when she complained of headache and of feeling very drowsy. She was pregnant for the first time. Immediately after the patient was put to bed she had a rapid series of violent convulsions, the face became extremely livid, the breathing was stertorous, and at times of the Cheyne-Stokes character. The fit lasted about half an hour. The convulsions gradually subsided, and the patient again passed into a deep coma. No urine or fæces were passed during the fit. While still comatose a catheter was passed, and two ounces of urine were drawn off, which on boiling became nearly solid with albumin. In about a quarter of an hour the patient had another violent convulsive seizure, the lividity and difficulty of breathing being very severe. Immediately after the commencement of the fit the inhalation of oxygen was commenced, and with very marked effect. Although the convulsive movements continued they were much less violent, the breathing soon became quiet, and in a very short time, about a minute, the lividity had quite disappeared. The movements ceased in about fifteen minutes, and she again passed into a comatose condition. During the night the patient had four attacks, each lasting from ten to fifteen minutes, and in each attack oxygen was administered with equally good effect. In the intervals between the fits she was quite comatose. Early on the morning of the 21st she gave birth, unconsciously, to a dead seven months' fœtus. On the 21st she had five attacks, each lasting about ten minutes. She was still comatose in the intervals, and could not be roused sufficiently to take anything by the mouth. Urine had to be drawn off, being still loaded with albumin. An enema was administered, which brought away a copious stool. On the 22nd she remained much in the same condition. She had four convulsive attacks, each lasting about ten minutes. She passed a small quantity of urine in one fit. On the 23rd she was conscious for the first time, although very drowsy. The bowels acted well after an enema of sulphate of magnesia. She had three attacks of convulsions, each lasting from ten to fifteen minutes, but they were not so violent as the previous attacks had been. On the 24th, and again on the 25th, she had two seizures, each of which was

[5] Liverpool Medico-Chirurgical Journal, July, 1884.
[6] THE LANCET, Aug. 20th, 1892.
[7] Wiener Klinische Wochenschrift, 1896, No. 20.
[8] Grünberg: Meditzinskoje Obozrenije, Warsaw, Nov. 3rd, 1895.

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milder than the previous one. In all these attacks the dyspnœa and lividity were extreme, but in each case these urgent symptoms were promptly relieved by the inhalation of oxygen, which also appeared to have a decided effect in abating the violence of the convulsions. Up to this time (the 25th) she had not voluntarily passed more than about ten ounces of urine, although from thirty to forty ounces were drawn off by the catheter. The urine contained large quantities of albumin, as much as five-sixths. Retinal hæmorrhages were to be seen in both eyes. On the 26th the patient was much better. She began to pass urine naturally (forty ounces during the day), and the albumin was reduced to two-thirds. From this date she made an uninterrupted recovery and was discharged on March 12th. When she left the hospital there was the merest trace of albumin in the urine and the retinal hæmorrhages had to a great extent cleared up. The patient was seen quite recently. She had not had any bad symptom since leaving the hospital. She was delivered about the middle of May, 1897, at full term, of a dead child. Her medical attendant stated that the labour was easy, and that there had been no sign of any recurrence of last year's trouble.

Remarks by Mr. DEAS.—In view of the high mortality in cases of uræmic eclampsia in pregnancy the above case may be of interest, especially as showing a use for oxygen previously recorded by Dr. Macalister in THE LANCET of Dec. 7th, 1895. There are several points of interest in the case, the chief, I think, being the markedly beneficial effect of the oxygen. It was the extreme lividity and dyspnœa which led to its use. It was evident that, whatever the toxin might be, the patient's most urgent need was to get her blood re-oxygenated, and it occurred to me to introduce free oxygen as directly as possible. It certainly seemed far safer than restraining the violent convulsions by means of chloroform in a patient alternating from convulsions to deep coma, the coma being also a great hindrance to exhibiting any purgative or diaphoretic drugs by the mouth. Two other points struck me forcibly at the time. Twice I administered hypodermically one-third of a grain of pilocarpine nitrate, and each time it was followed immediately by a violent convulsive seizure and vomiting. The other point was the excitation of the convulsions by slight peripheral irritation, eight attacks following immediately the passage of the catheter, and four after a vaginal douche.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

Two Unusual Cases of Tubal Gestation.—Primary Sarcoma of the Body of the Uterus.—Exhibition of Specimens.

A MEETING of this society was held on July 7th, Dr. WILLIAM DUNCAN, Vice-President, being in the chair.

Dr. ARTHUR GILES and Dr. EWEN MACLEAN contributed a paper on Two Unusual Cases of Tubal Gestation, the one causing chronic intestinal obstruction and associated with hæmato-salpinx of the non-gravid tube, and the other simulating retroversion of the gravid uterus. Case 1.—The symptoms and physical signs were principally those of pelvic cellulitis, together with evidences of pregnancy, whilst the case was complicated by chronic intestinal obstruction. In some respects the conditions suggested retroversion of the gravid uterus, and with this idea an attempt was made to push up the mass lying behind the cervix under an anæsthetic, but without success. The patient gradually got worse, and the propriety of opening the abdomen was discussed, but it was agreed that the patient's condition was so grave that she would probably not stand the shock of operation—an opinion confirmed by her death shortly afterwards. Case 2.—The symptoms and physical signs were those of retroversion of the gravid uterus causing retention of urine. An attempt to push up the mass behind the cervix under an anæsthetic was unsuccessful. But while the patient was resting in bed the symptoms improved. Nine weeks after admission she was operated upon and a tubal gestation was found, filling up the pelvis behind the uterus. Two conclusions were drawn as to treatment. First, that a pelvic tumour which differed in signs and symptoms from classical types should not be treated by the expectant method, but should be dealt with surgically as soon as possible. Secondly, that if a tubal gestation be diagnosed before rupture takes place the possible train of disasters will be best averted by immediate operation.—Dr. HORROCKS considered that it would have been better to have operated on the case which afterwards proved fatal. No doubt it was a difficult point to decide, but he considered it a good rule that when in doubt it was better to operate. This rule was, indeed, more firmly established now that better weapons were available, such as saline injections to deal with collapse, and also a more perfect system of asepsis. He asked what was the cause of death. Was it hæmorrhage? And, if not, was there any clotting or embolism? He also pointed out that the uterus was only three inches long; obviously from the size of the fœtus the uterus had either not increased in size as was usual or the fœtus had died and involution to some extent had taken place.—Dr. DRUMMOND ROBINSON asked Dr. Giles and Dr. Maclean why they had considered that the case might possibly have been one of cellulitis. He thought that the physical characters present suggested peritonitis rather than cellulitis. He also drew attention to the fact that a history of injury was absent—a point against the diagnosis of cellulitis.—Dr. MAIDLOW remarked that the history of the physical signs pointed to pelvic peritonitis and not cellulitis—a fact which, with the signs of pregnancy, he thought might have pointed to ectopic gestation. Moreover, symptoms of intestinal obstruction of any severity were in his experience very rarely associated with retroversion of the gravid uterus.—After some remarks by Dr. GALABIN, Dr. GILES, in replying, said that he quite agreed with Dr. Horrocks's rule, "when in doubt operate." In the first case, however, the patient's condition was so bad that it seemed impossible that she could stand an operation. The cause of death was intestinal obstruction and collapse. His reason for regarding the case as one of pelvic cellulitis rather than peritonitis was that in the first place there was at the time no reason to suppose that the appendages were affected, and he was in the habit of associating pelvic peritonitis with tubal mischief. In the second place the board-like hardness was more suggestive of cellulitis than peritonitis.

Dr. LEWERS read a paper on a case of Primary Sarcoma of the Body of the Uterus (Deciduoma Malignum) in a patient, twenty-four years of age, treated by vaginal hysterectomy. The patient had been married a year and believed that she had had three miscarriages, at two months, six weeks, and three weeks respectively. She came under observation on account of persistent metrorrhagia, dating from the time of the first supposed miscarriage, about eight months previously. The case on admission was at first supposed to be one of incomplete abortion, but after dilatation of the cervix examination showed that the symptoms were due to a malignant growth in the body of the uterus. Vaginal hysterectomy was performed on Feb. 11th, 1897; the patient recovered and was free from any sign of recurrence in May last. An examination of sections of the growth showed it to be a sarcoma and essentially identical with what had been described under the name of deciduoma malignum. Dr. Lewers examined the evidence as to the patient having ever been pregnant at all. While admitting the impossibility of proving she had never been pregnant, he considered that, having special regard to the fact that menstruation had never been regular, there was some probability that conception had never occurred.—Dr. EDEN said that the question of the connexion of these growths with pregnancy was the point upon which the whole theory of deciduoma malignum was established. If it could be shown that the disease had occurred in women who had never conceived then the theory must be abandoned, but nothing could be more difficult than the absolute exclusion of pregnancy by scientific proof in any woman, and in women whose menstruation was irregular it became quite impossible. It was obviously unfair, however, to agree that every woman might be assumed to have been pregnant unless the contrary could be proved. Direct evidence of pregnancy being so much more easily obtained, they were justified in asking that in those cases the positive evidence of pregnancy should be conclusive. In Dr. Lewers's case he thought there could be no reasonable doubt that the woman had never been pregnant at all, although in the nature of things absolute proof of this was impossible. Two other cases of deciduoma malignum had been recorded

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in which the evidence of pregnancy was equally wanting. It could not be too strongly emphasised that irregular hæmorrhages occurring in women who were the subjects of malignant disease of the uterus were no proof of abortion.

The following specimens were exhibited:—

Dr. LEWERS: Primary Sarcoma of the Body of the Uterus (to illustrate his paper).

Dr. GALABIN: An Œdematous Fibroid, weighing 20lb., removed by Hysterectomy.

Dr. GILES: Molluscum Fibrosum from the Labium Majus of a pregnant woman.

BRITISH GYNÆCOLOGICAL SOCIETY.

Mechanism of Inversion of the Uterus.—Escharotics in the Treatment of Uterine Cervical Cancer.

A MEETING of this society was held on July 8th, Mr. MAYO ROBSON, President, being in the chair.

Professor HECTOR TREUB, of Amsterdam, read a paper on the Mechanism of Inversion of the Uterus. He related a case of inversion in a patient who had been pregnant three times. Each pregnancy had ended in abortion, the last occurring seven years ago. For some time she had observed that something was protruding in the vulva, but she could always reduce it easily. Eleven weeks ago a prolapse appeared suddenly and could not be reduced. This caused much pain, and brought about hæmorrhage to the extent of making her swoon. Her general health had deteriorated, she had lost a fluid in appearance like meat-juice, and had been feverish. On examination a total inversion of the uterus, including the cervix, was found. Hysterectomy was performed, and the patient made a good recovery. Besides the œdematous mucous membrane the uterus only showed a very small intra-mural fibroid near the fundus. Microscopical examination showed that the muscular tissue was in a normal condition and that there was no question of atrophy of the uterine wall. Professor Treub proceeded to discuss the views held as to the mechanism of inversion. In only one group of cases was the mechanism wholly understood—viz., in those following immediately after labour; then the two elements upon which, according to Gaillard Thomas, the inversion depended were present—viz., relaxation and inertia of the uterine walls and downward traction or pressure. In other cases the explanation was far less obvious. Professor Treub rejected the theories of Küstner and of Schanta and Gottschalk as insufficient and submitted the following theory: "The base of a sessile tumour cannot contract because of the implantation of the tumour, which diminishes or altogether abolishes the contractility of that part of the wall. And it cannot be that only the contractility of that base is diminished; the surrounding parts must necessarily be feebler within a greater or smaller circumference. If from the outset the tumour is intra-mural the smaller degree of resistance of that part of the uterine wall, coupled with intra-abdominal pressure, may occasionally bring about a slight beginning of inversion; and when this is the case the conditions are essentially the same for sessile and intra-mural tumours and for the partial inversion described by Rokitansky. A circle of uterine tissue is abruptly curved in the place where Rokitansky found the external indentation. I need hardly say that in that incurved circle the uterine muscle must be absolutely paralysed. And this paralysis again will not be confined to a linear circle, but gradually diminishing will extend over a greater or smaller surface. The contractions of the normal part of the uterine wall will try to expel the part of the wall that acts as a foreign body. These expulsive efforts may slightly increase the inversion as far as the paralysis surrounding the circle of inversion permits, thus displacing the circle itself and paralysing another part of the uterine wall. Necessarily the extension of the partial paralysis proceeds farther in the uterine wall, too, and by the repeated action of this muscular play the inversion may gradually become complete as regards the body of the uterus. As soon as the body is inverted there is no longer any excitement for uterine contractions, and the inversion of the cervix generally does not take place. And it is the intra-abdominal pressure, again, that may invert the cervix too."

Dr. PURCELL, Dr. HEYWOOD SMITH, and Mr. SKENE KEITH having spoken, Professor TREUB replied.

Dr. HERBERT SNOW read a paper on Escharotics in the Treatment of Uterine Cervical Cancer. Of the various caustics used two stood out pre-eminently—viz., chloride of zinc and potassa fusa. As caustics they were on a par, but whereas the pain induced by the former was difficult to relieve, the pain resulting from potassa fusa could be instantly checked by the application of water; hence Dr. Snow believed that "the ideal caustic for malignant disease of the uterus or elsewhere was potassa fusa." He thought treatment of the cancerous cervix by escharotics preferable to hysterectomy.—The PRESIDENT thought that some of them would not agree with Dr. Snow's conclusions with regard to hysterectomy, because they could point to cases where this operation had been performed, and where the patients had remained well for much longer than the three years considered necessary to establish a cure. He would like to hear further details of the mode of application of potassa fusa; he had always regarded it as an agent rather difficult to control on account of its deliquescent properties. — Mr. SKENE KEITH said that he had used potassa fusa a good deal and believed it was originally an old Edinburgh remedy. He had applied it through a large Fergusson's speculum, rubbing it in in the form of a stick held in a caustic-holder. To prevent it from unduly spreading he used pyroligneous acid.—Dr. PURCELL and Dr. HEYWOOD SMITH made some observations, and Dr. HERBERT SNOW replied.

Reviews and Notices of Books.

Human Embryology. By CHARLES SEDGWICK MINOT, Professor of Histology and Human Embryology, Harvard Medical School, Boston. With 463 Illustrations. New York: The Macmillan Company. London: Macmillan and Co., Limited. 1897. Pp. 815. Price 25*s*.

THIS well got up and richly illustrated work is the result, the author tells us, of ten years' labour and is without doubt the fullest and most complete account of the embryology of man that has hitherto appeared in the English language. The author is well known and has made many contributions to the subject of embryology on his own account. His work as a whole may be regarded as a continuation, with special application to man, of Balfour's "Comparative Embryology," embracing in a very creditable manner the chief points in the very numerous and important additions to our knowledge that have been made by many workers throughout almost all the countries of Europe, not only in the embryology of human, but in that of the lower vertebrata and of the invertebrata.

Dismissing details of anatomy as being readily accessible in text books, Professor Minot plunges at once into the histology of the uterus. He takes exception to the view frequently expressed that the muscular tissue of the uterus essentially represents a hypertrophied muscularis mucosæ, believing that a muscularis mucosæ is not a primary but a secondary formation, and that it need not be coexistent with a mucous membrane, in support of which he points to the fact that in various instances in the animal kingdom a mucous membrane may be found without such a muscular layer. He describes with much precision and in considerable detail the appearances presented by the virgin uterus at the close of menstruation, his observations being opposed in some points to the statements of Sir John Williams; then by natural transition he passes on to describe the histological characters of the decidua serotina, vera and reflexa, and the results he obtained from the examination of various uteri at different periods of pregnancy. He entertains no doubt that the large cells of the decidua are directly derived from the connective tissue cells of the mucosa, the areolæ seen in section belonging to the glands which are considerably distended and distorted, and these

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he thinks are really the distended capillaries described by Sir William Turner. It is difficult to demonstrate the decidua reflexa after the fifth month, and preparations which Professor Minot possesses show that as early as two months the decidua reflexa is undergoing hyaline degeneration, that at three months the degeneration is considerably more advanced, and that by the sixth and seventh month the reflexa can no longer be found. The changes in the mucosa following parturition are very well given. We are still curiously ignorant of the cause or causes of the formation of the decidua either in menstruation or gestation, as well as of the cause of delivery, though in regard to the last-named event many suggestions have been made. Some of these are briefly given by Professor Minot in the following sentence: "Mauriceau sought the stimulus which excites the uterus to normal contractions at the full term in the uterus having reached the limit of its expansibility; Naegele in the irritation caused by the embryo acting like a foreign body in the uterus; Engelmann, at least partly, in the degeneration of the decidual cells; Harse and others in the accumulation of carbonic acid in the blood of the uterus." Perhaps answers to the question will be obtained hereafter by careful studies in comparative anatomy. In the section on the Genital Products minute descriptions of the spermatozoa and ova are given, in which most of the recent researches are embraced. Professor Minot strongly advocates the polarity of the ovum, the nucleus being excentric and the yelk grains accumulating at the opposite pole. The maturation of the ovum rendering it fit for impregnation is marked, as von Baer originally maintained, by the disappearance of the germinal vesicle, which loses its membrane, whilst the contents present the phenomena of karyokinesis; the polar bodies representing the larger portion of the nucleus are then extruded, whilst a small portion of the nucleus remains to form the female pronucleus. In regard to the rupture and subsequent changes that take place in the Graafian follicle, Professor Minot describes the coagulum which fills the follicle after the rupture as being rapidly penetrated by tissue which grows into it from the wall of the follicle, composed of spindle-shaped connective tissue cells and large cells containing lutein granules with bloodvessels. He agrees with Benckiser's statement that the lutein cells arise exclusively from the theca interna. Professor Minot refers to the experiments of Hertwig and Fol as being the first to show that a single spermatozoon suffices to fertilise a single ovum, and, in fact, that the first spermatozoon that wins the race "prevents the penetration of other spermatozoa. How, is undetermined." Hertwig, however, states very definitely that at the moment the seminal filament has bored its way into the egg a fine membrane detaches itself from the yelk over its whole surface, due probably to contraction of the egg plasma, causing the expression of nuclear fluid, which renders the penetration of another male element impossible. The concordant testimony of a multitude of observers supports Hertwig's views; still, the experiments of Newport should not be altogether overlooked, which were to the effect that ova attacked—we will not say impregnated—by many spermatozoa were more perfectly developed than when only one or two appeared (to him) to enter the ovum. A minute description is given of the segmentation of the ovum and of the formation and differentiation of the ectoderm and entoderm, which he considers should receive the distinctive appellation of the diaderm stage; and this is followed by an account of what he terms the "law of concrescence," though the term "process" might with advantage have been exchanged for "law." In regard to the further development of the embryo from the appearance of the medullary groove to the origin of the cardiac and uro-genital systems, we must refer the reader to the original for the numerous details which have been culled by the author from a very large number of works on Embryology; suffice it to say he has studied the bibliography of each stage very carefully, and whilst giving the views of each investigator he does not hesitate to impartially criticise and often to correct them from his own large experience. There is a valuable chapter on Known Human Ova of the Second and Third Weeks, in which Professor Minot has collated all the descriptions of embryos not over three weeks—a task that has not hitherto been attempted. He has been successful in discovering about thirty-eight cases, of which a few are rather doubtful. The fourth part is devoted to the consideration of the fœtal appendages, including the chorion, amnion and pro-amnion, yelk sac, allantois, and umbilical cord and the placenta. The last part is devoted to the growth and development of the fœtus, the several organs and systems being taken in order. The account of the Development of the Nervous System is particularly good and complete. Speaking of the differentiation of the cerebral hemispheres he remarks: "By a long-continued tradition it has become customary to describe the process as the sub-division of the primary vesicle into two secondary vesicles designated as the fore-brain proper (Vorderhirn, prosencephalon) and 'tween brain (Zwischenhirn, thalamencephalon). Such a description, however, seems to me hardly justified either by embryology or comparative anatomy, and to be especially apt to mislead and confuse." He proceeds to describe the hemispheres correctly as outgrowths of the primary vesicle.

Professor Minot has introduced a few, but very few, new terms, amongst which we may mention "ectental" ine, "diaderm," "concrescence," and "aniages," the latter term derived from the German and being equivalent to "rudiment." The text is illustrated by a great number of woodcuts, some of which are reproductions of those contained in other, and for the most part original, treatises, whilst others, and the larger number, are from preparations in the author's own collection. The treatise may be strongly recommended as an excellent exposition of the present state of embryological knowledge.

JOURNALS, REVIEWS, &c.

Guy's Hospital Gazette.—A special number of this Gazette dated June 7th has been issued with the twofold object of recording the events connected with the opening of the new medical school buildings, and of drawing attention to the advantages offered by this school to intending students. The article on the New School is illustrated.

The London Hospital Gazette.—The issue of this Gazette for June is perhaps one of the best that has yet left the hands of the editors. The opening article, "Esprit de Corps," contains some sound advice, and the humorous contributions are good, from that of the woman who "'ad digestion of the lungs and amenia" to the note concerning clerks and dressers, which among other advice advocates the good plan that the clerk or dresser who arrives earliest should fill in the names of his colleagues in the attendance book, as custom speaks favourably of the system. Medical students who are cyclists will heartily enjoy the article on the Surgery of the Pneumatic Tyre, wherein are set forth the appropriate treatment for punctures and the symptoms which suggest operation.

The St. Thomas's Hospital Gazette for June is more serious in its matter, but will be universally appreciated by students of the Hospital. There is an illustrated description of the new athletic ground at Chiswick, "the promised land which so many generations of students have hoped for and departed without seeing," which has now been entered into. Dr. T. D.

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Acland concludes his interesting paper on Compulsory Vaccination.

St. Bartholomew's Hospital Journal, like the foregoing, presents to its students rather solid fare. The subject of headaches is treated by Dr. Gee, and Tropical Diseases is the topic discoursed upon by Dr. W. H. Maidlow in his second contribution concerning the Ship's Surgeon and some Tropical Diseases. Mr. H. J. Walton, in A Plague-Wallah, incidentally mentions that the purdah, though designed with the object of concealing the loveliness of maidens who might otherwise be the object of evil design by the "Kafir," often leads the fair ones into trouble, as, thanks to the extremely limited range of vision which the eye-holes afford, the ladies are constantly falling between the railway carriages and the platforms. There is also a report of the paper read before the Abernethian Society by Dr. James Morrison on the Treatment of the Puerperal Uterus.

HOLIDAY PUBLICATIONS.

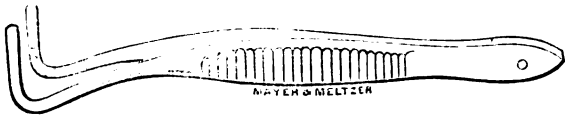
The London, Chatham, and Dover Railway Company's *Guide to Paris* presented gratis by the company will be found a most useful little companion for a visitor to Paris. The sectional street plans are on a large scale and very clearly printed. It also contains a useful list of the sights to be seen, prices of public conveyances, &c.

Summer Holidays in North-East England. London: Walter Scott, Ltd. Price 1*s*. 6*d*.—This is really a series of photographic illustrations of picturesque places in North-eastern England with short descriptive letterpress. There is certainly a comparatively unexplored field of beauty in this region, and intending holiday makers cannot do better than consult the pages of this book.

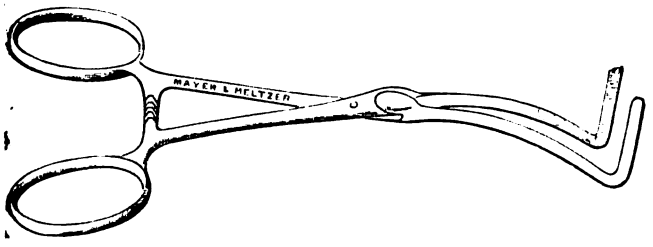
New Inventions.

NEW PALPEBRAL FORCEPS.

THESE forceps are made in two varieties, one with bow handles and step-catch fixation, furnished with the antiseptic joint; the other like the ordinary spring forceps. The blades are slightly curved backwards in their course and



finish by being bent forwards at a right angle. At this angular portion, which is about one inch in length, they are slightly roughened on their inner surfaces to prevent slipping,



and are so made that, closing in a parallel manner, they give an equal grip throughout this area. These instruments have been found useful as fixation forceps in various operations upon the lids, such as the removal of Meibomian cysts, plastic operations, &c. They are made by Messrs. Mayer and Meltzer, Great Portland-street, W.

Harley-street, W. H. WORK DODD, F.R.C.S. Eng.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY MEETING of the Council was held on July 8th, the President, Sir WILLIAM MACCORMAC, Bart., being in the chair.

The PRESIDENT reported the result of the meeting for the election of members of the Council, as recorded in THE LANCET of July 3rd, and he further stated that Mr. Watson Cheyne and Dr. Ward Cousins, being fourth and fifth on the list of the successful candidates, would be the substitute members of Council for the late Mr. Oliver Pemberton and the late Mr. Walter Rivington respectively.

Mr. Howse, Dr. Ward Cousins, Mr. Owen, Mr. Godlee, and Mr. Watson Cheyne were introduced, and made a declaration in the terms of the oath prescribed by the Charter of 1800, and took their seats as members of the Council. A vote of congratulation to the President and to Sir Thomas Smith on their receiving the honour of a baronetcy was passed.

The President reported the proceedings of the half-yearly meeting of Fellows on July 1st, as already published in THE LANCET of July 10th.

The Council proceeded to consider what reply should be sent to the memorial in reference to medical aid associations from Fellows and Members of the College practising in and about Plymouth, Devonport, and Stonehouse. It was resolved: "That the memorialists be informed that the Council are of opinion that the disciplinary powers provided by Section XVI. of the by-laws do not entitle them to question the legality of Fellows and Members of the College holding the appointment of medical officer to medical aid associations such as those referred to in the memorial, and the Council cannot therefore endorse the refusal of any Fellow or Member of the College to meet in consultation (particularly in urgent cases) registered practitioners when acting in conformity with their legal rights." It was also resolved that similar replies should be sent to the Norwich Medico-Chirurgical Society and to the Beckenham and Penge Medical Society.

The Council having learned that a medical man had falsely described himself as a Member of the College resolved to instruct their solicitor to institute legal proceedings against him.

A letter dated July 5th was read from Dr. R. R. Rentoul enclosing for the consideration of the Council a copy of his draft Bill for the Registration of Midwifery and other Nurses. The draft Bill was referred to the President and Vice-Presidents for consideration.

A letter was read from Sir William MacCormac stating that in anticipation of the expiration on August 1st next of his period of office on the Court of Examiners, he desired to place his resignation in the hands of the Council to take effect from the end of the Pass Examination for the Membership to be held this month, and that he was not a candidate for re-election. This vacancy, and that resulting from Mr. Davies-Colley's resignation, will be filled up at the next ordinary meeting of the Council.

The following professors and lecturers were elected for the ensuing year:—Hunterian Professorships: Henry Morris (The Surgery of the Kidney), Frederick Gymer Parsons (The Muscles of Mammals), and Charles Stewart. Arris and Gale Lectureship: Thomas Grigor Brodie (The Place of Formation and Chemical Properties of the Antitoxins). Erasmus Wilson Lectureship: Holburt Jacob Waring (The Pathology and Treatment of those Diseases of the Liver which are amenable to direct Surgical Interference).

Sir William MacCormac was unanimously re-elected President, and Mr. Alfred Willett and Mr. H. G. Howse were appointed Vice-Presidents.

The next meeting of the Council will be on July 29th.

THE SWANSEA HOSPITAL.—The annual report of the Swansea Hospital, which has been recently issued, shows an adverse balance of £766, although the institution is most economically worked. The sum of £805 was received from extraordinary sources during the year, as compared with £1727 in the preceding year.

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THE LANCET.

LONDON: SATURDAY, JULY 17, 1897.

THE holiday season is once more at hand, and once again we must repeat that the true holiday is that which occasions no strain and no anxiety. "Drive" is the curse of this century. We have lost the sense of repose. The capacity of passive contemplation has been preserved only by oriental peoples. We suffer from the exaggeration of the activity which has made our greatness as a nation. We are punished by the vice of our virtues. New diseases have arisen, or perhaps it would be more correct to say that diseases which were rare are now common, and these are almost all attributable to the extraordinary strain entailed by the modern exigencies of the struggle for existence. Great fortunes are amassed, terrible poverty follows in their trail, the "submerged tenth" appear as BANQUO'S ghost at the feast of the prosperous. Those who succeed have ever before them the alarming spectacle of innumerable failures, of unfathomable suffering. The poor suffer by reason of their poverty and the wealthy by reason of the dangers which menace their situation. Safe investments bring in hardly any interest, and where the interest is high the risk of loss is ever present. This it is which occasions the strain and causes what is colloquially called "driving." We now try to do in a few hours an amount of work which our forefathers leisurely accomplished in a much longer time. Mechanical contrivances, railways, the telegraph, the telephone, the bicycle, all conspire together to make us hurry in every detail of life, to leave us no time for reflection, to compel us to prompt decisions. Therefore, the strain of intense concentration is necessary so that we may be able to decide in a moment what in former times we might have contemplated at leisure and settled after calm deliberation. Among the working classes, though the hours of labour in the leading trades have been considerably reduced, it is found that the output on the whole has been greatly increased. This is not only due to improvements in machinery, but is also the result of the greater intensity of application. Machinery is very expensive and consumes much coal. The competition among the working men, as among the commercial classes, is most keen. To be secure in his employment—for there is the vast army of the unemployed outside ever ready to take his place—the workman must obtain from the machine he controls the maximum possible output in the minimum time. Hence the sense of "drive," which has enabled the chariot bearing British industry so often to win the race, though the victorious horses have so overstrained themselves as to sink prematurely to the grave.

While that class of disease due to bad sanitation is becoming more and more scarce in our midst, those diseases that result from nervous exhaustion are becoming more and more prevalent. What, then, under these circumstances, should be the object and purpose of a holiday? The answer is obvious—such rest as will recuperate the nervous system. Therefore, the first consideration is that the holiday shall be absolutely free from all anxiety, that there shall be no hurrying and no effort to do a great deal in a very little time, and that there shall be no competition, no rivalry, no attempt to excel or to outdo others. Unfortunately, the spirit of competition has spread even to our recreations. Medical evidence reaches us from all sides as to the injurious effects of injudicious and reckless bicycle riding. So in other out-door sports and athletic exercises recreation is converted into labour and pleasure into pain. Instead of playing to win health, how many play only for the satisfaction of beating a fellow player? Thus after over-straining themselves in work and business they overstrain themselves at play. Nor is this the only form of rivalry in recreation. The very mapping-out of a holiday excursion is often a deep-laid scheme to outshine a neighbour. During the whole winter the neighbour in question has described at various social gatherings the wonderful tour he and his family made last year in—let us say—Switzerland. His envious hearers have never been further afield than Margate or the Isle of Wight. They must now not only do as well, but even better. They will go further and see more. If the neighbour has contemplated the sunrise from the Rigi, they must at least look down the crater of Mount Vesuvius. Thus a lengthy journey is undertaken, involving expenses that are often beyond the financial means of the family, to see sights in which they take no real interest, but simply and solely because they want to do at least as well as, if possible better than, other acquaintances in their particular circle of friends. Such holiday tours entail a continuation of the strain and of the anxieties that are the inevitable concomitants of modern business. As the expenses must be limited, each town and each sight must be seen with undue haste and in a manner that causes unhealthy fatigue.

Of course, all action engenders reaction, and there are not a few families who seek to satisfy their self-esteem by proudly declaring that they will not allow themselves to be carried away by any such folly. They will not go to any fashionable place whatsoever. They will not brave the discomfort and fatigue of any continental tour. They will go to some utterly unknown country village, a long way from any railway line, where they will be topographically divorced from the life of great towns and from the noise and rush of both business men and holiday folk. This all sounds very wise, sedate, and reasonable. But we must not forget that habit is a second nature. For holiday-makers to be in a village where it is impossible to buy a newspaper; where postal communications are more difficult than if they were ever so far away on the continent; where there are no shops; where none of the comforts and luxuries to which they are accustomed can be purchased; where there is but one butcher, who only kills once a week, and where even the bare necessities of life are difficult to obtain, is a condition of existence which does not always engender that sense of contentment and perfect rest that characterises a healthy holiday. This, again, is not the ideal. All the habits of life are not to be thrown away by the mere hailing of a cab and the booking to the station nearest to some forlorn village. The chances are

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that the holiday seeker will in a few days weary of his solitude. He will find his ordinary troubles replaced by the trouble to get something like the food to which he is accustomed and some sort of occupation that will satisfy his mind. The dweller in a great town does not realise how much he depends on the surrounding conveniences and civilisation. When he is suddenly cut off from all these the change is too great and sudden, and there is but little enjoyment in it.

What, then, is the ideal holiday? Fortunately, this cannot be stated in a sentence or even in a volume. If it were so easily described then everyone would want to do the same thing and go to the same place, and this would be a material impossibility. But what we have said can serve to indicate the principle that should govern the plan of the holiday. We suffer from excessive competition, from the "driving" which produces the nervous exhaustion that constitutes the most characteristic symptom of the nineteenth century. There must, therefore, be no competition, no feeling of rivalry with other holiday seekers, and no desire to boast on returning of the wonderful things achieved. If we play we must play for the sake of health and pleasure, but our pleasure must not be found in the pride of excelling someone else. If we walk, or cycle, or climb, or row, or run, we must do so because we feel inclined to take such exercise, because it agrees with us, and not because we want to go farther or quicker than someone else. There is, we repeat, too much competition in business; therefore there should be none in pleasure. Where fatigue commences pleasure is apt to pall and health to suffer. But while thus economising the physical forces of the body we must be equally careful with regard to those of the mind. To save the brain and the nervous system the holiday must be so managed as to involve no financial strain Its pleasures must not be darkened by the thought that too much money is being spent. We must not attempt more than we can easily afford, for the object of the holiday is rest, and there is no rest where money troubles threaten. Bearing these general principles in mind, it is for each individual to select that form of holiday which is most in keeping with his means, his tastes, and his proclivities.

No result of the late Jubilee celebrations is likely to be more lasting or more important than the feeling of friendship, mutual admiration, and mutual esteem which it has brought about between Great Britain and her colonies, among which a deservedly high place must at once be accorded in respect of patriotism, public spirit, and enlightenment to Australia. If Cape Colony has presented us with a battleship, it must not be forgotten that Australia, ten years ago, undertook to defray jointly with us the expenses of the Australian auxiliary squadron. To our colonies we send the most enterprising of our sons, and Australia in particular gives them a warm welcome; and from Australia, when they have won prosperity, they return to the old country with less readiness than from any other adopted home. There is something in the life, whether in town or the country, that fascinates them, and they remain. Australia, however, is a large continent, and if we cannot include every portion of it in our praise we do not condemn it as a whole on account of the delinquencies of what may not be one of its most important factors, for, as a matter of fact, just at the present moment Perth, the capital of Western Australia, is certainly not a conspicuous example either of patriotism, public spirit, or enlightenment in respect of matters of vital importance to the health and prosperity of its citizens and to the reputation of the colony.

It is true, we understand, that those who spend the public moneys entrusted to them by Perth citizens are endowing the township with public printing-works, with a mint of palatial design, and with an observatory, while a project for zoological gardens has been mooted; but although commending the desire to study other worlds implied by the observatory, we would suggest that Perth should observe its own condition and look elsewhere without requiring the aid of astronomical telescopes for the true paths to self-improvement. Perth at this moment is being seriously devastated by an epidemic of typhoid fever, and, setting aside private sources of information, if only a small fraction of what we learn from the local press is correct there seems no reason why Perth should not continue to be devastated for an indefinite period by typhoid fever or by any other epidemic that may once get a hold upon its people. Of the attack now raging suffice it to say that in one week there were fourteen deaths from this disease alone. The causes directly responsible for the condition of Perth are evident. The city has no efficient drainage system—no system at all, we believe, according to modern ideas; it has a water-supply not beyond suspicion at its point of origin, and liable to every kind of abominable defilement in and near the town; while its milk-supply is equally open to criticism. Concerning this last, the rigour of the supervision accorded to it, as well as its unusually intimate connexion with the water-supply, may be judged from cases detailed in the *Perth Morning Herald* of milk being sold containing 50 per cent. and more of added water, while the back yard of a deserted "dairy" was found to contain traces indeed of a cow, but stacks of empty condensed-milk tins! There is no record that the milk-dealers in these cases suffered any penalty or were even prosecuted for their share in the work of endangering human lives. With regard to drainage, the system which the city fathers of Perth appear to permit for the disposal of the natural refuse of a growing town is perhaps the system suggested by the naturally porous soil of the locality, but it is also primeval and primevally dirty. "Dry-wells" is the term applied to pits which are neither wells nor dry, but are simply holes in the sand into which every form of refuse, more or less liquid, is collected, until the solid or greasy constituents of the refuse, instead of running away, begin to coat the walls, which thus become impervious. Then the "dry-well" is boarded up and another is dug near by. More solid refuse, including fæcal matter, is carried to some distance from the city, and either buried at a small depth in the sand or treated in a place called euphemistically (or satirically) a "sanitary reserve," where some sort of burning is practised in the case of anything that will burn easily.

What will happen, we should like to know—and we advise the ratepayers of Perth to ask themselves—when the whole of the sandy area within reach has become so impregnated with filth that it will hold no more? Probably those in

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authority are satisfied that "sufficient unto the day is the evil thereof." In this, in a sense, they are right, for the evil of Perth's insanitary condition would seem to have reached a point at which it will take many days to stay its course; but such an amiable policy of hope and trust must not be persevered in. The most elementary rules, not only of sanitation, but of decency, are being disregarded. Matters have reached a pitch at which the cleansing of back yards and the providing and emptying of privies are mere details. What is wanted is a complete and effective system of drainage, a code of sanitary laws, and a strong and independent body of men to enforce them. We do not insult the intelligence of Perth citizens by explaining that manure in a liquid form will percolate through sand and defile water springs, and that a heap of it lying exposed in a solid state will pollute the air. We do not suppose that they are blind to the fact that such things may cause and spread disease, and that in civilised towns, from motives of safety as well as for reasons of æstheticism, such methods of drainage are as obsolete as the indifference that permits them. But we do take it upon ourselves to advise Perth to get something done and done quickly. Perth has much in its favour in the way of situation, while it is a city of modern origin, and belonging, as it does, to a go-ahead colony, should be ready to employ all the necessary appliances now at the command of the modern sanitarian. Perth has, moreover, a brilliant example comparatively near to it if what we hear of Coolgardie, that most recent of mining centres, is true. At Coolgardie every effort seems to be made to overcome the natural difficulties that beset sanitation and local government in a new and necessarily rough-and-ready community. What Coolgardie can do surely Perth can do, and we look to public-spirited citizens to ensure that an early start is made. True public spirit will postpone the erection of observatories, mints, and even printing-houses, and will taboo the establishment of zoological gardens until the life and health of the city has been safeguarded. True public spirit is just before it is generous. It will disregard the fact that sewers are costly without being showy on the surface. It will support its sanitary officers through thick and thin, without studying the favour or disfavour of the dirty and ignorant, and it will so build up in the city, in the inhabitants of which it is found, memorials of nineteenth century progress worthy to rank with any of the more visible monuments of Jubilee loyalty and enthusiasm.

THERE is no one who will not have read with the greatest satisfaction the righteous sentences pronounced last week by Mr. Justice HAWKINS upon five scoundrels convicted of blackmailing. Three of them, GRANT, COULTON, and THORPE, had terrorised and unhinged the mind of their miserable victim to such an extent that they not only got large sums of money from him, but rendered his life so wretched that his health is probably permanently undermined. Justice, however, though it would seem *pede claudo*, has overtaken them; two have received sentences of penal servitude for life and the third for fifteen years. The other two, who had acted a shade less villainously towards another victim, were punished with ten and eight years penal servitude respectively. These are heavy sentences, yet not one whit too severe, and not so many years ago the legal punishment for this class of offence was death.

Blackmailing is, we regret to say, a crime essentially human, and, more than that, one belonging to the higher civilisation. The primitive man if he wanted his neighbour's goods or his wife simply took them; if his neighbour resisted he hit him on the head or was himself killed. It was the recognised method of procedure—one that everyone was liable to and one that men shared with animals; but with advancing refinement the bestial element was eliminated, and that side of human nature which theologians say is derived from the great Accuser came to the fore, and instead of entering into a brutal fight, where very possibly he might come off second best, the refined blackguard said to his victim, "Unless you will give me so much I will render your life utterly wretched; I will accuse you of nameless crimes; friends, position, honour will all slip away, and you will pray for death as a release." The criminal of this class is a keen judge of human character, and selects his victims with great care, so that he has two advantages on his side. First, the fact that there are a certain number of persons who are so dumbfounded by an accusation of this sort that though they may know it to be utterly false, yet they have not the courage to fight against it; secondly, the fact that there are perhaps few persons in the world who have not got a skeleton of some sort in the cupboard which they would rather not have exposed to the eyes of others. And so the weak-minded man is led to give way in the first flush of terror and disgust, thinking to stave off some disgrace—he knows not what—until the penalty for silence gets heavier and heavier and his life more and more miserable, when he at last does what he should have done at once, seeks the aid of the law and, as in the two cases upon which we comment, stands up in court before the eyes of his fellows a man of unblemished character.

We are led to dwell upon these particularly odious crimes because they have a special interest for us as members of the medical profession. Of all professions ours is the one most open to attacks of this kind; charges are constantly made against medical men which are most easy to bring and equally hard to refute, although we are glad to say that those against whom they are brought almost invariably act so that the matter is fought out in court. At first sight it might often seem worth while for a medical man to submit to blackmail; legal proceedings are very long, always expensive, and in cases of this sort not particularly pleasant for the defending side. Small wonder, then, if the busy practitioner is sometimes tempted to buy silence at the price demanded. It is a temptation, however, to which he rarely yields, for he knows very well that the blackmailer is a very vampire who returns time after time until he has drained his victim dry so that unless he is met and fought at the outset he becomes more and more difficult to shake off. Everyone should remember this point and medical men of all others, for their honour is their very existence; and if they have not time, or think that they have not, or are too poor to battle single-handed, there is an easy way out of that difficulty—namely, by joining one of the societies organised for medical defence. Let anyone read the reports of these societies and he will see that in nine cases out of ten the blackmailer when confronted with the society retires

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precipitately from the case. Let no one think either that on account of position, or age, or experience, or the nature of his practice he is exempt from the danger of attack. "*Hodie tibi, cras mihi*," is the motto for every one of us, and no one knows whence the bolt may fall. The medical defence societies are doing good work even with the small amount of power they possess, but we must wait and strive until our own profession is as united and as well organised as that of the law. The blackmailing of a lawyer is an unheard-of occurrence; firstly, he is far too alive to his own interests to make such a thing possible; and, secondly, he belongs to a profession the very name of which is objectionable to criminals. Let us, then, as medical men lay down our petty differences, and in so doing preserve for ourselves, not only a living wage, but our honour and reputation. The stronger we are the more wisely and the better we shall be able to use our strength, not only for our own profit and renown, but also for the benefit of the community which we serve.

AN interesting Blue-book has recently been issued by the India Office entitled "Further Papers relating to the Outbreak of Plague in India." Amongst other matters which it contains there are details of a number of experiments as to the results of the inoculation of preparations of different grains, &c., such as wheat, flour, rape-seed, &c., with cultivations of the plague bacillus; and the Governor-General of India in one communication states that during the sittings of the Venice Conference in March last the Government of Bombay telegraphed to the British delegation to the effect that grain purposely infected did "not permit of the existence of the microbes for more than four to six days." He now adds that the Government of India are advised that the experiments as to this are not conclusive, "since the loss of pathogenic property may be demonstrated without the loss of vitality, so that the bacilli may under favourable local conditions, re-acquire toxic properties." Points such as these have high scientific interest; but we cannot help thinking that when the question arises of announcing such possibilities in connexion with matters of trade and commerce, which are of vital importance to India and even to our own country, it would be better to wait until some measure of certainty had been attained. Nearly all measures of restriction which have turned out to be useless in practice have been based on theories involving possibilities as distinguished from certainties. It is, indeed, extremely doubtful whether a carefully designed laboratory experiment in which a given microbe is purposely inoculated into specially contrived preparations of a certain article finds any real counterpart in ordinary trade transactions carried on by persons who are presumably in health; and the fact remains that notwithstanding these experiments no case or cases have been known in which the abundant exports of grain from Indian or other plague-infected ports have been identified with, or even reasonably suspected of having been followed by, the production of plague.

Another similar matter was, according to the Blue-book, brought under the notice of the Local Government Board by the India Office. The latter department, whilst awaiting the results of experiments in India as to "the behaviour of the plague microbe in wool," desired to know, in the interests of certain British manufacturers, if the scientific advisers of the Local Government Board could express an opinion whether bales of wool from Bombay or Karachi would carry risk of plague to people who might handle the wool in England. Here again the question arises as to whether laboratory experiments and intentional inoculations can be interpreted in such a way as to apply to trade processes carried on under ordinary circumstances and with presumably healthy people. The whole histor of plague in Alexandria and elsewhere is entirely opposed to the theory of the disease being conveyed by goods which are dealt with as articles of commerce; and thousands of bales of cotton, for example, have been regularly delivered in European ports from plague-infected ports, and even by means of plague-infected ships, without the occurrence of plague in the ports of arrival or amongst those dealing with the cotton. And we cannot but feel that evidence of this sort should altogether outweigh the discovery, after a certain number of days, of the plague bacillus in a given sample of cotton which had been purposely inoculated with it under laboratory precautions by an expert bacteriologist.

We are, therefore, in no way surprised to find that the India Office were informed that the medical officer of the Local Government Board was not aware of any evidence to show that there was danger to the United Kingdom merely because of the arrival of bales of wool from ports where plague was prevalent, and that, in his judgment, the discovery of the plague bacillus after a certain number of days in an article that had been purposely inoculated with that bacillus ought not to be regarded as affording proof that the article in question, whether it be wool or any other substance, was likely in the ordinary trade processes to convey that infection. This was the attitude which was adopted by the British delegates at the Venice Conference, and it very largely aided them in carrying their point even in the face of suggestions of possibilities based on laboratory work and intentional inoculations. As a result trade and commerce will be but little hampered by the conclusions embodied in the Venice convention; and hence we should be sorry to see suggestions bearing in an opposite direction emanating from one of our own dependencies. When we have proof that trade processes involve danger, then will be the time to restrict those processes, and, in the meantime, we should prefer to see the results of bacteriological work in laboratories discussed apart from the question of such trade operations as are concerned with imports and exports.

Annotations.

"Ne quid nimis."

THE PLAGUE IN POONA AND THE LATE OUTRAGES.

THE more we learn of the facts connected with the late tragedies at Poona the more strengthened we feel as to the substantial correctness of the position we took up last week in regard to the recent events in India. There is, and there can be, no desire on the part of either the authorities in India or of this country to stifle any fair criticism or apply "the closure" to any reasonable, if mistaken, expressions of disapproval in regard to themselves or

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their acts. The natives of India generally are a docile and law-abiding, but an ignorant, excitable and highly credulous people, among whom public opinion, as we understand the term, has no existence, and the masses are consequently very much at the mercy of a disaffected minority, who utterly disregard the truth or accuracy of any statements they may make. It would be absurd and unjust to say that there are not numbers of intelligent, educated, and philanthropic Hindoos and Mahommedans in the country, for, as everybody knows, there are. We are not speaking of such as these, but of the masses of poor natives who are ignorant, superstitious and credulous, and conservative to a degree, and they make up a highly inflammable material if only the right kind of match be applied. Poona, the capital of the Deccan, is a well-known hotbed of disaffection, and the application of the necessary hygienic measures for dealing with the plague afforded an opportunity to the disaffected classes to indulge in all kinds of misrepresentation for the purpose of prejudicing the Government authorities and inflaming the fears and passions of the native races against them. The search parties consisted of native as well as European troops, and natives were invited to take part in all that was done—officers, medical and military, female medical practitioners, and nurses lent their aid; and it is inconceivable that under such circumstances any of the alleged outrages on the part of soldiers could have taken place; nor did any revengeful acts on the part of the native population occur at the time or immediately afterwards. It was not until time had been afforded for the fabrication of maliciously false reports that any vindictive spirit was exhibited, and that is always the danger in India. But there is no reason for people in this country "to lose their heads" on the subject. It is not the beginning of a fresh mutiny—indeed, there is not the necessary native organisation for creating one on any large scale, although manifestations of ill-feeling against our government must always be regarded with thoughtful suspicion and some possible anxiety. If we really believed that the natives of Poona had any just cause of complaint they would have our sympathy and support, but all the independent reliable evidence is to the contrary effect. The professors attached to Indian colleges who are now in this country should be prepared to substantiate their charges or take the consequences; at least, so it seems to us. The measures adopted for the suppression of the plague in Poona appear to have been eminently successful; but, notwithstanding all the care and consideration that may be bestowed, their application must, we fear, be always unpopular and distasteful. Still, we should spare no effort to do all we can to avoid wounding the religious susceptibilities and caste prejudices of the native population. India has been sorely tried of late by plague, pestilence, and famine, followed by earthquake; and it is quite possible that an ignorant and superstitious people may regard these as so many signs adverse to our rule.

KISSING THE BOOK.

ON July 5th Sir Walter Foster repeated his question in the House of Commons as to the English form of oath, and asked the Attorney-General whether it was his intention to make any proposals for amending the law so as to abolish the objectionable practice known as "kissing the Book." Sir Richard Webster repeated his reply that the sanitary objections to the present method of administering the oath had in his opinion been somewhat exaggerated. He also expressed his personal belief that the option of swearing in the Scotch form, which is becoming every day more generally known, was sufficient. He added in conclusion that it was not the intention of the Government to amend the law, at any rate during the present session. On the first and second points we must observe that the danger of infection is a matter not of opinion but of fact, whether we regard the risk as conveyed by the Book from mouth to mouth or as a mediate form of contagion in cases of epidemics. In the epidemic of small-pox in Warrington some years ago a solicitor, fearing that he might be infected by a previous witness from an infected house, claimed to be sworn with uplifted hand, but was refused permission by the county court judge, who was ignorant that in doing so he was violating the law and depriving the witness of his just rights. More recently in the epidemic of small-pox at Gloucester some jurors objected to kiss the book on similar grounds, and were permitted to swear with uplifted hand. Notwithstanding these exceptions, and the fact mentioned by Sir Sherston Baker, Recorder of Barnstaple, that there is no legal authority extant for kissing the book, it is still, we assert, practically compulsory on the large majority of witnesses, most of whom are wholly ignorant of the Act of 1888 and its fifth section; while of the few who know it only a very few claim the privilege, owing to an intuitive dislike to be singular and to give trouble. Sir Richard Webster is also reported to have stated that notices had been placed in all courts showing witnesses the provisions of the Oaths Act, 1888, which permits them to take the Scotch Oath. This is a fact of which we were wholly unaware. As the assizes are now being held throughout the counties of England and Wales it will be interesting to ascertain the result of this publicity. Apart from the question of infection the English form of oath stands condemned as an uncleanly mode of adjuration; it has also been condemned by an eminent English judge as being wholly unintelligible to children, and, he might have added, to many adults. Those who respect the religious sanctity of an oath have condemned it as wanting in solemnity. During a period of twelve years we have repeatedly urged its abolition and the substitution of the Scotch form as the uniform mode of adjuration. It remains now to be seen whether the public, guided by the press, will recognise the desirability of this reform.

FRACTURE OF A VERTEBRAL ARTICULAR PROCESS.

IN the June number of the *University Medical Magazine* of Philadelphia Dr. John K. Mitchell publishes a case of this very unusual injury. A woman, aged thirty-two years, in moving backwards stepped with her left foot into a hole and wrenched her spine in the effort to recover her balance. The spine, especially in the lumbar region, became very tender, and she suffered from sciatica in both legs so severely that the operation of stretching the nerve on the most painful side—the right—was performed, but without relief. Five years after the injury she was still suffering from paroxysms of pain accompanied by twitchings and involuntary movements of the legs, especially if she lay on her back. For months she had to sleep propped up, in order to prevent them. Movements, such as rising, bending, especially to the right, standing on the right foot, or walking on an uneven surface, caused distress in the cervical and lumbar regions and in both sciatic nerves, especially the right. The knee-jerks were diminished, especially the right. From the waist down the whole spinal region was very sensitive, and on the right side, at the level of the third and fourth lumbar vertebræ, was a spot so exquisitely tender that it could not be touched without the patient crying out. An exploratory operation was performed by Dr. J. William White. The patient was placed in the prone position and an incision made over the spinous processes of the third, fourth, and

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fifth lumbar vertebræ. The muscles were dissected first from the right and then from the left side of the spinous processes. Nothing abnormal was found. On inserting the finger, however, along the lateral aspect of the superior articular process of the fourth lumbar vertebra in order to reach the intervertebral foramen, a piece of rough bone, a portion of the process, broken off and displaced forwards, was felt. Enough periosteal attachment remained to prevent necrosis. The fragment was removed partly with the gouge and partly with the curette, care being taken not to injure the nerve. The patient was relieved at once by the operation. Next day her bed could be shaken vigorously, although she had formerly experienced agonising pain on the slightest movement. Complete recovery followed.

AN ANCIENT GREEK HEALTH RESORT.

THE ancient Greeks, at all events after heroic times, were not always in the aggravatingly robust state of health that is the popular idea of their condition. Human nature is very much the same all the world over and at all times. There were many health resorts where sufferers were treated by Asklepios himself or more frequently by his qualified assistants—i.e., the priests, and the *modus operandi* at these institutions formed the subject of a very interesting lecture by Miss J. E. Harrison, recently delivered before the University Extension Society. The lecturer gave an account of what was perhaps the earliest known medical school—namely, that of the centaur Chiron. Here the children of the heroes were taught simple surgery, riding, gymnastics, the rudiments of music, and, in common with the ancient Persians, to speak the truth, the last being a branch of education which has fallen into disuse among both nations. The chief subject of the lecture was, however, the shrine at Epidauros which has recently been excavated and is in fairly perfect condition. The temple and the long corridors where the patients slept are all there, but the holy well alluded to in many inscriptions has not been found. Besides these the patients have left memorials of their cures carved upon stones, a very full one being that of a Roman gentleman, and we are able, through the courtesy of Miss Harrison in supplying us with the original Greek, to append a translation. "I, Marcus Julius Apellas, of Idrias and Mylasa, was summoned by the god, as I suffered from a variety of complaints, and especially dyspepsia; and as I was on my way through Aegina he ordered me not to worry so much about myself (μὴ πολλὰ ὀργίζεσθαι). When I arrived at the shrine he told me to go about for two days with my head covered up, and these two days it rained. He also prescribed for me cheese and bread with celery and lettuce, to wash myself by myself—i.e., without the help of the shampooer—to drink lemonade made from citrons, to go to the fountains in the baths and rub myself against the wall, to run and do gymnastics, to walk in the portico, and to exercise on the trapeze, to rub myself in the sand and go barefoot. Also before I went into the bath I was to pour some wine into the warm water; I was to shampoo myself, but all the same I had to give an *attic* to the bath man. I was to sacrifice to Asklepios, Epione, and the Eleusinian goddesses, and to drink milk mixed with honey. And one day when I was drinking milk alone he said, 'Put honey in your milk and you will get the bowels open.' And when I implored the god to make me well quickly so that I could get home I had a vision in which he ordered me to rub my body all over with mustard and salt, and I seemed to go down to the springs by the shrine, and a boy went before me with a smoking censer, and the priest said to me, 'Now you are well and you must pay your fees.' So I did as the vision directed, and when I rubbed in the mustard and salt it hurt, but when I washed it off it did not hurt any more, and this happened on the ninth day after I came, and he touched me on the right hand and on the breast. And the day after, as I was sacrificing the flame leaped up and burnt my hand so that a blister came up, but my hand soon got well. And as I stayed on there he told me that anise and oil were good for a headache. I had no headache then, but some time afterwards when I had been studying I had a headache, and I used the anise and oil and the headache disappeared. He also told me to gargle my uvula with cold water (for I had consulted him on this point too), and the same treatment for the tonsils. And he told me to write all these matters down, and so, grateful and restored to health, I went away." The naïveté of this narrative is delightful, but the treatment is eminently practical. Apellas is very like the ordinary patient—the sort, we mean, who, having paid his fee, says, "Oh, by the bye, there's one thing more I want to ask you. I often have," &c.

MEMBRANOUS CONJUNCTIVITIS IN A CASE OF MEASLES.

IN a case recently published by Dr. H. A. Brennecke, this unusual complication, which clinically resembled true diphtheria of the conjunctiva, was observed.[1] The patient was a boy, aged three years, one of a number of patients attacked by measles. He exhibited the usual symptoms of the disease. On the fifth day the urine contained albumin, and hyaline and epithelial casts. The right conjunctiva was markedly injected. Next day this was more intense, and the lower lid was much swollen and showed a heavy white exudation. On the eighth day the upper lid was affected, and there was an abundant milky discharge. On the tenth day the patient was restless and refused nourishment; the back and shoulders as well as other parts exhibited diffuse, irregular, red patches, which did not disappear entirely on pressure. The right cornea was hazy. There were numerous subcrepitant râles in the lungs, and signs of consolidation in the right lower lobe. Death took place on the twelfth day. Repeated examinations of the membrane covering the conjunctiva failed to show the diphtheria bacillus, but a microbe having the characters of the streptococcus pyogenes was cultivated. It was also found after death in the blood and viscera. Dr. Brennecke concludes that the streptococcus was the cause of the membranous inflammation of the conjunctiva. He cannot decide whether the microbe primarily infected the conjuctiva or reached it through the blood from some other source, such as the throat.

METALLIC CHEESE.

IT has been a common theme of congratulation by not a few writers and philanthropists that the days are over when people were poisoned by the indiscriminate practices of the adulterator, and that now they are only cheated. What will be said then of the announcement that both the salts of zinc and lead are used in the preparation of cheese? "Cheese spice" is the delectable name of crystallised sulphate of zinc, which, according to Mr. Allen, the public analyst of Sheffield, is used to prevent the heaving and cracking of cheese. Worse still, Mr. Stoddart, another public analyst, has described a sample of Canadian cheese in which he found metallic lead, and it is probable that the highly poisonous acetate of lead was employed for the same purpose as sulphate of zinc. This is, indeed, a revelation, and vestries and other authorities would do well if they instructed their inspectors to secure samples of cheese with the view of setting this very disturbing question at rest. In old times, when substitutes were not, most excellent cheeses

[1] Medicine, Detroit, June, 1897.

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were made which required the addition of no other antiseptic than homely salt, and there is no reason why cheese should require any further treatment now. We trust that the facts brought to light by the two analysts just mentioned will lead to the permanent suppression of such an abominable practice.

STENOGRAPHY FOR THE MEDICAL MAN.

THE *Phonetic Journal*, in congratulating Sir W. R Gowers upon the honour Her Majesty has conferred upon him, naturally refers to his work in connexion with shorthand as well as to its influence upon his medical work. The characteristic of the work of Sir William Gowers is, our contemporary avers, accuracy. "This quality has been fostered by the habit of careful and correct observation. That habit in turn has been helped by the persistent practice of instantaneously recording the observed fact. The acquisition of stenography in his student days, the rapid recognition of its power to help him in his professional studies and in his professional work, the determined mastery of it and the continuous use of it have multiplied his naturally enormous capacity for work, and strengthened and intensified his habits of careful and correct observation." It is a noteworthy fact that another recipient of knighthood on the occasion of the Diamond Jubilee, Sir William Thomson, President of the Royal College of Surgeons in Ireland, is a writer of shorthand and as staunch an advocate of its use in medical work as is Sir William Gowers.

A NEW FEVER HOSPITAL FOR LONDON.

THE ceremony of the opening of the Park Hospital, Hither-green, Lewisham, on Monday last, by the Prince and Princess of Wales, successfully inaugurated the most recent and extensive of the large group of fever hospitals which have arisen under the ægis of the Metropolitan Asylums Board. Of the ceremony itself there is no need here to speak in detail. Suffice it to say that it once more afforded opportunity for testifying to the keen interest and sympathy which their Royal Highnesses evince in all matters that concern the public weal. The speech made by the Prince of Wales struck the right note and showed how fully he recognises the importance to the community of the work carried on by the Board as well as the manner in which the Board is fulfilling its trust. After the ceremony the large gathering of visitors were enabled to inspect the vast range of buildings, which may be taken as representing the most complete and best approved style of construction of an infectious diseases hospital. The site upon which the hospital is built is an elevated one, and is close to the Hither Green Station of the South-Eastern Railway. It consists of twenty acres of ground, and the hospital is intended to accommodate 548 patients, distributed as follows: 48 wards for 368 scarlet fever cases, 24 wards for 120 diphtheria and enteric fever cases, and 36 isolation wards to accommodate 60 patients. The staff will consist of 316 persons, including the medical superintendent, 5 assistant medical officers, matron, housekeeper, 2 superintendent nurses, and 191 other nurses. The ward pavilions are disposed on either side of the central administrative block, each pavilion consisting of two floors containing three wards, access to the upper floor being by an external staircase opening from the covered ways which connect all parts of the building. The architect, Mr. Edwin T. Hall, is to be congratulated upon the admirable manner in which every detail has been planned. The arrangements for heating and ventilation of the wards are in some respects novel and promise to be highly efficient. The water-supply will be furnished by wells sunk in the chalk, the water being pumped into a softening apparatus and thence to the water-tower, which forms a conspicuous feature in the centre of the blocks of buildings. The laundry and kitchens are well arranged, whilst the nurses' home, placed on the northernmost part of the site, consists of three houses connected by glass and iron corridors on every floor. In the important matter of drainage, in the construction of water-closets, lavatories, &c., no detail has been omitted to render the institution free from sanitary defects. The provision of this additional isolation for fever in the metropolis reflects much credit on the Metropolitan Asylums Board, whilst the care and pains taken in the construction and arrangements make this hospital worthy of London and a boon to its inhabitants. In the nine hospitals at present in operation there is provision for 4254 patients. To this will now be added the 548 beds at the Park Hospital, and 520 in the Grove Hospital now in course of construction at Tooting. A convalescent hospital is also to be erected at Carshalton for 700 patients. There will then be accommodation for 6022 fever and diphtheria patients, whilst the hospital ships, Gore Farm Hospital, and a proposed new hospital at Joyce-green, near Dartford, will bring the provision for small-pox up to 1892 beds.

THE INTER-MARRIAGE OF DEAF-MUTES.

A LETTER in another column reminds us that the question of how far acquired deafness is hereditary is a very interesting one to the community and therefore to their medical men. It is an unfortunate fact that deaf-mutes tend, perhaps by a common sympathy or from association during early years, to inter-marry. We say unfortunate, for marriages between congenital deaf-mutes or others with congenital nerve defect tend to produce a family with some members mentally afflicted. It is, however, otherwise among persons of sound brain power, who early acquire deafness as a result of scarlet fever or other accidental disease of the organ of hearing and consequent mutism—the ear, not the brain, being primarily affected. Those who tend to transmit deaf-mutism to their offspring are congenital deaf-mutes, not those acquiring deafness as a result of disease or accident; a man with disease of the middle ear is probably no more likely to have deaf children than a man blind from accident or disease to have children with defective sight. The census record shows that among deaf-mutes the male ratio is much higher than the female rate at each and all ages; and if it is true, as is commonly accepted, that congenital defects are more commonly transmitted to a son through the father, a man whose father was deaf from acquired ear disease in childhood, even if his mother were congenitally mute, is not likely to transmit such tendency to his children. The moral of these remarks is that it is unadvisable to train deaf boys and girls in mixed classes after the age of twelve or thirteen years.

THE HEALTH OF THE ARMY IN INDIA.

A BILL has been introduced into the Viceregal Legislative Council repealing the Cantonment Acts of 1895 and untying the hands of the Indian Government by giving it the same powers in respect of venereal disease that it has in the case of other infectious and contagious disorders. We notice, by the way, that the Ladies' National Association held a meeting at St. Martin's Town Hall on the 9th instant and took up their parable in an opposite sense. As at present, the Government of India is legally empowered to take energetic steps for preventing or limiting the spread of small-pox, cholera, and typhoid fever, but has no power to deal with the more common as well as gravest of all the contagious diseases that can afflict humanity—namely, syphilis. We need not repeat what we have already said on this subject, nor is there any

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special reason for further considering it until we are more fully acquainted with the exact nature of the proposals of the Indian Government. The Bill is, no doubt, framed in accordance with the instructions embodied in the dispatch forwarded by Lord George Hamilton to that country, and the Secretary of State's proposals were so studiously moderate in their nature that many people regard them as likely to fall short of what is required for dealing effectively with the evil. Be this as it may, it is unwise to legislate in advance or excess of what is likely to be supported by public opinion. Legislation on such a subject is attended with great difficulties and has many pitfalls for the footsteps of unwary legislators. We can only rejoice meanwhile that something in the shape of an earnest attempt to deal with a terrible evil has been made, and that a very decided and wholesome change has taken place in the state of public feeling in regard to it. That it is absolutely necessary for something to be done to limit the spread of this scourge is generally admitted. The Commander-in-Chief, Major-General Sir Edwin Collen, and the Viceroy of India spoke strongly in favour of the Bill. The Viceroy expressly said that he took his full share of responsibility for the measures which the Government of India proposed to adopt and of which the Bill was a part; and he added that whatever might be thought of the conduct of incontinent persons, no one with a scrap of humanity would hesitate to take any measures in his power to control and check the progress of a disease so insidious and terrible as regards them, and so far-reaching as regards many innocent and helpless human beings. On the score of morality Lord Elgin also considered his position equally clear.

THE ROYAL COMMISSION ON TUBERCULOSIS.

FURTHER sittings of this Commission were held at No. 7, Whitehall-place on July 8th, 9th, and 12th, Sir Herbert Maxwell being in the chair. The following witnesses were examined: Mr. Morgan Hopkin, of Swansea; Mr. Pearson and Mr. Hides, of Sheffield; Mr. Ward, of Middleton, near Manchester; and Mr. Berwick, of Bradford, all of whom represented various butchers' associations, and gave evidence as to direct personal loss from the condemnation for tuberculosis of the carcasses of animals which had been bought as apparently quite healthy. Other witnesses called were Mr. Davies, medical officer of health of Swansea; Dr. Harvey Littlejohn, medical officer of health of Sheffield; Mr. Hedley, chief inspector of the Irish Privy Council, veterinary department; and Mr. Sinclair, superintendent of exports for the Victorian Government. This, we understand, concludes the evidence which the chairman proposes to call; but before considering the report he intends, with other members of the Commission, to visit a few towns in the United Kingdom to see the method of meat inspection adopted in them.

POISONOUS "HOKEY POKEY."

As with ice-cream, it is not surprising that there should be considerable obscurity surrounding the composition of that largely-consumed sweetmeat which is euphemistically known as "hokey pokey." Last Tuesday an inquest was held in the Islington Coroner's Court on the body of a child aged eight years. She had purchased some "hokey pokey" in the street. Two days later she died, after suffering from acute digestive disorder and presenting the usual symptoms of irritant poisoning. How long are poisons to be disseminated in the street in this most reckless way? Nearly twenty years ago THE LANCET Commission on the Sanitary Condition of the Italian Quarter,[1] reported how filthy was the environment under which ices were frequently compounded, and if the authorities cannot trace the ingredients to their source, surely they can at least see that the preparation of these edibles (*sic*) are carried out with the strictest attention to sanitary requirements. Every barrow-vendor of ices or, indeed, of any other article of consumption should be registered and compelled to carry his registered number on a metal label like the cabmen and omnibus drivers and conductors. In this way the men dealing out poisonous stuff in the street could be traced, and thus some amount of control over these "itinerants" would be exercised. Some step in this direction is, at any rate, very much needed, especially when the increasing number of deaths from this cause is considered.

[1] THE LANCET, Oct. 18th, 1879.

COFFEE-PALACES AND COFFEE.

MOST connoisseurs have despaired of ever obtaining coffee infusion in England of the fine character and aroma of that prepared on the continent, and especially up country in Norway, but we may at least demand that a beverage that is called coffee should contain a certain proportion of the article the name of which it bears. Otherwise coffee may as well be given up for ever. Yet coffee properly made fills an important place in the dietetic category. It is refreshing and stimulating, with a distinct tendency to arouse from a state of stupor and lethargy. It is, in fact, in this connexion that it is sought, though it may be unconsciously. It is, in short, anti-narcotic. According to recent analyses published in the Proceedings of the Society of Public Analysts, some coffee-palace coffee infusions must be practically destitute of those properties which mark coffee as an agreeably refreshing and stimulating beverage. The average amount of caffeine—the crystalline stimulating principle of coffee—in infusions obtained at several establishments in London showed that instead of containing 10 per cent. of coffee they contained very little more than 2 parts per 100. The result of this shocking attenuation means that the infusion contained only a fourth part (0·026 per cent.) at the most of the proper amount of the valuable and active constituent of coffee which gives the beverage its restorative character. In an investigation made by ourselves[1] we found that an infusion made by adding two ounces of coffee to a pint of boiling water (equal to a 10 per cent. infusion) contained 0·11 per cent. caffeine. Doubtless in certain cases coffee-palace coffee, though attenuated from this point of view, possesses plenty of "body" owing to the balance being made up of chicory, milk, and sugar. But these things are not coffee or in any sense to be considered as compensating substitutes. The customer supplied with such stuff is, in our opinion, distinctly defrauded, and it is time that the Food and Drugs Act was brought to bear upon this system of cheating. A systematic raid on the part of the officials entrusted with the carrying out of the Acts would soon put an end to this fraudulent practice, and the sooner such a measure is taken the better.

[1] Vide THE LANCET, July 4th, 1894.

FOUR GOOD WOMEN.

ON June 9th last Her Majesty the Queen personally bestowed the decoration of the Royal Red Cross upon Sister Mary Helen Ellis, Sister Mary Stanislaus Jones, Sister Mary Anastasia Kelly, and Sister Mary de Chantal Huddon, "in recognition of their services in tending the sick and wounded." This little ceremony at Windsor recalls an early incident in the history of the development of military nursing, a history which practically belongs altogether to the present reign. The four ladies above mentioned are the survivors of a band of eight Sisters of Mercy who served as nurses during the Crimean War. In October, 1854, five sisters, responding to an appeal of the Right Rev. Dr. Grant,

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then Roman Catholic Bishop of Southwark, set out from the Convent of Mercy at Bermondsey, and, joining Miss Florence Nightingale in Paris, accompanied that lady to Scutari. A year later another party of three Sisters from the same institution arrived at the big hospital at Scutari. These eight ladies, of whom four now survive, worked under the direction of Miss Florence Nightingale at Scutari and at Balaclava until July, 1856, when they returned to London. They were not, however, destined to return permanently to scholastic work at Bermondsey, for in the same year they were asked to assist in the establishment of a small hospital of fifty beds which was at that time opened in Great Ormond-street for the relief of women and children belonging to that large class of sufferers who, by reason of the hopelessly fatal character of their disease, or on account of the prolonged nature of the treatment which they require, are no longer admissible to the large general hospitals. Under the title of the Hospital of St. John and St. Elizabeth the useful work of this charity, started with the help of the Sisters of Mercy who had been trained as nurses at the seat of war, has been carried on by nurses of the same Order until this day, and three out of the four sisters who have just been decorated by the Queen are still engaged in the administration of the hospital.

THE JUBILEE OF "LE SCALPEL."

THE well-known Belgian medical journal, *Le Scalpel*, published at Liége, has just completed the first fifty years of its existence, during which it has striven, by no means unsuccessfully, to maintain the honour, to cultivate the science, and to advance the interests of the profession in Belgium. Its founder, the late Dr. Festraerts, was a man of great capacity for originating and successfully carrying through struggles on behalf of those whose cause he had made his own, and, like other similar reformers, had often plenty of bitter enemies both in the profession and outside it. The forces that were several decades ago ranged against the *Scalpel* presented many features in common with those which were employed against THE LANCET and its Founder in the twenties and thirties. We congratulate Dr. Dejace, the present editor, on the position his journal occupies and on the energy with which he exposes abuses and seeks to remedy them in the interests of his brother practitioners.

A SAD STORY OF THE SEA.

THE daily press recently contained a report of a shipwreck under circumstances which reveal an amount of inhumanity displayed not only by laymen, but by a medical man, which we are glad to say is exceedingly rare. An English ship laden with sugar was going from Java to Delaware Breakwater, and very soon after leaving Java fever broke out, which eventually attacked every person on board. Eleven deaths occurred, leaving only ten people to work the ship, the second mate being in charge, and he decided to make for Mauritius, but was only able to get as far as Rodrigues Island, where he dropped anchor and, as it is inhabited by civilised beings, naturally thought he would be able to obtain medical advice and other assistance. The island is inhabited by French Creoles, but the governor and the surgeon are said to be Europeans and to be able to speak English. The pilot put off in his boat, and returning spread the report that yellow fever was on board. As no assistance came, the officer in charge, Mr. Rich, determined to land his passengers and crew, fearing that the ship would go to pieces, but on trying to land they were met by the governor and other inhabitants who threatened to fire on them if they persisted in landing. The only thing to do then was to row back to the ship, which they accomplished with great difficulty, and that night the ship was driven on to the rocks and began to break up. The Rodriguans at this juncture were apparently ashamed of their inhumanity and sent a boat manned by the pilot and some blacks which took off the survivors, landing them on a small sandy island separate from the main island and quite uninhabited. Here they were kept for twenty-two days with no shelter but a hut made of leaves, provisions being conveyed by a small boat and landed on the island. They had no medical assistance, but the surgeon put off in a boat after about a fortnight, stopped some distance from the shore, and examined them through opera glasses. After three weeks the monsoon set in and the Rodriguans, fearing that the islet would be covered by the sea, removed the shipwrecked people—now reduced to eight, including a woman and a baby—to the main island, where they were kindly treated for two months. After this they went to Mauritius, where they met with every possible attention. If this story is true we cannot pretend to explain such abominable behaviour. That laymen might be frightened by the occurrence of a possibly contagious fever is perhaps natural, but that any medical man should be so grossly neglectful of his duty is incredible. We are not told to what nationality he belonged, but whatever it is, if the account given be correct, his country has no reason to be proud of him.

COLOUR PHOTOGRAPHY.

IN THE LANCET of Feb. 6th we announced that a photographic process had been discovered by which a picture was produced chemically, with the natural colours to some extent faithfully portrayed. The nature of the process still remains a mystery to the general public, but in an interesting letter published in *Nature* of July 8th Sir Henry Trueman Wood, to whom the inventor has confided the details of his process, gives some assuring particulars as to the genuineness of the method. The selective action claimed by the inventor does, he says, exist, and the colouring matters applied to the photographic print have a certain tendency to attach themselves to those portions of the print which would be of a similar colour had the image been reproduced in natural colours. Further, the colouring matters, when applied in succession, do so combine or react on each other as to reproduce approximately the tones or tints of the original. A special negative or a special print does not appear to be any advantage, and it is satisfactory to learn that the process is not dependent upon purely mechanical operations, but is to some extent a matter of skill. This discovery by M. Chassagne is of great scientific interest, but its development and the particulars of procedure are for the present matters concealed carefully from the public because of the commercial issues involved. It will be important to the medical profession when the discovery becomes patent, since its application to the photography of sections and specimens in surgery and in anatomy should prove of great value.

TYPHUS FEVER AT PEKIN.

THE lately issued volume of the Medical Reports of the Imperial Maritime Customs, China, reviewed in our columns last week, contains a notable contribution to the literature of typhus fever by Dr. Matignon, of the French Legation at Pekin. Considering the hygienic conditions obtaining in that city and the north of China generally, it is not surprising that typhus fever should be endemic and that every year in the spring it should become epidemic. The mortality from it is considerable, but not so great as that from cholera. The European colony is mostly exempt, but the disease is liable to attack the missionaries and members of religious fraternities, who are brought more in contact

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with the people than are members of Legation and others. It is mainly upon his observations of cases amongst such communities that occurred in the spring of 1895 that Dr. Matignon has based his studies. His essay gives an excellent account of the characteristics of the malady, together with detailed notes of cases, and it is interesting to find that there were certain notable differences observed between the disease as there shown and the form familiar to Europe. In the first place, the incubation period was much shorter than generally admitted—instead of being about twelve days he found that it seldom exceeded four or five days, and was often not more than twenty-four hours. The onset was abrupt and the fever high from the first, with headache, pyrexial pains, congested face, but less marked prostration than usual. About the fifth day the rash appeared, and, contrary to the exanthem as we see it, was most irregular in its evolution, often taking a week for its full development, and then being profusely scattered over the whole body. The rash had the characters of the rose spots of typhoid fever, and in hardly a single instance did it become petechial, nor was the skin so markedly mottled as it is in the European fever. As regards the type of pyrexia and the date of crisis there does not seem to have been any departure from the western malady but in many of the symptoms there were curious differences. Thus there was seldom seen the intense prostration or depressed aspect so characteristic of typhus fever as we know it. Headache, however, was most severe, and articular pains were a striking feature throughout the attack. Sleep was disturbed; delirium was variable—sometimes somnolence and sometimes a peculiar state of amentia. Deafness was constant and there might be amblyopia. It was noticed that there was a marked tendency to diarrhœa rather than constipation, but one of the most characteristic and serious conditions was the degree in which the heart became affected, the pulse being remarkably quickened and the cardiac second sound reduplicated. Apparently there was not such intense pulmonary congestion as is often met with, nor was albuminuria nearly so frequent. Convalescence was often prolonged, and retarded by abscesses, boils, or, as in three cases related by Dr. Matignon, by more serious sequels, as gangrene of the skin, osteo-myelitis, and periostitis. He observed one case of relapse and also one of second attack, both of which occurrences are rarely met with in Europe. The memoir is one which, from the careful and thorough manner in which Dr. Matignon has studied the clinical characters of the disease, deserves the attention of writers on the subject.

HER MAJESTY THE QUEEN has been graciously pleased to accept a copy of "The Life and Times of Thomas Wakley."

HER MAJESTY THE QUEEN, the Patron of the Order of St. John of Jerusalem, has approved the admissions of Sir Joseph Fayrer, Bart., K.C.S.I., M.D., Hon. Physician to the Queen and H.R.H. the Prince of Wales, Mr. William Fairbank, M.R.C.S. Eng., surgeon to Her Majesty's Household at Windsor and Surgeon in Ordinary to T.R.H. Prince and Princess Christian of Schleswig-Holstein, and of Mr. Norman Hay Forbes, F.R.C.S. Edin., as Knights of Grace of the Order.

THE medical staff and lecturers of the Dental Hospital of London have issued invitations to a conversazione at the Galleries of the Royal Society of British Artists, Suffolk-street, on Tuesday next, July 20th. The prizes for the year will be distributed by Sir Frank Lockwood, Q.C., M.P., at 8.30 P.M.

AFTER the annual dinner of the Hospital Reform Association, which is to take place on the 26th prox., there will be a discussion on Hospital Abuse, more especially with reference to the nature of the remedies that should be adopted. The discussion will be initiated by Dr. Isambard Owen, and Mr. C. S. Loch and others will take part in it.

M. HENRI DUNANT, of Geneva, whose name is well-known in connexion with the foundation of the "Red Cross Society," and who is now unfortunately in very reduced circumstances, has been granted a pension of a thousand roubles annually by the Russian branch of the society.

H.R.H. THE MARCHIONESS OF LORNE and the Marquis of Lorne have kindly promised to open the Passmore Edwards' Convalescent Home for the Metropolitan Hospital at Cranbrook, Kent, on Tuesday next, July 20th, at 4.30 P.M.

THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

VISIT OF T.R.H. THE DUKE AND DUCHESS OF YORK TO THE BANK OF ENGLAND.

ON Friday, July 9th, soon after 1 P.M., T.R.H. the Duke and Duchess of York visited the Bank of England to witness the destruction of the plates from which the stamps issued for the benefit of the Prince of Wales's Hospital Fund were printed. It will no doubt be remembered that as soon as the printing of the stamps was completed the plates were consigned to the strong rooms of the Bank of England under the official seals of the Governor and chief cashier, which were affixed in the presence of several of the honorary officials of the Fund, until a convenient opportunity presented itself for their destruction. At this function H.R.H. the Duke of York, who, as President of the London Philatelic Society, takes a great interest in the matter, graciously signified his willingness to be present.

Their Royal Highnesses, who were attended by Sir Charles Cust and Lady Mary Lygon, on arrival at the entrance in Lothbury, were received by the Governor, Mr. Hugh Colin Smith; the deputy governor, Mr. S. Steuart Gladstone; the chief cashier, Mr. H. G. Bowen; and the acting secretary, Mr. Kenneth Grahame; and also by the following members of the Organising Committee of the Prince of Wales's Hospital Fund: Lord Rothschild, Lord Rowton, Sir Henry Burdett, the Right Hon. C. Stuart Wortley, Q.C., M.P., Sir Savile Crossley, and Mr. J. G. Craggs.

There were also present Mr. J. S. Purcell, C.B., Controller of Stamps at Somerset House; Mr. Thomas de la Rue of Messrs. de la Rue and Co. who carried out the printing of the stamps and who so kindly prepared the design, engraved the plates, and presented them to the Fund free of charge; Mr. G. H. Miles and Mr. Joseph Shaylor of Messrs. Simpkin, Marshall, and Co. the wholesale distributors of the stamps, whose task in dealing with the issue has been anything but a light one; Mr. S. G. Wilkinson of the Oxford Bible Warehouse who have used a very large number of the stamps in their Commemoration Bibles and Prayer-books; and representatives of the various philatelic societies.

The Royal party were at once conducted to the printing department, which they entered by a private passage through the branch bank's office, and where they were met by Mr. W. J. Coe, the superintendent of the department. Passing through the machine-room, where all the account-books of the bank are printed—and where, by the way, is the first machine from which the postal orders were printed, and also a fine Middleton Gripper machine which prints both sides of the paper at once—the Royal party reached the die-sinking department, where the destruction of the plates was to take place. In this room, which is under the charge of Mr. F. C. Smith (who has been in the service of the bank over forty years), all the dies and water-marking plates are designed and made for the bank-notes, postal orders, Indian notes, Exchequer Bills, and any other papers requiring a water-mark; and Mr. Smith takes a pride in showing a paper mould (from which the water-mark is impressed upon the

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paper whilst in course of manufacture) of a fine Damascus pattern, the process for making which was patented by his father (Mr. John Smith) in 1849, the mould being shown at the Great Exhibition of 1851.

At the benches in this room were stationed in readiness three expert workmen, each provided with an enormous two-inch file or rubber weighing sixteen pounds, and as soon as the seals of the plates, which had previously been brought from the strong rooms under the charge of the bank officials, had been broken by the Governor, the steel plates were fixed in position on the benches and the workmen set to work with a will to obliterate every line of the delicate tracery constituting the design of the plates. With the powerful tools at hand even the hard surface of the three steel plates from which alone the stamps have been printed soon had to yield, and after about ten minutes or a quarter of an hour's hard work the surface of the plates was utterly defaced. The destruction of the steel plates being complete, the attention of the workmen was then directed to the original matrix and die, the raised surface of the designs upon which, being too hard to be much affected by the powerful files which had been used upon the printing plates, were then applied to a grindstone which stood ready at hand, and in a short space of time the designs were ground level with the surface of the matrix and die. The defaced plates and dies were once again consigned to the charge of the Bank officials.

Their Royal Highnesses then proceeded to the Governor's room, where the official certificate of the destruction of the plates was signed by the Duke and Duchess of York, Mr. H. C. Smith, the Governor of the Bank of England, Mr. J. S. Purcell, C.B., Controller of Stamps, and the following members of the Organising Committee of the Prince of Wales's Hospital Fund: Lord Rothschild, Lord Rowton, Sir Henry Burdett, the Right Hon. C. Stuart Wortley, Q.C., M.P., Sir Savile Crossley, and Mr. J. G. Craggs.

The certificate is as follows:—

"Bank of England.

"Certificate of the Destruction of the Dies and Plates employed in the Production of the Prince of Wales's Hospital Fund Stamps.

"We, the undersigned, hereby certify that the whole of the Dies and Plates used in the production of these Stamps were this day destroyed in our presence."

Here follow the signatures as above.

The Governor of the bank then said: On behalf of the Committee of the Prince of Wales's Fund I beg to thank your Royal Highness and the Duchess for coming here to-day to see the plates destroyed. Perhaps you will kindly certify to those present that you are quite satisfied that no more stamps can be printed from the plates.

The Duke of York replied: It has interested both the Duchess and myself a great deal to come to-day and see the destruction of the dies and plates of the stamps which are issued in connexion with the Prince of Wales's Hospital Fund, and I trust that the remainder of the stamps will be soon sold, as I think there can be no more appropriate souvenir of Her Majesty's Diamond Jubilee than these Stamps.

His Royal Highness added that the defaced plates and dies might form an interesting exhibit at the forthcoming Philatelic Exhibition which he is to open in London on the 22nd inst.

The Royal party afterwards made a tour of the printing department of the bank, where they were much interested in inspecting the details of producing the bank-notes, postal orders, cheques, &c.

THE VICTORIAN ERA EXHIBITION AT EARL'S COURT.

ON Monday members of the press were invited to a private view of the incubators for infants at the Victorian Era Exhibition, Earl's-court. These are exhibited in a building facing the Welcome Club, and divided into three compartments. On one side there is sleeping accommodation for two wet nurses and for Mdlle. Louise Recht, who has been specially trained at the Paris Maternity Hospital to look after debilitated and prematurely born infants reared in incubators. A separate service for this purpose was established at the *Maternité* in 1893, and here some 400 children, born under most unfavourable circumstances, are received annually. On the other side of the building there is a nursery, where the infants are taken to be fed and washed. The public are admitted to the central room, and here they can view the infants lying within the incubators, and are shown how the apparatus is ventilated and warmed and the temperature automatically maintained. The mechanism employed for this purpose has already been fully explained in these columns.[1] Its efficiency is now put to a practical test. Messrs. Coney and Schenhein, who are the representatives in England of this the "Altmann Incubator," invite the criticism of the medical profession, and will supply every possible facility for the fullest investigation. They are ready to take in their charge any prematurely born child, and, apart from the trained nurse and the wet nurses, they have retained the services of two physicians, who attend three or four times a day to watch over the health of the infants. At night the watchman awakes the nurses every three hours so that they may feed the infants, and in the day time the babies are fed, generally from the breast, every two hours. In the nursery there is a small pharmacy, contrivances for sterilising milk, ingenious feeding bottles, and scales so that the infants may be weighed and their progress duly observed. A very large number of persons have already visited this exhibit, including many trained nurses. Much interest is manifested by the visitors. The incubators and the ventilating tubes are silvered, which gives them a bright and cheerful appearance, while the infants within look clean and comfortable, so that altogether it is a pleasant as well as an interesting sight.

It so happens that among the exhibits of the London Hospital to be seen in the main building there is an old-fashioned incubator which serves to illustrate the progress accomplished in modern days. This old incubator is not aseptic, for it is simply a wooden box with a glass lid, nor can the temperature within be automatically maintained. It is warmed by placing underneath three stone bottles containing hot water. Of course, the water becomes cold and the temperature falls unless the attendant is very careful. Nor is there any system for filtering and moistening the air. Instead of breathing pure outside air the infant must breathe the air of the ward or room in which he or she is placed. How all these inconveniences can be avoided will be made manifest to those persons who visit the special exhibit of the Altmann Incubators.

In other respects the exhibits of the London Hospital give a graphic object-lesson of the progress made in medicine, surgery, and nursing. Thus, while Messrs. Krohne and Sesemann show the improved and the new surgical instruments they supply to the London Hospital, there is displayed on a table the somewhat primitive instruments that were used at the hospital at the commencement of the century. Among the comparative novelties are the regulating inhalers for the administration of anæsthetics. Messrs. Krohne and Sesemann have also an improved patent lever spring for correcting the malposition of the great toe, and there is Largiader's apparatus for strengthening the chest and limbs, by which home gymnastics may be practised for the modest cost of 7*s.* 6*d.* Here, also, will be found Messrs. Allen and Hanburys' well-known pharmaceutical preparations, and their surgical instruments, their furniture for operating theatres, nurses' bags, pocket cases, and other things of interest to the profession, together with a patent portable bed-rest.

The London Hospital exhibits present to the public many of the most striking features of a surgical ward. For instance, there is one bed with a dummy figure representing a man who is supposed to be suffering from fever. From a cradle placed over the bed two large metallic trays are suspended containing ice. Rubber pipes travelling from these trays drain off the water to a bucket under the bed. Formerly a number of little buckets were tied to the cradle. These were more easily upset, and as they retained the water the bed was often wet. For the new beds now used the wire spring mattress is fastened to the iron framework and there is no wood whatsoever. But there are fracture boards that can be introduced to harden that portion of the bed where a spring mattress would interfere with the treatment of the patient. Further, all the heads of the beds can be easily lifted off whenever it is necessary to administer anæsthetics. There is also an ingenious method for lifting

[1] THE LANCET, May 7th, 1897.

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off the side of a cot, and it slides down a groove perpendicularly to the floor, so that it takes up no room. Then there is a new table on high legs, which passes over the beds, and can be wheeled up to the patient without resting on the bed clothes. The application of a cradle for fractured tibia is shown on a dummy figure, as also the methods employed for hip extension and the operation of tracheotomy. Among the curiosities, the old operating table used a century ago at the London Hospital and Miss Nightingale's carriage which she employed in the Crimea evoke much interest.

In this section the Jubilee Institute for Nurses have their exhibit. They display the bags they carry about with them, and their various ingenious contrivances for extemporising, in the dwellings of the poor, whatever may be required for the successful nursing of the sick. What changes can be thus brought about are illustrated by pictures of the interiors of houses, notably of Irish huts, before and after the nurse's visit.

The Metropolitan Asylums Board, the St. John Ambulance Association, the Army Medical Department, and Messrs. Burroughs and Wellcome (outfits for field purposes) have extensive exhibits in another part of the building. The education department was, from the sanitary point of view, a decided disappointment. We did not, for instance, notice the plan or the photograph of a single schoolroom provided with lateral light or any scientific method of warming and ventilating. There were, however, several pictures of class-rooms where these modern improvements and sanitary principles are utterly ignored. The careful treatment of milk and all its products by the London and Provincial Dairy Company was much more satisfactory. Here fresh milk, strawberries and cream, ices, &c., may be enjoyed by the visitor while contemplating cows and calves contentedly chewing the cud in model stables.

Altogether, though the Victorian Era Exhibition is in the main a pleasure resort, still there are some exhibits of technical interest to members of the profession, so that a small portion at least of the time devoted to a visit may be usefully as well as agreeably employed.

METROPOLITAN HOSPITAL SUNDAY FUND.

WE continue below our record of some of the principal amounts received at the Mansion House, the lists of which have been forwarded to THE LANCET office. The total sum now amounts to £31,000 :—

	£	s.	d.
St. Jude, South Kensington	566	19	5
Church of the Annunciation, St. Marylebone	217	15	9
St. Andrew, Stoke Newington	73	14	8
St. Andrew (Presbyterian), Upper Norwood	53	2	0
Regent-square Presbyterian Church	99	3	8
"F" (a further)	50	0	0
St. George, Tufnell Park	53	7	8
St. Augustine, Kilburn	58	17	9
Putney Parish Church	76	5	9
St. John, Putney	87	6	2
St. Paul, Camden Square	62	2	11
All Saints, Margaret Street	65	11	6
Dulwich College Chapel	67	7	0
Lewisham Parish Church	70	3	3
Highbury Quadrant Congregational Church	78	9	1
Hornsey Parish Church	67	16	5
Christ Church, Gipsy Hill	133	17	6
St. Thomas, Portman Square	74	6	10
Holy Trinity, Upper Tooting	54	3	7
Clapham Parish Church	66	0	0
St. Augustine, Highbury	93	5	8
Trinity Presbyterian Church, Notting-hill	42	11	8
St. Peter, Eltham-road	40	18	9
Bloomsbury Baptist Chapel and Mission	26	17	0
Hammersmith Parish Church and Mission	22	6	6
Christ Church, Mayfair	25	9	0
All Saints, Hatcham	37	6	5
St. Dunstan, East Acton	28	14	2
St. Luke, Old-street	20	1	11
St. Andrew, Stockwell	23	16	5
Wesleyan Church, The Avenue, Blackheath	23	14	0
St. Mary Magdalene, Wandsworth	29	12	6
St. John the Evangelist, Brixton	32	4	11
Holy Trinity, Anerley	30	9	0
St. Matthew, Westminster	22	10	6
Portman Chapel, Baker-street	76	14	7
Highgate Parish Church	70	17	6
St. Peter, Cranley-gardens	442	13	2
Holy Trinity, Sloane-street	247	16	0
St. Alban, Streatham-park	142	18	8
Christ Church, Hampstead	158	0	8
St. James, Clapham-park	146	0	6
St. Margaret, Westminster	242	19	6
St. Anne, Soho	95	17	8
Brompton Parish Church	118	16	10
St. Stephen, Westbourne-park	160	0	8
St. Luke, Nutford-place	131	11	1
St. George, Hanover-square	143	0	7
St. Paul, Beckenham	124	6	11
St. Peter, Kensington Park Road	152	2	5
St. John the Evangelist, Penge	80	0	0
Christ Church and St. Saviour, Ealing	64	19	11
St. John, Blackheath	84	5	3
St. Michael, Blackheath Park	85	5	3
St. Stephen, Wandsworth	72	3	6
St. Paul, Hamlet-road, Norwood	88	18	9
Grafton-square Congregational Church, Clapham	53	16	0
St. Matthew, Upper Clapton	53	1	9
Streatham Parish Church and All Saints	88	0	7
All Saints, Blackheath	64	7	7
Chipping Barnet Parish and District Churches	44	12	9
Chapel Royal, St. James's	39	3	0
St. Pancras Parish Church	48	9	7
Gray's Inn Chapel	45	17	7
St. James, Hatcham	68	2	3
St. Anne, Highgate-rise	25	16	8
St. Botolph, Aldersgate	20	17	0
Holy Trinity, Lee	21	10	0
St. John, Upper Norward (part collections)	33	2	7
St. Thomas, Clapton	30	10	9
St. Bartholomew and St. Matthew, Sydenham	178	16	6
Sir Savile Crossley, Bart. (further donation)	500	0	0
St. Michael, Paddington	151	11	1
St. Thomas, Regent-street	27	16	8
All Saints, Shooters-hill	21	5	5
Christ Church, St. Marylebone	35	18	7
Pro-Cathedral, Kensington	23	9	8
St. Mark (Presbyterian), Greenwich	33	18	0
Effra-road Unitarian Church, Brixton	29	17	5
Marylebone Presbyterian Church	48	1	0
St. Mark, Notting-hill	23	1	5
All Saints, Child's-hill	33	14	8
St. Andrew, Westminster	57	17	0
Willesden Presbyterian Church	42	18	1
St. Mary, Spring Grove	36	8	8
Christ Church, Woburn square	22	2	2
St. James, Garlickhithe	22	17	10
Streatham Congregational Church	30	12	9
Downs Baptist Chapel, Clapton	29	13	2
St. Luke, Hackney	27	17	10
High-road Wesleyan Chapel, Streatham	25	6	9
Christ Church, Westminster	30	0	0
St. Andrew, Watford	21	6	8
Eaton Chapel, Eaton-square	42	14	10
Finsbury-park Wesleyan Circuit	26	9	6
St. Mary, West Kensington	39	6	2
St. Paul, Harringay	26	0	0
Christ Church, with St. Barnabas, N. Finchley	24	7	7
Willesden Parish Church	22	6	7
St. John, Ealing	31	3	5
St. Stephen, Westminster	33	0	0
All Saints, Camberwell	32	8	4
Christ Church, Wanstead	22	18	6
St. John, Stratford	20	5	10
St. George, Westcombe-park	26	16	9
St. James, Clapton	25	18	3
St. Saviour, Clapham	24	6	9
Holy Trinity, Islington	21	13	9
Greek Church	93	9	6
Christ Church, Forest-hill	50	9	0
All Saints, Notting-hill	36	2	9
Hendon Parish Church and Christ Church	48	1	0
St. John the Baptist, Hillingdon, and Evelyn School Chapel	30	3	3
Box outside Mansion House	19	7	0

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6790 births and 3192 deaths were registered during the week ending July 10th. The annual rate of mortality in these towns, which had declined from 15·8 to 14·7 per 1000 in the three preceding weeks, rose again last week to 15·1. In London the rate was 15·1 per 1000, and almost corresponded with the mean rate in the thirty-two provincial towns, which was 15·2 per 1000. The lowest rates in these towns were 7·3 in Croydon, 8·7 in Huddersfield, 8·8 in Swansea, and 9·3 in West Ham; the highest rates were 20·0 in Liverpool, 20·6 in Burnley, 21·3 in Salford, and 23·1 in Preston. The 3192 deaths included 504 which were referred to the principal zymotic diseases, against 404 and 409 in the two preceding weeks; of these, 170 resulted from diarrhœa, 143 from measles, 75 from whooping-cough, 59 from diphtheria, 33 from scarlet fever, and 24 from "fever" (principally enteric). The lowest death-rates from these diseases were recorded in Bradford, Bristol, Derby, Huddersfield, and Halifax; while they caused the highest rates in Wolverhampton, Birkenhead, Burnley, and Preston. The greatest mortality from measles occurred in Bolton,

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Manchester, Birkenhead, Salford, Burnley, and Preston; from whooping-cough in Burnley, Oldham, and Norwich; and from diarrhœa in Birkenhead, Preston, Liverpool, and Leicester. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 59 deaths from diphtheria included 43 in London, 4 in Burnley, 2 in Portsmouth, and 2 in Liverpool. No fatal case of small-pox was registered during the week under notice either in London or in any other of the thirty-three large towns, and no cases of this disease were under treatment in the Metropolitan Asylum Hospitals. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2885, against numbers increasing from 2380 to 2821 at the end of the ten preceding weeks; 349 new cases were admitted during the week, against 274, 267, and 310 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 142 and 127 in the two preceding weeks, further declined to 116 last week, and were 76 below the corrected average. The causes of 41, or 1 3 per cent., of the deaths in the thirty-towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Leicester, Bradford, and in fifteen other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, Salford, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·4 and 18 7 per 1000 in the two preceding weeks, further declined to 17·7 during the week ending July 10th, but was 2·6 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 11·7 in Greenock and 14·3 in Aberdeen, to 22·1 in Leith and 22·6 in Dundee. The 529 deaths in these towns included 28 which were referred to diarrhœa, 20 to whooping-cough, 17 to measles, 10 to "fever," and 7 to scarlet fever. In all, 82 deaths resulted from these principal zymotic diseases, against 69 and 77 in the two preceding weeks. These 82 deaths were equal to an annual rate of 2·8 per 1000, which was 0·4 above the mean rate last week from the same diseases in the thirty-three large English towns. The 28 fatal cases of diarrhœa showed a further increase upon recent weekly numbers, and included 19 in Glasgow and 4 in Edinburgh. The deaths referred to whooping-cough, which had been 16 and 21 in the two preceding weeks, were 20 last week, of which 6 occurred in Glasgow, and 5 in Leith. The 17 fatal cases of measles slightly exceeded the number recorded in the preceding week, and included 9 in Edinburgh and 6 in Leith. The 10 deaths referred to different forms of "fever," corresponded with the number in the preceding week, and included 5 in Glasgow and 3 in Dundee. Of the 7 fatal cases of scarlet fever 4 were recorded in Edinburgh and 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 104 and 86 in the two preceding weeks, further declined to 69 last week, and were 15 below the number in the corresponding period of last year. The causes of 25, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 21·8 and 20·3 per 1000 in the two preceding weeks, rose again to 21·6 during the week ending July 10th. During the thirteen weeks of last quarter the death-rate in the city averaged 27·3 per 1000, the rate during the same period being 15·5 in London and 24·9 in Edinburgh. The 145 deaths registered in Dublin during the week under notice showed an increase of 9 upon the number in the preceding week, and included 9 which were referred to the principal zymotic diseases, against 11 in each of the two preceding weeks; of these, 2 resulted from diphtheria, 2 from whooping-cough, 2 from "fever," 2 from diarrhœa, and 1 from scarlet fever. These 9 deaths were equal to an annual rate of 1·3 per 1000, the zymotic death-rate during the same period being 2·5 in London and 3·7 in Edinburgh. The fatal cases of diphtheria, which had been 5 and 4 in the two preceding weeks, further declined to 2 last week. The mortality from scarlet fever also showed a decline, while that from whooping-cough showed an increase. The 2 deaths from diarrhœa corresponded with the number recorded in the preceding week. The 145 deaths in Dublin last week included 28 of infants under one year of age, and 31 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded those recorded in the preceding week. Four inquest cases and 4 deaths from violence were registered; and 51, or more than a third, of the deaths occurred in public institutions. The causes of 7, or nearly 5 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING JUNE, 1897.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during June in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 8·7 per 1000 of the population, estimated at 4,463,169 persons in the middle of this year. In the three preceding months the rates had been 7·8, 7·2, and 8·1 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Hammersmith, St. George Hanover-square, Westminster, Hampstead, Stoke Newington, St. Martin-in-the-Fields, and Lewisham; while they showed the largest excess in Holborn, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, St. Saviour Southwark, and Battersea. Four cases of small-pox were notified in London during June, against 8, 11, and 10 in the three preceding months; of these, 2 belonged to Battersea, 1 to Bethnal-green, and 1 to the Port of London sanitary areas. No small-pox patients were admitted into the Metropolitan Asylum Hospitals during June, and none remained under treatment at the end of the month. The prevalence of scarlet fever in London showed a further increase upon that recorded in recent months; this disease was proportionally most prevalent in Strand, Clerkenwell, Whitechapel, St. George-in-the-East, Mile End Old Town, St. Saviour Southwark, Battersea, and Lee sanitary areas. The Metropolitan Asylum Hospitals contained 2786 scarlet fever patients at the end of June, against 2468, 2330, and 2495 at the end of the three preceding months; the weekly admissions averaged 272, against 208, 225, and 258 in the three preceding months. The prevalence of diphtheria in London showed a slight further increase upon that recorded in the two preceding months; among the various sanitary areas this disease showed the highest proportional prevalence in Holborn, St. Luke, Whitechapel, St. George-in-the-East, Mile End Old Town, St. Saviour Southwark, and Camberwell. There were 864 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of June, against 776, 764, and 783 at the end of the three preceding months; the weekly admissions averaged 125, against 127 and 108 in the two preceding months. The prevalence of enteric fever in London also showed a further slight increase upon that recorded in the two preceding months; this disease was proportionally most prevalent in Clerkenwell, Poplar, St. Saviour Southwark, and Newington sanitary areas. Erysipelas showed the highest proportional prevalence in Marylebone, St. Giles, Bethnal Green, St. Saviour Southwark, and Rotherhithe sanitary areas. The 24 cases of puerperal fever notified during June included 3 in Lambeth, and 2 each in Fulham, St. Pancras, Islington, St. George-in-the-East, Limehouse, and Camberwell sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas of the metropolis, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the five weeks ending Saturday, July 3rd, the deaths of 5953 persons belonging to London were registered, equal to an annual rate of 13·9 per 1000, against 17·4, 16·6, and 14·9 in the three preceding months. The lowest death-rates during June in the various sanitary areas were 8·6 in Stoke Newington, 9·2 in Lewisham (excluding Penge), 9·7 in Strand, 9·9 in Plumstead, 10·8 in Hampstead, and 11·0 in Paddington; the highest rates were 19 2 in St. Saviour Southwark, 19·3 in St. George Southwark, 21·0 in City of London, 21·3 in St. George-in-the-East, 22·1 in Limehouse, and 26·3 in St. Luke. During the five weeks of June 624 deaths were referred to the principal zymotic diseases in London; of these,

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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS OF LONDON—JUNE, 1897.

(Specially compiled for THE LANCET.)

Sanitary Areas.	Estimated population in the middle of 1897.	Notified Cases of Infectious Disease.											Deaths from Principal Infectious Diseases.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,463,169	4	1856	1127	1	191	3	24	509	1	3716	8·7	1	131	64	156	141	—	28	2	101	624	1·5	5953	13·9	109
West Districts.																										
Paddington	126,161	—	45	33	—	2	—	1	12	—	93	7·7	—	—	—	3	5	—	1	1	4	14	1·2	133	11·0	76
Kensington	171,427	—	70	28	—	4	1	1	22	—	126	7·7	—	—	3	9	3	—	1	—	5	21	1·3	235	14·3	132
Hammersmith	105,959	—	30	14	—	4	—	1	6	—	55	6·4	—	1	1	2	3	—	—	—	7	14	1·4	139	13·7	166
Fulham	120,040	—	50	31	—	7	—	2	11	—	101	8·8	—	—	1	7	5	—	1	1	1	16	1·4	143	12·4	127
Chelsea	96,692	—	46	30	—	1	—	—	11	—	88	9·5	—	—	1	6	2	—	—	—	4	13	1·4	135	14·6	102
St. George Hanover-square	80,330	—	11	10	—	4	1	—	3	—	29	3·8	—	—	—	1	—	—	—	—	4	5	0·6	87	11·3	151
Westminster	53,027	—	10	13	—	3	—	—	3	—	29	5·7	—	1	2	3	1	—	—	—	—	7	1·4	85	16·7	130
St. James Westminster	22,576	—	11	5	—	—	—	—	3	—	19	8·8	—	—	—	—	—	—	—	—	—	—	—	28	12·9	91
North Districts.																										
Marylebone	140,808	—	33	23	—	4	—	1	25	—	85	6·3	—	2	2	4	3	—	—	—	5	16	1·2	223	16·5	94
Hampstead	77,275	—	18	7	—	2	—	1	5	—	33	4·5	—	1	—	1	1	—	—	—	3	6	0·8	80	10·8	120
St. Pancras	242,255	—	89	42	—	10	—	2	38	—	181	7·8	—	6	3	9	19	—	4	—	7	48	2·1	356	15·3	115
Islington	341,134	—	119	67	—	17	—	2	26	—	231	7·1	—	1	4	10	11	—	3	—	2	31	0·9	384	11·7	88
Stoke Newington	34,136	—	5	6	—	4	—	—	1	—	16	4·9	—	1	—	1	3	—	3	—	—	8	2·4	28	8·6	51
Hackney	216,698	—	101	55	—	10	1	1	34	—	202	9·7	—	7	1	4	6	—	3	—	6	27	1·3	251	12·1	100
Central Districts.																										
St. Giles	37,840	—	7	7	—	1	—	—	11	—	26	7·2	—	—	—	1	—	—	—	—	—	1	0·3	56	15·4	89
St. Martin-in-the-Fields	12,711	—	6	1	—	—	—	—	—	—	7	5·7	—	—	—	—	—	—	—	—	—	—	—	20	16·4	105
Strand	23,552	—	14	5	—	—	—	—	—	—	19	8·4	—	—	—	—	—	—	—	—	—	—	—	22	9·7	48
Holborn	30 493	—	13	31	—	—	—	—	5	—	49	16·8	—	—	—	3	1	—	—	—	—	4	1·4	54	18·5	175
Clerkenwell	66,162	—	33	20	—	9	—	1	—	—	63	9·9	1	8	1	5	2	—	1	—	1	19	3·0	113	17·8	106
St. Luke	41,279	—	15	24	—	—	—	—	4	—	43	10·9	—	14	1	1	2	—	—	—	1	19	4·8	104	26·3	125
City of London	30,228	—	11	4	—	—	—	—	5	—	20	6·9	—	2	—	—	—	—	—	—	—	2	0·7	61	21·0	171
East Districts.																										
Shoreditch	121,883	—	34	34	—	6	—	—	12	—	86	7·4	—	11	—	8	6	—	1	—	4	30	2·6	167	14·3	89
Bethnal Green	129,098	1	51	43	—	4	—	—	37	—	136	11·0	—	10	2	1	2	—	2	—	1	18	1·5	194	15·7	119
Whitechapel	79,724	—	61	35	—	1	—	—	8	—	106	13·7	—	6	4	2	—	—	—	—	5	17	2·2	138	18·1	136
St. George-in-the-East	47,917	—	28	19	1	1	—	2	8	—	59	15·0	—	3	2	7	2	—	—	—	1	15	3·3	98	21·3	146
Limehouse	56,508	—	30	22	—	4	—	2	8	—	66	11·8	—	8	2	5	3	—	1	—	2	21	3·7	124	24·1	110
Mile End Old Town	111,883	—	95	45	—	7	—	—	11	—	158	14·7	—	10	1	2	5	—	1	—	2	21	2·0	163	15·2	101
Poplar	169,811	—	90	59	—	18	—	1	24	—	190	11·7	—	3	2	10	9	—	1	—	1	26	1·6	256	15·7	132
South Districts.																										
St. Saviour Southwark	24,919	—	17	11	—	5	—	—	5	—	38	15·9	—	—	—	—	1	—	—	—	—	1	0·4	46	19·2	133
St. George Southwark	60,388	—	28	16	—	4	—	—	6	—	54	9·3	—	1	2	2	3	—	1	—	4	13	2·2	112	19·3	174
Newington	122,191	—	50	25	—	10	—	1	10	—	96	8·2	—	1	2	4	8	—	—	—	2	17	1·5	165	14·1	104
St. Olave Southwark	11,480	—	6	1	—	—	—	—	—	—	7	6·4	—	—	—	—	—	—	—	—	1	1	0·9	15	13·6	57
Bermondsey	85,629	—	33	16	—	3	—	—	7	—	59	7·2	—	3	1	4	4	—	—	—	2	14	1·7	137	16·7	134
Rotherhithe	40,643	—	18	9	—	—	—	—	9	—	36	9·2	—	4	5	2	2	—	—	—	1	14	3·6	74	19·0	146
Lambeth	300.048	—	109	58	—	13	—	3	29	—	212	7·4	—	13	5	6	11	—	2	—	1	14	1·6	384	13·4	113
Battersea	168,877	2	121	39	—	9	—	1	19	—	191	11·8	—	2	4	8	6	—	—	—	5	25	1·5	191	11·8	114
Wandsworth	196,612	—	67	33	—	4	—	—	21	—	125	6·7	—	2	5	7	1	—	—	—	2	17	0·9	215	11·5	86
Camberwell	257,575	—	100	115	—	6	—	2	29	—	252	10·2	—	5	3	10	5	—	1	—	3	27	1·1	293	11·9	98
Greenwich	178,367	—	99	51	—	7	—	—	24	—	181	10·6	—	1	2	5	2	—	—	—	4	14	0·8	206	12·0	82
Lewisham (excluding Penge)	86,152	—	17	9	—	4	—	—	5	—	35	4·2	—	2	2	—	1	—	1	—	1	7	0·8	76	9·2	98
Woolwich	41,409	—	14	10	—	1	—	—	7	—	32	8·1	—	—	—	2	1	—	—	—	1	4	1·0	61	15·4	132
Lee	39,215	—	23	1	—	1	—	—	2	—	27	7·2	—	2	—	—	—	—	—	—	—	2	0·5	43	11·4	39
Plumstead	61,057	—	27	10	—	2	—	—	3	1	43	7·3	—	—	—	1	2	—	—	—	—	3	0·5	58	9·9	82
Port of London	—	1	1	—	—	1	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 18 cases of membranous croup.

† Including deaths from membranous croup.

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156 resulted from diphtheria, 141 from whooping-cough, 131 from measles, 101 from diarrhœa, 64 from scarlet fever, 28 from enteric fever, 2 from ill-defined forms of continued fever, and 1 from small-pox. These 624 deaths were equal to an annual rate of 1·5 per 1000. No death from any of these zymotic diseases occurred during June in St. James Westminster, St. Martin-in-the-Fields, or Strand sanitary areas; among the other sanitary areas the lowest zymotic rates were recorded in St. Giles, St. Saviour Southwark, Lee, and Plumstead; and the highest rates in Clerkenwell, St. Luke, Shoreditch, St. George-in-the-East, Limehouse, and Rotherhithe. The single fatal case of small-pox belonged to Clerkenwell sanitary area. The 131 deaths from measles were little more than a third of the corrected average number in the corresponding periods of the ten preceding years; this disease was proportionally most fatal in Clerkenwell, St. Luke, Limehouse, Mile End Old Town, and Rotherhithe sanitary areas. The 64 fatal cases of scarlet fever were 25 below the corrected average number; the mortality from this disease was highest in Rotherhithe sanitary area. The 156 deaths from diphtheria were 14 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Holborn, Clerkenwell, Shoreditch, St. George-in-the-East, and Limehouse. The 141 fatal cases of whooping-cough were 99 below the corrected average number; the mortality from this disease was highest in St. Pancras, Shoreditch, Limehouse, Poplar, St. George Southwark, and Newington sanitary areas. The 28 deaths referred to enteric fever were 13 below the corrected average number; the mortality from this disease showed no marked excess in any of the sanitary areas. The 101 fatal cases of diarrhœa were little more than half the corrected average number. In conclusion, it may be stated that the mortality in London during June from these principal zymotic diseases was nearly 46 per cent. below the average.

Infant mortality in London, measured by the proportion of deaths under one year of age to registered births, was equal to 109 per 1000 during June, and was considerably below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in Paddington, Stoke Newington, Strand, St. Olave Southwark, Greenwich, Lee, and Plumstead; and the highest rates in Hammersmith, St. George Hanover-square, Holborn, City of London, St. George-in-the-East, St. George Southwark, and Rotherhithe.

THE SERVICES.

ARMY MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL J. H. MOORE has been appointed to officiate on the Administrative Medical Staff of the Army, with the temporary rank of Surgeon-Colonel, vice Surgeon-Colonel C. A. Atkins, on leave. Surgeon-Major R. D. Hodson has been posted to Sheerness for duty. Surgeon-Captain L. Way has been posted to the Station Hospital, Canterbury, for duty. Surgeon-Major S. C. B. Robinson has proceeded from York to Leeds for duty, in relief of Surgeon-Major J. R. Dodd, who proceeded to Woolwich for duty as Senior Medical Officer at the Royal Arsenal. Surgeon-Captain R. A. Bostock, Scots Guards, has been selected for promotion to the rank of Surgeon-Major in the Grenadier Guards, in succession to Surgeon-Lieutenant-Colonel W. Campbell, 1st Battalion, retired.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Captain R. W. H. Jackson, M.D., A.M.S., are replaced at the disposal of the Military Department. Ernest Whitmore Newton Guinness, gent., to be Surgeon-Lieutenant, East Indian Railway Volunteer Rifles, vice Whitaker, resigned. Surgeon-Lieutenant-Colonel H. Johnstone, Rangoon Volunteer Rifles, Brigade-Surgeon-Lieutenant-Colonel, Indian Medical Service, resigns his commission. The Volunteer Officers' Decoration has been conferred upon Surgeon-Lieutenant-Colonel Thomas Holbein Hendley, C.I.E., 2nd Battalion Bombay, Baroda, and Central India Railway Volunteer Rifles, Brigade-Surgeon-Lieutenant-Colonel Indian Medical Service. Surgeon-Lieutenant-Colonel J. M. Zorab, Civil Surgeon of Bhagalpur, is appointed to be Civil Surgeon of Cuttack, vice Brigade-Surgeon-Lieutenant-Colonel C. J. W. Meadows, retired. Surgeon-Captain J. T. Calvert, Civil Surgeon of Mymensingh, is appointed to be Civil Surgeon of Bhagalpur, vice Surgeon-Lieutenant-Colonel J. M. Zorab, but will continue to act as Inspecting Officer for the purpose of carrying out the provisions of the Epidemic Diseases Act, 1897, at Khana Junction, East Indian Railway, until further orders. Surgeon-Captain C. E. Sunder, Officiating Civil Surgeon of Rangpur, is appointed to act as Civil Surgeon of Bhagalpur during the absence on deputation of Surgeon-Captain J. T. Calvert, or until further orders. Surgeon-Major C. P. Lukis, from the Rohilkhand Volunteer Rifles, to be Surgeon-Major, to complete the establishment. The following appointment is made on the Personal Staff of the Governor of Bombay:—Surgeon-Captain J. B. Jameson, M.B., C.M., 28th Pioneers, to act as Medical Officer during the absence of Surgeon-Major H. Martin, M.B., on leave.

VOLUNTEER CORPS.

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At the quarterly meeting of the directors of the Naval

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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS OF LONDON—JUNE, 1897.

(Specially compiled for THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1897.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.													
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
LONDON...	4,463,169	4	1856	1127	1	191	3	24	509	1	3716	8·7	1	131	64	156	141	—	23	2	101	624	1·5	5963	13·9	109
West Districts.																										
Paddington	126,161	—	45	33	—	2	—	1	12	—	93	7·7	—	—	—	3	5	—	1	1	4	14	1·2	133	11·0	76
Kensington	171,427	—	70	28	—	4	1	1	22	—	126	7·7	—	—	3	9	3	—	1	—	5	21	1·3	235	14·3	132
Hammersmith	105,959	—	30	14	—	4	—	1	6	—	55	5·4	—	1	1	2	3	—	—	—	7	14	1·4	139	13·7	165
Fulham	120,040	—	50	31	—	7	—	2	11	—	101	8·8	—	—	1	7	5	—	1	1	1	16	1·4	143	12·4	127
Chelsea	96,692	—	46	30	—	1	—	—	11	—	88	9·5	—	—	1	6	2	—	—	—	4	13	1·4	135	14·6	102
St. George Hanover-square	80,330	—	11	10	—	4	1	—	3	—	29	3·8	—	—	—	1	—	—	—	—	4	5	0·6	87	11·3	151
Westminster	53,027	—	10	13	—	3	—	—	3	—	29	5·7	—	1	2	3	1	—	—	—	—	7	1·4	85	16·7	130
St. James Westminster	22,576	—	11	5	—	—	—	—	3	—	19	8·8	—	—	—	—	—	—	—	—	—	—	—	28	12·9	91
North Districts.																										
Marylebone	140,808	—	33	23	—	4	—	—	25	—	85	6·3	—	2	2	4	3	—	—	—	5	16	1·2	223	16·5	94
Hampstead	77,275	—	18	7	—	2	—	1	5	—	33	4·5	—	1	—	1	1	—	—	—	3	6	0·8	80	10·8	120
St. Pancras	242,255	—	89	42	—	10	—	2	38	—	181	7·8	—	6	3	9	19	—	4	—	7	48	2·1	356	15·3	115
Islington	341,134	—	119	67	—	17	—	2	26	—	231	7·1	—	1	4	10	11	—	3	—	2	31	0·9	384	11·7	88
Stoke Newington	34,136	—	5	6	—	4	—	—	1	—	16	4·9	—	1	—	1	3	—	3	—	—	8	2·4	28	8·6	51
Hackney	216,698	—	101	55	—	10	1	1	34	—	202	9·7	—	7	1	4	6	—	3	—	6	27	1·3	251	12·1	100
Central Districts.																										
St. Giles	37,840	—	7	7	—	1	—	—	11	—	26	7·2	—	—	—	1	—	—	—	—	—	1	0·3	56	15·4	89
St. Martin-in-the-Fields	12,711	—	6	1	—	—	—	—	—	—	7	5·7	—	—	—	—	—	—	—	—	—	—	—	20	16·4	105
Strand	23,562	—	14	5	—	—	—	—	—	—	19	8·4	—	—	—	—	—	—	—	—	—	—	—	22	9·7	48
Holborn	30 493	—	13	31	—	—	—	—	5	—	49	16·8	—	—	—	3	1	—	—	—	—	4	1 4	54	18 5	175
Clerkenwell	66,162	—	33	20	—	9	—	1	—	—	63	9·9	1	8	1	5	2	—	1	—	1	19	3·0	113	17·8	105
St. Luke	41,279	—	15	24	—	—	—	—	4	—	43	12·9	—	14	1	1	2	—	—	—	1	19	4·8	104	26·3	125
City of London	30,228	—	11	4	—	—	—	—	5	—	20	6·9	—	2	—	—	—	—	—	—	—	2	0·7	61	21·0	171
East Districts.																										
Shoreditch	121,883	—	34	34	—	6	—	—	12	—	86	7·4	—	11	—	8	6	—	1	—	4	30	2·6	167	14·3	89
Bethnal Green	129,098	1	51	43	—	4	—	—	37	—	136	11·0	—	10	2	1	2	—	2	—	1	18	1·5	194	15·7	119
Whitechapel	79,724	—	61	36	—	1	—	—	8	—	106	13·7	—	6	4	2	—	—	—	—	5	17	2·2	138	18·1	136
St. George-in-the-East	47,917	—	28	19	1	1	—	2	8	—	59	16·0	—	3	2	7	2	—	—	—	1	15	3·3	98	21·3	146
Limehouse	58,508	—	30	22	—	4	—	2	8	—	66	11·8	—	8	2	5	3	—	1	—	2	21	3·7	124	22·1	110
Mile End Old Town	111,883	—	95	45	—	7	—	—	11	—	158	14·7	—	10	1	2	5	—	1	—	2	21	2·0	163	15·2	101
Poplar	169,811	—	90	59	—	16	—	1	24	—	190	11·7	—	3	2	10	9	—	1	—	1	26	1·6	256	15·7	132
South Districts.																										
St. Saviour Southwark	24,919	—	17	11	—	5	—	—	5	—	38	15·9	—	—	—	—	1	—	—	—	—	1	0·4	46	19·2	133
St. George Southwark	60,388	—	28	16	—	4	—	—	6	—	54	9·3	—	1	2	2	3	—	1	—	4	13	2·2	112	19·3	174
Newington	122,191	—	50	25	—	10	—	1	10	—	96	8·2	—	1	2	4	8	—	—	—	2	17	1·5	165	14·1	104
St. Olave Southwark	11,480	—	6	1	—	—	—	—	—	—	7	6·4	—	—	—	—	—	—	—	—	1	1	0·9	15	13·6	67
Bermondsey	85,629	—	33	16	—	3	—	—	7	—	69	7·2	—	3	1	4	4	—	—	—	2	14	1·7	137	16·7	134
Rotherhithe	40,643	—	18	9	—	—	—	—	9	—	36	9·2	—	4	5	2	2	—	—	—	1	14	3·6	74	19·0	146
Lambeth	300,048	—	109	58	—	13	—	3	29	—	212	7·4	—	13	5	6	11	—	2	—	9	46	1·6	384	13·4	113
Battersea	168,877	2	121	39	—	9	—	1	19	—	191	11·8	—	2	4	8	6	—	—	—	5	25	1·5	191	11·8	114
Wandsworth	195,612	—	67	33	—	4	—	—	21	—	125	6·7	—	2	5	7	1	—	—	—	2	17	0·9	215	11·6	86
Camberwell	257,575	—	100	115	—	6	—	2	29	—	252	10·2	—	5	3	10	5	—	1	—	3	27	1·1	293	11·9	98
Greenwich	178,367	—	99	51	—	7	—	—	24	—	181	10·6	—	1	2	5	2	—	—	—	4	14	0·8	208	12·0	82
Lewisham (excluding Penge)	86,152	—	17	9	—	4	—	—	5	—	35	4·2	—	2	2	—	1	—	1	—	1	7	0·8	76	9·2	98
Woolwich...	41,409	—	14	10	—	1	—	—	7	—	32	8·1	—	—	—	2	1	—	—	—	1	4	1·0	61	15·4	132
Lee	39,215	—	23	1	—	1	—	—	2	—	27	7·2	—	2	—	—	—	—	—	—	—	2	0·5	43	11·4	39
Plumstead	61,057	—	27	10	—	2	—	—	3	1	43	7·3	—	—	—	1	2	—	—	—	—	3	0·5	58	9·9	82
Port of London	—	1	1	—	—	1	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 18 cases of membranous croup.

† Including deaths from membranous croup.

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156 resulted from diphtheria, 141 from whooping-cough, 131 from measles, 101 from diarrhœa, 64 from scarlet fever, 28 from enteric fever, 2 from ill-defined forms of continued fever, and 1 from small-pox. These 624 deaths were equal to an annual rate of 1·5 per 1000. No death from any of these zymotic diseases occurred during June in St. James Westminster, St. Martin-in-the-Fields, or Strand sanitary areas; among the other sanitary areas the lowest zymotic rates were recorded in St. Giles, St. Saviour Southwark, Lee, and Plumstead; and the highest rates in Clerkenwell, St. Luke, Shoreditch, St. George-in-the-East, Limehouse, and Rotherhithe. The single fatal case of small-pox belonged to Clerkenwell sanitary area. The 131 deaths from measles were little more than a third of the corrected average number in the corresponding periods of the ten preceding years; this disease was proportionally most fatal in Clerkenwell, St. Luke, Limehouse, Mile End Old Town, and Rotherhithe sanitary areas. The 64 fatal cases of scarlet fever were 25 below the corrected average number; the mortality from this disease was highest in Rotherhithe sanitary area. The 156 deaths from diphtheria were 14 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Holborn, Clerkenwell, Shoreditch, St. George-in-the-East, and Limehouse. The 141 fatal cases of whooping-cough were 99 below the corrected average number; the mortality from this disease was highest in St. Pancras, Shoreditch, Limehouse, Poplar, St. George Southwark, and Newington sanitary areas. The 28 deaths referred to enteric fever were 13 below the corrected average number; the mortality from this disease showed no marked excess in any of the sanitary areas. The 101 fatal cases of diarrhœa were little more than half the corrected average number. In conclusion, it may be stated that the mortality in London during June from these principal zymotic diseases was nearly 46 per cent. below the average.

Infant mortality in London, measured by the proportion of deaths under one year of age to registered births, was equal to 109 per 1000 during June, and was considerably below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in Paddington, Stoke Newington, Strand, St. Olave Southwark, Greenwich, Lee, and Plumstead; and the highest rates in Hammersmith, St. George Hanover-square, Holborn, City of London, St. George-in-the-East, St. George Southwark, and Rotherhithe.

THE SERVICES.

ARMY MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL J. H. MOORE has been appointed to officiate on the Administrative Medical Staff of the Army, with the temporary rank of Surgeon-Colonel, vice Surgeon-Colonel C. A. Atkins, on leave. Surgeon-Major R. D. Hodson has been posted to Sheerness for duty. Surgeon-Captain L. Way has been posted to the Station Hospital, Canterbury, for duty. Surgeon-Major S. C. B. Robinson has proceeded from York to Leeds for duty, in relief of Surgeon-Major J. R. Dodd, who proceeded to Woolwich for duty as Senior Medical Officer at the Royal Arsenal. Surgeon-Captain R. A. Bostock, Scots Guards, has been selected for promotion to the rank of Surgeon-Major in the Grenadier Guards, in succession to Surgeon-Lieutenant-Colonel W. Campbell, 1st Battalion, retired.

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Medical Supplemental Fund, held on July 13th, Inspector-General W. H. Lloyd in the chair, the sum of £61 was distributed among the several applicants.

Correspondence.

"Audi alteram partem."

"THE RECENT PRIMARY FELLOWSHIP EXAMINATION AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—I would like to sound the note of harmony amidst the clash of argument between "A Surgeon of Thirty Years' Standing" and "Anatomist." "Anatomist" focuses his reply on the somewhat unfortunate "German flute" metaphor. But even this is right in substance. And he quotes only such parts of the questions on the terminal portion of the rectum, the topography of the liver, the thyroid gland, &c., as he thinks support his view. These questions bear a different complexion when looked up in the Calendar. They include an account of the development of the organs mentioned, this involving, especially in the case of the liver, about the most intricate questions in embryology. One cannot describe intelligently the development of the liver without fixing the site of its first formation, which means tracing the separation of the pleural and peritoneal cavities. And similarly with the questions as to the nasal septum and the broad ligament of the uterus, to which are added riders as to the vestigial structures connected with these parts, with a reference, in the case of the broad ligament, to their homologues in the male sex.—"But it would never do at the higher examination to ask simply the topography of the liver," someone might say; "everybody would answer that."—"Tack on the partition of the cœlom and the formation of the mediastina."—"Or the three last inches of the rectum."—"Include the closure of the early cloaca and the differentiation of the sexes." We have in these additions the true explanation of the deficiency of the candidates as to "simple accurate knowledge of ordinary general anatomy," of their failing, of all subjects, on the bones. But then the men have been giving all their time to getting up the small type in the new editions of the text-books, and know next to nothing of the anatomy and physiology "without which a sound knowledge of the profession is impossible."

Generalities are not telling in argument. Let us narrow the point to assuredly familiar matter.—"Kindly put out your tongue."—"Would you mind telling me what for? what have you *seen*, who charge for looking down my throat, of the structures beneath the fur on the surface?" Fortunately patients do not often thus address us. But, honestly, what should we answer if they did? Are there not many of us nowadays who know little or nothing, in the true and practical sense of knowing, in the old surgeon's sense of knowing, in the sense of having personally dissected them, of the structures—as Inquisitive puts it—beneath the fur on the surface? I ask the question seriously, in the inner circle of "*nos intimes*," and in the light of your leading articles on Jan. 20th, 1894, and Feb. 6th of this Jubilee year. "*Numbers who dissect ..... dwindling to a minimum.*" "*Dissections of the deeper parts seldom made now*"—*ergo*, tongue, larynx, pharynx, soft palate, rectum, liver, and broad ligaments taught by "a system of chalks, blackboards, and tutorial cramming classes."

But then the corresponding higher examinations become examinations of a higher standard only in regard to the "high falutin'" matter now being introduced and examinations of a lower standard in regard to the anatomy and physiology already defined, in "Anatomist's" words, as that "without which a sound knowledge of one's profession is impossible." In those examinations in which a separate "honours' set" of questions are issued are there not a good many who pass, and aim at passing, on the "honours' set," who know that they would fail on the ordinary, or "pass set"? No less an authority than Professor Struthers "distrusts the honours' list." But then the "honours' list," for professional purposes, becomes—a possible list of dishonour. The new school dissects but little. It explains, and tries to get men to "understand"—that is, to imagine. In saying this, I fear I am calling down a chorus of denials on my head. But I stick to my point. It is true that things are not so *in principle*. *In principle* the new school insists strongly on practical work of all kind. "One part dissected with care," writes Professor Macalister, "is worth a dozen hurried over." Indeed, the zeal and personal example of the leaders are admirable. But the field of work is so enormously extended by the superadded "transcendentalism," that theory and practice cannot go hand in hand. The highest aspirations notwithstanding, the fact is as above stated. And this is by no means limited to work for the higher examinations. It extends to everything. The present system, the "cram" system, is demoralising the schools, discrediting the examining bodies, and dishonouring the profession.

The above is on the surface, and everyone can see it. But let me cross-examine "Anatomist" in regard to something more recondite, as to which he is right, but without quite understanding how, as to something which underlies and shapes the intellectual groundwork on which we stand, and, indeed, explains the apparently inexplicable. How does "Anatomist" tally facts with the view as to the same kind of knowledge being required (except as to greater (?) accuracy) for the higher as for the more ordinary examinations, and as to the examiners not pressing questions requiring more than "very ordinary knowledge" till *after* the candidate has shown himself entitled to a pass? If this be so—and I maintain that it *is* so—how do questions as to vestiges and homolcgues, and the hardest and most unsettled questions in embryology find their way into the *papers?* Will "Anatomist" give the key? The examiners are not trying to pluck. They are simply endeavouring to do their duty; and, on the whole, doing it remarkably well. But why do they make the examinations so "ingeniously eliminative"? They do nothing of the kind—intentionally, at least. Why do they pluck "70 per cent. of the candidates—eighty of the most hard-working and intelligent students"? Because "70 per cent. of the candidates—eighty of the most hard-working and most intelligent students" do not know the "attachment of muscles," the "position of the bones," and the like. We have this on the authority of the examiners' present mouthpiece, "Anatomist."

I maintain that the fault does not lie, in the main, with the examiners. With whom does it lie? With the teachers? Neither—in regard at least to their honestly doing their best by their men. Then where does the evil come from? It comes from the conditions under which both teachers and examiners are working. It comes from the conditions created by the text-books. It comes from the specialists, who, in writing them, pile up detail upon detail, until they make each part of a science a science in itself. Would that I could discourse here on a few of the pointed sayings of the inimitable Mr. Mitchell Banks, or on a few of the weighty apothegms—"Go to nature," for example—of our much endeared Professor Struthers. But I have done this elsewhere, and your space is precious.

Let us "Go to nature." The examiners are not unreasonable. They are tied down somewhat, or think they are—too much so, perhaps; but it is only a passing craze. They do not lay much stress on the transcendental. They do not know much about it themselves. How could they? They are, in the main, surgeons. Show them a little knowledge of Nature. Handle your bones. Look at your muscles. Dissect your large vessels and nerves. Dip your hands into the cavities. Let your knowledge be true knowledge, and not the "information poured upon the memory" (Struthers); and trust to the honour of those who are but a little ahead of you. The examiner soon distinguishes between your book knowledge, rattled off perhaps in unimpeachable phraseology, and your true knowledge, presented, perhaps, in terms laboured and inappropriate, but at least in your own English. One candidate answers "A 1," who probably knows "no more of his subject than he does of Greek." Another answers "well, as a youngster can when necessarily hauled over questions that would puzzle the Presidents of our Colleges." It is to the standing honour of the examiners that they usually pluck the first candidate and pass the second. No body of men are doing their work better, on the whole, than the College examiners. Examinations are easy enough to pass, with just a little honest,

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practical work, resulting in a little, simple, plain, true knowledge. "Anatomist" is right here. But the men do not know it. Tell them that they are running after the unattainable and valueless, and missing the good things at their door. Tell them, and thus solve the problem of the 70 per cent. of plucks.

I am, Sirs, yours faithfully,

THOMAS COOKE, F.R.C.S.

July 12th, 1897.

THE GARRULOUS THERMOMETER.

To the Editors of THE LANCET.

SIRS,—Your annotation in THE LANCET of June 26th on the case recorded in the *Indian Lancet* draws attention to a wonderful case of high temperature that to me seems inexplicable. I should like to notice, however, one sentence bearing on what may be considered an abuse of the thermometer. The annotation says: "For weeks the temperature was taken every quarter of an hour, as the rise was often very sudden." The wonder to me is that the woman survived these repeated experiments.

Undoubtedly the clinical thermometer is a great aid in the diagnosis of many diseases. *Per contra*, it is a most mischievous little instrument in the fingers of a fussy nurse, who looks upon it as a sort of fetich to be used on all possible occasions, very often to the discomfort or even detriment of the helpless patient. Montgomery, of Dublin, formerly preached strongly against the evils of meddlesome midwifery, and a warning note might prudently be rung out to-day against the too frequent use of these instruments of precision, especially in the hands of the ignorant. In cases of acute pneumonia, rheumatic fever, &c., where rest is a prime factor in recovery, the meddlesome application of the thermometer for some minutes is a small premium on death, and how often this is done as mere routine needlessly and hurtfully I know full well.

In one case, a young man who had passed through a severe attack of acute rheumatism with heart complications at the age of sixteen years, during his convalescence unfortunately heard that should he have a recurrence and the temperature reach 104° it would go hard with him. This patient had a recrudescence of an alarming nature at twenty-two years of age, and was nearly killed by the fiat of two medical men, who, with grave shake of head, croaked out in his hearing, "Yes, very ill indeed. Temperature 104°." Fortunately I had an instrument that would not register over 100°, and a sight of this was "good medicine" to the otherwise helpless man. Had this man succumbed I should always have considered that the road to death was shortened—it certainly would not have been smoothed—by the reading of the thermometer and the wisdom that it evoked.

Fear is a grave disease, and the unwarrantable use of these appliances, especially in certain temperaments, is accountable for much mischief. Were it not that I have read the sensible advice to "boil it down" much might be written on this subject of some import. My object in this brief letter is simply to draw attention to the mis-directed use of a valuable adjunct to our art, and to point out that this silent monitor in the hands of a garrulous person is capable of great misdoing. The *mens medica*, surely a gift more or less, is not sufficiently cultivated, whereas that dumb orator, the clinical thermometer, is not unfrequently accountable for the manufacture of high temperatures.

I am, Sirs, yours faithfully,

R. A. CALDWELL.

Beckford Lodge, Southampton, July 12th, 1897.

MERCER'S HOSPITAL, DUBLIN.

To the Editors of THE LANCET.

SIRS,—Kindly permit me to explain a statement appearing in THE LANCET of July 10th, which I assume was made by your Dublin correspondent, and might be wrongly interpreted by those not acquainted with the facts. The statement I refer to is that the only member of the old staff of Mercer's Hospital who had been re-elected was Dr. Ward. This might imply that the old staff had sought re-election at the hands of those who purported to have dismissed the entire medical and surgical staff of the institution, and which act was done without alleging any cause whatsoever. A resolution was passed by a section of the board to the effect that for the purpose of regaining for the old institution the high position it formerly held, and to increase the public confidence in the management of the hospital, it was resolved to call upon all the medical and surgical staff to resign with a view of appointing a new staff, and that *the old staff would be eligible for re-election.* It is needless for me to point out the absurdly contradictory nature of this resolution; for if it was necessary to dismiss the medical staff to regain a name for the institution it would be absurd to re-elect those whose names were associated with any deterioration. Subsequently it was decided by the board that all who did not send in their resignations should stand dismissed. So far as applying again to the board who passed such a resolution, condemning, without reason, the entire staff, I think I am safe in saying that no one save Dr. Ward applied for re-election.

Not only did I myself not apply for re-election, but I deny the power of the board to dismiss the staff without cause. It is significant that the time selected by the board for their high-handed act is the beginning of the legal long vacation, when the matter cannot be heard for months; but it is my intention, so soon as the circumstances of the case will allow, and so far as law will permit, to have the matter decided in the interests of the medical profession, my colleagues, and myself.

I am, Sirs, yours faithfully,

EL. STAMER O'GRADY,

Senior Surgeon to Mercer's Hospital.

Merrion-square, Dublin, July 13th, 1897.

THE HALF-YEARLY MEETING OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—The value of these meetings becomes much diminished if a small meeting maintains a quorum merely to accept and register the decision of the Council, and the adverse vote of a large meeting is met by a plebiscite on an unfair basis, as was the case with that of the meeting of Fellows which accepted the principle of extending the franchise to the Members. Until this plebiscite the Fellows had shown considerable independence of thought and action. Where were these at the last meeting or in the course adopted by the Association of Fellows at the recent election? Only one Fellow seemed to retain them, for on the amendment being carried and put as a substantive motion Mr. Anderson and Mr. Jackson, the mover and seconder of the original motion, did not vote, and yet one Fellow voted consistently. The meaning of By-law XV., which provides for the rights of Fellows and Members—and in the next motion the principle of representation on which the whole profession is governed were under consideration. Yet of thirty Fellows present besides the mover and seconder only the President of the College touched these subjects, and he explicitly stated that he did not speak on behalf of the Council. He did not give a single reason why the by-law does not apply in Mr. Anderson's case, but only deplored the idea of its being put in operation as derogatory to a scientific body. If it were derogatory it might be no less binding. If it is not binding the reason should be stated by the Council. If it be binding it is not consistent with the honour of the Council to repudiate its engagements. The explanation as to Mr. Bryant's position (I speak impersonally) is, though still unofficial, no more satisfactory. There can be no true representation unless the representative is responsible to those he represents; and if the representatives of the bodies corporate on the General Medical Council have no responsibilities to those who appoint them, then twenty such free agents—a majority of the General Medical Council—constitute an arbitrary and irresponsible government controlling the whole medical profession. The failure of the Fellows present to rise to the level of the occasion, the tameness with which they resigned their important functions in favour of an absolute discretion in the Council, should be matter of grave reflection to the rest of the body corporate, and especially to the Members of the College. Disused functions are quickly lost. If, as has lately appeared, the Fellows do not intend to claim any control over the affairs of the College it is time action was taken to prevent the Council from achieving the absolute supremacy it asserts.

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Sir Robert Craven's suggestion that Mr. Anderson's wrongs are suitable matter for appeal to the whole profession met with the favour of the meeting and the commendation of the chair; but appeals to the whole profession on suitable subjects should, it would appear, be led by the leaders of the profession; and why not by the great professional corporations, including the greatest, which is the College?

I am, Sirs, your obedient servant,

July 14th. A FELLOW OF THE COLLEGE.

THE INTERNATIONAL MEDICAL CONGRESS AT MOSCOW.

To the Editors of THE LANCET.

SIRS,—May I call attention to certain matters concerning the approaching International Medical Congress at Moscow?

Firstly, there is need for clear instructions as to how to send money to Russia. Postal orders payable in Russia are not issued in England. English banks will not supply drafts on Russian banks for sums of less than £10. Bank-notes are not allowed to be sent through the post in Russia. Money can be sent by English cheque crossed "Crédit Lyonnais"; but then the rate of exchange seems hard to ascertain. One friend of mine sent a cheque for £1, which he thought was equivalent to 25 francs, or 20 marks, or 10 roubles, but he only got a receipt for 8 roubles 50.

Secondly, the Moscow managers of the Congress seem what we in England should call dilatory. Another friend of mine sent his subscription a month ago, but has had neither receipt nor card of membership. I believe that no one in England has yet had a card of membership. The preparations that have to be made before travelling in Russia as to passport and railway ticket will make inconvenience result if the issue of cards of membership is postponed till the last moment.

Perhaps the ventilation of these matters may lead to closer attention to the convenience of intending members. I enclose my card. I am, Sirs, yours faithfully,

July 14th, 1897. F R.C.P.

*** The form of inscription says that a cheque of the value of 25 francs or 20 marks (10 roubles) may be sent, and in most cases we believe that a cheque for £1 has been followed by a receipt on a post-card stating that the sender will be enrolled as a member of the Congress. In cases where the amount credited has been 3 roubles 50 we believe that the sender will be inscribed. Of a credit for a less sum in response to a cheque for £1 we have had no examples brought to our notice previously. The official instructions are not explicit, and our advice is that all intending members should send a cheque for one guinea direct to the secretary-general, Professor W. K. Roth. The cards of membership ought to be issued, and we hope that the delay in sending them will not be extended. We would remind those who are expecting them that they must indicate to the secretary-general their place of arrival on the frontier.—ED. L.

THE GERMAN CONGRESS OF INTERNAL MEDICINE.

(FROM OUR BERLIN CORRESPONDENT.)

(*Concluded from p. 57.*)

The Use of the x Rays in Internal Medicine.

PROFESSOR BENEDIKT (Vienna) said that the x rays were an important addition to our methods of cardiac diagnosis. The size of the heart, which formerly could not be precisely ascertained when the organ was covered by the lungs, as in emphysema, is now easily measured; arterio-sclerosis can also be recognised in an early stage, and the formation of aneurysms may be observed. The rays are also valuable in studying the respiratory system, for not only do they enable the action of the diaphragm to be ascertained in health and disease, but infiltration of the pulmonary apices and the formation of cavities become visible, and foreign bodies in the thorax may be detected by the same means. The examination of the abdominal organs by the rays had, however, not yet proved very successful.—In the course of the discussion Dr. Levy-Dorn and Dr. Rosenfeld showed skiagraphs of aneurysms, and Dr. Becher recommended that Esmarch's artificial anæmia should be employed when the extremities are being examined, for the outline of the bones is thereby rendered more apparent.

The Use of Drugs in Modern Medical Practice.

Professor Liebreich (Berlin), the well-known adversary of bacteriology and serum treatment, said that the discovery of many powerful remedies was due to the systematic practical trial of a variety of substances—in fact, to the empiric method of inquiry, entirely without the assistance of theoretical considerations. Digitalis and iodine were notable examples of drugs which had been introduced into medical practice in this way. The recent great advances in synthetical chemistry have resulted in the formation of a host of compounds the properties of which remain for pharmacologists to investigate. Physicians may think that they are overwhelmed by the number of these new substances which are pressed on their notice; they ought, however, not to complain, but rather to welcome such extended opportunities of selection, whereby they are enabled to choose drugs appropriate to individual cases. There are remedies, such as quinine and mercury, which are specifics, inasmuch as they are directly antagonistic to the morbid process or cause of illness, but the mode of their action is as yet far from being known. Since the discovery of bacteria medical men have carefully studied the substances which are capable of destroying them, but in this connexion it is essential to take the cellular elements of the organism equally into consideration, and to avoid the error of concentrating attention exclusively on the micro-organisms, for it often happens that the bacteria associated with a given illness are not the primary cause of it, but have merely been developed to an unusual extent in consequence of the vital energies of the tissues becoming lowered from some cause or other. The bacillus of tubercle, for instance, is to be found in the lungs of healthy persons, and its development assumes the character of a pathological process only after the vitality of the pulmonary cells has been impaired. The treatment of pulmonary tuberculosis ought, therefore, to aim, not at the destruction of the bacilli, but at the restoration of the vital energy of the pulmonary cells. For this reason nourishing food and attention to hygiene are essential; cantharidin has also proved useful. The bacteriologists are of opinion that diseases ought to be classified according to the bacteria which are associated with them. Would they, however, give the name of "coli-bacillosis" to cases of arsenical poisoning in which the bacterium coli was discovered in the heart of animals? and would they try to destroy the bacteria in preference to endeavouring to get rid of the poison? Professor Liebreich was of opinion that Professor Koch's new anti-tuberculin would not be more successful than the former preparation. With regard to Behring's diphtheria antitoxin, he said that the mortality from diphtheria is reported to have diminished since the introduction of the treatment, but competent observers like Kassowitz, of Vienna, and Rose, of Berlin, admit that they have not seen any good effect resulting from it. The history of diphtheria prevalence also shows that periods of low mortality have occasionally occurred. In conclusion, Professor Liebreich asserted that tetanus antitoxin was useless, and that the practical results of the new serum treatment had by no means come up to the expectations to which it gave rise.—A very animated discussion followed Professor Liebreich's address.—Professor Baginsky claimed that the good results of the serum treatment were undeniable.—Professor Behring, after remarking that Kassowitz published his observations five years ago, offered to provide Professor Liebreich with a supply of toxins and antitoxins with which he could himself perform any experiments he might think desirable.—Professor Liebreich, in his reply, said that he did not question the statement that mixtures of toxins and antitoxins made in a test tube were inert.

The Treatment of Chronic Diseases of the Heart.

Dr. Rumpf (Hamburg) said that in the dietetic prescriptions given to patients suffering from chronic heart disease only albumin, fat, and carbohydrates had been hitherto taken into consideration. He has made experiments concerning the action of salts of lime in the organism, and has found (1) that when too much of these salts is present in the food a good deal of it becomes retained in the body; (2) that in calcification of the arteries the elimination of the lime-salts decreases; and (3) that the amount of the lime salts in

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blood is very inconstant. A decrease of lime salts in the food must thus be of therapeutical value. Dr. Rumpf has investigated the influence of several substances on the elimination of lime salts, and has found that hydrochloric acid, lactic acid, and organic salts of potassium promote it, whilst phosphoric acid had no influence; experiments with oxalic acid and salicylic acid are in progress. As to the amount of albumin necessary for the organism, Dr. Rumpf believed that from sixty to eighty grammes were sufficient. He also recommended food containing a large quantity of potassium and sodium salts such as vegetables and fruit, and expressed his opinion that a mixed dietary was preferable to one consisting exclusively of meat and fat.

Puncture of the Spinal Canal.

Dr. Lenhartz (Hamburg) has performed this operation in grave cases of chlorosis where the increased pressure of the cerebral fluid caused violent headaches. In 10 cases out of 20 operated on the pains disappeared at once. The principal indication for the operation is cerebro-spinal meningitis. He has resorted to puncture in 46 cases of tuberculous and 24 cases of idiopathic cerebro-spinal meningitis In the first group the tubercle bacillus was found in 21 cases only. Of the second group, in 13 cases Weichselbaum's, and in 9 Fränkel's, diplococcus was present; in one instance the bacillus of enteric fever was discovered, and in one instance no bacillus at all could be detected. Dr. Lenhartz was of opinion that it was still uncertain whether the bacillus intercellularis was the cause of epidemic cerebro-spinal meningitis; all his cases were sporadic and were not sufficiently numerous to found an opinion on.—Professor Fürbringer (Berlin) has performed the operation in a new series of 26 cases of tuberculous meningitis, in 14 of which the tubercle bacillus was found. He had previously published a series of 37 cases, in 30 of which the bacillus was present. He had also found the method very useful for the recognition of cerebro-spinal meningitis, and has succeeded in diagnosing cerebral hæmorrhage in 10 cases by its means. In one instance, where it was doubtful whether the patient suffered from delirium tremens or from fracture of the skull, the hæmorrhagic fluid obtained by puncture proved the existence of a traumatic lesion.

Acute Leukæmia.

Professor Fränkel (Berlin) said that a characteristic symptom of acute leukæmia was the hæmorrhagic diathesis in conjunction with swelling of the glands, the liver, and the spleen. He has seen 12 cases within seven years. A good many of them were erroneously believed to be purpura hæmorrhagica, but a correct diagnosis could always be made by a microscopical examination of the blood. The increase of mononuclear leucocytes is very characteristic. Professor Fränkel terms them lymphocytes, and the whole morbid process lymphocythæmia. He has once observed a peripheral paralysis of the facial nerve due to an immigration of leucocytes into the substance of the nerve. In the same case the enormous quantity of twelve grammes of uric acid were discharged within forty-one hours.

Iodine in Disorders of the Circulation.

Professor Vierordt (Heidelberg) said that he had been giving iodine to patients suffering from disorders of the circulation when the usual dietetic and mechanical treatment had not succeeded in relieving the pains. Cases of arterio-sclerosis were especially suitable for this treatment, but it was not applicable to patients over sixty years of age suffering from cardiac debility and albuminuria. At first from 0·25 to 0·5 gramme of iodide of sodium as given several times, so that from 1½ to 3 grammes were taken in the course of a day; afterwards iodide of potassium was administered. It is essential that the patients should use the iodine for a somewhat long time—say, nine months in the first year. After an interval of from three to six months the administration of iodine was resumed. The remedy was very well borne; sometimes, however, the digestion was interfered with. The treatment was remarkably successful, especially in the cases of six patients who had suffered from severe angina pectoris, but who improved so much that they were able to ascend hills and also to return to business. With regard to the theoretical explanation of the action of iodine he was of opinion that the lesion was prevented from extending, but was not actually repaired. It has been suggested by Sée, Huchard, and others that an effect is produced on the vaso-motor nerves, but this is not probable.

Fatty Degeneration.

Dr. Rosenfeld (Breslau) said that the alleged difference between fatty degeneration and fat infiltration was based upon the hypothesis of a metamorphosis of the cellular albumin into fat. He has examined the pathological conditions where this metamorphosis is believed principally to occur, especially in the livers of animals poisoned by phosphorus and phloridzin. In starving dogs to which phloridzin had been administered a quantity of fat was stored in the cells of the liver. This fat did not proceed from the albumin of the cells, as the albuminous substances were not decreased. When mutton fat was injected into the cellular tissue of the skin poisoning by phloridzin made the mutton fat pass from the skin into the liver. In phosphorus poisoning also the fat only passed from the cellular tissue into the liver; this fact was very obvious in starving dogs where the fat had entirely disappeared. In these animals poisoning by phosphorus was not able to produce fatty degeneration of the liver. An artificial injection of mutton fat makes this fat again appear in the liver. Dr. Rosenfeld concluded his address by the remarkable statement that fat is never formed from albumin and that the theory of fatty degeneration must thus be abandoned. When the albuminous substances of a cell are destroyed the loss is supplied by fat passing into the cell. The fat of the organism consists exclusively either of that which is taken as food or that which is formed from carbohydrates.

An abstract of all the papers read before the Congress would occupy more space than can be spared. The principal ones, next after those already enumerated, were as follows: Professor Kronecker, on Death by Thrombosis of the Coronary Arteries; Dr. Friedländer, on Alterations of the Blood by Thermic Influence; Professor Hochhaus, on Experimental Myelitis; Professor Goldscheider, on the Neuronic Theory; and Professor von Mering, on the Function of the Stomach. The next congress will be held in Wiesbaden.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Pressure of Lunacy Admissions at the Liverpool Workhouse.

THE pressure occasioned by the number of lunatics admitted to the Liverpool Workhouse last month was so great that it became necessary to notify the police that for the present the workhouse authorities were unable to receive any more lunatics brought to the workhouse by them. In order to find accommodation for lunatics ten epileptics had to be transferred from their proper wards to the wards occupied by ordinary inmates. The vestry clerk pointed out that every board of guardians in Lancashire is in a similar position as are, to a large extent, others throughout the country. The Lunacy Board are making arrangements, and are now building for something like 1000 patients near Warrington. The clerk was instructed by the Select Vestry to write to the Local Government Board and the Commissioners in Lunacy, and to point out to them the serious state of affairs prevailing in this district. The Commissioners in Lunacy, in their reply, intimated that they could not help the Select Vestry in the matter, as the responsibility rested with the Lancashire County Council and the Lancashire Asylums Board. The reply from the Local Government Board was not encouraging. Altogether matters are in a very unsatisfactory state, all the other unions in this neighbourhood being in similar straits.

Bequest to the Medical Faculty of University College, Liverpool.

By the will of Mrs. Gee, widow of the late Dr. Robert Gee, formerly lecturer in the diseases of children in the Medical School, a sum of £7000 has been bequeathed to the Medical Faculty of University College, Liverpool, for the promotion of study and research in medical science. It was decided by the Medical Faculty to institute a Robert Gee Fellowship in Anatomy of the value of £100 for one year; also four entrance scholarships of the value of £25 each for one year. The late Dr. Gee was also a generous donor to the Liverpool Medical Institution, of which he had been treasurer and president.

The Lyon-Jones Scholarships

The Senior Lyon-Jones Scholarship, open to all second

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year's students of the medical faculty who have completed two years of study at University College, has been awarded to Mr. W. J. Young. The Junior Lyon-Jones Scholarship, open to all candidates who have passed any of the preliminary examinations accepted by the Victoria University for the Medical degree course, has been obtained by Mr. D. M. Alexander. Each scholarship is of the annual value of £21, and is tenable for two years.

Resignation of Dr. H. C. Chapman.

Dr. H. C. Chapman, the medical superintendent of the Mill-road Infirmary, has felt it imperative to resign his appointment, owing to ill-health. He has been connected with the Mill-road Infirmary for about twelve years, during which period he so gained the full confidence and respect of the West Derby guardians that they have now granted him the highest superannuation permissible. Dr. Chapman intends to proceed to South Africa without delay, where, it is hoped, his health may improve. The intelligence of his ill-health and intended departure from Liverpool came as a surprise to his numerous friends, with whom he was deservedly popular.

Hospital Extension.

The City Council approved of the recommendation of the Port Sanitary and Hospitals Committee that the sum of £3000 should be placed at the disposal of the committee for the purpose of extending and completing the additions and improvements to the Netherfield-road infectious hospital and the furnishing thereof.

Stanley Hospital.

The committee of this institution at their last board meeting decided to open sixteen of the beds remaining closed for want of funds. Early in the year they issued an appeal to the public for the purposes of liquidating the debt of £2229 and opening the whole of the beds, but the responses have not been sufficient to justify the committee undertaking so heavy an expenditure.

July 15th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Changes at the Royal Infirmary, Edinburgh.

Two of the surgeons to the Royal Infirmary—namely, Dr. John Duncan and Mr. A. G. Miller—have just completed their full term of office and retire from the active staff. Mr. Cotterill has been appointed a full surgeon and Mr. Cathcart has been placed in charge of the surgical wards reserved for the women students, while Mr. Caird takes Mr. Cotterill's place in the lock wards. Mr. Harold Stiles has been appointed to the vacancy on the staff of assistant surgeons. This appointment has given great satisfaction. On the medical side the vacancy in the staff of assistant physicians has been filled by the affirmation of the appointment of Dr. R. F. C. Leith. The vacancy in the pathological department is to be filled next week and there are several applicants for the post.

The Meeting of the British Medical Association in Edinburgh.

Arrangements have already been begun on the understanding that this association will hold its annual meeting in Edinburgh in 1898. A large meeting of the profession was held in the Royal College of Physicians of Edinburgh on Monday, at which a committee of selection was appointed. Treasurers were instructed to appeal for funds, and the appointment of secretaries was made. Sir Thomas Grainger Stewart is nominated as President.

The Close of the Summer Session, Edinburgh.

The summer classes in the Medical Faculty close this week and arrangements are being made for the holiday season. Professor Cossar Ewart delivers the address to the medical graduates on one of the last days of the present month, instead of on the first lawful day of August, as under the old law which has been modified to this extent by the new ordinances.

Infectious Hospital at Aboyne.

A curious dispute has occurred as to the infectious diseases hospital which the district committee of the county council had commenced to erect at Aboyne. Sir W. C. Brooks, Bart., of Glen Tana, apprehensive of the effect of the presence of such an establishment in a summer resort such as Aboyne, has offered to pay £1000 if the hospital be removed to a site at Dess about a mile and a half from the village of Aboyne. It may be mentioned as a significant fact in connexion with matters of this kind that the Aberdeen City Hospital for Infectious Diseases, which was originally in the country, has now been surrounded by dwelling-houses without any known cases of communication of infection.

Presentation to a Medical Man.

Dr. William Reid, medical superintendent of the Aberdeen Royal Lunatic Asylum, was presented on the 9th inst., by his board of directors, his official colleagues in every branch of the institution, and a few intimate friends with a handsome silver tea and coffee service, on the occasion of his approaching marriage with a daughter of Dr. Bruce of Dingwall.

Examiners at Aberdeen University.

The University Court of the University of Aberdeen, at its meeting on the 13th instant, appointed as additional examiners, each for a period of four years from Feb. 1st, 1898, the following—viz.: Anatomy: Arthur Keith, M.D. Aberd., of the London Hospital Medical College, London. Physiology: M. S. Pembrey, M.A., M.D. Oxon., of Charing-cross Hospital Medical School, London.

July 13th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Health of Dublin.

THERE has recently been a very great improvement in the condition of Dublin as regards health. For the week ending July 3rd, Sir Charles Cameron stated the death-rate at 20 per 1000 persons living, the mean-rate for the corresponding week of the last ten years being 27·3. Belfast also shows a remarkably clean bill of health, the rate being 14·8. The Cork rate was 23·5; Kingstown seems to be especially healthy this season, the deaths being only at the rate of 5·6 per 1000. At a meeting of the Dublin Sanitary Association on July 9th, it was remarked that four deaths from diphtheria had taken place during the week which ended on the previous Saturday.

Beri-beri at the Richmond Asylum.

At a meeting of the governors of this asylum, which took place on the 13th, the medical superintendent, Mr. Conolly Norman, reported a recent outbreak of beri-beri in the institution. During the last fortnight fifteen new cases had occurred, twelve female patients and three nurses having been attacked. In reply to Mr. Clancy, Mr. Norman stated that there had been at one time as many as seventy persons suffering from the disease. It became worse during the summer, attained its height in the autumn, and passed away in the winter and spring. It had never, however, been entirely absent for the last three and a half years. Other instances of congestion in lunatic asylums have recently been reported, for instance, at Armagh, Londonderry, and Monaghan, but no case of beri-beri has appeared. The governors of the Londonderry Asylum have recommended that immediate steps be taken to erect buildings capable of meeting the requirements of sixty additional patients. At the Monaghan Asylum the medical superintendent reported recently that there were 137 patients over the proper number in the house.

Ulster Medical Society.

At the annual meeting of the Ulster Medical Society, held on July 9th, the council's report showed that the society was in a very flourishing condition, while financially the treasurer has a good balance in his hands. The following office-bearers were elected for session 1897-98: President, Dr. J. A. Lindsay; Vice-Presidents, Professor W. H. Thompson and Dr. McKisack; secretary, Dr. Colville; treasurer, Dr. John McCaw; librarian, Dr. Shaw; pathological secretaries, Dr. J. Lorrain Smith and Dr. Lynass; council, Dr. Campbell, Dr. Calwell, Dr. Bingham, Dr. Kevin, Professor Byers, and Dr. Gaussen.

Presentation of Addresses to Mr. John Fagan.

Mr. John Fagan, F.R.C.S. Irel., who was recently appointed inspector of industrial schools in Ireland, has been the recipient of two very flattering addresses from his medical friends in Belfast. One of the addresses was from his old colleagues, the members of the staff of the Royal Hospital, where for over twenty years Mr. Fagan was a surgeon and where he was greatly respected by his *confrères*

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both as a friend and as a skilful operator. This address was presented to Mr. Fagan on July 8th, on the occasion of an extremely social and pleasant dinner given in his honour by Dr. Walton Browne, senior surgeon to the Royal Hospital, and at which nearly all the staff of the hospital were present. The second address was presented to Mr. Fagan on July 9th from the members of the Ulster Medical Society, of which he was twice president. Mr. Fagan was also elected an honorary member of the society, and most flattering speeches were made at the meeting by several of the members, expressive of their admiration for Mr. Fagan and of the loss the medical profession in Belfast had sustained by his removal to another sphere of duty. Mr. Fagan goes to Dublin, carrying with him the best wishes for his happiness and prosperity.

July 13th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Academy of Medicine.

M. LANNELONGUE has read before this society a long paper dealing with his method of treating hernia by the injection of chloride of zinc under the skin. He showed some cases from which a better judgment could be formed than when he first introduced this method about a year ago. Preparatory treatment is unnecessary, and the only point to be taken into consideration is to compute the renal adequacy of the patient according to the method of Ahard. Care must be taken not to wound the spermatic cord or to throw the injection into the peritoneal cavity. At the moment of operation an assistant places his finger in the abdominal ring, and the operator injects from ten to twelve drops of the solution of chloride of zinc, taking care to press a finger on the cord. The first injections are made at the level of the external abdominal ring at the upper border of the pubes at first internal to, and then external to, the cord. The operation does not last more than two or three minutes. After the operation nothing is needed but a spica bandage. No anæsthetic is necessary, but to obtain quiet, children may be given a little chloral, and if they are over three years of age a little morphia may be added. The chloride of zinc brings about a necrosis of the tissues, together with an enormous immigration of leucocytes. Frequently enough fibrous and fatty tissue form to completely block up the canal. M. Lannelongue has employed this method in fifty-one cases. Between the ages of one and twenty years he had forty-four cases, forty-one of whom were permanently cured, two incompletely cured, and one was a failure. Two subjects of between fifty and sixty years of age had large double hernias; one case failed and the other was a success. Two women with simple hernias were completely cured.

Another Scandal at a Maternity Clinic.

The lay press recently made a great to do about the case of a pregnant woman who, accompanied by her husband, presented herself at a maternity hospital and was referred to the central office of the Assistance Publique as there was no vacant bed. The Assistance Publique, however, referred the woman to another hospital, saying that they did not take in lying-in cases. So the woman stopped in the street while her husband was being referred from one department of the administration to another, and while this was going on she was suddenly delivered in the street of twins. The chief secretary of the Prefecture of Police happened to be passing at the moment and gave orders for a conveyance to take the mother and children to a hospital. The daily press is much exercised over this matter, which could easily have been avoided had someone telephoned to the maternity hospital first of all to inquire if there was a bed. They forget, however, that women only too often put off till the last moment attending the hospital and are frequently confined in the carriage on the way there. The Prefecture of Police has been compelled to make policemen undergo a very elementary course of midwifery, for cases of women being confined on their way to the hospital are becoming so very common.

The New Tinea Hospital.

At the Hospital of St. Lois there has just been opened a new ward for the reception, treatment, and education of children suffering from tinea and allied conditions. Attached to this ward is a school, to which has been given the name of the École Lailler, and here the children will continue their studies without interruption during the long course of treatment necessary. Formerly when a child was attacked with tinea no school would take the patient, and he or she was therefore condemned to a long term of enforced idleness; but this new school will allow of these unfortunate little ones continuing their studies and being treated at the same time. The new building, which is divided into spacious class-rooms, well lighted and ventilated, will accommodate 650 pupils. The first division of the school is intended for cases of tinea tonsurans and contains 192 beds, and in its eight classes contains 418 children equally divided among out- and in-patients. The second division has 63 beds and school places for 200 children. A general infirmary with 28 beds will receive the sick from both these divisions. Altogether the Lallier School will contain 220 resident pupils, including the girls who come from the Trousseau Hospital and the boys from the Children's Hospital. The new buildings comprise a magnificent laboratory and spacious dining-rooms, which after meals can be used in the winter as covered playgrounds. The dormitories, too, are fitted up in the very latest fashion. The palace thus offered to these little scald-heads has cost 1,500,000 francs, of which sum 1,100,000 francs have been supplied from the funds of the *pari mutuel* and 400,000 francs by the town of Paris. It was commenced on June 1st, 1895, and finished on June 1st, 1897. For the opening ceremony, which was fixed coincidently with the distribution of prizes, an enormous tent was erected in the large courtyard, and here, attired in a uniform consisting of a blue blouse and trousers, the little ones, with their heads covered by a white handkerchief, were able to admire the magnificent buildings destined for their use.

An Original Petition.

The ward at the hospital of the Salpêtrière which is allotted to the use of the in-patients is so old and dilapidated as to be almost unfit for habitation. Moreover, it is infested by bugs, which during these hot nights make sleep impossible, and the in-patients have for a long time past been asking that their quarters should be rendered more comfortable, but the director of the hospital remained deaf to their complaint. They therefore collected in a bowl all the bugs which they were able to catch in a night and addressed them to M. Peyron, the Director of the Assistance Publique, with this inscription: "Collection made in our dormitory on the night of July 6th–7th, 1897." They further say that every morning they will send him a similar parcel, and so the management is at last impressed with the necessity of finding these in-patients more comfortable quarters.

July 13th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The New Tuberculin.

THE *Deutsche Medicinische Wochenschrift* has commenced the publication of a series of communications describing the experiences of leading hospital physicians with Professor Koch's new tuberculin. The first article is written on behalf of the department for diseases of the throat and chest of the Charité Hospital in Berlin by Dr. Bussenius, assistant physician to that hospital. The treatment was used for nineteen patients, twelve of whom suffered from laryngeal tuberculosis, two from pulmonary tuberculosis, four from lupus, and one from asthma. With fifteen of those patients the treatment was continued until it was considered that the full effect was produced, and it was accordingly stopped; in one case it had to be stopped on account of hæmoptysis occurring, and three patients are still undergoing the treatment. The number of injections was 314 for the first fifteen patients and twenty-four for the last four cases; the quantity of fluid injected was 125·46 c.c., containing 1254·6 milligrammes of solid substance, its price being no less than 1066 marks (£53). The largest number of injections performed in one patient was twenty-five, and the greatest quantity injected was 15 c.c. The duration of the treatment varied from twenty-nine to sixty-five days. When the treatment was finished injections of the old tuberculin were made, with the result that none of the patients showed a reaction. In accordance with the recommendations of Professor Koch, the injections were begun with very small quantities and were therefore somewhat

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quickly increased, Professor Koch believing that reaction may be avoided in this way. Dr. Bussenius found that the maximum dose was reached without febrile reaction in only four cases, whilst in the others the temperature generally rose after the injections. He stated that the fluid purchased from the Hoechst factory seemed to vary in strength. For instance, the preparation issued on June 4th caused not only fever, but also other and undesirable symptoms, such as swelling of the lymphatic glands, debility, &c., but bacteriological examination nevertheless showed it to be sterile; the preparation sent out on June 11th caused fever, which was ushered in by a rigor and lasted about twenty hours, the patient's temperature being 41·3° C. (= 106·3°F.). In one of the cases of lupus the injection of 1 c.c. of this tuberculin caused a swelling of the diseased cutaneous tissues similar to that observed with the old tuberculin. It was remarkable that the same patient had formerly received 4 c.c. from another bottle without any reaction. This result showed that the technical details of the preparation of the tuberculin still need improvement in order that the product may be always uniform. Great precautions are still necessary when a fresh bottle is used, the activity of which is not yet ascertained. The pulse and the respirations became more frequent simultaneously with the rise of temperature; two patients complained of oppression and excessive perspiration; disturbances of the digestion were never observed, and the appetite was not obviously influenced. In seven patients an increase in weight was observed and in five a decrease, whilst in two it was not changed at all. None of the 334 injections was followed by suppuration, but in some instances there was an infiltration round the place of the injection, which passed off without treatment. As to the effect of the treatment on the local process, it was stated that in two cases of pulmonary tuberculosis complicated by syphilis the cough and excretion where tubercle bacilli were present very soon disappeared; in laryngeal and pharyngeal tuberculosis there was no obvious amelioration in any instance. The local reaction was very slight, and there was no danger of laryngeal œdema, so frequent with the old tuberculin. The best results were obtained in cases of lupus. Two of the patients suffering from this disease recovered completely, seven and nine weeks respectively after the beginning of the treatment. In one case the healing went on very well and the greatest part of the lupoid area was in a state of cicatrisation; but the injection, unfortunately, had to be stopped owing to the above described troubles due to excessive energy of the tuberculin. The fourth case of lupus is still in an early stage of the treatment. Dr. Bussenius is not yet disposed to give a definite opinion as to the efficacy of the new tuberculin, but the results attained seem to fall short of the expectations of Professor Koch.—Another short communication on the new remedy is made by Professor Schultze, of Bonn, who has treated nine patients up to the present. The reactions so characteristic of the old tuberculin were never observed. In one case a laryngeal affection, probably of a tuberculous nature, made its appearance during the treatment, and the patient consequently refused to have the injections continued. Another patient suffered from diarrhœa after the injections, lost two kilogrammes (4½ lb.) in weight and declined further treatment. In four cases there was no apparent alteration of the patient's general condition, in one case of pleurisy there was a general improvement, and in two other cases a marked amelioration of the laryngeal affection was observed. Professor Schultze said that it was quite impossible to determine whether the amelioration was due to the treatment or to the general hygiene and dietetic measures.—This series of articles on the new tuberculin will be continued in the forthcoming number of the *Deutsche Medicinische Wochenschrift*.

July 12th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Heat and an Ice Famine.

THE above is a bad combination of which all who have to stick to their posts in Italian cities are "feelingly persuaded." The calorific wave that swept over the peninsula and islands recently, and has not yet spent its force, seems destined to take rank with the "Calori Storici" of the century, particularly those of 1861, 1881, and 1892. Already the superintendents of the various observatories throughout the kingdom are issuing comparative statistics of the "hot years," from which it results that 1897, with its temperature of 109° F. at Arezzo and at Sassari (Island of Sardinia), and its 95° F. at Brescia in the Alta Italia, is on the fair way to earn its *titolo di priorità*. Apart, however, from figures and their attempted explanation, seismic or meteorological, the heat this summer has been productive of unusual suffering and loss, of which we are but beginning to realise the extent. To aggravate the situation we are beset with an ice famine, sorely felt in all the great centres, particularly Rome, Florence, and Milan. Last winter, it will be remembered, was in Italy a remarkably mild one, in consequence of which the yield of ice was exceptionally poor. With an improvidence, however, which amounts, I fear, to a national characteristic, none of these cities was at pains to lay in a store against the inevitable requirements of the summer. In the last days of June and the first days of July the heat (as the poet says) "leapt upon us like a tiger." Central Italy was the first to wince under the shock. In Florence the butchers, the fishmongers, the poulterers, the dairymen, and the confectioners all found their wares becoming tainted and their business suspended. Under pressure of clamorous customers they besieged the ice-vendors' stores but were met with a "*non possumus*" which they interpreted as an excuse to raise the price of the commodity. In their exasperation they broke into the said stores, only to find "no effects" and a series of distasteful attentions on the part of the police. Now I hear they have had to telegraph for ice from the Mont Cénis, and the cost of the article from being 1 franc 20 centimes the hundredweight (*quintale*) is now 6 francs! Great as are the discomfort and sense of privation among the general public, it is in the hospitals where the ice famine is most felt, insomuch that the death-rate, particularly after surgical operations and among the admissions to the fever wards, must inevitably rise. It may be asked, Where are the artificial ice companies? That, however, has never been a flourishing manufacture in Italy, as may be inferred from the fact that of the 800 *quintali* consumed in Milan every year only 120 are artificial, the remainder (the natural ice) coming from firms in relation with Alpine sources. Neither Rome nor Florence, however, is so near the snow fields as the Lombard capital, and though the former has her Rocca Priora on the Alban Hills and the latter her Apennines, still, as I have said, the mild winter of 1896–7 in these quarters minimised the yield of ice and left the dealers without excuse for neglecting to replace it artificially or from the Alta Italia. In the well-nigh tropical summer of 1881 a similar "carestía del Ghiáccio" (ice famine) was equally felt, but improvidence and short memories go together, and it seems a special function of Italy to furnish object-lessons in both.

Water-carts and Street "Cultures."

Opinion, professional as well as popular, is divided on the question as to whether or no the streets in our cities should be watered. Quite lately a distinguished occupant of a university chair (I think of pathological histology) delivered a lecture on the subject, and after quoting the conclusions of the Hamburg Commission appointed *ad hoc* during or immediately after the latest cholera epidemic in that port left the problem, as they did, unsolved. The recent experiments of Wittlin, proving that the water-cart is a fertile fosterer of bacteria, have made a profound impression in Italy, favouring as they do the "quieta non movere" principle so dear to Southern populations. Leave the dust, it is said, to undergo the beneficent action of solar light, the steady desiccation (that best of all disinfectants), and put up with its inconveniences. "Better to bear the dust we have than fly," &c. But no one who has passed a summer in Italy, with the great increase of vehicular traffic, will be impressed with this argument. Why not fix the bacteria on the roads rather than favour their lodgement through the air-passages in the system? True, the mud left in the wake of the water-cart is in itself a "culture," which, if allowed to dry, will simply let loose a more formidable cloud of bacteria than before. But the water-cart itself might be better managed. Its operations should begin at daybreak, and while the roadway is still damp the scavenger or the steam brush should follow. Never water the streets during the hottest hours of the day (as is habitually done in Italy), but at those periods when evaporation is less rapid. It is all a question of more gradual and better-timed watering

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(say the less unscientific among the disputants), calculated to succeed (they add) in a country where wood pavements with their organic detritus are as yet unknown.

Honours for Professor Sanarelli.

Besides conferring on the discoverer of the bacillus icteroides the honorary citizenship of Uruguay, the Montevidean legislature, in acknowledgement of his services, has voted him the donation of ten thousand pesos, at the same time recording its regret that "the unhappy condition of the country does not admit of its doing more to evince its gratitude to a physician and nature-student who has already laid those regions under so many obligations."

July 13th.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated :—

Monday, July 5th :

Anatomy and Physiology.—Thomas Sayers, Herbert Leach, and Edwin Samuel George Fowler, Yorkshire College, Leeds; Arthur Cardell Oliver, University College of South Wales, Cardiff; George Percy Smith, Lambert Arthur Wellesley Johnston, John Brentnall, Stanley, Vivian Hood Symons, and Bernard Septimus Hollick, Mason College, Birmingham; Alfred Ernest Underwood Hawkes, University College, Liverpool; Francis Bellairs Alderson and William Herbert Forshaw, Firth College, Sheffield; William Francis Harriott Coke, St. George's Hospital; Samuel Joseph Willcox, University College, Bristol; Oswald Lacey Addison, University College, London; Alfred Charles Stanley Waters, Cambridge University; Shapurji Hormusji Modi, Grant Medical College, Bombay, and St. Bartholomew's Hospital; Walter Brock Parsons and William John McCoy, Medical College, Madras.

Anatomy only.—Stanislaus Marcus Dowling, Catholic University of Ireland, Dublin and University College, Bristol; and John Ellington Jones, University College, Bristol.

Seventeen gentlemen were referred in both subjects, one in Anatomy only and two in Physiology only.

Tuesday, July 6th :

Anatomy and Physiology.—Robert Archer Lloyd, Alwyne Theodore Compton, Graham Shaw Arnold Smith-Wynne, Francis Williams Sheppard, Charles Saunder Chalk, Alfred Ernest John Lister, and Thomas Massey Pearce, St. Bartholomew's Hospital; Donald Poyntz Chapman, Charing-cross Hospital; Harold Cooper Pretty and Clifford Allchin Gill, University College, London; Edwyn Manners Ridge, Benjamin Charles Broomhall, Charles Robertson Porter and Edward Walter Bain, London Hospital; Burnet Graham Patch and Horace Georges Pinches, St. Thomas's Hospital; Sydney Greenwood Penny, St. George's Hospital; Arthur Falconer Hayden, St. Mary's Hospital; and Sydney John Peake, King's College, London.

Seventeen gentlemen were referred in both subjects.

Wednesday, July 7th :

Anatomy and Physiology.—Richard Robert Cruise, Erasmus Oakes Faulkener, Harry Tudor Newling, Reginald Ambrose Facey, and Cyril Evered Thwaites, St. Mary's Hospital; Frederic William Longhurst, St. George's Hospital; John Salmon Smith, Middlesex Hospital; Harold West Hodgson and Alfred Bertram Saltau, London Hospital; Basil Sorley Bartlett, Roger Lionel Hagger, and Geoffrey Allen Upcott-Gill, University College, London; Morgan James Rees and Frederick Goulburn Gibson, Guy's Hospital; John Evans Richards and William Monro Anderson, Charing-cross Hospital; Ernest Alfred Donaldson-Sim, St. Bartholomew's Hospital; John George Glasgow, St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology; and Clarence Herbert Downer, King's College, London.

Seventeen gentlemen were referred in both subjects.

Thursday, July 8th :

Anatomy and Physiology.—Thomas Percival Allen, William Christian Bumgarten Smith, Pascoe Bevil Grenfell, and Reginald Torriano Cooke, St Bartholomew's Hospital; Thomas Sidney Dawber Enderby, Eustace Raven, and Douglas Duke Turner, St. Thomas's Hospital; John Hamilton Hart, St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology; William Augustine Mc Enery, Middlesex Hospital; Ernest Vaughan Aylen and James Davey, London Hospital; Arthur Charles Duncan Newton and William Lawrence Steele, University College, London; Ashley West Talbot and Edgar Hall Felton, Guy's Hospital; Frederick Burroughs Jefferiss, King's College, London; William George Hopkins, St. Mary's Hospital; and Ernest Ronald Walker, Charing Cross Hospital.

Eighteen gentlemen were referred in both subjects.

Friday, July 9th :

Anatomy and Physiology.—Sydney Balch Green, Henry Cyril Adams, and Daniel Davies, St. Bartholomew's Hospital; Thomas Davidson Miller, St. Thomas's Hospital; James Ross Clemens, Jefferson College, Philadelphia, and St. Thomas' Hospital; Arthur St. John Bateman and William Lumsden Stuart, King's College, London; Edward Cecil Clements, Middlesex Hospital; Cecil Edward Last, St. George's Hospital; Patrick Dalgado, Grant Medical College, Bombay; Henry Somerville, Westminster Hospital; George Ernest Goode and Samuel Newall Foulkes, London Hospital; Thomas Copeland Savage, University College, London; and Thomas Shalden Smith, St. Mary's Hospital.

Anatomy only.—Herbert Charles, Middlesex Hospital; Leslie Frederick Enthoven, Cambridge University and Mr. Cooke's School of Anatomy and Physiology; and Thomas Langton Butler, St. Mary's Hospital.

Physiology only.—Elijah Richard Lockwood Thomas, London Hospital; and Fred. Algernon Simpson, St. Mary's Hospital and Mr. Cooke's School of Anatomy and Physiology.

Eleven gentlemen were referred in both subjects, four in Anatomy only and one in Physiology only.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentleman, having previously passed the necessary examinations and having now conformed to the by-laws and regulations, has been admitted a Member of the College :—

Donald John Armour, M.D. Toronto, Toronto University and University College Hospital.

SOCIETY OF APOTHECARIES OF LONDON.—At the Primary Examination the following candidates passed in the subjects indicated :—

PART I.

Biology.—E. M. Forsyth, K. M. H. Hawkins, and T. G. Prosser, Royal Free Hospital.

Chemistry.—T. M. Burton, A. E. Gilford, C. Hind, H. M. Jones, and D. E. Lockwood, Royal Free Hospital; F. H. Maberly, Birmingham; L. S. Molony, F. M. Payne, and E. J. Polito, Royal Free Hospital; F. M. Rodgers, Manchester; and C. M. Scott, G. E. Soltau, and M. E. Unwin, Royal Free Hospital.

Materia Medica and Pharmacy.—J. Buckley, Manchester; H. H. Cotman, Aberdeen; E. A. Dunn, Royal Free Hospital; R. F. Ellery, St. Bartholomew's Hospital; W. J. H. Hepworth, Edinburgh; S. F. Hickman, Royal Free Hospital; W. Hunter, Durham; R. O. Jones and E. McD. Judge, Guy's Hospital; and J. A. Wolverson, Birmingham.

PART II.

Anatomy.—K. M. Betts, Royal Free Hospital; T. Burdekin, University College Hospital; C. E. C. Child, Charing-cross Hospital; H. H. Cotman, Aberdeen; T. B. Fawley, Leeds; K. E. Gregg, Royal Free Hospital; T. A. B. Harris, Sheffield; W. M. Hocken, Liverpool; T. E. Holman, Guy's Hospital; H. N. Horton, Middlesex Hospital; H. E. D. Lloyd, St. Bartholomew's Hospital; R. A. Lyster, Birmingham; H. MacMaster, Sydney and Edinburgh; D. V. Muller, Charing-cross Hospital; H. C. Pratt, Birmingham; M. E. Rocke, Royal Free Hospital; L. Sells, St. Thomas's Hospital; S. H. Smith, Royal Free Hospital; A. E. Whitehead, Sheffield; and W. R. Wilson, Dublin.

Physiology.—W. Asten, Birmingham; H. H. Beale, St. Mary's Hospital; J. R. Bentley, Cambridge and Middlesex Hospital; K. M. Betts, Royal Free Hospital; A. J. Blair, Belfast; A. F. Carlyon, Middlesex Hospital; A. Croneen, Guy's Hospital; A. M. Crosfield, Edinburgh; T. B. Fawley, Leeds; O. H. C. Fulton, Dunedin and Edinburgh; G. H. L. Hammerton and T. A. B. Harris, Sheffield; A. T. Harvey London Hospital; H. N. Horton, Middlesex Hospital; H. E. D. Lloyd, St. Bartholomew's Hospital; E. C. Pratt, Birmingham; M. E. Rocke, Royal Free Hospital; F. E. Shean, London Hospital; S. H. Smith, Royal Free Hospital; A. E. Whitehead, Sheffield; and J. H. Williams, London Hospital.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin :* The new Professor of Physiology, Professor Engelman, in taking over the late Dr. du Bois Reymond's chair, is arranging certain changes in the Physiological Institute and its four departments. The first, for microscopical and biological work, will remain under the charge of Professor Fritsch. Similarly, the second, for chemical physiology, will continue under its present director, Professor Thierfelder. The third, for special physiology, will be greatly enlarged, and the professor himself will take part in its work in conjunction with the present director, Dr. Immanuel Munk. The fourth department, for physical physiology, will also be largely increased; it will be called the Department for the Physiology of the Sensory Organs, and will remain under the direction of Professor König. In addition to extensive new buildings the supply of apparatus will be largely augmented. The lectures will be given by the professor in a course running through two semesters, but during the last four weeks in the summer Professor König will lecture on the sensory organs, and during the first four weeks of the winter Professor Thierfelder will lecture on physiological chemistry.—*Bologna :* Dr. L. Silvagni and Dr. F. Vitali have qualified as *privat-docenten* of medical pathology.—*Kazan :* Dr. Rustitaki has been promoted from Extraordinary Professor to Ordinary Professor of Operative Surgery.—*Kharkoff :* Dr. Podres has been promoted from Extraordinary Professor to Ordinary Professor of Surgery.—*Leipzig :* Dr. Kockel, *privat-docent* of Pathological Anatomy and Forensic Medicine, has been promoted to the rank of Extraordinary Professor.—*Tübingen :* The Chair of Midwifery and Gynæcology having been declined by Professor Fehling, of Halle, the faculty has made a fresh selection of names—(1) Dr. Bumm, of Basle; (2) Dr. Löhlein, of Giessen; and (3) Dr. Döderlein, of Groningen.—

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Vienna: Dr. S. Fränkel has qualified as *privat-docent* of Medical Chemistry.—*Würzbury:* Professor Kölliker, on account of his advanced age, is giving up the teaching of Descriptive Anatomy and will confine himself to Microscopical Anatomy for the future. The chair of Descriptive Anatomy has been offered to one of his old assistants, Dr. Philipp Stoehr, at present professor in Zurich. Dr. Eduard Koll has qualified as *privat-docent* of Internal Medicine.—*Yale:* Dr. J. Slade Ely has been appointed Professor of Medicine.

PRESENTATIONS TO MEDICAL MEN.—The following gentlemen have received presents from the local ambulance classes as tokens of appreciation of their honorary instruction in first aid—namely, Mr. Alexander A. McNab, M.B. Glasg., from the members of the Workhouse division of the St. John Ambulance Association, Bradford, a gold pin set with diamonds; and Mr. Sydney Partridge, M.D. Edin., from the members of the Darlaston centre of the St. John Ambulance Association, a barometer.—Dr. Beattie on Saturday last, at a social gathering held at Shaw Cross, Dewsbury, in connexion with the St. John Ambulance Association, was the recipient of a dressing-case presented by the male and female members of the above association, in appreciation of his services as their lecturer.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN-SQUARE, W.C.—Concerts in honour of the Diamond Jubilee were given at this hospital on July 10th, in the morning, afternoon, and evening, the arrangements being under the direction of Miss Janotha. The Duchess of York, attended by Lady Mary Lygon and the Honourable Derek Keppel, arrived at the hospital about half-past three, and were received by the Bishop of Marlborough, Colonel Porter, Sir William Gowers, Dr. Ferrier, Mr. Silva, and Mr. Burford Rawlings. The Duchess visited several of the wards and spent some time in the concert-room, making a stay of about an hour altogether. The general company included the Countess of Bantry, Lord and Lady Amherst of Hackney, Lady Russell Reynolds, Lady Crichton Browne, Sir Henry and Lady Burdett, Dr. Buzzard, General and Mrs. McMahon, Mr. R. J. Seddon (Premier of New Zealand) and Mrs. Seddon, the Rev. W. R. Greenhill (chaplain), and Miss Tweed (lady superintendent). At night the hospital grounds were brilliantly illuminated. Endeavours are at present being made to complete a Commemoration Fund of £10,000, a considerable portion of which has been already raised.

LITERARY INTELLIGENCE.—The prospectus has just been issued by the publishing firm of F. Enke, of Stuttgart, of a forthcoming "Handbook of Practical Medicine," edited by Dr. W. Ebstein and Dr. Schwalbe. The work is to be in five volumes and will appear in instalments. The first "lieferung" is to be issued at the beginning of 1898 and the last, it is hoped, about the middle of 1899. Among the long list of contributors may be noted the names of Professor Liebermeister and Professor Lenhartz, who write on the Respiratory Organs; Professor Laache, of Christiania (Diseases of the Blood); Professor Pel, of Amsterdam (Diseases of the Stomach); Professor Pibram, of Prague (Diseases of the Intestines); Professor Rosenstein, of Leyden (Diseases of the Kidneys); and Dr. Jolly, of Berlin (Neuroses); the aim being to secure writers who have specially studied the subjects assigned to them. It is instructive to find that nearly every section is supplemented by a surgical article, and it is further intended to introduce each section by remarks on the general clinical and therapeutical characters, especially the methods of examination. The price of the complete work is stated to be about 80 marks (£4).

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—News has just been received from Batavia of the sudden death of Dr. P. C. Plugge, he having gone to study in the great tropical botanic garden of Buitenzorg. He was born in Middelburg, Zeeland, in 1847, studying first at Amsterdam, where he received a gold medal for his thesis on Carbolic Acid as a Disinfectant. He was afterwards Assistant in the Physiological Laboratory in Groningen, and for a short time he took charge of the chemical laboratory in Tokio by special invitation of the Japanese Government, from which post, however, he was soon recalled to become Professor of Pharmacy and Toxicology in Groningen. His published papers are numerous and varied, comprising such subjects as the Chemical Effects of Light, the Poisonous Constituents of the Ericaceæ, Aconitine, Andromedotoxin, &c.—The deaths of the following eminent foreign medical men have also been announced:—Dr. W. Marmé, Professor of Pharmacology in Göttingen.—Dr. Fissore, Extraordinary Professor of Medical Pathology in the University of Turin.—Dr. Paulin Hulin, Medical Officer to the Hospices and Prisons, Louvain, Chevalier of the Legion of Honour, at the age of fifty-five years.—Dr. Emile Legros, Professor of Physiology in Brussels, and a well-known ophthalmic surgeon, suddenly, in his thirty-seventh year.—Dr. Debrou, formerly surgeon to the Orleans Hospital.—Dr. Don José de Letamendi, Professor of General Pathology in the Central University, Madrid.—Dr. Don José de Antelo, Professor of Surgical Pathology in the Manilla Medical School.

DURHAM UNIVERSITY MEDICAL GRADUATES' ASSOCIATION.—The annual meeting of this association was held at the rooms of the Medical Society of London on Wednesday, July 7th, when the following officers were elected for the year 1897-98:—President: Dr. T. Outterson Wood (in the place of Professor W. C. Arnison). Vice-presidents: Dr. S. Fielden and Mr. T. H. Openshaw. Council: Dr. C. C. Cripps, Dr. C. J Cullingworth, Dr. J. W. Hembrough, Dr. F. S. Palmer, Dr. H. B. W. Paige, Dr. H. T. Herring, Dr. G. H. Philipson, Mr. G. W. Ridley, Dr. W. J. Sheppard, Dr. T. C. Squance, and Dr. R. Steele. Honorary treasurer: Dr. W. C. Beatley. Honorary secretaries: Dr. W. D. Arnison and Dr. R. H. Milson. After the meeting the members dined together at the Café Royal, Dr. T. Outterson Wood, President, being in the chair. The usual patriotic toasts having been proposed by the President, Mr. H. T. Butlin proposed "The University of Durham," and Professor Philipson responded. The President, in proposing "Success to the Durham University Medical Graduates' Association," gave an interesting account of the history of the Medical College from its foundation in 1832 to the present time, and congratulated the association upon its great success, numbering, as it does, nearly 300 members. The honorary secretaries replied. Sir James Crichton Browne, who was a former lecturer at the College, and who was elected an honorary member of the association, proposed the health of the President, and Dr. Cullingworth proposed the Visitors which was responded to by Dr. Ernest White. Among those also present were the President of the Royal College of Surgeons of England, Sir Wm. MacCormac; the Treasurer of the Royal College of Physicians of London, Sir Dyce Duckworth; the President of the Royal Medico-Chirurgical Society, Dr. Howship Dickinson; the President of the Medical Society, Mr. Reginald Harrison; the President of the Durham University Medical College, Professor Philipson; the President of the Harveian Society, Dr. R. H. Milson; the Coroner for the Central District of the county of London, Dr. Danford Thomas; and members and guests to the number of fifty-seven.

PRESENTATION TO PROFESSOR JOHN ATTFIELD, F.R.S.—Professor John Attfield was presented on Saturday last, at Watford, on his retiring from the chair of Practical Chemistry in the School of the Pharmaceutical Society of Great Britain, with a handsome testimonial, consisting of an autograph album and silver plate. The former contained the names of eminent men of science of England and the continent. On the silver tray the following inscription is engraved: "An Album of Autographs, this Silver Tray, and a Silver Tea and Coffee Service were presented to Professor John Attfield, F.R.S., by one thousand grateful pupils and many public friends in all parts of the world, on his retirement from the chair of Practical Chemistry held by him for thirty-four years in the School of Pharmacy of the Pharmaceutical Society of Great Britain."

MEDICAL MAGISTRATE.—Sir Robert M. Craven, F.R.C.S. Eng., of Hull, has been placed on the Commission of the Peace for the East Riding of Yorkshire.

THE committee of the Central London Ophthalmic Hospital, Gray's Inn-road, have received a donation of £400 from Mrs. James Packe towards the building fund of the hospital.

WE are glad to announce that Mr. W. R. M. Wynne, the Lord-Lieutenant of the county of Merionethshire, has appointed Dr. John E. Jones, J.P., of Bryn-y-Ffynon, Dolgelley, a Deputy-Lieutenant of the county.

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Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Lunacy Bill.

THIS Bill has been read a second time in the House of Lords, and has at present every prospect of a quick passage through that Chamber.

Infant Life Protection Bill.

This measure, after passing the House of Lords, is now in the House of Commons, where it has been read a second time and referred for detailed consideration to the Grand Committee on Law.

Verminous Persons Bill.

This Bill to give local authorities power to offer to persons infested with vermin such means of cleansing and disinfecting as they possess was read a third time on Wednesday, July 7th, in the House of Commons. Local authorities are at present without this power, and verminous persons are treated at workhouses or casual wards and so rank as recipients of Poor-law relief.

Plumbers Registration Bill.

The Bill for establishing a national system of registration for plumbers failed to get through the report stage on Wednesday, July 7th, and in consequence has now little chance of being passed during the present session.

New Naval Hospitals.

In the Naval Works Bill now before the House of Commons the Admiralty take power to build two hospitals for the treatment of zymotic diseases, one at Haslar, Portsmouth, and the other at Haulbowline, Cork.

Workmen's Compensation Bill.

During the report stage of this Bill in the House of Commons several matters of special interest to medical men were discussed. For instance, various proposals were made for the periodical examination by duly qualified medical practitioners of workmen who are receiving compensation from their employers, and as the outcome of several debates there was inserted in one of the schedules of the Bill a provision that any workman claiming compensation under the Act shall, if so required by the employer from time to time, submit himself for examination by a duly qualified medical practitioner provided and paid for by the employer. The provision further says that if the workman refuses to submit himself to such examination or obstructs it, his right to the weekly payments shall be suspended until the examination takes place, and that if the workman objects to the examination he may appeal to the arbitrator whose decision in the matter shall be final.

HOUSE OF COMMONS.

TUESDAY, JULY 6TH.

Prison Rules as to Corporal Punishment.

Sir M. White Ridley said in reply to Mr. J. A. Pease that he was laying a new rule on the subject of corporal punishment in prisons on the table of the House. He could not deal with the matter so fully as he had wished without the further legislation which he had proposed to Parliament, but which there had been no time to pass during the present session.—Mr. Powell-Williams with regard to military prisons said that it was proposed to reduce the number of offences for which corporal punishment could be awarded and to require that the order for it be given by three instead of two visitors.

Kissing the Book.

Sir Walter Foster asked the Attorney-General whether he had considered the form in which the oath was administered in courts of justice in England with reference to the sanitary objections urged against it, and whether it was the intention of the Government to make any proposals for amending the law so as to abolish the objectionable practice known as "kissing the book."—The Attorney-General (Sir Richard Webster) said that he could only repeat his reply to the hon. member that he thought the sanitary objection to the present method of administering the oath had been somewhat exaggerated. Personally he believed that the option at present existing of swearing in the Scotch form, which was becoming every day more generally known, was sufficient. It was not the intention of the Government to amend the law, at any rate, during the present session. Dr. Farquharson asked whether the Attorney-General would take steps to make it more generally known that witnesses had a right to be sworn in the Scotch style.—The Attorney-General replied that he had made inquiries and had ascertained that in practically all the courts public notices had been issued and, as he had stated, the option was becoming more generally known.—Mr. Patrick O'Brien asked the learned gentleman to describe the Scotch form.—The Attorney-General said he must refer the hon. member to the Lord Advocate.

Fever Epidemic in Ireland.

Mr. Crilly asked the Chief Secretary to the Lord Lieutenant of Ireland if he had had any recent report from the officials of the Local Government Board of Ireland dealing with the outbreak of fever in the Belmullet Union; whether he was aware that on June 6th 44 persons were prostrated by fever in the South Island of Inniskea out of a total of 37 families; that 20 cases were reported last week; that two of the nurses attending these fever cases in Inniskea had been attacked by fever, and were on Friday last brought to the mainland and placed in hospital; and that three other nurses had been telegraphed for to Dublin and an advertisement published for a second medical officer; and what steps, if any, the Government proposed to take to deal with the existing distress, both from famine and fever, in the Belmullet Union.—Mr. Gerald Balfour said that he had received only the day previous a report from the medical inspector of the Local Government Board respecting the outbreak of fever on Inniskea Island. It had not been found possible in the brief interval since the question was placed on the paper to ascertain the number of fever patients on June 6th, but it appeared that on the following day there were 12 cases in the acute stage and 30 in the convalescent stage. One new case was reported last week, not 20 cases as alleged. There were now, in all, 14 cases in the acute stage of fever, 3 under observation, and 18 in the convalescent stage. Two of the nurses contracted the fever, and were under treatment in Belmullet. Additional nurses to replace them, as well as the resident medical officer, were landed on the island on Sunday. All the necessary steps had been taken by the Board of Guardians acting as the sanitary authority, and the Local Government Board would continue to advise and assist them in the administration of their statutory powers. He was not aware of the existence of famine in the Union.

The Case of Dr. Bynoe.

Mr. Bartley asked the Home Secretary whether he was aware that in the case of Dr. C. A. Bynoe, who was in 1892 convicted at the Old Bailey of forgery, a woman of the name of Rose Ripsher had confessed to the Home Office authorities that she alone was guilty of the forgery and that Dr. Bynoe was convicted in error, and whether he had taken steps to release Dr. Bynoe.—Sir M. White Ridley said he was fully aware of this woman's confession. The case of the prisoner Bynoe had been repeatedly under consideration, but neither his predecessors nor himself had found any reason to doubt the justice of his conviction.

THURSDAY, JULY 8TH.

Experiments on Living Animals.

Mr. John Ellis asked the Home Secretary whether the figures of experiments on living animals contained in Return No. 239 of this Session were obtained from the licencees who performed them, and in that case whether any steps were taken to verify their accuracy; whether each of the "licensed places" was inspected during the year to which the return related, and how many of them more than once; whether any of the visits of inspection were surprise visits, and, if so, how many; and, whether he had personally satisfied himself that the licences and certificates were all issued only to such places and persons, and with such objects, as were contemplated by the Cruelty to Animals Act, 1876.—Mr. Jesse Collings, for the Home Secretary, replied as follows:—Yes, the returns are obtained from the licencees, and the check of course upon them is supplied by the visits of the inspectors, which, with a few exceptions, are paid without notice. Four registered places at which no licences were in force, and the laboratory attached to the Board of Agriculture, which was only registered on Dec. 1st, were not visited during the year. Five places were visited once only, eight twice, twenty-five three times, two four times, three five times, and one six times. No licencee was found during any of these visits to be exceeding his powers. The answer to the last clause of the question is in the affirmative.

Qualifications of Dispensers.

Mr. Lyttelton asked the President of the Local Government Board if he could state why the standard of qualification for appointment as dispenser to a Poor-law union had been reduced so that persons other than those possessing a statutory qualification in pharmacy were now eligible for such appointments; and whether, having regard to the special technical training required in such dispensers, the Local Government Board would take steps to obtain for the sick poor in the various unions under their jurisdiction the security afforded by dispensers possessing a statutory qualification to dispense medicines.—Mr. Chaplin replied that in June, 1895, the Local Government Board issued an order by which compounders of medicines duly qualified in accordance with the regulations for the Army Medical Staff Corps were recognised as qualified for appointment as dispensers by boards of guardians. The Board had previously issued similar orders as regards particular cases. The order referred to was not issued without careful consideration.

Dog Muzzling.

Sir M. White Ridley said, in reply to a question by Mr. Schwann that he was able to quote the numbers given in the judicial statistics of persons proceeded against for offences generally in relation to dogs, a heading that included besides infringements of muzzling orders, infringements of certain statutory requirements as to keeping dogs, muzzled or otherwise, under proper control. The number of persons so proceeded against in the years 1893, 1894, and 1895 were 3539, 9265, and 31,434, of whom respectively 2952, 7803, and 27,527 were convicted. No doubt the great majority of the proceedings were for infringements of muzzling orders.

Plague Administration at Poona.

Mr. Weir asked the Secretary of State for India, having regard to the reply given by Lord Sandhurst as to certain allegations relative to the methods adopted at Poona for the suppression of the plague, and more particularly as to the statement that in the case of the inspection of the inmates of houses there was no possibility of indignity to native women, owing to the presence of lady doctors and other ladies with search parties, would he state the number of lady doctors at Poona and their names.—Lord George Hamilton said he was informed by the Bombay Government that the lady doctors engaged with search parties were Miss Bernard, M.D., Miss Crawley, L.R.C.P., Miss Dids, hospital assistant, and Mrs. Goodall, a Parsee with some medical qualifications. Other ladies were Mrs. Taylor, Miss Kelly, Mrs. Fernandez, Mrs. Balubai Awte (Hindu), Mrs. Bhimabai Awte (Hindu), Miss E. Barnard, Miss Tarkhad (Hindu), Miss M'Intosh, and the Hong Kong nurse, when not employed as a nurse.—Mr. Swift MacNeill also addressed a question to the Secretary of State on this subject.—Lord George Hamilton in the course of his reply read the following telegram from the Government of Bombay:—"Street inspection mentioned in Rand's letter of April 9th last arose thus: When searching was first instituted, women in many houses remained in dark rooms, where it was impossible to see whether they were ill, so householders were desired to cause their women to come into open place, such as reasonably light room or courtyard or street, merely that it might be seen whether they looked ill. If there appeared reason for actual medical examination, it was conducted with every regard for decency, not in public, and in case of women never by

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anyone but a woman, unless no objection was raised to examination by a commissioned medical officer. Allegation that women were stripped in street to detect plague symptoms is malevolent fabrication. The native gentlemen and lady doctors must have been cognisant of street inspection, as of all that went on."

MONDAY, JULY 12TH.

London Water Question.

Mr. Causton asked the President of the Local Government Board whether his attention had been drawn to the fact that the Southwark and Vauxhall Water Company was only giving an intermittent supply of water to many of the large blocks of workmen's dwellings in certain parts of West Southwark, and was creating a grave danger to public health; and whether he proposed to take any, and if so what, measures to compel the company at once to comply with the law, and give a constant supply.—Mr. Chaplin replied that the Local Government Board had received no complaints of the water-supply being intermittent in the cases referred to, and he had, therefore, no compulsory powers even if the facts were as stated. When notice was given of the question, he instructed General Scott to make inquiries into the matter. The company did not admit the allegations, and he was informed to-day by the company that the buildings in West Southwark continued to be well supplied with water, and no complaint existed.

Mr. Tritton asked the President of the Local Government Board whether, in view of the great inconvenience and danger to which the inhabitants of Norwood had been lately exposed by the failure in the water-supply, he would represent very strongly to the Lambeth Waterworks Company the necessity of immediate notice being given to consumers in future should it be found necessary for any reason to restrict or discontinue the ordinary supply.—Mr Chaplin replied that he had communicated with the Lambeth Water Company and impressed upon them the great importance of giving early notice, so far as circumstances would permit, of any probable deficiency in the water-supply of their district. He thought he should add that the deficiency in the supply was very sudden, that it was occasioned by causes which could not have been foreseen, and was at an end after five or six days. Under such circumstances it would have been very difficult to give notice to the many thousands of water consumers in the district in time to be of practical service.

Bubonic Plague.

Mr. Knox asked the President of the Local Government Board whether his attention had been called to the bacteriological report and the despatch of March 10th from the Government of India showing that mice inoculated with an infusion from grain infected by the plague bacillus died in some cases, though the grain had been for thirteen days free from fresh infection, and that the bacilli might at a later date re-acquire toxic properties under favourable conditions; and whether he could state what steps had been taken to prevent the introduction of the plague into the United Kingdom.—Mr. Chaplin replied: My attention has been drawn to the report and despatch referred to. From the report it would appear that in an experiment in which mice were deliberately injected beneath the skin with preparations of nine different species of grain which had been purposely infected with microbes of bubonic plague, one single mouse injected with one of these nine preparations died after twenty-four hours, whilst all the others survived. As regards the mouse that died, it is stated that it "showed no appearances microscopically or otherwise of having succumbed to bubonic infection," and I am advised that no scientific conclusion should be drawn from such a result. I do not gather that the report shows "that the bacilli must at a later date re-acquire toxic properties under favourable conditions." What the report says is that the Government of India are advised that the experiments are not conclusive, since such re-acquirement of toxic properties may be possible. The steps which have been taken to prevent the introduction of plague into England and Wales are embodied in an Order relating to plague, cholera, and yellow fever, which was issued by the Local Government Board in November, 1896. These regulations were brought under the direct notice of every urban, rural, and port sanitary authority in England and Wales. I also instructed medical inspectors of the department to pay special visits to a number of ports which are in somewhat frequent communication with ports of India.

TUESDAY, JULY 13TH.

Experiments on Living Animals.

Mr. Weir asked the Home Secretary whether he had yet been able to institute the promised inquiry into the allegations made by Dr. E. Berdoe in regard to the use of curare in the practice of vivisection; and, if so, would he state the result of his inquiry.—Sir M. White Ridley replied that he had made full inquiry into the allegations contained in the letter and statement which the hon. Member forwarded to him, and found that they were absolutely baseless. The experiments referred to were performed on animals under full chloroform anæsthesia; the morphia, to which alone allusion was made in the published account of the experiments, being used in addition. Curare was used, but not as an anæsthetic.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ADAMS, JOSEPH DIXON, M.D. St. Andrews, M.R.C.S., L.S.A., has been appointed a District Medical Officer of the Langport Union.

ALEXANDER, J., L.R.C.S. Edin., has been re-appointed Joint Parochial Medical Officer and Public Vaccinator, Leslie.

BAILEY, T. RIDLEY, M.D. Edin., has been appointed Certifying Factory Surgeon for the Bilston District, vice James Wells, Wolverhampton, resigned.

BOWHAY, A., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Calstock District Council.

CLARK, J. S., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Mortonhampstead Sanitary District of the Newton Abbot Union, vice F. G. Engelbach resigned.

DALY, C. F., M.D. Irel., L.R.C.S. Edin., has been appointed Medical Officer for the Silverdale Sanitary District of the Wolstanton and Burslem Union.

EDWARD, A. A., M.D., C.M. Edin., has been appointed Medical Officer for the No. 1 Rawtenstall Sanitary District of the Haslingden Union.

EDWARDS, L. C., M.B., C.M. Edin., has been appointed Casualty Surgeon to the Bristol General Hospital.

FFRENCH, D. M., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Debenham Sanitary District of the Bosmere and Claydon Union.

HARRISON, JAMES, M.R.C.S., L.R.C.P. Edin., has been appointed Medical Officer to the East Grinstead Isolation Hospitals.

HAY, H. D., M.B., C.M. Edin., has been re-appointed Joint Parochial Medical Officer and Public Vaccinator, Leslie.

HILDYARD, ROBERT LOXHAM, M.R.C.S., L.S.A., has been re-appointed Medical Officer and Public Vaccinator of the 2A and 2B Districts of the Langport Union.

JELLY, G. AUBREY, L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon and Registrar at the Royal Eye Hospital, Southwark, London.

MORGAN, J. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Llandulas and Llanwrtyd Sanitary District of the Builth Union.

MUNDEN, CHARLES, M.R.C.S., L.S.A., has been re-appointed Medical Officer of the 3C District of the Langport Union.

O'CONNOR, J. E., M.B., B.Ch. Irel., has been appointed Medical Officer of Health by the Lowestoft Town Council.

PARKINSON, C. H. W., M.R.C.S., D.P.H. Edin., has been re-appointed Medical Officer of Health by the Wimborne Urban District Council.

PARTRIDGE, SYDNEY, M.D. Edin., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer by the Darlaston Urban District Council, vice Samuel Partridge, resigned.

SMITH, T. F. HUGH, F.R.C.S. Eng., has been appointed Medical Officer to the Bartholomew's Hospital Convalescent Home.

SQUIRE, M. F., M.B., B.S. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer for the Infirmary and Workhouse of the parish of Paddington.

TORRENS, J., M.D., M.S. Irel., has been appointed Medical Officer for the Quatt District School, and Medical and Vaccination Officer for the Calverley and Wirehl Sanitary Districts of the Bridgnorth Union.

WATSON, W. D., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Leigh-on-Sea Urban District Council.

WILKINS, WALTER, M.R.C.S., L.R.C.P. (late H.S. and H.P., Charing-cross Hospital), has been appointed House Surgeon to St. Peter's Hospital, Henrietta-street, W.C.

WILSON, JAS. S., M.D. Glasg., D.P.H. Camb., has been appointed the Certifying Surgeon for Walsall and Bloxwich Districts, vice J. Wood, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRADFORD UNION WORKHOUSE.—Resident Assistant Medical Officer, unmarried. Salary £100 per annum, with prescribed rations, washing, and apartments in the Workhouse. Applications to the Clerk to the Guardians.

GENERAL HOSPITAL, Nottingham.—Assistant House Physician for six months. Board, lodging, and washing in the hospital, and an honorarium of £10 10s. will be given conditionally.

GRIMSBY AND DISTRICT HOSPITAL, Grimsby.—Resident House Surgeon. Salary £80 per annum, with board, lodging, and washing.

HARTISMERE UNION, Suffolk.—Resident Medical Officer and Public Vaccinator for the Gislingham District. Salary at the rate of £60 per annum, exclusive of vaccination fees and such other extra fees as are allowed by the Local Government Board. These average about £25 per annum. Applications to the Clerk, Guardians' Offices, Eye.

HEREFORD GENERAL INFIRMARY.—Resident House Surgeon, unmarried. Salary £100 per annum, with furnished rooms, board, washing, gas, coal, and attendance.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—House Surgeon for six months, unmarried. Salary £20, with board and residence in the hospital.

HULME DISPENSARY, Dale-street, Stretford, Manchester.—House Surgeon. Salary £130 per annum, with apartments, attendance, coal and gas.

KENSINGTON UNION.—Second Assistant Resident Medical Officer for the Workhouse and Infirmary. Salary £80 per annum, with apartments, board, and washing, subject to the statutory deduction under the Poor-law Officers Superannuation Act, 1896.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer for six months. Residence, board, and washing provided, and an honorarium given on the termination of the appointment.

MACCLESFIELD GENERAL INFIRMARY.—Senior House Surgeon. Salary £100 for the first year, with board and residence. Also Junior House Surgeon. Salary £70 per annum, with board and residence at the institution.

MEMORIAL HOSPITAL, Jarrow-on-Tyne.—House Surgeon. Salary £80, rising £10 annually to £100. Board and residence provided in the hospital. Applications to Mr. J. Campbell, Surgeon, Ivy Bank, Jarrow-on-Tyne.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the South-Western Fever Hospital, Landor-road, Stockwell, S.W.,

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unmarried. Salary £160 the first year, £180 the second year, and £200 the third and subsequent years of service, with board, lodging, attendance, and washing, subject to statutory deduction under the Superannuation Act, 1896. Applications to the Clerk to the Board, Chief Office of the Board, Norfolk-street, Strand, W.C.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Assistant Surgeon. Also Surgeon.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer for six months. Salary £30 per annum, with board, attendance, and washing.

MILL-ROAD INFIRMARY, Liverpool.—Medical Superintendent. Salary £500, with unfurnished house, coal, gas, rates, and taxes, inclusive of all fees. Applications to the Clerk to the Guardians, West Derby Union, Brougham-terrace, Liverpool.

NORTH WALES ASYLUM, Denbigh.—Second Assistant Medical Officer. Salary £100, with board, washing, and apartments. No beer allowance, and no pension given. Applications to the Clerk to the Visitors, Denbigh.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, London, N.W.—Assistant Resident Medical Officer for four months. Salary at the rate of £50 per annum, with board, residence, and washing.

RIPON DISPENSARY AND COTTAGE HOSPITAL.—Resident House Surgeon and Dispenser, unmarried. Salary £70 per annum, with board and lodging.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon. Salary £30 per annum; board, lodging, and washing provided.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Board, lodging, and washing provided.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—Resident Medical Officer for six months. Salary at the rate of £100 per annum, with furnished apartments, board, and washing.

ROYAL INFIRMARY, Aberdeen.—Medical Superintendent. Salary £350 per annum, without residence.

SHEFFIELD UNION.—Resident Assistant Medical Officer at the Union Workhouse, Fir Vale, Pitsmoor; single or widower. Salary £100 per annum, with apartments, rations, and the other usual allowances. Applications to the Clerk to the Guardians, Union Offices, Sheffield.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—House Surgeon for two years. Salary £100 per annum, with board, lodging, and washing.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Fourth Assistant Surgeon.

Births, Marriages, and Deaths.

BIRTHS.

ECCLES.—On July 11th, at 63, Sackville-road, Hove, Brighton, the wife of G. Tolcher Eccles, M.A., M.B. Cantab, of a son.

FERGUSON.—On July 9th, at Rutland-street, Edinburgh, the wife of James Haig Ferguson, M.D., F.R.C.P. Edin., of a son.

HAMER.—On July 8th, at Dartmouth-park-hill, N.W., the wife of W. H. Hamer, M.D., of a son.

LEWIS JONES.—On July 6th, at Kenilworth-road, Ealing, the wife of H. Lewis Jones, M.D., of a son.

OLIVER.—On July 10th, at 7, Ellison-place, Newcastle-upon-Tyne, the wife of Thomas Oliver, M.D., F.R.C.P., of a son.

RAMSAY.—On June 29th, at Jesmond Dene, Bournemouth, the wife of F. Winson Ramsay, M.S., F.R.C.S. Edin., of a son.

MARRIAGES.

BALDING—AUSTIN.—On July 7th, at St. Augustine's Church, Highbury New-park, Edmund Balding, L.D.S.R.C.S. Eng., eldest son of Edmund Balding, of Fairbridge House, Upper Holloway, to Violet Constance, third daughter of Edwin Austin, J.P., of Highbury New-park, N.

HALAHAN—GALTON.—On July 14th, at St. Paul's, Upper Norwood, by the Rev. H. Stevens, M.A., Vicar of Holy Trinity, Sydenham, assisted by the Rev. R. B. Ransford, M.A., Vicar of St. Paul's, S. Crosby Halahan, of Leigh Manor, Cuckfield, Sussex, eldest son of the late Colonel S. H. Halahan, of Haighlands, Sydenham-hill, to Maud Ethel, second daughter of John Galton, M.D. Lond., of Chunam, Sylvan-road, Upper Norwood.

LAUCHLAN—HILL.—On July 7th, at the Congregational Church, Grafton-square, Clapham, Charles A. Lauchlan, M.D., of Clapham-road, to Margaret Craven, seventh daughter of the late Rev. William Hill, of Beeralston, Devon.

MARTINE—TAYLOR.—On July 13th, at St. Michael's Church, Edinburgh, William Robert Martine, M.B., C.M. Edin., second son of the late William Martine, M.D., Haddington, to Dora, third daughter of the late Charles S. Taylor, S.S.C., Edinburgh.

MATTHEWS—DODD.—On July 7th, at All Saint's, Norfolk-square, W., Samuel Ryder Russell Matthews, M.R.C.S., L.R.C.P., son of the Rev. Andrew Matthews, Rector of Gumley, Leicestershire, to Katharine Frances, youngest daughter of John T. Dodd, of Cambridge-terrace, Hyde-park.

DEATHS.

COLLINS.—On July 13th, at Sydenham, the residence of his son, Dr. Thomas Collins, formerly of 28, Harcourt-street, Dublin, in his 89th year. Funeral at Norwood Cemetery on Thursday, July 15th, at 2.30.

ROGERS.—On July 12th, at 404, Commercial-road, E., George Arthur Rogers, M.R.C.S., L.S.A., Medical Officer of Health to the Limehouse District Board of Works, aged 54 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 15th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
July 9	29·97	S.W.	62	57	121	76	58	...	Overcast
,, 10	30·17	N.	68	60	124	79	61	...	Fine
,, 11	30·45	N.E.	62	58	118	76	58	...	Fine
,, 12	30·29	S.E.	61	56	117	72	56	...	Cloudy
,, 13	30·09	E.	68	62	124	78	57	...	Cloudy
,, 14	29·96	E.	69	61	125	80	58	...	Fine
,, 15	29·92	S.E.	67	58	124	77	55	...	Fine

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (21st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (22nd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (24th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

TUESDAY (20th).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.).—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

THURSDAY (22nd).—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square).—5.30 P.M. Dr. T. D. Savill: Tuberculosis of the Skin.

FRIDAY (23rd).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.)—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

During the week marked copies of the following newspapers have been received:—*Derby Express, Bradford Observer, Peterborough Advertiser, North Wales Chronicle, Cardiff Times, Brighton Gazette, Scotsman, Western Mail, Herald of Wales, Times of India, Pioneer Mail, Brisbane Telegraph, Builder, Citizen, Ceylon Observer, Cape Times, Architect, Birmingham Gazette, Newcastle Leader, Manchester Guardian, Market Harborough Mail, Bedfordshire Times, Leek Times, Liverpool Daily Post, Leamington News, Tyrone Constitution, Wellingborough News, Leeds Mercury, Melbourne Age, Llandudno Directory, Norwich Mercury, Wolverhampton Chronicle, Dundee Courier, Sussex Daily News, Burnley Express, Hampshire Chronicle, Berkhamsted Times, Bristol Mercury, Andover Advertiser, Midland Times, Coleshill Chronicle, Shrewsbury Chronicle, Yorkshire Post, Rushden Echo, Sanitary Record, Rangoon Times, Surrey Advertiser, Hertfordshire Mercury, Local Government Chronicle, Reading Mercury, Newbury Weekly News, Glasgow Herald, Sunday Times, Local Government Journal, Weekly Free Press and Aberdeen Herald, Morning Herald, South Wales Daily News, Central Somerset Gazette, Galignani Messenger, Kidderminster Times, Cardigan Observer, Hastings Observer, Exmouth Chronicle, Falkirk Herald, Dewsbury District News, Blackpool Times, West Middlesex Herald, &c., &c.*

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Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which was completed with the issue of June 26th, was given in THE LANCET of July 3rd. It is intended, in future, to include the Index and Title-page for each past half-yearly volume in the first number of the succeeding volume, as in the present case, instead of in the last number of the volume itself, as heretofore.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

TESTIMONIAL TO MR. W. J. C. MILLER.

WE mentioned in our issue of July 3rd, that some of his friends, contributors to the mathematical columns of the *Educational Times* and others, were forming a fund to present a testimonial to Mr. W. J. C. Miller, the lately retired Registrar of the General Medical Council. Included in the list of subscribers submitted to us are the names of the following members of the medical profession:—

	£	s.	d.		£	s.	d.
Sir H. W. Acland... ...	1	1	0	Dr. G. G. Morrice	0	5	0
Mr. D. Biddle	1	1	0	Sir James Paget	1	1	0
Dr. H. Gervis	1	1	0	Sir John Simon	1	1	0
Rev. Dr. Haughton ...	1	1	0	Professor Struthers... ...	1	1	0
Lord Lister	1	1	0	Mr. Thomas Wakley, Jun.	1	1	0
Dr. Donald MacAlister	1	1	0				

We understand that although the movement originated with mathematical friends of Mr. Miller, the Honorary Treasurer (the Rev. Robert Harley, M.A., F.R.S., Rosslyn, Westbourne-road, Forest-hill, S.E.) will be glad to receive any subscriptions which medical friends may wish to send.

Juniper.—The arrangement does not commend itself to us, but it would appear not to be illegal and not to traverse any regulations of the corporation to which our correspondent belongs.

DISTRICT NURSING ON A PROVIDENT BASIS.

DR. JAMIESON B. HURRY, Abbotsbrook, Reading, will be glad to hear of any centre where district nursing has been organised on a provident basis, or where a payment is required, in return for the services of the district nurse, from all persons except those actually destitute. A copy of the annual report of any such centre will be welcome.

THERAPEUTIC TATTOOING IN EGYPT.

IN May last Professor Lannelongue communicated to the Académie des Sciences in Paris a note by Dr. Fouquet, of Cairo, on tattooing as a means of treating disease. According to the author, the practice, which dates from the remotest times, is common in Egypt at the present day, and women still perambulate the streets in the native quarters of the city loudly proclaiming their readiness to perform, not only tattooing, but also ear-piercing and clitoridectomy. In support of the antiquity of the custom Dr. Fouquet gives a description of a mummy which he examined in 1892. It would seem that the remains are those of a priestess of Hathor named Ament, who lived at Thebes during the eleventh dynasty, some four or five thousand years ago. The body is that of a woman "still young but extremely emaciated, with her mouth open and twisted from anguish"; and the observer was led by these signs to the conclusion that death resulted from "generalised peritonitis." Commenting on the article in Duplay's *Archives* for July, M. Henri Meige justly takes exception to this retrospective diagnosis. If all the mummies presenting leanness and wry mouths are to be taken as having come by their deaths from peritonitis, then assuredly that malady must have been more deadly than the ten plagues, the condition described being universally found. As for the expression of anguish, the inference deduced is scarcely more justifiable, since mummified corpses are nearly always disfigured in the manner indicated. In the crypt of the church of Saint Michael at Bordeaux, for instance, there are a number of bodies which, owing to some preservative quality in the soil, have escaped decay, but only at the expense of contortions, more or less fantastic, that serve to convey the impression that the deceased had succumbed to painful affections. So much so, indeed, is this the case that quaint names have been bestowed by the local wits on the various groups constituting these lugubrious relics. Here, they say, we have an entire family who were poisoned by eating mushrooms; while that tall mummy, with his abdomen in shreds, was a porter who ruptured himself in the endeavour to carry too heavy burdens. The fact, nevertheless, remains, and abounds with interest, that the priestess Ament had marks of tattooing as well as traces of scarification on the lower part of her abdomen, although it does not seem at all probable that these operations were undertaken for the cure of an acute disease like peritonitis. They may have been performed with a view to prophylaxis, but it is more likely that preservation from witchcraft was the motive, if not simple adornment. Amongst the aboriginal tribes of Africa tattooing is still resorted to as a preventive of disease and accident, being regarded as a species of amulet or charm.

Mr. Mortimer Gray.—The treatment in question is a vulgar fraud.

WANTED A WORD OF ADVICE.

To the Editors of THE LANCET.

SIRS,—Would any medical *confrère* versed in such matters kindly give his advice through THE LANCET as to what annual fees, and what special conditions the medical officer of a society should stipulate for, if he were required to extend his functions as medical officer to the families of members. I am, Sirs, yours faithfully,

July 14th, 1897. D. J.

Triple Qual.—All information will be given to our correspondent by Dr. Major Greenwood, 243, Hackney-road, N.E.

EFFECTS OF WORKING IN COAL BUNKERS.

THE attention of Russian naval surgeons has for some time past been especially directed to the diseases observed amongst stokers and others employed in the engine-rooms, stokeholds, and coal bunkers of ships. Dr. Drezhnevich has recently published a paper on the effects of coal on the constitution of the atmosphere upon which he has been engaged for eight or nine years, having commenced it in 1888 in the chemical laboratory of the Cronstadt Naval Hospital under Dr. Shidlovski. The final part of the research was carried out in the Institute of Experimental Medicine attached to the St. Petersburg Medico-Chirurgical School under the direction of Professor Nenski. It was found that when rooms or bunkers containing a large quantity of coal were closed to the outer air the oxygen in them was greatly diminished, even at ordinary temperatures—that is to say, below 29° C., sometimes, indeed, disappearing altogether; at the same time, a very appreciable quantity of carbonic acid was found, which sometimes amounted to as much as 6 per cent.; hydrocarbons were also present, especially marsh gas, which generally existed to the extent of about 3 per cent. With higher temperature the vitiation of the contained air proceeded more rapidly, but carbonic oxide was not found, at all events, below 40° C. The special diseases noted among the men employed in the coal bunkers consisted of chronic anæmia and acute attacks of a spasmodic nature affecting parts or the whole body, indicating an insufficient supply of oxygen.

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BORIC ACID IN MILK.

AT Barry Police-court on July 2nd three milkmen were prosecuted under Section 6 of the Food and Drugs Act. It appeared that each of the defendants had been asked to supply fresh milk, but instead had given milk with 0·3 per cent. of boric acid. The medical officer of health of Glamorganshire stated that this percentage was too high and would be injurious to a child, and he was of opinion that 0·1 per cent. of boric acid was quite sufficient to preserve the milk. The bench imposed a fine in each case of 40s. and costs, including advocation fee, amounting to £5 5s.

Nemo.—We cannot go so far as to insist upon a strict "boycott"; for, after all, the medical man's duties are primarily towards the public, and a strict "boycott" might lead to injustice to the suffering. Also, there are clubs and clubs. But if the clubs to which our correspondent refers are those where no wage limit is enforced, and where touts are employed to seduce the patients of other medical men to transfer their patronage to the club officer, we feel very strongly that no medical man should hold a post in such institutions. To do so is to break faith with the profession, while it is also to injure the suffering public by supporting a system that leads to indifferent medical treatment—the sort of treatment that must be the return for a starvation wage. The medical profession of the neighbourhood should look upon the matter in this light and then decide upon a common course of action.

ANGELICA AND SHEEP'S PARSLEY.

To the Editors of THE LANCET.

SIRS,—May I be allowed to say a few words with reference to the two cases of dermatitis caused by angelica, as recorded by Dr. David Walsh in THE LANCET of July 3rd? To my thinking the pallid young pastry-cook and his untutored friend must have actually gathered "cow parsley" (Æthusa cynapium) instead of the celestial herb they wanted for making a sweetmeat. Only a practised botanist would distinguish the genuine plant by its not possessing three long narrow pointed leaves at the base of each partial umbel. At the same time, its mischievous imitator is well known to blister the hands and to irritate the skin of those who cull it. If Dr. Walsh will kindly read what is told about "fool's parsley" in "Herbal Simples" he will readily appreciate my proffered suggestion. And in this the animal with the crumpled horn and the fool are identical, just as in the nursery rhyme where "the cow jumped over the moon." But, indeed, such a mistake, if followed up, has a serious bearing, and shows that some authoritative supervision ought to be exercised over heedless young simplers who roam the suburban fields in search of esculent wildings, else the halfpence of our children and the silver groats of our housewives may purchase for their intended delectation what will poisonously prove the "pernicious pasticcios, and the complex combinations of the confectioner." Thanking Dr. Walsh for his courteous quotation from my pages,

I remain, Sirs, obediently and faithfully yours,

July 10th, 1897. W. T. FERNIE.

R. S.—We never recommend practitioners, nor do we suggest treatment. Our correspondent's usual medical man can tell him whether a second professional opinion is necessary and can advise as to who should be invited to express it.

MEDICAL WOMEN.

WE are indebted to the *Gazette de Gynécologie* for the following items of intelligence, some of which have, however, already appeared in our columns. The Medical Commission of Louisiana has delivered a diploma, authorising her to engage in medical practice, to Miss Emma Wakefield, who belongs to the coloured race. This lady is said to be the first of her lineage who has received this distinction in the Southern States, and probably throughout the entire Union. She is the daughter of ex-Senator Wakefield, and was educated in the medical section of the Coloured University in New Orleans. The University of Vienna lately, for the first time, promoted a lady to the dignity of Doctor of Medicine. The new graduate, Mlle. Possanner d'Ehrenthal, had great difficulty in persuading the authorities to recognise her Zürich credentials, but was eventually permitted to present herself for examination before the Viennese board, and having triumphantly surmounted all the tests was duly admitted as a fully qualified practitioner. Following the example set by Vienna, the University of Budapest has, likewise for the first time, bestowed its medical degree upon a member of the female sex, the learned recipient being Mme. Wilhelmine Wartha, *née* Countess Hugonnay, whose husband is a professor at the Budapest Faculty of Medicine. The Medical College for Women in New York was destroyed by fire on April 22nd last. It was the sole recognised institution of its kind in America and contained upwards of 100 students, having been founded in 1864 by the sisters Elizabeth and Emily Blackwell. The building so unfortunately consumed was erected by private subscription at a cost of £25,000.

MR. JUSTICE LAWRANCE ON THE MEDICAL PROFESSION.

ON July 9th, at the Bristol Summer Assizes, during the hearing of a case in which a midwife was acquitted on a charge of murder, one of the witnesses stated that her daughter went to several medical men and told them of the serious state of the deceased, but they refused to come. She also saw a police officer and asked him if a medical man could not be compelled to attend. During his summing-up Mr. Justice Lawrance observed that he did not understand what the witness meant when she said that the medical men refused to come. From what he knew of the medical profession he did not think any member of it would refuse to attend a woman in so serious a condition. Probably the deceased, being a pauper patient, was under the care of the parish surgeon, who went on the receipt of a note from the relieving officer.

P. D. (Hoxton).—We do not agree that the paper in question failed in clearness. To us the points mentioned by our correspondent were sufficiently evident.

THE INTER-MARRIAGE OF DEAF-MUTES.

To the Editors of THE LANCET.

SIRS,—Both my parents had the misfortune to be deaf and dumb, my mother from birth and my father as the result of fever when six years of age. They had six children, including myself, two of whom died in infancy, the remainder being healthy and strong in every respect. The question which has been very unpleasantly brought before me recently is, whether in the event of my marrying the possibilities are that any children my wife might have by me would be similarly afflicted. I may say that there is no knowledge of any other member of my family previously ever having been so afflicted. I should be glad if you could give me an opinion, as, of course, the matter to me is a very serious one. Thanking you in anticipation,

I am, Sirs, yours faithfully,

July 9th, 1897. DEEPLY INTERESTED.

*** If the son of a deaf-mute marries, being himself of sound constitution and brain power, he is not likely to transmit mutism to his children. Mutism from early acquired deafness is not transmitted.—ED. L.

THE HEAT IN AMERICA.

WE have not in this country had any unusual heat up to the present time; the summer has hitherto been somewhat changeable—relatively cold alternating with hot days; but in America the heat seems to have been excessive, and as a consequence the amount of sunstroke and heat exhaustion unusually large. Between 300 and 400 deaths from sunstroke and heat apoplexy have been reported, and the amount of prostration, sickness, and physical discomfort attributable to the effects of the heat is incalculable. We hear, too, of the more or less wholesale exodus of the urban populations for watering-places, and of the efforts made by those left behind in the big cities to sleep outside their houses or on the top of them. It is quite possible that the heat-wave which is said to have prevailed in America may yet appear in this country, although, judging from the past, it is scarcely likely that the temperature here will reach the same height or be so persistent as it frequently is in America. The great thing, no doubt, to be done by those who are not compelled to remain in cities and towns is to get away from them to the seaside, the country, or the mountains, or to Switzerland. For those who cannot do so strict temperance in living, light and easy clothing composed of a texture freely permeable by the air, the occupation of freely ventilated rooms, especially bedrooms and dormitories, and the use of ice and iced drinks, with the avoidance of alcoholic stimulants, are the main points to be attended to, and the experience and common-sense of most people commonly cause them to have recourse to them.

Dubious.—The "remedy" in question is a quack preparation and is run on most mischievous lines.

"THE SAYINGS OF OUR LORD."

THE Egypt Exploration Fund, in the persons of Mr. Bernard P. Grenfell and Mr. Arthur S. Hunt, have recently discovered, as is now well known to everyone, a remarkable papyrus, the date of which is about 200 A.D., and the contents of which are reported sayings of Our Lord. The complete result of the excavations will be published in the next Archæological Report of the Fund, but in the meantime a fragment has seemed of such a remarkable character that a translation of it has been issued immediately. One saying, which has a familiar ring, merits quotation to a medical audience:—"Jesus saith, A prophet is not acceptable in his own country, neither doth a physician work cures upon them that know him." Here we have a remarkable addition to the well-known text from St. Luke (Chap. IV., v. 24): "No prophet is accepted in his own country," and an addition the practical shrewdness and accuracy of which every medical man will recognise. Who has not found special difficulty in treating his personal friends?

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Communications, Letters, &c., have been received from—

A.—Dr. Arlidge, Staffordshire; Association for the Oral Instruction of the Deaf and Dumb, Lond., Director of; A. B. C., Leeds; Messrs. Anderson and Co., Lond.; Mr. E. A. Armstrong, Lond.

B.—Dr. Byrom Bramwell, Edin.; Messrs. Burgoyne, Burbidges & Co., Lond.; *Birmingham Daily Post*, Proprietor of; Dr. A. O. Bobardt, H.M.S. *Dart*, Cooktown, N.E. Queensland; Dr. A. Bronner, Bradford; Mr. C. Birchall, Liverpool; Miss E. P. Bullar, Southampton; Dr. G. Sandison Brock, Lausanne; Messrs. Ballard and Wilson, Merton; Mr. R. Baker, Lond.; Dr. D. Bright, Constantinople; Messrs. Burroughs, Wellcome, and Co., Lond.; Bedford General Infirmary, Secretary of; Mr. Austin Brereton, Lond.; Dr. M. Bandouin, Paris; Dr. H. A. Ballance, Norwich; Mr. G. S. F. Bains, Jarrow-on-Tyne; Dr. Bagshawe, St. Leonards-on-Sea; Mr. C. S. Bowker, Newport, Mon.; Mr. E. Stanmore Bishop, Manchester; Dr. R. Bell, Glasgow; Mr. G. F. Blake, Dublin; Dr. H. P. D'Arcy Benson, Guernsey; Rev. W. St. Hill Bourne, Lond.

C.—Dr. R. A. Caldwell, New York; Dr. John Cavafy, Lond.; Miss M. Canning, Lond.; Messrs. Cuff Bros., Dover; Messrs. E. Cook and Co., Lond.; Cinchona, Lond.; Messrs. Clark, Son, and Platt, Lond.; Mr. W. F. Clay, Edinburgh; Cambrian Railways Co., General Manager of; Messrs. T. Christy and Co., Lond.; Messrs. Crossley, Moir, and Co., Lond.; Mr. J. Cowley, Lond.; Cornwall County Council, Chairman of; Mr. T. Cooke, Lond.

D.—Mr. H. W. Dodd, Lond.; Deputy Town Clerk, Harrogate; Dr. W. D. Donnan, Holywood; Mrs. M. Dawson, Arundel; The F. A. Davis Co., Philadelphia, U.S.A.; Dr. W. Devereux, Tewkesbury; Devonshire Hospital and Bath Charity, Secretary of; Mr. P. Dunlop, Lond.; Mr. R. Dunstan, Lond.; Mr. R. J. Dunglison, Philadelphia.

E.—Mr. G. Ellis, Rochdale; Messrs. Eason and Son, Dublin.

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An Address

ON THE

PATHOLOGY OF PULMONARY PHTHISIS: A RETROSPECT.

Delivered before the Torquay Medical Society,

BY I. BURNEY YEO, M.D., F.R.C.P. LOND.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE IN KING'S COLLEGE, LONDON.

GENTLEMEN,—In casting about for a subject which might fitly occupy your attention at this your annual meeting, and form the main topic of the address which you have done me the honour to invite me to deliver, it occurred to me that a brief retrospect over a very remarkable chapter in the history of medical pathology might not prove uninteresting or uninstructive. I do not propose to ask you to follow me into a very remote retrospect; this backward survey will be limited to a period extending over very little more than a quarter of a century. But a few words of historical introduction may, however, be advisable in order to give something of coherence and completeness to the account I wish to present to you.

The subject I am thinking of is the Pathology of Pulmonary Phthisis. In the spring of the year 1873 a protracted discussion took place at the Pathological Society of London on the "Anatomical Relations of Pulmonary Phthisis to Tubercle of the Lung," and whoever will take the trouble—and it is certainly not an easy task—to read through the reports of this discussion can hardly fail to be struck with the extraordinary confusion of opinion and ideas therein presented. The period at which this discussion took place was an interesting one in the history of modern pathology, because I think it may be regarded as a critical period in the reputation and influence of the study of morbid histology as a pathological guide. At that time the whole field of pathology seemed, in the minds of many of the best reputed observers, to be identical with that of morbid anatomy and histology, with which it was then in imminent danger of being confounded, whereas it need hardly be said a true philosophical pathology takes in a far wider range. At that time the many earnest workers in the domain of morbid histology received perhaps rather more than an adequate meed of praise. Indeed, it was only by work of this kind that the young pathologist could hope to obtain any credit, and it followed as a consequence that the anatomical analysis of morbid products and the inferences drawn from them were pushed to an extreme, the evil results and the confusion attending which are well exemplified in the discussion to which I am now calling your attention. You must not suppose that it is merely an opinion of my own—that a sad confusion of ideas had been produced by an ill-considered and a too entire reliance on the results of histological analysis. It was recognised by the introducer of the discussion, Dr. Wilson Fox, and by others. "I would ask," Dr. Wilson Fox says at the end of the discussion, "is any chaos greater than the present?" and he adds: "I have often pitied the 'intelligent student' to whom we have appealed as our test of the definitiveness of our views." And, again, he asks, "Is there no way out of this confusion?" An eminent pathologist expressed his belief that "the use of the term tubercle tended to cause" this confusion, and proposed to discontinue its use. Another speaker of much authority also wished to throw overboard the word "tubercle." "At present," he says, "we are confused, hedged in, or hampered in a manner which is altogether ludicrous. Nobody knows what another means when he makes use of the word 'tubercle.' We cannot explain our views on the subject without entering into tedious statements concerning conflicting views." But as time has shown, the fault was not in the word "tubercle," but in this too exclusive method of investigation, in the then prevailing belief that nothing could be known of pathology outside the field of morbid anatomy and morbid histology. I was myself strongly convinced at the time of the dangers associated with this tendency, and I ventured to point out in that discussion "that the differences of opinion that existed amongst observers were greatly due to the circumstance that they had been looking too exclusively at one side of a many-sided subject," and "that they would be more likely to comprehend the true import of the anatomical evidences, the last words, as it were, of a disease when they regarded them in the light of the various circumstances that had attended its whole life-history."

But before we pursue this subject further let us take a very brief survey of the history of the prevailing opinions as to the pathology of phthisis during the first half of the present century. We will not go further back than the first publication of Laennec's views in 1811. In him we find the great originator of the idea of the unity of phthisis. All phthisis he regarded as "tubercular." He looked upon "tubercle" as an "accidental product"—foreign to the normal state and having no analogue in the healthy body—and the many modifications found in the lungs and other organs in the case of tuberculosis as caused by the evolutions of a unique heterogeneous substance, "tubercular matter." Laennec, with the insight of genius, saw identity of nature amidst apparent diversity of form and aspect, and he taught that isolated tubercle, miliary tubercle, grey granulations, and tuberculous infiltrations, grey and yellow, were all of the same pathological nature and origin. "The synthesis which he constructed of the different tuberculous processes has triumphed over all the attacks which it had to undergo, and has only now found its definitive confirmation in the most brilliant conquests of *modern technique*."[1] Laennec also maintained that tubercle was not only a substance foreign to the organism, but that it led a *special* life; the idea of its *specific* nature was distinctly in the mind of this great observer. These opinions of Laennec were violently attacked by Broussais (1826), whose views met with considerable favour in this country. Broussais maintained, in opposition to Laennec, that tubercle was purely and simply the result of inflammation, and that organs "irritated" to a certain degree and for a period more or less long ended by becoming tuberculous when they were so disposed. Tubercle, he said, was caused by chronic inflammation of the air passages, and was not therefore in any sense "specific." Broussais also, like a certain more recent observer, incriminated the pulmonary lymphatics in the tuberculising process. Tuberculisation, he affirmed, was attended by an inflammation of the lymphatic capillaries. The two essential points in the doctrine of Broussais as to the nature of pulmonary tuberculosis—viz., irritation as the cause and a lymphatic product as the effect—have held up to quite recent times a prominent place in the history of the pathology of phthisis. Louis shared the views of Laennec, but Andral, Cruveilhier, and Bouillaud (1837), and many others held with Broussais that tubercle was a result of inflammation and therefore non-specific. In 1844 Lebert attempted to demonstrate a specific histological structure in tubercle, but in this he signally failed, and his observations and conclusions were soon shown to be erroneous. In 1850 Laennec's doctrine was vigorously attacked by Reinhardt, and later by Virchow, the great authority attaching to whose name no doubt shook unduly the confidence which up to that time many had felt in the teaching of Laennec. Reinhardt declared that most of the anatomical appearances recognised as tuberculous were essentially inspissated pus, together with epithelial cells, filling the pulmonary alveoli, and were the results of catarrhal pneumonia. Virchow limited the application of the word "tubercle" to the grey granulation, and all the other forms of tuberculisation met with in phthisical lungs he declared to be the inspissated products of inflammation; he taught that pulmonary phthisis might be due either to the evolution of tubercle or to caseous hepatisation; and that phthisis, properly so called, was rather the result of caseous hepatisation than of tubercle. He reserved the name "tuberculous" to acute miliary tuberculosis. The idea of the unity of phthisis as in all cases a tuberculous disease was declared by him to be erroneous and the greater part of pulmonary phthisis to be due to inflammation. Thus we see that for Laennec and his followers there was but one kind of phthisis—i.e., tuberculous; and for Virchow and his followers there were at least two, one a caseous pneumonia and the other a rarer form—i.e., the tuberculous.

It was at this time that Niemeyer's teaching became prominent, and he maintained that phthisis depended on the caseous degeneration of the products of simple inflammation; that when in a phthisical lung the grey granulations

[1] Herard et Cornil, "La Phtisie Pulmonaire."

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and pneumonia co-existed the granulations were secondary and consecutive; and so arose his famous dictum that "the greatest danger to which a phthisical patient could be exposed was that he should become tubercular"; and so it happened that in this country, as in Germany, Laennec's doctrine was discredited and the belief in the duality of phthisis or in "varieties" of phthisis became very general, and modifications of the inflammatory process were considered to be the chief agents in its causation.

In France, however, the most distinguished pathologists rallied to the standard of Laennec and maintained the unity of phthisis as a tuberculous disease; this was greatly due to the labours of Grancher, who, by studying and comparing the tuberculous granulation with a fragment of caseous pneumonia, without any apparent granulation, was able to formulate the law that "a nodule of caseous pneumonia has the same structure as the typical tuberculous granulation." This opinion soon secured the support of Rindfleisch in Germany and of Wilson Fox in this country, and somewhat later it had the vigorous support of Charcot, who was then professor of pathological anatomy in the Paris Faculty.

We thus reach the period of the discussion in the Pathological Society of London in 1873. But it seems desirable before referring to this event to go back a few years to 1866, to the period when Villemin claimed to have discovered the inoculability of tubercle; for this may be regarded as the initial step in connexion with a vast amount of careful investigation, which led ultimately to the discovery, published some sixteen years later, of the true nature of tubercle and the true pathology of pulmonary phthisis. The sensational character of Koch's discovery and the world-wide fame that justly followed it threw somewhat into the background the merit of the distinguished Frenchman whose investigations into the inoculability of tubercle started the labours of pathologists in the right direction towards the discovery of the truth. Speaking of Villemin's work Cohnheim says: "It was at this epoch (1860–1870) that a discovery was made in France, whence will date, if I am not mistaken, in the history of tuberculosis, not only an incomparable progress, but also a complete transformation in our manner of regarding this disease. Few discoveries, indeed, were capable of stirring medical opinion to so great a degree as the demonstration by Villemin of the transmissibility of tuberculosis." Villemin's observations form so important a step in the modern advance towards a true pathology of phthisis that it may not be uninteresting to give here his own account of his method of procedure, more especially as it was soon after to be imitated in this country with the remarkable result of negativing the true conclusions of Villemin, and so leading to a retrograde movement and to a retardation of the acceptance of the true pathology of phthisis. For Villemin's conclusions were correct, whereas the conclusions of his critics and imitators in this country were erroneous. Villemin, in describing his own procedure, says: "If we make in the ear of a rabbit, or in the groin or axilla of a dog, on a very narrow surface previously shaved, a subcutaneous wound, so small and shallow that not the smallest drop of blood shall appear, and if we insinuate securely and carefully a portion of tuberculous matter the size of a pin's head taken from a cow or a rabbit, already rendered tuberculous; or if, on the other hand, with a hypodermic syringe we instil under the skin of an animal a few drops of phthisical sputum, made more fluid by the addition of a little water, this is what we observe. The day after the operation the most careful palpation finds no trace of the matter inoculated—the margins of the wound are united—then, after at most four or five days, a slight swelling is observed, accompanied sometimes by heat and redness—and we can watch the progressive development of a local tubercle, varying in size from that of a hemp-seed to that of a filbert. For some time after the inoculation the animals present no appreciable alteration in their health. It is only at the end of from fifteen to thirty days that they are seen to be losing flesh. Some recover from this and put on flesh; others go on getting progressively weaker and fall into a state of marasmus, are often attacked with colliquative diarrhœa, and perish in a state of extreme emaciation. On post-mortem examination we find that the tubercles at the seat of inoculation are formed of a caseous mass around which are very often seen small yellowish granulations infiltrated for some distance in the inter-muscular connective tissue. The lymphatic glands communicating with the seat of inoculation are frequently swollen, present scattered granulations or tuberculous nodules, and sometimes end in complete caseous transformation. We generally find tubercles in the lungs, but the eruption of tubercles is not limited to those organs. It appears more or less abundantly in the lymphatic glands, the intestine, the liver, the spleen, the kidneys, &c. These organs are often stuffed with tubercles. The serous membranes, and notably the omentum and the mesentery, are sometimes riddled with innumerable granulations. According to the lapse of time since the inoculation and the greater or less rapidity with which the eruption occurs, we find the tubercles either grey and transparent, or yellow, caseous, and softened, or ulcerated and excavated. If the animals are killed before the fifteenth day it is rare to find tubercles in the organs. There elapses between the time of inoculation and that of the tuberculous eruption a certain time, which has appeared to us to vary from about ten to twenty days." Surely this is a striking picture of an infective parasitic process. It was found that caseous matter had the same infective property as the grey granulations. An important and influential academic commission confirmed the results announced by Villemin. Objections to his conclusions, however, arose in various quarters, and in this country Wilson Fox and Burdon Sanderson sacrificed a great number of rodents with the object of testing the correctness of Villemin's observations and inductions, and the results they arrived at had the effect, they maintained, of negativing his views. They stated that the results he had obtained were not peculiar to tubercle, but might be produced by almost any substance—pus, fragments of bone, bits of cork, of india-rubber, &c.—but it has now long been admitted that these observations and experiments of Fox and Sanderson, which produced so great an effect on professional opinion in this country at the time, and which were thought by many to be fatal to Villemin's conclusions, were themselves valueless on account of the absence of those antiseptic precautions which have since been shown to be needful in the conduct of such experiments.

Surely this is a remarkable lesson in the history of pathology! An extremely competent and careful observer, after a carefully planned, well-ordered, and minutely methodical series of observations, announces results and conclusions which prove to be absolutely true and accurate. Shortly afterwards other competent and careful observers make a long series of professedly similar observations and publish results which, it is maintained, negative the conclusions of their predecessor. As a consequence the progress of truth is retarded and error confirmed in men's minds. Villemin, however, found an able defender in Chauveau, whose skilful experiments and observations on the transmissibility of tubercle in oxen and horses afforded ample corroboration of the conclusions of Villemin. While these facts were fresh in men's minds the discussion at the Pathological Society of London was instituted in 1873, and it will surely be of some interest to examine briefly some of the opinions expressed by the eminent men who took part in that debate.

Although it was nearly ten years later that the parasitic and infective nature of tubercle became incontrovertibly proved through the discovery by Koch of the bacillus of tubercle, the idea that tubercle was of this nature was prominent in many minds at the time of this discussion, and it is not a little remarkable that this idea should be almost ignored by those who took part in this debate. Indeed, it is clear that the accuracy and conclusiveness of Wilson Fox and Sanderson's observations and experiments on the rodents are assumed by the debaters generally, and Villemin's labours and results are scarcely alluded to. In his two long speeches at the beginning and close of the discussion the introducer never once mentions the name of Villemin. It is exceedingly interesting in connexion with this chapter of pathology to find the opener of this debate, evidently after much tribulation of mind and sorely against his preconceived views, forced to the conclusion from the results of his own elaborate and very careful observations that phthisis is, in all its forms, one and the same disease—i.e., a tuberculous one; so that, although with some hesitancy and here and there a little lack of clearness, the outcome of his researches was to re-establish the doctrine of Laennec of the unity of phthisis. "Fifteen years ago," he says, "I came from Germany strongly impressed with the opinion that phthisis might be sub-divided into many absolutely diverse diseases—diseases diverse in their essential nature as well as in their apparent origin. I had a great many terms at the end of my tongue—broncho-pneumonia, caseous pneumonia, and scrofulous pneumonia,—but when I myself became a teacher I felt great

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doubt and difficulty in saying what was not tubercle, and still more in saying what was tubercle. I came at last to the conclusion not to speak as I did in my earlier days, describing a lung as containing no tubercle because it did not contain what I imagined to be the only type of tubercle." And elsewhere he says: "It was my anxious wish to do something in my day and generation towards finding out a great many varieties of phthisis." It is needless, now that we know the true criterion of tubercle, to follow this most careful and conscientious observer through the laborious and minute anatomical and histological investigation which led him, in common with Rindfleisch, Charcot, Grancher, Cornil, and others, to the conviction of the unity of origin of the morbid processes which constitute phthisis; but these views as to the unity of phthisis were not acceptable to the majority of the authorities who took part in this debate. In a very lengthy and elaborate speech a well-known pathologist dogmatically asserted that phthisis was an affection "of which tubercle could no longer be considered as the pathological essence. ..... Laennec's central idea had been shown to be erroneous. ..... Phthisis had now been fully shown to be a non-tuberculous affection." His conclusions were that "the common varieties of pulmonary phthisis were to be regarded as due almost solely to various forms of chronic inflammatory changes in the lung; tubercle was to be regarded as a mere occasional and quasi-accidental complication; both phthisis and tubercle were robbed of their so-called 'specific' attributes." He found it "difficult to come to the conclusion that the products (after inoculations) found in rodent animals have any real right to be considered tubercle." This speaker showed, in perhaps an exaggerated form, the tendency which was then so strikingly prevalent with most pathologists to regard nothing as "specific." There existed at that time a widespread dislike, almost amounting to hostility, to the idea of anything being of a "specific" nature, either in pathology or therapeutics. We see this cropping up again and again in this discussion. At that time nothing was "specific," now everything is "specific." Another authority we find also maintaining "that tubercle could not be regarded as the essential specific element in phthisis." He thought that "much of the inveteracy of phthisical lesions would be explained without the aid of any precedent deposit of tubercle." He was disposed to refer the causation of these destructive changes in the lungs to the accumulation in the alveoli of simple, catarrhal products which "accumulated, decayed, and irritated the alveolar wall and set up those proliferative and inflammatory changes which constitute local tubercle, &c."

The veteran Dr. C. J. B. Williams believed that the "consolidation of scrofulous pneumonia and similar low inflammations induce consumption of the lung in the same mode as tubercles" and he was therefore opposed to the idea of unity. Another pathological authority leaned towards the idea of unity, but he would discard the use of the word "tubercle" and he looked upon "the various anatomical changes met with in the lungs in phthisis" as the "result of inflammation." The idea of unity was strongly opposed by Dr. Cayley who would restrict the term "tubercle" to the grey granulations and thought the changes in the lungs in many cases of phthisis as "entirely due to inflammatory processes" and that in some cases tubercles were developed secondarily to inflammatory changes which constituted the primary affection.

In a very interesting contribution to the debate, the late Dr. Moxon ranked himself boldly on the side of unity. "He believed all phthisis was tuberculous" but he thought the "notion of tubercle as a specific growth" had received a serious blow from the results of the inoculation experiments of Sanderson and Wilson Fox, and thus we see this acute observer led astray by the prevailing antagonism to the idea of specificity and by his belief in the results of experiments which proved to be fallacious. He thought the term "fibroid phthisis," unfortunate—"it was nothing more than old phthisis," in which a good deal of fibre was necessarily present; "fibroid phthisis was only phthisis with its age forgotten." This is a view which is now very generally accepted.

From these brief extracts from this debate you may form a good notion of the differences of opinion that existed less than twenty-five years ago amongst eminent pathologists as to the true pathology of phthisis. They show how little finality, definitiveness, and agreement were obtainable from having exclusive regard to the histological characters of the changes attending this disease. As I have already said, it is remarkable how little reference is made in this debate to the infectiveness of tubercle, to which, however, attention had at that time been strongly directed in many quarters, and which fact in the life-history of this disease contained within it the real truth as to the pathology of phthisis.

Before passing away from this stage of our pathological retrospect I ought, perhaps, to summarise the chief conclusions arrived at by Dr. Wilson Fox in the debate as to the nature and origin of tubercle. He had such a tender respect for the opinions of others that there was a certain hesitancy in pressing home conclusions at which he had arrived out of regard for those who upheld the contrary; it was on this account that some complained of a want of clearness in his statements. Charcot, who held the same opinion as to the unity of phthisis, expressed to me his regret that Wilson Fox had not expressed himself with greater clearness and emphasis. Wilson Fox himself characteristically observed at the end of his argument—"There are no subjects in medicine which would, I think, so dispel a spirit of dogmatism and exclusive adherence to one's own opinions as the study of phthisis, on which such differences have existed, and do exist, among the greatest men of the past and present, as may well make anyone doubt the accuracy of his own observations and the justness of his conclusions." The following is the manner in which he formulates the doctrine of unity: "The destructive changes in the lung characterised by the term 'phthisis' are almost invariably associated with, and in great measure caused by, a series of cell-growths which in their anatomical structure and vital characteristics are practically identical in all the forms of the disease." Caseation he regarded as due to the destruction of the capillaries of the new formation, and he recognised that the new growth was capable also of undergoing a development into fibroid tissue. Tubercle he defined to be "a lymphatic overgrowth produced by irritation under special circumstances of anatomical or constitutional predisposition ..... when you give rise to irritation in cases where lymphatic irritability is excessive under these circumstances you may get tubercle. You may therefore get it from a blood state in which the relations of the lymphatics are abnormal, or you may get it locally by exciting inflammation." "The anatomical and vital character of those tubercular growths are distinctive, but they cannot be called specific," but "cases where any close similarity exists between simple inflammation and tubercle are, however, rare, and even then it is a superficial resemblance rather than an identity of structure." "In those acuter forms of phthisis—the so-called scrofulous pneumonia—the process is identical step by step with the majority of the processes that occur in acute tuberculisation, and differs from it only in the extent of pneumonic exudation." "Chronic phthisis is distinguished by the characteristics of induration of the lung ..... the chronicity depending upon induration of those growths rather than on their acute destruction." "Every indurated form of phthisis, most cases of so-called fibroid phthisis of some English authors ..... come under the category of indurating tuberculosis." He denied or doubted the origin of phthisis in catarrhal pneumonia, scrofulous bronchitis, and scrofulous pneumonia. He pointed out that "the products of ordinary inflammation are in the lungs, as well as in the serous and mucous membranes, almost always found co-existing with tubercle ..... the tuberculous growth is something super-added to this, and gives to the pneumonia characteristic features ..... Anatomically, pneumonia is not tuberculous unless that growth co-exists in the alveolar wall."

The great merit of Wilson Fox's conclusions was that they went far to re-establish the unity of nature and origin of phthisical processes in the lungs—they went to disprove the then common belief that pulmonary phthisis could originate in ordinary inflammation, and they disposed of much of the erroneous opinion then existing about "caseous pneumonia," "scrofulous pneumonia," "fibroid phthisis," and the like. The confusion that these terms had given rise to and the false impressions some of them had produced on the professional mind were remarkable. I have known medical practitioners ask the question with regard to an unusually rapid form of phthisis, with extensive diffuse infiltrations, whether one did not think it might be "pneumonic" and not "tuberculous"? and this was asked with the impression that the "pneumonic" form was less virulent and more curable than the tuberculous, whereas it is precisely these so-called pneumonic forms of phthisis, as we

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know, which are so rapidly fatal. With regard to the real nature of the infective property of tubercle, Wilson Fox was led away from the truth by the results of his experiments on the rodentia, and by the fact that he shared the then prevailing reluctance, almost amounting to actual hostility, to regard anything in pathology as specific. On this point he says, "You may get a tuberculous gland secondary to any common irritation in a predisposed subject ..... any irritation of the tissue may, in the presence of local or constitutional predisposition, give rise to secondary growths diffused or circumscribed which constitute tubercle, and which may be the source of further infection." ..... "Specificity," he said, "is negatived etiologically in every phase of its history except the hereditary tendency, and how far back this reaches it is impossible to say, but that the disease may arise *de novo* under various unhealthy influences none of which can be called specific is a fact which I think no one can deny!" We now know that much of this teaching is erroneous. The idea of the infectivity and transmissibility of tubercle, so little dwelt upon in this discussion, had however taken deep root in the minds of many of the Continental pathologists and between the date of this discussion (1873) and the announcement by Koch of the discovery of the bacillus of tubercle in 1882, a great deal of good work was done in this direction with the effect of preparing men's minds for the great event. I have already alluded to Chauveau's observations in corroboration of those of Villemin. Observing that the infective virus was sometimes found in the fluids of the phthisical, he came to the conclusion that this consisted of very minute particles "imperceptible even under the microscope, inert in appearance, but endowed, in reality, with a singular virulence." Buhl in 1873 and Klebs in 1875 expressed their belief that bacteria were the cause of tubercle, and that they probably existed in the caseous masses. In 1877 Klebs professed to have isolated and cultivated the "monas tuberculosum," but he failed to establish its specific character. Toussaint (1881), Baumgarten and others also discovered microbes which they thought might be the active agents in tuberculosis. Professor Bouchard in 1881 argued vigorously on general grounds that phthisis must be classed amongst the infective diseases, and the next year (April 10th, 1882), R. Koch announced to the Physiological Society of Berlin that he had succeeded in isolating and cultivating the microbe of tuberculosis, and it was thus left to a German to give absolute demonstration of the causal unity of phthisis in all its various manifestations, as had been taught at the beginning of the century, by the great Frenchman Laennec, and this great event may fitly close the strictly pathological part of our retrospect. It is not possible to over-estimate the importance of the results which followed this discovery. The discovery of the true pathology of phthisis has been attended with practical advantages of the most remarkable kind; a flood of light has been thrown on its etiology, and the knowledge of the true nature and mode of propagation of this disease has led to a vast improvement in our methods of dealing with it, both in the way of prevention and cure. This is proved by the striking reduction in the death-rate from phthisis. From 1858 to 1860 the death-rate per million from phthisis was 2565; from 1889 to 1893 the death-rate had sunk to 1512, a reduction of 41 per cent. The recognition of the infective and communicable character of the disease has doubtless had a great share in producing this admirable result.

The methods now adopted for dealing with phthisical sputum, which often swarms with myriads of infective organisms, is an important check to the spread of this disease. It should be—and in many public institutions and private houses is—collected in spittoons containing a solution of carbolic acid or corrosive sublimate or some other disinfectant and subsequently burnt. Pocket-handkerchiefs should also be disused or specially prepared paper ones used, which can be at once burnt. The careful examination into the quality of meat and milk provided for the use of the public has no doubt tended to check the spread of tuberculosis by means of these agents, especially amongst children; whilst the practice of sterilising milk for the use of the poorer classes must have an excellent effect in the same direction. The possibility of the communicability of phthisis from one person to another, in most cases probably through the agency of the sputum, is now well recognised, although at first the evidence in favour of such occurrences was strongly contested. Indeed, I remember hearing a very eminent physician, now dead, publicly state it to be his belief that, supposing the communicable and contagious character of phthisis to be established, it would be a calamity for the public to become acquainted with the fact, and he doubted the propriety of medical men conveying such information to their patients, for he feared lest the distress and sufferings of the phthisical should be increased by finding themselves shunned as objects of danger. Now it appears to me that we have no right whatever to keep from the public information of that kind, and while we have long been urging on the public the necessity of the observance of most careful measures to avoid the spread of the more generally recognised contagious maladies it would be most inconsistent and unjustifiable not to explain to them the degree and extent to which this disease, which carries off a greater number of victims than any other, is infective and transmissible. The public are now pretty well informed on this matter, and I am not aware that phthisical patients complain of receiving less care, attention, or sympathy because of this. One thing I believe the spread of this knowledge amongst the general public has done, and that is to diminish greatly the number of marriages between the phthisical. Much greater care is now observed by the heads of families and others in preventing such very undesirable unions.

I find in the annual health report (1895) of Dr. Boobbyer, the medical officer of health of Nottingham, the following:—"Circulars are now issued to houses in which consumptive patients are known to be domiciled, setting forth the precautions to be observed in order to guard against the infection given off by the patients, and whenever the disease is known to have proved fatal, an offer is made to disinfect the part or parts of the house that have been used by the deceased free of charge. The public response to this offer, which has continuously increased from the outset, indicates a growing appreciation of the necessity for such precaution in the case of this most distressing and fatal disease."

COPY OF CIRCULAR.

BOROUGH OF NOTTINGHAM. PREVENTION OF TUBERCULAR CONSUMPTION.

This disease is infectious, and liable to spread among persons living in contact with those suffering from it.

Where the lungs are principally affected, the spit of the patients contains most of the poison. This should be received into a vessel containing a strong solution of carbolic acid (1 of carbolic to 20 of water), and all washing materials and utensils soiled by the patients should be soaked in the same solution before being washed.

Consumptive patients should always sleep alone.

The rooms of consumptive patients should be aired every day, and disinfected and cleaned at least once a month.

In case of the death or removal of any consumptive patient, the Health Department will undertake the disinfection of the infected house and materials.

PHILIP BOOBBYER, Medical Officer of Health.

Guildhall, Nottingham.

A considerable improvement also in the results of treatment has, I am satisfied, been the consequence of our more accurate knowledge of the pathology of phthisis. The very general adoption of aseptic and antiseptic measures in the treatment of phthisis has, I am satisfied, been followed by far more satisfactory results than we used to get before such remedies were used. No one now doubts the advantage of the open-air method of treating pulmonary phthisis when this can be carried out in suitable localities where the air is aseptic and enjoys at least a relative freedom from the presence of germs. The systematic employment of antiseptic inhalations and the internal use of such agents as creosote and guaiacol have no doubt some influence in checking the diffusion and diminishing the virulence of the infective processes in pulmonary tuberculosis. The course of the disease is retarded and time is thus gained for the establishment of indurative changes in the tuberculous infiltrations, and this is the natural method by which phthisis is arrested and cured.

But it is not my purpose to-day to enter upon any therapeutical discussion, it has simply been my desire to call your attention to what I think is a remarkable chapter in the history of medical pathology; a chapter which shows how dogmatic and assertive scientific men may become and into how great errors they may fall when they trust too implicitly to certain favourite methods of investigation and follow too partially their own preconceived notions. There is always some risk of fallacy if we attempt to determine the true nature of a series of phenomena when we only look at a limited part of them. For instance, the inability to recognise the specific nature of tubercle, and the tendency to positively deny it

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which appears so frequently in the discussion to which I have referred, had no real foundation in the thing itself. Pathologists rejected this very precise and definite view, which Laennec had asserted and Villemin had gone far to establish, for such indefinite ideas as are to be gathered from the words "inflammation," "irritability," "irritation," "disposition" or "predisposition" and the like. What, in the shape of precise knowledge, do such terms convey? What was there so fascinating in the word "inflammation" that it should have been adopted as able to cover all the facts in the life-history of phthisis? What exact information as to causal relations does it convey to our minds? Why, again, was there such great hostility manifested to the idea of specificity? It seems to me very difficult to find satisfactory answers to these questions.

I have been able, I think, to show into what errors these tendencies led some of the most able, and certainly some of the most laborious, pathologists of our time. With the new and exact methods of experimental research which we now possess we seem to be able to arrive at conclusions more definite, more certain, and less hypothetical, and we use terms less vague and indefinite, but even with those methods at our disposal we should learn from the past the need of great caution against forming too hasty or too positive conclusions in all subjects which present any scope for controversy. I think I have shown how easy it is even in careful scientific researches to make many false steps; let us then at all times walk circumspectly and warily.

MOTOR AND SENSORY APHASIA (WORD-DEAFNESS, WORD-BLINDNESS, AND MIND-BLINDNESS).[1]

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ALTHOUGH in each of the following two cases of aphasia there was a combination of motor and sensory disturbance, it is chiefly on account of the sensory derangement of speech that I have recorded them.

CASE 1.—The patient was a well-built man, aged forty-one years, who a little more than nine years before had some slight epileptiform convulsions; after one of these attacks he had paralysis of the right arm and leg and was aphasic. The aphasia, however, was not so lasting as in the attack I am about to describe, for he went to work in fourteen weeks, having recovered speech completely and the power of the right arm and partial power of the leg. Five years afterwards he had another, but much slighter, attack, lasting a fortnight, when speech was again affected and paresis of the right side occurred. His health receiving a great shock he gave up the very active work he was engaged in and had a long rest. He practically recovered and worked fairly hard again, but complained of headaches and giddiness. The viscera were healthy, and there was no evidence of syphilis. The attack I now relate commenced on Oct. 29th, 1892, with no marked premonitory symptoms. He was gloomy the day before, and shut himself up, and drew some curious pen-and-ink sketches, but he did not complain of his head. He retired to bed, and his wife roused him early next morning, as he had an appointment, and she discovered that he was perfectly conscious, but speechless; she noticed that the tongue was drawn to the right side, but the features were quite straight. There was slight numbness all down the right side, but power enough in the hand to write slowly. I was called in to see him at 8 P.M. I found complete motor aphasia—i.e., he had lost all power over the motor part of speech, and the only sounds he could utter were "o" and "a" fairly well and "u" indifferently. The tongue could only be partially protruded and deviated to the right, and the lips did not move. There was slight loss of power in the right leg, but less marked loss of power in the right hand. He could, however, write slowly with this hand, and he asked me several questions in writing which were intelligent and written correctly. He complained of the back of the head being painful and of having a burning sensation in that region. During the first week he was very emotional and easily excited, and at the end of the week he was very drowsy and difficult to rouse, and the paralysis of the right side was complete both for motion and sensation. There was marked rigidity of the right hand and arm, and the thumb was firmly contracted into the palm. The left hand was very tremulous and deficient in power, and sensation was diminished on the left side, but not so markedly as on the right. A curious spot of hyperæsthesia was discovered by the nurse on the inner side of the right knee, this being so sensitive that if touched ever so lightly he would spring up in bed and suffer agonising pain. He was now in a very sensitive condition, for the movement of lifting him up in bed to change his position had an extraordinary effect upon him and produced a drowsy and more or less unconscious condition which was very marked during the whole of the second week. Motor power, however, on the left side was practically normal and he could write slowly with the left hand. From the third week he gradually improved, gaining steadily more power in the right leg and arm and recovering sensation. He was much interested in all that was going on, reading daily papers and discussing topics of the day by writing with the left hand, for he was very little, if any, better so far as his aphasia was concerned. There was, however, during this period of motor recovery a good deal of sensory disturbance, particularly from the eighth week to the eleventh, when another condition developed—namely, that of sensory disturbance of speech. It was noticed that he was slightly deaf on Jan. 19th, which increased during the day and became complete on the following day. Dimness of sight was also observed, and he suffered a good deal of pain in the head. Next morning he could not read writing, however large, but could read words composed of large printed letters, but these were only of use until 3 o'clock in the afternoon, when they could no longer be seen. On the following day sight and hearing were gone on both sides, but a lighted taper passed before his eyes produced a pupil reflex. The ophthalmoscope showed the fundus of both eyes to be normal. There was a good deal of difficulty in swallowing. He had a fixed staring look, straight out, and was always plucking at the bedclothes with the left hand, a meaningless sing-song being heard at intervals. He now continued to be deaf and blind for ten days, and could only recognise his wife and nurse by the sense of touch, feeling their hands and articles of dress. On the eleventh day he showed signs of delight when the blind was drawn up and light admitted, and he could then recognise the difference between the hands of his wife and nurse. He was still deaf to words, but could hear sudden sounds. On the twelfth day he heard and seemed to recognise his own name, and he also noticed details in the dress of those about him. On the next day he saw colour in some tulips placed before him, which evoked grunts of satisfaction. Pointing to his ears and eyes he asked with his finger on the coverlet why he was deaf and could see so badly. Fourteen days after the loss of hearing he heard sounds at a distance, a dog barking, whilst he was comparatively deaf to sounds at his bedside, and on the following day he asked by making the outlines of the letters on the coverlet of the bed with his finger why he heard sounds (at the same time pointing towards the next house, where a piano was being played), yet could not tell what was said by those about him. He had now extended vision, pointing to pictures on the wall facing him, but the field of vision was very limited, and it was found he had right hemianopsia. He continued to be very deaf to ordinary word sounds, but the experiment of whispering the word "better" slowly in the right ear was tried. He heard it, and immediately began to write with his finger on the coverlet the whispered word, and showed signs of gratification. The same word spoken in natural tones produced an expression of pain and bewilderment. His mind continued to be very clouded, and he was unable to understand day from night or the time of day. Feb. 9th was the last day he made known his thoughts by drawing with his finger the outlines of letters forming words. He had during the day thought out and written a number of questions and was somewhat exhausted. His left hand (which he could alone use) was said to be rigid in the evening, the rigidity passing off very soon, but next day his sight was very much worse, and all hearing had gone again. He now had a slight attack of influenza, which was prevalent at the time. He could no longer form the outlines of letters, and the only way he could express his thoughts was in pantomime. He, like an uneduca'ed deaf-mute, made pictures in the air to express his

[1] A paper read before the Medical Society of London on Nov. 23rd, 1896.

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wants, and his wife understood his drawings in a wonderful manner. Wishing for a chop, he drew the shape in the air. Wanting milk and soda water, he pointed to the sheet for whiteness, and drew in the air the shape of a soda-water syphon. Before losing all sight he had enjoyed seeing and arranging a bunch of lilies of the valley. He evidently remembered this and drew in the air the shape of lilies of the valley, arching the stems and dotting them with flowers. His wife understood and brought the flowers to him, when he was quite satisfied and arranged them with care. His sight again came back, but he was still suffering with right hemianopsia. Although an omnivorous reader when well, he did not recognise when tried either letters or figure symbols, and when a paper was given him he turned it upside down, and by gesture asked why it was given him. There were now (the end of February) distinct signs of recovery from motor speech, and he uttered his first word, "better," distinctly enough to be understood. The right leg and arm also had much more power, but the arm was exceedingly sensitive to touch. He understood whispered language more easily, but he was unable to recognise words in the ordinary strength of tone. Although deaf to words, he interpreted tones and gesture so well as to be conversant with much that happened. In March mind-blindness was most marked, though he had not so much difficulty in remembering objects as persons. His aunt, to whom he was very much attached, was allowed to see him. He did not recognise her, but after she had left the room he drew, with a pencil in the left hand, the house in which she lived, with the road to it—the garden and the dog at the gate—which was a very fair description of her abode. During this month his deafness gradually improved, but he was more deficient on the left side than on the right. The sense of smell was impaired on the left side. He saw better, but had yet word-blindness. He was able to articulate more and used and understood more words, but he made use of pantomime as well. The very sensitive spot on the inner side of the right knee, which had remained so all these months, could now be touched, he having asked the nurse to lay her hand lightly upon it for trial. He tried to count, but it was difficult, especially on more than one hand. He soon became more inquiring and asked "what was it he used to do." When told "to paint" he remarked "what was that?" Upon pursuing the subject he was told he used to read books, when he replied "that sounded like it." He was now getting up daily and was greatly interested in building with dominoes. He took a little more interest in things, but at the end of March (five months after the attack commenced) he still had forgotten that he ever was a painter. He was one day anxious for a certain picture to be brought to him which as a matter of fact he had painted, but when asked if he painted it he emphatically stated no, but that he remembered seeing a man paint it. He was very anxious to know what a book was. In April he noticed the lettering upon half a crown, given in his hand, when he asked to have it read to him, repeating each letter after the nurse and committing them to memory and comparing their form with other letters; he asked if these were what were contained in books. He could not remember his own surname, and when told his wife's surname he indignantly denied it and uttered her Christian name. He was now taking great interest in looking at pictures in illustrated papers and was very critical. He was able to remember letters and words which he had been told a few days before, and it was interesting to notice the aid that the fingers of the left hand were to his memory. If he wanted to remember a thing he looked hard at his left fingers, and, as he remarked, he saw it there in a short time, but often after much puzzling. The patient's condition from this time gradually improved. He was able to understand word symbols more readily day by day, and he could read. He would repeat a word again and again after following the outline of each letter, and having been told what the letters spelled. He often employed a circumlocution of more general words instead of the special word he could not revive in his memory, and instead of asking for "a pencil" he would ask for "something to draw with." His great trouble was that he had forgotten so much. His mind-blindness did not improve, and he could not recollect his most intimate friends when they called to see him. Neither could he recognise paintings which he had spent a great deal of time over, but little sketches which had cost him very little time and thought he could recognise as his work. In August he had partially recovered his loss of power, but he had still right hemianopsia, and his motor speech was very indifferent. His friends attempted to get him into the air, after which he seemed very much worse, for the movement upset him considerably. Early in September he had been reading, and was very cheerful before taking his afternoon sleep, but when he awoke he was found to have a dazed look and to have lost all power of the right side. On the following morning I found hearing and sight completely gone. The tongue could not be protruded from the mouth, but deviated to the right. Swallowing was difficult, and there was also loss of sensation and power of the right side. He was completely deaf to words, even when whispered, but he had painfully acute hearing for sounds. There was one marked difference in his condition now from that in his previous attack, which was that he had always been able to make known his various wants by writing with his finger the outlines of the letters upon the sheet, which power he lost in the previous attack, when he was reduced to pantomimic signs. The word-deafness and loss of sight continued for four weeks, but he had right hemianopsia for several months afterwards. While deaf and blind to words, as well as having complete paralysis of motor speech, he expressed a wish to make his will, and made his wishes known by forming the outline of the letters on the sheet of the bed. He also made his lawyer and wife understand that when they meant "yes" they were to tap his hand and when "no" they were to cross it. To satisfy him the will was executed, and with his left hand he very badly wrote his signature. He now gradually recovered from word-blindness and very slowly regained power in his limbs, but the motor part of the aphasic condition was very slow in recovering, for he was unable to speak until the following April, when he commenced and rapidly regained speech, it having been absent since its partial recovery for thirty-two weeks. On getting downstairs he almost at once commenced to strum on the piano, and it was noticed that he had no difficulty in reading music. This test, however, had not been tried when he was word-deaf. At the end of the second year he was able to walk slowly on crutches. His zest for painting returned and he found the greatest pleasure in sketching from nature while he was convalescing. His mind was a complete blank with regard to paintings he had done before his illness. His power of motion steadily returned, and at the end of the third year he could dispense with his bath chair. It was very curious how, in the early period of his convalescence, movement of the body—i.e., to another room—brought on the sensory disturbance of speech for perhaps twenty-four hours. This occurred on three or four occasions. Four years have now elapsed since the attack came on, and I quite recently had a chat with the patient in his studio. He told me that he had tried hard to paint during the past year, but he was so disgusted with his work that he had practically given it up. To my uncritical eye his work looked very passable. He said, however, that his difficulty was in trying to remember how he used to do it, and when he found he was doing the thing wrong he was so dissatisfied with his efforts that he had ceased to make further attempts. He could, however, do pen-and-ink work exceedingly well. On asking him if he remembered painting the pictures about his room he said he did not, but he still thought he saw another man paint one of them. He described himself as being a better judge and more critical than ever he was before, but no workman, and this was not through want of muscular power, for that he had quite recovered. He has been colour-blind ever since he was fifteen years of age, his difficulty being to distinguish green from red. On inquiring if this was any worse or was in any way explanatory of his failure he said it was not, but if anything he thought the condition was a little better. He had always had an ambition to become an author and had written considerably; but he told me that he now found this work most difficult, his power of concentration being limited and thought slow. He had a very good vocabulary, however, when talking, and was never at a loss for a word, though there was sometimes an occasional hesitancy in pronunciation. Contrary to Lichtheim's experience, the sensory aphasia in this case of total aphasia cleared up before the motor.

CASE 2.—Another case of sensory and motor aphasia came under my care at the Royal Halifax Infirmary in the month of February, 1896. I had seen this patient five years before in consultation with Mr. Steele, of Halifax, when he was suffering from paralysis of the extensors of the left forearm, which had come on quite suddenly. There was no disturbance of speech at this time. He was said to have recovered from this attack. Two and a half years afterwards he had an

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epileptiform seizure, and partially lost the use of the right leg and foot, from which he recovered, but he had subsequently at intervals slight fits, one of which ushered in the present condition, and was attended with twitching of the right side of the face. There was a clear history of syphilis made out before, but the condition of the patient now was such that he could give no account of his illness. "I really cannot tell you, I am sure, just now," was his answer to every question put to him, and it was evident he had no comprehension of word language. He read with great difficulty figures and could not read printed matter accurately, but could make out some letters. He could not recognise a bell on the table, but could recognise a watch and a knife. When a water-pipe was pointed at he could not say what it was, but said "hot." Apparently there was no defective eyesight, but an exact perimeter tracing could not be taken on account of the patient's inability to comprehend what was wanted. The motor part of speech was good and there was no paralysis, and his gait was normal, and so were the organic reflexes. He looked in good health and apparently was always in a good humour, readily pleased, but not in any way emotional or childish. On further examining the aphasic condition he seemed to have a more or less complete comprehension of the uses of the objects shown, but could not always give the correct designation. Some things shown he remembered easily and could pronounce their names, others he could not name, but if he thought for a time he sometimes gave the correct name or a similar sounding word, or substituted a round-about phrase as an equivalent. Occasionally when taken suddenly he seemed to answer instinctively and generally correctly. A pencil he knew the use of, but could not name. A pen he called "pea," then pen. A knife and fork and book he knew. A cork he knew, but he called a bottle "brot," and medicine he could only pronounce partially. A key he called "lock," recognising its use. He knew his own name, but occasionally transposed the two parts. In the identification, then, of objects shown he occasionally used the association of ideas. Water pipe he called "hot," and the key "lock," but mispronounced some words. On investigating the visual sense in reading printed or written matter he was found to be much more incorrect. He could read figures accurately, though with some hesitation in some cases. When spelling out, letter by letter, printed words he was very incorrect, and did not always give the same interpretation on two consecutive occasions, while in time he might stumble into a correct reading. When reading and pronouncing words there were similar hesitation and inaccuracy, while there was often an approximation to the sound—e.g., he called London "Luddenden" (the name of a local village), after considerable doubt. His own name he was able to read correctly. On testing his capacity for repeating words there was evidently a degree of inability to recognise certain words and phrases. "What is your name?" he replied to correctly. "How old are you?" he could not understand. Certain words he was deaf to and could not repeat, and through the word-deafness he was unable to comprehend and allowed his mind to dwell on one or two stock phrases, which were always ready, and from which it was difficult to divert his attention. His memory was very defective and he could not say where he lived or the town he lived in; but the word-deafness might account for this. Neither could he say how long he had been ill. On testing his writing from a copy it was found that he made the same errors as in spelling, but did not make the same blunders twice. At times his writing was quite clear, whilst at others it was quite unintelligible. He could write his name, but sometimes transposed it and sometimes left out letters. He could copy figures more accurately than letters. His condition seemed to improve a little, and remained bright and cheerful. He was able to talk and answer simple things correctly, and his memory was a little better. Early in the morning of March 24th he went to the ward lavatory, and was found afterwards in an insensible condition. Apparently he had had a fit, but was quite unable to speak. There was complete paralysis of the right leg, the limb being quite flaccid and paralysed, with rigidity and contracture of the right arm. The eyes and face were unaffected. He could only partially comprehend what was said to him, and could make no response. He gradually recovered power in the leg and arm, and made attempts at speaking, and could utter one or two words—"very nicely," "yes," "getting on," and a few others—and seemed to comprehend more what was said, but his attention was very easily over-tired. On May 8th he had another attack, when he was quite speechless and collapsed. The nurse had observed some twitching of the muscles of the right side of the face when he awoke; he then lost the power of the right arm, but the leg escaped. The condition of paralysis was succeeded by one of rigidity. There was difficulty in swallowing, and the patient was very irritable. He seemed to understand a little more what was said to him in a few days, but recovery was very incomplete, for there was no return of intelligible speech, and there was complete loss of power over the right hand and partial loss of power of the right leg. He became very restless—constantly attempting to get in and out of bed—and was so noisy that we could no longer retain him in the infirmary. His condition is very pitiable at the present time; he cannot understand anything said to him, has complete motor aphasia and right hemiplegia, is very emotional, and presents all the symptoms of cerebral softening.

Although motor speech has been involved in both of these cases as well as sensory, as I have said before, I have brought them forward chiefly on account of them being good examples of sensory disturbance of speech. In Case 1 it is remarkable how compound was the aphasic condition, and it is most probable that there was thrombosis of the Sylvian artery, for all the cerebral centres concerned either in the expression or the interpretation of speech are situated within an area supplied by this vessel. The centre for motor speech (the posterior part of the third frontal convolution and the lower part of the ascending frontal convolution on the left side) was first affected, and the ascending frontal convolution containing also the cortical centres for the movement of the tongue and lips accounts for the early loss of these movements in this case. The part of the brain concerned in the sense of hearing was next affected, which is the posterior half of the first temporo-sphenoidal convolution on the left side. When this region is diseased there is often transient deafness in the opposite ear. The fact observed that he could hear a whisper and understand the word when whispered very softly and slowly is one I find no record of, but points, I think, to over-stimulation of the centre by the ordinary voice, preventing perception of sound characters. The hearing of both ears went simultaneously, but the right, or that on the opposite side of the lesion, was the first to recover. In word-blindness a lesion of the first temporal convolution is found in the majority of cases. The hemianopsia was probably due to involvement of the occipital lobe, for the pupil still continuing to respond to light supports Wernicke's suggestion that the symptom is then due to a lesion in the occipital cortex. The amaurosis which has been present in both attacks is probably cortical also, and is difficult to explain. The optic nerve always looked healthy. Mind or object blindness was part of the visual disturbance. It has been produced artificially by Munk in dogs by extirpating parts of the occipital lobe. Loss of smell, which was associated with the sensory aphasia, is thought by Gowers to be due to softening of the root fibres at the commencement of the fissure of Sylvius. I have not mentioned the fact before, but this patient had visual hallucinations, which Professor Henschen in his work, "The Pathology of the Brain," directs attention to as likely to trouble a patient with homonymous hemianopsia when that symptom is of cortical origin. He said he could always see in the blind half of the field of vision a man at the back of his head holding two lighted candles. Bastian has strongly pointed out that lesions in the posterior parts of the brain are more apt to produce hallucination than lesions in the middle or anterior parts. The amount of sensory disturbance was very remarkable in this case, and might have suggested, at an early period, a purely functional origin, but, as Wyllie says, "the very existence of word-deafness or word-blindness in any case should suggest an organic rather than a functional cause."[2]

In Case 2 there is not much to note except that the sensory aphasia came on first and long before the motor condition; also that there was an absence, as far as could be made out, of any hemianopsia with the word-blindness. The probable cause in this case is thrombosis, which may be proved in a short time, as the patient is now *in extremis*.[3] An important question in connexion with aphasia is its influence on testamentary capacity. In Case 1 the patient, as I have related, made a will and signed it. In concluding

[2] Disorders of Speech, p. 378.

[3] The patient has since died, but no post-mortem examination was allowed.

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this paper I have to thank various writers—Broadbent, Gowers, Wyllie, and others—for many suggestions, not forgetting my teacher, Hughlings Jackson, to whom I am indebted for any interest I take in this subject, and Dr. Maxwell, senior house surgeon to the Halifax Infirmary, for assisting in the note-taking of Case 2.

Halifax.

A CASE OF EXCISION OF THE SCAPULA FOR LARGE CYSTIC SARCOMATOUS GROWTH.

BY CHARLES A. MORTON, F.R.C.S. ENG.,

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A WOMAN, aged thirty years, came under my care on Nov. 18th, 1896, with a swelling in the position of the left scapula of four months' duration. There had been rather severe pain in it at times. The swelling was as large as the patient's head, smooth and round, with enlarged cutaneous veins over it. There was a freely fluctuating area, the size of the palm of the hand, in the centre of the swelling. The body of the scapula was buried in the swelling, and what seemed to be the angle was pushed much nearer to the spine than normal. There was a projecting mass of considerable size beneath the teres muscles, and the growth extended into the inner portion of the supra-spinous fossa, round the base of the spine. The acromion process and its junction with the spine and the region of the glenoid fossa seemed free from growth, and movements in the shoulder-joint were quite free. The whole mass of growth with the scapula was movable on the chest-wall beneath. An exploring syringe withdrew clear serous fluid from the fluctuating area in the centre of the swelling. It seemed probable that there was a cyst in a mass of sarcoma growing from the scapula.

I operated on Nov. 25th. Precautions were taken by the administration of brandy and the arrangement of hot bottles about the patient, before the operation began, to guard as far as possible against severe shock. An exploratory incision was then made into the cyst, and it was found to be part of an enormous sarcomatous growth. Excision of the scapula was therefore proceeded with. The exploratory incision was continued upwards and downwards along the vertebral edge of the mass for eight inches, and outwards over the spine and acromion as far as the acromio-clavicular joint, and the flaps turned up and down. I then divided the levator anguli scapulæ and rhomboids and found that the vertebral border and angle of the scapula had disappeared in the mass of growth. The attachments of the deltoid and trapezius to the spine were next divided; I then found the growth extended for an inch above the upper border of the bone, but it was at this point well encapsuled. In separating the mass here, I was not able to recognise the supra-scapular artery, nor did a vessel of any size bleed. The supra- and infra-spinatus muscles did not appear to be infiltrated as they approached the shoulder-joint. I therefore cut them through about an inch from the joint, and found the section healthy in appearance, and as the growth did not in any way encroach on the glenoid cavity I proceeded to saw through the spine at its junction with the acromion, and then through what has been called the "surgical" neck of the scapula—through the depression between the supra-scapular notch and the axillary border just where the triceps is attached. This section completely detached the head with the glenoid fossa, and the shoulder-joint was not opened. The coracoid process was left attached to the head. This division of the bone brought the subscapularis into view and I divided it. The body of the bone with the mass of growth was now only attached by the teres muscles and the serratus magnus, which were finally divided. The subscapular artery was clamped before division. An enormous number of small bleeding points were tied, and often between one and two dozen forceps were on the vessels at one time, but the patient lost very little blood considering the extent of the operation. She looked pale at the conclusion of the operation, and two drachms of brandy were given hypodermically, but she did not suffer severely from shock. The pulse was then only 106. Digital pressure was made on the subclavian artery in the posterior triangle before I began to divide the parts in the neighbourhood of the subscapular artery. Although the most scrupulous care was taken with every antiseptic detail the wound suppurated. This was almost certainly due to auto-infection, as she had a sinus leading to bare bone in the other arm; but during the healing, which was protracted, she gained flesh. There is now (July, 1897) no sign of any recurrence. The head of the bone can be rotated freely in the glenoid fossa. All movements of the forearm and hand are normal; the biceps and triceps act well. She can raise the arm a little more than to half a right angle, but only to half a right angle by means of the deltoid; beyond this the trapezius draws up the outer end of the clavicle, and with it the arm. There is no power of external rotation in the shoulder-joint. The acromion process became tilted, so that the upper surface no longer looked upward, but only backwards. The arm is a very useful one.

The mass of growth, on examination after removal, in some parts presented the appearance somewhat of fat, but was more gelatinous, and in others was white and firm. In the centre it was infiltrated with serum, and broken down into the cystic cavity which was tapped with the exploring syringe. Communicating with this cyst was a larger one, also formed by degeneration of the tumour tissue. The growth had destroyed the body of the scapula to a very large extent only portions of the bone were found as small thin plates scattered through it. The angle and vertebral border had quite disappeared. The subscapularis, and the infra-spinatus and supraspinatus muscles, except towards their insertions, were replaced by growth which was only covered by the thickened and infiltrated supra- and infra-spinatus fasciæ and the layer of fascia over the subscapularis. The origins of the teres major and minor were extensively infiltrated. Microscopic sections show a tissue composed of small round cells with large areas of degeneration, in which all structure is lost, and here and there amongst the round cells a few imperfect giant cells.

That it is unnecessary to remove the whole bone for even periosteal sarcoma seems now generally agreed upon by surgeons, provided that the section of the bone is made well away from the growth, for if this is done recurrence in the lungs is more likely than recurrence in the portion of bone which is left. I operated on this principle in this case, dividing the bone and muscles everywhere thoroughly beyond the limits of the growth, but not removing the whole bone. It would have taken longer to disarticulate at the shoulder and acromio-clavicular joints and dissect out the coracoid process, and, moreover, the retention of the head and glenoid cavity with the coracoid must add considerably to the utility of the limb. One objection that has been raised to leaving part of the scapula—that the cut arteries tend to retract behind the portions of bone left and are more difficult to secure—cannot, I think, be entertained—at any rate, when only the head and coracoid process are left.

Clifton, Bristol.

SOME UNUSUAL CASES.

BY HENRY LEE, F.R.C.S. ENG.,

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CASE 1.—Some years ago, whilst on a visit at West Ilsley, where there was no resident medical man, I was asked to see a boy, who, with others, had been trying a chaff-cutting machine. By some means or other he got his arm in front of the blades whilst the machine was in action. Immediately below the left armpit there was a gaping wound down to the bone. In this the open mouth of the lower extremity of the divided axillary artery could be plainly seen. The boy was faint and frightened, and there was no bleeding then to signify. Having a pocket-case with me the artery was tied and the wound closed. In this case the nerves were doubtless divided. The power of moving the arm had permanently gone.

CASE 2.—A patient who had worn a bivalved tracheotomy tube for a long time presented himself at St. George's Hospital. The shield of the tube had become detached, and the two valves had fallen into the trachea. These were removed separately by a curved pair of forceps.

CASE 3.—Soon after the introduction of the fourpenny-

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pieces a boy playing with one got it into his trachea. He was placed face downwards over a counter. One person held his heels and two others lowered his head. He soon became blue in the face and had to be restored to the upright position. This experiment was tried a number of times and always with the same result. After some delay this patient went to St. Thomas's Hospital, where one day he went suddenly to the watercloset and was sick. A metallic chink on the pan of the watercloset was heard and there were no further symptoms. The fourpenny-piece was not recovered.

CASE 4.—In Mr. Brunel's case, as is well known, he constructed a revolving apparatus, by means of which he could, when attached to it, be inverted without any physical exertion. The result was the same as in the last-mentioned case. The spasm of the glottis necessitated the return to the erect position. This was often tried, but ultimately with no better result than my "counter" arrangement. At length Sir B. Brodie opened the trachea and Mr. Brunel was placed on his revolving apparatus, and the half-sovereign, which had passed into the trachea, came out of his mouth. I have some reason to know that there was a general impression that the half-sovereign came out of the opening which Sir B. Brodie had made. The explanation, I believe to be this: When Mr. Brunel was inverted, the coin, as at other times, produced a spasm of the glottis, and prevented any air entering the lungs by the natural channel, but the patient was able to breathe through the artificial opening until the spasm relaxed. At all events Mr. Charles Hawkins, who assisted Sir B. Brodie, told me that he received the coin in his hand from Mr. Brunel's mouth. After a time it was found that Mr. Brunel had albuminous urine, and it was supposed that this indicated disease of the kidneys. A consultation was held at Sir B. Brodie's house. There were present Sir B. Brodie, Dr. Owen Rees, Dr. Seth Thompson, and myself. The general opinion was that Mr. Brunel ought to go to Egypt. I ventured, however, to remind Sir B. Brodie that when I was his clinical clerk at St. George's Hospital we had notes of cases in which there was albuminous urine and where there was no disease of the kidneys. Mr. Brunel went to Egypt, accompanied by Dr. Seth Watson, a personal friend of my own, and for some time physician to the Oxford Infirmary, who, as I had subsequently reason to believe, did not pay much attention to the condition of the urine. Mr. Brunel returned in sufficiently good health to undertake the building of the *Great Eastern* steamship, which he accomplished without difficulty. After the lapse of some months he became insensible to external impressions and lost the power of speech. Sir B. Brodie subsequently remarked that he had never known a case in which the power of speech was entirely gone that had recovered. After death the kidneys, upon section, showed no visible signs of disease. There was about half-way down an intussusception in the right ureter, evidently of long standing. The invaginated portion had assumed the appearance of a small tumour constricted at its base. It was as red as the ripest cherry. This left no doubt in my mind as to the origin of the albumin which had so frequently been found in the urine. The convolutions of the brain appeared compressed, but there was no effusion of blood or serum. The rings of the trachea, which had been divided, were found united by cartilage.

Queensborough-terrace, W.

A CASE OF ATROPHIC CIRRHOSIS WITH ASCITES FOLLOWED BY A LARGE CYST OF THE LIVER; WITH SOME REMARKS ON THE QUESTION OF DIAGNOSIS.

BY W. C. DEVEREUX, M.A., M.B. CANTAB.,
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AT the beginning of March, 1896, I was consulted by a woman, aged forty-four years, who had been ailing for about a month, complaining chiefly of great progressive weakness, sickness, anorexia, diarrhœa, and a great increase in the size of her abdomen. She had previously been a perfectly healthy woman, moderately stout, but had lately been losing flesh. Catamenia had been regular until the commencement of her illness, when they ceased altogether. The diarrhœa occurred from four to eight times a day, the stools being semi-fluid, very offensive, and grey or white in colour. The urine was scanty (sometimes not more than four ounces in the twenty-four hours even when there was no diarrhœa), acid, thick and highly coloured, with abundant urates and a trace of albumin. The tongue was thickly coated, and there was slight jaundice. The heart sounds were weak and there was a soft mitral systolic murmur. The pulse was very feeble and rapid (110). Both lungs were slightly œdematous at their bases. The abdomen was enormously distended with ascites, which prevented an accurate marking out of the liver, which was apparently much contracted. There was the usual etiology of atrophic cirrhosis. On consultation with Dr. Hayward, of Haydock, the case was diagnosed as one of atrophic cirrhosis of the liver. We decided not to tap for the present unless there was any increase in the œdema of the lungs. The patient was put on a liquid diet with no stimulants. She was given one-twelfth of a grain of subchloride of mercury and one grain of powdered boracic acid three times a day, and a mixture containing eight minims of tincture of digitalis, three grains of iodide of potassium, and compound infusion of gentian to one ounce three times a day. On March 19th, as the patient was making no progress (except a slight decrease in the diarrhœa) and the œdema of the lungs had increased, I resolved to draw off the ascitic fluid. This was done by means of a Southey's tube and seventeen pints were drawn off. The liver could now be accurately defined, and the superficial dulness was found to extend on the right side from the seventh to the eighth rib in the mid-sternal line in front and from the tenth to the eleventh rib behind. No dulness could be detected either in front or behind on the left side. The beneficial effect of the tapping was marked on the very next day, when as much as two pints of clear urine, free from albumin, were passed, and three days later bile reappeared in the motions, which were more formed and passed only once or twice in the twenty-four hours. The pulse improved (80) and the mitral systolic murmur and the œdema of the lungs disappeared. There was no sickness and the appetite improved. The increase in strength was remarkable, and in a fortnight the patient was able to sit up in a chair. On April 3rd the patient began to complain of a great deal of flatulence and there was some slight diarrhœa. As the pulse was not so good the mixture was changed to five grains of tincture of strophanthus, three grains of iodide of sodium, ten grains of bismuth salicylate, ten grains of benzo-naphthol, and fifteen minims of compound tincture of cardamom, which checked all the symptoms. About April 15th the patient had not been so well for three or four days, and complained of a feeling of fulness in the left side and a catching pain when she took a deep breath. On examination I found that the liver dulness on the left side extended from the seventh rib to two inches below the costal margin in the mid-sternal line, where the thickened edge of the liver could be felt. There was no increased dulness behind or on the right side. By the 22nd the dulness had extended down to the level of the umbilicus, and there was a large protuberance of about four inches in diameter, over which there was distinct fluctuation, the lowest point of fluctuation being about two and a half inches above the thickened edge of the liver. I withdrew a small quantity of fluid with an exploring needle, and obtained a brown semi-transparent fluid, highly albuminous (one-third), and containing chlorides, liver cells, abundant leucocytes, fat globules, acicular crystals (? tyrosin), and granular débris. There were no hooklets or cancer cells. On May 1st the dulness had extended on the left side into the pelvis and above to the second rib in front and to the upper border of the scapula behind. There were no breath sounds except at the apex. On the right side the dulness extended in front from the sixth rib to two inches below the costal margin, and from the eighth rib to the costal margin behind, and all over the right lung the breath sounds and resonance were normal. During the short time from the first symptoms of pain and fulness (April 15th) the increase in the weakness and emaciation was extremely rapid, so that the patient was little more than skin and bone. The pulse was very feeble (130) and at times scarcely perceptible. The symptoms, in spite of the negative character of microscopical examination of the fluid, seemed to point to malignant disease, probably sarcoma. The state of prostration was such that when Dr. Hayward again saw the patient with me on May 2nd there did not seem

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the faintest hope of her rallying again. We came to the conclusion that it would not be advisable to attempt aspiration, both on account of the extremely critical condition of the patient and the fear of hæmorrhage into the cyst. About a fortnight later the patient rallied slightly, and the enlargement showed no further signs of increasing. There had been occasional slight shivering fits, with the temperature running up to 101° F. On June 11th I inserted a Southey's tube into the area of fluctuation and withdrew three and a half pints of fluid. This was examined by Dr. Hayward, Dr. Robertson (medical officer of health of St. Helens), the Clinical Research Association, and myself. It was a dark brown, semi-transparent fluid, of specific gravity 1015, containing a large quantity of albumin (one-third), chlorides, no sugar, and was faintly alkaline. On microscopical examination there were pretty perfect nucleated liver cells, numerous fat globules, leucocytes in progress of disintegration, acicular crystals, and masses of bile-stained tissue. There were no cancer-cells, hooklets, or fragments of hydatid membrane. There was considerable improvement after the removal of the fluid, and the patient's strength increased. The emaciation, however, continued much the same in spite of the enormous appetite the patient developed. The temperature still ran up towards evening to 100° or 101°, and was unaffected by quinine. The morning temperature was normal. The stools were occasionally white, but always got back their proper colour on the administration of small doses of calomel. The liver dulness three days after tapping extended on the left side in front from the fourth rib to the costal margin and behind from the angle of the scapula to the costal margin. On the right side it extended from the sixth rib to the costal margin in front. The patient was able to be out of bed again by July 24th, though the liver had again begun to enlarge. By Aug. 12th the liver had again attained its former large dimensions, so I repeated the tapping, again drawing off three and a half pints of fluid. The fluid differed somewhat from that on the first tapping, being of a dirty white colour and non-transparent, and containing more pus cells, but no liver cells or bile-stained tissue, and was of specific gravity 1015. The report of the Clinical Research Association was as follows: "We could find no evidence whatever in this fluid of malignant growth or hydatid disease. It was of exceptional nature chemically, containing neither bile pigments nor bile salts, but somewhat abundant fats and crystals of fatty acids. No cholesterin could be found. The suspended matters were, in fact, composed of broken-down pus cells and fats." The next day the growth had receded to within an inch from the costal margin, and in a week had decreased by another inch, the upper limit of dulness remaining during this time at the level of the left fourth rib in front. The improvement now continued without interruption, the patient putting on flesh and gaining strength, so that on Sept. 20th she was able to go out in a bath chair. The liver dulness also gradually diminished. On Sept. 28th the patient began taking petroleum emulsion and to have massage. The patient was weighed for the first time on Oct. 26th, having probably gained between two and three stones since May. Her weight was then seven and a half stones. She is now very nearly as well as ever, and weighs over nine and a half stones. Catamenia began again at the end of February, having ceased for a year. The liver dulness extends on the right side from the sixth rib to the costal margin in front and from the ninth rib to the costal margin behind. On the left side it extends from the fourth to the seventh rib in front and from the seventh rib to the costal margin behind.

Remarks.—This case is one of considerable interest and, it must be confessed, of some obscurity. I propose to consider the question of diagnosis as it presented itself at three different stages or periods of the case: (1) at the beginning of March, 1896; (2) at the beginning of May, 1896; and (3) at the present time. I. When seen in March the case appeared to be an ordinary one of atrophic cirrhosis with ascites. The usual etiology and the physical signs and symptoms all pointed to this conclusion. The impression given before tapping as to the small size of the liver was confirmed by the examination made immediately afterwards. Very marked improvement instantly followed the tapping, and there has been no re-accumulation of fluid since in the general peritoneal cavity. A certain amount of doubt must arise as to whether the ascites was due to the cirrhosis or to some other cause. Murchison states that when once ascites due to cirrhosis appears it persists and gradually increases. Hale White[1] has shown that when ascites in cirrhosis requires tapping the end is not far off, and this is borne out by Rolleston in his article in the *Midland Medical Review*, 1896. On the other hand, Cheadle[2] and Foxwell[3] maintain that the condition is curable, and give several cases in support of this view. Without affecting the correctness of the diagnosis there is the possibility that the ascites was not due to the cirrhosis found to exist in the liver, but independent of it. In this case it might be due either (1) to some pressure on the portal vein; or (2) to some local inflammation, causing chronic peritonitis with effusion. II. At the beginning of May, 1896, after about a month of apparent progress towards recovery, the clinical aspect of the case changed. The physical signs of enlargement of the left lobe of the liver appeared. The area of liver dulness increased very rapidly, its progress being observed from day to day, until in about four weeks there was extreme enlargement of the organ generally, its lower edge being distinctly palpable projecting well below the costal cartilages in the right mammary line and extending downwards and to the left in the left inguinal region. Above the thickened edge of the liver there were very distinct signs of fluctuation obtained in the epigastric and upper umbilical regions. The evidence given by palpation and percussion gave the impression of there being enlargement of the liver generally, with a very large cyst in the left lobe projecting upwards and downwards as well as forwards. Associated with the rapid enlargement of the liver there had been equally marked loss of flesh and strength. Pain was not a marked symptom and jaundice was absent. The lower edge of the liver and its surface were felt to be hard and smooth. At the time of our consultation on May 2nd there was no doubt in the minds of either Dr. Hayward or myself that we had to do with a case of rapid enlargement of the liver with the formation of a large cyst in the left lobe. The possible causes presenting themselves to our minds were: (*a*) abscess, (*b*) hydatid, and (*c*) malignant abscess (carcinoma or sarcoma). (*a*) As regards tropical abscess: (1) there was an absence of the usual etiology—viz., residence abroad or dysentery; (2) the characters of the fluid obtained by the exploring needle were not those of abscess; and (3) the general symptoms also combined to negative this hypothesis. Abscesses of the liver are sometimes caused by a gastric ulcer becoming adherent to the under surface of the liver and eroding that organ, or a foreign body perforating the gut and entering the liver. These theories were, however, equally untenable for the same reasons as tropical abscess, together with the entire absence of any previous history which could give support to such a supposition. (*b*) Hydatid was excluded by (1) the very rapid enlargement of the cyst under daily observation, and (2) by the characters of the fluid, this containing a large quantity of albumin (one-third) and chlorides, and being without any signs of hooklets or the characteristic membrane. Frerichs[5] records a case of sterile echinococcus presenting symptoms analogous to this case, but even here the characters of the fluid were quite different. (*c*) The previous suppositions having been negatived, there appeared only the remaining one of malignant disease. The considerations bearing on this possibility appeared to be: (1) although the patient looked very ill and greatly emaciated there was no cancerous cachexia; (2) the examination of the fluid gave negative results as far as the finding of any characteristic cellular elements was concerned; (3) nodulation of the liver surface and jaundice were absent; (4) still the positive facts of rapid enlargement of the liver substance associated with marked emaciation and prostration gave ground for strongly suspecting malignant disease; and (5) formation of cysts, sometimes of a large size, is not unknown in malignant disease of a sarcomatous nature,[6] and therefore sarcoma was considered more probable than carcinoma. This diagnosis at the time seemed so highly probable that an almost hopeless prognosis was given. III. The happy event of the patient's apparent recovery gives occasion for reconsidering the diagnosis in the light of the subsequent history and present condition of the patient, as well as that gained by further reference to medical literature,

[1] Guy's Hospital Reports, 1892.
[2] Brit. Med. Jour., Nov. 19th, 1892.
[3] Midland Medical Review, 1896.
[4] Brit. Med. Jour., June 13th, 1896, p. 1448.
[5] Diseases of the Liver, vol. ii., p. 267.
[6] Brit. Med. Jour., June 13th, 1896, p. 1447.

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to which may be added suggestions made by several distinguished physicians who have been good enough to take some interest in the case. 1. The retrocession of the liver tumour, together with the continuous gain in flesh and strength which have followed the last tapping of the cyst, seem to almost certainly negative the idea of malignant disease, although the natural cure of such disease is not wholly unknown.[7] 2. The same considerations which in the earlier stage of diagnosis sufficed to negative abscess and hydatid are still equally applicable. 3. Simple cysts of the liver are but rare, and three varieties of them are recognised by pathologists. (*a*) Small serous cysts, with clear watery contents, varying in size from a pea to a bean, are occasionally found in the liver, and are often accompanied by similar disease of the kidneys. They are multiple, and are supposed to originate in alteration of the hepatic cells. Their inner wall is covered with pavement epithelium, and presents membranous projections such as result when small cysts unite to form larger ones. No connexion can be made out between them and the bile-ducts.[9] (*b*) Kiener and Kilsch state that biliary polyadenomata found occasionally on section in cirrhotic livers may suppurate and form abscess cysts. These are, however, found in large cirrhotic livers.[9] (*c*) Occasionally a single cyst, containing inspissated mucus, has been found, and is generally considered to be due to partial obliteration of one of the bile-ducts, which has been subsequently shut off from the rest of the duct.[10] A specimen shown by Dr. Sharkey at the Pathological Society in 1882[11] presented a very unusually large cyst, but even this contained less than a pint of fluid. In this case there is unfortunately no record of the symptoms, as the patient was admitted to the hospital suffering from a fracture of the skull and died on the following day. 4. A case of pancreatic cyst reported from St. George's Hospital[12] presents some striking resemblances to my case, especially in the characters of the cyst fluid, of which a much more elaborate examination was made. As against the diagnosis of pancreatic cyst, however, the following considerations present themselves: (*a*) the cyst approached the surface of the abdomen above the edge of the liver and not below it; (*b*) the fluid was found by three observers to contain liver cells and what appeared to be bile-stained tissue; and (*c*) the liver, though considerably smaller than it was, is still enlarged. There remains the supposition that a cyst primarily of the pancreas may have secondarily involved the liver substance by continuity and that the liver cyst was therefore secondary. If such a condition has ever been observed post mortem, this would appear to be a possible diagnosis in this case. If, however, such a condition has not been observed one would think from theoretical considerations that a very rapidly growing cyst of the pancreas would be more likely to displace the liver upwards rather than to erode it, especially when one knows how extremely slowly an aneurysm erodes the neighbouring organs. 5. Another suggestion that has been made is that the case may have been one of accumulation of fluid in the lesser cavity of the peritoneum due to the blocking of the foramen of Winslow. Had we had to do with a case of cystic enlargement approaching the surface of the abdomen below the edge of the liver, and apparently in connexion with it, this, too, would have been a possible diagnosis; but the same facts which have been alluded to above as negativing pancreatic cyst are also of weight against this hypothesis, for the character of the fluid and the physical signs of the cyst seemed undoubtedly to point to its being in the liver substance. Jordan Lloyd has shown[13] by experimental injection of the lesser peritoneal cavity that the dulness reaches only just down below the umbilicus, whereas in this case it extended well down into the left iliac fossa. In addition to these objections there was the absence of the stomach note, which is usually present as a narrow resonant line separating the cyst from the liver. 6. These reasons, together with the absence of blood from the fluid and the absence of the history of any injury, serve also to exclude peritoneal sanguineous cysts like those described by Theodore Fisher.[14] 7. Knowsley Thornton[15] records a case in which he removed the spleen containing thirty ounces of blood-stained fluid. Such a cyst might possibly set up inflammation, and thus cause in the first instance peritoneal effusion. The fluid which I drew off contained no sign of blood on examination both microscopically or chemically, and the present symptoms of occasional appearance of white stools and continued hepatic enlargement point to liver rather than to spleen. 8. The same objections, together with the position of the cyst relative to the edge of the liver, would negative a hæmorrhagic adenoma of the left supra-renal body such as described by Létulle.[16] 9. An empyema perforating the diaphragm and setting up a subphrenic abscess would be contra-indicated by the total absence of symptoms pointing to such a condition and the characters of the fluid.

Assuming that error in observation and defective memory of impressions received can be eliminated, which, however, as we all too well know, are not wholly impossible, it would appear that the condition which I believe to exist in the final stage is the most probable one, viz., "a simple cyst of the liver, with a fibrous capsule and lined with granulation tissue," however rare and unusual such a condition may be. As to the cause and nature of the first origin of the cyst, some obscurity cannot but exist and the diagnosis must to a large extent remain doubtful, the art of diagnosis so largely consisting in recognising in a case before one a likeness to some case or cases previously seen, and failing this doubt must exist. Lastly, with regard to the question of treatment, that adopted in the first stage needs no comment. In the second stage the large and rapidly increasing size of the cyst so considerably pressing from below on the left pleural cavity seemed to demand some attempt to relieve the pressure. In the then apparent probability of the existence of malignant disease it was not considered advisable to use the aspirator for fear of internal hæmorrhage into the cyst cavity. The same consideration as well as the extremely weak condition of the patient contra-indicated at the time any attempt of a serious operation to explore and at the same time to deal radically with the cyst by drainage. The treatment adopted, when the patient's condition had somewhat improved, by slowly draining the cyst with a Southey's capillary cannula, whatever theoretical objections may be raised to it, in this case appears to have been attended with success. Under more radical treatment the patient might easily have done worse and could hardly have done better.

Tewkesbury.

[7] THE LANCET, Dec. 5th, 1896, p. 1604, and May 1st, 1897, p. 1208.
[8] Frerichs: Diseases of the Liver, vol. ii., p. 224.
[9] Hamilton's Pathology, vol. ii., part i., p. 223.
[10] Friedreich, Archiv für Pathologische Anatomie, Band xi., S. 166.
[11] Transactions of the Pathological Society, vol. xxxiii.
[12] THE LANCET, July 4th, 1896.
[13] Brit. Med. Jour., Nov. 12th, 1892.
[14] Guy's Hospital Reports, 1892.
[15] Transactions of the Pathological Society, vol. xxxv., p. 385.
[16] Archiv de Science Médicale, 1896, p. 80.

A CASE OF ISCHIO-RECTAL HERNIA DUE TO DISLOCATION OF A SUB-PERITONEAL FIBROMA.

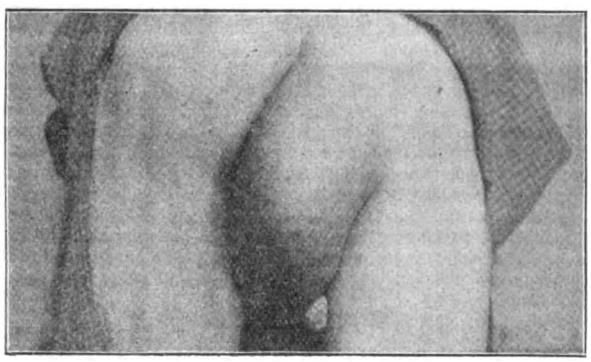
BY J. LYNN THOMAS, F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE CARDIFF INFIRMARY.

A MAN, aged sixty-two years, was sent to me by Mr. C. W. Hemming, who has very kindly supplied me with a full history of the case, and has also taken a keen interest in it for some years. About four years ago, whilst lifting a heavy weight, the patient felt a strain in the anal region, and the next day he noticed a rupture, which he pushed back, but it came down again immediately. The rupture increased in size until a year ago and since then has remained stationary. The swelling was increased by walking, was a source of trouble in defecating, compelled the patient to sit on the opposite tuber ischii, and for the last two years had incapacitated him for work on account of its size when he exerted himself. He had had no bladder trouble. The patient had always enjoyed good health, but was said to have dislocated his right hip ten years previously. The accompanying illustration shows the size and situation of the hernial protuberance and also the displacement of the right buttock-fold towards the left. The swelling extended anteriorly to the posterior extremity of the scrotum. The posterior portion of the tumour was reducible and contained intestine; the greater portion was irreducible, firm, elastic, slightly nodulated into three portions, and dull on percussion. With the finger in the rectum, the gurgling intestine could be felt descending into the hernia in immediate contact with the rectal wall on its right side, and occupying the ischio-rectal space from the

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coccyx to the right tuber ischii, whilst nothing could be felt in front and behind its walls. On coughing impulse was conveyed to the whole tumour. Before operation I took the irreducible portion to be an epiplocele. The nodule near the lower border of the swelling was a molluscum fibrosum growing from the right thigh.

Operation.—On April 16th, 1897, with the patient in the lithotomy position, the skin thoroughly cleansed, and the rectum irrigated and plugged with an iodoform sponge, I made a long antero-posterior incision over the outer aspect of the swelling to avoid the gluteal fold. Several layers of thickened fascia with intervening cyst-spaces (bursal) were cut through, and many enlarged veins coursed over the surface of the tumour. A flattened muscular band about an inch and a half in width crossed over the tumour from the side of the rectum towards the inner aspect (rather deeply) of the tuber ischii, causing one of the boundaries of the nodulations previously described and firmly fixing the growth in its bed. There was a bursa between the muscle fibres, and it required some persuasion to convince one that it was not intestine before it was divided; as soon as this was done the tumour was easily shelled out without opening the peritoneum immediately under it. A large piece of redundant skin and fat was removed, the wound was closed, a drain was put in for forty-eight hours and an iodoform gauze dressing was applied and fixed by collodion after Professor Kocher's fashion, in his after-treatment of radical cure of hernia. The wound healed up quickly. The tumour weighed two and a quarter pounds; it cut like a moderately tough



The tumour as seen from behind.

fibroma. Microscopically it proved to be a fibroma undergoing myomatous degeneration. Before the patient returned home there was very little fulness in the ischio-rectal space; it bulged on coughing, and two fingers could be pushed into it, the coccyx, great sacro-sciatic ligament, and tuber ischii being thus easily felt. The patient sat and defecated with comfort.

Remarks.—Ischio-rectal herniæ are very rare in men, Macready, in his valuable "Treatise on Ruptures," having collected only six. This case I believe to be unique, inasmuch as the enterocele was primarily due to the dislocation of the sub-peritoneal fibroma through the ischio-rectal fossa. I have given the particulars fairly fully on account of the many points of interest in the case. The muscular band crossing the tumour I concluded to be a portion of the levator ani, because it was not directly attached to the tuber ischii and was too near the rectum to be the transversus perinæi. In Mr. William Anderson's notable contribution to the "Surgery of the Sub-peritoneal Tissue" it is stated that "the fibromata merge on the one hand into the lipomata; on the other into the myomata; and it is probable that many of the older reports of fibrous tumours really refer to myomata. Purely fibrous growths may, however, develop in the sub-peritoneal tissue"[1]; and in speaking of fibro-lipomata he states that "they sometimes comprise a considerable proportion of fibrous tissue, and, like the retro-peritoneal tumours, may undergo myxomatous degeneration." No trace of fat could be found in this tumour. This is the second case during the last few months that has impressed upon me the importance of Mr. Anderson's plea for treating the sub-peritoneal tissue as an anatomical entity liable to diseases of its own. The other case was one in which Dr. A. E. Taylor asked me to do a radical cure for a femoral hernia that was partly reducible, but returned immediately. I did so, fully agreeing that there was an epiplocele, but it turned out to be a serous cyst with a pedicle running up the femoral canal, and by pressing above Poupart's ligament two other cysts were delivered through the saphenous opening, and in dragging down the last one a cone of peritoneum was removed. I need hardly add that the "radical cure" was satisfactory.

My thanks are due to Dr. Wallace for his assistance at the operation, which was a very tedious one, and to Dr. F. P. S. Cresswell and Dr. Wood for sections of the tumour.

Cardiff.

[1] Brit. Med. Jour., Oct. 17th, 1896.

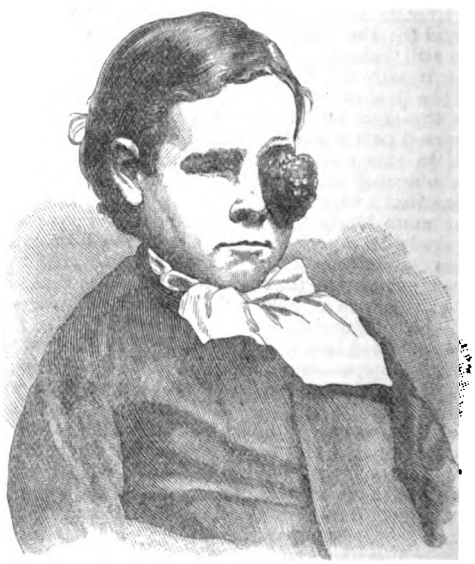
NOTE ON A CASE OF GLIOMA OF THE RETINA.[1]

BY CHARLES BELL TAYLOR, M.D., F.R.C.S. EDIN.,
SURGEON TO THE EYE INFIRMARY, NOTTINGHAM.

THE patient to whose case I wish to call attention was a sturdy little fellow full of life and vigour, and, although very blind, was still able to stumble about, avoiding large objects. The parents were under the impression that the white shimmer perceptible within the child's pupils—for, strange to say, both eyes were alike affected—was caused by cataract; but a glance was sufficient to convince me that such was not the case, and I was able, by dilating the pupils and concentrating the rays of light, to demonstrate that not only was the lens in each eye perfectly transparent, but that its natural brilliance was greatly enhanced by a yellowish background of abnormal growth with bossy surface, traversed by tortuous blood-vessels.

The growth could not be a simple non-malignant tumour, for such a thing was never heard of in this situation. It could not be sarcoma, because sarcoma is a disease of more advanced life, and is never bilateral. It could not arise from

FIG. 1.



View of patient previously to operation.

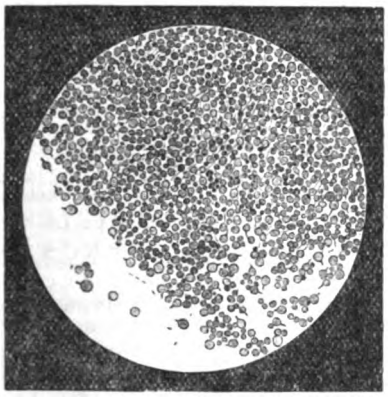
suppurative choroiditis or deposit of purulent matter in the vitreous chamber (pseudo-glioma as it is called), because such a condition is always preceded by accident or serious illness, and is accompanied by iritic changes and softening of the globe. What, then, was it? There can be only one answer to that question. It was medullary cancer or glioma of the retina, a disease which is certain to end fatally if untreated, which is apt to recur in the orbit after excision of the eyeball, and in a large proportion of cases to reappear in the sound eye, even years after the ablation of its fellow. Above is an illustration (see Fig. 1) of a patient under my care whose right

[1] This note was read, and the patient was exhibited, at the meeting of the Nottingham Medico-Chirurgical Society on Feb. 3rd, 1897.

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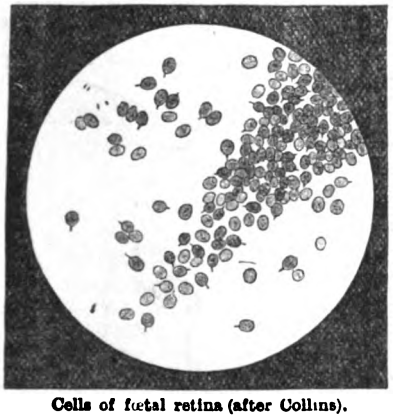
eye I excised on account of glioma with perfect success in her third year, and who succumbed to a recurrence of the disease in the left eye (which was not excised) in her sixth year. This is a black record for glioma, but we must not allow it to blind us to the facts that the subjects of glioma are for the most part children who show no sign of constitutional cachexia; that the disease never appears later in distant organs, such as the liver, for instance, by metastasis, as sarcoma does; that it never recurs either *in loco* or in the sound eye after three years of post-operative immunity; that it has never been seen in children over eleven years of age; and that its histological elements, simple round nucleated cells (never spindle cells), are not to be distinguished, as Mr. Treacher Collins has pointed out, from the normal cells of the

FIG. 2.



Glioma cells.

FIG. 3.



Cells of fœtal retina (after Collins).

fœtal retina. In short, the disease, although so serious in character is, in my opinion, in the first instance a purely local affection, which spreads only by continuity of tissue,[2] and I believe as a result of great experience that if the eye is excised while the growth is confined to the retina there will be no recurrence in the optic nerve or orbit of the affected eye, and that if the same operation is performed in good time upon the second eye should it become affected a like result may be attained.

It is clear, therefore, that the only course to pursue in the present case is to recommend extirpation of both eyes—a grim alternative, which the parents naturally regard with dismay. Nevertheless, it is our only resource and the least of evils, for if nothing is done, humanly speaking, the disease will spread backwards and forwards, the eyeballs will slowly distend until they give way and protrude from the orbits, and bleeding masses of fungus, offensive and ulcerated, will appear upon the surface, and will prove fatal to the patient and heart-rending to those who, compelled to watch over their child's slow dissolution, will reproach themselves that they refused the only chance of cure, when cure alone was possible.

Nottingham.

[2] In cases where the disease has re-appeared in the sound eye the optic nerve has been found to be quite healthy, thus proving that the growth was quite independent and had not spread, as some have supposed, through the optic tract from one eye to the other.

A NOTE ON RUPTURE OF INTRA-THORACIC AORTIC ANEURYSMS BASED UPON AN ANALYSIS OF THIRTY-TWO CASES.

BY T. N. KELYNACK, M.D. VICT., M.R.C.P. LOND.,
PATHOLOGIST TO THE MANCHESTER ROYAL INFIRMARY; DEMONSTRATOR AND ASSISTANT LECTURER IN PATHOLOGY TO THE OWENS COLLEGE.

THE occurrence of rupture of an intra-thoracic aortic aneurysm is an event which not only raises questions of clinical importance, but points of much pathological and medico-legal interest. I therefore venture to think that some brief reference to cases which have been met with in the Pathological Department of the Manchester Royal Infirmary may not be without some value.[1]

Number and proportion of cases.—Among the last 4593 cases submitted to pathological examination rupture of a thoracic aneurysm has been noted in 32 cases. This gives a percentage in all "general" cases of 0·69.

Sex.—Of the 32 cases, 30 were men and only 2 women—that is, a percentage of 93·75 males and 6·25 females.

Age.—The exact age was obtained in 30 of the cases; the others were middle-aged males. The average age was forty years. The males averaged 40·4 years. The females averaged thirty-four years. The youngest subject was aged twenty years and the oldest was aged sixty-five years.

Seat of aneurysm.—In many instances the greater part of the arch was involved. Grouped, however, according to the chief area of affection they may be arranged as follows: Ascending portion of arch, 12; transverse portion of arch, 11; descending portion of arch, 4; and descending thoracic aorta, 5.

Point of rupture.—This can be best indicated in tabular form:—

Part ruptured into.	No. of cases.	Percentage.
Pericardium	13	40·62
Pleura (left)	7*	21·87
Œsophagus	3	9·37
Externally	3	9·37
Trachea	2	6·25
Pleura (right)	1	3·12
Lung (left)	1	3·12
Bronchus (right)	1	3·12
Superior vena cava	1	3·12

* One of these was a case of dissecting aneurysm.

Nature of death.—Of the thirty-two cases, six were observed in medico-legal investigations, the subjects being brought dead to the hospital, having been found dead or suddenly seized in the street or elsewhere. In one instance a man while riding in a cart suddenly fell out of the vehicle and was picked up dead. In nearly all the cases where rupture occurred while in hospital or where a clear history could be obtained death was sudden, in many instances being practically instantaneous. In one case where rupture occurred into the œsophagus death took place in five minutes. In another, where the aneurysm burst into the pericardium, the patient felt faint and was dead in three minutes. In one subject, where the pericardium was found filled with blood, and where there was commencing erosion into the trachea, with also extension into the left lung, a small quantity of frothy blood was brought up for some hours before death, which was sudden. In a case where there was general aneurysmal dilatation of the arch of the aorta rupture took place into the pericardium through a vertical slit two and a third inches in length. The patient was brought to the hospital in what appeared to be a syncopal attack and died suddenly four hours later. In one case where death occurred suddenly blood-clot weighing eighty-five ounces was found in the left pleural cavity.

Manchester.

[1] These cases are strictly limited to aneurysm of the thoracic aorta. Aneurysms of the innominate and subclavian are not included. The question of rupture of cerebral, abdominal, and other aneurysms I hope to be able to refer to in a subsequent note.

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TWO CASES OF "ELECTRIC-LIGHT BLINDNESS."

BY ROBERT HILL, M.R.C.S. ENG., L.R.C.P. LOND.,
SURGEON, ROYAL NAVY (H.M.S. "VICTORY").

I VENTURE to forward for publication in THE LANCET the following cases that have come under my notice lately, hoping that they may be of interest to its readers, and more especially to those engaged in ophthalmic work.

CASE 1.—About 1 A.M. on June 1st, 1897, I was called hurriedly to see a man who was said to be suffering great pain in his eyes. The man, a stoker, twenty years of age, I found walking round the sick bay of this ship in an agony of pain, with his hands up to his eyes from which the tears were literally pouring. The lids were kept firmly closed, and all my efforts to see the eyes proved futile until I had dropped in cocaine, which acted like a charm. Five minutes later he could distinguish the number of persons in the room, but not the number of fingers held up. The pupils were moderately dilated (probably due to the cocaine); the palpebral conjunctiva was deeply congested, with but slight reddening of the bulbar conjunctiva; the cornea was clear. I imagined some irritant had been applied, but he denied this, nor could I find any trace of any substance such as pepper likely to cause the condition. Cold applications were used and the patient soon fell asleep. At 8 A.M. his vision was normal, but the conjunctiva was injected, and he complained of a sticky sensation in his eyes. He then gave me the following history. When at work in H.M.S. *Mars* on the afternoon of May 31st he had stopped for about three minutes to look at the electric drill which was being used to bore holes in a steel plate, standing at a distance of from ten to twelve yards; on resuming his own work everything appeared to him of a deep gold colour, but he had no pain or lacrymation. He turned into his hammock at 9 P.M., and woke up in great pain at 12 30

CASE 2.—At 9 A.M. on June 1st a stoker, aged twenty-eight years, who had been sleeping on shore, came to the sick bay complaining of his eyes. He stated that he had been working in H.M.S. *Mars* on the previous afternoon, and, like the patient in Case 1, had stopped to see the electric drill working, and had noticed during the remainder of the day that everything appeared of a deep gold colour. About 4 A.M. he had jumped out of bed in great pain, and this had lasted about an hour and a half. The condition of the eyes was very similar to that described in Case 1—injection of the conjunctiva being the only abnormal condition. Vision was normal.

Ever since the electric light has been in use workers at this trade have been subject to attacks of blindness, and cases have been recorded in which erosion of the cornea has followed the inflammation induced. Dark glasses are now always used by men so employed. The electric drill acts by fusing a hole through the steel, and probably the intensity of the light is greatly increased by the rays of light thrown off by the molten metal. The fact that the work is carried on chiefly in the daylight hides to a casual passer-by the extreme brilliancy of the light, and it is not until the patient experiences abnormal colour sensations that he is aware of anything extraordinary. When first this drill was used in Chatham Dockyard Surgeon P. N. Randall had a few similar cases among the dockyard hands, but as they slept on shore he had no opportunity of observing the acuteness of the pain.

The pathology of this condition has been stated to be similar to that of snow-blindness or desert blindness, and to depend on irritation of the branches of the ophthalmic division of the fifth nerve. In the cases above recorded the irritation would appear to have gone on to absolute paralysis and the pain to have been due to the acute congestion attending the nerves in their action of regaining their normal function. A somewhat analogous train of circumstances is found in the paralysis of the sensory nerves of other parts of the body when exposed to extreme cold, such as the ether spray or frost-bite, and the pain in these cases is often very great when the congestion attending the "coming to" of the part takes place. The short period during which the severe pain lasted is also in favour of this analogy. The close sympathy that exists between the second nerve and the branches of the ophthalmic division of the fifth nerve is shown in many common and well-known reflexes, such as lacrymation and sneezing on sudden exposure of the eye to a bright light, or, conversely, the dread of light that is caused by any injury to the cornea. In the class of cases described we have a marked instance of the first class of reflex. A temporary paralysis of some of the optic nerve terminals is induced by the exposure to the intense light and heat of the electric drill as shown by the subjective colour sensations experienced. The corneal terminals reflexly share in the paralysis; lacrymation and photophobia are absent because the nerve terminals are paralysed and not merely irritated at the time. After the lapse of a few hours a reaction with temporary congestion is set up as manifested by the acute pain and lacrymation, and probably some mistiness of vision. The longer the exposure to the bright light the profounder the paralysis and the more intense and lasting the reactionary symptoms. These cases are, in fact, analogous to snow-blindness, and, as in them, the pernicious effects of the electric light are probably due to the ultra violet rays of the spectrum.

Portsmouth.

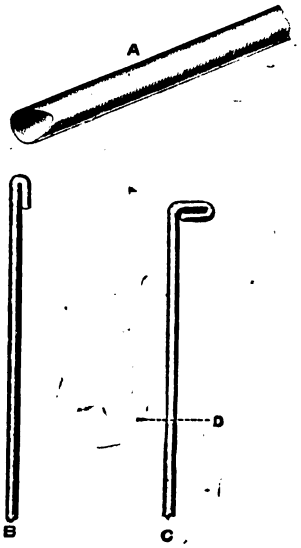
THE TREATMENT OF LACRYMAL OBSTRUCTION BY STYLES.

BY R. SHALDERS MILLER, F.R.C.S. ENG.

THIS little section of surgical therapeusis has probably been less successful than the operative treatment of other disorders of the eye and its subsidiary apparatus.

Since 1877, when I first became a clinical assistant at the Royal London Ophthalmic Hospital, Moorfields, it has been my habit to treat all organic strictures of the lacrymal duct—that is, all parts of the outfall from the lower punctum lacrymale to the exit in the inferior turbinate sinus of the nose—by styles, in most cases permanently retained. Except for temporary wear they should be made of pure platinum wire, about 25 gauge, and I always make them myself for each individual case. The shape, direction, and length of the nasal duct being variable this special adaptation is the key to success in the use of styles, which consist of a vertical stem with a short arm bent at or about a right angle to the stem and usually this arm is made double by recurving the wire back to the stem, so that the arm consists of two thicknesses of wire, parallel and quite close together, the recurved part being vertically beneath the other, or upper, part. In this way the slit in the edge of the lid is just filled up, but no

FIG. 1.



A shows the wire (magnified for clearness) with an oblique notch filed in the end to fit into the angle between the arm and the stem. B indicates the first bending of the wire, the notch facing the stem. C indicates the final bending, and D the place where the stem is cut off.

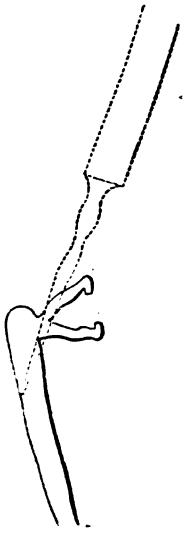
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metal is visible unless the lid be everted. Sometimes the furrow produced by slitting up the canaliculus is very shallow; then the arm of the style is single. The length of the arm should be such that it easily fills the slit-up canaliculus; it should not be tight. The stem should always be long enough to project through the lower opening of the duct in the inferior nasal sinus.

The practical effect of a style in maintaining the patency of the lacrymal exit depends upon the lateral movements of the lower lid, imparted by those long, straight muscular fibres which take origin at the tendo palpebrarum and run horizontally outwards to the surface of the malar bone and are anatomically quite separable from the oval bundles of the orbicularis proper. The tubular styles of the instrument makers are worse than useless; they soon become choked with mucus and dust. Also in the case of the grooved styles the necessarily thin edges of the groove cause irritation and the production of a granulation which stops the way. The stem should not be straight, except in the case of a very short duct, but somewhat concave outwards. The lower opening of the duct may be obstructed by a lower turbinate excessively curved towards the outer nasal wall, but even this is scarcely an excuse for turbinotomy.

I have found no difficulty in pushing a probe through the turbinate bone, and the style, made long, follows suit. Some of my patients have worn a platinum style for eight or more years without its ever having been removed from the moment of its first introduction. In every case of lacrymal abscess a style ought to be used—for a time at least—and in most instances is needed permanently; but a temporary one must be first introduced, of a form modified according to the amount of swelling in the part. Such style may be of lead or silver, and several different forms and sizes are sometimes desirable in succession to suit the changing size and shape of the lid and canthus. I have once found it necessary to make an eyed probe of lead wire, pass it through the duct and anterior naris, and, by means of a thread attached, pull a fine drainage tube through and thus restore a lacrymal passage which had been obliterated by an encysted abscess for sixteen years. A platinum style was afterwards worn with a perfect result. The wire for making these styles, together with more detailed information as to their manufacture, may be obtained of Messrs Curry and Paxton, Great Portland-street, W., who have lent the blocks for the accompanying illustrations. They will also make platinum styles from patterns of lead wire supplied to them by those who prefer not to undertake the construction of permanent instruments.

FIG. 2.



In the little operation preliminary to the insertion of a style the chief obstacle likely to be met with is the spur or projecting angle (see Fig. 2) formed by the lower boundary of the conjoint opening of the canaliculi and the adjacent part of the lacrymal sac—that is to say, the outer wall of the sac below the opening of the canaliculi. The lower canaliculus is slit up with either a Stilling's or a Weber's knife. The latter sometimes finds its way more easily, but as a rule I use a Stilling's knife throughout. I have here drawn (*vide* dotted lines in figure) an exact representation of my favourite knife, which has been reduced by several occasions of sharpening to a somewhat more slender form than the original. This traverses the canaliculus easily, and yet is strong enough at the base to be safe from breakage. A Weber's knife should never be passed down the duct; the blade is apt to stay there, of which mishap several examples have come to my knowledge. The canaliculus being slit up, the Stilling's knife is passed down the duct in the ordinary way, and in withdrawing is rotated till the edge of the blade looks directly outwards and the handle is inclined towards the external angular process of the orbit so as to bring the edge of the knife firmly against the above-mentioned spur (see Fig. 2), which is divided in drawing out the knife. A Couper's probe, about size 5 or 6, is then passed and allowed to stand for a minute or two, and the length of the part introduced is noted when the probe is withdrawn. The stem of the style should generally be about an eighth of an inch shorter than such measurement. It might be supposed that the division of the spur would cause hæmorrhage into the sub-palpebral tissues. This rarely happens, and when it does nothing more than a "black eye" ensues, and this can be reduced to almost nothing by tying up the eye with a pad kept wet with hazeline for a few hours. Styles are, of course, not needed in cases of temporary lacrymal obstruction, such as acute catarrh of the sac and comparatively recent mucocele, or in some obstructive conditions resulting from nasal disease. Irrigation with mild antiseptic fluids should have a fair trial before adopting any operative measure, except in lacrymal abscess. The repeated passing of probes is highly objectionable, and styles made of improper materials are perhaps worse.

The movement of the tears towards the inferior turbinate sinus is initiated by the capillary effect of the canaliculi, and by the action of the tensor tarsi muscle, and is continued by the ciliated epithelium which lines the sac and ductus ad nasum. But capillarity is not an attribute peculiar to cylindrical tubes; it occurs equally well between plane surfaces, as every worker with the microscope is aware, and a properly slit canaliculus is not a yawning chasm but a neat cleft with flat parallel surfaces in contact with each other and when a well-fitting style is *in situ* capillary attraction goes on readily between the style and the inner surfaces of the furrow containing it. Capillarity is a physical property which is more or less manifest whenever a liquid is in contact with a solid. An occasional cause of lacrymation, partly due to irritation and partly to obstruction, is the presence in either the upper or lower canaliculus of an eye-lash which leaves a short piece of one end projecting from the punctum. This end scratches the eye, and I have known the resulting irritation mistaken for "hay-fever." This impaction of an eye-lash has come under my observation twice in the lower canaliculus and once in the upper.

Windsor.

NELSON AS A PATIENT.

BY EDMUND OWEN, F.R.C.S. ENG.,
SURGEON TO ST. MARY'S HOSPITAL.

A FEW months ago Mr. C. Fraser-Mackintosh, of Inverness, showed me an autograph letter of Nelson's, which, to the best of his belief, had never been published. As I deemed it of considerable interest from a surgical point of view I asked for the loan of it so that a *facsimile* might be made for THE LANCET. This he kindly granted.

Exactly 100 years ago to-day—namely, on the night of July 24th, 1797—Nelson with about 900 men left the frigates which were anchored off Teneriffe and proceeded in open boats to the desperate attack on Santa Cruz with what Captain Mahan calls "superb courage."[1] "In the act of stepping out of the boat," says Southey, "Nelson received a shot through the right elbow and fell." He might have bled to death. But even at that time the principles of First-Aid, which the benevolent Society of St. John of Jerusalem have in recent years done so much to popularise, were not unknown, for we are told that one of Nelson's officers bound some silk handkerchiefs tightly above the lacerated vessels and so arrested a profuse hæmorrhage, whilst "one of his bargemen tore his shirt into shreds and made a sling with them for the broken limb. ..... Had it not been for this Nelson must have perished." As soon as he was once again aboard he told the surgeon to get his instruments ready, for he knew that he must lose his arm, and that the sooner it was off the better. Unfortunately, after the amputation the nerve (the median, I suppose) was included in the silk ligature which secured the main vessel. This was truly a calamity; it caused the hero intense and prolonged suffering. In those days the ligature-threads were not cut short as now, but were brought out at a corner of the wound to provide a needful drain for the customary septic discharge; and some of us can recall instances in which a premature attempt to get away a ligature was followed by alarming secondary

[1] The Life of Nelson. London: Sampson Low and C°. 1897.

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hæmorrhage. The presence of the ligature in the case of Nelson must have given neuralgic pains which were referred to the hand and fingers of the amputated limb, and, what to him was equally serious, the fact of the wound not being healed kept him fretting on shore when his sole desire was to be on active service.

Captain Mahan says that the ligature had been "awkwardly" applied. I suppose that even a surgeon need not take exception to his use of this adverb, for though its first meaning is "clumsily," it may simply mean "unfortunately." Nelson, however, did not say that the artery was "awkwardly" secured. He was too loyal a patient to use such a word, and I do not believe that he ever thought it. He alluded to the inclusion of the nerve as an "unlucky circumstance," and when writing to his wife he said, "I am fortunate in having a good surgeon on board." Certainly no surgeon would use the word "awkwardly" in connexion with the accident; it would be ungenerous and would suggest lack of dexterity on the part of the operator. Indeed, as we look back upon that sorrowful early morning after the glorious failure at Teneriffe the surgeon of the *Theseus* receives a fair share of our kindly sympathy. He had no friendly help from ether or chloroform, and his patient was weak from loss of blood—not another drop must be lost. To-day he would be prepared to supply such deficiency by the injection of a pint or more of hot salt water into a large vein. The amputation had to be done at lightning speed; as we know, the sea was rough, and we can imagine the scanty illumination below decks. Indeed, not only the field of operation, but the entire ship must have been shrouded in gloom and depression.

Returning to England Nelson joined Lady Nelson at Bath, where he continued to be the subject of "much pain and some fever." For the ligature still held to the nerve, and the granulation-tissue lining the two-inch sinus was continuously absorbing small doses of the septic discharge. This auto-intoxication could not fail to make him ill and unhappy, and it probably caused him to be the subject of headaches, thirst, perspirations, and shiverings. Probably, also, this association of symptoms constituted the evidence of the "fever" to which he alludes. Or, as there was no clinical thermometer in those days, the presence of fever may have been recognised by the mere application of the surgeon's hand to the surface of the patient's body—an extremely fallacious method of examination.

A consultation was held in England as to whether the nerve could not be freed of the lingering ligature; but we learn that the surgeons were afraid to cut blindly into the depths of the sinus lest they should at the same time wound the artery with the scissors. So no interference was undertaken, and our hero was left to suffer. In similar circumstances, at the present time, the wound would be promptly and deliberately opened up and the removal of the ligature safely effected. But a hundred years ago surgeons were in constant dread of secondary hæmorrhage from operation wounds—a contingency which aseptic surgery has practically abolished from our midst. They would not have dared to separate the adhering flaps of the stump lest, so doing, they might be courting disaster.

Whether in hospital work or in private practice soldiers and sailors make the best of patients. They give a willing obedience to all instructions and they take things as they come, without question or complaint. Here was Nelson on Oct. 2nd, 1797, in constant distress because a large nerve was by misadventure tied along with the artery, and speaking of its inclusion as an "unfortunate circumstance." *O si sic omnes.*

Southey says that the first letter that Nelson wrote with his left hand was to Lord St. Vincent. It is not improbable that this is an error, as he appears to have written a very early one to the bride of his friend, Captain Thomas Freemantle, who, like Nelson, had been shot in the arm in the attack upon Santa Cruz. I have not the date of that letter; it runs thus:—

> "MY DEAR MRS. FREEMANTLE,—Tell me how Tom is; I hope he has saved his arm. *Mine is off*, but, thank God, I am as well as I hope he is.
>
> "Ever yours,
>
> "HORATIO NELSON."

The letter above produced in *facsimile*, being dated Oct. 2nd, 1797, was written within ten weeks of the amputation of Nelson's right arm, and it has the great merit of being perfectly legible. I have professional friends who cannot write half as clearly as this with either hand, and as to the hurried handwritings in papers which one has to decipher in the course of a certain examination, many would be discreditable to boys from the fifth standard of a Board school. But our profession has not the monopoly in bad writers. It would be an interesting, and probably a valuable,

No. 141, Bond Street,
Oct. 2d, 1797.

My Dear Sir.

I am much obliged by your kind enquiries, My Arm from the unlucky circumstance of a Nerve being taken up with the Artery is not yet healed nor do I see any prospect of the ligatures soon coming away

Horatio Nelson

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experiment, if all bad writers were compelled to educate their left hand in the use of the pen; this might have the advantage of making their communications precise as well as clear. I cannot but think that in the case of some writers the cells upon the wrong side of the brain have been forced to specialise in the graphic function, and that a little practice with the other hand might afford a cellular group in the other cerebral hemisphere the opportunity of taking up their neglected but proper office. In my opinion, too narrow a specialism of the cells of the left motor area is undesirable, the individual using his right hand for all the finer acts. For my own part, I like to see a child indiscriminately putting out his left hand to greet a friend, or holding his knife or scissors in it. But so surely as he does it some relative or nurse calls out, "The other hand, dear." A very considerable proportion of our best bowlers are left-handed; fortunately there was no Mrs. Grundy in the playground or cricket-field to interfere with the course of Nature and to render their movements artificial. In some cases the motor areas upon the two sides of the cricketer's brain have established a sort of compromise, and so we see the man bowling with his left hand and batting with his right. I think that every man who intends to use a razor should learn to shave with his left hand as well as with his right; he cannot say but that the lesson once learnt may some day be of the greatest use to him.

Great Cumberland-place, W.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

A CASE OF GONORRHŒA WITH EXTENSIVE SUPPURATION; URINARY AND FÆCAL EXTRAVASATION.

(Under the care of Mr. CLEMENT LUCAS.)

THE number of complications that may accompany an attack of gonorrhœa is very large, and the following case is a noteworthy instance of the very widespread suppuration that may occur in this disease. The noteworthy points are the formation of a sinus above the pubes and the development of the fistula opening into the bowel. For the notes of the case we are indebted to Mr. C. H. Fagge, house surgeon.

A man, aged twenty-one years, was admitted into Guy's Hospital on March 4th, 1897, complaining of a swelling in the perineum. In November and December, 1896, the patient had suffered from gonorrhœa and was treated privately, and when the discharge stopped about Christmas he noticed that he had much difficulty in micturition, which culminated in complete retention. Catheters were used for five days, and by their means the spasmodic obstruction was overcome, and he has since passed urine freely. About a week after catheterism was abandoned he noticed a swelling in the perineum; it was very tender and painful, and the pain was greatly increased on micturition. Soon after this a swelling formed above the pubes, and he experienced shooting pains passing from the perineum upwards to the front of the abdomen. The swelling above the pubes pointed and was opened, and pus was evacuated. Lately he had noticed that a little urine came away per rectum at the end of micturition, and that flatus escaped from the opening above the pubes, and from this opening urine also sometimes dribbled after micturition. His family history was good, and he had always had good health, excepting an attack of pleuro-pneumonia five years previously. On admission the patient was seen to be pale and somewhat emaciated. In the middle line, three inches above the umbilicus, was the opening of a small sinus, from which a little pus could be expressed; the skin surrounding the opening was brown, indurated, and tender. In the perineum was an oval, lax, fluctuating swelling extending from the back of the scrotum to the anterior margin of the anus. On pressing this swelling flatus escaped through the sinus in front. In the globus major of the right epididymis was a hard nodule about the size of a cherry stone. The urine was acid and contained a trace of albumin; small quantities of blood and pus were also present. On March 5th Mr. Lucas made a rectal examination and found on the anterior wall of the bowel an opening with tender swollen edges, situated about three-quarters of an inch from the anus. An anæsthetic (A.C.E.) having been given, a probe was inserted into the sinus in front, and it was found to pass downwards. This sinus was slit up as far as the pubes and was thoroughly irrigated. The patient was then put in the lithotomy position, and the fluctuating perineal swelling was laid open from scrotum to anus, the sphincter, however, not being divided. A probe was then introduced and was found to enter the rectum through the opening already mentioned; a little pus was washed out and the cavity packed with iodoform gauze, and over this an antiseptic dressing was applied. On March 8th the packing was taken out of the perineal wound and was found to be saturated with fæcal matter, which was also present in the wound. The patient complained of much pain, which was increased by movement and by micturition. On March 11th he said that he felt better and stronger; there was less pain; micturition, which occurred every four hours, was, however, painful. By March 12th the wound above the pubes had contracted, leaving a healthy granulating surface measuring about three inches by two and a half inches. The perineal wound did not look so healthy, and a small quantity of urine appeared to come through the sinus occasionally. He now had some constipation, and though after purgatives the bowels were opened a small quantity of blood was passed with the motions. From the perineal opening urine continued to flow occasionally. On March 20th the patient strained greatly at stool, but was unable to pass any motion. As a result of the straining the perineal wound opened more, with slight bleeding; the suprapubic wound still extended upwards two inches from the pubes, but it was doubtful if it communicated with the perineal wound. Both the wounds were syringed with a solution of perchloride of mercury and were then filled with iodoform gauze. On March 22nd the temperature in the evening was 102 4° F., and later there was some sweating, this being apparently due to septic absorption. The evening rise and morning fall of the temperature continued until April 1st, when the patient felt better. An anæsthetic was given, the perineal wound was more freely opened and thoroughly scraped out, a blunt director was passed from the perineal wound into the rectum, and the intervening tissues were divided. Iodoform powder and gauze and an antiseptic dressing were applied. This dressing was continued daily and the wounds steadily became smaller, and by May 29th the suprapubic wound was almost healed. A No. 9 coudé catheter was passed, and a few days later a No. 10. On June 4th the wounds had both nearly healed and the patient was ready to leave the hospital.

EDINBURGH ROYAL INFIRMARY.

PROGRESSIVE PERNICIOUS ANÆMIA OF UNUSUALLY RAPID DEVELOPMENT, ASSOCIATED WITH MARKED JAUNDICE, ETC.; RAPID RECOVERY UNDER LARGE DOSES OF ARSENIC.

(Under the care of Dr. BYROM BRAMWELL.)

TO Addison is undoubtedly due the credit of first recognising "idiopathic" or "pernicious" anæmia as a definite disease, though it has been customary to associate the name of Biermer, of Zurich, with the discovery. At the present time we are hardly nearer a knowledge of the cause of this disease than when it was first described, but it may be taken as extremely probable that a toxin is the immediate cause, and the results obtained by Dr. William Hunter by the injection of tolylene-diamine point strongly in the same direction. Dr. Byrom Bramwell must be credited with the introduction of arsenic in the treatment of pernicious anæmia, and in some cases it certainly effects a cure, but in others its administration seems to be without any benefit.

A man, aged fifty-three years, was admitted to the Edinburgh Royal Infirmary on May 3rd, 1897, complaining of great general weakness and jaundice. The patient stated that three months previously he began to feel a little sick after taking food, but that until six weeks ago he was out with shooting parties every day and was able to do his regular work, which involved much hard

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hill-climbing, without difficulty. On March 10th he noticed that his skin was yellower than it used to be and that the urine was dark in colour. About the same time he experienced some pain in the upper part of the abdomen, and became so weak that he had to give up work. The weakness and jaundice steadily progressed, and he got thinner. He also suffered from headache and constipation. Latterly his sight became somewhat dim. During the last three weeks he got rapidly worse and vomited occasionally. Up to the commencement of this illness he was a very robust and healthy man; indeed, with the exception of an attack of influenza two and a half years ago, from which he perfectly recovered, he had never been ill. He had always been very temperate with regard to alcohol. He knew of no cause for the present illness. As regards his family history, his parents were long-lived. He had had four children; two died from diabetes at the ages of seventeen and twelve years respectively; the other two were quite healthy. On admission the patient's chief complaint was extreme debility. He was deeply jaundiced and at the same time profoundly anæmic. Instead of the delicate lemon-yellow hue characteristic of pernicious anæmia the colour of the skin resembled that of a ripe banana. The muscles were somewhat wasted and flabby, and there was little fat on the surface of the body. There was some œdema of the feet. The patient's weight was 12 st. 2 lb., and his height 6 ft.; his normal weight was 12 st. 6 lb. On the evening of admission the temperature was 100°F. The patient stated that he was very short of breath on exertion, and that he was giddy when he stooped or suddenly rose from the recumbent to the erect position. The heart did not appear to be enlarged; the cardiac impulse and sounds were very feeble; there were no cardiac murmurs. A well-marked venous hum was present in the neck. The radial pulse, which numbered ninety-six per minute, was small in volume and of low tension. The condition of the blood was highly characteristic of pernicious anæmia. The red blood corpuscles numbered 810,000; the hæmoglobin equalled 20 per cent. On microscopical examination the red corpuscles did not go into rouleaux. Many of them were larger and many of them were smaller than normal. Most of them were irregular in shape. Many of the red corpuscles appeared to be nucleated in consequence of the hæmoglobin being concentrated at one point of the corpuscle; but after staining with various reagents no true nucleated red corpuscles could be seen. Some small deeply pigmented corpuscles (Eichhorst's corpuscles) were present. The leucocytes were not increased in number. The blood plates appeared to be normal. The blood did not seem to contain any organisms. Dr. Robert Muir made and incubated several cultivations, but with negative results. Many minute hæmorrhages were seen in both retinæ; some radiated in striated lines round the discs, others more punctiform in shape were scattered over the retinæ, for the most part in the course of the vessels. There was no optic neuritis. The respiratory system was normal. The appetite was very poor and the tongue was thickly furred. The patient stated that he often felt sick, but rarely vomited. The bowels were constipated. The stools were of a bright orange (burnt sienna) colour. No parasitic organisms could be detected in the stools on microscopic examination. There was some tenderness over the lower margin of the liver, which extended for one and a half inches at least below the margin of the ribs. The upper margin of the liver, as determined by percussion, corresponded to the upper border of the fourth rib. The spleen appeared to be of normal size. The urine was normal in amount, dark amber coloured (much less dark than might have been expected from the acuteness of the anæmia and the intensity of the jaundice), acid, its specific gravity 1016; it contained a small amount of albumin and a trace of bile, and on microscopical examination a few hyaline casts. The patient complained of some headache—sometimes frontal and sometimes occipital. He stated that since his illness commenced he had been more sleepy than formerly. The knee-jerks were markedly diminished, but there were no other symptoms suggestive of disease of the cord. The patient was kept in bed, and milk diet and gradually increasing doses of arsenic (Fowler's solution) were prescribed. On May 7th seven drops of Fowler's solution three times daily were prescribed by Dr. Coleman, the house physician (Dr. Bramwell usually begins with a smaller dose), and this dose was increased by three minims daily until the 20th, when the patient was taking the very large quantity of sixty minims. After this the dose was reduced to forty minims per diem. The daily temperatures were as follows:—May 3rd, E. 100° F.; May 4th, M. 98·2°, E. 100°; May 5th, M. 98·6°, E. 99·6°; May 6th, M. 98·0°, E. 99·6°; May 7th, M. 99·0°, E. 99·8°; May 8th, M. 98·6°, E. 97·8°; May 9th, M. 97·4°, E. 98·6°; May 10th, M. 97·4°, E. 97·4°; May 11th, M. 97·6°, E. 98·2°; May 12th, M. 97·8°, E. 98·2°. On and after May 13th the temperature continued normal. The pulse was 96 on May 3rd, 4th, 5th, and 6th; on May 7th and 8th it varied between 96 and 116, but on the succeeding days it declined. The patient's bowels were moved once daily on May 4th, 7th, 8th, 10th, and 11th. On the 6th the urine deposited a large quantity of orange-coloured sand, which consisted of very minute crystals of uric acid. On the 9th the temperature, which since the patient's admission had risen to about 100° each night, was subnormal. Uric acid was still present in considerable quantity in the urine. On the 10th the jaundice was less marked, and the patient stated that he felt less sick and that his appetite was improving. The red blood corpuscles numbered 970,000, and the leucocytes 13,000 per cubic millimetre; the hæmoglobin equalled 28 per cent. The urine continued to deposit a considerable quantity of uric acid. On the 16th the patient was steadily improving and he felt much stronger. The feeling of nausea in the morning, which had been a good deal complained of, was less. The heart's action was more forcible. The stools still had the same yellow ochre colour, and the urine continued to deposit large quantities of uric acid crystals. The lower margin of the liver did not then extend below the margin of the ribs. A marked improvement had taken place in the condition of the blood. The red blood corpuscles now numbered 1,710,000, and they were much more normally shaped; the white corpuscles numbered 12,000 per cubic millimetre; and the hæmoglobin equalled 40 per cent. The patient was taking forty-eight minims of Fowler's solution per diem. On the 18th the patient complained of irritation of the eyes, as if they were filled with sand, and of a feeling of sickness. The urine still contained a small quantity of albumin and a few hyaline casts, but it no longer deposited uric acid crystals. The feet and legs were still œdematous. The amount of arsenic was increased to fifty-four minims daily. By the 20th the dose of arsenic had reached sixty minims per diem. On the 21st a vesicular (herpetic) eruption commenced on the left side of the forehead, and the dose of arsenic was reduced to forty minims per diem. On the 23rd the patient felt much better; he was much less anæmic, the jaundice had almost entirely disappeared, the red corpuscles numbered 2,650,000 per cubic millimetre, and the hæmoglobin equalled 42 per cent. On the 26th, though the feet were still slightly swollen, the patient was rapidly improving and feeling much stronger. The urine was now free from albumin. On the 30th the red corpuscles, which now numbered 2,950,000 per cubic millimetre, were for the most part normal in shape; the hæmoglobin equalled 46 per cent. The urine then contained phosphates, but no albumin. The vesicular (herpetic) eruption which had developed six days previously on the left side of the forehead had almost completely disappeared. The eyes were still "sandy" and the throat was a little dry. On June 8th it was noted that the patient had been up for the past two days. The lips were red and the face was injected. Retinal hæmorrhages were no longer present. The red blood corpuscles, which were for the most part normally shaped, then numbered 2,700,000 per cubic millimetre, and the hæmoglobin equalled 64 per cent. On the 14th the red blood corpuscles numbered 3,420,000 per cubic millimetre, and the hæmoglobin equalled 64 per cent. Some of the red blood corpuscles were still mis-shaped, and a few Eichhorst's corpuscles were still present. One or two large leucocytes containing numerous minute particles of dark brown pigment were seen in the specimen of blood examined on this date. The patient's weight had decreased during the last fortnight. On May 12th he weighed 12 st. 2 lb.; on the 22nd, 12 st. 5 lb.; on the 29th, 12 st. 5 lb.; on June 5th, 12 st. 1 lb.; and on the 12th, 11 st. 12 lb. The urine was free from albumin. Since May 30th the patient had taken forty minims of Fowler's solution daily. On the 15th the patient left the hospital, feeling, he said, perfectly well. He was advised to continue the arsenic in smaller doses (twenty-four drops daily) and to return at once for treatment if a relapse should occur. The remarkable change in his appearance was shown by the following circumstance. Before his discharge he was sent with a note asking Dr. Muir to re-examine the blood. Dr. Muir did not recognise him, and wrote back requesting that the patient should be sent to him for examination. On July 20th the patient reported himself at the infirmary. He looked the picture of ruddy health and stated that he felt quite well. The red

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corpuscles numbered 4,010,000 per cubic millimetre, the white corpuscles 14,000; the hæmoglobin equalled 88 per cent. (Gowers's instrument); the red corpuscles were normal in shape; no Eichhorst's corpuscles were seen. The patient was advised to go on with the arsenic. The steady improvement in the condition of the blood is shown in the following table:—

Table showing the Condition of the Blood and Dose of Arsenic at Different Dates.

Date.	Number of red blood corpuscles per cubic millimetre.	Percentage of hæmoglobin.	Number of white blood corpuscles per cubic millimetre.	Dose of liquor arsenicalis per diem.
May 5th	810,000	20	—	20 minims.
May 10th	970,000	28	13,000	40 ,,
May 16th	1,710,000	40	12,000	50 ,,
May 20th	—	—	—	60 ,,
May 23rd	2,650,000	42	—	40 ,,
May 26th	2,950,000	46	—	40 ,,
June 8th	2,700,000	64	—	40 ,,
June 14th	3,420,000	64	12,000	40 ,,
July 20th	4,010,000	88	14,000	

Remarks by Dr. BYROM BRAMWELL.—This highly characteristic case of pernicious anæmia presents several points of great interest. The more important are:—1. The rapid development. It is, I think, the most acute case which has come under my own notice. Though some pain in the region of the stomach was experienced at the beginning of January the patient did not feel ill, and no symptoms were observed until six weeks before his admission to hospital. 2. The causelessness of the attack. So far as could be ascertained there was absolutely no cause (intestinal or other) for the disease. 3. The absence of organisms in the blood. The blood contained no organisms. For many years past I have stated in my lectures that some cases of pernicious anæmia are perhaps due to the presence of some form of micro-organism in the blood. This case, in which the symptoms were so profound, the duration so short, and the course so progressive seemed to be a most suitable case for testing this question, and it is important to note that Dr. Muir's observations were attended with negative results. But this by no means proves that in all cases of pernicious anæmia micro-organisms are absent from the blood; for, as I have stated in a recent article,[1] it is not improbable that the condition which we term progressive pernicious anæmia is perhaps a group of clinical symptoms (which may be due to a variety of causes) rather than a single disease—a single clinical entity. It is possible, if this view is correct, that in some cases of pernicious anæmia organisms are present in the blood, while in others they are absent. 4. The presence of Eichhorst's corpuscles in the blood. These small, deeply stained corpuscles are in my experience rare. I have never seen them so numerous as they were in this case. 5. The intensity of the jaundice. I have never met with any case of pernicious anæmia in which the jaundice was anything like so deep as it was in this case; and yet the stools were of a deep orange (yellow ochre) colour and the urine only contained a faint trace of bile. Further, it should be noted that on the patient's admission the liver was enlarged and tender. 6. The colour of the urine. The urine was never very dark—it was dark amber coloured; it was much less deeply pigmented than one might have expected considering the severity of the case, the acuteness of its development, and the intensity of the jaundice. 7. The absence of parasitic organisms in the stools. 8. The presence of albumin and a few hyaline tube casts in the urine. The albumin and casts were merely temporary; but even the temporary presence of albumin is in my experience quite exceptional in cases of pernicious anæmia. The hyaline casts were probably the result of the jaundice. In my experience—and this important clinical fact is not, I think, sufficiently known—hyaline casts are almost invariably (I am disposed to think invariably) present in cases of well-marked jaundice. 9. The copious uric acid deposits in the urine. I have met with one or two other cases of pernicious anæmia in which large quantities of uric acid were deposited in the urine; in one case the patient suffered from recurring attacks of gout. 10. The absence of any degree of cardiac dilatation and of cardiac murmurs. Considering the extreme degree of the anæmia these were remarkable features of the case, and are perhaps explained by the rapidity of the course of the disease and the short time that it had been in existence when the patient came under observation. 11. The large doses of arsenic which were administered (for several days the patient took no less than from fifty to sixty minims of Fowler's solution in the twenty-four hours) and the remarkably rapid recovery which took place both in the condition of the blood and as regards the jaundice and other symptoms under the arsenical treatment. Since I first employed arsenic in the treatment of pernicious anæmia in the year 1875 I have not met with any case in which the results have been more satisfactory than in this case. It is probable, I think, that in this case the acuteness of the disease favoured the success of the treatment. In the advanced stages of severe and long-continued cases, arsenic, and every other plan of treatment often, as might be expected, fail to produce any beneficial effect. 12. The development of a herpetic eruption on the forehead during the arsenical treatment. Mr. Jonathan Hutchinson has directed attention to the fact that herpes zoster is in some cases apparently the result of arsenic. This is of great interest, especially when it is remembered that arsenic is a specific in many cases of recurring herpes of the vulva and in pemphigus.

[1] Atlas of Clinical Medicine, vol. iii., p. 134.

Medical Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Hæmorrhage into the Broad Ligament.—Double Ovariotomy.—Dermoid Cysts of the Ovary.

A MEETING of this section was held on May 28th, Dr. LOMBE ATTHILL, the President, being in the chair.

Dr. J. H. GLENN being absent the Secretary read the following notes of a case of Hæmorrhage into the Broad Ligament arising from the Stump of an Ovarian Cyst, and Complicating the Puerperium:—In January, 1894, I removed a left ovarian cyst from a young married woman, whose age was stated to be twenty-seven years. The operation was simple, and the only feature of interest was an excessively varicose condition of the pedicle. This gave rise to a little more hæmorrhage than is usual, but was carefully ligatured and the patient went on uninterruptedly. On Jan. 27th, 1895, I delivered her of a living female child by forceps. On Sept. 19th, 1896, I was called again, but the infant was already born on my arrival; this time it was a boy, which is interesting, as she had only the right ovary. The uterus was firmly contracted and no trouble was experienced with the placenta, as it came away easily, neither was there any oozing. On palpation there was nothing now to be detected, but I did not feel satisfied as the patient's pulse was 110 and her aspect anxious. About fifteen minutes after the expulsion of the placenta I felt a swelling on the left side, which corresponded to the height of the firmly contracted uterus, strangely simulated a uterus bicornis, and soon rose almost as high as the lower border of the ribs in the mammary line, but little over the middle abdominal line. I awaited developments, and the patient recovered, her highest temperature being 99·4° F. I believe that here we had a rupture of one of the varicose veins mentioned above as seen in the pedicle. Five months after confinement the hæmatoma had dwindled to the size of a fœtal head and was distinctly fluctuating.—Dr. EMILY WINIFRED DICKSON said that it seemed difficult to her to imagine how the broad ligament could have suddenly become distended so much as to allow the tumour to reach up to the ribs.

Dr. E. WINIFRED DICKSON read a paper on Double Ovariotomy with eighteen months interval between the operations. The patient, aged forty years, was admitted to the Richmond Hospital, Dublin, in May, 1895, suffering from ascites and an abdominal tumour. An ovarian papillary cystoma was removed from the left side, and the patient made an aseptic recovery. Eighteen months later she presented herself in a very similar condition with ascites and a right-sided tumour. Respiration was very much impeded by the distension of the abdomen, but the laparotomy scar had not yielded. The abdomen was opened for the second time in

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November, 1896, and a similar tumour was removed from the right side together with about six quarts of ascitic fluid. She rallied well after the operation, but died about six weeks later with all the clinical appearance of malignant disease; the post-mortem examination showed that it was an unusual form of recurrence.—Mr. O'SULLIVAN said that he examined both tumours after their removal and found both of them to be papillary cystic tumours, which appeared to him to be of a benign character. At the post-mortem examination he found an extensive fibrinous peritonitis. No secondary growths were found except in the peritoneum. He regarded it as a case of peritoneal infection by dissemination of the tumour cells through the abdominal cavity.

Dr. ALFRED SMITH showed three large Dermoid Cysts of the Ovary, which extended in each case above the level of the umbilicus. The patients made good recoveries.

Dr. KIDD exhibited a Double Dermoid Cyst removed from a patient aged thirty-three years. The larger tumour was of the size of a fœtal head, and the smaller one of about the size of a goose's egg. The patient made an uninterrupted recovery.

Reviews and Notices of Books.

Memories of Seven Campaigns: a Record of Thirty-five Years' Service in the Indian Medical Department in India, China, Egypt, and the Soudan. By JAMES HOWARD THORNTON, C.B, M.B, B.A., Deputy-Surgeon-General, Indian Medical Service (Retired), late Principal Medical Officer, Punjaub Frontier Force. With an Introduction by A. EGMONT HAKE, Author of "The Story of Chinese Gordon," &c., and Editor of "General Gordon's Journals at Khartoum." Illustrated by EDWARD THORNTON, A.R.I.B.A., and KATHERINE MARGARET THORNTON. Westminster: Archibald Constable and Co. 1895.

THIS is an age in which military and naval celebrities have collected and published their experiences and memorials. There has been of late quite an epidemic of this form of literature, beginning with a renewal of interest in everything relating to the greatest military, but not the most benevolent, character of modern times—the first Napoleon. The great literary success of the present time—owing to the easy, fresh, and natural style in which it is written, and the pleasant narrative form and varied character of its author's experiences—is probably the work by Lord Roberts. We are glad to welcome a book by a medical officer of long and distinguished service giving a record of his thirty-five years' service in India, China, Egypt, and the Soudan in connexion with the various campaigns in which he took part, together with the observations and impressions he has derived while serving in those countries. This volume serves to show how interesting and diversified an Indian medical officer's work and experience may be. The author entered as a student at King's College in 1851 and matriculated at the University of London in the same year. After going through the usual course of lectures and hospital attendance for two years he passed his first M.B. examination, and a year later took his degree of B.A. with honours, and in 1855 he became M.R.C.S. of England. He was selected by the Council of King's College Hospital for an appointment of assistant-surgeon on the Bengal medical establishment of the East India Company's service, and pending his reaching the age of twenty-two, before which time he could not be admitted into the service, he passed his final examination for the degree of M.B. Lond. in November, 1855. In March, 1856, he embarked for Calcutta, and the voyage out *viâ* the Cape occupied some three and a half months. He arrived at the mouth of the Hooghly River on June 28th following. It is worth mentioning that he was much struck by the beauty of the river banks and the mansions of Garden Reach scattered at intervals, as well as by the imposing appearance of the city. A closer view, however, soon dispelled these impressions. The sanitary condition of Calcutta is, we know, not all it should be at the present time, but it is certainly better than it was then. After remaining at the General Hospital in that city for about two months he was ordered to the Benares circle for duty. Shortly afterwards the Indian Mutiny commenced, and he was soon plunged into the midst of all the exciting and trying circumstances of that eventful time. This was followed by the war with China and various military expeditions of one sort and another in India, Egypt, and elsewhere, including some of the smaller expeditions involving a good deal of that exposure and hardship which so often accompany our Indian mountain warfare. It would be impossible within the limits of space at our disposal to follow the author in his descriptions of all he saw and did in his diversified career, for these occupy some 359 pages, exclusive of the introduction. The book is well illustrated, and the author in his "memories" has a good deal to recount that is both interesting and instructive, especially to those more or less acquainted with Indian life and travel and desirous of renewing their acquaintance with that country and of tracing some of the changes that have taken place in it since the author first entered the Indian Medical Service. We are glad to notice, by the way, that he speaks highly of the advantages of this service, declaring that these are still, in his opinion, superior to the inducements held out by any other medical service in any part of the world. We wish, however, that he had said more about his medical, as apart from his military, experiences than he has done.

Speaking of the Indian Mutiny Deputy-Surgeon-General Thornton pays a tribute of praise to the admirable conduct of the majority of native domestics in the service of Europeans in India during that crisis. Throughout the volume there are interspersed various practical observations and comments of a medical, sanitary, and administrative character which, if they are of necessity in a work of this kind lightly touched upon and of a somewhat sketchy nature, are, nevertheless, pertinent and useful. For instance, speaking of the climate of Hong-Kong and of the prevalence of malaria in connexion with emanations from disintegrating granite, he adverts to the necessity of leaving newly-erected buildings unoccupied for some time in order to safeguard the inmates against fever—a very necessary precaution where the soil has been excavated to make new foundations. He remarks that he has always regarded the burning of the Summer Palace in the war with the Chinese as a regrettable act of vandalism which destroyed some beautiful buildings and works of art, while it was altogether futile and ineffectual as a punishment for Chinese treachery and cruelty. The chapters dealing with Deputy-Surgeon-General Thornton's experiences in Egypt and at Suakin are distinctly interesting. The absolute immunity of the soldiers of the Indian contingent from enteric fever, from which officers and men of the British force suffered so much, the surroundings and general conditions in both cases being precisely the same, has not, he thinks, ever been satisfactorily explained. In addition to the descriptions of the more purely military part of his experience there are a number of incidents scattered through the volume which serve to enliven its pages. There is, for example, a droll story of an officer having sent in a report to the superintending engineer of the district of some interesting Buddhistic remains he thought he had discovered on the Kashmir road. These remains proved eventually to be the ruins of some bridges which had been erected many years before by an engineer of the district, but had been in great part carried away by the force of hill torrents. The feelings of the superintending engineer when this became clear to him may be readily imagined. We have said enough, however, we hope, to induce our readers to procure and peruse the book for themselves.

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On Gall-stones and Cholelithiasis. By EDWARD MANSFIELD BROCKBANK, M.D. Vict., M.R.C.P. Lond. London: J. J. and A. Churchill. 1896. Pp. 301.

DR. BROCKBANK has in the short compass of this very handy volume produced a model monograph. There was, as he says in the preface, a "want in our literature of a work containing an account of the present condition of our knowledge of the disease." This want can no longer be said to exist. The book consists partly of an admirable collation of the latest work on cholelithiasis in this country and abroad, and partly of original researches by the author into the solvent action of various drugs on gall-stones. After a good short description of the biliary passages, and the different forms of gall-stones and their seats of formation, Dr. Brockbank gives a very lucid account of the chemistry of cholesterin and its most probable origin. He accepts the view that it arises chiefly from the mucous membranes which line the biliary passages, and he brings forward many pieces of evidence to support his contention. "With the cystic duct completely obstructed or obliterated, so that the access of bile to the gall-bladder is impossible, the latter is often found to contain fluid without any trace of bile in it, and which to the naked eye is seen to sparkle with crystals of cholesterin, and calculi in such a sealed-up gall-bladder show evidence of growth from the deposition of pure cholesterin on them." "The cholesterin may be formed as a result of the degeneration of the cell elements of the mucous membrane, but it is also possible that some of the glands which exist in profusion in the wall of the biliary passages may secrete it." While this is the main method of formation, a little cholesterin "is secreted by the liver from the blood, in which it exists already as a product of the metabolism of the tissue of the body, especially of the nervous system." After pointing out that cholesterin is soluble in a solution of bile-salts, but naturally insoluble in the bile acid, Dr. Brockbank sums up against the theory that decomposition of the bile-salts in the biliary system is the cause of the precipitation of cholesterin. "In the present state of our knowledge on the subject the change from a bile-salt to its corresponding acid, or the decomposition of bile acids which is supposed to take place during life in the biliary passages, and which lead to precipitation of the cholesterin held in solution by the bile-salts, are points which must be considered to be not proven."

The author describes fully the action of soaps on cholesterin and the transformation of the solid cholesterin into a viscous body. In the third, fourth, and fifth chapters the methods of evolution of a gall-stone are discussed in detail. "In young people the cast-off epithelial cells (of gall-bladder and ducts) are pale, but in older people and those who have died of tuberculosis, acute febrile affections or heart disease, and always where calculi already exist in the gall-bladder, the cells contain many fat globules and myelin forms. The latter have almost the same appearances as the bodies which I have described as forming when a solution of soap acts on cholesterin. These myelin forms exude or escape from the cells and swim freely in the bile either singly or in clusters. ..... Naunyn considers that the above-mentioned soft, amorphous cholesterin masses are one form of rudimentary gall-stone; and he also describes another form of rudimentary stone which consists of cholesterin in a hard, vitreous, amorphous condition, but which sooner or later shows evidence of crystallisation. ..... I have myself frequently seen both the soft and hard form of amorphous cholesterin occurring with the clusters of myelin forms, but I think that rudimentary calculi can arise in yet another way. I have explained previously how the soap-cholesterin bodies under the action of water lose their compound nature and are broken up, the cholesterin being deposited in the crystalline form. I have very frequently watched the myelin forms in bile from day to day, and have seen how they gradually disappear, and how crystals of cholesterin develop with great rapidity and in great profusion, and the question occurred to my mind as to whether the crystals which form in bile might not be deposited from the myelin forms by a process analogous to that which leads to their formation from the soap-cholesterin bodies." The part played by micro-organisms in the production of gall-stones, and the conditions under which they may be present in the bile are amply detailed. "If the presence of micro-organisms is an exciting cause of the formation of biliary calculi, it probably acts by the bacilli setting up a stone-forming catarrh of the mucous membrane of the biliary passages." The effect of nitrogenous food in increasing the production of bile-salts favours the view that gall-stones tend to occur more readily in people who eat sparingly of nitrogenous compounds.

The clinical and pathological portion of this book is well written. All the ordinary forms and complications of cholelithiasis are graphically set down and the differential diagnosis is clearly given, and a brief record is added of the rare abnormalities that may occur.

Chapter XIII., on the Medical Treatment of Gall-stones, shows judgment and balance. Dr. Brockbank admits that "not one new remedy of any great value has been discovered since Coé's time (1750)," and then proceeds to show how the old remedies may help, and in some cases even cure, the patient. He relates some experiments to test the solvent action of alkalies on gall-stones. "I found that the alkaline salts which occur in the various mineral springs, even when in strong solution in water, have not the slightest solvent action on a gall-stone. I kept gall-stones in solutions of the salts of various strengths, maintained at the body temperature, for periods of time varying from two to four weeks without there being any loss in the weight of the calculi at the end of the time." Various means were used for producing movements of the stones in the fluids, to imitate as far as possible the movements of the gall-bladder, but with no better result. And yet for various reasons the good results of a course of Carlsbad waters are absolutely beyond question. The effect of large doses of oil are also discussed. Chapters XIV. and XV. are devoted to the surgical treatment of gall-stones.

The volume is well worth careful reading, and gives a good account of our present knowledge of the subject.

A Practical Treatise on Mechanical Dentistry. By JOSEPH RICHARDSON. Seventh edition, revised, enlarged, and edited by GEORGE WARREN. With 692 Illustrations. London: J. and A. Churchill. 1897. Pp. 670. Price 22*s*.

THIS book is so well known that anything like a systematic review is hardly called for. That a seventh edition has been reached is alone sufficient evidence of its worth as a text-book on mechanical dentistry. The necessary knowledge and skill for the manufacture of dentures, crowns, bridges, &c., can only be properly obtained by constant practice, and it goes without saying that the mere reading of a text-book is not sufficient to make a person proficient in dental mechanics, but when reading is carried out in conjunction with actual practical work, then a book of this character becomes extremely valuable. Mr. Warren, who has edited this edition, is to be congratulated upon his work, for he has included all the most recent improvements, this being more especially noticeable in the chapters dealing with appliances for the Correction of Dental Irregularities and Crown and Bridge Work, while he has also found room for an excellent little chapter on Electricity and its Application in Dental Mechanics. The chapters on the Restoration of Palate Defects and Fractures of the Maxilla and Mandible should prove useful to the general medical practitioner. The latter subject is very fully dealt with, only, curiously enough

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we find no mention of Hammond's splint, a method most valuable in the treatment of fractured jaws.

JOURNALS AND REVIEWS.

THE *Journal of Anatomy and Physiology*. Conducted by Sir WILLIAM TURNER, F.R.S., and J. G. M'KENDRICK, M.D. Aberd., F.R.S. Vol. XXXI. New Series, Vol. XI. Part 4. July, 1897. London: Charles Griffin and Co. Price 6*s*. —The death of Sir George Humphry, who was one of the founders of this journal, has led to the reorganisation of the editorial staff, and in future numbers the editors whose names appear upon the present title-page will be joined by Professor Alexander Macalister, of Cambridge, Professor D. J. Cunningham, of Dublin, and Professor G. D. Thane, of London. The present part contains the following articles: 1. On the Action of Infused Beverages on Peptic and Pancreatic Digestion, by James W. Fraser, M.D. Edin. Dr. Fraser finds that infused beverages, such as tea, coffee, and cocoa, as a rule retard peptic and possibly tryptic digestion of albuminoid food stuffs as compared with the rate of digestion with water as the beverage. There are, however, certain exceptions. Tea and coffee, for example, do not retard the digestion of eggs and salted meats. The active agent in the retardation is chiefly tannic acid in the case of tea and coffee, but in the case of cocoa it is due to the suspended solids. Numerous elaborate tables are given. 2. On the Existence of a Sterno-coracoidal Articulation in a Fœtal Marsupial, by R. Broom, M.D. Glasg. 3. Notes on the Duodenum and the Pylorus, by Thomas Dwight, chiefly dealing with the position, size, and form of these parts as deduced from casts. 4. On Some Points in Comparative Myological Nomenclature, by Professor Bertram, C. A. Windle, of Mason College, Birmingham, and F. G. Parsons, F.R.C.S. Eng., of St. Thomas's Hospital. 5. A Case of an Additional Presacral Vertebra, by Dr. R. J. Gladstone. 6. On the Structure of Cross-striated Muscle and a Suggestion as to the Nature of its Contraction, by W. M'Dougall. In this article the wing muscles of insects and the skeletal muscles of the cray fish are chiefly considered. 7. The Rolandic and Calcarine Fissures: a Study of the Growing Cortex of the Cerebrum, by D. J. Cunningham, F.R.S. 8. Case of Anomalous Kidney and Ureter, by T. W. P. Lawrence. 9. Notes on the Myology of a Negro, by Thomas H. Bryce, M.B. Edin., of Queen Margaret College, Glasgow. 10. Replies to Questions issued by the Anatomical Society of Great Britain and Ireland, by William J. Alexander, M.A. 11. Note on the Dissection of a Third Negro, by Sir William Turner. 12. An Experimental Research upon Cerebro-Cortical, Afferent, and Efferent Tracks, by David Ferrier, F.R.S., and W. A. Turner, M.D. Edin., of King's College. This number contains the completion of the index to Vols. XXI. to XXX.

The *Archives de Médecine Navale et Coloniale* for June contain several interesting contributions, but among them there is nothing *hors ligne*, as our neighbours would say. Dr. Bartet of the *Étoile* leads off with some observations on an infectious disease which he met with at Jeddah in 1895. By the light of subsequent experience he is inclined to think it was Indian relapsing fever, but at the time he believed himself confronted by a new disorder. The paper illustrates the difficulty that is sometimes felt by colonial and naval medical officers in arriving at a correct diagnosis for lack of access to reference libraries. A report on disinfection by means of chloroformol follows; and then, under the head of Practical Surgery, there is a useful paper by Dr. Lassabatie on the necessity for a uniform system of colouration for antiseptic solutions, so that the attendants who are liable to frequent changes of station may not be led into error. According to a tabular statement supplied by the author each naval hospital in France would seem to have its own special colour. Dr. Lassabatie recommends that solutions of corrosive sublimate, carbolic acid, and boracic acid, which are the three microbicide substances generally employed, should be tinted respectively blue, red, and yellow, sterilised water, which is becoming more and more popular every day, alone remaining colourless. Amongst the other papers there is one (illustrated) by Dr. Hercouet on the little known Gilbert Archipelago, which extends on either side of the equator about the centre of Micronesia. These islets are very poor and unproductive, but the writer regrets that his Government failed to establish a protectorate over them when the opportunity offered some time ago. As matters now stand the neighbouring British plantations in Queensland alone derive benefit from the labour of the population, which is estimated at 41,000 persons. The number also contains Notes on a case of Complete Dislocation of the Knee by Muscular Action; a Short Account of a Cure of Snake-bite by means of Dr. Calmette's Serum; a Description of the Effects of Sea-Water on Cast Iron after Prolonged Immersion, by Apothecary Le Naour; and the conclusion of Dr. Neiret's paper on Medical Matters in the Island of Mayotta.

Appleton's Popular Science Monthly. July, 1897.—This number is full of interesting papers. Dr. Shufeldt contributes an attractive paper on "Some Facts about Wasps and Bees." Under the title, "Let us Therewith be Content," Ellen Coit Elliott says some sensible things about "women's sphere." To the questions "Are scorpions matricides and suicides?" Dr. Juan Vilaro replies decidedly in the negative in the first instance and in the affirmative in the second. Professor Charles Ernest Pellew continues his interesting and amusing "History of Alcohol" He comments upon the disastrous results of gin-drinking occasioned by the encouragement given to its manufacture early in William and Mary's reign, when London streets abounded with gin-shops, and one could find placards on them reading "Drunk for a penny; Dead drunk for twopence; Clean straw for nothing"; &c. As is well known, this led to the passing of the famous gin law in 1736, but this did not completely eradicate the mischief, since apothecaries took to selling the stuff duly coloured in small vials, labeled "Colic Water," "Makeshift," and "Ladies' Delight." The writer concludes that the world has at last found out what intoxication means, and the disastrous effects of inebriety have taught a practical lesson which we venture to think has produced a far more salutary result than the fierce and violent, but well-meant, denunciations of teetotal enthusiasts.

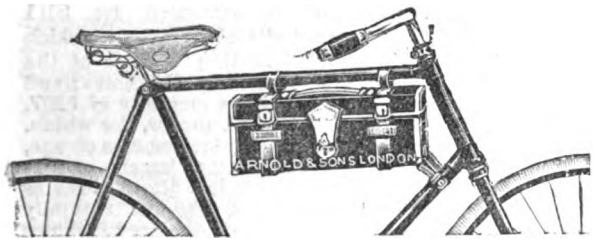
The *Dublin Journal of Medical Science* for July leads off with an interesting paper by Mr. C. R. C. Tichborne on the Dissemination of Micro-Organisms and the Best Method of Destroying Germ Emanations from Sewer Gas. After referring to the two methods of germ transmission—namely, the "raft" method, where germs are borne on solid particles floating in the air, as in the desquamation of scarlet fever, and the method in which they are distributed by bubbles bursting on the surface of sewage—he lays down the proposition that sewage ought to be disinfected from the top by a mixture of antiseptics having a lower specific gravity than sewage, and the mixture he advises is made up of crude phenol 1 part, naphthalene ½ a part, and light coal-tar oil 3 parts. When mixed with sewage the tar oils will separate, forming a germicidal pellicle on the surface and trapping any germs sent up by bubbles, while the rest of the mixture will sink through the sewage, purifying it on its way. Dr. A. E. Boyd writes on the Report of the Vaccination Commission. He summarises the facts and conclusions arrived at, and he considers that the weakest part of their recommendations is that regarding revaccination, which he thinks might be made compulsory on school children.

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New Inventions.

NEW CYCLE MIDWIFERY BAG.

I HAVE suggested this bag to Messrs. Arnold and Sons, West Smithfield, as I have been unable to find a suitable one in which to carry instruments, &c., when cycling. Although I have planned it for a cyclist's midwifery bag, to be easily adjusted to the cycle even in the dark, it can, however, be



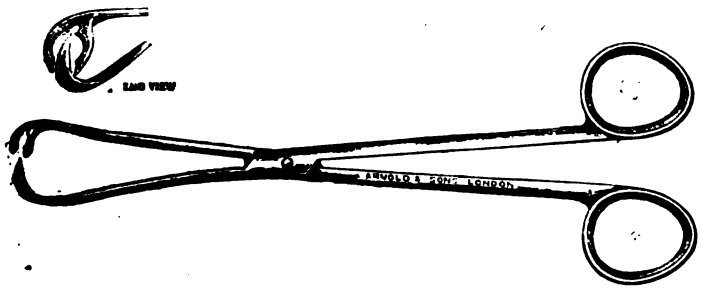
carried in the hand, as the straps are all removeable. It also forms a good useful all-round bag for the practitioner whether cyclist or not. It is of light weight and is made of stiffened water-proofed mail canvas bound with leather. It is carried on the frame of the cycle suspended from the horizontal tube by two detachable leather straps; these are passed through stout india-rubber rings before being attached to the bag in order to safeguard against concussion when passing over rough roads, and as they encircle the bag they give support to its bottom. Another detachable leather strap is attached at one end of the bag near the bottom and passed round the framework to prevent swinging. The bag is fitted with lock and key and a flat leather handle for carrying. Inside it is lined, and as the top is thickly padded and well overlaps the sides, the bag is when closed quite dust-tight. Near the bottom are six lappets of material fastened to the end of the bag. These are to be placed between the instruments. The bag, whilst holding all the usual obstetric instruments, has room for a pocket midwifery case, Higginson's syringe in case, hypodermic syringe in case, and Barnes's bags.

I am much pleased with the manner in which Messrs. Arnold and Sons have carried out my suggestions. The bag is neat, well made, strong, and serviceable, and I have found no harm come to either instruments or bottles, even over rough country roads. It is not in the way when riding, and even when filled its weight is hardly noticeable.

Bedford. JAMES C. CLARK, L.R.C.P. Edin., &c.

A NEW TONSIL FORCEPS.

THIS forceps is designed for use with the bistoury or sickle in removing the tonsils. It consists of a male barbless,



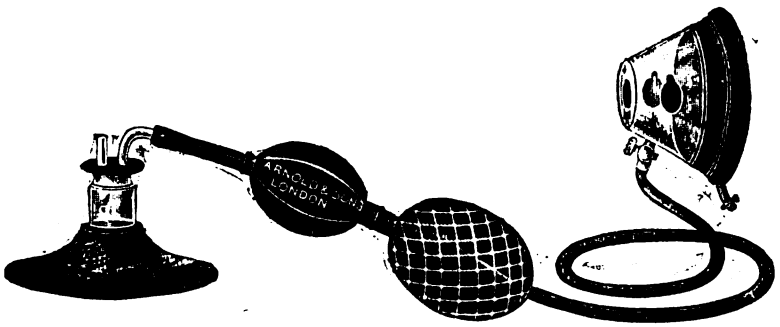
spear-shaped blade, concave below and with cutting edges, fitting into a female divided incurved blade the barbs of which are placed within the fenestrum. Its length is five and a quarter inches, and its end measurement is five-eighths of an inch. Two sizes are made. I claim for it (1) a gripping power greater than that of the forked or toothed volsellum, and that it does not tear through; (2) efficiency in grasping and keeping taut the pedicle of any enlarged growth in a roomy cavity; (3) there is no bar of arrest to its progress, and by keeping the blade of the bistoury close to the convexity of the closed end, there is no danger of wounding other structures or notching the knife, and the growth can be rapidly excised; (4) it can be used either side, and is of service when the guillotine (of which three sizes should always be kept) is objected to; and (5) with a Wingrave's gag and some eucaine both assistant and anæsthetics are unnecessary, and the operation of tonsillotomy is rendered painless and efficient by the use of this instrument and the bistoury. The instrument is made by Messrs. Arnold and Sons, West Smithfield, London.

Ealing, W. HERBERT A. SMITH, M.D. Durh.

A NEW APPARATUS FOR ADMINISTERING ANÆSTHETICS AND OTHER VOLATILE VAPOURS.

THE accompanying illustrations represent several forms of apparatus, designed by Professor Hobday, of the Royal Veterinary College, for the administration of anæsthetics and other volatile vapours, and shown before the members of the Society of Anæsthetists at their meeting in March last. Before being introduced into human practice they were thoroughly and successfully tested on a large number of veterinary patients (including over 400 dogs), in most cases for severe and varied operations, during a period of about two years.

FIG. 1.



Shows the position of the bellows by which a current of air is *sucked* over the surface of the anæsthetic in the bottle, the mixed vapour being passed on into the mask.

The principle of the apparatus in Fig. 1 is to *suck* a current of air over the surface of the anæsthetic and to force a diluted vapour into the mask which is placed on the patient's face; this has been found to work successfully in the case of children, parturition cases, and for prolonged operations where a light degree of anæsthesia is required to be maintained, anæsthesia taking place in most cases quickly and without struggling.

In Fig. 2 a current of air is *forced* over the surface of the anæsthetic by means of the bellows, the size of the bottle and amount of surface exposed, together with the pressure exerted on the bellows, influencing the strength of the vapour; and in Fig. 3, which is designed with the idea of saving the trouble of pumping, the same idea (that of forcing a current of air over the anæsthetic) is maintained. In this latter case the pressure exerted by the compressed gas is regulated by a valve on the end of the cylinder, and the amount of vapour admitted can be adjusted as delicately as required by the aid of the tap on the lower part of the mask; one great advantage of this method is that the anæsthetist has both hands free to manipulate the mask. The cylinder method has been tested with both

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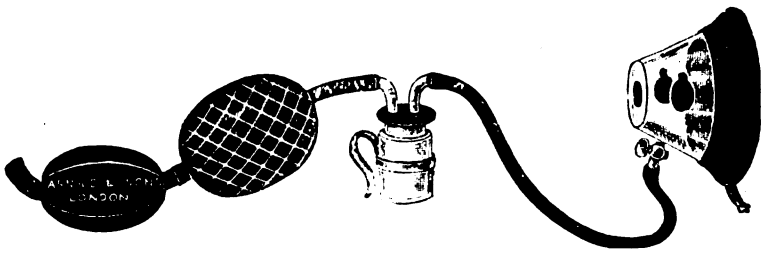
pressed air and oxygen, and the anæsthetics used in the bottle have been chloroform, ether, and mixtures of these anæsthetics with alcohol. It has also been used with a Junker's bottle when a more concentrated vapour was required.

It is needless to say that the strength of the vapour given with Figs. 2 and 3 is greater than that given by Fig. 1.

The chief advantages claimed are: 1. That the chances of overdose are minimised, the amount of anæsthetic used being exceedingly small (especially with the apparatus shown in Fig. 1) and only just sufficient to produce and maintain anæsthesia. This pattern is of especial value for midwifery cases where the practitioner often has to trust the administration of the anæsthetic to an unskilled person under his instructions. In a temperature of 60° F., with six drachms in the bottle, the vapour soaked into the mask contains one part of chloroform well mixed with 4200 parts of air. In the dog, on many occasions, unsuccessful attempts were made to destroy the animal by forcing the bellows as hard as possible for over half an hour, no dangerous symptoms even being manifested. 2. That the supply and strength of the vapour is much more regular and constant when taken from the surface than when proceeding from a current of air forced through an ever-diminishing quantity of fluid such as chloroform. 3. That the anæsthetic is less likely to become oxidised or otherwise changed by the air passing over the surface than if it was constantly passing through it. 4. That there is no fear whatever of irritant or rubefacient effects upon the face of the patient. 5. That by administering the anæsthetic so gradually there is no sensation of choking or other objectionable feeling on the part of the patient.

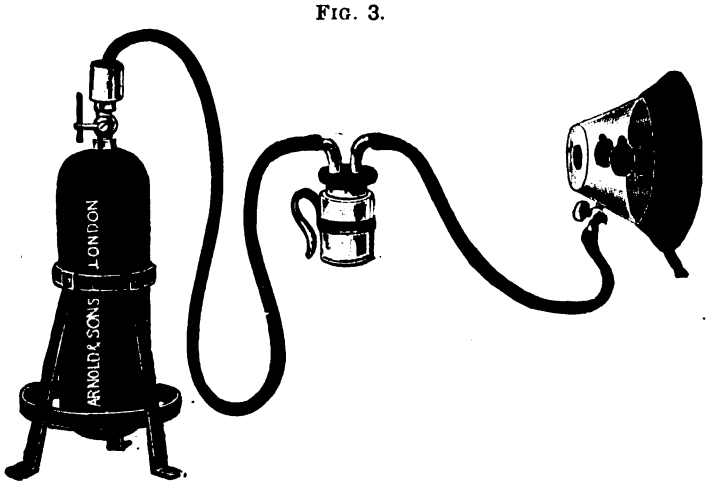
The apparatus can be obtained from Messrs. Arnold and Sons, West Smithfield, E.C. The cylinders can be supplied in any size, from one containing only a few cubic feet to those containing 100 cubic feet or more, the cost of the compressed air being merely nominal.

FIG. 2.



Shows the arrangement of the bellows whereby a current of air is *forced* over the surface of the anæsthetic in the bottle, the mixed vapour being driven into the mask.

FIG. 3.



Shows the arrangement whereby air, oxygen, or other compressed gas contained in the cylinder is made to pass over the surface of the anæsthetic in the bottle without any of the trouble of pumping; the pressure being adjusted by a valve on the cylinder, and the amount of mixed vapour admitted into the mask absolutely controlled by a tap on the latter.

ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH OF LIVERPOOL.

DR. HOPE'S Annual Report, recently issued, shows that the area of the city of Liverpool is now twenty and a half square miles, with an estimated population of 641,063. The chief causes of mortality are stated to be zymotic diseases, which accounted for 2311 deaths; constitutional diseases, to which were due 1809 deaths; diseases of the nervous system, causing 1492 deaths; and lung diseases, with a mortality of 3207. Diarrhœa caused 851 deaths, for which, among infants under three months of age, improper feeding was largely responsible, the deaths being fifteen times as numerous as among children naturally fed. The decrease of small-pox is shown by the fact that during the decade 1866–75 the deaths were 236 annually, against 10 annually during the decade 1886–95 The actual death-rate from all forms of tuberculous disease has similarly decreased from 4·3 to 2·9 per 1000 of the population. As regards rabies, the effect of the muzzling order has been the destruction since the year 1890 of 14,757 dogs, mostly worthless and diseased. The number of lodging-houses, of which at the end of the year 1896 there were 635 on the register, with accommodation for 13,585 lodgers, shows a decrease, due to the smaller houses being replaced by larger ones affording better accommodation. The sub-let houses on the register numbered 17,708 and the inspectors charged with their supervision made upwards of 83,000 visits. There were 5705 inspections of canal boats. The scavenging department removed 282,296 tons of refuse from 62,200 ashpits. The report concludes with the remark that "the diminishing rate of mortality effected in past years has been continued in almost every district of the city, and indicates a great diminution in the amount of sickness of a serious character and consequently suffering and loss." The report also deals with the city burial grounds. Interments still take place in eleven burial grounds within the city. As to the effect of these interments on sanitary conditions, Dr. Hope quotes a report of an inspector of the city engineer's department, in which he states that "a large quantity of black jelly was found adhering to the side of the sewer nearest the necropolis; the other side was of the natural colour of the rock. When this material was touched or pricked it emitted a frightful stench. The opinion of the other men and myself was that it came from the burial ground. One of the men at work was taken seriously ill and died while the work was in progress." The medical officer advocates the closing of all these burial grounds.

REFUSING TO DISINFECT AT BARRY.—On July 12th, at the Barry police-court, the agent of a house in which a case of small-pox had occurred was summoned by the Barry Urban District Council for refusing to disinfect the premises. The inspector stated that he served defendant with notice to disinfect on the 23rd ult, but he refused to comply. The magistrates fined the defendent 8*s*., the cost of the work done, and ordered him to pay the costs of the case.

THE CASE OF LEPROSY AT UPWEY, NEAR DORCHESTER.—Mr. Joseph Chamberlain, M.P., has interested himself in the case of leprosy at Upwey. The boy came with his parents from Singapore, where he is supposed to have contracted the disease. Mr. Chamberlain sent an expert to examine the boy, and on his report the Colonial Department has granted a pension of £15 to the unfortunate lad.

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THE LANCET.

LONDON: SATURDAY, JULY 24, 1897.

THE Royal College of Physicians of London has enjoyed during its long career considerable Court favour. Instituted by HENRY VIII. "with a view to the improvement and more orderly exercise of the art of physic and the repression of irregular, unlearned, and incompetent practitioners of that faculty," the first President of the College appointed by the Royal Founder was his own body-physician and personal friend, THOMAS LINACRE. The association of the Court with the College, thus initiated, has been ratified many times in a striking manner by different sovereigns, as all can read by consulting the earlier biographical sketches in Dr. MUNK'S "Roll Call of the Royal College of Physicians"; and has now received its latest and most interesting confirmation by the gracious action of H.R.H. the PRINCE OF WALES in permitting himself to be enrolled as an Honorary Fellow. It had been an open secret in medical circles for some weeks that His Royal Highness might soon be expected to become a member of our profession by accepting a diploma from the College, and on Monday last the expected event became an accomplished fact when the PRINCE was admitted at Marlborough House to the Honorary Fellowship of the College in the presence of the President, Censors, Treasurer, and Registrar of the ancient and dignified corporation.

That members of the medical profession will regard this occurrence in more ways than one we have, however, reason to know, so that a few words explanatory of the significance of the event will not, we trust, be out of place. To some the granting of a purely honorary medical title will seem ridiculous, on whomsoever it is bestowed, if the recipient of the distinction has had no medical training and boasts no medical knowledge. These will hold, and with perfect loyalty in their freedom of thought, that, inasmuch as His Royal Highness cannot possibly know the elements of medicine, to make him a *socius compar* of the learned Fellows of the Royal College of Physicians of London is an idle and unsuitable compliment. The PRINCE OF WALES, they may say, is a practical soldier and expert sailor, so that there is a fitness about his Service titles which does not pertain in the case of his medical diploma. This view, although correct in a sense, gives a false picture of His Royal Highness's position. He is, it is true, a well-instructed military man, and although it is only the ritual of the military life with which he is familiar he is in possession of knowledge equipping him for high station in the Army, while hereditary bent and the necessary environment of the Courts of Europe have all combined to make this knowledge simple for him to comprehend and easy for him to apply. In a similar manner the PRINCE OF WALES is prepared for great offices in the Navy. We do not imply that he could command our fleet, but we more than imply that he could distinguish between good and bad naval policy and between efficient and inefficient nautical measures. But the facts—and this is the point—that the *bâton* of the Field Marshal and the uniform of the Admiral are not without their appropriateness to His Royal Highness's individuality, though true in the main, are quite by-the-bye. Nobody supposes that in actual war the PRINCE OF WALES could, if he were permitted to make the attempt, command our forces by land or sea. Everyone knows—and he as certainly as the rest of us—that he would be unable to meet the responsibilities, exactly as he would be unable to give a name to a nervous disease. He may know more of the elements of strategy than of physic, but his position in a campaign against disease is comparable for all practical purposes to the one he would occupy against an invading army.

The right way to regard the honorary titles of the PRINCE OF WALES is so clear that we are surprised to find that there should be any obscurity in the matter. He is the representative of HER MAJESTY THE QUEEN, who is the Fountain of Honour, and as such it is germane to his position that he should enjoy high official status in all our institutions—in our great departments and no less in our professional corporations. The Army and Navy fill places in our Constitution which no profession aspires to fill, but the professions have a claim upon the personal attention of the Crown which cannot be denied, and which the PRINCE OF WALES has always shown himself prompt to admit. The PRINCE OF WALES has done more than cement an historic friendship between the College and the Crown by his acceptance of an honorary diploma—much more. In his compliment to the College may be seen a pleasing recognition of the whole profession of medicine. We may interpret the event as meaning that the Heir-apparent, desiring to associate himself with all that is best, all that is most useful, and all that is most healthily progressive in the country, has designed to acknowledge the place of medicine in his comprehensive programme by consenting to become a Fellow of the Royal College of Physicians of London.

WE have striven to keep our readers *au courant* with the rise and progress of the epidemic of plague that has prevailed in certain parts of India, and we have also frequently alluded to the disasters by which that country has been afflicted in the shape of famine and quite recently earthquake. There has also been, in addition to the evils of pestilence and famine, a spirit of unrest among the natives which has manifested itself at Calcutta and at Poona. There is no evidence to prove that these two occurrences were directly connected with one another. The disturbances at Chitpur and Calcutta, of a kind not infrequent in India, arose from politico-religious causes, and the tragedies at Poona are supposed to have been connected with, and attributable to, the unpopularity of the measures adopted, and successfully adopted, for the repression of plague. The feeling against the authorities in this respect seems to have been greatly excited and fomented by the disaffected Mahratta press. All the evidence points to the murderous outrages at Poona having been the outcome of

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a political conspiracy which had been long incubating, and in which a great many natives were involved, and quite probably the native police also. The opposition to the plague suppression measures and the false statements that had been spread abroad in regard to them simply afforded an occasion, however, for letting loose the passions of disaffected people. Still, looked at from any point of view, there is evidence of a spirit of unrest among portions of the native communities in India which cannot be entirely disregarded, although we do not in the least believe that there is any feeling of enmity to, or discontent with, our rule in India among the native population generally. It is easy to understand, of course, that there must be a conflict, whenever they come together, between Eastern ignorance, caste-traditions, and prejudices, and the methods adopted by modern Western civilisation—however carefully and considerately carried out—in regard to sanitation and the repression of epidemic disease. The natives of India are not, as we know, from examples in our own country, peculiar in their opposition and resistance to hygienic measures. But we are glad to learn that the recent crimes in Poona probably had not their roots altogether in this soil of enmity and prejudice, but in other sources of disaffection of a political kind.

The official and medical reports and modern literature regarding plague at Hong-Kong and India are becoming so voluminous that it is not easy to keep pace with them. We have before us an excellent report on the Prevalence of Bubonic Plague in the Colony of Hong-Kong during the years 1895 and 1896, by J. M. ATKINSON, M.B. Lond., D.P.H. Camb., Acting Colonial Surgeon; the report of the Commission sent by the Egyptian Government to Bombay to study plague, with a capital descriptive introduction from the standpoint of the practical sanitarian, by Dr. J. G. ROGERS PASHA, the Director-General of the Sanitary Department at Cairo, followed by observations of a scientific and technical kind on the nature and propagation of the plague, its cause, with the general symptoms and the clinical, pathological, and bacteriological features of the three forms of the disease encountered, by Dr. H. BITTER, the Director of the Institute of Hygiene, Cairo; and the Experiences and Lessons of the Bombay Plague, by THOMAS BLANEY, reprinted from the *Times of India*, dealing with the scourge from an epidemiological and public health point of view in relation to the three stages of its course as seen in Bombay—its initial or spreading stage, its second or stage of general spread, and its third or declining stage, as well as other papers and pamphlets. We have only time at present to glance at these sufficiently to extract and indicate their titles and nature. A Reuter's telegram from Berlin giving the results of the Commission under the direction of Professor KOCH has also just been published. Professor KOCH'S report states that the plague bacillus outside the human body or those of certain animals has very brief vitality. The duration of the life of the bacillus was found to be from eight to ten days at the most. The bacilli do not develop without the influence of atmospheric oxygen. Experiments on animals showed various results. Rats were found to be in the highest degree susceptible, and to be spreading the plague germs and communicating them to human beings. The Commission observed only isolated cases of illness among people camping in the open, while among those who had remained indoors the epidemic continued its ravages without abatement. Professor HAFFKINE'S system of inoculation, which was applied to 1400 patients, showed undoubted protective results, although a number of the patients were, it is stated, taken ill in consequence of the inoculation.

IT is a source of peculiar satisfaction to ourselves that greater attention is now paid to the sanitary condition of the river at Henley during the regatta week. There is, however, still room for improvement; but we believe—and there is visual evidence to that effect—that the worst sources of evil are, as far as possible, removed. It was during the regatta in 1886 that a LANCET Commission[1] conducted a practical inquiry on the spot, and the results of its investigations were by no means assuring. They led, however, to the framing of by-laws, which received the Royal assent in 1887, to the enforcement of which we attribute the improved appearance of the river now evident to everybody. These by-laws were framed to provide against the pollution of the river by sewage and other refuse occasioned by the sojourn of house-boats extending in an unbroken chain for almost a mile in length along the course. It must not be forgotten that the regatta at Henley attracts visitors from almost all parts of the world, and this may occur at a time when cholera is rampant in some parts; and the result of choleraic dejecta being thrown into the river might be the means of disseminating a disastrous epidemic amongst London water consumers. The intakes of the companies supplying London are not a very great distance below the Henley Reach, and at the annual regatta there are hundreds of persons housed on the river whose sanitary wants must of necessity be attended to. The Conservancy apparently kept a sharp look-out on the householders on the bank to prevent them from fouling the river in an open way, but it was obviously absurd and unfair to enforce this step when people living in house-boats for over a week on the spot were considered exempt from a similar enforcement. As we have said, the condition of the river, judging from last week's regatta, is still not entirely free from reproach, and we do not see why the regulations should not be made so rigorous as to stop all unnecessary disposal of refuse into the river. The nooks all along the course were full of pieces of bread, cucumber, tomato, disintegrated salads, and other débris which had at one time been succulent. If people throw these things into the river, wrongly regarding it as a proper receptacle for all kinds of rubbish, they will cast anything else into it without the slightest attempt at discrimination. And we fear it is possible that even human excreta are thus disposed of in contravention of those by-laws which our own inquiries aided in getting framed and enforced. One excellent plan which has been adopted is the attendance of a scavenging barge to collect the slops and dejecta early in the morning and to dispose of them on a comparatively remote piece of ground.

[1] THE LANCET Commission on Henley Regatta, THE LANCET, vol. i., 1886, p. 142; THE LANCET, vol. ii., 1886, p. 175; THE LANCET, vol. i., 1887, pp. 1254 and 1294; THE LANCET, vol. ii., 1887, pp. 28 and 84; THE LANCET, vol. ii., 1888, p. 84.

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We should like to see this regulation supplemented by an an arrangement for collecting the innumerable floating bottles and items of waste food which accumulate in enormous quantities in the various havens along the course. These are a source of nuisance, not perhaps of the same intensity as human dejecta, but still easily removable. At any rate, the decomposing vegetable matters could be collected without much trouble, since, as a rule, they are located by the eddies of the stream. Such refuse certainly detracts from the beauty of the river. A similar complaint holds good with regard to racecourses and picnic grounds such as Epping Forest, where the visitors, utterly regardless of the comfort of others, cast corks, empty bottles, papers, and the fragments of an abandoned lunch in all directions. Such a disregard for clean and tidy manners may not be so serious a matter as the actual befoulment of a river with human excreta, but in one sense what is displeasing to the eye is objectionable equally with what is offensive to the nose. We do not know whether it is possible to trace the effects of the Henley week upon the purity of the water running down to the intakes below, but the rate of flow being known, and consequently the approximate time when such water is drawn by the companies, it would be interesting to observe the differences, if any, in regard to the quality of the water supplied to the metropolis during that period. It may reasonably be anticipated that a material increase would take place in the amounts of organic carbon and nitrogen, and *pari passu* the brown colour would exist in much greater relation to the blue, which is the normal colour of pure water.

THE Council of the Royal College of Surgeons of England at its last meeting repeated the expression of its inability to question the legality of the conduct of those of its Fellows or Members who accept the posts of medical officers of Medical Aid Associations and to endorse the refusal of any Fellow or Member to meet in consultation (particularly in urgent cases) registered practitioners if acting in conformity with their legal rights. This *non possumus* position of the College must be taken into serious consideration by the profession. The College is the disciplinary authority of the greatest number of the practitioners of the country. It has charge, not only of the major morals of its members, but, in a sense, of those minor professional morals which Sir JOHN SIMON said the General Medical Council could not undertake to regulate. It has powers of remonstrance and censure which in a large number of cases it is quite sufficient to use without proceeding to extremities. But, even so, it does not see its way to question the legality of conduct which on a large scale is lowering the public estimate of medical science and medical service. When medical men undertake the care of patients in such numbers as are inconsistent with due attention to individual cases, and when crowds of patients are gathered into monster associations by a system of touting which sweeps in thousands who are quite able to pay the ordinary charges of medical men, and which is grossly unfair to private medical men, we might have thought that a case had arisen for the exercise of the minor degrees of discipline of the Royal College of Surgeons and of its sister corporations. But the Council of the College has decided otherwise, and declares *non possumus*.

We need not suppose that the Council was unanimous in this finding. It may well be that opinion was divided on the subject, and that a little more importunity or the presentation of particular facts in some given case may suffice to move the majority of the Council to more activity and to more courage in the assertion of its disciplinary powers, given for the very purpose of upholding the methods of the profession and the essential conditions of honourable and successful practice. Another very important fact for the profession to notice, and especially those members of it who live in places where the working of medical aid associations and other such-like combinations do so much harm, is that the Royal College of Surgeons is only acting in this matter like all the other medical authorities. They all with one consent make excuse of one sort or another for doing nothing. The Royal College of Physicians of Ireland has expressed a pious opinion that its Members and Licentiates ought not to accept office in such associations. But it has gone no further. The reasons for such inaction and timidity are subjects for speculation. Perhaps the bodies which express them are acting on legal advice, though it is certain that if lawyers saw their profession degraded by such methods and systems they would undoubtedly find means within the domestic courts of their profession to check and control them. There have been some very gross cases of "touting" by associations which clearly violated all the rules that medical men in their personal capacity observe towards each other as well as the spirit and letter of the by-laws of the Colleges touching unprofessional methods of practice. One chief part of the explanation is an indisposition, as it were, on the part of the corporations to undergo the trouble and the expense of using their disciplinary powers, and a desire to throw such trouble and expense on the General Medical Council, which has no mandate to deal with professional misconduct short of that which is "infamous," and which has only one punishment—that of removal from the Register. Clearly the framers of the Medical Act in so restricting the disciplinary powers of the General Medical Council never contemplated relieving the qualifying bodies of their proper duties towards their members.

All this is very obvious. The situation is serious. The profession is left without any help from its authorities, and medical officers of medical aid associations may well retort on their accusers and say: "You see we are doing nothing that the bodies which gave us our diplomas disapprove or find illegal." It may be said that there is no more to be done. Let things drift, and let each man do what seems right in his own eyes. We do not take that view. We would urge the profession to organise itself in every important town and centre, and to assert itself. Combination in the trade-union form of "striking" is not, perhaps, to be commended. But there is such a thing as the public opinion of the profession, and we have great faith in that if temperately expressed and asserted. We are quite at one with the Royal College of Surgeons in thinking that, in urgent cases at least, consultation should not be denied. But, short of the extreme course of denying consultation, much may be done

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to make the medical officers of these associations feel that they are acting selfishly and contrary to the interests alike of the public and the profession. The profession must save itself and show itself superior to the corporations, which act too much as if they had no interest in the profession further than to submit students to examination and to receive their fees. The profession will err deeply if it depends on either the General Medical Council or the medical corporations. It must in every district assert itself in strictly professional ways. One way that has, perhaps, not been tried quite so much as it should have been is that of treating directly with the leaders of the associations which are acting with such a high hand and with so little apparent generosity towards the profession. We do not share in all the sentiments that are expressed about working under a working-man's committee. Working men are not naturally ungenerous or ill-disposed towards the profession. They are amenable to reason and to argument. And we should advise in such centres as Portsmouth, Norwich, and Beckenham further attempts to treat directly with the associations themselves.

Annotations.

"Ne quid nimis."

UNHEALTHY PAUPER CHILDREN.

WE have already referred at some length to the important subject of the disposal of pauper children suffering from ophthalmia, ringworm, and other contagious diseases, and such as are suffering from some mental or bodily defect.[1] An order was issued on April 2nd, 1897, by the Local Government Board placing the several classes of pauper children referred to under the care of the Metropolitan Asylums Board. The last-named authority has set to work with laudable promptitude, and has just received a report from a special committee appointed for that purpose. Considerable difficulty has been experienced in arriving at approximate numbers of the several classes for which the Board will have to provide, but the urgent necessity for some change of the kind now taking place is apparent from the figures given, which for obvious reasons are probably under- rather than over-estimated. At the present time it is reckoned that provision will have to be made for about 800 cases of ophthalmia, 400 cases of ringworm and contagious diseases of the skin, approximately 360 children showing some mental or physical defect, about 150 children remanded under a magistrate's order (Industrial Schools Act, 1866), and an unknown number of children requiring "convalescent" treatment—a total, excluding the latter, which amounts to 1710 children. It is proposed to take over and utilise existing institutions as far as possible, with the important provision that the existing cubic space shall be revised. We notice with pleasure that it is proposed to deal with mentally and physically deficient children quite apart from the others, and under the care of foster-mothers, in batches of about eight each. A special point is also wisely made in the report that in all cases such education as these several classes are capable of receiving shall be given to them; moreover they shall also be under medical treatment. We notice with some regret, on the other hand, that no recommendation is made as to the appointment of any medical inspector. Without competent medical inspectors, of whom one might perhaps be a woman, this scheme, which otherwise promises so well, will fail as surely as did the old system.

[1] THE LANCET, May 1st and 8th, 1897.

EGYPTIAN ANATOMICAL NOMENCLATURE.

M. VICTOR LORET, of Lyons, has recently succeeded in determining the true signification of two anatomical terms used in the most celebrated of ancient Egyptian medical papyri—that which is known by the name of its owner, Dr. Ebers. M. Loret has been enabled to succeed because of the large number of new texts of Egyptian writings, both upon monuments and manuscripts, that are now annually published. These two terms, which are among the very few in the papyrus which were still imperfectly understood, are those for groin and perineum. The former word had been recognised by Professor Stern in his "Glossary of the Ebers Papyrus," but he assigned no reason for its meaning, and the matter had been deemed unproven. M. Loret quotes some twelve texts corroborative of the conclusion and the matter is now beyond doubt. The other hieroglyphs denoting perineum have been deciphered by means of the contents of a magical papyrus in the Vatican, recently edited by Dr. Erman. This manuscript gives a series of incantation formulæ appertaining to every member and portion of the body, commencing with the head and terminating with the feet, the order being strictly preserved. The title for the perineum is placed in the list in the following succession: "dorsal vertebræ, anus, perineum, viril member, thighs." In conclusion, a hope may be expressed that among the thousands of Greek papyri discovered last winter in Egypt some translations of old Egyptian medical records may be found and thus render superfluous the time and learning hitherto expended in laboriously wresting the secrets of the ancient hieroglyphic writing.

THE CONSTITUTION OF DEAD AND LIVING PROTEID.

IT is simple enough by the ordinary process of permutation to suggest different constitutional structures of complex substances, but it is more satisfactory if the formulæ so derived are found to stand the test of investigation. There is not a more complicated substance than albumin or the proteid constituents which play so important a part in the human economy. Their percentage composition is easy enough to establish, but their exact constitution is another matter. It is comparable to the difference existing between the substance or bricks of a building and the architecture or structural form it exhibits when the bricks are placed in position. Chemically analogous examples afford a strong line of deduction in throwing light upon the constitution of complex substances, and Dr. P. W. Latham, of Cambridge, in a Croonian Lecture in 1886, based his arguments on the constitution of dead and living proteid on some simpler types of chemical change. He assumed that the action of the liver on the amido bodies, glycocoll, taurine, leucine, tyrosine, &c., is one of dehydration similar to that by which glycogen is produced by the dehydration of glucose. Again, in accordance with Pfluger's view, ammonium cyanate is the type of living and urea of dead nitrogen, the conversion of the former into the latter being an image of the essential change which takes place when a living proteid dies. Further, in many of the cyanogen compounds condensation of three molecules take splace, forming compounds much more stable than those consisting of one molecule only, such as is exemplified in cyanuric acid, which results from the condensation of three molecules of cyanic acid. Dead albumin may be built up on the evidence furnished on the lines here suggested. The change from the dead to living albumin may be similarly supposed to take lace as from urea into ammonium cyanate. Dr. Latham

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proceeds to adduce evidence explanatory of the changes which take place as the living proteid dies. His latest conclusions are as follows: (1) that living proteid consists of a series of cyan-alcohols with one thio-alcohol united to a benzine nucleus; (2) that when a proteid dies it gives off carbonic and lactic acid, the thio-alcohol by oxidation being converted into a sulphonate which combines with ammonia, and by the conversion of CNOH into NH = CO the cyan-alcohols are changed into a series of amido bodies; (3) that by condensation of the lower cyan-alcohol and the separation of CNOH the higher cyan-alcohols are formed; and (4) that urea is formed by the separation of carbamic anhydride (CO = NH), which either combines with ammonia to form urea or is hydrated to form carbonic acid and ammonia.

SPORADIC INFLUENZA.

DR. OTTO LINDENTHAL, of the Vienna Pathological Institute, who has had an opportunity of examining eight cases of fatal influenza-pneumonia, contributed an interesting paper recently to the *Wiener Klinische Wochenschrift*.[1] He believes that during periods when there is no influenza epidemic the microbe which is the cause of it passes from one individual to another, producing sporadic cases which are indistinguishable, clinically and bacteriologically, from the regular affection as met with in epidemics. The microbe does not multiply in the air or ground or even in water, but seems to require the body tissues and secretions as a medium. He finds that the pleuritic effusion in influenza is not always purulent, but may be croupous, sereus, or even sanguineous; also that the nasal inflammation can be, and perhaps always is, due to the influenza bacillus alone, but that very frequently the pneumonia coccus and other pyogenic microbes are associated with it. The influenza bacillus varies a great deal in size and shape from the smallest coccus-like rod to bacilli as large as those of diphtheria. All forms, however, retain their characteristic properties—difficulty of staining, immobility, refusal to take the Gram stain, special development in hæmoglobin, and deficient development at summer temperature or when deprived of oxygen. The colonies are at first developed in an arched or semi-spherical form and are homogeneous and transparent, and when allowed to grow freely have a friable appearance in the centre, afterwards becoming less arched and bluish when seen by transmitted light, or even so dark that they lose their translucency. As to the so-called pseudo-influenza bacillus which has been described, Dr. Lindenthal does not appear to believe in its existence.

MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE additions to the Museum of the College during the past twelve months include many specimens of great interest and importance. Among the pathological specimens may be mentioned the scalp of a Chinaman which had been torn off owing to the pigtail having become entangled in some machinery (presented by Mr. Stanley Boyd); three very interesting specimens of diffuse sarcoma (lymphadenomatosis) of the sternum, ribs, and spinal column (the bones are extensively invaded by the new growth); a specimen of the sac of an obturator hernia, and one showing the partial enterocele which had been contained in it. Mr. D'Arcy Power has presented six specimens which illustrate the pathology of experimental intussusception. A very good specimen of dissecting aneurysm of the aorta was presented by St. Bartholomew's Hospital, and Mr. J. Tweedy and Mr. C. D. Marshall have given fifteen specimens exhibiting various macroscopic lesions of the eye. A very good example of a conical stump is shown; the bone projects about three inches beyond the muscles, but is covered with skin; it was removed from a boy, fifteen years old, who had had his arm amputated nine years previously. Among the teratological additions two specimens are especially worthy of note; one was a case of complete ectopia cordis, the heart lying uncovered on the surface of the thorax, yet the child lived some hours; the other specimen was presented by Mr. Bilton Pollard; it is a diverticulum of the ileum, which was contained in the sac of a congenital umbilical hernia; it measures nearly three feet in length, and was attached about five feet and a half above the ileo-cæcal valve. In the physiological series fourteen specimens illustrating elastic structures have been added, the tunica abdominalis of the horse and elastic spinal ligaments of several animals being especially well shown. Then follows a large group of specimens illustrating the varieties of joints; these are divided into (1) joints without known function, mostly the result of periodicity in rate or nature of growth; these are illustrated by specimens of the jointed branches of some euphorbiæ; (2) joints which are points of development of organs, separated by internodes that effect the necessary elongation, well shown in an equisetum; (3) joints that allow of continuous growth (the best examples of this form are the "shell" of an echinus, the separate plates of which it is composed having been taken apart), and the carapace and plastron of a tortoise; (4) joints that by allowing motion diminish the risk of fracture; in a multi-nucleate calcareous alga (cymopolia barbata) the branches have flexible nodes alternating with brittle calcareous internodes, and in a bryozoan (membranipora membranacea) encrusting a seaweed the calcareous lateral walls of each zoœcium are interrupted in certain places by flexible areas that allow the bryozoan to adapt itself to the movements of the seaweed; and (5) joints that allow of voluntary motion, as in the chelæ of a lobster (homarus vulgaris) and in the joints of vertebrates. Many other specimens might be mentioned, but we have space for a few only: several most exquisite dissections of the nervous systems of a scorpion, a cuttlefish, and other invertebrates, and a skeleton of a snake (dasypeltis scabra) which feeds on eggs that it swallows whole, the shell being afterwards broken in the throat by the sawing action of thirty-two tooth-like processes borne on the anterior vertebræ. Professor Stewart and Mr. Targett are to be congratulated on the excellent specimens which have been added to the Museum, and great praise is due to the anatomical assistant, Mr. R. H. Burne, for the numerous careful dissections which he has made.

THE HOXNE DISTRICT COUNCIL AND THE NOTIFICATION ACT.

THE Hoxne District Council have some curious notions as to the duties of medical officers of health. The chairman of the council has evidently been under the impression that it was a necessary part of the duty of a medical officer of health to visit and see each patient concerning whom he had received a notification certificate; but, having been to head-quarters in London to ascertain whether he was right, he announced at a recent meeting of the council that there was no such compulsory duty on the part of the medical officer of health. We have explained again and again that the responsibility of visiting or not visiting premises on which there is infectious disease rests with the health officer and with no one else. He is the judge as to whether such a visit is necessary. It would, indeed, be absolutely impossible for medical officers of health in London and other large towns or in combined districts to make such visits in all cases, even if their authorities supplied them with

[1] Wiener Klinische Wochenschrift, No. 17, quoted in the Allgemeine Medicinische Central-Zeitung, No. 57, 1897.

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unlimited means for travelling in the swiftest manner possible. Besides which, ten cases of scarlet fever—or of measles where notifiable—may not in one case call for a personal visit, whereas one single case of scarlet fever at a dairy, or of typhus fever in an ordinary town, would probably call for an immediate visit. The question is one for medical judgment, and this has been explained clearly by the Local Government Board. But the chairman and others referred also to visiting the "patient." As a general rule, this is absolutely unnecessary and altogether uncalled for. The medical officer of health is bound to act on the diagnosis formed by the certifier unless he has ground for suspecting fraud or unless some imminent danger to the district is involved. Visits by medical officers of health to patients of other practitioners have been officially denounced as unjustifiable except under the circumstances named; and even where they have to be paid, any such visit should only be made after communication with, and in conjunction with, the medical practitioner in attendance on the case. In 1895 we dealt in a series of articles (which have since been issued in pamphlet form) with all the various "Difficulties under the Infectious Disease (Notification) Act" which had been met with by medical officers of health and sanitary authorities, and we quoted at length a large number of decisions that had from time to time been given by the Local Government Board on the various questions that had been submitted to them in this matter. We cannot help thinking that if this *résumé* of difficulties and official decisions on them were better known there would be fewer instances of "allegations" against medical officers of health either as to excess of duty or failure of duty on their part. It behoves district councils like that of Hoxne to learn their powers and the duties of their officers before casting blame; and there are few points in which decisions have been more clearly enunciated than those which have, in this instance, led the Hoxne District Council into a wrong and altogether untenable position.

HIGH TENSION AND HIGH ALTITUDES.

A HOLIDAY contributor writes from Andermatt, Switzerland, on the 17th inst.:—"Alpine misadventure is a wide word and is made to include victims to pathological conditions unrecognised by the victims themselves, whose sudden fall into a crevasse or mountain torrent is set down to 'loss of balance,' 'misplaced footing,' or one or other of the many mishaps besetting the mountaineer, when syncope due to cardiac lesion was the real cause. In August, 1894, THE LANCET pointed out this 'error in classification' when Baron Paccoy, who had for two days been acting as guide to the Queen of Italy, stumbled and fell into a crevasse on the Lyskamm, not, as was at first thought, by inadvertence in walking, but by instantaneous heart failure occurring at the dangerous spot in question. May not this account for the strange disappearance of Mr. Cooper at Zermatt, now being investigated at the instance of our Foreign Office by the cantonal authorities? May he not have fallen into the Visp when suddenly overtaken by the syncope not unusual in a septuagenarian beside a rushing, brawling mountain stream? The hypothesis is well worth entertaining, strengthened as it is by the circumstances under which, on Sunday, the 11th inst., the burgomeister of a Westphalian town met his death on the Furka Pass. This gentleman, with his wife and a young Italian officer as *compagnon de voyage*, left Andermatt on the morning of that day for the Rhone Glacier. Everything went well till they came within sight of the object of their journey, when the burgomeister, rising in the carriage to get a better view, had barely uttered, 'Oh! C'est magnifique!' when he dropped down dead. The great altitude, the rarefied air, the high tension — conditions inseparable from Alpine ascents—were too much for a 'chronic sufferer from weak heart,' and he collapsed accordingly. Now, had this syncope occurred at a difficult spot of the Rhone glacier itself, had it supervened on the edge of a crevasse into which the victim fell, would not the incident have been classified as 'accident due to misadventure'—to one or other of the merely pedestrian risks encountered by every Alpine climber? The whole question opens up a series of considerations very gravely present to the Swiss medical faculty, in view of the multiplication of such engineering enterprises as the Jungfrau Railway, for example, which will shortly be 'ballooning' passengers of all ages and bodily conditions to a height of over 12,000 feet above the sea level. At a congress of the said faculty, held some time ago at Arona, the perils and the precautions incidental to such railway development were fully discussed, and an impressive warning was given to the travelling public not to venture on rapid ascents above the snow-line without previous sanction on the physician's part. To no section of that public is the warning more immediately addressed than to the British, who, after the exhaustion of the London season or a nine months' spell of work, professional or other, are found thronging every Swiss mountain inn, and in sheer holiday exultation qualifying by every kind of imprudence for some such fate as comes under the all too elastic heading of 'Alpine misadventure.'"

UNNECESSARY STREET NOISES IN AMERICA.

EFFORTS are being made in New York and in some other large cities in the United States to prevent as far as possible the unnecessary street noises. All over the world street noises in the large towns are a nuisance as well as a serious menace to health. Some of the noise must be endured as a necessary evil, but a great part of it might be easily abolished by judicious legislation, and to the lasting benefit of the general public. The worst feature of the case is that it is not only in the day time that the pandemonium is rampant; but at night too, when the nervous system absolutely requires rest, it is often almost impossible in a large city to obtain undisturbed repose. The matter is a serious one and will sooner or later have to be gravely considered. The noises prevailing by day and by night in New York are almost beyond belief. Englishmen are rightly prone to think that London is a noisy place, but compared with New York the American, we believe, looks upon London as a village. The noises in New York have a peculiarly jarring, irritating effect on the nerves; the booming rumble of the cable cars, the metallic rattle of the trains on the elevated railway, the jolting of the carts and heavy traffic over the rough, uneven roadways, the continual sounding of the gongs on the cars, the ringing of the bells attached to hucksters' carts,—all these combine to make up an aggregation of sounds which, happily, can be equalled in no part of London. In all large towns unnecessary street noises of any description should be sternly repressed. It seems absurd in these days of high pressure that to the unavoidable sounds should be added those which might be stamped out without doing harm to anyone.

MILK LEFT ON THE DOORSTEP: A SERIOUS POSSIBILITY.

ONE of the most curious early-morning sights in residential London is the innumerable cans of milk left on the doorsteps, or hung upon the railings, or upon the door-knobs, awaiting the advent of the domestic to take them inside in readiness for breakfast. Of course, it is done because the milkman calls at an inconveniently early hour, but the system has its decided disadvantages, not to say grave dangers. A case was reported at the Marlborough-street Police-court this week in which a man was charged with stealing two quarts of milk from outside a house in

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Shaftesbury-avenue. The temptation to a famished man in the early hours of the morning, when he finds excellent food placed at the street-doors on every side, is indeed great, and so the magistrate thought, and taking that into account he sentenced the man to fourteen days' hard labour. This case prompts us to quote an instance known to ourselves in which the milk left in a can on a doorstep had been actually tampered with. Some maliciously disposed person had opened the lid and dropped inside a vermin-killing powder containing strychnine. Fortunately it was noticed that there was something wrong with the milk by the appearance of a blue powder in it, otherwise the consequences might have been very grave indeed, and with little chance of tracing the villain. We hardly like to suggest that there are miscreants amongst us who would be guilty of committing such a heinous offence, but the ease with which it obviously can be done, and was done in this case, should be a serious warning to the public to effectually prevent any such possibility. Milk consumers should insist on their milk cans being sealed, and should reject the early morning milk if it be found that the seal is broken.

MULTIPLE MELANOTIC SARCOMATA RESULTING FROM A MOLE.

The following case has recently been published by Dr. D. Grant.[1] The patient was a muscular, exceptionally healthy man, aged twenty-seven years. He had a black mole on the right arm ever since birth. Three years ago it was torn by the horn of a sheep and soon healed. Some time afterwards he injured it again, and it spread to the size of a finger-tip. A year after the first injury he showed it to a medical man, who thought little of it. Six months later he bruised it again. Healing did not take place readily, and a few satellites appeared. Another medical man excised the whole affected area of skin. Five months later a lump appeared in the axilla which was promptly excised. However, a large number of secondary growths appeared. The surface of the body was thickly sprinkled with melanotic growths, varying in size, depth, and colour, and a much larger number could be detected by touch. The whole skin of the trunk was thickly infiltrated with minute growths. This case, unfortunately, is a type of all. That melanosis may result from a mole is but a commonplace doctrine; yet in no case has free excision be resorted to in the first instance. The reason is that the first changes—increase in size or ulceration—appear trifling. The nature of the disease is recognised too late—when secondary growths have appeared. How many more such cases must occur before it becomes generally realised that a mole is a potential sarcoma and should be promptly and freely excised on showing the slightest activity?

RAILWAY NOISE AND VIBRATION AND THEIR EFFECT UPON HEALTH.

VIBRATION and noise are factors well known not only as producing temporary discomfort but also injurious effects upon the health. In these days when travelling rapidly from place to place is a *sine quâ non* both causes of disturbance are to some extent inevitable, but we cannot help thinking that much more might be done to alleviate the distress arising from our incessant recourse to the many and various means of moving from place to place. Speed is the craze, but there is no reason why speed should not be attained without the discomfort due to noise and rapid vibration, not to mention the, perhaps, permanently ill-effects which a constant series of joltings may have upon the nervous passenger and invalid. The various railways running out of London afford a good illustration of what is, and what is not, done in this direction. Passengers, for example, cannot fail to have noticed how smooth and free from vibration is the travelling on the Great Western Railway. On the London and North-Western and the Midland Railways it is still good from this point of view, but not quite so free from shock and noise. The trains of the former company running on the Underground Railway are, however, excellent examples of smooth and comfortable travelling. The trains running south create, as a rule, an endless clatter, so that on these lines a journey, say of fifty miles, produces as much distress and fatigue as a journey of over 300 miles north by the east and west coast and the Midland routes. It is fair to add, however, that the London and South Western Railway has of late years considerably reduced the amount of shaking which passengers on this line were wont to experience. The Great Eastern Railway, though well to the fore in enterprise, is, perhaps, one of the worst from the point of view of a rattling, shaking, and noisy journey. These differences are, of course, easily explained on engineering grounds. The character of the "run" is dependent upon the degree of perfection of the rolling stock and the track. What we should like to know is why the same standard of smoothness and regularity in both these engineering details cannot be adopted by all companies alike. The question is not one that affects the interests of the passengers only, because surely the more smoothly a train runs over the metals the less must be the wear and tear to both the train and the track. It will be generally conceded that every effort should be made to minimise the ill-effects which travelling at a high speed is apt to induce.

[1] Intercolonial Medical Journal of Australia, May 20th, 1897.

HOT WEATHER IN NEW YORK CITY.

THE weather in New York is said to have been the hottest on record for the first week in July. Heat makes itself felt in a peculiar degree in New York owing to the humidity of the atmosphere. When the thermometer approaches the hundred mark the heat is almost unbearable in the sun. Already there have been many casualties from the effect of the heat. On July 5th, when Independence Day was celebrated, what with the thermometer at 94° F., and the noise and smell of the numberless crackers and other descriptions of fireworks which supplied a vent for the overflowing patriotism of young America, life (a correspondent writes) was scarcely worth living. Without doubt, if this weather continues, as it is predicted it will, the scenes of last July will be repeated, when horses and men died in large numbers in the streets.

THE PHYSIOLOGY OF THE ADRENALS.

A LONG and interesting article on the Physiology of the Suprarenal Bodies is to be found in the June number of *Pflüger's Archiv*, written by Dr. Arthur Biedl, one of the assistants in the Vienna Institute. The points to which he has directed his particular attention are the vaso-motor nerves and the secretory nerves of these organs. He describes in detail the operative procedure he adopted in his experiments, and arrives at the conclusion that certain vaso-dilator fibres run in the splanchnic nerves to the adrenals, partly because no other explanation can be offered of the rapidity with which hyperæmia follows stimulation of these nerves, partly on account of the steady increase of the hyperæmia as the stimulation is continued, and partly because of its continuance for some time after the cessation of stimulation quite independently of the blood pressure in the arteries. He has observed that in the dog the splanchnics, after traversing the diaphragm, give off on each side, before they enter into the formation of the solar plexus, a single large branch to the adrenals, and these, he believes, contain the chief vaso-dilator fibres, since, if divided, the stimulation of the splanchnics in the

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thorax is without influence, whilst stimulation of the distal extremities of the divided nerves is followed by active hyperæmia. From a critical review of the researches of previous investigators he considers the facts actually established in regard to the vaso-dilator nerves distributed to the abdominal viscera to be that these nerves leave the spinal cord chiefly by the anterior roots of the lower dorsal nerves and, running in the rami communicantes, enter the sympathetic in the dorsal region and are distributed with the branches of the splanchnic nerves to the large and small intestine, the liver, kidneys, pancreas, and adrenals. He has satisfied himself that there are ganglia on the vessels distributed to the adrenals, and that although their presence has not been anatomically demonstrated vaso-constrictor nerves exist. The two sets of nerves, vaso-dilators and vaso-constrictors, run in the same trunks, their relative proportion varying to a considerable extent. Dr. Biedl has devoted much time and attention to the secretory nerves of the adrenals. These organs belong to the class of those which have an internal secretion discharging the materials they elaborate into the blood. Various investigators have been led to the belief that the granules well known to exist in the blood of mammals proceed from the adrenals. Others have shown that the venous blood of these organs resembles arterial blood in colour, and yet another observer has demonstrated that the peculiar extract of the adrenals is not a post-mortem product, but is contained in the venous blood returning from these organs during life. Dr. Biedl, in his experiments directed especially to the determination of the changes in the morphological elements of the venous blood and the behaviour of the extract with its peculiar action on the blood pressure, found that after stimulation of the suprarenal branch or of the splanchnic nerve in the thorax the number of bright granules or little masses of protoplasm was diminished, and at the same time the number of the leucocytes of the blood was reduced, these bodies being apparently retained within the organ. In regard to the active extract, Dr. Biedl believes that the splanchnic nerves do not only contain vaso-dilators, but that they are also associated with the secretory nerves of the adrenals, which run in the same trunks, and that stimulation of these nerves leads to some, though not material, increase in the quantity of the active extract produced.

DILATATION OF THE STOMACH IN INFANCY.

IT is well known that dilatation of the hollow viscera is a morbid condition commonly gradual in its development and equally, if not more, slow in its amendment. It derives, moreover, a peculiar interest from the fact that it constitutes a form of change which marks the transition between functional and organic disease—a stage at which overwork and weakness of tissue account for the whole pathology, and which is therefore often well within the hope of a healthy reversion. Additional light has recently been shed on this subject by a paper published by Dr. Comby in the *Journal de Clinique et de Thérapeutique Infantiles* of July 1st, 1897. The writer's observations have been limited to the study of gastric dilatation during infancy. He finds that at an age when the newly-formed organ might be expected to be fully competent the stomach frequently shows a marked degree of dilatation. In 64 children who died in the Hospital for Sick Children, Paris, this viscus was found to be dilated, its volume varying from 200 c.c. to 310 c.c. In 16 others it was contracted. Dr. Comby explains the former condition as being due to atony produced by an auto-infection by putrescent matters resulting from an improper diet, the latter as an evidence of the refusal of such food by the child, who is consequently starved. He believes that infantile dilatation is by no means always recovered from, and that many cases of a like kind which are discovered only in the adult or the aged have had their true beginning in the earliest months of life. As the best means of treatment besides a suitable diet, he advocates irrigation of the stomach, a catheter being passed along the gullet into the stomach, and this organ repeatedly washed out with fifty or sixty grammes of tepid boiled water or Vichy water. He has never known this method to give rise to any serious inconvenience.

THE GENERAL MEDICAL COUNCIL.

THE committee appointed to consider the Midwives Bill now before Parliament, in pursuance of the request of the Lords of the Privy Council, will meet at the offices of the Council on Monday next, the 26th inst. It is understood that the usual July meeting of the executive committee will not be held in the absence of any urgent business.

CEREBRAL ABSCESS IN CHILDREN.

AT the recent meeting of the American Pediatric Society Dr. Hott gave an account of four cases of this condition which had come under his notice. Details were published in *Pediatrics* of June 1st. The first case was that of a child, aged six weeks, and this has the peculiar interest of being the earliest age at which an intracranial abscess has been described. The child was born easily and naturally and there was no history of injury or disease. It was a fat, healthy-looking infant, with nothing abnormal until four days before death, when swelling of the left thigh commenced. On admission to hospital the child was found to be almost moribund, with a feeble, almost imperceptible pulse, and a temperature of 99·5°F, but without coma. The thigh was incised, but no pus was found, only disorganised blood. The patient died, and examination of the brain revealed an abscess in the parietal lobe, with some recent local meningitis on the inner surface of the dura mater. The abscess cavity was 7 cm. long and 5 cm. deep, and contained two ounces of pus. The only likely source of infection was from the external ears, each of which had been punctured, and the punctures were found covered with dirty fluid encrusted with pus. The second child was three months old. The symptoms developed acutely—viz., irregular shallow respiration, retracted abdomen, and fever. There was also opisthotonos in the last few days and convulsions on the last of all. There was found to be a large abscess of the right parietal lobe, which communicated with the ventricles, and pus was found in the left petrous bone, although there was no discharge from the ear during life. The third patient was also three months old and was said to have been well and strong until seven weeks before, when it fell from the bed on to the floor. Three days later the patient cried out sharply and vomited. On admission to hospital there were emaciation, occasional vomiting, and discharge of blood from the left ear. Death took place suddenly, and there were found to be meningitis of the inferior surface of the cerebellum and an abscess as big as a hazel nut. The fourth case was that of a child nine months old. On admission the patient was found to be in excellent condition as regards nutrition, but there were internal strabismus, dilatation and inactivity of pupils to light, and increased knee-jerks; there was no fever. Vomiting occurred occasionally, and symptoms of irritation alternated with drowsiness. Gradually rigidity developed in the lower extremities and hands, and there were slight paralysis of the left side of the face and discharge of pus from the ear. The child died in the eighth week of the illness, and at the necropsy two abscesses of considerable size were found in the right lateral lobe of the cerebellum. These did not communicate, and no pus was found in the

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auditory canal. In conclusion Dr. Hott gives a short account of the different conditions in which cerebral abscess occurs in children. It is rare in the first four years of life, more common later, and the first case referred to is the youngest case recorded.

A PROFESSORSHIP OF PUBLIC HEALTH AT LIVERPOOL.

WE notice with pleasure that the Council of University College, Liverpool on the recommendation of the Senate and Medical Faculty, have converted the Medical Lectureship of Hygiene into a Professorship of Public Health, and that the appointment has been given to Dr. E. W. Hope, medical officer of health to the corporation of Liverpool, Lecturer on Hygiene in University College, Liverpool, and Examiner in Public Health in Victoria University, Manchester. The creation of the professorship and the appointment of Dr. Hope are creditable to the authorities of the College. Liverpool long had an unenvlable distinction as the unhealthiest of our largest cities. The steady removal of this scandal is due very largely to the clearness with which Dr. Hope and his predecessor, Dr. Taylor, demonstrated the causes of this high mortality, and to the perseverance with which they urged the Corporation of Liverpool to wage incessant war with the causes of disease which existed in the cellars and other unhealthy dwellings, and with the intemperance and other evil habits of many of its crowded population. The action of the authorities has been rewarded by a large measure of success, so that Liverpool can now boast a lower rate of mortality than other towns the density of the population of which is much less, such as Dublin and Manchester. There is a large decrease in the number of deaths from the principal zymotic diseases. Typhus fever is not so effectually extinguished as in London and Ireland; but according to Dr. Hope's recent report its mortality in 1896 was at the rate of 5·6 per 100,000 of the population, as compared with 132·1, the rate for the decennial period 1866-75. Mortality from tuberculous disease is also being largely reduced. There is still, however, much to be done, and the death-rates from fever, diarrhœa, and measles testify to a large preventable mortality. There can be no better way of securing this than by magnifying the office of the medical officer of health; and this is especially wise when the officer is one so capable as the present occupant of the post.

POSSIBLE EXCEPTION TO COLLES'S LAW.

AT the recent meeting of the American Dermatological Association Dr. Corlett, of Cleveland, recorded an interesting case[1] of great importance, although, unfortunately, not complete and conclusive. He urges that we may look for an occasional exception to this law, which need not necessarily impair its general value as a clinical fact. The case was as follows. A woman applied to the Charity Hospital on account of an extensive eruption on her infant. It was discovered that there was also a suspicious looking lesion on her own breast. The child was two months old, with a dark reddish macular eruption over the entire body, including the palms and soles. Over the buttocks extensive excoriations were present and the infant had snuffles and mucous patches, and was small and shrivelled in appearance. The child had apparently been born at full term and was healthy for three weeks after birth. There seemed to be no doubt that the child was syphilitic. The mother was anæmic and complained of aching in the bones of her legs. There was a sore on the left breast about two inches from the nipple, which had appeared about two weeks after the child's mouth became sore. This sore was a superficial ulcer about the size of a split pea, indurated and with a slight serous discharge. The axillary glands were enlarged, freely moveable, and painless. The post-cervical lymphatic glands were also enlarged, and there was slight redness of the mouth. The skin was free from other scars or eruption, but the sore looked extremely like a primary sore, and there seemed to be a presumption that the infection was from the child. The history of the mother was that she had enjoyed good health and had borne to her first husband two healthy children still living. She had never miscarried. She had been married a second time a year before she came under observation, her second husband having been a widower for three years and having had by his first wife four healthy children. According to his wife's statement he had been under treatment for some disease recently, but he was said to appear well, often, however, taking medicine for a "cold." An effort was made to see the husband, but it was unsuccessful, and the mother and child also disappeared, so that the case is incomplete. But the evidence, such as it is, seems at least to suggest that the cases may illustrate, as some hold, that Colles's law is by no means one without exceptions. It is unfortunate that it was impossible to follow the cases through their subsequent history.

[1] Pediatrics, June 1st, 1897.

ON July 14th H.R.H. Princess Christian laid the foundation-stone of the new cancer wing at the Middlesex Hospital. The new building will accommodate thirty-six female patients who, in the words of the founders of the cancer wards, are never discharged until "relieved by art or released by death."

DR. HERMANN WEBER, the President, will preside at the thirty-ninth annual meeting of the New Sydenham Society at 20, Hanover-square, on Tuesday next, at 4 P.M. All interested in the society, whether members or not, will be welcome at the meeting.

THE *London Gazette* of Tuesday, the 20th inst., announces that the Prince of Wales has been pleased to appoint Sir William Mac Cormac, Bart. (President of the Royal College of Surgeons of England), and Mr. Alfred Downing Fripp (M.S. Lond., F.R.C.S. Eng.), to be Surgeons-in-Ordinary to His Royal Highness.

AT a recent meeting of the council of the British Institute of Preventive Medicine, Dr. Allan Macfadyen was appointed Director of the Institute.

THE *London Gazette* of Friday, July 16th, announces that the dignity of a Knight of the United Kingdom of Great Britain and Ireland has been conferred on Mr. Thomas Naghten Fitzgerald, F.R.C.S. Irel., senior surgeon of Melbourne Hospital.

EDINBURGH DENTAL HOSPITAL AND SCHOOL.—The summer meeting of the Edinburgh Dental Hospital and School was held on the premises in Chambers-street on July 16th, Bailie Sloan presiding. The report for the past session showed that there were at present forty-nine students, twenty-two of whom had been enrolled during the past year. The increasing attention paid to the conservation of the teeth was referred to, and it was stated that the prosthetic possibilities of the cases were carefully observed by the students entrusted with the construction and fitting of the dentures. During the year from July 1st, 1896, there were 6075 conservation cases and 4545 patients underwent operations in the surgical department. The chairman afterwards presented the medals and prizes to the successful students.

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The Lancet Special Commission
ON
SICILY
AS A HEALTH RESORT.

IV.[1]

Public Health Questions in Sicily.—Rates of Mortality.—The Amount of "Fever," Malaria, Typhoid, Diphtheria, Dysentery, Diarrhœa, &c.—Rate of Incidence of Respiratory Affections.—Favourable Statistics regarding Phthisis.—Spas and Mineral Springs of Sicily: Termini, Sciacca, Acireale, Sclafani, Barcellona, and Acqua Santa di Palermo.—Sanitation and Water Supply.—Analyses of Waters made in THE LANCET *Laboratory.*

IT would be beyond the scope of these articles to attempt to give an exhaustive account of public health and disease in Sicily. Attention must be limited for the most part to those phases of the subject which affect the suitability of the island as a health resort. Sicily has the reputation of being one of the healthier portions of the Italian kingdom, and this reputation would appear to be well founded. Malaria, though somewhat widely prevalent during the summer months, is not usually of a severe type, and the deaths from this disease per 10,000 inhabitants are given by Dr. Andrew Davidson[2] as 8·4, which may be compared with the figures for Latium (13·2), Calabria (20·4), Campania (2·5), and Sardinia (20 0). "Fever" prevails somewhat extensively, but it is a moot point whether this is usually typhoid fever or the much less serious "Mediterranean fever" or "Malta fever." To this point we shall return, as a definite view upon the subject is indispensable for a correct interpretation of the Sicilian mortality tables. Dysentery, diarrhœa, and diphtheria are relatively somewhat prevalent, while, on the other hand, diseases of the respiratory organs (including pulmonary tuberculosis) are below the European average. Ophthalmic affections are common. Rheumatism is common. Under the other heads of disease there does not appear to be anything characteristic to note. The annual rates of mortality in the principal towns, though somewhat high if tried by the British standard, are moderate for Southern Europe. The rate for Palermo is about 24 5 per 1000, for Catania 28 4 per 1000, and for Syracuse 25·4 per 1000. These figures are calculated from the officially certified number of deaths and probable population, and may be accepted as at least approximately accurate. When it is remembered that there is much poverty in Sicily, and that poverty has a considerable influence upon mortality, and when the higher average mortality in warm as compared with temperate countries is borne in mind, these returns must be regarded as not unfavourable. The general death-rate of the entire kingdom of Italy for the ten years ending 1887 was 28·1 per 1000, so that the Sicilian towns are, on the whole, below the general average. The special questions in this connexion which most directly affect the suitability of Sicily as a health resort are the following: (1) the character and amount of "fever" (including malaria) prevalent in the island; (2) the amount of dysenteric and diarrhœal affections; and (3) the amount of respiratory disease, including phthisis. These questions will now be examined in detail.

1. Visitors to the various Mediterranean sanatoria are familiar with the fact that at most of these resorts there prevails an affection known as "low fever," "coast fever," "continued fever," "Mediterranean fever," "Neapolitan fever," "Malta fever," &c. Surgeon-Colonel Lane Notter defines this disease as "an endemic fever of long duration, accompanied by profuse perspiration and constipation, and often followed by pains of a rheumatic or neuralgic character, swelling of the joints, or orchitis, and tenderness or enlargement of the spleen. The disease is further characterised by a small mortality, tedious convalescence, a constant liability to relapses, and well-marked anæmia. It is not contagious." The question whether this fever is a variety of typhoid fever or distinct from that disease has excited much controversy, but the great preponderance of opinion amongst experts is in favour of the differentiation of the two affections. This is the view upheld by Bruce, Davidson, Hughes, Maclean, Notter, and others. The subject has an important bearing upon the nosology of Sicily, where forms of low continued fever are common. The Sicilian practitioners are by no means agreed as to the proportion of these fevers which should be regarded as Mediterranean fever and as mild typhoid fever. By some genuine typhoid fever is regarded as quite rare in Sicily, while others regard it as common, though usually somewhat mild in its course and favourable in its event. The subject is involved in great obscurity aad is one upon which a difference of opinion is natural and inevitable. Professor L. Giuffrè, of the University of Palermo, gives an opinion that in that city "la febbre tifoidea genuina è molto rara" (genuine typhoid fever is very rare), and in summing up his conclusions in his learned monograph upon "The Continued Fevers observed in Italy from 1872 to 1886" he regards the continued fever common in Sicily as "a definite species absolutely distinct from typhoid fever, and up to a certain point distinct also from the classical "miliary" fever, of which it is in all probability a recent transformation." Professor Cervello, of Palermo, also regards genuine typhoid fever as rare, but this view is not universally held by the Sicilian practitioners, some of whom believe that many of these cases of obscure continued fever are really mild cases of typhoid fever. Turning to the official returns, it appears that at Palermo (where compulsory notification of disease is in force) the number of cases of typhoid fever notified in recent years was as follows:—1893, 76 cases; 1894, 151 cases; 1895, 58 cases; and 1896, 112 cases. The above figures are those officially supplied by the municipality, and they are remarkably low for a city of 280,000 inhabitants. They cannot be reconciled with the statement of Dr. Andrew Davidson,[3] that the average death-rate from typhoid fever per 10,000 living is in Sicily 14·3. There is here a radical discrepancy which can only be explained by assuming that the returns are calculated on different principles. There seems no doubt that typhoid fever is generally very prevalent in Italy. Hirsch[4] remarks that "in Italy, while the deaths from typhoid fever in the army in 1877 were 342, in a general mortality of 2072 among an effective force of 193,650 men, or 1·8 per 1000, the deaths from this disease in the country generally reached the enormous figure of 16·5 per cent. of the total mortality." The true rate of prevalence of typhoid fever in Italy and Sicily must remain doubtful while the nosological relation of that disease to "Mediterranean fever" (the "febbre infettiva" or "febbre innominata" of the Sicilian authorities) remains undetermined, or, at least, disputable. What seems certain is that in the various Sicilian towns there is a large amount of low continued fever—whether mild, typhoid, or Mediterranean fever—but that well-marked typhoid fever of the type familiar to English observers is not common. The facts regarding malarial fever are clearer and less open to controversy. Malaria is widely prevalent in Sicily, but it is not usually of a severe type; it is almost confined to the summer and autumn months; it hardly exists in the large towns except as an importation, and its importance to winter visitors is practically *nil*. Professor Cervello has kindly favoured THE LANCET Commissioner with the following memorandum on the subject: "It is undoubtedly true that there are in Sicily certain localities infected with malaria, but this need not by any means be a danger to strangers who come to pass the winter with us, since the places where they sojourn—such as Palermo, Catania, Acireale, Taormina, &c.—and those to which they pay a passing visit are absolutely exempt from malaria and perfectly healthy. The infected localities are circumscribed and distant from the great centres ..... hence the question of malaria concerns the inhabitants of the island exclusively, and not all of these, but only those who cultivate these infected districts. Further, the malarial fevers occur from the end of June to the beginning of October, a period in which travellers do not come to Sicily." Inquiries made in many parts of Sicily confirmed the above statement, and Dr. Tommasi-Crudeli, of Rome, the well-known authority on malaria, has verbally given the Commissioner his views on malaria in Sicily, and these views do not differ in any material point from those of Professor Cervello. Catania is probably the most malarious commune in Sicily, so that an examination of the figures for Catania will show the worst phase of the island from the point of view of malaria. The average deaths per annum from malaria

[1] Nos. I., II., and III. were published in THE LANCET of June 5th and 12th, and July 3rd, 1897, respectively.
[2] Geographical Pathology, vol. i., Article Italy.
[3] Ibid., p. 229.
[4] Handbook of Geographical and Historical Pathology, vol. i., p. 626.

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in Catania were (1878–1895) 39. It must be remembered that the cases do not arise in the city, but almost without exception come from the Piana di Catania, parts of which are highly malarious in summer and autumn. As regards Palermo Professor Giuffrè writes: "Le febbri di malaria in Palermo non esistono." (Malarial fevers do not exist in Palermo). Cases occasionally arise in marshy land some miles distant from the city, but these are practically confined to the cultivators of the soil. Girgenti, Syracuse, and Taormina are also virtually exempt from malaria, so far as the towns are concerned, although the disease is frequent in their vicinity during summer and autumn. The subject of malaria in Sicily is one of great importance to the inhabitants of the island, and is of much interest to the scientific observer, but it may be affirmed with confidence that it is one with which the invalid visitor has no practical concern. In winter and spring and in the districts frequented by foreigners malaria may be said to have no existence.

2. Dysenteric and diarrhœal affections are, as already stated, common in Sicily, especially in summer and autumn. They are probably due to heat, imperfect sanitation, and the consumption of unwholesome fruit. In Catania the deaths from dysentery (1881–95) averaged 69 per annum, nearly twice as many as the deaths from malaria. It is satisfactory to note that a marked improvement seems to be in progress as regards this disease. Thus the deaths from dysentery, which were 161 in 1881 and 124 in 1882, had fallen to 53 in 1893 and to 35 in 1894. Catania has been improving its water-supply, and the above is the satisfactory result. Diphtheria is somewhat common in the Sicilian towns, and forms one of the chief items in the bills of mortality. The deaths from this disease in Palermo during recent years have been as follows: 1893, 126 deaths; 1894, 305 deaths; 1895, 267 deaths; and 1896, 138 deaths. In Catania the deaths from this disease have averaged (1878–95) 103 per annum, but in the case of diphtheria, as in the case of dysentery, Catania can show a marked improvement in recent years. Thus, the deaths from this cause, which numbered 229 in 1878 and 316 in 1879, had fallen to 29 in 1894 and to 39 in 1895. The disease is one which varies much from year to year, but the progressive improvement is striking and creditable. Although Catania comes so well out of these comparisons, it must be borne in mind that the general mortality there is considerably higher than in Palermo.

3. The subject of the prevalence of respiratory diseases in Sicily is one of great interest and importance, since sufferers from these maladies furnish the chief contingent of those who seek climatic change in winter. The general consensus of opinion among the Sicilian practitioners is that bronchitis and pleurisy are somewhat common, pneumonia not common, and pulmonary tuberculosis common, but below the general European average. Professor G. B. Ughetti's memoir, "Sulla Tubercolosi in Catania," contains much interesting information regarding the prevalence of the last-mentioned disease in Sicily. It would appear that in the year 1878, when the population of Catania was 90,423, the deaths from pulmonary tuberculosis were 120, a rate of 1·32 per 1000 inhabitants. In 1888, when the population of the city had increased to 106,847, the deaths from pulmonary tuberculosis were 127, a rate of 1·18 per 1000. In 1895 the population of Catania was 115,992 and the deaths from pulmonary tuberculosis 144, a rate of 1·24 per 1000. These are remarkable figures, and would tend to show that the rate of prevalence of pulmonary tuberculosis in Catania is far below the ordinary European average. Hirsch, whose authority is not only high, but free from any suspicion of bias in favour of Sicily, gives the rate in Catania as 1·42 per 1000 inhabitants. How very favourably this contrasts with the general average of cities will be apparent from the following table, which is also derived from Hirsch's great work, "Handbook of Geographical and Historical Pathology."

Table showing the death-rates from pulmonary tuberculosis per 1000 inhabitants.

Christiania	3·45	San Francisco	2·97
Stockholm	4·1	Edinburgh	3·0
Copenhagen	3·0	Glasgow	4·0
Berlin	3·8	Geneva	2·2
Leipzig	3·5	Paris	4·1
Dresden	3·8	Milan	3·6
Munich	4·0	Rome	3·42
Cologne	4·4	Naples	2·75
London	3·2	Palermo	2·64
Melbourne	2·2	Algiers	2·9
Boston	3·3	Catania	1·42
New Orleans	3·9		

The table shows how ubiquitous a disease is pulmonary tuberculosis, and also how uniform on the whole are its ravages in the great cities of the world. Professor Ughetti claims for Catania the lowest relative mortality from this disease of any of the Italian and Sicilian cities. He also finds that Sicily as a whole compares very favourably with the Italian kingdom in general, and gives a table to show that the deaths from tuberculosis (pulmonary and meningeal) in Sicily are only about half the average for Liguria, Lombardy, and Tuscany.

The interesting and important subject of the natural mineral and thermal waters of Sicily will now be considered. The geological formation of the country, the wide diffusion of sulphur-producing strata, and the large amount of volcanic activity present conditions which lead the observer to expect numerous spas and mineralised springs, and this expectation is found to be justified. The following list (though probably not exhaustive) comprises the chief thermal and mineral waters of Sicily:—(1) Termini-Imerese; (2) Sciacca; (3) Acireale; (4) Sclafani; (5) Barcellona; and (6) Acqua Santa di Palermo. Full analyses of the majority of these waters have been furnished to THE LANCET Commissioner, but considerations of space compel a somewhat summary treatment of the subject.

1. *Termini-Imerese.*—There are two springs at Termini, known as the South-west spring and the North-east spring. The former is called "salino-alcalino-acidulo-terrosa," and its characters, according to the analysis of Professor Paternò, are briefly as follows. The water is perfectly limpid as it comes from the spring, but becomes turbid after a considerable exposure to the air. It is colourless and odourless, and has a saltish and bitter taste. Its temperature is uniformly 43° C. (= 109·4° F.). Its specific gravity is 1·0119. It slightly reddens blue litmus paper. It does not decolourise a solution of permanganate of potassium. A kilogramme of the water contains: Nitrogen, 0·0168 gramme; oxygen, 0·0011 gramme; carbonic acid, 0·1300 gramme; sulphurous acid, 0·1078 gramme; chlorine, 8·3072 grammes; sodium, 4·6927 grammes; magnesium, 0·3492 gramme; and calcium, 0·5291 gramme. The chlorine is present in the form of sodium chloride, calcium chloride, and magnesium chloride—the first being much the most abundant. A kilogramme contains 0·0166 gramme of free carbonic acid. The north-east spring, according to the analysis of Dr. Oliveri, has the following characters. The water is perfectly limpid and does not become turbid on exposure to the air. The taste is saltish and the reaction neutral. The temperature is 42·50° C. (= 108·5° F.). The specific gravity is 1·011575. The amount of free gas in a litre is 26·60 c.c.—viz., carbonic acid, 12·35 c.c.; nitrogen, 10·05; and oxygen, 4·20. The chief mineral ingredients are chloride of sodium, chloride of potassium, chloride of magnesium, chloride of calcium, bromide of magnesium, sulphate of calcium, sulphate of magnesium, carbonate of calcium, carbonate of magnesium, and silicon. These waters are used both externally and internally, and Dr. Battaglia, the medical director of the baths of Termini, recommends them in the following affections—viz., muscular and articular rheumatism, chronic exudations, remains of inflammatory affections, various neuralgias, peripheral paralysis, some forms of spinal neurasthenia, passive congestion of the liver and spleen following malaria, some forms of gout, chronic adenitis, osteitis, and periostitis.

2. *Sciacca.*—Sciacca is situated on an eminence overlooking the sea upon the western coast of Sicily, and is distant about twenty-four miles from Castelvetrano. It occupies the site of the Thermæ Selinuntinæ of antiquity. The sources of the hot springs are situated in the valley between the town and Monte S. Calogero. The mineral waters of Sciacca are numerous and of varied composition. There is (*a*) a sulphur spring, of which the temperature is from 50° to 52° C. (= 122° to 125·6° F.), and the chief constituents sulphuretted hydrogen and chloride of sodium. A litre of the waters contains 1·5 grammes of the former and 8·026 grammes of the latter ingredient. (*b*) The Acqua Santa of Sciacca, which has a temperature of from 30° to 32° C. (= 86° to 89·6° F.), and of which the composition closely resembles the mineral waters of Vichy and of Casamicciola. The free carbonic acid present in a litre of this water amounts to a gramme, and fifty-eight centigrammes carbonate of iron to twenty-three centigrammes and chloride of lithium to 0·31 gramme. (*c*) The Acqua Ferrata of Sciacca, which has a temperature of 28° C. (= 82·4° F.), and which is very rich in bicarbonate of iron, a litre of the water containing

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eighty-three centigrammes of this salt. It also contains a considerable amount of free carbonic acid. The vapour baths of S. Calogero, which are close at hand, add to the extensive resources of Sciacca. The temperature of the vapour in these grottoes varies from 36° to 42° C. (= 96·8° to 107·6° F.).

3. *Acireale.*—Acireale rests upon the lava streams of Mount Etna, at an elevation of 560 ft. above the sea-level and distant about nine miles from Catania. The waters (Terme di Santa Venera) are not thermal. The gases present in the waters in the free state include sulphuretted hydrogen (10·508 c.c. per litre), carbonic anhydride (95·704 c c. per litre), oxygen, and nitrogen. The chief mineral ingredients are chloride of sodium (2 68466 grammes per litre), sulphide of sodium, chloride of potassium, chloride of magnesium, chloride of lithium, iodide of sodium, carbonate of calcium, carbonate of magnesium, manganese, and silica. The climate of Acireale resembles that of Catania, but its greater elevation gives it some advantage. The late Professor Cantani, of Naples, who esteemed Acireale very highly, attached great importance to the fact that the town being built upon the "terreno vulcanico" had a very dry soil, while the humidity of the air was moderate, thus ensuring equability of temperature. The mineral waters of Sclafani, Barcellona, and Acqua Santa of Palermo are of less importance.

It will thus be seen that the resources of Sicily in spas and mineral springs are ample and varied; they have not, however, been developed in any thorough or systematic way. The bathing arrangements and hotel accommodation are good at Termini and Acireale, fair at Barcellona, elsewhere mediocre. The bathing season, as generally in Europe, is from the end of spring to the beginning of autumn.

The important subject of the potable waters of Sicily may fitly conclude this article. The Sicilian towns have been making great progress during recent years as regards their water-supply. Public interest has been aroused in the subject, which, it need hardly be said, is one of the first importance both to the inhabitants of the island and to tourists and invalids. Palermo has recently introduced an admirable water (the "Scillato") from sources in the Madonian Mountains seventy kilometres from the city. It has also other sources of supply showing a high degree of purity. Marsala has recently introduced a new water-supply. The water-supply of Girgenti is limited in amount, and, on the whole, defective in quality; but the spring from which the sample examined in THE LANCET Laboratory was drawn shows an admirable degree of purity. Professor Ughetti certifies that the water-supply of Catania is "good and sufficient." Taormina has a very limited water-supply, but the quality is good.

It has been pointed out that the Sicilian towns have shown considerable enterprise in improving their water-supplies, and the analyses made in THE LANCET Laboratory show that this enterprise has had its reward. It cannot, however, be affirmed that they have made equal progress as regards drainage, cleansing of streets and harbours, &c. Most of the towns have a very antiquated system of drainage, the soil is in many cases much impregnated with organic refuse material, the outfall is in close proximity to residential quarters, and the almost tideless Mediterranean increases the difficulty of disposing satisfactorily of sewage matters The flushing of the sewers is done somewhat imperfectly and intermittently. The cleansing of the streets is not effected in any thorough or efficient manner, decaying vegetable matter and various kinds of garbage being freely exposed to the powerful rays of a southern sun. In all these respects much work remains to be done to render the sanitary condition of Sicily satisfactory. The energy shown in providing new sources of water-supply encourages the hope that in time sanitation will be dealt with in a like spirit. The results of the analyses of the samples of Sicilian waters forwarded to THE LANCET Laboratory are appended.

THE LANCET ANALYSIS OF SICILY WATERS.

The samples were received on June 15th at THE LANCET Laboratory, where they were submitted to chemical examination and analysis at some length. In all eight specimens were examined. Of these seven were distinctively labeled, while the eighth sample was unlabeled. The stopper of the ninth sample had evidently become detached, since there were not more than a few ounces of water in the bottle. This sample and the eighth are, therefore, omitted from the list. The waters were contained in clean, colourless, stoppered bottles of about two litres capacity. The stoppers were tied down and covered with a leather cap and sealed. The results of analyses, expressed in grains per gallon, together with other observations, were as follows:—

SAMPLE 1.—*Scillato Serpatoio S. Ciro.*

Appearance	Clear, bright; no deposit.
Colour	Faintly blue.
Odour	None.
Total solid matter	16·80
Change on ignition of solids	None.
Total hardness	11·20.
Chlorine	1·05.
Equal to common salt	1·73.
Nitrogen in nitrites	0·050.
Nitrogen in nitrates	None.
Free ammonia	None.
Albuminoid ammonia	None.
Oxygen absorbed in fifteen minutes	0·0018.
Oxygen absorbed in four hours	0·023.
Reaction	Slightly alkaline.

This is a sample of the new water-supply recently introduced into Palermo. The catchment area is at Scillato in the Madonian mountains 70 kilometres from Palermo. The S. Ciro reservoir is within three or four miles of Palermo and is a service reservoir. The soil of the catchment area is composed of secondary calcareous rocks. The temperature of the water in the basin at Scillato was 54·2° F., and of the air 57° F. The water shows that admirable organic purity characteristic of water derived from an uncontaminated chalky area. The mineral matter in solution consisted almost entirely of lime salts. The water is practically free from nitrogen either in mineral or organic form. It contained absolutely no free ammonia and yielded no ammonia (albuminoid) on boiling with alkaline permanganate; neither did it abstract oxygen to any appreciable extent when mixed with a weak solution of acidified permanganate. The water is irreproachable in quality.

SAMPLE 2.—*Acqua del Gabriele, from the Piazza Sant Annuzza.*

Appearance	Bright, no deposit.
Colour	Slightly blue.
Odour	None.
Total solid matter	27·3.
Change on ignition of solids	None.
Total hardness	19·68.
Chlorine	1 69.
Equal to common salt	2·78.
Nitrogen in nitrates	0 252.
Nitrogen in nitrites	None.
Free ammonia	None.
Albuminoid ammonia	None.
Oxygen absorbed in fifteen minutes	0·0046.
Oxygen absorbed in four hours	0·022.
Reaction	Slightly alkaline.

This is the "Gabriele" water of Palermo collected from a fountain in the Piazza Sant Annuzza in the city. The catchment-area is a few miles from Palermo, and the geological formation of the soil is triassic. The temperature of the water was 55·7° F., and of the air four degrees higher. Like the previous sample this water shows again a very remarkable degree of organic purity. The presence of an increased proportion of nitrates is noteworthy, but the amount, taking into consideration the environment of the water, presents no objection from a sanitary point of view. In considering other results—as, for example, those showing the complete absence of free ammonia or of organic nitrogen or any oxygen-absorbing capacity and of the source of the water—there can be little doubt of its freedom from any source of impurity. It contains more solid matter than the previous sample, which is to be attributed chiefly to the increase of lime salts. The quality of the water for drinking purposes is excellent.

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SAMPLE 3.—*Sorgina Girgentis.*

Appearance	Brilliant, no deposit.
Colour	Slightly blue.
Odour	None.
Total solid matter	25·9.
Change on ignition of solids	None.
Total hardness	18·42.
Chlorine	1·82.
Equal to common salt	3·00.
Nitrogen in nitrates	0·252.
Nitrogen in nitrites	None.
Free ammonia	None.
Albuminoid ammonia	None.
Oxygen absorbed in fifteen minutes	0·008.
Oxygen absorbed in four hours	0·017.
Reaction	Slightly alkaline.
Metals	No trace.

This is a sample of water derived from a spring at Girgenti. The soil is pliocene. The temperature of the water at the time of collection was 56·4° F., and the air one degree higher. The water shows a chemical composition very similar to Sample 2. Its organic purity is, again, a feature. This is evident from the insignificant or practically negative results reported under chlorine, nitrates, free ammonia, albuminoid ammonia, and oxygen absorbed, and the fact that the residue on evaporation remained unchanged on heating. In respect of organic purity, as well also as in chemical composition, the water somewhat closely resembles the composition of the well-known pure waters derived from the deep chalk wells in Kent.

SAMPLE 4.—*Acqua di Scillato, from the Piazza di Cupo.*

Appearance	Quite brilliant.
Colour	A blue tinge.
Odour	None.
Total solid matter	15·4.
Change on ignition of solids	None.
Total hardness	11·8.
Chlorine	0·91.
Equal to common salt	1 50
Nitrogen in nitrates	0·056.
Nitrogen in nitrites	None.
Free ammonia	None.
Albuminoid ammonia	None.
Oxygen absorbed in fifteen minutes	0·007.
Oxygen absorbed in four hours	0 011.
Reaction	Slightly alkaline.
Metals	No trace.

This is another specimen of the Scillato water drawn from a fountain in one of the squares of Palermo, and, as will be seen, its composition differs but little from Sample 1, which is derived from the same source. These results are all the more satisfactory in showing that there is absolutely no exposure to objectionable contamination along the line of conduits. The high standard of purity is still maintained.

SAMPLE 5.—*Acqua Maurigi, from the Fonte nel Cortile Cascino.*

Appearance	Quite bright.
Colour	Slight blue.
Odour	None.
Total solid matter	23·8
Change on ignition of solids	None.
Total hardness	16 90.
Chlorine	2 31.
Equal to common salt	3 80.
Nitrogen in nitrates	0 252.
Nitrogen in nitrites	None.
Free ammonia	None.
Albuminoid ammonia	None.
Oxygen absorbed in fifteen minutes	0·005.
Oxygen absorbed in four hours	0·009.
Reaction	Slightly alkaline.
Metals	No trace.

This is a specimen of the Maurigi water, another of the Palermo potable waters. The specimen was drawn from a fountain in the city. Like the previous samples of potable water the results give not the faintest evidence of the presence of organic matter. Its composition is closely allied to Sample 2 except that there is a slight, but unimportant, increase in the amount of chloride. The relative proximity to the sea-border may probably account for this small difference.

SAMPLE 6.—*Acqua Corrao.*

Appearance	Brilliant, no deposit.
Colour	Faint blue.
Odour	None.
Total solid matter	28·0.
Change on ignition of solids	None.
Total hardness	18·68.
Chlorine	1·82.
Equal to common salt	3·00.
Nitrogen in nitrates	0 280
Nitrogen in nitrites	None.
Free ammonia	None.
Albuminoid ammonia	None.
Oxygen absorbed in fifteen minutes	0·009.
Oxygen absorbed in four hours	0 015.
Reaction	Slightly alkaline.
Metals	No trace.

This is another of the Palermo potable waters. The specimen was derived from a fountain in the city supplied from the Corrao reservoir. The catchment area is composed of calcareous rocks. The temperature of the water at the time of collection was 64·2° F. As might be expected, considering the nature of the area from which this water is collected, it shows a somewhat high proportion of mineral matters—in fact, the highest of the series—with a correspondingly increased degree of hardness due to chalk removable on boiling. In character it resembles Sample 3, some of the results being identical. The nitrates, however, are slightly increased. There is not a particle of evidence in the analysis that the water sustains the slightest pollution at any point.

SAMPLE 7.—*Acqua Santa.*

Appearance	Bright and clear.
Colour	Slight green.
Odour	None.
Total solid matter	1291·5.
Change on ignition of solids	None observable.
Total hardness	—
Chlorine	652·4.
Equal to common salt	1075·1.
Nitrogen in nitrates	0·056.
Nitrogen in nitrites	None.
Free ammonia	Trace.
Albuminoid ammonia	0·0084.
Oxygen absorbed in fifteen minutes	0·008.
Oxygen absorbed in four hours	0·022.
Reaction	Distinctly alkaline.
Metals	No trace.

This is a mineral water, as is obvious from the analysis, which has its source in the environs of Palermo and arises in a grotto. It possesses a strong saline taste. The temperature varies from 64 4° to 66·2° F. The results show a high standard of organic purity. Its saline strength is about half that of sea-water, the constituents being similar. In addition to common salt it contains also important quantities of sulphate of lime and magnesia, while a distinct indication of lithium was afforded on examination of the residue by spectroscopic analysis.

To sum up, it is evident that the potable waters of Sicily submitted to us for examination show an exceptional purity. In not a single sample of water examined could any evidence be traced of organic impurity. It is remarkable also that the whole of the drinking waters with not one exception yielded absolutely no free ammonia, or even ammonia when boiled with alkaline permanganate. As is well known, any nitrogen present in an organic form, as in the form of albuminoid, is converted into ammonia on heating with a solution of permanganate of potash and caustic alkali. Under the heading of albuminoid ammonia in the foregoing results it will be observed that the satisfactory result, "none," is recorded all through the series. In the same way the

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complete absence of organic matter is shown in the results coming under the heading of "oxygen absorbed." In every instance the amount was insignificant and quite negligible. Again, the residues obtained on evaporation showed not the least sign in any single instance of charring, so that not only is the presence of animal matter excluded, but also that of vegetable matter. The waters were clear and bright, fresh to the taste, and well oxygenated. According to the evidence furnished in the foregoing results these potable waters of Sicily are admirable in excellence and purity.

MEDICAL AID ASSOCIATIONS AND THE NORWICH MEMORIAL.

A MEETING of the medical profession in Norwich was held on the 17th inst., Sir Frederick Bateman, consulting physician to the Norfolk and Norwich Hospital, being in the chair, to consider replies from the Royal Colleges of Physicians of London and Surgeons of England (already given in THE LANCET) and from the Council of the British Medical Association, in answer to a memorial addressed to these bodies with regard to a medical institute and consultations with the medical officers thereof. The following resolutions were unanimously passed:—

1. *Royal College of Physicians of London.*

"That whilst the thanks of this meeting be given to the Council of the Royal College of Physicians for their reply to the memorial, the medical men of Norwich desire to express the hope that the College will in due course so alter its By-laws that it would not be considered 'a departure from its customary procedure' to forbid its Fellows, Members, and Licentiates from accepting positions derogatory to the honour and contrary to the best interests of the profession."

2. *Royal College of Surgeons of England.*

"That this meeting, whilst acknowledging with thanks the reception of their deputation and the reply of the Council of the College of Surgeons to the memorial, desire to express an opinion that steps should be taken so to amend Section XVI. of the College By-laws as to enable the Council to prevent its Fellows and Members accepting positions derogatory to the honour and contrary to the best interests of the profession."

3. *British Medical Association.*

"That a vote of thanks be accorded to the Council of the British Medical Association for so far answering their memorial in undertaking to memorialise the Medical Council to take further steps to prevent the growing evils of medical aid associations, but that this meeting regrets that the Council of the B.M.A. declines to give an answer to that part of the memorial which referred to consultations with the medical officers of these trading societies."

General Council of Medical Education and Registration.—The secretary reported that the memorial had been acknowledged by the Medical Council, but no reply had been received.

The Royal College of Physicians of Ireland passed the following resolution on Nov. 3rd, 1893, and confirmed it by a subsequent resolution of May 28th, 1897:—

"That the Royal College of Physicians, Ireland, desire to express their disapproval of their Licentiates accepting office in medical aid associations as at present conducted in England, inasmuch as the independence of the physician is destroyed by the system and the services of the physicians are used so as to produce a profit for lay persons, &c."

It was unanimously resolved that no further steps be taken with regard to meeting the medical officers of the Norwich Institute in consultation, as this had been decided by a large meeting of the profession (33) held on Jan. 16th, and subsequently endorsed by the signature of forty-one medical men in the city of Norwich.

THE TWELFTH INTERNATIONAL MEDICAL CONGRESS.

DELAY AT HEAD-QUARTERS.

AS was indicated in our columns last week, the organizers at headquarters are not beforehand with their arrangements for their visitors. We have heard from several gentlemen who have sent their cheques that they have not been credited with the full amount of roubles necessary to become members, and that not having received their railway passes they remain in ignorance if these are being withheld because of incomplete payment or because the passes are not ready for distribution.

Mr. Makins, upon whom has devolved the practical work of the English Committee, tells us in another column that he has learned from Professor Roth that cheques for £1 are received in full discharge of the fee of membership, and that the free railway tickets are in active course of preparation—so that we can only preach counsels of patience.

We have been asked by Professor Roth to announce to our readers that the free railway tickets will not be available till after Aug. 1st, and the Secretary-General repeats his request for early information from members as to the frontier town at which they intend to arrive. This information should be sent to the Secretary-General before Aug. 1st, and we may add that for the purposes of these passes St. Petersburg is to be considered a frontier town.

The English Committee is now issuing the following letter to such intending members as have entered into correspondence with that Committee:—

International Medical Congress,
47, Charles-street, Berkeley-square, London, W.,
July 19th, 1897.

DEAR SIR,—As it appears possible that the delay in the receipt of tickets and certificates for the journey to Moscow may in some cases be due to defective fulfilment of the "conditions de voyage en Russie" laid down on pages 6 and 7 of the pamphlet "Renseignements divers," previously sent to you, the English Committee has prepared the form at the back, which should be torn off, filled up, and sent at once to Professor W. K. Roth, Secrétariat Général du XII. Congrès International de Médecine, Moscow.

If no acknowledgement of your cheque has been received the form can be altered to meet the case.

May I take this opportunity of pointing out that the English Committee is an honorary body and not a part of the Executive of the Congress, hence all questions regarding the business of the Congress, or relating to excursions, lodging, accommodation, &c., must be sent direct to the Secretary-General (in the case of lodgings to Professor Chervinsky, care of Secretary-General).

Yours faithfully,
G. H. MAKINS.

On the back of this letter is printed the following form:—

DEAR SIR,—I beg to inform you that I sent my subscription to the Congress last, and have received from you a post-card acknowledging the same.

I intend travelling to Moscow viâ (*here state route chosen*)

.....

entering Russia by (*here state frontier town of entry*)

.....

and leave by (*here state frontier town on return journey*)

.....

and I shall be much obliged by your forwarding the necessary tickets and certificates at your earliest convenience.

Name.....

Address.....

N.B.—The route chosen must be a direct one from the frontier to Moscow, and *vice versâ*. See "Renseignements divers," p. 7.

A FEW HINTS.

Intending visitors to Russia will do well to remember the following points:—1. A passport is absolutely necessary, for no one can enter Russia without one. 2. Any traveller staying in a hotel or an inn must hand over his passport to the landlord, to be by him passed on to the police. This and the following regulation hold good for every town visited. 3. If he is staying in a private house he must himself take his passport to the nearest police office. 4. Permission must be obtained to leave the country as well as to enter it.

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5. Travelling in Russia is just as easy as anywhere else, provided the traveller conforms to the customs of the country and the police regulations, which are not irksome.

METROPOLITAN HOSPITAL SUNDAY FUND.

WE continue below our record of some of the principal amounts received at the Mansion House, the lists of which have been forwarded to THE LANCET office. The total sum now amounts to over £37,000:—

	£	s.	d.
The Very Rev. the Chief Rabbi, from London Synagogues including—	1259	16	9
Great Synagogue	507	9	6
Bayswater	146	12	0
New West End	134	0	9
Central...	89	11	2
Hampstead	80	12	0
St. John's Wood	75	16	8
West London Synagogue for British Jews	217	1	6
St. Mary, Bryanston-square	273	0	10
St. Columba, Pont-street	100	16	0
Holy Trinity, Beckenham	60	8	0
St. John, Deptford	48	13	2
Spanish and Portuguese Synagogue	44	1	0
Chapel Royal, Hampton Court	50	2	8
St. George, Bloomsbury	68	8	6
St. Saviour, Pimlico	41	13	1
St. Alban, Holborn	52	10	4
Windsor-road (German Lutheran) Church, Denmark-hill ...	66	16	6
Pinner Parish Church and Chapel of Ease	39	6	0
Barking Parish Church	34	18	10
St. Margaret, Lothbury	54	3	6
Leyton Parish Church	27	1	0
Holy Trinity, Marylebone	36	10	8
St. Mary Magdalene, Munster-square	30	1	1
St. Matthew, Hammersmith	28	2	6
St. Saviour, Southwark (Cathedral)	30	8	8
Holly Park Wesleyan Chapel, Highgate	20	0	0
St. Paul, Clapham	21	17	5
St. Stephen, South Kensington	61	14	1
St. Mary (new) Church, Stoke Newington	49	15	10
St. Luke, Westbourne-park...	40	2	7
All Saints, Clapham-park	36	8	3
Finsbury-park Congregational Church	31	7	10

THE EARTHQUAKE IN INDIA.

THE Anglo-Indian papers contain, as might be expected, a good deal about the late earthquake in India, but full details of the disaster had not been received by them at the date of publication. The issue of some of the journals published in Calcutta must have been a matter of much difficulty and have given rise to a good deal of strain under the circumstances. The shock in Calcutta was the most severe that has been known to the oldest residents. The office of our contemporary, the *Indian Lancet*, for example, suffered severely. "Though a large two-storied building," we are told, "it rocked as if made of cardboard, and we expected it every moment to collapse. The whole building, as a result, has been very severely damaged, and it is with a great effort that the paper is being issued on due date."

The damage done to property has been considerable; indeed, there is scarcely a house that has escaped entirely. The *Indian Medical Record* of June 16th says that the scare in Dharamtala-street, where its office is situated, was one of intense excitement. The Medical College Hospital suffered seriously, and the panic among the patients was almost indescribable. The *Indian Medical Record* states that "most of the patients rushed out of doors, but some of the hospital staff with exemplary courage remained with those who were unable to move. It was some time after the shock before the terrified patients could be persuaded to return to their beds. There are some bad cracks in the walls and over the archways. The second surgeon's ward has suffered most. In the south verandah of the hospital the massive pillars are cracked to a dangerous extent. The Calcutta General Hospital has also suffered a good deal. The two ends of the structure are badly damaged, while the centre hall, set apart for some of the European patients, is in a dangerous condition. The patients have been removed from the hall to other quarters. One European patient named Clive, an actor by profession, had a narrow escape. He is suffering from enteric fever, and was lying unconscious at the time in a special ward, the walls of which were observed by his servant, who was with him, to crack. The man lifted his master out of bed, and just as he emerged from the room the walls caved in. It is reported that some, if not all, of the wards intended for the use of female patients and children cannot be availed of just now."

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Friern Barnet Urban District.—Mr. Hugh Stott calls attention, in his annual report for 1896, to a case of enteric fever which was, he considers, caused by the consumption of oysters at Southend. The person in question, a hospital nurse, visited Southend with two friends, and all consumed oysters. A short time afterwards all three were attacked with diarrhœa and vomiting, and the nurse subsequently developed enteric fever. Mr. Stott communicated with the medical officer of health of Southend, but no other cases of enteric fever could be traced to this source. It appears from a report that has recently reached us, that the oyster merchants at Southend have so fully recognised the danger to which certain "layings" on the Southend foreshore were exposed that they have removed the oysters therefrom. It may be remarked that instances of vomiting and diarrhœa after the consumption of oysters are by no means rare, and in certain cases some of those thus affected have subsequently developed enteric fever.

Wigan Urban District.—The county borough of Wigan has not hitherto deemed an annual report from its medical officer of health a necessity, and has apparently contented itself with monthly reports. We are glad to see that the borough has now fallen into line, and we shall look forward to some interesting reports from Mr. William Berry, the present medical officer of health. The Wigan guardians, like many others, during the epidemic of small-pox at Gloucester, decided, at the earnest request of Mr. Berry, to enforce the Vaccination Acts; and it is to be hoped that they will have the courage to continue their enforcement now that the Gloucester "scare" has passed away. It is, however, a sad satire upon the whole system that those responsible for the administration of the Acts should have needed to be stirred into activity by the sanitary authority. Mr. Berry has, too, we note, prevailed upon the sanitary committee to adopt the compulsory notification of measles for three years. Wigan, or at least certain parts of it, still affords, it seems, a suitable nidus for typhus fever, and during 1896 twenty cases with seven deaths occurred.

Hull and Goole Port District.—Dr. J. Wright Mason draws attention in his current report to the necessity in new vessels of increased cubic space for the seamen, of covering the iron work so as to prevent sweating, of the provision of proper lavatory accommodation, and for the placing of berths further away from the sides of the vessels. Dr. Mason thinks that much good might be accomplished in regard to existing vessels if there were more uniformity among port sanitary officials in the several ports of Great Britain. Special attention was given during the past year to vessels from India, 15 having arrived from Bombay and 7 from Kurrachee.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6608 births and 3501 deaths were registered during the week ending July 17th. The annual rate of mortality in these towns, which had been 14·7 and 15·1 per 1000 in the two preceding weeks, further rose last week to 16·6. In London the rate was 16·3 per 1000, while it averaged 16·9 in the thirty-two provincial towns. The lowest death-rates in these towns were 11·2 in Croydon, 11·4 in Halifax, 11·6 in Derby, and 11·7 in Bristol; the highest rates were 23·5 in Salford, 24·2 in Sunderland, 24·5 in Wolverhampton, and 32·2 in Preston. The 3501 deaths in these towns included 572 which were referred to the principal zymotic diseases, against 409 and 504

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in the two preceding weeks; of these, 244 resulted from diarrhœa, 147 from measles, 73 from whooping-cough, 52 from diphtheria, 32 from scarlet fever, 23 from "fever" (principally enteric), and 1 from small-pox. The lowest death-rates from these diseases were recorded in Croydon, Brighton, Blackburn, and Bradford; and the highest rates in Manchester, Burnley, Salford, and Preston. The greatest mortality from measles occurred in Birmingham, Birkenhead, Manchester, Salford, Burnley, and Preston; from whooping-cough in Salford and Huddersfield; and from diarrhœa in Plymouth, Bolton, Leicester, Sheffield, Liverpool, and Wolverhampton. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 52 deaths from diphtheria included 36 in London, and 4 in Birmingham. One fatal case of small-pox was registered in Hull, but not one in any other of the thirty-three large towns, and there were no cases of small-pox under treatment during last week in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospitals at the end of the week was 2903, against numbers increasing from 2380 to 2885 on the eleven preceding Saturdays; 381 new cases were admitted during the week, against 267, 310, and 349 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 127 and 116 in the two preceding weeks, rose again last week to 138, but were 51 below the corrected average. The causes of 28, or 0·8 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Manchester, Bradford, Newcastle-upon-Tyne, and in seventeen other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·4 and 17·7 per 1000 in the two preceding weeks, rose again to 17·9 during the week ending July 17th, and exceeded by 1·3 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 12·8 in Aberdeen and 15·6 in Glasgow to 24·9 in Leith and 32·4 in Perth. The 534 deaths in these towns included 34 which were referred to diarrhœa, 23 to whooping-cough, 12 to measles, 7 to scarlet fever, 3 to "fever," and 1 to diphtheria. In all, 80 deaths resulted from these principal zymotic diseases, against 69 and 82 in the two preceding weeks. These 80 deaths were equal to an annual rate of 2·7 per 1000, which corresponded with the mean rate last week from the same diseases in the thirty-three large English towns. The 34 fatal cases of diarrhœa showed a further increase upon the numbers recorded in recent weeks, and included 15 in Glasgow and 6 in Dundee. The deaths referred to whooping-cough, which had been 16 and 20 in the two preceding weeks, further rose to 23 last week, of which 12 occurred in Glasgow and 5 in Edinburgh. The 12 fatal cases of measles showed a further decline from recent weekly numbers, and included 6 in Edinburgh and 6 in Leith. The 7 deaths from scarlet fever corresponded with the number recorded in the preceding week, and included 3 in Aberdeen and 2 in Glasgow. The 3 fatal cases of "fever" were all registered in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 104 and 69 in the two preceding weeks, were 68 last week, and were 16 below the number in the corresponding week of last year. The causes of 43, or more than 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 20·3 and 21·6 per 1000 in the two preceding weeks, further fell to 24·2 during the week ending July 17th. During the thirteen weeks of last quarter the death-rate in the city averaged 27·3 per 1000, the rate during the same period being 15·5 in London and 24·9 in Edinburgh. The 162 deaths registered in Dublin during the week under notice showed an increase of 17 upon the number in the preceding week, and included 11 which were referred to the principal zymotic diseases, against 11 and 9 in the two preceding weeks; of these, 4 resulted from "fever," 3 from whooping-cough, 2 from diarrhœa, 1 from measles, and 1 from scarlet fever. These 11 deaths were equal to an annual rate of 1·6 per 1000, the zymotic death-rate during the same period being 2·8 in London and 2·7 in Edinburgh. The 4 deaths referred to "fever" exceeded the number recorded in any week since March last. The 3 fatal cases of whooping-cough showed a further increase upon the numbers returned in recent weeks, while the mortality from scarlet fever and from diarrhœa corresponded with that recorded in the preceding week. The 162 deaths in Dublin last week included 26 of infants under one year of age, and 38 of persons aged upwards of sixty years; the deaths of infants showed a slight further decline, while those of elderly persons showed a further increase upon recent weekly numbers. Seven inquest cases and 4 deaths from violence were registered; and 64, or more than a third, of the deaths occurred in public institutions. The causes of 16, or nearly 10 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN JOHN D. FERGUSON and Surgeon-Captain George S. McLoughlin are seconded for service in East Africa. Surgeon-Major Patrick J. Nealon, M.D., is placed on temporary half-pay on account of ill-health.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Lieutenant Cochrane is reported to have passed the required examination in Urdu. Surgeon-Captain W. C. Sprague is appointed to act as Civil Surgeon, Karwar. Surgeon-Major J. P. Barry, on relief, is appointed to act as Superintendent of the Lunatic Asylum, Colaba. Surgeon-Captain J. L. T. Jones, on relief by Surgeon-Major A. W. F. Street, is appointed to take over the duties in Poona performed at present by Surgeon-Major J. P. Barry and Surgeon-Captain W. W. O. Beveridge. Surgeon-Captain A. E. Berry is appointed to the Officiating Medical Charge of the 4th Madras Pioneers. Surgeon-Captain A. W. Dawson, on plague duty, has been transferred from Lucknow to Hardwar in the Saharanpur District, and Surgeon-Captain J. F. Kelly, on plague duty, has been transferred from Hardwar in the Saharanpur District to Lucknow. The services of Surgeon-Captain C. D'Alton, A.M.S., and Surgeon-Captain J. F. M. Kelly, A.M.S., are replaced at the disposal of the Government of India, Home Department. Surgeon-Captain Jay Gould has been appointed an additional Health Officer of the Port of Calcutta. Dr. C. Banks, Superintendent of Emigration, has been appointed an additional Health Officer of the Port of Calcutta in addition to his own duties. Surgeon-Captain D. R. Hamilton, A.M.S., has been appointed to have charge of the Civil Medical duties at Dum Dum, in addition to his own duties, during the absence on leave of Surgeon-Captain M. Morphew, or until further orders. Surgeon-Captain H. A. Stalkartt, A.M.S., has been appointed to have Medical Charge of the Civil Station of Dinapore in addition to his own duties, vice Surgeon-Captain B. K. Basu, transferred.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Staff Surgeons: J. C. F. Whicher to the *Scout*; H. J. McC. Todd to the *Caledonia*; and J. R. McDonald, M.D., to the *Flora*. Surgeons: H. St. D. Griffiths to the *Barrosa*, and for charge of the *Flood* on the way out; G. McGregor to the *Vernon*; and O. Rees, M.D., to the *Pembroke*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain John P. Atkinson, M.D., and Surgeon-Captain John P. Massingham to be Surgeon-Majors.

MEDICAL STAFF CORPS.

A concert was given by the detachment of the Medical Staff Corps at the Station Hospital, Gibraltar, in commemoration of Her Majesty's Diamond Jubilee by permission of His Excellency the Governor and the Principal Medical Officer, Surgeon-Colonel Catherwood. The stage was erected in the patio of the hospital, and over it was displayed a picture of Her Majesty illuminated by lamps. The convalescent patients were allowed to attend the concert, a privilege which was much appreciated.—No. 9 Bearer Company and No. 4 Field Hospital, made up to war strength, assembled at the Curragh Camp on the 13th inst. for field training. The

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Bearer Company is commanded by Surgeon-Major J. Grove Crofts, the officers for duty being Surgeon-Captains J. S. Green and V. Davoren. The Field Hospital is under the command of Surgeon-Lieutenant-Colonel J. C. Dorman, Surgeon-Majors R. D. Donaldson and H. A. Haines, Surgeon-Captain E. G. Browne being one of the duty officers.—The annual sports of No. 12 Company (Woolwich) were held on the 8th inst. at Charlton-park, and included corps competitions illustrating the various modes of dressing and removing the wounded on the battle-field. Among the company present were Surgeon-Major-General and Mrs. Jameson, Surgeon-Colonel and Mrs. Ferguson, Brigade-Surgeon-Lieutenant-Colonel and Mrs. Fawcett, Brigade-Surgeon-Lieutenant-Colonel Allin, Colonel Yorke, R.A., and many other officers of the garrison. Surgeon-Major Bedford acted as judge in the corps competitions. At the close of the meeting the prizes were distributed by Mrs. Fawcett.

VOLUNTEER CORPS.

Artillery: 1st Norfolk (Eastern Division, Royal Artillery): Surgeon-Lieutenant S. W. Woollett to be Surgeon-Captain. 1st Ayrshire and Galloway: Thomas Easton, M.D., to be Surgeon-Lieutenant. *Royal Engineers* (Volunteers): 1st Lanarkshire: Surgeon-Captain A. Mechan, M.B., to be Surgeon-Major. *Rifle:* 3rd Volunteer Battalion the Prince Albert's (Somersetshire Light Infantry): Surgeon-Lieutenant A. W. Dalby to be Surgeon-Captain. 5th Volunteer Battalion the South Wales Borderers: Charles Evan Humphreys, gent., to be Surgeon-Lieutenant. 1st Nottinghamshire (Robin Hood): Robert Plenderleith Shearer, M.B., to be Surgeon-Lieutenant. 22nd Middlesex (Central London Rangers): Surgeon-Lieutenant G. Herschell, M.D., to be Surgeon-Captain.

VOLUNTEER MEDICAL STAFF CORPS.

The Woolwich Company: Thomas William Bartlett, gent., to be Surgeon-Lieutenant.

DEATH OF SURGEON REGINALD JAMES FYFFE, R.N.

Surgeon R. J. Fyffe, M.R.C.S. Eng., L.R.C.P. Lond., of H.M.S. *Rattler*, died under distressing circumstances on July 12th, at the early age of thirty years. The deceased had only recently returned from the China station, on leave, to be present at the naval review, his home being at Southsea. On July 10th he went to Bratton, near Westbury (Wilts), to his brother-in-law, the Rev. R. S. Jacobs, the vicar. The deceased was riding a bicycle on July 12th to Trowbridge, when he was seen to fall off the machine, and it is surmised that he missed the pedal, which caused the accident. Mr. Fyffe was picked up in an unconscious state, from which he never recovered, and died about eleven o'clock the same evening. At the inquest evidence showed that he had sustained a fracture of the skull, and a verdict of accidental death was returned. Much sympathy is felt in the district at the death of so promising an officer.

A vacancy in the list of Honorary Physicians to the Queen has been filled by the appointment of Surgeon-Major-General William Roche Rice, M.D., C.S.I., late chief of the Indian Medical Department, Sanitary Commissioner with the Government of India, and in earlier years Chief Inspector of Hospitals in the North-West Provinces and Oudh. He joined the service in November, 1856, and has the medal for the Indian Mutiny.

Correspondence.

"Audi alteram partem."

THE TWELFTH INTERNATIONAL MEDICAL CONGRESS.

To the Editors of THE LANCET.

SIRS,—I have to-day received a letter from Professor Roth in which he states (*a*) that cheques of £1 are received in full discharge of the membership subscription; (*b*) that the preparation of the free railway tickets in Russia and the *cartes de legitimation* is in active progress, but that delay is occurring from the want of exact information from members as to the route chosen by them in entering and leaving Russia; and (*c*) that in a few days a fresh supply of the pamphlet "Renseignements divers" will arrive. To meet the second difficulty a small form, to be sent at once to Professor Roth, has been prepared and issued to every member who has received his form of inscription from me, and copies of this form will be issued to anyone requiring them. I am, Sirs, yours faithfully,

G. H. MAKINS.

47, Charles-street, Berkeley-square, W., July 19th, 1897.

"CYCLING FOR WOMEN: ITS EFFECTS ON PARTURITION."

To the Editors of THE LANCET.

SIRS,—The opinion given by Mr. J. W. McVitie in THE LANCET of July 3rd as to the effect of bicycle exercise on parturition seems to be rashly gratuitous when only based on observations that have been made on two cases; but, more than this, it is one that may be calculated to arouse some misgiving, and even fear, in a section that is very largely represented in cycledom. Such an idea may go far towards casting into disrepute a form of exercise that is now universally recognised as being of very considerable value. The evidence upon which Mr. McVitie bases his conclusions is, indeed, slender—if he is not altogether mistaken about his instances. In the first place, primiparous cases almost invariably exhibit delay during the second stage of labour, whether they be cyclists or not, and therefore it would seem almost absurd for such cases to be taken for the purpose of advancing an alarming theory. But your correspondent exposes himself to controversion on a point of simple physical and physiological effect. The long-continued or oft-repeated pressure of a saddle would not render the perineum "unusually tough and unyielding." To argue that it would do so is merely to indulge in hasty speculation. If the pressure were sufficient to cause an amount of perineal muscular inaction, then the result would be the very opposite to that complained of; there would be atony and want of resiliency, instead of tone and increased resistance. And, on the other hand, if the movement of the perineum on the saddle exercised the muscles to the extent of an over-development of them, then, other things being equal, if the parturient cases were "of good physique" and had the ordinary expulsive forces unimpaired no unusual opposition to the passage of the child would be encountered. Instances go to show that the higher the muscular development the more perfect is any function that is concerned. Savages go through child-birth with much greater ease that do the more civilised, and the tone and development of their muscular system ensures a more rapid and perfect involution. It is extremely likely that cycling is an advantage rather than a disadvantage in the particular respect under consideration as well as in others, and that excessive riding, either on account of atony caused by the pressure thereof or through muscular development induced by the exercise, helps rather than hinders.

Mr. McVitie applied short forceps to his cases "without tearing the perineum in the slightest." Does this argue in favour of his skill, or is it the plainest proof that there was nothing "unusually tough or unyielding"? Perhaps it indicates both, but most assuredly the latter. If the perineum in each of his cases had been so unusually tough and unyielding as to cause delay during the second stage, then it would almost certainly have given way under the strain of instrumental assistance. The class of case that exhibits an inordinately rigid perineum is that affected by age. A patient approaching forty years of age will generally suffer considerable delay, and her perineum will commonly tear under the use of forceps. There is toughness and rigidity, not on account of muscular atony or even through exercise and development, but on account of age pure and simple.

The advantages of cycling are so great—and none the less to women who contemplate marriage as well as those who may be living in their first years of married life—that it would seem to be undesirable that a pet diversion should have a stigma thrown upon its character unless the circumstances upon which it is founded are overwhelming and convincing. Cycling has saved many lives in both sexes, and no section has derived more benefit from the exercise than that consisting of the married and those about to marry. It would be monstrous if the idea were widely disseminated that such a class should strictly limit the amount because

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certain primiparæ displayed symptoms that, after all, most practitioners have to deal with in all primiparæ.

Mr. McVitie's warning against "immoderate use of the wheel" is a good one for all ages and both sexes, but he should not proceed to abstract from the general bliss of a married existence one of the most enjoyable, popular, and healthful exercises ever made fashionable by throwing out such an awe-inspiring warning as he has without further reason than that given. Such a theory as he has presented might not only help to limit the amount of cycling in a particular section, but would most likely conduce to an unpopularity quite incommensurate and entirely undeserved.

I am, Sirs, yours faithfully,

Buckhurst-hill, July 5th, 1897. HAYDN BROWN.

"SOME NOTES ON THE LATE GRECO-TURKISH WAR."

To the Editors of THE LANCET.

SIRS,—In justice to my colleague Mr. Abbott, I should inform you that it was he who was in charge of the whole English expedition in the Greco-Turkish War, and had control of the larger Hospital at Chalkis. I would also add that Sir William MacCormac is the chief surgeon of the St. John Ambulance, whereas I am only chief surgeon of the Metropolitan Corps.

I have the honour to be, Sirs, yours obediently,

10, Maddox-street, Regent-street, W. SAMUEL OSBORN.

"THE VALUE OF AN EXCLUSIVE RED MEAT DIET IN CERTAIN CASES OF CHRONIC GOUT."

To the Editors of THE LANCET.

SIRS,—Mr. William Armstrong's paper under this heading in THE LANCET of July 3rd has shown the good that can be done by sometimes using what on the face of it appears to be a theoretically wrong diet. Reasoning as the writer does on the subject of auto-intoxication the diet has much in its favour; its results are good in his practice.

Speaking of children in whom the uric acid diathesis is sometimes very marked, I will give a case in my own practice which supports the assimilation theory. A child at two days old passed a quantity of red urine which alarmed the nurse, so much so that she saved me a specimen which on being tested was found to contain pure uric acid crystals. This urine was constantly being passed by the child, who screamed a great deal, had flatulence and sickness, and seemed very miserable altogether. The mother's milk was rich in cream, but turned acid rapidly. Careful dieting of the mother had no effect on the child for good. I found eventually that no milks would agree, so I abandoned milk and put the child on mutton juice. This agreed perfectly, the crying and sickness ceased, the general aspect of the child changed for the better, and the uric acid ceased to be marked after twenty-four hours of mutton-juice feeding. I gradually brought the feeding back to a sterilised cream mixture; the child is now well and taking food without difficulty. Curiously enough the family history of this infant reads like a list of Spa patients—viz., paternal grandmother has rheumatoid arthritis; the father has passed quantities of uric acid calculi; the mother has what Sir Willoughby Wade would call gouty neuritis accompanied by acid dyspepsia.

When Dr. Eustace Smith introduced meat-juice feeding he saw the wonderful way in which the albumin was assimilated, and I am quite convinced that it is in cases of uric acid diathesis that milk-mixed carbohydrate diets often disagree. Beef-tea I never give to children, as I only see harm from its use. In several other cases of children unable to digest milk well I have noted uric acid, but the family history is not so marked. When one considers that sugar, which is almost harmless in itself, can (as Sir Dyce Duckworth has pointed out) by setting up fermentation produce flatulence and acidity, it is obvious that carbo-hydrates may retard stomach digestion by acting as diluents alone, as well as by improperly fermenting and throwing the whole digestive tract out of gear by sending into the duodenum a fermenting mass, the toxins of which are absorbed—veritable taskmasters to an overworked system. Sir William Roberts has called attention to the value of mixed diets, and they certainly are more comfortable than the single red meat and water or vegetarian; but in the special cases mentioned by Mr. Armstrong the microbes must be mastered.

I am, Sirs, yours faithfully,

LENNOX WAINWRIGHT, M.D. Brux., &c.

Folkestone, July 19th, 1897.

CERTAIN POINTS IN THE CAUSATION AND TREATMENT OF SPINAL CURVATURE.

To the Editors of THE LANCET.

SIRS,—In a paper recently published on the above subject Mr. Barwell again draws attention to the condition which he terms "amesial pelvis," and he alludes to a figure of this condition in the last edition of his work on Spinal Curvature. In a work on the same subject now in the press I have discussed this condition, and I have shown that the "amesial pelvis" is not the whole story. Briefly the facts are these. Mr. Barwell has only taken his plumb-line from the "vertebra prominence," and noticed that the rima natium is to one or other side of it. If Mr. Barwell had taken the plumb-line from above the patient's head to the ground between her feet he would have found not only the pelvis but also the whole body amesial. The figure he alludes to in his book has the plumb-line passing through the middle line of the head to midway between the heels. This I believe to be a most unusual condition for a curvature patient. Mr. Barwell's account of how he arrived at this diagram explains the error. She was examined "piecemeal," "and the result embodied in an outline sketch." If in his second figure a vertical be drawn up from between the knees, it will not pass through the middle line of the head, but very much to one side of it. It would pass still more to one side if drawn up from between the heels. Therefore the head as well as the pelvis and all the intermediate portions are amesial. This condition I have found to be nearly if not quite universal in cases of lateral curvature. As to the reason of this amesiality, I believe it has its first cause in general muscular weakness. The body bends to one or other side because the muscles are not strong enough to hold it straight, much as a willow stick bends to one or other side when stood on end, whilst a brass rod of the same diameter would remain straight. The side to which the amesiality occurs, depends on any cause, such as an habitually bad position, which weakens the ligaments on one side of the spine by frequently over-stretching them. Once amesiality has commenced, curvature has begun. Amesial pelvis is, therefore, but a part of a general amesial condition. This amesiality causes an inequality in the amount of weight borne by each foot. If Mr. Barwell will examine the boots of his second case with amesiality to the right he will probably find that the outer side of the right sole and the inner side of the left show most signs of wear. I can quite corroborate Mr. Barwell's statement that the amesial pelvis "is generally also oblique." It must be so if the legs are of equal length. This is obvious from ordinal mechanical considerations.

Mr. Barwell has undoubtedly proved the uselessness of most spinal supports. The revulsion of opinion has, as usual, gone too much the other way, and I should like to say a good word for Fig. 3 in his paper. This is one of the modifications of the late Mr. Chance's instruments, and is notoriously very largely used by another eminent spine specialist. At the present time I am treating several patients with them, and though I am even more alive than Mr. Barwell to the amesial pelvis, I do not find it a bar to fitting the instrument and getting a great deal of good from it. The plates are not meant to act "with sufficient power and constancy to have an effect on the most prominent part of the curve," nor *when properly applied* can one "with the greatest ease sway the whole thing from side to side." What is claimed for these instruments, I can testify that they do: (1) they keep the spine in as upright a position as possible, for flexion increases the deformity and especially increases the rotation; (2) this is done by shoulder-straps, which only prevent the shoulder from falling forwards and do not otherwise limit their movements; (3) this constant keeping back of the shoulders tends to develop the flattened chest, removes stoop, and therefore cures part, whilst it removes an active cause, of the deformity; (4) they limit movement into a worse position when the patient is erect, and when at rest

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they form a portable spinal chair on a principle I have described elsewhere; (5) they do not limit, but rather tend to produce, movement into a better position and are, therefore, actively curative. It is not my object to advocate their use for all cases of curvature, such as, I believe, has been done. In a certain minority of cases I have found them useful adjuncts to other treatments.

I am, Sirs, yours faithfully,

Folkestone, July 18th, 1897. PERCY G. LEWIS.

FACTORY GIRLS' COUNTRY HOLIDAY FUND.

To the Editors of THE LANCET.

SIRS,—You were good enough last year to substantially help the Factory Girls' Holiday Fund by publishing an appeal on its behalf, and we trust that you will again grant it a similar favour. As might have been expected in view of the heavy demands which have been made this year upon our sympathy and resources, the amount of support the fund has received is as yet quite insufficient for its work; but we earnestly appeal to the generous not to allow our year of rejoicing to bring disappointment to the hundreds of poor women and girls who are at this moment eagerly counting upon a week or fortnight's escape from the unchanging drudgery of their toiling lives. The conditions of modern industry make it a sad necessity that women must work as hard as men, and as a result our hospitals are full of overworked and underfed women and girls. On the principle that prevention is better than cure it is wished to give as many of them as possible the chance of breathing pure air, of having good food, and of enjoying the unwonted luxury of rest for at least one week of their weary year. Short as the holiday is it makes a wonderful change in the pale, dull-eyed workers, and all who help would feel well repaid to see the sunburnt, happy faces that come back to work. We know the physical benefit it is to them, and we know the happy memories of their short stay in the country does something to soften and purify their hard lives in London.

Subscriptions will be gladly received by the honorary secretary, Miss Canney, St. Peter's Rectory, Saffron-hill, London, E.C., or by the honorary treasurer, Miss M. Wyatt, 1, Routh-road, Wandsworth-common, S.W.

We are, Sirs, yours obediently,

HENRY SCOTT HOLLAND. ROBERT F. HORTON.
ELIZABETH GARRETT ANDERSON. FRANK LLOYD.
H. ADLER, Chief Rabbi.
M. C. TREVOR.
NORFOLK. EDWARD CANNEY, Chairman of the Executive Committee.

July 19th, 1897.

*** DR. BYROM BRAMWELL has written to us pointing out that one sentence in our leading article of July 10th on Aphasia and Disorders of Speech "might be likely to convey to the readers of your article the idea that my views as to the action of the right hemisphere were formed subsequently to, and based upon, Dr. Bastian's lectures." We have, therefore, pleasure in stating that the simultaneous publication in our columns of Dr. Byrom Bramwell's papers and Dr. Charlton Bastian's Lumleian Lectures was an accidental coincidence due to the fact that the great pressure on our space inevitably leads every now and then to delay in the insertion of contributions, more especially when they are of such a length that they can only appear in successive issues of THE LANCET. Dr. Byrom Bramwell's series of cases of aphasia was an instance of this kind, the manuscript having been in our hands for a considerable time (several months) before the first instalment appeared in our issue of March 20th last; it was completed in eight articles, the final one of which was contained in our issue of May 22nd.—ED. L.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, CITY-ROAD, LONDON.—The Goldsmiths' Company and the treasurer of the hospital, Mr. Hope Morley, have respectively sent £100 and 50 guineas to the Royal Chest Hospital, City-road, E.C.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Society of Chemical Industry.

THE annual general meeting of the Society of Chemical Industry was held on the 14th inst. at the Owens College, under the presidency of Dr. Edward Schunck, F.R.S., who gave a most interesting address. A large portion of it consisted of personal recollections of some of the most notable men connected with the history of chemical technology in the Manchester district, especially of Dr. Dalton and Dr. Charles Henry, who practised for some time as a physician in Manchester. He was a favourite pupil of Dalton, and after a time gave up the practice of medicine for that of chemical manufacture, in which his family had been successfully engaged for some generations. His grandfather was the first to prepare the so-called "Henry's magnesia," the distinctive merit of which consisted, according to Dr. Schunck, in its forming with water a soft, milk-like emulsion, without any grittiness, giving no deposit even on long standing. This property was said to be due to precipitation with potassium carbonate in place of sodium carbonate, and to using the solution of magnesia in a very concentrated state, "a proof, if correct, of how often success in manufacturing manipulation depends on minute details." Dr. Charles Henry wrote a life of Dalton, "a classic production, forming one of the most important volumes of the Cavendish Society's series," and to him Dalton bequeathed the whole of his scientific apparatus, which was afterwards given to the Manchester Literary and Philosophical Society, in whose rooms it is still to be seen.

Incidentally the colouring of pickles was referred to in connexion with the chemistry of chlorophyll. The opponents of what Dr. Schunck speaks of as the "so-called adulteration" producing "the much admired vivid green colour" say that it is produced by the addition of some salt or compound of copper. He says the point to be determined is whether the quantity of copper present is "as injurious as has been represented." The green colour is that of a derivative of chlorophyll—cupric phyllocyanate—which has a considerable tinctorial power. Most vegetables contain less than 1 per cent. of chlorophyll, which itself "yields by decomposition a not very large amount of phyllocyanin, and that the cupric phyllocyanate contains, according to my determination, only 9 per cent. of copper, and when we consider, moreover, that the copper is contained in the cupric phyllocyanate in a form in which it cannot be detected by ordinary reagents, then, I think, we may arrive at the conclusion that the small quantity of copper contained in a green pickle or vegetable cannot be very injurious." He goes on to say, however, that the mischief is "that the pickling vinegar, containing usually an excess of copper salt, is allowed to stand in contact with the pickles, and may be taken with them to some extent." The conclusion he comes to is that if this vinegar is poured off, the vegetable washed with water, and this also poured off before fresh vinegar is added, "then I feel convinced any quantity of the product may be eaten with impunity." Very consolatory to the devourers of pickles, but it would be better to have them without copper, even though in the form of cupric phyllocyanate.

Dr. Schunck also referred to the condition of the Ship Canal. He said that when Manchester was smaller and sanitary conditions not much thought of "it seemed only natural that our one river should carry away the sewage and waste water of the town to the sea," but now the effluent water is impounded in the Ship Canal, where it ferments and decomposes, giving off fœtid gases. With regard to purification, all that he thinks certain is that a successful scheme, even if possible, is sure also to be costly. Then follows some curious reasoning. Some of a sceptical turn may ask if there is evidence to satisfy a scientific inquirer that our polluted streams are as injurious to health as is sometimes asserted. Sentimental and æsthetic objections must not be brushed aside as of no importance, because what depresses the mind affects also the bodily health; "but the question is whether we are justified, except on the highest and most urgent grounds, in saddling the towns and manufacturers of Lancashire—in face of a declining trade—with the enormous outlay which, according to experts, would be necessary to effect the purification of our rivers to the satisfaction of the authorities." Dr. Schunck does not tell us

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what death-rate, what amount of ill-health and depression—most costly as they are to a working population—he would require before cleansing our rivers. It is not encouraging to hear that he has no doubt as to the increased pollution of the air by coal smoke, and that it is much greater than it was years ago. Sometimes it is contended that this is due to the number of small tenements erected of late years, but he is certain that "the chief part of the smoke comes from factories and works," and it is satisfactory to find that he thinks it "is a disgrace to our manufacturers, a disgrace to our municipalities, a disgrace to the community generally." We may hope that his audience took this to heart, for chemical manufacturers are among the greatest polluters of the air of Manchester, and not long ago sought special privileges as to evolving smoke. Dr. Schunck, noting the much greater purity of the air after rain, suggests the possibility of producing artificial showers by means of a rose attached to the end of a water-hose to wash down the suspended carbon, the sulphurous acid, and other impurities, at the same time watering the streets. When this is carried out Manchester will more than ever deserve its reputation of being a rainy city.

July 20th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Rabies and the Muzzling Order.

IT is with much regret that I have to record the occurrence of a serious accident to Dr. Allen, Professor of Physiology at Mason College, on Sunday last. It seems that a fox-terrier dog without a muzzle had been lurking about the district of Dr. Allen's residence for some days, and on Sunday found its way into the drive approaching the house. Dr. Allen offered some water to the dog, whose excitement was increased by being followed by a number of children. This the dog refused, and Dr. Allen, fearing for the safety of the crowd, put on a pair of kid gloves and seized the dog by the back of the neck, forcing it into the stable. During the struggle the dog bit Dr. Allen twice on the right hand and once on the left. The dog was afterwards killed by the police and its body examined by a veterinary surgeon, who pronounced that it had been the subject of rabies. A portion of the remains was packed up and sent to the Pasteur Institute at Paris, whither Dr. Allen proceeded at once for treatment himself. The many friends of Dr. Allen are hopeful that his injuries may not be serious and that the result of his journey to Paris may prove beneficial and permanent.

Epidemic of Brutality.

The periodic element of ruffianism which seems to be endemic in large towns has broken out recently in the midst of the city, as shown by violent attacks upon the police. Last Sunday night the disturbance resulted in the death of a fine young policeman, whose head was fractured by a brick thrown by one of the crowd. The patient, aged twenty-eight years, was conveyed at once to the General Hospital, where he succumbed in four hours, not regaining consciousness. These savage attacks upon the police in the execution of their duty demand prompt and even drastic measures from the authorities. Law-abiding people are not safe and dread certain localities of the town after daylight hours, when drunken and disorderly mobs of roughs make the neighbourhood dangerous. A salutary punishment of a number of the residuum of this class would do more to suppress these disturbances than the appeals to humanitarian sentiments which generally accompany the magisterial sentences.

Lavatories for Females.

The Public Works Committee have decided to erect two lavatories in the centre of the city for the convenience of females. The necessity for this action is obvious from a sanitary point of view, and if well managed and properly kept no doubt they will add to the comfort of a large number of people.

The New General Hospital.

On the invitation of the medical staff, the day after the opening of the hospital by Princess Christian a large number of the profession were entertained and shown over the new buildings. Some three or four hundred responded and evinced their approbation of the admirable arrangements made for the reception and treatment of patients. The adaptation of the various parts of the building for the purposes intended gave unqualified satisfaction. Much interest was shown in the chapel, which is fitted with beautiful marble, the gift of Mrs. J. C. Holder, and in the fittings of the children's wards, which have been mainly carried out by the girls of King Edward's High School. Considerable advance has been made towards the completion of the building, and it is hoped that it will be ready for patients by the end of September. The details are infinitely numerous, and require constant supervision which is ably supplied by the committee and house governor, Mr. Collins.

July 20th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Anderson's College Medical School, Glasgow.

THE governors of this school have decided not to re-appoint Dr. Campbell Black to the chair of Physiology. Dr. Black has occupied the chair during the last six years. From a correspondence printed in the *Glasgow Herald* it appears that some difference of opinion has arisen between Dr. Black and the governors in reference to certain addresses which Dr. Black delivered to his class, and which were reported in the public prints. A committee was appointed to meet Dr. Black, and though, according to his published statement, he "besought instruction in the matter" the issue is as stated above. The chair is now advertised as vacant.

Glasgow and the British Association.

At a meeting recently summoned by Lord Provost Richmond, and attended by representatives from the magistrates, the University, St. Mungo's College, the Philosophical and other scientific societies, it was unanimously decided to invite the British Association to meet in Glasgow in the autumn of 1901. The date selected is the year in which Glasgow is to have its second international exhibition. The first exhibition was in 1888, the year when the British Medical Association held its annual meeting in the city.

Medical Appointments, &c.

Mr. J. A. Anderson, M.D. Glasg., and Mr. Andrew Cluckie, M.B. Glasg., have been elected district medical officers by the Stranraer parish council. Mr. J. Duffus, M.D. Aberd., and Professor J. G. McKendrick have been admitted to the commission of the peace for the county of Kincardine.

Model Lodging-house, Aberdeen.

Rapid progress is being made with the construction of the corporation lodging-house, East North-street, Aberdeen, where 261 male lodgers will be accommodated. The scheme is being carried out under the Housing of the Working Classes Act. The total cost of the buildings will be £12,000, and the town council entered into contracts just in the nick of time, the prices for building work having greatly increased since then. There are in all five blocks, three of which will be four storeys in height. The front dressings are of fine white granite, and those in the back walls are of red granite. There is a large amount of masonry work in the contracts. The reading and recreation rooms, lavatory, and bath accommodation, and the lighting and ventilation will be excellent, so that the lot of the "dosser" who is able to pay the fee expected will be a great improvement on the previous state of affairs among the itinerant population in Aberdeen. The undertaking will be a source of considerable profit to the corporation. Messrs. Marshall and Dick, Newcastle-on-Tyne, are the architects of the buildings, and Mr. John Ogilvie is inspector of works for the corporation.

July 20th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Dublin Sanitary Association.

AT the last meeting of the council of the Dublin Sanitary Association the President, Dr. J. W. Moore, Mr. Frank Newell, one of the honorary secretaries, and Mr. Jonathan

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Pim, were selected to represent the association at the approaching twelfth annual meeting of the International Medical Congress at Moscow.

Pauper Nursing at the North Dublin Union.

The city coroner held an inquest on the 20th inst. on the death of a child, aged five months, who died in the institution, and who was found in a half-starved condition. During the inquiry it transpired that the child, who was an orphan, was left in the charge of unskilled and pauper nurses. The jury, after a long investigation, found a verdict of manslaughter. This will probably have the effect of directing public attention to the state of things which prevails in connexion with union nursing.

The Coombe Lying-in Hospital, Dublin.

At the recent annual meeting of the friends and supporters of this old-established institution the master (Dr. Kidd), in submitting the report, called attention to the fact that among the 418 patients treated in the internal midwifery department during the past twelve months the mortality was *nil*. In other words, no death occurred.

New Police Cells at Belfast.

At an inquiry held in Belfast on July 15th by the inspector of the Local Government Board the Belfast Corporation applied, among other things, for leave to borrow £11,000 on the proposed new police cells, which are so desirable, the present arrangements being in a very unsatisfactory state. There are to be 51 cells for the accommodation of 107 prisoners—namely, 19 single cells for males and 4 for females, and 18 large cells for males and 10 for females, each capable of containing three prisoners. There are to be new offices for the Commissioner of Police, the detective department, a medical man and matron, and all the most recent improvements will be embodied in the plans.

The Infectious Diseases Hospital, Belfast.

Dr. Clibborn, the medical inspector of the Local Government Board, held an inquiry on July 19th in Belfast as to the suitability of the proposed site at Purdysburn for the new infectious diseases hospital. The chairman of the Public Health Committee (Alderman Graham, M.D.) having given evidence in support of the situation, Dr. Clibborn said that he had received a printed memorial from a number of medical men of Belfast objecting to the site on various grounds, but, properly speaking, as they were not there he did not think he should go into that; but, to prevent any discussion afterwards, or any statement to the effect that the views of those objectors were not taken into account, he would ask Alderman Graham's opinion about certain statements in the memorial. The main objection was in reference to the distance from the centre of the city—four miles; but Alderman Graham gave statistics of other places in which the infection hospital was also at a distance from the towns. He also added that the Ulster Medical Society has unanimously come to a conclusion that they would offer no further objection to the site. The President of Queen's College had also written a letter opposing the site, and the medical inspector said that if he had been present he would have been very happy to have heard him. The Corporation ask a loan of £20,000, and Dr. Clibborn will report on the whole matter.

A Question of Fees for Expert Evidence.

Last week, at the Cork summer assizes, Dr. O'Connell, dispensary medical officer, Castlemartyr, appealed from a decision of the Recorder dismissing a claim of one guinea which he sought to recover from the Midleton Board of Guardians for attending a sanitary prosecution on behalf of the guardians. The defence was that the fee of one guinea was included in the salary of £25 paid to the plaintiff as sanitary medical officer of the union. After arguments on both sides his lordship, Mr. Justice Murphy, said that as the Medical Association appeared to be practically the plaintiffs in this action, and as the question was a serious one, he was prepared, if necessary, to state a case, but his present impression was that the law was with the defendants, and that the fee was included in the fixed salary of £25 as sanitary officer. He would let the case stand for some time to give the plaintiff an opportunity of considering whether he would have a case stated.

July 21st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Serum Treatment of Plague.

AT the Academy of Medicine M. Roux read for the writers the long report of MM. Wyssokowitch and Jobobat upon the plague in Bombay. These gentlemen made exhaustive experiments in the laboratory which they set up immediately upon their arrival, and reported that the first cases were all bubonic in character, but that later the type changed and pneumonia became the prominent symptom. They found general hypertrophy of the lymphatic system to be common, and due rather to the swarming of the bacilli than to any hyperplasia of tissue. In the pneumonic cases, as would be expected, the bronchial glands were attacked. In the intestines they found punctiform hæmorrhages, while the mesenteric glands were engorged, but according to MM. Wyssokowitch and Jobobat these lesions were all secondary to the general "*septicémie pesteuse.*" The bacillus they considered to obtain entrance both by the integument and by the mucous membrane, so that while external buboes were formed a fatal pulmonary condition could be set up at the same time by the affection of the bronchial glands. In support of their hypothesis that the bacillus can traverse healthy skin they conducted some experiments upon macaque monkeys, which are very susceptible to plague, the slightest scratch made upon the palm of the hand of one of these monkeys with a needle dipped in plague culture causing bubonic plague to develop without it being possible to detect the original scratch. The result of their experiments was to convince them that the healthy skin could be traversed by the bacillus. The plague they found could be artificially produced in the pneumonic type by introducing the poison into the trachea under chloroform, but the mucous membrane of the œsophagus and stomach were more resistant, supporting their view that the punctiform hæmorrhages found post mortem were part of a general condition, and were not a spread of local mischief. With regard to the protective action of the serum MM. Wyssokowitch and Jobobat treated monkeys with variable quantities of Yersin's preparations, but the state of immunity when reached did not last for more than ten or fifteen days, and a like temporary result was arrived at when a method proposed by Haffkine, in which the culture to be injected was sterilised by heat, was employed. The immunity in each case appeared to commence immediately after the injection. The importance of these observations seemed to them to lie in the fact that it was possible to immunise the human subject for definite periods by repeated injections. With regard to the curative action of the serum, they experimented with ninety-six monkeys, which they inoculated and then injected at varying times and in varying doses. From their experiments they concluded that careful dosage, and especially early employment of the serum, were necessary for the success of the treatment. When the injection was made during the first two days of the attack the serum seemed to have its full curative power. Later in the disease it lost its efficacy, although improvement had been observed up to the sixteenth or eighteenth day. On the whole, they considered that mortality from plague might be diminished by one-half by employment of the serum, although the pneumonic form was not affected by the injection but remained uniformly fatal.

X Rays and Tuberculosis.

M. Bergonié, of Bordeaux, has recently made some researches into the action of the x rays upon the progress of pulmonary tuberculosis. The patients were laid out on beds, and the surface of the skin being covered with a light covering the Crookes's tube was placed over the affected region at a distance of twenty centimetres. The exposures lasted for ten minutes and resulted in no erythema or injury to the skin. In five of the patients only was the treatment persevered with. In two of these, where acute phthisis chanced to be aggravated by the results of alcoholism and poor living, there was no improvement whatever either in the general or the local conditions. Three chronic cases of pulmonary tuberculosis showed some amelioration of general condition, but no alteration at the seat of mischief and no arrest of the disease. In three other cases the rays

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had no appreciable action. The bacillus of Koch seems not to have been modified in its behaviour, an observation which was supported recently at the Biological Society by M. Blaise, who read a note affirming that the x rays had absolutely no action whatever upon microbic cultures.

France and Foreign Medical Students.

At the Municipal Council a resolution has just been adopted that the Government should be asked to annul the by-law of two years' standing under which foreign students desiring to study medicine in France were sent to the provincial universities. Previously to this by-law the foreign student was in a better position than the French student because he was not compelled to serve three years in the army or to pass a matriculation examination of equal severity. As a set off to this great advantage foreign students were therefore drafted to the provincial centres instead of being permitted to work at the *Faculté de Paris*. But more recently a rule has come into force whereby the degree of Doctor of Medicine shall only give the right of practice in France or French possessions to such students as shall have passed the usual French preliminary examinations and have served three years in the army. Native talent is considered by the Municipal Council to be sufficiently protected now, and the Prefect of the Seine has promised to communicate this view to the Government. The commencement of the next November session will therefore probably see foreign students again inscribing their names at the *Faculté de Paris*, but the degree which they expect will not give them the right to practise in France unless they conform to the new regulations.

July 20th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Poisoning by the Fumes of Nitric Acid.

ON May 17th a serious fire, caused by the bursting of a carboy filled with nitric acid, broke out on the premises of the well-known chemical factory of Bayer and Co. in Elberfeld. The conflagration very soon involved the whole building where the stock of this chemical was kept, and a high wind drove the smoke and fumes towards the firemen, who were immediately seized with violent cough, dyspnœa, nausea, and headache, rendering it necessary for them to be relieved every few minutes. Strange to say, the men who were thus attacked soon felt quite well again, so that they were able to continue on duty and to walk home when the fire was over, but after several hours thirteen of them developed symptoms of poisoning, the consequence being that eleven were taken to the hospital, whilst two died before they could be admitted. Dr. Künne, chief physician to the hospital, has described the cases in the last number of the *Deutsche Medicinische Wochenschrift*. The symptoms differed much in their intensity, but all the patients suffered from dyspnœa, vomiting, cyanosis of the skin, sopor, and clonic convulsions. The heart's action was at first accelerated, but within a few hours became very slow, making only from forty-five to fifty-four beats per minute; sometimes the pulse was irregular. All the patients, even those who did not cough very much, complained of oppression in the chest and great pain near the sternum. This was followed by severe bronchitis, the expectoration being sometimes of a yellow colour and sometimes tinged with blood. Some of the patients had a difficulty in swallowing, due to inflammation of the fauces. Of course they were unable to sleep, but only a few became feverish. Albumin was found in the urine of three of them for periods varying from three to eight days. Seven of the men recovered completely within ten days, but the remaining four were very weak and off duty for about a fortnight longer. It appears from these cases that nitric acid has a very injurious influence on the human body, and that the opinions to the contrary effect formerly held by some medical men were erroneous; the nature of the chemical substance which is formed when it is introduced into the blood is not yet known, but it obviously affects the vaso-motor and respiratory organs, the kidneys, and the nervous system. Medical treatment is restricted to the alleviation of symptoms. Fires in chemical works are often extremely dangerous to firemen. An occurrence similar to that at the Elberfeld factory happened recently in Schering's chemical works in Berlin, when no less than three officers and sixty men of the fire brigade showed symptoms of poisoning, and were rendered unfit for duty; their cases, however, have not yet been described in the medical journals.

Vaccination and Tuberculosis.

The Government having asked for information as to whether vaccination makes the individual more liable to tuberculosis, the scientific committee of the Royal Medical department (Wissenschaftliche Deputation für das Medicinalwesen) has given the following opinion. Tuberculosis being the most frequent of all existing diseases a considerable number of vaccinated or re-vaccinated persons must inevitably suffer from it sooner or later, but there is no reason for supposing that such persons have an exceptional liability to tuberculosis. If the spread of tuberculosis were caused by vaccination the mortality from it would have increased since the introduction of compulsory vaccination, but the fact is that the army returns prove that tuberculosis has become less frequent since the enactment of the vaccination laws. Diseases produced by a faulty method of vaccination, such as erysipelas, septic infection, &c., may impair the health and render the tissues less able to resist the entrance of the tubercle bacilli; the dissemination of tubercle bacilli previously present in the glands of children may also be facilitated by feverish complications of this kind, but apart from these exceptional cases the opinion that vaccination may be the cause of tuberculosis is erroneous.

July 19th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Missing Surgeon of the Bottego Expedition.

IN THE LANCET of May 15th. p. 1379, I gave some account of the destruction of Captain Bottego and his expedition, indicating at the same time that the fate of Dr. Maurizio Sacchi, who acted as surgeon to the force, was as yet uncertain. Information just received by the Sacchi family appears, happily, to put his safety beyond a doubt. The moment the disaster that befel the expedition was known they addressed a communication to the Abyssinian Ras Maconnen, begging him to afford them what details he could gather as to the fate of Dr. Sacchi. To that communication they have now had a reply from the Ras himself, written in French, and dated Harrar, June 28th. "Doctor Maurizio Sacchi," he says, "is alive, and in the day now passing is at Shoa." Then follows the comforting assurance: "You may be quite at your ease on his account. No harm will overtake him. When he passes through Harrar I promise you that I shall protect him and assist him to the best of my ability." The joy of the Sacchi family may be imagined, and all Mantua, city and province, the natal district of Dr. Sacchi, is naturally jubilant. It has further been announced that the survivors of the Bottego expedition, Lieutenant Vannutelli and Sub-Lieutenant Citerni, are at present at Adis Abeba, in good health and under the roof of the Italian envoy, Major Nerazzini. According to these gentlemen Dr. Maurizio Sacchi happened not to be with the expeditionary force on the fatal day, having had occasion to detach himself from the main body on its reaching the elevation of Lake Rodolfo. Meanwhile, Itallans are commenting with admiration on the courtesy and neighbourly kindness of Ras Maconnen—qualities displayed towards them not for the first time, and, indeed, quite in keeping with all their more intimate experience of King Menelik and his allies.

Anthropometry of the Italian Army.

The colossal armies of the great Continental powers present facilities, otherwise unattainable, for more than one department of anthropological inquiry. Italy, if she has not led the way in utilising those facilities—Germany, I believe, having the priority—has followed suit in a commendable manner. As far back as 1879, at the instance of Lieutenant-Colonel Guida, M.D., the War Office gave instructions that for every soldier on his joining a regiment there should be kept a "foglio sanitario" (sanitary sheet), noting his general physique (colour of hair, eyes, and skin; development of forehead, nose, mouth, and chin; eyesight; the maximum antero-posterior and transverse diameter of the cranium;

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stature; thoracic perimetry; and weight); while progressively, throughout his period of service, recording the limits of stature, thoracic perimetry, and weight, repeated year by year; and, finally, registering all the sanitary vicissitudes of which he was the subject. Between 1879 and 1883 the "fogli sanitari" were 300,000 in number, and the War Office charged Captain Livi, M.D., with digesting and analysing the material thus collected. A most instructive and interesting work is the outcome, the title of which I transcribe from the copy now before me for the benefit of those of your readers engaged in anthropological study: "Livi, R——, Antropometria Militare, Parte I., Dati Antropologici ed Etnologici. Con Atlante. Roma." Another publication, now in the press, will take note of the pathological, hygienic, and demographic conclusions to be drawn from the "fogli sanitari," with their suggestions for modifying regulations hitherto in force, for improved methods of recruiting, and thereby for diminishing the "morbosità" (tendency to disease) and "mortalità" of the soldier.

July 18th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The International Medical Congress in Moscow: The Reception by the Czar.

IT has been known for some time that His Majesty the Czar, as patron of the Congress, has consented to receive deputations from all the foreign countries represented at the Congress. The arrangements for the reception have now been made public. It will take place before, not after, the Congress, on Aug. 5th (17th); that is to say, two days before the opening of the proceedings in Moscow. There will be only one representative from each country, his selection being left to the national committee of the particular country. Professor Sklifosovski, the president of the organising committee, will have the honour of making the presentations to the Emperor. It is not stated where the reception will be held, but it will certainly be either in St. Petersburg itself or in the summer palace at Peterhof, where the Czar is at present residing.

The Moscow Municipality and the Congress.

The Executive Committee of the International Congress recently approached the *Duma*, or Town Council, of Moscow, suggesting that it was desirable that the municipal authorities should entertain the members of the Congress at some form of reception or rout. The council has, however, by a small majority rejected the proposal, although it was supported by the "finance" and "social" committees of the council. Instead of entertaining the members the council proposes to commemorate the Congress by instituting an international prize, to be given every three years, for the best work upon Public Health or Epidemiology. The sum set aside for this purpose is 16,450 roubles, or about £1800, and the value of the triennial prize is fixed at 5000 francs, or £200.

Other Arrangements in Moscow.

There will be three general meetings of the Congress, and these are fixed for Thursday, Aug. 7th (19th), Sunday, the 10th (22nd), and Thursday, the 14th (26th) of that month. The Grand Theatre in Moscow was originally proposed as the most suitable place for the general meetings, but it seems that it will only seat some two thousand people; so the first, which is expected to be the largest gathering, will take place in the Nobility Club (*Blagorodnoé Sobranjé*); the other two will be held in the Theatre. The Preliminary Programme of the Congress has just been published, and from this it will be gathered that there will be no lack of material for discussion either at the general or the sectional meetings. Already over 970 communications are promised, and it is rather curious to note that the three sections in which the largest number of papers will be read (if the present proportion be adhered to) are those of Hygiene, Surgery, and Nervous and Mental Diseases, in each of which over 100 papers are at present promised. Those with the smallest numbers are in the sections of Anatomy and Physiology.

Additional Orations at the General Meetings.

A list of the principal orators and the subjects of their communications was published in THE LANCET of May 29th. This can now be supplemented by the following. Professor Virchow's paper will be entitled, "On the *Rôle* of the Vessels in Inflammation"; Professor Lukianof's will be "On Inanition of Cell Nuclei"; Professor Metchnikof will discuss "The Plague"; Professor Robert (of Barcelona) will read a paper on "The Characteristics of Human Pathology in Relation to Therapeutics," and Professor Lannelongue (of Paris) one on "The General Treatment of Surgical Tuberculosis." Professor Danilevski (of Kharkof) will not read one of the orations as originally announced.

Official Representatives at the Congress.

It is said that official invitations to attend the Congress have been sent to the Bavarian Prince Ludwig Ferdinand and the Bavarian Duke Carl Theodore, both of whom are Doctors of Medicine. The names of a large number of official representatives at the Congress of Universities and medical and governmental institutions of all sorts are now published, and of these the following may be mentioned:—Edinburgh University will be represented by Professor T. R. Fraser; Glasgow University by Professors McCall Anderson, Ferguson, Macewen, Cameron, and Yellowlees; Cambridge University by Professor Clifford Allbutt; Dublin University by Professors Finny and Purser. France will be unusually well represented at the Congress. The Paris Medical Faculty alone is sending fourteen representatives, including such well-known names as those of Professors Potain, Lannelongue, Tillaux, and Le Dentu. The French army and navy will be represented by four medical men, one of whom will be Professor Dujardin-Beaumetz. It may be added that an unusual number of lady practitioners have become members of the Congress.

Reception and Accommodation of Members.

It is stated that twenty-three members of the Congress will be treated as guests of the Russian Court and provided with accommodation in one of the official residences of the Kremlin. The immense *Manége* in Moscow is to be put at the disposal of the Congress, and in this room will be found for many of the special offices in connexion with it. Each section of the Congress will have a separate office here under the same roof. Buffets will be provided, at one of which light refreshments in the form of "butterbrods" and beer will be obtainable without charge by members of the Congress. The reception of members on the first day will take place in the upper *Torgovie Riadui*—that is to say, in the large new arcade close to the Kremlin. The entertainment given by the medical profession of Moscow to members of the Congress will take the form of a concert, at which the excellent orchestra of the Philharmonic Society will perform. As in Russia the theatres are always closed during the summer months, and the actors and actresses (who are here, as of old in England, servants of the State) dispersed, it has been found impossible to arrange for a gala spectacle in the Grand Theatre, as had at first been hoped.

A Practical Hint.

A few words as to the weather which may be expected in Moscow in the month of August may be welcome to some Englishmen who are intending to come to Russia now for the first time. On the whole the climate of Moscow at that time is not at all unlike that of England at the same period. In both there is a certain element of uncertainty which it is well to be provided for. It is just possible that the week in August during which the Congress is to be held will be very hot, but so late in the summer the heat is scarcely likely to be intolerable. It is far more probable that the weather at that time will be but moderately warm; and the nights, it is more than probable, will be distinctly chilly. No member who brings a warm change of clothing in his portmanteau and a good warm travelling rug will be likely to regret it.

A Proposed International Jenner Society.

Dr. Hubert, Secretary of the Russian National Health Society, and author of the work on Jenner and Vaccination, more than once mentioned in the columns of THE LANCET, intends to propose at the Congress in Moscow a scheme for the formation of an International Jenner Society, for which he suggests the title "Jennerianum." There would, under the scheme, be a division of the society in each country, and the object of it would be to collect observations and statistics upon small-pox and vaccination. This would appear to be an appropriate time for starting a movement of the kind, and the proposed society would be a worthy commemoration of the centenary of Jenner's great work, more particularly if it led to a still wider spread of the practice of vaccination. The details of the scheme will be looked forward to with interest.

St. Petersburg, July 3rd (15th), 1897.

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Obituary.

SIR JOHN CHARLES BUCKNILL, M.D. LOND., F.R.C.P., F.R.S., J.P., &c.,

FELLOW OF UNIVERSITY COLLEGE, LONDON; LATE LORD CHANCELLOR'S MEDICAL VISITOR OF LUNATICS.

ON July 20th Sir John Charles Bucknill died, after a long illness, at Bournemouth, aged seventy-nine years. He was born in the year 1817 at Market Bosworth, in Leicestershire, in which town his father, Mr. John Bucknill, was practising as a surgeon. At an early age he was sent to Rugby School, where Dr. Arnold had recently been appointed headmaster. Bucknill did not, however, remain at Rugby very long, but after a year or two was removed to the Grammar School of his native town, Market Bosworth, where he became a day scholar, living at home with his family. About 1835 he proceeded to University College, London, then possessed of the most notable teaching staff—certainly in London, and probably in the world: Samuel Cooper, author of the great dictionary, Robert Liston, and Richard Quain being the surgeons, Jones Quain the anatomical teacher, Robert Carslake the pathologist, John Elliotson and Anthony Todd Thomson being likewise members of the staff. Among his contemporaries at University College Hospital were the late Sir John Eric Erichsen and Sir Richard Quain.

In 1840 Bucknill took the degree of Bachelor of Medicine at London University, being placed first in the honours division in surgery and third in medicine. From the time of his graduation his association with the University was continuous. He became Doctor of Medicine in 1852, and shortly afterwards a Fellow of University College, and was for some years a member of the council of that body. Having qualified he became house surgeon to University College Hospital under Liston, who died shortly afterwards. In 1842 Bucknill married. His wife, who died in 1889, was the only child of Mr. Thomas Townsend, of Hillmorton.

In 1844 what may be truly termed his life's work began. He was appointed first medical superintendent of the new Devon County Asylum, which appointment he held for the eighteen most active years of his life. His work here was marked by a zeal and enlightenment which was a rare feature in asylum management in those days—days when the madman's usual lot taxed even the pen of Charles Reade to describe. His energy and success attracted the attention and earned the friendship of Dr. Daniel Hack Tuke, and it was at this time that the literary partnership which afterwards bore fruit of almost incalculable value to the profession was initiated. While at the Devon County Asylum Bucknill conceived the idea of a periodical journal to be devoted to asylum management. This project saw the light in the form of the *Journal of Mental Science* in 1853 under his editorship. This journal he personally continued to conduct until his retirement from Devonshire nine years later. His next journalistic venture was in 1855, when he founded the short-lived *Asylum Journal*. In 1857 he secured the Sugden Prize for a thesis on "Unsoundness of Mind in its Relation to Criminal Actions," a masterly exposition of the nature and limits of the criminal responsibility of the mentally afflicted, the result of long study and careful observation by one who possessed exceptional opportunities of arriving at the pith and essence of his subject.

Dr. Bucknill's time was not, however, entirely occupied by his asylum work and literary projects. His ever active and alert nature found fresh scope for the exertion of his energies in the direction of the National Defence movement. To him the great Volunteer movement of 1852 in no small degree owed its origin. Early in the year a meeting was convened at Exeter, presided over by Lord Fortescue, to consider the necessity for the enrolment of a corps of citizen soldiers, especially with relation to coast defence. It was pointed out that the last successful invasion of England—namely, that by William of Orange—was achieved by the landing of an army on the South Devon coast. Dr. Bucknill was the active spirit in this agitation, and in the end a resolution was unanimously passed in favour of memorialising the War Office asking for permission to raise a force to be known as the Exeter and South Devon Volunteers. The required powers having been obtained, Dr. John Charles Bucknill was enrolled as the first recruit in the first regiment of Volunteers established on the new system in the United Kingdom. The new corps was officially named the 1st Exeter and Devonshire Rifle Volunteers. From this time forward he was an enthusiastic volunteer and took a very prominent part in the duties, both official and social, of the corps, gaining thereby wide popularity in the county, and earning the respect and friendship of his comrades.

In 1859 he became a Fellow of the Royal College of Physicians of London, and held in that body the posts of Censor from 1879 to 1881 and of Lumleian Lecturer in 1877. In the latter year he also delivered the presidential address in the Physiological Section at the annual meeting of the British Medical Association in Manchester. Being appointed in 1862 by the Lord Chancellor to be Medical Visitor of Lunatics, Dr. Bucknill resigned his appointment at the Devon County Asylum and also the editorship of the *Journal of Mental Science*. He held his new position for fourteen years and during his tenure of the office did a great deal towards abolishing several then surviving anomalies in the management and inspection of lunatic asylums. He likewise succeeded in getting his sphere of jurisdiction into a thoroughly workable state, to the great advantage of his successors. As a public servant he showed himself a thorough man of business with a rare grasp of detail; it is, in fact, as an indefatigable and fearless official that he will long be remembered with feelings of gratitude. In 1876 he retired from this position and devoted himself to private practice, retaining, however, the deepest interest in the affairs of asylum management and the relations between crime and mental disease. Two years later—namely, in 1878—he was instrumental in founding the journal *Brain* and became its editor, which position he occupied for many years. His work in the columns of this magazine was one of the most successful of its features and showed no mean literary power apart from the sound knowledge which was only to be expected from so profound a psychologist.

The literary works of Sir John Bucknill are not voluminous, but all that he wrote was worthy of his high reputation as a physician and scholar. His love of, and close acquaintance with, the works of Shakespeare was throughout his distinguished career a notable factor in his personal life, and his two books, "The Pyschology of Shakspeare," published in 1859, and the dissertation printed in the following year on "Shakspeare and the Medical Knowledge of his Time," were valuable contributions to the literature of English poetry—the former disquisition, in particular, demonstrating in an exceptional degree the sympathetic insight which characterised all his literary work. His style as exhibited in this essay was marked by a rare ease of language and a thoroughness of erudition. His greatest work, "A Manual of Psychological Medicine," written in collaboration with his friend, Dr. Daniel Hack Tuke, contains, perhaps, the largest amount of useful information concerning insanity and allied neuroses of any work of similar scope in the language, the portions relating to criminal responsibility or irresponsibility being justly regarded, by jurists as well as medical witnesses, as authoritative. The arrangement of this work was somewhat new in the days when it appeared, it being based mainly on a statistical and tabular plan. "Care of the Insane and the Legal Control of the Mentally Deficient" appeared in 1880, and has been of the greatest value in the clear definition of the state of English law as regards the custody and restraint of the unsound in mind. "Habitual drunkenness" in its relation to crime was during this period (1878-1880) exercising the minds of the heads of the medical and legal professions to a great degree. The famous "Alcohol Controversy" had been carried on for some time in the pages of various reviews and journals. Among those who took a prominent part were Sir James Paget and the late Sir Benjamin Ward Richardson, but the medico-legal side of the question was almost entirely in the hands of Dr. Bucknill and Dr. Daniel Hack Tuke. The former contributed a very valuable essay on the Psychology of the Habitual Drunkard, which appeared in 1878 and caused at the time a considerable amount of controversy. Besides these, his more permanent works, Sir John Bucknill was the author of a large number of papers in the medical journals and was a frequent correspondent to the numerous learned societies of which he was a member. His last work, published in 1884, was "The Relation of Madness to Crime," a work of much practical value as well as interest, and may be fairly taken

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as an example of the fruits of his long practical experience. Although a specialist he was in no way narrow. His own words, addressed to the Physiological Section of the British Medical Association at Manchester in 1877, although not intended to refer in any way to his own career, exemplify in a particularly apt manner his position. "This occasion seems opportune for speaking on a subject of great and general importance to us as specialists—viz., whether the customary practice of our speciality does not frequently tend to impair our usefulness by impairing our field of observation and narrowing our views of men and of society. ..... There can be no doubt that all special employment tends to narrowness of mind and that the learned professions suffer from this most notably. This was, indeed, long ago pointed out by Archbishop Whately in his work on 'Rhetoric,' and there can be no doubt there is a legist's narrowness, a priest's narrowness, and a physician's narrowness." He went on to insist on "the great need of the mental physician to breathe much of the pure air of rational life for the sake of both himself and his patients." "If there be one man more than another," he finally added, "who ought to be a man of the world it is the physician who has the care of the insane, for if he allows himself to become ignorant of the outside world he will make no comparison of the sane with the insane, and therefore will be liable to consider opinions and conduct morbid which are only strange." Sir John Bucknill carried out the precept here laid down. His social virtues will long be remembered by all who had the privilege of his acquaintance. He was throughout his career a man of the widest interests, and in the very liberality of his mental gifts did much more for his profession, and, above all, for the insane, than can well be estimated while his loss is fresh upon us.

Sir John Bucknill received the honour of knighthood in 1894 in recognition, not only of his wide learning and services to science, but in no small measure as an acknowledgment of his work in relation to the Auxiliary Forces. He was a justice of the peace for the county of Warwick and a Fellow of the Royal Society and a large number of other learned bodies both in England and on the Continent.

The funeral took place on Thursday at Clifton-on-Dunsmore, near Rugby.

JABEZ SPENCE RAMSKILL, M.D., M.R.C.P. LOND., M.R.C.S. ENG.

A NOTABLE figure in connexion with the early days of the National Hospital for the Paralysed and Epileptic has passed away in the person of Dr. J. S. Ramskill, who died on June 22nd at the age of seventy-three years. He received his medical education at Guy's Hospital, graduating as M.B. at the University of London in 1847 and proceeding to the degree of M.D. in 1849, and his first hospital appointment was that of physician to the Metropolitan Free Hospital. In 1859 he was elected assistant physician to the London Hospital and lecturer on medicine to the same institution, where his lectures on nervous diseases were much appreciated by the students and hospital resident medical officers. In 1859, too, he and Dr. Brown-Séquard were appointed the first two physicians to the National Hospital for the Paralysed and Epileptic in Queen's-square, a hospital at which he finally attained the position of senior physician, a post he held for many years. He was alway greatly interested in nervous diseases, and contributed the articles on Vertigo, Chronic Hydrocephalus, and Meningitis to "Reynolds's System of Medicine," as well as Lectures on Epilepsy to the *Medical Times and Gazette*. Dr. Ramskill was specially interested in the therapeutics of epilepsy, and it is to be regretted that he did not publish the results of a long inquiry he made as to the treatment of cases of epilepsy. He was a very genial and kind-hearted man, and will be greatly missed both by his numerous medical colleagues and his many friends outside the profession. He leaves a widow (his second wife) and one son.

MAX JOSEPH OERTEL.

BY the death, on July 13th, of Professor Max Joseph Oertel, medical science has lost one of its most eminent exponents. Born at Dillingen, Bavaria, in 1835, he studied philology and history at Munich before turning his attention to science and medicine. In 1860 he was appointed assistant to Professor Pfeuffer and a few years later pursued the study of laryngology under Professor Czermak, being himself appointed to the newly founded chair of Laryngology at Munich University in 1867. One of his earliest essays (1862) was upon the Endolaryngeal Removal of Laryngeal Polypus, which he was the first after Bruns to perform. The subject with which his name is mostly connected is that of the treatment of circulatory disorders, his contribution upon this being notable for the originality and breadth of view that it evinced. His essay appeared in 1882 in the "Handbook of Therapeutics," edited by Professor von Ziemssen, and his advocacy of graduated exercise and hill-climbing as a rational means of treatment of cardiac failure became known as the "Oertel cure." To the same work he contributed a lengthy article upon the Therapeutics of Respiratory Diseases. He had previously written upon Diphtheria in von Ziemssen's "Cyclopædia of Medicine," and his monograph, "Die Pathogenese der Epidemischen Diphtherie" (1887), completed a study commenced more than twenty years previously, when diphtheria was epidemic in Munich. That monograph, of which a full abstract was given in our columns at the time of its publication, was in the main a most profound analysis of the minuter histological lesions induced by diphtheria in the organs of the body, the text being accompanied by an atlas of beautifully executed microscopical drawings. Professor Oertel had, indeed, claimed the discovery of the bacillus diphtheriæ, but there is some doubt whether the organism he described is to be considered identical with that associated with the names of Klebs and Loeffler. At any rate, his demonstration of the cell lesions harmonised fully with the bacillary doctrine of the nature of diphtheria.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The following deaths have been announced:—Professor Johann R. von Lerch, at Hainfeld, on the 7th inst., aged eighty-three years. He had been dean of the medical faculty in the University of Vienna and also of the Doctoren-Collegium. Since 1888 he had lived in complete retirement.—Professor Oscar Boer, of Berlin, aged fifty years. He was a favourite pupil of Koch, and carried on many researches with him and with Behring, Ehrlich, Brieger, and Wassermann, mainly on the subject of immunity from infectious disease and the preparation and employment of antitoxic serums.

Medical News.

UNIVERSITY OF GLASGOW.—The following have passed the Final Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

Kilgour Adamson, John Allan, James Andrew, James Mitchell Bonar, John Ritchie Brown, John Ritchie Burns, Charles Cairnie, M.A. James Souter Christie, Walter Colquhoun, M.A.; John Crawford, James Donaldson, William Duncan, Charles Elphinstone Fleming, George Willmore Francis, James Graham, James Hogg, James Donald Holmes, Robert Kirk, George Louis Le Fevre, Archibald Livingston, William Martin, M.A., B.Sc.; Samuel Martyn, George Bain Murdoch, Andrew Brown Murray, Neil McCullum, John Allan Craigie Macewen, B.Sc.; John M'Laws, Murdo Norman Macleod, Norman Macnair, B.Sc.; Robert Nelson, William Park, Henry Joseph Rankin, James Rankin, B.Sc.; James Rutherfurd Ratcliffe, Neil Robson, William Kerr Russell, David Shedden Service, Harry Muir Watson, James Wells, and Robert Wilson. *Women.*—Agnes Jane Anderson, Annie Kirkby Anderson, Ursula Chaplin, Mary Philip Graham, Norah Kemp, and Merbai Ardesir Vakil, B.A.

For the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.):—

Alexander Smith Allan, James Alston, William Cochran Burns, David Louis Cairns, Francis James Charteris, Joseph Adam Clarke, George Coats, George William Coats, James Duncan Cochran, Joseph Muir Corbett, Walter Scobie Findlay, M.A.; James Finlayson Fleming, Adrian Andrew Forrester, Thomas Bonnar Garvie, Lawrence Whitaker Harrison, Thomas Hunter, M.A., B.Sc.; Alexander Lawrie, William Mitchell Lindsay, William Glen Liston, John Watson Little, John MacDonald, James M'Haffie, David M'Kail, James M'Queen, M.A.; James Service Ormond, John Reid (Glasgow), Norman Emil Henry Scott, Robert Scott, Alexander Bankier Sloan, Samuel Macfarlane Sloan, David Steele Smith, John M'Callum Stewart, James Strang, Daniel Rees Thomas, Walter Lewis Thomson, William James Alexander Walker, William Watson, Ernest Watt, Edward Roberts Weir, John Wotherspoon, and David John Young. *Women.*—Jessie Hawkesworth Smith.

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FOREIGN UNIVERSITY INTELLIGENCE.—*Kiel:* The title of Professor has been conferred upon Dr. L. Glaevecke, *privat-docent* of Gynæcology, and upon Dr. E. Paulsen, *privat-docent* of Laryngology.—*Manilla (Medical School):* Dr. Trinidad Pardo de Tavera has been appointed Professor of Anatomy; Dr. Ramon Fina y Baulenas, Professor of Surgical Pathology; Dr. Wenceslao Martinez, Professor of Forensic Medicine and Toxicology, and Dr. Mariano Garcia de Rey, Professor of Therapeutics.—*Naples:* The following have been recognised as *privat-docenten*: Dr. S. del Vecchio (Operative Medicine), Dr. Giovanni Miranda (Midwifery and Gynæcology), Dr. Carlo Gioffredi (Materia Medica and Pharmacology), and Dr. Giuseppe Ajello (Medical Chemistry).—*Vienna:* Dr. Richard Kretz has been recognised as *privat-docent* of Pathological Anatomy.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—PRIZE LIST.—*Winter Session, 1896-97.* Descriptive Anatomy—Junior: J. F. Peart, first prize (£3) and medal; W. R. Meredith, second prize (£1) and certificate. Senior: J. S. P. Stewart and Miss F. A. Dreaper (equal), first prize (£3) and medal; J. S. P. Stewart and Miss F. A. Dreaper (equal), second prize (£1) and certificate. Practical Anatomy.—First year: A. S. Ellenbogen, first prize (£3) and medal; J. F. Peart, second prize (£1) and certificate. Second year: J. S. P. Stewart, first prize (£3) and medal; Miss F. A. Dreaper, second prize (£1) and certificate. Third year: G. W. Little, first prize (£3) and medal; J. M. M. Crawford, second prize (£1) and certificate. Practice of Medicine.—D. A. Fitzgerald, first prize (£3) and medal; S. R. Godkin, second prize (£1) and certificate. Surgery.—A. S. Green, first prize (£3) and medal; F. J. Palmer, second prize (£1) and certificate. Midwifery.—F. J. Palmer, first prize (£3) and medal; D. Hadden, second prize (£1) and certificate. Physiology.—J. S. P. Stewart, first prize (£3) and medal; Mrs. H. L. Hennessy, second prize (£1) and certificate. Chemistry.—J. P. Byrne, first prize (£3) and medal; J. P. O'Donnell, second prize (£1) and certificate Pathology.—W. H. May, first prize (£3) and medal; P. H. Falkner, second prize (£1) and certificate. Physics.—E. Glenny, first prize (£3) and medal; S. Gordon, second prize (£1) and certificate. *Summer Session, 1897.*—Carmichael Scholarship: D. A. Fitzgerald, £15. Mayne Scholarship: F. J. Palmer, £15. Gold and Silver Medals in Surgery.—A. S. Green, gold medal; D. Hadden, silver medal. Practical Histology: H. Graff and Mrs. H. L. Hennessy (equal), first prize (£3) and medal. Practical Chemistry: G. Lewis, first prize (£3) and medal; R. H. G. Oulton, second prize (£1) and certificate. Public Health and Forensic Medicine: J. F. Meyler, first prize (£3) and medal; S. R. Godkin, second prize (£1) and certificate. Materia Medica: C. C. Meeke, first prize (£3) and medal; D. Jones, second prize (£1) and certificate. Practical Pharmacy: E. Glenny, first prize (£3) and medal; M. J. Johnston, second prize (£1) and certificate. Biology: J. Byrne, first prize (£3) and medal; E. Glenny, second prize (£1) and certificate. The preliminary examinations for the conjoint diplomas of the Royal College of Physicians and the Royal College of Surgeons will be held on Tuesday and Wednesday, Sept. 28th and 29th. The prospectus of the course of study can be had on written application to the Registrar, Royal College of Surgeons in Ireland, Dublin.

LONDON HOSPITAL MEDICAL COLLEGE.—The following is a list of the scholarships and prizes awarded (session 1896-97).—Prize Scholarship in Science (£120): H. E. Ridewood. Prize Scholarship in Anatomy and Physiology (£60): E. W. A. Walker. Entrance Science Scholarships: A. B. Lindesey (£60) and C. E. Ham (£35) Buxton Scholarships in Arts: T. S. Dudding (£30) and T. J. Latham (£20). Epsom Scholarship, for students of Epsom College: E. F. Fisher. Clinical Medicine: £20 scholarship, F. F. Ward; honorary certificates, C. B. Wall and A. G. Wilson. Clinical Surgery: £20 scholarship, W. E. Heilborn; honorary certificates, T. S. Novis and E. E. Prest. Clinical Obstetrics: £20 scholarship, R. W. Pearson; honorary certificates, H. L. Gregory and G. Hutcheson. Duckworth Nelson Prize: biennial (£10), T. S. Novis; honorary certificate, A. G. Wilson. Letheby Prizes: Senior (£20), H. D. Pollard; honorary certificates, O. Eichholz, H. Balean, and M. F. Reaney; Junior (£10), R. V. Dolbey; honorary certificates, C. E. Ham, T. L. Lewis, and T. S. Dudding. Sutton Scholarship (£20): E. Frazer. Anatomy and Physiology: £25 scholarship, A. F. Tregold; honorary certificates, W. R. Dunstan, J. Sherren, H. D. Pollard, H. Balean, and E. Merry. Anatomy and Biology: £20 scholarship, H. E. Ridewood; honorary certificate, C. E. Ham. Dressers' Prizes: £15 Prizes, M. F. Reaney and A. N. Symons; £10 prize, W. B. Taylor; £7 10*s.* prizes, B. C. Broomhall and R. H. N. Smith; £5 prize, H. Hodgson; honorary certificates, J. H. Sanders and E. M. Ridge. Practical Anatomy: £8 prize, A. B. Soltau; £4 prize, A. L. Matthews; honorary certificates, A. S. David, C. L. Traylen, D. Ellis, A. N. Symons, and R. Gauld.

THE SANITARY INSTITUTE.—The twenty-first anniversary of the Sanitary Institute occurred this month, and the Council arranged a commemorative dinner on the 7th, to celebrate the success that has attended the efforts of the institute to promote the public health and advance sanitary science. The Duke of Cambridge, president of the institute, was in the chair, and the company present numbered about 130, including the Earl of Stamford, Lord Kelvin, Sir Henry C. Burdett, Sir William R. Gowers, Sir Guyer Hunter, &c. Professor W. H. Corfield and Sir Douglas Galton responded to the toast of the Institute, the latter of whom said, in the course of his speech, that the Public Health Act of 1875 gave a new development to sanitation all over the country, and the institute was founded in 1876 for the purpose of advancing knowledge in all subjects bearing on public health. The earliest congress, in 1877, began with 150 members and an income of £150, but in 1897 there are 2100 members and the income is £6000. The Parkes Museum was founded in the same year as the Sanitary Institute, and the efficient action of the two institutions was largely increased by the union of them, which took place a few years later.

THE BRUSSELS MEDICAL GRADUATES' ASSOCIATION.—The annual general meeting of this association took place on July 15th, at the Café Royal, Regent-street, W Dr C. T. Brookhouse was elected President for the ensuing year, and Dr. A. W. Thomas Vice-President. Dr. Sunderland, the retiring President, congratulated the members present on their excellent organisation, and cordially thanked the officers of the association for their kind coöperation with him during his year of office. The members and their friends to the number of fifty-one afterwards dined together, and there were present, among others, Sir John Williams, Dr. A. E. Sansom, Dr. Clement Godson, and Mr. Howard Marsh. Dr. Sansom proposed the Health of the Association, which was responded to by the hon. secretary, Dr. Major Greenwood, who, in the course of his remarks, pointed out that the flourishing condition of their association was not a little due to the supineness of the English universities in neglecting to afford reasonable means for graduation in this country. Mr. Franklin Clive and Madame George sang some excellent songs during the evening, and Dr. Haydon also assisted with some admirable violin solos.

OPHTHALMIA AT THE ELY (CARDIFF) SCHOOLS.—At the meeting of the Cardiff Board of Guardians, held recently, Mr. H. C. Ensor reported that 38 per cent. of the children at Ely Schools were affected with ophthalmia, but all the cases were of the mildest form, with the exception of 9 which were acute.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The usual quarterly court of directors was held on July 14th, Dr. Pollock, Vice-President, being in the chair. Three new members were elected, and the death of one was reported. The death of a widow was announced. Fresh applications were made by the guardians of two orphans for extra assistance to complete their education and cure of spinal curvature. A sum of £1206 10*s.* was voted to be distributed among the fifty widows, eleven orphans, and six orphans on the Copeland Fund. The expenses of the quarter amounted to £45 3*s.*

PRESENTATIONS TO MEDICAL MEN.—Mr. Joseph J. Cullen, L.R.C.P., L.R.C.S. Irel., medical officer, Castleknock, was on the 7th inst., at the Town Hall, Dalkey, presented by his many friends with a gold watch and chain and an artistically illuminated address as tokens of esteem.—Mr. Walter Petter, M.B., C.M. Edin., and Mr. John Smale, L.R.C.P. Lond., M.R.C.S. Eng., both of Darlington, have been the recipients of a silver inkstand and a silver eggstand respectively for their honorary instructions in first-aid to the

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local classes of the St. John Ambulance Association.—Mr. Albert G. Willington, M.D. St. And., M.R.C.S. Eng., of Handsworth, who is leaving that town after practising there for fifty years, has been presented by his friends with an illuminated address and a purse of sovereigns.

THE HEALTH OF LOWESTOFT.—The Borough of Lowestoft, with a population of over 26,000, had only four zymotic deaths during the second quarter of the present year—viz.: one from diarrhœa and three from whooping-cough. The corrected death-rate for the same period was 14·8.

MEDICAL MAGISTRATE.—Mr. Patrick R. Murison, M.B., C.M. Edin., L.R.C.P. Lond., of Dundee, has been placed on the Commission of the Peace for the county of the city of Dundee.

THE Committee of the City of London Hospital for Diseases of the Chest, Victoria Park, have appointed Mr. Henry T. Dudley Ryder secretary to the institution, in place of the late Captain Storrar-Smith.

MR. C. E. M. HEY, M.R.C.S. Eng., &c., who is a Knight of Grace of the Order of St. John of Jerusalem in England, has received the honour of the French decoration of the 1st class, which has been conferred upon him at the recommendation of La Société Nationale de Sauvetage de France.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Public Health (Scotland) Bill.

THE Government has made it known that the Public Health (Scotland) Bill is one of the measures which must be passed during the present session of Parliament.

Infant Life Protection Bill.

This measure has now passed through all its stages in the House of Lords, and in the House of Commons has been read a second time and considered by the Grand Committee on Law. It differs in many particulars from former Bills dealing with this subject, and especially in this, that it substitutes for the registration of houses a system of notification to the local authority. Its application is confined to houses where more than one infant of less than five years of age is kept for hire or reward, and it gives the local authority power of supervision and inspection. The local authority may cause to be removed to a proper place of safety a child who is found in a house so unfit or so overcrowded as to endanger health, or is in the keeping of a person who, by reason of negligence, ignorance, or other cause, is so unfit to have the care and maintenance of the child as to endanger health. When the Bill was before the Grand Committee on Law Sir William Priestley put forward the idea whether it should not be made to apply to houses where only one child is received. He did not, however, press it, and the Committee decided not to alter the provision.

London Water Question.

During the committee stage of the Metropolitan Water Companies Bill an attempt was made to get a clause inserted providing that in the case of a deficiency of water during any quarter the occupier might complain to the Railway and Canal Commission, and if the complaint was well founded the Commission might order the water company to repay the proportionate part of the rate for the days during which the supply was deficient. The clause received a considerable measure of support in different parts of the House, but the Government opposed it mainly on the ground that it went beyond the scope and intention of the Bill and on a division it was rejected by 134 to 75 votes.

London University.

At the close of the sitting of the House of Lords on Tuesday, July 20th, the Duke of Devonshire, Lord President of the Council, formally presented a Bill to make further provision with respect to the University of London.

HOUSE OF LORDS.

THURSDAY, JULY 15TH.

Lunacy Bill.

The Committee stage of the Lunacy Bill was taken at this sitting of their lordships' House. Considerable discussion arose with regard to Clause 15, which gives power to the Lunacy Commissioners to require amendment of the regulations of hospitals.—Earl Russell moved to omit the whole clause, saying that it was not necessary to give this power in the case of county or other asylums managed by large public authorities, the members of which were elective and were subject to public criticism. The Lord Chancellor took the position that instead of moving now the omission of the entire clause his lordship should have proposed some amendment by way of limiting the proposed power.—The Earl of Northbrook made the suggestion that in the case of an asylum maintained out of county or borough rates the council of the county or borough should have the opportunity of making representations against the proposed rules before they were finally approved by the Secretary of State.—The Lord Chancellor thought this reasonable and undertook to consider it.—In connexion with Clause 19 Earl Russell said that if it were enforced too rigidly at first it would press hardly upon London in the present congested state of lunacy accommodation. The London County Council, he pointed out, had 2000 lunatics under charge for whom they had no accommodation in asylums. He frankly admitted that their asylums were somewhat overcrowded, not to an extent prejudicial to health, but in a way that would be affected by this clause. The clause was reasonable in itself, but he trusted that in putting it into force some allowance would be made for the condition of things that had necessarily arisen in London.—A long debate took place with regard to the proposal in the Bill to extend to the officers and employés of lunatic asylums the provisions of the Poor-law Officers Superannuation Act of 1896, and as the outcome of it all the superannuation clauses in the Bill were withdrawn.

HOUSE OF COMMONS.

THURSDAY, JULY 15TH.

Diphtheria at Devonport.

Captain Norton asked the Under-Secretary of State for War whether, in reference to the recent outbreak of diphtheria at Devonport, by which two lives were lost, any sanitary recommendations had been made, and, if so, how far back, by the Army Medical Department or Royal Engineers respecting defects in the drainage of the Raglan Barracks; and, if recommendations were made, what were the circumstances that prevented the War Office from carrying them out.—Mr. Broderick replied that in April, 1896, the medical officer at Devonport reported that the drains of the Raglan Barracks were in an unsatisfactory state. Inquiry was made with the result that the general officer commanding submitted a comprehensive scheme involving a large cost. This had to be examined before the work could be undertaken. Money was taken in this year's estimates, and every effort would be made to press on the work as quickly as possible.

FRIDAY, JULY 16TH.

Bill for the Regulation of Dogs.

Mr. Walter Long, President of the Board of Agriculture, intimated, in reply to a question, that he hoped to be able very shortly to lay on the table a Bill for the better regulation of dogs on the lines recommended by the Departmental Committee, by which the question was recently considered. He had no intention of pressing the Bill through the House during the present session, though he would be very glad to find that the measure was generally acceptable. What he had in view was that the provisions of the Bill should be thoroughly understood by the House and the various public authorities throughout the country.

Cycle Accidents.

Sir Elliott Lees asked the Home Secretary whether, in view of the numerous police prosecutions against cyclists and the want of any definite standard as to what might be considered by the courts a lawful and safe pace for a cycle on the public highway, the Home Office would lay down and announce some regulations defining the maximum speed which they considered compatible with the public safety in town, country, and suburban districts respectively.—Sir M. White Ridley replied: I have no power to make any such regulations, and it seems clear, too, that the question what is furious or dangerous riding must depend upon the circumstances of each particular case. I may add that I made inquiry last year of the chief officers of all the police forces in England and Wales as to the number of accidents caused by cyclists in their respective districts and the remedies they suggested if the protection given by the present law seemed to them insufficient; but their replies were such as to lead me to the conclusion that no alteration in the law was required.

Experiments on Living Animals.

Mr. Weir asked the Home Secretary: (1) Having regard to the allegations made by Mr. E. Berdoe relative to the use of curare in the practice of vivisection, and to the statement of the Home Office that the experiments referred to were performed under anæsthetics, and that curare, though used, was used when the animals could not suffer pain, would he state what anæsthetics were so used; (2) was he aware that it had been held on the highest authority (Professor Claude Bernard) that an animal stupefied with morphia was still conscious to suffering, and that an animal under the influence of curare became absolutely paralysed, but was still sensible to pain though unable to show it by sound or struggle; and (3) would he state whether, in the experiments to which he referred, dogs were the animals experimented upon?—Sir M. White Ridley replied: I informed the hon. Member on Tuesday that chloroform was the anæsthetic used. My answer to the second paragraph is in the negative, and to the third paragraph in the affirmative.—Mr. Weir asked the Home Secretary if he would state the number of experiments in which curare was used in the practise of vivisection during last year and the number of licencees by whom that drug was used; and would he state the names of the licensed places where curare was used in the practice of vivisection during the year.—Sir M. White Ridley replied: I cannot see that the returns for which the hon. Member asks would serve any good purpose, and I do not propose, therefore, to call for them. Curare is prohibited by law from being used as an anæsthetic, and I am perfectly satisfied that it is not so used.

MONDAY, JULY 19TH.

Classification in Lunatic Asylums.

Mr. Weir asked the Home Secretary if he would state under what circumstances a person in a county asylum who was classified as a pauper under Section 3 of the Lunacy Act, 1891, was entitled to be classified as a private patient.—Sir M. White Ridley replied that as soon as the

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asylum authorities had reasonable grounds for believing either that the patient was entitled to property which would be available for his maintenance and sufficient to render him no longer even partly chargeable to a union, county, or borough, or that an undertaking had been given by a friend or relative to provide a sum sufficient for the purpose, he would no longer be classed as a pauper.

Beri-beri in Ireland.

Mr. Patrick Aloysius M'Hugh asked the Chief Secretary to the Lord-Lieutenant of Ireland whether he was aware that the Eastern disease, beri-beri, was at present prevalent in Richmond Lunatic Asylum, Dublin; how long had this institution been afflicted with this disease, and how many nurses had suffered from it; whether medical experts, including medical gentlemen of the highest eminence connected with the institution, attributed the existence of the disease to overcrowding; was he aware that the Board of Control of lunatic asylums was responsible for the overcrowding; and would he take steps to secure that the Board of Control would not be permitted to stand in the way of necessary reforms in connexion with this asylum?—Mr. Gerald Balfour replied: Thirty-six patients and three nurses in the Richmond Asylum are at present suffering from the disease known as beri-beri. The disease first appeared in the institution about May, 1894, and continued until October, after which no fresh cases occurred. There was no outbreak in 1895, but it re-appeared in August, 1896, since when the institution has not been entirely free from it, although it almost died out in the colder months. Ten nurses in all have suffered from it—viz., seven in 1896 and three during the present year. Medical experts are of opinion that the disease was fostered by overcrowding. It is the duty of the Board of Control to provide such accommodation as is necessary in the district asylums in Ireland. In consequence of the rapid increase of lunacy in the Richmond district it was decided in 1892 to build an additional asylum for 1200 patients at Portrane, and that work is now in progress. In 1893 and 1894 temporary buildings were erected at Richmond Asylum for 298 patients, and since then accommodation has been provided for 224 patients, and further buildings are now being erected, which, it is anticipated, will make the total accommodation sufficient for the number at present in the asylum. The Board of Control are anxious to aid and promote by every means in their power any reforms necessary for the improvement of the Richmond Asylum, and works are being carried out with the view of effecting that object.

TUESDAY, JULY 20TH.

Army Medical Officers.

Colonel Denny asked the Under Secretary of State for War when the Secretary of State for War would be in a position to carry out the intention expressed by the Under Secretary when the Army Estimates were introduced last February of affording assistance to form medical messes at the large stations.—Mr. Brodrick replied that messes for medical officers had been established at the principal stations. The Secretary of State said that he would be prepared to consider any case in which it might be represented that a mess was still required.

Experiments on Living Animals.

Mr. Weir asked the Home Secretary, seeing that an animal subjected to a true anæsthetic such as chloroform was insensible to pain, would he state whether there was any reason why the use of curare in the practice of vivisection should not be forbidden, especially in view of the fact that an animal under the influence of curare had been held by the highest authority, Professor Claude Bernard, to be acutely sensible to pain, notwithstanding the fact that it was so paralysed by the drug as to be unable to express its pain by sound or struggle.—Sir M. White Ridley: As I have already stated, I am satisfied that curare is not used as an anæsthetic. There are cases, however, in which its use along with the anæsthetic is indispensable for the success of the investigation, but its use does not make the anæsthetised animal sensible to pain.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

AMENABAR, JULIUS DANIEL, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Eye Infirmary, Wolverhampton.

ASHTON, GEORGE, M.B., Ch.B. Vict., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Senior Resident Medical Officer to the Chorlton Union Hospitals, Withington, Manchester.

BENSON, T. S., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health by the Annfield Plain Urban District Council.

BIRD, JAS. B., M.B., C.M. Edin., has been appointed Assistant Physician to the Cumberland Infirmary, vice R. D. Helm.

BROUGH, DANIEL, M.B., C.M. Edin., has been appointed House Surgeon to the Bridgwater Infirmary, Bridgwater.

COWIE, WM., M.B., C.M. Aberd., has been appointed Assistant Medical Officer to the Plumstead Infirmary, Kent.

DAVIDSON, PERCIVAL, M.B., B.S. Durh., has been appointed Senior House Physician to the Royal Infirmary, Newcastle-on-Tyne.

FLEMING, R. A., M.D., F.R.C.P. Edin., has been appointed one of the Pathologists to the Edinburgh Royal Infirmary, vice R. F. C. Leith.

GOLDSMITH, F., M.B., Ch.B. Adel., has been appointed Medical Officer at Port Darwin, South Australia, vice L. S. O'Flaherty.

GOSSE, WILLIAM, L.R.C.P. Lond., M.R.C.S. Eng., D.P.H. Camb., has been appointed a Public Vaccinator for the Sittingbourne District of the Milton Union.

HOPE, E. W., M.D. Edin., D.Sc. (Public Health), B.Sc., L.R.C.P. Lond., has been appointed to a Professorship of Public Health, University College, Liverpool.

KINGDON, WILFRED R., M.B., B.S. Durh., has been appointed Resident Medical Officer of the Woodlands Asylum, Ticehurst, Sussex.

LEE, W. H., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed House Physician at the Royal Hospital, Sheffield.

LEITH, R. F. C., M.B., C.M. Edin., F.R.C.P., has been appointed an Assistant Physician to the Edinburgh Royal Infirmary.

LLOYD, JORDAN, M.B., F.R.C.S., has been appointed Honorary Consulting Surgeon to the West Bromwich District Hospital, vice C. Pemberton, deceased.

MARTIN, A. J., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed an Honorary Acting Physician to the Walsall and District Hospital.

MASON, T. P., M.B. Lond., F.R.C.S. Irel., has been appointed a Consulting Physician to Mercer's Hospital, Dublin.

PARTINGTON, WM., M.B., C.M. Glasg., has been re-appointed Medical Officer of Health by the Tunstall Urban District Council.

PATTINSON, J., has been appointed Public Analyst for the Borough of Sunderland by the Sunderland Town Council.

SIMPSON, W. P., M.B., C.M. Edin., has been appointed Medical Officer for the Pelham Lounds Sanitary District of the Boston Union.

STOKER, H., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Medical Officer of Health for Melbourne, Victoria, Australia.

RENNEY, HENRY, M.D. Durh., D.P.H., has been appointed Honorary Deputy Medical Officer of Health by the Sunderland Town Council.

ROWELL, WILLIAM HENRY, M.B., B.S. Durh., has been appointed Junior House Physician to the Royal Infirmary, Newcastle-on-Tyne.

VERNON, WM., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Bitton Sanitary District of the Warmley (out-relief) Union, vice G. S. D. Willett.

WHITMARSH, R. P. H., M.D. Brux., L.R.C.P., L.R.C.S.E., L.S.A. Lond., has been appointed Resident House Physician to the Hospital for Consumption, Brompton.

WILLIAMS, JOHN HUMPHRY, M.D., C.M. Edin., has been re-appointed Medical Officer of Health for the Borough of Flint.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITALS, Manchester.—Resident Senior House Surgeon. Salary £80, with board and washing.

BIRMINGHAM CITY ASYLUM.—Junior Assistant Medical Officer. Salary £80 a year, with board, lodging, and washing.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant (non-resident) for three months. Honorarium of thirteen guineas will be given.

BOSCOMBE HOSPITAL, Shelley-road, Boscombe, Bournemouth.—House Surgeon, unmarried. Salary £60 (exclusive of wine and beer), lodging, and washing.

BRADFORD UNION WORKHOUSE.—Resident Assistant Medical Officer, unmarried. Salary £100 per annum, with prescribed rations, washing, and apartments in the Workhouse. Applications to the Clerk to the Guardians.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon. Rooms, coals, and lights provided.

CHILDREN'S HOSPITAL, Nottingham.—House Surgeon (non-resident) for six months. Salary at the rate of £100 per annum.

CUMBERLAND INFIRMARY, Carlisle.—House Surgeon for one year. Salary £70 per annum, with board, lodging, and washing.

GUEST HOSPITAL, Dudley.—Resident Medical Officer. Salary £100 a year, increasing £10 a year to £120, conditionally, with board, residence, attendance, and washing.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London, W.—Junior Resident Medical Officer for six months. Salary at the rate of £50 per annum, with board, lodging, and washing.

HUNTINGDON COUNTY HOSPITAL, Huntingdon.—House Surgeon. Salary £50.

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QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, London, N.W.—Assistant Resident Medical Officer for four months. Salary at the rate of £50 per annum, with board, residence, and washing.

QUEEN'S COLLEGES, Ireland.—Professorship of Medicine in the Queen's College, Cork. Applications to the Under Secretary, Dublin Castle.

ROTHERHAM HOSPITAL AND DISPENSARY.—House Surgeon for three years. Salary 100 guineas, with board, lodging, and washing.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Board, lodging, and washing provided.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—Resident Medical Officer for six months. Salary at the rate of £100 per annum, with furnished apartments, board, and washing.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Assistant House Surgeon. Board, residence, and laundry provided.

STOCKPORT INFIRMARY.—House Surgeon. Salary £100 a year, with board, washing, and residence. Also Junior Assistant House Surgeon for six months. Honorarium at the rate of £24 per annum, with residence, board, and washing.

STOURBRIDGE DISPENSARY.—House Surgeon and Secretary. Salary £120 a year, increasing £5 annually to £130, with furnished rooms, coal, and gas, and an allowance of £25 for travelling expenses.

SUNDERLAND BOROUGH ASYLUM, Ryhope, Sunderland.—Resident Clinical Clerk for six months. Board and lodging provided, with a nominal salary.

Births, Marriages, and Deaths.

BIRTHS.

ASHWELL.—On July 18th, at Mansfield-road, Nottingham, the wife of H. G. Ashwell, M.R.C.S., L.R.C.P., of a son.

GLOSTER.—On July 15th, at Upper Phillimore-place, Kensington, the wife of J. C. Gloster, M.B., M.Ch., of a daughter.

HEATH.—On July 14th, at Hagley-road, Edgbaston, Birmingham, the wife of A. Douglas Heath, M.D., of a daughter.

HOUGHTON.—On July 18th, at East Looe, Cornwall, the wife of Leonard F. Houghton, M.R.C.S., L.R.C.P., of a son.

MILLER.—On July 18th, at 747, Commercial-road, Limehouse, E., the wife of Arthur W. Miller, M.B., C.M., of a daughter.

NEALE.—On July 19th, at Truro Villa, Nevil-road, Bishopston, Bristol, the wife of Albert E. Neale, M.B., B.S., of a son.

OLIVER.—On July 19th, at Westdene, Maidstone, the wife of Charles Pye Oliver, M.D., of a son.

SMITH.—On July 14th, at Warkworth House, S. Thomas, Exeter, the wife of Thomas Smith, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

BLACKER—MARRIOTT.—On July 7th, in the Cathedral at Exeter, by the Rev. Canon Edmonds assisted by the Rev. William David, Arthur Barry Blacker, M.D., B.S., of 15, West Eaton place, S.W., son of the late Rev. Maxwell J. Blacker, M.A., and grandson of the late Lieut.-Colonel Valentine Blacker, C.B., Surveyor-General of India, to Zaré Elizabeth Marriott, widow of George Herbert Marriott, of Orotava, Teneriffe.

COWAN—GRANT.—On July 14th, at St. George's, Dunster, John James Cowan, M.B., C.M., second son of Inspector-General M. W. Cowan, M.D., R.N., of Leigh Lodge, Worcester, to Gertrude (Bal), only daughter of Vice-Admiral John F. G. Grant, of Alcombe, Somerset.

JEFFREYS OWEN—JONES.—On July 7th, at St. Mary's, Bath, R. Jeffreys Owen, L.R.C.P. Lond., M.R.C.S., of Llandovery, to Mary Elizabeth, only daughter of the late George Jones, Esq., J.P., of Ystrad, Llandovery.

LEMON—WHITE.—On July 17th, at St. Paul's, Edinburgh, Edward Henry Lemon, M.R.C.S., L.R.C.P., D.P.H., of Lee, Kent, to Adelaide Theresa, only daughter of the late Robert White, Abercromby-place, Edinburgh.

REID—BRUCE.—On July 15th, at Strathpeffer Church, by the Rev. Jas. Fraser, M.A., minister of Blair-Atholl, assisted by Rev. John M'Gilchrist, B.D., minister of Fodderty, Wm. Reid, Physician-Superintendent of the Aberdeen Royal Lunatic Asylum, to Grace Garden, eldest daughter of Wm. Bruce, M.A., M.D., LL.D., The Castle, Dingwall.

DEATHS.

BUCKNILL.—On July 19th, at Bournemouth, Sir John Charles Bucknill, M.D., F.R.S., aged 79.

ROBERTSON.—On July 15th, at Buxton, William Henry Robertson, M.D., aged 86.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 22nd, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
July 16	30·06	N.E.	66	59	118	81	60	...	Fine
" 17	30·08	W.	70	64	112	82	63	...	Hazy
" 18	30·12	S.E.	68	59	117	82	59	...	Hazy
" 19	29·78	S.E.	68	59	114	79	63	0·48	Hazy
" 20	29·57	S.W.	65	62	125	79	61	...	Cloudy
" 21	29·65	S.W.	63	60	115	75	59	...	Overcast
" 22	29·89	N.W.	63	60	111	72	61	...	Cloudy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which was completed with the issue of June 26th, was given in THE LANCET of July 3rd. It is intended, in future, to include the Index and Title-page for each past half-yearly volume in the first number of the succeeding volume, as in the present case, instead of in the last number of the volume itself, as heretofore.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

THE PROFESSORSHIP OF MATERIA MEDICA AT GLASGOW.

WE have received the testimonials in favour of "Robert Bell, M.B., M.D.," for the chair vacant by the death of Professor Charteris, and we advise Dr. Bell in his own interests to edit his testimonials before approaching Lord Balfour of Burleigh on the strength of them. "M.B., M.D.," is not a usual affix to a physician's name, while the writer of the private letter and the testimonial on page 18 (both of which are published) was never a baronet and is now dead. Testimonials, when containing no errors, are looked at sufficiently askance nowadays, so much have they been abused; but testimonials to which an incorrect statement is appended will prove of negative value.

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A WARNING.

To the Editors of THE LANCET.

SIRS,—Will you permit me space in the interests of the profession to utter a warning note to any professional brethren who may be contemplating appointments abroad? First, let them be sure that what appears a large salary to them at home is of the same relative value in the country whither they propose to go. Secondly, have everything reduced to writing in such form as to be cognisable by the courts of both countries. Thirdly, if it be the United States have an agreement signed in England before starting and embodying a clause to the effect that a new agreement embracing the same terms shall be executed in America on landing. Fourthly, insist that the facts upon which any promised advantages are based shall also be reduced to writing. Fifthly, do not take any "collateral advantages" as part remuneration. Get money value for your services and pay cash for your collateral advantages when you have found out what they are worth. Lastly, insist upon a clause securing your return passage in any case. These suggestions are the result of my own experience. Let me emphasise and illustrate them by two examples.

In 1893 I left England "with my household gods" as medical officer to the Lower California Development Company, operating in Lower California, Mexico. The salary was only £100 per annum, but as collateral inducements I was offered private practice in a country whose lovely climate, cheap living, natural advantages, future prospects as a new Riverside at fruit-farming were attracting numerous thriving investors. Moreover, there was an outlook for my boy in the acquirement on what would have been very advantageous terms (had the acquisition proved worth anything at all) of a fruit ranche. I was told of fenced and planted farms, of a large territory under irrigation by nine miles of pipe line, of frequent shipping communication by the company's steamers, of a railway in construction to connect the place with the United States, "the first seventeen miles now being open for traffic," and numberless other things tending to sink my £100 per annum into insignificance by the side of the collateral advantages. I found—an arid wilderness of leagues of sand and cactus, without foliage or available water, and occupied by some six or eight officials, with a few settlers—chiefly refugees from justice—and Mexican peasants—thriftless and quarrelsome, the whole numbering perhaps seventy, certainly not more. The frequent steamers ran once a fortnight, so that one could not go away without leaving for two weeks. The climate (on the coast) consisted chiefly of wind and sandstorm from sunrise to sunset, while the railway, "now open for traffic," had never run but one train—viz., two years before for Government inspection, which had resulted in rejection. The line began nowhere, passed by nowhere, and ended abruptly in a Sahara. There were three or four fenced ranches, not more, which had been abandoned mostly by their owners, and, save as a source of tax income to the Mexican Government, were of no value to anyone. Finally, one was imprisoned there—"anchored," as the secretary of the company euphemistically phrased it—almost as securely as though one had been a prisoner on a barren rock in mid ocean. If any corroboration be needed of my account of this place it can, doubtless, be furnished by my predecessor there, Mr. H. W. Newton, formerly, I believe, of the Middlesex Hospital.

Now for my second experience. I escaped from Lower California, after fifteen months' penal servitude, a sadder (but I regret to say not a wiser) man. After twelve months in Los Angelos trying, though with insufficient capital yet with good prospect of ultimate success, to work up a practice, I was informed that the Mountain Mines, Limited (now the Mountain Copper Company, Limited), an English syndicate operating in Northern California, wanted a resident physician. After some correspondence I went up there to investigate and be investigated. I found what undoubtedly bade fair to be the prosperous undertaking into which it has subsequently developed. The manager was essentially an English—or rather Scottish—gentleman, the staff congenial, and the surroundings and conditions apparently conducive to a life worth living, while for a man devoted to his profession there was every promise of good practice (especially surgical) as things developed. The following terms were agreed upon between the manager and myself (subject to confirmation in London), and were taken down by me in writing at his dictation. The salary I knew to be less than half that customary in this country, where the lowest professional fee is $2.50 or 10*s*. But then, there were splendid opportunities in the future for practice, which is always allowed in this country, and other "collateral advantages." 1. Salary, undetermined. I asked for a minimum of $150 a month. The manager thought the company would not give more than $100 or at most $125. (They had been paying a local practitioner in Redding, seven miles off, $100 a month for a bi-weekly visit and attendance on urgent summons, while he enjoyed an excellent practice at home). 2. Board free for myself and at $15 a month for each member of my family. 3. A house to be built for me rent free, furnished as to all essentials by the company, and with free fuel, light, and attendance. 4. Such private practice as could be undertaken without neglecting official duties and the right to charge fees for attendance on employés' families. In due course I was offered the appointment if I would accept a salary of $125, which I did. This, with free board at $15, made a nominal $140. As the manager was anxious to start on the erection of a hospital (which was not, however, begun for nearly twelve months) I started up by request four days later and, without waiting to sign any agreement, as soon as I had given up my house and office, sold my belongings, &c. I expected, of course, to have at least a one or two years' agreement on the terms stated presented to me for signature on arrival. When I spoke about this later, to my astonishment I was told "this company does not give agreements to its staff." However, as I found all the other officers in the same case, and no one apparently with any misgiving, I had no alternative but to be content. My house, it is true, made no progress for various reasons; but I was given furnished quarters rent free (a bedroom and a sitting-room), and all the other clauses were duly fulfilled. Some months later, two directors came out. They calmly interdicted private practice, scoffed at the idea of charging fees to families, and insisted on their attendance being included in the duties of my salary, and charged me rent for my quarters (reduced to a bedroom only), making the same one month retrospective. When I appealed to the terms on which I came, and which the manager was willing to substantiate, they calmly informed me that as my salary was paid monthly, my tenure was only a monthly one. They did not intend to fulfil those terms; they could buy lots of doctors as the steamships did for £10 a month, and if I did not like it I could quit at any time. Again I was trapped; I had given up all and had nothing to go to, so perforce had to stay. Since then the works have increased. Three smelters, an extensive mine, and eleven miles of mountain railroad employ upwards of 600 men, many with families. The work exacted from the doctor here is the most arduous I have ever seen or heard of, to say nothing of the responsibility involved. Yet his pay is only $140 a month, out of which not only board but even rent for his quarters in hospital (a house surgeon charged rent!) is exacted. Compare this with the $100 a month and upwards paid to various classes of mechanics and $50 a month and upwards for common labour. Why, the work here would easily earn at the minimum fees authorised by the Medical Society and adopted by all reputable practitioners $1500 a month. On the calculation of a three months' basis it is actually pay for journeys, visits, consultations, operations, dressings, and confinements, of under 19 cents (9½*d*.) each! Further, the company has issued a ukase that no member of its staff is to do any business of any kind outside the company's duties; so that if one should see a profitable investment, which is not unlikely in a great mining country, one is debarred under pain of dismissal from availing oneself of it. Finally, a few months ago, the board suggested that the doctor should do private practice and pay the fees to the company, the directors reserving the right of deciding what portion of these fees, "if any," they should return to their doctor. Not having arrived at the stage at which I am prepared to be guilty of "infamous conduct in a professional respect" by complying with such an outrageous demand, needless to say I declined. Two days ago, on grounds not personal but of public policy professionally, I handed in my resignation, and I quote this with the other instance as a warning to all who may contemplate taking up company appointments abroad to trust nothing to either the truthfulness as to matter of fact or the scrupulousness as to matters of agreement of companies or their officials. Rather, have everything—promises, representations as to actually existent conditions, limitations of freedom, &c.—in black and white, duly signed, sealed, and delivered in such a way as to be cognisable by the courts of both countries, and above all, insist on a clause guaranteeing your return passage.

As a St. Mary's man, I am known to most of the authorities there, who will be able to testify whether my remarks are *primâ facie* worthy of credence or not. As to my service here, I am content to leave my record in the hands of the late manager, Mr. Alex. Hill, C.E., whose retirement only took place this month.

I am, Sirs, yours faithfully,

KENNETH W. MILLICAN, B.A. Cantab., M.R.C.S. Eng., L.R.C.P. Edin.

Keswick, Cal., June 18th, 1897.

W.H.F. (South Molton).—We do not know the meaning of A.K.S. Possibly it is a mistake for A.K.C. If so, the letters mean "Associate of King's College," which is not a medical qualification, but somewhat equivalent to the B.A. of an ordinary university.

PREVENTION OF VENEREAL DISEASES.

WE are obliged to our Sydney, N.S.W., correspondent for his suggestion. Without discussing the possible efficacy or not of his proposal we fear that its application would be attended with such difficulties and objections as to make it impracticable to carry out.

J. W.—(1) We cannot say. (2) We do not prescribe or suggest treatment. (3) The degree is a good one, though we cannot attempt to classify it as harder or easier of attainment than that of the other universities named. (4) Yes.

R. W—Our correspondent is advised not to apply for the vacancy. The profession in the neighbourhood are right to resent such methods.

One in Doubt need be in doubt no longer. The operation is impossible.

F. D. B.—We think so.

LUPUS NECROGENICUS AND LUPUS VERRUCOSUS.

To the Editors of THE LANCET.

SIRS,—Would any of your readers supply me with any information concerning the literature of lupus necrogenicus or lupus verrucosus?

I am, Sirs, yours faithfully,

Blaenavon, Mon., July 19th, 1897. J. THOMSON.

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A MYSTERIOUS QUESTION.

To the Editors of THE LANCET.

SIRS,—Please insert the following in next week's LANCET:—"Is there any cure for scarlet fever dropsy beginning in ancles and going gradually up body. If so, what will cure it? Bornall please answer (to Besom)." Yours truely,

F. R.

*** We give the insertion which is asked; perhaps our correspondent will now give us a literal "construe" of the communication.—ED. L.

Cue.—The circumstances of the case dictate the answer. If the bicycle is to be used entirely for the conduct of the principal's practice, or for its development, it seems to us to be his duty to purchase it and keep it in order. If the assistant's work has previously been got through without a bicycle, and there is no suggestion that he should do more with a bicycle, the principal may look upon the purchase of a machine as a luxury in which he does not personally participate, and may therefore be just in thinking that he ought to be at no expense in the matter. Probably both parties would benefit by the purchase of a bicycle; therefore some arrangement might be arrived at whereby the expense would be shared and the use of the machine be not so strictly limited to professional purposes.

Celeste.—In the proper circumstances the treatment is radical. Our correspondent's medical man could give her all information.

Mr. G. Leonard Hill.—We do not remember publishing any cases of the sort to which our correspondent is seeking reference.

"COOLING POWDERS."

AN inquest was recently held by Dr. Wynn Westcott on the body of a boy aged six years who was taken ill on June 27th. His mother gave him a cooling powder, but the child died next day. Mr. A. S. Dawson, in giving evidence, said that he found the child dead on his arrival on the 28th. This was the third case to which he had been called after the administration of one of these powders. They contained tartar emetic, and were sold quite promiscuously. The drug was a very depressing one, and the examination of the child's body showed that he had died from syncope following pneumonia. Death, he believed, was accelerated by the very hot weather and the depressing effect of the drug. A juryman remarked that it was a shame that poison could be sold to anybody who asked for it; but the coroner said that as the powders in question were a patent medicine and bore a government stamp they evaded the Poisons Act. The Medicine Stamp Act ought to be repealed. It is simply a premium upon lying and murder; for most patent medicines are useless, and many of them are harmful. We have said over and over again that all proprietary and patent medicines should only be sold in bottles, or packages, or boxes with the full formula legibly printed thereon. Then, if people still like to pay 4*s.* 6*d.* for a halfpennyworth of nitre or 11*s.* 6*d.* for a grain of perchloride of mercury, they can do it, but at present adventurers flourish unchecked, and it is quite time something was done to stop them, even though "commercial enterprise" be interfered with.

Dr. Thomas Laird is thanked for his communication. We will endeavour to ascertain if any practical experience of the treatment can be published.

J. S. will find the lecture printed in full in THE LANCET of June 24th, 1893.

E.P.P.—We cannot trace the receipt of the communication in question.

ITALIAN FOUNDLING HOSPITALS.

THE recent appalling revelations of the mortality in these institutions—revelations evoked last May in the Camera dei Deputati, when the mismanagement of the Neapolitan Brefotrofio was under discussion—have led to the nomination of a committee of inquiry into the whole subject—viz., the illegitimacy which gives rise to the system of foundling hospitals, the provocatives of that illegitimacy, and the distribution and administration of the hospitals themselves. The constitution of the committee is notably strong, made up as it is of high medical authorities like the Senators Durante, Tommasi-Crudeli, and G. Bianchi; the members of Parliament, Silvestro Piccardi, Professor Angelo Celli, F. Fede, U. Levi, P. Bertarelli; the commendatore L. Bodio; the engineer G. Speroni (President of the Provincial Council of Como), and the advocate Raffaele Perla To those of our correspondents who have written to us for information as to these hospitals we may recommend the committee's report (shortly to be made *publici juris*) as a document possessing all the guarantees of impartiality, thoroughness, and accuracy. For such of them, moreover, as require that information with the least delay possible we know of no better source than the "Atti Parliamentari" for the latter half of May, which, as the Italian equivalent to our own Hansard, may be procured through any bookseller. The Neapolitan Brefotrofio, we may add, is not under religious management.

THE CLIMATE OF CORSICA.

To the Editors of THE LANCET.

SIRS,—Would any of your numerous readers be kind enough to inform me as to the salubrity of the climate of Corsica?

I am, Sirs, yours faithfully,

July 18th, 1897. O. H.

A Practitioner of Twenty-five Years' Standing will agree with us that no parent's opinion concerning the reasons for a son's failure in examination will ever have public weight. Therefore, though in sympathy with the letter, we have judged that no useful object would be served by printing it.

A. H., M.B.—THE LANCET of Sept. 12th, 1896 (page 769) contains the information our correspondent requires. It is too long for us to transcribe here. There is an agitation in Italy to place that country in a position towards foreign medical men similar to that adopted by France and Switzerland.

Inquisitor has forgotten to enclose his name and address.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (28th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (29th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (31st).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Newcastle Weekly Chronicle, Salisbury Journal, Acton Gazette, Dundee Advertiser, Glasgow Evening Herald, East Anglian Daily Times, Birmingham Gazette, Brighton Gazette, Hull Daily Mail, Huddersfield Chronicle, North British Daily Mail, South Wales Daily News, Manchester Guardian, Times of Ceylon, Eastern Morning News, Liverpool Courier, Scotsman, Citizen, Bradford Observer, Derbyshire Times, Yorkshire Post, Architect, Western Mercury, Tottenham Herald, Bath Chronicle, Tamworth Mercury, New York Herald, Builder, Liverpool Daily Post, Sydney Morning Herald, Times of India, Pioneer Mail, Montreal Star, North-Wilts Herald, Leicester Post, Evesham Journal, Herald of Wales, Wolverhampton Chronicle, Leeds Mercury, Halifax Guardian, Portsmouth Times, Carnarvon Herald, Devon Weekly Times, Sussex Daily News, Sheffield Telegraph, Bristol Mercury, Sanitary Record, Reading Mercury, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Hertfordshire Mercury, City Press, Surrey Advertiser, Mining Journal, Local Government Journal, Christian World, Oswestry Advertiser, Sevenoaks Chronicle, Science Siftings, Eastern Counties Times, Derby and Chesterfield Reporter, Perthshire Advertiser, Melton Mowbray Mercury, West Middlesex Herald, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Messrs. Arnold and Sons, Lond.; Anglo-Swiss Condensed Milk Co., Ltd., Secretary of; Ancoats Hospital, Manchester, Secretary of; Dr. S. A. Arany, Kassa, Hungary; Anderson's College Medical School, Glasgow, Secretary of.

B.—Dr. E. Baily, Oban, N.B.; Messrs. Burroughs, Wellcome, and Co., Lond.; Brussels Medical Graduates' Association, Lond., Hon. Secretary of; Borough of Lowestoft, Medical Officer of Health of; Dr. E. M. Brockbank, Manchester; Mr. A. Hinckes Bird, Lond.; Dr. John Bruce, Rothes; Dr. P. F. Bergmann, Wiesbaden; Boscombe Hospital, Bournemouth, Hon. Secretary of; Mr. C. Birchall, Liverpool; Mr. Banks, Bolton; Dr. L. S. Beale, Lond.; Birmingham City Asylum, Medical Superintendent of; Dr. L. Buchanan, Glasgow; Messrs. Burgoyne, Burbidges and Co., Lond.; Herren Breitkopf and Härtel, Leipzig; Dr. E. T. Blank, Rovio, Switzerland; Mr. F. D. Bennett, Lond.; Sir F. Bateman, Norwich; Mr. Blackett, Lond.; Birmingham and Midland Hospital for Skin Diseases, Hon. Secretary of; Dr. Bagshawe, St Leonards-on-Sea.

C.—Dr. F. Graham Crookshank, Lond.; County of Chester, Medical Officer of Health of; Celeste, Newby Bridge; Mr. E. Brudenell Carter, Lond.; Mr. John Cahill, Lond.; Dr. J. A. Clough, Leeds; Messrs J. and A. Churchill, Lond.; Condal Waters, Ltd., Managing Director of; Mr. T. Cooke, Lond.; Messrs. Coxeter and Son, Lond.; Children's Hospital, Nottingham, Secretary of; Cortland Wagon Co., Lond; Mr. H. Connop, Reading; Mr. A. Court, Birmingham; Comaltana Wine Co., Heckmondwike; Dr. A. T. Cabot, Boston, U.S.A.; Cumberland Infirmary, Carlisle, Secretary of.

D.—Mr. R. Dunstan, Lond.; Herr E. Dieterich, Helfenberg.

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Inaugural Address

ON

MEDICAL GEOGRAPHY AS AN AID TO CLINICAL MEDICINE.[1]

Delivered at the First Meeting of the Isle of Man Medical Society on Dec. 4th, 1896,

BY ALFRED HAVILAND, M.R.C.S. ENG.

MR. PRESIDENT AND GENTLEMEN,—I thank you very cordially for the honour you have done me in asking me to deliver the inaugural address on the occasion of the first meeting of the Isle of Man Medical Society. At the same time allow me to congratulate the founders of an institution which in the sequel is calculated to promote the advancement of science among those practising in your island.

The subject I have selected for my address is one that requires no apology on my part for its introduction, as ever since I first landed in the Isle of Man, in August, 1882, I have been identified in the minds of at least your senior members with the study of geography—a study that I have persistently pursued more or less throughout my professional career, and which since 1868 has assumed the more definite form of the medical geography of Great Britain. With these few remarks I will now trace the course of my studies in the Isle of Man back to their origin in the greater island of Britain, which I was on the point of calling the mother-country—a term of endearment, however, not warranted by the Keltic origin of Manxmen. In 1875 I first published my folio work on "The Geographical Distribution of Heart Disease and Dropsy, Cancer in Females, and Phthisis in Females," illustrated by the coloured maps I here show, which I will presently briefly explain. In these maps you will observe that the Isle of Man is left uncoloured—blank, in fact. Now, it so happened that in 1882 I visited Brighton and made a thorough investigation of its physical configuration and geology, the results of which I embodied in a large map published by Bacon and Co. When Brighton was drained the engineer fortunately was an accomplished geologist and made coloured drawings of the sections cut for the sewers; these were placed at my disposal by the mayor and corporation of the borough. With these materials I was enabled to construct the map before you, which, I am pleased to know, the sanitary authority and others still find useful. Some years previously (1875) I had read a paper at Brighton showing the distribution of deaths among children from tuberculous deposits in the membranes of the brain and the mesenteric glands, and pointed out the high mortality from these causes that characterised the coastal districts of England and Wales. My geological map of Brighton, which included a portion of Hove, dispelled the illusion that this town was "all chalk, all chalk," as it had been described by some London medical men who were in the habit of sending their patients there with the view of counteracting the evils arising from London clay. From Brighton I proceeded to Scarborough, when I completed my investigations with regard to the low death-rate from phthisis there, to which I shall again refer when speaking of that disease in your island. Whilst, however, I was staying at the Yorkshire health resort my attention was again drawn to the blank area in my map lying in the Irish Sea, midway, as Cæsar described it, between Britain and Ireland, and nearly through the centre of which passed the same line of north latitude, 54° 5′, that traversed Oliver's Mount, which rises over 500 ft. above the sea in the centre of Scarborough. Having determined to extend my inquiry to the Isle of Man I wrote to the then Registrar-General, Mr. Samuel Harris, now the Vicar-General, who immediately forwarded to me copies of his two first-printed annual reports for the years 1880 and 1881, being his fourth and fifth respectively; his former reports for the years 1877, 1878, and 1879 had not been printed and published and are still in MS. Since the year 1880 up to the present sixteen printed annual reports have been published, and presently I shall endeavour to lay before you some of the facts accumulated during the decennial period 1881–90, and compare them with those published by Dr. John Tatham in August last in his admirable supplement to the fifty-fifth annual report of the Registrar-General of births, deaths, and marriages in England, which embraces the same period.

The scanty materials afforded by the two printed annual reports of the Manx Registrar-General were to a certain extent disappointing, but I was not disheartened, and having just concluded an eight years' campaign against disease in the midland counties, over an area of more than a thousand square miles, containing nearly four hundred parishes (365), I lost no time in commencing my investigations on the same lines that I had laid down for my guidance whilst carrying out the larger work. The first thing to be done was to gain an accurate knowledge of the physical configuration and geology of the Isle of Man. These ends I attained, as well as I could, by walking all over the island and sketching its mountains, its valleys, its cliffs—in fact, everything that would give me a clue to solving the problems of its local climates and their relation to health and disease. This part of my work would take up too much wall space to exhibit here, but a few of my sketches that I once reduced and which were engraved for publication, now abandoned, are on the table, and may help to show you the nature of this part of the investigation. The study of the geology of the island went side by side with that of its physical geography, and as the mildness of the Manx winter enabled me to pursue my studies almost uninterruptedly I soon acquired a sufficient knowledge of every part of this beautiful rock in the Irish sea called *Mona* by Cæsar, and *Man* by us, from the old Keltic word *Maen* a rock. My next step was to make special inquiry as to the prevalence or otherwise of certain causes of death in the different parishes, carrying out a thorough house-to-house visitation, for which I had provided myself with lists of the names of those who had died from any one of the specified diseases. In this way I made use of what I have characterised as "scanty" data, but their teaching when studied with their surroundings proved in the sequel to be of great service, and I have long since ceased to regret the extra labour that they cost me.

It was during this house-to-house visitation that I learned the true state of old Douglas, and was enabled to advise those in authority against enwalling it, as was once proposed, but to air-flush it by means of new wide streets and the destruction of the old and narrow ones—which piece of advice I have remained here long enough to see carried out to a salutary extent. You still want baths and wash-houses, and the clothes dried before being taken home to the artizans' and labourers' dwellings.

Before entering upon the description of the maps of disease-distribution in the Isle of Man I must very briefly explain the maps that I had previously constructed to illustrate the medical geography of heart disease and phthisis and cancer in England and Wales; the heart disease map was first published in 1871, then again in 1875, with those of the two other diseases. In 1892 I published, as an introduction to the Medical Geography of Great Britain,[2] the first part of the second edition of that work, and illustrated my method of investigation by maps of the Geology, Physical Geography, and Disease Distribution in the English Lake District, so that I need not now enter further into detail than will be sufficient to enable you to read my English maps and compare them with those I have constructed for your country. Moreover, only so lately as last May Professor Thomas Clifford Allbutt published in his "System of Medicine"[3] an article on the "Medical Geography of Great Britain," which he had asked me to contribute to his great standard work. In this contribution I endeavoured as succinctly as possible to explain the principles of this important branch of knowledge and their application to clinical medicine. To these works, therefore, I must refer the members of this society who desire to become further acquainted with the history and results of my investigations.

On the three maps of England and Wales before you are portrayed, by means of different shades of red and blue colours, the distribution of three great causes of death—heart-disease among males and females, phthisis among females, and cancer among females—

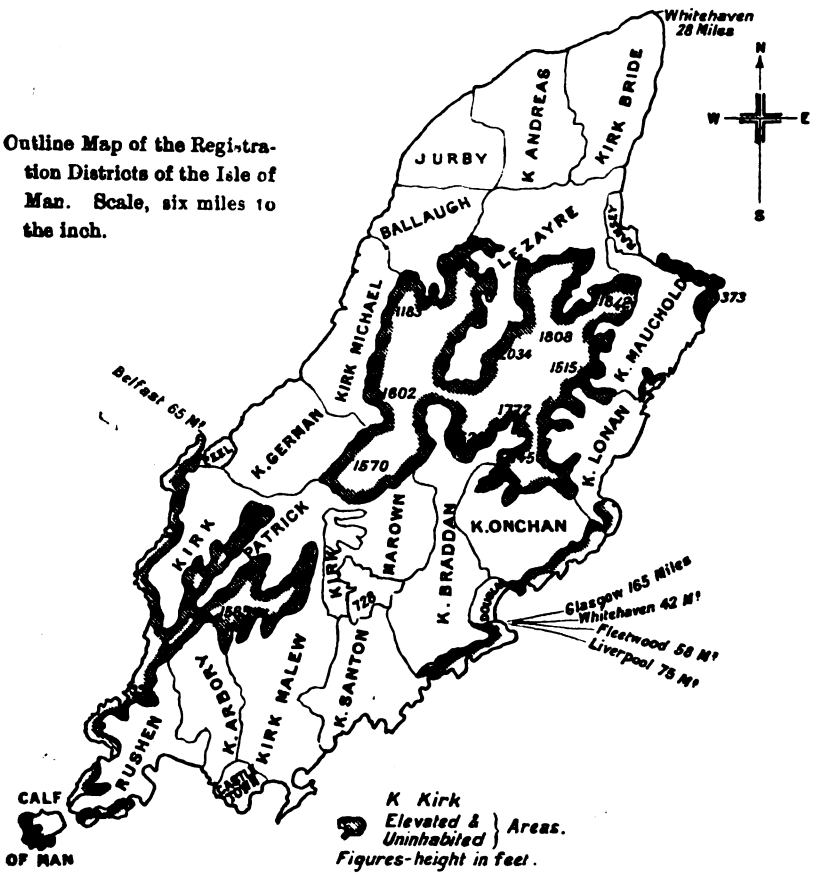
[1] Mr. Haviland's address was freely illustrated by coloured maps and diagrams.

[2] Swan Sonnenschein and Co., London, 1892.

[3] London: Macmillan and Co., Ltd. 1896. Vol. i., pp. 48 54.

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during the decennial period 1851-60, the data for which were received from Dr. William Farr's first supplement to the Registrar-General's twenty-fifth annual report. The scale of colours is the same in all the maps, whilst the death-rates, of course, differ according to the cause of death represented. I selected red and blue with the view of aiding the medical memory, the first being typical of red, life-giving arterial blood, the symbol of health and low mortality as indicated by death-rates below the average, whilst the second represents the colour of effete and used-up venous blood, the emblem of disease and high death-rates, or a mortality above the average. The lowest mortality is indicated by the darkest red and the highest by the darkest blue, the intermediate shades between these polar extremes gradually decreasing in intensity as they approach the central average point, which in the case of heart disease (for both sexes) was during 1851-60 equal to an annual death-rate of 12·45 to every 10 000 living, in that of cancer of 4·33, and of phthisis of 27·74 to every 10,000 females living. The number of deaths from heart disease during the above ten years amounted to 236,973, from cancer 42,137, and phthisis



Outline Map of the Registration Districts of the Isle of Man. Scale, six miles to the inch.

have hitherto dealt. It is true that on comparing this map with that of phthisis, the two when placed side by side present a marked contrast to one another; but this is more due to the fact that cancer affects the river-valley systems, which when protected and sheltered harbour the *materies morbi* of rheumatism, and its too frequent sequel heart disease, than to a common cause. A few illustrations, however, will suffice to show the nature of the problems that this remarkable contrast affords us. I will follow the plan I have hitherto adopted and begin with the high mortality groups; these will be seen to skirt the lower courses of fully-formed rivers that seasonally flood their riparial districts, instances of which will be seen, especially on the east and south coasts, from the Tweed to the Devonshire rivers, between which extremes will stand out the blue colouring of high mortality along the Rivers Tyne, Swale, Humber, Welland, Trent, Ouse, Yare, the East Anglian rivers, Thames, and the south coast rivers. The Thames Basin has long been known as one of the great cancer fields of England and Wales, and I may say, in passing, that with the fresh light thrown on this subject by the increased numbers afforded by the deaths occurring during 1881-90 the mortality tends to show an increase instead of a decrease. This highly important area has been treated separately and the history of cancer within it will be shortly published. It is natural to suppose that if floods tend to increase the mortality from malignant diseases in the districts where they occur, the localities where floods do not and cannot occur should be comparatively free from these diseases; or that if the low-lying clays and retentive soils which characterise the high-mortality flooded areas are replaced by elevated permeable formation, such as the several limestones, then, too, the death-rates would lessen and the groups would be characterised by shades of red, such as can be seen throughout the palæozoic and elevated areas of Wales, the north-west of England, the chalk downs on the north and south of the Thames Basin — in fact, wherever chalk and other limestones come to the surface. Having given you a hasty sketch of the teachings of these three maps I will now pass on to the geographical distribution of the same causes of death in the Isle of Man during the ten years 1881-1890. The groups of high and low mortality are represented by the same scale of colours, but the scale of mortality will be adjusted according to the insular averages.

The Isle of Man is divided into twenty-one districts, seventeen parishes, and four townships for registration purposes (see Map). These are classed together into four divisions, consisting of the Western—Peel, German, Patrick, Michael, and Ballaugh; the Northern — Ramsey, Maughold, Lezayre, Andreas, Bride, and Jurby; the Eastern—Douglas, Onchan, Lonan, Braddan, and Marown; and the Southern—Castletown, Malew, Santen, Arbory, and Rushen. The Act of Tynwald, by which the registration of births, deaths, and marriages became law, was promulgated on July 5th, 1878, so that it was in force for a year and a half before the Registrar-General's report for 1880 was printed. In 1881 the next census after that year took place, and in 1891 the ten years were again completed by the census of that year, and thus enabled the mean populations of the several districts to be taken for the ten years 1881-90 by adding the two censuses together and dividing by two, as in the cases of the English and Scotch censuses. Although I have worked out in a tabular form all the details of the twenty-one districts for each of the single years composing the decennium 1881-90, as regards their mean populations, numbers of deaths from each of the three causes for each year, and the annual death-rates from them, I shall content myself on this occasion with only

269,618 amongst a mean population in the first instance of 18,996,616, and among the two latter of 9,718,174 females.

With this brief preliminary explanation I will now endeavour to show you what the three maps teach us, and then proceed to compare the lessons derived from them with those afforded by maps of the Isle of Man, representing the distribution of deaths from different causes over an equal number of years, although not for the same decennium. The English maps are divided into 630 registration districts.

[Mr. Haviland here described the three maps of England and Wales, relating to A, Heart Disease in both Sexes; B, Phthisis in Females; and C, Cancer in Females. In Map A mortality was least in wind-swept districts where the valleys lay in the axes of the prevailing winds. In Map B the opposite state of things prevailed, and as regards Map C Mr. Haviland continued:—]

The cancer map.—I now proceed to explain the groups of high and low mortality among females from cancer. The causes regulating the distribution of death from malignant diseases will be seen to differ widely from those with which we

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laying before you a summary of the results of my investigation, reserving for your future reference the tables containing the actual figures, as they will be of more use in the study than in the lecture room. Ever since the first publication of my English maps, the first thing that appears to strike the student is the fact that the truthful delineation of the distribution of a cause of death, carefully worked out by death-rates from it, should give a clue to the physical geography and geology of a country. That such, however, is the case no one, I think, will now deny who has attentively followed the explanations I have given of the groups of high and low mortality from the three classes of disease that have just been discussed. England and Wales offer every variety of physical and geological feature, from the elevated mountain masses of the Cambrian and Lake District, the Snowdon, and great water parting of Wales, and the Derbyshire and Devonshire peaks and moors in the west, to the rich central valleys of the Severn, the Thames, and the broad stretches of flat, alluvial lands in the east; and when we consider that this diversity of land surface is spread over an area of nearly 60,000 square miles (58 186), we may well hesitate to accept the teachings of a little outlying island only 227 square miles in extent with those of a country more than 256 times as large. "*De minimis non curat lex.*" But science does, fortunately, and, moreover, science from day to day accumulates the facts on which it is built, and, like a rolling snow-mass, *vires acquirit eundo*, so we will make a beginning with the first few possible facts that have come to our hand since your Registration of Deaths Act was first promulgated from your ancient Norse Tynwald Hill on July 5th, 1878. Let us, then, begin with a brief enumeration of the main facts at our disposal. The area of England and Wales, I will remind you, is equal to 58 186 square miles, and is divided into 631 registration districts, giving an average area to each of 92 square miles, whilst that of the Isle of Man is 227 square miles, divided amongst 21 districts, giving an average of a little over 12 square miles each. The four town districts are the smallest but most populous, as in England, and it will be seen by the map before you showing the elevated land that large areas of several of the rural districts in the north-east and south-west of the island are occupied by sparsely-inhabited mountain lands. These culminate in the north at Snaefell, 2034 feet, and in the south at Barrule at 1585 feet. Running, as these masses do continuously from the north-east in the Maughold district to the south-west in that of Rushen, they form the backbone of the island, and roughly separate the north-west from the south-east aspects.

Heart disease.—The number of deaths registered as caused by diseases of the circulatory organs amounted "at all ages" to 402 males and 499 females during the decennium 1881–1890 in the Isle of Man amongst a mean population of 26 044 males and 28,538 females, equal to an annual death-rate of 15·43 among males to every 10,000 males living, and of 17·48 among females. During the same period the death-rates in England and Wales were 15·47 and 16 02 respectively, so that the death-rates are very similar to those of the island, being only 0·04 less among males and 1·46 more among females. On looking at a map of the Isle of Man there will be little difficulty in pointing to the districts that are liable to the full force of the prevailing winds which we have seen in England to have such a powerful effect in reducing the mortality from diseases of the circulatory organs. The axis of the island corresponds with the line of the south-west and north-east prevailing winds. The southern division embraces the wind-swept parishes of Rushen, Arbory, and Malew, the death-rate amounting to only 7 19 males and 11·34 females to every 10,000; whilst the more sheltered parishes, as Michael, under the lee of the precipitous cliffs, have a much higher death-rate, 17·64 males and 18 41 females; Marown, 22 82 females. Among males, however, the death-rate is low, 8 11. I have omitted the results from the towns and from Braddan, as they contain the lunatic asylum and the poor-house, the deaths in which have not been accounted for. Santon, too, contains the isolation hospital, in which several deaths have taken place. Corrections for deaths in these institutions should in future be made.

Phthisis.—In the ten years from this cause there were 722 deaths among males and 815 among females, equal to a death-rate of 27·72 among the former and 28 55 among the latter. In the first map that I constructed for 1880–1882 the distribution of phthisis among females in this island was faithfully foreshadowed, and will help us to understand the figures of the ten years 1880–91: Bride, 46 51; and Ballaugh, 32·25, in the north; and Rushen, 31·10, and Arbory, 37 69, in the south. On the west coast, under the shelter of the Kirkmichael cliffs, there was a low mortality (20·25), as was found under the protection of the Scarborough and the North Devon cliffs. In fact, as I pointed out in Edinburgh when I lectured before the Scottish Meteorological Society on the Climate and Diseases in the Isle of Man as Influenced by Physical Configuration, although in some of the wind-swept parishes a very high death-rate from phthisis occurs, there are to be found in the centres of the mountain masses ample valley room for the erection of cottages where protection would be afforded, not only to the inhabitants of the island, but to the lung-tainted visitor, who would find the purest elevated climate conceivable and protection from wind. At that meeting I proposed, instead of building hospitals for phthisical patients, that cottages so constructed should be built as to turn round on a table and be adjusted so as to meet the varying sun and wind changes.

Cancer.—130 males and 195 females died from this cause during 1880–91, thus yielding an annual death-rate equal to 4 99 and 6·83 respectively. During the same period the death-rate in England and Wales reached 4 30 males and 7 38 females. In England phthisis had decreased greatly since 1851–60, when it amounted to 27·74 amongst females; in 1881-90 among that sex it had fallen to 16 08. In the Isle of Man there are no extensive river basins subject to floods, but there is elevated ground and a central valley which receives the drainage of the northern and southern masses. This valley stretches between Douglas and Peel and traverses the central parish of Marown. Its area is nearly always water-logged, and this condition of the soil I have always associated with the prevalence of cancer. Coincident with the Marown swamp is the highest death-rate from cancer among females—namely, 16·59; the next highest is found in Andreas (8 51), in Michael (7 36), and in Arbory (8·56), all more or less subject to water-logged soil. The elevated localities, such as Maughold (1·95), Lonan (5·89), and some others, as Malew, characterised by a large area of limestone (5·23), Santon (3·71), and Patrick (2·54) have all the lowest death-rates from malignant disease.

I have now given you a hasty sketch of the distribution of certain important causes of death in the Isle of Man during the ten years 1881–90, the details of which are to be found for every parish. This essay must be considered as a starting point only. This is the first attempt that has ever been made to apply the principles of medical geography to your island excepting the one that I published in 1883 on the distribution of phthisis in it. I must now leave this subject in the hands of the members of this society, who, I hope, will pursue it year after year as the disease facts accumulate. And in expressing this hope I will, in conclusion, add a word of encouragement: In the study of medical geography the busy medical practitioner will often find the material for answering such important questions as "where shall I go to avoid the chances of falling a victim to the disease with which I am tainted?" With such evidence before you as the maps present no medical man would recommend a patient to take up his abode where he knows the local climate is favourable to the diseases for which he is consulted. Fortunately for those visiting the Isle of Man, the local climates are so pronounced and varied, owing to the great diversity in its physical configuration, that when once mastered and the distribution of disease well studied, no difficulty will be experienced in answering such questions. Again, during convalescence—a period in our patients' cases of great anxiety to us, as it is one of great susceptibility to morbid influences—medical geography will often point out to us the places to be avoided when the time for a change of air arrives, as well as where are to be found the most suitable local climates.

A DANGEROUS ATTACK BY A LUNATIC.—We regret to learn that on July 17th, whilst on the cricket field, Dr. Merson, medical superintendent of the Hull Borough Asylum, received a violent blow on the back of the head from one of the patients, the blow being struck with a cricket bat. Dr. Merson was rendered unconscious immediately and remained so for several hours. His condition caused great anxiety for some days, but we are pleased to learn that he is now progressing favourably, though slowly.

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A CONTRIBUTION TO THE ETIOLOGY OF BERI-BERI.[1]

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THAT the symptoms and signs of beri-beri are due to a multiple peripheral neuritis is, I think, now an accepted fact. The question which remains at issue, if, indeed, it has not yet been settled, is, What is the cause of this neuritis? A multiple neuritis is symmetrical, and, being so, the parenchymatous degeneration of the affected nerves must be due to some irritant circulating in the blood, this irritant having a special affinity for the nerve protoplasm. The peripheral parts of the nerves are the parts most affected, because, these being farthest from their source of nourishment, their vitality will be proportionately less, and they will therefore the more readily undergo degeneration.[2] We are familiar with many examples of multiple neuritis caused by poisons circulating in the blood. Alcoholic neuritis, arsenical neuritis, the neuritis of small-pox, of enteric fever, and certain aspects of diphtheritic paralysis, may all be cited by way of illustration. In the first two cases, alcoholic and arsenical neuritis, the poisons get into the circulation from without by means of the digestive system. In the other cases, or at least I may say without fear of contradiction in the cases of diphtheria and enteric fever, the toxins are manufactured in the blood or tissues, the result of the vital activity of certain specific micro-organisms.

Early in the study of beri-beri it was recognised that its symptoms must be due to some deleterious, if not actually poisonous, substance present in the circulation. With this in view many and various causes were mentioned by way of explaining the etiology of the disease. It was thought to be allied to rheumatism, to scurvy, to be a form of malaria. Wernich examined the blood in many of his patients, and he concluded that the disease was similar to pernicious anæmia. This theory, he maintained, would explain the cardiac failure, the dropsy, and the nervous and other symptoms. But it was found that the changes he described in the blood were by no means common to all cases of beri-beri, and that, indeed, many of these changes did not exist in reality, but only in his preparations, the result of his faulty methods of examination. Diet, again, was claimed to be the cause. It was said that many of the sufferers lived entirely on rice, and that on substituting a more nitrogenous food they showed marked signs of improvement. Others maintained that the diet was too rich in nitrogenous material and claimed an improvement on giving less. Impure water, overcrowding, gases from organic decomposition, were all given an important place among the causal factors of the disease. But a more adequate explanation than any of these had to be found, for not one of them was convincing or satisfactory. In some of the other infective diseases a micro-organism had been found in the blood or tissues of those affected. These organisms in growing produced certain poisons called toxins, and it had been shown that the poisons so produced were the causes of the characteristic symptoms of the disease. The task, therefore, which presented itself was to find in the blood or tissues of people suffering from beri-beri a specific micro-organism with characters analogous to the organisms of such diseases as diphtheria or enteric fever. Some idea of this kind was evidently in Simmons's[3] mind twelve years ago when he wrote as follows: "Ten years' study and observation of the malady (beri-beri) under a great variety of circumstances and conditions have led me to the definite conclusion that its exciting cause is a specific poison or germ, having many striking resemblances in its mode of production to paludal or marsh miasm, though entirely distinct and separate from it."

Various investigators have discovered micro-organisms in the blood and tissues of patients suffering from beri-beri, but unfortunately the variety of these organisms is very considerable. Pereira[4] in 1874 reported the presence in the blood of micro-organisms, which he described as "micrococci in rapid motion." He says he also found these in normal blood, and so he considered them as of no importance. It is therefore probably De Lacerda[5] who deserves the credit of being the first to describe an organism which he considered to be the cause of beri-beri. This was a bacillus, the same, he says, as he cultivated from rice, and the same as he found in the blood of rats that had died after eating the rice. Some years later, however, in 1887, De Lacerda[6] cultivated cocci from the blood of his beri-beri patients and by inoculating rabbits with the growth produced the symptoms of that disease. In 1885 Ogata[7] found in the spinal cord of a patient who had died from beri-beri a bacillus something like the anthrax bacillus. Growing in gelatin it had a "tree-like" appearance, and on agar-agar a "yellow-grey-white" colour. On injecting cultures of this bacillus into mice and dogs, he says, there was developed in them the symptoms of beri-beri. He cultivated the organism on a medium of gelatin and grape sugar, and found that the fluid resulting from this growth on being injected into animals caused paralysis. He found his bacillus in the intestines of those suffering from beri-beri, and concluded that it was the toxins of these bacilli being absorbed into the circulation that caused the paralytic symptoms. In 1887 Van Eecke[8] reported that he had cultivated four different kinds of organisms from the blood of his patients. These were as follows: (1) "Micrococcus albus," a micrococcus which was immobile, aerobic, and which liquefied gelatin; (2) "micrococcus tetragonus flavus," cocci arranged in tetrad forms; (3) "micrococcus flavus," also aerobic and liquefying gelatin; and (4) "bacillus flavus," short rods in pairs and chains, in active motion, aerobic, and with spore formation. On injecting animals with these growths, three of them, the first, third, and fourth, each produced paralysis. No result was obtained with "micrococcus tetragonus flavus."

However important all the above observations might be, it was not till Pekelharing and Winkler[9] took the subject in hand that anything like a satisfactory account of the bacteriology of beri-beri was given. These investigators in the first place sought for an organism in the tissues and cerebro-spinal fluid at their various post-mortem examinations, but with no conclusive result. On examining, however, the blood of the patients while alive the result was much more satisfactory. In the blood were found numerous micro-organisms, both cocci and rods, and these were demonstrated in unstained as well as in stained specimens. An extended inquiry as to the condition of the blood in people residing at Atjeh and at Batavia was next undertaken. In the former place, where beri-beri is very prevalent, most of the inhabitants had "cocci and bacteria" in their blood, whether they were actually suffering from the disease or not. At Batavia, on the other hand, where beri-beri is almost never met with, the blood of its residents showed total absence of these organisms. As regards the micro-organisms in the blood of the so-called healthy people in Atjeh it was pointed out that almost no one enjoyed good health there. Most of its inhabitants complained of a feeling of heaviness, lassitude, palpitation, pains, and often loss of tactile sensation in the legs. The medical men who were carrying on the investigation also experienced these symptoms, and they were not free from them till they removed to Batavia. Fresh arrivals at Atjeh had no micro-organisms in the circulation, but these could almost always be demonstrated after a short residence, disappearing, however, on removal from the infected neighbourhood. All these observations gave confirmation to the surmise that beri-beri was due to the micro-organisms in the blood. The next step was to cultivate the organism or organisms outside of the body. This was found to be a matter of considerable difficulty. Cultures were taken from the blood of eighty patients, in all of whom micro-organisms had been demonstrated to be present. Of the eighty tubes only fifteen showed any growths, and not all of these growths were alike. Of the fifteen, twelve were micrococci and three were rods. Of the twelve micrococci, nine seemed alike, and these showed a close

[1] Being a thesis presented to the University of Glasgow for the degree of Doctor of Medicine.
[2] Gowers: Diseases of the Nervous System, vol. i., p. 110.
[3] Simmons: "Beri-beri" in Pepper's Practice of Medicine, 1886.
[4] London Medical Record, 1882, p. 464.
[5] Bentley: Beri-beri; Scheube: Die Beriberi Krankheit.
[6] Sternberg's Bacteriology, 1896, p. 473.
[7] Bentley: Beri-beri; Scheube: Die Beriberi-Krankheit.
[8] Scheube: Ibid.
[9] Pekelharing and Winkler, "Beri-beri," Edinburgh, 1893.

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resemblance in many of their characters to staphylococcus pyogenes albus. Two more of the tubes contained yellow growths; the twelfth was not well made out. The growths in the three tubes with rod-shaped organisms differed considerably from each other. It is to be noted that of the nine white micrococci six liquefied gelatin and two did not; the ninth was lost. In addition to cultivating these micrococci from the blood, Pekelharing and Winkler had no difficulty in growing a similar organism from the air of houses in Atjeh. It was now necessary to test the pathogenic characters of these micro-organisms. Single injections of cultures, it was found, produced no effects on animals; but this was quite to be expected, for the disease beri-beri differs from other infective diseases in that, while most of the others require but one exposure to their infecting agent, it is necessary to have a prolonged contact with the virus of beri-beri to ensure the development of that disease. And so the injections were given at intervals, and were continued over periods extending from nine to forty-eight days. Seven rabbits and two dogs were treated in this way with cultures of the white micrococcus. Six out of the seven rabbits and one of the dogs showed on post-mortem examination well-marked degeneration of their nerves. From the blood of these animals the same micrococcus was cultivated, and this in its turn produced a nerve degeneration in other rabbits. Cultures of the white micrococcus were given to rabbits along with their food and diffused in the air they breathed, with results similar to those obtained on injecting this virus. Again, saline solutions impregnated with the air of a room in Atjeh were injected into a rabbit. This animal died, and the post-mortem examination showed a degeneration of its nerves. Micrococci, too, were cultivated from this rabbit's blood, and these produced degeneration of nerves in other animals. Control observations were made, the control animals being kept under circumstances exactly similar to the ones receiving the injections. No nerve degeneration was found in the former. A rabbit was injected with a culture of staphylococcus pyogenes albus. The rabbit died in five days, and abscesses were found in its liver and kidneys, but no degeneration in its nerves. The pathogenic properties of the three rod forms and of the two yellow cocci cultures obtained from the blood were in a similar way investigated, but there was no certain evidence to show that any of these caused a nerve degeneration. The conclusion, therefore, that Pekelharing and Winkler arrived at was that the "white micrococcus" they cultivated from the blood is the cause of beri-beri. As to its liquefying gelatin or not, that they thought to be a matter of no moment, but to depend mostly on the culture medium on which the organism was grown. The "rod forms" were supposed to be extraneous, probably impurities. The "yellow cocci" they seem to think in some way related to the "white cocci," but on this point they are not very clear. They believe that the "white cocci" impregnate the air of the infected houses, ships, and districts, get into the human circulation through the air passages, and when they are absorbed in sufficient amount—some weeks' exposure to the infection being necessary—produce in the blood toxins in such quantity and of such a nature as to bring about a parenchymatous degeneration of the peripheral nerves.

Following on these observations of Pekelharing and Winkler came Eykmann[10] (1888), but he could not confirm their conclusions. He himself got only negative results from the study of the bacteriology of beri-beri. Neither could Mendes[11] agree as to the specific nature of the cocci of Pekelharing and Winkler. In 1887 Sternberg,[12] when in Rio de Janeiro, tried to cultivate an organism from the blood of four typical cases of beri-beri, but his results were also quite negative. Leopold[13] in 1892 isolated four micro-organisms from the blood of his patients. These were as follows: (1) "staphylococcus pyogenes albus"; (2) "micrococci in chains"; (3) "a small streptococcus, colourless, of unknown character and difficult cultivation"; and (4) a micrococcus which by inoculation in guinea-pigs and dogs causes a degenerative neuritis, and is described as the micrococcus of beri-beri. In 1893 Musso and Morelli[14] cultivated from the blood and ascitic fluid of two cases of beri-beri a micrococcus which, when injected into rabbits, produced symptoms of beri-beri. Scheube, in his "Die Beriberi-Krankheit," (1894), while recognising the importance of the observations of Pekelharing and Winkler, takes great exception to many of them. He maintains that they did not produce beri-beri in the animals they injected and that the cocci found by them are not the cause and not even one of the causes of the disease. If the organisms are present in the blood, why in sixty-five out of eighty cultures were no growths obtained? He says their results do not confirm each other and that some of them do not seem trustworthy. He does not think it probable that beri-beri can be produced by several organisms, as was suggested by Pekelharing and Winkler, and, again, he thinks they treat the bacilli and yellow cocci they cultivated too lightly. He wants to know how these could get into the test-tubes if not from the blood. He points out that some of the cocci liquefied gelatin and that some did not, the former seeming the more virulent. He asks why no result was obtained by giving injections from the blood of those affected with beri-beri. He maintains that the cause of beri-beri has not yet been discovered. Lastly, Fiebig[15] argues that the micrococcus cultivated by Pekelharing and Winkler is the same organism as staphylococcus pyogenes albus. He says the two have many resemblances and that they have no differences which could not be explained by alterations produced on growing them on different culture media.

From this account of the observations made and the opinions held as to the etiology of beri-beri it will readily be seen that all are not agreed as to the nature of its specific micro-organism. And in this connexion I may quote Dr. Spencer,[16] who, no later than seven months ago, wrote as follows: "In spite of the arduous researches of Pekelharing, Winkler, and others the organism which is the cause of beri-beri has not been satisfactorily or certainly determined." At this stage of the discussion, therefore, all fresh observations cannot but be received as evidence of some value. And so, I think, I need urge no excuse for presenting the results of a bacteriological examination of the blood in even only two cases of beri-beri.

Two firemen from the s.s. *Britannia*—(1) a man aged twenty-five years, and (2) a man aged twenty-three years—were admitted into No. 11 ward of the Glasgow Royal Infirmary on Feb. 26th, 1896. Their last port had been Bluefields, Nicaragua, and as far as could be made out they were two of seven lascars on the *Britannia* all affected with the same symptoms, and presumably the same disease, but not at the same time. Three of the seven had been sent to hospital in America, other two died on board the ship, and the remaining two, the patients under notice, arrived in Glasgow. When admitted into the ward each gave almost exactly the same clinical history and both showed very much the same physical signs. The symptoms, they said, were of three weeks' duration and had set in with a feeling of great weakness, lassitude, and loss of power in the legs. The gait of the patients was unsteady, especially so in the case of patient No. 2, who could not walk at all without support. The knee reflexes in both patients were absent, but the plantar and abdominal reflexes were quite active. No distinct muscular atrophy could be said to be present, although there was certainly some loss of power in the arms and in the legs. The reaction of degeneration was not fully developed. Most of the muscles in the limbs showed much lessened excitability to Faradaic electricity, yet some response was almost always obtained with a sufficiently strong current. The patients complained of pains and feelings of tingling and swelling in the feet, legs, and arms. The limbs were tender and painful to the touch, and there was a sense of constriction at the ankles, knees, and wrists, just as if a cord had been tied round these parts. Some degree of anæsthesia and analgesia was noticeable, especially in the legs. There was œdema of the legs, arms, and trunk in both the patients, but it was much more marked in the case of the second patient, who also had some cardiac complication. No murmur was to be heard over his precordial area, but the sounds were feeble, and the second sound, and sometimes the first sound, was re-duplicated. Moreover, he had signs of œdema at the base of both lungs, and possibly there was also some pleural effusion. The spleen and liver were normal in both the cases, and in both there was a trace of albumin in the urine. An examination of the blood showed

[10] Sternberg's Bacteriology, 1896.
[11] Scheube: Die Beriberi-Krankheit.
[12] Sternberg's Bacteriology, 1896.
[13] Bentley: Beri-beri; Schaube: Die Beriberi-Krankheit.
[14] Sternberg's Bacteriology, 1896.
[15] Scheube: Die Beriberi-Krankheit.
[16] THE LANCET, Jan. 2nd, 1897, p. 32.

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the following: patient No. 1—hæmoglobin, 68 per cent.; red corpuscles, 114 per cent.; patient No. 2—hæmoglobin, 76 per cent.; red corpuscles, 125 per cent. These two patients remained in hospital for two and a half months, and their clinical history during that time is pretty much an account of their gradual recovery. The second patient had one bad attack of syncope four days after admission, and two days after that each had a considerable rise in temperature lasting for two or three days, and for which no explanation could be found. Otherwise, the temperature was normal, the œdema gradually disappeared, the motor and sensory troubles passed off, and the patients were dismissed well.

During the residence of these patients in hospital I had the opportunity of examining their blood on four different occasions, viz.:—On March 6th and 11th, April 25th, and May 9th, and the appearances which presented themselves were the same on each occasion and in each patient. The blood was examined with the $\frac{1}{12}$th oil-immersion lens in the fresh state as well as in dried specimens stained with eosin and methyl-blue, with fuchsine and with Biondi's stain. It was noted that the red blood corpuscles ran together into rouleaux, and that the white corpuscles were slightly increased in number, many of them containing large black granules. There also seemed to be an increase in the plates of Bizzozero. In addition to the above ordinary constituents of the blood, there were present in fresh specimens small granules or micro-organisms in very active motion. These little bodies were seen as single "granules" or cocci, or as cocci in pairs (diplococci), or more rarely as several cocci joined together. Sometimes, as in the last case, they were very similar to rod-shaped organisms, but this appearance I was convinced was caused rather by two or three cocci forming a short chain than by a rod-shaped organism. That the movements observed were not a Brownian movement, but due to the organism itself, I am quite convinced, and on this point other observers who were good enough to look at my preparations were all agreed. In the stained specimens the organisms appeared almost invariably as cocci in pairs, lying over or attached to the red blood corpuscles. Never were any rod-shaped organisms seen in these preparations.

I next directed my attention to cultivating these organisms on artificial media. Tubes of agar-agar, serum-agar, and gelatin were inoculated with the blood of the patients on the following dates and with the following results:—March 7th: four tubes each of agar-agar and serum-agar and two tubes of gelatin. Growth appeared on two tubes only—one agar-agar (Growth A) and one serum-agar (Growth B)—both from the blood of patient No. 1. March 14th: four tubes each of agar-agar and serum-agar and two tubes of gelatin. The only growth here (Growth C) was in a gelatin tube taken from patient No. 2. This tube had by mistake been placed in the incubator at 37°C. April 20th: Four tubes each of agar-agar and serum-agar. Growths appeared in two agar-agar tubes (Growths D and E) and in one serum-agar tube (Growth F), all from case No. 2. April 27th: Six tubes each of agar-agar and serum-agar. Growth on one agar-agar tube (Growth G) from case No. 1. May 8th: Six tubes each of agar-agar and serum-agar and four tubes of gelatin. Growth on one agar-agar tube (Growth H) from case No. 1. From the above it will be seen that of fifty-six tubes inoculated at various times from the blood of the two patients, unequivocal growths were obtained only in eight. Of these eight tubes five were agar-agar, two serum-agar, and one gelatin (also at 37°C.). Four of the growths were from patient No. 1, and four from patient No. 2. Throughout this investigation every care was observed so that no organism from without should get into the tubes, special attention being given to the cleansing of the patient's finger from which the blood was drawn. On further investigating these eight growths it was found that only three of them (E, F, and H) were pure cultures. These three seemed to be the same organism, for their characters were exactly alike. They grew rapidly on agar-agar, there being in twenty-four hours at 37°C. an almost continuous growth along the streak. In from two to three days this had increased to an abundant pearly-white, club-shaped growth, with slightly scalloped edges, presenting an appearance almost identical with a similar growth of staphylococcus pyogenes albus. Cover-glass preparations stained with fuchsine showed the organisms to be cocci grouped so as to form staphylococci. These also stained well with Gram's method. Plate cultures were made both with agar-agar and with gelatin, and each showed the growths to be quite pure. With a low power the colonies on the agar plate were noted to consist of light-yellow or straw-coloured discs, finely granular, with well-defined edges and small, dark centre. There were also other forms to be seen, much smaller, darker in colour, round or lozenge-shaped, and in appearance rather like an uric acid crystal. These were usually separate from the larger discs, but sometimes they overlapped them, seeming to grow out of them, giving an appearance as if the darker growths were the stalk, and the lighter growths the bell, of a mushroom-shaped colony. On gelatin plates of five days' growth the colonies had much the same appearances as the above larger discs, only they seemed thicker and more granular. There were very few of the dark uric acid-looking plaques to be seen. On examining a "hanging drop" preparation cocci, solitary and in pairs, were seen to be in very active motion. The appearances here reminded one of those presented by these organisms in the fresh blood, for the kind of movement was almost exactly alike in both cases, and it certainly was not a movement in the fluid, but inherent in the cocci themselves. As to whether or not these cocci had flagella I cannot say definitely, but if they had I was quite unsuccessful in my attempts to stain them. The micrococci grow rapidly in bouillon broth, giving it in twenty-four hours a muddy appearance. The reaction of the culture-medium after a few days was strongly acid. It was demonstrated that a small amount of sulphuretted hydrogen was given off from this medium during the growth of the organisms. The addition of potassium nitrite and sulphuric acid to the bouillon growth showed the indol reaction, though faintly, yet quite distinctly. When grown on milk a coagulation is developed in from two to three days, and the fluid which separates has a strongly acid reaction and a distinctly sour smell. Stab-cultures in gelatin develop slowly and liquefaction does not seem to be constant. When it does take place it does so very slowly, sometimes along the streak, sometimes transversely at the upper part of the gelatin. Each of the three cultures we are now considering at first did liquefy gelatin, but growing them on gelatin seemed to lessen and even destroy this capacity. The growths E and F are examples of this, for now, after some eight or nine months' growth, partly on gelatin and partly on agar, I cannot get them to liquefy gelatin. At no time, even in summer, did liquefaction take place in less than a fortnight, and sometimes it did not develop till six weeks had elapsed. In the tubes where liquefaction took place the organisms, which fall to the lower level of the fluid, developed a dirty orange-coloured pigment. The fluid itself had a neutral reaction. The remaining five growths, A, B, C, D, and G, were impure, but on making plate cultures and isolating their component organisms it was found that each of the five contained a staphylococcus similar to that of E, F, and H, whose characters we have just been considering. From each there was, in addition, isolated a rod-shaped organism, but not in any two growths was this organism the same. Thus, in growth A, where both cocci and rods are to be made out in the cover-glass preparations, a staphylococcus was isolated whose appearances on plate cultures, in agar-agar tube, in bouillon broth, in its power of liquefying gelatin, &c., showed it to be the same as the growths E, F, and H. The rod-shaped organism on agar-plate cultures formed light brown or yellow colonies, quite round, granular in appearance, with fairly well-defined edges. There were also some plaques to be seen, light yellow in colour, and usually overlapping each other. The appearances on gelatin plates were very similar. On an agar-agar tube there appeared in twenty-four hours pearly-white, rounded colonies which tended to run into each other along the streak. On staining this growth it was seen to consist of short, thin rods, not stained uniformly. These stain by Gram's method, but every attempt to stain spores was unsuccessful. Hanging drop preparations showed rods in active motion. Gelatin liquefies slowly. Growth B also contained a staphylococcus of the type I have already described, except that it never liquefied gelatin. The rod organism isolated had very distinctive characters. On agar plates a colony appeared under a low power, as a more or less rounded body of amber colour, with several processes, giving in all an appearance as like as possible to that of the itch insect—acarus scabiei. After four or five days' growth on an agar tube the culture which was white began to spread out at its edges into

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branches, presenting an appearance like that of a fir tree. Cover-glass preparations showed short thick rods, many of which only stained at their two ends. These rods stain well with Gram's method and show spore formation when stained for spores. A hanging drop reveals large strong rods all in active motion. Growth in gelatin stab-cultures is very slow, and when it does take place it is in the form of white fluffy discs deep down in the culture medium. There is no liquefaction of the gelatin. The next growth, C, contained a staphylococcus the same as in the other tubes. This organism grew well in gelatin, but never caused any liquefaction. The other growth isolated from tube C was a rapidly growing bacillus, which readily liquefied gelatin, and in its plate culture appearance and other characters showed itself to be bacillus mesentericus vulgatus. Growth D also contained the white staphylococcus, which in this case liquefied gelatin in three weeks. The other organism present here was a bacillus which on agar plates presented darkish-brown, hairy-looking colonies, with rather irregular outline. The agar tube taken from this in two days had a thin scum-like growth over part of its surface, and on being stained it was seen to consist of long strong rods swollen at their ends; spores were made out to be present. This bacillus was actively motile and stained by Gram's method. In the last growth we have to consider, Growth G, the staphylococcus present did not liquefy gelatin, but otherwise it corresponded in every detail to the type already so often mentioned. The rod form here consisted of short bacilli, which stained with Gram. It was a growth very difficult to cultivate, and as it died soon its characters were not completely made out.

We have now to consider the pathogenic characters of these growths from the blood of our beri-beri patients. I shall therefore proceed to give an account of the results obtained by injecting six rabbits with some of these organisms. The plan pursued in every case was to grow the micro-organism in bouillon broth for forty-eight hours, and then to inject a certain quantity of this culture, either full strength or diluted with an equal quantity of sterilised water, into the abdominal cavity of the rabbit. Special care was taken in every case to make the syringe employed aseptic and to cleanse thoroughly the skin of the rabbit before giving the injection.

Rabbit No. 1, a fairly large animal, was injected with the pure staphylococcus growth E. Eleven injections were given in twenty-six days—i.e., three injections per week. The first five injections each consisted of 3 c.c. of the broth culture, the sixth of 4 c.c., the seventh and eighth of 5 c.c., and the ninth, tenth, and eleventh each of 12 c.c. The day after the last injection the rabbit showed signs of paralysis. It could not stand, but lay on its side panting for breath. The fore legs and hind legs were extended, and it seemed quite unable to flex them. The animal was killed at once, and an examination made a few minutes later, but nothing abnormal could be made out in any of the organs. There was very slight induration at the part of the abdominal wall where the injections had been given, but no appearance of an inflammation of any of the peritoneal membranes. The liver, kidneys, and spleen seemed quite healthy. The nerves of the hind legs were kept for microscopic examination. Cultures were taken from the blood in the heart, from the spleen, and from the liver. Eighteen tubes in all were inoculated, and in exactly half of these was a growth obtained. Cover-glass preparations were made, and in all these tubes the organism present was found to be a staphylococcus. Four of these growths were now examined in detail, and they were all demonstrated to have the same characters as the coccus which had been originally injected into the rabbit.

Rabbit No. 2, a smaller animal, was injected with staphylococcus growth F. In this case six injections, each of 2·5 c.c., were given in twelve days. On the twelfth day the animal was seen to be dying, its head being much retracted and its legs fully extended. It was killed and examined at once. The appearances which now presented themselves were exactly the same as in rabbit No. 1, except that on the surface of the liver there were several small white spots about the size of half a millet seed, which were taken to be small abscesses. They contained many staphylococci. Tubes were inoculated from the abscesses and with the blood in the heart and spleen. There was a growth in the heart culture and in the abscess culture, and both of these were shown to have the character of the white staphylococcus which had been injected into the rabbit.

Rabbit No. 3, also a small animal, was injected with Growth H. Three injections of the bouillon culture, each of 6 c.c., were given in five days. About a quarter of an hour after the last injection the animal died. The post-mortem examination was quite negative, at least, as regards naked-eye appearances. There was no sign whatever of an inflammatory process in the abdominal cavity. Owing to an accident no growths could be obtained from the blood of this animal.

Rabbit No. 4 much larger than the last rabbit, was injected with the same growth (H). In this case it took six injections, each of 3 c.c., extended over twelve days, to kill the animal. Although it had seemed quite well at the last injection the rabbit was found dead the next morning. The post-mortem appearances corresponded to those of rabbit No. 2 in there being several abscesses or collections of cocci scattered over the surface of the liver. Otherwise the macroscopic examination was negative. A growth was obtained in only two of the cultures taken, and both of these were from an abscess in the liver. In this rabbit, however, only eight tubes were inoculated, and this may account for there being no cocci grown from the blood. The two growths from the liver were quite pure and contained the white staphylococcus the same as had been injected into the abdominal cavity.

Rabbit No. 5 was small, similar to Rabbit No. 2. It was injected with Growth A, which contained both staphylococci and bacilli. Seven injections, each of 2·5 c.c., were given in fourteen days. The rabbit died on the sixteenth day, with limbs extended and head retracted. The post-mortem appearances were exactly similar to those in the last rabbit, there being here also small white abscesses in the liver. White staphylococci were grown from the blood of the heart and spleen, but no bacilli were found in any of the cultures.

Rabbit No. 6 was injected with Growth G; also both cocci and bacilli. Four injections, each of 6 c.c, were given in eight days. Five hours after the last the animal died with well-marked signs of paralysis. The post-mortem examination was negative; no abscesses were present in the liver. Four tubes were inoculated, two from the blood in the heart and two from the spleen. Growth presented itself in three of these. Two were pure staphylococci, but the third, in addition to the same staphylococcus, contained a rod-shaped organism. This bacillus, however, on plate cultures and otherwise, showed itself to be quite a different organism from that contained in Growth G, and so I take it to be an impurity and to have no relation to the subject in hand.

Nerves from the hind legs of these six rabbits were removed, stained, and examined microscopically. In doing this great care was taken so as in no way to stretch or otherwise bring about an artificial appearance in any of the nerve fibres. The nerves were fixed and stained at the same time in osmic acid (1 per cent.), and most of them counter-stained with alum carmine. Portions of the nerves were then cleared in a mixture of aniline oil and xylol, and then in xylol alone, and while in the latter the individual nerve fibres were as much as possible separated the one from the other. The specimens were mounted in Canada balsam. To make sure that this process had nothing to do with the altered appearances in these nerves I prepared in exactly the same manner nerves from a healthy rabbit, and these latter I found to remain perfectly normal. A careful microscopic examination of the nerves from the six rabbits readily convinces one that a parenchymatous degeneration is present in every case. This certainly is much more marked with some than with others—for example, in rabbits No. 2, No. 3, No. 5, and No. 6 the degeneration is so complete that there is difficulty in finding a normal nerve fibre. In rabbits No. 1 and No. 4, on the other hand, many healthy fibres are to be seen. In the degenerated fibres the myelin is sometimes seen as a series of frothy-looking masses filling up the sheath, and giving a segmented appearance to the fibre. Sometimes the myelin is in the form of small rounded balls stained black or brown in the centre of the sheath. Sometimes, again, the sheath seems empty except for its nuclei, which in some of the specimens are much increased in number. Some of the nerve-fibres have a spindle shape, one part of the sheath being filled and swollen up with frothy myelin, while an adjoining portion has its walls in close apposition, the myelin at this part having disappeared.

The importance of micro-organisms as factors in the causation of disease is now well recognised. But the discovery of "specific microbes" has so often been claimed, and these

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claims have so often proved unfounded, that the scientific world is very slow to recognise any such discovery without its being backed by the strongest proof. The conditions which are now considered necessary to prove a certain organism the cause of disease have been laid down by Koch.[17] They are as follows: (1) The micro-organism must be found in the blood, tissues, or secretions of the animal affected with, or dead the result of, the disease; (2) this organism must next be cultivated on media outside the body, and this for several generations of the organism; (3) this culture in turn must be shown to produce on inoculation the same disease in a healthy animal; and (4) in this animal the same micro-organism must again be found. To these four conditions have been added[18] (5) that the same micro-organism must be found in all cases of the particular disease under consideration; and (6) that this organism must never be found in any other disease. The first four conditions were certainly fulfilled by Pekelharing and Winkler before they claimed their white staphylococcus to be the specific micro-organism in beri-beri. And in view of all the criticism their observations and conclusions evoked, it is a great satisfaction to me to find that my results, be they only from two cases, correspond to, and, if I may say, corroborate in almost every detail, the work of these two men. I found a micrococcus to exist in the blood of the two patients on every examination. A micrococcus was demonstrated to be present in all the cultures obtained from this blood. The injection of these cultures into rabbits was followed by signs of paralysis, and at the post-mortem examinations peripheral neuritis—the characteristic lesion of beri-beri—was a constant appearance. Lastly, the same micrococcus was found in the blood or tissues of the rabbits so treated. So that I, too, have fulfilled Koch's four postulates, and therefore my conclusion also must be that this white staphylococcus is the cause of beri-beri.

On considering again for a moment the opinions of the former writers on this subject we find that the great majority of them also seem to be in favour of the micro-organism being a white staphylococcus. Pereira found micrococci in active motion in the blood, and the reason doubtless that he failed to obtain results by injections with these micro-organisms is that he did not understand that not one only, but many injections are required to develop the disease. His observation as to the presence of these micrococci in 2½ per cent. of healthy people corresponds in a measure to that of Pekelharing and Winkler, who, as we have seen, explain that in an infected district the so-called healthy are seldom really healthy, but suffer in some degree from the presence of the micrococci in their circulation. The later observations, too, of De Lacerda, the conclusions of Van Eecke, of Leopold, of Musso and Morelli, all are in favour of a micrococcus. It is true that much from these last cannot be taken as sound evidence, for they do not seem in many cases to have fulfilled Koch's "laws" before drawing their conclusions. Yet be its value what it may, this evidence is in favour, and certainly not against, a micrococcus being the specific cause of beri-beri. Ogata, on the other hand, claimed a bacillus to be the organism. This, however, as far as I can make out, was never cultivated from the blood of his patients, but from the alimentary tract, and after death from the fluid or tissues of the body. Now, one understands that it would not be difficult to cultivate from a dead body, and this especially in a warm climate, an organism whose toxins injected into a mouse would cause the "symptoms of beri-beri." And may not the same be said of a culture taken from the alimentary tract, especially in patients not in good health? I think, therefore, we need give this evidence of Ogata in favour of a bacillus little consideration.

As to explaining the presence of the bacilli found by me in five cultures, and by Pekelharing and Winkler in their cultures, and so often in the fresh blood, considerable difficulty presents itself. That none of the bacilli in my five growths is likely to be the cause of beri-beri seems pretty certain. In the first place they were never seen in the blood either in fresh or in stained specimens. They are all different organisms. One of them, bacillus mesentericus, has well-known properties of its own. Two of them, each associated with the white staphylococcus, on being injected into rabbits, could not be found in their circulation, and therefore they probably did not live in the blood of the rabbits. Certainly to have completed the argument I should have tested the pathogenic characters of pure cultures of these bacilli. But as no one of them occurred twice their presence did not seem of sufficient importance to necessitate this proceeding. And here it is to be remembered that Pekelharing and Winkler proved the non-pathogenic character of the bacilli they isolated.

What, then, is the meaning of these bacilli in growths taken from the blood and how do they get there? They must either have been in the blood, on the skin of the finger, or have otherwise got into the tube from without, during the process of inoculation. If from either of the two latter sources, why have they only grown when associated with a staphylococcus, an organism almost certainly grown from the blood, and why never in any of the forty-eight tubes that remained sterile? If, again, they are from the air why only in one case was it a well-known micro-organism—bacillus mesentericus? The remaining explanation which presents itself is that the bacilli exist in the circulation as saprophytes. And in favour of this view it might be pointed out that the presence of the staphylococcus of beri-beri must lower the vitality and resisting power of the blood and tissues. In this condition, therefore, the existence and growth of saprophytes would be possible. That saprophytes, however, are not common in the blood in disease I can affirm, for during the past two years I have examined the blood, both in stained and in fresh specimens, of some eighty patients chosen from the general wards of the hospital. Only in very few cases, some pneumonias and cases of endocarditis, were micro-organisms of any kind to be found. But, on the other hand, it is well known that certain pathogenic organisms have not uncommonly present with them others which are non-pathogenic. As an example of this one may cite the frequent association in pus of the micrococci cereus albus and flavus with the streptococci and staphylococci pyogenes. But even if these bacilli in our cultures were not saprophytes, but had well-known pathogenic characters, that in no way need be an argument against our white micrococcus being the specific micro-organism of beri-beri. The presence of staphylococci and streptococci in diphtheria, associated with the bacillus of diphtheria, does not lessen the claim of that bacillus to be the specific cause of the disease, even although it has been shown that the toxins from the cocci when injected into guinea-pigs caused paralysis.[19] The important thing is that in diphtheria the bacillus of diphtheria is found constantly present, while the cocci are not; and the bacillus, too, is known to produce diphtheria whenever injected into animals. What I wish to bring out, therefore, in regard to beri-beri is that the great mass of evidence so far seems to be in favour of the micrococcus of Pekelharing and Winkler being present in all cases of beri-beri. And as this micro-organism has the property of producing when injected into animals a neuritis similar to that in beri-beri, the conclusion to be drawn is that this micrococcus is the cause of beri-beri. That the bacilli and cocci seen in the blood by the Dutch writers are, as they suggest, just two different forms of the same organism is not an explanation which commends itself to one's mind. For as far as I know there is in bacteriology no analogy for such an explanation. It is much more likely that the Dutch writers were dealing with impure growths containing both cocci and bacilli, and which, as I found, often required repeated plate cultures to be made before each could be isolated. As regards the variety of micro-organisms found in the blood by Leopold and Van Eecke, their descriptions are not sufficiently definite to let one recognise them, nor is the account of the pathogenic properties given by Van Eecke of the organism found by him at all satisfactory. Besides, most of what has already been said on the bacilli found in the blood will also apply to these other organisms. One point I wish to note here is that in my two cases the micrococci did not disappear from the blood on the patient's leaving the place of their infection. For these micro-organisms were still to be seen, and were cultivated, after two and a half months' residence in hospital and after practically all signs of the disease had disappeared.

We have now to consider Scheube's criticism of the Dutch writers, and much that he says is doubtless petty and requires no answer, but there are some points raised by him which may well demand consideration. (*a*) Scheube asks

[17] Crookshank's Bacteriology, 1896, p. 8.
[18] Schenk's Bacteriology (London, 1893), p. 92.
[19] Société de Biologie, May 29th, 1896, reported in Gazette Médical de Paris, June 13th, 1896.

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why the micrococci of beri-beri are so difficult to cultivate from the blood, Pekelharing and Winkler only obtaining fifteen growths out of eighty inoculations, and not all of these containing cocci. I do not know that any very satisfactory answer can be given to this question, which is, I think, applicable, not only to beri-beri, but also to other diseases caused by micro-organisms, and this difficulty of cultivation from the blood is the only explanation I can give for the negative results obtained by Sternberg and other observers. (*b*) He asks why single injections with the blood of beri-beri patients do not cause the disease in animals and why repeated doses must be given so that it may develop. The reason, doubtless, is that up to a certain point the blood of the animal infected has the capacity of destroying micro-organisms either by its phagocytes or by an "antitoxin" which it seems to contain in its serum. When too many organisms get into the circulation the blood is not able to deal with them, and so they grow, producing their toxin, which, being no longer neutralised, gives rise to the symptoms of the disease. (*c*) Scheube seems to consider it impossible that the Pekelharing and Winkler staphylococcus may at one time liquefy gelatin and at another not be able to do so. But is it not the case that such a well-known micro-organism as the staphylococcus pyogenes albus sometimes shows this characteristic?[20] and the observations, extending over ten months, which I made on this point entirely confirm those of the Dutch writers. I found the liquefaction of gelatin always slow. I found that some of the growths which liquefied gelatin at first did not do so later. This, as far as I could make out, was in those organisms that had been growing for a considerable time on gelatin. Three of the growths at no time liquefied gelatin, but these were separated from impure growths, and possibly the presence of the other organism had lessened the virulence of our micrococcus. As far as I could make out, the virulence of the micrococcus was in direct proportion to its power of liquefying. For example, Growth H always liquefied gelatin, and when injected into rabbits it killed them rapidly and with small doses (Rabbits No. 3 and No. 4). Growth E, on the other hand, which had lost the power of liquefying gelatin before being injected into Rabbit No. 1, did not kill till many days later, and even then required much larger doses of the culture. Nor did the cultures grown from these and the other rabbits inoculated liquefy gelatin any more rapidly. This seems strange, for one expects the virulence of an organism to be increased on passing it through an animal that is not immune.

I have yet to refer to Fiebig's objections to the staphylococcus of Pekelharing and Winkler. He says it has the same characters as staphylococcus pyogenes albus, and he maintains that it is the same organism. It certainly has much the same morphological appearances, but the pathogenic characters of the two are very different. For would a culture of the staphylococcus pyogenes albus injected into the abdominal cavity of a rabbit produce no septic results? In not one of my six rabbits did an abscess form at the seat of inoculation, and in not one was any inflammatory condition of the peritoneum to be made out. Certainly in some of the rabbits minute abscesses were found in the liver, but these, I take it, may be looked upon as collections of cocci growing in a part of the circulation where the blood tends to stagnate. As to whether the staphylococcus pyogenes albus may under special circumstances become the staphylococcus of beri-beri or *vice versâ* I cannot say; but at present there seems to be as much difference between the two as there is between the pseudo-bacillus of diphtheria and the bacillus of diphtheria itself.

And now in conclusion it may be asked—Is it finally settled that the staphylococcus of Pekelharing and Winkler is the specific micro-organism in beri-beri? The reply is difficult. We know that medicine is not an exact science, and that its conclusions cannot therefore be drawn with the absolute certainty of a proposition in Euclid. The methods of medicine are those of observation and induction, and only when very numerous observations have been made can the conclusion be drawn with even a degree of finality. But where a finding cannot be absolute it may sometimes be comparative. When our observations are only few, then our conclusions can only be comparatively true. In medicine this latter is a position we often find ourselves occupying, and it would seem to be the one we are now standing in as regards the causation of beri-beri. A certain number of data have been furnished as to the etiology of this disease; and from these the conclusion to be drawn is, as I have contended in the foregoing arguments, that the staphylococcus of Pekelharing and Winkler is its specific micro-organism. This, doubtless, is only a "comparative" conclusion, for we have not yet data to draw one more certain.

I wish, in concluding, to express my very best thanks to Dr. G. S. Middleton, who so kindly placed at my disposal his two cases of beri-beri, with their clinical histories contained in his ward journal. I am also much indebted to Dr. Lindsay Steven, to Dr. Workman, and to Dr. Barlow for the use of their laboratories and apparatus.

Glasgow.

[20] Crookshank's Bacteriology, p. 178.

ON REMOVAL OF THE EYE AND MULES'S OPERATION.

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A RECENT number of THE LANCET contained an abstract of a paper on "Sympathetic Ophthalmitis, especially in connexion with Mules's Operation of Evisceration,[1]" which was read before the Ophthalmological Society by Mr. Richardson Cross, of Bristol, and also an abstract of the discussion which ensued. I had been forewarned of this paper and discussion, and should have been glad to hear the former and to take part in the latter, had I not been restrained from doing either by paramount considerations. I was compelled to withdraw from the Ophthalmological Society some years ago in consequence of the attitude of indulgence which it assumed towards homœopathy, an attitude which in my judgment was unworthy of honourable practitioners of legitimate medicine and surgery. I fancy that both Mr. Cross's paper and the discussion upon it must have been reported for the society by a homœopath, and that hence the valuable observations which both, no doubt, contained have been administered to your readers in a state of high dilution and mixed with an inordinate quantity of inert material. I read, for example, that Mr. Cross cited "*several* instances in which sympathetic irritation *or* ophthalmitis, had followed the operation, the proportion being as high, he said, as 13 per cent."; and, again, that he "was sure *many* cases occurred after Mules's operation even with the strictest antiseptic precautions and *often* after *many* years." The italics in both quotations are mine; and it seems almost certain that in the paper Mr. Cross must have made more precise statements than those which are attributed to him. He must surely have said how many cases of Mules's operation he had seen, how many of them had been followed by sympathetic irritation, and how many by sympathetic ophthalmitis, and exactly what he meant by "many" years in the case of a procedure which has not yet been twelve years before the profession. These and other details of equal importance will probably appear when the paper is published; but this, as I understand, will not be for some months, and then only in the Transactions of the Ophthalmological Society, a volume little likely to fall under the notice of any who are not members. The question at issue is one of very considerable importance, alike to the public and to the medical profession generally. Its discussion should not be confined within the narrow limits of a little coterie of the lovers of homœopathy, nor should any of the evidence with regard to it be consigned to a living death in the pages of their annual publication.

Dr. Mules's paper describing his operation was read in the Section of Ophthalmology and Otology at the Cardiff meeting of the British Medical Association, and was published in December, 1885.[2] Immediately after the publication I began to perform the operation, both in hospital and in private practice, in nearly every case in which I should previously have removed the eye, and I have continued to do so ever

[1] THE LANCET, June 26th, 1897.

[2] Brit. Med. Jour., Dec. 19th, 1885. It may be worth while to mention that it will be found on page 1153 of the volume, and not on page 1183, as stated by error in the index.

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since. I have only removed eyes (1) in cases of intraocular growth of suspected malignancy; (2) in cases in which sympathetic ophthalmitis had commenced; and (3) in a few instances of blind and painful eyes in aged people, for whom it was desirable to avoid the healing stage of a Mules's operation and with whom appearance was a secondary consideration. I retired from active duty at St. George's Hospital in 1893, so that my experience of Mules's operation extends over nearly eight years of hospital practice and over nearly twelve years of private practice. Before stating my results I would crave permission to lay down a few definitions.

In the first place, by "Mules's operation," I mean the operation as described by Dr. Mules himself and not anything else. In his own words, it is "an operation requiring care, dexterity, and careful attention to detail," and he directs the operator to take "especial care to remove the ciliary body and choroid, leaving a clean white sclera." I desire to emphasise this because in the discussion on Mr. Cross's paper Mr. Treacher Collins is reported to have asked a question on this point which was not satisfactorily answered. Moreover, an eminent surgeon once expressed to me his disapproval of Mules's operation, and rested this disapproval on a case in which he had removed the resulting stump, and had found in the scleral cavity the remains of lacerated ciliary nerves. Whatever had been done in this case was not "Mules's operation."

It seems also necessary to define "sympathetic irritation" and "sympathetic ophthalmitis." By "sympathetic irritation" I mean a state which was first described under that name, so far as my knowledge extends, by the late Professor Donders, about 1865, in one of the *Bijbladen* which it was his custom to append to the annual administrative reports of the Netherlands Ophthalmic Hospital. I have lost or mislaid the paper; but to the best of my recollection it related the case of a blacksmith, in one of whose eyes a considerable fragment of iron had lodged, destroying the sight, and occasioning, after a time, inability to use the other eye. The "irritated" eye was the subject of photophobia, lacrymation, pain, and spasmodic closure of the lids; and the patient had been unable to work for many months. The injured eye was to all appearance passive; but it was removed, together with its contained iron, and the patient was immediately and permanently cured. A few analogous cases have since been published, and in one of my own the patient, a woman, suffered, not only from eye "irritation," but also from fits resembling epilepsy. She had a violent fit when I divided her optic nerve in removing the injured eye; but it was the last, and, like Donders' blacksmith, she was cured by the operation. Cases of sympathetic irritation may be more or less severe, but their characteristic feature seems to be that the irritation has little or no tendency to pass into inflammation or to produce any structural changes in the affected eye, and that it is at once relieved by the removal of the peripheral source of the morbid reflex. I should not hesitate to endeavour to cure it by a Mules's operation, which would probably be quite as effectual as the removal of the offending eye in its entirety. I may add that, in my experience, sympathetic irritation is extremely rare; and that to hear of "several" or "many" instances of it occasions me some perplexity.

The definition of "sympathetic ophthalmitis" is more difficult, in view of the well-known fact that both eyes are liable to become diseased, one at a later period than the other, in many affections which are not commonly supposed to be "sympathetic" in that which is the last to suffer. Conjunctivitis, phlyctenulæ, iritis, ulcerative keratitis, inherited interstitial keratitis, cataract, glaucoma, and many other conditions are all prone to occur in a second eye after they have become developed in the first; and there are but few of these maladies in which the hypothesis of "sympathy" could be sustained by any evidence at present known to us. Swanzy defines sympathetic ophthalmitis as "a uveitis (irido-cyclitis, irido-choroiditis) caused by an irido-cyclitis of the other eye, the latter being usually of traumatic origin." Noyes gives nothing which can be called a definition. Klein, in Eulenburg's Real-Encyclopädie, says: "Wenn ein Auge in Folge einer spontan oder nach Verletzung entstandenen Erkrankung des anderen Auges desselben Individuums erkrankt und *nur in Folge* dessen erkrankt und nachweislich jede andere Krankheitsursache ausgeschlossen ist, so heisst die Krankheit eine *sympathische*." He continues: "Es sind mithin von diesem Begriffe alle jene Krankheitszustände ausgeschlossen, welche sich in Folge äusserer Einflüsse oder constitutioneller Körperverhältnisse des Individuums, in Folge von Allgemeinleiden oder Blutentmischungskrankheiten an beiden Augen desselben Individuums zu gleicher Zeit oder kurz oder auch längere Zeit nach einander einstellen." I conceive this to be an accurate statement of the case as far as our present knowledge extends; and I doubt whether the necessity of strictly limiting the meaning of the term "sympathetic" has always been sufficiently borne in mind by those who have written upon the subject. Of late years, for example, it has been said that inflammation and subsequent atrophy of the optic nerve may not only be a manifestation, but even the sole manifestation of "sympathetic ophthalmitis," although it is at least certain that we see such inflammation and atrophy far more frequently in cases from which the hypothesis of sympathy must be excluded than in those in which it may, even as a possibility, be admitted. It seems to be beyond the reach of doubt that certain injuries of one eye are liable to be followed by irido-cyclitis or irido-choroiditis of the other; but I am not acquainted with any other form of "secondary" eye disease in which the antecedent is sufficiently constant to be safely made the subject of a generalisation.

The difficulties hence arising are enhanced by the fact that we have no knowledge of the channels through which the forms of ophthalmitis which we most confidently regard as "sympathetic" are conveyed from one eye to the other. The ciliary nerves, the optic nerves, and the lymph channels have successively been pressed into the service; and of late years the *materies morbi* has been supposed to be derived from the omnipresent bacterium. Nothing has, so far, been proved. Donders, some five and thirty years ago, removed an injured eye in which one of the long ciliary nerves was entangled in a mass of cicatricial tissue; and to this entanglement, or to the irritation attendant upon it, he attributed the "sympathy" which had been produced. Mooren, about the same time, in removing a wounded eye with the object of preventing sympathetic ophthalmia, bruised the optic nerve in dividing it with faulty scissors; and to this accidental injury he attributed the sympathetic ophthalmia which, in spite of the removal of the wounded eye, was soon afterwards developed. As for bacteria, I have not yet heard that any specific organism has been discovered, either in the eye which has excited the sympathy, or in that to which the morbid influence has been conveyed. With regard to causation, therefore, we are not able to go beyond conjecture; and we are entitled to regard as sympathetic the common form of irido-cyclitis of one eye, occurring subsequently to an injury of the other, only because such a succession of events has been too frequent to be any longer regarded merely as a coincidence. We are very far from being able to affirm that every form of disease occurring in an eye the fellow of which has been injured must be looked upon as a "sympathetic" consequence of the injury. In a great number of cases the balance of probability would, as it appears to me, be rather in the contrary direction. I therefore propose, for the purpose of this communication, to accept Swanzy's definition of sympathetic ophthalmitis, and, at least provisionally, to regard the cases in which disease other than irido-cyclitis or irido-choroiditis has appeared in a sound eye at an uncertain time after disease or injury of its fellow as being open to the possibility of some different explanation.

At this point I should like to enter a modest and gentle protest against the use of the far-fetched and nasty metaphors, "eviscerate" and "exenterate," by which the operation of removing the contents of the eyeball has been described. "Eviscerate" and "exenterate" are good English words, with legitimate although disagreeable meanings; but their metaphorical application to the eye has been "made in Germany." The crystalline lens is not a "viscus," nor are the choroid and retina "entrails." We do not "eviscerate" a filbert, nor do we "exenterate" an egg, nor do we "disembowel" a bottle of champagne. We "empty" the several cavities of their contents, and we do the same with the sclera. Dr. Mules, in his paper, states that emptying the sclera as a substitute for removal of the eye was first suggested, simultaneously and independently, in 1894, by himself and by Professor Alfred Graefe. This is so far an error that the same thing was done by Dr. Noyes, of New York, as early as in 1872, in order to convert a spoilt eye into a good stump for an artificial one.

Having so far tried to clear the ground, I may say that I have performed Mules's operation in about 150 cases. In consequence of the accidental loss of some notes I am unable to

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state the precise number; but this total is not far from the truth. The patients have been of both sexes, and of ages ranging from nine months to seventy years. Speaking generally, I have been more than satisfied with the results. One loses sight, of course, of the majority of hospital patients; but many of my private patients, after several years, are still wearing artificial eyes with perfect comfort and with natural appearance. There is no irksome pressure from the edges of the artificial eye, no hollow between the upper lid and the margin of the orbit, and no cavity in which secretion accumulates. There is free mobility of the artificial eye in all directions—somewhat less, of course, than that of the natural eye, but sufficient to preserve the correct relative positions in ordinary use. I have lately seen three patients who were respectively operated upon in the years 1886, 1887, and 1888; and to all of them, as well as to more recent cases, the foregoing description will apply. In my early operations, for want of experience with regard to certain details, such as the best size of ball, or the best material for sutures and the best way of inserting them, I frequently failed to obtain complete union; and, with an exception to be presently mentioned, incomplete union always involved the ultimate escape of the ball. Even if the original opening were a mere pinhole it underwent dilatation, as the ball was pressed against it from within by the external ocular muscles, the effect sometimes reminding me of the dilatation of the os uteri by the fœtal membranes. The consequent enlargement of the opening was often very slow, and was always painless until the diameter was nearly equal to that of the ball. It then became painful by reason of the greater force which the muscles were able to exert; and it has been my practice in such cases slightly to incise the margins of the opening and to let the ball come out. The exception referred to was in the case of a man on whom the operation was performed in 1890 for very painful acute hæmorrhagic glaucoma. Two small openings were left with a band of firm tissue between them; and this band so resisted the forward pressure as to prevent the ordinary dilatation from occurring. The patient died from renal disease in 1893, the size of the openings having remained unchanged, and the artificial eye leaving nothing to be desired as regards either comfort or appearance. In a few cases in which openings were left I have endeavoured to close them by a second operation, sometimes immediately, sometimes after an interval, but none of these endeavours were successful. In two instances only, in which the union was originally complete, it afterwards gave way. The first patient was operated upon in November, 1887, he being then past seventy, on account of septic inflammation following a severe wound inflicted by a piece of dirty wood. He came to me in June, 1891, with some irritation of the stump; and I found that he had been wearing the same artificial eye, usually day and night, for the whole of the three and a half years which had elapsed. I had it replaced by a new one, and gave the parts a little rest before this was worn. He came again in February, 1894, the cicatrix having given way and the glass ball being exposed. The second case was that of a man of middle age, on whom the operation was performed in June, 1886, on account of blindness and pain caused by an intraocular growth. Healing was complete, but the patient returned in the following November with an opening and the ball exposed. I let it out, and allowed the scleral cavity, which was perfectly clean, smooth, and white, to collapse. In 1889 he came again, with the stump painful and irregularly distended. I then removed it, and found the distension to have been occasioned by an accumulation of watery fluid, which may previously, in all probability, have produced the yielding of the cicatrix. Even if the ball escapes, whether immediately or after a time, the condition of the patient is infinitely better and more comfortable than after removal of the eye. The stump formed by the collapsed sclera is not so good as that formed by the sclera with a contained ball, but it is in every respect far better than that formed merely by the collapsed muscles. The next best thing to the ball staying in is its coming out; and, except in the case last mentioned, I have never seen any collection of fluid in the scleral cavity, either when the ball was exposed or after it had escaped. I have never seen a single instance of "sympathetic irritation" subsequent to the operation, nor a single instance of "sympathetic ophthalmitis" in the sense of the definition above laid down; but I have seen four cases in which the previously sound eye has subsequently suffered from serious disease, and it may be worth while to describe them with some minuteness.

CASE 1.—A patient, between fifty and sixty years of age, came to me in November, 1891, with advancing cataract of her right eye and with general septic inflammation of the left, apparently the result of an operation for cataract performed a few weeks before at Wiesbaden, whence she had just returned. I performed Mules's operation with good effect, and the patient went to her country home, having arranged that she would come to me for the extraction of the right cataract as soon as this was sufficiently advanced. I saw her once or twice at intervals, her lens gradually becoming more opaque and her vision always corresponding in acuteness with the increasing degree of opacity. At length, in January, 1894, I received a letter saying that she had recently become practically blind, and asking me to fix a day for the operation. On her arrival in town I found the Mules's stump perfectly comfortable, and the right eye, except for the cataract, of perfectly normal aspect, its cornea bright and clear, the iris natural, the pupil mobile, and the conjunctiva healthy; but the perception of light and the projection were less good than they should have been or than the lenticular opacity would explain. The cataract was extracted with absolute surgical success—that is, with prompt healing and the restoration of a perfectly clear pupil; but the sight was very defective, and as soon as the ophthalmoscope could be used it became manifest that the optic nerve was passing into atrophy. The blindness has since become complete.

I confess that I cannot see my way in this case to connect the disease of the optic nerve with the Mules's operation. They may have been cause and effect, but there is no evidence that they were so, and, as it seems to me, very little probability. I have seen hundreds of cases of optic nerve atrophy, sometimes commencing in one eye and afterwards attacking the other, sometimes attacking both simultaneously or nearly so; but this was the only one of them in which Mules's operation had been performed. Unless we are to believe that the operation affords security against atrophy we must, I think, admit that the two events may occur independently in the same individual.

CASE 2.—A girl about eighteen years of age, of highly neurotic temperament and family history, and the subject of a very remarkable degree of habitual constipation, came to me in April, 1890, to ask me to remove her left eye, which had never had good vision, and had lately been destroyed by a succession of attacks of inflammation and ulceration of the cornea, attended by great swelling and thickening of the conjunctiva. After waiting a month to see the effect of treatment I performed Mules's operation on May 5th. All went well for a time, and the patient went to Yorkshire, where, a few weeks later, the right eye became inflamed. Being written to on the subject I advised, early in August, that Mr. Teale should be consulted, and he accordingly saw the patient. On Sept. 10th he wrote as follows: "The eye has proved troublesome and is not yet quite satisfactory. The trouble was essentially conjunctival, and at last became so severe that a peculiar œdematous patch appeared towards the inner canthus, and the neighbouring cornea became opaque, and, in fact, blistered. When everything else seemed to have failed I peritomised the conjunctiva and peeled off the affected surface of the cornea. The early result was good, the cornea healed, and the œdema of the patch of conjunctiva subsided. On the whole, the eye is better, but is still far from well, and is too intolerant of light." It is right to say that Mr. Teale added, "Can the stump of the Mules's eye be causing sympathetic ophthalmia?" I did not think so; and I may assume that if Mr. Teale had held this view at all seriously he would have performed or proposed removal. The patient improved and returned to town, but late in November had an attack of severe and intractable inflammation of the eye, with ulceration of the cornea, which was described to me as being precisely like the attacks by which the left eye had been destroyed. After a period of ineffectual treatment I put her under chloroform, thoroughly scraped the surface of the ulcer, irrigated the eye with mercurial solution, and then closed and immobilised the lids with a pad of wool, retained by adhesive strapping and a bandage. The dressing was not removed for a fortnight, when the eye was apparently well, the ulcer had healed, and the conjunctiva was free from swelling or abnormal vascularity. As a matter of precaution the dressing was re-applied for another fortnight,

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after which the patient returned to her usual occupations. In a few weeks there was recurrence of ulceration, which again yielded to similar treatment, but which recurred again and again. At last I proposed to close the lids for six months, and for this purpose pared and united their edges, but before the period had expired the patient said that she no longer had perception of light. During the whole time of her illness the eye on which the Mules's operation had been performed never gave her a moment's uneasiness, and was never either congested or tender on pressure. She has continued to wear her artificial eye ever since, and seems hardly conscious of its presence.

In this case it will be seen that the possibility of sympathetic mischief had been present to the minds both of Mr. Teale and myself, and that, to me at least, the hypothesis appeared untenable. I should describe the case as one of corneal disease of peculiar malignity, probably neuroparalytic in its essential character, occurring in a very unfavourable subject, and attacking the two eyes in succession under the influence of some common cause. I cannot find any facts in the history which give the smallest colour to the notion of sympathy, at least in the sense to which I think the word ought to be restricted.

CASE 3.—A girl, about fourteen years of age, went to St. George's Hospital in January, 1887, her left eye being disorganised by chronic inflammation. A Mules's operation was successfully performed, although the patient was so unlucky as to develop scarlet fever a day or two after the operation. This did not interfere with the healing, and she was discharged with a well-fitting artificial eye. In October, 1895, she came to me with interstitial keratitis of the right eye, of the ordinary type and of considerable severity, which ran a very chronic course, and from which she is now making a better recovery than at one time I anticipated. There has never been any tenderness of the Mules's stump, and there has been nothing in the case of the right eye to distinguish it from hundreds of others in which no cause of sympathy could be indicated.

CASE 4.—A single woman, about fifty years of age, had double cataract, for which I operated successfully on both her eyes early in the "eighties." One of them afterwards became the subject of painful and complete glaucoma, and after some ineffectual treatment I performed a Mules's operation upon it in 1887. The remaining eye was attacked by glaucoma in 1894 and was eventually lost. There was nothing to suggest "sympathy" except that the events were consecutive in order of time.

It will be seen from the foregoing narrative that I have met with four cases in which, after the performance of Mules's operation, the remaining eye has been attacked by serious disease. It is remarkable that the four cases were totally unlike in their origin and nature, and that the diseases attacking the second eye were also totally unlike. It is remarkable that neither the ordinary phenomena of sympathetic irritation nor the ordinary phenomena of sympathetic ophthalmitis were exhibited in any one of them, and that in none of them was there any tenderness of the Mules's stump. In most of the cases of supposed sympathy occurring after the lapse of years it has been recorded that the eye by which the sympathy was excited had become tender or painful shortly before the sympathetic outbreak. I am strongly of opinion that if in my cases the eyes on which Mules's operations were performed had been removed instead the subsequent occurrences would have been precisely the same, except that no idea of sympathy would have been suggested. Moreover, it must be remembered that sympathetic ophthalmitis of the ordinary type is by no means unknown after removal of the eye. Many cases of the kind have been recorded, and one of the most recent of them may be found in the *Annales d'Oculistique* for the present year. The question raised by Mr. Cross is one which deserves all the observation and all the acumen which can be brought to bear upon it. On the one hand, the superiority of Mules's operation over removal is as great as the superiority of excision of a joint over the amputation of a limb; and, on the other hand, even this enormous advantage must not be conceded to patients if it be attended by any measurable risk of destructive changes in the eye which remains sound. My personal experience induces me to believe, with some confidence, that the risk is purely imaginary, or, at least, that it has no better foundation than the occurrence of a certain number of coincidences.

Harley-street, W.

ON THE VALUE OF ARSENIC AND BELLADONNA IN THE TREATMENT OF CHOREA.[1]

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DURING the summer of 1894 I had an opportunity at the Evelina Out-patient Department of testing the value of arsenic and belladonna in the treatment of chorea. I made notes of twenty-five cases the results of which I have briefly summarised.

CASE 1.—A boy, aged twelve years, had been suffering from chorea for three months. There was no history of rheumatic fever, but the father had been attacked by this disease. There were slight choreic movements of the face and eyes. The apex beat was perceptible in the fifth interspace, half an inch outside the nipple line, and there was a slight bruit audible in that area. Liquor arsenicalis in doses of twelve minims was ordered twice a day. After three days the twitchings were much improved, and after ten days they had disappeared.

CASE 2.—A boy was suffering from a fourth attack. The chorea was slight and limited to the left side, the apex was situated in the fifth space, and there was a long and loud presystolic bruit. Twelve minims of the liquor arsenicalis were prescribed three times a day. After seven days the movements had entirely gone, and oleum morrhuæ with vinum ferri was substituted.

CASE 3.—A girl, aged eight years, suffered from an attack two years previously. There was no history of rheumatic fever, and no cardiac murmur was discovered. There were twitchings of the face, tongue, and eyes. Liquor arsenicalis (10 minims) with bismuth mixture—a combination of subnitrate, tragacanth, and peppermint water—was given twice a day after food. Three days later the dose was increased to 15 minims. This dose, however, was followed by sickness, and a crop of herpes appeared on the lips; it was therefore diminished to 10 minims. After taking arsenic for fourteen days no visible improvement was apparent; consequently the drug was stopped, and tincture of belladonna was tried instead in doses of 15 minims three times a day, along with a carminative. After taking this drug for seven days the movements had disappeared, and tonics were administered in its place. The patient took phosphate of iron for fourteen days and was then discharged, as she had not exhibited any movements during that interval.

CASE 4.—A boy, aged seven years, had exhibited choreic twitchings for a period of three weeks. There was no cardiac bruit and no history of rheumatism, but of fright. After taking arsenic (10 minims) for ten days there was no amelioration. At the end of that time, also, he was sick after each dose, and an acute herpetic eruption with œdema of the right ear appeared. Tincture of belladonna in 20-minim doses with bismuth mixture was ordered every four hours during the day. On the fourth day the movements were decidedly better; after seven days they were no longer present and no toxic effects were observed.

CASE 5.—A girl, aged twelve years, was suffering from the eighth attack. There were now moderate choreic movements of the extremities and tongue which had existed for five weeks. Arsenic in 15-minim doses was prescribed three times a day. There was no cardiac bruit, but the heart's action was markedly irregular. After three days the movements were, if anything, worse; there was some soreness of the eyes and nose, with diarrhœa. Tincture of belladonna (20 minims) along with potassium bromide was ordered every six hours. After four days the movements were much improved; the hands could be held out perfectly still, and only twitchings in the left arm and face were left. The speech was good and the pupils, as is generally the case in chorea, were slightly dilated, but they reacted to light and accommodation. After a week the movements had quite gone. The pupils were then very wide and reacted but slightly to light.

CASE 6.—A girl, aged eleven years, had exhibited frequent and irregular movements of the left arm and leg for a week. There was no history of acute rheumatism, but her father

[1] A paper read before the North Tottenham Medical Society, Nov. 5th, 1896.

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and brother had suffered from it. She was very anæmic; the apex beat was situated in the nipple line, and there was slight hypertrophy of the left ventricle. Whenever the limbs were thrown into spasmodic movements the heart's action at the same time became markedly irregular. She was ordered 15-minim doses of liquor arsenicalis twice a day. The movements gradually improved, but at the end of three weeks she still complained of much sickness of an evening and of abdominal pain after food. Belladonna, in the form of the tincture in 15 minim doses, with mistura carminativa, was substituted. A week later the movements became *nil* and did not reappear.

CASE 7.—A girl, aged eight years, had a fright three weeks previous to admission to hospital. There were movements of the hands and tongue. The heart sounds were normal, but the cardiac movements became irregular when the jerks occurred. A week's treatment with arsenic only appeared to aggravate the condition; she complained also of sickness, headache, and of an eruption around the mouth. Tincture of belladonna in 15-minim doses with peppermint water was prescribed instead. After a week the note read: "No vomiting, no headache, movements the same, pupils normal, herpes drying up." After three days' further treatment the movements were vastly improved, and after fourteen days had completely disappeared.

CASE 8.—A girl, aged eleven years, was suffering from a second attack, which was apparently the result of an examination at school. The left face and tongue were particularly affected. After three days' treatment with arsenic diluted with cinnamon water the eyes and nose became very sore, and tincture of belladonna in 10-minim doses was ordered three times a day in place of it. After three days the movements had subsided considerably, and after ten days' treatment the movements were extremely slight. She complained of blisters in the mouth and of a sore throat. Oleum morrhuæ with vinum ferri was now ordered instead. It is advisable, especially in the case of out-patients, to discontinue the arsenic and belladonna as soon as the movements become insignificant, and then to give tonics in order to complete the cure. The remaining cases were much of the same character, and illustrated in the same manner the efficacy of these drugs.

During the last year eight cases of severe chorea, including one of chorea insaniens, have been admitted into the Tottenham Hospital. Condensed notes of three of these read as follows:—

CASE 9.—A boy, aged ten years, was admitted on Feb. 8th, 1897, with extensive choreic movements affecting all the muscles of the face, arms, and shoulders. Contractions of the sterno-mastoids caused him to turn his head from side to side. He had spasmodic and very violent movements of the trunk. Breathing and swallowing were unaffected. The heart's action was rapid, the pulse 90, but there was no murmur. A mixture of 30 minims of tincture of belladonna, and 6 minims of liquor arsenicalis, with mistura bismuthi, was prescribed every four hours. On the 11th he became a little quieter, slept during the day for a few hours, and well at night. He took food well. On the 12th he was much quieter, but if observed the movements became exaggerated. On the 13th he was much better; most movement was now to be seen in the lips and tongue. The first sound was reduplicated at the apex. There was some swelling of the parotids, and the urine measured 12 ounces. Potassium acetate in 5-grain doses was added to the mixture. On the 14th he was decidedly quieter, and the urine measured 18 ounces. On the 16th he was very much quieter, and no oscillations occurred unless he attempted to move. The urine amounted to 16 ounces. Syrup of phosphate of iron was now ordered and the arsenic and belladonna were discontinued.

CASE 10.—A girl, aged seventeen years, was an out-patient with chorea twelve years previously. She was frightened in February by a carriage accident, but no movements were perceptible until April 8th. On admission on April 14th she was exceedingly violent and restless, and the movements affected the limbs chiefly. The temperature was 99·2°F. On the 15th a mixture of 30 minims of tincture of belladonna, 6 minims of liquor arsenicalis, with bismuth mixture, was administered every four hours after food. On the 20th the movements had entirely disappeared. Massage to the arms was commenced and cod-liver oil with phosphate of iron was prescribed instead.

CASE 11.—The case of chorea insaniens occurred in a girl, aged fifteen years, with a history of rheumatism at the age of five years. The movements commenced about five days before admission. The knee-joints were swollen. At the height of her violence chloroform was administered; she was taking belladonna for three days before, and subsequently for a week. At the end of this time she could walk, and all movements had ceased.

When estimating the value of a drug much care is required, and especially is this the case in chorea, since the natural tendency is towards recovery after about seven weeks, even if no treatment at all is adopted. If a drug is prescribed, and after a few weeks' perseverance it is found to be of no benefit, it is natural to seek a change, and the latter drug may receive the credit of the cure, which might have followed even if no drug had been administered. The observation of the cases here mentioned gives one the impression, however, and this is also generally acknowledged, that large doses of arsenic have a beneficial influence in subduing the movements, and this is best seen after the movements have existed for some time—weeks or months—that is, when a cure seems almost hopeless. The drug should be given after food, and the little patient should lie down for half an hour afterwards in order to avoid retching and sickness. Whilst looking up the literature I found a paper by Dr. Fuller, in the *Medical Times* of July 1st, 1859, on the Treatment of Choreic Patients by Belladonna. He gave large doses of the drug in twelve cases. One girl aged ten years, received 70 grains of the extract daily, the average dose for an adult being half a grain. She took 1000 grains in twenty-six days. Another took 37 grains of atropine in eighteen days, the average dose for an adult being one-fiftieth of a grain. During the administration neither fever, rash, nor erythema was noted. The pulse became quick and the urine scanty. Only in two instances was indistinctness of vision observed; four suffered from sickness and diarrhœa. There was no dryness of the throat, no headache, and no delirium. In two patients the belladonna was useless; in the remainder its efficacy was noteworthy. The drug was readily absorbed from the stomach and passed out in the urine, from which it could be extracted. The phenomena of chorea appear to be due to a nutritive and functional disturbance or ataxia of the higher nerve centres. Post mortem a general tendency to dilatation of the smaller arteries within the substance of the brain accompanied with exudation is observed. This appears more especially in the corpus striatum and the regions supplied by the middle cerebral arteries; in other words, there is pronounced hyperæmia of these nerve centres. It is probable that the chief stress falls upon the Rolandic areas. Such vaso-motor ataxia might be induced by reflex disturbances arising within the digestive tract, by uterine irregularities, or by emotional disturbances. In the rheumatic diathesis the toxin may attack the motor centres directly.

It is, perhaps, permissible to make the following remarks in conclusion:—1. Belladonna appears to be most beneficial in recent cases, and its influence is sometimes very marked in severer forms. 2. In obviously rheumatic cases arsenic in large doses may be given a trial or may be combined with belladonna from the first. Belladonna may act by diminishing the excitability of the nerve centres or by imparting an improved tone to their vascular supply. 3. In the wards of a hospital it is perfectly justifiable to give to a child as much as 30 minims or more of tincture of belladonna every four hours for ten days or even longer. Certain precautions are necessary. The patient should be kept in bed and the urine should be daily measured. Small doses of potassium acetate may be added if it become much diminished or if the eyelids show any puffiness. In one child nocturnal incontinence occurred, and the dose was lessened. The occurrence of the papular erythema, which leaves raised circular lumps for a time, does not necessitate any diminution of the dose. Dryness of the throat and swelling of the parotids, should they occur, are merely temporary. The influence of the belladonna makes itself felt after about four days. Should no visible improvement occur before the tenth day it would be useless to continue with it. But in all the eight severe cases already referred to belladonna was of benefit, and is certainly worthy of further trial. As soon as the movements become trivial or occur only during exertion it is better to omit the belladonna, to commence massage of the affected muscles, and administer cod-liver oil and syrup of phosphate of iron or other tonics. The arsenic may be continued for a week or longer. For permission to publish the cases seen at the Evelina Hospital I am indebted to the courtesy of Dr. Soltau Fenwick, assistant physician to the hospital.

Edmonton.

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VITALITY.[1]

BY LIONEL S. BEALE, M.B., F.R.C.P. LOND., F.R.S.,
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VII.—THE INTERSTITIAL CIRCULATION IN ALL LIVING THINGS.—ITS DEPENDENCE ON VITALITY.

INTIMATELY associated with the matter of every living particle is water. Indeed, water is a constant and necessary constituent of all life. Its amount is considerable in proportion to the solids wherever vital phenomena are active. Living matter without water has probably never existed, and anything approaching desiccation results in death. Water, then, must be regarded as an absolutely necessary condition of life at all times, but the smallest amount that may be present without life ceasing has not been determined. As far as I have been able to ascertain, no evidence yet obtained supports the conclusion that life in the complete absence of moisture is possible, and it seems almost certain that water must have preceded the existence of any form of life.

Life involves the very free movement not only of material particles but of the constituent atoms of the living matter, many of which are being continually rearranged—placed in new positions with respect to one another. There is no such thing as a living particle having the same composition in every part, or remaining of the same composition from moment to moment. An isolated living atom of any substance in nature is not conceivable.

Whether the atoms are caused to move in the water in which they are suspended or are in some sort of chemical or other kind of combination with the elements of the water cannot be decided at present. The atomic movements and rearrangements here referred to are *vital movements*, but are, of course, invisible and not to be demonstrated; but the general movements so characteristic of living matter are well known, and can be studied without difficulty in the amœba, in the colourless blood corpuscles, in pus and mucus corpuscles, and in many other particles of living matter or bioplasm; and these movements of living matter differ in essentials from every kind of movement known to take place in matter in any other state or condition, and are vital—that is, peculiar to, and characteristic of, life—the temporary living state of matter.

Not only is water necessary to living matter, but the fluid which bathes the living matter and the substance immediately around it must be continually changed. It is probable that neither the particles of living matter nor the fluid around it are ever in a state of rest—stagnation of fluid like the cessation of movement in living matter being immediately followed by death.

In all living forms there is evidence of the free and constant movement of interstitial fluid, and in organisms of complex structure consisting of tissues as well as of living matter the fluid is not only present in the living matter itself, but pervades every part of all the moist tissues, circulating freely among the structural elements, and keeping these in a state of health and activity. In some cases there are actual canals which are bounded by a thin layer of the tissue and thus separated from one another; in others the fluid pervades every part of the tissue, occupying minute interstices, which vary much in dimension and arrangement in different tissues, and in the same tissue at different ages. The free movement of fluid is, in fact, always taking place in living forms, whether there are true vessels arranged as a network of tubes in every part of the organism, or propelled by a special organ into large vessels directly connected with it, and so into smaller ones resulting from the division and sub-division of the trunk and its branches, and thus distributed to all parts. The free circulation in the living matter and in the interstices of the tissues is universal, and is one of the phenomena belonging to life itself. It is an "interstitial circulation," always independent of any propelling organ or power, or capillary attraction, adhesion or any motor action known in connexion with the non-living.

This unceasing movement and interchange of fluid which takes place in the minute channels and interspaces between the microscopic elements of the tissues as well as in every kind of living matter is a necessity of life, and has been universally present in all things that have lived, including the most minute speck of independent living matter and the most gigantic and highly complex organisms. The interstitial circulation goes on even in the so-called non-vascular tissues which may be situated some distance from any vascular supply—from any blood- or lymph-carrying vessels. Even in the hardest textures, such as bone, and teeth, and shell, the circulation of interstitial fluid continues as long as any living particles, however minute, which have taken part in the formation of the tissue, remain. When tissue becomes hard, and dry, and inactive, there is, of course, no longer circulation of fluid in its interstices, and all changes indicative of life have ceased; and though still connected with and, in fact, forming part of a living organism, the tissue is no more living than if it had long been completely severed and preserved for many years in a museum. Through the agency of the interstitial circulation all nutrient matters after passing through the formed material are brought into close proximity with the particles of bioplasm that are to appropriate them, which living particles are concerned in the development, formation, and action of the respective tissues or organs. By the interstitial circulation the deterioration of tissue may be prevented, and damage which it may have sustained repaired. Abnormal formations and deposits may be removed through the circulation of the interstitial fluid, and may be taken up by it, changed, and dissolved. Although entirely independent of the organs of circulation and of any propelling power, mechanism, or apparatus, some of the interstitial fluid with its dissolved constituents is continually passing through the capillary walls where capillaries exist and mixing with the blood, some of its components taking part in nutrition while others are altogether removed from the organism by the action of various excreting organs.

The interstitial circulation of man and the higher animals is active long before the organs of circulation or the fluid to be propelled through the vessels exist, and before any vestige of the complex arrangement of nerve centres and fibres which regulate and control the blood circulation can be discerned. In fact, the ordinary circulating organs may be said to be subordinate and to minister to the interstitial circulation, and would have no meaning in the absence of the latter, which begins at the earliest period of embryonic life and before any structures or organs have appeared. The interstitial circulation never ceases as long as life lasts, and continues for a time after the heart has ceased to beat and the blood to circulate. In various pathological changes detrimental to some of the tissues and organs of the body of *vital importance* the interstitial circulation may still be carried on, but in its absence, development, nutrition, formation, repair, action, and the removal of the products of disintegration and decay would be impossible.

That "death" occurs when the heart stops beating and the blood ceases to circulate is certainly true with regard to the high and complex phenomena which characterise man and the higher animals, but some vital actions continue to be manifested in certain organs and textures after death in the ordinary sense has taken place. The formation of hair, nail, bone, and some other structures may continue for some time after death. In short, although the bioplasm of certain parts has ceased to live, that of certain tissues and organs of the body may retain its vitality for some time, which varies according to circumstances. The bioplasm concerned in the higher operations of the brain and some other parts of the nervous system may indeed be dead, while other forms of bioplasm continue to live, and for different periods of time after "death." In man and the higher animals the forms of living matter dying first are more dependent upon the steady supply of nutrient matters and the immediate removal of the products formed during their vital changes than the bioplasm taking part in the formation and action of simpler tissues and organs, and probably "die" the instant the interstitial circulation in them ceases to be carried on at the normal rate. "We" die some time before the death of many of the living particles taking part in the formation and action of some of our tissues occurs. In certain cases, as is well known, the multiplication of particles of bioplasm (leucocytes) continues for some time after death, and is associated with a rise in the temperature of the whole body amounting occasionally to three or four degrees during several hours after the blood circulation has

[1] Nos. I., II., III., IV., V., and VI. were published in THE LANCET of Feb. 22nd, April 11th, June 13th, Aug. 29th, Oct. 17th, 1896, and Jan. 23rd, 1897, respectively.

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ceased for ever. It must, however, be borne in mind that every form of bioplasm belonging to the organism has been derived by direct descent from one minute living particle.

(To be continued.)

NOTES ON SMALL-POX, VACCINATION, AND RE-VACCINATION.

BY FREDERICK W. LOWNDES, M.R.C.S. ENG.,
SURGEON TO THE LIVERPOOL POLICE.

THE value of vaccination and re-vaccination in preventing and diminishing both the prevalence and mortality of small-pox must be to members of the medical profession a matter of experience. In the following notes I have given mine for what they are worth. If other practitioners would give theirs it seems to me that valuable additional material might be added to that already furnished by the report of the Vaccination Commission.

During my student career, 1860–65, I only saw one case of small-pox, and that a doubtful one, though I saw many cases of typhus, typhoid, and scarlet fevers, measles—in short, all the other exanthemata. Liverpool at that time was a hot-bed of typhus fever, its victims comprising many medical practitioners, young, old, and middle-aged; now there are middle-aged physicians who have never seen a case of typhus fever, it being so comparatively rare. But ought not small-pox to be equally so? In the spring of 1866 I was assistant to Mr. G. C. Holt, who was then practising in Tunstall, Staffordshire. During the three months I remained with him I saw many cases of small-pox, which was then very prevalent, and the cause was very easy to find. Not only was vaccination much neglected, but it was very inefficiently performed, the public vaccinator yielding to the wishes of the mothers and only producing two, or at the most three, vesicles. As the neighbourhood was a great one for tramps nothing could be easier than the importation of the disease. I saw several cases of the confluent form ending fatally. What surprised me most was the perfect indifference of the inhabitants to such a scourge, the child, either unvaccinated or only very imperfectly protected by it, being allowed to play about in the room in which the father lay a ghastly object even for a surgeon to behold; but all remonstrances were vain. For myself I felt no fear whatever, having been not only efficiently vaccinated in infancy (the marks of which were then quite distinct), but having also been re-vaccinated eight years previously during an epidemic of small-pox in Liverpool. This was so successful as to convince me even then that vaccination in infancy, however efficiently performed, can only be regarded as a protection up to puberty, and possibly to the age of twenty-one years, but not later. At the time of which I am writing re-vaccination was almost unknown in Staffordshire and elsewhere in England. During the rest of this same year, 1866, I was in Birmingham as one of the resident surgeons of the lying-in hospital in that town. Though my duties took me into the very worst and poorest parts of the town I neither saw nor heard of any cases of small-pox, and I learned incidentally that vaccination was most efficiently performed there. During the year 1867 I resided in Burford, Oxon., as assistant to Mr. T. H. Cheatle, who had been practising there for some years. I am glad to state that he still practises there, occupying a very honourable position both among his professional brethren and the residents of his native town, in which he has practised for more than forty years. Shortly before my arrival at Burford a fatal case of small-pox had occurred at one of the neighbouring villages, which was the subject of conversation. It formed an addition to the illustrations of panic and selfishness which have so often distinguished the conduct of people during the prevalence of small-pox. Instead of the indifference I had seen in Tunstall the farmers and other employers of labour had such a dread of the disease that they refused to allow any of their labourers to go near the house wherein the infected man lay, while at his death the relieving officer was obliged to take men from Burford, a distance of three miles, to put the body in the coffin. In consequence of this and other warnings elsewhere vaccination was vigorously pushed, instructions being to vaccinate in three places on each arm, I having been taught to do the same in four places at the vaccination station in Tottenham-court-road, London, two years previously. It has the advantage of securing marks on both arms as well as the thoroughly efficient vaccination of the infant. But I have never seen it done since, and it seems to me that four good marks on the left arm are sufficient for all practical purposes. No other case of small-pox occurred in or near Burford during the year.

When I began practice in Liverpool at the end of 1868 I assisted the late Dr. Steele, Dr. Lodge, and Dr. Roger Parker in their vaccinations. At that time a large number of vaccinations were performed yearly by the surgeons of the Ladies' Charity, of whom Dr. Steele was one, it being a rule that no woman should have the benefit of the charity in a subsequent labour unless the child had been vaccinated. Later the consolidation order took effect, the vaccinations at the Ladies' Charity ceased, and three public vaccinators performed the vaccinations formerly done by the twelve district medical officers. Dr. Lodge was the public vaccinator for Everton, a very large district. A Welshman himself, he used to say that Welsh women gave him the most trouble in demanding to have their infants vaccinated in only two places, and I have seen him show them triumphantly a child with six, or even nine, multiple vesicles on the arm, without any more areola, or constitutional disturbance than in those who had only four. I had very good opportunities of seeing the various forms of vaccination by grooved needle, by parallel incisions, by parallel scratches, and by simple punctures. On the whole I have found the parallel scratches, as recommended by Dr. Seaton and Dr. Renner, the most satisfactory. It was somewhat remarkable that soon after the new arrangements had been made and that vaccination had been most rigorously enforced we should have been visited by a very severe epidemic of small-pox. I was then one of the district medical officers, my district comprising some of the worst parts of Liverpool. A great improvement has taken place in it since, whole streets having been removed and houses of a much better class built on the sites. I saw a very large number of cases, some of them being of the most severe confluent form. Abler pens than mine have dealt with this epidemic, and I will limit myself to what came under my own notice. We had not then the Public Health Act of 1875, and had only limited powers as to the removal of patients to hospital and of corpses to the mortuary. I have a very vivid recollection of attending a man day after day lying in the room where also lay the dead body of his child—a victim to the fell disease. I remember, also, how when the disease was at its height men and women invaded the vaccination stations in hundreds and thousands to secure re-vaccination, which to not a few was really primary vaccination. Careful note was made as to vaccination marks in all those who were admitted into hospital, the result being to confirm all the various and subsequent experience of the value of vaccination in reducing the number of those infected and the virulence of the disease. At length, when the re-vaccinations had continued for some time and a very large proportion of the whole population was fully protected, the epidemic ceased, just as it did more recently both in Warrington and in Gloucester. Since then we have had cases of small-pox now and then, and not long ago there was a sufficient number to cause a scare. But thanks to the notification of each case and to the prompt measures taken by Dr. Hope, the medical officer of health, to ensure immediate removal to hospital when this was possible, and isolation when it was not, as well as to the prompt vaccination of infants and re-vaccination of adults, the disease was prevented from spreading. In such a city as Liverpool there must in the very natural course of events always be a very large number of infants under the age of three months, which, added to others not vaccinated from other causes, furnishes a considerable number of unprotected children, among whom a case might be imported at any time.

And re-vaccination is by no means so generally adopted as it ought to be. In 1877 I was appointed surgeon to the Liverpool police force, one of my duties being to examine all candidates for the force. I was struck with the circumstance that excepting those who had been in the army or Royal Irish Constabulary hardly one had been re-vaccinated, while in not a few men there was an entire absence of any vaccination scars. I found that it had been the practice previously to re-vaccinate the whole force in times of small-pox epidemic. But it

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seemed to me much more desirable that each candidate, after being found fit to be admitted into the service, should be re-vaccinated (unless this had been previously done) before commencing his duties. Now, as everyone knows, police officers are very apt to be brought in contact with small-pox patients exposing themselves in the streets before they are cured, or detained at a railway station or other public place. Most important is it, therefore, that every police officer should be thoroughly protected by vaccination and re-vaccination. About ten years ago my late colleague, Dr. J. S. Clarke, and I examined the arms of all members of the force. We found that very few had been re-vaccinated, and that many had no marks whatever. We recommended that the whole force should be re-vaccinated and that every candidate should be re-vaccinated before admission if the examining surgeon found this to be necessary. Our recommendations remained disregarded until the beginning of the year 1895, when the Watch Committee resolved that every officer then in the force should be re-vaccinated by the examining surgeon, but that this should be voluntary on their part. The committee also resolved that every candidate should be re-vaccinated before admission if the examining surgeon deemed this necessary. This is the rule enforced in the Royal Irish Constabulary and in the Metropolitan Police Force, London. It seems to me worthy of adoption in every police force, whether large or small. For until it has been a rule absolute re-vaccination will never become general. Only thirty-seven constables came to me voluntarily to be re-vaccinated, while 176 men who have joined the force since 1895 have received certificates from me of successful vaccination. They being men between twenty-one and thirty years of age present marks of very efficient primary vaccination. But I generally find excellent results of re-vaccination, both in those vaccinated by their own surgeons and by myself. I always use calf lymph, and endeavour to secure two good marks. In the course of ten or twelve years every member of the Liverpool police force will have been re-vaccinated, and though it is to be wished that this very desirable regulation had been effected before, it is very satisfactory that it has been done now. The chairman and members of the Liverpool Watch Committee as well as the Head Constable deserve great credit for bringing about so very desirable a reform, which was not effected without considerable opposition.

I cannot help thinking that if every individual member of the profession did his best in his individual and professional capacity to promote re-vaccination in his household and among all with whom he is brought professionally in contact we should very soon hear the last of small-pox epidemics and anti-vaccinationists. I have given my experience for what it is worth, but there must be many practitioners in town and country who can give even more convincing proofs of the value of Edward Jenner's work, accomplished so happily 101 years ago.

Liverpool.

SUBCUTANEOUS EMPHYSEMA FOLLOWING LABOUR.

BY CHARLES D. MUSGROVE, M.D. EDIN.

ALTHOUGH the above condition is by no means rare it is sufficiently uncommon to be worth recording, the more so in this particular case on account of a peculiarity in the onset of the symptoms.

A primipara, aged twenty-two years, was confined on May 22nd, 1897. The presentation was left occipito-anterior and the labour a natural one, except that it was somewhat prolonged, especially in the later stages, owing to the large size of the child's head. From the time when the head had descended low enough to be visible at the vulvar opening it was nearly an hour before delivery took place, and during this period the pains were violent and almost constant, whilst the patient, who was strong and well built, exerted herself to the utmost in holding her breath and bearing down forcibly. After the head was expelled, which occurred at 6.30 P.M., the remainder of the labour was satisfactory. During the night the patient rested quietly, with intervals of sleep, until 4 A.M., when she was seized with a pain at the left side of the trachea about an inch above the sternal end of the clavicle. This continued for an hour, after which it passed off almost as suddenly as it had come on. Neither at this nor at any other period in the progress of the case was there any dyspnœa. When I saw her at 10 A.M. she had no pain or discomfort, her breathing was quiet and natural, and her temperature was 98° F., but her pulse was intermittent and irregular, though not rapid. On examination over the part indicated by her as the seat of the pain, which had occurred at 4 A.M., no swelling or tenderness was found, but in each supra-clavicular region and over the whole of the front of the chest there was felt and also heard on palpation marked emphysematous crackling of the subcutaneous tissues. The percussion note over the whole extent of the lungs was normal in character, and the lung sounds were distinctly heard, so that there was evidently no pneumothorax present.

Taking into consideration the fact that the emphysema of the subcutaneous tissues occurred within fifteen hours of the termination of labour, it is evident that rupture of one or more vesicles of the lung had taken place owing to the severe and prolonged straining during the hour preceding the expulsion of the head, and that the air having been effused beneath the visceral layer of the pleura, and probably also between the lobules of the lungs, had found its way to the mediastinum and thence to the neck. It is to this latter part of its course that I desire specially to draw attention, as offering a feasible explanation of the attack of pain, which formed the onset of the symptoms. It is evident that in the mediastinum air which has been effused from the lungs must be on the outer aspect of the pericardium, and therefore outside that layer of fascia, which is continuous with the fibrous layer of the pericardium, and which, as it is traced upwards, is found to invest the trachea and thyroid gland. Its readiest mode of passage from the chest to the neck would appear to be through the looser tissue lying at the back of the sternum, and if so it would make its way upwards on the inner aspect of the fascia, which is attached to the posterior aspect of the sternum, and which is continued upwards to invest the depressors of the hyoid bone; in this case a conclusive proof was afforded that this was the course which the air had taken, for on applying a stethoscope over the upper part of the body of the sternum a distinct crackling was heard with each beat of the heart, of which only one explanation is possible, viz., the presence of air in the loose tissue lying behind the bone. Taking these facts into consideration there seems every probability that after the air had reached the neck it lay between two layers of fascia, a posterior covering the trachea and an anterior investing the sterno-hyoid and sterno-thyroid muscles, and it is to the pressure of the air as it was gradually forced up from the chest into this compartment that I would ascribe the attack of pain in the neck, for whereas the entrance of the air from below would be comparatively easy, its escape from the compartment in which it would find itself would be a matter of considerable difficulty; in fact, it appears to me that there would be only one way of escape—viz., by forcing itself through the anterior wall of fascia at the point where the latter is pierced on each side by the external jugular vein. It may have been that while the patient was asleep this vessel was somewhat engorged owing to the position of her head, thus preventing the escape of air alongside of it. If this assumption be correct it can readily be understood that the pain due to the stretching of the fascia by the increasing volume of air behind it having awakened the patient, the movements of the latter, by varying the amount of blood in the vein, would tend to facilitate the escape of the air, thus accounting for the disappearance of the pain. The air, having once reached the subcutaneous tissues, would, of course, be able readily to diffuse itself over the neck and chest.

Of the further progress of the case little remains to be said. The crackling produced on palpation gradually became less marked, until on the seventh day it had disappeared, whilst that heard with the beat of the heart continued for two days longer, after which it also ceased, so that by the tenth day the whole of the effused air had evidently been absorbed.

Penarth.

THE Queen has been graciously pleased to accept the original copy of Surgeon-Lieutenant-Colonel John MacGregor's Jubilee poems entitled "*Victoria Maxima et Victoria Regina*" A cover was specially designed and embroidered by Mrs. MacGregor.

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A METHOD OF OBVIATING RECURRENCE AFTER OPERATION FOR SYMBLEPHARON.

BY KENNETH SCOTT, F.R.C.S. EDIN.

THE circumstances under which this special form of treatment was called for occurred in a peculiar case, very similar to some others which I recently had occasion to describe,[1] in which there were adhesions between the cornea and palpebral conjunctivæ due to a specified cause. The patient was an Egyptian peasant, twenty-seven years old, and of strong, healthy constitution. He acknowledged having suffered from inflammation of his left eye some six months previously, and having then employed a white "sheeshm" for its cure. White "sheeshm," as I have elsewhere stated,[2] is a dry powder, usually composed of powdered alum, calomel, sugar, and flour, and is one amongst a variety of others employed by the lower Egyptian peasant class as a dry collyrium, which is introduced inside the eyelids when there is inflammation of the eye; needless to say the result is usually more harmful than beneficial. The patient's left eye when I first saw it presented a slight ptosis, which, on closer examination, was found to be caused by the upper eyelid and cornea being firmly adherent to each other. The point of junction between the two surfaces was restricted to a spot, about 4 mm. in area, situated on the outer third of the horizontal diameter of the cornea. The band of connexion was fleshy, very short, and corresponded in girth to the size of its corneal attachment. The introduction of a tenotomy hook demonstrated that the adhesion was strictly limited to this one point. During the operation I rendered the band tense with a tenotomy hook and then carefully dissected it off from the cornea with an angular keratome. I also find this knife convenient to use for a similar purpose when operating on cases of pterygium. In the dissection I was careful to remove a very slight thickness of the anterior corneal layers, so laying bare clear corneal tissue and also making certain that no opaque débris of cicatricial tissue should be left behind. I then everted the upper eyelid and with scissors removed the remainder of the band. I have always found it very difficult to keep any form of dressing or other material in place which has been introduced temporarily with the object of keeping the two opposing conjunctival surfaces apart during a process of healing. There were no thin glass shields at hand which might have answered this purpose, but which have also the disadvantage of, to a certain extent, acting as foreign bodies under the eyelids. In consequence I was compelled to devise some other means for attaining my object, and succeeded by everting the upper eyelid and stitching its ciliary edge in that position to the eyebrow. The sutures employed were of very fine silver wire, as that material seemed to be the best for the purpose, being recommended by its complete pliability, its being so readily fastened by twisting, and, if necessary, being undone and readjusted; it was also recommended by the thorough way in which it can be rendered aseptic. The patient's eye was now treated as a case of extensive corneal abrasion. Atropine was instilled, and a plain dressing with vaseline and a sprinkling of dermatol was kept applied to the eye. The healing of the denuded portion of cornea was carefully gauged each day by the use of fluorescin, and when the process was completed after the lapse of four days the retaining sutures were removed.

I have similarly applied the principle of this method with marked success in a case of symblepharon posterius, in which class of cases—contrary, I believe, to general usage—I always remove flaps of bulbar conjunctiva and attach them by buried sutures to the inner surface of the eyelid, as I find by experience that the recuperative power of a denuded portion of the bulbar conjunctiva is much more speedy and satisfactory than that of a corresponding area when situated on the eyelid; besides, by attaching the flaps to the bare inner surfaces of the eyelids any tendency to cicatricial contraction is avoided, which might otherwise lead to subsequent inversion of eyelashes, &c.

The small detail of operative procedure described above may possibly have been used by other surgeons, but as hitherto I have not found mention of it I may perhaps be allowed to recommend it on account of its great simplicity, efficiency, and practical painlessness. The cornea is protected by the dressing from extraneous influences, and has every opportunity of healing uninterruptedly, thus avoiding one of the chief causes of anxiety which the surgeon has frequently to encounter in these cases.

Cairo.

[1] Ophthalmic Review, vol. xv., p. 77.
[2] Ibid.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CONGENITAL CYST OF THE NECK OF DOUBTFUL NATURE.

BY P. CLENNELL FENWICK, M.B. LOND., M.R.C.S. ENG., L.R.C.P. LOND.

MR. G. E. DEAMER recently delivered a patient of a healthy male child and immediately noticed a tumour on the right side of the neck. He asked my opinion of its nature, and I have thought that a note of the case might find publication in THE LANCET.

The tumour was at birth of the size of a large chestnut, and was situated between the sterno-mastoid and thyroid body—limited sharply above by the lower jaw, and showing several swollen veins running over its surface. The anterior border of the sterno-mastoid overlapped it. At five weeks old the tumour was swollen (about the size of a large walnut) and was lying close to the thyroid gland, while between it and the gland a hard, round cord could be defined, apparently attached to the right lobe of the thyroid and to the back of the growth. The swelling was hard and round, and felt like a tense cyst. There was distinct pulsation perceptible to the eye, and the cyst moved up and down on swallowing. When the child cried it increased in size, but returned to its original dimensions when the infant was quiet.

The diagnosis of the growth is obscure. Owing to its close communication with the thyroid, its entire mobility and its rapid variation in size, I was inclined to think it was an unobliterated branchial cleft, but I was unable to account for the pulsation, which was certainly *not* transmitted from the underlying vessels.

As neither Mr. Deamer nor I have seen an exactly similar case we should be glad of any assistance in arriving at a correct diagnosis, for which purpose, with his permission, I send this note.

Christchurch, New Zealand.

A CASE OF UTERUS BICORNIS.

BY JAMES B. TOMBLESON, M.B., B CH. OXON.,
SENIOR OBSTETRICAL HOUSE PHYSICIAN, ST. THOMAS'S HOSPITAL.

I HAVE recently had under my care a case of uterus bicornis, with gestation in one horn, which I think worth reporting. The patient was being attended in her confinement by an obstetric clerk from St. Thomas's Hospital, who sent for me as he thought that the case was a curious one of twins. On abdominal examination I found a large, almost symmetrical heart-shaped tumour, reaching on each side nearly up to the costal margin. There was a deep central sulcus separating the two halves, of which the right was rather larger than the left. I decided that probably a fœtus lay in each half of the tumour, which I had no doubt was the uterus, and as the pains were not very numerous or powerful I left the patient, resolving to see her later. Some hours

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later the obstetric clerk sent for me, stating that a child was born and that he believed a second one was present, lying transversely across the pelvis. I found on examination of the abdomen that in place of the earlier tumour a much smaller one was now to be felt lying across the lower part of the abdomen. In the middline it reached three inches above the symphysis pubis. The most prominent part was a round, firm mass in the right iliac fossa the size of a cocoa-nut, and from this the mass gradually tapered away towards the left iliac fossa, where it was about two inches thick. As a result of this examination I thought the clerk was probably right, and prepared to do internal version under an anæsthetic. On getting my hand into the vagina (the insertion of the whole hand was necessary as the cervix was very high up) I found that the uterus contained only the placenta and some blood-clot. I made a careful examination, and found that the uterus consisted of two horns, which united only at the cervix. Of these, the right was capacious and had evidently contained the fœtus, while the left was much smaller in calibre, admitting two fingers for a distance of two inches and one finger for three and a half inches. The placenta was detached when the examination was made, but from its position had probably occupied the left cornu. No septum was to be felt on either anterior or posterior wall of the cervix. On inquiry I learned that the patient had been confined twice previously, that on each occasion the child was premature (in this case early seventh month), and that on each occasion, too, an erroneous diagnosis of twins had been made by the attending practitioner. In this latter fact, it seems to me, lies the chief interest of the case, and it is in the hope that my account of this case may prevent others from making a similar mistake to my own, that I have ventured to send this report.

Albert Embankment, S.E.

A NOTE ON THE TREATMENT OF HEART DISEASE BY THE ADMINISTRATION OF BARIUM WATERS COMBINED WITH THE NAUHEIM SYSTEM OF BATHS.

BY W. BLACK JONES, M.D., B.S. LOND., D.P.H.

THE treatment of cases of heart disease by the administration of barium waters combined with the Nauheim system of baths having been carried out at Llangammarch Wells during the past three years, the following case may be of interest to the readers of THE LANCET.

A man, aged thirty-four years, engaged in office work, consulted me in April last. There was a history of the patient having suffered from chronic rheumatism, but his present trouble had existed for about a year, during which time he had complained of dyspnœa and palpitation, pulsation in the cardiac region and carotids being constantly present, even at night. His appetite was poor, and the bowels were irregular. He presented signs of aortic stenosis, mitral regurgitation and dilatation, the apex beat being in the nipple line, with a heaving impulse. The pulse was regular, with rather an increased tension. The urine was normal. The treatment consisted in the administration of barium water, Nauheim effervescing baths, rest, and careful dieting. He began to improve in a few days, and after three weeks' treatment it was noticed that the apex beat had retracted to a point half an inch within the nipple line; there was a corresponding diminution in the area of cardiac dulness, and the pulsation was less forcible. The effect of the baths was shown by the following average of eight successive observations on the pulse rate; the rate after resting for half an hour before the bath was 74·1, that immediately before leaving the bath was 71·3, while that after resting half an hour after dressing was 66·5. This diminished rate was found on several occasions to remain constant until the evening. Shortly before leaving Llangammarch he stated that he was quite free from any kind of throbbing or other inconvenience, a condition which he had not experienced for many months.

This improvement I consider to be due to several factors which are afforded in this place, chief among them being the mineral water, the baths, and rest.

Llangammarch Wells.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum propriis collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. MARY'S HOSPITAL.

A CASE OF TYPHOID FEVER WITHOUT ULCERATION OF THE INTESTINE.

(Under the care of Dr. CHEADLE.)

FROM time to time cases have been met with which during life had been diagnosed as typhoid fever; but when, post mortem, no intestinal ulceration was discovered the diagnosis was doubted. Dr. Sidney Phillips has recorded two cases in which, though Peyer's patches were swollen, yet there was no ulceration even as late as the twenty-first or twenty-fourth days respectively of the disease.[1] A similar case is reported in *La Semaine Médicale*.[2] The following case, though resembling the cases already quoted, differs from them in several important particulars. At the necropsy no sign of any disease of Peyer's patches could be seen; if this case had occurred only a few years ago most physicians would have considered the diagnosis of typhoid fever as very doubtful; but, in addition to the typical character of the clinical symptoms, the serum test during life and the bacteriological observations made after the death of the patient render the diagnosis absolutely certain. For the notes of the case we are indebted to Mr. A. Ferguson MacCallan.

A boy, aged three years, was admitted to the hospital under the care of Dr. Cheadle on Nov. 8th, 1896, with a history of diarrhœa, vomiting, and debility. A brother and a sister of the patient had been for some time in the children's ward, suffering from typhoid fever. The date of the child's admission was probably the tenth day after the onset of the symptoms. His appearance was heavy and apathetic, the lips being dry, cracked, and bleeding. There were on the abdomen three rose-coloured papules, which faded on pressure, and there were four or five on the back. The abdomen was swollen and tympanitic, and the liver was enlarged, but the spleen did not appear to be increased in size. Previously the patient had been healthy, and no important family history could be elicited from the mother. The heart showed signs of slight enfeeblement. On examining the lungs no dulness was found, but the air entry was poor, and there were a few moist sounds and musical rhonchi heard on auscultating the back. The urine was normal. There was no marked diarrhœa, the motions being yellowish-brown in colour and of a soapy consistency. On Nov. 10th subsultus tendinum and marked carphology were observed. On the 12th the catarrhal sounds heard over the chest were slightly louder. Profuse diarrhœa began. On the 18th epistaxis and vomiting occurred. The abdomen was less distended and moved freely with respiration. On the 23rd the breath sounds heard over the chest were obscured by sibilant rhonchi and mucous râles. In the left axilla the breathing was bronchial in character. The deep cardiac dulness was a little increased to the left, and the first sound at the apex was weakened. On the 24th the patient was in a comatose condition and there was slight dyspnœa. Curds were present in the motions. The patient vomited. On the 30th the first sound at the apex of the heart was reduplicated and the second sound was accentuated; this gave a cantering rhythm to the beats. On Dec. 1st the patient was sick after food whenever given. The pulse was feeble and irregular, and he expired in the afternoon. The treatment adopted by Dr. Cheadle was directed to sustain the failing heart by stimulants and cardiac tonics; these included brandy, tincture of digitalis, and aromatic spirits of ammonia. The lung condition was treated with potassium citrate,

[1] THE LANCET, Jan. 31st, 1891.
[2] La Semaine Médicale, March, 1890.

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and vinum ipecacuanhæ; the latter drug was, however, abandoned after a time as being a cardiac depressant. The diet consisted of meat teas and milk, which latterly was peptonised. On two occasions when the diarrhœa was excessive enemata of starch and opium were ordered. The case appeared to be one of profound typhoid poisoning, resulting in death from heart failure. On the twenty-first day of the disease, Nov. 19th, on applying the serum test, Mr. MacCallan found that there were loss of motility of most of the bacilli and marked clump formation. The typhoid bacillus was separated from the urine on the twenty-sixth day of the disease by Parietti's method. On the thirty-second day he suspended in 5 c.c. of water part of a two-day old stock culture of the bacillus, and to this were added two drops of blood from the patient. The fluid, previously cloudy, became clear after some hours, the bacilli having formed clumps and settled to the bottom of the tube as a flocculent, uneven mass.[1]

Necropsy.—At the post-mortem examination no ulceration of the intestine was visible, and Peyer's patches appeared to be normal. There was a slight indentation of the mucous membrane close to the ileo-cæcal valve, but this was probably accidental, since microscopical sections showed nothing abnormal. The colon was normal. The spleen was normal in size and appearance; it was opened aseptically, and cultivations on agar, gelatin, and potato were made. The culture tubes after incubation showed typical colonies of the typhoid bacillus. Mr. MacCallan examined microscopically for typhoid bacilli thirty or forty sections of the spleen, but was unable to recognise any. This was not surprising, as Gaffky says that it is sometimes necessary to examine 200 stained microscopical sections of the spleen in cases of typhoid fever before groups of bacilli can be recognised. The mesenteric glands and liver were enlarged. Before the heart was opened blood was collected from the right auricle in Pasteur pipettes and the serum test was carried out with a culture of bacilli which had been separated from the patient's urine. Loss of motility in most of the bacilli and clump formation were observed. The heart showed a slight dilatation of the left ventricle. The bronchi contained muco-pus, and there was some lobular collapse of the lung tissue. Mr. MacCallan wishes to acknowledge the valuable hints he received from Mr. Plimmer.

LEEDS GENERAL INFIRMARY.

A CASE OF PRIMARY DYSMENORRHŒA WITH EPILEPSY CURED BY DILATATION; REMARKS.

(Under the care of Dr. J. BRAITHWAITE.)

THE value of dilatation of the cervix uteri in dysmenorrhœa has been under-estimated because it has been indiscriminately applied to all forms of the disease; but, as in the following case, sometimes certainly it effects a complete and permanent cure. The removal of the concomitant epileptiform attacks is of great interest, because, although it is at the present time customary to throw doubt on reflex neuroses,[1] yet cases undoubtedly do occur, though admittedly rarely, in which severe nervous symptoms disappear on the removal of a distant source of irritation. For the notes of the case we are indebted to Dr. J. A. Clough, resident obstetric officer.

A patient, aged seventeen years, unmarried, was admitted to the infirmary complaining of severe pain at her menstrual periods with "fits." She began to menstruate at fourteen years of age, the dysmenorrhœa beginning at the commencement of menstruation. The pain usually came on just before the period, it was worst on the first day of the period, but passed off before the period ceased. The pain was so severe as to cause the patient to remain in bed. The period lasted from five to seven days, with clear intervals of from fourteen to twenty-one days, the menstruum containing clots. During the week preceding menstruation she had "fits," sometimes as many as ten or eleven occurring during that time. There were no premonitory signs, but she would fall very suddenly, losing consciousness, but with no actual convulsions. The fits lasted about ten minutes, after which she would sleep for several hours. She never passed urine or motions during these attacks. These "fits" began two and a half years ago and had continued up to the time of admission. The patient was markedly anæmic, but her general condition was apparently good. She had been treated by drugs for the dysmenorrhœa without any good result. On examination the vagina was found to be roomy, the cervix being a trifle conical, with a small os. On Jan. 11th the menstrual discharge having ceased only a few hours, the cervical canal was dilated up to No. 7 Hegar. This was done in order to allow the introduction of a laminaria tent of the largest size. No anæsthetic was used. The next day, the patient being under ether, the tent was removed and the cervical canal dilated up to No. 18 Hegar—that is, to about the size of a rather large little finger. This apparently completely cured the menstrual pain, for the mother wrote recently to say that there had been no return of it, although six months had elapsed since the dilatation. The patient has only had two fits since, both within a fortnight of the dilatation. It is somewhat doubtful whether these attacks were true epilepsy, as there was no convulsive action. The patient, however, became unconscious, and the attacks were followed by profound sleep.

Remarks by Dr. BRAITHWAITE.—As it is commonly thought, and, indeed, generally accepted as a fact, that dysmenorrhœa is only temporarily relieved by dilatation, the above case is interesting, especially as there was simultaneous recovery from menstrual epilepsy. It is usually found in the gynæcological ward that the cases which are relieved by dilatation are those in which, like the one related, the pain is at its greatest intensity on the first day of the period and ceases before the period is over. The medical treatment chiefly relied upon is the use of antipyrin just during the first few hours, followed by drachm doses of liquor ammoniæ acetatis. The typical cases for treatment by dilatation are those in which the pain is confined to the first two days of the period. The cause of the pain in these cases is either an active spasm at the os internum or a passive inability to open. During painless menstruation the os internum is open, and this opening is a vital act necessary to the painless performance of the function. For the success of dilatation it is necessary to over-dilate. Over-dilatation cannot be accomplished unless the tent is used previously. This causes a softening of the tissues, so that they yield kindly and readily. The dilatation must also be done just as a period ceases, as the tissues are then soft and already a little open. There are many cases of dysmenorrhœa which are not curable by dilatation, especially some in which probably the whole uterine muscle is in a state of colic. In these cases the pain is not confined to the first two days. There are, of course, many cases in which dilatation, however thorough, fails, but it ought to have a trial in nearly every case in which relief cannot be given by medicinal or other means, and which are severe and of long duration. It has this great advantage, that the patient is in no worse position if it fails.

[1] Knapp: American Journal of the Medical Sciences, Oct., 1895.

Reviews and Notices of Books.

Atlas of Clinical Medicine. By BYROM BRAMWELL, M.D., F.R.C.P.Edin., F.R.S.Edin., Assistant Physician to the Edinburgh Royal Infirmary. Three vols. Edinburgh: T. and A. Constable. 1892 to 1897. Price 31*s.* 6*d.* per volume.

WITH the issue of the last instalment of the third volume of his "Atlas of Clinical Medicine" Dr. Byrom Bramwell has decided to suspend its further publication, although his stores of clinical and pathological drawings are by no means exhausted. The admirable manner in which he has carried out this enterprise deserves recognition, and for the sake of science it may be hoped that means may be found whereby the publication can be continued. It is, however, obviously out of the question that work of this high class, involving great expenditure of capital, should be left to the unaided efforts of one man. Dr. Bramwell has shown the utility and the importance of such work, and we do not hesitate to urge that its further development might well receive practical assistance at the hands of those scientific bodies who have at their disposal funds for

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the encouragement of research and the propagation of scientific knowledge. These three volumes contain no fewer than 100 folio plates, many of which are highly artistic and all most faithful representations of clinical and pathological conditions.

It is not merely as an atlas that Dr. Bramwell's work should be regarded. Each volume contains detailed records of high value, reflecting the greatest credit upon the industry and ability of the author. The subjects which have been thus treated—many of them quite exhaustively—are numerous and varied. They comprise many most important contributions to the clinical and pathological study of diseases of the nervous system, such as Friedreich's ataxia, bulbar paralysis, ophthalmoplegia, alterations in the fields of vision, acute poliomyelitis, progressive muscular atrophy and the muscular dystrophies, of which latter a very valuable contribution is to be found in the final instalment of the work, including histological studies of the muscles and spinal cord from cases of pseudo-muscular hypertrophy and myopathic atrophy. Again, the subject of syphilis, illustrated by many drawings, is fully discussed in articles in the second and third volumes; and such conditions as Addison's disease, Hodgkin's disease, chlorosis, and pernicious anæmia are expounded with discrimination and judgment. Amongst other topics to be found in the several volumes are myxœdema, exophthalmic goitre, acromegaly, small-pox, measles, scrofula, and Asiatic cholera, whilst in the third volume there is a copious clinical account, with full illustration, of the effect of the thyroid treatment of certain skin diseases. Nor does this list by any means exhaust the topics which are either commented upon or illustrated, for one notable feature is the series of drawings illustrative of types of mental disease that appear in more than one volume. Having on several occasions drawn attention to the merits of the work and the praiseworthy industry of its author it is hardly necessary to dwell on them here at length, but we could not allow the opportunity to pass of expressing the hope that at no distant date a means will be found for the continuance of a publication which has acquired a distinctive position in medical literature.

The Menopause and its Disorders. (With Chapters on Menstruation.) By A. D. LEITH NAPIER, M.D.Aberd., Senior Surgeon, and Surgeon in Charge of Gynæcological Cases, and Lecturer in Clinical Surgery and on Gynæcology, General Hospital, Adelaide, &c. London: The Scientific Press, Limited. 28 and 29, Southampton-street, Strand, W.C. 1897. Price 7*s.* 6*d.* net.

IN his preface the author tells us: "Apologies are, however, unnecessary when a writer has something new to say or some new way of presenting recognised truths. The *raison d'être* of this work will be at once apparent when I state that no book dealing specially with the subject-matter here treated of has been published in Britain within the last quarter of a century. During that time the whole pathology of gynæcology has been so modified that it is now virtually new." Does Dr. Napier really mean what he says? We see that the book consists of thirteen chapters, the subjects of which appear for the most part to be the same as those met with in the numerous treatises on gynæcology in common use, except that in season and out of season the menopause is tacked on. Thus Chapter XII. is entitled "Ovarian Tumours at or after the Menopause." What reason can there be for dragging in the menopause in any useful account of ovarian tumours? They occur practically at all ages, and, so far as we can see in a work which is entitled "The Menopause and its Disorders," there is no reason to include ovarian tumours, which are certainly not disorders peculiar to the time of the menopause. The same criticism applies to the chapters on Fibroid Tumours, on Malignant Disease, and on the treatment of Vaginal and Uterine Displacements in Elderly Women. The truth is that the work is a book on the diseases of women. It is quite incorrect for the author to suggest, as we think he does, "that no book dealing specially with the subject-matter here treated of has been published in Britain within the last quarter of a century." The "subject-matter" is, for the most part, as our readers will see, matter that forms a part of every work on gynæcology. The author's standpoint as a gynæcological teacher will be sufficiently evident from the following quotation on the treatment of procidentia uteri: "In my judgment neither a plastic operation, such as colporrhaphy or [*sic*] perinæorrhaphy, nor shortening the round ligaments, nor ventrofixation, is likely to prove so curative as vaginal hysterectomy for total prolapse in elderly women. Our constant aim should ever be to cure our patients when possible; and in many of these cases this can only be done by total uterine extirpation per vaginam."

A System of Dental Surgery. By the late Sir JOHN TOMES, F.R.S. Fourth Edition. Revised and Enlarged by CHARLES S. TOMES, F.R.S. London: J. and A. Churchill. 1897. Pp. 709. Price 16*s.*

IN comparing this edition with the original published in 1859 the reader cannot fail to be impressed with the great strides that dental surgery has made during the past forty years. The present issue has been thoroughly revised and brought up to date so as to form the most reliable work that is extant in this section of medicine. In glancing through the pages it is very apparent that the changes between this and the previous edition have been somewhat drastic, and everywhere evidence is afforded that the work of editing has been carefully carried out. A chapter on the Bacteriology of the Mouth has been introduced, and the section dealing with caries has been increased and thoroughly revised, so as to embrace all the fresh knowledge that has come to light during the last ten years. In the chapter treating Materials used for Filling Teeth, Mr. Tomes has given a short but concise account of the most recent views on the properties and behaviour of amalgams, a subject of keen interest to the dental practitioner. The portion of the book dealing with manipulative proceedings is still unsatisfactory, and we feel that the value of this important text-book would be greatly enhanced by a fuller treatment of the manipulative methods. True it is that manipulative skill can only be obtained at the chair side, but much that is valuable may be gleaned from well-planned and clear diagrams of typical cases. The chapters on the Pulp and Periosteum are both interesting, but the former would be much improved by the addition of illustrations. The subject of Odontomes is very fully dealt with, and much that is new is to be found in the chapter on Absorption of the Alveoli and Pyorrhœa.

Speaking in a general way, we cannot help feeling that as a text-book for students the work would be far more readable if a little more care were taken in the arrangement of the different subjects on the basis of modern pathology. By this means we feel certain the student would gain a clearer insight into the bond which unites dental with general pathology.

Disorders of Digestion in Infancy and Childhood. By W. SOLTAU FENWICK, M.D., B.S., M.R.C.P. Lond., Physician to Out-patients at the Evelina Hospital for Sick Children. London: H. K. Lewis. 1897. Pp. 378. Price 10*s.* 6*d.*

DR. SOLTAU FENWICK, as physician to out-patients at the Evelina Hospital for Sick Children, has had ample opportunities of observing disorders of digestion in infants and

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children, and in the preface of his work he informs us that it is mainly from the notes of some 5000 cases of disordered digestion which have come under his notice that the present volume has been compiled.

There is nothing strikingly original in the work, but it is an excellent compendium of our knowledge on the subject of disorders of digestion in children set forth with discrimination and clearness evidently by one who himself has a thorough knowledge of the various forms of indigestion encountered in a children's hospital. An interesting account is given of experiments made by Dr. Soltau Fenwick upon the contents of the stomachs of healthy children. He finds that in infants at the breast the milk is usually found to be curdled after a residence of from ten to fifteen minutes in the stomach. In infants fed upon cow's milk the total acidity of the gastric contents is more pronounced than in breast-fed infants, and often amounts at the end of eighty minutes to as much as 0·18 per cent. HCl, whilst in breast-fed infants it is 0·13 per cent. In infants who are fed upon farinaceous foods the total acidity of the gastric contents is invariably diminished, and may not exceed more than half the normal.

The description of the various forms of digestive disorders is well given and may be taken as a reliable guide by the practitioner and student. The subject of the diseases of children is usually neglected by students whilst at the hospitals, and, consequently, when they launch out into practice they are frequently puzzled by the many phases which gastric and intestinal troubles present, and a wrong diagnosis and treatment is frequently the result. With such a work as the one now under consideration on their shelves, such difficulties would be easily overcome, and we believe that its acquisition would be a valuable addition to their library. An appendix includes a short account of the methods employed in the chemical examination of the contents of the stomach, and certain recipes and formulæ which are useful for reference.

The book is illustrated by photo-micrographs showing the condition of the walls of the stomach and intestines in health and disease. They are admirably executed and decidedly add to the worth of the book.

LIBRARY TABLE.

The Diagnosis and Treatment of Diseases of the Rectum, Anus, and Contiguous Textures. Designed for Practitioners and Students. By S. G. GANT, M.D., Professor of the Diseases of the Rectum and Anus, University and the Woman's Medical Colleges, Kansas City, Missouri, &c. With two chapters on Cancer and Colotomy by HERBERT W. ALLINGHAM, F.R.C.S. Eng., Surgeon to the Great Northern Central Hospital, Assistant Surgeon to St. Mark's Hospital for Diseases of the Rectum, &c. Illustrated with 16 full-page chromo-lithographic plates and 115 wood engravings. Philadelphia: F. A. Davis Company. 1896 Pp. xiv.-399. Price $3 50 net.—In this volume there are many points which deserve commendation. The descriptions are satisfactory, the treatment is given very fully, and the illustrations are numerous. A great amount of care has doubtlessly been devoted to the chromo-lithographs, and many of them are excellent, but Plate VI. is decidedly useless, as it shows practically nothing and can in no sense be called artistic. The author ascribes much importance in the production of disease of the rectum to railway work, as he has found hæmorrhoids, fissure, and prolapse especially common among railway employés. As Dr. Gant has had very great opportunities of seeing patients drawn from men of this class his observations are of value. The two chapters on Cancer of the Rectum and Colotomy contributed by Mr. Herbert Allingham are, as might be expected, carefully written.

Clinical Papers on Surgical Subjects. By HERBERT W. PAGE, M.A., M.C. Cantab., F.R.C.S. Eng., Surgeon to St. Mary's Hospital and Lecturer on Surgery at its Medical School, Member of the Court of Examiners, Royal College of Surgeons of England, &c. London: Cassell and Co. 1897. 8vo, pp. x.-208. Price 5*s.*—This little volume contains ten clinical lectures delivered at St. Mary's Hospital and two other papers, and though they have all appeared previously in various journals and periodicals, they are well worth reproduction in a permanent form. They are naturally of varying degrees of interest, but there is not one which does not present the subject with which it deals in a novel and attractive form. It is difficult to say which is the most important, but the lecture dealing with a case of Fatal Pelvic Injury in a Child is certainly extremely instructive. The case is as follows. A boy, aged seven years, had been run over, and as a few drops of blood trickled from the urethra a soft catheter was passed, and a little blood was withdrawn, but no urine. The same night the child's bladder seemed to become distended as high as the umbilicus; it was thought that the distension of the bladder was due to blood clot, and as this could not be washed out per urethram a trocar and cannula were introduced above the pubes and an attempt was made to wash out the bladder from above. Subsequently urine flowed from the wound and the child died two days later. At the necropsy it was found that the pelvis had been fractured and had torn the urethra, and that the dulness above the pubes was due to an effusion of blood into the prevesical space. The trocar had not pierced the bladder. Another paper of great value is on Traumatic Rupture of the Ureter. The book is dedicated in a very appreciative spirit to the author's former house surgeons at St. Mary's Hospital.

Die Syphilis der Nase und des Halses. Von Dr. P. H. GERBER. Mit 2 Tafeln. (*Syphilis of the Nose and Throat.* By Dr. P. H. GERBER. With 2 plates.) Berlin: Verlag von S. Karger. pp. 74.—This is a reprint of a paper which appeared in the *Dermatologische Zeitschrift*, and was written at the invitation of Professor Lassar. It deals with syphilis as it affects the nose, the naso-pharyngeal space, the pharynx, and the larynx. A valuable feature is an extensive bibliography. The illustrations are good, though a little too highly coloured.

The Operations of Surgery, intended especially for the Use of those recently Appointed on a Hospital Staff and for those Preparing for the Higher Examinations. By W. H. A. JACOBSON, M.Ch. Oxon., F.R.C.S. Eng., Assistant Surgeon, Guy's Hospital; Surgeon to the Royal Hospital for Children and Women. London: J. & A. Churchill. Third edition. 1897. With 398 Illustrations. Price 34*s.*—So well known is Mr. Jacobson's work that it may seem almost superfluous to praise this new edition. The progress in operative surgery during the six years which have elapsed since the second edition appeared has been very great and has necessitated a corresponding increase in the matter contained in this treatise. The number of illustrations, 199, in the first edition has been exactly doubled, and the text has been increased to an almost equally great extent. A single volume is very much more convenient for reference than two volumes, therefore we are very glad that Mr. Jacobson has succeeded in compressing all the subject into this one volume; this has, however, only been possible by the adoption of a smaller type for part of the work, and a slightly larger page; but we fear that this will hardly be practicable in the future if surgery increases in extent as it has increased of late years. To those who knew the previous editions it will suffice to say that in the present edition the work has been brought thoroughly up to date; and to those who have not known the book in its earlier form, and who need a careful and scientific treatise on the performance of

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operations, we can confidently recommend Jacobson's Operations of Surgery.

B. Bradshaw's Bathing Places and Climatic Health Resorts. London: Kegan Paul, Trench, Trübner, and Co. 1897. Price 2*s.* 6*d.*—This is a most useful book in many ways, though we do not quite see the need of the table of diseases and the places where they are most effectually treated. For instance, to call "abdominal swellings" a disease is absurd. To begin with, swelling of the abdomen is a symptom, and not always of disease. However, with this exception the book appears to be carefully drawn up, and gives a list of baths and health resorts all over the world, even to the little known but valuable springs in the Caucasus. The suggestions at the beginning are admirable and to be pondered upon, though we think that it is at last beginning to dawn upon the average Briton (1) that the Continent was not entirely created for his special use, and (2) that occasionally it is possible that he may come across "a foreigner" who is as good a gentleman as himself, or even better.

JOURNALS AND REVIEWS.

Science Progress. July, 1897.—This quarterly issue is a decidedly all-round interesting number. From the medical point of view perhaps the paper on "The Venoms of the Toad and Salamander," by Dr. Richard T. Hewlett, merits the first place in our attention. We deal with it in another column. The important contribution by Mr. C. A. Barber, M.A., on "The Diseases of the Sugar-cane" is continued. Finally, in the longest paper in this number, Mr. Minchin, M.A., discourses upon "The Position of Sponges in the Animal Kingdom." He inclines to the view that they are true metazoa.

Caledonian Medical Journal.—Dr. Alastair MacGregor, of Shepley, Huddersfield, publishes the first portion of a remarkable paper on Second Sight, the continuation of which is promised for the October number. He gives details of nine cases, in five of which either himself, himself together with his sister, his father (a clergyman in Skye), or his grandfather (also a clergyman) were immediately concerned. Two of these nine events were instances of presentiment only; all the others were accompanied by surprising audible or visible manifestations, and one of them may be quoted as a typical example. Many years ago Dr. MacGregor and his sister were on a visit to an invalid clergyman near Inverness. One evening after sunset, in the month of October, the two visitors were examining photographs in the drawing-room with the lady of the house, the husband being in bed, and his nephew being expected to arrive from a distance about 8 P.M. About 6 P.M. the three persons in the drawing-room all at once "heard the sudden sound of a trap driving quickly up the avenue, followed speedily by the crunching of wheels on the gravel at the front door, the grating noise of a brake being applied—in short, all the usual sounds attendant on the drawing-up of a conveyance." Dr. MacGregor rushed to the front door to welcome his friend, and continues: "To my surprise there were no signs of a trap being there; the moon was shining brightly, and everything was still. I had just re-entered the hall, feeling very crestfallen, when I heard a piercing shriek in the dining-room, and out rushed Mrs. —— saying that Mr. —— had just died." The weirdness and the speedy realisation of Dr. MacGregor's various "warnings" are not excelled by the vision of Theoclymenus, as related in the twentieth book of the Odyssey. This personage, who had a reputation as a seer, on a festive occasion told the self-complacent suitors of Penelope that their heads and faces and knees appeared to him to be veiled in darkness, and their cheeks to be wet with tears, the walls of the apartment were splashed with blood, and the fore-court of the house and the hall were filled with spectres on their way to the under-world. He was laughed at for his speech, but Ulysses had already returned in disguise, and in a day or two put all the suitors to death. Another interesting article in the current number of this journal is entitled "Medical Heroes of the 'Forty-five," by Dr. W. A. Macnaughton, medical officer of health of Kincardineshire.

Analytical Records
FROM
THE LANCET LABORATORY.

BALLARDVALE LITHIA-WATER.

(AGENTS: INGRAM AND ROYLE, 26, UPPER THAMES-STREET, E.C.)

LITHIUM SALTS seldom occur in natural mineral waters unassociated with other salts which may detract from the medicinal value of the water in the treatment of gouty disorders. Assuming that the specimen of Ballardvale water recently submitted to us is a naturally occurring product its composition is certainly remarkable. Thus, of the total quantity of mineral water (15·4 grains per gallon) no less than 13 grains, or 84 per cent., consisted of carbonate of lithium. The water is consequently very soft to the taste, and is quite free from mineral salts such as the sulphates of lime, which are undesirable for persons who suffer from gout. The common salt amounted to only 0·7 grain per gallon. Further examination showed that the water was of admirable organic purity. It is well known that draughts of pure water copiously taken are of advantage in uric acid diathesis in irrigating the urinary passages. When it happens that the water so employed contains lithium in the form of alkaline salts, as in the case of the Ballardvale water, there can be little doubt that an important advantage in treatment is thus gained. The water can be obtained either plain or aerated.

COPENHAGEN BEERS (GAMLE CARLSBERG).

(IMPORTERS: F. BAGGER AND CO., 3 AND 4, GREAT WINCHESTER-STREET, E.C.)

Since the discovery by Dr. Hansen, of the Carlsberg Laboratory, Copenhagen, that the various diseases of beer were caused by certain species of yeast, brewers have been enabled to place upon the market a much more satisfactory and, moreover, a more uniform product. Instead of employing yeast without regard to its specific character as to whether it contains mixed forms or not a pure culture is separated which produces a beer of always the same quality and character. The same "race" of yeast is always employed. This, together with the fact that the fermentation is conducted slowly and at a low temperature (the yeast growing from the bottom upwards rather than on the surface, as in the case of English brewing) is quite sufficient to account for the excellent and uniform condition of beers produced on the Continent. Types of these are admirably illustrated in some samples we have recently received from the Copenhagen Laboratory. The results of analysis were as follows:—Pilsener: extractives, 4·48 per cent.; mineral matter, 0·15 per cent., alcohol, by weight 3·41 per cent., by volume 4·27 per cent., equal to proof spirit, 7·49 per cent. Lager beer: extractives, 5·16 per cent.; mineral matter, 0·22 per cent.; alcohol, by weight 4·0 per cent., by volume 5·0 per cent.; equal to proof spirit, 8·77 per cent. Carlsberg beer: extractives, 6·11 per cent.; mineral matter, 0·35 per cent.; alcohol, by weight 4·0 per cent., by volume 5·0 per cent., equal to proof spirit

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8·77 per cent. Imperial stout: extractives, 9·43 per cent.; mineral matter, 0·35 per cent.; alcohol, by weight 4·62 per cent., by volume 5·78 per cent., equal to proof spirit 10·13 per cent. In not one of these specimens was any preservative found, while there was no evidence of malt or hop substitutes being present. They were all in good, sound condition, possessing that peculiar taste and character which beers fermented at a low temperature evince. Again, while the amount of alcohol was comparatively small the beers contain a maximum amount of malt extractives, and the taste is decidedly less bitter than ordinary English ale. As we have pointed out before, the fact that a smaller quantity of hops is employed, coupled with the smaller percentage of alcohol, affords some explanation that the so-called lager beers are lighter and less stupefying than the mild and bitter ales brewed in this country.

FROMMES EXTRACT.

(FROMMES EXTRACT CO., 61½, FORE-STREET, E.C.)

This extract is of purely vegetable origin, and, according to the results of our own analysis, presents the composition of a complete food (*vide* THE LANCET, Dec. 4th, 1896). In appearance it is like ordinary meat extract, and may be used in a similar way. Since we published our analysis of the extract we have received further preparations, into the composition of which this vegetable extract largely enters. They are—(1) soup tablets, (2) condensed milk, and (3) various biscuits. The initial food value of the articles just indicated are undoubtedly enhanced by this addition. Another preparation of the extract contains a less proportion of fat, and in a great number of cases we think this modification would constitute an improvement in regard to digestibility. The extract gives distinct evidence of peptones. As is well known, there are distinct merits belonging to vegetable food which are absent in animal food, and *vice versâ*. This extract, therefore, should afford an important nourishing adjunct to the dietary.

LEMON SQUASH AND LIME JUICE CORDIAL, &c.

(WALTER SCOTT AND CO., ROCK FERRY, CHESHIRE.)

We found no evidence during the course of our examination of these preparations that they are not, as stated, "prepared from the finest selected fruit." It is obvious that if unsound fruit had been employed the flavour of the resulting cordial or liquid would be unsatisfactory. The samples of lime juice cordial and lemon squash possessed a good fragrant flavour characteristic of the respective fruits from which they are made, but in our opinion they are too syrupy and sweet. The acidity of the former, calculated as crystallised citric acid, amounted to 1·89 per cent., and of the latter to 2·17 per cent. In the raspberry and lemon preparation as well as in the black currant liquid we could trace no evidence of foreign colouring matters. All the preparations proved to be free from metallic contamination, but each one is somewhat heavily preserved with salicylic acid.

SCOTCH WHISKY (THE BUCHANAN BLEND).

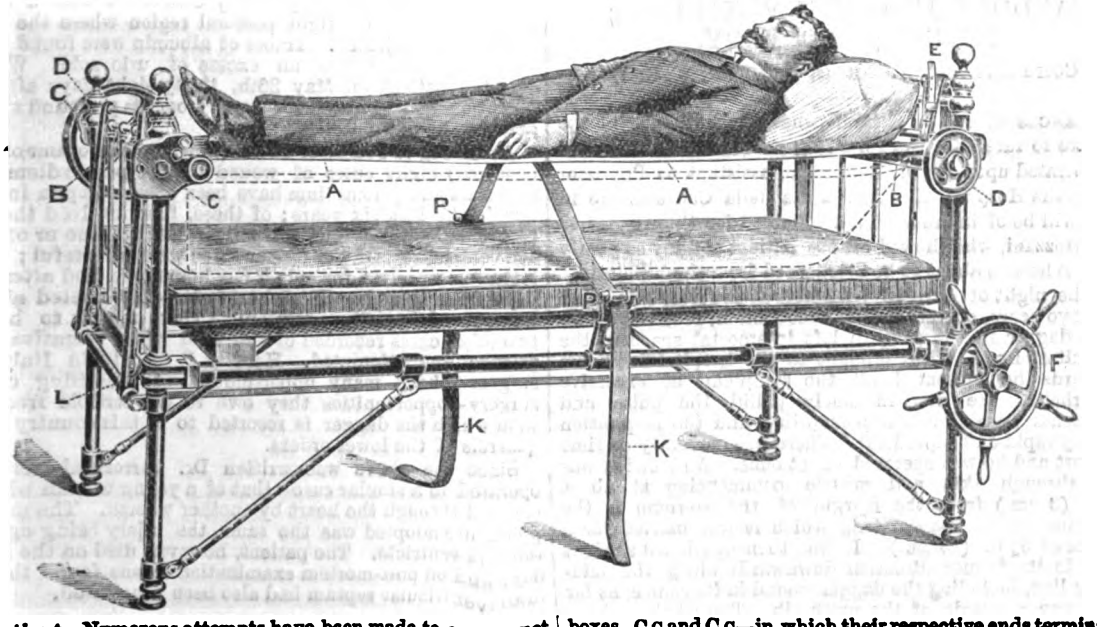
(JAMES BUCHANAN AND CO., GLASGOW, LEITH, AND LONDON.)

Our analysis shows this to be a remarkably pure spirit, and therefore well adapted for medicinally dietetic purposes. It contains a very small proportion of extractive matters, while the acidity is practically *nil*. The actual results of analysis were as follows: Alcohol, by weight 38·78 per cent., by volume 46·02 per cent., equal to proof spirit 80·64 per cent.; extractives, 0·21 per cent.; mineral matter, *nil*; acidity reckoned as acetic acid, 0·027 per cent. The spirit, whilst free from injurious and crude products, possesses a delicate and smooth flavour, owing partly to skill in blending and partly to the maturing effects of storage for some years in wood.

New Inventions.

THE "FACILE PRINCEPS" BEDSTEAD.

A BED as ordinarily constructed is not an ideal arrangement even for the healthy, and when used by the sick and suffering is often a source of inconvenience to practitioner, nurse, and patient. Numerous attempts have been made to construct a bed which should answer the manifold requirements of the sick-room, but the majority have been more or less necessarily complicated and expensive. A cheap and simple couch for the sick has yet to be invented, but in the meantime the bed illustrated below merits attention. Simply stated, the patient is put upon a sheet divided through its entire length with its edges over the central axis of the bed overlapping. The top and bottom ends of this divided sheet are affixed to rollers, which are made to ascend and descend on the four pillars of the bedstead. The following describes the process in detail. Two iron rollers, B B, are attached by means of four hollow



boxes, C C and C C—in which their respective ends terminate—to the four pillars of the bedstead. The sheet upon which the patient is lying, A A, is attached to the rollers, B B, and

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can be tightened or loosened by means of the small wheels, D D. This sheet is divided down the centre from head to foot, with the smooth edges overlapping from two to six inches. The webbing E passes upwards at one end from the sheet roller, over the top rail of the bedstead, down to and round an iron drum, L, to which it is fixed. A second piece of webbing passes from this drum underneath the bed to a similar one affixed to the other end of the bedstead, and upwards to the top rail of the bedstead, then the end is attached to the sheet roller at that end; so that the two rollers with sheet attached are raised simultaneously by turning the large wheel F, which is fitted to the iron drum at one end, and also controlled by a ratchet. When necessary to raise the patient, as in the illustration, either to change the sheets or for any other purpose, the sheet is tightened until it becomes almost rigid, and the nurse turning the wheel F, the patient is raised on it with an easy and almost imperceptible motion as the brass wheels of the rollers glide up the pillars of the bedstead. It is fixed by means of a pawl and ratchet at any height between the mattress and the top of the bedstead. The nurse can then withdraw the mattress and return it, placing upon it a clean sheet divided in the same manner as the one upon which the patient is raised, this being lowered until about an inch above the clean one. Then the bands K K, passing round the anti-friction rollers P P, are drawn upwards and towards the centre of the bed, over the patient, thus drawing the two divisions of the sheet apart and leaving the patient upon the clean one beneath. Either end of the sheet can be raised independently of the opposite end, if so desired, in order that the patient may be placed in an inclined position. There is also an arrangement by which a semi-sitting position may be obtained or the position naturally assumed on a double inclined plane. If required an operating table can be attached to the bed and the patient lowered upon it, thus obviating the removal of the patient from the bed. For giving the bath in typhoid fever the bed seems to offer great facility, and the ease with which the bed pan can be used recommends it to both nurse and patient. Another advantage is that in hot weather or in hot climates the patient can be raised frequently and a current of air allowed to pass underneath the bedding. The bed has been designed by Mrs. William Douglas with a view to economising labour whilst giving a maximum of comfort to the patient, and this we think she has succeeded in doing. The bed can be obtained from Messrs. Maw, Son, and Thompson, 7 to 12, Aldersgate-street, E.C.

PENETRATING WOUND OF THE PERICARDIUM AND LEFT VENTRICLE; SUTURE; RECOVERY.

(COMMUNICATED BY DR. G. SANDISON BROCK.)

INSTANCES of recovery from penetrating wounds of the heart are so rare that the following account of a successful case operated upon by Dr. Parrozzani, assistant to Professor Tassi at the Hospital of Santa Maria della Consolazione in Rome, will be of interest. I am indebted for these notes to Dr. Parrozzani, who showed me the patient already so nearly well that he was about to be discharged from the hospital.

On the night of April 18th, a porter at the river-side, aged thirty-two years, of very robust constitution, received a stab from a dagger in the seventh left intercostal space in the mid-axillary line. When brought to the hospital five hours afterwards he presented all the symptoms of excessive hæmorrhage. He was extremely pallid, the pulse and heart beats were almost imperceptible, and the respiration was very rapid and superficial. There was evidently no time to be lost and he was operated on at once. An incision was made through skin and muscle commencing at about 1¼ in. (3 cm.) from the margin of the sternum in the fourth intercostal space, along which it was carried for a distance of 5½ in. (14 cm.). It was then continued at right angles to its former direction downwards along the mid-axillary line, including the dagger wound in its course, as far as the upper margin of the ninth rib. The whole incision had thus the shape of the letter L inverted. The pleura was next incised at the level of the fourth intercostal space in the horizontal line of the inverted L, and the fifth, sixth, seventh, and eighth ribs, with the attached pleura, cut through in the vertical line. A triangular-shaped door or shutter, to which the costal cartilages acted as a hinge, was thus formed. Such a large opening was deemed desirable for fear of any wound of the diaphragm or abdominal viscera. On reflecting the shutter, the pleural cavity was found filled with blood, and the pericardium presented a solution of its continuity 1 in. (2½ cm.) in length, from which at regular intervals issued a small jet of blood. The opening in the pericardium having been enlarged to nearly 2½ in. (6 cm.), the cavity was freed of the small quantity of blood it contained. The blood had not accumulated in the pericardial sac in any considerable quantity owing to the fact that the wound in the latter, being at its most dependent part near the apex of the heart, had allowed the blood to escape readily into the pleural cavity. This was a fortunate circumstance, since the usual cause of death in these cases—viz., the fatal pressure exercised upon the heart by the blood accumulating in the sac around it—was here absent. The apex of the heart presented a wound about ¾ inch (2 cm.) in length, from which the blood spurted in small jets at every beat of the organ. The pulsations of the heart had become so extremely feeble that it seemed as if they were about to stop altogether. Introducing the little finger of the left hand into the wound, Dr. Parrozzani found that it passed into the left ventricle obliquely, but quite freely from the apex towards the base. The inserted finger served the double purpose of checking the hæmorrhage and of fixing the apex of the heart so that the wound could more easily be secured. A large curved needle armed with No. 2 silk was now passed deeply through the whole thickness of the myocardium, but without touching the endocardium, the little finger being withdrawn from the wound and the thread rapidly knotted. The entrance of the needle into the myocardium caused the heart to throb vigorously, and the withdrawal of the finger was followed by a gush of blood completely flooding and obscuring the field of operation. The wound was, however, effectually closed by three more stitches, the blood-clots cleared out of both pericardial and pleural sacs, and the "shutter" in the chest wall finally closed by deep and superficial sutures. The operation lasted an hour and a quarter. No chloroform was used, but twelve subcutaneous injections of ether and five of camphorated oil, and a few of caffeine were administered. A saline solution (1500 grammes) was introduced by hypodermoclysis, and thorough auto-infusion (by means of Esmarch's bandages), was practised. One hour after the operation the pulse became quite perceptible. The wound healed by first intention, and no complication in myocardium or pericardium arose during convalescence. The temperature on one occasion rose to 102° F., but this was probably connected with a slough which formed in the right pectoral region where the saline solution was injected. Traces of albumin were found in the urine and there was an excess of uric acid. When I saw the patient on May 26th, thirty-eight days after the operation, he had nearly recovered from his profound anæmia and said he felt quite well.

According to Professor Tassi[1] (in whose clinic four of them occurred) eight cases of wound of the pericardium or of the heart and pericardium have been operated upon in Rome during the last six years; of these, four involved the pericardium alone and four the pericardium and one or other of the ventricles. Of the former three were successful; of the latter two survived for only a few hours, one died after eight days from anæmia, while the fourth—that related above—has proved entirely successful. There appear to be only two other cases recorded of the kind where operative interference was attempted. Happily it is only in Italy that surgeons have many opportunities of practising cardiac surgery—opportunities they owe to the terrible frequency with which the dagger is resorted to in this country in the quarrels of the lower orders.

Since the above was written Dr. Parrozzani has again operated in a similar case—that of a young woman who was stabbed through the heart by another woman. The mode of procedure adopted was the same, the injury being again in the left ventricle. The patient, however, died on the second day, and on post-mortem examination it was found that the inter-ventricular septum had also been penetrated.

Rome.

[1] Bullettino della Reale Accademia Medicale di Roma, anno 1896-7, fasc. i.

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THE LANCET.

LONDON: SATURDAY, JULY 31, 1897.

THE medical officers of health of Scotland are to be congratulated on the very satisfactory alterations which have now been made in the Public Health (Scotland) Bill. The whole profession, indeed, has a right to congratulate itself, and the public not less than the profession.

It happens that an Act applying to the burghs of Scotland, though not to rural districts — the Burgh Police (Scotland) Act of 1892—contains an extraordinary provision that the sanitary inspector (and *not* the medical officer) shall "superintend and enforce the sanitary provisions" of the Public Health Acts. This unique enactment appears to have had its origin in some vague notion that if a medical officer of health in a burgh were engaged in private practice he would be likely to be less independent than a sanitary inspector wholly occupied in the service of the local body. While we are strongly of opinion that it is in the interests of public health that the districts supervised by medical officers of health should be so large as to debar such officers from general practice, yet it is absurd to say that a whilom joiner or plumber who is appointed to be sanitary inspector and fire-master and road surveyor in a petty burgh at a salary of £70 or £80 a year, and whose main anxiety is to get other £10 added, is likely to be more independent in his work than a medical officer who has an income, say, of £500 a year independently of the burgh commissioners. Anyhow, nothing more objectionable could well be conceived than this provision in Section 75 of the Burgh Police Act, which slipped through unchallenged at the fag end of the Session of 1892, and which hoisted the sanitary inspector into the position of "superintending and enforcing the sanitary provisions" of the Public Health Acts in burghs. It was most important, therefore, as we pointed out in a previous article,[1] that the passing of a new Public Health (Scotland) Bill should be taken advantage of to attack Section 75 of the Burgh Police (Scotland) Act. The attack was made from two points. In the first place, several members of Parliament gave notice of motion that the medical officer of health of every local authority, burghal and rural, should in future be responsible for the enforcement of the provisions of the Act, and in some of these notices the very words above quoted from the Burgh Police Act were copied, with the substitution of medical officer for sanitary inspector as the responsible official. In the second place, other Members of Parliament set down amendments providing for what would amount in practice to the repeal of the objectionable part of the Burgh Police Act. It should be explained here that last year when the Bill was in the Upper House Lord BALFOUR of BURLEIGH, the Secretary of State for Scotland, granted a useful concession to medical officers of health. Since the formation of county councils about seven years ago several of these bodies have learned by experience that a public health department does require a responsible head, and that that head ought to be the medical officer of health. But on framing by-laws to give effect to this conclusion they were met by the difficulty that, excepting in one notable instance, the central authority refused its sanction on the ground that the present Public Health (Scotland) Act does not provide for the subordination of the sanitary staff to the medical officer of health. Lord BALFOUR'S policy has been, not to make the medical officer of health supreme in his department, but to allow every local authority to do so if it sees fit. He has apparently had in view the possibility of medical officers of health being incompetent, or inactive, or over-active. To give effect to his policy he inserted a provision that local authorities should "regulate the duties and relations" of the two classes of officials, and that this power should refer, not only to future appointments, but to appointments already made. It was in connexion with this provision that the second attack was made on the Burgh Police Act, the attack taking the form of a motion that the regulation of duties and relations of medical officers of health and sanitary inspectors should take effect, "notwithstanding anything contained in Sections 75, 76, and 77 of the Burgh Police (Scotland) Act, 1892"—that is, notwithstanding the enactment that in burghs sanitary inspectors were to "superintend and enforce" the sanitary provisions of the Public Health Acts. There were therefore before the House two sets of amendments, the first declaring it to be the duty of the medical officer of health to "superintend and enforce," and the second declaring that the new Act should override the Burgh Police Act in so far as that Act had provided that the sanitary inspector should be the officer appointed to "superintend and enforce" the sanitary sections of the Public Health Acts. The position created by these two sets of amendments was that if, in view of Lord BALFOUR'S policy, as above indicated, the Government refused to accept the first, they could hardly refuse to accept the second, for every argument advanced against the first would be an argument in favour of the second. This was what actually happened in the debate. The first amendment was proposed in an able speech by Captain SINCLAIR, who had obtained a knowledge of public health administration in the London County Council, and who had no hesitation in urging that in the district of every local authority the medical officer of health should be made the responsible head of the health department. The LORD ADVOCATE declared that the acceptance of Captain SINCLAIR'S amendment would place the medical officer of health above the local authority itself. The statement was an amazingly strong one, seeing that an Act passed by a Conservative Government has since 1892 placed the sanitary inspector in burghs in exactly the same position as Captain SINCLAIR'S amendment proposed that the medical officer of health should now be placed. But the virtue of the LORD ADVOCATE'S statement consisted in its strength, so far as the second amendment was concerned, and the first amendment being defeated (though it received an unlooked-for

[1] THE LANCET, May 8th, 1897, p. 1282.

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amount of support), there was no choice but to accept the second. It is no doubt conceivable that this latter amendment might have been accepted independently of the introduction of the former, but in a matter so important nothing could be left to chance.

Sir CHARLES CAMERON, in the Grand Committee, fought hard against a most retrograde proposal to relax the requirement of the present law that future medical officerships of health shall be conferred only on holders of qualifications in public health. The proposal was that in the case of burghs a public health diploma might be dispensed with "with the express consent of the Local Government Board." This was carried in committee by a small majority, and there seemed little likelihood of the decision being reversed on the report stage; but the unexpected happened, and the honourable Member is to be congratulated on his success in restoring the original requirement.

Further, in Clause 15, an awkward slip had been made with regard to the power of medical officers of health to perform any of the duties of sanitary inspectors. In the interests of sparsely populated highland counties Mr. CALDWELL had proposed that every medical officer of health might, whenever he saw fit, perform any duty which a sanitary inspector would be empowered by the Act to perform. This was objected to as amounting to an insidious attempt to place the medical officer of health at the head of the sanitary staff, and a modification was accepted that a medical officer of health might perform such duties when "authorised" by the local authority. By an unfortunate error the word "required" was set down instead of "authorised," and in the Report stage Mr. CALDWELL got this remedied.

Much anxiety was felt as to the fate of Clauses 22 and 36, in which it was proposed that the sanitary inspector should have conferred on him the statutory right to certify nuisances as a basis for legal prosecutions. Quite a number of members—Sir WALTER FOSTER, Colonel DENNY, Dr. FARQUHARSON, and others—had given notice of amendments to omit the sanitary inspector from both clauses, and the LORD ADVOCATE himself had set down such an amendment as regards Clause 36, which deals with offensive trades. The fight, therefore, was waged entirely round Clause 22, and here Sir WILLIAM PRIESTLEY did excellent service. His amendment differed from the others in proposing to omit both medical officer of health and sanitary inspector, so that the grounds for initiation of proceedings would be left entirely to the local authority. As it turned out, this was a judicious compromise. The LORD ADVOCATE had been anxious to meet the difficulty by altering the clause so that proceedings might be initiated either on a certificate by the medical officer of health or after a report by the sanitary inspector. This was no doubt an improvement, in so far as the Bill would no longer have assumed the competence of the sanitary inspector to "certify" nuisances, but only to "report" regarding them. There would still, however, have remained on the face of the Bill an invitation to local authorities to take proceedings at law as to danger or injury to health based on a sanitary inspector's report, and without reference to, or consultation with, the medical officer of health. Sir WILLIAM PRIESTLEY therefore adhered to his amendment, and the LORD ADVOCATE, after listening to both lay and medical opinions, frankly yielded, and withdrew his own proposal. On other clauses in the Bill alterations were made on similar lines.

The success which has been met with in the report stage is most gratifying. The support which was received, not only from medical Members of Parliament such as Sir WALTER FOSTER, Sir WILLIAM PRIESTLEY, Sir CHARLES CAMERON, Dr. FARQUHARSON, and Dr. CLARK, but also from lay members interested in public health like Captain SINCLAIR, Colonel DENNY, Mr. BRYCE, and Mr. J. A. CAMPBELL, deserves every acknowledgement. The LORD ADVOCATE'S attitude, too, at least in the later stages of the discussion, was much more satisfactory than in Committee. And as regards Mr. CALDWELL there is no doubt, we think, that he was anxious to rectify the blunders which he had unwittingly committed in Clauses 22 and 36. His acquiescence in the reversal of his amendment on Clause 36 is noteworthy, and so also is his support of Sir WILLIAM PRIESTLEY'S amendment on Clause 22, and the vote which he both gave and "voiced" with regard to Clause 45. At this period of the session it is hardly likely that anything which has been gained in the Commons will be lost in the Lords, but even there vigilance will be necessary.

In the course of this discussion we have held that the interests of the public and those of the medical profession are identical. The public, however, could not be expected to be so much alive to the threatened danger, and the duty of informing Parliament has therefore fallen mainly upon the profession. The essential unity of medicine has been pleasantly shown in the ungrudging fashion in which the General Medical Council and the general practitioners have coöperated with the health officers in this work of educating Parliament. Medical societies and branches of the British Medical Association have vied in activity with the organisations specially representative of sanitary science. This is as it ought to be, and we doubt not that it will so remain. It would be an evil day alike for preventive medicine and for curative medicine if they became seriously dissociated from each other.

THE new Bill dealing with the re-constitution of the University of London has been introduced into the House of Lords and has passed practically without debate. On the second reading the Duke of DEVONSHIRE, as Lord President of the Council, stated that after prolonged negotiations with the various parties interested, the present Bill had been introduced as a workable compromise. Lord KIMBERLEY as a Fellow of the University of London, gave it his blessing. Its career in the House of Lords has been a very smooth one. It is in the House of Commons that difficulties will probably have to be met and overcome. We hope that the Government is really in earnest and intends to force the Bill through during the present session. We cannot pretend that the Bill is an ideal one or that it represents our views that a teaching university and an Imperial examining board should be kept apart. But if they must run together in double harness

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the arrangements in the Bill seem to us to be very well adapted to the purpose intended. Mr. COZENS-HARDY, as chairman of the Committee of Graduates generally approving the schemes of the COWPER Commission, asks that the scheme shall be supported, and this is re-echoed by Dr. T. B. NAPIER and Mr. J. B. BENSON, the chairman and secretary of the Gresham Amendment Committee. Mr. E. H. BUSK, as chairman of Convocation, also strongly recommends his fellow-graduates to support it.

There is no question that if London is to have a real university it must be established on some such lines as are suggested in this compromise. The idea of a teaching university on the Scottish or German plan is beyond the domain of practical politics whilst the present University and its Imperial examining board are in possession of the field. This Bill varies in some important points from those introduced in 1895 and 1896. The Commissioners have no longer a free hand in framing statutes and regulations provided these are in general accordance with the scheme of the report of the COWPER Commission, but a number of important details are placed in the Schedule of the Bill with which they cannot interfere. In Part I. of the Schedule the constitution of the Senate is laid down, and it is not only to be the supreme governing body but the Executive of the University. Three standing committees will have advisory powers only. First, the Academic Council consisting of the sixteen members of the Senate appointed by the Faculties, the three *ex-officio* members, and a senator or senators selected by the Senate to make the number of members up to twenty, this body forming the committee for internal students—i.e., students who have matriculated at the University and who are pursuing a course of study approved by the University in a school or schools of the University or under one or more of the recognised teachers of the University. Secondly, the Council for External Students, consisting of the sixteen members of the Senate appointed by Convocation—other than the Chairman of Convocation—the three *ex officio* members, and senators elected by the Senate to make up the number of members to twenty-eight. Thirdly, a Standing Board to promote the extension of University teaching to consist of the three *ex-officio* members and senators elected by the Senate. The *ex-officio* members of all these three committees are the Chancellor, the Vice-Chancellor, and the Chairman of Convocation. The constitution of Faculties, Boards of Studies, and the standard of the examination for the degrees as being equal for internal and external students are also authoritatively laid down. The certificates and diplomas will state whether the candidate has passed as an internal or external student. Inasmuch as every medical student must necessarily be an internal student, his position is not altered, but the change is of great importance in the Faculties of Arts, Law, and Science.

There can be no doubt that the opponents of the COWPER scheme have gained very substantial advantages in the present Bill. They have secured eighteen out of fifty-six members of the Senate instead of one-seventh; they have prevented the Academic Council having any executive functions, and they have also secured a position for the Council for the external students coördinate with that of the Academic Council for internal students. The constitution of the Statutory Commission could hardly be improved. Lord DAVEY (chairman) the Lord Bishop of LONDON, Lord LISTER, Sir WILLIAM ROBERTS, Sir OWEN ROBERTS, Professor JEBB, and Mr. BUSK (the chairman of Convocation) are so thoroughly versed in the various phases of the question of higher and technical education in London that it is almost needless to say that their names have been received with general approval.

A GREAT deal of ill-feeling has been engendered, and some scandal has been created, by the action which the Vestry of St. George's, Southwark, have taken with regard to the annual report of their medical officer of health. For some reason or other Dr. WALDO'S reports do not find favour with certain members of the vestry, and it is highly probable that this is, in part, due to the fact that Dr. WALDO does not commend the vestry for things which they ought to do, but have left undone. Under any circumstances the vestry, or one of their committees, proposed to revise the annual report and to print only so much of it as seemed good to them. According to the Order of the Local Government Board, dated Dec. 8th, 1891, every metropolitan medical officer of health is required to make an annual report comprising a summary of the action taken and of advice given for preventing the spread of disease, and comprising also an account of the general sanitary condition of the district at the date to which the report refers. There is also to be an account of inspections made, of conditions that are injurious to health, and of proceedings taken or advised as to numerous matters, including offensive trades, dairies, factories, workshops, &c., and this report must be sent by the medical officer of health to the Local Government Board. It will be obvious to every right-minded person that it is essential that this report shall be that of the medical officer of health, and not a report that has been tampered with and amended. This is as necessary in the interests of the public as it is for the purposes of the Local Government Board, for after all it is primarily the public interests and not those of the vestry that are in question in this annual report. It has, therefore, always been held that this annual report must not be altered by any person other than the medical officer of health himself; and it is the proposal to modify the reports of Dr. WALDO, or to subject the issue of them to a revising committee of the vestry, that has brought about the discreditable proceedings which have for some time past been in progress in Southwark.

At this stage of our remarks we would point out that directly any indication of supervision of annual or other reports by a health officer becomes apparent it will be policy on the part of that officer to confine his reports somewhat strictly to the instructions issued by the Local Government Board in the matter; for we are free to admit that we have in certain cases seen discussions and theses embodied in annual reports, of which a critical authority would have a right to say that they formed no proper part of such a document. And, further, we have seen annual reports of becoming dimensions padded out into a volume of quite undue bulk by a mass of appendices, some parts, at least, of which had no direct or even general bearing on the

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sanitary condition or administration of the district in question during the year under review. We do not refer to the Southwark case in this respect; for the vestry, finding that they have no power to edit Dr. WALDO'S reports according to their own liking, have adopted another method of preventing the publicity of this document: they have only printed sixty copies. One of these has presumably gone to the Local Government Board, and the remaining fifty-nine seem to be in the hands of members of the vestry and their friends, the consequence being that we have as yet not seen this report which has caused so much trouble in Southwark.

We do not propose here to discuss the legality of thus limiting the issue of the report, but we must point out to the ratepayers of St. George's, Southwark, that it is their place to see that the annual reports of their medical officer of health are not hidden away in this manner. The Government of this country has required the appointment of medical officers of health for the protection, and in the interests, of the public, and especially of that portion of the community which is least able to defend itself, and to demand that it shall be provided with means of decent and wholesome living. If the vestry have nothing to hide, in so far as they themselves are concerned, or if they think Dr. WALDO'S report contains matter which should not be embodied in such a document, then the proper course would be to print so much of it as constitutes the report, to circulate it widely, and to appeal to public opinion as to its being a proper and honest report. But by taking the step they have adopted they have gone far to convince many that the report contains matter which does properly find a place there, but which they, in their own individual interests, do not want to have exposed to the light of day and to the intelligent apprehension of their constituents. Whatever, therefore, be the reason of this misguided and puerile action, the members of the vestry themselves alone come under suspicion; and for that reason they had better abandon the unfortunate position into which they have drifted.

OUR Dublin Correspondent informs us that 124 cases of beri-beri have occurred in the course of a fresh outbreak of the disease in the Richmond Asylum, Dublin, and it is impossible to learn the serious nature of this recrudescence without anxiety. The reappearance in successive years of so grave and fatal an oriental malady in one of our national domestic institutions is a matter that deserves the most careful consideration, and one that demands the adoption with stringency of all such measures as experience has shown to be most likely to lead to good results.

The cause of beri-beri is unknown, for though all things point to a specific germ the exact organism has not yet been satisfactorily determined. The white staphylococcus of PEKELHARING and WINKLER, it is true, fulfils several of KOCH'S well-known postulates, which have to be satisfied by any germ claiming the honours of specificity, but the whole story has not yet been told. This is well shown by Dr. W. K. HUNTER in a contribution to our knowledge of the etiology of the subject, which will be found on page 240 of this issue, and which contains in addition to a clear account of some careful experiments an interesting *résumé* of the work of previous investigators. But although the discovery of a specific germ has yet to be made, we know perfectly well that where beri-beri has once broken out it is apt to remain, and also that overcrowding and bad ventilation are conditions which greatly favour its spread. In those Eastern countries where it is common it is a dweller on the threshold of gaols, and abides with communities where individuals live closely crowded together in defiance of health and decency. In addition to bad ventilation and overcrowding, it is also recognised that insufficient diet encourages the development of the disease. But it should be borne in mind that these conditions foster, but do not generate, beri-beri. The morbid entity which causes it must be imported into the locality in which the vicious environment prevails, an environment which is eminently favourable to the development of many other epidemic diseases. The first question, therefore, that must suggest itself to those seeking to control the outbreak in the Richmond Asylum is whether there is any evidence to associate its occurrence with any source of infection from countries where beri-beri is endemic; and, as far as we can learn, no connexion seems to have been traced. That the disease was originally brought to the asylum by patients or in food or clothing arriving from some Eastern country seems an inevitable conclusion, and of these infected food seems to us the more probable, for beri-beri is not contagious from person to person. But the infection once brought to the asylum we find that all the conditions which go to form a favourable soil for the development and persistence of the disease are present. The overcrowding is undoubted and the want of ventilation must follow. Sir THORNLEY STOKER, in a communication to a new Dublin paper, the *Daily Nation*, is quoted as saying that "not only is the whole institution overcrowded far beyond its normal accommodation, but that even the new wooden male building is not fit to receive more than half the number at present occupying it. Its two dormitories are at present occupied by 100 patients, although not suited to give sanitary accommodation to more than 50. The female permanent hospital contains as many as sixty-three patients, who have an average of 451·968 cubic feet of space each." Sir THORNLEY STOKER points out that the proper number of persons to be accommodated in such a space would be twenty-five only, and adds that in this wing a corridor is being used as a dormitory, and that the floor space is so over-occupied that of the sixty-three patients seventeen sleep on mattresses placed on the floor. We may take it, therefore, that the presence of the two factors universally allowed to perpetuate and foster beri-beri is established in the Richmond Asylum. Again, the conditions of asylum life altogether, apart from overcrowding and in the presence of perfect hygiene, are not unfavourable to the spread of a disease of low nervous type. With a vicious overcrowding the spread of the disease becomes inevitable when once it has been introduced. The persistency with which it clings to the unfortunate centre of infection is a repetition of what constantly occurs in its oriental homes. In the interests of humanity steps must be immediately taken to make the Richmond Asylum a properly built, properly drained, properly ventilated building for its purposes, and the work of construction must be thorough and must be preceded by all necessary destruction. An inquiry

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into the diet of the institution might also repay trouble spent upon it. One of the most important points known regarding beri-beri is the fact that it was practically banished from the Japanese navy simply by a change of diet. At one time the number of cases that occurred on board the Japanese men-of-war was so great as to practically threaten the efficiency of the navy. The change to a more liberal and different dietary almost immediately banished the scourge from the Japanese ships. It has also been found in Borneo that when work was rendered almost impossible by the number of deaths from beri-beri amongst the coolies, the labourers could be kept practically healthy by giving them a more liberal diet, and by generally taking care of their ordinary health.

We have very little doubt that nothing short of very stringent measures will suffice to root out the disease that has settled in the Richmond Asylum, and on the mere ground of economy it would probably be better to incur at once a heavy outlay than to endeavour to check the spread of the disease whilst the patients and the unaffected are still housed together in the infected building. The patients would, undoubtedly, have a better chance if removed to huts in an airy situation, and this suggestion need have no terrors for the community. We have said that beri-beri is not contagious from person to person, and this must be reassuring to the Dublin community. Medical men, both in this country and on the Continent, who have occasion to see invalids on ships coming from the East are alike agreed upon this. No one port has the exclusive privilege of producing examples of the malady, but in the seaport towns where it has been observed it has been usually confined to sailors, who have contracted the affection either in the tropical countries from which they have sailed, or on their passage home, or, and more rarely, shortly after their arrival. It has never spread from these sailors to the persons with whom they associated after landing, or who had care of them when they were sick. The element of contagion from person to person seems, therefore, to be so insignificant that it may be ignored.

Annotations

"Ne quid nimis."

THE PLAGUE AND THE POONA CRIMES.

IT is gratifying to learn, amid all the gloomy news we have of late had from India, that rain has fallen in most districts of the country, that the prospects as regards the future crops are good, and that the pressure and tension which have been caused by the famine are now greatly relieved. India is, we may confidently trust, successfully emerging from the series of severe trials to which she has been subjected. We are glad to learn, too, that a wholesome state of feeling has been exhibited by the greater portion of the native press in regard to the recent murderous outrages at Poona, and that these outrages have been strongly condemned. It is plainly the duty of the Indian Government to adopt strong measures for promptly putting a stop to all incitements to crime and disaffection on the part of the native press. The circumstances connected with the repression of the plague have been altogether exceptional. There has been the eternal conflict between Western civilisation and methods of procedure and oriental religious sentiment and tradition; and the obstacles and difficulties were great on both sides. There is nothing more repugnant to the native mind, nothing which Hindus and Mahommedans more resent, than any interference with the habits of their domestic life or their religious traditions and caste prejudices; and this is not to be wondered at considering all that the loss of caste means to them. On the other hand, it was absolutely essential in the interest of the natives themselves and of everybody concerned that restrictive measures of a hygienic nature should be carried out for controlling the spread of the epidemic. We may be quite sure that the European authorities were as loth to enforce these measures as the natives were opposed to the application of them; the strain was mutual, and based upon strong and honest convictions on both sides. Notwithstanding that the committees for carrying out the powers of the Epidemic Diseases Act were partly composed of natives, female nurses, and female medical practitioners, that they were undertaking a loathsome and perilous task, and that all possible precautions were taken, the action that had to be followed necessarily shocked the religious feelings of the natives and seemed to them a tyrannical interference with their sacred sentiments and customs. Our rule, and a belief in the justice of our conduct, were subjected to very severe strain. The occasion was of quite a different character to the Indian mutiny, for that in its origin and causes was of a military character, whereas this was mainly attributable to the wounded sentiments of the native population fanned by a portion of the disaffected native press. Still, it must be remembered that newspapers do not reach the vast majority of the teeming population of India, who are indifferent and very ignorant and occupied with their daily toil, but superstitious and sensitive to a degree in matters affecting their caste prejudice. When all the circumstances of the case are taken into account it will be seen that the situation was of a critical kind, not from any dimensions that the opposition to our action reached, but from its peculiar nature and the possibilities that lay hidden in it. British rule in India has received a slight but significant shock at Poona. There are so many unforeseen dangers connected with Imperial rule that it is well to be reminded of them from time to time "Lest we forget—lest we forget!"

WATER-GAS.

A DEPUTATION from the Manchester and Salford Sanitary Association recently presented a memorial to the gas committee of the city council expressing concern at the growing practice by municipal gas committees of using water-gas with coal-gas for illuminating purposes. It was pointed out that ordinary coal-gas owes its poisonous properties when respired to the 4 to 8 per cent. of carbon monoxide it contains. Water-gas contains from 40 to 45 per cent. of this gas, and when used to mix with coal- or oil-gas the percentage of carbon monoxide in the illuminating gas thus composed is raised to not less than 18 or 20 per cent., so that it is at least three times as poisonous as ordinary gas. "A person might be fatally poisoned even by a small proportion (as small as 0·5 per cent.) of the gas in air which was respired for some time." Dr. Dixon Mann and Mr. Thomson, the analytical chemist, spoke in support of the memorial, and impressed on the committee the need of warning consumers of the risk of leakage. Mr. Alderman Gibson, chairman of the committee, pointed out the difference between water-gas and water-oil-gas, which latter the committee intended to use. The reason for its use was that with the present plant it was scarcely possible to keep pace with the consumption, that "last year and the year before, making gas night and day, employing their fullest capacity, they were within twenty, or at most thirty, minutes of placing the entire city in darkness. ..... But starting

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and stopping the making of water-oil-gas was as easy and almost as expeditious as turning off a meter." He went on to say that starting in a morning they could supply 3,000,000 cubic feet in the afternoon to mix with their ordinary coal-gas, while four or five days would be required to do the same with coal-gas retorts. The replies received from London, Liverpool, Belfast, Birmingham, Edinburgh, Blackburn, Stockport, and elsewhere were to the effect that they had not the "report of one single case of poisoning by gas inhalation other than would have occurred by the inhalation of ordinary gas." He also added the remarkable statement: "America was the home of carburetted water-gas, and there were no complaints there as to accidents arising from its proper use." The deputation was asked "to trust the committee in this matter." As it would have been out of order for the deputation to have made any comments on these statements Dr. Dixon Mann wrote next day to the papers, showing how they differed from the report of Dr. Abbott, secretary of the State Board of Health, Massachusetts. The report states that previously to 1878 fatal accidents from breathing coal-gas were very rare, and that up to that time illuminating gas was not allowed to contain more than 10 per cent. of carbon monoxide. This law was repealed and water-gas introduced to an unlimited extent. "The consequence was that in Boston alone, with 450,000 inhabitants, in the year 1890 more deaths took place from illuminating gas than had occurred from the same cause during the preceding fifty years," and "in 1896 no less than forty-three deaths from the same cause occurred in Boston. Dr. Mann is a little satirical on the "profound emphasis" with which the chairman informed the deputation that water-oil-gas and water-gas are two different things, and how he and many members of the committee seemed persuaded that the ignorance of the public at large was fully shared by the Manchester and Salford Sanitary Association, while the committee ignored the fact that water-oil-gas is a mixture of the two, "the poisonous property of water-gas being simply diminished proportionally to the amount of oil-gas which the mixture contains." As Dr. Mann remarks, the objections to the use of water-gas are not only that it may quickly cause fatal poisoning, but because of the loss of health and the actual disease it may produce by chronic poisoning. If this gas is used all gas-fittings must be kept absolutely gas-tight, which we know, taking one house with another, to be a very rare occurrence. Sober-minded people would probably think it better to extend the gasworks than to flood the mains with, and drive through every faulty pipe and leaky fitting, this insidious and deadly compound. We may point out that the question was discussed some years ago in the Report of THE LANCET Sanitary Commission on Gaseous Fuel[1] where some interesting particulars will be found as to the manufacture of oil-gas and water-gas, and the method of mixing these with ordinary illuminating gas.

IMPORTANT DECISION UNDER THE NOTIFICATION ACT

AN important case has just been decided in the Plymouth County Court. Dr. Clay, having in several instances been called in as a consultant in cases of infectious disease, has felt it his duty to comply with the terms of the Infectious Disease (Notification) Act, to the effect that "every medical practitioner ..... called in to visit a patient" shall forthwith notify; and he has, in consequence, sent in a notification certificate in addition to the certificate already sent in by the usual medical attendant. But the Town Council have refused to pay for these duplicate notifications, and hence Dr. Clay took friendly proceedings against them in order to test the validity of their action. The County Court judge, after considering his judgment, has held that Dr. Clay had the duty of notifying under the terms of the Act, quite irrespectively of the fact that the case had already been notified. In our articles as to "Difficulties under the Infectious Disease (Notification) Act," since issued in the form of a pamphlet, we dealt specially with the question of "Multiple Certificates Relating to the Same Patient," and we quoted the view of the Local Government Board to the effect that "if ..... two practitioners are in actual attendance on, or are called in to visit, a patient, whether at the same period or successively, and their attendance or visiting is connected with the medical treatment of the patient, both are in strict law required to send certificates of notification, and these must be duly paid for by the sanitary authority." We need not discuss the question further here, because we have, as already explained, dealt with it before; but we may add that if no second certificate were to be given as regards the same patient nothing would be easier in our large towns than to evade the purposes of the Act. Patients have more than once been moved into rooms some distance away in the same sanitary district in order to escape what their friends deem to be the needless intervention of the officers of the local authority, and a fresh medical practitioner is called in. If such a practitioner, though having knowledge that a notification certificate had been transmitted by the previous practitioner, failed again to notify he would be liable under the Act to be summoned and fined. Indeed, it would be difficult so to contrive a clause that would ensure all needed multiple certificates being transmitted, whilst eliminating such as are not strictly needed, and therefore the clause was drawn as it stands.

CHICAGO SCHOOLS AND MEDICAL INSPECTION.

WE have received the report of the first medical inspection of Chicago Schools, taken under the supervision of Dr. A. Reynolds and Dr. Reilly, the Commissioner and Assistant Commissioner of Health for the city of Chicago. The time covered by the report covers the periods from Sept. 3rd, 1896, to June 30th, 1897, inclusive. The number of children in attendance was 272,000, in 572 separate buildings, and the work was placed in the hands of eight medical inspectors. Day by day every medical inspector was notified of the existence and locality of any case of infectious or contagious disease in his district, "whereupon he proceeded at once to ascertain if the patient had been in attendance at any school; if not, his duties terminated with seeing that the case was properly isolated and the necessary precautions against spread of the contagion or infection on the premises and in the neighbourhood were duly observed. If, on the other hand, the patient had been attending school, the school was at once visited and taken charge of by the inspector so far as relates to carrying out and enforcing precautionary measures against further spread of the disease, to the remedy of insanitary conditions on the school premises, &c. In cases of diphtheria and scarlet fever the throats of the children in the same room as the patient were examined after the method of Dr. Durgin, the teacher was instructed to watch for certain symptoms and to report their appearance to the inspector, and other appropriate action was taken and surveillance maintained as long as deemed necessary." As to the vaccinal condition of the children, 914 school examinations were made, covering a total of 90,220 scholars, and 47,310 vaccinations or re-vaccinations were performed. Of reported diseases diphtheria was the most prevalent, 744 individual cases among school children leading to the discovery of 2619 cases at home. There were 231 school cases of scarlet fever and 745 home cases. Stomatitis was found to be so prevalent in many schools that the inspectors advised teachers to

[1] THE LANCET, Nov. 25th, 1893.

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instruct pupils to bring their own drinking cups and to forbid the common practice of children sucking water taps. Numberless structural defects in school buildings were reported to the School Board and as far as possible remedied by them. Schools, as everyone knows, are a fruitful source of infection, and we congratulate Chicago upon the institution of regular inspection.

THE FLANNEL SHIRT CLUB.

IN THE LANCET of January 9th, 1897, we referred to the formation of this useful society, which has for its object the supply of flannel shirts to patients who may be discharged from hospital in a destitute condition. The first half year's report has just been issued, and we see from it that eleven metropolitan hospitals have participated in the alms of the society. Those hospitals which were not helped have guilds or funds of their own for the purpose. The first annual meeting was recently held at 5, St. James's-square, kindly lent by the Earl and Countess of Strafford. The Vice-president, Mrs. W. L. Courtney, made a graceful speech, and enthusiastic testimony was borne by many matrons and ward sisters to the benefits afforded to sundry necessitous male patients. We wish every success and prosperity to this society and may mention that shirts may be sent to Miss Lamport, 52, St. John's Wood-road, and subscriptions to Mrs. H. H. Clutton, 2, Portland-place, W.

THE THERAPEUTICS OF THE ANIMAL EXTRACTS.

THE complete success of the treatment of myxœdema by thyroid extract, which was introduced six years ago by Dr. George Murray, was naturally the beginning of a new era in therapeutics. The animal extracts have been extensively used for a large number of diseases, and the literature of the subject is already very extensive. But what has been established as to the value of this new form of treatment? A useful article by Dr. Francis P. Kinnicut in the *American Journal of Medical Sciences* of July well summarises the results up to the present time. What little appears to be established we shall state. The so-called successful results which remain and constitute a large part of the literature are such as are always reported of any new remedy to be followed only by disappointment. In cretinism the myxœdematous symptoms are readily removed by thyroid treatment. Bodily growth and mental development held in abeyance take place in a degree inversely proportional to the age. If the treatment is begun early in the disease the child will probably grow into a healthy adult. In a type of idiot somewhat resembling the cretin some improvement, physical and mental, has been obtained. Some benefit follows the treatment in goitre—especially in the h perplastic form. Large collections of colloid and cysts are not affected. But complete disappearance of the goitre has rarely been observed. In exophthalmic goitre an aggravation of the symptoms usually results. In obesity a loss of weight at the rate of from 2 lb. to 11 lb. a week is produced in some cases. After a time a limit is reached, beyond which further loss does not occur. As a rule, discontinuance of treatment is followed by relapse. In diseases of the skin the expectations entertained have not been fulfilled. In psoriasis definite results have been obtained in some cases; but even in these not better than by modes of treatment already in use. Of 48 cases of Addison's disease treated by suprarenal extract 6 were reported cured, 22 improved, 18 unimproved, and 2 aggravated. Thymus extract appears to be useless in exophthalmic goitre, but beneficial in the other form. Of 30 cases of goitre 20 were improved; but only 2 were cured. Of 13 cases of acromegaly treated with pituitary preparations 7 showed varying degrees of improvement, 5 none, and 1 became worse. In two the violent headache and neuralgic pains in the limbs were diminished. Decrease of the affected extremities occurred in one case.

AN INTERNATIONAL FIRE PREVENTION CONGRESS.

A MOST admirable movement is being organised which will meet, we are sure, with the hearty approbation of all. This is to call together an international congress to discuss the means to prevent and minimise fire in theatres, concert halls, and all other places of public resort where fire may be a source of danger. It is proposed to hold this congress in Paris, where it is hoped also that an international exhibition will be convened which shall illustrate all the appliances, inventions, products, and plans for the prevention of fire. We heartily recommend this proposal to those manufacturers, engineers, and inventors whose time and attention is devoted to the best means of preventing and suppressing fire, and we feel sure that they will be accorded every consideration, and that ample facilities for the exhibition of their appliances will be placed at their disposal in a building commensurate with the requirements and the merits of the exhibits. We repeat, the idea is an admirable one, and we wish it every possible success. Those whose interests are concerned and who have at heart the avoidance of those terrible disasters from fire, painful instances of which have occurred during the last twelve months, should cordially embrace the opportunity thus afforded them of doing a real service in the interests of the public, and should communicate with the British secretary, Mr. Frederick Hoare, of College-chambers, 249½, High Holborn. It is hardly necessary to add that the movement is very strongly supported in France, and we hope it will receive similar support here and in other countries.

THE RINDERPEST.

IN another column we publish a letter from Mr. H. A. Lawrance, F.I.C., in which he puts forward his position in connexion with the rinderpest controversy that is at present raging almost as severely as the disease itself in South Africa. Many of Mr. Lawrance's suggestions appear to have had little foundation, except on analogies between rinderpest and other diseases, but his letter bears evidence that he has followed the question with great care from the outset, and we think it a pity that he should not be allowed to give evidence before the Select Committee which is at present sitting at the Cape. We see, by the way, from recent telegrams that the Cape Government is now perfectly satisfied that Koch's method of preventive or protective inoculation is sound, and that under certain conditions good results may be expected from its use in affected districts. In the meantime the experts at the Cape are actively engaged in determining the exact conditions under which the bile and serum treatment is attended with the best results, and there can be little doubt that it is to these efforts that the good results obtained must, in part at any rate, be attributed. Whilst on this subject it may be well to point out that if Dr. Edington's statements as regards the persistence of the virulence of the infective agent in blood, mucus, &c., that have been desiccated hold good, we in this country should be on the outlook to prevent the introduction of the disease amongst our cattle through the medium of imported wool and hides. Due precautions are, no doubt, taken to sterilise the outer surfaces of bales of these commodities; but if the rinderpest organisms can retain their vitality in the dry wool and hair, the introduction of rinderpest from the Cape into this country may be simply a matter of time. A definite pronouncement on this point should be given at as early a date as possible, and we would

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suggest that a definite report as to the dangers of this mode of infection should be drawn up immediately.

FORMATION OF GALL-STONES ON SUTURES LEFT AFTER CHOLECYSTOTOMY.

IN the *Boston Medical and Surgical Journal* of July 1st Dr. J. Homans records the following case. Cholecystotomy was performed on a woman and ninety-seven gall-stones were removed. The gall-bladder was united to the peritoneum by silk sutures and drained. The patient made a good recovery and remained free from symptoms until twenty months after the operation, when they began to recur. Cholecystotomy was performed again and seven gall-stones were removed; they were found to have crystallised round the sutures, which had become detached and had dropped into the gall-bladder. Though cholecystotomy has been now performed many times we do not know of any instance in which this accident has happened.

TINNED FOOD.

IT cannot be doubted that certain foods preserved in tins afford an auxiliary and convenient source of food-supply which cannot well be dispensed with, and, that being so, any suggestion calculated to ensure the wholesomeness of the food so preserved is entitled to every consideration. We do not believe that the mischief that now and again arises from the consumption of tinned food is referable to the presence of metal. Tin is a comparatively harmless metal, while the iron over which it is veneered is quite free from risk. The lead in the solder employed may, however, give rise to poisoning, but we believe that so well is the sealing process done that cases of this kind are rare. The dangers of tinned food generally arise from an inherent change in the food itself, and there is no doubt that the longer the food is preserved the greater is the chance of its being unwholesome, while, as is well known, as soon as the food thus preserved is exposed to the air certain changes rapidly set in, and for this reason the food should be partaken of as soon as possible after the tin is opened. Dr. Sykes, the medical officer of health of St. Pancras, makes what would appear to be a useful and practical suggestion in his annual report, which is that the law should provide that all tins containing tinned food shall have stamped upon them the date of tinning. Assuming that the correct date of tinning were thus stamped upon the tin the public would be able to judge in some measure of the wholesomeness of the contents, since it is reasonable to suppose that the enclosed food would not improve on prolonged keeping. We trust that the suggestion will be brought before the notice and consideration of the proper authorities.

EPSOM COLLEGE.

WE are glad to note from the annual report of the Royal Medical Benevolent College for the year ending May, 1897, that the institution shows steady progress. There is an increase in the sum received from annual subscriptions; the amount of donations is satisfactory, seeing that a festival was not held in 1896; and the sum received on school account is larger than it has been for many years. A legacy of £300 for the endowment fund has been received under the will of the late Dr. Henry Fearnside, of Bournemouth, and the residue of the testator's estate is to pass to the College for the same object after the decease of Mrs. Fearnside. The re-building of the chapel is being proceeded with. Four exhibitions or scholarships have been won by students of the College. The health of the boys has been, on the whole, excellent, and the school has been quite full throughout the year. We are glad to be able to congratulate the council upon the continued prosperity which their report shows, and can only wish that it may long continue. Founders' day was held on July 26th, when, in the unavoidable absence of Lord Lister, the Rev. T. N. Hart Smith, the head-master, presided. Among those present were Sir Joseph Fayrer (Chairman of the Council), the Rev. E. W. Northey (deputy chairman), Dr. Constantine Holman (treasurer), Dr. Charles Browne, Dr. Charles Drage, Mr. J. F. France, Dr. J. H. Galton, Mr. Reginald Harrison, Mr. Christopher Heath, Dr. F. Needham, Dr. A. E. Sansom, Mr. L. Smiles, and Colonel Gordon Watson. The chairman announced that during the year the College had exceeded any previous record in the distinctions gained by boys direct from the school. Addresses were delivered by Sir Joseph Fayrer, Dr. Holman, and Mr. Christopher Heath. In the course of the proceedings it was announced that a cheque had been received from Lord Rosebery defraying the debt on the organ which had been erected in the new chapel.

THE SELECT COMMITTEE ON PETROLEUM.

AS might have been anticipated, the members of this committee, which has sat for a long time now, still find that their investigation is not complete. They were appointed to inquire into, and report upon, the sufficiency of the law relating to the keeping, selling, using, and conveying of petroleum and other inflammable liquids, and the precautions to be adopted for the prevention of accidents with petroleum lamps. It is regrettable that they have not yet arrived at any definite conclusions or recommendations, especially in regard to that clause in their inquiry relating to dangerous lamps. But it must be admitted that legislation in relation to the sale of lamps and oil will require the most serious consideration before any final plan can be adopted. Then, again, there is considerable diversity of opinion as to whether any extension of the Petroleum Act should apply to the construction of lamps or to the raising of the flash point of the oil. However, "at this late period of the session the committee are of opinion that it will not be in their power to conclude their investigation," so they have agreed "to report the evidence already taken to the House and to recommend that a committee on the same subject should be appointed early in the next session of Parliament." We regret that the committee have lost an excellent chairman in the person of the late Mr. Mundella.

THE MEDICAL WORK OF THE LONDON COUNTY COUNCIL.

THE address on the report of the London County Council for 1896-97 is of special interest to us on account of its being the first one delivered by the first medical chairman that body has elected. The works of the Council are so many and various that we have only space to mention those which more especially concern ourselves as medical journalists. And first on the list comes the Asylums Committee. The number of persons of unsound mind coming within the jurisdiction of the county of London is 13,526, as compared with 10,104 in 1890, and a new county asylum with 2000 beds is being erected at Horton Manor. Dr. Collins expressed a hope that before another year or so Londoners may expect the "excrescence of Holywell-street to be conspicuous by its absence." We do not see the use of pulling down Holywell-street unless the two churches of St. Mary-le-Strand and St. Clement Danes are sacrificed too, and even then Fleet-street and the Strand will be far too narrow for the traffic. Some of the host of omnibuses ought to be made to go along the Embankment and so relieve the congested streets. The Drainage Committee report that during the past year 2,184,500 tons of sludge were taken out to sea from Barking and Crossness and discharged into Barrow Deep, and we are glad to see that dredgings made at this spot gave no

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evidence of sewage pollution. The Public Control Committee report that cases of glanders have fallen continuously from 2336 in 1892-3 to 867 in 1896-7, which is very satisfactory, as a number of such cases have been reported by the use of mallein as a diagnostic. The committee on inquests, &c., has been doing very useful work. In the words of the chairman, "arrangements have been made, or are now approaching completion, throughout all the districts in London, which will practically obviate the necessity for holding any inquest amid the desecrating surroundings of the public-house. In coöperation with the various sanitary authorities good mortuary accommodation has now been provided in nearly all districts. Such mortuaries are increasingly used for the reception of bodies awaiting interment in other than inquest cases. The public are recognising the advantage of the removal of dead bodies, during the interval between death and interment, from crowded houses to decent mortuaries, where sentiment is respected and sanitation satisfied." This is good news to us, for it is a point upon which we have insisted for years. We shall deal later with the report as a whole, and must congratulate Dr. Collins upon the successful work of the great body over which he has been called to preside.

THE VENOMS OF THE TOAD AND SALAMANDER.

IT has long been known that both the toad and salamander are of a venomous nature. Shakespeare, as everyone knows, refers to the toad as a source of ingredient in the mystical mixing of a charm-producing preparation, and in one instance to a toad which had "sweltered venom sleeping got." Pliny also says of the salamander that "of all venomous beasts there is none so hurtful and dangerous." In a very interesting paper on this subject in the July issue of *Science Progress* Dr. Hewlett shows that the employment of preparations of the toad as remedies for dropsy is not so absurd as may at first appear, for, as he has shown, a substance is secreted by the skin very like digitalin, and hence possibly having a favourable effect in cases of cardiac dropsy. It would appear that the active principles of the venoms of the toad and salamander are totally different substances from those of snake venom, the former being alkaloidal, while the latter are proteid in nature. Curiously enough, the venom of the toad and salamander is fatal to the animal which secretes it, only in comparatively large amounts. The salamander appears to be remarkably refractory to certain poisons; it is only completely "curarised" by forty-three milligrammes of curare, while morphine is apparently quite inactive. It was demonstrated by actual experiment that the salamander's blood and blood serum act as an antitoxin towards curare. The paper is a very interesting one, not only as tending to throw light upon the action of poison, but in also showing that the belief of the ancients in the venomous nature of the toad and salamander was not altogether devoid of foundation.

THE FORTHCOMING CONGRESS OF THE SANITARY INSTITUTE.

THE preliminary programme of the Sixteenth Congress to be held in Leeds from September 14th to 18th, has now been issued. The President of the Congress is Robert Farquharson, M D Edin., LL D. Aberd., F.R C.P. Lond., M.P., D.L., J.P. The congress will include three general addresses and lectures; three sections, meeting for two days each, dealing with (1) Sanitary Science and Preventive Medicine, presided over by T. Pridgin Teale, M.A., M.B. Oxon., F.R.C.S. Eng., F.R S.; (2) Engineering and Architecture, presided over by Lewis Angell, M. Inst. C.E., F.R.I.B A.; and (3) Chemistry, Meteorology, and Geology, presided over by Wm. Whitaker, B.A., F.G.S., F.R.S.; and six special conferences, River Pollution, presided over by Major L. Flower, sanitary engineer, Lee Conservancy Board; Municipal Representatives, presided over by Councillor B. Womersley, chairman of the sanitary committee, Leeds City Council; Medical Officers of Health, presided over by Edward Seaton, M.D., F.R.C.P. Lond., F.C.S.; Municipal and County Engineers, presided over by Thomas Hewson, M. Inst. C.E.; Sanitary Inspectors, presided over by Peter Fyfe, F.R.S. Edin.; and Domestic Hygiene. In connexion with the congress a health exhibition of apparatus and appliances relating to health and domestic use will be held, and excursions to places of interest in connexion with sanitation will be arranged. These local arrangements are in the hands of an influential committee, presided over by the Lord Mayor of Leeds, with Dr. J. Spottiswoode Cameron, medical officer of health of the city, Mr. A. E. Pearson, M.R.C.S, L.R C.P. Edin., and Mr. W. Spinks, Assoc. M. Inst. C.E, as honorary secretaries. We understand that there are good reasons for expecting a large attendance.

CANCER CURERS.

MR. WILLIAM LENNOX WATSON is a lucky man. He is in possession of a receipt for the cure of cancer handed down from his father, and he gives his advice and the cure free—in which respect we must say he differs from the ordinary tribe of quacks. Like another celebrated benefactor, he does "good" by stealth, and blushes to find it fame, for, in explanation of his using the name of Hudson, he handed in a statement saying that he used and assumed the name because he was not proud of his connexion with the business. The cure consists of a plaster, in which the active ingredient is arsenic, and the plaster is to be applied to the skin after the epidermis has been removed by a blister. It is to remain on for fourteen days. Miss Blacker, for whose manslaughter Watson was indicted, against his instructions, kept the plaster on from May 13th until June 3rd, when she died from, as the post-mortem examination showed, arsenical poisoning. Absorption of the poison must have been rapid, for evidence was given that when in the train, returning to York on the day of application of the plaster, Miss Blacker was attacked with sickness and diarrhœa, which the accused stated in the letter was "quite the usual thing with the plaster." Mr. Justice Grantham summed up strongly in favour of the prisoner, and the jury returned a verdict of "Not guilty"—a verdict which appears to us to be absolutely wrong. Miss Blacker, we notice, was lured to her death by an advertisement in a religious paper. We have frequently commented before upon the way in which the so-called religious papers insert advertisements of quack remedies and those calculated to produce abortion, and we must say it is a disgrace for any paper, and especially a "religious" one, to prostitute its columns to such purposes. We can only express a hope that Mr. "Hudson" will not merely feel ashamed of his business, but will give it up for the future.

HEALTH OF THE ARMY IN INDIA.

WE think that all reasonable people may be congratulated on the altered tone which has of late characterised the discussion regarding the measures that should be adopted for limiting the spread of "the most serious, insidious, and lasting of all the contagious diseases that afflict humanity." As to the moral and religious aspect of the question, we have always contended that whatever might have been urged against the Contagious Diseases Acts, the benefit they conferred on the unfortunate women in this direction was very great. Detention in hospital gave an opportunity of their being reached by kindly moral influences and afforded them time for rest and reflection while their physical ailments were being treated. We know

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of no better or more practical way of conveying philanthropic and Christian influences to them than by carrying these to their bedsides when sick. Then, again, the order and decency of our streets were improved and their temptations lessened, and a wholesome restraint was imposed upon many vain, giddy, and thoughtless girls by the fear lest their conduct should attract attention. The opponents of all legislative action in regard to the spread of these diseases appear to think that all physical measures are incompatible with moral and religious methods of dealing with the evil. We would commend to the attention of our readers the excellent and exhaustive letter from Mrs. Louisa Herbert, which appeared in the *Times* of the 17th inst., wherein it is wisely said that "practical religion is really sanctified common sense." The recent speech made by the Lieutenant-Governor of the Punjab, Sir W. Mackworth Young, on the new policy proposed to be adopted by the Indian Government in regard to this form of contagious disease is also worth reading as indicative of the view taken by a conscientious man of strong religious convictions. All this shows that there is, at any rate, a growing disposition to look the facts in the face—from a prudent as well as a merciful and Christian point of view.

THE EXPLOSIVES ACT.

THE annual report of Her Majesty's Inspectors of Explosives for the year 1896 is again satisfactory. There can be little doubt that in this department of control this country leads the way. This is evident from the fact that the Governments abroad are constantly inquiring into the working of our Acts with a view to the improvement of their own. The number of deaths from accidents by fire or explosion connected with manufacture during the year was one only, which, as the inspectors observe, marks an extraordinary and most satisfactory contrast with the figures which obtained before the Act came into operation This result is all the more satisfactory when it is considered that not only has the actual number of factories largely increased, but in many cases the amount of output of an individual factory also, and consequently the number of hands employed and the resulting chances of accident. Further, the risks attending the preparation of explosives that are quite new, to the manufacture of which a large proportion of the recently built factories are applied, are less well known than those connected with the more familiar explosives, and therefore they are not so easy to provide against. And these results have been accomplished without any undue or even inconvenient interference with the trade. The number of accidents in the various industrial applications of explosives shows also a considerable decrease, namely, 134 against 152. The number of deaths from accidents of this class shows also a decrease, namely, 33 against 40, the returns this year being slightly below the decennial average.

THE EPPING FOREST GIPSIES.

FROM time immemorial the forests of Epping and Hainault have been the resort of wanderers and outcasts, and at the present time certain parts of the forest are infested by tent- and van-dwellers, who voluntarily keep without the pale of civilised society, and are generally a nuisance to the inhabitants around. Many attempts have been made to clear them from the forest, but hitherto without result; they have removed from one part only to become a nuisance in another. In 1894 the Essex County Council made a series of by-laws to prevent tent-dwellers, squatters, gipsies, or other persons from using as a dwelling-place so as to cause annoyance, injury, or disturbance to residents in the neighbourhood any tent or van or similar structure placed on any land within two hundred yards of any highway or street or of any dwelling-place. These by-laws were to apply to the whole county, but the Secretary of State refused to sanction them save for that portion of the county which is situated within the metropolitan police district. The result has been that the southern part of the forest, which is within the police district, has been practically cleared of gipsies, whilst the numbers in other parts have increased. At Lambourne End, a portion of the old forest of Hainault, there are about 200 squatters, who are causing great anxiety to the authorities. The county council appears to be powerless, and all the efforts made by the Ongar rural district council to dislodge them have been of no avail. When legal notices of any kind are served upon them they simply pack up their tents and remove to another portion of the forest. At the last meeting of the district council the Lambourne parishioners drew the attention of the members to the large increase in the number of gipsies and to the great nuisance caused by them. After a considerable amount of discussion, during which the action of the Secretary of State was adversely criticised, it was decided that the surveyor should obtain the "names of the gipsies and serve them with notices to provide sanitary appliances and a proper water-supply." The clerk urged that it would be better to worry the Secretary of State, as when the notices were served on the gipsies they would remove to another district for a time and then come back. This is, no doubt, what will occur, and we cannot but think that if reasonable by-laws were framed and the whole facts of the case laid before the Secretary of State his formal approval would be obtained. Until this is done there is little hope of remedying the present disgraceful condition of Hainault Forest.

THE LOUGHBOROUGH MEDICAL AID ASSOCIATION.

THE above association has recently been advertising for a duly qualified medical officer, salary £400 a year, with midwifery fees, which average about £30 per annum (the per case fee being 10*s.*), and a residence. At first sight this would seem to be fairly good pay as things go, but the medical officer is expected to provide a duly qualified assistant out of his receipts. From the medical report for the year ending December, 1896, we learn that 9035 visits were paid and an average of 120 prescriptions a day dispensed. The total receipts of the association were £1169 14*s.* 2½*d.* Adding up all the items debited to medical expenses—viz., salaries, midwifery fees, cab fares, rates, taxes, drugs, dispensing, bottles, rent, coals, gas (which we count as being all for medical purposes)—we come to a grand total of £726 11*s.* 0½*d.* Deducting this from the total we have £443 3*s.* 2*d.*, and if, to be perfectly fair, we deduct the secretary's salary, £126, and the auditor's fee, £1 10*s*, we have £315 13*s.* 2*d.* remaining over. This sum ought to be divided among the medical officers, except some small portion to be regularly applied as a sinking fund against loans or legal expenses. The secretary, we see, is also dispenser, and considering that he dispensed some 43,000 prescriptions he cannot be considered overpaid. The official balance-sheet shows a balance of £176 odd, and in our opinion a society that makes a clear profit of, according to its own accounts, £176 odd out of medical aid and dispensing, with a gross expenditure of just under £1200, can only be called by one term—namely, a sweating society. By the rules the medical officers must give their whole time to the association and shall not engage in private practice either professionally or otherwise (whatever that may mean) and shall provide their own instruments. A medical aid association, as we have often said, is only to be justified where the medical officers have a voice in the management of the affairs, a right of objection to the admission of members earning above a

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certain wage, and where the association does not tout for members. We do not see in this association why the medical officers should not receive the whole of the members' payments after deducting the cost of drugs and quarters, for the only benefit offered to members is medical service.

AT a recent meeting of the provisional committee of the movement for providing a memorial in Bristol of the late Mr. Greig Smith, it was resolved that in order to perpetuate the memory of the deceased surgeon an appeal should be made for subscriptions to provide a bust or medallion to be placed, if permission be obtained, in the Bristol Museum and Library or some other public institution; also that a medallion be placed in the operating room at the Bristol Royal Infirmary, and that the balance of the money collected be applied in assisting to carry out the scheme at the operation theatre drawn up by the late Mr. Greig Smith.

H.R.H. PRINCESS CHRISTIAN visited Norwood Cottage Hospital on July 16th, and then attended a garden party at the residence of the President, Mr. C. E. Tritton, M.P., where she received purses on behalf of the special Diamond Jubilee Fund in aid of the hospital. This fund was instituted early in the year, chiefly with a view to the support of the Hokkaido bed at the hospital and a bed at the Convalescent Home, Bexhill. It was stated that the subscriptions to it amounted to about £3000, a result which was largely due to the energy of Mrs. Gandy, wife of one of the surgeons.

AT the annual meeting of the St. Andrews Graduates' Association held at 11, Chandos-street, W., on Thursday, July 22nd, Dr. Cleveland, who had filled the office of chairman *pro tempore* since the lamented death of Sir Benjamin Ward Richardson, was elected President of the Council for the ensuing year. At the same time Sir Charles Gordon, K.C.B., and Sir Charles Gage-Brown were elected Vice-presidents of the Association.

WE regret to record the death, on July 22nd, of Dr. Henry Thompson at the advanced age of eighty-one years. Dr. Thompson at the time of his death was consulting physician to the Middlesex Hospital, having resigned the office of physician in 1879. He was also Senior Fellow of St. John's College, Cambridge.

THE medical service in State, under the auspices of the Guild of St. Luke, will be held this year in St. Paul's Cathedral on Oct. 19th at 7.30 P.M. The Archbishop of York will preach, and we are further informed that academical dress will be worn by members of the medical profession who are graduates.

THE Vice-Chancellor of the University of Cambridge (Dr. Alexander Hill) will preside at the annual distribution of prizes and certificates to the Students of the St. George's Hospital Medical School this year. The ceremony will take place in the new board-room of the hospital on Friday, Oct. 29th, at 3 P.M.

H.R.H. PRINCESS HENRY OF BATTENBERG, the Governor of the Isle of Wight, lays the foundation-stone to-day (Saturday) of the new buildings of the Royal National Hospital for Consumption and Diseases of the Chest at Ventnor.

THE proposals of the Indian Government with regard to the Secretary of State's despatch concerning the health of the troops in India have been published as a Parliamentary paper, and we hope to make some remarks thereon next week.

Pharmacology and Therapeutics.

ICHTHALBIN.

THE unpleasant taste and smell of ichthyol have, in England at least, presented serious obstacles to the internal use of this really valuable drug. Attempts have been made to disguise the odour by means of citronelle, coffee, and other substances, but unfortunately with only very partial success. The active principle of ichthyol is generally admitted to be sulpho-ichthyolic acid, which exists in it to the extent of 53 per cent. This acid Dr. Sack, of Heidelberg, has recently succeeded in combining with albumin, forming a brownish-grey powder insoluble in acids, but decomposed by alkalies. This substance has neither taste nor smell and contains 40 per cent. of sulpho-ichthyolic acid, so that three grains of it are about equivalent to four of ichthyol. It passes unchanged through the stomach, but in the alkaline media of the intestine it slowly breaks up into sulpho-ichthyolate of soda and peptone. It has proved useful in rachitis, anæmia, tuberculosis, syphilis, and in various intestinal affections, the digestion being improved, the bowels made regular, the appetite increased, and also—often to a remarkable degree—the body weight; in several cases of eczema in children, too, it has proved beneficial. Of course, it is hardly so well suited for external employment as ichthyol itself; nevertheless, it has been successfully applied to the anus for fissures and pruritus. The dose is said to be half a teaspoonful of the powder two or three times a day. It may be taken dry on the tongue and washed down with water or mixed with a little powdered chocolate in which way children like it best.

THEOBROMIN IN SENILE ASYSTOLIA.

Dr. Baronaki has found very great benefit from the administration of theobromin in cases of asystolia in old persons due to degeneration of the muscular walls of the organ. When, however, the asthenia depends upon lung or hepatic trouble this drug is of much less value. In order to obtain its full effect he puts the patient on a purely milk diet with 30 minims of tincture of digitalis *per diem* for four days. He then substitutes for the digitalis theobromin, which is prescribed in seven and a half grain powders every two hours during the daytime, so that six powders, or forty-five grains of theobromin, are taken during the twenty-four hours. The diuretic effects of this are generally observed after a few doses and the œdema and uræmic symptoms disappear. After this result has been obtained it is not advisable to continue the drug, as it is liable to produce sickness, giddiness, and mental excitement. It is best to order iodide of potassium, and then if the symptoms of asystolia reappear to repeat the course of digitalis and theobromin. In very grave cases, where the effect of the drug rapidly passes off and there appears to be danger in giving the digitalis too often, Dr. Baronaki has found the theobromin recover its diuretic power after venesection or scarification of the lower extremities. He has no doubt in his own mind that he has been able by this method to materially prolong the lives of several old persons who, from their appearance and symptoms, would, if treated in other ways, have very rapidly succumbed to an attack of cardiac asthenia.[1]

CARBOLIC ACID IN INFECTING CORNEAL ULCERS.

According to Dr. Geirsvold, a Norwegian practitioner, infecting ulcers of the cornea may frequently be very successfully treated by touching the surface with a Bowman's probe dipped in pure carbolic acid. Some of his cases were complicated by suppuration of the lacrymal ducts, and he was not obliged to use the thermo-cautery, curetting, or sub-conjunctival antiseptic injections.

SALICYLATE OF METHYL IN HERPES ZOSTER.

Dr. Chambard-Hénon of Lyons has found that the pain of herpes zoster may be very rapidly relieved by rubbing salicylate of methyl well into the healthy skin surrounding the eruption. In a case which he publishes he used eighty drops for each application. He lays waxed cloth on the surface and covers the whole with a layer of cotton wool and a bandage.

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[1] Semaine Médicale, p. 260.

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THE TWELFTH INTERNATIONAL MEDICAL CONGRESS.

MOSCOW: AUGUST 19TH—26TH.

Former Congresses.—The Beauties of Moscow.—"Our Lady of Vladimir" and the Ikon painted by St. Luke.—Biographical Notes of the Organisers of the Moscow Congress.

EXACTLY thirty years have passed since the first International Medical Congress was held. It was in Paris in 1867, when the earliest of those great exhibitions for which the French capital has since become so famous was about to be opened, that the idea arose of summoning such a conference. About five hundred medical men from foreign countries responded to the invitation, and in this modest way the series of triennial gatherings was inaugurated. Had the triennial interval been observed from the beginning the Congress which is about to meet in Moscow would have been the eleventh instead of the twelfth of the series. But it will be seen from the following little table that at first the interval between the successive gatherings was only two years, the change to three years having been made only in 1881. On two occasions the Congress has had to be postponed; in 1871 no Congress was held on account of the Franco-German War, and in 1893 the gathering was put off for one year on account of the cholera epidemic then prevailing.

Table giving the Dates, Places of Meeting, and Names of Presidents of the Previous Congresses.

Number of Congress.	Date.	Place of meeting.	Name of President.
First	1867	Paris.	Professor Bouillaud.
Second	1869	Florence.	Professor Salvatore de Renzi.
Third	1873	Vienna.	Professor Rokitanski.
Fourth	1875	Brussels.	Professor Vleminckx.
Fifth...	1877	Geneva.	Professor Karl Vogt.
Sixth	1879	Amsterdam.	Professor Donders.
Seventh	1881	London.	Sir James Paget.
Eighth	1884	Copenhagen.	Professor Panum.
Ninth	1887	Washington.	Professor Nathan Smith Davis.
Tenth	1890	Berlin.	Professor Virchow.
Eleventh... ...	1894	Rome.	Professor Baccelli.

The Twelfth Congress will be held in Moscow in this present year of grace between the dates of Aug. 7th (19th) and Aug. 14th (26th), the first dates being O.S. The President of the whole Congress has yet to be elected, but it may not be rash to prophesy that the choice will lie between Professor Skliffosowski and Professor Klein, the joint presidents of the Organising Committee. It will be observed that the number of European countries in which congresses have not yet been held is a rapidly diminishing one. At the last congress but one invitations for the present gathering were offered by the representatives both of Russia and of Spain, neither of which countries have as yet been the scene of congresses. The Russian invitation was accepted. The question whether the meetings should take place in Moscow or St. Petersburg was left entirely to the discretion of the Russians, and there can be little doubt in the mind of anyone familiar with the two cities that the choice of Moscow has been in every way the right one. Not but that, in the absence of a rival capital, St. Petersburg would have made an admirable centre for an international gathering of medical men. Lying proudly on the reclaimed banks of the Neva, with her massive palaces and cathedrals standing as firmly as if they were built upon rock instead of upon millions of piles driven into a marshy soil, she is the very type and embodiment of the triumph of man over the adverse forces of Nature. She can offer many sights of interest, and even of beauty, and for medical men the attractions in the way of large hospitals, cliniques, and scientific institutions of all kinds are numerous. But St. Petersburg is not Moscow. It is, perhaps, not without significance that in writing of great cities we should unconsciously speak of them in the feminine rather than in the neuter gender. A great city has a distinct physiognomy of its own, and in this, as in a woman's face, one instinctively looks for character and beauty. In both of these attributes Moscow is richer, not only than St. Petersburg, but than most other cities of the world. To have seen Moscow once is to acknowledge this—that to realise to the full her curious beauty and power of fascination she should be seen many times, under varying conditions as it were, in all her different moods. Moscow seen under an almost tropical July sun, when the Kremlin Hill, with its gold-capped cathedrals and towers and palaces, literally glitters like a gem-covered crown set in an enamelled field of red and green and gold and purple (for in such bright colours are the roofs of churches, houses, and monasteries painted), is one thing; but Moscow in winter, in a raging snowstorm, when the silence of the streets, the drifting clouds of grey powder, and the soft white covering which for a time blots out or tones down the occasionally too brilliant colours of tower and roof, lend an air of mystery to the scene, is another and no less beautiful thing. Moscow should be seen, if possible, at night, when the moonlight plays curious tricks with the gold domes and fantastic lights and shadows of the Kremlin. She should be seen (but this sight occurs but once in a lifetime) when, as in May of last year, the city has adorned herself in the most lavish decorations to welcome the Czar and Czaritza on the occasion of a coronation, and when the spectator is led to question which is the more beautiful, the city or the pageants enacted within her walls. And, lastly—perhaps the most wonderful sight of all—Moscow should be seen illuminated, with every tower and spire and wall and dome covered with a million lights, as on the three nights following a coronation. To have seen this in the warm twilight of a northern summer night is to have seen a spectacle such as few other cities could present. She will be in more sober guise next month, as befits the occasion of a learned gathering such as the Medical Congress and the part of hostess which she will be called upon to play. True to the traditions of Russian hospitality, Moscow has already made great preparations for the reception of her numerous visitors, and there can be little doubt that the coming Congress will yield to none of its predecessors in the care of the hosts to provide for the comfort and enjoyment of the guests.

But Moscow is not less historically interesting than she is externally beautiful. The city is thought to have been founded in the year 1147 by Prince George Dolgorukof, a son of Vladimir Monomach, who had married Gytha, the daughter of our own Saxon King Harold, the first and only Russian ruler who has married a purely English princess. It was in the fourteenth century that Moscow became the capital of Russia. Kief, the earliest capital, had given way to Vladimir, Vladimir was succeeded by Tver, and Tver yielded to Moscow in the reign of the first Ivan. It was this prince who made of Moscow a great city, and there are many traces of him still left. Two of the three cathedrals, those of the Assumption and of the Archangel Michael, were built by him almost as they now stand on the top of the Kremlin Hill. The further history of the city can scarcely be told here, full of interest though it is, without encroaching upon too great a space. Moscow has had to contend with many disastrous visitations—Tatar and Polish invasions, plague, fire, and famine. But she gallantly survived them all, and it was only at the beginning of the eighteenth century that she had to yield some of her laurels and privileges to her young rival, the new city built by Peter the Great, where the Neva flows into the Finnish Gulf. The submission has, however, been more apparent than real. It was at Moscow rather than at St. Petersburg that Napoleon struck his terrific but ineffectual blow in 1812, when the greater part of the city was voluntarily sacrificed to fire in order to save the country from falling into the hands of the enemy. And Moscow is still the *pervo-prestolnaia*, or primary capital of the Empire, the city where the Czars are crowned and christened, although the place of burial has long since been removed to the fortress church of St. Peter and St. Paul in St. Petersburg.

The great centre of interest in Moscow is the Kremlin. "What is the Kremlin?" is a question constantly asked. It should rather be, "What is a Kremlin?" Moscow is not unique in possessing one; they are to be found in several other old Russian towns—in Kazan, for example, and in Nizhni-Novgorod. But none of these have obtained the wide fame of the Moscow Kremlin, and deservedly so, for

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none can compare with it in size and magnificence or in historical interest. There is some doubt as to the exact meaning of the word itself; but it is thought to be derived from the same root as the word *Krépost*, a fortress, and the word *Krépkir*, strong. The Kremlin in Moscow is more than a fortress; it may best be described as an enclosed space, some two miles in circumference, surrounded by splendid walls, from twenty to fifty feet in height, with curious, almost bizarre, towers and gates at intervals. Within the enclosed space are found a number of important buildings, the "palais de justice," the arsenal, the Imperial palaces, old and new, more than one monastery and convent, the treasury of the Holy Governing Synod, the Bell-tower of Ivan Veliki (or Ivan the Great), the famous Great Bell of Moscow, and last, but not least, the three cathedrals, which, with bell-tower, crown the hill upon which the Kremlin is built. These three curiously beautiful churches represent, as it were, an epitome of the lives of the Czars. In the Cathedral of the Annunciation, the *Blagoviéshtchinski Sobor*, they are christened and, in accordance with the custom of the Eastern Church, receive the Communion immediately after the baptismal rite. In the Cathedral of the Assumption, the *Uspienski Sobor*, the Czar crowns first himself and then the Czarí'za. In the Cathedral of St. Michael the Archangel, the *Archangelski Sobor*, all the ancient Czars of Muscovy, down to the time of Peter the Great, lie buried.

The external aspect of the three miniature cathedrals is impressive and dignified, and this is particularly so in the case of the Cathedral of the Assumption, the largest of the three, whose tall, plain, white walls are relieved in their upper part by bright Byzantine frescoes. But the most lavish decoration has been reserved for the interior of the churches There can be few more beautiful things in Eastern Christendom than the interior of the *Uspienski Sobor*. The central of the five domes is supported by four pillars; and walls, domes, and pillars are entirely covered with frescoes. The effect is one of great richness and beauty. In preparation for the coronation of last year the whole series of frescoes was thoroughly cleansed and restored. The work was done with great care and judgment and under the auspices of the most learned and judicious authorities upon this beautiful art, so that the restoration, which was held to be a necessity, could not in all probability have been better carried out. And yet we may be pardoned perhaps for regretting the richer and more sombre effect that time, and doubtless a generous layer of dust, had lent the coloured surfaces before they were touched by the hand of the renovator. The *ikonostas* is, and always must be, one of the most beautiful features of the church. This, the great screen covered with ikons, or painted religious pictures, stretches across the cathedral from side to side, and divides the body of the church from the sanctuary behind it. There are five tiers of paintings in the screen, set in a gold framework, and some of them almost covered with gold, so that the hands and faces of the painted figures alone remain visible. In the lowest tier are many of the most famous ikons in Russia. Some are undoubtedly of a great age, and most of them have played a part in the history of the country. Like the frescoes on the walls, the figures are for the most part curiously stiff and archaic, but none the less full of that devotional character found in all Byzantine Christian art. Most venerated of all the ikons is a small one enclosed in a gilt shrine, and not always open to the inspection of the curious. The thick incrustation of rough-cut jewels with which it is covered indicates the veneration with which it is regarded by the rich; the worn look of the metal work just underneath the figure, where thousands of lips have been pressed in the act of kissing, show the respect and adoration paid to it by rich and poor; and the black, indistinguishable features and outlines of the painting are proof of its great age. It is even said to have been painted by the physician-evangelist, St. Luke himself, and so may be regarded with double interest by the followers of his honourable profession. The ikon represents the Madonna and child, and is known as the "Vladimir Mother of God" (*Vladimirskaia Bojaia Matj*); its shrine is on the left of the central doors of the ikonostas.

All the three cathedrals are rich in tombs and relics. Three of the four great historical patriarchs of Moscow, St. Peter, St. Jonah, and St. Philip, lie buried in the corners of the *Uspienski Sobor*. The Cathedral of the Archangel is full to overflowing of the velvet-covered sarcophagi of the ancient Czars. There are no tombs in the Cathedral of the Annunciation, but there is a most wonderful collection of saintly relics in this church—ulnas and tibias, carpal bones, and femurs in abundance, and many other parts of the human body, each in its own niche of large gilt and glass-covered cases. Each is inscribed with the name of the saint of whose earthly frame it once formed a fragment, and whose more spiritual part is long since "with the saints, we trust."

It is difficult not to linger in and about the cathedrals of the Kremlin. But there are a number of other interesting sights to be seen; there is the Bell Tower of Ivan Veliki to be climbed for those who are energetic enough to mount many hundreds of steps for the sake of a really fine view. There is the palace, of which the superb modern rooms and curious and interesting old rooms (in the so-called "*Terem*") ought certainly to be visited by a conscientious sightseer, who (like all conscientious sightseers) will be well rewarded for his pains. The Treasury of the Kremlin (*Orujeinaia Palata*) and the Treasury (*Riznitza*) of the Synod contain a wealth of beautiful things which must on no account be missed. The *Czar Kolokol* and *Czar Pushka* ("King Bell" and "King Cannon") are of such a size that they can scarcely be passed by unnoticed. Just outside the Kremlin is the extraordinary church of *Vassili Blajennui*, built by Ivan the Terrible, who, so runs the story, put out the eyes of the architect that he should never build another church to rival it. But for these and all the other sights of Moscow the reader must turn to the pages of his faithful "Murray," where he will find all possible information and help that he can require. Enough has been said to prove beyond question that, with so many interesting things to be seen in the intervals between the more serious labours of the Congress and the social engagements in connexion with it, no one who goes to Moscow this August need fear that time will hang heavily upon his hands.

The Russian Committee of the Eleventh International Congress, held in Rome three years ago, was presided over by Professor Pashutin, whose name has already been mentioned in these columns. When the Russian invitation to hold the next congress in the Empire of the Czars was accepted, Professor Pashutin formally addressed the Medical Faculty of the University of Moscow with the request that it would undertake the far from light duties of organising the Congress. The Faculty accepted the proposal, and a "Preliminary Commission," consisting of seven of the leading medical professors, was formed. In September, 1894, the Organising Committee of the Congress, consisting of all the professors in the Medical Faculty, under the presidency of the Curator of the Moscow Educational District, came into existence; and at the same time the executive committee, of eight members, under the presidency of the Dean of Faculty, Professor Klein, was elected. The executive committee consisted, in addition to the president, of Professor Kojevnikof, vice-president; Professor Erismann, general secretary; Professor Filatof, treasurer; Professor Diakonof, Professor Neiding, and Professor Tikhomirof, all with the title of secretaries; and Professor Ostrōumof and Professor Korsakof as members. In October of last year several changes were made in the constitution of these committees. The curator of the Educational District retired from the presidency of the organising committee, and was succeeded by Professor Skliffosowski; but in view of the fact that the new president resides in St. Petersburg (where he is in charge of the Helena Clinical Institute), Professor Klein was appointed joint president with him. Professor Roth succeeded Professor Erismann as general secretary, and Professor Ognef and Professor Shervinski were added to the executive committee from which Professor Ostrōumof had retired. It should also be stated that a large number of names had in the meantime been added to the organising committee, including those of the Rector of Moscow University, the mayor and vice-mayor of Moscow, Dr. Pashutin of St. Petersburg, Dr. Ragozin, the director of the Medical Department, Dr. Anrep, of the Women's Medical Institute, Dr. Lukianof, of the Imperial (once the Oldenburg) Institute of Experimental Medicine, Dr. Kudrin for the navy, Dr. Remmert for the army, and a large number of other prominent persons whose names are too numerous to mention.

The Congress was almost from the first under the patronage of His Imperial Highness the Grand Duke Serge, whose name is familiar to all Englishmen, and whose tall and commanding figure must have been seen by not a few at the time of the recent Jubilee, when, as on the like occasion in 1887, Russia was represented by him. The Grand Duke Serge is Governor-General of Moscow, and is married to a grand-daughter of the Queen, the Princess Elizabeth of Hesse, who is also a

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sister of the present Czaritza. Last winter His Majesty the Czar was graciously pleased to become a patron of the Congress, and he has still further shown his interest in it by consenting to receive deputations from all the countries represented at the Congress.

FIG. 1.



His Imperial Majesty the Czar of Russia, "High Protector" of the Congress.

The necessary expenses in connexion with the Congress were soon guaranteed. The Government granted an initial sum of 50,000 roubles, which has since been increased to 75,000 (equivalent to about £8000). The municipality of Moscow has also voted generous sums of money, and these have been increased by votes from the Government *zemstvo*

FIG. 2.



His Imperial Highness the Grand Duke Serge Alexandrovitch, "August Patron" of the Congress.

of Moscow and other sources. In addition to this, the Russian railways, nearly all of which are now under State management, have arranged to grant free railway tickets to Russian members of the Congress from any part of the empire, and to foreign members from any frontier town to Moscow and back.

The Office-bearers of the Congress.

Professor Nikolai Vasilievitch Skliffosowski, the President of the Organising Committee of the Congress, and one of the foremost of Russian surgeons, was for many years associated with the University of Moscow, but four years ago he accepted the appointment of Director of the Helena Clinical Institute in St. Petersburg, an institution which was recently briefly described in the pages of THE LANCET.[1] He is a native of

FIG. 3.



Professor N. V. Skliffosowski, Joint President of the Organising Committee of the Congress.

the "government" of Kherson, and a graduate of the University of Moscow, and for the five years immediately succeeding his graduation was surgeon to one of the large municipal hospitals in Odessa. After spending some time abroad in visiting the surgical schools of Germany, France, and England, Dr. Skliffosowski returned to Russia, and soon obtained the Chair of Surgery in the University of Kief. Two years later he was transferred to the corresponding chair in the Army Medical Academy in St. Petersburg. This appointment he held for ten years, and during this period two great European wars

FIG. 4.



Professor I. F. Klein, Joint President of the Organising Committee of the Congress and President of the Executive Committee.

occurred—the Austro-Prussian War of 1866 and the Franco-Prussian War of 1870–71. In both cases Professor Skliffosowski went to the seat of war and took an active share in the campaigns. In the Russo-Turkish hostilities of 1877 he took a no less prominent part in the capacity of "consulting surgeon" to the army of occupation on the Danube. In 1879 he was appointed Professor of Clinical Surgery in the University of Moscow. During eight of his fourteen years' tenure of this chair he was also Dean of the Medical Faculty. In 1893 he was transferred, as already mentioned, to St. Petersburg. Professor Skliffosowski has the honourable

[1] THE LANCET, July 3rd, 1897, p. 35.

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title of *Privy* Councillor, and he is the author of many monographs on surgical subjects.

Emeritus Professor Ivan Feodorovitch Klein, joint President with Professor Skliffosowski of the Organising Committee, and President of the Executive Committee of the Congress, is a native of St. Petersburg, but a graduate of Moscow. He finished his curriculum in the University of Moscow in 1861, and has never since broken his connexion with his *alma mater*. For three years he was assistant to the Professor of Pathological Anatomy; during 1864-69 he was prosector attached to the same chair; and since the year 1869 Dr. Klein has himself held this professorship. From 1869 to 1878 he was prosector in the hospital for suckling children attached to the great Foundling Hospital in Moscow; and for many years he filled the same post of prosector (or pathologist) to the Old Catherine Hospital, the hospital which formerly served as the University clinique. During 1870-78 Professor Klein was secretary to the Medical Faculty of the University of Moscow, and during 1878-80, and again from 1888 to the present time, he has been dean of this faculty. Professor Klein's published writings are numerous, and deal mostly with pathological subjects. Among them may be mentioned essays on "Thrombosis, Embolism, and Ichoræmia" (1863), on "The Etiology of Malignant Tumours" (1868), on "The Histology of Small-pox" (1869), on "Pelvis Spandylolisthetica Mosquensis" (1870), on "Hydrocephalus" (1871), on "Pericarditis" (1881), on "Disseminated Sclerosis" (1882), and many others. Professor Klein is also a Privy Councillor.

Professor Alexis Jacovlevitch Kojevnikof, Vice-president of the Organising Committee of the Congress, is a distinguished neurologist and alienist. A native of Riazan, Dr. Kojevnikof graduated in the University of Moscow in 1858. In 1860 he was elected assistant physician in the medical wards of the clinique, and three years later obtained a scholarship enabling him to carry on researches in the University laboratories and wards for a period of two years. In 1865 he took his M.D. degree, and in the following year was sent abroad at the charge of the University to spend three years in scientific work in other countries. He had already made the nervous system an object of special study, and in his three years abroad he worked under the first neurologists of the day in France, Switzerland, Belgium, Holland, and England. On his return to Russia he was appointed *privat-docent* in the nerve wards of the old clinique in Moscow. Neurology had at that time scarcely gained the position of an independent specialty, and Dr. Kojevnikof was the first professor of neurology appointed in any Russian university. When in 1884 the new university cliniques in

FIG. 5.



Professor A. J. Kojevnikof, Vice-President of the Executive Committee of the Congress.

Moscow were constructed the neurological and psychiatric wards were the first to be completed. In 1892 the Kojevnikof Neurological Museum in connexion with the cliniques was opened. It consists of a fine collection of anatomical and pathological preparations made by Professor Kojevnikof, and has been named after him. He was also instrumental in founding two large lunatic asylums—one of 400 beds, under the municipality of Moscow, and one of 600 beds, under the Moscow Government *zemstvo*. His influence as a teacher is shown by the fact that some years ago a small club was formed of the pupils and assistants of Professor Kojevnikof; and on the occasion of his twenty-five years "jubilee" the members dedicated to him a volume containing nineteen original essays on neurological subjects written by themselves. This club formed the nucleus of the "Moscow Society of Neuro-pathologists and Alienists," of which Professor Kojevnikof was elected the first president, an office which he still retains. He is a member of a large number of Russian medical societies and also of the Imperial Archæological Society, and a corresponding member of the Société Medico-Chirurgicale in Paris. His writings are numerous; they include observations on apbasia, lateral amyotrophic sclerosis, ophthalmoplegia, alcoholic paralysis, acromegaly, epilepsy, bulbar paralysis, and many other subjects (physiological, pathological, and clinical) connected with the nervous system. Many of his essays have been published in French and German as well as in Russian journals.

Professor Vladimir Karlovitch Roth, the general secretary of the Congress, is a native of Orel, and a graduate of Moscow, where he gained a gold medal for his prize essay upon Jaundice. He completed his curriculum in 1871, but remained in the university, working in the wards and laboratories of Professor Kojevnikof. Professor Roth had from the first devoted himself to the study of diseases of the nervous system, and in 1877 he went abroad for three years, visiting Paris, Berlin, and Vienna, hearing the lectures of the most renowned neurologists of the day, Broca, Claude Bernard, Charcot, Leyden, Frerichs, and others, and working in the laboratories of Vulpian and Virchow. In 1881 he was

FIG. 6.



Professor V. K. Roth, Secretary-General of the Congress.

appointed physician to the nervous wards of the Old Cathesine Hospital in Moscow; in 1891 he became assistant physician to the New Cliniques for Nervous Diseases; and in 1894 he was elected Extraordinary Professor of Neurology, the chair which he still holds. Professor Roth has published a large number of essays and observations on subjects connected with his speciality. In 1895 was published the first volume of his large and admirably illustrated work on "Progressive Muscular Atrophy," a subject which he has made his own, and upon which he has written a large number of articles and essays elsewhere. Lateral sclerosis, cerebro-spinal gliomatosis, acromegaly, myxœdema, neuralgia parsethetica, are some of the other subjects upon which Professor Roth has written, and in 1889 he described a new form of thermo-æsthesiometer in the pages of the *Progrès Médical*.

Professor Victor Vasilievitch Pashutin, as Director of the Army Medical Academy in St. Petersburg, and President of the Medical Council, fills two of the most honourable appointments obtainable in the profession in Russia. A native of Novotcherkask, in the territory of the Don Cossacks, he passed his student life in the Academy of which he is now the head. Even as a student his leaning towards the special

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subject to which he afterwards devoted himself—namely, experimental physiology and pathology—began to show itself, and before he had qualified he published observations which he had made in the laboratories of the Academy. He obtained the title of *lékar* in 1868 and the degree of M.D. in 1870. In the following year he was sent abroad at the cost of the Academy to work in foreign laboratories for three years. His selection by the Academy for foreign travel was itself an honour of no mean kind; such selection is almost always the forerunner of a successful career, and in the majority of cases leads to a professorship in the future. Professor Pashutin worked principally while abroad under Ludwig and Huppert in Leipzig and under Hoppe-Seyler and Recklinghausen in Strasburg. During this period he published a large number of physiological observations, principally in German journals. In 1874 he was appointed Extraordinary Professor of General Pathology in the University of Kazan. In 1879 he was transferred to the corresponding chair in St. Petersburg, which he held until further promotion in 1890 compelled him to resign it. In 1885 he was appointed Scientific Secretary of the Academy, and in the same year he was elected a member of the council of the Ministry of Public Instruction, where his weighty advice, particularly upon matters relating to medical education, has often been of great service to the

FIG. 7.



Professor Victor Vassilievitch Pashutin, President of the Medical Council, and Director of the Imperial Academy of Military Medicine in St. Petersburg.

profession. In 1890 he was appointed by Imperial command to the office of *Natchalnik* (Principal or Director) of the Army Medical Academy, an appointment which he still retains. In 1889 Professor Pashutin was elected a member of the Medical Council, the highest authority upon medical matters in the country; and in December of the same year he was named by Imperial command the President of the Council in succession to the late Dr. Zdekauer. He is honorary member of a large number of Russian medical societies in all parts of the empire. In 1896 he received the title of Privy Councillor. Professor Pashutin has been the recipient of several orders—the Stanislas of the First Class, the St. Anne of the First Class, and the Montenegrin order of Prince Danilo I. At the last two International Medical Congresses he has been the President of the Russian National Committee, and he is a member of the Organising Committee of the present Congress. Professor Pashutin's published works include two volumes of "Lectures on General Pathology" (1878 and 1881); a large and valuable work entitled, "Course of General and Experimental Pathology," two volumes of which have been issued, and which he hopes to complete this autumn; and some ninety essays and articles on many physiological and pathological subjects.

Professor Niel Feodorovitch Filatof, the treasurer of the Congress, is a native of Penza. He graduated in the University of Moscow in 1869. After spending some years abroad in Vienna and Prague he returned to Russia and devoted himself entirely to the subject of diseases of children. In 1876 he was appointed *privat-docent*, and in 1891 Professor of Pediatrics in the University of Moscow, and this chair he still holds. Professor Filatof's writings include a volume on "The Semeiology and Diagnosis of Diseases of Children," which has had four Russian editions

FIG. 8



Professor N. F. Filatof, Treasurer of the Congress.

and been translated into German, Hungarian, Czech, and Italian; "Infectious Diseases in Children"; a "Manual of Children's Diseases," which has reached a third edition; "Diseases of the Digestive Tract in Children"; and many other contributions to the subject of pediatrics.

Professor Peter Ivanovitch Diakonof, one of the secretaries of the Congress, was born in Orel, and is a graduate of the Army Medical Academy in St. Petersburg. In 1888 he was appointed *privat-docent* to the chair of Operative Surgery and Topographical Anatomy in the University of Moscow, and in 1893 was elected to the professorship in this subject. Professor Diakonof is also consulting surgeon to several of the large general hospitals in Moscow; he is president of the Moscow Surgical Society; editor of *Chirurgia*, a monthly magazine devoted to the subject which gives it its title; and author of many essays and observations upon surgical subjects.

We hope that the foregoing brief biographical notices of the organisers of the Moscow Congress will be of interest to our readers. Next week we shall issue a special and very fully illustrated supplement dealing with the History, past and present, of Medicine in Russia.

ADMISSION OF THE PRINCE OF WALES TO THE HONORARY FELLOWSHIP OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

WE have received the following official account of the proceedings at Marlborough House on July 19th, on the occasion of the admission of H.R.H. the Prince of Wales to the Honorary Fellowship of the Royal College of Physicians of London, which we have much pleasure in publishing. In reference to our remark, in a leading article last week on the subject, that "it had been an open secret in medical circles for some weeks that His Royal Highness might soon be expected to become a member of our profession by accepting a diploma from the College," it is now publicly stated that the Prince of Wales's election dates from a Comitia held on April 29th of this year.

The President (Sir Samuel Wilks, Bart.), the four Censors (Dr. Church, Dr. Cayley, Dr. Bastian, and Dr. Payne), the Treasurer (Sir Dyce Duckworth), and the Registrar (Dr. Edward Liveing) attended by appointment at Marlborough

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House in their College robes, accompanied by the Bedell with the College insignia.[1]

On the entrance of the Prince, after the officers had been presented to him, the President addressed His Royal Highness as follows:—

"Sir,—We, the President and principal officers of the Royal College of Physicians, have assembled here, in compliance with an intimation received of your Royal Highness's pleasure, to admit you to the Honorary Fellowship of our College, which you have been graciously pleased to accept.

"In fulfilment of my duty as President, and in accordance with the usage of the College, I have to ask your Royal Highness to give your assent to a declaration, which is in these terms: 'You give your faith that you will, as far as in you lies, maintain the honour and defend the rights of the College unimpaired.'"

The Prince willingly gave his assent, and then subscribed his name to the same form of words inserted in the Register of Fellows.

The President, again addressing His Royal Highness, formally admitted him a Fellow in the following words: "I, Samuel Wilks, President of the Royal College of Physicians of London, admit your Royal Highness Albert Edward, Prince of Wales, to the Honorary Fellowship of our College"; and, taking the Prince's hand, wished him "all happiness" in the name of the College.[2]

The Prince was then presented with a diploma on vellum, illuminated with the College arms, contained in a case of red morocco, and with a gold-headed cane, after the fashion of those formerly carried by physicians, with a vinaigrette in the head to ward off infection. These were graciously accepted and courteously acknowledged by His Royal Highness.

The following is the text of the diploma:—

SCIANT OMNES NOS,

SAMUELEM WILKS, Baronettum, Medicinæ Doctorem et Præsidentem Collegii Regalis Medicorum Londinensis, una cum consensu Sociorum ejusdem Collegii, auctoritate nobis a Domino Rege et Parliamento concessa, in Societatem nostram, honoris causa, cooptasse virum illustrissimum ALBERTUM EDVARDUM, Walliæ Principem, Cornubiæ Ducem, Nobilissimi Ordinis Periscelidis Equitem. In cujus rei fidem et testimonium Sigillum nostrum Commune præsentibus apponi fecimus.

Datum Londini in Collegio nostro die vicesimo nono mensis Julii, annoque Domini Millesimo octingentesimo nonagesimo septimo.

The President then addressed the following concluding words to the Prince: "And now, with your Royal Highness's permission, I should like to add a few words to my formal duties. Standing here as the representative of this ancient and learned body, I desire to assure your Royal Highness that the announcement of your willingness to join our Fellowship was received with the greatest enthusiasm and satisfaction by the Fellows. For remembering, as we do, that our College received its first Charter from the hands of King Henry VIII., and that the illustrious Harvey, who may be regarded as its second founder, was on terms of friendship with King Charles I.; and that during the two centuries which followed our annals show the close connexion which existed between many of our eminent Fellows and the Royal Family, until we reach the time when, through the influence of our President, Sir Henry Halford, with King George IV., the site of the present College was secured to us from the Crown; and that on the completion of the edifice its inauguration took place under the auspices of the Royal family, the Duke of York, accompanied by the other Royal dukes his brothers, being present on the occasion, and the King graciously conferring that day on our President the star of a Knight Commander of the Order of Hanover,—when we recall, I say, all those events it must be evident to your Royal Highness with what satisfaction the College sees that there is no abatement in the kindly feeling which has ever been shown towards us by the Royal Family, but that it is perpetuated by your illustrious name being now enrolled in our annals."

The Prince in courteous terms expressed the pleasure it gave him to be connected with so ancient and honourable a corporation, and then took leave of the President and officers.

[1] The mace and cushion; the College statutes, bound in velvet, with the Corporation seal attached; and the caduceus of Dr. Caius.

[2] The "omnia fausta precor" of the old Latin form.

THE MEDICAL, SURGICAL, AND HYGIENIC EXHIBITION.

AN exhibition of very general interest to the profession was opened this week in the Queen's Hall, Langham-place. Those who are responsible for this departure—and the committee includes the names of some of the leading druggists and surgical instrument makers—must be congratulated on the success which, judging from the excellent number of visitors present during the week, has attended their first venture. The Queen's Hall does not afford very much space for the arrangement of exhibition stalls, but although the exhibition could not be regarded as a very large one, yet it contained an admirable selection of drugs, sanitary appliances, surgical instruments, &c., with the improvements of which an exhibition of this sort affords the practitioner an excellent opportunity of becoming acquainted.

In the exhibits which we may classify under the section of drugs Messrs. Oppenheimer, perhaps, displayed the greatest variety of specimens. The exhibit included a most interesting collection of medical, surgical, and pharmaceutical antiquities lent to the association by Mr. William Oppenheimer. The collection comprised surgical instruments and terra-cotta votive offerings of ancient Italy, the instruments dating from the first to the fifth century. The collection also included a series of forty-three different implements found in the tomb of an "oculist," and there was also on view a large collection of ancient drop bottles, invalid cups, and feeding bottles, many of these being of Etruscan make. These were in curious contrast to the fine pharmaceutical products for which this firm is well known, the feature of the exhibit being, of course, the palatinoid and bi-palatinoid, which are of special service in administering unstable and nauseous drugs and the animal extracts. In Messrs. Warwick Brothers' small but interesting exhibit the chief thing shown was the iron "jelloid," in which, as we have found, the iron is preserved intact in the ferrous state, so that the jelloid presents an excellent and reliable form of Blaud pill. Mr. B. Kühn's exhibits included the new non-poisonous, non-irritant, yet powerful antiseptic, disinfectant, and deodorant, chinosol; anti-diphtheritic serum (Ruete-Enoch); tannalbin, ferropyrin, papain, diuretin, and ethyl chloride in handy metal cylinders for inducing local anæsthesia. Messrs. Potter and Sacker presented a very pretty exhibition, including Schieffelin's perfect pills, which are well-known for their general pharmaceutical excellence, solubility, and yet permanency of character. The exhibit included various suppositories and a well-prepared syrup of hydriodic acid. Messrs. Arthur and Co. showed some interesting new pharmaceutical additions. Of these might be mentioned extractum radicis pernionis, a preparation for the treatment of chilblains, itching, and bruises; a neutral non-saccharine fluid containing lime and iron, which is said to obviate the disagreeable effects of ordinary iron salts; iodoglycerol; and the following iodine preparations which are said not to produce iodism—iodotannin, iodogelatin, iodovitellin, and iodoalbumin. Messrs. Hockin, Wilson and Co.'s exhibit included their well-known special pharmaceutical preparations, amongst which should be mentioned the excellent combinations of podophyllin with pepsin or belladonna with strychnine. Excellent specimens of pharmaceutical advance were illustrated in the exhibit of Messrs. Kirby and Co. in the various kinds of pills coated with "pearl," sugar, gelatin, gold, and silver. An enormous assortment of extracts, tablets, and drugs was displayed on the stall of Messrs. Parke, Davis, and Co., while the feature of Messrs. Cooper and Co.'s exhibit was the pretty cachets, which consist of flexible, tasteless, and easily soluble wafer capsules for the administration of drugs. Mr. Martindale's stall gave evidence of his determination to keep pace with modern requirements. Of the novelties in Messrs. J. F. MacFarlan and Co.'s exhibits should be mentioned the silk sutures and catgut ligatures, the latter being put up in the form of balls, as suggested by Dr. Charles Cathcart. The exhibit, of course, included this firm's well-known purified chloroform. Close by was a display of certain members of the aromatic series, by the Fleming's Oil and Chemical Company, and chiefly those employed as antiseptics and insecticides. It included ammoniated camphylene cream, moth preventives, and various carbolic preparations.

The bulk of the displaying space was undoubtedly devoted

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to surgical appliances and instruments, and this section attracted considerable interest. No less than twenty-one firms contributed to this collection. They included Messrs. Maw, Son, and Thompson, of 7 to 12, Aldersgate-street, E C. (aseptic instruments, clinical thermometers, syringes, india-rubber goods, &c.); Messrs. Claudius Ash, and Sons, Limited, of 5 to 9, Broad-street, Golden-square, W. (dental requisites, nitrous oxide gas appliances, &c.); Messrs. Mayer and Meltzer, of 71, Great Portland-street (gynæcological instruments and aseptic appliances); Messrs. John Weiss and Son, of 287, Oxford-street, W. (aseptic instruments, operating tables, &c.); Messrs. K. R. Schramm and Co., of 24, Great Castle-street, W. (orthopædic appliances); Messrs. John Bale, Son, and Danielsson, of Great Titchfield-street, Oxford-street, W. (anatomical diagrams, clinical figures, &c.); Messrs. Evans and Wormull, of 31, Stamford-street, S.E. (army medical equipments); Mr. W. K. Stacy, of 4, Newgate-street, E.C. (various hospital accessories); Mr. K. Schall, of 55, Wigmore-street, W. (electrical apparatus, including that for the x-ray work); Messrs. J. G. Ingram and Son, of Hackney Wick (rubber goods, enemas, syringes, &c.); the Lattice Elastic Stocking and Mavette Co., of 70, Fenchurch-street, E.C. (varicose vein appliances, chest protectors, and binders); Miss Webb, of Bournemouth (hospital and massage gown obviating movement on the part of the patient and useful in surgical cases); Messrs. Coxeter and Son, of Grafton-street, Gower-street, W.C. (gynæcological instruments, anæsthetics, inhalation and electrical apparatus); Mr. Frank A. Rogers, of 327, Oxford-street, W. (sprays, anatomisers, and injecting apparatus); Messrs. T. Burberry and Sons, of 30, Haymarket ("urber," a mackintosh substitute); Messrs. Down Brothers, of 21, St. Thomas's-street, S E. (every conceivable form of surgical instrument); Messrs. C. J. Plucknett and Co., of 25, Poland-street, Oxford-street, W. (dental appliances); Messrs. W. H. Bailey and Son, of 38, Oxford-street, W. (surgical instruments, enemas, douches, bed-pans, ear-trumpets, &c.); Messrs. Nehmer Brothers, of 27, Sekforde-street, Clerkenwell, E.C. (new electrical apparatus to take the place of batteries for medical purposes); Messrs. T. J. Syer and Co., of 45, Wilson-street, Finsbury-square (operating table and couch, and invalid accessories); and Mr. F. Davidson, of 120, Great Portland-street (simple sight-testing apparatus for the general practitioner).

Sanitary appliances were well and widely represented. One of the most interesting exhibits coming under this classification was that of Messrs. J. Defries and Sons, Limited, of 147, Houndsditch, E.C., who illustrated the application of the Pasteur filter both on the small and large scale. The exhibit, in addition, comprised the Equifex saturated steam disinfector, steam sterilisers, and some cultures of pathogenic organisms. Some good things were shown by the Liverpool Lint Co., of Netherfield-road (North), Liverpool, amongst them being flax and cotton lints, bandages, carbolised tow, and "first-aid" dressings. Messrs. S. F. Goss, Limited, of 201, Regent-street, showed a high-class collection of toilet appliances and preparations adapted to modern medical requirements, and which they describe as "free from quackery." Close by was the stall of the Sanitary Wood Wool Co., of 26, Thavies-inn, Holborn-circus, E.C., where Hartman's patent wood wool preparations could be inspected. These, as is now well known, are applied for all conditions wherever antiseptic treatment is needed. Messrs. Tidman, Son, Limited, brought to the notice of the visitors their sea salt, sea soap, salicylic soap, and creamoline soap. The Lawes Chemical Co., of 59, Mark-lane, E.C., displayed to advantage their comparatively non-poisonous disinfectant fluid, which neither stains nor burns. Other disinfectants were shown, as, for instance, formalin, by the Formalin Hygienic Co., of 9 and 10, St. Mary's-hill, E.C., which may now be applied in various forms for all purposes of disinfection and sterilisation. The more well-known and time-honoured disinfectant, chlorine, was shown in improved form as bleaching powder by the United Alkali Co., of Exchange-buildings, Liverpool. Their preparations are a great advance on the old bleaching powder. The interesting absorbent material now prepared from peat by the Peat Industries Syndicate, of 15, Walbrook, E.C., was shown in various hygienic forms, as, for example, accouchement sheets, dressings, sanitary towels, &c. The great advantage of this eminently absorptive material is that in itself it is distinctly clean as well as antiseptic. The Whitely Exerciser Co., Limited, of 20 and 21, Laurence Pountney-lane, Cannon-street, E.C., exhibited an ingenious little contrivance providing an infinite variety of exercises and adapted for exercising in a small space; it may even be used by bed-fast patients. Messrs. D. Blair and Co., of 47, Cannon-street, E.C., showed their "Instra" Warmers, which are very handy and convenient for all purposes of local warming; they have already been accorded a favourable account in our columns. "Autosprays" are the patented invention of the Medico-Hygienic Inventions Company, Limited, of 63, Queen Victoria-street, E.C., which are well worthy of mention. These consist of solutions of a variety of remedies, agents for immediate application, in the form of a fine spray. In this exhibit also Trillat's system of aerial disinfection was illustrated, and preparations suitable for use in the system were shown. The comparatively rapidly-acting yet sterilising filter of the Berkefeld Filter Company, of 121, Oxford-street, W., was shown in action, and afforded an attractive exhibit. Messrs. Newton, Chambers, and Co. displayed several Izal preparations, the active constituent, though a powerful antiseptic, being otherwise quite innocuous. Lastly, Messrs. Ewart and Sons, of 346, Euston-road, N.W., gave an excellent demonstration of the advantages of their "Geyser," which, as was shown, could be applied for all domestic purposes.

(To be concluded.)

THE HOSPITAL REFORM ASSOCIATION.

THIS youthful though energetic association held its first annual dinner at the Holborn Restaurant on July 26th, Dr. WARD COUSINS being in the chair. Some sixty members and others interested in hospital reform were present.

In proposing the toast of the Hospital Reform Association Mr. LOCH referred to the fact that the staffs of hospitals were not sufficiently in touch with the outside practitioners. If all the organisations and societies in a given district knew what they were severally doing, and could communicate the one with the other, it would go far to eliminate some of the worst instances of hospital abuse. In a great many instances he thought that out-patients should, after having been seen once, be referred back to their usual medical man.

The Chairman and other members, in responding to this toast, all laid stress upon the lack of supervision of out-patients as to whether or not they were fit subjects for relief. Although in many instances the general practitioner abused the hospital by sending patients to a hospital to save himself trouble, yet a great part of the blame lay with the staffs of hospitals who saw any patient who might come without inquiry.

Dr. GLOVER thought the abuse of hospitals one of the most serious questions now before the public and perhaps the most serious one before the profession. In various relations he had had to study it. As a member of the Council of the Metropolitan Hospital Sunday Fund he had directed attention to it and would continue to do so, for it was still undisposed of in that body. He was at the meeting that night as the representative of THE LANCET, whose deep interest in the question was shown by a series of investigations which had more than anything else set the truth on this subject before the profession and the public. The medical profession had a deep interest in the right administration of medical charity, for the profession itself, apart from hospitals, did half the medical charity of the country. Finally, he impressed on the association that their success must depend on securing the support of the united profession. They, as general practitioners, could not act efficiently without the help of the medical staffs, for without their aid hospitals could not be conducted, and their interests could not be separated from those of the profession at large.

Mr. TIMOTHY HOLMES mentioned that he was, perhaps, the only surviving member of a committee which sat in 1871 to consider the question of hospital abuse. There were a number of eminent persons upon it, and they did—nothing. He thought that every hospital should be restricted to its own district and be a great centre of charity for that district; it should be in touch with the general practitioners in the neighbourhood, and they should be able to look

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upon it as a centre whence advice and help could be obtained. Such a scheme, he thought, would be of benefit to both patient and medical man. With regard to the abuse of the letter system, that had been given up at St. George's Hospital for the last thirty years.

The proceedings ended with the usual complimentary toasts. A notable feature of nearly all the speeches was the number of complimentary references to the work done by THE LANCET in its inquiry into club practice and the like. It was cheering too to see how men from the provinces as well as metropolitan medical men were all agreed as to the necessity of in some manner curbing hospital abuses. We can only wonder how it is that this evil has been allowed to attain to such proportions not only under the eye of the profession, but with its very connivance and assistance; but the fact is obvious. Men holding hospital appointments and more or less represented on the managing boards of hospitals have looked passively on while the canker of abuse has grown until it almost defies control, and it has become a difficulty now to convince hospital authorities that there is any evil to be remedied. Familiarity breeds contempt, and they have become so accustomed to crowds of patients as to regard them as a credit and ornament to their respective hospitals. Such crowding leads to the very evils which are rightly complained of as being present in club and medical aid societies' practice. Careful observation, discrimination of cases, and the personal factor are all wanting and impossible in the presence of such numbers of patients, so that cases that need help, and further help than mere medical attendance, cannot be particularly attended to. This is the very discredit of a charitable institution, to invite a promiscuous crowd, pauperising the well-to-do, and not extricating from pauperism the really poor. The present year is likely either to fasten this curse of hospital pauperism on the public and the profession with a tight grip or to see a change in the administration of hospitals. The whole profession is interested in seeing this change effected without delay, and can either compel the reform, leaving intact all that is good in the hospital system, or it can, by apathy and divided counsels, give the evil a fresh lease of existence.

THE INTERNATIONAL CONGRESS OF NEUROLOGY, PSYCHIATRY, MEDICAL ELECTRICITY AND HYPNOLOGY.

THE first session of this Congress will be held at Brussels from Sept. 14th to 19th, 1897, under the presidentship of Professor Verriest of Louvain. The general secretary is Dr. Crocq, of the Molenbeek Hospital, whose address is 27, Avenue Palmerston, Brussels. All authors of personal contributions are requested to send a summary of their contributions to the general secretary as soon as possible. We subjoin the official programme so far as it has been at present decided.

QUESTIONS SUBMITTED FOR DISCUSSION.

NEUROLOGY.

I. The Surgical Treatment of Epilepsy: its Indications and Consequences. Reporter: Professor Winkler, of Amsterdam (Holland).

II. Pathogeny and Treatment of Exophthalmic Goitre. Reporter: Professor Eulenburg, of Berlin (Germany).

III. Pathogeny and Semeiology of Reflexes. Reporter: Professor Mendelssohn, of St. Petersburg (Russia).

IV. (Subject not yet decided.) Reporter: Professor Oppenheim, of Berlin (Germany).

V. Influence of the Delivery on the Nervous and Mental Diseases presented later by Children. Reporter: Professor Anton, of Graz (Austria-Hungary).

VI. Pathogeny of Muscular Rigidity and of Contracture in the Organic Affections of the Nervous System. Reporter: Professor Van Genuchten, of Louvain (Belgium).

PSYCHIATRY.

I. On the Diagnostic Value of the Prodromic Symptoms which long Precede the Manifestations of General Paralysis. Reporter: Professor Thomson, of Bonn (Germany).

II. Psychoses and Dreams. Reporter: Dr. Sante de Sanctis, of Rome (Italy).

III. On the Modifications of the Morbid Type of Progressive Paralysis of the Insane during the last Thirty Years. Reporter: Professor Mendel, of Berlin (Germany).

IV. On the Relations between Psychoses, Mental Degeneration, and Neurasthenia. Reporter: Dr. Lentz, of Tournai (Belgium).

MEDICAL ELECTRICITY.

I. The Semeiological Value of Electrical Reactions of Muscles and Nerves. Reporter: Professor Doumer, of Lille (France).

II. The Therapeutical Value of High Frequency Currents. Reporter: Professor Bergonié, of Bordeaux (France).

HYPNOLOGY.

I. The Therapeutical Value of Hypnotism and Suggestion. Reporter: Dr. Milne Bramwell, of London (England).

II. The Question of Criminal Suggestions: their Origin and Actual State. Reporter: Professor Liegeois, of Nancy (France).

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6543 births and 4060 deaths were registered during the week ending July 24th. The annual rate of mortality in these towns, which had increased in the three preceding weeks from 14·7 to 16·6 per 1000, further rose last week to 19 3. In London the rate was 20·0 per 1000, while it averaged 18·8 in the thirty-two provincial towns. The lowest death-rates in these towns were 10·1 in Derby, 10·3 in Croydon, 10·9 in Swansea and in Halifax, and 12·8 in Huddersfield; the highest rates were 22·5 in Birmingham, 24 9 in Salford, 25·3 in Sheffield, and 26·4 in Liverpool. The 4060 deaths in these towns included 904 which were referred to the principal zymotic diseases, against 504 and 572 in the two preceding weeks; of these, 526 resulted from diarrhœa, 153 from measles, 92 from whooping-cough, 60 from diphtheria, 48 from scarlet fever, 25 from "fever" (principally enteric), and not one from small-pox. No fatal case of any of these diseases was recorded last week in Halifax; in the other towns they caused the lowest death-rates in Brighton, Swansea, and Derby; and the highest rates in Salford, Portsmouth, Sheffield, and Preston. The greatest mortality from measles occurred in Birmingham, Manchester, Burnley, Salford, and Preston; from whooping-cough in Oldham, Sheffield, and Sunderland; and from diarrhœa in Leicester, London, West Ham, Portsmouth, Liverpool, Birkenhead, and Sheffield. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 60 deaths from diphtheria included 42 in London, and 4 in Liverpool. No fatal case of small-pox was registered last week in any of the thirty-three large towns, and no cases of small-pox were under treatment during the week in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2976, against numbers increasing from 2380 to 2903 on the twelve preceding Saturdays; 396 new cases were admitted during the week, against 310, 349, and 381 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 116 and 138 in the two preceding weeks, further rose last week to 158, but were 22 below the corrected average. The causes of 58, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Oldham, Leeds, Hull, Newcastle-upon-Tyne, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Norwich, Liverpool, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·7 and 17·9 per 1000 in the two preceding weeks, further rose to 19·5 during the week ending July 24th, and slightly exceeded the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 12·8 in Aberdeen and 15·2 in Greenock to 23·9 in Perth and 25·6 in Leith. The 580 deaths in these towns included 37 which were referred to whooping-cough, 35 to diarrhœa, 15 to measles, 7 to "fever," 5 to scarlet fever, and 1 to diphtheria. In all, 100 deaths resulted from these principal zymotic diseases, against 82 and 80 in the two preceding weeks. These 100 deaths were equal to an annual rate of 3·4 per 1000, which was 0·9 below the mean rate last week from the same diseases in the thirty-three large English towns. The 35 fatal cases of diarrhœa showed a further increase upon the numbers recorded in recent weeks, and included 20 in Glasgow and 7 in Dundee. The deaths referred to whooping-cough, which had increased from 16 to 23 in the three preceding weeks, further rose to 37 last week, of

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which 19 occurred in Glasgow, 7 in Edinburgh, and 6 in Dundee. The 15 fatal cases of measles exceeded by 3 the number in the preceding week, and included 8 in Leith, 4 in Glasgow, and 3 in Edinburgh. The deaths referred to different forms of "fever," which had been been 10 and 3 in the two preceding weeks, rose again to 7 last week, of which 2 occurred in Glasgow, where 3 of the 5 fatal cases of scarlet fever were also recorded. The deaths from diseases of the respiratory organs in these towns, which had been 69 and 68 in the two preceding weeks, rose again to 87 last week, and exceeded by 21 the number in the corresponding week of last year. The causes of 38, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the three preceding weeks from 20·3 to 24·2 per 1000, declined again to 23·3 during the week ending July 24th. During the past three weeks of the current quarter the death-rate in the city has averaged 23·0 per 1000, the rate during the same period being 17·1 in London and 20·2 in Edinburgh. The 156 deaths registered in Dublin during the week under notice showed a decline of 6 from the number in the preceding week, and included 20 which were referred to the principal zymotic diseases, against 9 and 11 in the two preceding weeks; of these, 7 resulted from diarrhœa, 4 from whooping-cough, 3 from measles, 3 from diphtheria, 2 from scarlet fever, and 1 from "fever." These 20 deaths were equal to an annual rate of 3·0 per 1000, the zymotic death-rate during the same period being 4 6 in London and 2·8 in Edinburgh. The 7 fatal cases of diarrhœa considerably exceeded the numbers recorded in recent weeks. The deaths referred to whooping-cough, which had been 2 and 3 in the two preceding weeks, further rose to 4 last week. The mortality from "fever" showed a decline, while the deaths from measles, scarlet fever, and diphtheria exceeded those recorded in the preceding week. The 156 deaths registered in Dublin last week included 33 of infants under one year of age, and 35 of persons aged upwards of sixty years; the deaths of infants showed an increase, while those of elderly persons were slightly below those recorded in the preceding week. Six inquest cases and 2 deaths from violence were registered; and 54, or more than a third, of the deaths occurred in public institutions. The causes of 7, or more than 4 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR E. D. FARMAR-BRINGHURST has been given the Medical Charge of the Northumberland Artillery Militia during the stay of the corps at Plymouth. Surgeon-Captain H. I. Pocock proceeds to Horfield for duty, and Surgeon-Lieutenant Marriott assumes Medical Charge of troops, South Fort Barracks, Dover. Brigade-Surgeon-Lieutenant-Colonel J. M. Beamish, M.D., joins at Woolwich for duty, and Surgeon-Major W. T. Johnston proceeds to Okehampton for Medical Charge of the camp. Surgeon-Major Patrick J. O'Sullivan, M.D., retires from the service receiving a gratuity. Surgeon-Major Patrick Halion Fox, M.R.C.S.I., retires from the service receiving a gratuity.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of the under-mentioned officers are replaced at the disposal of the Government of India, Home Department: — Surgeon-Captain C. D'Alton, A.M.S., Surgeon-Captain J. F. Kelly, A.M.S., Surgeon-Major Routh, A.M.S., and Surgeon-Captain Mangan, A.M.S. The services of Surgeon-Lieutenant J. C. Robertson, on plague duty in the Jhansi districts, are replaced at the disposal of the Government of India, Home Department.

NAVAL MEDICAL SERVICE.

Surgeons: Richard W. Stanistreet to Chatham Hospital; James Bradley, M.D., to the *Egeria;* and Daniel J. P. McNabb to Haslar Hospital.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major George W. Hatchell, having resigned his Militia appointment, ceases to belong to the Army Medical Reserve of Officers. Surgeon-Captain C. C. Moxon, having resigned his Volunteer appointment, ceases to belong to the Army Medical Reserve of Officers.

VOLUNTEER CORPS.

Artillery: 6th Lancashire: Surgeon-Lieutenant W. H. Murdoch, M.D., resigns his commission. 1st Argyll and Bute: Surgeon-Captain J. Cunningham, M.B., resigns his commission. *Rifle:* 1st Volunteer Battalion the Duke of Wellington's (West Riding Regiment): Surgeon-Lieutenant-Colonel T. M. Dolan, M.D., resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement. 3rd Glamorgan: Surgeon-Lieutenant J. E. J Soden resigns his commission. 1st Tower Hamlets: Surgeon-Lieutenant J. F. Woods, M.D., resigns his commission.

THE ALLEGED COMING CHANGES AT THE HORSE GUARDS.

There has of late been a good deal of discussion in the public journals regarding the rumoured changes at the War Office, but owing to some quasi-official assurances matters appear to have settled down for the present. The discussion was raised, we suspect, more with the view of registering a protest against the accomplishment of certain alleged appointments than with any belief that these had actually been definitely agreed upon. The *Saturday Review* of the 10th inst. had a paragraph, *à propos* of the rumours that Lord Wolseley's health was not good, and might lead to his resigning the supreme command of the army, in which it admitted a feeling of disappointment of the hopes entertained on his being appointed to that office. As regards the appointment hereafter of a Royal Duke to the position our contemporary remarked that it would probably lead to its being made permanent, which, as experience had shown, is to stereotype inefficiency. In case of the rumoured retirement of Lord Wolseley turning out to be correct — it is but a rumour and most probably an unfounded one—Lord Roberts's great claims would, of course, have to be considered. Amid the various statements, however, that have been put forward of late only one thing seems certain—namely, that the post of Adjutant-General of the army will have to be filled up in October on the retirement of Sir Redvers Buller, but nothing is definitely known at present as to who his successor will be. The general feeling in the army appears to be that Sir Evelyn Wood, the present quartermaster-general, has the greatest claims to be Sir Redvers Buller's successor. He has had, as everybody knows, a long, distinguished, and very varied service as a soldier, and is besides a very practical, straightforward, and able man. In the event of his appointment the question arises as to who is to be the new quartermaster-general? Apart from difficulties arising out of his Royal rank and political considerations, it is only just to say that the Duke of Connaught is very popular, has a keen love of his profession, is a good man of business, and is most conscientious and painstaking in the discharge of his duties. His Royal Highness has impressed people, too, as being eminently fair and conciliatory to all. The nation as a whole and all branches of the service are necessarily interested in these appointments, for the efficiency as well as the contentment and happiness of the army, and of the medical service as an important branch of it, greatly depends upon the wisdom of the choice. The retiring Adjutant-General, Sir Redvers Buller, is universally regarded as an able and honest man, and a most distinguished soldier, of whom more will be heard in the event of any war occurring.

ARMY SERVICE IN INDIA.

Captain Pirie asked the Under-Secretary for War in the House of Commons on the 23rd inst. whether the War Office would be prepared to reconsider the question of long service in India for British troops as being both physically and financially advantageous, especially in view of the disastrous casualties from enteric fever and other disease among British soldiers in India.—Mr. Brodrick said, in reply, that the application of the short-service system to India has been proved to possess many advantages from a physical, financial, and military point of view, and Her Majesty's Government had no intention of resorting to the system of long service in the Indian army. We have frequently adverted to this subject in the past. It appears that the amount of sickness, and notably of enteric fever, is much greater among young soldiers during their first two years of service in India than among older and

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longer resident soldiers, but the death- and invaliding-rates are greater among the latter. A soldier of about twenty-five years of age, and from that to thirty, with over two years' service in India, is probably at his best for military purposes and efficiency. On medical and physical, and consequently on financial, grounds it seems to us that no pains should be spared to retain soldiers for Indian service for a few years—at any rate, for a year or two—longer in India than at present; but we suppose it is argued that this would interfere with the working integrity of the present short-service system.

THE LATE GRECO-TURKISH WAR.

We can commend the perusal of Mr. Bennet Burleigh's article on "The Greek War, as I Saw It," published in the *Fortnightly Review* for this month to those who are interested in the subject. The article is the reverse of flattering to the Greeks. It certainly gives an object-lesson on the text "How war should not be made." Mr. Bennet Burleigh says that while at Salonica he ascertained, through an English friend who had made it his business to know, and from personal observation, that 12,000 sick and wounded Turkish soldiers had been brought into that place from Thessaly. These did not include all the worst cases or those who were wounded in the later engagements, such as those of the last days around Velestino and Domoko.

THE CHITRAL AFFAIR.

We are always having some little mountain warfare on hand in India. The intelligence that has been received at the India Office regarding the night attack on the British force by the hill tribes in the Malakand Pass, resulting in the death of one and the wounding of four officers, is embarrassing news for the Indian Government, because it involves the trouble and cost of a punitive force. Moreover, it is very difficult to guard against such attacks in the future or to deal effectively with those taking part in them. One thing is clear, that the strength of the Indian Medical Service must be maintained in order to supply medical officers to meet contingencies of this kind.

THE ARMY MEDICAL STAFF.

It appears that the War Office will not obtain a sufficient number of candidates to fill the vacancies existing in the British Medical Service at the forthcoming examination. It is calculated that at least forty or fifty vacancies have to be filled and, according to the latest official statement in the House of Commons, there were a little time ago only twenty-seven candidates for these appointments.

ARMY MEDICAL SCHOOL, NETLEY.

The summer session of the Army Medical School, Netley, will be brought to a close on July 30th, when the names of those gentlemen recommended for commissions in the Army Medical Staff and Indian Medical Service will be announced and the prizes will be distributed by Major-General Sir William Butler, K.C.B., commanding the South-Eastern District.

THE HEALTH OF BOMBAY.—The news from Bombay is not altogether satisfactory. There has ceased to be any mortality from plague, but there is some cholera in the city, and the death-rate is still high.

THE INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting, under the auspices of the Incorporated Society of Medical Officers of Health, was held in Bristol on July 24th. The members were received at the Guildhall by the High Sheriff of Bristol and the chairman of the Bristol Sanitary Committee. A business meeting was held, and, after partaking of luncheon at the invitation of the latter gentleman, the members proceeded to Ham-green for the purpose of inspecting the fever hospital in course of erection there.

PRESENTATIONS TO MEDICAL MEN.—Mr. G. H. Ede, M.D., C.M.Aberd., of Bramley, Surrey, has been the recipient from the Bramley classes, in connexion with the St. John Ambulance Society, of a walking stick with silver mountings from the men's class, and a paper knife with silver handle from the women's class, as thank-offerings for his ambulance lectures.—Mr. Thos. F. Fannahill, M.B. Glasg., D.P.H. Camb., of Glasgow, has been presented by twenty-two members of the Caledonian Medical Society with a Morton's Ophthalmoscope and accessories, appropriately inscribed. Until recently he was the editor of the *Caledonian Medical Journal*, and is now proceeding to South Africa.

Correspondence.

"Audi alteram partem."

THE RINDERPEST.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 6th you were kind enough, in reviewing Dr. Koch's report of Jan. 31st, to refer to the correspondence I had with the Government. I now send you a memorandum embodying the suggestions that have been made from time to time by me and the results arrived at by the various experts arranged in chronological sequence, and as I thought the views expressed were original, although further reading shows that not to be the case, it is hoped that you will be able to find space for the document, and if you think it worthy of editorial comment you may be able to get me a hearing and enable me to endeavour to avert a calamity. Although not entirely original, you will see doubtless the application of my ideas to many human diseases; its application to the bubonic plague was suggested to the Indian Government on Feb. 8th and 10th. When my views were submitted to the Government expert they were condemned, and in consequence it was not possible for me to get a hearing before the Select Committee. Meanwhile the disease is spreading rapidly into the colony, and I much fear will become endemic if Dr. Hutcheon's view be carried out.

Within the last few days a method has been thought out whereby the toxic strength of the blood might be increased, but until Dr. Edington's annual report appears I shall not know whether I am trespassing on his preserves, so at present do not like to mention it.

I am, Sirs, yours faithfully,

Sea Point, June 8th, 1897. H. A. LAWRANCE, F.I.C., F.C.S.

MEMORANDUM.

1. Oct. 22nd, 1896.—Letter to Mr. Farre. Suggests the use of blood of "salted" cattle as a preventive method.

2. Oct. 26th, 1896.—Letter to Secretary, Rinderpest Committee, Bloemfontein, O.F.S. Points out that suggestion in Par. 1 anticipates the work of bacteriologist, as after discovery and isolation of organism he would have to prepare the antitoxin. "The antitoxin is, I believe, undoubtedly present in the blood of beasts that have survived the disease."

3. Nov. 7th, 1896.—Letter to Dr. Edington. Suggests the use of blood of "salted" cattle as a preventive method.

4. Nov. 10th, 1896.—Letter to Mr. Farre. "Blood might be drawn off from the animal (salted) and filtered through a porcelain candle in order to obtain the serum. If it be that there has been a change in the blood with the production of a toxin or antitoxin, then this serum should have a protective action."

5. Nov. 29th, 1896.—Letter to H.E. the Governor: "Bearing this in mind, it occurred to me that one or other of two things must have taken place in the blood of these immunised cattle—either there must have been formed a toxin, with the subsequent production during recovery of an antitoxin, in the blood serum, in which case the serum, filtered through porcelain, should have a therapeutic and preventive property if used as a vaccine for the pest; or the white corpuscles (phagocytes) have acquired the power of destroying the microbes of the disease, in which case the inoculation of unfiltered blood would probably prove to be an efficacious treatment. Your Excellency will observe that in this process it is not proposed to introduce into the beast to be protected any disease organism, as it is essential that the animal should have quite recovered from a sharp attack of the pest, so that whatever change, be it the production of an antitoxin or the stimulating of the white corpuscles, the microbe can produce in the blood of animals has been carried to its fullest extent."

6. Jan. 3rd, 1897.—Dr. Koch's Reports, p. 7: "And also the circumstance that in the bile of most of the cases examined I have found in pure cultivation a bacterium, which, according to the description published, is conformable with the microbe discovered by Dr. Simpson in Calcutta and declared to be the cause of rinderpest. All these experiments with bile, however, had negative results. We are consequently justified in saying that bile does not contain the contagion of rinderpest, and that Simpson's bacterium cannot be considered to be the microbe of rinderpest."

7. Jan. 31st, 1897.—Dr. Koch's Reports, p. 13: Experiments with serum of "salted" cattle described. "These experiments demonstrate that the serum of immune animals possesses a certain protective power."

8. Feb. 10th, 1897.—Dr. Koch's Reports, p. 15. Shows that the effect of the serum is only temporary. "A second and equally important fact is that one is able to render immune healthy cattle with the bile of such that have succumbed to rinderpest."

9. Feb. 13th, 1897.—Letter to *Cape Times* (not inserted): "What has occurred to the microbes that have been alleged to be the cause of rinderpest? Dr. Simpson's microbe was disposed of in a very summary fashion, but it will not surprise me if a good deal more is heard of this organism in the future."

10 Feb. 17th, 1897.—Letter to *Cape Times* from Mr. G. E. Cory, Grahamstown, Feb. 13th, enclosing letter from Dr. Simpson, Calcutta, Jan. 8th: "I have, however, two animals which have been rendered immune against the rinderpest microbe." (Compare with paragraphs 6 and 9.)

11. March 1st, 1897.—Letter to Secretary for Agriculture: "I am

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anxiously waiting for Dr. Koch's further announcements, as there is a point he may possibly overlook, and if so there may be trouble in store."

Contradictory reports of the bile cure now began to appear in the press.

12. March 26th, 1897.—Letter to Secretary for Agriculture: "Let me ask you to compare the last paragraph of my letter of the 1st inst. with Dr. Hutcheon's letter which appeared about the 16th inst. and with the reports that keep coming to hand of the results of the bile method, and I think you will agree that I was well able to see the danger ahead, and it may be mentioned that there is even graver danger in a rash use of the serum method on the lines laid down in Dr. Koch's last report." This method will be found on p. 19, Dr. Koch's Reports.

13. April 22nd, 1897.—Letter to Mr. Theron, Chairman, Rinderpest Committee: "I should consider, however, that it is very probable indeed that in the virulent blood, at a certain stage of the disease which would have to be ascertained by experiment, there is a maximum amount of the poisonous toxin. Then, if the blood were taken at this stage and filtered through porcelain, keeping in an ice chest being insufficient, in order to remove all organisms, and this filtrate were mixed with the serum taken from salted cattle, I think a powerful vaccine would be obtained that might perhaps give an immunity of a more lasting character." "Probably it would be found, if the method indicated above were tried, that before a perfect immunity could be secured several inoculations would have to take place, but you will notice that *no* disease organism would be introduced into the beast to be protected, and this is, in my opinion, a condition of the greatest importance."

13*a*.—"As regards the bile process it will be found that in one of Dr. Koch's early reports he stated that he found a bacillus present in the bile in pure cultivation which he took to be Simpson's microbe, but as an injection of this gall did not impart the disease the conclusion was drawn that this microbe was not the cause of the disease. In another report he shows that the antitoxic property of a gall was so great that a mixture of equal parts bile and rinderpest blood did not communicate the disease. This experiment shows that, under certain conditions, bile is able to counteract the disease organisms, and if this be the case is it not possible that Dr. Koch has drawn too hasty an inference from the fact that his microbe-containing gall did not communicate the disease! If this surmise of mine be correct it would explain the very contradictory reports about this process; the extract in the *Argus* of the 20th inst. from the *Bechuanaland News* and the telegram from Dr. Hutcheon read yesterday lend strong support to my views, for if the gall were rich in microbes and weak in antitoxic material the disease would appear in the treated cattle; while if the reverse were the case immunisation without any sickness would result, and according to the relative proportion of these two ingredients the disease would either not appear at all or in a longer or shorter time." "Here, again, filtration through porcelain would probably eliminate this source of trouble, and the bile method might then be used with the certainty of not communicating the disease."

14. May 7th, 1897.—Select Committee's Report, Mr. Hutcheon's evidence:—987. "It is only now dawning upon us that we will be able to correct the failing in inoculation—namely, its tendency to communicate itself to a number of herds when one is inoculated. Another point that has become clear to us is that by the present inoculation you get a certain number of cattle in the herd infected; complete immunity is not given to others, but the disease slumbers on and we find afterwards that the immunity is not permanent. Hence we get the disease much prolonged beyond what it would have been if we had allowed it to go on in the herd." (Compare 13*a*.) 1003. "There is another point that we have not decided yet. There is bile and bile. We are only finding out now that there are a great many things with reference to bile that we did not know before. I am satisfied of this, that though the physical appearance of different samples of bile may be the same, there is a difference, because you may inoculate with the same bile in appearance and no bad results seem to follow. You do not communicate the disease, and so far as we have seen the herd remains healthy. In another case of two biles the same in physical appearance you have very unsatisfactory results, although every care is taken. The same parties would inoculate. I selected a great portion of the bile myself and others inoculated, so that there should be no contact between me and the cattle, and yet the results were different. Now Dr. Turner and Dr. Edington have made a statement that they can test this bile and determine what is satisfactory and what is not, and it is quite possible that they will. If they effect that, and it can be practically carried out, and according to their statement they can, for they will use the spectrum to see whether the bile be good or bad. Now these are points that have to be proved." (Compare 9, 13*a*.) 1011. "Dr. Koch recommended bile as the most reliable thing. Dr. Kohlstock and Dr. Turner are convinced that bile is the thing, notwithstanding the unsatisfactory results. And it is a curious thing that the herds they have inoculated have been satisfactory in results. No disease appeared in them after inoculation. We have some in the Herschel district, but the disease appeared after thirty days from infection from outside." (Compare 13*a*.) The main point in Mr. Hutcheon's evidence is the suggestion to inoculate first with bile and then ten or twelve days later with virulent blood.

15. May 10th, 1897.—Select Committee's Report. Dr. G. Turner's evidence:—1144. "My opinion is that inoculation with proper gall confers immunity on the cattle." 1145. "I cannot say permanent because the cattle longest inoculated only date back about three or four months. We have sent down to that farm to have the cattle inoculated with rinderpest blood to ascertain whether they are immune. Five of these cattle were inoculated on Friday last with virulent blood." 1146. "You can tell [the proper kind of gall] to a certain extent by the colour. The green gall is the best gall, but even amongst green gall there are choices. A gall which apparently resembles good gall may not confer immunity. I hope in a short time to be able to tell which is good and which bad gall." 1147. You have made experiments with the spectrum with reference to this, and you noticed certain lines in the galls which rendered cattle immune? "Yes." 1148. What are they? "I am sorry you ask me this, as I have not finished yet. I come forward thus with the greatest diffidence. In those galls that have acted well I have noticed the bands of the blood spectrum, not blood as we popularly talk of it, but blood colouring matter in the gall. Those were the galls that have answered. One or two galls that I have been doubtful about have failed to give these lines, and have merely presented the spectrum of ordinary gall." 1149. Do you still continue any other empirical attempts to find a remedy? "No; we have been trying to perfect the gall prevention method." 1150. You have confined yourself to that? "We are using the serum as well. We have immunised animals with serum, but apparently the immunising is not so powerful, and for that reason we have continued mostly on the gall line." 1151. You can immunise with serum? "Yes; Dr. Koch showed that by taking serum and putting 1 per cent. of rinderpest blood with it, and letting it stand for twenty-four hours, that 20 c.c. would immunise an animal, but it does not appear to give so powerful an immunity as the gall." 1152. Have you tried experiments with antitoxin? "Yes; we have not had time to separate antitoxin from serum. We used the serum from an immune animal. We know that the serum from an immune animal injected into the blood of another will protect it in a very few hours from rinderpest, but that immunity is not very powerful and passes off very rapidly. I took some of this serum and treated two oxen with a very large portion of this serum indeed, injected subcutaneously. One ox was given 50 c.c. in the morning and 50 c.c. in the evening, and the other 80 c.c. in the morning and 80 c.c. in the evening, and I believe this was done on three days before they died. I was very much disappointed, as I was in hopes that by using the serum it might be possible to save an animal. ..... I am, however, going to try it again." 1153. Do you notice microscopically the presence of phagocytes in the blood? "They are always in the blood." 1154. Then that would be antitoxin ones? "No; I have not been examining the serum in that way. As a matter of fact, the antitoxin is not an organised thing at all. It is a chemical substance. The effect of it when it enters the system is to enable the phagocytes to resist the attacks of the micro-organisms and destroy the bacilli. There are also chemical theories to explain the action of antitoxin." 1155. Then you simply give the phagocytes in the blood additional strength? "Yes." 1160. But you may inoculate even with bile that looks all right and produce the disease? "I wish to say that I have no experience of bile giving the animals disease. I have tried in every way to give animals the disease with the bile and have failed to do so. We have used all sorts of biles, but have not succeeded up to the present." 1161. "I have taken brown bile and inoculated an animal with it, and the animal was still alive after ten days." 1167. "The animals on the farm have taken 100 c.c. (rinderpest blood), while $\frac{1}{10}$ c.c. will kill a full-grown ox." (This evidently refers to 1145) 1176. "One of the best-known diseases is small-pox, and yet no one has isolated the organism of that disease. Although we know it is there, and cultivate it by introducing it into the cow and taking the vaccine from the cow; although we know it must be there, we cannot see it. So it is with the organism of rinderpest. I took 60 c.c. of bile in order to verify a theory of Dr. Koch's. I filtered it in a porcelain filter. I washed the filter with a salt solution that does not destroy the virus in order to wash away the liquid bile. I then examined it [what?—H. A. L.] under a microscope, but could see nothing. I then inoculated an animal with it [what? the residue or filtrate?—H. A. L.], but the animal received no ill-effect, and still the animal is immune. Something went into that animal which I could not see. I only know this from the results I arrived at, and could only see it with the eye of faith." 1179. You say that you do not know how long bile inoculation confers immunity? "No, I do not." 1180. Dr. Hutcheon stated here that he found after one month the immunity began to wear off, and the result was that the disease would remain in a herd for months. In one case fifty had been dying over a long period, and are not done yet. Dr. Hutcheon therefore recommended that all animals ten or twelve days after the bile inoculation should be inoculated with rinderpest blood. In that way he thought to drive the disease out of the country. Do you agree with that? "I think if the experiments being made prove that the gall alone is not sufficiently powerful, that is the right way to set about improving the methods." 1181. He says that unless you inoculate with rinderpest blood you may have the disease among the animals for a very long time and keep up centres of infection? "If you use a bile which does not happen to be good that which he describes might take place, but I cannot tell you that I know it of my own knowledge. The case in which this was tried was in a district which had rinderpest all round it. It is true that this bile came from Dr. Koch himself, but I am perfectly prepared to admit and am confident that all bile does not grant immunity." 1182. What is the special virtue of gall for the purposes of inoculation? "That is a question which I had a long discussion with Dr. Koch about. Dr. Koch's view is this: that the bile contains a chemical substance something like an antitoxin, and that it also contains the rinderpest organism unmitigated and in its full virulence. [Compare par. 13*a*.] He said that was so because it was well known that a ½ per cent. of carbolic acid would destroy the virus in blood in twenty-four hours in the ordinary temperature of the room. He took a good rinderpest bile and added 0·5 per cent. of carbolic acid, kept it for twenty-four hours, and inoculated an animal with it. The active agent in the bile was destroyed and the bile lost its power. Then he took ten other centimetres of the same carbolised gall and added 10 per cent. of rinderpest blood and injected it immediately, and the animal did not suffer from rinderpest but was rendered immune. [Compare with 1167, there must have been something present to modify this rinderpest blood, the dose being sufficient to communicate the disease to 500 head of cattle.—H.A.L.]. Thus he believes he put back into the bile the virulent element that he had destroyed with the carbolic acid.....I filtered 60 c.c. of bile through porcelain. Now if Dr. Koch's theory was correct the animal into which I introduced this filtered bile ought to have died; it did not, but it was immune. [Compare 1176 and par. 13*a*.] I took the filtered bile, injected it into the animal, and that animal had the rinderpest after I infected it, but it recovered. From my experiments I do not think that the organism is in the bile in the unmitigated form." 1184 "I differ on a slight point from Dr. Hutcheon there. We are perfectly agreed as to what ought to be done, but we differ as to whether gall can give rinderpest."

16.—With regard to the experiment described in 1151 it was scarcely likely to be successful for (1) the disease had nearly run its course; (2) the method of separating the serum introduced by Dr. Koch, keeping in an ice chest, would have killed the phagocytes in the immune blood. My letter of Nov. 10th said, "B. Blood might be drawn from an (immune) animal and at once injected into the veins of the beast to be protected. Should it happen that the white corpuscles (phagocytes) have acquired the power of destroying the organisms producing the disease during the progress and recovery from it, then it may be expected this treatment will be the more efficacious." In this case active phagocytes would be introduced and consequently would exert their full influence.

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17. May 15th, 1897.—Dr. Edington's report: "In my former reports I showed that virus kept over seven days could not be used to infect healthy cattle. I did, however, find evidence that such inoculation gave rise to some slight degree of immunity, and it therefore seemed to me that this immunising power could only be exerted by, and obtain, in virtue of the toxin as present in the blood after the microbes themselves had been destroyed." (Compare pars 5 and 13.). "I have further shown that animals which have recovered either from this inoculation (i.e., rinderpest blood used on or about the fifth day after its withdrawal) or from spontaneous infection are not absolutely immune." "I would add with regard to the bile method that if selected bile is immediately mixed with 50 per cent. of pure neutral glycerine that it is safely kept from putrefactive change, and if kept over six days, as I have indicated in my annual report regarding blood and mucus, it is impossible then to produce virulent rinderpest on inoculation while the toxin is not destroyed." (Compare 13a.) "My earlier experiments showed that glycerine does not exert a destructive action on the contagion of rinderpest, and I have since found that it appreciably conserves its virulence, although not to any great extent." (How are the statements in the last two paragraphs to be reconciled?—H. A. L.)

18. May 17th, 1897.—Dr. Kohlstock's reports show that serum from immune animals protects for ten days. Also that under certain conditions a gall can be sterilised by heat, but does not say whether it retains its effective power. A mixture of blood and this bile rendered an animal immune. The result of the experiment mentioned in 1145 and 1167 is given. The animals were in good health, with normal temperatures, after the lapse of eight days. (Compare 17, par. 2). "Animals which were injected with brownish-green gall, containing the Simpson bacillus in pure culture, or gall of a brownish colour, containing both bacteria and streptococci, became immune without the occurrence of any accidents, such as abscesses, &c." "Thick, green gall, free from smell and organisms, has often been taken from dead cattle; on one occasion I rendered an animal immune with such a fluid."

"THE NON-POSSUMUS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—Your leading article on this subject ought to meet with the warm approval of every Fellow and Member who desires to see the College something more than a mere examining board. The situation is not new. The council is only carrying out its traditional policy of refusing to act for the promotion of the interest of those who constitute the College; in my opinion it always will so refuse to act until it becomes really and not falsely representative of the majority of its constituents. The letter of a "Fellow of the College," in THE LANCET of July 17th, hits the mark; "there can be no true representation unless the representative is responsible to those he represents." The question is one of principle. The dominant party on the council maintains that the College is a purely scientific body, and has no concern with the affairs of its Fellows and Members, except in cases of gross misconduct. In the words of a recent president the Council will not "fight the puny battles of the Members." Unfortunately for this contention, it is bound by the by-laws to "protect and defend every Fellow and Member of the College who may be disturbed in the exercise and enjoyment of the rights, privileges, exemptions, and immunities acquired by him as a Fellow or Member thereof." This by-law is the Magna Charta of the Fellows and Members, and to it the Council will be held on any and every opportunity. The Council has already stultified itself in the case of Mr. Anderson by first recommending it to the notice of the profession as one of great hardship and then refusing to do anything to "protect and defend" him. We intend to give the Council many further opportunities of such stultification, until at last it recognises that if the Fellows and Members are bound to observe the by-laws, so also is the Council.

You justly say that the situation is serious, but if the Members are in earnest about asserting their rights the solution will not be much longer delayed. If all those who have been disturbed or injured in the exercise of their profession by medical aid associations, insurance companies, or in any other way, will communicate with me, I know that the committee of the Society of Members will coöperate with them in pressing their grievances on the notice of the Council. It is only because the great bulk of the Fellows and Members have *not* been in earnest that hitherto so little progress has been made.

I am, Sirs, yours faithfully,

W. G. DICKINSON,
Hon Sec., Society of Members of the Royal College of Surgeons of England.

West Hill, Putney, S.W., July 26th, 1897.

THE LATE MR. F. W. ELLISON: AN APPEAL.

To the Editors of THE LANCET.

SIRS,—I should be very greatly obliged if you would have the kindness to insert the enclosed letter from Mr. Hatfield. The case to which he refers is one into which I have myself very carefully inquired. I am quite sure it is perfectly genuine, and it appears to me to be one in which we may, with every hope of success, appeal for help to the readers of THE LANCET. Any subscriptions that may be sent will be gratefully received by Mr. Hatfield, York House, 1, Park-road, Forest-hill, S.E., or by myself, and will be at once acknowledged.—I am, Sirs, faithfully yours,

HOWARD MARSH.

30, Bruton-street, Berkeley-square, W., July 23rd, 1897.

[ENCLOSURE.]

DEAR MR. MARSH,—I want to bring before the profession the sad case of Mr. F. W. Ellison, a former student of St. Bartholomew's Hospital, who died last September at Glenely, Adelaide, after two days' illness, aged forty-two. He took the M.R.C.S. in 1878, and after practising for five years at Catford he went to Australia twelve years ago and managed after some time to make a living at Glenely. He has left a widow and six children totally without means. The eldest, a boy aged sixteen, has weak lungs; the youngest is a boy aged six. Mrs. Ellison and her family are now in this country, and are entirely dependent on relatives, who are by no means well off. Up to the present time they have received small remittances from Australia, the result of the collection of book debts, but these have now almost ceased. An aunt has undertaken the charge and support of one of the daughters, and we wish, if possible, to secure for the family a small house within reach of some good school. They have, however, no furniture, and the friends are anxious to raise a fund for the purpose of buying some for them. If you can help me in this I shall be very glad. I have before me some flattering testimonials to Ellison's good qualities from yourself, the late Dr. Black, Dr. Gee, Sir Dyce Duckworth, Dr. Clement Godson, and Mr. Walsham, so I expect he will be well remembered at the hospital. He was a charming man and a great friend of mine when he lived here.

I have already been helping in some way, and I propose to subscribe to any fund that may be opened, and my friend, H. A. Francis, who wrote from Vancouver immediately he heard of the death, has informed me that he also should subscribe.—Believe me, yours sincerely,

W. H. HATFIELD.

York House, 1, Park-road, Forest-hill, S.E., July 23rd, 1897.

"A METHOD OF UNITING THE DIVIDED INTESTINE."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 22nd, which I received some days ago, I have read a note by Mr. G. Lenthal Cheatle on a Method of Uniting the Divided Intestine. It might be of interest to your readers to know that I have employed in two cases the same procedure with the best results. Owing to the difficulties caused by not having instruments other than scissors, knives, and common suture needles, it came to my mind to convert the intestine into practically a flat ribbon by a longitudinal incision to make sewing easy. Thus I had first the idea of uniting the divided intestine by the method mentioned and transformed it into a definite surgical procedure. In a work which I have taken in hand, which will soon be published, I shall describe the *modus faciendi* used in my two cases.

I am, Sirs, yours faithfully,

Dr. PACHECO MENDES,
Professor of Surgery, Faculdade de Medicina.

Bahia, Brazil, July 5th, 1897.

"CYCLING FOR WOMEN: ITS EFFECT ON PARTURITION."

To the Editors of THE LANCET.

SIRS,—Your correspondent, Mr. Haydn Brown, in his lengthy criticism of my letter evidently jumps to the conclusion that I condemn cycling for women; whereas I merely drew attention to the dangers of over-exertion and the use of unsuitable saddles.

With regard to the perineum being untorn, I only stated the fact and made no pretension to skill with the short forceps, which nowadays the veriest tyro in midwifery finds no difficulty in using. I do not think it likely, as Mr. Brown supposes, that my remarks are likely to deter any of the fair sex from enjoying the pastime of cycling, which when indulged in moderately is a healthy and graceful form of exercise. I am, Sirs, yours faithfully,

July 28th, 1897. J. MCVITIE, M.R.C.S. Eng.

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HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

XII.—BIRMINGHAM.[1]

The Hospital Reform Inquiry.—Utter Collapse of a Promising Movement.—Disorganisation and Disunion.—The Rapid Growth of Grievances.

NOWHERE, perhaps, is the question of hospital abuse fraught with so many complications as at Birmingham; but, whatever may be the difficulty of the problem, by far the greatest obstacle to reform is the lack of union among the medical men themselves. The profession has been infected by the contagion of the surrounding commercialism. Only a small proportion of the inhabitants of Birmingham were born and bred in the town. People rush in from the outside in the eager hunt for money. They simply strive to "make their pile" and haste away again. Among such a population it is difficult to spread altruistic ideas; it is a wild endeavour all round after business each for himself, and but few pause to consider what are their duties to society. This spirit also animates, more or less—let us hope very much less—the medical profession, and therefore it has been more particularly difficult to group the medical men together and get them to put their personal interest in the background so as to defend the position of the profession as a whole. In smaller towns, where the spirit of commercialism is not so paramount, organisation has been more easily accomplished. In Birmingham it suffices for one set of men to attempt to form an organisation or to start a movement, and at once another set of men are stirred with suspicions, or even moved to open hostility. Instead of inquiring what good cause is to be promoted, they will strive to find out that some personal interest is to be served. In a town where most people are seeking to enrich themselves it is difficult to believe that anyone is only seeking the general good. Perhaps this may account for the fact that in Birmingham the members of the medical profession do not hold together and have failed to understand the force and beauty of the doctrine of solidarity. Yet there was, some years ago, a movement which should have given a powerful impetus to the medical profession. In 1889 several meetings were held by the medical men practising in Birmingham to discuss the question of hospital abuse. In October of that year a preliminary report had been drawn up by a committee of medical men elected at these meetings. It was proposed to submit this report to a large public meeting of all persons interested in the medical charities of the town.

This report set forth that the demands upon the medical charities were greater than could be met, because these charities had been diverted from their original purpose. A too large proportion of the public resorted to the hospitals to the detriment of the interest of the subscribers and of the medical men, while it lowered the dignity of the recipients. Therefore, hospital reform was needed, so as to encourage providence and supplement the action of the Poor-law. Hospitals were originally intended for the poor, and were supported by those who expected no benefits in return. The report then went on to say that "under the 'ticket system' it is notorious that tickets are often given to unfit persons; are purchased either directly or indirectly by those who propose to use them, and are thus diverted from their proper purpose. Under the so-called 'free system,' though inquiry is usually made as to the position of the applicant, the same abuse exists. Many persons who are well able to pay for the services of a competent medical attendant, and not a few who could afford the fee of a consultant or specialist, elude the inquiry and obtain gratuitous treatment. Among the in-patients are often to be found well-to-do persons who, requiring a surgical operation or having met with an accident, prefer to be treated in a well-ordered hospital rather than in their own homes, and disregard the fact that they have no right to accept either the benefits of a charitable institution or the services of a medical man without paying for them in full. In this matter the medical profession is not altogether free from blame. Hospital officers acquiesce in the admission of unsuitable cases; other medical men are not always sufficiently careful as to the status of those whom they recommend for hospital treatment."

The report goes on to say that the number of out-patients is often so great that the serious cases suffer considerably from having to wait a long time, and that sufficient attention cannot be given to each case. As regards the in-patients, persons requiring surgical operations are occasionally kept waiting weeks because there is no bed vacant, while the stay of those who are admitted is sometimes undesirably shortened so as to make room for those who are impatiently waiting their turn. "Furthermore, the over-pressure on the time and energy of the medical officers is apt to interfere with the due discharge of their duty as teachers. It has therefore been necessary to appeal for more funds so as to enlarge the hospitals; but though these appeals have met with a generous response the pressure still increases, because no attempt has been made to deal with the root of the evil—namely, the indiscriminate extension of charity." The Report then goes on to show that whereas the total number of cases treated by the medical charities of Birmingham amounted to 67,000 in 1867 they were equal to 166,000 in 1887. The population of Birmingham was 325,895 in 1867. In 1877 it had increased 15·81 per cent. and reached the figure of 377,436. In 1887 the population was estimated at 441,095, an increase of about 35 per cent. in the twenty years. But the ratio of patients treated by the medical charities as compared to the population was 1 in 5 in 1867, 1 in 3·5 in 1877, and 1 in 2·6 in 1887. This is an increase in the number of patients as compared to the population equal to 147 per cent., though the population only increased 35 per cent. Thus the number of hospital patients during these twenty years augmented more than four times as rapidly as the population of the town. These figures, however, must not be taken too literally. There are a good many patients in the Birmingham hospitals who come from out-lying districts and from other towns. Also the hospital returns are not correct in the sense that a patient may be entered twice over in the same year, and is reckoned as two patients, when the entry refers to one and the same individual. But these reservations apply equally well to the figures given for 1867 as to those for 1887. The proportion of the increase stands as stated, it is the proportion of patients as compared with the population which must be reduced. The report says, however, that there can be but little doubt that one-third, not of the sick, but of the whole population, receives gratuitous medical treatment during the course of twelve months from the hospitals.

The preliminary report of the committee also deals with the question of the Hospital Saturday Fund, but this phase of the problem is so important that it must be treated separately. The report concluded with the opinion that a large portion of the work done in the out-patients' department of the hospitals should be relegated to provident dispensaries, and that those who are too poor to join such institutions should come under the Poor-law. The voluntary hospitals should only deal with severe cases, and when necessary the provident dispensaries and the Poor-law infirmaries should be available for purposes of medical education. The report finally deprecated any idea of effecting suddenly radical changes, but urged the necessity of a fuller inquiry. This preliminary report of the committee was submitted to an influential meeting of the profession held on Nov. 20th, 1889. All medical men within a radius of twenty-five miles had been invited, and ninety medical men were present. The meeting unanimously voted "that the statements contained in the report are deserving of the serious attention of the public and the administrators of medical charities."

Further resolutions urged that an inquiry should be held, and that a committee should be elected to represent the profession, which should approach the mayor with a view to convoking a conference on the subject. This was done, and a numerously attended conference met in the council chamber on Jan. 15th, 1890. After a lengthy discussion it was resolved that the mayor should appoint a committee of

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *concluded*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *concluded*) Dec. 12th, 1896, Liverpool; (5) Jan. 2nd, 1897, Manchester; (5 *continued*) Jan. 9th, 1897, Manchester; (5 *concluded*) Jan. 23rd, 1897, Manchester; (6) Feb. 6th, 1897, Leeds; (6 *concluded*) Feb. 13th, 1897, Leeds; (7) April 17th, 1897, Coventry; (8) May 1st, 1897, The Royal London Ophthalmic Hospital; (9) May 8th, 1897, France, United Action and Legislative Action; (10) May 15th, 1897, Leicester; and (11) June 5th, 1897, Nottingham.

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inquiry, and the mayor nominated Judge Chalmers as chairman of this committee of inquiry. The committee consisted of Mr. C. T. Saunders or Mr. J. C. Holder, for the General Hospital; the Rev. J. C. Blissard, for the Queen's Hospital; Mr. F. Keep or Mr. Alderman Lloyd, for the General Dispensary; Mr. Councillor Ball, for the Hospital Saturday Committee; Mr. R. H. Taunton, for the Children's, the Eye, and the Women's Hospitals; and Dr. A. Harvey, Dr. Rickards, and Mr. Priestley Smith, for the medical profession. Mr. W. S. Pritchett was secretary of the committee.

This committee held seventeen meetings, examined a number of witnesses, and finally issued a printed report. With regard to in-patients this report stated that though possibly there may have been isolated cases of abuse there need be no apprehension that money was wasted in this respect. The average cost of in-patients varied from £2 17*s.* in some hospitals to £4 10*s.* in others, while the average cost of each out-patient was only about one shilling. The committee agreed with the report of the previous committee as to the enormous increase in the proportion of persons receiving treatment at the hospitals, and stated that, "making allowance for certain sources of fallacy, they estimate from these figures that at the present time about one-third of the population of Birmingham, apart from the pauper class, receive gratuitous medical treatment in the course of twelve months." While these figures bore testimony to the high estimation in which the hospitals and their staffs are held by the public they proved that the medical staffs were overworked by the swarms of out-patients who crowd the hospitals. Therefore, complicated cases could not receive the prolonged investigation necessary and there was not time to give proper instruction to the students. The question of numbers did not, however, prove that rich people frequented the hospitals, and in dealing with abuse the committee seemed somewhat at a loss when it came to consider for what class of persons hospitals were really intended. The committee stated that "as long as the hospitals are independent institutions, free from any controlling authority, it is clear that each hospital has the power to determine for itself to what class of persons it shall open it doors." Still the feeling seemed to be that hospital patients should constitute a middle zone between paupers and the well-to-do classes. The destitute have greater advantages in resorting to the Poor-law than to the hospitals because they can then obtain food, clothing, fuel, &c., as well as medical treatment. Besides, at Birmingham out-door medical relief is admirably organised by the Poor-law guardians. There are medical stations in different parts of the town where patients can call or send for the medical officer to attend to them at their own homes. Medical treatment is always granted in the first instance, but if the patient is able to pay the guardians are empowered by law to recover the amount due. It should further be noted, and this is very important, that the receipt of out-door medical relief does not involve any civil disqualification. Under such circumstances nearly all the out-door patients of hospitals might be referred to the Poor-law, but the committee was of opinion that the receipt of Poor-law relief had a demoralising effect and that the wealthy classes do well to subscribe to hospitals so as to prevent this result. In the abstract it is difficult to see why the receipt of charity from a hospital should be less degrading than the receipt of charity out of the rates; but in practice a great difference does exist—at least, in the minds of the people. Indeed, this accounts in a measure for the readiness with which the working classes subscribe to the hospitals.

The report then proceeds to deal with the difficulty of establishing a wage limit, for so much depends on the incidence of the illness; and it adds that "wherever the line should be drawn between fit and unfit cases the great weight of the evidence shows that as regards out-patients it is widely transgressed in Birmingham." There was conclusive evidence that the hospitals are largely resorted to in trivial cases. According to Dr. Simon there were 4000 trivial out of 10,000 cases. "Mr. Jordan Lloyd stated that very many of the cases he attended at the Children's Hospital were cases of neglected dirt. Mr. Lawson Tait was of opinion that many patients came to the Hospital for Women 'to see old friends and make new ones.' When they came to be medically examined they described impossible symptoms, and he found that there was nothing the matter with them. Mr. Marsh, on the day he gave his evidence, had been consulted at the hospital for a spot on the arm which proved to be a flea-bite, for a small, superficial abscess, and by a woman who thought she must have a cancer because her husband was said to have it." The committee were of opinion that all cases that could be efficiently treated by any qualified practitioner and which required no special medical or surgical skill were unfit for the hospitals. Most of such cases could be met by the payment of the ordinary medical fee or by joining a provident society. The hospitals should not compete against such societies by opening their doors to all comers. But of course the public would prefer to obtain the advice of a hospital surgeon or physician of high reputation rather than that of the medical officers of clubs. It is for the hospitals to shut their doors against such cases.

As the work done by the visiting staff is unpaid, it might be urged that the pressure could be reduced by increasing the staff. Such increase would, however, lower the reputation of the hospital staffs, prevent the best men in the profession from competing for these appointments, and the committee urged that "such a result would be disastrous, for, in the first place, the poor would no longer be able to command the highest medical skill, and in the second place, the rising generation of students would no longer be taught by the best men."

The committee was of the opinion that it was the fault of the hospitals themselves if unfit cases were admitted, but that this could not be prevented unless all the hospitals combined to exclude such applicants. "Any partial reform would be likely to shift the unfit cases from one hospital, or group of hospitals, to another." It was suggested that patients should only be admitted if recommended by a qualified medical practitioner or by a provident association or dispensary the rules of which were approved by the hospitals. This would be a stimulant to the good provident societies and "the hospitals would resume their special function of giving second or consulting opinions to the deserving poor." To carry out these reforms the committee proposed that a general council should be formed at which the managers of the Saturday and Sunday Hospital Funds should send representatives. The general dispensary, the city corporation as responsible for the city hospital, the guardians as responsible for the workhouse infirmary and for out-door medical relief, should also send representatives; and these, together with the delegates of all the hospitals, would fully reflect the opinions of the public medical institutions. The report of the committee, however, proceeds in a great measure to stultify itself by insisting that this council "would be almost purely consultative. It would have no power of forcing its opinions on individual institutions, except in so far as it could bring public opinion to bear on them. It might or might not be advisable that some such council as suggested should have certain controlling powers over hospitals, but those powers could only be given by the Legislature. It is obviously beyond the province of the committee to go into any suggestion involving more than voluntary coöperation between the existing hospitals."

This last quotation is a good illustration of the utter want of backbone that characterised all the efforts made at Birmingham. To say that a general council, constituted as suggested above, would have no power is either false in fact or it means that it is not worth while bringing such a council into existence. It seems, on the contrary, that a representative body of this description, if it was determined and earnest in its purpose, could exercise strong coercive powers. If this general council agreed by a large majority that certain rules should be enforced, how could any individual hospital resist? First, the Saturday and Sunday Hospital Funds would cease to contribute to the recalcitrant hospital. Then the general council would lay the whole matter before the public and call upon the subscribers to cease their subscriptions. Finally, they might invite the honorary medical staff to withdraw from the institution in question and make it somewhat difficult for the staff to refuse. It seems that a general council could easily ruin any institution or hospital that refused to submit and agree to the common discipline, but, of course, the members of such a council must be determined, must mean business, and must be ready to fight with every weapon available, instead of being satisfied with mere flabby conversation. The report of the committee concluded with the five following recommendations:

"1. The formation of a General Council representative of all the public medical institutions of the city.

"2. The formation of an inquiry agency to investigate the circumstances of applicants for treatment at the hospitals.

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"3. That apart from first aid, and urgent cases, regulations should be framed by the hospitals to exclude trivial cases and cases where the patients are in a position to pay for such treatment as they may require.

"4. That facilities should be given for cases so excluded being dealt with by dispensaries or provident associations.

"5. That any person recommended by an approved provident association, or by a qualified medical practitioner should, as a rule, be admitted to the out-patient departments of the hospitals without further formality."

Though these recommendations may be open to criticism, and might be enlarged, they constitute for all practical purposes a good working basis. A programme may be more or less good; that is a matter of secondary importance; the whole question rests on the activity shown in realising the programme. An imperfect programme applied is better than a perfect scheme which is merely set down on paper. The real point is not what the Committee and the medical profession said, but what they did. In this respect it is difficult, while keeping within the bounds of courtesy, to describe and qualify what followed the publication of the Report of the Hospital Reform Inquiry Committee. Never was a reform movement on this subject launched under better and more influential auspices, and yet never did a movement so utterly collapse. The report when published was universally approved and with equal unanimity universally neglected.

This extraordinary collapse is explained in various ways. It is urged that the local press never really took the matter up. A principal lay manager of the General Hospital was opposed to reforms. As this is the largest hospital, it is difficult for the other hospitals to move without the approval of the General Hospital, and it cannot be said that the committee of this hospital has shown any very particular deference to the opinions of its medical staff. The managers of hospitals are to a great extent recruited from among the successful merchant class. Outward and visible success is their aim, and so long as the hospital they patronise has the largest number of beds and of patients they think the end is attained. Hence a spirit of competition was introduced which blocked the attempt at reform. Though the medical staff of the General Hospital had largely contributed to bring about the inquiry, when that hospital was invited to join in forming the proposed general council it failed to send any reply. Month after month passed by, and it was only when the agitation had simmered down and lost all its impetus that the General Hospital at last sent an answer. The impression seems to be that it was the delay on the part of this, the most important medical charity in Birmingham, that killed the movement. It has been urged that the Ethical Section of the British Medical Association should have pursued the matter; but in answer it is stated that they are only a consultative body and cannot take the initiative in any question. If so, it is high time that some organisation should be constituted which can take the initiative. An influential committee is appointed, an exhaustive report is issued, the whole of the profession agrees with its conclusions, and yet seven years are allowed to elapse without anything whatever being done. It suffices that a few laymen, members of hospital committees, should disapprove or fail to understand the necessity of the proposed reforms, and the whole of the medical profession is scattered like chaff in all directions, loses what little cohesion it had acquired, and quiescently allows the grievances it had proved and denounced to go from bad to worse.

(To be continued.)

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Netherfield-road Hospital for Infectious Diseases.

THE formal opening of the extension of the City Hospital North, Netherfield-road, took place on the 22nd inst. in the presence of the Lord Mayor. This hospital up to the year 1886 was carried on as a charitable institution for the treatment of infectious diseases. By the passing of the Liverpool Improvement Act, 1886, the corporation had vested in them the control of the Netherland-road Hospital. Several additions and alterations were subsequently made, comprising the erection of a new administrative block, laundry, mortuary, and boundary walls; a complete system of drainage was also introduced, together with new roadways, at a total cost of £13,640. By these means provision was made for ninety-six beds. In the year 1895 further improvements were made at a cost of £1000. The present extension comprises two new pavilions, having two wards in each pavilion, with ten beds in each ward, making a total of forty beds; also an isolation block, containing four wards with ten beds, additional accommodation being thus provided for fifty patients; by means of this enlargement the total accommodation is brought up to 146 beds. The laundry buildings have also been extended and provided with new machinery and fittings; these are to be used exclusively for cleansing patients' clothing, the old appliances being reserved for the use of the staff. A new lodge has been erected containing discharging-rooms, waiting-rooms, &c. The administrative block has also been enlarged, giving additional bedrooms for ten nurses and eight servants, the total staff now consisting of one resident medical officer, matron, twenty-five nurses, five porters, and twenty-two servants, total fifty-four, as against thirty-two prior to the extension. A new approach of easier gradient has also been made. The total cost of this scheme, including the cost of property purchased, furnishing, electric lighting, drainage, and laundry machinery, amounted to £28,000, while the area of the recent extension is 5500 square yards, thus enlarging the area of the hospital to 15,140 square yards. Each patient has 144 feet of floor space, and there are 12 lineal feet between each bed. At present there are sixty-four patients in the hospital, and it is gratifying to know that there is not one case of small-pox in any of the city hospitals.

The New Professorship at University College, Liverpool.

The conversion of the lecturership on hygiene at University College, Liverpool, into a Professorship of Public Health, alluded to in THE LANCET of July 24th, follows on the scheme matured by the College authorities for developing within the College a school of sanitary science, a full description of which was given in a former number of THE LANCET. Dr. Hope, who has been promoted to the new professorship, was appointed Lecturer on Hygiene in the year 1886, and in the following year became examiner in Public Health at the Victoria University. By reason of becoming a member of the professorial staff Dr. Hope will in future have a seat in the Senate of the College.

Distribution of the Hospital Sunday and Saturday Funds.

The joint committee of the Hospital Sunday and Saturday Funds have distributed £11,400 among the various Liverpool charities, being an increase of £400 on the previous year. There was a falling off in the Hospital Sunday Fund, but, on the other hand, the Hospital Saturday Fund shows an increase of £500 as compared with last year. The amount received by the Hospital Sunday Fund was £6028 and by the Hospital Saturday Fund £5726.

July 27th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Post-Graduate Classes in Edinburgh.

ARRANGEMENTS have been made at Surgeons' Hall for a series of courses in the following subjects, to commence simultaneously on or about Sept. 27th:—Anatomy (Medical and Surgical), Bacteriology, Central Nervous System (Anatomy and Pathology of), Dermatology, Diseases of the Chest, Children, Ear, Throat, and Nose, Demonstration of Modern Gastric Methods, Electricity in Medicine, Gynæcology, Infectious Diseases, Ophthalmology, Ophthalmoscopy, Pathology, Practical Sanitation, Surgery (Clinical, Practical, and Operative), and Minor Surgery in Children.

The Hospital Difficulty at Aboyne, Aberdeenshire.

Sir W. Cunliffe Brooks, Bart., of Glen Tana, Aboyne, having, as stated in THE LANCET of July 17th, offered to pay £1000 if the fever hospital at present being erected about half a mile east from the village of Aboyne were transferred to a more isolated site, the Deeside District Committee have re-considered the question. While agreeing to take all steps to defend their action in view of an appeal by ratepayers to the county council, the district committee remitted to a sub-committee powers to meet

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with the objectors and to make an arrangement with them. The Marquis of Huntly, from whom the present site was acquired, suggested a new site about half a mile farther east, and Dr. Watt, county medical officer, and Mr. G. G. Jenkins, the architect, are to report as to its suitability.

Women Students of Medicine at Aberdeen.

The graduation list of the University of Aberdeen on this occasion shows that one woman student has passed the first professional, while three others have passed the first portion of the same examination.

July 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Surgeons in Ireland.

THE Prince of Wales, on behalf of the Queen, recently received a deputation from the Royal College of Surgeons in Ireland, consisting of Mr. William Thomson, President; Mr. R. L. Swan, Vice-President; Sir Charles Cameron, Secretary of Council; Mr. A. H. Jacob, Mr. F. T. Heuston, and Mr. L. H. Ormsby, Members of the Council.

The Outbreak of Beri-beri at the Richmond Asylum, Dublin.

There have been 124 cases of beri-beri in the Richmond Asylum since the new outbreak—a fact the significance of which needs no comment.

The Royal Academy of Medicine in Ireland.

The deputation from the Royal Academy of Medicine in Ireland, which was recently received by H.R.H. the Prince of Wales at St. James's Palace, consisted of Dr. James Little, President; Mr. John B. Story, Secretary; Mr. William Thomson, Dr. George F. Duffey, Dr. John W. Moore, and Mr. F. T. Heuston.

Medical Superintendentships of Irish Lunatic Asylums.

The Moderator of the Irish Presbyterian Church (Rev. Professor Leitch, D.Lit.) interviewed Mr. Gerald Balfour (Chief Secretary for Ireland) on July 21st to urge the claims of Presbyterian medical men to a larger share in the medical superintendentships of lunatic asylums in Ireland. He pointed out that of twenty-three of these appointments seventeen were held by members of the Church of Ireland, while Presbyterians, though almost equal in numbers as a religious body, only held one. Mr. Balfour replied that he would give the matter his best attention, and expressed his surprise at the figures quoted, and said that Presbyterianism should disqualify no one while he was in office.

The Royal Victoria Hospital, Belfast.

At a meeting of the City Council of Belfast, held on July 22nd (the Lord Mayor presiding), a very large and influential deputation from the promoters of the Royal Victoria Hospital attended to apply for a portion of the grounds of the present lunatic asylum in Grosvenor-street as a site for the new hospital. The Sites' Committee of the hospital and the medical staff, after most careful consideration, have come to the conclusion that this is the best place, and the deputation asked the corporation to grant them ten acres, or to recommend the Board of Control of Asylums to agree to the introduction of a Parliamentary measure authorising the transfer of, say, five acres now, or as soon as possible, and an additional five acres when the same might become available. The deputation having retired, the Council passed a resolution recommending the Board of Control to agree to the allocation of six acres as a site, and, if feasible, an additional four if hereafter required, the Board of Control to promote the necessary measure. The proposed site is an elevated one with two frontages (one opposite the Dunville Park), and it will in every way be most suitable. The medical staff of the hospital were unanimous in recommending it.

Professorship of Zoology in the M'Gill University, Canada.

I have pleasure in announcing that Mr. Ernest W. McBride, M.A., B.Sc. (London University), Fellow of St. John's College, Cambridge, and Demonstrator of Animal Morphology in the Biological Laboratory of that university, has been appointed to the chair of Natural Science in the M'Gill University, Montreal, Canada. Mr. McBride, who is the son of a highly respected Belfast merchant (Mr. S. McBride), was a distinguished student of Queen's College, Belfast, where he held the Senior Scholarship in Natural History in session 1887–88. At Cambridge, in addition to a most brilliant academic career, Mr. McBride was President of the University Union, and he has done some most valuable original work contributed to the Royal Society. He is also a graduate of the London University.

July 27th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Normal Thromboses in the Placenta.

AT the Academy of Medicine M. Delore mentioned that he had frequently met with thromboses under the chorion in the placentæ of women who had shown no signs of illness. He had made some bacteriological researches and was able to state that all placentæ contain microbes and thromboses in varying quantities. The microbes in nearly all cases are found in the thrombi. He cited two illustrative cases, the first, that of a woman in good health, a primipara, who had a perfectly natural labour lasting three hours. The placenta was placed in an aseptic box and the chorionic face was found covered with thrombi, and out of eight cultivations made from these seven gave positive results, micrococci, diplococci, and streptococci being found. The puerperium was, however, absolutely free from any complications. In the second case the woman was ill during her pregnancy, and had previously suffered from endometritis. Only a few thrombi were found, but many microbes. There are then normally found in the placenta microbes both living and virulent, and the researches of Desaubry and Bordier have shown that in the dog, after the assimilation of fat, there is found in the lymphatic and venous systems an abundance of microbes. It is probable that the same result follows in the pregnant woman after a heavy meal. As it is necessary that these microbes should not enter the fœtus the decolourised thrombi would seem to be a means of resistance and of protection for the fœtus employed by the organism against them.

The Antitoxin Treatment of Tetanus.

M. Nocard has brought forward a somewhat encouraging communication on the Treatment of Tetanus by Antitoxin. Experiments alone can solve this question, and those of M. Nocard were carried out with a toxin prepared at the Pasteur Institute in the form of powder and so virulent that 6 mgs. are enough to produce a fatal tetanus in the horse. If the immunising powers of the two anti-tetanus serums prepared by Hoechst and by the Institute are compared it will be found that they are not quite identical. An intravenous injection of either has no power to arrest the progress of tetanus once declared. Fairly satisfactory results obtain if the injection is made twenty-four hours before the appearance of the first tetanic symptoms, but the dose must be considerable. If injected forty-eight hours previously to the appearance of the tetanic symptoms the serum is almost always effectual, but the dose must be large and injected straight into the veins. Finally, if the serum be injected within twelve hours after the toxin has been injected the animal resists to a wonderful degree. If these conditions are adhered to the serum treatment would seem very effectual.

Stealing Inoculated Rabbits.

Parisians have been greatly alarmed by learning through the daily press that a robbery had taken place at the Auber-villiers Hospital, which is specially devoted to contagious diseases. A quantity of rabbits inoculated for some researches of M. Roger have been stolen, and they had been inoculated with diphtheria, tetanus, typhus, cholera, &c. As it is probable that the thieves sold the rabbits to dealers, everyone who supped off rabbit that evening is consumed with a horrible fear of having caught some infection. Interviews have been published with Dr. Roux and other authorities, and instructions have been given to the octroi officials to stop the entry of such rabbits, their carcases being easily recognisable by having been shaved for the purpose of inoculation. In case they come in skinned, instructions have been given for a very prolonged cooking, which, according to

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Dr. Roux, would render them harmless as regards infection. "Scientific" thefts have been frequent of late. Last week there were stolen from the laboratory of M. Gautier a Ruhmkorff coil, a cage of birds, and some thirty white rats.

A Pasteur Medallion.

In December, 1894, the Municipal Council decided to place upon the wall of the higher normal school in the Rue d'Ulm opposite the building which was for a long time the laboratory of Pasteur some commemorative tablet. It was to consist of a black marble plaque with a medallion of the illustrious *savant*, and its execution was entrusted to a pupil of Roty. Until lately the plaque alone had been fixed, but at the end of last week the medallion was added, without, however, any ceremony. It is of bronze on a gilded base, and surrounded by a crown of oak and laurel in rose-coloured marble. The features of the great man have been reproduced from the celebrated medal of Roty.

Professional Secrecy and Divorce.

The *Cour de Cassation* has just decided, on the opinion of M. Falcimaigne, that "if it is ever allowable for a medical man to make known by letter to the wife of a patient who has confided in him the cause or nature of his illness, the rules of professional secrecy forbid him to authorise the said woman to publish the said letters, and especially as evidence upon which to demand a separation or plea of divorce. Such evidence would not be admitted by the court, even if given in with the consent of the medical man who wrote the letters."

Medical Responsibility.

Dr. Lassalette, who was condemned on June 12th to two months' imprisonment and a fine of 500 francs for the death of a patient who had been operated upon by him for the removal of a fibroma by laparotomy, and in whom at the post-mortem examination a forgotten pair of forceps was found, entered an appeal, but the only result was that his imprisonment was increased to three months.

July 26th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Bacillus Icteroides.

FROM Montevideo a fact reaches me which may be taken as a measure of the enthusiasm aroused by the "bacillus icteroides" and its discoverer. Dr. Antonio Quesada, a resident at Paso de los Toros, presented himself the other day at the Hygienic Institute of that city and asked for an interview with its director, Dr. Sanarelli. On being admitted he stated the object of his visit to be neither more nor less than this—to subject himself, under Dr. Sanarelli's eye, to inoculation with the bacillus icteroides. Dr. Sanarelli, while fully appreciating his courage and devotion to medicine and humanity, admonished him as to the risks he would incur and tried to dissuade him from his purpose. But Dr. Quesada remaining resolute, nay, expressing his determination to undergo the ordeal at other hands rather than not undergo it at all, Dr. Sanarelli had finally to give way and accept his offer. The experiment accordingly is imminent. Dr. Quesada will be accommodated in a special ward and be placed under the surveillance of a commission composed of three Uruguayan physicians and three of foreign nationality. With the inoculation of the bacillus the clinical observations will begin. The commission will examine with scrupulous care the respiration, the blood in its constituents and circulation, the several excreta—every channel, in short, through which a pathognomonic sign characteristic of yellow fever may be looked for. The effect of the inoculation ought to be instantaneous. After two days—always assuming that no complications supervene—the self-constituted "subject" to yellow fever will enter on convalescence and—still excluding complications or unforeseen contingencies—ought to be well in a week. The public, professional and lay, are awaiting the result of the experiment with intense curiosity, as a practical test of the validity of Dr. Sanarelli's findings and conclusions. Dr. Quesada, I may add, is a man of robust constitution and in the prime of life—forty-two years of age. He has served as an army surgeon with the Spanish forces in Morocco, in the Philippine Islands, and in Cuba, where he availed himself of his many opportunities of studying yellow fever. He has suffered from dysentery, and various febrile disorders, including malaria, but never, I believe, from yellow fever proper. He is, moreover, a professional man of exceptionally refined culture and, according to one who knows him well, "nutre molta fiducia nella scoperta di Sanarelli" (cherishes great confidence in the discovery of Sanarelli).

The National Medical Congress.

The "Congresso Medico Nazionale" will shortly be held at Bergamo, the picturesque, historical town on the Italian slopes of the Alps, and those of the profession from the English-speaking world who are taking their holiday in these regions might do worse than look in during its proceedings. Dr. Antonini, Superintendent of the Bergamasque Lunatic Asylum, acts as secretary to the Congress and, through his courtesy, I can anticipate the agenda-paper, so far at least as to specify the following themes to be introduced and discussed during the sittings: "The Application of Tuberculin for the Prophylaxis of Tuberculosis in the Lower Animals and in Man"; "The Question of Tuberculous Animal Food in its bearings on the Public Health"; "The Profession in its Relations to the Prophylaxis and Treatment of Tuberculosis"; "The Medical Attitude towards Consanguineous Marriages." This last is a very elaborate paper to be introduced by a special report from the pen of Dr. Roberto Massalongo, Professor of Special Pathology in the University of Padua. Among the other contributions I may signalise "The Necessity of a Federation among the Italian Medical Associations," leading up, I presume, to a discussion on the Santini Bill now before Parliament to put Italy in line with Switzerland and France in excluding from practice all English-speaking practitioners unprovided with an Italian diploma. From all I can gather our Italian *confrères* are by no means unanimous as to the wisdom or even economic advantage of legislation in Dr. Santini's sense. The "Prophylaxis of Pellagra" is another paper sure to contain much that is interesting, if only for the names of its "Relatori" (Dr. Marzachi and Dr. Antonini). "Hygienic Surveillance in Rural Communes" will be dealt with by Dr. Prati, while "The Organisation of Obstetric Assistance in Town and Country" will be introduced by a past-master of the subject, Professor Landucci, of the Padua school. Italian medicine will be powerfully represented at the Congress, which, taking into account the preparations on foot for its participants, native and foreign, will open with every prospect of brilliant success.

Dr. Maurizio Sacchi.

Just before closing the desk I receive an announcement which throws very grave doubt on the reported safety of the surgeon of the ill-starred Bottego expedition. "Contrary to the affirmations contained in the letter of Ras Maconnen," writes my informant, "according to which Dr. Maurizio Sacchi was in perfect health at Shoa, his family have received from the Consulta (the Italian Foreign Office) an intimation to the effect that the doctor, who had been intrusted by Captain Bottego with a caravan conveying a large quantity of ivory and whose escort consisted of but a few Ascari, had been attacked and robbed near Lake Rodolfo, and, while defending himself, savagely murdered. Evidently," adds the correspondent, "Dr. Sacchi was making for some seaport of the Benadir to discharge the commission confided to him by Captain Bottego."

July 25th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Census of Population.

FIFTEEN years ago an inaccurate and incomplete census was taken of Egyptian towns by the Government. The time was ill-chosen, for the urban population was engaged in revolt against the Khedive, many Europeans and others had fled the country, and those who remained were too frightened of the Arabi Pasha *régime* to answer questions truly. The consequence was that the numbers published were considerably below reality, and as no attempt has been made since then to correct them the birth-rate and death-rate calculated on the 1882 census have been notably absurd. This year the Egyptian Government succeeded in getting £30,000 from the Caisse de la Dette Publique for the expenses of a new census, and after a preliminary trial the numbering of the people took place on June 1st, which happened to

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correspond with the first day of the Mussulman year. Everyone expected a considerable increase, but it looks, from the figures already published, as if the population of Egypt will have in future to be reckoned as nearer nine than six millions, and, if so, this will bring down the average death-rate from about 45 to 30 per 1000. The totals of 41 towns give an increase of 490,979 people, including the following additions:—Cairo, 201,562; Alexandria, 88,371; Port Said, 18,748; and Tantah, 23,538.

Control of Prostitutes.

Regulations have lately been made by the Ministry of the Interior for all houses where two or more habitual prostitutes live. Permission must be applied for in writing by the owner of the house, and licences are only issued to those quarters of the town chosen by the Governor or Mudir. Minors and ex-prisoners are disqualified, and a list of all residents and servants must be furnished. All women under the age of fifty years must be medically examined once a week, and those found to be ill are sent to the Government hospital. Inmates are not allowed to solicit publicly, and are not even to stand at their doors or windows. There is to be no gambling, police may inspect by day, and punishment for breach of rules is by fines of ten or twenty shillings, or by imprisonment from three to seven days. Thus it will be seen that Egypt is following the example of Malta rather than that of India, China, England, and the Straits Settlements. However, in Egypt there has been a certain amount of compulsory examination of native women since 1882. It is to be hoped that India will soon follow suit. This year's returns from Simla state that one-seventh of the whole British garrison may now be taken as ineffective in case of war.

Heluan-les-Bains.

Heluan has been for years considered as a future sanitarium, and it now looks as if its opportunity had really come. Last year a Government concession for the baths and two hotels was given to a rich company which already owns about £100,000 worth of property in Heluan and the railway connecting it with Cairo. The company decided to try to attract English visitors, and were fortunate in their choice of a resident physician. An entirely new bath establishment is to be built at once, and in the meantime there are fifteen baths for both sexes, two needle baths, and inhalation of sulphur spray vapour for bronchitis, as at Marlioz. A European masseur and masseuse are ready for the treatment of rheumatic and lung patients. The air of the desert—only sixteen miles from the luxuries of Cairo—is of unrivalled purity and dryness, for the Nile is two and a half miles away from the hotels, and the nearest cultivated ground is two miles distant. One hotel provides accommodation for 120 visitors, others for smaller numbers, and there are rapidly springing up a few boarding-houses and private houses for invalids. Altogether, about 250 people can now be comfortably housed. For amusements in this desert retreat the following have been provided: croquet, bowls, quoits, golf, practice cricket, and lawn tennis. Sand carts with ponies, riding horses, camels, donkeys, bicycles, a steam launch and sailing boats can all be hired. The nucleus of a good library also exists, and there are a swimming bath and a dark room for photography, and the management provides occasional concerts and an English military band once a week. A new era has dawned for Heluan, and an additional attraction is provided for invalids coming to Egypt.

Water Filtration by Native Filters.

Experiments show that the Egyptian filter jars of Nile mud which are universally used by Europeans and by some natives of the better class are useless when they are quite new, or much more than a year old. They are never very trustworthy, but they are apparently at their best when they have been used for eight, nine, or ten months. This is due to the inside coating of slime, which acts as the best filtering medium, as was pointed out by Professor Koch at Hamburg. When the filters (*ziehs*) are new they allow thousands of micro-organisms per cubic centimetre to pass through. A filter eighteen months in use allowed 1535 to pass, though the unfiltered water only contained 5000 micro-organisms per cubic centimetre; while several other filters in use a shorter time only permitted 400 to pass through from the same unclean water. The experiments are sufficient to prove that the *zieh* can be trusted to remove mud, but not microbes.

Cairo, July 24th.

Obituary.

WILLIAM HENRY ROBERTSON, M.D. EDIN., F.R.C.P. LOND., J.P.

DR. W. H. ROBERTSON had resided in Buxton for so many years, and had figured so prominently in both the public and the social life of the town, that his death, which occurred on July 15th, after a short illness, is being felt as a serious loss by all classes of the inhabitants. He was born in September, 1810, and studied medicine in Edinburgh, of which city he was a native, taking the degree of M.D. at the university there in 1830, after which he practised for a short time in Chesterfield. Removing to Buxton about 1834, he took a house in the square and had a dispensary in Terrace-road, on which foundation he built up a practice that was not only exceptional in its duration as measured by lapse of years, but brought him a gratifying amount of solid professional reputation, and gave him opportunities in many ways of displaying his excellent administrative talents. At an early period in his career he studied the effect of the Buxton mineral water in the treatment of disease, and the subject was one which never lost interest for him, for as the result of mature experience he held that in properly selected cases of a rheumatic or gouty nature these waters were truly valuable. On this account he had a special regard for the original Buxton Bath Charity, of which he was at the time of his death the only surviving medical trustee, and was chairman of the trustees and board of management of the Devonshire Hospital and Buxton Bath Charity since January, 1866, in addition to which administrative position he had been an honorary medical officer of the institution for sixty years, and senior consulting physician since 1865. Dr. Robertson was also chairman of the Buxton Improvements Company (Limited) from its commencement in the year 1870, and after the company was in the year 1888 reconstituted as the Buxton Gardens Company (Limited) he continued to be annually re-elected its chairman. He was the oldest member of the Buxton bench of magistrates, having been appointed J.P. for Derbyshire in July, 1867. Dr. Robertson became a Fellow of the Royal College of Physicians of London in 1872. He was the author of several treatises, relating chiefly to the Buxton mineral water, and he also contributed some articles on the same subject to the columns of THE LANCET; his "Guide to the Use of the Buxton Waters" has reached a twenty-fourth edition. Dr. Robertson has left a widow, a daughter, and a son, the Rev. Gordon Robertson, M.A., who is vicar of Sutton-on-Trent, Newark. The funeral took place at Christ Church, Burbage, on July 19th. There was a very large attendance, and out of respect to the memory of the deceased all the places of business in the town were closed whilst it was in progress.

PROFESSOR PREYER.

THE death has been announced of Professor T. W. P. Preyer, of Jena. He was born at Moss Side, Manchester, in 1841, and after a preliminary education in London and Bonn, studied medicine at Bonn, Berlin, Vienna, Heidelberg, and Paris. He graduated at Bonn, and in 1867 was appointed Professor of Physiology at Jena. His work on "Blood Crystals" (1871) is well known, as also his study of mental development entitled "The Soul of the Child" (1882). He also wrote on the "Colour and Temperature Sense" (1881), and in 1883 published a work entitled "Elements of General Physiology."

WATKIN WILLIAM ROBERTS, F.R.C.S. ENG., &c.

MR. ROBERTS, who died at Carnarvon on July 24th, in his seventy-eighth year, after an illness of several weeks' duration, was an old and much respected inhabitant of the town, and had an extensive practice in the counties of Carnarvon and Anglesey. He was born at Garnedd, in West Anglesey, and received his first medical training from his uncle, Mr. William Roberts, who practised in Carnarvon. In 1840 he obtained the qualifications of M.R.C.S. Eng., and L.S.A.,

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after which he held several dispensary appointments in Ireland; but more than forty years ago he returned to Carnarvon and made it his home. In 1856 Mr. Roberts became a Fellow of the Royal College of Surgeons of England; he was also a Justice of Peace for Carnarvon, and for many years had a seat on the town council, at first as a councillor and afterwards as an alderman. Mr. Roberts was a widower; he has left a son and six daughters.

FRANK CHANCE, M.B. CANTAB, F.R.C.P. LOND.

DR. CHANCE, of Burleigh House, Sydenham-hill, who died at Nice this month, was a scholar, and especially a linguist, of unusual attainments. He was born in Birmingham in 1826, and studied medicine at St. Bartholomew's Hospital and Cambridge University, graduating there as B.A. in 1854 and M.B. in 1855. His aptitude for the study of languages was already so well marked that while at Cambridge he gained the Tyrwhitt Hebrew scholarship, and subsequently edited "Bernard's Commentary on the Book of Job," which was published in 1864. He was also for many years a member of the Old Testament Revision Committee. Dr. Chance became a member of the Royal College of Physicians of London in 1859 and a Fellow in 1863, but he can scarcely be said to have engaged in practice to more than a nominal extent. In 1860 he published a translation of Virchow's "Cellular Pathology." Dr. Chance was a widower, and has left one daughter.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Hermann Wasserfuhr, an eminent hygienist of Berlin, at the age of seventy-four years. During the Franco-German War he organised the transport service for taking the wounded back, and he was afterwards employed in the arrangement of the medical department in Alsace and Lorraine. He wrote a good deal on military medical organisation, on malaria in Alsace, and on school hygiene, and was one of the founders of the *Vierteljahrsschrift für öffentliche Gesundheitspflege*.—Dr. Vigneron, Lecturer on Genito-Urinary Diseases in the Marseilles Medical School.—Dr. Delaissement, Surgeon to the Hotel Dieu, St. Quentin.—Dr. Don José Estéban Lorenzo, Clinical Professor of Surgery in the University of Salamanca.—Dr. Carlo Grillenzoni, formerly Professor of Anatomy in the Ferrara School of Medicine.—Dr. Dewindt, President of the Belgian Medical Federation.

THE BRITISH MEDICAL ASSOCIATION.

THE sixty-fifth annual meeting of the British Medical Association is to be held, as many of our readers know, in Montreal, but the general meeting for the transaction of business and consideration of Reports of Council and Committees and an extraordinary general meeting were held on Tuesday last at Exeter Hall, the latter meeting having been summoned in pursuance of the requisition of 100 members. Dr. H. BARNES, the President, occupied the chair.

The special business commenced with a motion by Mr. ARTHUR MAUDE in the following words:—

"That whereas long delay has taken place in giving effect to, and carrying into execution, certain resolutions of general meetings of this Association relating to the taking up of medical defence by the Association, and uncertainty is thereby imported whether such resolutions are binding upon the Association and the Council, and it is desirable that such uncertainty be removed, the following amendment of the twenty-fifth Article of Association be adopted as a special resolution; that is to say, that at the end of the twenty-fifth Article the following words be added—namely: 'And it shall be the duty of the Council to give effect to, or carry out as speedily as possible, all resolutions of general meeting, unless otherwise duly provided.'"

Mr. MAUDE, in speaking to his motion, said that he wished to clear the air of the doubt which existed in the minds of members as to the power of the Council and as to their own powers over the Council. He reminded the meeting that though the branches elected the Council (or rather some members of it) it made no difference in the responsibilities of the Council to the general meeting. The directors of a company were by law responsible to their shareholders in general meeting, however those directors might have been appointed.

Surgeon-Major POOLE seconded the motion.

Surgeon-Major INCE moved as an amendment:—

"That as the report of a strong committee on the subject of the reform of the constitution of the Association is about to be submitted to the members generally by the Council, any discussion upon a motion affecting the duties of the Council is for the present at least both premature and inexpedient."

Dr. BRASSEY BRIERLEY, Mr. LAWSON TAIT, and others continued the discussion. On the amendment being put to the meeting it was carried by 62 to 41. On the amendment being put as a substantive motion 71 voted for the motion, while 55 voted against it.

Dr. HUGH WOODS then brought forward the following motion:—

"That the Council of the British Medical Association be and is now hereby instructed to forthwith take all necessary steps to complete and legalise the special resolution adopted by the extraordinary general meeting held at Birmingham on the 13th day of July, 1896, and confirmed by that held at Carlisle on the 28th day of July, 1896, which resolution amplifies the Memorandum of Association, and provides explicitly for the application of the funds of the Association to the purposes of medical defence; and that until a detailed 'scheme' of medical defence shall be agreed to, the Council shall act in any case or matter of medical defence upon the instruction of a general meeting of the Association."

The concluding part of this motion was ruled out of order by the Chairman, and Dr. WOODS, in speaking to the remainder, accused the Council of having adopted the methods of the "heathen Chinee," dark and not straight. He also was understood to accuse the Council of having submitted the question of medical defence to the branches because they thought the branches would give a hostile vote, at which there were loud cries of "Withdraw," many members feeling that their good faith had been impugned.—The CHAIRMAN asked what was to be withdrawn, and Dr. Woods withdrew.—Mr. JACKSON, of Plymouth, having seconded the motion, a discussion followed, as a result of which Dr. WOODS withdrew his motion and an amendment was proposed by Dr. WELSFORD to the effect that the Council be instructed to take the necessary steps to confirm the alteration of the Memorandum of Association put forward at Birmingham in 1896. The amendment was carried by 65 to 64 votes. The figures being so close, a division was demanded, which resulted in 90 ayes against 89 noes.

Dr. RENTOUL withdrew a motion which he had on the agenda paper, and the meeting was about to adjourn when the result of the last division was called in question.

At two o'clock the meeting again assembled, when the Chairman stated that the first voting having resulted on a show of hands in 65 in favour of the amendment and 64 against it, there had been a division. On a division there were 89 in favour and 88 against. Under misconception as to what his powers were with regard to the giving of a vote he gave his vote against the resolution, so making the votes equal. "According to the Chairman's Handbook," he continued, "I ought not to have seen what the tendency was when I gave a vote. It will therefore be necessary to declare that the resolution was carried by a majority of one vote." This statement was loudly cheered.

The business of the extraordinary meeting being now concluded, Dr. Roddick, of Montreal, the President-elect, should have taken the chair at the general meeting, but in his absence Dr. H. Barnes, the retiring President, relinquished his seat to Dr. Saundby, the President of the Council. The usual congratulations and votes of thanks having been duly tendered, Mr. Wheelhouse and Sir Walter Foster were presented with the gold medals of merit, Dr. Saundby hanging them round the necks of these gentlemen. Dr. G. Sims Woodhead received the Stewart Prize, and Dr. Alexander Hill Griffith the Middlemore Prize. The building was then cleared of reporters while certain proceedings with regard to the proposed expulsion of two members from the Association took place, after which the members discussed the report of the Council and the reports of the various committees.

Dr. MYRTLE proposed:—

"That this meeting requests the Council to take definite steps to ascertain the opinion of members of the Association in the United Kingdom on the question of medical defence by means of an individual canvass by reply-paid letter or card."

This resolution was carried by 48 to 25. Subsequently it was decided to send this card to Colonial members also.

The balance-sheet coming before the meeting, Mr. LAWSON TAIT demanded to know where the costs in the case of Kingsbury *v.* Hart were to be found. After some anxious searching on the part of the Council the treasurer found them among the Association expenses, but this did not

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satisfy Mr. Tait, who thought, first, that they ought not to have been paid by the Association at all, and secondly, that they should have been put down in the balance-sheet as a separate item. He, therefore, moved that the vote be reduced by the amount of the costs. Mr. Tait eventually withdrew his motion, not, however, before having said that "the gentleman who had been appointed to supervise the medical ethics of this case knew as much about medical ethics as did probably the Lord Chancellor."

The report of the Parliamentary Bills Committee drew forth some strong remarks about the Obstetric Nurses Bill, after which the meeting adjourned until Wednesday at 12 o'clock. After some formal business had been gone through, a lively discussion seemed probable on a motion by Mr. NELSON HARDY which was directed towards securing a vote to unattached members of the Association, but the motion was withdrawn on the understanding that the matter would come up for consideration later. Promise of some excitement, however, was given by Mr. LAWSON TAIT'S motion:—

"That 'inasmuch as it is specifically ordained in the ninth Article of the Association that the *British Medical Journal* shall be conducted by a paid editor, who shall be responsible for all that appears in its pages, except such matters as may be printed by direction of the Council. The *Journal* shall contain papers on medical science, and shall be considered the medium of communication between members of the Association'; it is desirable that the Council should exercise a more complete control over this paid editor, should secure the exclusion of such matter from the columns of the *Journal* as does not come within the strict limitation made in the said Article, and such matter as tends to defeat the legitimate objects of the *Journal*; and, further, should secure that the said editor is responsible under the terms of the ninth Article of the Association."

He complained that articles which were of paramount interest to the profession were often crowded out of the *Journal*. According to the Articles of Association the *Journal* should be conducted by a paid editor, who should be responsible for all that appeared in the *Journal* except such matters as might be ruled by the Council. The Reference Committee which was appointed by the Council was, therefore, totally illegal and improper. Mr. Tait then went on to ask how the mass of money for the payment of articles was distributed. The motion was afterwards withdrawn and the meeting adjourned.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—In July the following candidates passed in the subjects indicated:—

Surgery.—J. S. Barnes, St. Thomas's Hospital; A. R. Bates, Edinburgh; T. Jones, Middlesex Hospital; F. T. Knott, London Hospital; C. H. Maskew, Birmingham; A. R. O'Fflahertie, and J. F. Porter, London Hospital; B. C. Stevens, St. Thomas's Hospital and Durham; and F. H. Wilkinson, Liverpool.

Medicine.—A. R. Bates, Edinburgh; A. W. H. Edgelow, Charing-cross Hospital; R. S. Elvins, Birmingham; W. R. Kemp, Cambridge and St. Mary's Hospital; A. R. O'Fflahertie, and J. F. Porter, London Hospital; P. D. Pywell, St. Thomas's Hospital; W. F. Reckitt, Guy's Hospital; J. M. Ritchie, Birmingham and Durham; and B. C. Stevens, St. Thomas's Hospital and Durham.

Forensic Medicine.—F. W. Chesnaye, St. George's Hospital; A. R. Bates, Edinburgh; R. S. Elvins, Birmingham; W. R. Kemp, Cambridge and St. Mary's Hospital; J. F. Porter, London Hospital; P. D. Pywell, St. Thomas's Hospital; B. C. Stevens, St. Thomas's Hospital and Durham; and S. A. Stride, London Hospital.

Midwifery.—A. W. H. Edgelow and J. M. Edwards, Charing-cross Hospital; R. S. Elvins, Birmingham; W. R. Flint, St. Mary's Hospital; G. C. Hobbs, St. Bartholomew's Hospital; W. R. Kemp, Cambridge and St. Mary's Hospital; J. F. Porter, London Hospital; P. D. Pywell, St. Thomas's Hospital; B. C. Stevens, St. Thomas's Hospital and Durham; and J. M. Wood, Middlesex Hospital.

The diploma of the Society was granted to the following candidates entitling them to practise Medicine, Surgery, and Midwifery:—Messrs. A. R. Bates, T. Jones, W. R. Kemp, F. T. Knott, A. R. O'Fflahertie, J. F. Porter, W. F. Reckitt, B. C. Stevens, S. A. Stride, and F. H. Wilkinson.

UNIVERSITY OF ABERDEEN.—The following candidates have graduated as follows:—

Degree of Bachelor of Science (B.Sc.).—*Harold George Wickham Adan, Aberdeen; †Alexander Findlay, Aberdeen; and ‡William Coul McLaren, Dinnet.

Degree of M.D.—Charles Spencer Anderson, M.B., C.M., Swansea; Andrew Baxter, M.B., C.M., Darwen; Charles Harold Dyer, M.B., C.M., Cleckheaton, Yorks (under the new ordinances); Edward Meredith Griffiths, M.B., C.M., Abercarne, Newport, Mon.; James McRae, M.A., M.B., C.M., Huntly; Edmund Thomas Martin, M.B., C.M., Leeds; William Moir, M.B., C.M., Darwen (under the new ordinances); Duncan Neil, M.B., C.M., Acton; Williamson Rust Reith, M.A., M.B., C.M., Erdington, Birmingham; and James Ritchie, M.B., C.M., Liverpool.

Degrees of M.B. and C.M. (Old Ordinances).—John Veitch Baston, M.A., Inverness; William Hunter, Aberdeen; William Anderson Kinloch, Garmouth, Morayshire; Andrew Ross Laing, West Cults, Aberdeen; Herbert Frank Mitchell, Norwich; and John Alex. Rose, M.A., Cultercullen, Aberdeenshire.

Degrees of M.B. and Ch.B. (New Ordinances).—William Ainslie, Taltswell, Mintlaw, Aberdeenshire; William Howard Clark, Beccles, Suffolk; John Duff, New Noth, Gartly, Aberdeenshire; Henry William Garden, Lumsden, Aberdeenshire; William Scott Hall, Aberdeen; Alfred William Hare, Orleigh Mount, Lansdown, Bath; Andrew Alex. Robb, Aberdeen; John Roger, M.A., Kinbroon, Rothienorman, Aberdeenshire; Norman James Sinclair, Old Aberdeen; and George Albert Turner, Aberdeen.

William D. M. Donald, Banff, has passed the examinations for M.B. and Ch.B., but will not graduate until he has attained the necessary age.

Graduation Honours.—William Hunter graduates with Honourable Distinction.—John Murray Medal and Scholarship (awarded to the most distinguished graduate (M.B.) of 1897): Maurice George Robertson, M.A., M.B., C.M., Huntly. *Proxime accessit* Thomas W. Lumsden, M.B., Ch.B., Midmar. George Thompson Fellowship: William Hunter.

* With special distinction in Chemistry.
† With special distinction in Chemistry and Physiology.
‡ With honourable distinction. Old regulations.

The diploma in Public Health has been conferred on the following candidates:—

David Buchan, M.B., C.M. Aberd., Aberdeen; George Chalmers, M.B., C.M. Aberd., Huntly; William Ronaldson Clark, M.A., M.B., C.M. Aberd., Surgeon-Captain I.M.S., Bengal; George Melli, Duncan, M.B., C.M. Aberd., London; John Arthur Rinder Glennie, M.B., C.M. Aberd., Aberdeen; Thomas Harper, M.B., C.M. Aberd., Insch; Leonard Guscotte Haydon, M.B., C.M. Aberd., Exeter; Johnston Shearer, M.A., M.B., C.M. Aberd., Surgeon-Major I.M.S., Bengal; and James Samuel Hourston Walker, M.B., C.M. Edin., Nairn.

FOREIGN UNIVERSITY INTELLIGENCE.—*Erlangen:* Dr. Adolf Gessner has qualified as *privat-docent* of Gynæcology. He has been assistant medical officer in the University Gynæcological Clinic, Berlin. Dr. Kryger, assistant in the Surgical Clinic, has been recognised as *privat-docent* in Surgery.—*Heidelberg:* Dr. Georg Marwedel, first assistant in the Surgical Clinic, has qualified as *privat-docent* in Surgery.—*Iurieff (Dorpat):* Dr. Kessler, Extraordinary Professor of Gynæcology, has resigned.—*Munich:* Dr. Alfred Schönwerth has been recognised as *privat-docent* in Surgery.—*Tübingen:* Professor Döderlein, of Gröningen, where he has only been for about three months, has been induced to move to Tübingen as Professor of Gynæcology.—*Vienna:* Dr. Lode has qualified as *privat-docent* of Hygiene.—*Würzburg:* Dr. A. J. Rosenberger has been appointed Extraordinary Professor of Forensic Medicine.

THE DIAMOND JUBILEE AND THE MEDICAL CORPORATIONS.—A Court was held at St. James's Palace on July 21st, when H.R.H. the Prince of Wales, on behalf of the Queen, received addresses from a number of public bodies, including the following medical corporations and associations consisting either wholly or in part of medical men, the names of the members of the respective deputations being given within parentheses:—The Royal College of Physicians of Ireland (Dr. G. F. Duffey, President, Dr. James Craig, Dr. J. W. Moore, Dr. James Little, and Dr. T. W. Grimshaw); the Royal College of Surgeons in Ireland (Mr. William Thomson, President, Mr. R. L. Swan, Mr. A. Jacob, Mr. Francis Heuston, and Mr. Lambert Ormsby); the Royal Academy of Medicine in Ireland (Dr. James Little, President, Mr. J. B. Story, Mr. Francis Heuston, Dr. G. F. Duffey, Mr. William Thomson, and Dr. J. W. Moore); the British Institute of Public Health (Professor W. R. Smith, President, Sir James N. Dick, K.C.B., Surgeon-Major-General J. Jameson, C.B., Sir James R. Andrew Clark, Bart., Dr. J. C. Thresh, and Mr. C. A. James, L.R.C.P. Lond.); the Incorporated Society of Medical Officers of Health (Surgeon-Lieutenant-Colonel G. P. Bate, President, Dr. E. Seaton, Dr. F. J. Allan, Dr. W. H. Kempster, Dr. Reginald Dudfield, and Mr. H. C. Jones); the University of Dublin (the Earl of Rosse, Mr. E. H. Carson, M.P., and Mr. W. E. H. Lecky, M.P.); the Royal University of Ireland (the Marquis of Dufferin and Ava, Sir Thomas Moffett, Mr. J. C. Meredith, LL.D., and Mr. Joseph McGrath, LL.D.); and the Coroners' Society (Mr. G. F. Roumieu, J.P., Dr. G. D. Thomas, Mr. S. Hacker, Mr. Braxton Hicks, Mr. Arthur Langham, and Mr. W. Schröder). The Prince's reply to each deputation was as follows: "On behalf of the Queen, my dear mother, I thank you for your loyal and dutiful address and for the affectionate congratulations which you tender on the completion of the sixtieth year of her reign. It is a source of profound joy to the Queen to receive the expressions of devotion to her person and family which are offered by her subjects throughout the empire. She is gladdened by the

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thought that the sixty years of her reign have been years of progress in knowledge and of increase in prosperity, and she prays that, by the blessing of Almighty God, she may always live in the hearts of her loving and beloved people."

THE CAMBRIAN RAILWAYS.—We have received a handbook of scenery accessible from the Cambrian Railways, "Picturesque Wales," and a "Souvenir of Wild Wales," both of which will soon dispel any doubts, should such exist, of Wales being one of the most picturesque divisions of the British Isles. Wales, however, has a stronger claim than that of beauty to recommend itself to the health-seeker and tourist, for the air is, as a general rule, of the purest and the sanitation for the most part good. There are many facilities for convenient and cheap travel given by the railway companies, and those who are yet undecided "where to go" should certainly procure these two publications from the Cambrian Railways Company's offices at Oswestry.

DIPHTHERIA IN LONDON.—The deaths registered from diphtheria in London during the week ended July 10th numbered 43, having been 29, 24, and 32 in the three preceding weeks. The corrected decennial average for the twenty-seventh week of the period 1887-96 was 36, and was thus exceeded by 7. Of the 43 deaths, 2 were of infants, 31 others of children under five years of age, and only 1 of a person aged over twenty years. Eight of the deaths belonged to Camberwell, 4 to St. George, Southwark, and 3 to Poplar sanitary area. At the close of the week there were 914 persons under isolation in hospitals on account of diphtheria, the admissions during the week having been 163 in number, against 124, 119, and 152 in the preceding three weeks. In the Outer Ring there were 5 deaths registered in the week—namely, 2 in Bexley, and 1 in Wimbledon, in Acton, and in Stratford sub-districts respectively. For the week ended July 17th the deaths registered in London were 36 in number, the corrected decennial average for the particular week having been 37. Of the 36 deaths, 4 were of infants, and other 24 of children under 5 years of age, no death being of a person aged more than 20 years. Lambeth was credited with 4 of the deaths, and Islington, Mile End Old Town, and Poplar sanitary areas each with 3 deaths. On Saturday, July 17th, there were 927 patients still under treatment in hospital, the admissions during the week having been 136 in number. In the Outer Ring the registered deaths from diphtheria numbered 8—namely, 2 in Hillingdon, and 1 each in Wimbledon, Hayes, Tottenham, Edmonton, Enfield, and Leyton sub-districts.

WORCESTERSHIRE MEDICAL SOCIETY.—The quarterly meeting of this society was held by kind invitation of Dr. Stanley Haynes (Vice-President) at his house at Malvern on July 20th, Mr. T. Bates, of Worcester, being in the chair. Three new members were elected, and six members proposed for election at the next meeting.—Dr. Mabyn Read, medical officer of health of Worcester, read a paper on "The Antitoxin Treatment of Diphtheria," relating his experiences during the epidemic that occurred in the city during 1896. One hundred and thirty-seven cases were treated by him at the Isolation Hospital, with seventeen deaths. He expressed a strong opinion as to the great value of antitoxin in the treatment of diphtheria and found no detrimental effects of any consequence due to its use.—Inspector-General Cowan, M.D. Edin., R.N., Dr. Haynes, Mr. Moore, and others joined in the discussion, and Dr. Read having replied, the President thanked him for his excellent and interesting paper.—Dr. Pollard then read a paper on "The Clinical Aspects of Adenoids." After discussing some of the less well-known symptoms he expressed his preference for chloroform as an anæsthetic and Gottstein's curette as the most generally useful instrument for the operation required for the removal of the growths.—Mr. Bates showed (1) a patient from whom he had removed a Thyroid Cyst with Calcified Walls (the specimen also was exhibited); and (2) a Testis removed by Castration, which exemplified the various results of the tuberculous process when attacking that organ.—Mr. Holbeche showed (1) a man who had suffered from Compound Dislocation of the Ankle Joint, with Compound Comminuted Fracture of the Lower Third of the Fibula, followed by Delirium Tremens and Cellulitis of the Leg and Thigh, necessitating many incisions; notwithstanding all this, the man made a good recovery, with only slightly impaired movement of the ankle-joint; and (2) two children of a family, all of whom had been affected with Mal-development of Fingers or Toes.

THE NEWPORT AND MONMOUTHSHIRE HOSPITAL.—The foundation stone of this hospital will be laid by Lord Tredegar on Aug. 2nd, when a large public demonstration will mark the event.

POPLAR AND STEPNEY SICK ASYLUM DISTRICT.—The report and statistics of the Poplar and Stepney Sick Asylum District for the year ending Lady-day, 1897, show that during that period there were 3656 admissions into the asylum, 3134 discharges, and 582 deaths. The cost of food, fuel, light, and clothing for the paupers was £12,209, the weekly rate per head being 5*s*. 11*d*. for the first half year and 6*s*. 8*d*. for the second half year. The asylum contains 770 beds, of which 550 are allocated to Poplar Union and 220 to Stepney Union. The nursing staff consists of eight sisters, nine assistant nurses, seven staff-nurses, one superintendent night nurse, and thirty-seven probationers. The medical superintendent is Mr. Charles Spurrell, F.R.C.S. Eng.

HARROGATE ROYAL BATHS.—An important addition to the public buildings of Harrogate has been made by the erection of the new baths, a handsome structure which has required about three years for completion. The Queen has graciously permitted the corporation to call it the Royal Baths, and it was formally opened on July 23rd by H.R.H. the Duke of Cambridge, who described the springs and the new buildings whereby their general use is so much facilitated as being advantageous, not only to the neighbourhood, but to the whole of England. The corporation naturally take the utmost interest in the success of this extension of the resources of the place, as was acknowledged by the Mayor, who stated that the suite of baths had been erected for the purpose of meeting the growing demands for the special modifications of bathing (including massage) introduced in recent years. The ground floor of the building contains the central hall or pump room, the gentlemen's baths, the ladies' baths, the general rooms, and the winter garden, the latter of which is 183 feet long, 42 feet wide, and 35 feet high under the glass roof. The Turkish bath, of course, requires a series of rooms, which are thoroughly well suited to their purpose and provided with every requisite. Beyond it is the "inhalation" room, the special feature of which is a sulphur water fountain rising in the middle, and giving off a vapour or fine spray which is inhaled by the occupants of the apartment. In the "pulverisation" room medicated water can be applied to the throat, eyes, &c. Among the other varieties of baths may be mentioned several kinds of douche baths, slipper baths, needle baths, the Harrogate combination bath, and the vapour-room, which is sometimes called a Russian bath. In the well-bath the water is deep enough to reach to the neck of a person standing upright. The crane-bath is one in which the bather is taken from an invalid chair and lowered into the water by a lift. The building is entirely lighted by electricity and heated by steam. It would appear that, owing to the public spirit and enterprise of the Harrogate Corporation, invalids in this country will be able to avail themselves of the most recent improvements in the application of baths to the treatment of disease without undergoing the fatigue and anxiety of a journey to some Continental health resort.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Public Health (Scotland) Bill.

THE medical profession scored a notable victory on the report stage of this Bill. In its original form the Bill provided for proceedings being taken by the local authority when nuisances were reported to it by the medical officer, but in the Grand Committee the sanitary inspector was added, this putting the medical officer and the sanitary inspector on the same level with regard to the certification of nuisances. On the report stage the Lord Advocate proposed as a compromise that the proceedings should be "upon a certificate by the medical officer, or after a report by the sanitary inspector, or otherwise." Sir William Priestley, Sir Walter Foster, and Sir Charles Cameron pressed the Lord Advocate to leave out all reference to the sanitary inspector, and they were so successful in their representations that the Lord Advocate agreed to withdraw his amendment, and to accept one in the name of Sir William Priestley leaving the local authority full discretion as to the steps they should take before instituting proceedings. Another

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success was gained in connexion with Clause 45, which gives power to inspect premises where infectious disease is supposed to exist. Captain Sinclair moved to omit the power given to the sanitary inspector to enter and inspect. Dr. Clark insisted that this was giving the sanitary inspector power to diagnose disease, and several of the other medical members supported him. Sir Walter Foster expressed the view that the sanitary inspector should only enter the premises under the direction of the medical officer. In the end the Government decided to make the matter an open question, and on a division Captain Sinclair's motion was carried by 110 to 82 votes.

Indian Famine and Plague.

Sir William Wedderburn has given notice that in connexion with the Indian Budget he will ask the House of Commons to express the opinion "that a detailed and searching village inquiry should be instituted, in order to ascertain the causes which blight the industry of the cultivators and render them helpless to resist even the first attacks of famine and pestilence."

Withdrawal of the Lunacy Bill.

The Bill to amend the Lunacy Law got through all its stages in the House of Lords, but when it reached the House of Commons notice of opposition was given by Sir Henry Fowler, and in consequence Mr. Balfour at once withdrew the measure, saying that in the circumstances there could be no hope of passing it during the present session.

HOUSE OF LORDS.

FRIDAY, JULY 23RD.

London University Commission Bill.

The Duke of Devonshire moved the second reading of this Bill and said that it was substantially the same measure as that which passed last session through their lordships' House, but for which, unfortunately, time did not suffice in the House of Commons. Certain modifications had been introduced which were the result of communications which had been in progress during almost the whole of the session between those interested, and there was reason to hope that the difficulties which prevented the Bill from passing into law had been removed, and that it would pass now as practically an unopposed measure. He was sorry to say that very considerable time had elapsed since Lord Cowper's Commission reported, and during that time a very great change, he was happy to say, had taken place in the higher education of the City of London, and this had caused the necessity for certain alterations of procedure in the Bill. Almost the only point discussed in the House last year was that which affected, or was supposed to affect, denominational colleges, and principally King's College. The agreement which was arrived at last year had been embodied in somewhat different terms in the present Bill, and he believed it was now practically accepted by King's College and the principal bodies concerned, and was now not objected to by Lord Herschell, who took a strong line of opposition last year.—The Earl of Kimberley, after making some comments on the Bill, expressed the hope that it might be passed into law before the close of the present session.

HOUSE OF COMMONS.

THURSDAY, JULY 22ND.

Beri-beri in Ireland.

Mr. Carew asked the Chief Secretary to the Lord-Lieutenant of Ireland whether any, and what, steps were being taken to check the spread of beri-beri in the Richmond Lunatic Asylum. Was he aware that the disease originated in long overcrowding and that though the inspectors of lunatics as far back as 1891 made a special report to the governors complaining that the Board of Control had taken no action to meet in any way the urgent requirements of the institution with its vast population for increased accommodation, nothing had been done to meet the requirements beyond the erection of a few wooden sheds at the Richmond Asylum and a few temporary structures at Portrane, both condemned as insanitary and insufficient by Dr. Manson and Sir Thornley Stoker? And whether the first section of the permanent structure which the Board of Control was erecting at Portrane would not be available till March, 1899? and, if so, what steps would be taken in the meantime to relieve the congestion?—Mr. Gerald Balfour replied: The outbreak of beri-beri in the Richmond Asylum has been fostered by overcrowding, consequent on the rapid increase in the number of patients. Steps have been taken to meet this overcrowding by erecting temporary accommodation at the asylum, and also at Portrane, county Dublin. The patients attacked have, as far as possible, been isolated, and the buildings occupied by them have been disinfected. The present outbreak is, so far, of a very mild type. There has been only one death attributed to it, and the general death-rate of the institution was never lower. The disease, though fostered by overcrowding, does not, it is believed, originate *de novo* from that cause, at least in this climate. The inspectors of lunatics did not make any complaint in 1891 that the Board of Control had taken no action to meet the urgent requirements of the institution for increased accommodation; but in their first memorandum of inspection they called the special attention of the Board of Governors to the overcrowding, and discussed the question of how increased accommodation could best be provided. Consequent on the reports of the inspectors numerous conferences were held between the Board of Control and the Board of Governors, and it was ultimately decided to build a new and fully equipped asylum to accommodate 1200 patients at Portrane. This asylum is now in course of erection, and it is anticipated that the first portion of it will be ready for the reception of patients in about twelve months. In addition, temporary accommodation has been provided at the Richmond Asylum for 298 patients, and at Portrane for 224, and further buildings are now being erected, which, it is anticipated, will make the total accommodation sufficient for the numbers at present in the asylum. The inspectors state that they are of opinion that these temporary buildings have been erected with the greatest care, and with every precaution that sanitation requires, and that they are similar to those erected recently at the London County Asylums to provide temporary accommodation.—Mr. T. M. Healy asked whether the right hon. gentleman would consider the desirability of getting a specialist to examine into and report upon this strange disease, or whether the right hon. gentleman had already obtained the opinion of a specialist with regard to it.—Mr. Gerald Balfour: I am under the impression that a specialist did visit the asylum and did report upon the disease, but the actual cause and origin of the outbreak still remains obscure.—Mr. T. M. Healy asked whether that document was public property.—Mr. Gerald Balfour: I am not quite certain on the point, but I will make inquiries with regard to it.

FRIDAY, JULY 23RD.

Medical Students and the Soudan.

Captain Norton asked the Under Secretary of State for War whether the War Office had already taken steps to obtain from the medical schools students who had not completed their studies with a view to the formation of an ambulance corps for service in the Soudan, or whether any such steps were in contemplation.—Mr. Brodrick: No force is being prepared in this country for service in the Soudan.

Candidates for the Army Medical Staff.

Mr. Brodrick, in reply to Captain Norton, said there were twenty-seven candidates for the next Army Medical Staff examination.

State of the Indian Army.

Captain Pirie asked the Under Secretary of State for War whether the War Office would be prepared to reconsider the question of long service in India for British troops, as being both physically and financially advantageous, especially in view of the disastrous casualties from enteric fever and venereal disease among British soldiers in India. Mr. Brodrick replied that the application of the short service system to India had been proved to possess many advantages from a physical, financial, and military point of view, and Her Majesty's Government had no intention of reverting to the old system of long service for the Indian Army.

Small-pox Hospital Sites.

Dr. Tanner asked the President of the Local Government Board whether any definite rules now apply in the selection of sites for hospitals for small-pox, and if any evidence was now available to indicate at what distance from people aggregated in institutions or living in dwelling-houses hospitals might be established without risk to persons who were susceptible of small-pox infection.—Mr. Chaplin replied: The inquiry of the hon. member raises an interesting and important question, on which he is probably more competent to express an opinion than I am, but I am advised by the medical experts of the Local Government Board that no definite evidence is as yet available to show what is the distance at which small-pox hospitals may be established from aggregations of persons without risk to such persons, and pending the solution of this question we do not sanction loans for the provision of small-pox hospitals on any site where it would have within a radius of a quarter of a mile either a hospital or a workhouse or any similar establishment, or a population of 150–200 persons, or on a site where it would have within a radius of half a mile a population of 500–600 persons, whether in one or more institutions or in dwelling houses.

The Certification of Lunatics.

Dr. Tanner asked the Chief Secretary to the Lord Lieutenant of Ireland whether, in the case of any dangerous lunatic confined in an asylum, in whose behalf application had been made that he or she should be discharged, having ceased to be insane, such application could not be entertained until it was certified to the Lord-Lieutenant by two physicians or surgeons that the individual had become of sound mind, or it had been certified by the resident medical superintendent or visiting physician that he had ceased to be dangerous, and if in the case of the two former authorities demanding such release any demur on the part of the local medical (asylum) authorities could prevent it.—Mr. Gerald Balfour replied: In the case of a dangerous lunatic committed to a district asylum under the 10th Section of the Act 30 and 31 Vict., Cap. 118, it is not necessary for two physicians or surgeons to certify that the individual has become of sound mind before an application for discharge can be entertained. The discharge of such lunatics is regulated by Section 11 of the Act and by the latter part of Section 10. Section 11 requires the resident medical superintendent or the visiting physician to certify that the person has either become of sound mind or has ceased to be dangerous, while the latter part of Section 10 enables relatives or friends under certain conditions to take the lunatic under their care and protection on entering into sufficient recognisances for his safe keeping. But the Court of Appeal has held that there is no absolute right conferred by this Section, and that it remains optional with the governors of the asylum to so transfer the custody of the lunatic.

MONDAY, JULY 26TH.

The Pollution of the Brent.

Mr. Bartley asked the President of the Local Government Board whether he was aware that the present condition of the River Brent was again in a most dangerous condition to the health of the district and of the western suburbs of London, and that residents who could were leaving their houses in consequence, and that the children in the large central district school, some 1200 in number, which was close to the banks of the River Brent, were in great danger from the foul condition of the stream; whether his attention had been drawn to the correspondence between the Hanwell and other local authorities on the subject; whether anything had been done to protect the population since attention was called to the matter in this House; and whether he would cause immediate steps to be taken to stop the pollution of the river.—Mr. Chaplin replied that he was not aware of the correspondence between the Hanwell and other local authorities referred to, and the only complaint which he had received for many months past as to the condition of the Brent was received on the 20th of the present month from the Wembley Urban District Council alleging pollution of the river by sewage from Willesden district. Since attention was called to the matter in this House, an injunction had been granted to restrain the Willesden Urban District Council from discharging the effluent from their sewage works into the river until it had been properly purified. An injunction had also been obtained against the Wembley District Council. In the case of Willesden the Local Government Board had sanctioned loans amounting to £23,000 for sewerage and sewage disposal and £12,000 for the

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purchase of an additional area of fifty-two acres of land for the purification of the sewage. They had also sanctioned a loan of £5000 for the purpose of sewage disposal in the case of the Wembley district. The Middlesex County Council were empowered to enforce the provisions of the Rivers Pollution (Prevention) Act and any action which might be required as regards other districts could be taken by them. The Local Government Board were not empowered to institute proceedings

The Vaccination Commission.

Sir Seymour King asked the President of the Local Government Board whether he had yet ascertained when the remainder of the evidence and special reports on which the final reports of the Royal Commission on Vaccination was based would be published, and what was the cause of delay.—Mr. Chaplin said that Mr. Bret Ince, who acted as secretary to the Commission, informed him on May 12th that the whole of the as yet unpublished evidence referred to would be issued within three weeks of the time, and that the special reports would be issued at the same time, but some of them rather sooner than the evidence. He had since then twice written to Mr. Ince on the subject of the delay, but he regretted to state that as yet he had not received any reply to his last communication, which was dated July 14th, or to the memorandum which was forwarded to him on Saturday, when the notice of this question appeared on the paper.

Inflammable Preparations for the Hair.

Mr. Wootton Isaacson asked the Home Secretary whether his attention had been called to the death by fire, of a lady in a hairdresser's shop, while having her hair dressed with a preparation known as Petrole or dry shampoo; whether he was aware that this dangerous preparation was composed of rectified petroleum and ether, which gave off a vapour which would catch fire from a distant light, or the action of the sun; and whether he would adopt means to put a stop to the sale of these dangerously inflammable preparations.—Sir M. White Ridley replied: Yes, my attention has been called to this accident. I am informed that the inquest has been adjourned for further evidence as to the precise character of the preparation and other matters, and I am unwilling to anticipate the conclusions of the jury by expressing any opinion at present either as to the cause of the accident or as to the necessity which it may show to exist for taking further measures with regard to substances of this character. If, however, it is found, as seems likely, that the preparation was largely composed of petroleum spirit it falls, of course, within the provisions of the Petroleum Acts. I may add that the London County Council, as the local authority under those Acts, are giving careful attention to the subject, and are represented at the inquest. The hon. member is no doubt well aware that the present law with regard to petroleum is in a very unsatisfactory state.

TUESDAY, JULY 27TH.

Calf Lymph.

Mr. Strachey asked the President of the Local Government Board whether a board of guardians might instruct the public vaccinators in their union to give parents the option of having their children vaccinated with calf lymph instead of human lymph.—Mr. T. W. Russell, who replied on behalf of Mr. Chaplin, said that the public vaccinators were not subject to the directions of the boards of guardians in this matter, but they were enabled by the instructions of the Local Government Board to use calf lymph instead of human lymph whenever they so desired.

WEDNESDAY, JULY 28TH.

Infant Life Protection Bill.

At this sitting this Bill as amended by the Grand Committee was considered and was read a third time. It now only awaits the Royal Assent before becoming law.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ABERNE, J. L., L.K.Q.C.P. Irel., L.R.C.S. Edin., has been appointed Medical Officer for the Gislingham Sanitary District of the Hartismere Union.

ANDERSON, J. A., M.D. Glasg., has been appointed Medical Officer for the Leswalt (Stranraer) Parish Council, vice H. Cochrane.

ATKINS, T. B., L.A.H. Dub., has been appointed a Member of the Licensing Court for the Licensing District of Mitchell, New South Wales.

BLUMFIELD, J., M.D. Cantab., has been appointed Junior Anæsthetist to St. George's Hospital, London.

CLUCKIE, A., M.B., C.M. Glasg., has been appointed Medical Officer for the Stranraer Parish Council.

COLE, S. G., M.B., B.Ch. Oxon., has been appointed Junior Obstetric Officer to St. Mary's Hospital, London.

GREENWOOD, ALFRED, M.B., Ch.B. Vict., L.R.C.P., L.R.C.S. Edin., has been appointed Resident Medical Officer to the Salford Union Infirmary, Manchester.

HUNT, T. H., M.B., B.S. Lond., has been appointed Senior House Surgeon to the Royal Halifax Infirmary, vice J. C. Maxwell, resigned.

KEMPE, C. M., M.R.C.S., has been re-appointed Medical Officer of Health for the Shoreham Urban Sanitary District.

LAWSON, THOMAS, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Resident Medical Officer for the St. Pancras and Northern Dispensary, Euston-road, London.

MCARTHUR, D. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 5 Sanitary District of the Hertford Union.

MULLIN, JOHN, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Ruskey Dispensary District, Strokestown Union.

NEIL, JAMES, M.D. Aberd., C.M., has been appointed Medical Superintendent for the Warneford Asylum, Oxford.

PAKES, WALTER C. C., L.R.C.P. Lond., M.R.C.S., D.P.H. Camb., has been re-appointed Assistant Demonstrator of Bacteriology at Guy's Hospital, with the Charge of the Practical Chemistry in the D.P.H. Course.

RICHARDS, J. S., M.D. Lond., B.S., L.R.C.P., M.R.C.S., has been appointed Medical Superintendent of St. Saviour's Infirmary, East Dulwich-grove, S.E., vice H. E. Harris, resigned.

ROSE, H., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Buckinghamshire County Hospital, Aylesbury.

SALMON, C. C., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been elected a Member of the Dental Board of Victoria, Australia.

SPRINGTHORPE, J. W., M.D., Ch.B. Melb., M.R.C.P. Lond., has been appointed President of the Dental Board of Victoria, Australia, vice Dr. Turner, resigned.

STORR, F. A., B.A. Oxon., L.S.A., has been appointed Medical Officer of Health by the Halifax Rural District Council.

TAYLOR, J., M.D. Aberd., D.P.H. Camb., has been re-appointed Medical Officer of Health by the Chester-le-Street Rural District Council.

VAUGHAN, ETHEL, M.B., B.S. Lond., has been appointed an Assistant Medical Officer to the Camberwell Infirmary.

WILKINSON, WM. A. HORSLEY, M.B., Ch.B. Vict., has been appointed Medical Officer of Health to the Gainsborough Urban District Council, vice D. Mackinder, resigned.

WILLIAMS, R. T., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health for the Porthcawl Urban Sanitary District.

YOUNGSON, T. McK., M.B., C.M. Aberd., has been appointed Medical Officer of Health by the Wolstanton Rural District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident Senior House Surgeon. Salary £80, with board and washing.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon. Rooms, coals, and lights provided.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W. — Clinical Assistant.

CHILDREN'S HOSPITAL, Nottingham. - House Surgeon (non-resident) for six months. Salary at the rate of £100 per annum.

CORNWALL COUNTY ASYLUM, Bodmin.—Junior Assistant Medical Officer, unmarried. Salary £100 a year, increasing £10 yearly to £120 a year, with board, lodging, &c.

CUMBERLAND INFIRMARY, Carlisle.—House Surgeon for one year. Salary £70 per annum, with board, lodging, and washing.

GUEST HOSPITAL, Dudley.—Resident Medical Officer. Salary £100 a year, increasing £10 a year to £120, conditionally, with board, residence, attendance, and washing.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London, W.—Junior Resident Medical Officer for six months. Salary at the rate of £50 per annum, with board, lodging, and washing.

HUNTINGDON COUNTY HOSPITAL, Huntingdon.—House Surgeon. Salary £50.

LANCASHIRE ASYLUMS BOARD.—Medical Attendant on the Patients for the Idiot Boys' Asylum at Winwick, near Warrington. Inclusive salary 100 guineas per annum. Applications to the Clerk to the Lancashire Asylums Board, County Offices, Preston.

MALDON UNION.—Medical Officer for the St. Peter's Medical Relief District. Salary £80 a year, with midwifery fees of 15s. per case and other extra fees. The Medical Officer will also be appointed Public Vaccinator. Salary and fees subject to deduction under the Poor Law Officers Superannuation Act. Applications to the Clerk to the Board, Maldon, Essex.

MANCHESTER ROYAL INFIRMARY, DISPENSARY, AND LUNATIC HOSPITAL OR ASYLUM.—Honorary Dental Surgeon.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the North-Eastern Fever Hospital, St. Anne's-road, Tottenham, N., unmarried. Salary £160 the first year, £180 the second year, and £200 the third and subsequent years of service, with board, lodging, attendance, and washing, subject to deduction under the Poor-law Officers Superannuation Act, 1896. Applications to the Clerk to the Board, Chief Office, Norfolk-street, Strand, W.C.

PARISH OF BOLESKINE AND ABERTARFF.—Medical Officer for the Fort-Augustus District. Applications to Mr. A. Urquhart, Inspector of Poor, Gorthleck.

POPLAR HOSPITAL FOR ACCIDENTS, Blackwall, E.—Two Assistant House Surgeons for six months. Salary £65 a year, with board and residence.

ROTHERHAM HOSPITAL AND DISPENSARY.—House Surgeon for three years. Salary 100 guineas, with board, lodging, and washing.

ROYAL SURREY COUNTY HOSPITAL, Guildford. — Assistant House Surgeon. Board, residence, and laundry provided.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, London.—Demonstrator of Anatomy.

STOCKPORT INFIRMARY.—House Surgeon. Salary £100 a year, with board, washing, and residence. Also Junior Assistant House Surgeon for six months. Honorarium at the rate of £24 per annum, with residence, board, and washing.

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STOURBRIDGE DISPENSARY.—House Surgeon and Secretary. Salary £120 a year, increasing £5 annually to £130, with furnished rooms, coal, and gas, and an allowance of £25 for travelling expenses.

Births, Marriages, and Deaths.

BIRTHS.

BARRACLOUGH.—On July 24th, at London-road, South Lowestoft, the wife of Harold C. Barraclough, M.B., of a son.

CHAPMAN.—On July 20th, at St. John-street, Hereford, the wife of Paul Morgan Chapman, M.D., F.R.C.P., of a son.

GARDINER.—On July 26th, at Portland-terrace, Richmond, Surrey, the wife of M. H. Gardiner, M.B., L.R.C.P., L.R.C.S. Edin., of a son.

LAWSON.—On July 25th, at Fortune's Well, Portland, Dorset, the wife of David James Lawson, M.D., of a son.

NORTON.—On July 26th, at Kennington-park-road, S.E., the wife of H. Harvey Norton, L.R.C.P., M.R.C.S., of a daughter.

SHUTE.—On July 22nd, at Granby-place, Northfleet, the wife of G. S. Shute, M.D., of a son.

THOMPSON.—On July 23rd, at Grenville House, Quay, Bideford, N. Devon, the wife of Charles Sinclair Thompson, M.B. Edin., of a son.

MARRIAGES.

BOND—YELD.—On July 22nd, at St. Mary Abbott's, Kensington, William Ernest Bond, M.R.C.S. Eng., L.R.C.P. Lond., of Bramhall, Cheshire, to Emily Hollier Yeld (Millie), younger daughter of the late W. Walter Yeld, of Churchgate House, Stockport.

CRICKMAY—ROSSER.—On July 22nd, at St. John's Church, Croydon, by the Rev. William Henry, M.A., Vicar of Challock, Kent, godfather of the bride, assisted by the Rev. T. G. Hill, M.A., Colin Lindsay, youngest son of George R. Crickmay, F.R.I.B.A., of Putney and Westminster Chambers, to Edith Lizzie, only child of Walter Rosser, M.D., of Croydon.

CURREY—BINNY.—On July 24th, at St. Peter and St. Paul's, Aldeburgh, E. F. N. Currey, M.R.C.S. Eng., L.R.C.P. Lond., eldest son of the late J. E. Currey, M.D., of Lismore, Co. Waterford, Ireland, to Constance Murray, fourth daughter of Major-General Binny, B.S.C. (Retired), of Crespigny, Aldeburgh, Suffolk.

DUCAT—JACKSON.—On July 17th, at St. Mary's, Spring-grove, Isleworth, Arthur David Ducat, M.B. Lond., of Chiswick, to Helen Meltora, eldest son of Walter H. E. Jackson, C.C., of Derby House, Spring-grove, Isleworth.

GIBSON—WATT.—On July 26th, at St. John's-wood Presbyterian Church, Marlborough-place, Henry W. Gibson, M.B., to Jane Grant, eldest daughter of A. P. Watt, 29, Abbey-road, N.W.

GLOVER—GLOVER.—On July 22nd, at Union Chapel, Islington, by the Rev. Richard Glover, D.D., of Bristol, and the Rev. W. Hardy Harwood, of Islington, Lewis G. Glover, M.A., M.D. Cantab., of 1, College-terrace, Hampstead, youngest son of John Glover, J.P., of Highgate, to Mary Mildred, only daughter of James Grey Glover, M.D., J.P., of Highbury.

NEWTON—HARBORD.—On July 22nd, at Slaugham Church, Sussex, Reginald Frederick Henry Newton, M.R.C.S., L.R.C.P., of Balcombe, Sussex, to Susanna Booth, fourth daughter of the late William Harbord, Surgeon, Wainfleet All Saints, Lincolnshire.

STRAND—PETTER.—On July 21st, at St. Michael's, Blackheath-park, Alick Oondell Strand, M.R.C.S., L.R.C.P., L.D.S., Hinckley, to Edith, eldest daughter of Arthur Petter, Eskdale Lodge, Blackheath, S.E.

TOWNE—NEWNHAM.—On July 27th, at Lady Grey, Allival North, South Africa, by the Rev. W. Rossiter, Rector of St. Paul's, Allival North, Hugh Rose Forster Towne, M.R.C.S., L.R.C.P. Lond., younger son of the Rev. L. B. Towne, Vicar of St. John the Baptist, Harlow, to Ethel Agnes, second daughter of Dr. Lewis J. Newnham, of Lady Grey.

WILSON—NAYLOR.—On July 21st, at Cairo, Williams Hawkins Wilson, M.B. Oxon, Professor of Physiology, Medical College, Cairo, to Kate Hamilton, youngest daughter of J. B. Naylor, C.S.I., Indian Civil Service (Retired), of Cadbury House, Yatton, Somerset.

DEATHS.

BLACK.—On July 19th, suddenly, at 95, Goldhawk-road, London, W., John Frank Black, M.B., C.M., aged 31 years.

BULLOCK.—On July 21st, suddenly, Thomas Warren Bullock, M.R.C.S., L.S.A., of Overtown House, Isleworth, aged 37 years.

HOLMAN.—On July 18th, at his residence, Niton, Isle of Wight, Charles Henry Holman, M.R.C.S., aged 75 years.

OAKES.—On June 14th, 1897, in his 27th year, George Nelson Davidge Oakes, L.R.C.S.I. and L.R.C.P.I., of 28, Leeson-park-terrace, Leeson-park, Dublin, accidentally drowned while bathing at Menaos, N. Brazil, while in Medical Charge of the s.s. *Sobraleuse*, Red Cross Line, to the intense grief of his afflicted mother, relatives, and many kind, sorrowing friends: only son of the late John Oakes, Esq., Lieutenant, Deputy-Assistant-Superintendent of Stores. (By cablegram, June 19th.)

ROBERTS.—On July 24th, at Uxbridge-place, Carnarvon, Watkin William Roberts, F.R.C.S., J.P., in his 79th year.

THOMPSON.—On July 22nd, at Welbeck-street, London, Henry Thompson, M.D., Senior Fellow of St. John's College, Cambridge, F.R.C.P., aged 81 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 29th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
July 23	30·10	N.W.	66	59	127	82	56	...	Cloudy
,, 24	30·10	S.E.	71	66	130	85	64	...	Hazy
,, 25	29·93	W.	72	63	125	79	65	0·04	Fine
,, 26	29·89	W.	66	60	121	73	60	0·12	Cloudy
,, 27	29·84	N.W.	61	59	119	74	57	...	Cloudy
,, 28	30·02	N.W.	66	60	97	73	59	...	Cloudy
,, 29	30·22	W.	68	64	83	72	63	...	Cloudy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which was completed with the issue of June 26th, was given in THE LANCET of July 3rd. It is intended, in future, to include the Index and Title-page for each past half-yearly volume in the first number of the succeeding volume, as in the present case, instead of in the last number of the volume itself, as heretofore.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18*s*., carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s*., by post 2*s*. 3*d*.

To be obtained on application to the Manager, accompanied by remittance.

PRESERVATION OF DEAD BODIES.

ACCORDING to Dr. Kraindel (*Vrach*, No. 27, 1897) a very efficient method of preserving bodies for anatomical and other purposes is to inject into the vessels a 5 per cent. solution of formalin to the extent of a quarter or even a third of the weight of the body. From experiments made on the body of a child, and on a head and foot, he came to the conclusion that a temperature of 80° F. has no effect on bodies so treated—at all events for six or seven weeks. The cadaveric discolouration and all smell disappeared as soon as the liquid had been introduced, and the external appearance became that of a body recently dead. Experiments made with a stronger solution—10 per cent.—showed that this causes decided external change, the skin having a shrivelled appearance and becoming slate-coloured in less than three weeks.

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WHAT'S SAUCE FOR THE GOOSE, &c.

AT the recent election of an assistant physician to the Carlisle Infirmary the rules of the institution were read, and the attention of the new member of the staff was specially directed to a statute preventing union appointments or clubs being held by the honorary staff, to which reasonable ordinance he was asked to subscribe. A correspondent who should be well informed tells us that an assistant surgeon also elected recently holds club appointments, and he asks: "Is this fair?" If the facts are as he has stated them, undoubtedly the position is not fair at all, and we recommend the assistant surgeon to resign his club appointments, if he have any, so as to bring himself into line with his medical *confrère*.

Ed. S., *C.M.*—The duties of a workhouse medical officer are set forth very fully in Article 205 of the General Consolidated Order of the Poor Law Commissioners, dated July 24th, 1847. There have been some minor amending orders issued by the Local Government Board since then, but practically this General Order gives full particulars and has all the authority of a statute. The duties of master, matron, and nurse are set forth in the same Order, and the duties of the first two named were somewhat modified by a General Order of the Local Government Board, dated Feb. 12th, 1879, and by supplementary Orders at other times. The standard text-book on the subject, which we commend to the notice of our correspondent, is "Glen's Poor-law Orders" (Knight and Co.), costing about 25*s*. The General Orders can be obtained separately from Messrs. Eyre and Spottiswoode, East Harding-street, London. As regards the duties of nurse, it is with much regret we record that no material modification has been made in her duties since the Order of 1847, although times have changed so much in this department of human enterprise. However, we understand that the Local Government Board have at the present moment under consideration a new Order dealing with the question of workhouse nursing.

THE PATHOLOGY OF DISTEMPER.

To the Editors of THE LANCET.

SIRS,—The pathology of distemper in the dog has been neglected, I suppose, by the veterinary surgeons, as the disease is very prevalent and claims a great number of very valuable dogs by death. I have hunted in vain to find if any micro-organism is described, and have also consulted some local veterinary surgeons. Klein in his latest work does not describe distemper at all. I should define distemper as an acute inflammatory, contagious disorder, affecting chiefly the respiratory passages, sometimes the alimentary tracts, and very frequently leaving as a sequela some nervous affection (chorea and paralysis and fits), rheumatism, and rickets. Distemper in the dog, I think, is only a stage in the life-history of the organisms of scarlet fever and diphtheria, for these reasons scarlet fever is followed by rheumatism and dropsy and chorea in the human being. So it is in the dog with distemper. Diphtheria is frequently followed by paralysis. So also is distemper in the dog. In the dog the paralysis is chiefly in the hind limbs, but I have seen the throat also affected. As regards treatment in these animals, perchloride of iron gives very good results. Antitoxin injected gives excellent results also, the nasal mucous membrane is cleared of its discharge in twenty-four hours, and should there be a white film over the eyes this also disappears. But for this film calomel dusted into the eyes has given me excellent results.

Vaccination between the ears has also given me good results. The other part of the treatment I follow is a stimulating plan—plenty of raw meat-juice, eggs and milk, and port wine and brandy—and hygienic. The sequelæ of distemper are almost incurable—viz., chorea and paralysis. I write this short letter so that some of our bacteriologists may take up this subject and see if there is any connexion between these diseases pathologically, as they coincide clinically. I believe there is. Most of my experiments with antitoxin and vaccination have been done on high-bred dogs—i.e., in-bred to bring out their fine qualities. Mongrels do not suffer so severely as in-bred ones.

I am, Sirs, yours truly,

Ashton-under-Lyne, June 14th, 1897. F. W. MANN, M.B.Edin.

*** Were distemper due to the microbe of scarlet fever would not our correspondent expect the latter disease to be specially rife among veterinary surgeons, the attendants at kennels, &c.? But we have yet to learn that such is the case. Diphtheria, on the other hand, is due to a perfectly well-known bacillus, which during the past twelve years has been carefully studied by Löffler, Roux, Yersin, and others, but which has never, so far as we are aware, been shown capable of producing symptoms even remotely resembling those of distemper. Further than this, Friedberger and Fröhner (two very eminent German veterinary authors) absolutely deny that any case of human diphtheria has been shown to have arisen from animal infection, or that human diphtheria can be transmitted (as a specific disease) to animals. The micro-organism of distemper has not yet been definitely identified, though our correspondent is quite in error in supposing that the veterinary profession has neglected to study the disease. On the contrary, it has given it very close attention. Millais identified six varieties of organism with nasal discharge, one of which was a bacterium and the other five cocci. Of these one resembles very closely the pneumococcus of Friedländer, and is regarded by Millais as the *causa causans*, on account of its occurring in the blood of every animal examined. By growing mixed cultures on gelatin (transplanting to new tubes six or seven times) a material was produced which could be employed as vaccine. It sufficed to smear a small quantity of such a culture on the nose of a well-bred dog to bring about a mild and uncomplicated attack of distemper, after which the animal enjoyed an immunity similar to that which follows disease contracted in the usual way. Rabe (of the Hanover Veterinary School) found small cocci, sometimes in chains, sometimes aggregated in twos or fours (sarcinæ), in the nasal discharge and blood. They stained readily with methyl-violet. Friedberger confirmed this. Mathis discovered a diplococcus which, after cultivation, reproduced the disease in dogs. Schantyr recently published a report of experiments. He divides distemper into three forms—viz., an abdominal "typhus" type, distemper proper, and canine "typhoid." The "typhus" bacilli are small, short bacilli closely resembling those of human typhus. They occur in the blood and internal organs. The true distemper bacilli are small, slightly bent organisms, and the "typhoid" bacilli are very small, straight rods, usually aggregated together in groups.—ED. L.

TRENCH'S REMEDY.

WE have received a curious little pamphlet issued by Mr. J. Townsend Trench. This gentleman is the son of the late Stewart Trench, who wrote "Realities of Irish Life"—a very delightful book. The present Mr. Trench is a many-sided genius—land agent, lay preacher, magistrate, unqualified practitioner, and a crack shot like his father, who had the reputation of being sure of a crow on a bush at forty yards. We do not quite understand Mr. Trench's attitude. He advertises all his remedies—some twenty-eight in number—and apparently goes about the country prescribing gratis, and yet he says: "Never hesitate to consult your local doctor. He has the advantage of seeing you on the spot. Never for a moment let me stand between the patient and what is believed to be his or her best interest. The doctors are my best friends, and I cannot speak too highly of them and their noble profession." The "epilepsy remedy" which appears to be Mr. Trench's sheet anchor is, we fancy, a very ordinary bromide mixture; but, as Mr. Trench so truly remarks, "In some cases I find Folly harder to cure than Fits," and a much advertised and bepuffed remedy with testimonials from the clergy and ministers of all denominations will always be popular.

Dr. A. Arany (Hungary).—There is no legal obstacle to anyone practising in England with any or no qualification at all, but such person cannot sign a death certificate or sue for fees. To have any rights he must be possessed of a registrable qualification, and register such at the office of the General Medical Council. A Hungarian diploma is not registrable in this country, but the Conjoint Examining Board admits gentlemen, possessed of qualifications entitling them to practise in their own country and given after a course of study and examination equivalent to that prescribed by the Board, to the examinations for the conjoint diploma under special conditions. For further particulars we advise our correspondent to apply to the secretary of the Conjoint Board, Examination Hall, Victoria Embankment, London.

THE DROWNING FATALITIES.

WAR has been defined as an epidemic of wounds and injuries, and this particular season of the year is usually marked by its little recurring epidemic of drowning. That is only to be expected, perhaps, during the bathing and boating season; but it is seldom that so many separate cases of drowning have occurred in a short time as have recently been chronicled in the daily papers. Most of these cases have arisen under circumstances that did not admit of being foreseen in any way and provided against by the presence of a boat—a precaution commonly taken where a number of people are daily bathing at a seaside place; and one of the sad features on the present occasion has been the number of those who have been drowned whilst endeavouring to succour and save others from that fate. Drowning people proverbially catch at a straw, and a panic-stricken victim instinctively clutches at the nearest part—the head and neck, for instance—of anyone attempting his rescue. It requires much coolness and some practised skill on the part of a swimmer going to the aid of a drowning person to safely and successfully accomplish his object.

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The Graduation Address

Delivered in the University of Glasgow on July 22nd, 1897,

BY W. T. GAIRDNER, M.D. EDIN. AND DUB., F.R.C.P. EDIN. AND IREL., LL.D., F.R.S.,

PROFESSOR OF MEDICINE IN THE UNIVERSITY OF GLASGOW; PHYSICIAN IN ORDINARY TO HER MAJESTY THE QUEEN IN SCOTLAND.

LADIES AND GENTLEMEN,—I had occasion some years ago to encounter what I have selected as the text of this little sermon, or address, in a form which I venture to think is susceptible of improvement—demanding, in fact, what, if it were a Biblical text, we should call a "revised version." As it is only, however, a very common French proverb, we may take it upon ourselves now to adopt it with the rendering most suitable for our purpose. I was standing, on the occasion referred to, in the reception-room of the British Medical Association, while one friend, locally familiar with the ground, was inquiring for tickets for some evening entertainment or other, while another friend, a very distinguished ethnologist, and I were awaiting the result. The first friend was by this time pretty well merged in a crowd, all alike clamorous for tickets, on which he ejaculated incidentally, "Ah, everything comes to him who waits." "I beg your pardon," I remarked, "you will not say that if the tickets are all done and you find you cannot get them." "How do you reconcile that proverb," said the ethnologist to me, "with Shakespeare's 'tide in the affairs of men that, taken at the flood, leads on to fortune'?" "Oh," I replied, "I do not see any difficulty there; but our friend has quoted the proverb wrongly." "How so?" "The proverb, as I understand it in French, does not promise anything at all to the man who merely waits, but everything to the man who *knows how to wait*." And the distinction here is all-important; for Shakespeare's "tide" is just as likely as not to submerge the man who, like Dickens's Micawber, is merely waiting for "something to turn up," while it "bears on to fortune" only the man who "knows how to wait"—who is not merely waiting, but is ready and fully equipped and armed to take the advantage of the tide when it comes. The proverb, therefore, is all right in its real and original form, and Shakespeare is also all right; and both of them contain a good deal of the philosophy of human life and of human effort which it may well be worth while for all of us to consider a little on the present occasion. For, graduates, I am afraid it must be admitted, for most of you at least, that a good deal of "waiting" will have to be done, now or later, before you can expect to reap the highest rewards of your profession. It will not be given to many of you, as to a very excellent hospital assistant of mine now in Johannesburg, to be pitchforked at once into a share of a practice worth several thousands a year, and likely to be largely increased. You will have to wait, most of you, perhaps all of you, for considerable success in your profession; and you may have to wait longer than you quite like. But as this waiting has got to be done—as it is part of the game, in short, and, as I hope to show you, a very important and even beneficent part of it—my lesson to you is that it is as well to study how you can play this waiting game scientifically and practically, according to the laws of the game. My lesson to you is that you should not fret or worry over this, but rather be well advised about it beforehand; in other words, and in the words of the proverb, that you should "know how to wait."

"*Tout vient à point à qui sait attendre.*" That, I believe, is the true original form of the proverb, and, as you will easily see, it contains a far deeper philosophy of life than the current English version, even if we admit that the latter has any meaning at all for us, or is not absolutely misleading. "Waiting" is here set forth as a part, and a very important and necessary part, of the art of success in life; it is to be studied as a branch (a Frenchman might say) of the *savoir vivre*. It is to be accepted, not in a spirit of restlessness and impatience, still less in the mere happy-go-lucky mood of a Mr. Micawber, but rather as a part of every earnest man's destiny, and in the full confidence that when it is so accepted and so used by a man working in the right way and in a corresponding temper of mind, the opportunity will come, the tide will rise, which "taken at the flood" (as Shakespeare says) "leads on to fortune." And so the immortal dramatist, he who was "not of an age, but for all time," is found to be in perfect accord with that possibly very far inferior authority unknown, who devised and popularised the science of "getting on" in life in the very epigrammatic phrase with which this little address began.

There need be no hesitation, then, in recommending to you, as young graduates entering on a medical life and medical responsibilities, that you should try, above all things, to "know how to wait." That is the very plain and obvious condition, the first step towards ultimate and honourable success in medicine as well as in every other high pursuit. The great statesman, for example, is he who can "take occasion by the hand, to make the bounds of freedom wider yet"; but he must be content to wait for the occasion. The greatest general or admiral at the head of the strongest army or fleet will be the most careful to see that success is not marred by an inopportune moment for an engagement. Why, then, should you, with all the world before you, and all your lifetime to work in, not "know how to wait"? Why risk all that should be most valuable in your life in one ugly rush—character, experience, efficiency in the end—because, owing to faults of temper, or even the laudable desire to "get on," or the apparent and immediate need thereof, you feel tempted to satisfy all your ambitions at once? "Waiting"—in the sense of the proverb—is not idleness, and in our profession of all others it has no need to be an unprofitable or degrading occupation. There is plenty to do for all of us, if we can only accept our just position and act in a subordinate part with frankness and sincerity. It is even a duty of the first order to keep ourselves, body and mind, in a state of preparation for higher duties; and therefore no one can for a moment think of "waiting" in the sense of a folding of the hands or of what is called across the Atlantic "loafing around." No; he who "knows how to wait" will strive to keep himself always ready to use favourably the occasion when it comes. He will instinctively beware of letting his faculties go to rust; and you, graduates, will naturally seek such occupation as will conform to the large and valuable discipline which you have already undergone. But you will, nevertheless, "know how to wait"; and sooner or later the favourable occasion, or occasions, will come. And then, just because you have so waited and so kept yourselves in readiness for them, you will reap your reward.

There is nothing very profound in all this, you will say. No; but still it requires to be thought about seriously and often. Many a promising career has been blasted, many a life practically thrown away; still worse, many an honourable beginning converted to quackery and baseness by not knowing or not believing that all will come right to him who knows how to wait. The temptations of a medical career are not small—it may even be said that to ill-regulated or over-ambitious minds not guided by principle, and easily swayed by self-interest, they are apt to be overwhelming. Let me advert very briefly to only two out of the many.

1. There is the making haste to be rich—not, perhaps, necessarily a fault (much less a crime) in itself, but certainly an unbecoming attitude of mind in an early medical career, and one which is not easily reconciled with the principles of your higher and nobler vocation. "They that will to be rich," says an old and venerable book, "fall into temptation and a snare, and into many foolish and hurtful lusts which drown men in destruction and perdition." It can hardly be disputed that the temptation and snare here referred to receive many illustrations in connexion with the profession of the healing art. Nor is it at all an exaggeration to say that the making of money, if advanced to the rank of a first principle and practised without any scruple or any restraint of honourable tradition, is by far the easiest part of success in the art. The vast fortunes made by the most glaring quackeries, the immense sums spent (it is to be presumed profitably) in the advertisement of remedies which are either worthless or set forth in terms that can only be described as evidently mendacious, are the standing proof that the art of medicine, if pursued as a mere trade, is at once the easiest and the worst, or the most contemptible, of all possible trades. It may, therefore, nay, will often, occur to you in your early career that the restraints upon your freedom of action arising out of the necessary and honourable tradition of centuries, and out of the almost unspoken influence of all that

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you have been taught in this University, are somewhat in the way of your success, if the "tide which taken at the flood leads on to fortune" is to be merely a tide of fees. I know not if it is an absolutely true story, but it is one which might be true, and almost looks like the truth—that of the bone-setter in Paris, who, on account of some questionable transactions, was visited by the police as practising irregularly without a diploma. The story goes that a perfectly regular diploma was immediately produced; but that the supposed culprit earnestly requested the police agent not to betray him, and explained that he had carefully concealed and deliberately suppressed his diploma, "because" said he, "I once practised on the strength of it and was starving; and now, by behaving like a charlatan, and freely advertising as such, I am already a rich man." The moral of the story is that in the making of money, as in other things, you must "know how to wait." The money will come, unless you are very unlucky, with the gradual increase of reputation and in the faithful, quiet, honourable discharge of higher duties; but to make it a first consideration is almost the sure road to a fatal lowering of tone, to the alienation of your more honourable brethren, and in the end to "destruction and perdition" in a medico-ethical, if not also in the apostolic, sense. In the course of a pleasant excursion not long ago with a number of medical brethren, most if not all of them old pupils of mine, and as good fellows as I can desire my old pupils to be, one of the best and not least successful said to me jokingly, "You never taught us how to make money." I at once admitted the truth of the remark, but it was because in my opinion that part of a medical education may, nay, ought, to be severely left to itself. The money-getting side of your art is very easily, perhaps too easily, learned by those who desire it above all things; but it is not to be looked on as the end, much less the beginning, of your professional efforts. This medico-ethical disability (if such it be) is not one that attaches to our calling exclusively, or even especially. It is true that we have to live by our profession; but at the same time we are bound, as in all high and noble callings, by a much higher law—we are bound in every instance and at every stage of our career so to live that the higher is not sacrificed to the lower. It is not too much to say that every man worth his salt in the medical profession makes up his mind from the first, and advisedly, to do far more for nothing, or for the love of it, than he can ever do for fees. One cannot but regret that it should be needful to place this high doctrine thus clearly and definitely before young and generous minds which are not, as a rule, given over to the opposite view. But the sheer necessities of your early struggles in some cases, and in all cases the hardening influence of a kind of trades unionism that is now being at many points insidiously introduced into professional life, has a tendency to displace its purer and nobler traditions, and to subvert the teaching of that grand old Hippocratic oath, which in a modified shape is still the substance of the declaration that each one of you has adopted to-day as the rule of your life. I will not go into details, because time will not permit. I will rather take an illustration from another calling, which lies ready to hand. In the current number of the *Quarterly Review* there is an article under the title "On Commencing Author," in which you may read as follows: "There are numerous motives operating upon the true man of letters ..... urging him to exercise his vocation, and to exercise it to the very best of his power without being paid for it at all. We do not say that he will not ask for his cheque, or thankfully accept it, but we do say that the motive which prompted him to write, if he is likely to be worth his salt in literature, is a motive with which the cheque had nothing whatever to do." The last word that can be said in this place, on this branch of the subject, is that you should love your profession as such—love it so well and with such a whole heart that you cannot think of it as a mere trade, under whatever apparent compulsion of necessity; and to do this, which in the end will be your true advantage and benefit, even (in most cases) from the pecuniary point of view, you must above all "know how to wait."

2. The second great temptation which tends to make shipwreck of a medical career, especially in its earlier stages, is an uneasy personal vanity or egotism which makes itself, as it were, the centre of the medical universe and is never done inquiring, "Why am I not as well off as A, or B, or C, who may have been more lucky, but is certainly not better or abler than other people"—or than the complainer, to wit? It is very easy to have this feeling within limits, and perhaps impossible to avoid it altogether; but it is also very easy so to cultivate and coddle it under one or another specious disguise that it becomes a perfect passion for demeaning others, a perpetual cover or cloak for malice, hatred, envy, and all uncharitableness. I hope you will most of you avoid yielding to a weakness which is often that of the strongest and most active minds, and which will often claim to be even a virtue in respect of its bold nonconformity or want of respect for persons, in denouncing what it pleases to hold as abuses. The only criticism, however, I am concerned at present to pass upon such persons is that they are usually glaring examples of men who do not "know how to wait," and who therefore allow their talents, their time, and all that should be most valuable to them, to be squandered in personal and for the most part petty disputes and differences. The result is, that instead of everything coming to them *à point*, as in the proverb, they find themselves from first to last handicapped in the race of life by personal animosities and antagonisms, many of which are not shared in even by the persons, of more quiet and even temper, whose peace of mind it has been intended to disturb. I do not say that it may not occur to any one of you to have to take a part, as matter of duty, in controversy; but as a rule controversy, and especially personal controversy, is to be avoided, and is always particularly to be avoided in the case of young aspirants who, from want of experience if not from their own overweening vanities and conceit, may be too readily brought to mistake very small issues for large ones, and so to nurse, as it were, a vindictive soreness at what they deem to be the neglect of their own high ideals. The broad and large common-sense and the generally peace-loving disposition of the medical profession usually discounts the pretensions of such erratic and quarrelsome members of it, and relegates them sooner or later to the category of men who stand in the way of its normal business, because they have never learned "how to wait."

You will see, I trust, from these examples of the snares and possible pitfalls that beset the path of the young graduate waiting for employment and reward, that the temper and spirit in which that *waiting game* (as I have called it) is to be played may have a very large and important influence on your future happiness and success. If the game of life is not a mere haphazard, if it is at all like (say) a game of chess in its intricacy and its demands on your skill, you will not succeed in it in such a way as to be satisfactory to your friends or yourselves unless you give some attention to the laws of the game; and by these I mean not only those obvious and comparatively well-defined rules the violation of which will involve you immediately in disaster, but those laws also—moral, spiritual, and physical—the study of which, and the acting on which, are absolutely necessary to secure a well-founded and enduring success. A false step in the beginning may have consequences to you which can never be repaired. But (what is perhaps of even greater importance), in medicine more than in most other callings a steady and satisfactory progress depends much more upon *character* than even on the most brilliant talents; and character, though it may easily be lost by a single false step, can only be built up gradually by many acts of personal devotion, and by the application in detail of all that you have learned for the relief of suffering humanity during these years of your probation. Hence it may be said with perfect truth that the more modest *rôle* at the beginning, is often not only the safest, but also the most successful (in the best sense of the word) in the end. The subordinate position, while it enables you greatly to extend your experience, and to keep all your powers and your acquirements well in hand for future use, is often much to be preferred to the more ambitious programme, which by giving you a nominal independence would also place you in a position of comparative isolation, with comparatively slender resources that can be turned to future account. A man who "knows how to wait" will not despise the day of small things; but he will say to himself, Whatever happens, I must above all things be ready: I must, in any case, strive to keep what I have learned and earned in the way of skill and experience; and I can only do this, by steadily persevering in getting more. So that the question of immediate success, whether in the way of emolument or of reputation, is often merged in the larger question, How am I to keep my powers intact for a larger success later—to maintain the discipline of mind and of body, of fingers, and of ears and of eyes, the familiarity with practical methods and processes, which ap-

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till now has made me what I am, a legally qualified practitioner and graduate?

It is at this point, graduates, that I venture to commend to you—not for the first time, as you will find from the other little printed address which I have caused to be handed round among you—the claims of the thesis for the degree of M.D. (such of you as mean to go on by-and-bye to that higher degree) to your careful consideration from the very commencement of your medical career. Under the newest regulations by ordinance, the thesis has ceased to be, what it long was, the only academic test employed in respect of the higher degree; but it remains, and probably will remain, the chief test for honours or distinctions under the new system as under the old. But however it may be in this respect worthy of your early attention, there can be no doubt, I think, that the gradual maturing of the faculties towards a well-considered and, if possible, original thesis on a subject absolutely of your own selection forms an admirable way of keeping your faculties in good repair, of proving your powers to yourselves, and in the end of making them apparent to others without even the faintest surmise of self-advertisement in a bad sense; for the thesis that bears any trace of such a destination is pretty sure to be rejected. So highly do I (and this, I think, is true also for all of us in the medical faculty)—so highly do we all appreciate the value alike to you and to your Alma Mater of a thoroughly good thesis that we heartily wish it were within the power of the University to offer, as has long been the case in Edinburgh, a certain number of gold medals as the reward of very high distinction in this respect. I may add to the expression of this wish (not now for the first time), that without any certain knowledge I am also not altogether without a hope that through the goodwill of some benefactor proceeding upon a recognition of the desire in question it may ere long be accomplished.

I have hitherto considered the French proverb or epigram with which we began from the point of view which was probably that of its unknown author—viz., as referring to worldly success only, or chiefly; a high kind of worldly success, it is true, and such as we, your professors, wish for all of you in your art; certainly not such a success as forms in and by itself a degradation of the art of healing But I should like before I close to lift the argument for a moment into a yet higher region, and to show you, if possible, that there is a very grand and noble interpretation of the proverb, a spiritual sense of it, in which the "waiting game" may be played with absolute security and with a success, in the highest sense of the word, that none of the "chances or changes of this mortal life" can ever diminish or take away. In one of his most intricate and, I will add, difficult arguments in the Epistle to the Romans (Chapter viii., v. 28) St. Paul has formulated for us a proposition which, although I do not much approve in general of texts as detached from their surroundings, I will take the liberty on this occasion of so detaching; inasmuch as while the context is of the nature of an argument, and one which has led to much controversy, the few words I refer to are really of the nature, not of argument, but of deep spiritual experience, and have a very curious parallelism, so to speak, with the wording, not to say also the meaning, of the French proverb. "We *know*," says St. Paul (not as admitting any doubt of it at all) "that all things work together for good to them that love God." Listen again to the Frenchman: "*Tout vient à point à qui sait attendre.*" Is there any real relation or connexion between these two expressions? I think there is; and if you will bear with me still for a few minutes I will endeavour to show you that the relation is not only real, but that it goes to the very root of the whole matter.

Huxley, in one of his early discourses upon the laws of Nature, has a superb—I would say a noble, even a sublime—image which ought, in my opinion, to have gone one step further, but which, even as he has it, might have saved him from the remarks of some who have confounded his agnosticism with irreverence. He represents man as playing for his life at a game of what we ignorantly call hazard, against a beneficent and pitying angel, who as a matter of duty will always oblige him inexorably to keep the laws of the game whether he loses or wins; but who, so far from being vindictive or adverse in feeling to man in this trial of his powers, "would as soon lose as win." Now, this is Huxley's way of saying, in what he regards as scientific (though at the same time highly imaginative) language, what our Frenchman has said in the proverb; and it is also, I think, a reflection in some degree (though, of course, without the theistic and emotional element) of the burning words of St. Paul. The point which is common to all three is the idea that human life, its successes and its failures, are in some way or other under the influence of *laws;* and even Huxley, who was no materialist, would assuredly have admitted (though he does not say so) that these laws of our being extend over the mental, moral, and spiritual region as much as over the material. Play the game, he says, according to the rules; for if you do not, ignorance of them will not protect you, but if you do you *may* win, and, in any case, will have done your best. Be sure, says the Frenchman, that if you can only *wait* and be ready, the occasion will come, and with it all things will come to a point for you. Love God, says St. Paul, and all things are yours; for "all things work together for good" to such as love God and conform to His sovereign will. Of course, there is an element here that is not found directly in the other two. It is what we may call the definitively Christian or religious element. The French proverb here is carried up to its highest terms in the form of a great and far-reaching spiritual experience.

But in another and, perhaps, an even more remarkable phrase used by St. Paul elsewhere the sublime idea here set forth is carried on a stage further. Of himself and Apollos he says, in speaking of the foundation and planting of the Corinthian Church (1 Cor. iii., 9), "We are God's fellow-workers; ye are God's husbandry, ye are God's building." This working together of all things for good, therefore, admits of active as well as passive coöperation with God, and those that work on these lines in the love of God are συνεργοὶ τοῦ θεοῦ—labourers together with God (as the Authorised Version has it); God's fellow-workers, more literally and more strikingly, in the Revised Version. Here, one can see at once, is the implied condition of the *synergy*, the working together for good, that is pointed to in Romans. In doing God's work, doing it consciously and along with Him, we cannot fail to have Him with us. Thus it is that "all things work together for good to them that love God" and are willing to coöperate with Him in His work. Success in life, as this view of the matter puts it, depends on what you mean to do and how you mean to do it. If your only objects are money, reputation, a crowd of patients, and large fees you may very easily fail; nay, you will certainly fail in some degree, for the desire in these cases increases usually beyond the means of its satisfaction. But if you desire, humbly and reverently, to work the work of God, and be a "fellow-worker" with Him, in what profession can you accomplish this object more consciously, more surely, or more inevitably than in ours?

Natura non nisi parendo vincitur. In that saying of the great Chancellor, Francis Bacon, is contained the whole secret of medical as of all other real success. Whether it is the healing of a broken bone, or of a wound, or of a fever, it comes round again to that. By obeying the laws of nature by working consciously along with them, by adapting our efforts to their conditions, we, too, become "fellow-workers with God." In the material as in the spiritual world it is the same law which governs the whole. God is the great worker—the great Healer. It is through knowing His laws, and acting on them and through them, that we can best, or indeed alone, coöperate with Him. And in so working with God, even if we have to wait for it, success is assured. "*Tout vient à point à qui sait attendre.*" Only, for success in the highest, in the only real sense, it is necessary to "love God" as well as to know His laws. Then, indeed, we shall find that "all things work together for good," and the "waiting game"—even if it comes to that—is assured of success.

Few things in the personal history of great men are more pathetic and at the same time more encouraging from this point of view than what we have come to know of the blindness of John Milton. It came upon him, not suddenly it is true but completely, in his forty-fourth year. "What a fate!" writes Professor Masson, in detailing all the circumstances with his usual pious care and unwearied diligence. "All his intentions, all his projects, all his hopes of further activity and usefulness, turned into mere gropings through a future of blackness. His secretaryship, to which he had been accustomed, the duties of which he had come to like, how on any terms could he give up that? Then, apart from his secretaryship, the cutting short of his own cherished studies and the fond occupations of his life hitherto, his miscellaneous pursuit of

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knowledge, his commerce with the books he had gathered about him and with the libraries at hand, his unfinished controversies"—all this and more, it will be admitted, forms a most discouraging picture of calamity and possible ruin in the very middle of a great career. But Milton was one of those men who know how to wait. He tells us so himself in those two admirable sonnets to Cyriac Skinner, in 1655, when the calamity had already been borne for three years. He had a good many more years to wait before he had quite accommodated himself to the new conditions. He had to go into hiding at the Restoration, and then to live in comparative obscurity after he had regained his freedom. Altogether, it was a very poor case, speaking from the point of view of the worldling, for the man who under Cromwell was probably the most powerful as well as most renowned of Englishmen, Cromwell himself excepted, and whose "*Defensio pro populo Anglicano*," with its bitter controversial sequels, were not only in some degree the causes of his blindness, but also of his exultation; as he himself says:—

"Liberty's defence, my noble task,
Of which all Europe talks from side to side."

Yet it is none the less true that for us, and for all time, the real greatness of Milton was, in a very genuine sense, the outcome of his blindness and comparative obscurity, for to these we owe "Paradise Lost" and "Regained," "Samson Agonistes," &c., while the "Defensio" is now only rescued from oblivion by its being the work of one at no time unconscious of his own great powers, but who had assuredly not taken a just measure of them when he wrote in early despair of his great calamity just alluded to:—

"That one talent which is death to hide,
Lodged with me useless"—

and when, in the calm anticipation that his time of activity and usefulness was ended, he brought this wonderful sonnet to a close in the line:—

"They also serve who only stand and wait."

I hope most sincerely, ladies and gentlemen, that none of you will have a trial like that of John Milton. But if it should be so, you will draw some encouragement and some small degree of hope, it may be, from his noble example. At all events, your course is now clear. You are graduates of this ancient University, and, as such, fully entitled to practise the art of healing throughout Her Majesty's dominions. We desire to accord you our heartiest congratulations, and to part with you in sincere good-will and with every disposition to help you in your work. What that work is to be we do not presume any longer to dictate. But whatever it may be, we trust that you will apply yourselves to it in the spirit of Longfellow's noble lines, which form the conclusion to the "Psalm of Life," and with which I, too, will close this address:—

"Let us, then, be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labour and to wait."

AMYLACEOUS DYSPEPSIA.

BY JAMES TAYLOR, M.B., B.CH. R.U.I.

DURING the last few years so much has been written in regard to that complaint which is so common, and which plays so important a part in the life-history of patient and practitioner alike—dyspepsia—that it cannot be said that the subject has not received its due share of attention at the hand of the profession. But, notwithstanding all that has been said on the subject, clinical results show clearly that our knowledge of the pathology of the many varieties of dyspepsia is still very meagre. That the complaint is a difficult one to deal with becomes evident when to the consideration that in a large proportion of dyspeptics no evident anatomical lesions can be detected in the organs to which the maldigestion of the food can be referred, we add the fact that there is such an intimate relationship between the different organs concerned in the processes of digestion that when derangement in an organ takes place it is difficult to say which one is primarily at fault or how far the defaulting organ may influence the others. Amylaceous dyspepsia is a variety of this complaint which until recently seems to have received little attention apart from its inclusion in the consideration of a general condition at the hands of the profession. It is to this form that I would now briefly call attention.

It has been assumed that the pronounced acidity coming on in dyspeptics after meals is caused by an increase in the quantity of hydrochloric acid in the gastric juice. In the majority of cases the burning fluid which regurgitates into the mouth is a mixture of lactic, butyric, and acetic acids arising from the fermentation of the carbo-hydrates and fats. The gases and acids arising from the fermentation of the fats do not constitute an important clinical factor, owing to the comparatively small amount of fat taken as food, and when fermentation of this class of foods takes place it occurs most frequently in connexion with a like process in the carbo-hydrates. Illustration of the process is to be found, in a general sense, in the formation of the lactic acid, which can be readily produced artificially by placing bread with water in a warm chamber. During the process which ensues the sugar of the bread is converted into lactic, butyric, and acetic acids.

To understand what the derangement termed amylaceous dyspepsia is, it is necessary to have clearly before our minds what occurs during the normal digestion of amylaceous substances. In this connexion I may mention that the recent contributions by Dr. Christopher to the subject of indigestion are interesting. He prefers the term "super-digestion" to "indigestion." According to this authority the normal digestive processes are due to fermentations brought about by the unorganised ferments of the alimentary canal. Pathological fermentations are induced by organised ferments and micro-organisms, which exert their peculiar action on the products of normal fermentation. In other words, he defines super-digestion to be the result of pathological fermentations of the products of normal digestion. In salivary digestion the starchy portions of the food are transformed into maltose and dextrine. This change may be represented by a chemical equation:—

$$\underset{\text{Starch.}}{3(C_6H_{10}O_5)n} + nH_2O = \underset{\text{Maltose.}}{nC_{12}H_{22}O_{11}} + \underset{\text{Dextrine.}}{nC_6H_{10}O_5}.$$

This transformation takes place best in a neutral medium. Until recently it was supposed that the action of the ptyalin of the saliva was stopped immediately the food entered the stomach, owing to the hydrochloric acid being formed in sufficient quantity at the commencement of gastric digestion to neutralise the alkaline saliva. Velden has, however, shown that there is no free acid in the stomach before the expiration of from three-quarters of an hour to two hours after the arrival of food in that organ. During the earlier stages of digestion it is almost certain that the hydrochloric acid secreted combines at once with the proteids, and that no free hydrochloric acid appears in the gastric secretion until the proteids have combined with as much hydrochloric acid as they require. It is supposed, therefore, that during this interval the ptyalin is permitted to maintain its action. This hypothesis was confirmed by the observations of Chittenden and Ely, which showed also that saliva neutralised with acid is more active than ordinary alkaline saliva. A portion of the acid secreted by the stomach in the early stage of gastric digestion is thus presumably used in the neutralisation of saliva, and is, in consequence of this action, an aid to ptyalin, which is, *per se*, an active ferment. The resulting products of starchy proteolysis begun in the mouth and carried on in the stomach are therefore the same as those resulting from the action of saliva alone—namely, maltose and dextrine, the action being merely increased. Ultimately the greater part of the dextrine is changed into maltose. No grape sugar is formed. Therefore, in cases of excessive acidity we must look for some other source of the lactic acid, and in order to do this we must consider the action on the cane and grape sugars taken as food. Cane sugar becomes converted into invert sugar (a mixture of lævulose, or fruit sugar, and dextrose, or grape sugar), and grape sugar lends itself readily to the process of lactic acid fermentation. This accounts for the fact that intolerance is shown by many dyspeptics to saccharine substances. The changes in grape sugar are the result of the action of fermentative organisms, and may be represented by a chemical equation:—

$$\underset{\text{Grape sugar.}}{2C_6H_{12}O_6} = \underset{\text{Lactic acid.}}{4C_3H_6O_3}$$

$$\underset{\text{Lactic acid.}}{2C_3H_6O_3} = \underset{\text{Butyric acid.}}{C_4H_8O_2} + 2CO_2 + 2H_2$$

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The conversion of starch ceases on the appearance of free hydrochloric acid in the gastric secretion, as ptyalin is destroyed by the acids of the gastric juice in full digestion. The digestion of starch is, however, resumed again in the intestine under the influence of the pancreatic and intestinal secretions. The amylopsin of the pancreatic fluid converts starch into maltose, which is further slowly transformed into grape sugar. Cane sugar is an important article of food, and is consumed by us in large quantities daily. It is, however, a crude form of food, and requires to be converted into invert sugar, which, as has already been stated, is a mixture of lævulose and dextrose. This transformation is brought about under the influence of the inversive ferment of the intestinal secretion, and may be represented by an equation:—

$$\underset{\text{Cane sugar.}}{C_{12}H_{22}O_{11}} + 2H_2O = \underset{\text{Dextrose.}}{C_{12}H_{24}O_{12}} + \underset{\text{Lævulose.}}{C_{12}H_{24}O_{12}}$$

Under pathological conditions the grape sugar resulting from the digestive processes in the intestine yields lactic and butyric acids. Or the grape sugar may undergo the alcoholic fermentation, and the resulting alcohol may in its turn undergo the acetous fermentation, forming acetic acid. This super-digestion is brought about under the influence of fermentative organisms, which are more constant in the intestine than in the stomach. Super-digestion of carbohydrates occurs, as already stated, in those disordered conditions in which excessive fermentative processes are occurring. The clinical features present in these cases are: pain of a sickening, weakening character, coming on about three or four hours after food, referable to the abdomen, but not as a rule localised. Relief is usually experienced on taking food. There are paroxysms of marked severity at night, loss of weight, abdominal distension and tympanites, furred tongue, and constipation.

From what has been said it may be presumed that in all probability the distress after eating experienced by many dyspeptics is not necessarily due to a deficiency of pepsine (some authorities deny that deficiency of pepsine does occur), but rather to an accumulation of gases and acids produced by the fermentation of the food in the stomach and intestine. If the discomfort does not commence until three or four hours after the ingestion of food we may take it for granted that the fermentation is mainly or entirely intestinal. The view that pathological intestinal fermentations take place for the most part in the products of normal digestion is supported by the fact that intestinal disturbance is induced in the majority of these cases by a vegetable diet. This is not to be wondered at when we consider that fully two-thirds of the food of mankind consists of starch, and that the greater portion of the starchy food reaches the intestine unchanged. In some rare cases fermentation of the normal products of salivary digestion takes place in the stomach, for, in the absence of hydrochloric acid, gastric digestion would be attended normally by the formation of fermentation acids and gases, giving rise to pain and discomfort shortly after the ingestion of food. Lactic acid formation in any appreciable quantity is an evidence of the deficiency of the normal acid of the gastric juice. Under these circumstances the administration of hydrochloric acid might be beneficial.

With regard to the treatment of those cases in which excessive fermentations of the products of starchy proteolysis are occurring in the small intestine, it is obvious that to eliminate carbohydrates from the food and to strictly limit the diet of the patient to purely albuminous substances for about a fortnight would bring relief. In doing so, however, we overlook the importance of starch as an article of diet. In addition, such albuminous diet is irksome and monotonous, and the patient loses weight. On the whole, it would be better to lessen the quantity of amylaceous substances than to forbid the use of them altogether. Intestinal antiseptics given with the idea of destroying the micro-organisms concerned or by lessening their power to produce fermentative changes have been found useless in my hands. The principal seat of trouble being in the intestine, and the use of antiseptics being attended with no advantage, we seek for some method of digesting amylaceous substances in the stomach, so that they may be absorbed by that organ and little or none reach the intestine. Our object can only be carried out effectually by means of a powerful diastasic ferment. The proper choice of a diastase is important. Many malt extracts contain much saccharine matter. This is mostly in the form of grape sugar, which, when eaten in large quantities, tends to undergo fermentation in the stomach, even when the secretion of hydrochloric acid is normal and commences in the usual course. Moreover, the normal processes of digestion are naturally slow, in order that the products of the digested food may present themselves slowly for absorption and so become available only as they are required for the support of the slow nutritive processes. If a quantity of predigested food be ingested there arises the risk that it will be rapidly absorbed into the blood and be rapidly excreted without having imparted any of its nutritive qualities to the tissues. In addition, too rapid absorption into the blood not only disturbs the equilibrium of that fluid, but also produces disturbance in the liver functions. This in all probability explains the reason of the biliousness produced in some individuals by the use of malt extracts. Naturally, we eat starch in preference to grape sugar, the starch being slowly converted into sugar in quantities with which the healthy organs can deal. None of these objections hold good in the case of the preparation called "taka-diastase," introduced by a Japanese chemist, and of all the preparations I have used to give relief in amylaceous dyspepsia I find none which gives such good results as those obtained by its use. Its action has been at once prompt and efficacious in the cases in which I have prescribed it, I being one of the number. Prior to the time at which it came under my notice I had used the various preparations of malt extract, but, whatever their value as nutrients and as vehicles for the administration of other preparations, I have found little gain attend their use in amylaceous indigestion. Our object is to convert the starchy matters of the food into maltose in the stomach prior to the onset of peptic digestion, and we have in this digestive agent a substance capable of fulfilling that object, for not only is its activity great, but it is said to produce its characteristic effects on starch immediately it comes in contact with the last-mentioned at the normal temperature of the body. The dose is 2½ grs. in tablet or powder, to be given at the commencement of a meal. It would be useless to speak favourably of the action of any artificial digestive ferment without at the same time emphasising the necessity for proper dieting. In these cases of amylaceous dyspepsia the starchy elements of the food should be properly cooked. Diastase cannot act on the starch granule unless the cellulose investment has been ruptured by the process of cooking, during which process the starch, under the influence of heat and moisture, swells up into a jelly-like mass. Without this previous change starch is but slowly acted on by diastase. Proper mastication of the food is essential, so that the juices of the mouth may be thoroughly incorporated with the starchy elements of the food and salivary digestion be well begun before the food enters the stomach. Excessive use of saccharine substances should be avoided, for not only are they liable to undergo lactic acid fermentation, but they hamper the action of the ptyalin. The patient should be warned against the custom of taking quantities of fluid with the meal, on account of the tendency then present to wash the food quickly down instead of masticating it properly and mixing it thoroughly with the saliva. Fluids used at meal-times should, therefore, not be sipped with the meal, the rule being to eat first and drink afterwards. Tea has an inhibitory effect on salivary digestion owing to the presence of tannic acid in the leaf. It should be made weak and used sparingly, and should, like other fluids, be taken after meals. A small quantity of bicarbonate of soda added to the tea in the teapot is said to neutralise the effect of the tannic acid. In conclusion, I would remark that in no case did I find taka-diastase fail in giving good results in amylaceous dyspepsia, and many of these results were obtained after a fair trial had been given to many diastase and other preparations.

Belfast.

THE death is announced of Dr. William Jepson at the ripe age of eighty-five years, formerly a well-known and esteemed medical practitioner in the Salford division of Manchester, whence he retired to Saltash, in Cornwall, in 1881. *Inter alia*, Dr. Jepson was an accomplished botanist and one of a small band who devoted leisure hours to collecting and arranging the wild plants, ferns, and mosses which were more abundant then in the moors and country around Manchester than they are at present. This pursuit, coupled with practical studies in chemistry, was continued at Saltash until failing eyesight and advancing years compelled a cessation. Dr. Jepson was at one time lecturer on botany at the Chatham street School of Medicine, Manchester.

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THE SURGICAL TREATMENT OF ANKYLOSIS OF THE TEMPORO-MAXILLARY ARTICULATION.

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THE subject of ankylosis of the temporo-maxillary joint has received considerable attention from surgical writers, and many cases of operation for this condition have been reported. Like most procedures in surgery, these operations have a post-antiseptic history very different from that which they showed in pre-antiseptic days. Formerly, if the bone was divided and a false joint made, it was a not uncommon experience to have so considerable an inflammatory swelling and so much pain that the bones were fixed and held in apposition by the spasmodically contracted muscles, and when, finally the parts were so far advanced towards healing as to permit of forcible motion being attempted, it was usually found that the ends of the bones were so fastened together that in spite of all endeavour the ankylosis returned and the case was no better than before. In attempting to obviate this difficulty extensive resections of the ascending ramus were undertaken in some cases, with the object of removing so much bone that the severed parts could not afterwards come together and unite. Of the operations devised upon this plan perhaps the most successful has been that of Esmarch, which consists in the removal of a wedge-shaped piece from the junction of the ramus and body of the maxilla through an incision just behind the angle of the jaw. In 1872, when surgery, stimulated by antiseptic teachings and results, was pushing forward along all lines, Bottini reported a case in which a good, permanent result was obtained by division of the neck of the jaw close to the articulation, and it was soon found that under aseptic conditions this method could be relied on to give a good false joint. Since that time these two plans, with occasional modifications by other operators,[1] have been rivals in the treatment of these deformities.

In considering these operations we must carefully distinguish between those cases in which the ankylosis is largely due to extensive cicatricial formations in the soft parts, as a result of noma, lupoid inflammation, or burn, and those in which there is a true bony ankylosis of the temporo-maxillary joint without involvement of the soft parts. When the jaws are bound by cicatricial contraction the section of the bone must be in front of the cicatrix, or at least must be so placed that the portion of the bone that is freed by the operation is no longer held by cicatricial bands. Necessarily, therefore, the division must usually be close to the body of the jaw, and for these cases Esmarch's operation is admirably adapted and obtains the best mechanical condition of the jaw possible under the circumstances. In the second class of cases, however, of true bony ankylosis it is plain that, other things being equal, the nearer the new joint is to the site of the old one the more nearly it conforms to the conditions on which the muscles were designed to act, and on which, *a priori*, they act best. In comparing, therefore, an operation which makes the section of the bone close to the old articulation with one which makes it at or near the angle of the jaw, we have to consider the former as the better operation, unless it has disadvantages either of danger, untrustworthiness, or unsightliness which more than counterbalance its mechanical advantages. My experience of the high section of the bone leads me to think it has none of these disadvantages, for in the seven cases in which I have operated in this way the mechanical result has been uniformly good, showing the trustworthiness of the procedure, and in none of them has the scar been unsightly. In all but one case it has been so slight as to readily escape observation at the end of a year. It is so placed that the hair can often be drawn forward over it and conceal it altogether. Paralysis of the orbicularis palpebrarum muscle was troublesome in two of the early cases, but finally disappeared. By keeping the incision close up to the zygoma this can be avoided.

I have met with no especial element of danger in these operations except that which is common to any operation upon an ankylosed jaw—namely, the danger of asphyxia under anæsthesia. In one case the breathing was stopped by the falling of the tongue into the throat, and a quick tracheotomy was performed. Recognising this danger, I have always had the tracheotomy instruments laid out during these operations, and this was the only case in which I had to use them. It is true that a case is reported in which the carotid artery was wounded, but this would have been avoided had the section of the bone been carried out inside of the periosteum in the manner I shall presently describe. My operation has been in the main after the manner of Bottini. It has been as follows. In the first place, to discover on which side the ankylosis exists is not always easy. Cases have been reported in which the sound side was operated on by mistake. To determine this point the history should be investigated, and often it will be found that the original osteo-periostitis which led to the ankylosis was distinctly limited to one articulation. The history is, however, often doubtful on this point, and a decision must be reached by an examination of the jaw itself. If the fingers are pressed in on the teeth upon each side, and at the same time the patient makes vigorous attempts at mastication, a springing of the bone on the free side will be noticed, in quite distinct contrast to the fixity on the ankylosed side. Furthermore, as there is usually a loss of cartilage and even of bone in the process which destroys the joint, the jaw naturally falls over to that side, and this lateral displacement may be readily made out by noting the relation of the middle lines of the two jaws as shown by the incisor teeth or otherwise. After a study of these several points a mistake must be exceedingly rare. In my first two cases I made the incision vertically over the neck of the jaw, but later I adopted Bottini's incision along the lower edge of the zygoma, with a vertical cut added if more room was needed. The vertical incision should not extend far down in front of the ear lest the facial nerve suffer injury, but it may run up over the zygoma. The incision is carried at once down to the bone, which is cleared by a periosteum elevator. The division is then made with a chisel, which cuts out a wedge across the whole width of the bone which represents the neck of the jaw, even when this is a mass involving both the condyloid and coronoid processes. With care this division can be kept within the limits of the periosteum, and all danger of injury of the carotid artery is thereby avoided. To ensure safety a curved retractor may be carried under the posterior edge of the bone during the use of the chisel, thus wholly obviating any danger of injury to the vessels lying there. In none of my cases has the internal maxillary artery even been injured. When the bone is completely divided the final separation may be accomplished by pushing a wedge-shaped screw gag into the cleft in the bone and so forcing it apart. The ends of the bone are then readily rounded off with rongeur forceps. The hæmorrhage is trifling and the wound may be tightly closed. A cork should be kept between the teeth on the injured side for the first week or fortnight while the healing is going on, but may be taken out as often as is desired for passive motion after the first three or four days. The following is a brief summary of the seven cases on which I have operated.

CASE 1.—A girl, aged thirteen years, suffered from ankylosis of the left temporo-maxillary joint for ten years the result of scarlet fever. She was operated upon in August, 1887, the neck of the condyle being chiseled through just below the point where it became welded into the temporal bone. This was done through a vertical incision about one inch in length. Slight loss of power over the eyelid supervened, but this disappeared after a few months. The patient was seen on Jan. 19th, 1895, eight years after the operation. At that time the scar of the incision was barely visible. She noticed that to tightly close the left eye required more effort than in the case of the other, but the ordinary movements of the eyelid were perfect. The left side of the jaw was somewhat undeveloped as compared with the other. The mouth opened three-fourths of an inch,

[1] Dr. J. E. Mears has reported an operation through the mouth in which he saws the ramus through on a level with the last molar tooth, and after separating the attachment of the temporal muscle he seizes the bone with lion forceps and forcibly twists it out. If it yields at the neck the condyle may be chiseled out and left. This method would not seem to be applicable for those cases in which both condyloid and coronoid processes are welded firmly to the bones of the skull, a condition not always discoverable before operation. The slight scar of the external operation makes it of less importance to attack the bone at a disadvantage within the mouth; and in the cases to which Dr. Mears's operation is applicable it removes more bone than is necessary, and has in that way a mechanical disadvantage. The results that Dr. Mears has figured are certainly very good.

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and there had been no change in this since just after the operation. Lateral motion was considerable, one-quarter of an inch or more, and the grinding power was good.

CASE 2.—The patient, a girl aged seventeen years, had ankylosis of the left temporo-maxillary articulation of thirteen years' standing, which followed mastoid disease caused by scarlet fever. She was operated on in July, 1888. The operation was begun with a vertical incision, but as it was found that the coronoid process was also involved in the mass of bone welding the maxilla to the temporal bone a cross incision was made along the lower edge of the zygoma. This patient was examined on Jan. 9th, 1895, eight years after the operation. The scar of the operation was not very noticeable, and she said that its appearance had caused her no annoyance. When her mouth was widely open the gums were $\frac{1}{2}$ in. apart, and with her plates of teeth in place she could open her mouth half an inch. The mastication was vigorous and she had capital grinding power. The eyelid had good motion.

CASE 3.—A woman, thirty years of age, fell when three years old, striking her chin, and this was soon followed by ankylosis of the left temporo-maxillary joint. Forcible attempts to separate the jaw with wedges accomplished a bending of the body of the lower jaw, so that while the molars and even the gums in the back part of the mouth were in close apposition the incisors were about one-half a centimetre apart. An operation was performed in April, 1889, in the manner followed in Case 2, and here, too, the welding of the jaws to the temporal bone was by a thick irregular mass of bone. Some temporary paralysis of the eyelid followed the operation. This patient was seen on Jan. 14th, 1895. The motions of the jaw were well preserved and the grinding power was excellent. When the mouth was open the aperture between the teeth measured between three-quarters of an inch and an inch. The scar of the operation was practically invisible, it being difficult to determine, except by close inspection, which was the side of the operation. While the motions of the eyelid were perfectly preserved there was a perceptible difference between the action of that side of the face and the other. This was mainly noticed when laughing, and consisted in an excessive action of the muscles around the eye on the affected side rather than in any lack of power in them. This was so slight as not to be annoying.

CASE 4.—A woman, aged thirty-two years, received a blow upon the jaw when six years of age. This was soon followed by ankylosis of the right side of the jaw. An operation was performed on Dec. 13th, 1889. The incision was made just beneath, and parallel to, the zygoma and was crossed by a short vertical incision through the skin alone. The condyloid and coronoid processes were both welded to the skull by an irregular mass of bone. This was chiseled through. She left the hospital well on the thirteenth day after the operation. The patient was seen in Dec., 1894. At that time the scar of the operation was barely visible. The motions of the jaw were good. The mouth opened a little over an inch and there was good grinding power with lateral motion of a quarter of an inch. The motions of the eyelid were perfect.

CASE 5.—A woman, aged twenty-six years, suffered from anklyosis of the temporo-maxillary joint, which had followed a blow on the chin in infancy. An operation was performed on July 15th, 1890. The first incision was beneath and parallel to the zygoma, with a short cross incision through the skin. In the midst of the operation the patient became asphyxiated owing to the dropping of the tongue back into the throat. An immediate tracheotomy was performed and the chiseling of the jaw was then finished. The wound suppurated, owing, no doubt, to some contamination of it after the tracheotomy. Still, the recovery was not seriously interfered with and the patient left the hospital twenty-three days after the operation. This patient was seen on Jan. 7th, 1895, four and a half years after the operation, when the possible separation between the incisors was an inch. Lateral motion was one-quarter of an inch. The grinding motion was good, but the grinding was interfered with by the irregular arrangement of the molar teeth, which did not properly correspond in the two jaws. The scar was slightly depressed, but not unsightly. Movements of the eyelid were not in any way interfered with.

CASE 6.—A boy, aged eight years, had scarlet fever when six years old. Otitis followed, and rapidly progressing ankylosis of the jaw occurred. When seen the jaw was fixed by bony ankylosis, with the teeth immovably in apposition. He was operated upon on Jan. 15th, 1890. A short incision was required as the condyloid process alone was fixed to the temporal bone, and the section and removal of the neck of the jaw was easily performed. The wound healed by first intention, and he left the hospital in nine days. He was seen two years later with perfect control of all the motions of a mouth which opened as widely as in any boy of his age. He had perfect grinding power.

CASE 7.—A woman, thirty-seven years of age, when she was aged seven years, received a blow on the right cheek, followed by much pain about the ear, with gradual closure of the jaws, so that at sixteen years of age they were tightly approximated and fixed. Forcible efforts with wedges accomplished a sufficient separation to allow of the food being pushed between them. She was operated upon on July 19th, 1891. The incision was made parallel to, and close under, the zygoma. As in all but two of my seven cases, the upper end of the ramus was welded to the skull by a large irregular mass of bone which was chiseled through. The recovery from operation was uneventful. This patient was seen on Jan. 8th, 1895. She had had all the lower teeth but one molar drawn, and had not yet had a plate made. There was a distinct downward bend in the body of the lower jaw as a result of the long-continued wedging which had preceded operation. As a consequence of this, the anterior gums did not closely approach the upper teeth, being held apart by the last remaining lower molar. The jaws could be separated an inch, and there was fairly good grinding motion, as appreciated by the rubbing to and fro of the solitary lower molar against the upper range of teeth. The scar was not conspicuous and the motions of the eyelid were good, though she said that when she was tired or nervous she was somewhat troubled by twitching of that eye.

The first two of these cases were published in the Transactions of the American Surgical Association (vol. vii.), the others have never been reported. The restoration of motion in all of these cases was thoroughly satisfactory, and has been maintained now for a sufficient number of years in each case to warrant the belief that it is permanent. It is particularly worthy of note that the grinding power was recovered in every case. In Cases 1 and 6 the division was through the neck of the condyle, so that all of the masticatory muscles retained their proper relations, except the external pterygoid, which was separated from its attachment. In the other cases the coronoid process was involved in the ankylosis, so that in them the attachment of the temporal muscle was also lost. The masseter and internal pterygoid muscles were in no way interfered with, and gave ample support and power to that side of the jaw.

A review of the literature of the subject has yielded reports of sixty-two operations upon cases of bony ankylosis of the temporo-maxillary articulation, and the five hitherto unreported cases of the writer bring this number up to sixty-seven. Of these, forty-seven were done by Bottini's method and twenty were done by other methods involving a section of the jaw through the ramus at some point nearer the angle. These figures would seem to show a preponderance of surgical opinion in favour of the operation close to the zygoma. A careful comparison of the functional results by the various operations is impossible on account of the incompleteness of many of the reports in this regard. As far as could be judged, however, the method of Bottini furnished better power of motion than any of the operations near the angle. This search into the experience of others has thus confirmed the opinion which the writer formed from the study of the mechanical principles involved and of the final permanent results in his own cases, and has led him to consider the operation devised by Bottini to be the best one known, up to the present time, for the relief of this most distressing deformity.

The following references to the literature of the subject, which are all that a rather thorough search has yielded, may be of service to future investigators.

BIBLIOGRAPHY.

Diefenbach: Operative Chir., 1845. Koenigsdoerfer: Inaugural Dissertation, 1855. Esmarch: Beiträge zur Chirurgie, 1860, Band ii. Weber: Pitha und Billroth, 1868, Band iii. Bottini: Communication to the Medical Academy of Turin, 1872. König: Deutsche Zeitschrift für Chirurgie, Band x., 1878. F. Bruncke: Inaugural Dissertation, Göttingen, 1878. Ranke: Archiv für Klinische Chirurgie, Band xxxii., Heft 3; collects nine cases—namely, Bottini, König (2), Schulten, Ranke (2), Hagedorn, von Langenbeck, Mears, and Kuhlen-Kampf. Kuhlen-Kampf: Centralblatt für Chirurgie, 1885, No. ii. Schulten: Nord. Med. Ark., Stockholm, ix., 13. Gerster: Medical News (Philadelphia), vol. xlix., 1886, p. 581. Lange: New York Medical Journal, vol. xliv., 1886, p. 640; also Medical News (Philadelphia), vol. xlix.,

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1886, p 581. Pughe: Liverpool Medico-Chirurgical Journal, 1887, vol. vii Mears: Transactions of the American Surgical Association, vol. i., 1883, also Transactions of the College of Physicians, Philadelphia, 1887. Page: Brit. Med. Jour., vol. ii., 1887, p. 1277. Kuster: Langenbeck's Archiv, 1888, xxxvii. Cabot: Transactions of the American Surgical Association, vol. vii., 1889. Penrose: Philadelphia Medical News, 1890, vol. lviii., p. 596. Sola Huerta: Rev. Med. Farm. de Aragon, Zaragoza, 1890, vi., 82. Chabry: Annales de la Policlinic de Paris, 1890-1891. Allingham: Brit. Med. Jour., vol. i, 1891, p. 129. Russo-Travali: Silicia Med. Torino-Palermo, 1891, iii., pp. 156-158. Hoffa: Centralblatt für Chirurgie, 1891, No. 32. Jemoli: Centralblatt für Chirurgie, 1891, No. 21. Hedrich: Gazette Médicale de Strasburg, 1891, i., p. 49. Greig: THE LANCET, Dec. 19th, 1891, p. 1383. Baiardi: Boll. d. Clin., Milano, 1891, viii., 337; and Lo Sperimentale, Firenze, 1891, lxvii., 32. Poisson: Rev. Med. Farm. de Aragon, 1890, vi., 82. Rechnitz: Beiträge zür Casuistik der Kieferklemmer (Würzburg), Berlin, 1891. W. Knight: Dental Register, Cincinnati, 1892, xlvi., 170-178. Caponi: Thèse, Lyon, 1892. Borella: Gaz. Med. Comb., Milano, 1892, li., 51. Kummer: Bulletins et Mémoires de la Société de Chirurgie de Paris, 1892. xviii., 295. Rosving: Bibliothek. f. Læger. Kjöbenhavn, 1892, 7 R., iii., 171-204. Gardner: Australasian Medical Journal, Melbourne, 1893, New Series, vol. xv., 54. Von Bergmann: Archiv für Klinische Chirurgie, Berlin, Band xlx., 664. McCosh: Annals of Surgery (Philadelphia), 1893, vol. xviii., p. 39. Poulton: Australian Medical Gazette, 1893, vol. xii., 220. Pilcher: Brooklyn Medical Journal, 1893, vol. vii., 763. Demons: Mémoires et Bulletins de la Société de Médecine et Chirurgie de Bordeaux, 1893-1894, p. 253, and 1894, p. 18. Sarycheff: Medic. Oboz., Moscow, 1894, xii., 52. Saritsher: Medic. Oboz., Moscow, 1894, xii., 527-531. Swain: THE LANCET, July 28th, 1894, p. 187; collects twenty cases by the following operators—Jones, Davy, Heath, Page, Barker, Mason, Spanton, and Swain.

POINTS OF POSSIBLE MEDICO-LEGAL INTEREST IN CERTAIN CASES OF DISSEMINATED MILIARY TUBERCULOSIS.

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IN disseminated miliary tuberculosis there may be doubts as to the medico-legal aspect of the case during life, the doubts being afterwards completely cleared up by a post-mortem examination; but in other cases points of medico-legal interest may first attract attention at the time of the necropsy. Instances of the first class are sometimes afforded by tuberculous meningitis supervening in adults. The following is an example.

CASE 1.—A German, aged nineteen years, was brought to the German Hospital suffering from fever and delirium. He could answer no questions and there was no history obtainable. The physical signs were not quite the same over both pulmonary apices, and this caused tuberculous meningitis to be suspected. There was, however, much albuminuria—a condition not usually associated with tuberculous meningitis—and neither ophthalmoscopic examination nor special nervous symptoms helped us. It was therefore possible that the patient had taken some poison acting on the kidneys and nervous system. He died some days later, and the post-mortem examination cleared up the diagnosis. Tuberculous meningitis was found, together with old and recent tubercle in the lungs, and miliary tuberculosis of the mucous membrane of the glottis. The kidney affection was parenchymatous, probably due to the bacillary toxins which had to be excreted.

Cases of tuberculous meningitis in adults are probably not rare in which, if there were absence of past history, a temporary suspicion of poison or foul play might be entertained. In the foregoing case the absence of past history and the presence of much albumin in the urine led to doubt in the diagnosis. In such cases the doubtful points are cleared up by the post-mortem examination. It is, however, the second class of cases to which I wish to draw attention—cases of disseminated miliary tubercle in which pathological questions of medico-legal interest occur at the time of the necropsy. Their importance arises from the fact that a blow or injury to quiescent tuberculous nodules in any exposed region of the body may give rise to acute miliary tuberculosis of the lungs, thus bringing about death in persons previously in apparent health. The following is a typical example.

CASE 2.—A well-built man, a German, aged thirty-three years, was admitted under my care at the German Hospital on April 5th, 1897. He had fever (temperature 103·6° F.), vomiting, great dyspnœa and cyanosis, intense dryness of the throat, and scanty expectoration, in which a trace of altered blood pigment was at one time visible. On examining the lungs no definite signs of consolidation could be made out, but a certain amount of fine inspiratory crepitation was heard over both sides, and the case seemed to be one of acute double pneumonia before the outer parts of either lung had become hepatised. The history was that ten days before admission, when on board ship on his way back from the Transvaal, he received a blow on the left testis, which was followed by local and general symptoms. After five days his condition improved somewhat, but two days previously to admission he had a rigor and pains over the whole of the body. Except for some slight improvement soon after admission, due to rest and cessation of the vomiting, his condition underwent but little change. The dyspnœa and orthopnœa increased and the fever remained continuous till he died, practically suffocated, on April 20th, about twenty-five days after receiving the blow on the testicle. In the meantime, owing to the absence of any crisis, and since there were no signs of definite hepatisation of the lungs, we had come to suspect that the pulmonary disease was one of acute miliary tuberculosis. The crepitations were variable; on one occasion distinct inspiratory crepitations could be heard below both clavicles. The sputum was examined for tubercle bacilli with negative results. The urine contained a little albumin. At the necropsy both lungs were found to be engorged with blood and absolutely stuffed with miliary tubercles. There was some fibrosis from earlier disease at both pulmonary apices. The bronchial lymph glands were enlarged, and besides miliary tubercles in the pleuræ there was evidence of older pleurisy, especially over one lung. The left epididymis (i.e., where he had received the blow twenty-five days before his death) contained a softened, caseous nodule, smaller than a small cherry. The cerebral meninges contained no tubercles, nor were tubercles found in any other organs, except a few minute ones in the renal cortex below the capsule. The liver might, of course, have contained microscopic tubercles though no macroscopic ones were found. The heart was distended with blood, but showed no evidence of disease. The spleen was somewhat enlarged and pulpy; it weighed nine ounces and contained one small white infarct.

In this case I think there can be no doubt that the tubercle spores were by the injury set free from the old caseous focus in the epididymis, and were carried by the venous blood to the right heart. Many of the spores were then caught up in their passage through the lungs, and thus gave rise to the miliary pulmonary tuberculosis. This theory amply explains why the pulmonary tubercles were practically all about the same size, why they were uniformly distributed throughout every part of the lungs, and why there was not evidence of general miliary tuberculosis in other parts of the body. A few of the microbes had, however, certainly passed through the pulmonary circulation, otherwise we should have found no miliary tubercles in the kidney. Moreover, by careful microscopic examination we might have found evidence of commencing tubercles in other organs.

Similar cases were observed prior to the discovery of the tubercle bacillus and gave rise to various inquiries as to the possible relation between the injury and the lung disease. A remarkable example was the following, which I have from my father, and which occurred at Bonn about 1849.

CASE 3.—An apparently healthy student, about twenty-one years of age, received some injury to one of his ankle-joints. Shortly afterwards he fell ill with an acute pulmonary affection, characterised by frightful dyspnœa and cyanosis, and, like the previously mentioned patient, died practically from suffocation about twenty-five days after the injury to his ankle. At the necropsy both the lungs were found completely stuffed with miliary tubercles, and in the ankle some caseous material was found. It was known that during childhood the patient had suffered from a disease of his ankle.

Other examples, though perhaps not quite so typical as the two foregoing, cannot, I think, be very rare—i.e., cases in which acute miliary tuberculosis of the lungs is set up by injury to some exposed part of the body which happens to be the site of previous tuberculous disease. The wonder is that such cases are not more often observed. I have not, however, heard of any case which has led to legal proceedings of any sort, though one would expect to hear that the question has frequently occurred in connexion with the foreign systems of workmen's insurance. Fortunately in Case 2 the injury which started the tuberculous dissemination was probably of a purely accidental nature.

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HEADACHES:

A STUDY OF SOME COMMON FORMS, WITH ESPECIAL REFERENCE TO ARTERIAL TENSION AND TO TREATMENT.[1]

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I PROPOSE to set forth some of the commoner types of headache, arranged in the order of the period of life to which they belong. As the subject is large and its literature extensive I must confine myself to my own observations, which have been made chiefly upon out-patients, and these mostly women and children. My object is to inquire how far the common forms of headache are dependent upon states of general blood-pressure, and by what means they can be relieved. In infancy we can say little as to headache, yet sometimes the unappeased cry and the action of putting the hands to the ears or hair tell us with much probability of its presence. During childhood the chief causes of headache are school pressure and the rheumatic poison. The latter will come before us in connexion with a later age. School headaches are common among the children attending the public elementary schools. The boy or girl is subjected to mental stimulation under bad physical conditions—crowded insanitary homes, poor or scanty food—and the result is a frequent headache. The pain is usually frontal, worse on exertion, relieved by lying down or going into the open air; in severe cases it persists at night and may hinder sleep. When the rheumatic tendency is also present the proneness to headache is much greater. There is generally increase of arterial blood tension. Here let me say that in my experience the determination of the blood tension is not always easy. The pulse may tell us much, rather, however, by its sustained character between the beats than by incompressibility of the beats themselves. But the true tension of the pulse is often difficult to appreciate. Accentuation of the second sound of the heart, as heard over the aortic orifice, is a more certain sign, although here the observer must be mindful that a thick or thin chest wall, retracted lung, or stiffened aortic valves may greatly modify the sound. It is useful to listen also over the carotid arteries at the base of the neck. Headaches due to defects of eyesight must not be confounded with those from school pressure. The best remedies for school headaches are, in my experience, rest and cod-liver oil.

In adolescence and young adult life there are many kinds of headaches prevalent. There is, first, the rheumatic headache—i.e., that which is associated with acute or subacute rheumatism or with a well-marked rheumatic habit. The subjects are children or young adults. The pain is generally frontal, often felt on waking in the morning, and almost always worse in the early part of the day. The heart is over-acting, with a loud second sound in the pulmonic area. There is increased vascular tension. The headache is relieved by salicylates and alkalies; if any specific remedy for the pain is required antipyrin has been found effective. Closely associated with the rheumatic headache is that due to over-action of the heart. This is also a condition of plus tension, and must be distinguished from rapid heart (tachycardia) where the tension is lowered. The heart's action is increased, not only in rate, but in force; the impulse is strong, the sounds loud, and especially the second sound, as heard on both sides of the base of the heart. The subjects are often rheumatic, so that a clear distinction between these two classes of headache cannot always be drawn. The site of the pain has seemed to be more varied than in the simply rheumatic headache; often it affects the vertex, and it is sometimes worse in the evening or in the night. Vertigo is common and there may also be tinnitus aurium. Rest, iodide of potassium, and alkalies are the remedies indicated. A third large class of plus-tension headaches in young persons is found in connexion with anæmia. The throbbing or shooting frontal headache is typical of anæmia, but the site may also vary a good deal. Constipation is generally present. The remedies for the pain are those for anæmia—purgative salines and iron—and the presence of the headache need not deter us from giving iron if adequate saline treatment is used. This brings us to constipation headaches in general, still showing increased blood tension in the vessels. Constipation may cause pain in the head at all periods of life. The pain is more often referred to the forehead than elsewhere, but in many cases the vertex is spoken of, or other parts of the head. Vertigo is often complained of. Many of these cases are complicated by rheumatism or senile vascular changes. Albuminuric headaches also belong to the series of high-tension headaches. In a few cases I have observed the top or back of the head was mostly affected, and the pain, unlike that in most of the classes already mentioned, was not usually relieved by the recumbent posture at night, but was then as bad or worse than in the daytime. Migraine forms a very important class and will detain us a little longer. I understand by migraine a periodical nerve storm, the typical paroxysm consisting in severe pain in one brow or temple, giddiness, nausea, often vomiting, and sometimes disturbances of special senses, such as hemiopia or transient blindness, vibratile spectra, numbness of parts of the surface, &c. The pain is in some cases symmetrical. Such attacks occur at any age from childhood onward, but are less common after the climacteric period. In the majority of my cases the arterial tension has been increased, but in one notable case it was not so; this was the worst case I have ever seen, the attacks were very frequent and severe, reducing the subject, an intelligent professional man, to misery, and in his vessels the blood tension was very low. Instances of megrim are common in women with a gouty inheritance, and whose urine is over acid, often laden with urates, and depositing uric acid crystals. Such women have increased vascular tension and their catamenia are profuse. They are liable to strange pains, which puzzle their medical attendants, in the back, the side, or about the sternum. In the treatment of migraine we must, in the first place, deal with the patient's general condition. Saline purgatives, a mild mercurial course, potassium iodide, sodium salicylate, or alkalies are often indicated. There are generally bad habits of diet in these cases needing to be set right, also want of exercise, constipation, &c. For the relief of the paroxysms antipyrin and phenacetin have often been in my experience successful. Alkalies sometimes induce the attacks, perhaps by rendering the uric acid in the tissues soluble. But I am accustomed to rely much upon cannabis indica, having had a pretty large experience of this remedy. The extract, often combined with cascara sagrada, has controlled many, if not most, cases of migraine. The co-existence of a tendency to menorrhagia is a further reason for the use of Indian hemp. But it is a remedy which requires careful adjustment for each case, both from the varying susceptibility of different subjects to its influence, and I think also from the varying strength of the drug itself. I prefer to use the fresh extract, and have in a good many instances given it to the point of intoxication. This, however, does no permanent harm. In the case of a woman convalescent from acute lung catarrh attacks of migraine were occurring daily; one-fourth of a grain of the extract was prescribed, and she took by mistake two doses at once, half a grain in all; intoxication followed, as shown by strange delusions, and unconsciousness for two hours. On recovery she remained free from headaches for ten days. In another case the dose of the drug was gradually increased to seven-eighths of a grain, and then, a hearty meal following the administration, symptoms of intoxication came on, with hysterical excitement. The patient declined further use of the remedy, but was persuaded later to resume it, and the attacks of migraine were both distant and slight when she persevered with it. In a third case nearly half a grain used to cause some symptoms of intoxication when taken upon an empty stomach—"pins and needles," stupor, and strange feelings being complained of; but these were delayed for three or four hours when the dose was taken after a full meal. In the case of severe migraine alluded to with low blood tension cannabis only aggravated the patient's sufferings—I believe it is useless except for high-tension states—nor did caffeine, bromides, or salines help him, and change of air brought only a short respite. The patient left me unrelieved. I heard of him a year later; he had consulted other physicians, but the attacks continued much the same.

I have notes of about a dozen cases of epilepsy in which headache was a prominent symptom, but it varied much in site and other characters; in several of the cases the pain

[1] Introduction to a discussion at the Hunterian Society, April 28th, 1897, vide THE LANCET, May 8th, 1897, p. 1275.

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was worse in the evening or during the night. With regard to neuralgic headaches, besides those which are localised in the area of a cutaneous nerve on one side of the head and some of which are reflex to ocular, dental, or nasal conditions, there are a few cases upon my list of severe habitual headache of long standing in women which do not seem to fall under any other category. The pain was in the back of the head and nape of the neck, coming forward over the vertex. There was plus tension in the arteries. Relief was obtained from cannabis, with alkalies or salines.

I now pass to some forms of headache, still in younger adult life, in which the arterial tension is lowered. The principal of these is the headache associated with tachycardia, or heart-hurry. This condition may be contrasted with that of the over-acting heart previously alluded to. The heart contractions are in both frequent, more so in tachycardia, but whilst the over-acting heart beats forcibly against tense blood-vessels, in tachycardia the beats are simply quickened, the second sound is weak, and the vessels are relaxed. The breathing is quickened, the skin perspires inordinately, and there is incapacity for much exertion, physical or mental. Graves's disease may be looked upon as tachycardia in its full development, but all degrees of the condition in a slighter form are very common—more common, I venture to think, than used to be the case. The headache of heart-hurry is again various in its location, frontal, vertical, posterior, or several of these combined. The head is often flushed or hot, and the pain is commonly worse at the catamenial epochs; it is usually relieved by quiet, by recumbency, and by drinking tea. Caffeine quells some of these headaches, and the iodide and bromide of potassium relieve others. Headache in alcoholic subjects may be coincident with plus or minus blood tension. When it is due to the direct action of alcohol the vessels are relaxed, the tension is low, and the condition is closely similar to that of tachycardia. On the other hand, the indirect and remoter effects of alcohol, by hindering elimination, increase the blood tension and contribute a large quota to the plus tension headaches of middle life, which we shall consider presently.

There is a well-marked type of headache which may be termed congestive. The head is flushed and hot, and the carotids often pulsate visibly, whilst the hands and feet are cold; the pain is frontal, or all over the head when severe, and is described as bursting, throbbing, beating, or shooting in character; it often begins on rising in the morning and is worse after exertion or meals. The subjects are well nourished, and in women the catamenia are scanty or absent. The blood tension, contrary to what might at first sight be supposed, is somewhat diminished. This form of headache seems to be very well relieved by caffeine. One woman, aged twenty-three years, came again and again during many months for her five-grain doses of the citrate of caffeine. "It seems," she said, "as if I cannot do without the medicine; I get relief half-an-hour after I take it." Caffeine is the most useful remedy we have for low-tension headaches. Antipyrin and phenacetin relieved some of the cases. Mention may here be made of the headache due to cough. It is, I think, of much the same type as the last; the pain is frontal or vertical and the head is hot. The blood tension is doubtful; sometimes, if not generally, lowered. Observations on this head are complex; in one case the tension was usually increased, but during a paroxysm of cough it was diminished and the vessels relaxed. The headache of influenza and of enteric fever belong also to the low-tension class.

Going on now to the headaches of middle life, it will be convenient to speak here of those attendant upon heart disorders, although many of these are found also at earlier ages; those belonging to old age will be considered later. My records of heart cases are too few to enable me to draw many conclusions. In the early stage of rheumatic heart disease, with or without slight valvular lesion, the vascular tension is generally heightened, and headache is very common. It may be thought that mitral regurgitation must lower the tension; when the reflux is large it probably must do so, but in my experience a small leak may coincide with tightened vessels. The site of the pain may be in any part of the head, and the headache is much the same as that already described under the heading of rheumatic. Cannabis relieves some of these cases. Headache occurs also in the latter stages of mitral disease when the tension has sunk; it attends also, often severely, aortic incompetency. Mitral stenosis caused a characteristic headache in six well-marked cases. It was generally located at the vertex, often throbbing in character, came on on waking or rising, and was increased by exertion or by taking food. This headache was relieved, as is usually the case, on lying down; on the other hand, I have noted several cases of feeble, irregular, or irritable hearts, with headache aggravated by the recumbent posture. We shall see that this is very often the case with the high-tension headache of old age. Menorrhagia is commonly attended with headache, generally frontal or vertical and throbbing. I think the blood tension is most often heightened. Cannabis indica is especially indicated. Arterial tension is apt to rise during the middle period of life. The causes of this change, as they are seen in the well-to-do classes, are quite familiar—over-eating, alcohol, sedentary habits, and the gouty constitution. From these it results that the blood becomes charged with effete matters and the vessels thickened, the heart usually hypertrophies, and for long no serious difficulty hinders the due circulation of the blood. In the poorer classes another set of causes are at work—bad air, scanty and poor food, long hours of manual labour, shortened rest, and chills. These depressing causes generally, in my belief, lead to contraction and thickening of the arteries, or, I would say, to premature age of the vessels; for among the poor, at least, degenerated vessels are among the normal results of old age. Then arises the question, Will the heart hypertrophy in response to the greater pressure against which it has to act? In many cases it does so, but in others it fails to hypertrophy because its tissues are badly nourished and there is general lack of strength. Instances of this condition are often to be seen amongst the poor in broken-down, middle-aged men and women. The vessels are thickened, but the heart is dilated and feeble, with weak second sound; there is asthenia and short breath, and the pulse has nearly that character described by Broadbent as "virtual tension." Headache is very common amongst the gouty and those whose excreting organs are working ill—a high-tension headache, to be relieved by mercurial purgatives, salines, alkalies, potassium iodide, and perhaps cannabis. The poor with their high tension bred of want and fatigue suffer perhaps less in headaches, nevertheless many such cases have come before me. I shall refer to this again in connexion with old age. There is, however, one class of headaches in middle life of a kindred type to the foregoing—that which affects women about the climacteric epoch. The pain is commonly referred to the vertex, and is often spoken of as bewildering or as aggravated by noise or worry; vertigo is frequently complained of. The blood tension is increased. In other cases which showed symptoms of hysteria or mental depression, with headache, at this epoch the tension has been noted as lowered.[2] Bromides are the most useful drugs; cannabis relieves some of the cases.

It remains to speak of the headaches of old age. The poor age early; at fifty-five they are old, at sixty or sixty-five thickened vessels, tortuous temporal arteries, thin and wrinkled skin, and arcus senilis tell that the full age of the Psalmist has virtually been reached; and it is by reason of strength if they compass seventy years or seventy-five. Amongst over 12,000 patients at St. Luke's Dispensary I have not seen probably half-a-dozen over eighty years of age. The blood now circulates through inelastic tubes, no longer with the easy flow of health—a stronger propelling force must urge it forward. The heart responds and hypertrophies; there is heightened tension. But as the vascular changes go on there comes a time when the heart muscle can no longer easily meet the strain. There is increased action, making up in frequency of beat for the lessened power; there is præcordial distress and bad breathing. This condition is well described by Balfour in his book, "The Senile Heart"; also by Clifford Allbutt. Again, the heart may be vanquished in the strife, its cavities may dilate, and its action become rapid and irregular, with low tension in the arteries. And life may yet be prolonged for years, but it is life at a lower level, the sum of the action of feeble organs, when the flowing blood stream has fallen to a mere brook, meandering through the marshy tissues. Now whilst the tension is increasing monthly and yearly it is not to be thought that the various organs can work in comfort. Amongst the symptoms of

[2] Sir W. Broadbent states that high tension is the rule in melancholia. In the hystero-mental depression of the poor I have often found it lowered.

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dis-ease headache is common, in site frontal, vertical, or posterior, often throbbing, and apt to be worse in the night. One patient has "dreadful sensations" in the head at night, another is awakened daily by the pain at 3 A.M., and it lasts until near tea-time. When the heart is distressed and labouring against pressure these pains become in some cases violent, "splitting," burning, and especially affect the night time, hindering due sleep. The bowels are almost always costive, the hand is shaky, and the last joints of the fingers are enlarged (Heberden's nodes). Headache is also common in the last stage of senile heart, when the blood tension is low, the heart dilated, and its action irregular; there are also giddiness and often faintings. The treatment of these headaches is that of their associated heart conditions. Mercury is perhaps our sheet anchor in the relief of the high tension of old age; salines and potassium iodide are of like help. I once gave nux vomica to a person aged eighty-eight years with thickened vessels. She begged it might be left off. "It strings me up so, sir; I cannot bear it." As has been well said, Epsom salts are the best tonic for the aged. A woman, aged fifty-seven years, came to me six years ago; she had chronic bronchitis, dilated heart, breathlessness, and œdema of the legs. I thought she was past cure, but sent her to bed and ordered her to take a course of sulphate of magnesia and grey powder. She came in recently, to my surprise, having lived in tolerable health these six years. "Ever since," she said, "you told me to take the salts I have flown to them whenever I was down; nothing ever does me as much good as the salts." I believe she is right; the saline has eased the vessels and given the heart time to hypertrophy, as it has done. In the low-tension headache of failing heart power digitalis, strophanthus, and the like are of chief use.

The chief points I have sought to bring forward are these:—1. The state of the arterial blood tension is an important factor in many forms of headache. Increased tension is the rule, but there are some well-marked types of low-tension headaches. 2. In the treatment of headache the first thing is to treat the cause or the disorder which is associated with it. 3. The remedies which lower the general blood tension are often useful for high-tension headaches, and those which raise tension for the low-tension forms. 4. Of specific remedies, cannabis indica is of value in most high-tension headaches and caffeine citrate in many of those of low tension. Antipyrin, phenacetin, and acetanilide may be useful in both, but chiefly when the tension is high.

Finsbury-square, E.C.

A CASE OF

PUERPERAL SEPTICÆMIA TREATED WITH ANTI-STREPTOCOCCIC SERUM; DEATH.

BY J. D. RAWLINGS, M.B. LOND., M.R.C.S. ENG.,
LATE HOUSE PHYSICIAN, ST. BARTHOLOMEW'S HOSPITAL; HOUSE PHYSICIAN, GENERAL LYING-IN HOSPITAL, ETC.

MANY cases of septicæmia, puerperal and otherwise, have now been published in which the use of antitoxin has been followed by extraordinary recoveries, but I have seen few in which antitoxin has been tried and apparently failed. As negative results in such matters are as important, though not so gratifying, as positive ones, I offer the notes of the following case, in which serum treatment was begun three days after the onset of the disease and was continued until the patient was moribund, the case going steadily downhill all the time. On the only other occasion when I had the opportunity of trying anti-streptococcic serum the result was the same, but in that case the treatment did not have a fair chance, as it was not begun till twelve hours before death.

A primipara, aged twenty-four years, was admitted, on Aug. 24th, 1896, into the General Lying-in Hospital, Lambeth. Pregnancy had reached full term, and the patient was said to have been in labour for fifty-four hours. On the evening of admission an unsuccessful attempt had been made to deliver with forceps in the patient's own home. On admission to hospital the patient was in good general condition, showing no constitutional symptoms or local signs of obstructed labour. Fairly strong pains were occurring every ten minutes. The fœtal heart was 156. Pelvic measurement showed a slight degree of general contraction, thus:—Distance between the iliac spines, 9⅝ in.; distance between the iliac crests, 10½ in.; external conjugate diameter, 7 in.; diagonal conjugate diameter, 4¼ in.; and true conjugate diameter (measured after labour), 4 in. Immediately after admission a vaginal douche of perchloride of mercury (1 in 2000) was given. Two hours later chloroform was given and forceps applied. There was no unusual difficulty about delivery; the head was brought from the brim to the perineum in half an hour; there were no lacerations. The child, weighing seven and a half pounds, was born alive. The placenta was expressed from the vagina. The total amount of hæmorrhage during and after labour was twenty ounces. After delivery the uterus and vagina were very thoroughly douched with perchloride of mercury (1 in 2000). A little later the temperature was 99·2° F. and the pulse was 84. On the 25th, twelve hours after delivery, the temperature was 103·6° and the pulse 120, no rigor having occurred. On the 26th the temperature varied from 101·4° to 104·2°, the pulse from 122 to 140, and the respirations from 28 to 36. The patient was sweating freely and had a headache, but no rigors. In the evening there was found to be some superficial sloughing of the lower part of the vaginal wall and vulva posteriorly. The lochia were normal in appearance, odour, and quantity. The vagina was douched with creolin and the vulva powdered with iodoform. Four ounces of brandy per day were ordered. The appetite was good and the patient slept well at night. On the 27th the patient was bright and cheerful, the temperature varied from 102·4° to 103·4°, the pulse was 126, and the respirations were 28. The bowels were very freely relieved twice; the tongue was clean; there were no signs of pneumonia, pericarditis, or peritonitis, but the heart's apex was felt one and a half inches outside the nipple line and hæmic murmurs were heard at the base; the lochia were still normal; the breasts were flaccid. The dose of brandy was increased to six ounces, and digitalis and caffeine were ordered. In the evening a little chloroform was given, and the uterus was scraped with a blunt flushing curette; only a few shreds came away. During the operation creolin (1 in 200) was flowing through the curette; afterwards a quart of plain water was run through the uterus, and this was followed by two quarts of perchloride (1 in 4000). After the curetting the temperature suddenly fell to 97·8° and the respiration became infrequent and sighing, but the pulse was 100 and of good volume; the extremities were warm and there was no increase of pallor. The patient only slept two and a half hours. On the 28th the patient was still very bright and cheerful. The temperature gradually rose during the morning to 103·2° and the pulse to 120. At noon the uterus was douched with perchloride, when the vagina was looking better than it had done before. At 2 P.M. 9 c.c. of streptococcic antitoxin were injected. In the evening the patient was seeming a little better in herself, but the pulse was intermittent. The temperature was 102·8°. The uterus was douched with perchloride, when a few sloughs came away and the vagina looked much more healthy than before. A further 9 c.c. of antitoxin were injected. The patient slept for two hours after half a grain of morphia. On the 29th the patient said that she felt better, but she looked worse, and certainly was so. The temperature varied from 102° at 2 A.M. to 98·6° at 10 A.M., twenty hours after the first dose of antitoxin; the pulse was generally 136, but very variable in rate and very irregular. The tongue was slightly furred but moist, and the appetite was good. Two liquid offensive motions were passed. The lochia were normal, but diminished in quantity. The dose of brandy was increased to twelve ounces. Antitoxin was injected at 1 P.M. and again at 9 P.M., but no fall in temperature occurred. Digitalis, strychnine, and caffeine were given hypodermically. In the evening the patient complained of intense pain in the back, which persisted almost without remission till her death, and was unaffected by morphia. She slept a very little after the administration of one grain of morphia. On the 30th the temperature ranged from 100·4° to 101·4°; the pulse was 200. A cadaveric odour was present. The patient scarcely slept at all at night, in spite of morphia, which was given hypodermically in doses of half a grain, until three and a half grains had been given in eight hours. On the 31st the temperature was 103·4°. The pulse was 208 and scarcely perceptible at the wrist. She was not in pain for a short time in the morning. She asked for solid food at dinner-time and ate a quarter of an ounce of cold beef and an ounce of mashed potato and drank half a glass of ale. In

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the evening she ate a whole pear with avidity. There was twitching of the supinators of the left arm. On Sept. 1st the movement of the abdomen on respiration was a little impaired, and there was slight resistance in the left flank. In the evening the twitching increased, hiccough occurred, food was refused, and the patient died at midnight.

Necropsy.—Post mortem the top of the uterus was found to be one and a half inches below the umbilicus, and the weight of the uterus was 14 ounces. There was no general peritonitis, but on the left half of the posterior aspect of the uterus the peritoneum was injected. Douglas's pouch contained about two drachms of free pus. There was no recent lymph or adhesions. Inside the uterus was some blood-stained thin pus, but no retained membranes or placenta. When the pus was sponged off the surface appeared healthy. The upper part of the vaginal walls was healthy, but contained pus like that in the uterus. There was some sloughing of the lower part of the posterior vaginal wall and the posterior part of the vulva. The true conjugate measured 4 in. and the transverse diameter of the brim was 4⅝ in. There was no thrombosis or pus in the iliac veins. There was no endo- or peri-carditis. The lungs, pleuræ, and spleen were natural.

Remarks.—Apart from the antitoxin treatment there are some interesting points in the case. It is somewhat unusual for so acute a septic process to be unaccompanied by any rigors. The case is a striking example of the extreme value of a high pulse rate in the diagnosis of puerperal fever. It is not uncommon during the first days of the puerperium for the woman to get a rise of temperature and headache without any localising signs anywhere and with a pulse well under 100. Such symptoms need cause but little anxiety, and generally disappear after a purge. With a pulse of 120, however, the same symptoms are of the utmost gravity. In the present case, for example, the pulse rate was at first the only indication that the fever was of a serious nature, there were no rigors, the lochia were sweet and plentiful, the patient was bright and cheerful, the tongue was clean and moist, and the appetite good. On the other hand, the bowels were loaded, and that might have been accepted as an explanation of the fever and headache. And yet there was an acute septic process going on which was to terminate fatally on the eighth day. In this connexion it is interesting to note that during the twenty hours following the first dose of antitoxin the temperature fell from 103·2° to 98·6°, but as this was unaccompanied by any fall in the pulse-rate it was not regarded as a sign of improvement, but merely as a remission of temperature such as occurs naturally in septic cases; and this proved to be the case. Seeing the extreme importance of early treatment in puerperal sepsis, and the great value of the pulse-rate as a means of diagnosis in the early stages, I would lay down the following rule: if in the first three days of the puerperium the temperature rises without obvious cause to 102°, and is accompanied by a pulse-rate of 120 or more, the case should be regarded provisionally as septic, and if the temperature and pulse-rate are maintained for twelve hours and still no satisfactory cause is discovered the uterus should be curetted and douched without further delay. This was not done so early in the above patient's case because her condition was at first thought to be due to septic absorption from the vagina, and it was hoped that vaginal douching would be sufficient; there would, moreover, have been the risk of carrying septic matter from the vagina into the uterus on the douche tube. Dr. Champneys, in his lectures, and Professor Byers, of Belfast, in a paper read before the British Medical Association last July, emphasise the importance of the pulse-rate in these cases; but the point is, I venture to think, not sufficiently insisted on in textbooks. Pain in the back of such intensity as in this case is unusual, and nothing was found to account for it before or after death. The patient's tolerance of morphia was extraordinary; in one night she took three and a half grains hypodermically; the tolerance was genuine, for different samples of morphia were used. As so often happens in fatal septic cases, the condition known as euphoria was well marked; although she was being rapidly killed by acute sepsis the patient felt well, was in good spirits, and until the pain in the back began had no idea that she was seriously ill. Six hours before death she recognised her husband and talked rationally to him. No rash of any kind occurred.

I am indebted to Dr. Boxall, under whose care the patient was, for permission to publish the case.

Belsize-road, N.W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON A CASE OF MYXŒDEMA.

BY ERNEST A. DENT, M.B., C.M. EDIN.,
SENIOR RESIDENT OFFICER, DEVONSHIRE HOSPITAL, BUXTON.

A WOMAN, aged forty-five years, was admitted to the Devonshire Hospital, Buxton, on March 13th, 1895, suffering from pain and swelling of the joints, from which symptoms rheumatism had been diagnosed. On examining the patient I observed signs which led me to inquire for a history bearing on myxœdema, the chief of these being a dull expressionless face, some loss of hair, thickening, dryness, and scaliness of the skin, and the characteristic hesitating speech, manner, and gait. The patient complained of pain in the fingers, and pain and swelling in the feet, dryness of the skin, and absence of perspiration, also of increasing weakness and loss of memory, with want of interest in, and fitness for, any employment. She stated that these symptoms commenced about four years before and attributed them to a shock she received at that time. The family history was as follows. Three members—viz., her maternal grandmother and two of her sisters—were insane, and one brother of the patient was affected with rheumatism.

Treatment. — The patient was ordered thyroid gland tabloids (five grains) thrice daily, and, in addition, half a pint of the Buxton mineral water twice daily and mineral water baths up to the waist at a temperature of 100° F. for ten minutes every other day. After taking the tabloids for a few days she complained of giddiness, and there being some weakness of circulation a stimulant mixture was prescribed. When she had been in the hospital a little more than a fortnight she was very much better in every respect, a week later she said that she felt tired and her legs ached, and in about a fortnight after this she complained of feeling faint. The tabloids were now reduced to one daily. There was continuous general improvement in her condition almost from the commencement of treatment, and when she left the hospital, seven weeks after admission, her face had a much brighter expression, the thickening was much reduced, leaving her skin comparatively soft and wrinkled, she perspired freely, and her memory and manner were much better. She was recommended to continue taking one tabloid a day after her discharge.

As the patient has lately been re-admitted here I am able to give further particulars about her. She tells me that she went on taking one tabloid a day for about nine months after leaving (two years ago), and during that time she continued to improve. Since then she has not been so well, having "caught cold," and as she had another "trouble" she was very depressed and felt generally weak. About six weeks ago she had an attack of sickness and diarrhœa (attributed to eating oysters), and when recovering from this she sought admission here. Perspiration had ceased, she felt very weak, and was suffering from constipation and slight dizziness; the skin was very dry. She was ordered one tabloid twice daily and a stimulant mixture, and was, a fortnight later, very much better.

Remarks.—The family history, the patient's statement that the symptoms were caused by a shock, the rapid improvement under treatment, and the subsequent history, seem to me to be points of interest in this case. I think the favourable result obtained from the tabloids on her first visit here was aided by the warm baths, and the patient said that she felt much comfort and benefit from them. The later notes on this case tend to confirm the view, that in the case of myxœdema, although the symptoms have subsided, the thyroid treatment should not be entirely discontinued.

I am indebted to the honorary medical officer, under whose care this patient has been, for permission to publish the case.

Buxton.

A CASE OF LACERATION OF THE TONGUE.

BY ALFRED EVANS, M.R.C.S. ENG.

I WAS recently called to attend a boy who had been injured when playing cricket. It appeared that whilst

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batting in a match he attempted to "pull a ball to leg," but the ball, instead of travelling to that vaguely-defined district, unfortunately landed on his own oral region. On examination the right side of his mouth was found to be very swollen and contused and there was considerable hæmorrhage. He was able to open his mouth with some difficulty, and it was then seen that the cricket-ball had fractured his right canine and lateral incisor teeth, breaking them off flush with the gum. The fragments of teeth had been driven with considerable force into the lingual muscles, the points of entry being near the frænum, the incisor fragment being forced out on the dorsum and easily extracted, leaving a punctured wound through the tongue, along which the probe easily passed from the sublingual to the dorsal surface. The canine tooth, however, had made a channel for itself extending from the attachment of the frænum into the muscular tissue, and could be felt embedded in the tongue near the middle line opposite the last molar tooth of the same side, and the probe was passed one inch and three-quarters before it reached the foreign body. Pressure and manipulation with the finger failed to remove it, so, having applied a spray of ethyl chloride along the track of the tooth it was grasped by dressing forceps and pulled out by the route by which it had entered. The tongue was considerably lacerated, but no artery of any importance was injured, and rinsing the mouth with iced water and, afterwards, frequent ablutions with a weak permanganate solution, together with abstention from all solid and hot foods, resulted in a rapid recovery, and, excepting a little soreness, the organ has now quite healed. The rarity of this form of accident is my excuse for reporting the casualty.

Acton, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

NORFOLK AND NORWICH HOSPITAL.

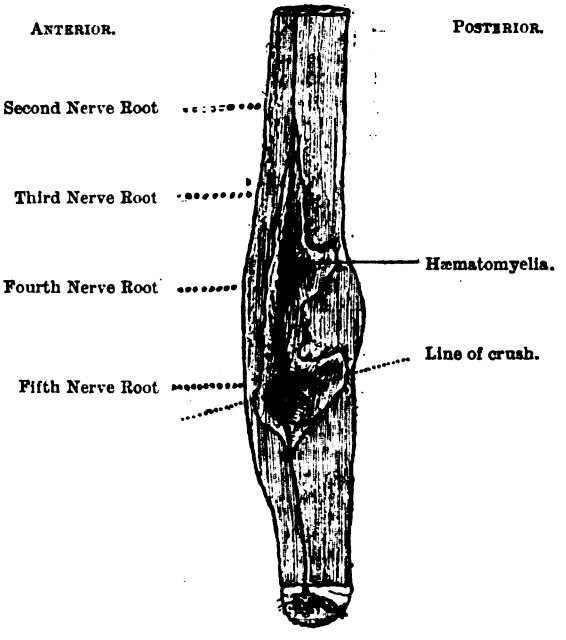
A CASE OF TRAUMATIC HÆMATOMYELIA; NECROPSY; REMARKS.

(Under the care of Mr. C. WILLIAMS.)

THE very definite symptoms to which a hæmatomyelia gives rise when uncomplicated by any other injury of the spinal cord enable a diagnosis to be made of the exact seat and character of the lesion. In the following case careful observation made the diagnosis certain and effectually prevented any idea of laminectomy, which could have been of no service. For the notes we are indebted to Mr. H. A. Ballance, house surgeon.

A woman, aged seventy years, was admitted into the Norfolk and Norwich Hospital at 9 A.M. on Feb. 3rd, 1897, having at 7.15 A.M. been found in an unconscious condition at the foot of a flight of nine stairs. On admission the patient was quite unconscious; the pulse was 64 and the respiration was 16. There was no stertor. The pupils were very contracted and equal, and showed no reaction to light. The knee-jerks were present. The breathing was solely diaphragmatic. There was a cut on the left side of the forehead about an inch vertically above the outer canthus and two-thirds of an inch long, exposing the pericranium. A fissured fracture could be felt at the bottom of this wound going obliquely downwards and inwards. There was, in addition, a scalp wound one and a half inches long at the back of the right parietal bone down to the pericranium, but the bone was not fractured. There was no irregularity about the cervical spine. Towards the evening of the day of admission the patient roused up a little, but not sufficiently to talk. There was no sickness, the right arm and leg were rather rigid, and the knee-jerk and plantar reflex were much better marked on that side. The left side of the body was quite flaccid. The breathing was rather noisy; the pulse was 56 and regular; and the rectal temperature, which on admission was 96° F., rose to 99·4°. On the 6th the patient remained in much the same condition and had roused sufficiently to say "No," "Yes," and "What," but she did not answer questions connectedly. The temperature varied from 100° to 101°, the respiration was 20, and the pulse ranged from 70 to 80. The pupils still remained pin-point in character. She lay on her back in a state of absolute flaccidity, all four limbs being motionless and the arms lying by the sides. Costal respiration was quite absent. There were no reflexes in the lower limbs. There was entire loss of sensation from just below the level of the clavicles downwards, but the exact limiting line could not be defined owing to the patient's dull mental condition. It was evident, however, that the skin area supplied by the fifth cervical root was quite devoid of sensation and that the anæsthesia extended from this region downwards. The catheter had to be used, as there was retention of urine and the bowels did not act unless purgatives or enemata were given. The urine contained neither albumin nor sugar. On the 8th the general condition and the state of the temperature, pulse, and respiration remained the same. The plantar reflexes had re-appeared, the right being better marked than the left. In the evening of the 9th she was not so well. The temperature had been rising all day, so that at 8 P.M. it was 105° in the rectum; the pulse was 92, and the respiration was 40 and shallow. She was more comatose and could not be roused at all. There was complete flaccidity. No reflexes, tendon or plantar, could be elicited. The patient died at 6.30 A.M. on the 11th, having gradually sunk since the 9th. The temperature had continued rising, so that two hours before death it was 108° in the rectum, and ten minutes after death, 109.2°. The pulse reached 100 for the first time on Feb. 10th.

Necropsy.—A post-mortem examination was made at 4.30 P.M. on the day of the patient's death. The fracture of the skull in connexion with the wound on the left side of the forehead was found to be two inches long, and it passed obliquely down through the anterior part of the temporal fossa into the anterior fossa of the skull base. There was no depression of bone, laceration of the brain or hæmorrhage on its surface. There was a good deal of cerebro-spinal fluid in the ventricles, and the cut cerebral surface appeared to be more moist than usual. On exposing the cervical spine from behind, the column appeared to be normal and even after removal of the laminæ and division of the theca the spinal cord looked perfectly healthy, and there was an entire absence of meningeal hæmorrhage. On passing the finger down the cord, however, a portion opposite the upper border of the fifth cervical vertebra felt quite soft, as if pulped. The cord having been removed and divided vertically in the sagittal plane, a hæmatomyelia involving its central parts, was seen to be present opposite the bodies of the third, fourth, and fifth vertebræ inclusive, and of the form shown in the illustration.



Longitudinal sagittal section of the cervical spinal cord, showing the hæmatomyelic cavity in the centre and the levels of the cervical nerve roots.

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This cavity was filled with broken-down blood-clot, the spinal cord being softened around it. It measured one and three-quarter inches vertically and tailed off above and below along the central canal. The largest part of the cavity was opposite the upper border of the fifth cervical vertebra and the fifth nerve root. The upper tailed extremity reached to the level of the second nerve root. Posteriorly the layer of nervous matter bounding the cavity measured one-twentieth of an inch in thickness and anteriorly one-eighth of an inch. The disorganisation encroached more into the right than the left lateral region of the cord. The level of the crush was oblique, as shown in the figure, and exactly opposite the fifth nerve root. On examination of the spine the posterior common ligament was seen to be intact, but the anterior was ruptured opposite the body of the fifth vertebra, which was horizontally fractured at quite its upper part, only a scale of bone having been detached and remaining adherent to the disc between the fourth and fifth bodies. There was no fracture of the articular processes. The lungs were well aerated all through and showed no excess of fluid in the tubes; this was singular considering that the breathing had been solely diaphragmatic for eight days. The other organs were healthy.

Remarks by Mr. BALLANCE.—The case is interesting both from the comparative rarity of hæmatomyelia and from the typical symptoms of injury of the cervical cord that were present. The level of the injury was easily diagnosed during life. It was evident that the fifth cervical root had not escaped because of the cutaneous anæsthesia and the paralysis of the deltoid group of muscles, and that the fourth was intact because of the persistence of diaphragmatic breathing. From the absence of the irritative symptoms commonly met with in hæmorrhage into the meninges it was concluded that the damage was probably limited to the cord itself. The contraction of the pupil and the slow pulse, due, as is well known, to the paralysis of the pupil dilator and cardio-accelerator fibres respectively in their course down the spinal cord to the upper dorsal region, were very noticeable. The exact nature of the injury was dislocation with recoil, the upper four cervical vertebræ with a part of the fifth having passed forwards on those below them and then sprung back again into their former position, bruising the cord during the process. The situation of the injury in the present case entirely accords with Thorburn's experience. He states[1] that traumatic hæmatomyelia usually occurs opposite the fourth, fifth, and sixth cervical vertebræ, and that he has not met with a single case in the dorsal or lumbar regions, a circumstance which he adduces to prove that this form of injury is due to dislocation with recoil, and not to what is vaguely called concussion. Necropsies are very uncommon in this form of hæmatomyelia, as the majority of cases recover. It is to be regretted that this patient also sustained a head injury, as otherwise a much more detailed clinical picture might have been obtained.

Reviews and Notices of Books.

The Physiology and Pathology of the Cerebral Circulation: an Experimental Research. By LEONARD HILL, M.B.Lond., Hunterian Professor, Royal College of Surgeons of England. London: J. and A. Churchill. 1896. Price 12*s*.

THE profound and exhaustive researches upon the cerebral circulation which Dr. Leonard Hill expounded in his Hunterian Lectures for 1896 did much to throw light upon a question that is amongst the most difficult for the physiologist to determine. The re-publication of these lectures in the form here presented will therefore be heartily welcomed, for in them the reader is led step by step towards the explanation of the phenomena of the pathological states of anæmia and compression. The conditions under which the circulation is carried on within the closed cavity of the cranium are not to be explained on anatomical grounds or even deduced from clinical observation. They can only be investigated by experiment, and it is because the experiments carried out for this purpose by the author of this work were so skilfully planned and so well adapted to discover the actual conditions that they have been so fruitful. For there is no question that these physiological researches have led to a very material change in the point of view from which the phenomena of cerebral anæmia and compression must be regarded. Commencing with the study of the movements of the brain, cardiac and respiratory, Dr. Hill passes to consider the *rôle* of the cerebro-spinal fluid, establishing the important fact that in normal states the tension of this fluid is equal to that of the venous pressure. He shows that the subdural space is physiologically one with the subarachnoid, and that fluid can pass readily from one to the other—a fact which, though anatomically disputed, yet is confirmed by the teachings of pathology. It is instructive to learn that withdrawal of this fluid is at once followed by serous transudation from the blood, and that it is impossible for any increase of the cerebral tension to be transmitted by the cerebro-spinal fluid owing to the tendency to equilibrium between the intravenous and subarachnoid pressure. Dr. Hill also shows that it is possible to irrigate the brain and spinal cord with ease, his final conclusion to this section being the suggestion "that in such a pathological condition as meningitis irrigation of the meninges might be employed." He adds: "The operation could be as easily and safely carried out as that of irrigation of the peritoneum." The next section deals with the cerebral circulation. Whilst confirming the general truth of the Monro-Kellie doctrine that the volume of blood in the brain is almost invariably constant, Dr. Hill, by means of most carefully devised experiments, has studied the relations of the intra-cranial circulation to that of the general circulation. In some respects his results run counter to those of other experimenters, but he gives good reasons for such divergencies, and affords much matter for thought and inference. One interesting outcome of this research is the evidence that the circulation within the skull is uncontrolled by vaso-motor nerves, but that it is influenced solely by the variations in the general arterial or venous pressure. In so far as this is under any nervous control, it is through the splanchnic nerves that the cerebral circulation is to be modified, the circulation being accelerated by a rise in arterial pressure and slackened by a fall in that pressure. Owing to the conditions within the skull it is not possible for the intracranial pressure to be more than momentarily raised above that of the cerebral venous pressure. "The cerebral circulation passively follows every change in the general circulation. Every change in the position of an animal from the influence of gravity on the vascular system affects the cerebral circulation. Every variation in respiration and every muscular movement is followed by passive changes in the circulation of the brain. Every heart-beat and every respiratory undulation is exhibited on the tracings of the cerebral venous or intracranial pressures. Compression of the jugulars or the abdomen causes a marked rise in cerebral venous pressure, and muscular movements of the neck by pressure on the jugular veins are sufficient to affect the cerebral circulation. Every stimulus that enters the organism and affects the general vaso-motor centre produces a passive effect on the cerebral circulation. Each pleasurable emotion raises the general blood pressure and increases the blood-flow through the brain, and each painful emotion brings about the opposite result. It is by means of the splanchnic area that the blood-supply to the brain is controlled" (p. 74). This passage illustrates the prime fact learnt by this research—namely, the close dependence of the circulation within the skull upon the conditions obtaining in the body generally, and at the same time affords physiological reason for facts of daily experience. A section is devoted to the discussion of the influence of the force of gravity on the

[1] Surgery of the Spinal Cord. By William Thorburn. 1889.

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circulation, and opens up many questions of practical moment. The main lesson to be learnt is that the effect of gravity is compensated for by the splanchnic vaso-motor system, and that the extent of this varies in individuals. The phenomena of syncope and shock are explained, and the value of abdominal compression in restoring the subjects of these conditions, or those of cardio-vascular paralysis from chloroform poisoning, is well exemplified. The application of these physiological studies to the subjects of cerebral anæmia and cerebral compression forms two most valuable and interesting sections of the work. The conditions for the production of cerebral anæmia are explained in detail and the effects of narcotics as well as the phenomenon of sleep are discussed, the great share taken by the splanchnic vaso-motor apparatus being again dwelt on. As regards compression it is shown that the brain does not transmit pressure equally in all directions, and that there is "complete pressure discontinuity between the cranial and vertebral cavities" owing to the viscosity of the brain substance, the tentorium cerebelli, and falciform ligaments, and to the plugging of the isthmus tentorii cerebelli and the foramen magnum by the translocation of the brain mass. The symptoms of compression are mainly those of anæmia of the bulb, and are due to the cessation of the blood flow. A small opening into the skull does not necessarily relieve compression, for what is required is to allow of "an equivalent compensatory expansion of the cranial contents," which may not take place owing to the viscosity of the brain mass. These are some of the inferences drawn by the author, but we fear that it is not possible to do him full justice without extensive citation. We would, however, strongly commend his admirable monograph—which is a model of clear exposition and sound reasoning—to the attention of physiologists and pathologists. They will find in its pages much material for consideration, and many an obscure point in cerebral pathology and in the symptomatology of cerebro-spinal disease will be made more clear. Nor can these studies fail to produce good fruit in regard to the more rational and hopeful treatment of disturbed conditions of the cerebral circulation.

LIBRARY TABLE.

Oban: a Health and Holiday Resort. By EDWIN BAILY, M.B., C.M. Edin., Medical Officer of Health of the Burgh. Oban: Hugh McDonald. Pp. 48.—Increased facilities of access, both by railway and steamboat, as well as the natural advantages of its situation, have rendered Oban one of the most popular summer resorts in the Western Highlands of Scotland. It can be easily reached even from London, the route being by Stirling and Callander, and the duration of the journey from thirteen to fifteen hours. Dr. Baily has written a charming description, not only of the town with its immediate surroundings, but also of many picturesquely situated places of interest in the neighbourhood. The frontispiece is a view of Oban Bay crowded with yachts, as it often is in summer time, and numerous other landscapes are scattered throughout the pages. In conclusion, he recommends either the earlier months of the year or October as the best seasons for health-seekers and those whose time is at their own disposal to visit Oban; and he brings forward some strong evidence of its advantages even as a winter resort, on the ground mainly of the mildness and equability of the temperature and the profusion of plant life during winter. An average of ten years gave the mean daily temperature of January at Oban as 39·8° F. and of August as 57·3°, whilst at Torquay, in the south of England, the means for the same months were respectively 39·4° and 59 9°.

Fruits and Farinacea the Proper Food of Man. By JOHN SMITH. London: The Ideal Publishing Union. 1897. Pp. 172.—This is a new edition of a tolerably well-known vegetarian work, which was first published many years ago, and is, in the words of the sub-title, "an attempt to prove, from history, anatomy, physiology, and chemistry, that the original, natural, and best diet of man is derived from the vegetable kingdom." The author, evidently possessing considerable literary ability and not carried away by prejudice, availed himself freely of extracts from medical books which could be used in support of his case, but his reasoning almost necessarily falls short of being conclusive, firstly, because the original food of man is of no practical consequence at the present day; secondly, because the human alimentary tract does not correspond to that of either the herbivora or the carnivora among the lower animals; and, thirdly, because the most important vegetable food products are derived from cereals, all of which are unfit for use in the "natural" state, and require processes of preparation quite as complicated as those necessary for animal food. The best chapter in the book is probably the one headed "Vegetable Food Consistent with Physical Strength and Activity." In questions of this kind practical experience is more useful than theorising, and there is plenty of evidence that many persons find vegetarian dishes, when properly cooked, to be both wholesome and palatable.

A Handbook of Surface Anatomy and Landmarks. By BERTRAM C. A. WINDLE, D.Sc., M.D. Dub., Professor of Anatomy in Mason College, Birmingham. Second edition, revised and enlarged, in collaboration with T. MANNERS-SMITH, M.A., M.R.C.S., Lecturer on Osteology and Senior Demonstrator of Anatomy, Mason College, Birmingham. London: H. K. Lewis. 1896. Pp. 143. Price 3*s.* 6*d.*—We are told in the preface that this little book is not intended to be a treatise on surgical applied anatomy, but is meant for students of anatomy in their first and second years, to serve as a guide for that portion of the knowledge of the human body which can be gained without dissection. Directions are also given for the examination of certain of the orifices, and for the use of some of the common surgical instruments, such as the catheter. That the book has reached a second edition is proof that it has been found to be of value, but we should certainly be inclined to recommend it rather to students after they had entered the wards of a hospital than before passing in anatomy and physiology. It is, of course, desirable that while a student is studying anatomy he should have some idea of the various applications of this anatomical knowledge in the practice of medicine and surgery; and, indeed, most works on practical anatomy, such as "Ellis's Dissections" or "Cunningham's Anatomy," contain chapters devoted to superficial anatomy and to other anatomical facts which are found by the student to be important later in his career. But this introduction of medical and surgical applications of anatomy into the ordinary text-books intended for the use of students of the first and second year can easily be overdone; and in this volume we continually meet with words and phrases which must be almost incomprehensible to the student who has not yet entered on the study of surgery. The book is carefully written, perfectly trustworthy, and it is well illustrated by a large number of diagrams. We may especially commend the chapter devoted to a description of the relations of the scalp and skull to the fissures and convolutions of the brain; this section has been largely re-written for this edition. We consider that the book forms an excellent guide to the superficial anatomy of the body, and that, though it may assist junior students, it will be especially useful to candidates for the final examinations.

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Analytical Records
FROM
THE LANCET LABORATORY.

XEROFORM.

(BURGOYNE, BURBIDGES, AND CO., 12 AND 16, COLEMAN-STREET, E.C.)

"XEROFORM" is a yellow powder, not unlike iodoform in appearance, and possessing a similar but less pronounced smell. It is a compound of tri-bromo-phenol with oxide of bismuth, the two being together in nearly equal proportion. It is insoluble, practically tasteless, and non-irritating, and appears to act as an excellent antiseptic. Bacteriological experiments have shown that it possesses a very powerful germicidal effect upon the comma bacillus and other pathogenic organisms. Xeroform is stated to have been used in gynæcological practice with gratifying results and also in affections of the skin. It is described as "the iodoform of the future."

RONUK.

(RONUK, LIMITED, 83, UPPER THAMES-STREET, E.C.)

This is a brown mahogany-coloured paste described as a sanitary polish and cleanser suitable for renovating the surfaces of the floors of a sick chamber or of hospital wards. It possesses a pleasant aromatic smell, and readily produces an attractive polish on leather or flooring with a minimum of work.

(1) ICHTHYOL; (2) DUODENIN; AND (3) HYPNOTIC CO. PALATINOIDS.

(OPPENHEIMER, SON, AND CO., 14, WORSHIP-STREET, E.C.)

The convenience of administering insoluble and nauseous drugs in the form of palatinoids is again illustrated in some recent new additions to the list. These comprise palatinoids of ichthyol, containing 3 grains of the sulph.-ichthyolate of ammonium; of duodenin, containing 5 grains of the purified enzyme of the duodenal ducts; and a hypnotic combination of potassium bromide 4 grains, morphia $\frac{1}{12}$ grain, cannabis indica extract $\frac{1}{8}$ grain, and pulv. fol. byoscyami 1 grain. The last is an approved formula, while the previous substances are of well-known value.

NEW FORMULÆ (PARKE DAVIS & CO.).

(PARKE, DAVIS AND CO., DETROIT; LONDON AGENCY, 21, NORTH AUDLEY-STREET, GROSVENOR-SQUARE, W.)

Perhaps the most interesting preparation recently sent to us by this firm is the Plasma Nasal Tablet. It is designed so that when dissolved in two ounces of water a solution of the same density as blood serum is obtained. The calculated effect of this is to prevent diffusion of the solution through the mucous membrane, leading probably to engorgement and irritation. The tablets are composed of sodium chloride, sulphate, and phosphate, with definite quantities of the same potassium salts; to these is added a small quantity of menthol. The resulting solution when a single tablet is dissolved in two ounces of warm water would appear to be well adapted for washing out the nasal cavities. Taka diastase is now well known as a powerful amylolytic ferment obtained by cultivation upon a species of fungus. It is now combined with pepsin and pancreatin, thus making the preparation of decided and general value in certain forms of digestive failure.

NEW TOILET PREPARATIONS.

(BLONDEAU ET CIE, MAIDEN-CRESCENT, N.W.).

The preparations submitted to us were as follows:—Violette de Parme Soap, Bouquet Soap, Lait Vinolia, Triple Extrait, and Brown Vinolia Cosmetic. Each and all showed a standard of purity consistent with purposes for which they are intended. The soaps contained an excellent basis absolutely free from any excess of alkali. Lait Vinolia appears to be a fatty emulsion not unlike milk in appearance: Ether extracted an oil along with which was associated the delightfully fragrant essential oil of the rose. The Triple Extrait consisted evidently of a solution of otto of roses in spirit. We could trace no objectionable ingredients in any of the preparations described.

EXTRA OAT STOUT.

(MICHELL, GOODMAN, YOUNG, AND CO, STAMFORD-HILL, N.)

An important departure in the preparation of this fermented liquor is the employment of a definite quantity of oat. As a consequence the extractive matters are found to contain a higher proportion of nutritive material than would be the case if barley malt were alone employed. An increase occurs chiefly in the amount of nitrogenous principles, and of the valuable mineral constituent, phosphate of potassium. The resulting liquor is of a mild but somewhat full flavour and in ripe condition. Our analysis was as follows: extractives, 6·30 per cent.; mineral matter, 0·45 per cent.; alcohol, by weight 5·0 per cent., by volume 6·24 per cent., equal to proof spirit 10·94 per cent.; total acidity reckoned as acetic acid, 0 90 per cent. It is clear from these results that the preparation is one of merit and a nourishing article.

NURSERY BISCUITS.

(A. ROBB AND CO., 79, ST. MARTIN'S-LANE, W.C.)

These biscuits are evidently prepared with a due consideration of the special requirements of infants and invalids in the choice of an easily digestible farinaceous food. The biscuits are delicately crisp and well cooked. They are somewhat sweet and malty to the taste, containing an excellent proportion of soluble carbo-hydrate, notably dextrine, which, as is well known, is a valuable element of food for children and of easy assimilation.

LIGHT BITTER ALE.

(THE BECK BREWING CO., PRESCOT-STREET, LIVERPOOL.)

The analysis of this product was as follows: Total extractives, 2·35 per cent.; mineral matter, 0 11 per cent.; absolute alcohol, by weight 0·05 per cent., by volume 0 07 per cent., equal to proof spirit 0·12 per cent; total acidity reckoned as acetic acid, 0·25 per cent. It contained no preservatives. The ale is evidently a genuine infusion of hops and malt liquor, but with only a trace of alcohol. It is brilliant and sparkling, with good flavour, simulating the ordinary brewed and fermented article.

MEADOW SWEET CHEESE.

(THE MEADOW SWEET CHEESE CO., 5, RAINFORD-SQUARE, LIVERPOOL.)

Our analysis of this excellent dairy product was as follows; Water, 33·43 per cent.; fat, 30·41 per cent.; casein, 32 12 per cent.; mineral matter, 4·04 per cent., containing 1·20 parts salt. These results are very satisfactory, and fully bear out the statement that this cheese is "carefully made from the milk of selected dairies and enriched with cream." The sample we examined was contained in a jar upon which was marked the date at which the cheese was made and packed. Since, as we found, there are no objectionable preservatives used in its manufacture, while it contains, as will be seen, only a minimum of common salt, it does not keep for more than a week or ten days. The proportion of fat is a noteworthy feature in the analysis; and, moreover, on determining its melting point we found it to be 31° C., which is exactly that of genuine milk or butter fat. The sample which we examined possessed an excellent flavour, free from roughness, bitterness, or acidity. It is evidently cheese, and nothing but cheese, and that of first-class quality. This, we fear, is more than can be said of much of the stuff that is sold as cheese in the English market at the present time.

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THE LANCET.

LONDON: SATURDAY, AUGUST 7, 1897.

THE members of the British Medical Association who hunger and thirst after medical science will this year have to repair to Canada for their satisfaction. Those who rather affect questions of a medico-political sort or such as bear on the constitution and duties of the Association have already had their meeting. It really seems as if the members of the Association were divisible into two such sects as the above. There are, of course, a few striking exceptions—men equally at home in the discussion of either set of subjects; but, as a rule, there is a sharp line of demarcation, and certain names appear in the one section which are conspicuously absent in the other, and *vice versâ*. Nor is the blame one-sided. It is easy to say that the great questions affecting deeply the interests of the profession, its constitution, its privileges, and its duties, are discussed year after year by the same limited group of speakers, who might be counted on the fingers. The fact, however, is not the fault of the members in question. The general meeting of the Association is open to all members, and all should take a decided part in its affairs and their administration and in its constitution. Even as an instrument for the promotion of medical science the Association will suffer if the great majority of its members take no part or lot in the discussion of its duties; and as an instrument for affecting public and Parliamentary opinion it will suffer great impairment if the leaders of the profession do not do their share in giving a tone of moderation and breadth to questions which cannot be settled without reference to public and Parliamentary support.

The business meetings of the Association, if we may judge from the numbers who vote, are attended by a mere fraction of the members. At the meetings held last week the questions discussed were of great importance, such as the functions of the Council, the constitution of the Association, the deference due respectively to a general meeting of members and to the views of the branches carefully ascertained, the Midwives Bill, or, to speak more accurately, the Obstetric Nurses Bill, indirectly the question whether the Association should undertake the work of Medical Defence, the case of Mr. R. B. ANDERSON, and the disciplinary function of the Association in the way of excommunication. It will not be denied that these questions involve the very judgment and reputation of the Association—even of the profession—and that errors of judgment in regard to them may not only involve the Association in discredit, but may be disastrous to the profession, yet they were determined by 150 or 160 members; and it occasionally happens in the Association that the gravest questions are settled by half that number. It cannot be wondered at that the Council are fain to refer such subjects to the branches for careful consideration and advice, and that the judgment of the branches is not always the same as that of a general meeting, which is often controlled by a handful of speakers who are apt to regard themselves as the Association. It would be personal to specify illustrations, but members of the Association will have no difficulty in supplying them. It is the more unnecessary as we seem to detect in the proceedings of the recent annual general meeting, with one or two exceptions, a greater spirit of responsibility and moderation than has often of late years been exhibited, and a greater disposition in different sections to believe that there is something in other views than their own.

Two very different incidents in the proceedings deserve a word of notice. The presentation of the gold medals will be generally approved. If an association does not emphasise such services as those of Mr. WHEELHOUSE and Sir WALTER FOSTER there must be something wrong in it. The award of the Stewart Prize to Dr. G. SIMS WOODHEAD and of the Middlemore Prize to Dr. ALEXANDER HILL GRIFFITH will be equally approved. The other incident was of a painful character—the expulsion of two practitioners from the membership of the Association for having accepted offices under the Government of South Australia in the General Hospital of Adelaide, vacated by the whole staff as a protest against the conduct of the Government. The members so removed had ample opportunities of defending themselves. We cannot wonder at the all but unanimity with which the Association acted in this matter. The profession must protect itself, and it would be simply lamentable if a great voluntary association were to be stricken with the same paralysis of discipline which seems to threaten the chartered and statutory authorities.

IN the Bradford district—the home of the wool-sorters' disease—another case of death from anthrax recently occurred, in time, it is to be hoped, to check the withdrawal of certain restrictions which, from time to time, have been placed on the sorting of wool. But whatever means be adopted in the sorting-room, there must necessarily, from the nature of the dust in which the anthrax spores are carried, be very great danger, at some point or other of the process, to those engaged in wool-sorting or, as Dr. BELL, of Bradford, points out, in the removal of the dust from the vessel in which it accumulates. It appears that the time for the general consideration of the carriage of infective material in hides, hair, and rags has arrived; and although the destruction of none of the pathogenic organisms with which we are at present acquainted presents quite the same difficulties as are associated with the destruction of anthrax spores, there can be little doubt that the question of sterilisation in bulk is one that will have to be faced sooner or later.

As has been pointed out by the Dangerous Trades Committee of the Home Office, there are certain districts—notably Asiatic Turkey, Persia, Cashmere, South Africa, and Peru—from which fleeces from animals that have died from anthrax—fallen fleeces—are constantly being sent, whilst hides from some of these places and from China, and hair from Russia and Siberia, are often taken from

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cattle and horses that have succumbed to anthrax. It is, of course, evident that the ideal method of treating such material would be by sterilisation before the goods are baled; but that being out of the question, it is all-important that some plan of sterilising in bulk, if possible, or in loosened bulk, if necessary, should be devised. In the case of hair, through which steam and liquids percolate most readily, the difficulty should not be very great, but in the case of pressed wool and baled hides the obstacles to thorough disinfection are necessarily very much greater. A dense mass of wool exposed to superheated steam, even for a very considerable period, could be affected on the surface only, whilst such treatment of leather would ruin it for all commercial purposes. We cannot think, however, that a committee, composed of practical men accustomed to deal with these various goods, of one or two thoroughly capable medical officers of health, and of a similar number of expert bacteriologists, would be unable to draw up a satisfactory report on the various means of dealing with goods coming from scheduled districts. Any one of these sets of men alone would be utterly incapable of dealing with the subject; but the whole of them, looking at the question from various points of view and with the benefit of each other's advice, should be able to draw up a workable scheme which would approve itself to all concerned. If the question could be settled as regards anthrax it would be settled for every other disease from which we have anything to fear from the carriage of infection through the agency of imported goods. In a letter published in our columns last week it is pointed out that if certain observations as to the persistence of vitality of the rinderpest virus be correct, it is essential that the hides from "dangerous" districts should be submitted to a process of disinfection before they are admitted to this country. Any measures that would be sufficient for the sterilisation of the anthrax hides would be, of course, more than sufficient for the sterilisation of rinderpest hides; but at present there are no methods known by which even baled rinderpest hides could be rendered free from the virus if it were present.

As regards the possibility of the carriage of the infection of plague to this country, considerable light has been thrown on the question by the various recent workers at the life-history of the plague bacillus. All are agreed that, except under very favourable conditions, the plague bacillus very rapidly dies out, whilst even under the most favourable conditions it is difficult, without constant re-inoculation and passage through living animals or human beings, for the organism to maintain a high degree of virulence. It follows therefore that wherever a long voyage has to be made, even in these days of rapid transit, the bacillus as a rule dies a natural death, and although the organism may be present and alive in goods that leave Bombay, it has lost its virulence, and usually also all vitality, by the time that it reaches—this country, say. Quite recently Dr. KOCH and the Bombay Commission have fully confirmed these statements as to the short life of the plague bacillus. Still, it is obvious that under certain conditions it might be necessary to disinfect rags and flock from plague-stricken districts; but in most cases this could be done with comparative ease, owing to the nature of the fabrics in which the infective material might possibly be lodged. This whole question is one of very great importance. It has even been suggested by the Dangerous Trades Committee that "Government should be empowered to stop the landing of hides on receipt of information that they come from infected areas." They also suggest that horsehair and bristles from Russian and Siberian animals should be excluded from our ports on the same grounds that infected animals are not allowed to be sent into the country. As we have already pointed out, no evidence can be collected that there is any danger of the conveyance of the plague to the United Kingdom through the wool that arrives from ports where plague is prevalent, and in this case the experience of those engaged in following the history of outbreaks of disease is entirely at one with the most recent scientific evidence. In the same way we have as yet no evidence that the rinderpest virus can be carried and remain active for any length of time in baled goods; even the laboratory experiments concerning the vitality and virulence of rinderpest virus do not afford grounds for definitely supporting this opinion, and anything that has been advanced has been in the form of suggestion rather than of actual statement. In the case of anthrax, however, we are dealing with a very different state of affairs. Owing to the conditions under which the anthrax organism finds its way into the wool and hair of animals that have died from anthrax, spores are almost invariably formed before the organism dies. These spores are extremely resistant to drying and, in fact, to all agents and agencies which might prove fatal to less resistant organisms. Their powers remain dormant apparently for years, and only come into play—but then with all their original intensity and virulence—when the conditions of moisture and nutrition are again sufficiently favourable for the development of the potential energy of the spore. This very fact renders it exceedingly difficult to sterilise any substances into which these organisms have found their way; but there can be no doubt that it is our duty to find some means by which these organisms may be rendered harmless before the fleeces or the skins come into the hands of the wool-sorters and the leather-dressers.

WE shall continue next week our Commissioner's report on hospital abuse at Birmingham, and take this opportunity of thanking our many supporters who have borne witness in public and private to the value that this branch of our work has in their eyes, and of assuring them that our policy in the past with regard to this important question will be our policy in the future. We shall continue in these articles to report facts obtained from trustworthy sources, or founded upon the personal investigation of our Commissioner, and we shall attempt to draw a moral from these facts that, haply, order may spring out of chaos, and a problem, or a series of problems, which now defies the remedial measures of all experts in charitable matters, may become simpler of solution in the light of more accurate special knowledge. Remedies academic or comprehensive will probably suggest themselves by comparison of the different troubles in different localities—but the first thing is to get the facts.

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In this connexion we have pleasure in calling attention to Dr. ROBERT SAUNDBY'S letter upon our Commissioner's first article dealing with hospital abuse in Birmingham, which appeared in THE LANCET of July 31st. Dr. SAUNDBY'S letter will be found upon page 331 of our present issue. Dr. SAUNDBY'S name is probably known to many of our readers as President of the Council of the British Medical Association, and he is described in the Medical Directory of 1897 as Physician to the Birmingham General Hospital, Consulting Physician to the Birmingham Eye Hospital, Consulting Physician to the Birmingham and Midland Hospital for Women, and Examiner in Medicine to the English Conjoint Board — among other titles to respect. So that from more than one point of view we might have anticipated thoughtful criticism of our work from him. We might have credited him, as a pluralist in hospital appointments, with being aware that the efficiency of the hospital work of the kingdom has been much crippled by the distribution of indiscriminate charity, especially in the out-patient departments. We might, again, have felt secure that we should find him, as a high officer in the British Medical Association, quick to comprehend all sides of a topic the settlement of the inherent difficulties of which is a matter of such urgent importance to the general practitioner. In each capacity—whether as one of the chief officials of the British Medical Association or as a physician prominent in public charitable work—we might have fairly concluded that we should obtain from Dr. SAUNDBY a judgment of our work inspired by fairness as well as by special knowledge. Moreover, we might have expected from a gentleman who has held such responsible posts in the profession and who is a physician of experience and culture the usual courtesies of debate. Instead of which we receive the little letter to which we have already referred. In this letter we read of our Commissioner as a "self-sufficient gentleman," while lower down the eye catches the polite phrases, "spiteful misrepresentation," "cowardly and cruel libel," "suffering from the effects of the dog-days," "monstrous accusation," "interference of outsiders"—to cull a few blossoms, surely already a little faded, from Dr. SAUNDBY'S epistolary rhetoric. Not one word of justification does Dr. SAUNDBY condescend to employ. Our Commissioner has written, as he will continue to write, in full detail of the situation in Birmingham. On no point or points whatever does Dr. SAUNDBY controvert his statements. In not one single instance does he exhibit and gibbet the cowardice, cruelty, and misrepresentation of which he writes. He prefers to be vague and abusive, for we can use no other word to cover the phraseology we have quoted.

And here we might fairly leave the matter, for Dr. SAUNDBY has shown himself to be so unable to form an unbiased judgment of our aims that we might hold his estimate of our work valueless. We might respond that he was at liberty to think what he liked and say what he liked, but that we should be unable to afford him the gratification of taking him seriously. But we consider it important to dwell upon one point in Dr. SAUNDBY'S letter. We are bound to reflect that the myopia which Dr. SAUNDBY has exhibited, although in the enjoyment of unexceptional opportunities for insight into the difficulties that surround the question of hospital abuse, may be shared by others of our readers less fortunately placed. Therefore, we invite all readers of THE LANCET to peruse Dr. SAUNDBY'S letter and to note in it the untenable position of privacy from discussion that is there assumed for affairs that are clearly of public interest. Dr. SAUNDBY talks of "interference of outsiders," and reports certain of the profession at Birmingham as having told our Commissioner "to mind his own business." Our Commissioner, who gives us a truer view than Dr. SAUNDBY of the kindness and good sense of the practitioners in Birmingham, was minding his business—i.e., THE LANCET'S business—when he made his inquiries into a matter of the first interest to the medical profession. It is imperative that all should understand that the hospitals do not belong to the medical staff. It is imperative that the medical profession should realise that public charities must be administered for the public good, and that public deeds are open to public criticism. At the present moment the suffering poor, the charitable public, and the general practitioners alike suffer from the lax methods of the distribution of hospital benefits. As good men, as just citizens, and as kindly fellow practitioners, all medical men should do their utmost to help in arriving at better methods, if better methods can be devised. As medical journalists we have our share in this work, and we shall continue to discharge our duty as seems proper to ourselves, secure in our knowledge that what we have done has borne good fruit, and deeply conscious that had not it been for the hearty coöperation of the medical profession in so many localities the information which we have already been able to diffuse could not have been obtained.

Annotations.

"Ne quid nimis."

A PLEA FOR A STATE MEDICAL SERVICE.

IN a recently published pamphlet Dr. James Erskine, lecturer on Aural Surgery in Anderson's College Medical School, Glasgow, advocates a complete departure from the system of medical practice as at present constituted. The multiplication of hospitals, the gratuitous treatment of infectious disease at the public expense, the growth of the provident society organisations, and even the recent improvements in the practical parts of medicine and surgery, whereby methods have been introduced more and more difficult to apply in private dwelling-houses with the assistance of an amateur nurse, have all of them had the effect of seriously encroaching on the field of the time-honoured family medical man. Dr. Erskine puts the case accurately in describing this unsatisfactory condition of things as "an undeserved Nemesis overtaking the medical profession for their beneficent labour," and he does not hold out any prospect of an improvement under present conditions. His remedy is a nationalisation scheme, most of the details of which he leaves to be supplied by others, his main recommendation being that "hospitals ought to be uniformly free and accessible both as regards illness and locality." For some years the hospital question has, he says, been discussed mainly from the point of view of so-called abuse by patients in a position to

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pay fees, and for various reasons he thinks that any agitation for reform on that ground is destined to fail, for the complaints being prompted by financial and professional considerations do not excite popular sympathy, and have not elicited any favourable response from the medical staffs or the governors of hospitals. In a State-organised medical service, however, this divergence of interests would not exist. "The hospital, as we have it at present, should be the great central institution of health ..... Medical laboratories would be provided at hospitals convenient for pathological work, and for original research and scientific investigation, in which men could work under certain regulations and with defined terms of encouragement and reward. Appointments would be made mainly by examination, repeated at intervals of years, and promoted by length and merit of service. Men in the national service would not be entitled to undertake any private practice for remuneration. If after serving the State a certain term they desired to practise among the wealthy or the class of the community declining to avail themselves of the national medical provision, they would be free to do so after relinquishing national appointments." ..... "A system of national hospitals must necessarily include medical schools." Such are the essential features of Dr. Erskine's scheme. The first observation which occurs to us with regard to it is that it would be practically an extension of the existing system of Poor-law medical relief with the hospital out-patient department superadded, and that it would have a disastrous effect on the development of medical science, for the incentives to individual effort would no longer exist and medical education would tend to become a mere perfunctory routine. Fashionable practitioners, unhampered by official trammels, would no doubt thrive as they have always done, but the appointments at the great hospitals would cease to be regarded as stepping-stones to fame and fortune, mediocrities would gravitate towards them, the spirit of progress would languish, and the best interests of the profession would suffer not a little by the change.

THE POONA OUTRAGES.

THE vindication of the authorities at Bombay and of the British soldiers employed on plague duty from the foul and scandalous charges brought against them is as complete as we, in common with most people, felt it would be. On all sides it is now admitted that these charges were false and unfounded. Professor Gokhale has been compelled to withdraw his statements and apologise for having made them. Sir William Wedderburn has taken the only course open to him and has expressed to the House of Commons his extreme regret for having directly or indirectly aided in giving currency to charges that cannot be substantiated; and a large and influential meeting of Mahommedans at Poona has freely admitted that there was no cause whatever for complaining of the proceedings of the plague committee, which had been carried out with the least possible inconvenience to religious feeling. We have now learned, too, the details connected with the murders of Lieutenant Ayerst and Mr. Rand, and these tend to show that they were the result of an organised plot, probably of a more or less political kind, and that the application of restrictive measures adopted for the suppression of the plague was rather the occasion than the cause of these crimes. Surgeon-Captain W. W. O. Beveridge, of the Army Medical Staff, who was engaged from first to last in attempting to check the progress of the plague at Poona and who was intimately acquainted with all the circumstances, does not hesitate to declare that "the charges made against British soldiers are absolute lies." This officer, whose life was probably aimed at, and not that of Lieutenant Ayerst, gives a most satisfactory explanation of British soldiers having been employed in plague work in preference to native soldiers, and he speaks in the highest terms of their bravery and devotion and of the intelligence, patience, and kindness they displayed in all their dealings with the natives. As our readers are aware, we from the first entirely discredited the scandalous charges that had been made, but it is satisfactory to be assured on the most unimpeachable evidence that they are false and malicious. The organisation and mixed composition of the search committees rendered it nearly impossible that such outrages should have occurred. Unfortunately, they were nevertheless accepted on mere hearsay by some persons in this country with most mischievous results and grave injustice to those responsible for our rule in India. Apologies, however full, cannot unfortunately efface these results; the mischief has meanwhile been done, and there will always be some evil-disposed or credulous people ready to believe such reports, in spite of all subsequent contradictions. It was Lord Melbourne, we believe, who remarked that if India were lost to this country it would be by the House of Commons. It is fortunate that the present Viceroy of India and the Governor of Bombay, who have been compelled by the force of the circumstances in which they have found themselves to have recourse to a system of criminal prosecution in support of law and order in India, should have received their appointments at the hands of the late, and not the present, Government, for it is an additional proof of conviction on their parts as to the necessity for acting as they are doing.

THE PETROLEUM HAIR-WASH FATALITY.

THE recent lamentable accident to Mrs. Samuelson has, naturally enough, excited not only widespread sympathy, but is one possessing features of unusual interest, from the point of view of scientific men, as to its *causa causans*, and also from the point of view of those upon whom the duty lies of safeguarding public health, using the term in its widest sense. Despite the verdict of the jury, "That the deceased died from the effect of burning caused by the ignition of petroleum, but how this ignited there was no evidence to show," we think it almost certain that the petroleum, or, to be more accurate, the petroleum spirit, was fired by an electric spark generated from the hair to the hands by friction. That friction of dry hair will generate such sparks is well known, and that such sparks will ignite explosive gases is also well known, as was lucidly set forth by Lord Kelvin in his letter to *The Times* of Aug. 2nd. It seems fairly certain that there was no actual flame in the room where the hair washing took place, but it is possible that the vapour travelled some distance and coming into contact with a distant light flashed back. But on the whole we think the electric spark theory is the more probable, especially as similar conflagrations often happen during the "dry cleaning process" of woollen and other goods. As to the responsibility of the hairdressers we shall say nothing, for the London County Council has, we are glad to see, issued a notice calling attention to the matter, and proceedings are pending as to the legality or otherwise of the use of petroleum spirit. The point to which we do, however, wish to draw special attention is the evidence of the Chief of the Public Control Department of the London County Council, who is reported as saying that "he had visited thirty-eight of the leading hairdressers of London with reference to the application of petroleum hair-wash. He found that twenty-five never used it; thirteen did use it, these being all French establishments; ten had given it up since this accident; three had not done so, and two of these stated that *since the accident there had been a greatly increased demand for petroleum hair-wash.*" (The italics are ours.) Fashion is an inexorable goddess, and we suppose that nothing on earth will make a certain class

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of woman give up using anything which may perhaps enhance her beauty. Ignorance may be an excuse for those who used this preparation before the latest misfortune, although at least two deaths were reported from the use of it in a room with a naked light; but ignorance will not serve now, and yet we have the above startling evidence. As in Casimir de la Vigne's poem, it is a case of "On disait 'Pauvre Constance,'" and that is all, and the fashionable world goes on, if not dancing, using all sorts of quack or patent remedies merely because they are fashionable. An occurrence such as this is one more reason for the law as to patent medicines and other preparations being altered. The formula of all these nostrums should be stated on the bottle or package in which they are contained, and meantime we might state that an alcoholic solution of ammonia is quite as efficacious for the cleansing of hair as light petroleum oils, and is not fraught with danger like them.

THE IMMEDIATE REDUCTION OF THE DEFORMITY IN POTT'S DISEASE.

ON July 24th, at the Royal Southern Hospital, Liverpool, Mr. Robert Jones and Mr. A. H. Tubby demonstrated on a series of cases of Pott's disease the manipulations for immediate reduction of deformity. The children's ages varied from three to eight years, and some of the curvatures were very extreme. The deformities were reduced with considerable facility. The forced reduction of the deformity in caries of the spine has been advocated at various times,[1] but it has always met with much opposition. Recently the practice has been revived by Dr. Calot, of Berck-sur-Mer, who had employed it in thirty-seven cases when he wrote his paper.[2] He claimed that the healing process was much accelerated, and that most cases recovered under ten months. The method employed is as follows: forcible traction is made on the upper and lower parts of the spinal column, while firm pressure is exerted over the prominence. When the deformity is reduced a plaster jacket is put on. We believe that the cases mentioned above are the first that have been treated by Calot's method in this country. An exact estimate of the value of the treatment is impossible at the present time.

HOUSE AGENTS AND RENT COLLECTORS AS SANITARY INSPECTORS.

THE sanitary authority of St. James's, Westminster, has made it a condition for the appointment of sanitary inspector that he shall not deal in house property or act as a rent collector or an agent for absentee property in that district. The authority is to be congratulated on this determination, as it is clearly a difficult matter, with human nature constituted as it is at present, for an officer interested in house property to view that property in an altogether unbiased fashion, or, in cases where he has to collect the rent, to order such reconstruction of drains, &c., as will render it a difficult matter to obtain the rent in question. Dr. J. Edmunds, the medical officer of St. James's, Westminster, thinks that a restriction of this nature might well find a place among the regulations of the Local Government Board which appertain to sanitary inspectors, and there is certainly much to be said for the proposal. We have ourselves seen instances where sanitary inspectors who acted also as house agents found great difficulty—that is, if the state of the houses in which they were interested can be taken as an index—in carrying out their duties as inspectors. If, however, we are to reduce this position to its logical conclusion it will be necessary for Parliamentary powers to be obtained to prevent jerry-builders and all persons interested in businesses leading to air and water pollution from occupying seats on district councils. It is the presence of such men as these which prevents the adoption of proper by-laws, the removal of the smoke which envelops our manufacturing towns, and the cleansing of the water courses which traverse them. At the same time, we fully admit that it is the existence of enterprising men, such as large manufacturers frequently are, which contributes in no small degree to our national greatness.

[1] Hare: Practical Observations on the Prevention, Causes, and Treatment of Curvatures of the Spine, 1838.

[2] Semaine Médicale, June 23rd, 1896.

THE CHURCH SANITARY ASSOCIATION.

THE annual sermon of the Church Sanitary Association was preached on Aug. 1st ("Sanitation Sunday") in All Saints' Church, Tufnell Park, London, by the vicar, the Rev. W. J. Hocking. The preacher took for his text the motto of the association, "I will, be thou clean" (St. Mark i. 41), and in the course of his sermon said that two things were beginning to be learned by slow degrees: first, that diseases and pains were not necessarily parts of the economy of human life, but the consequences of imperfect conditions; and secondly, that nine-tenths of the physical ills, diseases, and deformities from which men suffer were traceable to the violation of wise and beneficent laws, and hence were preventable. Science was making it clearer and clearer every day that not only diseases, but a very large proportion of deaths, were attributable to causes evolved out of conditions for which men were, directly or indirectly, responsible. Mr. Hocking also said that it was one of the phases of the Church's mission in every parish to be the teacher of everything that makes for the health of the community—"as well for the body as the soul." Sermons upon the same subject were preached in various parts of the country, the Gospel for the day indicating that concern for the temporal welfare of the people was part of the duty of the Christian ministry. In thus impressing on the masses a sense of the necessity of attending to domestic and personal hygiene the clergy have before them a wide field of usefulness, in which it is possible to benefit their congregations without any excursions into questions of therapeutics. The special feature of the Gospel for last Sunday was the miracle of feeding 4000 persons in the wilderness.

OPERATION FOR HYDATID TUMOUR OF THE SPINAL CORD.

IN a recent number of the *Inter colonial Medical Journal of Australasia* Dr. Jeffreys Wood records a case of very great interest. The patient was a child, aged ten years, without anything significant in his personal history until, at six years of age, he began to wake at night complaining of pain in the back. During the day no pain was complained of. In September, 1893, there was loss of power in the right hand and arm, but this gradually passed away, so that he was able once more to use the hand for writing and with a knife to cut up his food. During 1894 and 1895 the patient remained well and fairly active. About Christmas of the latter year he was noticed to drag the feet in walking. The difficulty in walking increased in the early months of 1896, and in March of that year pain in the left arm was complained of, in addition to the pain in the back and in the right arm, which had been frequent during the previous two years. The left arm also began to waste and the difficulty in walking increased, so that from the commencement of April, 1896, until his admission to the Children's Hospital in May of the same year he was kept in bed, being unable to stand. During this time he lost all power over his legs, bladder, and rectum, and priapism was very troublesome. The pain in the back and arms also increased. On admission to hospital he was found to be a

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bright, intelligent boy, with complete motor palsy of the legs, exaggerated knee-jerks, and ankle clonus on both sides. Both arms were much wasted, and the head was drawn towards the left shoulder, and there was inability to turn it to the right. There was complete loss of cutaneous sensibility up to the level of the second rib and there was also anæsthesia over the inner side of each arm. There was ability to flex both arms at the elbow, but extension at the elbow could not be carried out. There was drop-wrist, the fingers were flexed at the mid-phalangeal joint and could not be voluntarily moved. The thenar and hypothenar muscles were wasted, more on the right side than on the left, and the muscles of the right hand did not react to Faradaism; those of the left hand did. The triceps and deltoid on each side showed the reaction of degeneration, and the symptoms were taken to indicate some gradually increasing pressure between the level of the nucleus of the fifth cervical nerve and that of the sixth. The spine was trephined at the level of the fifth cervical spine and the laminæ of this vertebra and of that below it removed with forceps. The cord was seen to fill the canal, and there was no pulsation. A swelling was seen on the right side of the cord. In separating the dura mater from this it was seen to be a hydatid cyst, and on opening it a small amount of hydatid fluid escaped and a number of daughter cysts quickly followed. Considerable difficulty was experienced in getting rid of the daughter cysts, but in all sixteen were removed, together with the mother cyst. After the operation there was a considerable degree of recovery of voluntary power for a short time, but unfortunately symptoms of cerebral meningitis developed, and the boy died eighteen days after the operation. The unfortunate termination of a case so admirably studied and carefully operated upon is much to be regretted.

MEDICINE FOR THE MIND.

LADY MACBETH'S medical attendant was obliged to confess his inability to minister to a mind diseased, but according to the modern school of psycho-neurologists the cleansing of psychically affected brains is by no means beyond the range of medical achievement. In a work which has just been published[1] M. de Fleury combats with great seriousness the old-fashioned hypothesis that bodily ills alone are the province of the practitioner. The disorders of the psychic half of the human economy are every whit as numerous and important, if not more so, than those affecting the somatic half, and everyone reflecting on the havoc they occasion must acknowledge that systematic efforts should be made to render them amenable to treatment. Laziness, grief, and anger are among the mental affections discussed by the writer, not only from a curative, but also from a prophylactic, point of view, but his remarks should be perused in the original. As might perhaps be expected, an entire chapter is devoted to the tender passion under the heading, *La Médecine des Passions*. "Love," says M. de Fleury, "is a physiological phenomenon which enters the domain of pathology the moment it assumes the sentimental form. Do we not habitually say, 'So-and-so is madly in love'? This passion, which is beyond the control of sense, in face of which reason loses her rights and her powers, is incontestably a human malady." The symptoms of *l'Amour-Maladie*, we are further told, bear a wonderful resemblance to those of alcoholism and morphinomania. Everyone who inquires into the facts for himself will be struck with the absolute identity of the pathological processes in each case. The point of departure is different, but the results are precisely similar, and the same treatment—namely, separation—cures both. M. de Fleury's theories are ingenious, but it cannot as yet be said that he has discovered the sweet oblivious antidote which Shakespeare's Thane asked for; nor, for the matter of that, a panacea of any kind for thick-coming fancies.

[1] L'Introduction à la Médecine de l'Esprit. Paris: Alcan, 1897.

THE AUSTRALIAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THE seventh session of the above association will commence on Jan. 6th, 1898, the place of meeting being Sydney. The objects of the association are to give a stronger impulse and a more systematic direction to scientific inquiry; to promote the intercourse of those who cultivate science in different parts of the Australasian colonies and in other countries; to obtain more general attention to the objects of science, and a removal of any disadvantages of a public kind which may impede its progress. The president-elect, who also holds the office of permanent honorary secretary, is Professor A. Liversidge, M.A., LL.D., F.R.S., who will answer any questions addressed to him as to proceedings, &c., and will furnish a list of hotels, apartments, or boarding houses, with tariffs, to members of the association. Inquirers are particularly requested to state the nature and amount of accommodation they may require. The sections into which the subjects for discussion are divided include nearly every department of science other than medical. The steamship and railway companies give reductions in fares to members upon production of their cards of membership. Besides the general meetings, excursions will be organised to various places of interest in the neighbourhood, and this portion of the Congress will no doubt be by no means the least appreciated of the proceedings, for the scenery of the Blue Mountains is as beautiful as any in the world.

TYPHUS FEVER IN LIVERPOOL DURING 1896.

IN these days we hear but little of typhus fever in England, and it will probably be a matter of surprise to many persons to learn that during 1896 there were in Liverpool as many as 305 cases, with 36 deaths, of this disease, as against 162, with 24 deaths, in the previous year—figures which go to show that although this disease was more prevalent in Liverpool during 1896 than during 1895 the fatality rate was lower. The latter fact may be partly accounted for by the circumstance that during 1896 one of the day industrial schools appears to have acted as a centre for disseminating the disease, and that thus the age distribution of the attacks was a favourable one. Dr. Hope tells us that the greater number of the attacks occurred in the south end of the city, in parts notable for "drunkenness, squalour, and filth," circumstances which are almost always found to be associated with this terrible disease. Upon the discovery of a case of typhus fever in Liverpool the patient is at once sent to the isolation hospital and the infected bedding and clothing are destroyed. Furthermore, an inspector visits the house from which the patient is removed every day for a fortnight, and makes minute inquiries as to any other suspicious cases of illness, while regard is also had to all persons who may have visited the house prior to the removal of the patient and the disinfection of his belongings. Notwithstanding these precautions, Dr. Hope remarks that the disease at times remains unrecognised until a localised outbreak attracts attention. As he observes, typhus fever is by no means easy of diagnosis even by persons fairly familiar with its manifestations, and it is obvious that, owing to the rarity of the disease, especially in London, the majority of the younger generation of medical practitioners must have passed through their hospital experience without seeing a case at all. We are accustomed to flatter ourselves that we have practically "stamped out" typhus fever from our

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Supplement to THE LANCET, August 7, 1897.

The Twelfth International Medical Congress.

(MOSCOW, 1897.)

MEDICINE. PAST AND PRESENT, IN RUSSIA.

I.

Introductory.

MOSCOW will shortly be the scene of an International Medical Congress, the twelfth of those great meetings which are successively held in different countries, and which will now gather for the first time on Russian soil. With Russia for the time being the centre of the medical world it seemed not unlikely that a description of some of her medical institutions would prove as interesting as it could not fail to prove instructive. It was with the object of describing these as they now are in the present year of grace that the following articles had their inception. It soon, however, became clear that the existing condition of medical institutions in this most interesting of countries could only be properly understood by treating them historically and tracing them up from their earliest origins to their present state of advanced development. The original scheme of the articles had in consequence to be much expanded. But, as though in compensation, a large number of facts and incidents in the history of medicine in Russia were brought to light in the course of this investigation into the little known records of the past, which cannot, we believe, but prove of real interest to English members of the profession and, more particularly, to those who intend to take part in the Congress in Moscow. These alone appeared to justify the more expanded treatment of the subject.

To Englishmen there are, indeed, many striking features in this history. Firstly, English medical men have played a not unimportant part in the introduction and improvement of the medical arts in Russia. Among the foreign medical graduates who have from time to time entered the Czar's service our own countrymen have always held a leading, and at one time held quite the first, position. It seems but right at the present moment that the names of these half-forgotten worthies should be resuscitated from the English and Russian records of their times; that their interesting and, in some instances, historically important experiences should again be briefly told; and that due prominence should be given to the generous treatment they invariably received from their Imperial patrons. Should the part played by Englishmen seem to be brought unduly forward in the following pages the excuse must be that this was almost inevitable in articles intended for English readers, and that no discourtesy is thereby implied to the memory of the many medical worthies of other nationalities who may have filled equally important positions, but whose stories are more briefly told.

A second striking fact in the history of medical institutions in Russia is one which is common to the history of almost all institutions in that country. No English historian of Russia has failed to notice the contrast between the growth of institutions in the two countries. With us they have usually originated in the initiative of private individuals or communities, who have only ultimately gained for them the recognition and approval of the State. In Russia this course of events has been usually reversed. There the Czar, as the *Batushka* or "little father" of his people, has in times past usually summoned from abroad cunning artificers, physicians, surgeons, and men of learning, and with their aid has planned and organised professional or other institutions, and trained the people to a recognition of their value and use. In one case the impetus has been from below upwards, in the other case from above downwards. Each method has had its advantages. Each course was, perhaps, inevitable from the history, geographical position, and national characteristics of the two peoples. And, so far at least as concerns the particular group of institutions which will here be considered, each has ended in providing the country with a series of such institutions and a private and public medical service of the nature best adapted to meet its needs. It is not intended here to compare the wants of the two countries or the way in which they are provided for; but it may be said in passing that few capitals in Europe can show a more perfect series of hospitals, laboratories, and other medico-scientific establishments than may be found in St. Petersburg and Moscow; in a word, nowhere are the needs of scientific medicine more fully recognised or more generously satisfied than in the Russian capitals. Of the truth of this statement visitors to the Congress will have ample opportunities of judging for themselves, for, with the courtesy characteristic of our Russian *confreres*, the medical institutions of both cities

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will be thrown freely open to the inspection of all members of the Congress.

A no less interesting object of study than the provision for the medical wants of the capitals is presented in the country districts of Russia by the efforts of the *zemstvos*, or local administrative bodies, to provide the peasants with a system of free medical aid. Finally, there is the immense machinery of state medicine and the public health service forming a vast bureaucracy, with a Medical Council and Medical Department at the head, all of which present characteristics worthy of study. In this connexion attention may be called to the fact that the present Medical Department is a direct descendant, without a break, of the old Court *Apteka*, or Dispensary, which was probably first instituted by an English apothecary late in the sixteenth century.

The information upon which the following notes upon medicine, past and present, in Russia are based has been gathered from a variety of sources. The historical facts have been taken from contemporary records, both Russian and English, from historical works in both languages, and from numerous pamphlets and articles in Russian periodicals, to enumerate which would serve but little purpose. The light thus cast upon one of the by-paths of history, hitherto ignored by the general historian, appears to throw no little reflected light upon the broader and more trodden paths. The description of the medical institutions of to-day is based as far as possible upon actual observation and documentary evidence; but for much supplementary information it is our pleasant duty to express our sincere thanks to many of our Russian *confrères*; to Professors Klein, Erismann, Diakonof, Roth, Pospiélof, and Filatof of Moscow; to Professors Pashutin and Sklifosovski, and Dr. Ragozin of St. Petersburg; to Dr. Isaief and Dr. Dobrotvorski of Cronstadt; and finally to His Excellency Count Delyanof, the Minister of Public Instruction, and his secretaries, Messrs. Latyshef and Anitchkof, for details and statistics relating to the universities and medical education in Russia.

II.

The Earliest History of Medicine in Russia.

THE first chapter of the history of medicine in Russia opens at a period when—if the bull be permitted—medical science as such did not exist. Its germs were there, however. Even so early as the arrival of the more or less mythical Rurik, from which the history of modern Russia usually dates, its traces may be found. Such knowledge of the healing art as then existed was entirely in the hands of the *Koldunui* and *Volkhvui*, the *Kudesniki* and *Viédunui*—the wizards and wolf-men, the sorcerers and seers—grey-haired old men who wandered about in woods, who expounded the cult of the Pagan religion, who transmitted the ancient traditions and laws from generation to generation, and who were prophets, seers, chiromancers, and magicians. This was in the early centuries of the Christian era,[1] when the Russian country and race first appear in definite outline on the page of history. It is tempting to recur to a still earlier period, when Russia was inhabited by a race of whom scarcely an outline remains, if only for the fact that among the dim traces which time has spared of them is a record pointing clearly to their knowledge of the art of surgery. Of the Scythian race, their origin and history, comparatively little is known; but of their customs and arts much has been learned from the superb collection of Scythian relics recovered from the tombs of Kertch and southern Russia generally and now preserved in the Hermitage in St. Petersburg. In this collection, which consists for the most part of personal ornaments and vases of gold or other metal, is a small vase made of the combination of metals known as electrum. This beautiful little object was found in a tomb at Koul-Oba, and is generally known as the Koul-Oba vase. It is considered by experts to be of Greek workmanship, but the figures which it bears are purely Scythian. The vase is ornamented with three groups of figures in *repoussé*, and all three of these are of curious interest. (Fig. 2). In the first a Scythian chieftain is seated and listening to the advice of a kneeling figure, which has been conjectured to represent a *volkhva*, or "wolfman." This group may, therefore, in view of the character of the two others, without any great stretch of the imagination be regarded as representing an early Scythian medical consultation. In the second group a Scythian is examining with his fingers the teeth on the left side of the jaw of another, who appears to be the same chieftain as that

FIG. 1.



The Koul-Oba Vase.

represented in the first group. In the third the same two figures again recur, but in this instance the chieftain has evidently been wounded in the leg, which the surgeon is binding with a long bandage. Now, in examining the chieftain's skeleton found in the tomb from which this vase was taken a curious fact was brought to light. Two teeth in the left side of the jaw were wanting, and around the third, which was diseased, were signs of inflammation of the bone. In addition, the bones of the left leg are said to have shown traces of injury. It seems almost certain, then, that the incidents depicted on the vase were really important ones in the life of this forgotten Scythian chieftain. It were pleasant, did space permit, to linger on this interesting little relic, and to dwell upon the accuracy of detail and the vividness with which the actions are represented. It is the perfection of realism—a realism in no way destroying, but rather enhancing, the decorative effect.

The peculiar and unusual character of the groups just described has led to some speculation as to the purpose for which the vase they adorn was originally intended. That it was meant for some purpose more or less closely connected with medicine seems probable, and a suggestion has recently been made that it originally contained some poison. There is evidence that among the Scythians when a chieftain was buried his wife, his horse, and several slaves were buried alive with him in the same tomb. The Koul-Oba vase was found close to the remains of the chieftain's wife, and it has been thought that it may have contained a poison humanely put within her reach to enable her to put an end to

[1] Rurik is thought to have gone to Russia in 862.

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her sufferings. This for the present remains an open question. Dr. Zmćief tried quite recently to throw some further light on the matter. He obtained some scrapings from the dried crust which lines the vase and submitted them to chemical and microscopic examination. He was able to determine that they contained neither opium nor arsenic, but apparently came to no positive conclusion as to their composition.

Nearly 1200 years elapse between the date of the Græco-Scythian relic found in the Koul-Oba tomb[2] and the time of Rurik. During the interval history is almost silent. On matters relating to medicine she is absolutely silent. It is only after the "Norman Conquest" of Russia, in the year 862 A.D., that the story again takes definite shape, and known historical characters begin to replace the more or less mythical heroes of the earlier period. As the mists clear away the warrior princes are naturally the first to take outline. But next to them there are no figures which become so clearly defined as those of the grey-haired sages already briefly described. Russian writers have loved to dwell upon them, to paint them as men of real dignity and sometimes of sublime independence—tall grey figures wandering in the untouched forest and culling simples on the banks of the Dnieper or the Bug, where doubtless they learned something of

> "the powerful grace that lies
> In herbs, plants, stones, and their true qualities."

Not infrequent references to them and their knowledge may be found in the *Builinui*, those interesting and (to Englishmen) too little known national epics, which sing the deeds of knights and heroes, real and mythical—of Vladimir the Great in his white-walled city of Kief and of his warriors ever seeking fresh adventures in the open field. In "Ilia Muromets"—the most popular of these epics—Ilia lies for thirty-three years in sloth and impotence, until the seers or wizards give him a honeyed drink. He drinks a "bucket and a half," and all his strength returns, and he is enabled to go into the arena and overcome the monster Solovei, whom he brings bound to his stirrup to the very courtyard of the Prince Vladimir's palace. It was a *kudesnik*, "beloved of the gods," who stopped King Oleg in a dark forest and foretold to him the strange manner of his death. The legend is told in one of Pushkin's best known poems. But it is needless to multiply instances; the "grey-haired *Koldoun*" is a familiar figure to all readers of Russian national literature.

In the tenth century Christianity was introduced into Russia. It came from Byzantium, and with it came such knowledge of medicine and the other arts as Byzantium then possessed. There, as elsewhere in Europe, the care of the sick was part of the duty of the monastic profession. The earliest Russian monastery was the famous Petcherskaia Lavra, or Monastery of the Caverns, in the newly-built capital of Kief. The earliest monks in Russia came direct from Mount Athos, where St. Athanasius had built a hospital for the sick. They carried with them the medical knowledge they had there gained, and the Petcherski monks soon became famous for their skill in treating disease. The names and reputation of a few individual monks are still preserved in the monastic chronicles. Anthony, a St. Athos monk, was considered a marvellous physician; Alimpi was reputed to cure leprosy by means of an ointment; Agapit, a pupil of Anthony, worked wonders with his *zelié* or simples, not only among his brethren, but among the laity. This last monk is the hero of an amusing tale of rivalry between himself and a lay "doctor," an Armenian, who settled in Kief, and there practised medicine with no little success. The layman treated the highest *boyars* and even the Prince Vsevolod himself. On one occasion he was summoned to attend the Prince's favourite *boyar*, but finding him apparently beyond recovery he declined further to treat him. He told him that he had but eight days to live. The *boyar* in despair sent for Agapit, who gave him his usual simples, and in the end the great man recovered and the monk was covered with glory. The Armenian was furious with jealousy and a very pretty quarrel began between the two practitioners. At last the Armenian hit upon a plan by which he hoped to ruin the other. He obtained a condemned criminal, gave him some poison, and sent him as a patient to Agapit in order that he might die before his eyes and in spite of his treatment. But the plot failed. The monk recognised that the man was poisoned, gave him some antidote, and saved his life, thus further increasing his reputation. The quarrel then became still more acute. The famous Prince Vladimir Monomakh (it was he who married Gytha, the daughter of our own Saxon King Harold) had been long treated by the Armenian without success. Again the monk stepped in and cured the patient by merely sending him his herbs! But at length Agapit

FIG. 2.



A Diagram representing the groups of figures on the Koul-Oba Vase. (Like Fig. 1, this illustration comes from a picture in Mr. A. Maskell's work "Handbook on Russian Art.")

[2] The vase is ascribed by experts to the fourth century B.C.

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himself fell ill and was visited by his rival. A medical discussion began, and ended with the Armenian exclaiming contemptuously: "This man knows nothing of our art." He took the hand of the monk (perhaps to feel his pulse) and told him he would die in three days. "That is your way of treating disease, is it?" said the other. "You have more to say about death than about helping me. I tell you my death will not come in three days, but in three months." And so it did—a fact which seems to have so struck the Armenian that he at once joined the Church and became a monk in the same monastery. The story, with its series of triumphs of ecclesiastical over lay medicine, and its characteristic ending (it is told by a Petcherski monk), is of interest in more ways than one. Among other things it shows that in the eleventh century poisons and antidotes were known and used; and also as Professor Zagoskin (from whose book it is here quoted) rather quaintly remarks, "because it shows that even then methods of competition between rival practitioners were in vogue not in consonance with their high calling and with the demands of what we now call 'medical etiquette.'"

With the coming of Christianity and the Byzantine monks the fate of the ancient sages and wizards was sealed. The new Church entered into a fierce persecution of the whole race of *kudesniki* and their allies. They sent them to the gallows or the stake and pronounced the practice of magic or sorcery a crime against the true faith. In the Statute of Ecclesiastical Courts, published by Vladimir the Great, himself the first Russian ruler to be baptised, *zeliénitchestvo* is declared to be a specific crime, and as this term appears to have meant the use of *zelié* or simples, the clause was probably a blow aimed at the heathen professors of medicine generally. But the lay art did not die easily. The seers and the system they represented were too firmly rooted in the country and in the hearts of the people to be eradicated in a day. It may even be questioned whether they have ever become quite extinct. The "grey-haired *Koldoun*" may no longer exist as such, but in all essentials he is alive to this day. The *znakhar* and *znaknarka*, the "wise man" and "wise woman," to whom the Russian peasant still turns in cases of illness and misfortune, are the direct representatives of the ancient wizards and sages of the time of Vladimir. They are still believed to possess a mysterious power and skill in the healing of disease, and there is still a widespread faith in the superior virtues of their wonderful simples over all the drugs in the Pharmacopœia.

It will have been noticed from the story of Agapit and the Armenian that so early as the eleventh century a class of foreign practitioners was in existence in Russia. In that and the following centuries incidental mention is not infrequent of foreign physicians and their treatment. It has been conjectured that they came from Byzantium and possibly also from Arabia. These lay practitioners were of no little repute. They were to some extent opposed by the monks, but they were powerfully protected. The princes and *boyars* preferred their services to those of the monks, which they left to the lower classes. The monks always refused payment for their treatment, but the laymen were paid and apparently well paid. In the oldest code of Russian laws in existence—that of Yaroslav, compiled in 1018—a person wounded in an assault, in addition to receiving three *grivnas* compensation from his adversary, was entitled to one *grivna* for the practitioner's fee. A *grivna* was the third part of the price of a horse in those days. Of the nature of the medical practice at that time and of the remedies employed almost nothing is known. Surgical interference in certain cases was, it seems, sometimes resorted to. In 1076, two days after Christmas Day, Prince Sviatoslav[3] died from the "cutting of a tumour" or of some form of local induration or swelling. Very much later a certain Prince Dmitri was treated for bleeding at the nose by means of plugging the nostrils. Hospitals, or rather infirmaries for the disabled, were also in existence, and mention is made in 1091 of a bathing establishment in Pereyaslavl, though whether for medicinal or merely for cleansing purposes is not clear.

Early in the thirteenth century Russia was conquered by the Tatars, and during the next two and a half centuries of rapine and war there was of necessity almost complete cessation of the practice of the peaceful arts. Such medical art as there was at this period was entirely in the hands of the monks, who were generally spared by the Tatars. This miserable period came to an end in the time of Ivan the Third, whose reign from 1468 to 1505 is an important one in many ways. He was the first Russian ruler who took the title of Czar. He married the Byzantine princess Sophia Paleologos, and in her suite there came to Russia many refugees from the capital on the Bosphorus, which had only recently fallen into the hands of the Ottoman Turks. The result was a general revival in Russia of all the arts—a revival for which the overthrow of the Tatar supremacy had paved the way, and which was still further stimulated by the advent of the more cultured Byzantines. Among the arts which shared in the renascence was that of medicine. Foreign physicians were invited to settle in Moscow, which had long before become the capital, and several did so. Presumably some high inducement was held out to attract them; for to enter the service of the Russian autocrat of those days was to run no little personal risk. The fate of the first two foreign doctors who arrived in Moscow could scarcely have been encouraging to those who followed. Their histories are worth quoting briefly.

The first to enter the service of Ivan was one Anthony, a German, who came to Moscow in 1483. He was in high favour with the Prince, but even that could not save him. Only two years after his arrival he was ordered to treat a Tatar prince who was then in Moscow. He failed to cure him, and, in accordance with what seems to have been the pleasing custom of the age, was handed over to the relations of the dead prince to be dealt with at their will. The Tatars dragged him to the banks of the Moskva River, and there "cut his throat with a knife like a sheep!" Five years later Master Leo,[4] a Venetian Jew who with other artificers had been brought to Moscow through the Byzantines, was commanded to treat the son of the Grand Duke himself. He was rash enough to pledge his own life that the prince should recover. The patient had some affection of the legs; Leo gave him his simples and applied poultices and hot bottles, but with no avail. The disease got worse and the prince died. The unfortunate practitioner was thrown into prison, and six weeks later was publicly executed. The people considered his death a just one; he had deceived the Czar and had brought his fate on himself—a statement, it must be confessed, not without some element of truth. It was not always easy for those who had once entered the Czar's service to leave it. The murder of the German doctor, Anthony, created a panic among the other foreign craftsmen. Aristotle Fioraventi, the famous Venetian architect, designer of coins, caster of cannon and of bells, who rebuilt the beautiful Cathedral of the Assumption as it now stands in the Kremlin in Moscow (the same cathedral in which the present Czar was so recently crowned), when he learned of the murder, begged to be allowed to return to his own country. But his request so enraged the Grand Duke that he put the unfortunate man under arrest in his own house and confiscated all his goods.

[3] Professor Zagoskin by an obvious slip says Sviatopolk.

[4] The title of Master appears to have been usually applied to Jewish doctors in the Middle Ages, as they were excluded from bearing the title of "Doctor."

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In the following reign, that of Vassili IV., a Russian subject named Theophil was taken prisoner in Lithuania and carried to Moscow. There he began to practise medicine, and with such success that when in 1516 the margrave in whose service he had formerly been demanded his return the Russian prince refused to let him go. To a like request two years later the prince answered: "He has many of the nobles on his hands under treatment; besides he has already a wife in Moscow." In this case the foreigner had, it seems, become quite at home in his new surroundings and did not himself wish to leave. Nineteen years later he was still in Moscow, for in 1537 he was ordered to make a medical examination of a certain princeling who had refused to enter the military service on the pretext of illness. Two other names stand out at that period, those of Marco, a Greek, and Nicolo, a native of Lübeck. The second is described by the imperial ambassador, who visited Moscow in 1518, as "Maestro Nicolo Lubacense, professor di medicina et di astrologia et di tutte le scienze fondatissimo." This professor of all fundamental knowledge treated the Grand Duke in his last illness, but of his other exploits almost nothing is known.

III.

The Reign of Ivan the Terrible.—Alien Physicians in Russia: their Diplomatic Positions.

WITH the accession to the throne of Ivan IV.,[5] better known as Ivan the Terrible, begins a period in the annals of Russian medicine of much greater interest to Englishmen than those hitherto described. The story of the relations between England and Russia in the middle of the sixteenth century has often been told, and it is not proposed to go over that well-trodden path again here. The voyages of Chancellor and Willoughby, the "discovery" of Archangel, the foundation of the Russia Company, the establishment of diplomatic and commercial relations between London and Moscow, and the abortive attempt of the Czar Ivan the Terrible to bring about a still closer union of the two countries by marrying an Englishwoman—all these are matters known to everyone who has the slightest acquaintance with the course of Russian history. What is not so generally known is that an important part in these events was taken by the English physicians or medical practitioners who were invited or sent to Moscow from London at that time. Many of the numerous letters which passed between the Czars Ivan and Feodor on the one hand, and the Queens Mary and Elizabeth on the other, are taken up with the important subject of the choice and despatch of a trusty body-physician for the service of the Russian autocrat. And the men who entered this service—one that was still not without its perils—were not only men of high professional attainments but were something more than physicians. In many cases they were trusted diplomatic agents who carried on important and delicate negotiations between the two countries. In those days, when there was no resident ambassador of the one Court at the other, but only occasional missions for some special purpose, it was obviously of great advantage to an English statesman to have an intelligent, educated, and observant person, such as a physician would be, residing at the Russian Court, and ready and able to keep him in touch with all that was passing there. Nor were the English statesmen of the time slow to take this advantage; not only in the case of physicians, such as Mark Ridley or Jacob, who were duly accredited from one Court to the other, but even in the case of those who entered the Russian service privately, such as the scoundrel Bomelius, whose story will be told presently.

The first Englishman who went to Russia to practise medicine appears to have been Dr. Ralph Standish. Unfortunately but little is known of his career. He had graduated M.D. at Cambridge in 1553, and had been licensed by the College of Physicians to practise for one year only in November, 1556. In 1557 he sailed for Russia with the famous Antony Jenkinson, the first English ambassador at the Muscovite Court. He reached Moscow, but of his experiences there and his ultimate fate no traces are left. Contemporary with him was a certain Italian practitioner, named Arnolfo Linsœus, who appears for one moment only on the page of history. He was summoned to attend the victim of one of the Czar's jests. Ivan had given one of his boon companions, a Prince Gvozdef, some scalding soup to drink, and when the prince tried to run away he struck him with a knife and wounded him so severely that he fell to the ground covered with blood. Arnolfo was sent for. "Cure my good servant there," said the Czar, "I have been playing with him rather carelessly." "So carelessly," answered the doctor, "that perhaps God and your Majesty will raise the dead, for the breath has already gone out of his body." The Czar waved his hand, called the dead man a "dog," and went on with his amusements.

An incident such as that just narrated throws a lurid light on the character of the times and of the ruler who subsequently earned the title of "The Terrible," though, like all isolated incidents, it shows but one side of that curiously complex personality, in whom good and evil had a prolonged struggle for the mastery, but in whom the final triumph of evil was so complete that what good there was in him has been almost altogether lost sight of in the memory of his crimes.

Ivan the Terrible has not infrequently been compared with King Henry VIII. There seems, however, little to justify the comparison, save that each had a particularly strong will and each married six wives. The Russian, unlike the English ruler, was on the point of marrying a seventh, or, to speak more strictly, was negotiating a seventh marriage, when he died. Had he lived it is doubtful if the marriage would have taken place, for the English lady whom he asked to share his throne was not over eager to leave her own country, and seemed to think that the perils and drawbacks of becoming wife to a man like the Czar were fully as great as the attractions of an Emperor's crown. The negotiations for this match are closely associated with the names of two medical men of widely opposite characters and careers, the physician-ambassador, Robert Jacob, and the miscreant Bomel. It is sometimes stated that Ivan IV. made a proposal of marriage to Queen Elizabeth herself. But this was not the case. The idea was suggested to him, but it was not probable that he seriously entertained it as a practical possibility. The suggestion is said to have been made to the Czar by this same Bomel, a good-for-nothing Anglo-German, the story of whose eventful career is not unprofitable reading. This man, Elisœus Bomelius in full, was the son of a Lutheran preacher and was born at Wesel in Westphalia. He was sent to England and educated at Cambridge, where he graduated as Doctor of Medicine. At this time his evil propensities had not shown themselves, and he was well received by the English reformers, to whom he had letters. Melanchthon is said to have praised him highly for "erudicion and godlynes." After graduation he went to London and soon gained a high repute as physician and astrologer. "People resorted to him to be cured of their sicknesses, having a wonderful confidence in him and in his magic." He even gained the ear of Sir William Cecil, who is said to have consulted him as to the probable length of the Queen's life during one of the negotiations for her marriage. In 1567 Bomel was arrested at the instance of Dr. Thomas Francis, the President of the College of Physicians, for

[5] Reigned 1533 to 1584.

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practising medicine without licence from the College, and was thrown into the King's Bench Prison. There he lay for a couple of years, writing to Cecil vindictive letters, in which he spoke of Francis's ignorance of astronomy and Latin, while petitioning Cecil and later Archbishop Parker for his release. The Archbishop wanted to send him abroad, but Bomel gained time by concocting a tale that he had an important secret to divulge—that he had knowledge of a great danger hanging over England. The Archbishop, suspecting a conspiracy, passed him on to Cecil. The important secret proved to be nothing more than the vague statement that, as great revolutions occur every 500 years, and as that time had passed since the Conquest, something terrible might be expected to happen shortly. Cecil treated the author of this rubbish with the contempt he merited, though, as has been remarked, if his "prophecy" had come only a few years later, at the time of the Armada, his fate might have been a different one. As it was, he accepted a most opportune offer to join the suite of the Russian ambassador Savin, who was then in England and on the point of returning to Moscow. Late in 1570 he was settled in the Russian capital. The English ambassador, Jerome Horsey, who began his travels in 1572, frequently met Bomel; he found him living in great pomp and luxury at the Court of Ivan, with whom he was in great favour as a magician. According to the Russian historian Karamzin he was for a time the Czar's evil genius, poisoning his mind against the *boyars* or nobles, foretelling rebellions, and prompting him to some of his worst persecutions. But Nemesis overtook him at last. The wicked doctor, together with the Bishop of Novgovod, was discovered in treasonous correspondence with the kings of Sweden and Poland, with whom Russia was then at war. His dreadful fate cannot be better told than in the pregnant words of Horsey, who was in Moscow at the time. "The bishop, upon examination," he writes, "confessed all. Bomelius denied all, hopinge to fare the better by means of some of his confederates, as it was thought, favouretts neare about the Kinge, whome the Emperor was appointed to attend his son Charowich [Czesarévitch] Ivan; to examine the said Bomelius upon the racke; his arms drawen backe disjointed, and his leggs stretched from his middell loynes; his backe and bodie cutt with wyer whippes; confessed much and many things more than was written or willinge the Emperor should knowe. The Emperor sent word they should rost him. Taken from the *pudkie* [or rack] and bound to a wooden pool or spitt; his bloudye cut backe and body rosted and scorched till they thought noe liff in him; cast into a slead, brought thorow the castell; I preste among many others to see him; caste up his eyes naminge Christ; cast into a dungeon and died there. He lived in great favour and pompe; a skilful matimitician, a wicked man, and practicer of much mischieff. Most of the nobles were glad of his despatch, for he knew much by them. He had conveyed great ritches and treasure out of the country by way of England to Woesell in Weostvalia, where he was bowrn, though brought up in Cambridge. An enymie alwaies to our nation. He had deluded the Emperower, making him belive the Quen of England was yonge and that yt was very feacable for him to marrie her, whereof he was now out of hoep." One turns with a shudder from this hideous picture of suffering. The wretched man's widow, an English-woman, remained in Moscow until 1583, when the English ambassador obtained leave for her to quit the country and return to England. His reference to the matter is very brief. "Obtained leave," he writes, "Jane Ricards, the widow of Doctor Bomelius, who for treason with the King of Pole against the Emperor was roasted to death at the city of Moscow in the year 1579."

A very different man was Dr. Robert Jacob. The Czar wrote to Queen Elizabeth in 1580 asking her to send him an experienced physician, and the Queen recommended Dr. Jacob, or Jacobi, one of her own body-physicians; not, as she stated in her reply to the Czar's letter, that she herself had no need of him, but because her "brother in the blood," as she called the Czar, required him. Jacob seems to have been a man of considerable attainments. He was a native of London and a graduate of Basle and of Cambridge.[6] It was in 1581 that he sailed in a fleet of merchantmen which Jerome Horsey was conducting from England to Russia. On arriving in Moscow he was for some time maintained by the Russia Company, until the Czar gave him a regular stipend. Jacob was not long in Russia before his influence was felt at the Court of Ivan. Some slight trace of conscience, it may be supposed, was still left to that extraordinary person. After committing on his people a series of atrocities of a nature which a few years ago would have been known as "Bulgarian," but which in future will perhaps be more familiar as "Armenian," he appears to have felt, if not remorse, at least a fear that the people would rise and avenge their wrongs upon the author of them. This, quite as much as the expectation that political advantages to Russia would follow, made him anxious to find an ally in England. His relations with Elizabeth were already of the most friendly character, and he had already secured her promise of welcome and protection if he should be forced to fly for safety from his own subjects. But he now proposed to form a new bond of union between the two countries by marrying an English-woman. The fact that he had two wives living at the time was no obstacle to the autocrat. One had already been put away, and the second could be forced into a nunnery. So he turned to Dr. Jacob, who, in addition to being a physician, acted much as an ambassador from the English Court, and asked him to recommend a *nevièsta*, maid or widow, worthy to share the Imperial throne. The doctor mentioned the name of Lady Mary Hastings, the daughter of Lord Huntingdon, and related on her mother's side to Queen Elizabeth. He so dwelt upon the charms of this lady that he quite captivated the imagination of the Czar, who, doubtless, was also not unmoved by the fact that the proposed bride was nearly related to the Queen. The result was that Ivan at once despatched a special ambassador to London with instructions to arrange conditions for a close Imperial union between England and Russia, and to see the Queen privately and tell her as a secret of the Czar's wishes as to marriage. He was also to see Lady Mary Hastings and report to the Czar whether she deserved the eulogiums that Jacob had passed upon her. The man chosen for this important mission was Theodore Pisemski.

It is beyond our province here to tell the story of Pisemski's mission, of his interviews with Elizabeth and the delays under various pretexts before he could see the bride-elect. She, poor creature, was only just recovering from the small-pox, which had destroyed her beauty for ever. Pisemski reported to the Czar as he had been commanded to, but his report was a mere inventory of the lady's features—about as graphic as the description of the person on a modern Russian passport. It contained not one word in praise of her beauty or personal charms. The Queen was also very doubtful of the effect which the sight of Lady Mary's scarred and disfigured face might have upon the Czar. The person most concerned, the Lady Mary herself, at first favoured the idea of the marriage, but her view altered when she came to know more of the man she was asked to marry and of the country she was invited to share in ruling. Pisemski consequently returned to Russia in 1583, having failed in this

[6] He was a Fellow of Trinity, took his A.B. in 1569, and A.M. in 1573. He then went to Basle, where he graduated M.D., and was incorporated on that degree at Cambridge in 1579. In 1585 he became Licentiate of the College of Physicians, and Fellow in 1586.

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part of his mission. He was accompanied by an ambassador from Elizabeth, the famous Jerome Bowes, who was instructed to settle all matters commercial, political, and secret then pending between the two countries. Bowes is described as a man rough in his manner and obstinate—one who in his first word showed himself determined not to yield a point. This mission was beset with difficulties, but it was brought to an abrupt end by the illness and death of the Russian autocrat. Ivan the Terrible, living up to his name to the last moment, died on March 18th, 1584. His faults are known to all. Let one small fact, infinitely minute in the balance though it be, be placed to his credit here. While his own subjects were groaning under the most monstrous tyrannies the world has ever seen, while the foreign merchants, and even the foreign ambassadors at his Court, were frequently subjected to the grossest indignities and even dangers, his English physicians were for the most part treated with respect and justice. If the fact be but a small palliation of the tyrant's crimes, it is a proportionally great tribute to the moral worth of those who met with such exceptional treatment.

Of the physicians at the Russian Court during the reign of Ivan the Terrible Robert Jacob was by far the greatest. Of the others scarcely more than their names remain. Ralph Standish, Richard Elmes, Reynolds, Richert (or Richard), the apothecaries Thomas Carver[7] and James Frencham—these are a few of the Englishmen whose names the records of the time have preserved. Only one (the last named) has left any more permanent mark in history. Frencham is said to have founded the first *Apteka* in Russia—a peculiar and important institution to be described more fully later. Jacob returned to England very shortly after the death of Ivan, but was again sent by Elizabeth to the new Czar Feodor, who required a skilled obstetrician to attend the Empress Irene in her confinement. Neither Jacob nor the midwife who was sent with him, however, reached Moscow, the practitioner returning to England and the midwife being detained for some obscure reason at Vologda for over a year. But the Czar soon wrote again to the Queen begging her to send him another physician. Elizabeth wrote in reply to Boris Godunof, the Master of the Horse to the Czar, who later himself sat on the Russian throne:—"And whereas wee were advertised by our marchands that your lordship was desiry to have an English physician to be sent over for the service of the Emperour, and having byn also moved and solicitted by our Cheife Councellor and Lord High Treasurer of England, William Lord Burghley, to send over one of our owne Doctors of Physick, commended by us to His Matie, wee, applying ourselves and being willing and ready to assent, either to this or to any other thing that may lyke His Matie, have appointed Mark Rydley, one of our Physicians, to undertake this voyage and service, *a man learned and expert in his profession* and fitt for the service of a Prince, who being required hereunto by us, upon notice had of your Lo. desire and estraverged from his

FIG. 3.



MARK RIDLEY.
Missus ab Elisa Ruthensis quinque per annos Anglis ni desis te vocat illa domum. Tute Mathematicis clarus magnetica calles Pœonias laudes doctus ubique capis.

[7] Carver went to Russia in 1567. He perished in the house of the Russia Company in Moscow, which, with nearly the whole of the rest of the city, was destroyed by fire by the Tatars on Ascension Day, 1571.

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country, wee do *commend* to your honourable favour to be protected and graced by your Lo. *according to the quality of the man*, whom we doubt not but your Lo. shall find to deserve your good lyking and favour." Mark Ridley,[8] the doctor mentioned in this letter, was the son of an English clergyman. He was a Cambridge graduate and Fellow of the College of Physicians, and a learned authority on magnetism, a subject upon which he published several works. He stayed at the Court of Moscow for about four years, until the death of the Czar Feodor in 1598, when he returned to England. He seems to have held a high position in his profession, being Censor of the College of Physicians on eight occasions and treasurer twice. He died in 1624.

After the death of the Czar Feodor the Russian throne was occupied by Boris Godunof, who is generally called a usurper. It is true he had no royal blood in his veins, but Elizabeth recognised him, and three months after his accession wrote him a letter of congratulation on his selection by the Russian people, in which she gave him all the full and numerous titles of a Russian Czar. It was in this letter that she asked him to "grant lycence" to Mark Rydley, "our subject, Physician to the late Emperour, to returne him hither to his natyve country, for that they have shewed us that dyvers causes nearly concerning his private state doe require his being here and cannot be ordered without hym." A year later Boris Godunof, who probably missed the services of Rydley, wrote, just as his predecessors had done before him, to Queen Elizabeth, requesting her to send him an English physician On this occasion the negotiations were not quite so successful as before, though not from want of goodwill on the part of the English Queen, nor from any professional disqualifications on the part of the doctor she selected. This was Dr. Thomas Willis, who must not be confounded with his more distinguished namesake, the famous Oxford professor and physician to Charles II. The Dr. Willis of Elizabeth's time went to Russia with the Queen's warmest recommendations, but unfortunately she at the same time gave him some instructions of a political character. This was quite enough to rouse the suspicions of Boris, who did not feel himself very firmly seated on the throne and was ready to scent danger in the most trifling circumstances. He determined, therefore, not to receive the English doctor, but in order to avoid offending the Queen he had recourse to a little diplomatic subterfuge. He arranged that the foreign doctor should undergo an examination as to his knowledge and fitness to practise before being allowed to settle in Moscow. This earliest of medical examinations held in Russia was entrusted to Shtchelkalof, the Russian Chancellor, an official with notorious anti-English prejudices, who carried through the farce admirably. "You call yourself a doctor," he said to Willis; "but have you any doctor's diplomas, or doctor's books, or healing herbs with you?" "All my doctor's books and herbs I left behind me at Lübeck," answered the doctor, "in order to hurry on here." "And how do your recognise sicknesses in man; by the water or by the pulse?" "One does not need books to tell diseases," answered Willis. "A slight malady one tells by the water and a severe one by the pulse. Besides," he added, "I *have* a grand book of medicine with me; it is here, in my head," and he rapped his forehead as he spoke. The examiner was, of course, not satisfied with these answers, and the rejected doctor was sent back to his native country. He was apparently the only English medical man who went to Moscow during the usurper Boris's reign. After the death of Boris in 1605 political affairs in Russia became of a highly complicated character, although it is unnecessary here to follow the fortunes of the false Dmitris and the Shuiskis, pretenders who held the throne of Moscow for periods to be reckoned by weeks or days, or the fluctuations of the never-ending wars between Russia and Poland, during which affairs in Russia were almost as chaotic as during the period of Tatar invasions three centuries earlier. These troublous times—*Smutnuia Vrémeni*, as they are well named in Russia—came to an end in 1613, when something like order was restored by the election to the throne of Michael, son of Philaret, the Metropolitan of Moscow.

[8] Mark Ridley, or Rydley, was the son of Lancelot Ridley, the rector of Stretham, near Ely, where he was baptised in 1559. He was at Clare College, Cambridge; graduated A.B. in 1580, A.M. in 1584, and was admitted L.C.P. in 1590; took his M.D. Cantab. in 1592 and F.C.P. in 1594.

IV.

The Accession of the Romanoffs.—The Aptekas and the Aptekarski Prikaz or Ministry of Medical Affairs.—Foreign Medical Men in Moscow of the Sixteenth Century.

THE accession of Michael, the first of the Romanoffs, is an important epoch in Russian history, and as many readers of these notes may be unacquainted with the general outline of that history it may help them to "fix" this epoch by adding that Michael was the grandfather of Peter the Great, and that he reigned from 1613 to 1645. But the main importance of his reign in the present connexion is that during it was organised a very remarkable institution—a Ministry of Medical Affairs—of interest not only in itself, but also as being the germ whence sprang the present highly organised medical bureaucracy which now exists in Russia.

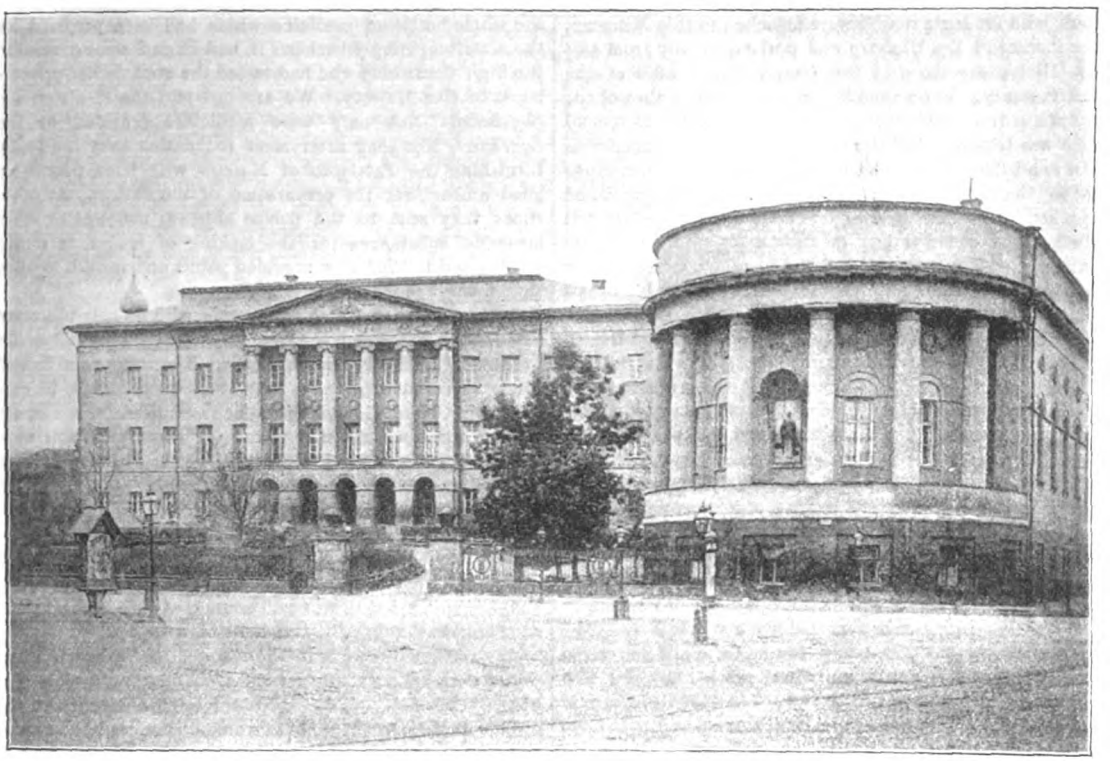
Each of the various departments of Government in Russia in the seventeenth century was known as a *Prikaz*, a word which, in the sense in which it was then employed, is now obsolete, but which may be translated as a Ministry. Among the various Ministries, not the least important appears to have been the *Aptekarski Prikaz*, or Ministry of Affairs relating to Medicine. The exact date of its institution is not known. Some ascribe it to the end of the sixteenth century. It was certainly in existence early in the seventeenth century. It seems to have been a development of another institution, the *Apteka*. This was at first merely the central store for the distribution of drugs to persons about the Court of Moscow. It was founded about the year 1581 by one of the numerous English apothecaries who entered the Czar's service. Of this Englishman, unfortunately, not very much is known. His name was James Frencham,[9] and he seems to have gone to Russia at the same time as Dr. Jacob, whose career has already been sketched. He was certainly in Moscow in 1581, when he instituted the Court *Apteka;* then he seems to have returned to England, but twenty years later he is the subject of quite a series of letters between Queen Elizabeth and the Czar Boris Godunof, showing that he again desired to join the Czar's service. Accordingly, in 1602, after an unusually long delay on the road, he again arrived in Moscow, this time with his wife and family, and a whole supply of drugs, of which, fortunately for the curious in such matters, a list is preserved. Whether Frencham had anything to do with founding the *Aptekarski Prikaz* is not clear. All that is known is that it grew in some way out of the *Apteka*, which he is known to have founded. The *Prikaz* was organised in exactly the same way as the other Ministries. One of the highest *boyars* or nobles was always at the head of it. Thus in 1637 it was under a Tcherkasski, in 1642 under a Sheremetief, and in 1662-88 under a Miloslavski. Let us glance for a moment at what constituted this seventeenth century Ministry of Medical Affairs.

Apart from the clinical staff the members belonged to the following six groups: 1. Doctors—i.e., physicians. 2. *Lékars*—i.e., surgeons. 3. *Aptekars*—i.e., apothecaries in connexion with the Court *Apteka;* under them were

[9] The Russians renamed him Jacob Artsief.

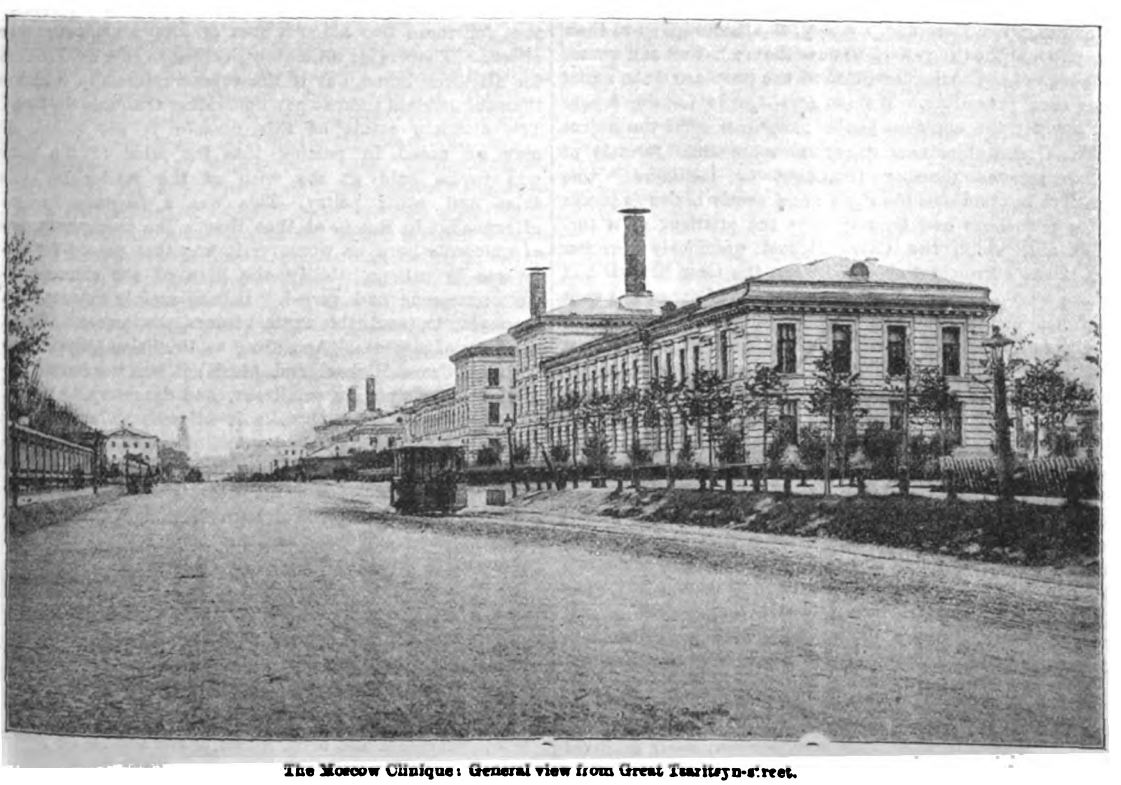
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FIG. 4.



The University of Moscow: The new University Buildings.

FIG. 5.



The Moscow Clinique: General view from Great Tsaritsyn-street.

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alchemists, distillers, pupils, and *travniki*, or persons who collected *travni*, or healing herbs. 4. Oculists. 5. Barbers, blood-letters, bone-setters, and undertakers. 6. Clock-makers, who for some reason were attached to this Ministry.

The income of the Ministry was derived mainly from two other Ministries—those of the Grand Palace and of the Grand Treasury. For a time its history is merely that of the old *Apteka* from which it had sprung. Later a second *Apteka* was founded, and the two were known henceforth as the Old and the New. The Old continued to serve out drugs only to the Czar, the Court, and to more distinguished foreigners. The New *Apteka*, however, was allowed to sell medicines and other things to the troops and to private individuals, and it was even ordered to take concern for the health of the citizens and for the prevention of infectious diseases. So that as early as the middle of the seventeenth century there was the nucleus in Russia of a Public Health Service. In the following pages the stages in history which connect those early beginnings with the present system which prevails in that country will be briefly indicated. But before doing so a little more has to be said about the Old and New *Aptekas*.

It is tempting to dwell on those still early days, when the first rays of western civilisation were beginning to dawn on the Muscovite Empire, but before Peter had forcibly flung open his famous "window that looked to the west," and which let in, with much-needed light and air, some other elements less desirable. It is a fact perhaps not generally recognised that before the great Reformer's time Russia had not only begun to look to the west and to adapt herself to western ideas of civilisation and development, but had also begun to advance on lines of her own. Thus the *Aptekas* just described, although founded by an Englishman, appear to have been thoroughly Muscovite institutions and were not modelled on any similar institution in another country. Thanks to the reprint by the present Russian Medical Department[10] of the books and documents of the *Aptekarski Prikaz*, we can form to ourselves a complete picture of these institutions and their working. We learn not only the accepted medical traditions of the time and country, the names given to their ailments and the drugs used to cure them; but we can gather some idea of the social condition of the people and the social ideas then prevailing. We see one *Apteka* for the *boyars* and one for the common people; we can read the abject petitions (the abjectness doubtless more than formal) of private persons desiring treatment or medicine. One Theodore Baranof has his right hand nearly blown to pieces by an arquebuse and humbly begs the privilege of a surgeon's aid, which the Czar Michael graciously permits. Here is the ceremonial observed when the Czar himself had to take a dose of medicine. A special set of drugs was kept for His Majesty in a separate room, locked and sealed by the secretary of the *Prikaz*. Without his consent no one, not even the imperial medical men and apothecaries, could enter the room. The drugs were kept in sealed bottles and boxes. The prescription written by the medical man was first submitted to the *Prikaz*, who entered it in their books, and was then presented as a *skazka*, or official paper, to the Czar, who gave the order for its preparation. It then passed to the *Apteka*. Here only the most trusted medical men and apothecaries took part in the preparation, working in a separate room to which no one else had access. And now, when all was ready, the medicine was tasted by a whole series of official persons: firstly, by the doctor who had prescribed it; secondly, by the president of the *Aptekarski Prikaz;* and lastly, by the high Court official who carried it up to the Czar. Dr. Rosenburg, body physician to the Czar Alexis (Peter the Great's father), relates that he once had to swallow the whole bottle of medicine which had been prepared for the Czaritza, simply because it had caused some nausea to the high Court lady who had tasted the stuff before presenting it to Her Majesty. We are not told the result on the physician. Not only were medicines provided by the *Aptekas*. Not long after their foundation they are found furnishing the Patriarch of Moscow with "ten pounds of good amber" for the preparation of the chrism. At other times they sent to the palace aniseed, molasses or other aromatic substances for the making of *vodkas* or strong drinks, and in 1707 they provided paints and varnish to paint the imperial yacht at Voronezh.

Of the medical practice of the time, with its poly-pharmacy and its use of curious and sometimes very rare and costly drugs, not much need be said here. The recipes and lists of drugs correspond closely with the same things in contemporary medical books in other countries. Occasionally strange remedies are met with. By great good fortune a complete inventory is preserved of the contents of a travelling medicine chest which was prepared for the Czar Alexis on the occasion of one of his journeys to the Great Monastery of the Trinity, some forty miles from Moscow. In the list of oils, elixirs, essences, syrups, salts, plasters, and powders, there occur a "syrup of colts' hoofs,"[11] a "spirit of worms," another of ants, and a balsam of "unicorns' horns." The horn of a unicorn was a most highly esteemed remedy in those days. Sometimes fabulous prices were not only asked but given for even a piece of a horn. For instance, in 1655 a foreigner brought to the *Prikaz* in Moscow three horns which he declared to be those of unicorns and offered them for sale at the enormous price of 10,000 roubles.[12] Dr. Graman, a physician who had studied at Jena, Leipzig, and Wittenberg, gravely reported upon these horns to the *Prikaz*. He declared that they were undoubtedly what they professed to be, and that two of them were extraordinarily fine specimens, and he therefore proposed that for these two alone a sum of 5000 roubles should be offered. The *Prikaz* ultimately decided to offer 5300 roubles for all three horns, but if the vendor refused to take less than the original sum, to pay that rather than lose the horns. The ultimate result of this bargain is not stated. It may be noted in passing that the price of the horns was to be paid at the wish of the vendor in sable skins and other peltry. This was a frequent medium of exchange in Russia at that time. The therapeutic uses of unicorn's horn, or whatever it was that passed for it—it was in all probability the horn of the rhinoceros—were numerous and varied. It was mainly apparently a prophylactic, invaluable against fevers, pestilences, and even the bites of serpents. According to Dr. Belau (physician to both the Czars Michael and Alexis) it was "a certain protection against plague, small-pox, and dysentery." He had sufficient belief in it to take it himself, at least on one occasion, when he swallowed a dose of twelve grains in two tablespoonfuls of hot Rheinwein, taking measures to encourage diaphoresis after the dose. He was the fortunate possessor of a small piece of horn weighing a quarter of an ounce, and in exchange for this he asked not less than twenty sable skins.

No little store was also laid by certain magic stones. The same Dr. Belau offered the *Prikaz* a whole collection of such stones. One of these if worn near the kidneys cured renal complaints; others had only to be soaked in water and the water acquired marvellous healing powers in disease of the

[10] Richter, whose work on Medicine in Russia has usually been the leading authority for this branch of history, was deprived of the use of these documents, as he believed they had been destroyed in the burning of Moscow in 1812. They were, however, safely preserved among the archives of the Ministry of the Interior.

[11] Possibly, of course, a plant of that name.

[12] Equivalent to at least 60,000 roubles, or over £6000, at the present day.

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eyes; yet another had a wonderful influence over pregnant women, for if worn round the neck of the woman it gave strength to both mother and child. In fact, there was scarcely a disease or a part of the body which had not its own particular magic stone. Few of the drugs used at that time were of native production. They came from Germany, Holland, or England. English merchants trading to Archangel found a ready market for such goods, and in addition the foreign medical men who came to Moscow always brought a goodly supply of drugs with them. The list of drugs already mentioned, which Frencham, the English apothecary, took with him, contained the names of no less than 164 different substances or preparations. Later efforts were made to develop the native resources. *Travniki* — that is to say, collectors of *travni*, or simples used by the peasants, were appointed by the *Prikaz*. The enormous tracts of Siberia were laid under contribution. The Siberian *voyevods*, or military governors, were ordered to make local inquiries as to the herbs of popular repute in their district, and to send samples of such as were used to Moscow. The record remains of the appointment in 1669, by the governor of Yakutsk, of an official named Epishef who travelled for two years on a botanical excursion, and published on his return a brief description, still extant, of the herbs he had collected and their uses—a sort of miniature Siberian Pharmacopœia of the seventeenth century. Later in that century attempts were made by the *Prikaz* to cultivate medicinal plants in botanical gardens in and around Moscow itself. The word "*travniki*" was also applied to certain popular manuscript books which described the nature and properties of the herbs and simples in common use. The descriptions in these books are a curious mixture of common sense and superstition. The one most commonly appealed to was known as the *Leitchebnaia Kniga*, or Book of Treatment, a translation from the Polish, which treated of simples, of distillation, of tinctures, of precious stones, of philosophical knowledge, of blood-letting, of the apothecary's and barber's arts—in fact, a sort of epitome of the medical knowledge of the time, addressed as much to the careful housewife as to the professional apothecary. An original copy of this book perished, with innumerable other valuable manuscripts, in the great fire of 1812.

Meanwhile, the stream of foreign medical practitioners continued to flow to the Russian Court. During the reign of Michael eight physicians, five *lékars* or surgeons, and four apothecaries entered his service. In the reign of his son and successor, Alexis, the numbers were larger, though the reign was shorter by a year; eleven doctors, three *lékars*, six apothecaries, and one eye-doctor entered his service. In Feodor's brief rule of five and a half years (1676 to 1682) four doctors, nine *lékars*, and six apothecaries came from abroad to Moscow. Feodor was succeeded by his half-brother, Peter the Great, whose reign must be reserved for more detailed treatment, but it may be noted here that in the first seventeen years only of his reign as many as eleven doctors, eighty-seven *lékars*, one eye-doctor, and nine apothecaries arrived in Russia. It is impossible here, and would serve but little purpose, to name even a fraction of these numerous foreign practitioners. But a few names undoubtedly deserve mention. Indeed, it is a remarkable fact, upon which it is well to insist, that the majority of the foreign medical men who went to Moscow in the sixteenth and seventeenth centuries were men of considerable standing. They were by no means the scum of the profession in other European States or adventurers who, having failed in their own country, were playing pitch-and-toss with Fortune in a new one. On the contrary, they were nearly all men with good university degrees, and provided with recommendations from their own sovereign to the Russian ruler. Without some such recommendation they would not have been accepted at Moscow. It was impossible for a private individual to make his way to the Russian capital and then start practice. To begin with, such was the state of the roads that without an *opasnaia gramota*, or letter signed by the Czar guaranteeing a safe journey, he could never have reached Moscow alive. If by a miracle he had reached the capital he would at once have been arrested, and then the best he could have hoped for would be a safe escort to the frontier. On the other hand, those who came with proper credentials were treated with every consideration. Let us, for example, try to follow the fortunes of an English medical man invited to Moscow about the middle of the sixteenth century. A detailed correspondence on the matter may be supposed to have passed between the Queen and the Czar. This correspondence was sometimes prolonged over several months, or even a year or two. When all was settled to the satisfaction of both parties, the practitioner chosen would probably sail to Archangel in a fleet of English merchantmen belonging to the newly formed Russia Company. Or he might join the suite of an English or Russian ambassador going or returning to Moscow. Having safely accomplished the sea voyage and landed at Archangel, the long overland journey to Moscow would begin—a distance of over 600 miles to be traversed either on horseback or in carriages. To accomplish this safely a passport, the so-called *opasnaia gramota*, was, as already stated, essential. This document sometimes guaranteed not only a safe conduct to Moscow but also, in case the bearer should wish at any future time to go back to his own country, a safe return to the frontier. Journey money was provided and also a fixed daily supply of provisions. Rather more than halfway to Moscow, at Vologda, the party of travellers would be met by a special escort from the Czar to bring them on to the capital. Arrived in Moscow he was assigned a set of rooms or a house, most probably inside the Kremlin. Here the very first act demanded of him was to subscribe an oath of fidelity to the Czar, in which the medical man bound himself most solemnly not to use poisonous drugs, or to do anything by thought, word, or act to the hurt of the Czar or to any member of the Royal family. The fear of being poisoned or bewitched seems to have been constantly present in the minds of more than one Czar, and the precautions taken against such a disaster have already been seen in the description of the ceremony observed when the Emperor required a dose of medicine. It is even said that the Emperors Feodor and Boris Godunof declined under any circumstances to take medicine from their foreign medical men, though they more than once called in *kudesniks*, or wizards (even then not an extinct race), and took their simples readily enough.[13]

After taking the oath, the doctor whose fortunes we are following was taken to the *Posolski*[14] *Prikaz*, or Foreign Office, thence to the *Aptekarski Prikaz*, and finally had an audience of the Czar. Then followed a curious and pleasant custom, though one strongly tinged with orientalism. The Czar sent the new-comer a quantity of handsome presents, technically known as the "presents on arrival." Here is the list of articles sent to Dr. Sibelist, a famous physician in his day, when he arrived in Moscow early in the seventeenth century:—Undefined quantities of velvet, "black and smooth"; velvet of a coarser quality, and satin; two pieces of damask and two of cloth; forty sable skins worth 40 roubles, and 40 roubles in

[13] A tale is told of a *médecin malgré lui* in the time of Boris Godunof, which, if not true, is certainly drolly apposite. The Czar being taken ill a proclamation was made offering high rewards to any person who would cure him. A certain *boyar's* wife, who had some grudge against her husband, scented a fine opportunity for revenge. She went to the Court and stated that her husband knew of a remedy which was a certain cure for the Czar's disease. The *boyar* was sent for and at once questioned as to his remedy. Denials and professions of ignorance were of no avail. He was beaten and threatened with torture and even with death if he did not at once treat the Czar. So the wretched man begged a respite of fourteen days, hoping some *deus ex machinâ* might be forthcoming in that time. During the interval he collected some herbs and some earth from the banks of the River Oka, and as a last resource proposed that the Czar should bathe in an infusion of these. To his surprise and joy the Czar actually recovered after his bath. But the poor *boyar* was not out of his fix yet. It was clear that he had known of a remedy all along, and as he had refused at first to name it he must have wished the Czar to die. So he was beaten within an inch of his life, and then, with a fine inconsistency, as he had ultimately cured the Czar he was dismissed with a reward of 200 roubles and an estate of eighteen serfs, granted him on condition that he did not take vengeance on his wife. The couple are declared to have lived "happily ever after."

[14] From "posol," an ambassador.

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money. To his wife were sent at the same time quantities of damask, taffetas and cloth, and forty sables worth 25 roubles; and to his servants pieces of "English cloth, each of the higher servants receiving in addition 8 roubles in money. Even the kitchen-maid and cook were not forgotten, each getting her modicum of cloth. These for the outer person. But the inner man was not forgotten, and numbers of good things were despatched from the Czar's table to that of his new Court physician. The same Dr. Sibelist received three loaves of bread, a quarter of beef, a goose, two ducks, a hare, two woodcocks, a sheep "with the wool on," five chickens, six half-pounds of butter, eight eggs, a flagon of *boyar* wine, two flagons of *romanei* (a kind of sweet wine) and two of Rheinwein; two each of cherry mead, raspberry mead, molasses mead, and another sort of mead; one *vedro* (two and a half gallons) of still another kind, and four *vedros* of "prince's mead"; one *vedro* of "artificial" beer, and two of "simple" beer.

The stipend paid to the foreign physician, if not on so prodigal a scale as the presents made to him on his arrival, was not an ungenerous one. In the time of Boris Godunof a doctor received 200 roubles a year and twelve or fourteen roubles a month. It is not easy to give an exact equivalent of these sums in the money of to-day, but it seems probable that taken together they amounted to a very considerable sum. But in addition to this he was provided with a house, with a monthly supply of bread sufficient for his whole household, and with sixteen "loads" of firewood, four barrels of mead, and four of beer every month. He and his servants were vast consumers of strong drinks. In addition to those just named there came daily to his house from the Czar's kitchen one and a half quarts of *vodka*, the Russian rye spirit, as well as the same quantity of vinegar and a side of bacon. Every day the Royal table furnished him with three or four dishes, each "so heavy that the strongest man could with difficulty lift it." Other material wants were also liberally provided for. Four good horses were sent from the Royal stables for his use, and sufficient hay and straw for seven horses were furnished every month. One still better horse was given him as a saddle-horse, to be used specially when he made his morning visit to the Kremlin and the *Court Apteka*, a visit never omitted in the summer months. Then there was a special horse for sledging in the winter, two horses for his wife "with which to drive to her own church," and a carthorse "to get in the water." To some, if not all, of his foreign physicians the Czar granted a small estate of some thirty or forty "souls"—i.e., serfs. Special presents on special occasions also—such as the successful treatment of a great *boyar*, or *à fortiori* of the Czar himself—were not infrequent. In the latter case he might get a piece of valuable damask or velvet, or forty fine sables as a present. Altogether, the lot of the foreign practitioner who was invited to the Muscovite Court in the sixteenth century was by no means an unenviable one. It had its drawbacks, doubtless, but so long as he kept the Czar's favour he had nothing to fear and was treated as the equal of any *boyar* or noble in the land. It was only by the people that the foreign practitioners were mistrusted, apparently because they regarded them and their strange doings as embodiments of the powers of evil. It would have gone hard with many of them had they not been under the protection of the Czar. On more than one occasion of popular outbursts in the city of Moscow their houses are said to have been the first to be sacked by the mob.

Among the more noteworthy physicians who went to Moscow in the seventeenth century a few have to be named. They were English, Dutch, German, and Italian. In 1621 Dr. Arthur Dee, body physician to King James and later to King Charles, went to Moscow with the King's recommendation, and stayed there for fourteen years. He wrote a treatise while there on the "Hermetic Science," which was published in Moscow, and later in Basle and Paris.[15] After Dee came Sibelist from the University of Halle, recommended by the Duke of Holstein; then, in 1639, Graman, who had studied medicine in Jena, Leipzig, and Wittenberg, and was recommended by the famous Holstein ambassador, Olearius. Four years later came Belau, with the diplomas of Leyden and Königsberg. Samuel Collins, an Englishman, is said to have made a greater name than all his predecessors at the Russian Court. He was the son of an Essex clergyman and a graduate of Padua and Oxford. He was nine years in Moscow, and the year after his death, which took place in Paris in 1670, there appeared a small anonymous book entitled "The present state of Russia in a letter to a friend in London, written by an eminent person residing at the great Czar's Court at Moscow for the space of nine years." There is no doubt that this work was from the pen of Collins. Apparently it was never intended for publication, but was merely a series of private letters addressed to "an eminent Doctor of Physick here in London." The book is quaint and interesting, even if it throws no particular light upon the state of medicine at that period, or the treatment received by the foreign practitioners at the Russian Court.

The name of John Tradescant must not be passed over without brief reference. The true founder of the great Ashmolean Museum in Oxford, which might more appropriately have been called the Tradescant Museum, and the earliest collector of all that is interesting in natural history, he has fallen into quite unmerited oblivion. John Tradescant, generally known as "the elder," to distinguish him from his son, was a Fleming by birth who had settled in London and held the honourable position of gardener to the Marquis of Salisbury and to the King (Charles I.). He had travelled much in Europe, and one of his journeys led him to Archangel in company with Sir Dudley Digges. Digges's expedition was apparently a commercial one, but he only reached Cholmogory, where he had to turn back on account of the Poles. Tradescant seems to have got no further than Archangel; but he made a great collection of natural history specimens and other curiosities gathered in the neighbourhood, and these he brought to London and deposited in his growing museum in his house at Lambeth. "Tradescant's Ark," as the house was called, soon became one of the sights of the town, and was visited by the King and Queen and the highest in the land. The old naturalist died in 1638. The collection, which included specimens of minerals, birds, fishes, insects, plants, coins, medals and all sorts of curiosities, passed to the son and on his death to the grandson, who died in 1659. Having no heirs, this last representative of the family left the museum to Elias Ashmole. Ten years later the University of Oxford offered the degree of M.D. to Ashmole, and about the same time the latter offered the whole Tradescant collection to the University, provided that they would erect a suitable building for it. The Ashmolean Museum, as it was henceforth rather unfairly called, was designed by Wren, and opened in 1683. The name of Elias Ashmole has another claim to mention here, as he published an English translation of the treatise on Hermetic Science by Dr. Arthur Dee, to which reference has just been made above.

Of the medical men of German and other nationalities space will permit no more than the mention of two or three. Rozenberg came to Moscow with the diploma of Königsberg University; Blumentrost was a graduate of Jena; Carbonarius of Grätz; Pelarino of Padua. But with these names, all of which appear at the end of the seventeenth century, begins a new era of medicine in Russia. Peter the Great had already not only come to the throne, but had begun to show the stuff he was made of. The old order was giving way to the new. Among the wonderful reforms, or rather new creations, of his great genius not the least wonderful must rank his successful endeavours to nationalise medicine as he had nationalised the other arts and sciences.

V.

The Early Russian Hospitals and Russian Medical Education.—The Medical Chancellery.

BEFORE the reign of Peter the Great there does not occur the name of a single Russian in the medical hierarchy of the Muscovite Court. There were no means by which a native Russian could obtain a medical education in his own country, and the idea of going abroad to study at a foreign university, even if he had entertained it, was one which possessed no attractions to a Russian of the pre-Reform period. The great reformer himself was the first Czar who left his country for reasons other than warlike; and it is extremely doubtful whether his example alone would have induced others to follow it. Peter was not the man to wait until his example was voluntarily followed. He saw the

[15] Fasciculus Chemicus, abstrusæ Hermeticæ Scientiæ ingressum, progressum, coronidem, verbis apertissimis explicans. Moscow, 1629, 12mo. Dr. Dee was born in 1579 and was educated at Westminster and Oxford. He was a friend of Sir Thomas Browne, who says of him: "He was a persevering student in hermetical philosophy, and with the highest asseverations affirmed that he had 'ocularly, undeceivably, and frequently' seen projection made in Bohemia." He died in 1651.

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weakness of the system then prevailing, under which all the medical knowledge in the country was concentrated in the hands of a few foreigners immediately about the Court, while the whole of the nation was left without any instructed medical aid whatever. He not only saw the weakness of the system, but he also saw the remedy. In 1692 he tried an important experiment. He sent one of his own subjects abroad to receive a medical education at a foreign university. The experiment was quite successful. The student chosen was one Peter Vassil'itch Postnikof, the son of a *diak*, or Secretary of State, who had also served as ambassador at foreign Courts. Postnikof went to Padua and returned in four years' time with the doctorates of philosophy and medicine of that famous seat of learning. His first appointment on his return was, however, not a medical one, but that of interpreter in the suite of Russian ambassadors at foreign Courts on account of his knowledge of Latin, French, and Italian. He finally returned to Moscow in 1701, and received some medical appointment (probably in the *Prikaz*) worth 500 roubles a year, but unfortunately he died very soon after. The success of Postnikof induced the Czar to send a second Russian student to Padua—this time at the request of the student's father, who was also a *diak*. Gregory Ivanovitch Volkof obtained his degree, returned to Moscow, and, like Postnikof, was employed as interpreter in the diplomatic service. Peter set him to translate the Jardinage of Quintigny, a French book then much in vogue; but whether as a result of the dull character of the book, or on account of the difficulty of translating it, he fell into a melancholy, and so disappears from the stage of history.

And now, having satisfied himself as to the capacity of his subjects to learn the mysteries of medical science, Peter determined to try a much more important experiment, no less than the foundation of a medical school in Moscow, so that students could obtain the needful education without leaving their own country. The first step towards this end was to build a hospital. Before this time there were no true hospitals in Russia. Institutions which passed for such were really rather infirmaries for the aged and disabled than hospitals proper. It is, however, worth noting that late in the seventeenth century, just before Peter's time, the modern idea of a clinical hospital is almost exactly expressed in a ukase from the Czar Feodor to the *Aptekarski Prikaz*. In this the object of hospitals is defined as "to provide the truly poor man with a means of curing his disease; to assign to hospitals until death those with incurable disease ..... to root out mendicants and those who feign sickness," and as a subsidiary object to provide young medical men with a means of perfecting themselves in the practice of their profession.

The hospital projected in this ukase was apparently never built, and the first institution of the kind in Russia was undoubtedly the Moscow *gofshpital*, the construction of which was begun by order of Peter the Great in the year 1706. It was built in a year; and in 1707 was inaugurated, not only the first hospital, but also the first medical school in Russia. Peter had visited England in 1698, and it is supposed that the new building in Moscow was a copy of a hospital he had seen in Greenwich. It was built from the plans of Dr. Nicolaus Bidloo, a Dutchman, who came to Moscow in 1703, under contract to act for six years as *leib-medik* to the Czar. This really able physician and organiser, who gave himself heart and soul to the task of floating the new institutions, was a son of the famous anatomist of Leyden University, and nephew of the no less illustrious botanist of Amsterdam. Bidloo soon became one of the Emperor's most intimate and familiar friends, but, like many others who were in the service of that energetic and exacting person, he found his health unequal to the strain of constant attendance upon his master, and he had been scarcely a year in Moscow when he became really ill. It was then that Peter asked him to design the new hospital and a medical school to accommodate fifty students—a task which Bidloo most willingly undertook.

It is impossible to more than outline the fortunes and misfortunes through which the hospital and school passed. The building itself—the school and hospital were one—being of wood, was utterly destroyed by fire on more than one occasion, but it was always rebuilt, though not always without grumbling on the part of the ecclesiastical authorities who had to find the funds. For the traditional sentiment which regarded the treatment of the sick poor as a duty of the monastic world was still of sufficient force to induce Peter to lay the burden of building the new hospital on the Monastic *Prikaz*, and of rebuilding it after the fire in 1722 on the Holy Synod—the successor of the Monastic *Prikaz*.

The history of the hospital during the first fifty years of its existence is one of constant difficulties with the church authorities, who grudged the expenditure on an institution over which they had no direct control, from which they derived no benefit, and which was used almost entirely for sick and wounded soldiers. They argued, not without reason perhaps, that the military, rather than the ecclesiastical, authorities should bear the expense. The hospital suffered accordingly. The doctors complained of the shocking state of repair of the buildings and want of room for their patients. The Synod refused to give any more funds and referred the doctors to the Senate; the Senate replied that the Synod, as the direct successor of the Monastic *Prikaz*, which had paid for building the hospital, was bound to maintain it. And so between Synod and Senate the buildings slowly went to ruin. At last, however, the Synod gained its point, and in 1754, on the same day that the Empress Elizabeth signed the ukase founding the University of Moscow, the hospital and medical school passed over to the Military *Collegium*—the War Office of the period. Meanwhile, the *Aptekarski Prikaz* had undergone a series of changes and reformations. In 1672 its name was altered—it became the *Aptekarskaia Palata* or Chamber; in 1714 the word Chancellery was substituted for Chamber; in 1725 it was again re-named the Medical Chancellery; and finally, in 1763 in the reign of the Empress Catherine, it became the Medical *Collegium*. Under Peter the Chancellery, which was removed to the new capital on the Neva in 1712, had as its head an official known as the *Archiater*, reviving an old Roman title.[16] The first *Archiater* was a Scotchman, Dr. Robert Erskine; he lived in St. Petersburg, and apparently scarcely knew of the existence of the new medical school and hospital in Moscow. Neither he nor his successors ever visited it, although some of them seem to have watched its work, for they sometimes blamed Bidloo for the slowness with which his students passed through their curriculum. They also to some slight extent controlled the school and its diplomates, whom they drafted off to the army and navy as fast as they could qualify.

The Medico-Chirurgical School, as it was called, was in the meantime slowly getting under way. There were many difficulties to overcome, and the full complement of fifty students was not reached until 1712, five years after the school was opened. The Russians hesitated to send their sons to what they naturally regarded, with many other of Peter's introductions, as at best an outlandish institution, entirely out of keeping with their customs and ideas. But, as has already been seen, a medical career at that time was very lucrative and honourable, and if the Russians themselves at first held back, the foreigners settled in Moscow and St. Petersburg were by no means unwilling to send their sons to Bidloo for a medical education. Ignorance of the Dutch language was no obstacle, for Latin seems to have been the language employed in the hospital and school, and Latin was freely taught in the boys' schools in Peter's time.[17]

Of the internal economy of the medical school and the life of its students some details remain which are not without interest. The students lived in the hospital buildings, occupying thirty-two small rooms on an upper storey, technically called *bourses*. They were divided into three groups according to seniority. They were provided not only with board and lodging, but also with stuff for their clothes. Each boy received seven *arshines* (about five yards) of cloth every two years to make his *caftan*, or long outer coat, his *camisole*, and trousers. Students of the first class received a better sort of cloth than those of the second, and these than those of the third. No mention is made of linen or underclothing, but each student received a rouble a month in coin, and this sum, small though it may seem, probably had to cover the purchase of linen as well as all other small household or private expenses. The students attended the hospital early each morning, and later in the day came the lectures, or "*collegia*" as they were called. The lectures appear to have been mere dictations which were learned by heart, word for word. The dearness, and sometimes the entire absence, of

[16] The title *Archiater* was first given by Nero to his Imperial body physicians. Later to the *Archiatri Palatini* were added the *Archiatri Populares*. See Haeser's History of Medicine.

[17] Even Peter's father, the Czar Alexis, is said to have known Latin and to have read without translation the memoranda of his body physician, Dr. Blumentrost, which were written in that tongue.

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paper on which to take down the lectures are worthy of mention as an index of the innumerable difficulties which must have blocked the way for the introductions and development of the sciences in those days. The curriculum included quite a wide range of subjects. There was clinical instruction, including the principles of bandaging and surgery. Anatomy was taught; Bidloo wrote a book on the subject and published a splendid anatomical atlas, with illustrations engraved on copper.[18] Peter, as is well known, purchased the famous anatomical museum of the Dutchman Ruysch for 30,000 gulden.[19] Post-mortem examinations were practised, sometimes with a medico-legal object. *Aptekarskaia Nauka*, or the Apothecaries' Science, included botany, pharmacognoscy, pharmacy, and pharmacology. The London Pharmacopœia seems to have been used. Operations were performed on the living and dead. Trephining must have been frequently performed, to judge by its constant appearance as the subject of examination questions at that time. Bidloo was an autocrat like his employer Peter. He had absolute power over everything and everybody in the hospital and school, and very severe punishments were sometimes meted out to the erring student. The severest were imprisonment on bread and water, fettering, beating with the knout, and finally—only for the worst offences—expulsion from the school to serve in the ranks of the army. Drunkenness and brawling seem to have been not infrequent, but they were most strictly punished. The course of instruction varied in length from five to seven, or even to ten, years. The comparative length of the curriculum was due to the conscientiousness of Bidloo, who would not grant to any student a diploma until he was thoroughly qualified, notwithstanding that Peter offered a high premium upon every student who passed. The first issue of diplomas was in 1713, and others followed in 1718, 1723, and 1727. The examinations for the degrees, of which there were two, those of *lékar* and *pod-lékar* (or *sub-lékar*),[20] took place in the presence of all the teachers in the school and of medical men from the outside as well.

Such, in brief, is the picture of Russia's first medical school. Not, some will say, a very attractive or striking picture when contrasted with that of a modern medical school; but when the circumstances of the time are taken into consideration, and more especially the material difficulties to be overcome, the prejudices to be soothed away, and the ingrained habits and views of a whole people to be entirely transformed and turned into totally new channels, it becomes a matter for wonder that so much was accomplished in so short a time. An equally detailed picture might be given, did space permit, of the hospital as of the school—not perhaps of its very earliest days, but as it was in 1735. That year was an epoch in its history. Bidloo, its founder and organiser, died. The Empress Anna was on the throne, and on the petition of the then *Archiater* of the Medical Chancellery the hospital came under the supervision of that body. In the same year was published the "General Reg'ament concerning Hospitals," an Imperial law which was binding, not only on the Moscow Hospital, but on the other institutions of the kind which had already been built in different parts of the country. From this remarkable historical document it is possible to see the entire organisation of those early, but by no means primitive, institutions. From it may be learned the numbers and duties of the doctors and *lékars* of various grades, of the clerical staff, the dispensers, male attendants, laundresses, cooks, gardeners, brewers, and others attached to the hospital staff; the diet of the patients (by no means an ungenerous one) may be studied in detail, as well as the modes of ventilation and lighting, the nature of the beds and bedding, and many another point of interest, while incidentally something may be gathered as to the commonest modes of treatment then in vogue. On paper the picture is that of a well-ordered, well-organised, and liberally supplied hospital. In practice—at least, in the case of the Moscow Hospital—it is to be feared it was not quite so perfect, and it will be convenient here to follow very briefly the fortunes of that institution until it lighted on better days at the very close of the last century.

The hospital under the Medical Chancellery was in no way better off, perhaps was not so well off as under the immediate direction of Bidloo, while as regards the sinews of war the military authorities proved to be far less liberal than the Holy Synod had been. For a time, with an able administrator like Baron Tcherkasof at the head of the Chancellery, it prospered; but after his day the whole establishment slowly went to ruin. And this was equally the case with the hospitals which had been built in other Russian towns—in St. Petersburg, Riga, Elizavetgrad, Kherson, and Kief. When the Emperor Paul came to the throne in 1796 it is said that there was not a hospital in the country in which 200 patients could be safely placed; there was not a ward which did not let in freely both the wind and the rain; and the hospitals were terribly overcrowded, two patients being constantly placed in one bed. Paul visited the Moscow Hospital soon after his accession and was horrified at its condition—so horrified that he at once ordered its re-construction. This was commenced in 1797, and the new building, with room for 1280 patients, was completed in 1802. A sum of half a million roubles had been assigned for its cost, but the amount expended was something over 650 000 roubles. When the present Army Medical Academy was founded in St. Petersburg in 1799 the Moscow Hospital ceased to be used for clinical instruction. It became a purely military hospital, and as such it exists at the present day. The existence of other Russian hospitals in the last century has just been referred to. It is unnecessary here to mention more than one or two of these institutions. The most important were naturally those in the new capital of St. Petersburg and the adjoining fortress-island of Cronstadt. The St. Petersburg Admiralty or Naval Hospital was solemnly opened by Peter the Great in 1716. Its position was close to that of the present large clinique of the Army Medical Academy. The Dry-land Hospital, *Sukhoputnui*, so called in contra-distinction to the *Morskoi*, or Naval Hospital, was founded in 1717. It was rebuilt after being burnt down in 1733, and in that year three new medico-chirurgical schools were instituted, one at each of the St. Petersburg hospitals and one in Cronstadt. From that date all hospitals devoted to clinical instruction were termed *generalnui*, or general hospitals.

In Catherine II.'s memorable reign quite a number of new hospitals were built. In Moscow she founded the still existing Catherine Hospital, at first intended only for the purposes of small-pox inoculation, but later turned to more general uses; the Pavlovski Hospital, named after her son, who succeeded her as the Emperor Paul; the Golitzin Hospital, and a lunatic asylum. In St. Petersburg the Obukhovski Hospital—which still exists and is one of the largest of the municipal hospitals in the city—was founded in 1784. A lunatic asylum was founded in the same year. Nor must omission be made of the hospitals or asylums characteristic of the period which the Empress opened for the treatment of secret contagious diseases. At first these seem to have been merely private houses in which patients of the upper classes were received, the utmost secrecy being observed and no questions asked as to the name or rank of the individual. It is worth noting that almost at the same time as the ukase was issued instituting these homes another ukase was signed in which strict orders were given, in the case of soldiers affected with these diseases, to make close inquiry as to the source whence they had acquired it. In 1763 was opened a hospital called the "Secret Hospital," with beds for thirty men and thirty women, and in this, as in the home just mentioned, absolute secrecy prevailed, the very linen being marked with the single word "Discretion."

Another group of institutions no less characteristic dates from the great Empress's reign. Few of those who attend the approaching International Congress in Moscow will fail to visit the famous Foundling Hospital on the banks of the River Moskva. It has long been regarded as one of the "sights" of the city, and is certainly well worth a visit. It is both the largest and the oldest hospital of its kind in Russia, dating from the year 1764. The Foundling Hospital in St. Petersburg scarcely yields to it in size, and is only six years its junior, as it was opened in 1770. These institutions were founded by Catherine with the laudable object of providing a refuge for unfortunate women in child-birth and of saving the lives of the no less unfortunate children they brought into the world.

[18] Positionum Anatomo-physiologicarum. Parts I. and II., Ludg. Batav.

[19] Ruysch wanted 50,000 gulden for the secret of his mode of preparing anatomical specimens, and refused to tell it to Erskine for less. He seems, however, to have divulged it to Peter, who told it to Blumentrost, and after passing through one or two more hands it was published by Rieger, another foreign *leib-medik* at the Russian Court.

[20] The title of *lékar* still remains. All persons qualified to practise must have the diploma of *lékar*; the higher degree of Doctor of Medicine is optional. The degree of *sub-lékar* was done away with in 1799.

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VI.

The Leading Russian Practitioners of the Eighteenth Century.

IT will be noticed that the history of medicine in Russia has already become more a history of institutions than of individuals, such as it had for the most part been before Peter the Great's time. The names of certain individuals, however, still stand out with sufficient prominence to demand brief special notice. But it will be convenient first to note shortly what can be gathered as to the conditions of medical practice in Russia in the last century. So far as the bulk of the people was concerned, it would seem that for the greater part of the century they were little better off for medical aid than in the earlier periods The hospitals already described were almost entirely filled with soldiers and sailors. The large majority of medical diplomates from the newly founded schools were drafted off to the ever-growing army and navy. Most of them, too, it must be remembered, were still foreigners, and were mistrusted by the peasantry, who preferred their *znakhars* and *znakharkas*—the "wise men" and "wise women" of the village. Travelling charlatans, popularly known as *Vengertzui*, went about the country and did a thriving trade in pills and potions. They became so numerous that Dr. Blumentrost in 1721 applied to the Senate for a special law against them. It was in that year that he drew up a scheme for the institution of a Medical *Collegium* on the lines of the other *Collegia*, as the Ministries had then come to be called, which should have the entire control of all medical affairs in the empire. Only two of the numerous points in the scheme became law. One of these was to the effect that qualification should be necessary for practice, but though it became law it seems to have remained to a great extent a dead letter.

Of the leading medical practitioners in Russia in the last century the oft-quoted name of Dr. Bidloo must unquestionably occupy the first place. He was the real founder of modern medicine in Russia, for before his time all medical practice was in the hands of foreigners, and it was he who led the way in training the Russians themselves to the medical profession. The second place should probably be assigned to Lawrence Blumentrost the younger. There were three Blumentrosts in Moscow in Peter's time—a father and two sons. The elder Lawrence, a Dutchman, died in Moscow in 1705, before the opening of the medical school. Both he and his eldest son John left less mark upon their time than the younger son Lawrence, who was born in Moscow, and sent by the Russian Government to Germany and Holland for his medical education. Having graduated at Leyden he returned to Moscow and became *leib-medik* to Peter. Many years later he was appointed to the full charge of the hospital. Of the many successive holders of the position of head of the Moscow Hospital, only one other must be mentioned here. Dr. Athanasius Shafonski, a Russian, was appointed in 1769, and in the following year the famous plague of Moscow broke out—one of the worst pestilences perhaps ever known in any city. Shafonski, in his position as head of the hospital, had ample opportunities of studying the disease and he has left an admirable description of it, both from the medical and historical point of view, in a book, now rare even in Russia, which was published by Imperial command in 1775.[21]

Other Russian names which have survived are those of Poletika, a native of Kief, who ultimately became professor in the University of Kiel—the first Russian who obtained a foreign medical chair; Ambodic,[22] a famous accoucheur, head of the Obstetrical Institute, who first introduced the use of the forceps into Russia, and who published the first Russian work on obstetrics; and Shchepin, who taught anatomy and surgery first in Moscow and then in St Petersburg. Baron Tcherkasof, though not a qualified medical man, had attended medical lectures when in England, and ultimately became president of the Medical *Collegium* in Moscow. It was owing to his exertions that in 1764 a medical faculty was added to the University of Moscow, which had been founded ten years previously. The new faculty, however, did not for many years grant degrees. The Medical Chancellery or *Collegium* was still the sole source of licences to practise, and it was not until 1794 that the first medical degree was conferred by a Russian university.[23] Tcherkasof was distinguished for his patriotism, amounting sometimes almost to Chauvinism. This was shown particularly in his relations to the foreigners, who still predominated in the Russian medical hierarchy. His endeavours were constantly directed to the replacing of them by his own countrymen; and on one occasion he went so far as to induce the Medical *Collegium* to issue a ukase, declaring that foreign doctors were no longer needed now that Moscow had a degree-granting University of her own. The ukase, however, met with a very cold reception and was never acted upon. Tcherkasof's patriotism did not prevent him from loyally coöperating with the famous Dr. Dimsdale, whom, at Catherine's command, he invited from England. Dimsdale was then the greatest authority living on the subject of small-pox inoculation. The story of his inoculation of the Empress herself and the Czesarévitch has been so frequently told that it may be very briefly recapitulated here. It was in 1768 that Catherine sent for Dimsdale, whose writings had already made his name famous. He went to St. Petersburg, and is said to have passed two months in making preliminary experiments before inoculating his Imperial patient herself. When the time came the greatest secrecy was observed. At 10 o'clock one autumn night a carriage drove up to a side door of the Winter Palace, and from it descended Dr. Dimsdale and the Czesarévitch (afterwards Emperor) Paul Petrovitch, the latter carrying under his furs an infant who was to furnish the material for inoculation. On the following day the Empress retired to Tsarskcé Selo, where she passed through the subsequent malady "with great firmness of mind." A little later Paul was himself inoculated, and when these facts were made public it soon became the fashion in St. Petersburg to be inoculated. The infant from whom Catherine had been inoculated was christened Ospennui, from *ospa*, small-pox He was made a Court page and granted a patent of nobility, the crest on his coat of arms being a child's arm bearing a large pock-mark, which was perhaps more appropriate than beautiful. He died young, however, and the coat of arms was never borne by anyone but himself. Dimsdale received high honours from the grateful Empress. He was created a Baron, received a large sum of money and

FIG. 6.



Thomas, first Baron Dimsdale, M.D., who inoculated the Empress Catherine II. for the small-pox.

[21] A full account of this work and its author appeared in the Practitioner for November, 1894.

[22] His real name was Nestor Maxímovitch (i.e., son of Maxim) Maximóvitch, and as his surname and patronymic were identical in spelling (though not in accentuation) he took the name of Ambodic by Imperial consent.

[23] The Empress conferred the right to grant the degree of Doctor of Medicine on the University of Moscow in 1792. The first to obtain the degree, two years later, was Dr. Barsouk-Moiseef.

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handsome presents, and was further rewarded by a pension of £500 per annum for life.

To return for a moment to the reign of Peter the Great, the name of Robert Erskine, already mentioned, deserves some further notice. A graduate of Oxford and a Fellow of the Royal Society, Erskine, or, as the Russians re-christened him, Areskin, went to Moscow in 1706 as physician to Prince Menshikof, and it was he who recommended him to Peter. Peter appointed him his *leib medik* in 1713, and three years later he became, as was stated earlier, the first *Archiater* of the Medical Chancellery. He travelled with the Czar through Germany, Holland, and France, and it fell to his lot to formally propose Peter for the Membership of the Paris Academy of Sciences. In the famous anecdote which relates how Peter was present at, and took great interest in, an operation for cataract performed in one of the Paris hospitals, it was Erskine who was the operator. He was a relation of the Earl of Mar, and—with how much truth need not be discussed here—was charged by his enemies in England with holding treasonous correspondence with the exiled Stuarts. He was able, however, to refute these charges to the Czar's complete satisfaction, and he remained in Russia till his death in 1718. He died at Olonetz, where he had gone to take the baths, and his remains were honoured by a magnificent funeral in the Alexander Nevski Monastery in St. Petersburg, the Emperor himself following in the funeral procession. Throughout the century the names of many other English medical practitioners in the Russian service may be met with. Lewis Calderwood went to Russia in 1728 as surgeon to the famous Preobrajenski Guards; he later held appointments in the Moscow and St. Petersburg Hospitals, and died in 1755 Matthew Guthrie obtained the right to practise in Russia in 1769 Robert Simpson joined the great Admiral Greig's fleet in 1774 and in 1792 became chief surgeon to the large Naval Hospital in Cronstadt. Charles Brown, an Aberdeen graduate, obtained the Russian diploma in 1784, and Samuel Hurst, a Cambridge graduate, obtained it two years later. Henry Holloway was surgeon to the Finnish Army in 1788; Charles Stewart was attached to the troops in Poland a little later. Jonathan Rogers was surgeon to the fleet in 1771; he also accompanied a Russian Embassy to Constantinople, and was later surgeon to the Izmailovski Regiment. He returned to England in 1799, but was again in Russia in 1803 and from that date to 1811 was general staff-surgeon to the fleet. In 1806 he published his Russian Naval Pharmacopœia.[24]

A more diligent inquiry into the records of the time would doubtless bring to light many another name which might well be added to the list. But those here given will suffice for the present purpose, with the addition of but one more, that of Dr. John Rogerson. A native of Dumfries-shire and a graduate of Edinburgh, he went to Russia in 1766 and remained in that country for just fifty years. For most of that time he was *leib-medik* to the Empress Catherine and her successors. He was with the Empress in her memorable progress throughout her realm in the year 1787. The famous De Ségur, the French ambassador, who also shared in the progress, has left a lively description of this journey in his "Souvenirs et Anecdotes." The Scotch doctor was apparently somewhat deficient in a sense of humour, for, according to De Ségur, he was on one occasion seriously offended by a very harmless and ancient jest on the part of the Frenchman. Catherine had at one part of the progress presented Dr. Rogerson with a magnificent sword in recognition of his services. The opportunity for an obvious sally was too good to be missed by the volatile ambassador. "Docteur," he said, "je vous en félicite; vous avez là une nouvelle récette, sûre et expéditive." Dr. Rogerson's name is also enshrined in a couplet written by the Empress on the death of a favourite dog:—

"Ci gît la 'Duchesse Anderson'
Qui mordit Monsieur Rogerson."

Catherine was assuredly no poetess. A brief account of the French Lestocq, whose wonderful career, however, belongs rather to political than to medical history, closes these notes on the medical celebrities in Russia in the last century. The son of a member of the French Reformed Church who had settled in Hanover, he is described as "a man wholly destitute of political qualities, without discretion, and without connexions." But notwithstanding these deficiencies it was he who guided the revolution which in 1741 placed the Empress Elizabeth (the daughter of Peter the Great) on the throne of Russia. The Empress in return made him her *leib-medik*, and granted him estates and orders and other honours so long as he remained in favour. But those were the days of rampant favouritism, when nothing was certain but the uncertainty of Imperial sunshine, and when nothing was more common for those who had basked in it for a time than to fall in a day—just as many of them had risen the reverse way in a day—from the top to the bottom of the ladder of fortune—to pass from the luxuries of a palace in St. Petersburg to the prospective horrors of an *ostrog* at the mouths of the Obi. Such was Lestocq's fate. He kept the Empress's favour for some seven years, but in 1748 the almost inevitable downfall came. He was exiled to Siberia and never returned.

[24] Pharmacopœia Navalis Rossica, Petropolis, 1806.

FIG. 7.



Dr John Rogerson, Physician to the Empress Catherine II. From a photograph by Messrs. Wayland of Blackheath. The original picture is in the possession of Mr. James Wilson of Blackheath, by whose kind permission this reproduction appears in THE LANCET.

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VII.

The Opening of the Present Century; the System of Tchins or "Ranks."

WITH the close of last century and the opening of the present a new era began in medicine, as in most other things in Russia. The Empress Catherine had died in 1796 after a reign of thirty-three years. The erratic Paul, who succeeded her, came to an untimely end in the gloomy palace in St Petersburg, which still bears his name, in 1801. His reign is noteworthy if only for the re-building of Peter's famous hospital in Moscow and for the founding in St. Petersburg of the great Academy of Military Medicine, which will next year celebrate the centenary of its existence. But the accession of Alexander I, the son of Paul, was a real epoch, from which the Russia of to-day may in some sense be said to date. The new Emperor had not been many months on the throne before a vast series of reforms was instituted, affecting almost every individual and every interest in the empire. With these it is not proposed to deal here, except in so far as they touch upon matters relating to medicine. And, first, it is of interest to note the recognition given to such matters under the new *régime*. The *Aptekarski Prikaz*, the first medical department of the Government, has already been traced through its various changes of title until it became the Medical College in 1763. As such it remained for the rest of the century, though, so far as may be gathered from the records of the time, its influence during the latter half of the century was but small. But the already existing organisation of this body, such as it was, was taken advantage of by the framers of the new Ministry or Ministries which were instituted by the famous manifesto of Alexander I., issued in September, 1802. The Ministry, as the new machinery of government was collectively called,

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FIG. 8.



The Moscow Clinique: The Gynæcological and Obstetric Cliniques.

FIG. 9.



The University of Moscow: The Anatomy Institute.

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consisted of eight divisions, or what would now be called in Russia, and were even then spoken of as, separate Ministries. Of these, not the least important was the Ministry of Internal Affairs, and it was into a sub-division of this that the old Medical College was incorporated, together with another body which need not be further noticed here.[21] After one or two slight changes this sub-division was re-named the *Expédition* of State Medicine, a title which it retained until, in 1811, it received the title it now bears, that of the Medical Department of the Ministry of Internal Affairs.

Prince Kotchubei was the first head of this Ministry, and it was under his direction that a scheme was framed for the institution of another very important body, which, as the Medical Council, has since become the highest medical authority in the land. In its original conception the Council was framed on the lines of an ordinary learned society, but was to be regarded as a sort of consultative body, in which all the best medical learning of the time should be concentrated, and to which the Government could at any time appeal for advice or decisions on questions relating to medicine and those who practised it. It consisted of an indefinite number of members appointed by the Ministry, and these might be foreigners as well as Russians; but all were men distinguished by their medical knowledge and of high general reputation. The dean, or president, was elected by the members for three years, and there were corresponding members, a scientific secretary, and two interpreters attached to the Council.

It will be seen that as early as the beginning of the present century there were in Russia two governmental medical bodies—the *Expédition* of State Medicine and the Medical Council, both attached to the Ministry of Internal Affairs. These two authorities still exist in scarcely altered guises—the first as the Medical Department, the second still as the Medical Council. It would serve no useful purpose here to enter in detail into their functions or the relation they bear to each other. Suffice it to say that that relation was clearly defined. Briefly and in very general terms the functions of the Council were those of a legislative and the functions of the *Expédition* those of an executive body, the division of responsibilities between them being much the same as it is between the corresponding authorities at the present day. The further history of the two central medical authorities until they assumed the form they now have is soon told. In 1810 a considerable number of matters of medical interest came under the Ministry of Education, but only for a time. In 1811 another great change was made in the organisation of the Government, as the result of which a classification of Ministers was introduced, which, with some slight alterations, has remained down to the present day. Though not perhaps bearing directly on the present subject-matter it may be of interest to some readers to state briefly what that classification was and is.

In 1811 the governing authorities were grouped into five divisions, each of which contained one or more Ministries as follows:—1. *External Affairs:* Ministry of Foreign Affairs. 2. *External Safety:* Ministries of War and Marine. 3. *State Economy:* Ministries of Finance, Internal Affairs, Education, and Ways and Communications. 4. *Justice:* Ministry of Justice. 5. *Internal Safety*, Ministry of Police. In addition there was, and still is, an *Upravlénié* (Board of Direction) of foreign religious creeds. Since that date these nine Ministries have become ten, two new ones having been added and one having disappeared. The Ministry of Police was, after a few months' separate existence, absorbed into that of Internal Affairs. The two new Ministries which exist now and did not then are those of the Imperial Court and of Agriculture and Imperial Domains. It was under the new classification of 1811 that the Medical *Expédition* became, what it has ever since been called, the Medical Department, then, and for a few months after, of the Ministry of Police, now of the Ministry of Internal Affairs.

A word may be said here about another department and its curious growth from small beginnings to a useful and important part of the same Ministry. As early as 1804 Prince Kotchubei had felt the want of properly recorded statistical facts and conclusions based thereon, and at his suggestion a small *Obshtchestvo Dvorian* or Literary Society of Nobles, as it was then called, was formed. This consisted of ten members, all highly educated young men of good birth, who undertook, firstly, to keep a historical record of the new Ministry and all the changes it should undergo, and, secondly, to collect and work out all available statistical information about every "government" in the country. In this way it was hoped to gain more or less reliable statistics of the whole empire. The plan, however, did not work very well, for reasons which need not be entered into. But with the re-organisation of the Ministries in 1811 a fresh impetus was given to the movement. It was proposed to form a separate statistical society, but it ultimately took shape as the Statistical Department of the Ministry of Internal Affairs—a name which defines with sufficient clearness for these brief notes its objects and functions. The use of such a department as ancillary to that of State Medicine is obvious.

And now, having traced the two central medical bodies from their early beginnings to their present state, it becomes necessary to give a brief account of them as they now are, of the duties they discharge, and of their relation to each other. The Russian Medical Council is expressly defined in the Imperial Code of Laws as "the highest medico-educational, medico political, and medico-legal authority in the empire." It consists of a president and an undefined number of members. Certain highly-placed medical officials in other departments are *ex-officio* members—namely, the director of the Medical Department of the Ministry of the Interior; the heads of the Army Medical and Navy Medical Departments; the medical inspector of the important group of philanthropic institutions founded by, and bearing the name of, the Empress Marie, the beneficent consort of the Emperor Paul; one representative each of the Ministries of Education and Finance; and some others. The remaining so-called consulting members, *soviéshtchatelnuié tchlenui*, are chosen for their ability and reputation from among the higher ranks of medical *tchinovniks* or officials. The Council meets twice a week and deals with a vast number of subjects, some of which may be briefly noted, but which are too numerous to name in full. First, there is a group of subjects which would naturally be expected to come under the decision of such a body. Such are the censorship of medical publications and advertisements; the issue of orders and regulations in regard to epidemic infectious diseases; the granting to foreigners of licences to practise; the supervision of all medical reports and observations; and the payment of pensions to medical officials. A second group of subjects may be named separately, though the line dividing them from the first is but an ill-defined one. There are matters which, though dealt with by the central authority in Russia, might be, and in some other countries are, dealt with by individual persons or institutions. Of these may be mentioned the investigation of new discoveries in medical science; the analysis of Russian natural mineral waters and instructions as to their use; and the revision of evidence in inquiries into cases of sudden death. All matters are brought before the Council either by the Minister or one of the directors of departments, and a simple majority decides, the president having a casting vote. The president, who must be a medical graduate, is nominated by the Minister and confirmed by the Emperor. At present this important post is held by Professor Pashutin, who is also *natchalnik*, dean or director, of the Imperial Academy of Military Medicine. The Medical Department of the Ministry of Internal Affairs consists of a director, a vice-director, and a certain number of sections, and it deals with a great many different matters which are grouped under the heads of civil medicine in general, legal medicine, and medical police. There is a catalogue of no less than forty-seven such matters, of which obviously only a small minority can find mention here, and as a type may be named the distribution of all qualified medical men, veterinary surgeons, and pharmaceutists who leave the Universities or the Army Medical Academy (the sole licensing bodies, as will be shown presently) and enter the public service. The appointments of all medical *tchinovniks*, or officials, whether in towns or *uyezds* (districts), whether to the local governing bodies (the *zemstvos*), to mineral spas, to the police, to quarantines, factories, or any other institution which comes under the civil administration, as well as their remuneration and removal, are in the hands of the department. In addition, all civil hospitals, all druggists' shops and druggists, and all certified midwives are under its more or less direct control, as are public vaccination, the carrying out of measures to check epidemics, and the tabulation of statistics of disease and mortality throughout the empire. These are a few of the subjects with which the

[21] This was the *Prikaz* of Social (or Communal) Supervision, which was a sort of Board of Charity Commissioners, and which did, and still does most useful philanthropic and charitable work.

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department has to deal. The present holder of the responsible post of director of the Medical Department is Dr. Lev Ragozin. The department publishes a monthly journal called the *Messenger of General Hygiene and Legal and Practical Medicine*, a magazine which, in addition to the official statistics and announcements of the month, contains a large number of original articles and of references to foreign current medical literature. An annual report of the department is also issued. This contains the illness and mortality statistics of the whole empire—a vast mass of figures arranged in elaborate tables—and also the returns of the vaccination stations and the other numerous institutions, some of which have already been named, under the department's jurisdiction. The report is rather larger than our own Registrar-General's annual report. In addition to the Medical Council and Medical Department, the Ministry of Internal Affairs has attached to it a Veterinary Committee, under whose control are all matters connected with disease in animals.

In the course of this chapter the Russian word *tchinovnik* has occurred more than once. It has on each occasion been translated as "official," but a few words of explanation may perhaps make the exact meaning of the term more clear. It must be premised that the whole machinery of administration, whether central or local, is in the hands of a body of officials, who form collectively, perhaps, the largest and most powerful bureaucracy in the world. The system may be roughly conceived as a triangle, with the Chancellor of the Empire, in the first class, at the apex, and each successive rank containing more and more individuals. The *tchinovniks* are divided into fourteen ranks or *tchins*, each rank, whatever the profession or calling of the individual, corresponding with some rank in the military and naval services. The whole system of *tchins* dates from the time of Peter the Great, whose object in instituting it in 1722 was a laudable one. In his day there was but one class of nobles—those whose sole claim to nobility was that of heredity, a heredity untempered by the law of primogeniture—with the result that the most remote descendant of a "noble" still claimed nobility, to whatever walk of life he had actually descended. It was Peter's object to replace this class of nobles by another whose claims should be those of real service done to the State or to the Emperor. In this he did not succeed, as the old class of nobles with the old form of heredity still remains, but he succeeded in adding to them a new class of nobles. This he did by decreeing that among civil officials, or *tchinovniks*, as they were henceforth called, the first four ranks should confer hereditary nobility, and those from the fifth to the ninth personal nobility. In the army and navy the hereditary nobility was conferred by the first six *tchins*, and personal by the last eight. The preference given to the army and navy is thus seen in the fact that in them all the fourteen ranks carried nobility with them, while this is the case with only nine out of the fourteen civil grades.

Those who are curious in such matters may be interested to know that a doctor of medicine belongs to the eighth *tchin* (that of *Assesseur de Collége*); that he ranks with a major in the army and a lieutenant-captain in the navy, and is entitled to be addressed as "*Vashé Vuisokrodié*" ("*votre haute-naissance*"). A *lékar*, on the other hand, or holder of the lower medical qualification, only ranks with a captain in the army and a lieutenant in the navy, and is addressed as "*votre haute-bonne-naissance*" only—a longer title, but one conferring less honour on its recipient. A university student, who must have passed out of one of the State *gymnasia*, has already his foot on the ladder of ranks as a member of the fourteenth class. And it is open to the medical man to rise to almost any rank. His services to the State may be rewarded by the honorary title of Privy Councillor or Actual Privy Councillor, titles which raise the bearer to the third and second ranks respectively. Or he may receive from the Emperor some decoration which will give him an almost equally high position. Mere length of service, too, entitles the Government medical official to a rise in rank; thus, after four years' honourable service he would rise one step higher than that he had previously occupied; but the highest *tchin* attainable in this mechanical way is that of Privy Councillor, which occupies the third class in the table of ranks. Service in more remote parts of the empire, such as Siberia or Central Asia, entitles to a quicker rise, two days counting as three, or three as four, as the case may be. But to enter into all the intricacies of the great system of *tchinovnism*, even only so far as they affect medical men, is an absolute impossibility. The laws and regulations relating to it fill a volume of themselves.

VIII.

The Medical Bureaucracy in Russia.

IT will be convenient here to give a brief sketch of the medical bureaucracy as it now exists in Russia. Naturally the highest places are occupied by the two central authorities just described, the Medical Council and Medical Department. Many other central institutions, such, for example, as the Medical Chancellery of the Ministry of the Court, the Medical Faculties of the Universities and the Army Medical Academy, the medical officers to the "Institutions of the Empress Marie,"[26] and the Medical Departments of the Army and Navy, fill high positions, as so also do the physicians or *leib-mediks*, surgeons or *leib-chirurgs*, and specialists appointed to the Imperial family. It is not, however, proposed to consider these here. Here we propose to give a brief outline of the public medical service—that is to say, the service which in town and country is responsible for the public health of the people and for free medical aid to the poor. In no other nation is the distinction between urban and rural communities so marked. The towns are separately considered by the law from the country; so that every town has its *golova*, or mayor; its *duma*, or town council; its *vprava*, or executive board; and to these and the police are entrusted the organisation of a sanitary service and the provision of hospitals and dispensaries for the poor. The details of the law are not the same for all parts of the country, and some large towns, more especially the capitals, have entirely distinct organisations of their own in this respect. Both Moscow and St. Petersburg may well be proud of their immense municipal hospitals and dispensaries and of their public health services, which have done so much, and are still doing so much, to provide for the sanitary needs of these rapidly growing cities. It may be asserted without hesitation that some of these hospitals[27] will prove veritable revelations to many foreign visitors to the International Medical Congress, whose knowledge of Russia and her institutions may be of that vague and inaccurate, even if not prejudiced, nature which is but too common.

With this reference to urban resources, we pass to a subject which is in some respects of greater interest, as it presents many points more characteristic of the nation—that is, the public medical service in the country districts, and more particularly among the peasants, who form so large a majority of the population. To make this quite clear a brief account of the system of local administration which prevails in Russia is absolutely essential. It shall, however, be as short and concise as possible.

The whole country of Russia (or so much of it as is not under military rule) is divided for administrative purposes into "governments" (*gubernii*) and "provinces" (*oblastui*). Each[28] of these, again, is divided into "districts" (*uyezds*), which are again sub-divided into "towns" and "rural *volosts*"—a *volost* being made up of an indefinite number of village communes or *mirs*. Now each of these divisions and

[26] These institutions have already been briefly referred to. The Russian empresses and princesses have ever been, and still are, foremost in promoting good works of all sorts, and those of two sorts they have taken under their special protection—namely, institutions devoted to charity in any form and those connected with the education and interests of women. It is just a hundred years since, in May, 1797, the Empress Marie, the wife of Paul, took, with the Emperor's consent, all such institutions under her immediate patronage, and each succeeding empress has shown the greatest interest in the welfare of the "Institutions of the Empress Marie," as they have ever since been called. Only a very few of these can be named here. Among those devoted to charity may be mentioned the immense Foundling Hospitals in St. Petersburg and Moscow, hospitals, orphanages, and refuges for the poor of all kinds and descriptions; and among those devoted to the interests of women, the Xénia Institute in St. Petersburg and a vast number of schools and *gymnasia* for girls in all parts of the country. There are in all 539 charitable and educational institutions under the board of management (which is practically a Government department in itself). The voluntary subscriptions received during the past fifteen years have amounted to over 12,000,000 roubles, equivalent to an annual sum of 800,000 roubles, or over £80,000.

[27] And not only the hospitals, but the many other medical institutions, some of which will be described in detail, but many of which must escape mention from want of space. Such, for example, is the Imperial (Oldenburg) Institute of Experimental Medicine in St. Petersburg.

[28] This description applies only to those parts of the country in which the system of *zemstvos* has been introduced. This has now been done in a majority of the "governments" of European Russia.

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sub-divisions has its governing body. The "government," as the largest division, may be taken first. Each government is administered by a council, or *gubernskoé zemstvo*, an executive board, or *gubernskaia uprava*, and a "committee for peasant affairs." The functions of these bodies need not be considered except in so far as they deal with medical matters. To each government *uprava* is attached a medical board (*vratchebnoé upravlénié*), consisting of a medical inspector and his assistant, a pharmaceutist, a secretary, and a consultative board, to which any number of medical men, even unofficial practitioners, may be added. These medical boards have very considerable powers, and can decide many important medical and sanitary matters without reference to the Central Medical Department, to which, however, they are ultimately responsible. Here are some of their duties and responsibilities. All medical men, whether officials or private practitioners, all *feldschers*, all midwives, all druggists and their shops, and all civil hospitals are under their more or less direct control. In their care is always a sufficient store of surgical instruments which the central authorities provide free of cost, and which the boards are allowed to lend whenever required to any medical man, whether official or in private practice, under, of course, proper guarantee for their return. All medical practitioners in the "government" are by law enjoined to make monthly returns to the board of all cases of illness and death which have been under their care, whether in or out of hospital. As a matter of fact, this injunction is to a large extent not carried out, and in the majority of instances yearly instead of monthly reports are returned, while in many instances, especially in the case of private practitioners, the instruction to return cases of illness as well as of death is not complied with. It might, indeed, be seriously questioned whether such monthly returns of illness would serve any useful purpose, particularly as the returns of acute infectious cases are separately provided for. The Medical Department publishes annually the figures of some 26,000,000 cases of illness which have been registered, but in a population of nearly 130,000,000[29] this obviously does not represent the true totality of sickness. All public health measures, the medical topography of the government, the control of lunatics, in a word, all medical and sanitary matters come under the jurisdiction of the board. The mode of procedure is defined with very great exactitude in the Medical Code of Laws,[30] or by different regulations which have been issued from time to time to cover particular cases. It may be added in passing that the whole medical law of Russia, with these various regulations now collected for the first time and inserted under the paragraph of the law to which they bear reference, is in course of publication. The first of the three volumes to which this great work will ultimately extend has recently been issued and is a model of careful editing. It is unnecessary to enter here into the methods by which the multifarious duties of the government medical board are carried out. It is sufficient to say that the activity of the board is to a great extent concentrated in the person of the inspector, who is directly in touch with, and responsible for, the institutions and individuals under the board's control. As in the case of the board, so in that of the inspector, the law is so worded that the widest interpretations may be put upon the duties of both.

Such, in brief, is the provision made for dealing with medical matters by the "government," or largest division of the land. The next smaller division is the *uyezd*, or district. This is administered by a council or *zemstvo*, an *uprava* or board, and a committee for peasant affairs, just as a "government" is. But the district has no medical board. It has, however, at least one official, *uyezdnui vratch*, or district medical officer, and a certain number of veterinary surgeons and *feldschers*, or trained medical assistants. There are also a committee of public health and a vaccination committee (*komitet obshtchestvennago zdravia* and *ospennui komitet*). The constitution of these two committees is very similar; that of the first may be taken as a type. It consists of the "leader of the nobility" of the district, the *ispravnik* or police commissary, the police master, the district medical officer, the mayor of the town (the capital town of the district), and the senior priest of the district, thus representing a considerable number of different interests and classes of society; other members may be added, such as local estate-owners, doctors, priests of different religious creeds, and so forth. Both the committees work in conjunction with the government medical board, and have immediate control of the sanitary and medical interests of the district.

As already stated, the *uyezd* is made up of a number of *volosts*, these again consisting of a collection of village communes. But lower than the *uyezd* the law does not provide for any medical appointments. The district medical officer is, so to speak, the ultimate unit in the medical bureaucracy, and in view of his responsibilities and of his isolated position in the country the Ministry of the Interior has made provision for a more prolonged course of medical instruction in his case than in that of the ordinary medical graduate. For this purpose a certain sum of money is set aside annually which enables the Ministry to send a selected number of these officials to St. Petersburg or other university towns for further post-graduate study. This is also done in the case of the government medical inspector, who of course occupies a much higher position and one of much greater administrative responsibility than that of the district medical officer. Both these titles are only gained after severe examination in the universities, and both appear in the list of medical degrees attainable at a university, as will be explained hereafter. Few questions have been the subject of more controversy than those connected with this appointment of district medical officer or *uyezdnui vratch* and the duties he has to fulfil. Touching as it does upon economic questions of the highest interest, the subject is one that might well claim more detailed treatment than can, from exigencies of space, be given to it in these notes. Here it must suffice to state the problem in its simplest terms, without any attempt at determining the solution of it.

Ignoring for the moment the towns, and also certain special parts of the country, such as the Caucasus, the Cossack Territory, and Central Asia, Russia may be said to be inhabited by a peasantry—a peasantry which six-and-thirty years ago was in a state of absolute serfdom. The law of Feb. 19th, 1861, emancipated them from this condition, and subsequent laws[31] have provided a system which has given them large powers of local self-government combined with ultimate responsibility to the central authorities on the Neva. With the newly acquired freedom came newly acquired responsibilities and a corresponding need of increased education to meet those responsibilities. It would be idle to assert that education has advanced with the need of it, and few will be found to deny that the Russian peasantry is practically an uneducated peasantry. With absence of education are inevitably joined a degree of superstition and a ready credulity on all matters outside the individual's narrow circle of knowledge. In bare terms it would be harsh and unfair to describe the Russian peasantry as uneducated, superstitious, and credulous without mentioning their many good qualities. A deep religious faith, no lack of practical intelligence, and plenty of common sense in questions within his own immediate ken, added to a simple kindliness—an inexhaustible fund, indeed, of what may be comprehensively termed "human nature,"—these are some of the qualities which make the Russian peasant quite one of the most attractive and sympathetic of all peasants. It is the provision of this peasantry—who, be it remembered, are for the most part scattered over wide areas of country—with a system of medical aid which shall be at once effective, prompt, free of cost to the peasants, and not too ruinously expensive to the local authorities, which constitutes the problem these authorities are called upon to solve, for it is largely on the local governing bodies that this duty falls. The law only provides that every *uyezd* shall have at least one medical officer, but it is clear that in the great majority of instances this number would be totally, even absurdly, inadequate, and it is left to the *zemstvos* to make up the deficiency according to local needs. The greatest practical difficulty with which they are met is the scattered nature of the population with which they have to deal. There are, roughly, two main systems of providing medical aid, each of which has its advocates and its opponents. In one, the so-called "stationary"

[29] The preliminary report of the census carried out in January last has just been issued and states that the total population of the Russian empire was then 129,211,000.

[30] Ustav Vratchebmie, or Medical Statute; being the twelfth volume of the Svod Zakonov or Collection of Laws. The last edition was that of 1892.

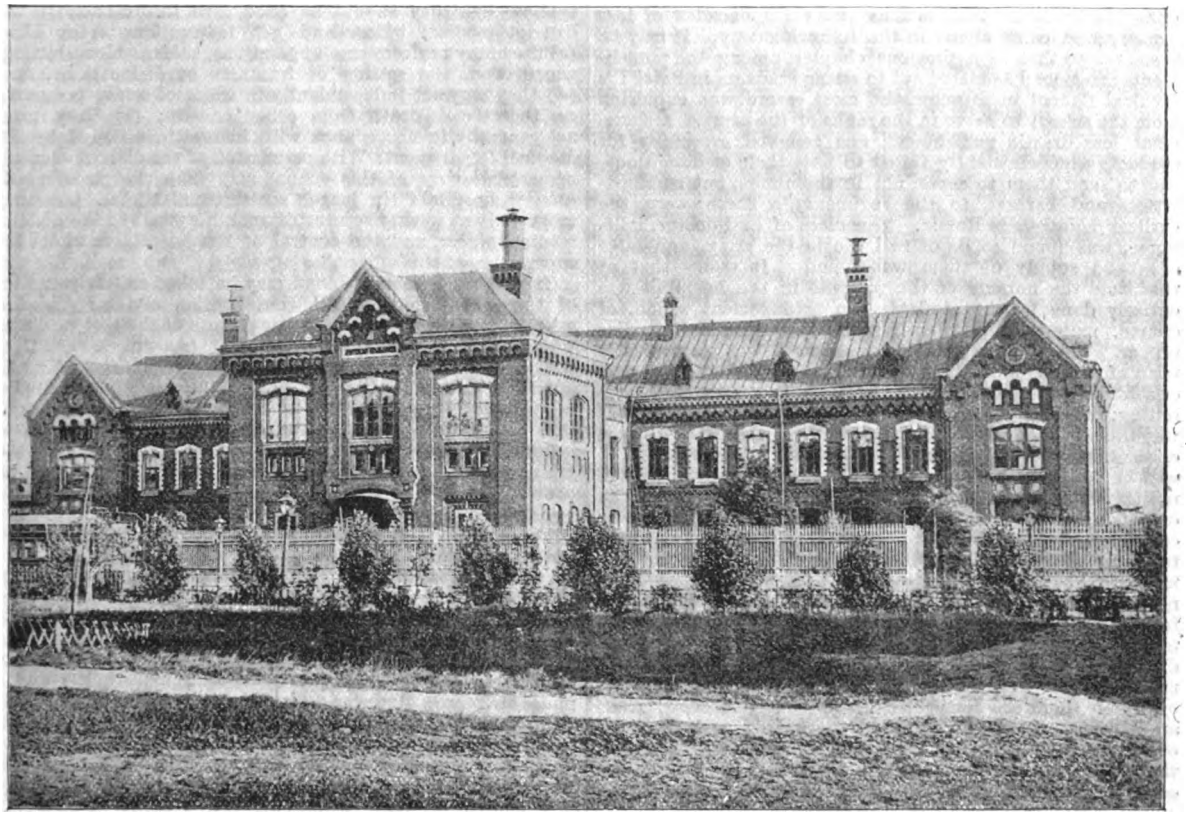
[31] Notably those of Jan. 13th, 1864, which instituted the system of *Zemstvos*, and of July 12th, 1889, which introduced the local committees for peasant affairs.

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(*statzionarnui*) system, the medical man lives either in the "district town" or in some village in his own division of the district; he there receives all patients who have need of him at certain fixed hours of the day, and only pays visits in case of necessity. In the other, the so-called *raziézdnui*[32] system, the medical men live in the central or "district" town, and, the district being parcelled out into divisions, they visit in turn every part of it on given days of the week or month. Under this system each village has its fixed day, perhaps twice in a month or oftener, when "the doctor" will be there to receive patients at a room in one of the cottages fitted for the purpose, or, if necessary, to visit them at their own homes. During the interval his patients are in the hands of a *feldscher*, whose functions will be defined later.

And now it will be asked, How do these systems succeed in practical working, and do they provide the peasantry with an adequate medical service? The answer must be "yes" and "no"—qualitatively, "yes"; quantitatively, "no." As far as quality is concerned the *uyezd* medical officer receives the highest university education; he is doubly a university graduate, for after obtaining the ordinary medical degree he proceeds to the further examination for the "Service" degree of *uyezdnui vratch*. Nor would it be possible to find a more conscientious, more devoted class of official. But so far as quantity is concerned it must be at once admitted that the supply of fully qualified medical aid to the Russian peasantry is inadequate. A few figures showing the number of medical men in the empire and their proportion to the population will suffice to prove this. According to an indisputable authority[33] on such matters the figures for 1890 were as follows. In a total population then reckoned at 110,000,000 (and the results of the recent census show that the total was considerably larger) there were 18 334 medical practitioners of all kinds, including those in the army and navy. There was, therefore, one doctor to every 6000 inhabitants. Further, when the towns were excluded and the rural population alone considered, it was found that the proportion of medical men was reduced to 1 in 9000; that in some districts it sank to 1 in 12,000; while in the whole government of Archangel there were but 14 doctors to 373,000 inhabitants. Slightly more recent figures which have since become available show practically no increase. From these figures, then, it is clear that at least in many parts of the country there is an insufficient supply of medical men. It will naturally be asked whether, in those parts of the country where there are no medical men or only an inadequate number, the peasants, all or some, are left without medical aid of any sort whatever. This, however, is not altogether the case, for there is in Russia, in addition to the class of fully qualified medical men, a second class of practitioners drawn from a lower social stratum and passing through a more restricted curriculum. As a matter of fact, *feldschers*, as these secondary practitioners are called, are more numerous than regular practitioners in Russia. So important, indeed, is the part they play and so thoroughly national is the whole system of *feldscherism* that they deserve a brief chapter to themselves.

FIG. 10.



The Moscow Clinique: The Clinique for Diseases of Children.

[32] From "raziézjat," to drive round.

[33] M. Anitchkof, a State Secretary (literally Companion of the Minister) for Education, adduced these figures in his address at the opening of the new Medical Faculty in the New-Russia University in Odessa in September last

IX.

The Feldscher.—Feldscherism Described and Discussed.

IT would appear to be a fact that Russia is the only country in Europe in which the principle of a secondary or subordinate class of medical practitioner is admitted. Some other countries may still in practice countenance the

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existence of licence-granting bodies whose examinations require a minimum of medical knowledge to pass; but their diplomates belong practically to the same great social group as graduates with the highest university degree—the group of qualified medical practitioners. There is no secondary class bearing a different title, with a less thorough training and with inferior rights of practice. But in Russia there is such a class, and as the resulting system has been severely condemned by some critics and no less warmly defended by others, it has become a subject of frequently recurring controversy, and therefore merits some consideration here. There are two types of *feldscher*, the military and the civil. The latter will be chiefly considered here, but it is practically almost impossible to separate the two groups from each other, for a large number, even a majority, of civilian *feldschers* are, as a matter of fact, men who have once served in the same capacity in the army. Their very name, *feldscher* (which is, of course, the German word for army surgeon incorporated bodily into the Russian language), as well as their history, indicate clearly that the system was originally a military one, and their employment in civil life only a later development.

The origin of the system in the army is rather a curious one. It dates as far back as the early decades of last century and came about in the following way. It may be remembered that in a previous chapter, among the punishments mentioned as meted out to erring students in Peter I.'s Medical School in Moscow, the most severe was expulsion from the school to serve in the ranks of the army. A somewhat less drastic punishment, one reserved especially for students who persistently failed to pass their examinations, was to send them to serve, not in the ranks, but as bloodletters and barbers to the regiments. These were the earliest *feldschers* in Russia. This class of half-doctor, half-nurse, was found to be of real use in the army, and later a second supply of them was found. It seems that at that time the nursing of the patients in the hospitals was entirely done by the students—an arrangement which, of course, materially interfered with their medical studies proper. To obviate this the experiment was successfully tried of sending annually a certain number of boys, the sons of soldiers, to the hospitals to be trained in the arts of bloodletting, dressing of wounds, and nursing generally. In this way the students were set free from nursing duties, and a new class of army *feldschers* was formed. But these were still, it will be noted, entirely a military class, either nursing in the military hospitals or attached to regiments in the field. The civil *feldscher* is, in fact, only a recent growth of the present century, and dates from that great period of reform which followed the emancipation of the serfs in 1861, and the institution of the system of *zemstvos* a few years later. Even now the majority of *feldschers* in civil employ are drawn from the so-called "regimental (*rotnuié*) *feldschers*"—that is to say, men trained in the military hospitals or lazarets, as distinguished from the "school (*shkolnuie*) *feldschers*," or men trained in the army schools. These schools, of which there are four (in St. Petersburg, Moscow, Kief, and Tiflis), turn out a more thoroughly trained class of men than the so-called regimental *feldschers*, but the latter are far the more numerous. Of schools for educating civilian *feldschers* there are altogether twenty-one in Russia.

It will be interesting and essential to the right understanding of the *feldscher's* position to note briefly what is the course of training in these schools. To begin with, then, the school will generally be found attached to some large hospital in one of the central towns of a "government." The education begins early, pupils being taken generally at the age of thirteen years. As the boys are mostly drawn from the less educated classes of the population the first subjects they are taught are those of ordinary school education—scripture, history, arithmetic, Russian, Latin, writing, geometry, and geography. Later come the more advanced and the professional subjects proper. Of these an immense list is mentioned as included in the curriculum—botany, zoology, physics, anatomy, physiology, chemistry, pharmacology, pharmacy and pharmacognosy, pathology and therapeutics, surgery, diseases of children, eye diseases, ear and throat diseases, hygiene, epidemiology, venereal diseases, skin diseases—in a word, all the subjects required for a full medical degree. While the programme of a *feldscher* school includes all these subjects in full detail it is obvious that in the four years available only the elements of these sciences can be taught, or, at least, retained by the pupils. The last two years are spent in practical work in the wards. Here the work is mainly confined to the duties of nursing and of dressing the surgical patients; the physical examination of medical cases is also taught, and, it may be added, post-mortem examinations are attended and taken part in by the student. At the end of the four years the qualified *feldscher* leaves his school with a certain amount of medical knowledge and with certain more or less defined rights and privileges. These vary slightly with different schools, the diploma of each school bearing with it certain privileges which are stated in the *ustav*, or statute, of the particular school. Here, for instance, are the privileges—which are equally duties—of *feldschers* with the certificate of one of the central schools, that at Mogilef:—

"*Feldschers* of this school have the right to act independently in the following circumstances: (*a*) they may give the necessary aid in acute and dangerous cases in places where there are no medical men, but on the first opportunity it is their duty to inform the district medical officer (*uyezdnui vratch*) of the case; (*b*) they may act independently on the appearance of epidemic infectious diseases, such as cholera, scarlet fever, small-pox, measles, or typhus, but they should at once give information to the district medical officer and get instructions from him; (*c*) they may perform small operations, such as blood-letting, vaccination, the setting of fractures or dislocations, &c.; (*d*) they may act independently in cases of acute poisoning or threatened death from other causes; (*e*) they must act generally in accordance with instructions issued by the Medical Department. With permission of the district medical officer *feldschers* of this school may take charge of small *volost*[34] hospitals (in large, scattered districts), but they must present weekly returns of such hospitals to the district medical officer, and the control of the hospital is under the supervision of this officer."

The rights here mentioned may be taken as fairly typical of those conferred by all the Russian civilian *feldscher* schools, and they give a very fair picture of the sort of duties which a *feldscher* is expected to fulfil. As will be seen from the second paragraph, he may be in sole charge of small hospitals, and not only is this often the case, but he is also not infrequently in almost sole medical charge of the population of a large district. Not, of course, immediately after leaving his school, for it is clear that a youth leaving the *feldscher* school at the age of seventeen years, after a four years' course, part of which was devoted to ordinary school subjects and only two years to practical work in the wards, could not be regarded as qualified to take the sole charge of patients. Possessed of that little knowledge which in medicine, more perhaps than in anything else in life, is a dangerous thing, some further training is essential if the *feldscher* is not to be more active for harm than for good. The next step in his career, therefore, as a rule, is for him to become attached to some hospital, when he occupies a really useful position, somewhere between the positions of a male nurse and a house surgeon. Here the *feldscher* may spend the rest of his life, or he may in time become appointed by a district *zemstvo* as the sole permanent medical adviser to the peasant population in some country district. In most parts of European Russia he will have the advantage of the advice and control of the district medical officer. Nominally, indeed, the health of the whole population of the district is in the hands of the medical officer, whose orders the *feldscher* carries out during the intervals of his superior's fortnightly visits. But practically in a large number of instances the terms above used are nearer the truth, the *feldscher*, living on the spot, being the real permanent medical adviser, the district medical officer, who visits the village at stated intervals, having only a consultatory and controlling influence.

The whole question of the system of *feldscherism* has been, and still is, hotly discussed in Russia. There are those who affirm that the system is the very foundation-stone of the whole structure of *Zemskaia Meditzina* (or medical aid to the peasants at the cost of the *zemstvos*), and that were it done away with the peasants who have a voice in the *zemstvo* would not vote another *kopeck* towards maintaining the structure. According to those who hold this view, the peasants regard the *feldscher* as an institution peculiar to

[34] A "volost," as has been explained, is a collection of village communes for administrative purposes.

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themselves and one not lightly to be done away with. "The doctor," they will say, "oh! he is the gentleman's doctor, but the *feldscher* is the *moujik's* doctor." On the other hand, there are equally acute observers who hold quite a contrary opinion. The peasants, according to this school of observers, are only content with a *feldscher* when they have never had the opportunity of being treated by a doctor. Provide them, they say, with properly qualified medical aid and they will at once take the fullest advantage of it; they even now mistrust the *feldscher*, and much more willingly submit to the advice of the medical officer. *Feldscherism*, according to this view, far from being the keystone of a successful system of medical aid, is the greatest stumbling block to its development in the right direction.

It is, perhaps, rash for a foreigner to attempt to decide on the value of any national institution or custom, and the one under consideration is a thoroughly national institution—a system found in no country outside the frontiers of Russia. This is, indeed, in the eyes of those who uphold the system, one of the strongest arguments in its favour. They are proud of the fact and assert that in this way Russia has solved a problem with which all nations are faced, but of which no other nation has found a satisfactory solution. They declare that even in those countries, such as England, with the largest number of medical men in proportion to the population, there will still not be enough, and many of the people will remain without medical aid or seek that of druggists and unqualified practitioners. In Russia druggists are strictly forbidden to give medical advice; unqualified practice and charlatanry are common enough, "wise men" and "wise women" existing in every village; but it is as a counterbalance to these, it is as a means of preventing the peasant falling into such hands, that the system of *feldscherism* is so highly lauded by those who approve of it. The argument is ingenious and may be readily accepted as far as it goes; but it is not the whole truth. The fact would appear to be that *feldscherism* is at best a compromise—an attempt to solve a difficult problem by half-measures. As a satisfactory permanent solution of the problem it can scarcely be accepted. Medical aid to a population, whether of peasants or any other class of people, if it is to be supplied at all, should surely be of the highest quality possible. In dealing with health and disease, life and death, half-measures have a way of being either useless or worse than useless. What, however, can be truly said in defence of *feldscherism* is that even half-trained medical aid is better than none at all; that as there is an insufficient supply of qualified medical men the peasants would, in the absence of *feldschers*, be entirely at the mercy of the "wise men" or "wise women" of the villages. It may be freely admitted that such a lot would be infinitely, incomparably, the worse of the two. The *feldscher*, if he be an intelligent man—and they are, as a rule, a most intelligent, kindly, willing race of men—gains a great deal of practical knowledge in his hospital and other experience, and this in a large number of simple cases will prove of real value; while the "wise" man or woman (some apology is due to the *feldschers* for mentioning them in the same sentence, and thus even appearing to compare them) is for the most part guided by traditions and superstitions which often lead to the most disastrous and hideous results in practice.[35] As an important and earnest effort on the part of the authorities to provide the peasantry for the time being with properly trained medical assistance and as an alternative to the mischievous help of "irregular practitioners" the present system may be honestly commended. The *feldscher* is, of course, much cheaper than the doctor, even if there were sufficient doctors available, and this has been shown not to be the case. And regarded as a highly trained male nurse, always working under a medical man, the *feldscher* is beyond question an admirable institution of the greatest use in hospitals and even in villages. But where the present system seems to be less commendable, at least in the eyes of a foreigner, is in the development it has taken in the country districts, where the peasants are often left for long intervals in the *feldscher's* sole medical charge. This, if it is to be commended, can only be regarded as a temporary measure, corresponding to the transitional economical and intellectual state of the peasantry at the present time. The principle of a secondary class of medical practitioner, with inferior education, training, and rights of practice, appears wrong. It seems probable that its existence is only a question of time, though it must of course be a very long time, for the number of qualified medical practitioners in Russia to reach a point when they shall be accessible to all. There will then be no need of a secondary class of practitioner; the *feldscher*, as such, will disappear, or will remain as an exceptionally well-trained male nurse.

Feldscherism is not likely soon to be done away with; indeed, it is obvious from what has already been said that until the number of medical men can be proportionally increased, to do away with it would be an unmixed misfortune for the peasants. There are at present more *feldschers* than medical men in Russia. The numbers in 1892 (the latest available) were 12,174 (civil) medical men and 16,568 (civil) *feldschers*. In the same year, in the twenty-one civil schools 204 *feldschers* finished their course; but, as already stated, the majority of *feldschers* in the country are trained either in the military hospitals or in the army *feldscher* schools.

A very intelligent man, a Russian army *feldscher*, put into black and white his views on the whole subject of *feldscherism*. His little essay contained much really useful information, some of which has been made use of above, and it ended thus: "Russian doctors not only do not approve of *feldschers*, but they contend with *feldscherism* as with the phylloxera or any other destructive insect. But they cannot possibly do without *feldschers*. There are comparatively few doctors in Russia (say 15,000), and if they were to work unassisted for twenty-four hours in the day, still two-thirds of the population would be left without medical aid."

X.

Russian Universities and Medical Education in Russia.—The Ten Universities.—The Ministry of Education.—The University Authorities.—The Faculties.—The Medical Chairs and Professors.—The Curriculum.—The Degrees, and Mode of Obtaining Them.—State Examinations.—Statistics of the Universities.—The Army Medical Academy in St. Petersburg and Sir James Wylie.

IN Russia a medical practitioner must not only possess a diploma, but he must have obtained his medical education and his diploma from a university; in other words, all Russian medical practitioners are university graduates. Licence-granting colleges or schools of medicine or surgery are institutions unknown in Russia; and so also, *à fortiori*, are schools or colleges affording facilities for medical training, though not themselves granting diplomas to practise. It is at the universities alone that students can obtain both training and diploma. There is one apparent exception to this rule, and that is the Imperial Academy of Military Medicine in St. Petersburg, or, as it is more generally called, the Army Medical Academy. Its exceptional nature is, however, more apparent than real, for the Academy may be regarded for all practical purposes as a substitute for the absent faculty of medicine in the University of St. Petersburg, which (since the very recent addition of a medical faculty to that of Odessa) is now the only Russian university without such a faculty. There are, in all, ten Russian universities, including those of Helsingfors and Dorpat (now Yurief), which have only become Russian since their foundation. They may be briefly enumerated, together with their dates of institution and mode of origin. The University of St. Petersburg was opened in 1819 in the reign of Alexander I. It was practically a development, with new organisation and powers, of the former so-called "Principal Pedagogic Institute." The University of Moscow was instituted by the Empress Elizabeth in the year 1755. It is consequently the oldest purely Russian university. The first medical degree granted in Russia was conferred by this

[35] Quite recently a "wise woman" (*znakharka*) advised a mother to put gunpowder into her baby's eyes and apply a match as a cure for ophthalmia. The mother did it; the ophthalmia was destroyed, but so were both eyes, and the baby died in agony. Another woman roasted her baby in the stove under similar advice. But the horrors of this sort of "practice" are too great to dwell upon. Nor must it be supposed that they are confined to Russia; they would appear to occasionally occur in all countries.

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University in 1794. The University of Kazan was founded by Alexander I. in 1804. The University of Kharkof was opened a year later by the same Emperor. The University of Novo-Rossiisk (i.e., New Russia), in Odessa, was instituted by the late Emperor Alexander III. in the year 1865 by the conversion into a university of the pre-existing Richelieu Lyceum. This was an important institution which had been founded by the Duc de Richelieu, a French *émigré*, who in 1830 became the first Governor of Odessa. The University of St. Vladimir, in Kief, was instituted in 1833 and opened in the following year by the Emperor Nicholas I. It took the place of the former Polish University of Vilna, which was suppressed after the Polish rising of 1833. The University of Warsaw dates from 1869, when the so-called *Glavnaia Szkola*, or Head School, was converted into a university. It has a statute of its own dating from the year of its foundation, and differing from the statute common to most of the other Russian universities. The University of Yurief was known as the University of Dorpat prior to the year 1892. It has been under a Russian statute since the year 1802 The older university was founded by the great Swedish ruler, Gustavus Adolphus, in 1632 The University of Tomsk, the sole one in Siberia, was brought into existence in 1887. It has at present only a medical faculty, but it is expected that very shortly a juridical faculty will be added. The Alexander University of Helsingfors is the successor of the old Finnish University of Abo. This was removed to Helsingfors after the destruction of Abo by fire in 1827. The older university was founded in 1640.

With the exception of the last four in the above list all Russian universities are under one common code of laws or statute, the so-called University Statute (*Universitetski Ustav*). There have been four such statutes in successive operation during the present century, those of 1804, 1835, 1863, and 1884. It is the last, that of 1884, which is now in force. Under the older statute of 1863 the universities enjoyed wider rights of self-government, and were in general more independent of the State authorities, than is the case under the present law. The relation which the universities now bear to the Government authorities may be very briefly stated before passing on to consider the medical faculties and the course of education provided by them. The universities, as educational institutions, are administratively under the Minister of State for Public Instruction (*Ministr Narodnago Prosviéshtohénia*). For the purposes of this Ministry the country is divided into fifteen districts[36] or circuits (*okrugs*), each of which is administered by a curator (*popetchitel*) or representative of the Government. This official is in direct touch with the university as well as with all other educational institutions of any kind whatever that may exist in his district. He has considerable powers, among which may be mentioned the appointment of the deans of faculties and of some other university officials; and he is, moreover, the direct and only link between the Government and the universities, all communications between the two having to pass through his hands. The internal affairs of the university are managed by the following authorities: (*a*) the rector, the practical working head of the institution; (*b*) the university council—i.e., all the professors, under the presidency of the rector; (*c*) the university board—i.e., all the deans of faculties and the inspector of students, under the presidency of the rector; and (*d*) the inspector of students, whose functions are generally those of a proctor.

A complete Russian university should contain four faculties—namely, a Historico-Philological, a Physico-Mathematical, a Juridical and a Medical Faculty. It will be observed that there is no mention of a Theological Faculty, and, as a matter of fact, the University of Yurief (Dorpat) is unique among Russian universities in possessing such a faculty. A fully equipped medical faculty contains the following twenty-three chairs:—(1) Anatomy; (2) Physiology; (3) Histology and Embryology; (4) Medical Chemistry; (5) Pharmacognosy and Pharmacy; (6) Pharmacology, with prescription-writing, toxicology, and instruction in the use of mineral waters; (7) General Pathology; (8) Pathological Anatomy; (9) Medical Diagnosis; (10) Special Pathology and Therapeutics; (11) Nervous and Mental Diseases; (12) Dermatology and Syphilology; (13) Therapeutic Faculty Clinique; (14) Therapeutic Hospital Clinique[37]; (15) Operative Surgery with Topographical Anatomy; (16) Surgical Pathology with Desmurgy[38] and instruction upon Dislocations and Fractures; (17) Surgical Faculty Clinique; (18) Surgical Hospital Clinique; (19) Ophthalmology, with Clinique; (20) Midwifery, Gynæcology, and Diseases of Children, with Cliniques; (21) Medical Jurisprudence; (22) Hygiene, with Epidemiology, Medical Police, Medical Statistics, Epizoology, and Veterinary Police; and (23) History and Encyclopædia of Medicine.

There are two kinds of professors in a Russian university, the ordinary and the extraordinary (*ordinarnui* and *extra-ordinarnui*). The distinction between them may be made clear by stating that the ordinary professor takes a higher rank than the extraordinary, being entitled to a position in the fifth class, or *tchin*, in the system of ranks already briefly explained in Section VII.; while the extraordinary only ranks in the sixth class. The former also receives a higher stipend than the latter, the sums being respectively 3000 roubles and 2000 roubles[39] per annum. In the University of Tomsk, in Siberia, these stipends are increased by one-half in consequence of the isolation and other disadvantages of an appointment in that distant city. There is another class of professors to who allusion must be made; these are the so-called supernumerary (*sverkhshtatnui*) professors—i.e., those who are not on the *shtat* or list of professors proper. They may be either ordinary or extraordinary, and are either teachers raised to the rank of professor before a vacant chair offers itself for occupation, or professors who, having served for thirty years, are placed on the retired list, although they continue to deliver lectures. In addition to the professors there are an indefinite number of *privat docents* in a Russian university. The system, as well as the name, has been borrowed from Germany.

The number of students is not limited. Moreover, it is worth noticing that the number of medical students never has been limited. Even in the stormy period of 1848, when the revolutionary wave which swept over Europe was repeated in the serious student disorders in some of the Russian universities, and when the Emperor Nicholas I. limited the number of students to be admitted to each university to the comparatively low figure of 300, the medical faculties were expressly exempted from any such limitation. For admission to the universities now a student has to present a certificate of proficiency from one of the Government *gymnasia*, or high schools, or from some other school recognised as equivalent by the Minister of Education. Students are allowed to enter only at one period of the year, on or before Aug. 20th (old style), that being the day on which the autumn session or half-year begins. There are two sessions in the year, from Aug. 20th to Dec. 20th, and from Jan. 15th to May 30th. The vacations are consequently of rather less than a month's duration at Christmas, and of nearly three months' duration in the summer. The entering student or freshman must be at once inscribed in one or other of the four faculties. The fees are not large; each student pays a sum of 5 roubles (about half a guinea) each half-year, and an additional sum of 1 rouble for each weekly lecture he arranges to attend—that is to say, that if, for example, he arranges to attend eighteen, twenty-four, or thirty lectures in the week, he will pay 18, 24, or 30 roubles for that half-year.

The full list of medical degrees obtainable at a Russian university is a long one, including, as it does, not only the two ordinary medical degrees, a lower and a higher, found in almost all universities in other countries, but certain other degrees in addition connected with the public services, and

[36] The fifteen districts are those of St. Petersburg, Moscow, Kazan, Orenburg, Kharkof, Odessa, Kief, Vilna, Warsaw, Riga, the Caucasus, Turkestan, Eastern Siberia, Western Siberia, and the Amur.

[37] The distinction between a "Faculty Clinique" and a "Hospital Clinique," whether Therapeutic (i.e., Medical) or Surgical, is briefly as follows. The first is endowed and supported by the university, and the second usually belongs to the town or city authorities and is only subsidised by the university. The Faculty Clinique is attended by students in their fourth year; in it everything is carried out, as far as possible, in an ideally scientific manner—there is no haste, and students can study selected cases at their leisure. The Hospital Clinique, on the other hand, is attended by fifth-year students, and it is conducted on the lines of an ordinary hospital; the cases are not selected, and men are enabled to learn here the practical working of a large hospital, and to get accustomed to the rapidity of diagnosis and judgment necessary in a large general practice

[38] The word "Desmurgia" includes what may be summed up as practical minor surgery and bandaging.

[39] A rouble is a little over two shillings. These stipends are equivalent, therefore, to rather more than £300 and rather more than £200 respectively.

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qualifying those who obtain them to hold some of the appointments described in an earlier chapter. The degrees are consequently divided into three groups, called respectively the learned-practical (*utcheno praktitcheski*), learned-official (*utcheno-slushebnui*), and special-practical (*spetzialno-praktitcheski*) groups of degrees. In the first group, the learned-practical, there are three degrees—namely, in ascending order of value, those of (*a*) *lékar*, or practitioner; (*b*) doctor of medicine; and (*c*) doctor of medicine and surgery. In the second group, the learned-official, there are also three degrees, those of (*a*) district medical officer (*uyezdnui vratch*, whose functions were defined in an earlier chapter); (*b*) medical member (accoucheur or operator) of a *zemstvo* medical board; and (*c*) medical inspector to a *zemstvo* medical board (*inspektor vratchebnoi upravui*). In the third group, the special-practical, are the degrees of (*a*) dental surgeon (*zubnoi vratch*); (*b*) dentist (*dantist*); and (*c*) midwife (*povivalnaia bubka*). It may here be added that all chemists and druggists, and all veterinary surgeons, are compelled to obtain a diploma by examination conducted in a university before being allowed to practise their calling. Of these many degrees much might be written, but it will suffice here to summarise the requirements of the universities for the two most important degrees, those of *lékar* and Doctor of Medicine, only adding a few condensed notes on the method of conferring the other degrees.

The degree or title of *lékar* is the lowest degree entitling the holder to practise. The curriculum required for it extends over five years, or ten sessions, during which the student must attend lectures in all the subjects in which he is going to be examined at the end of that period. There are class-examinations each session, and, in addition, at the end of his fifth session the student has to pass the so-called "half-course" (*polu-kursovui*) examination before he can continue his curriculum. At the end of the five years the student presents himself for examination for the degree of *lékar*. He must hand in the following certificates:—(*a*) of attendance at the university for ten sessions; (*b*) of good behaviour from the university inspector of students; (*c*) of having passed his half-course examination, with any remarks of the examiners; and (*d*) detailed certificates from each professor as to the work done by the candidate since the "half-course" examination, countersigned by the dean or secretary of the medical faculty. In addition, the candidate must send in his photograph and the sum of twenty roubles (about two guineas), the examination fee. It will be noticed that in this way the examiners are enabled to gain a very good idea of what sort of work the candidate has done as a student, and this may have some influence on the result of the examination.

The examination is conducted by a Government examining committee or board (*ispuitatelnaia commissia*) annually appointed by the Minister of Education. The board consists of five members and a president. The subjects of examination are divided into five groups, corresponding to the five members of the board, each of whom appoints the examiners in his particular group. The examiners so appointed may be selected from the professors and *privat-docents* of the same university in which the examination is to take place, or from eminent men, specialists in the particular subject, from elsewhere. In the latter case the choice must be confirmed by the Minister of Education. The following are the five groups and the division of subjects between them:—

First Group: (*a*) Descriptive Anatomy; (*b*) Histology; (*c*) Pathological Anatomy and Pathological Histology; and (*d*) Operative Surgery and Topographical Anatomy.

Second Group: (*a*) Physiology; (*b*) General Pathology; (*c*) Medical Chemistry; (*d*) Pharmacology, Prescription Writing, and Mineral Waters; and (*e*) Pharmacy and Pharmacognosy.

Third Group: (*a*) Special Pathology and Therapeutics; (*b*) Nervous and Mental Diseases; (*c*) Diseases of the Skin and Syphilis; (*d*) Diseases of Children; (*e*) Clinical Examination in the Medical Wards; and (*f*) Clinical Examination in the Skin and Syphilitic or in the Children's Wards.

Fourth Group: (*a*) Surgical Pathology, with Desmurgy and Treatment of Dislocations and Fractures; (*b*) Ophthalmology; (*c*) Midwifery and Gynæcology; (*d*) Clinical Surgery; and (*e*) Clinical Ophthalmology and Midwifery.

Fifth Group: (*a*) Hygiene and Medical Police; (*b*) Legal Medicine and Toxicology; and (*c*) Epizoology and Veterinary Police.

The examination in all these subjects is entirely of a *vivâ-voce* or practical character. There are no written examinations in any subject as with us in England. The principal question asked the candidate is drawn by the candidate himself from a ballotting-urn, in which are placed a number of slips of paper with questions written on them. The first question drawn may be refused, but there is only a second chance, and the second question drawn must be answered by a candidate who has declined the first. In addition to the principal question the examiners have the right to ask any other reasonable question within the limits of the particular subject. The examiners classify the result in each case as either "unsatisfactory," "satisfactory," or "very satisfactory." Two "unsatisfactories" are sufficient to stop any further examination and "plough" the candidate. For honours, or, as it is called, *lékar s' otlitchiem* (or *cum eximiâ laude*), it is necessary to obtain at least eleven "very satisfactories" out of the twenty-three subjects, and not one "unsatisfactory." Should the candidate fail he may come up again after two sessions, and should he fail a second time he may try a third time; but this is his last chance, as under no circumstances may he be examined a fourth time. There is no minimum age-limit mentioned in connexion with the degree of *lékar*. Practically, however, as most boys leave the *gymnasia* about the age of eighteen, and as the curriculum extends over five years, this degree is usually taken at the age of twenty-three.

Having obtained the degree of *lékar* the graduate may at once proceed, if he wishes, to obtain the higher degree of Doctor of Medicine. This degree is still one of the "learned-practical" degrees; but should the new regulations, which have for some time been under the consideration of the authorities, come into force, it will be raised a step higher and become a purely "learned" (*utchenui*) degree. To obtain it under the present regulations it is necessary to have the lower qualification of *lékar*, to pass a written examination, and to present and defend a dissertation. The written examination consists of a paper containing two questions only. When this is satisfactorily passed the candidate may submit his dissertation to the approval of the faculty, and when that is gained he must print not less than 500 copies and lodge them with the university authorities. This is done at the candidate's own expense, and should the dissertation be of any length the expense is sometimes considerable. There is even some talk of increasing the number of copies required, at least in the Army Medical Academy in St. Petersburg (where 500 complete copies and 300 abstracts of the dissertation are now demanded), as the list of foreign and Russian universities and medical institutions to which copies of each dissertation are sent is an ever-increasing one. Appended to the dissertation must be a certain number of definite propositions or conclusions (*theses*), of which six at least must be purely medical in character. The public defence of the theses takes place at a meeting which is duly advertised, and which is freely open to the general public. Not only members of the university, but anyone present, may rise and controvert the statements or views of the candidate. As a rule, however, the three official "objectors" (*vozrashatelui*) appointed by the faculty are the sole speakers on these occasions. The result is announced immediately, and if the verdict is satisfactory the "faculty oath" is read and signed, and the candidate, now a candidate no longer, is an accepted Doctor of Medicine. In the rare case of rejection of a dissertation the candidate may come up again after an interval of not less than three or more than six months to defend either the same dissertation a second time or a newly written one.

Should the proposed new regulations for obtaining the doctorate become law considerable changes will be introduced into the method just described. Three years will have to elapse from the time the candidate has obtained the degree of *lékar* before he will be permitted to present himself for the higher one. He will then have to pass a fresh searching examination in all the subjects required for the lower degree, and this examination will be specially directed towards some one special branch of medical science chosen by the candidate. There are seventeen such branches of specialism named, but it is scarcely necessary to repeat them here.[40] The most important point is that practically under

[40] Vide THE LANCET, Oct. 26th, 1895.

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these regulations the M.D. degree would in future be obtainable by specialists only. The dissertation would be required as now, but it would have to be presented within five years of passing the examination; failing this the examination would have to be repeated. It is still uncertain whether the new regulations as thus drafted will be ratified by the Medical Council.

The degree of Doctor of Medicine and Surgery is, as a matter of fact, very rarely taken. It is obtained in the same way as that of Doctor of Medicine, but the examination in surgery, theoretical and practical, is especially searching.

The conditions for obtaining the "learned-official" (*utcheno-sluzhebnui*) degrees are adapted in each case to the special kind of knowledge which the holder of the degree will be likely to require in the particular office which the degree will entitle him to fill. Thus, for example, a candidate for the title of "district medical officer" (*uyezdnui vratch, vide* Chapter VIII.) must have one of the ordinary medical degrees already described, and must pass a special examination in legal medicine, medical police, first aid, epizoology, and in the duties and social relations of a district medical officer. A candidate for the degree of "operator" or "accoucheur" to a *zemstvo* medical board must have the degree of *uyezdnui vratch*, and must pass an examination in surgery or midwifery, as the case may be. An inspector of a medical board (*inspektor vratchebnoi upravui*) must have the degree of M.D., and have been in the public service for at least six years, and he must pass a very wide examination, not only in the special subjects just named as needed for the title of district medical officer, but also in medical law, State medicine, and medical administration, veterinary police, and pharmacognoscy.

Of the "special-practical" (*spetzialno-praktitcheski*) degrees little need be said here. A "dentist" (*dantist*) and a "dental surgeon" (*zubnoi vratch*) must pass a university examination before being permitted to practise. It may also interest many readers, particularly those who approve of a proposed Bill which has been the subject of much recent agitation in the medical world in England, to know that in Russia a midwife (*povivalnaia babka*) must be properly trained and pass an examination before she can follow her calling, and that this examination is conducted in the universities.

Before closing this account of the medical degrees conferred by Russian universities it is necessary to add that in Russia all druggists are by law compelled to pass an examination as to their fitness for such an occupation. There are three titles, those of "apothecary's assistant," "provisor," and "master of pharmacy" or "*aptekar*." An "apothecary's assistant" must have been a pupil for not less than three, or more than five, years in a recognised druggist's shop, not in a village, and must pass an examination. A "provisor" must have had the lower title for three years, must have attended courses of lectures on mineralogy, botany, zoology, chemistry, physics and pharmacology, &c, and must pass a written examination in these subjects. A "master of pharmacy" must first have obtained the title of provisor, and must pass a still wider examination in the subjects just named, and he must also present and defend a dissertation with at least six *theses*. The examination is largely practical, and includes chemical and medico-legal analyses. For veterinary surgeons there are also three titles of ascending value, those of "veterinary assistant," "veterinarian" (*veterinar*), and "master of veterinary science."

The following Tables contain interesting statistics of the medical faculties and degrees of the Russian universities (excluding Helsingfors). The figures are for the year 1895. They have been most kindly furnished by the Ministry of Public Instruction. The medical faculties of the universities have alone been referred to, to the almost complete exclusion of another great degree-granting body, the Army Medical Academy [41] in St. Petersburg. The Imperial Academy of Military Medicine, to give it its full title, is intended mainly for the training of surgeons for the services. It is not, however, confined to this, and many civilian practitioners have gained their diploma or degree at the Academy. The curriculum here is practically the same as at the universities, and so are the degrees and the mode of obtaining them. The large majority, however, of the students ultimately enter the army or navy medical services.

The Academy is older than any of the universities, with the exception of that of Moscow. It was founded by the Emperor Paul in the year 1798, and opened in 1800. Next year the centenary of its foundation is to be commemorated with all due solemnity in St. Petersburg, and in honour of the occasion a detailed history of the institution will be published, and is, indeed, already in course of preparation. Space will not permit here of more than a brief mention of some points in its history. The Academy has been successively under the Ministry of the Interior, under

TABLE I.—*The Numbers of Students in the Russian Universities on Jan. 1st, 1896.*

Universities.	Faculties.						Total.
	Theological.	Historico-philological.	Physico-mathematical.	Juridical.	Medical.	Eastern tongues.	
St. Petersburg	—	194	1085	1673	—	105	3057
Moscow	—	251	929	1587	1390	—	4147
Kharkof	—	39	150	376	800	—	1365
Kazan	—	37	131	185	451	—	804
St. Vladimir (Kief) ...	—	53	329	1020	1032	—	2434
Novo-Rossiisk (Odessa)	—	41	253	281	—	—	575
Tomsk	—	—	—	—	413	—	413
Yurief (Dorpat)	225	40	95	95	716	—	1171
Warsaw	—	29	137	347	453	—	966
Totals	225	684	3109	5564	5245	105	14,932

TABLE II.*—*Medical Degrees and Titles conferred by the Russian Medical Faculties† in the year 1895.*

University.	Medical degrees.				Other titles conferred after examination.					
	Doctor of Medicine.	*Iékar* (with honours).	*Iékar* (without honours).	District Medical Officer.	Master of Pharmacy.	Provisor.	Apothecary's Assistant.	Dental Surgeon.	Dentist.	Midwife.
Moscow ...	23	28	189	146	1	81	114	23	3	126
Kharkof ...	6	28	84	95	—	14	114	16	25	35
Kazan ...	3	44	26	16	—	12	52	—	4	167
Kief	2	21	147	5	—	23	47	30	20	98
Tomsk ...	—	17	43	—	—	—	—	—	—	—
Yurief ...	47	140		11	1	117	82	—	22	98
Warsaw ...	2	97		14	—	17	54	27	5	98
Totals ...	83	864		287	2	263	463	96	79	622

* It is necessary to note in connexion with this table that under the system of examination for degrees by Government commissions it is scarcely correct to say that such and such a university conferred so many degrees in any given year. Students may pass their examination in any university they choose, no matter where they have completed their curriculum. The above figures refer to students who obtained their degrees in the examinations conducted at the universities named. That they were not all students of the university where they passed their examination is shown by the following example: In Moscow (*vide* the report of the University for 1895) 174 Moscow students obtained the title of *iékar* in the year 1895; but the total number of students who obtained the title in that year by examination in the Moscow University was 217. Confusion may easily arise between the two sets of figures.

† Only seven universities appear in this table, as there is no medical faculty in the University of St. Petersburg, nor was there one in that of Novo-Rossiisk, in Odessa, until last autumn. In 1896 the Army Medical Academy in St. Petersburg granted the title of *iékar* to 136 successful candidates.

[41] Voenno-Meditzinskaia Akademia; in rendering this "Army Medical Academy" it should be mentioned that the Russian words imply that both the military and naval services are included in the objects of the Academy.

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that of Public Instruction, and finally, since 1839, under the Ministry of War. For many years, early in the century, its fortunes were closely linked with those of a distinguished Scotchman, Sir James Wylie, who for a quarter of a century occupied the honourable position of head of the Army Medical Department in Russia, and was practically the head of the whole profession in the country for that period. Wylie first went to Russia in the year 1790, when, after an examination, he was appointed surgeon to the Eletzk Regiment. In 1798 he was appointed body surgeon to the Emperor Paul. The story of his having attracted the attention of the Czar by his successful treatment of a certain Count Kutaisof by lancing a large abscess in the neck after other surgeons had despaired of success—a story which gave rise to the saying that "Wylie had made his fortune by cutting a count's throat"—may be taken for what it is worth. It is certain that he gained the confidence of both Paul and his successor, Alexander I., who promoted at a charge of from 45 to 60 roubles per month. The medal, of which an illustration appears here, was struck on the occasion of Sir James Wylie completing his fiftieth year in the Russian service in the year 1840. For the loan of the medal and permission to reproduce it thanks must be given to a collateral descendant of the baronet now resident in St. Petersburg.

Since the death of Sir James Wylie the Army Medical Academy has always had for its president one of the most distinguished army surgeons of the day. The names of Pelican (1846–57) and Yenokhin (1857–62), to mention but two, are still remembered with honour. At present the Academy is under the presidency of Dr. Victor Pashutin, who is also President of the Medical Council, and as such occupies the most honourable position in the medical profession in Russia. It may be added that the present head of the Army Medical Department, which is now called the Army Medical Board (*Upravlenić*), over which Wylie

FIG. 11.



Medal presented to Sir James Wylie, Bart., Physician to the Emperor Alexander I., first Director of the Academy of Military Medicine, and Founder of the Wylie Clinical Hospital in St. Petersburg.

him to the highest honours in his power to give. In brief, Wylie in his time was the most prominent figure in the medical world in Russia. It was more particularly in the direction of improving the medical services of the army and navy that his professional activity found scope. The Napoleonic wars had given a stimulus to all departments of the army, and in 1811 the first Medical Department of the War Ministry came into existence. Wylie was its first director, and this post he retained until the year 1836. He took a prominent part in the campaigns of 1812 and 1813, and it was in recognition of this that, at the personal request of the Emperor Alexander, he obtained his knighthood, and later his baronetcy. He was knighted by the Prince Regent, who used the famous Cossack Platof's sword for the occasion, on board one of the Russian ships then lying off Portsmouth. In Russia his memory is perpetuated by the fact that attached to the Army Medical Academy, of which he was for many years the president, is a clinical hospital built from funds which he left for that purpose, and named after him. Its full name is the Michael Clinical Hospital of Baronet Wylie (pronounced in Russian *Vilié*), but it is more commonly known as the Wylie Clinique. It is not the principal clinical hospital of the Academy, but occupies three sides of a square, in the centre of which is a life-size statue of the founder on a high pedestal.[42] The cost of erecting the hospital was 943,000 roubles (nearly £100,000); it was opened in 1873. It contains 150 beds, made up as follows: 40 medical, 40 surgical, 20 ophthalmic, 30 obstetric and gynæcological, and 20 for children's diseases; 120 of the beds are free, the remainder are occupied by paying patients,

[42] The following is a more detailed description of the statue. The pedestal is of grey marble, the figure is seated, and holds in one hand the reformed statutes of the Academy; caryatides adorn the angles of the pedestal, and between them are bas-reliefs representing incidents in the life of Wylie. His coat of arms and that of the Academy also appear.

presided for so long, is Dr. Alexander Remmert, the corresponding position in the navy being occupied by Dr. Vladimir Kudrin.

XI.

The University Cliniques in Moscow.—Their Origin.—State and Private Generosity.—The Cliniques Described.—The Systems of Heating, Ventilation, Water-supply, &c.—The "Institutes."—The Operating Theatres.—The Hospital System in Russia.—Hospitals in Town and Country.—The "Hospital Statute."—The Medical Staff of Hospitals.

PRIVATE munificence and State and municipal liberality have combined to produce in Moscow one of the largest and best-equipped series of cliniques attached to a university to be found in Europe. Until some ten years ago the clinical work of the Moscow students was carried on in two large hospitals, the old and new Catherine (*Staraia-* and *Novaia-Ekaterininskaia*) Hospitals, in the centre of the town and not very far from the University buildings. But as far back as 1873 the need of wider accommodation for patients and of more modern clinical facilities for the professors and students had made itself felt, and in that year an elaborate scheme for a new clinique was proposed by one of the professors and submitted to the University authorities. It was warmly approved of by the medical faculty, but was for some reason rejected by the University Council, and consequently the scheme for a time came to nothing. But only for a time; nine years later it was revived at a more auspicious moment in consequence of the generous offers of two wealthy ladies, Mesdames Pashkalof

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and Morozof, who announced their readiness to provide funds for building two special cliniques, one of forty beds for obstetric cases and one of sixty beds for the treatment of nervous diseases. This was really the first step towards the realisation of the wishes of the medical faculty for new clinical buildings. In 1883 the University obtained authority to sell the ground and buildings of the old clinique, and to employ the sum thus realised towards the erecting of a new one. A commission was formed to carry out the scheme, and this commission was presided over by Professor Sklifosovski, the president of the organising committee of the International Congress about to be held in Moscow.

In the autumn of 1884 the municipality of Moscow most generously ceded to the University a large space of vacant ground on the *Diévitché Polé* (or "Field of the Virgin") as the most suitable site for the new clinique. The ground thus ceded was very nearly forty-five acres in area, and at about the same time this was increased by another most opportune gift of adjoining land. The second gift of land was due to the generosity of Madame Morozof, one of the ladies already mentioned, who had offered to build at her own expense a hospital of sixty beds for the treatment of nervous diseases, and who now presented the University with over fourteen acres of land upon which to build it. The Commission was thus relieved of one great difficulty and expense, that of finding an appropriate site for the new buildings. Matters now moved forward rapidly. A small committee of three, consisting of M. Bikovski, the architect of the University, and Professors Sréziref and Erismann, was sent abroad to study some of the principal foreign university cliniques. They visited Munich, Zürich, Berne, Strasburg, Heidelberg, Leipzig, Halle, Berlin, and Paris, and on their return a detailed scheme of the new buildings was drawn up. It was found that to carry this out completely a further sum of two and a half million roubles—that is to say, over £250,000—would be required; while even if only the most essential parts of the scheme were executed a sum of at least 1,711,000 roubles would have to be asked for. Ultimately, in the spring of 1886, the Government gave a grant from the treasury of 2,150,000 roubles, or about £220,000, for the purpose of building the new clinique. But the generosity of the State and of private individuals was not yet exhausted. In 1887 the Government voted an annual sum of 30,000 roubles for the endowment of the Psychiatric Clinique; in 1889 it granted two annual sums of 15,750 and 16,880 roubles respectively, for the Obstetric and Gynæcological Cliniques; and finally in 1890 the Council of State consented to grant in full the demands of the University for the furnishing and equipment of all the other cliniques and laboratories, and, with very slight reductions, to endow them with the sums asked by the University authorities. The most striking examples of private munificence, in addition to those already mentioned, have been the gift from M. Solodovnikof of funds to build the Clinique of Dermatology and Syphilis, the erection by Madame Bazanof of the Clinique for Diseases of the Ear, Throat, and Nose (at a cost of 515,000 roubles), and the donation of 70,000 roubles from Madame Barbe-Alexéief for the construction of the general out-patient department. Many of the cliniques bear the names of their generous founders.

It has been necessary to enter into some detail with regard to dates and figures, at the risk of appearing tedious, in order to give the reader some idea of the scale upon which the scheme of providing the first of Russian universities with adequate clinical accommodation has been conceived and carried out. From first to last, not far short of half a million sterling must have been expended upon it, while the annual grant from the State Treasury is considerably over 415,000 roubles (about £43,000). The buildings, which were erected from the designs of M. Bikovski, the architect of the University, and MM. Goedicke and Strom, of St. Petersburg, cover a space of ground measuring 3920 feet from N.E. to S.W. and 525 feet from N.W. to S.E. The "Field of the Virgin" upon which they stand is a large irregular open space, taking its name in all probability from the New Convent of the Virgin (*Novo-Diévitchi Monastyr*) close by. This striking and picturesque mass of ecclesiastic buildings, surrounded by high walls like some mediæval fortress and surmounted by a characteristic dome-capped tower, is one of the most interesting of the innumerable monasteries and convents in and around Moscow. It was founded in 1524 to commemorate the capture of Smolensk by the Russians from the Poles. The buildings of the clinique are about twenty minutes' drive from the Kremlin, which for practical purposes may be regarded as the centre of Moscow. The drive is a pleasant one—past the Temple of the Saviour, the immense cathedral with white walls and monster gold dome, built in memory of the famous incidents of 1812; along the *Pretchistinka* street, passing many of the small gaily-tinted churches and pleasantly gardened villas, which are as characteristic of Moscow as they are unlike the churches and houses of the more modern capital on the Neva; and finally, along one side of the "Field of the Virgin," by the Great Tsaritsyn-street (*Bolshaia Tsaritsynskaia*) until the clinique itself is reached. The convent makes an admirable landmark for the stranger uncertain of his way to aim at; and at a very short distance beyond are the famous Sparrow Hills, from which Napoleon first saw the gold roofs of Moscow, and which still afford the finest views to be had from anywhere of this wonderful city.

The clinical buildings nearest the town are those of the Psychiatric and the Ear, Throat, and Nose Departments; but as these lie off the main road to the left they will not at first be observed. The first clinical buildings which catch the eye are a series of two-storeyed, yellowish-white buildings on the right, running partly at an angle and partly parallel with the main road (see Fig. 5); and a taller, more ornate, red-brick structure on the left. The latter is the Children's Hospital, better known in Moscow as the Khludof Hospital, in honour of its founder, M. Khludof, who left a sum of half a million roubles (over £50,000) for the purposes of building such a hospital (see Fig. 10). Of the buildings on the right side of the road the first is a block containing the Obstetric and Gynæcological Cliniques, lying at an angle of 45 degrees with the main road, and quite close to the Church of St. Michael the Archangel, the church attached to the clinique (see Fig. 8). Continuing along the Great Tsaritsyn-street, and still on the right-hand side, will be found the Faculty Cliniques, medical and surgical, a two-winged building with a common entrance in the centre. It is the open space in front of this entrance which has been chosen as the most appropriate site for the statue of Pirogof, the unveiling of which is to form one feature of the congress week. Some distance further on is an almost identical building, containing the surgical and medical hospital cliniques. (The difference between a faculty clinique and a hospital clinique was explained in a previous chapter.) Still further is the Clinique for Skin Diseases and Syphilis, a handsome building of quite different architectural character from those already described. It is easily recognised by its corner-wise position and its brilliant white colour; it consists of a central block with Corinthian columns ornamenting its face, and two wings, one parallel and the other at right angles with the main road. The end of the "Clinical Townlet" (*Klinitcheski gorodok*), as this great series of hospitals is familiarly called, is now almost reached in this direction. Lying back from the main road on the right may be seen a side view of the Institute of Pathological Anatomy, which will be mentioned again later; and beyond this are the four detached "barracks" for the reception of children suffering from infectious diseases. This completes the list of buildings in the Great Tsaritsyn-street. Behind and running nearly parallel with it is a second series, divided from the first by another street, which, as it is not a public thoroughfare, but the exclusive property of the clinique, has not received any name. Following this road and taking the second series of buildings in the same order as the first, it may be said to begin with the Institutes of Hygiene, General Pathology and Pharmacology, all in one block, situated directly behind the Faculty Cliniques. Next to this are a number of important and useful, if less interesting, institutions—the kitchen, laundry, disinfection chambers, artesian wells, and water-tower. Still further along are the Propædeutic Wards (i.e., the preliminary clinical wards for the instruction of third-year students in the elements of clinical observation) and the Ophthalmic Hospital. A long stretch of garden is now reached, in which are some of the professors' residences and a block of dwellings for the servants and attendants. Directly facing the end of the road and bringing it to an abrupt termination is the façade of the Institute of Pathological Anatomy (already briefly mentioned), and in this same block of buildings are contained also the Institutes of Legal Medicine and of Operative Surgery.

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The number of beds made up in the various hospitals that have been just enumerated is as follows :—

Name of Clinique.	Professor's name.	Number of beds.
Surgical Faculty Clinique... ...	Professor Bobrof	80
Medical ,, ,, ...	,, Popof	67
Surgical Hospital ,, ...	,, Sinitzin	83
Medical ,, ,, ...	,, Oströumof ...	82
Nervous Diseases ,, ...	,, Kojevnikof ...	44
Propædeutic ,, ...	,, Tcherinof ...	48
Ophthalmic ,, ...	,, Krukof	34
Contagious Diseases ,, ...	,, Filatof	32
Psychiatric ,, ...	,, Korsakof... ...	50
Obstetric ,, ...	,, Makéief	40
Gynæcological ,, ...	,, Snégiref... ...	40
Dermatological ,, ...	,, Pospiélof ...	60
Throat, Ear, and Nose Clinique	—	15
	Total	675

It will be impossible, and it would, in fact, be superfluous, to describe here in detail all the wards, laboratories, lecture theatres, operating and dressing theatres, waiting-rooms, microscope rooms, Roentgen-ray rooms, bath-rooms, and offices—in a word, all the component parts of one of the completest of modern cliniques. Members of the Congress will have frequent opportunities during their stay in Moscow of seeing these for themselves, for clinical demonstrations will be held almost daily, and many of the sectional meetings of the Congress will take place in the theatres of the clinique. But some general impressions and notes gathered on the occasion of two visits to this city of the sick, and supplemented by the detailed information in the official description of the clinique published specially for the members of the Congress (for advance proofs of which thanks are due to the courtesy of Professor Klein, Dean of the Faculty of Medicine), may be of interest.

The various cliniques, general and special, differ to some extent in details, but the general principles upon which they are constructed are common to them all. They are all built on the system of separate blocks with lateral corridors. In the wards an air space has been allowed of 1489 cubic feet (45 cubic metres) per patient. The height is 14 ft. (6 *arshins*), and consequently the floor area for each bed is just over 100 square feet. In almost all the cliniques there will be found on entering a large hall or vestibule, where coats, hats, and sticks are left in charge of a *suisse*. This may seem an unnecessary statement to make, but it may not be known to some who have not visited Russia previously that on entering any building whatever, be it to make a call of only two minutes' duration, it is the unalterable custom to leave the overcoat as well as the hat and stick or umbrella in the hall. To enter a Russian dwelling-room in an overcoat is scarcely less discourteous than to enter it with one's hat on. A few steps usually lead up from the hall to the ground floor corridor, off which lead the wards and other rooms and offices. The corridors, 12 ft. in width, are features of all the cliniques. With their colour-washed walls of cream or pale blue and dado of oil-paint, with their polished oak parquet-floors, their large double windows, their comfortably warmed and artificially moistened air, and their polished pine-wood tables and benches (for the patients take their meals here), these corridors present a distinctly attractive appearance, and serve as excellent promenades for patients who are not confined to their beds. Here, as in the wards, all angles of walls, floor, and ceiling have been well rounded off to prevent lodgment of dust. A word may also be said of the broad stone staircases leading to the upper storeys, upon which, in many instances, will be found a second large vestibule or landing hung with lavishly-framed portraits of members of the Imperial family or of the "donors" of the particular clinique. The first impression upon entering the wards is one of comfort and cheerfulness. The wards are for the most part small, rarely containing so many as a dozen patients in each. The beds stand at some distance from the walls, and, at least in some wards, each of the legs of the bed is inserted into an india-rubber cup, which materially lessens the chances of jarring and external shocks. The clean white blankets are a pleasant change from the grey blankets met with in most Russian hospitals. The walls are treated in the same way as those of the corridors, and the floors are of the same oak parquet, which is thought to be as hygienic as any other material, and is certainly the most pleasant-looking of all hitherto suggested for this purpose. In all the cliniques the professor has a most comfortable and even luxurious private cabinet. In that of Professor Pospiélof, the courteous professor of dermatology, and probably in others, are two articles of furniture deserving of mention. One is a neat disinfecting chamber in which the professor's blouse (large white blouses are worn by all the staff when at work) or coat can be disinfected by dry heat in a very short time. The other is a washing-stand of French manufacture, consisting of a light plated-steel frame on rubber-covered wheels, and supporting a plate-glass basin and reservoirs for water and disinfecting solutions. It appears to be the perfection of a hygienic washing apparatus.

The wards and all the other parts of the cliniques are artificially heated by hot-water pipes sunk in the lower part of the walls. The pipes in the wards are about two inches in diameter (some of the main pipes are as broad as eight inches), and at intervals the heating surface is increased by a number of square transverse plates or wings of metal at right angles to the pipe. The water is heated by naphtha furnaces in special out-buildings. Ventilation has been carefully provided for. The foul air is artificially extracted through openings, in all cases as near the floor as possible; fresh air, warmed and moistened by a specially designed and somewhat elaborate apparatus, is admitted through grilled openings about two-thirds of the distance up the walls. In summer the large windows (of double parallel sashes 8 in. apart, like all windows in Russian buildings) can be opened and allow of a very thorough aeration of the buildings; but in a climate like that of Moscow some carefully-planned system of artificial ventilation, such as the one here briefly described, is a necessity in the long and intensely cold winter. It is but fair to add that in a visit paid to several of the cliniques late in November there was no perceptible stuffiness or draughtiness—the Scylla and Charybdis of all artificial systems of ventilation—in any of the wards; on the contrary, the air felt pleasantly warm and at the same time fresh and sweet. It is almost superfluous to state that the electric light is laid on in all parts of the clinique. The water-supply is derived from an artesian well, and a second such well is now being bored to increase the supply. The present yield of the one well is about 78,000 gallons daily. The clinique as a whole has a system of drains and sewers of its own; the sewage is carried to a large plot of land, the property of the clinique, near the banks of the River Moskva, where it is employed for purposes of irrigation.

It is impossible to close these notes upon the clinique without some reference to the fine series of operating theatres, laboratories, and lecture theatres which it contains. The so-called "Institutes," whether of Hygiene, Anatomy (see Fig. 9), or any other branch of medical science, are goodly-sized buildings containing series of well-fitted laboratories (bacteriological, biological, chemical, physical, &c.), and large lecture theatres, museums, and libraries. But there are also theatres and laboratories, and in many cases small libraries and museums, attached to the clinical buildings as well. Most of the cliniques have rooms for carrying out microscopical, bacteriological, and chemical investigations in connexion with the cases under treatment, and all have lecture theatres. The lecture theatre is generally a room well lighted from the top, and with seats for 200 or 300 students arranged in the usual amphitheatre fashion. There are many operating theatres, not only attached to the surgical wards proper, but also in some of the special departments, as, for example, the Ophthalmic, the Dermatological, and the Obstetric and Gynæcological Cliniques. As they are all more or less alike in general principle the operating-rooms of the Surgical Faculty Clinique may be taken as good typical examples. This clinique was formerly under the charge of Professor Skifosofski, and is now in the hands of Professor Bobrof. There are two operating theatres attached to it—a large and a small—the latter known as the "Laparotomy Theatre," but in reality reserved not only for laparotomies, but for all operations which involve the opening of the great cavities of the body. The large operating theatre is horseshoe-shaped, and having a large gallery in addition to the amphitheatre of seats can accommodate nearly 300 spectators. The floor is of asphalte, painted with oil paint. The table is lighted by an immense window behind it, measuring about 24 ft. in height and 13 ft. in width; this window, instead of being double like other windows is triple, a hot-water pipe passing between the two outer sashes to warm the air between them in winter. The principal articles

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of furniture in the theatre are two plate-glass cupboards for the instruments; a glass table upon which to place those used during an operation; a marble basin in which to wash them after the operation; a long marble table for the dressings and other apparatus; two vessels for sterilising the instruments by means of boiling; sterilisers for preparing the aseptic dressings; and high stands for the antiseptic or aseptic solutions. The operating tables are quite simple, are constructed of either wood or zinc, and move absolutely noiselessly and imperceptibly upon rubber-covered wheels. The patient is anæsthetised in a separate room outside the theatre, and it may be added that chloroform is the anæsthetic most often employed. The so-called "Laparotomy Theatre" is much smaller than the large theatre, and students are admitted to the operations here in groups of not more than twenty at a time. There are no seats, but the floor is raised a few feet round the central space reserved for the operator and his assistants. The temperature is kept constant at 18° R. (72·5° F.) when operations are being performed. Admission to the wards of the clinique is not quite free; patients in the general wards pay a small fee of 9 roubles (less than £1) per month. Those in private wards pay from 50 to 150 roubles (roughly from £5 to £15) a month. The professors, however, have discretionary powers to admit deserving cases to the general wards without charge, provided that the number thus admitted does not exceed 40 per cent. of the total number of patients.

It may interest some readers to add here a few words as to the method by which hospitals, as a rule, are supported in Russia. It is the rare exception, if indeed any such exist, to find a hospital dependent upon the voluntary contributions of the public. In the towns the hospitals are generally supported by the municipalities. A tax of about a rouble or a rouble and a quarter per annum is levied upon all persons below a certain social position—that is to say, roughly, upon all persons of the labouring classes and servants—and this entitles those who have paid it to free treatment in the municipal hospitals. The tax is easily gathered, as under the system of passports prevailing in Russia every person's passport must be stamped by the authorities once a year, and at that time the hospital tax is paid. There is at present some talk of altering this system in St. Petersburg. It is proposed in this city to levy a general tax of 2 roubles a year upon every citizen in support of the hospitals, but the proposal is already meeting with some opposition. In the smaller towns and in the country a sufficiency of hospital accommodation is guaranteed to the artisan class by an Imperial ukase of the year 1860, in accordance with which all factories and large trade establishments are compelled to maintain small hospitals providing at least one bed to every 100 workmen, and the proprietors are forbidden to take pay of any kind from the workmen in support of the hospital. This law, however, does not apply to the capitals or to Warsaw, and it has been pointed out in a recent controversy on the subject that this tells rather unfairly on the working classes in these cities, for they are compelled to pay a hospital tax, while their fellows in the provinces are exempt from it. In the country generally the hospitals are supported by the *zemstvos* of either "government" or "district"—those local governing bodies to which frequent reference has already been made in these notes.

All these hospitals, whether supported by the State, by municipalities, or the *zemstvos*, whether founded by the charity of private individuals or by one of the great central charities briefly alluded to in an earlier chapter, are administered on the same principles—the principles laid down in the "Hospital Statute" (*Ustav létchebnuikh zavedinii*) of 1893. Under this Statute hospitals which take in more than 15 patients are divided into four classes, according to the number of beds they make up. Those with more than 300 beds belong to the first class; those with from 101 to 300 beds to the second class; those with from 61 to 100 to the third class; and the fourth class includes those with from 16 to 60 beds. The exact mode in which the institution is to be conducted, the duties of each member of the staff, the method of admitting patients, and many other matters, are defined with much exactitude in the Statute. Without venturing to enter on the impossible task of trying to compress into a small space all the complicated details of a Statute such as this, it may suffice to mention one or two facts relating to the medical staff.

The management of a Russian hospital is, to a very great extent, concentrated in the hands of the so-called *glavnui vratch*, or "head physician," a title which does not at first sight indicate what the manifold duties and responsibilities of such an office really are. The "head physician" has not only the entire control of the medical details of the hospital, but all administrative and domestic matters in connexion with it are under his direction. The office is, as a rule, only attained by comparatively senior men; the work it entails in a hospital of any size is very arduous and the responsibility great. The *glavnui vratch* always lives within the precincts of the hospital and is the real mainspring of the institution. In hospitals of the first three classes he is assisted by a hospital board (*pravlenié bolnitzui*), which consists of two of the medical men on the staff, who serve in turn, and the superintendent. The medical staff consists of "consultants," "senior" and "junior staff doctors" (using the word "doctor" as including physician and surgeon), and "ward doctors" (*palatnui vratch*) corresponding to house physicians and house surgeons. Hospitals of the first two classes have a "prosector," or pathologist, and a superintendent (*smotritel*), who has charge of the domestic arrangements and is responsible for all the stock of the hospital, except the surgical instruments. The *feldschers* have already had a chapter devoted to themselves. It only remains to mention the nurses. A great part of the nursing is done by the *feldschers;* they attend the physician or surgeon at his examination of the patients, enter his orders in a book, and transmit them to the nurses proper; they do most of the dressing of the minor surgical cases, and many of the other duties which we are accustomed to see performed by the nurses are performed by the *feldschers*. The nurses are, as a rule, called "sisters of mercy" (*sëstra miloserdii*), a title which does not, however, imply that they have taken vows or are members of any religious sisterhood, though many are attached to the Red Cross Society or other analogous associations. They are assisted in some of the rougher work of the wards by female ward attendants known as *sidiélki* (from *sidiét*, to sit), who may be defined as half nurses and half servants.

XII.

Russian Medical Celebrities of the Present Century.—The Lives of two selected.—Outline Biographies of Pirogof and Botkin.—The Pirogof Medical Society.—The Pirogof Statue in Moscow and Museum in St. Petersburg.—The Botkin Hospital and Journal.—Conclusion.

IN the history of medicine in Russia during the present century, which has of necessity been somewhat disconnectedly told in these pages, the names of many distinguished Russian physicians and surgeons are met with, whose services to the profession should entitle them to more than a mere passing mention. Such were Pirogof, Inozemtzef, Dobroslavin, Pelican, Tchistovitch, Zdekauer, Botkin, and others, to name only those who are no longer living. It is impossible here to give a detailed notice of their lives and labours; and exigencies of space will permit of a brief account of two only, the two whose names open and close the list just given and who have, perhaps, gained a wider reputation outside their own country than any of the others mentioned.

The fame of Nicolaus Ivanovitch Pirogof is assured perpetuity from the fact that his name is associated with a certain operation which he devised and practised. To most Englishmen he is probably known solely as the originator of a mode of amputating the foot; but he has, in truth, far wider claims to recognition. He was not only a great anatomist and surgeon, but he was also a most capable administrator—reformer in the best sense of the term—and an interesting and thoughtful writer. More than this, he was the first to use anæsthetics widely in military surgery; he foreshadowed the modern system of ambulances, Red Cross Societies, and aid to the sick and wounded in time of war, and he introduced nursing by women into Russian hospitals, military and civil. The facts of his life may be briefly told. Pirogof was born in 1810; he was the son of an official in the commissariat department of the army. He entered the University of Moscow at the age of fourteen, and he was only seventeen when he obtained the title of *lékar*. He at

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once entered the "Professorial Institute," a kind of college which then existed for the preparation of young graduates who intended to aim at a professorial chair. Even for those times this was an extraordinarily quick career and an unusual position for one of his years. Subsequently, he was for four years Professor of Surgery at Dorpat, and in 1840 he was appointed to the chair of Hospital Surgery in St. Petersburg. He soon became one of the leading consultants of the day in the capital.

FIG. 12.



Nicolaus Pirogof, the great Russian Anatomist and Surgeon.

In 1847 the use of anæsthetics during surgical operations was introduced into Russia and the first operations performed under ether were performed by Pirogof. He published the results of his experiences with the new method in an essay, written in French, and this came to the knowledge of the Emperor Nicholas I. Russia was then at war with the Turks, and the Czar—to his eternal honour be it recorded—at once commanded Pirogof to proceed to the seat of war in the Caucasus and test the practicability of employing anæsthetics in the field hospitals. Pirogof seems to have been the first great surgeon to employ anæsthesia largely on the battle-field. He published an account of his work in this campaign in a book called "Rapport d'un Voyage au Caucase," issued in 1849. In 1848 occurred the great epidemic of cholera, the worst of the century. Pirogof, who was a keen pathologist as well as an anatomist and surgeon, made as many as 800 necropsies upon the bodies of patients who had died from cholera. Shortly afterwards he published his valuable work on "The Pathological Anatomy of Asiatic Cholera." From 1849 to 1852 he was busy in his work as professor, as director of the Anatomical Institute, and as consultant to six of the large city hospitals. The "Annals of a Hospital Clinique" was his principal literary labour at this time; and it was in this periodical, which was printed in German, that he first described the operation which has since borne his name. In 1854 his splendid Anatomical Atlas appeared, and shortly after this he was sent to the seat of war in the Crimea. He inspected all the field hospitals on the Russian side, and was himself in charge of the barrack hospitals at Simpheropol. He has left a vivid, if harrowing, description of the sufferings of the troops in the intense cold of the Crimean winter. It was his experience here, and his recognition of the many unnecessary and preventable horrors of war, which led him to propose the reforms in the direction of aid to the wounded which have already been briefly alluded to. Soon after the war he published a series of interesting and suggestive essays under the title of "Questions of Life," and among the "questions" there discussed the problems of education in its widest sense were treated at perhaps greater length than any others. It was probably the views he there expressed that led to his selection by the Emperor Alexander II. for the appointment of Curator of the Odessa Educational District—a post the nature of which was explained in an earlier chapter. After a short period he was transferred to the same appointment in the Kief district; but unfortunately his views on the relationship existing between the universities and the Government did not coincide with those of the Minister then in power. It was about this time that he published his long pamphlet upon "The University Question," in which he claimed for the universities and for the students greater freedom of literary and scientific discussion and fuller powers of self-government than they then had. The pamphlet was prohibited, and Pirogof felt himself in honour bound to resign his appointment.

In 1870 he went as the representative of the Russian Red Cross Society to the Red Cross Conference in Berlin, and at the same time he took the opportunity of inspecting a large number of the field hospitals on both sides in the Franco-Prussian war. He has left a description of this tour in a work published in St. Petersburg in 1871. Six years later the Russo-Turkish war broke out, and in September, 1877, Pirogof, though he was then sixty-seven years of age, was sent to Roumania by the Russian Red Cross Society. His experiences of this war were also published in book form on his return to St. Petersburg. In 1881 he completed his fiftieth year of public service, and although his health had already begun to fail he could not refuse the invitation of his Moscow colleagues to attend a festival organised in Moscow in his honour to commemorate the occasion. He himself knew at this time that he had not many months to live, though he hid the fact from others that he was suffering from malignant disease. He died four months later, on Oct. 27th, 1881.

Intending members of the Congress about to meet in Moscow may be glad of this outline, however brief, of the life of Pirogof, for his name will be on many lips at that time. During the Congress week in Moscow his statue, which has been raised in front of the university cliniques, is to be formally unveiled; and in the following week in St. Petersburg the new "Pirogof Museum," attached to the Army Medical Academy, the nucleus of which is the splendid anatomical and surgical collection made by Pirogof himself, will be officially inaugurated.

FIG. 13.



Professor S. P. Botkin.

Sergé Petrovitch Botkin was Pirogof's junior by many years, but their lives touched at many points. He was born in Moscow in the year 1832, and was a graduate of that University. He had not long taken his degree when, in 1854, he was commanded to the Crimea with Pirogof, where he was placed in charge of the "typh" wards—the word "typh" including all cases of both typhus and typhoid fevers. His defective eyesight, from which he suffered all his life, unfitted him for the practice of surgery, and he henceforth devoted himself entirely to the medical side of the profession. After the war was over he spent some years abroad, studying under Virchow, Rokitanski, Hoppe-Seyler, and others. He returned to Russia in 1860, and was shortly afterwards appointed to the Faculty Chair of Clinical Medicine in the Army Medical Academy in St. Petersburg. His career in the

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capital was for many years one of unbroken success. He soon attained the position of the foremost consulting physician in the City. In 1872 he was appointed physician to the Court and accompanied the Empress Marie Alexandrovna, who was then ailing, to the Crimea, which he had before visited under such very different circumstances. It was in the same capacity of *leib-medik* that in 1877 he went in the suite of the Czar to the seat of war, and he has left some interesting reminiscences of what he saw of the Russo-Turkish campaign. In the following year occurred the outbreak of plague on the lower reaches of the Volga. A case presenting some suspicious symptoms was admitted into Botkin's wards in St. Petersburg, and in an unfortunate moment he let it become known that he regarded it as a mild case of plague. Something like a panic occurred in the city, and it has been necessary to record the incident here, for the storm which in consequence broke over Botkin's head and the gross and unfounded charges made against him of having spread the rumour to suit his own private ends told seriously upon his health. He suffered severely from attacks of angina; and later hæmoptysis appeared. He tried many health resorts, Russian and foreign, to gain relief, but with very partial success. His reputation in St. Petersburg had been little shaken by the incident just related, and he continued to occupy his honourable position in the profession until his death. He died at Mentone on Christmas-eve, 1889. His literary works included many essays on various clinical subjects and upon matters connected with public health. It should be added that he was the first medical member ever elected to the St. Petersburg municipality, and that he was president of the Commission appointed by the Government in 1886 to inquire into the sanitary condition of the empire and the means for improving it.

The names of both Pirogof and Botkin have since their death been attached to certain institutions founded to commemorate their labours in the cause of medicine. Even before Pirogof's death the proposal was made to form a medical society which should bear his name. Under the title of the "Society of Russian Practitioners in Memory of Pirogof" this has since become the most representative of all Russian medical societies. Conferences lasting eight days are held under its auspices, at intervals of from one to three years, in one of the capitals or more important provincial towns; and these meetings are attended by large numbers of medical men from all parts of the empire. The society is, in fact, in not a few points closely analogous to the British Medical Association.

The memory of Botkin is perpetuated by the name of one of the most important of the municipal hospitals in St. Petersburg, known as the "Barrack Hospital for Infectious Diseases in Memory of Botkin," and by the fact that a medical journal is published weekly in St. Petersburg under the title of *The Botkin Hospital Gazette* (*Bolnitchnaia Gazeta Botkina*).

With this condensed account of the life and work of two great representative Russians, surgeon and physician respectively, the present notes upon the past and present of medicine in Russia may fitly come to a close. The lives just told may be taken as types of the lives, *mutatis mutandis*, of the Russian physicians and surgeons of to-day, with many of whom Englishmen who go to the approaching Congress will have an opportunity of becoming acquainted, but of whom it would be an impertinence to speak here in terms of eulogy. Brief *curricula vitæ* of some of the more distinguished Russian medical men of the day, more particularly of those officially connected with the Congress, have already been given in the notes upon the Twelfth International Medical Congress. But if living individuals may not be praised, living institutions may; and of the medical institutions of Russia it may truly be said that they are worthy of the great country which has given them birth, of the great people by which they are supported, and of the great profession which has brought them to their present admirable state of development.

"FLOREAT MEDICINA ROSSICA."

PRINTED and PUBLISHED by the REGISTERED PROPRIETORS at No. 423, Strand, and Nos. 1 and 2, Bedford-street, Strand, in the Parish of St. Martin-in-the-Fields, Westminster, in the County of London.

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midst, but it may be that ere we succeed in bringing about its total extinction an increased phase of activity of the virus will show us some weak spots in cities other than Liverpool and Dublin.

DR. H. R. SILVESTER: AN UNREQUITED BENEFACTOR.

IT unfortunately happens only too often that benefactors of their fellow men fail to obtain any personal reward or distinction for the important services which they have rendered. A conspicuous example of this kind has lately been suggested to us by a correspondent in the course of a letter on the "Silvester method" of restoring persons after apparent death from drowning and other causes of asphyxia. There can be no doubt that the community has benefited immensely by Dr. Silvester's discovery, the Royal Humane Society alone having recorded hundreds of instances in which it was the means of saving the lives of persons who were to all appearance drowned. Not only the Royal Humane Society, but the Admiralty, the Board of Trade, the Emigration Board, the Coast Guard Service, the National Lifeboat Institution, and various life-saving societies, both in this country and abroad, have approved of the method and directed it to be used by their officials, and in various publications have carefully described the details of the process for the information of seafaring men and the world at large. Dr. Silvester, however, has received only one recognition of his services to the public, the Fothergill medallion, awarded by the Royal Humane Society, a high honour it is true, but the circumstances are exceptional, for the lesson which Dr. Silvester has taught is one to be learned, not only by the medical profession, but by the thousands whose business or pleasure leads them into positions where life may be lost by drowning. The "Silvester method" is, in fact, one of the most useful of life-saving devices, its discoverer happily is still with us, and the present time, when he is retiring from the practice of his profession, would seem to be a fitting occasion for some public appreciation of his valuable work.

MR. RALPH STOCKMAN, M.D., F.R.C.P. Edin., F.R.S. Edin., who has been appointed to the chair of Materia Medica and Therapeutics in the University of Glasgow by the Crown, in room of the late Professor Charteris, holds the position of Lecturer on Materia Medica and Therapeutics in the Edinburgh Extra-mural School, and is Examiner in Materia Medica in the University of Oxford. He has also held the post of Examiner in the same subjects at Victoria and Glasgow Universities.

THE date of delivery of the Bradshaw Lecture by Dr. Markham Skerritt has been fixed for Nov. 4th, 1897. On Nov. 11th Dr. Pavy will deliver a lecture supplementary to his previous Croonian Lectures. The Gulstonian Lectures for 1898 will be delivered by Dr. J. Rose Bradford, the Lumleian Lectures by Sir R. Douglas Powell, and the Croonian Lectures for 1899 by Dr. J. B. Bradbury.

AMONG their appointments to Science Research Scholarships Her Majesty's Commissioners for the Exhibition of 1851 have placed the name of William Alexander Osborne, M.B., of Queen's College, Belfast. These scholarships are of the annual value of £150 and are tenable for two years, and, under special circumstances, for three years.

THE Treasury have appointed a small committee to consider and report upon the desirability of establishing a National Physical Laboratory for the testing and verification of instruments for physical investigation and for other similar purposes. Lord Rayleigh will be chairman, and with him are associated several leading physicists.

AT the Viceregal Lodge, Dublin, on Aug. 2nd, his Excellency the Lord-Lieutenant conferred the honour of knighthood on Mr. George F. Duffey, M.D. Dub., President of the Royal College of Physicians of Ireland; and on Mr. William Thomson, M.D. Q.U.I., President of the Royal College of Surgeons in Ireland.

ENGLISH visitors to the Moscow Congress who may avail themselves of the opportunity of passing through Hamburg are assured of a welcome by the profession there. In another column we publish a letter by Dr. Kümmell, of the Allgemeines Krankenhaus in Hamburg, on this subject.

WE have received from the Foreign Office a Programme of the Conference which is to be held on the subject of Leprosy at Berlin from Oct. 11th until Oct. 16th next. Intending members should communicate with Dr. E. Ehlers, 6, Lanegarde, Copenhagen.

AT a meeting of the Council of the Metropolitan Hospital Sunday Fund held on Thursday, Aug. 5th, at the Mansion House, the sum of nearly £40,000 was recommended to be paid to 132 hospitals and 56 dispensaries.

SIR CHRISTOPHER NIXON, M.D. R.U.I., has been appointed Representative of the Royal University of Ireland on the General Medical Council, in lieu of Sir John Banks, resigned.

THIRTY-FIVE duly qualified medical practitioners have applied for the post of superintendent of the Aberdeen Royal Infirmary.

THE London University Commission Bill has shared the fate of other opposed measures and has been withdrawn.

Pharmacology and Therapeutics.

TREATMENT OF HYDROCELE BY CARBOLIC WATER.

WHAT appears to be both a simple and effective method of dealing with hydroceles has been practised for the last couple of years by Dr. Pilate and Dr. Vissemans in the Orleans Military Hospital. It consists in the washing out of the cavity of the tunica vaginalis—after evacuation, of course—with a weak solution of carbolic acid. The surface is first cleaned with soap and brush and then washed with a solution of perchloride of mercury. The trocar is then inserted, and after the serous fluid has been drawn off warm carbolic water of the strength of 3 per cent., which has been previously boiled, is injected. This is allowed to come out, and is seen to be turbid, containing fibrinous flocculi. The washing out is repeated four or five times until the liquid emerges from the cannula quite clear. The instrument is then withdrawn and the puncture closed in the usual way, a suspensory bandage being put on. Owing to the anæsthetic effect of the carbolic acid the patient feels no pain. Some further effusion into the sac usually occurs in four or five days, but this soon subsides and the patient can resume his ordinary work. He is advised, however, to continue to wear the suspensory bandage for a time. This treatment has proved quite satisfactory, but is only recommended in simple cases occurring in young subjects.

NUTRITIVE EFFECT OF SUBCUTANEOUS INJECTIONS OF OIL.

Dr. Fornaca and Dr. Michell, of Professor Bozzolo's clinic in Turin, have made a series of trials of the effects to be obtained by injecting oil under the skin. They find that a dose of from 30 to 200 grammes introduced in this way is rapidly absorbed, and that it produces a marked decrease in the quantity of nitrogen eliminated, thus of course allowing more to remain in the tissues without undergoing metabolic change, the body weight increasing and the general condition being improved. It would appear that oil introduced subcutaneously has much the same nutritive value as when it is ingested, and produces better effects that when it is injected per rectum. Indeed, it seems to these investigators that the hypodermic might be substituted for the rectal method in most

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of the cases in which the latter is usually employed. Two of the subjects on whom observations were made were suffering from diabetes. In one of these cases 1780 cubic centimetres were injected in the course of thirteen days, and produced a remarkable diminution in the quantity of nitrogen eliminated and in the amount of sugar excreted, together with a slight increase in the body weight. No alteration was found in the quantity of urine passed. In the other case it was not possible to inject more than 310 grammes in four days, but even this small amount produced some decrease in the amount of nitrogen eliminated.

RECTAL FEEDING IN TYPHOID FEVER.

For some time past Dr. Queirolo, Professor of Clinical Medicine in the University of Pisa, has been in the habit of feeding his cases of typhoid fever entirely by the rectum in order to afford the diseased bowel complete rest. The nutrient enemata are given four times daily, and consist of triturated meat and pancreas with a few drops of laudanum, each injection being preceded by irrigation of the bowel with boracic acid—the plan, in fact, advocated by Leube. The patients are allowed to drink hydrochloric acid lemonade. In this way the digestive tract is preserved from putrescible substances, and this Dr. Queirolo considers obviates one of the most fruitful sources of auto-toxic action. All the cases treated on this system, many of them of a very severe type, are stated to have recovered.

The Lancet Special Commission
ON
SICILY
AS A HEALTH RESORT.

V.[1]

Consideration of the Suitability of Sicily as a Health Resort for cases of (1) Bronchitis and Bronchial Asthma; (2) Laryngeal Affections; (3) Impaired Convalescence; (4) "Scrofula" and "Lymphatisme"; (5) Senile Affections; (6) Anæmia and Chlorosis; (7) Nervous Diseases; and (8) Phthisis.—Sicily as a Summer Station.—Gibilmanna.—Accommodation in Sicily.—Deficiency of Artificial Attractions.—Question of Brigandage—Season for Visiting Sicily—Richness of Sicily in Matters of Historic and Antiquarian Interest.—Renan and Goethe.—Concluding Remarks.

IN the previous articles the data—meteorological and botanical—for forming a correct estimate of the climate of Sicily have been sufficiently set forth. It was found that the climate was intermediate between that of Europe and Africa, and that its leading characteristics were warmth, mildness, brightness, breeziness, equability, and moderate humidity, and that the proportion of fine weather, free from extremes, was remarkably high. It was further pointed out that the physiological action of the climate upon the human organism might be described as (1) moderately tonic and (2) sedative. It remains to inquire in detail what are the morbid conditions likely to be benefited by a temporary residence in Sicily—or, in other words, what is the special utility of the island as a health resort. The following statements embody the experience and opinions of the leading Sicilian physicians who have been kind enough to furnish THE LANCET Special Commissioner with their views.

(1) *Bronchial affections, especially the dry and irritable varieties, and including bronchial asthma*—All authorities are unanimous that these affections do exceptionally well in Sicily. That is a conclusion which theoretical considerations would strongly suggest, and which practical experience is found to corroborate. A climate which is warm without extreme heat, neither excessively dry nor excessively humid, almost exempt from frost, snow, and cold winds, and which presents a remarkable degree of diurnal, mensual, and annual equability would naturally suggest itself as highly favourable for bronchial affections Further, the unquestionably sedative influence of the climate upon the nervous system adds the additional element which is desirable in bronchial affections of an irritable or spasmodic type. On the other hand, cases of bronchitis attended by profuse secretion, whether or not amounting to actual bronchorrhœa, do not progress favourably in Sicily, inasmuch as they require a drier atmosphere. Bronchial asthma is well known to be a most erratic affection, for which it is difficult to select a suitable climate, but all the Sicilian observers are unanimous that, on the whole, it does well in Sicily.

(2) *Laryngeal affections.*—The remarks just made with regard to bronchial affections may be substantially repeated with regard to laryngeal affections. The dry and irritable varieties do extremely well in Sicily—the moist varieties do not do well. Tuberculous laryngitis will be considered in connexion with phthisis.

(3) *Impaired convalescence after wasting diseases, after-effects of the specific fevers, malaria, bone and joint diseases, pneumonia, pleurisy, &c.*—This large class of patients on the whole do well in Sicily. The mildly tonic influence of the climate seems to promote the recuperative processes without stimulating the dregs of these diseases to renewed activity. The large proportion of mild, sunny weather permitting regular exercise almost daily is much in favour of these cases. Convalescents sufficiently advanced towards recovery to require a distinctly bracing climate should not be sent to Sicily.

(4) *"Scrofula" and "lymphatisme."*—These cases do well in Sicily for reasons analogous to those which render the climate favourable for convalescents. As regards British patients of this class, only the more delicate cases are suitable for Sicily. The more robust patients will generally be found to do better at Margate, Broadstairs, Folkestone, or perhaps Biarritz.

(5) *Senile affections*—These cases do well in Sicily, the warmth and equability of the climate and its mildly sedative influence being highly favourable to them. Elderly patients, who are free from grave organic disease, but who feel the weight of years and are depressed by the gloom and cold of the British winter, would in most cases benefit decidedly by wintering in Sicily. The bronchitis and dyspepsia from which they so often suffer would be relieved, and the generally mildly tonic influence of the climate suits their case. These patients are often sent to the Riviera, and frequently with benefit, but the Riviera climate is too exciting for many of them—insomnia resulting—and the mistral tries them severely.

(6) *Anæmia and chlorosis.*—These cases do well in Sicily, the large amount of sunshine and ample facilities for outdoor exercise promoting digestion and sanguification.

(7) *Irritable nerve affections, including hysteria and neurasthenia.*—These cases are likely to benefit by the mildly sedative influence of the Sicilian climate. The great scenic attraction of the island and its historic and antiquarian interest may prove valuable in certain cases of nerve disorder. Insomnia will probably be favourably affected.

(8) *Phthisis.*—This disease requires somewhat fuller consideration for various reasons. It is the chief disease for which climatic change is usually sought, its climatic treatment is admittedly a very difficult matter, and the Sicilian physicians are not unanimous regarding the results obtained at the Sicilian sanatoria. It has been shown that phthisis is common in Sicily, but that its prevalence is below the general European average, and Professor Ugetti's remarkable figures tending to show the comparative exemption of Catania have been given, although they cannot be regarded as in any sense final and conclusive. The Sicilian practitioners in general are guarded in their statements respecting the results of treatment obtained among foreign phthisical patients wintering in Sicily. Many cases would appear to do well, some very well, and even the least promising cases—e.g., laryngitis tuberculosa—are sometimes relieved, but the general results are doubtful in nature, and the suitability of the climate for phthisical patients is still a moot point. Where practical experience speaks with doubtful voice it is fair to inquire what light can be thrown on this important subject by the general principles known to apply to the climatic treatment of phthisis. Are there cases of the disease likely to benefit by wintering in a climate characterised by warmth, mildness, equability, moderate humidity, &c., or not? Are there cases, on the other hand, upon which the effect of such a climate will be either neutral or injurious? These questions admit of a more or less definite answer. The ground may be somewhat cleared by

[1] Nos. I., II., III., and IV., were published in THE LANCET of June 5th and 12th, and July 3rd and 24th, 1897, respectively.

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laying down the principle that cases of phthisis likely to be benefited by the Alpine sanatoria should not be sent to Sicily. If the disease be early, limited in extent, and not very active; if the general constitutional state be fairly good; if the vascular and digestive systems are sound; and if there be no general bronchitis, rheumatism, or nervous disorder—then the patient should in most cases be sent to a distinctly tonic climate such as Davos, the South African Highlands, or Colorado. But it must be admitted that the above type of case forms only a small minority of phthisical patients. The majority of these cases present either marked constitutional debility, or activity of the tuberculous process or serious digestive defect, or bronchial, cardiac or nervous complications; and where such symptoms are present the recommendation of the elevated sanatoria is distinctly perilous, although even in the most unlikely cases a brilliant success may sometimes be obtained. Excluding from consideration those cases of phthisis where for various reasons climatic change must be altogether prohibited, there remains a large class where general or digestive debility, anæmia, low vascular tone, bronchial irritability, nerve disorder, or some other cause, precludes resort to the elevated sanatoria. In such cases the choice at present rests in most instances between the sea-voyage, the Riviera, Madeira, and the Canary Islands, the North African sanatoria, viz., Egypt, Algiers, and Tunis, or the Australasian colonies. The question arises whether in a certain proportion of such cases Sicily might be tried with benefit. It is probable that good results might be obtained in the following varieties of phthisis—viz.: (*a*) Early phthisis complicated by anæmia, low vascular tone or nervous irritability. In such cases the tonic and soothing qualities of the Sicilian climate might be expected to act favourably. (*b*) In cases of phthisis of the catarrhal variety. The admitted efficacy of the Sicilian climate in bronchial conditions would suggest its suitability for catarrhal phthisis. (*c*) In cases of laryngitis tuberculosa. In such cases the prognosis is always grave and usually very bad, but the soothing qualities of the Sicilian climate and its well-known utility in irritable laryngeal states render the prospect of some temporary benefit fairly hopeful. Experience has shown that this expectation is sometimes justified by the event.

Among the diseases upon which the influence of the Sicilian climate is, on the whole, injurious may be mentioned rheumatism and renal affections. Ophthalmia in many of its forms might be added to these.

Some not unimportant differences exist between the various Sicilian localities with regard to their suitability to different states of disease. For bronchial, laryngeal, and irritable nervous affections it is probable that Palermo and its vicinity offer the greatest advantages. For phthisis the environs of Catania and Acireale would seem most suitable. For convalescents from acute diseases Taormina offers unrivalled attractions. In most of the other morbid conditions enumerated as likely to benefit by the Sicilian climate the choice of special localities is probably unimportant. Syracuse is, on the whole, unsuitable for a health resort. Girgenti has not hitherto been much frequented by invalids, but it has considerable claims to attention from the point of view of climate and may have a future before it.

The above remarks apply more particularly to Sicily as a winter resort, but there can be little doubt that the island offers considerable attractions as a summer station—especially for residents in Algeria, Tunis, and Egypt. The slopes of Mount Etna and of the Madonian mountains present almost every grade of temperature and variety of climate, and a summer sanatorium might easily be founded in one or other of these localities. The Marchese di Gallidoro writes as follows to THE LANCET Commissioner: "Of all places in Sicily that have been proposed as an Alpine climatic station I think the most suitable is Gibilmanna (Mountain of the Manna, from the manna tree, Fraxinus ornus, which from time immemorial has been largely cultivated on its slopes). It can be easily reached from Palermo by taking the train (one hour) to Cefalù, whence a tolerably good mule path leads to Gibilmanna in an hour and a half. The Capuchin convent and shrine of the Madonna are about 900 metres above the sea level. In close proximity there is an extensive plantation of stately oak trees, and close by rises Pizzo S. Angelo, between 1200 and 1300 metres high, which may be considered as an isolated eminence on a spur of the great Madonian range, and can be reached in about an hour's easy walk. There is an abundant supply of fresh water, the view is as extensive as it is beautiful and varied, and the climate is as fresh, healthy, and invigorating as can be desired." The question of establishing a sanatorium in Silicy for invalided soldiers and civilians from Egypt, Malta, and perhaps India has been more than once mooted, and is deserving of serious consideration. There seems every reason to believe that in Taormina there is to be found a sanatorium of exceptional value for convalescents from malaria, the specific fevers, inflammatory affections of the lungs and pleura, wounds, accidents, &c. When it is remembered that Taormina is about twelve hours' journey from Malta, its convenience and accessibility are manifest.

Sicily is well adapted to serve as an intermediate station for patients *en route* to or from Tunis or Egypt. Especially does this apply to patients who have wintered at Luxor, Helouan, or Cairo, and who find themselves compelled to leave in the month of March. To cross the Mediterranean directly at this season and face the abrupt climatic change which this involves is in many cases imprudent and undesirable, and the selection of a suitable intermediate station has long been a matter of great difficulty. Sicily may be recommended with confidence as well suited to cases of this kind. March is an excellent month there, and April is also good. The patient who has just come fresh from the sublime remains of ancient Egyptian art will find much to interest and instruct him in Sicily, and in no other way can he so safely and so pleasantly bridge over the gulf between the climate of Egypt and that of the Riviera, Pau, Biarritz, or Arcachon. Breaking their homeward journey in Sicily may be safely advised as a good routine rule for patients who have wintered in Egypt.

The question of the nature and amount of the accommodation to be found in Sicily can be touched on only very lightly here. On the whole, the traveller will probably be agreeably disappointed on this score. In Palermo there are a number of hotels of the first-class where the tourist or invalid can count upon every comfort and attention. In Girgenti, Catania, and Taormina the accommodation is also good. The great "bath establishments" of Termini-Imerese and Acireale are comfortable and well-equipped. On the other hand, in most of the small towns and country places the accommodation is often of the most primitive description, and the average Sicilian inn is not to be lightly ventured upon, even by the seasoned traveller, still less by the invalid. The national standard of cleanliness is not high, and the mildness of the climate is only too favourable to insect life. In special provision for the wants of invalids Sicily at present is very deficient. "Pensions" are few in number and not usually comfortable or adapted to the needs of the ailing, and furnished apartments are not, as a rule, organised to meet the wants of the invalid. In these points, however, efforts are being put forth to remedy existing defects, and it may be expected that substantial progress will soon be made. What is most required is a number of "pensions" or small private hotels, removed, if possible, from the great centres of population, and situated in quiet, airy, and healthy localities. In such institutions the special wants of *poitrinaires* or other invalids could be met, and the mode of life arranged for their benefit in a way which is impossible in a large hotel where the great majority of visitors are healthy people. The environs of Palermo and Catania present many spots particularly well suited for institutions of this sort, and Girgenti and Taormina also offer unusual advantages.

Sicily is deficient also in those attractions which go far to make the fortune of such resorts as Homburg and Spa, Nice and Monte Carlo—viz., the Kursaal, the Casino, the racecourse, the fashionable promenade, the bands of paid musicians. This is not an unmixed disadvantage, perhaps, inasmuch as the pursuit of health and the pursuit of pleasure are not easily compatible. The gaiety of life upon the Riviera, for example, does not add to its utility as a resort for serious invalids, while no doubt increasing its attractiveness to the holiday maker and pleasure seeker. But there is a mean to be observed in this, as in most other things. A sanatorium should not be a centre of dissipation, neither should it be given up to dulness and gloom. Disease and absence from home are depressing; time hangs heavily on the invalid condemned to an enforced and unwelcome idleness; hence some provision for reasonable and healthful amusement is indispensable for every health resort, which aspires to hold its own amidst the ever-increasing number of rival sanatoria. Parks with sheltered walks, where good music could be heard at stated times, clubs, libraries, and

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reading-rooms, tennis courts, and golf-grounds; these are a few of the measures which naturally suggest themselves in this connexion.

It would not be possible to deal exhaustively with Sicily as a health resort and omit all reference to a matter which naturally arises to the mind of the English reader in association with the island—namely, the subject of brigandage. On this question a great deal of misconception exists, and Sicily is now suffering in repute for events which belong to the past, rather than to the present. Broadly speaking, it may be affirmed that while the security of life and property in Sicily is below the general European average, and leaves much to be desired, organised brigandage has practically ceased to exist in the island. Crimes of violence (especially the use of the knife)—the result of family feuds, love quarrels, and starvation—are common in Sicily, and the offender often takes to the mountains, sometimes associating there with others in like plight, but this is for the most part the worst that can be said. Count Mazzarino informed our Commissioner that he had been in the habit for years of visiting all parts of Sicily, even the most remote, unarmed and unattended, and that he had never been molested in any way. A prominent Englishman recently drove all over the island, with his wife, in an open carriage without escorts and had no reason to regret his hardihood. All information tends to show that even in past days, when brigandage was admittedly an evil of great magnitude, tourists and foreign visitors were in no case molested. The real victims were wealthy residents who were known to the brigands, and for whom a substantial ransom might be expected.

The choice of season for visiting Sicily will depend upon the objects and state of health of the traveller. To those who propose to winter in the island an arrival in the early days of November may be recommended, and the date of departure may be safely postponed until the end of April or the beginning of May. Travellers for pleasure only will find February, March, and April the most suitable months. At that season, as already stated, the weather in Sicily is often the best in Europe, being for the most part bright and mild without cold winds or extremes of temperature. The amount of rain varies within wide limits, and is sometimes considerable. The early autumn (September and the first half of October) is not a favourable time for visiting Sicily, but the latter part of October and the month of November may be chosen, although much less suitable than the spring months.

In the selection of a sanatorium climatic and hygienic questions no doubt claim the first place, but they are not the only points worthy of consideration. The general attractiveness of a locality, the facilities it affords for recreation, study or research, the distractions which it can offer to the traveller or invalid—these are matters of great, and in some cases (e.g. nervous invalids) of primary importance. From this point of view Sicily takes a high place in the front rank of European sanatoria. It would be difficult to name any locality in Europe which combines so much natural beauty with such wealth of historic and antiquarian interest or which unites so many points of interest to any educated individual. The following sentence of Renan may here be recalled: "Je l'avoue, il me serait impossible de résider ou même de voyager avec goût dans un pays où il n'y aurait ni archives ni antiquités. Ce qui fait l'intérêt et la beauté des choses, c'est le cachet de l'homme qui y a passé, aimé, souffert." (I declare that it would be impossible to me to live or even to travel with pleasure in any country which possessed neither history nor antiquities. What really gives interest and beauty to things is the mark that there man has been, that there he has loved and suffered.) From this point of view Sicily is almost unique. Her history is one of the most ancient, chequered, and pathetic which human annals present. Her remains of antiquity are among the most extensive and the most moving in the world. As the traveller stands in front of the great temple of Segesta and beholds the majestic ruin standing amidst a scene of indescribable loneliness, or as he climbs the precipitous streets and narrow alleys of modern Girgenti and thinks of the grandeur of ancient Acragas, "the most beautiful city of mortals," as Pindar calls it, or as he takes his place in the Greek theatre of Syracuse and surveys the ruin and desolation around him, the great harbour, in the distance the purple Ionian Sea, and on the northern horizon the snowy dome of mighty Etna—he feels that nature and art, history and myth, poetry and romance have combined to make Sicily an enchanted land. Subtle suggestions of the south arise to heighten the impression. Wherever he goes in Sicily he is reminded that just below the southern horizon lies the great Dark Continent. The waving date-palm and the prickly pear, the Moorish arch in the cathedral, and the Saracenic water-tower by the wayside, the careless grace with which the peasant bestrides his mule, recalling the Kabyle or the Bedouin, the touch of negroid type in an occasional face, the breath of the sirocco—these speak of Africa and of the desert. Many of the greatest minds have felt the subtle charm of Sicily. Homer sang its praises in the dim dawn of poetry, although the vagueness of his references make it improbable that he ever visited the island. The trumpet tones of Pindar proclaimed its glories to a later age. Virgil and Cicero, and in modern times Goethe and Schiller, have written of Sicily. There is a tradition that the first suggestion of Mignon's song came to Goethe as he stood upon the terrace of the church of San Gregorio, which overlooks the straits of Messina. Whether or not this tradition be true, there can be no doubt that this song is full of the odour and subtle suggestion of Sicily and of the South—especially in its opening verse:—

"Kennst du das Land, wo die Citronen blühn,
Im dunkeln Laub die Gold-Orangen glühn,
Ein sanfter Wind vom blauen Himmel weht,
Die Myrte still und hoch der Lorbeer steht?
Kennst du es wohl?
Dahin! Dahin
Möcht' ich mit dir, o mein Geliebter, ziehn."

"Know'st thou the land where lemon trees do bloom,
And oranges like gold in leafy gloom;
A gentle wind from deep blue heaven blows,
The myrtle thick, and high the laurel grows?
Know'st thou it, then?
'Tis there; 'tis there,
O my beloved one, I with thee would go:"
(*Carlyle's translation.*)

Sicily has passed through much racial strife and many dynastic vicissitudes. Her troubles at present are chiefly economic. The tyrant is gone, perhaps for ever, but the tax-gatherer remains. Poverty abounds in the island and even the pale shade of starvation is not far off. But in many things there is progress, and above all the general advance in education is marked and unmistakeable. The seed is being sown, and the harvest—even if late—will some day appear. May the charming island renew something of her ancient glory and once again become the abode of a prosperous, happy, and contented people.

THE MEDICAL, SURGICAL, AND HYGIENIC EXHIBITION.

(*Concluded from p. 278.*)

WE may next deal with the representative display of foods and food products. Here, perhaps, the Aylesbury Dairy Co., of 31, St. Petersburgh-place, W., were to the fore. Their stall included such well-known preparations as humanised milk, peptonised milk, sterilised milk and cream, sterilised food for infants, cream milk for infants, and Koumiss of varying degrees of fermentation. Next should be mentioned the great number of laboratory products which formed the chief feature of Messrs. Armour and Co.'s (59, Tooley-street, S.E.) stall; this included the animal ferments, desiccated powder, tablets of animal substances, thyroid tablets, and concentrated extract of beef, with and without beef fibre. Messrs. Beanes and Co., of Wallace-road, Hackney Wick, N.E., brought to the notice of the visitors their excellent preparation known as "Diastased Farina," which by itself possesses digestive properties and is therefore well adapted as a food for infants and invalids. Messrs. G. Van Abbott and Sons, of 6, Duke-street Mansions, Grosvenor-square, W., showed samples from their very comprehensive list of foods for the diabetic. The preparations of interest to medical men in the exhibit of Messrs. Sadler, Firth and Ross, of 26, Gt. Guildford-street, S.E., were mustard oil and mustard bran for medical application. In addition this firm showed excellent specimens of the condiment. Of the recent additions to the list of really good beef preparations must be reckoned Vimbos prepared by the Vimbos Co., of 130, Queen Victoria-street E.C.; one marked property this fluid preparation possesses being its excellent flavour. We have already described the humanised milk

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prepared by Dr. Gaertner's process.[1] The resulting product contains a soft flocculent curd in an easily assimilable state, while the sterilising process is not carried too far. Samples were shown by the Friern Manor Dairy Farm, Ltd., of 20, Farringdon-street, E.C. Some choice cereal preparations adorned the stall of Mr. B. Lampe, of 181, Queen Victoria-street; they were all characteristic in size and quality of American growths. The well-known preparations of the Liebig Extract of Meat Co., of 9, Fenchurch-avenue, E.C., were submitted for inspection and trial, while Messrs. Broomfield and Co., of 83, Upper Thames-street, E.C., described the advantages of Albene, a pure refined vegetable fat which is said to be easy of digestion, and not liable to become rancid. It is stated to be useful in cooking, and also as a suitable ointment base. The first malt extract ever prepared (Leopold Hoff, 29, New Bridge-street, E.C.) found a place in the exhibition. It presents the active and nutritive quantities of malt in a fluid and agreeable form. On Messrs. Mellin's (Stafford-street, Peckham, S.E.) stall were to be seen their well-known foods for infants and invalids, which consist largely of food products partially prepared for easy assimilation by the action of diastase. The exhibit also included an emulsion of cod liver oil and hypophosphites. An attractive assortment of diabetic foods was presented by Messrs. Callard and Co., of 65, Regent-street, W., while not far away were the Hovis preparations of flour, bread, and biscuits of Messrs. S. Fitton and Son, Macclesfield. An excellent idea of the improvements which modern investigation has required at the hands of those responsible for the quality and purity of our dairy produce, could be gained by an inspection of the excellent exhibit of Messrs. Welford and Sons, of Elgin-avenue, Maida Vale, W. Then should be mentioned the great number of Bovril preparations exhibited by the Bovril Co., of 30, Farringdon-street, E.C., and, also, the excellent food and milk prepared by Henri Nestlé, of 48, Cannon-street, E.C., and the preparations of the Anglo-Swiss Condensed Milk Company, of 10, Mark-lane, E.C., which are guaranteed to contain a maximum of cream.

We may now briefly review the mineral and medicinal waters that were exhibited in addition to other allied products and the appliances connected therewith. Messrs. Ingram and Royle, of 26, Upper Thames-street, E.C., made an excellent display of the many natural mineral waters for the sale of which they are the agents. Thus were shown the various natural mineral waters of Vichy, the Carlsbad salts, and Hunyadi Janos. An excellent illustration of the improvements recently brought to bear upon the manufacture of aerated waters was shown in the exhibit of Messrs. Idris and Co., of Camden Town, N.W., the purity of the aerated waters of this firm being well known. Not far off was an interesting exhibit by the Compressed Gas Co., Ltd., of 181, Queen Victoria-street. Here were shown machines for directly converting any liquid placed in a bottle into an aerated beverage. The machines are suitable for domestic and general use, and are useful for aerating milk. Included in the same exhibit was an icing and cooling apparatus by means of carbonic acid gas. Both would be valuable for hospital use. What is described as a new natural mineral water for use in the treatment of gout and gouty diathesis and sundry diseases of the kidneys and bladder is the water from the "Kronenquelle" exhibited by Messrs. W. Schacht and Co., of 27, Finsbury-pavement, E.C. The Holyrood Table Water, prepared by Messrs. Macfarlan and Co., of 9, Moor-lane, E.C., is worthy of mention as a new artificial water introduced by this firm the composition of which is founded on analyses of the best imported waters. The aerated waters prepared by the Chemists' Aerated and Mineral Waters Association, of Gifford-street, Caledonian-road, N., were brought prominently to the notice of the visitors in the vestibule of the hall, where huge syphons were displayed illuminated from the interior by red electric glow-lamps.

Lastly, a very important exhibit—which was allotted especial space in a room adjoining the hall, and one which deservedly attracted considerable interest—was that of the West-end Pathological Laboratoty, under the control of Mr. Severn and Mr. Groth, the secretary. This consisted of numerous characteristic pure cultivations of bacteria in various nutrient media, besides a collection of mounted slides of some of the rarer micro-organisms under oil immersion lenses. Among these the preparations of the organisms occurring in diphtheria, trachoma, bubonic plague, catarrhal ophthalmia, and certain hair and skin fungi were especially to be commended. Mr. Severn also showed some accurately coloured drawings of pathogenic bacteria and excellent photo-micrographs and radiographs. Amongst the novelties of this exhibit were also the demonstrations by Mr. Townsend of Dr. Oliver's hæmoglobinometer and cytometer, and of the Tintometer Company's other apparatus.

[1] THE LANCET, July 3rd, 1897, p. 26.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE quarterly Comitia of the Fellows was held on July 29th, the President, Sir SAMUEL WILKS, Bart., being in the chair.

It was announced that the Gulstonian Lectures for 1898 would be delivered by Dr. J. Rose Bradford, the Lumleian Lectures by Sir R. Douglas Powell, and the Croonian Lectures for 1899 by Dr. J. B. Bradbury. The date of delivery of the Bradshaw Lecture by Dr. Markham Skerritt this year was fixed for Nov. 4th, and on Nov. 11th Dr. Pavy will give a lecture supplementary to his previous Croonian Lectures.

On the motion of the Senior Censor (Dr. Church) the hearty congratulations of the College were voted to the President upon the honour conferred upon him by Her Majesty. The vote was carried by acclamation, the Fellows standing. It was acknowledged by the President in suitable terms, attributing the honour to the office to which he had been called by the votes of the Fellows.

The following gentlemen were admitted to the Membership of the College:—Donald John Armour, B.A., M.B. Toronto; Francis Henry Edwards, M.D. Brussels; Robert Hutchison, M.D. Edin.; Alexander McGregor, M.D. Aberdeen; and Arthur Francis Stabb, M.B. Camb.

The PRESIDENT announced that the Treasurer (Sir Dyce Duckworth), Dr. Pavy, and Dr. Lauder Brunton would represent the College at the forthcoming International Medical Congress at Moscow.

Licences were granted to the 146 candidates who were successful at the recent examination, and the diploma of Public Health of the two Colleges was granted to those who had passed the examinations for that purpose.

On the invitation of the President the Registrar read an account of the proceedings attending the admission of H.R.H. the Prince of Wales to the Honorary Fellowship.[1]

A communication was read from the Home Secretary stating that Her Majesty had been graciously pleased to accept the address presented by the College on the occasion of the completion of the sixtieth year of Her Majesty's reign.

Communications were read from the Secretary of the Royal College of Surgeons of England reporting the proceedings of its Council.

A communication was read from the Educational Committee of the Medico-Psychological Association, enclosing a Syllabus of Instruction in the subject of Insanity approved by the committee. On the motion of Dr. Norman Moore, seconded by the Senior Censor, the syllabus was referred to the committee of management for transmission to the examiners.

A communication from Dr. R. R. Rentoul forwarding a copy of his Draft Bill for the Registration of Midwifery and other Nurses was received.

A communication from the Foreign Office was read enclosing documents received through the German Ambassador upon the subject of an International Conference on Leprosy which is to assemble in Berlin in the month of October. The programme of the proceedings was forwarded with an expression of the hope that its contents would be made known to the medical profession in this country, who are invited to share in the Conference.

The PRESIDENT announced that the London University Commission Bill, which had just passed through the House of Lords, had been considered by the Standing Committee of the College upon the university question, and also by the delegates of the two Royal Colleges, and it was a question whether it might not be advisable for the College to pass a resolution expressing approval of the measure, in order to

[1] Vide THE LANCET, July 31st, 1897.

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strengthen the hands of the Government in its passage through the House of Commons.

Dr. PYE-SMITH accordingly moved a resolution in this sense, remarking that the Bill fulfilled the real object in view—namely, the formation of a great teaching university in London, and that it had received the approval of all the other bodies concerned. In urging the Government to pass the Bill the College would be acting in harmony with its previous action on the subject.

Dr. ALLCHIN, in seconding the resolution, pointed out in what particulars the measure differed from that of last year, and he did not consider that the changes were such as to affect the position of the Royal Colleges and the medical schools.

Dr. PAYNE thought that the position assigned to the medical schools was less satisfactory than in the previous Bill, since they would now come in as teachers and not as corporate institutions.

Dr. SANSOM expressed his warm approval of the measure, which he considered to be a fair compromise that would work well.

Sir W. PRIESTLEY gladly supported the resolution, but feared that the Government would have to abandon the measure should the threatened opposition be persisted in.

Dr. ISAMBARD OWEN deprecated the passing of a resolution without due consideration of the scheme.

Dr. NORMAN MOORE, however, said that in passing such a resolution the College would be acting consistently with its previous action. The resolution was then put and carried almost unanimously.

On the motion of the Registrar it was resolved for the first time that certain by-laws relating to Licentiates be enacted, re-enacted, or repealed, to conform with the changes recently effected in the examinations of the Conjoint Board.

On the motion of the Senior Censor, seconded by Dr. STEPHEN MACKENZIE, the following report of the Council was adopted:—

"The Council of the Royal College of Physicians, having considered with great care the memorial submitted to the College by the Hospital Reform Association, is of opinion that it is impossible for the College to make, in the words of the memorial, 'searching investigation into the present system of dispensing out-of-door medical relief at the hospitals, infirmaries, and dispensaries, not only in the metropolis, but in all the large provincial towns.'"

On the motion of the Senior Censor, seconded by Dr. ORD, it was unanimously resolved to adopt the recommendation of the Council to award the Moxon Medal to Sir Samuel Wilks, Bart., President of the College, "as having especially distinguished himself by observation and research in clinical medicine."

On the motion of Dr. PAYNE, seconded by Dr. ALLCHIN, it was unanimously resolved to adopt the recommendation of the Council to award the Baly medal to Professor Schäfer of University College, London, "as having especially distinguished himself in the science of physiology."

Reports were received from (*a*) the representative of the College in the General Medical Council, (*b*) the Finance Committee, (*c*) the Committee of Management, and (*d*) the Laboratories' Committee. In addition to their usual quarterly report on the work in progress at the laboratories this committee presented a special report upon the subject of standardising antitoxin, and recommending that the director should be authorised by the Royal Colleges to issue official certificates after testing the quality of samples of antitoxin submitted to him for this purpose. Some discussion ensued, shared in by Dr. PAVY, Dr. PYE-SMITH, Dr. KANTHACK, Dr. S. MARTIN, Dr. POORE, and Dr. HERON, and the recommendation was adopted.

Reports were also received from the Library Committee, the Curators of the Museum, and the Examiners for the Licence.

A list of books presented to the Library during the past quarter was handed in, and the thanks of the College voted to the donors. The thanks of the College were also given to Lady Russell Reynolds for the gift of two handsomely bound copies of Sir J. Russell Reynolds's "Addresses," to Sir Richard Quain for the gift of a photogravure portrait of himself, and to Dr. O'Neill, of Lincoln, for some valuable Roman remains found in that city.

The followiog is a list of the Censors and other officers elected for the ensuing year:—Censors: Dr. Samuel Jones Gee, Dr. Henry Charlton Bastian, Dr. Joseph Frank Payne, and Dr. William Miller Ord. Treasurer: Sir Dyce Duckworth. Emeritus Registrar: Sir Henry Pitman. Registrar: Dr. Edward Liveing. Harveian Librarian: Dr. William Munk. Elected Members of the Library Committee: Dr. Samuel Jones Gee, Dr. Philip Henry Pye-Smith, Dr. George Vivian Poore, and Dr. William Henry Allchin. Curators of the Museum: Dr. William Howship Dickinson, Dr. Henry Charlton Bastian, Dr. William Cayley, and Dr. Norman Moore. Finance Committee: Dr. Alfred Baynard Duffin, Dr. George Vivian Poore, and Dr. John Mitchell Bruce. Examiners: Chemistry and Chemical Physics: Mr. William Ramsay, F.R.S., Mr. Richard Tayler Plimpton, Ph.D., Mr. John Millar Thomson, F.R.S., Mr. Percy Faraday Frankland, Ph.D., F.R.S., and Mr. Frederick Daniel Chattaway, Ph.D., D.Sc. Materia Medica and Pharmacy: Dr. Francis Warner, Dr. William Carter, Dr. Nestor Isidore Charles Tirard, Dr. Sidney Philip Phillips, and Dr. James Calvert. Elementary Physiology: Dr. Henry Lewis Jones. Physiology: Dr. Vincent Dormer Harris, Dr. William Dobinson Halliburton, and Dr. John Wychenford Washbourn. Anatomy: Mr. George Robertson Turner and Mr. George Dancer Thane. Medical Anatomy and Principles and Practice of Medicine: Dr. William Cayley, Dr. Thomas Henry Green, Dr. Thomas Lauder Brunton, Dr. Isaac Burney Yeo, Dr. Arthur Ernest Sansom, Dr. Horatio Bryan Donkin, Dr. Thomas Barlow, Dr. William Ewart, Dr. David Bridge Lees, and Dr. Julius Dreschfeld. Midwifery and Diseases Peculiar to Women: Dr. John Baptiste Potter, Dr. Charles James Cullingworth, Dr. Peter Horrocks, Dr. John Phillips, and Dr. Robert Boxall. Surgical Anatomy and Principles and Practice of Surgery: Mr. John Langton and Mr. John Neville Colley Davies-Colley. Public Health: Part I., Dr. Thomas Stevenson; Part II., Dr. William Pasteur. Examiners for the Murchison Scholarship: Dr. Thomas Whipham and Dr. William Henry Allchin.

QUARTERLY REPORT OF THE RED CROSS.

THIS report has just missed being a very interesting document. The three months it covers include the Græco-Turkish war, in which both belligerents enjoyed the services of an ambulance furnished by Germany, an ambulance furnished by Russia (four ambulances, that is to say), and the Greeks alone had a Danish ambulance all to themselves, besides receiving generous gifts in kind from Rome, Budapest, Lisbon, Geneva, and other sympathising centres—all this, moreover (we are still speaking of the Greeks), in addition to a large outflow of compatriot charity. As for the Turks, their "Red Crescent Society," having its headquarters at Constantinople, gave them no assistance for the reasons that the outbreak of hostilities took it by surprise, that at the same moment it lost its president by death, and that the surviving members of its committee were not in a position to take the field. It did nothing, in fact, as long as the struggle lasted, and intervened only when the armistice was agreed to on May 27th, when it took part in the work of embarking and convoying the wounded by sea. The interest of Red Cross activity centres, accordingly, in the German, Russian, and Danish ambulances, but, unfortunately, none of them had prepared their reports when the "Chronique Trimestrielle de la Croix-Rouge," now before us, was in course of publication, so, as we have hinted, this document is unable to satisfy the curiosity of an eager world. Not that it is devoid of an interest of its own. The International Committee, which has its headquarters at Geneva—whose action, we need hardly say, is quite independent of the national committees (German, Russian, Danish)—performed a duty as salutary as it was unique, the duty, to wit, at the first warlike rumour, of ascertaining from the belligerents their probable clinical and sanitary wants with a view to obtaining from the neutral societies of the Red Cross such assistance as might be required. Having obtained the requisite information, the International Committee then addressed the neutral societies *en masse*, with the response already known, while it further declared to the belligerents that it was ready to organise in a suitable locality a central dépôt for the receipt, the custody, and the distribution of the offerings (medical, pharmaceutical, alimentary, and sumptuary) contributed by sympathising outsiders. This undertaking on the part of the International Committee, however, failed of effect, like many other equally well-inspired proposals in that unfortunate war, and it had

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no opportunity of repeating in 1897 the admirable service it vouchsafed to the belligerents in the campaigns of 1870, 1877, and 1885. Another point in which the usefulness of the International Committee made itself felt was its willingness to act as intermediary between the belligerents, accusing each other reciprocally of non-observance of the articles of the Geneva Convention. In so acting the International Committee does not, of course, arrogate to itself the power of returning a verdict; it simply collects from the allegations of the disputant parties the materials on which the civilised world can pronounce an opinion on the conduct of either, so as to withhold from the offender that moral support which is year by year counting for more in the comity of nations. For instance, a protest was lodged by the Greeks against the Turks setting forth that the latter shelled the hospital at Arta. This the Turks denied, and the "Bulletin" of the International Committee became the medium of the representations *pro* and *contra*, providing the world at first hand with the facts of the case and enabling it to judge accordingly. From this *rôle*, rather thrust upon it than assumed, the International Committee is in a fair way of becoming a "Bureau de Consultation," if not a court of appeal, contributing thus to familiarise the world with that method of arbitration to which Christendom so fondly looks for the non-military settlement of difficulties. Indeed, the questions that from time to time come before it are such as to form a preparatory discipline for the "arbitration school." For example, "What use can a civil ambulance, organised by a neutral power and placed at the service of a belligerent, make of its own national flag?" Even more important is another question of the kind: "Has the Red Cross Society of a belligerent power, or the belligerent himself, the right to refuse the coöperation of an ambulance organised by the Red Cross of a neutral State?" Once more: "Is it lawful for a society of assistance to the wounded, recognised by the International Committee, to make use of another emblem than a red cross on a white ground—for example, a red crescent?" These are difficult questions, pressing for solution, and the facilities offered in this direction by the International Committee, with its experience of similar problems, cannot but be put in evidence at the Sixth International Congress of Red Cross Societies throughout the World which will meet on Sept. 20th at Vienna.

METROPOLITAN ASYLUMS BOARD STATISTICS.

I.—INFECTIOUS DISEASES.

THE Statistical Committee of the Metropolitan Asylums Board have just issued their eleventh annual report. The work of this Board and its value from a public health point of view increases from year to year, and the statistics contained in the report just issued show the same excellence of arrangement and method which has been conspicuous in its predecessors. During the year 1896 no fewer than 22 463 cases were received into the Board's hospitals for infectious diseases—a number considerably larger than that recorded in any year since 1871, when these hospitals were first opened. The nearest approach to this number occurred in 1893, when 21,050 cases were admitted, including 2376 small-pox patients. The main value of these isolation hospitals, from a sanitary point of view, arises from the possibility they provide for turning the notification of infectious diseases to practical account. The report just issued gives some valuable and interesting figures bearing on the connexion between the notification and isolation of infectious diseases in London in recent years. The year 1890 was the first in which compulsory notification was in force in London, and the proportion of admissions to the Board's hospitals to the total number of legally admissible cases was in that year 33 6 per cent. In the five following years the percentage of admissions to admissible cases rose, with some fluctuations, to 52·2 in 1894 and 50·3 in 1895. During last year 42 876 admissible cases were notified, of which 22 463, or 52·4 per cent., were actually received into the Board's hospitals. It is interesting to note that the proportion of admitted to admissible cases of the several diseases varied very widely; the proportion was 82 per cent. of small-pox cases, 63 per cent. of scarlet fever cases, 39 per cent. of cases of diphtheria and membranous croup, 27 per cent. of enteric fever cases, and 33 per cent. of typhus fever cases. It should be remembered, however, that the numbers of notified cases of these different diseases are probably of varying degrees of accuracy, which would affect to some extent the above-quoted percentages. It is, moreover, pointed out in the report that the proportion of admitted to admissible cases is at times considerably affected by the amount of hospital accommodation available. For instance, throughout last year the admitted cases of scarlet fever averaged 63 per cent. of the notified cases of that disease. It appears, however, that in the first five months of the year, in which the managers were able to accommodate all applicants, more than 70 per cent. of the notified cases were admitted, whereas later in the year, when the hospital accommodation fell short, the proportion of admitted to notified cases gradually declined to 57 per cent. in October, when the pressure for admission was greatest. This evidence of the need for increased hospital accommodation will probably not be lost sight of by the managers and by the ratepayers, on whom the heavy cost of this hospital accommodation falls. The report tells us that the completion of the works now in hand will place the managers in possession of nearly 6000 beds for infectious diseases other than small-pox.

During 1896 the number of patients admitted into the ten fever hospitals in use by the Board was 22,273, as compared with 16,847 in 1895, 16,667 in 1894, 18,674 in 1893, and 16,276 in 1892. Between 1891 and 1887 the numbers ranged between 5152 and 8334, and prior to 1887 the highest number in any year was 2867 in 1882. These figures show the remarkable extension of the work entrusted to the Metropolitan Asylums Board since the notification of infectious diseases became compulsory in London in 1890.

The cases of scarlet fever admitted to these hospitals last year were 15,982, and considerably exceeded the admissions in any previous year. The nearest approach to this number occurred in 1893, when 14,548 cases were admitted. The number of deaths from this disease in the Metropolitan Asylum Hospitals during the year was 666, equal to a proportional case mortality of 4·3 per cent., showing a further decline from the rates in the four preceding years, which had steadily decreased from 7·3 to 5·5 per cent. The marked and steady decline of the proportional case mortality of scarlet fever cases in the board's hospitals calls for further notice. In the ten years 1871–80 the case mortality was equal to 12·1 per cent., in 1881–90 it fell to 10·1 per cent., and in the six years 1891–96 it averaged only 6·0 per cent. It would be interesting to know what proportion of this decrease of mortality is due to modification of the type of the disease, how much to the treatment in the hospitals of an increased proportion of mild cases, and how much to more successful hospital treatment of the cases admitted. The report contains a valuable table showing the relation of age and sex to scarlet fever mortality, based upon 66,492 cases treated in these hospitals during the five years 1892–96. The most noticeable feature in these statistics is the fact that the mortality decreases with the age of the patient from 27 per cent. in the first year of life to 1·2 per cent. in the age-period 25–30; the mean percentage of case-mortality is 13·3 under five years of age, and averages 2·5 above the age of five years.

Cases of diphtheria were first treated in the Board's hospitals in 1888, when 99 were admitted. The number of cases admitted has steadily increased in each succeeding year, and rose to 4508 in 1896, which were equal to 39 per cent. of the cases notified. The deaths from this disease in the hospitals during the year were 948 and were equal to a case mortality of 21·2 per cent., showing a further decline of 1·7 per cent. from the percentage in the preceding year, when the antitoxin treatment was first generally adopted in these hospitals. It should be noted, however, that during the seven years 1888–94, prior to the trial of antitoxin, the case mortality of diphtheria in these hospitals steadily declined from 59·4 per cent. in 1888 to 29·3 in 1894. The percentages in 1895 and 1896, when the antitoxin treatment became general, further fell to 22·9 and 21·2. The report now under notice contains full and elaborate statistics bearing upon the result of the antitoxin treatment of diphtheria in these hospitals upon the case mortality, which call for careful consideration and separate notice. It may be noted that whereas 71 per cent. of the deaths from scarlet fever in London last year were recorded in the Board's hospitals, only 35 per cent. of the total deaths from diphtheria were recorded therein. It is,

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however, satisfactory to find that the proportion of diphtheria cases in London isolated and treated in hospital has constantly increased in recent years. If, moreover, it be safe to assume that the number of notified cases of diphtheria in London approximates closely to the actual number of occurring cases, it would appear that the case mortality last year outside the Board's hospitals did not materially differ from the case mortality in those hospitals.

During 1896 the number of cases of enteric fever treated in the Board's hospitals was 600, and fewer by 61 than the number in the preceding year. The deaths from this disease during the year were 96, showing a case mortality of 15·8 per cent, against 20·5, 18·1, and 18·2 in the three preceding years. Case mortality from enteric fever in these hospitals has declined from 19·5 in the ten years 1871-80 to 16·4 in the ten years 1887-96, but this decline is small compared with the decrease in the case mortality of scarlet fever and diphtheria. The number of cases of enteric fever treated in these hospitals last year was equal to 27·0 per cent. of the notified cases, or if the cases handed over for treatment by the managers to the general hospitals be included the proportion is raised to 30·0 per cent. The 96 deaths from this disease in the Board's hospitals were equal to but 16·2 per cent. of the total deaths assigned to this cause during the year in London. The age incidence of enteric fever shows a marked contrast to that of scarlet fever and diphtheria. The number of deaths referred to enteric fever under the age of five years is small, and their case-mortality (based upon 10,484 cases at all ages in the Board's hospitals in the years 1871–96) is 13·2 per cent., but at subsequent age-periods the mortality increases steadily and constantly from 8·9 per cent. at the ages of from five to ten years, to 35·4 per cent. above the age of fifty years.

Only nine cases of typhus fever were admitted to these hospitals in 1896, resulting in two deaths. Of the 97 cases admitted in the nine years 1888–96, 18 proved fatal, showing a case mortality of 18·6 per cent., while the mean mortality during the whole period 1871–96 averaged 20·7 per cent. It appears, therefore, that the case mortality of typhus fever in hospital, as of the other infectious diseases, has declined in recent years.

Not more than 190 cases of small-pox were admitted to the Board's hospitals during last year, of which only 9 proved fatal, equal to a case mortality of but 4·7 per cent. The small-pox cases admitted in the three preceding years were 2376, 1117, and 941 respectively. It is worthy of note that these 9 fatal cases of small-pox were the only deaths from small-pox recorded in London during the whole year.

Before concluding this notice of the Metropolitan Asylums Board's statistics, so far as they relate to infectious diseases, it may be well to refer to some interesting figures given in the report relating to illness of members of the staff in the fever and small-pox hospitals. During last year there were 3542 persons employed at the fever hospitals, of whom 176, or 5·6 per cent., were attacked by fever or diphtheria, and 3 died; while of the 250 persons employed on the small-pox hospital ships, not one suffered from small-pox. The managers state that the experience of each succeeding year only confirms them in their belief that nurses and other members of a hospital staff may be brought with almost absolute impunity into contact with small-pox provided they are protected by efficient vaccination.

We must postpone to another occasion a notice of the valuable statistics relating to the more than 6000 imbecile patients under treatment in the asylums under the management of the Metropolitan Asylums Board.

THE HEALTH OF THE TROOPS IN INDIA.

A PARLIAMENTARY paper has been published, as we briefly announced last week, setting forth some "Further Correspondence regarding the Measures to be Adopted for Checking the Spread of Venereal Disease among the British Troops in India." As the subject is one of much interest and importance we may give a brief analysis of the contents of this Parliamentary paper, with such comments as occur to us. The military letter from the Government of India states that after having fully considered the despatch of the Secretary of State for India, with which our readers are already acquainted, together with the report of the Earl of Onslow's Committee, the memorandum of the Army Sanitary Commission dealing generally with the measures by which it is considered possible to restrict the spread of venereal disease among soldiers in India, and the representations of the Royal College of Physicians of London and the Royal College of Surgeons of England, they have drawn up and submitted the accompanying draft rules proposed to be issued under the Cantonments Act of 1889. These rules, amending and enlarging that Act, are framed on the lines of, and in accordance with, the principles embodied in the Secretary of State's despatch. Although they are stated to be drafted with the least degree of stringency necessary to enable cantonment authorities to deal with the evils against which they have to contend, it is considered that the repeal of Act V. of 1895 is necessary in order to protect medical and other officers in the performance of duties which the new rules will impose upon them. The Act of 1895 prohibiting examinations and removing the then existing safeguards against the spread of venereal disease was, it will be remembered, the result of orders from this country. Exception is taken to the suggestion of the Army Sanitary Commission with regard to the employment of female hospital assistants for the examination of diseased women, on the ground that it is, under the circumstances, an unnecessary, and in many respects an unsuitable, provision. The difficulties in the way of giving effect to this suggestion of the Army Sanitary Commission and the practical objections to it are well and very pertinently indicated. The desirability of raising the moral and physical condition of the army and of warning young soldiers on their arrival in India of the dangers to which they are exposed are pointedly recognised, and the steps which have already been, and will hereafter be, taken in this direction are adverted to. With regard to the inspection of soldiers, the imposition of penal stoppages for admission to hospital, and the punishment of soldiers concealing venereal disease, the Commander-in-Chief makes some propositions which are embodied in a letter from the Adjutant-General in India accompanying the despatch. Speaking generally, we consider that the proposals emanating from the Government of India are wise, judicious, extremely moderate, and under the circumstances absolutely necessary; and we are glad to notice that the Secretary of State has telegraphed his authority to the Viceroy to proceed in the manner proposed. We feel it right, however, to advert to certain points in regard to which we either do not agree or are not without misgiving. In the first place, while admitting that there may be some force in the objections raised in India against the employment of female hospital assistants under the direction of medical officers in the examination and treatment of women, we nevertheless concur with the dissent expressed by Lord George Hamilton in his despatch, for we regard it, on the contrary, as a necessary and suitable provision. The employment of females for this purpose to a very large extent deprives of any force the objection which is so strongly urged by the opponents to all legislative measures. Notwithstanding the difficulties that may exist in carrying it out at present on any extensive scale it should be given a trial wherever practicable. In the next place, as regards penal stoppages being imposed upon a soldier for every day spent in hospital on account of venereal disease, and a change being introduced into the Army Act and regulations so that this may be made universally applicable to the British Army, we entertain grave doubts. It may be fairly urged, of course, that it is logically and morally wrong to apply the same rule to the soldier undergoing treatment for a self-inflicted disease or a complaint caused by his own misconduct and to the soldier suffering from a disease or disability which has been contracted in the execution of his duty and over the origin of which he had no control. But in that case whatever loss of pay is forfeited should not go to the State, but to the benefit of the corps to which the soldier belongs and to those who had to do his duty whilst in hospital. We think it probable that soldiers would recognise the justice of the view that a difference should be made between the daily pay of a soldier in hospital for an attack of pneumonia, rheumatic fever, typhoid fever, or ague, and that of one suffering from venereal disease; but the latter should, even then, not forfeit all his daily pay, and whatever loss he incurred in this respect should not be for the benefit of

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the State. The danger of imposing any system of fines or penal stoppages is lest it should lead to concealment of disease. Nor should the possible effect on recruiting of any unpopular measure be lost sight of. The subject will, no doubt, be carefully considered, however, by the Secretary of State for War.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on July 29th, the President, Sir WILLIAM MACCORMAC, Bart., being in the chair.

On the recommendation of the Library Committee, Mr. Victor Gustave Plarr, B.A. Oxon., and late librarian at King's College, London, was appointed librarian. A vote of thanks was given to Mr. C. R. Hewitt, assistant in the library, together with an honorarium, in recognition of his valuable services in the library since the death of Mr. James B. Bailey; Mr. Hewitt's salary was also increased.

It was resolved that the museum and library should be closed from Aug. 28th to Oct. 1st.

The following recommendations of the Committee of Management of the Conjoint Examining Board were adopted:—

1. That the following institutions be added to the list of recognised places of instruction in chemistry, physics, practical chemistry, and biology:—*(a)* Battersea Polytechnic Institute. *(b)* Cheltenham College (without biology). *(c)* Middlesbrough High School (without biology). *(d)* Northern Polytechnic Institute.
2. That the following hospitals be added to the list of fever hospitals recognised by the Board:—*(a)* Bristol Corporation Fever Hospital. *(b)* Manchester Corporation Fever Hospital.
3. That the following asylums be added to the list of lunatic asylums recognised by the Board:—*(a)* City and County Asylum, Fishponds, Bristol. *(b)* Manchester Royal Asylum, Cheadle.
4. That the Victoria Hospital for Children, Chelsea, be recognised as a place of study during the fifth year of the curriculum.
5. That the Royal Westminster Ophthalmic Hospital be added to the list of ophthalmic hospitals recognised by the Board.

Mr. J. N. C. Davies-Colley and Mr. C. H. Golding-Bird were elected members of the Court of Examiners.

Sir William MacCormac was elected a member of the Committee of Management in the vacancy occasioned by the resignation of Mr. Christopher Heath.

A letter was read from Mr. G. F. Oldham communicating the following resolution adopted at a meeting of members of the medical profession in Norwich, held on the 17th inst., viz.:—

"That this meeting, while acknowledging with thanks the reply of the Royal College of Surgeons to the Norwich memorial, desires to express the opinion that steps should be taken so to amend Section XVI. of the by-laws as to enable the Council to prevent its Fellows, Members, or Licentiates accepting positions derogatory to the honour and best interests of the profession."

In reply to a letter from the Rev. J. J. H. S. Pennington stating that he still required £1100 for the completion of the St. Clement Danes Parish House and asking for a further contribution, the Council voted 10 guineas.

The following resolution, moved by Mr. J. Tweedy, was carried: "That the printed copies of the minutes of the Council be considered the property of the College, and that regulations be framed with a view to preventing unauthorised persons from obtaining them."

A letter was read from Lord Salisbury announcing that an International Conference on Leprosy would shortly be held in Berlin.

A recommendation was received from the Laboratories Committee that the director should be authorised to issue an official certificate of the strength of diphtheria antitoxins tested in the laboratories.

CHILDREN'S CONVALESCENT HOME, WEST KIRBY.—At the instigation of Mr. W. Adamson, president of the Liverpool Royal Southern Hospital, a few local gentlemen have subscribed the sum of £600 for the purpose of endowing a free bed at the Convalescent Home, West Kirby, for the use of patients from the Royal Southern Hospital, which, by Royal permission, has been called "Queen Victoria Cot." As the Liverpool Royal Infirmary is already in the possession of a cot endowed by the liberality of Mr. A. K. Cannington, it is hoped by the committee that similar endowments will be made by the benevolent on behalf of the other city hospitals, especially the Children's Infirmary.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Liverpool Port District.—The formation of the Port Sanitary District of Manchester, owing to the existence of the Manchester Ship Canal, has thrown upon the sanitary authority of that newly-created district the responsibility of dealing with ship-borne infection on Manchester-bound vessels, and has dispensed with the necessity for the proposed arrangement with the Liverpool Port Sanitary Authority for dealing with certain infectious diseases on board vessels passing through the waters of the Liverpool Port Sanitary Authority. There were no less than 3516 vessels examined by the Liverpool Port Sanitary inspectors during 1896, and of this number 1996 had some sanitary defect or other. Seventy-three cases of infectious disease were landed from shipping during the year, and among cases classed as non-infectious we notice fifteen cases of beri-beri. A marked diminution in the number of emigrants leaving Liverpool took place during 1896, the numbers amounting to only 98,279, as against 117,196 in 1895. Dr. E. W. Hope thinks it probable that a large number of emigrants pass now direct from the Continent instead of *viâ* Liverpool as formerly. Among the English emigrants who left Liverpool during 1896, 31,571 went to the United States and 12,768 to Canada.

Birmingham Urban District.—For the first time in the history of the city of Birmingham the population has been estimated at over half a million, while the average number of persons per acre has reached 39·5, as against 36·4 in 1887. Dr. Alfred Hill does not speak enthusiastically as to the mortality statistics for the past year, the general death-rate (20·4 per 1000) being higher than in recent years, and the position of Birmingham amongst the other large towns being less creditable than heretofore. As Dr. Hill somewhat pathetically remarks: "It is anything but reassuring to find that the greater part of the increase in last year's mortality was caused by the serious prevalence of zymotic diseases, all of which (except small-pox) were much more fatal than in the five previous years." When the death-rate of the several wards of the city is worked out it is found that there is much inequality, the rate for St. Mary's Ward being 28·9, that for Balsall Heath 15·4, or, taking the nine worst wards, it is found that they yield a death-rate of 24·5, as against one of 17·7 in the better wards. A further analysis shows that the more prominent causes of death were higher in the nine worst wards (save in respect of cancer and diphtheria), while diarrhœa and enteric fever were nearly twice as common in the bad wards as in the good ones. Dr. Hill, in discussing the causes of these high mortality rates, expresses the opinion that the want of ventilation is the most important feature with which the sanitary authority has to deal, and he provides a table which appears to demonstrate very clearly the excellent effects of improved houses and of better ventilation. The figures are so remarkable that we give them here:—

—	Death-rate, 1873–1875.	Death-rate, 1879–1881.
Lower Priory	62·5	21·9
Rope-walk	42·0	24·9
Bailey-street	97·0	25·6
Potter-street	44·0	28·8
Russell-street	55·0	19·1
Princip-street	46·0	13·2
Aston-road	40·0	19·3
Tanter-street	47·0	22·0

There were 14 cases of small-pox in Birmingham during 1896, the three first cases having been introduced from Gloucester, facts which show, as Dr. Hill observes, the folly of allowing communities to please themselves as to whether they shall enforce the vaccination laws or not. Measles caused 310 deaths in Birmingham in 1896, and Dr. Hill remarks that if any notable reduction is to be effected in the death-rate from this disease, much more definite action will have to be

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taken than is the case at present. He considers notification to be as yet impracticable in Birmingham, and he suggests that the sanitary officers should obtain from the School Board officials the names of all children who are absent owing to measles; and that printed instructions should be forwarded to the invaded houses. Dr. Hill proposes that exactly the same lines of action should be taken in the matter of whooping-cough. The necessity for the control of these two latter diseases is shown by the fact that during the decade 1886–95 the average annual number of deaths from measles was 237, and from whooping-cough 257, while scarlet fever and diphtheria claimed but 94 and 69 respectively. The fall in the fatality rate of scarlet fever in Birmingham during the last two decades is very clearly shown in the following table in the report:—

—	Cases.	Deaths.	Case mortality.
1875–78	538	78	14·6 per cent.
1879–83	1948	207	10·6 ,, ,,
1884–90	6201	383	6·2 ,, ,,
1891–93	10,661	473	4·4 ,, ,,

And it may be noted that the reduced fatality-rates have gone side by side with the increased hospital isolation of the disease. The behaviour of diphtheria in Birmingham is full of interest, and there seems to be no adequate explanation of the increased incidence during the last two years. In 1873 the death-rate from this disease was 0·31 per 1000, and this rate gradually diminished until in 1893 it reached 0·09 per 1000. Towards the end of 1894 a rise commenced which reached in 1896 no less than 0·48 per 1000. Dr. Hill can furnish no sufficient explanation of this rise, and it seems clear from the distribution of the disease that it is not dependent upon grave insanitary conditions. The rise is a most puzzling one and well merits the close study which it will doubtless receive at the hands of Dr. Hill.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6662 births and 4827 deaths were registered during the week ending July 31st The annual rate of mortality in these towns, which had increased from 14·7 to 19·3 per 1000 in the four preceding weeks, further rose last week to 22·9. In London the rate was 23·6 per 1000, while it averaged 22·4 in the thirty-two provincial towns. The lowest rates in these towns were 9·9 in Croydon, 10·3 in Huddersfield and in Halifax, 12·2 in Oldham, and 13·5 in Cardiff; the highest rates were 28·0 in Portsmouth, 28·7 in Wolverhampton, 31·7 in Preston, 32·0 in Sheffield, and 32·6 in Liverpool. The 4827 deaths included 1337 which were referred to the principal zymotic diseases, against 572 and 904 in the two preceding weeks; of these, 994 resulted from diarrhœa, 143 from measles, 87 from whooping-cough, 54 from diphtheria, 37 from scarlet fever, 21 from "fever" (principally enteric), and 1 from small-pox. No death from any of these diseases was recorded last week in Huddersfield; in the other towns they caused the lowest death-rates in Cardiff, Halifax, and Derby; and the highest rates in Sheffield, Wolverhampton, Liverpool, Preston, and Portsmouth. The greatest mortality from measles occurred in Manchester, Salford, Burnley, and Preston; from whooping-cough in West Ham, Plymouth, Wolverhampton, Burnley, and Gateshead; and from diarrhœa in Portsmouth, Wolverhampton, Nottingham, Birkenhead, Liverpool, and Sheffield. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 54 deaths from diphtheria included 41 in London, 2 in West Ham, and 2 in Liverpool. One fatal case of small-pox was registered in London, but not one in any other of the thirty-three large towns, and there was one small-pox patient under treatment during last week in the Metropolitan Asylum Hospitals. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital, which had increased from 2380 to 2976 at the end of the thirteen preceding weeks, had further risen to 3106 on Saturday last, July 31st; 360 new cases were admitted during the week, against 349, 381, and 396 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 138 and 158 in the two preceding weeks, declined again to 146 last week, and were 30 below the corrected average. The causes of 60, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bradford, Leeds, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Bristol, Birmingham, Liverpool, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks from 17·7 to 19·5 per 1000, declined again to 18·2 during the week ending July 31st, and was 4·7 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·5 in Aberdeen and 14·7 in Paisley to 20·7 in Dundee and 21·4 in Leith. The 542 deaths in these towns included 51 from diarrhœa, 22 from whooping-cough, 5 from scarlet fever, 5 from measles, 3 from diphtheria, and 2 from "fever." In all, 89 deaths resulted from these principal zymotic diseases, against 80 and 100 in the two preceding weeks. These 89 deaths were equal to an annual rate of 3·0 per 1000, which was 3·5 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had increased from 20 to 35 in the four preceding weeks, further rose to 51 last week, of which 29 occurred in Glasgow and 6 in Greenock. The 22 deaths referred to whooping-cough showed a decline of 15 from the number recorded in the preceding week, and included 14 in Glasgow and 4 in Leith. The 5 fatal cases of scarlet fever corresponded with the number in the preceding week, and included 4 in Edinburgh. The deaths from measles, which had been 12 and 15 in the two preceding weeks, declined again to 5 last week, of which 4 occurred in Leith. The 3 fatal cases of diphtheria included 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 68 and 87 in the two preceding weeks, declined to 66 last week, but slightly exceeded the number in the corresponding period of last year. The causes of 30, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·2 and 23·3 per 1000 in the two preceding weeks, further declined to 22·8 during the week ending July 31st. During the past four weeks of the current quarter the death-rate in the city has averaged 23·0 per 1000, the rate during the same period being 18·8 in London and 19·6 in Edinburgh. The 153 deaths registered in Dublin during the week under notice showed a decline of 3 from the number in the preceding week, and included 16 which were referred to the principal zymotic diseases, against 11 and 20 in the two preceding weeks; of these, 8 resulted from diarrhœa, 3 from diphtheria, 1 from scarlet fever, 1 from whooping-cough, and 1 from "fever." These 14 deaths were equal to an annual rate of 2·1 per 1000. the zymotic death-rate during the same period being 6·9 in London and 1·6 in Edinburgh. The fatal cases of diarrhœa, which had been 2 and 7 in the two preceding weeks, further rose to 8 last week. The 3 deaths referred to diphtheria corresponded with the number registered in the preceding week, while the mortality from scarlet fever and from whooping-cough showed a decline. The 153 deaths in Dublin last week included 42 of infants under one year of age, and 31 of persons aged upwards of sixty years; the deaths of infants showed a further increase upon those recorded in recent weeks, while those of elderly persons showed a decline. Seven inquest cases and 4 deaths from violence were registered; and 49, or nearly a third, of the deaths occurred in public institutions. The causes of 12, or nearly 8 per cent., of the deaths in the city last week were not certified.

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THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR MICHAEL F. MACNAMARA, F.R.C.S.Irel., retires from the service, receiving a gratuity. The undermentioned Surgeon-Lieutenants to be Surgeon-Captains:—Percy Evans, M.B., Arthur E. Milner, Claude K. Morgan, M.B, John P. Silver, M.B., Herbert W. Vaughan-Williams, M.B., John M. Buist, M.B, James Walker, M.B., Frank Dove, George St. Clair Thom, M.B., and Stephen W. Sweetnam.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain William Alfred Dingle, M.D., 2nd Tower Hamlets Royal Engineers (Volunteers), to be Surgeon-Captain.

VOLUNTEER CORPS.

Artillery: 1st Monmouthshire: Surgeon-Lieutenant W. E James to be Surgeon-Captain. *Rifle:* 2nd Volunteer Battalion the East Yorkshire Regiment: Surgeon-Major W. Stephenson to be Surgeon-Lieutenant-Colonel. 2nd Volunteer Battalion the Duke of Edinburgh's (Wiltshire Regiment): Surgeon-Lieutenant G. R. Swinhoe to be Surgeon-Captain.

ARMY MEDICAL SCHOOL, NETLEY.

The seventy-fourth session of the Army Medical School, Netley, was brought to a close on July 30th, when the prizes were distributed and an address was given by Major-General Sir William F. Butler, K.C.B., Commanding the South-Eastern District. The following is a list of Surgeons on probation who were successful both at the London and Netley examination. The prizes are awarded for marks gained in the special subjects taught at the Army Medical School, and the final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley.

ARMY MEDICAL SERVICE.

	Combined marks.		Combined marks.
†S. L. Cummins	4671	J. Poe	3942
J. McArdle	4455	H. L. W. Norrington ...	3928
‡C. H. Hopkins	4247	H. G. F. Stallard	3806
L. J. C. Hearn	4227	R. D. Jephson	3654
P. Mackessack	4172	J. Crean	3577
J. McD. McCarthy ...	4147	A. W. N. Bowen	3413
E. Brodribb	4085		

† Gained the de Chaumont Prize in Hygiene.
‡ Gained the second Montefiore Prize.

INDIAN MEDICAL SERVICE.

	Combined marks.		Combined marks.
*J. G. P. Murray	5644	A. Fenton	5093
†S. Anderson	5428	J. A. Dredge	5006
‡F. H. G. Hutchinson ...	5390	R. W. Knox	4885
§J. L. Majoribanks	5208		

* Gained the Herbert Prize of £20, the Martin Memorial Medal, and the Pathology Prize presented by Sir Joseph Fayrer, Bart., K.C.S.I.
† Gained the Maclean Prize for Clinical and Ward Work.
‡ Gained the Parkes' Memorial Medal.
§ Gained the first Montefiore Prize of 20 guineas and Bronze Medal.

Owing to the extraordinary pressure on our space by reason of the publication of our special Russian supplement we are compelled to hold over the report of the proceedings and Sir William F. Butler's address till our next issue.

THE TOCHI EXPEDITION.

The *Army and Navy Gazette* says: "The medical arrangements of the Tochi expedition are: Principal Medical Officer, Surgeon-Colonel Carew, D.S.O.; Argyll and Sutherland Highlanders, Surgeon-Captain Swan; Rifle Brigade, Surgeon-Major O'Donnell. No. 2 British Field Hospital: Surgeon-Majors Townsend and Skinner, and Surgeon-Captains Mansby and Johnson. Sections A and B, No. 3 British Field Hospital: Surgeon-Major Kelly and Surgeon-Captain McDowell; 14th Sikhs, Surgeon-Captain Irvine, I.M.S.; 25th Bengal Infantry, Surgeon-Captain Drake-Brockman; 33rd Bengal Infantry, Surgeon-Captain Evans; 1st Sikh Infantry, Surgeon-Captain Seton; 1st Punjab Infantry, Surgeon-Captain Vizzard. No. 28 Native Field Hospital: Surgeon-Lieutenant Colonel Mawson, Surgeon-Major Briton, and Surgeon-Captains Gee and Mulvaney. No. 29 Native Field Hospital: Surgeon-Lieutenant-Colonel Simmonds, Surgeon-Captain McLeod, and Surgeon-Lieutenants Morgan and James. No. 38 Native Field Hospital: Surgeon-Major Hudson, Surgeon-Captain Elliott, and Surgeon-Lieutenants Scott Moncreiff and Morehead. Native General Hospital, Bannu: Surgeon-Major Mukerjee, Surgeon-Captain Rogers, and Surgeon-Lieutenant Dee."

THE RELIEF OF CHAKDARA.

The relief of Chakdara seems to have been effected by a well-designed plan executed with skill, and the enemy was completely surprised. The losses of the Chakdara garrison, and those of the force that advanced to its relief were relatively small. A large native force provided with scaling ladders, which were preparing to attack Chakdara, had to retire hastily. Malakand is reported to be quiet. Whether the tribesmen are determined on further resistance has yet to be seen, but it will be the object of the punitive British force to so completely dominate them as to put an end to their future mischief—not an easy task under the circumstances and the difficult conditions of the country. Meanwhile there will be a good deal of occupation for the medical officers in organising their hospitals, in attending to the sick and wounded, and arranging for their transport to the base.

Surgeon-Captain W. H. Horrocks, M.B., A.M.S., has been appointed Assistant Professor of Military Hygiene at the Army Medical School, Netley, vice Surgeon-Major Firth, F.R.C.S. Eng., whose period of service will expire on Sept. 1st.

Correspondence.

"Audi alteram partem."

AN INVITATION FROM HAMBURG.

To the Editors of THE LANCET.

SIRS,—On behalf of the Hamburg Committee in connexion with the Twelfth International Medical Congress I venture to express the hope that many of our English colleagues will pass through Hamburg going to Scandinavia on the way to Moscow.

In addition to the General Hospital (Neues Allgemeines Krankenhaus) Hamburg possesses various other hospitals, medical institutions, and places of interest, all of which we shall be most happy to show to our visitors.

I am, Sirs, yours faithfully,

Hamburg, July 31st. DR. KÜMMELL.

"HOSPITAL ABUSE."

To the Editors of THE LANCET.

SIRS,—I can understand that the self-sufficient gentleman who called upon some of us here respecting the subject of "Hospital Abuse" should have resented being told to mind his own business and allow us to mind ours; but it is inconceivable that THE LANCET, which owes something to its position as the leading English medical journal, should have allowed such a spiteful misrepresentation of the profession in this city as that which is published as the report of the "Special Commissioner" on Hospital Abuse in Birmingham to appear in its columns. It is a cowardly and cruel libel to say that the profession there is so saturated with the commercial spirit and so engrossed with making money that it cares nothing for these questions, and the Editors of THE LANCET must have been suffering from the effects of the dog-days when they allowed such a monstrous accusation to pass their censorship. What is the charge which this precious Commissioner makes? It is that Birmingham having taken the lead in the question of hospital reform, has not been able to attain to any practical result. But where has such a result been obtained under conditions anywhere comparable to ours? And are we to be fairly exposed to the taunt of being a money-grubbing, disorganised profession because difficulties which have been nowhere overcome have been to us so far insuperable, or because many of us think that if they are to be overcome it will be by tact, patience, and the growth of the conviction that the medical profession is only asking what is right and reasonable, or that this consummation will not be promoted by the interference of outsiders whose acquaintance with our local

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conditions must be very imperfect? It is to be hoped that you will in future conduct your campaign without indulging your "Commissioner" in coarse abuse of the profession here or elsewhere.

I am, Sirs, yours truly,

R. SAUNDBY, M.D. Edin., F.R.C.P. Lond.

Birmingham, Aug. 1st, 1897.

THE CONGRESS IN MOSCOW: RUSSIAN PASSPORTS.

To the Editors of THE LANCET.

SIRS,—Will you allow me to correct one small mis-statement in your "hints" to intending visitors to Moscow, printed in THE LANCET of July 24th? You say: "If he [the traveller] is staying in a private house he must himself take his passport to the nearest police office." This is not quite the case. The traveller staying in a private house has practically no responsibility with regard to his passport. It is the duty of the *dvornik* or porter attached by law to every house to obtain the traveller's passport and take it to the police. It is also the *dvornik's* duty to obtain the necessary permission of the authorities to enable the traveller to leave the country. In both cases the traveller himself remains passive. If his passport is in order, that is to say, if it has been *visé* by a Russian consul in London or elsewhere, he has no further trouble; the system works automatically. May I also add to your first hint, that "a passport is absolutely necessary," that a passport itself is useless unless it has been *visé*, as just stated, at a Russian consulate.

I am, Sirs, yours faithfully,

St. Petersburg, July 17th (29th), 1897. FRANK G. CLEMOW.

CULLINGWORTH FUND.

To the Editors of THE LANCET.

SIRS,—Will you allow us to make a brief statement in your columns as to the Cullingworth Fund, which is now finally closed? It was hoped that we should be able to defer sending out the balance-sheet until the litigation had been brought to a conclusion, but Miss Beatty has applied for permission to appeal to the House of Lords *in formâ pauperis*, and though this application has been refused it is still open to her to proceed with the suit in the ordinary way. Under the circumstances we have thought it better to issue the balance-sheet without further delay. The amount subscribed is £972, a sum which will, it is hoped, fully cover Dr. Cullingworth's legal expenses. The incidental expenses would have been much greater had it not been for the generous coöperation of yourselves and the editor of the *British Medical Journal*, which we desire cordially to acknowledge.—We remain, Sirs, yours faithfully,

T. D. ACLAND, B. PITTS, } Hon. Secs.

TREASURER'S STATEMENT.

Receipts as per published lists	£872	0 0	Paid to Dr. Cullingworth	£959	14 6
			Printing, &c.	6	0 6
			Clerical assistance	2	10 0
			Postage, &c.	3	10 0
			Messengers and telegrams	0	5 0
	£972	0 0		£972	0 0

July 30th, 1897. W. ROBERTS, Hon. Treasurer.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Antitetanus Serum as a Preventive.

AT the last meeting of the Academy of Medicine M. Nocard, continuing the subject introduced by him some eight days previously, brought forward evidence to prove that a small dose of antitetanus serum was enough to immunise a horse against a fatal dose of tetanus toxin. The use of antitetanus serum as a preventive has been in force for some years in veterinary practice in cases of wounds, castration, or other surgical procedures. To this end the Pasteur Institute has supplied 7000 doses of antitetanus serum, a dose being 10 c.c., a quantity which has sufficed to treat preventively 3100 animals in those parts of the country where tetanus is endemic. Among these there has been no death from tetanus. In the case of one horse injected five days after receiving a wound tetanus developed, but the attack was slight. During the same time that these animals were injected the same veterinary surgeon observed among animals not treated by injection 259 cases of tetanus. There would therefore seem to be no doubt of the utility of preventive injections of serum in veterinary practice.

The Surgical Treatment of Exophthalmic Goitre.

At the same meeting of the Academy two very important communications were made by the respective champions of the rival methods for the cure of exophthalmic goitre by operation. M. Jaboulay spoke in favour of resection of the cervical sympathetic nerve, while M. Doyen held out for the total extirpation of the thyroid body. M. Jaboulay related how the idea of the operation he favoured came to him some eighteen months ago. Having removed the whole thyroid body, including the median lobe, in a goitrous patient without any relief being experienced, he remembered that the two most prominent symptoms in exophthalmic goitre—namely, exophthalmos and cardiac palpitations—could also be produced by an acute excitation of the cervical sympathetic, so he made up his mind to try section of this nerve in a case of this particular disease. He had operated upon nine patients and had obtained in all a great amelioration of the symptoms, besides which the operation was simple and devoid of danger. His method had been followed by other operators in various parts of France, and the number of cases reported up to the present was fourteen.[1] On the other side M. Doyen brought forward two cases of exophthalmic goitre treated by ablation of the whole of the thyroid body. In these patients the operation was followed by the immediate and lasting disappearance of all the symptoms. Notwithstanding that the cure seemed complete, one patient, although deprived of a thyroid, was attacked by a fresh crisis of exophthalmos, dyspnœa, and cardiac palpitation, but this was owing to her undergoing an untimely course of thyroid treatment, and the symptoms wholly subsided on all treatment being stopped. M. Doyen therefore advised ablation of the thyroid, and considered section or resection of the cervical sympathetic as a merely indirect method of treatment.

A New Method of treating Adherent Ulcer of the Stomach.

Dr. Delageniere, of Mans, reported to the Academy that in a complicated case of gastric ulcer, where perforation had taken place and the organ was adherent to the diaphragm, he detached the adherent portion together with a part of the muscle to which it was adherent, inverted the affected parts into the cavity of the stomach together with the bit of muscle, to the end that they might be digested, and brought the edges of the fold together with sutures. The patient rapidly recovered, and up to the present remains well. Dr. Delageniere considers that this operation is indicated in all cases of gastric ulcer which have resisted ordinary treatment.

The Paris Milk-supply.

This very important question is at present the leading topic in Paris. Two absolutely different opinions are evident. On the one hand, all the medical men demand that every precaution to ensure a supply of pure milk should be taken, together with sterilisation and a rigorous inspection of cowsheds, dairies, &c. On the other hand, those interested in the trade complain of the severity of these measures. The syndicate of cow-keepers in Paris and the suburbs have set forth their ideas on the matter, the President stating that owing to the progress which had occurred during the last fifteen or twenty years the sheds in Paris where milch cows were kept were in far better condition than many farms in the country. The most remarkable improvements had been introduced into the Parisian cowsheds, and although this might be due to the severe regulations of the municipal laboratory, still it could not be denied that they were there. Under these conditions they considered that they should no longer be treated as suspected persons, and with regard to the laws concerning tuberculosis they passed a series of resolutions. 1. That the declaration which all cow-keepers have to sign whenever one of their stock falls ill should remain in force, but only when the animal shows definite signs of tuberculosis. 2. That a penalty should only be inflicted by the

[1] THE LANCET, July 10th, 1897, p. 120.

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court when the accused has acted in bad faith. 3. That the penalties enacted by the law of 1881 should be reduced. Dr. Budin, the chief physician to the Maternity Hospital, in his report dealing with milk foods and feeding, proposes that no milk below a certain standard of richness in fat should be considered as milk from the hygienic point of view or be sold under that name. For sterilisation boiling and keeping hot for three-quarters of an hour in a water bath of boiling water is sufficient for milk to be consumed within twenty-four hours. It is not enough that there should be a supply of good raw milk or even of sterilised milk, but means must be taken to bring such supply within reach of the poor of Paris, who are generally unable to procure good milk. Sterilised milk, or in some cases sterilisers, should be distributed among the necessitous mothers of Paris who at present cannot bring up their infants at the breast. Those mothers who are in slightly better circumstances might be given tickets for either milk or a steriliser. Milk might be called in certain cases an indispensable drug, and the *bureaux de bienfaisance* ought to be able to prescribe it like other drugs.

Aug. 3rd.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The German Commission on Plague.

THE members of the German Commission on Plague have recently returned to Europe, with the exception of Professor Koch, who went direct from Bombay to the German colonies in East Africa. Some preliminary notices of the work of the Commission have again appeared in the official papers of the Government. The Commission states that the bacillus of plague very easily perishes outside the human body or that of animals. Cultures of the bacilli were destroyed by boiling and by corrosive sublimate at once, by mineral acids within five minutes, by carbolic acid within ten minutes, and by milk of lime within an hour. In ordinary town water the bacilli died within three days, being unable to live without atmospheric oxygen. Pigeons, fowls, geese, and pigs did not show any reaction after injections of cultures of the bacilli; sheep and goats were more sensitive to the infection; whilst horses, and especially cattle, were very liable to contract the disease. All the animals artificially infected eventually recovered. The greatest liability to the disease was presented by rats, which, it was found, carried the bacilli from house to house, and in this way were very dangerous to the population. Grey monkeys were also very liable to the disease, but brown monkeys were not quite so readily affected. Monkeys were therefore used for the study of artificial immunisation. It was proved by experiments that injections of Haffkine's serum produced immunity, especially cultures of high virulence which had been exposed to a temperature of 65° C. (149° F.) for an hour. The immunity appeared after a period of from five to seven days. Monkeys immunised in this way were immune against about two milligrammes of a culture of plague bacilli. The serum of Yersin was also tested by the Commission. An injection of 2 c.c. of this serum given to brown monkeys made them immune against 2 c.c. of plague culture, but it was found that 1 c.c. was not sufficient for the purpose. With grey monkeys, however, the serum was useless. The immunity of brown monkeys lasted only eight days. Strong serum had a remedial effect on these monkeys, but there was no evidence that the disease occurring in the human subject could be treated in this way. The report further states that Professor Koch, on May 18th, visited the Portuguese town of Damaon, where he observed that the natives who lived in houses had nearly all caught the disease, whereas those who camped out were comparatively seldom attacked. The effect of 1400 injections performed there after Haffkine's method was to produce marked immunisation; some of these patients fell ill, but only twenty of them died, and in most cases the symptoms were mild. Some members of the Commission visited the North-West Provinces for the purpose of investigating a disease called mahamari, which is apparently identical with the bubonic plague.

The late Professor Joseph Oertel.

Dr. Joseph Oertel, Professor of Laryngology at Munich University,[1] and one of the leading physicians of Germany, died in Munich on July 13th. He was born in Dillingen, Bavaria, in 1835, and after having finished his curriculum at the University of Munich he went to Vienna, where Professor Czermak had just begun to introduce the laryngoscope into medical practice. After his return to Munich he became *privat-docent*, and in 1876 Extraordinary Professor of Laryngology. His principal publication during this time was a treatise on Epidemic Diphtheria, being a part of the great "Handbuch der speciellen Pathologie" edited by Professor von Ziemssen. He was known to be a very clever laryngologist, but his reputation was limited to this branch of practice, and it was therefore somewhat of a surprise to the medical profession when he published in 1884 a work entitled "The General Treatment of the Disorders of the Circulation," the subject being one which had no connexion with the department of medicine he had hitherto cultivated. In this treatise, which subsequently became one of the standard works on medical treatment, he argued that in order to remove œdema and other symptoms of circulatory troubles water must be withheld as much as possible and the heart must be strengthened by exercises of some kind, especially by walking uphill. To this end he prescribed a special diet, the principal points of which were the general discouragement of drinking, especially during meals, and an absolute prohibition against taking soups and other food containing much water. He endeavoured to strengthen the heart by the "terrain cure," which is generally known by all medical men. He first introduced this system at Meran, a health resort in the Tyrol, where he induced the local authorities to set up round the town notices by which patients could find out how far they had come, and whether the road before them was level or steep. This system of "terrain cure" was subsequently introduced in many health resorts, especially in Southern Germany, and whoever has visited Baden-Baden, Wiesbaden, Kreuth, Aussee, &c, must have seen the coloured marks so essential for this plan of treatment. Professor Oertel's first trials of his new method were made on himself. A true Bavarian, he was not averse to the use of beer; he was also very round-shouldered, and soon after entering on practice he began to suffer from œdema and other symptoms of cardiac failure. He then resolved to live in the way above described, and satisfied himself as to the soundness of his method by means of chemical and physiological observations. It was in his own case so successful that, as he told me himself, although he had for several years been unable to walk more than a few hundred steps at a time, he ultimately became able to climb mountains like strong people. Professor Oertel had an extremely kind manner, and was much liked by the numerous patients who came from all parts of the world to consult him.

The International Medical Congress at Moscow.

A correspondent whose letter appeared in THE LANCET of July 17th (page 168) complained of the difficulties which attend the remitting of money to Russia. In Germany the matter was arranged by our national committee appointing one of its number as treasurer, who received the money from the German members and sent it in one sum to Russia. He issued provisional receipts, which were taken as legal documents by the Russian consuls for the purchase of passports. This arrangement, however, was only in force till July 20th, and members inscribed after this date had to apply directly to the Russian committee. It was said that the Russian committee would send the requisite vouchers immediately, but although I entered my name some weeks ago I have not yet received anything from Russia, and as the Russian Consulate has retained the German receipt I have at present nothing to show as evidence of membership. There is thus some inconvenience in getting a railway ticket, which must be taken before August 1st, but it is hoped that the cards will arrive one of these days from Russia. Up to July 15th the names of 447 members from Germany were entered. The Army Medical Department will be represented by Generalstabsarzt Dr. von Coler and Oberstabsarzt Dr. Schjerning, the German Surgical Association by Dr. von Bergmann and Dr. Gurlt, the Berlin Medical Society by Dr. Senator and Dr. Landau, and the Verein für Innere Medicin by Professor Gerhardt. The German representatives,

[1] A brief obituary notice appeared in our issue of July 24th.—ED. L.

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Professor Virchow, Professor von Leyden, and Dr. von Coler, will be received by the Czar at St. Petersburg. Dr. Voigt, medical superintendent of vaccination in Hamburg, warns German medical men and instrument-makers not to send articles to the exhibition connected with the Congress. He states that he was invited by the Russian Society of Public Health to send a collection of vaccination instruments to the Jenner commemoration held in Moscow last year, and he did so, but he had great difficulty in getting his collection back. The articles were forwarded on Nov. 15th, and as he had received no acknowledgment by Jan. 30th he sent several letters and telegrams to the secretary of the association. No answer, however, was returned, and the Russian Consulate, moreover, declined to take any steps in the matter. After having at last applied to the German Embassy he received in the middle of April a parcel containing a portion of the collection, but a good many of the objects had disappeared.

July 29th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Congress Fever.

FOR the next two months the Continent will be labouring under this now periodic autumnal visitation which in Italy especially assumes more and more the character of a "quotidian intermittent." The international assemblage at Moscow will, of course, for the early part of August, form the chief of its "foci of infection," but it will thereafter declare itself at innumerable centres, principally (as I have stated) in the Italian kingdom. I have already announced the gathering at Bergamo of the National Medical Congress of Italy,[1] and that will be followed by another, also on a national scale—the Eighth Congress of Internal Medicine, which is to hold its sittings this year at Naples. From the Neapolitan committee I learn that Professor Guido Baccelli of Rome (where he directs the medico-clinical staff of the University Institute), Dr. Vincenzo Cervello (Professor of Pharmacology and Materia Medica in the University of Palermo), and Dr. Achille Spatuzzi (who fills the chair of Hygiene in the Naples School) have been severally approached with a view to their starting a special discussion in one or other of the subjects belonging to their personal department. This is an innovation on traditional practice in the programmes of these congresses, and though but recently tried it has worked exceedingly well in concentrating and economising attention and time, all too apt to be wasted among speakers, with whom the "parola facile" ("determination of words to the mouth") is an ethnological characteristic. Each of the distinguished professors above indicated has complied with the invitation, and Dr. Baccelli has already intimated his theme to be "La Sintesi della Malaria" (or Malaria considered in its Totality). Dr. Spatuzzi will discourse on the (historically and socially) interesting subject of the "Sommi Medici Napolitani nella Vita Publica" (the Neapolitan Leaders of Medicine in Public Life); while Dr. Cervello has still his special topic under consideration, to be announced some day soon. Besides these congresses there are others—hygienic, medico-psychological, balneary, epidemiological, ophthalmic, anthropological, medico-chirurgical—well-nigh numberless, among which may be mentioned the "Società Italiana di Laringologia, Otologia, e Rinologia," which (the third of the series) will meet on Oct. 28th next in the Roman University. The President will be Dr. Vittorio Grazzi, who holds the chairs of Aural Medicine in the Florentine and Pisan Schools, and among the papers read and discussed will be one introduced by Professor Gherardo Ferreri, of Rome, on the Value of Autoscopy in the Diagnosis and Treatment of Laryngeal Disorders; on Adenoid Affections in Italy, by Professor Giuseppe Gradenigo, of Turin; and on the Physiology of the Middle Ear, by Professor Giulio Masini, of Genoa.

Acute Dysentery in Sicily.

The health conditions of Sicily have more than a merely local interest now that (thanks to THE LANCET) the island has vindicated its claim before the professional world as a resort for the invalid and convalescent. From causes which have not yet been made clear, but prominent among which may be inferred the heat, well-nigh tropical, of the last few weeks, dysentery has appeared in the province of Messina rather formidable as to character and diffusion. Limina is the locality which has been most severely visited. Numerous cases of "dysenteria sanguinolenta," not a few of them terminating fatally, have occurred within the fortnight now ending, and the Prefecture has taken energetic measures to deal with it clinically, etiologically, and prophylactically. Dr. Fortunato, the provincial medical officer, is accordingly engaged on bacteriological examinations of the water, the food, and other sources of the malady, checking them by further scrutiny, also bacteriological, of the alvine dejections of the patients. This report, specially called for by the Ministry of the Interior, is not yet made public, but from what is already known of his findings in professional circles there is now no doubt that a considerable tract of Eastern Sicily is in presence of an epidemic closely resembling, if not in every point identical with, acute dysentery. One conclusion Dr. Fortunato and his staff have already reached, and that is that cholera, whether of the Asiatic or the milder European type, is absolutely excluded from their purview. Meanwhile, Count Buraggi, governor of the province, has issued orders of the most stringent kind, tending to isolate the epidemic and to allay the public alarm.

Typhoid Fever in Milan.

The Lombard capital—that great *entrepôt* of European and oriental travel, with its hotels so often crowded with the English-speaking world—is at present visited by typhoid fever, in all cases serious, in some fatal. According to the Ufficio Igienico Municipale there is no true *focolaio* (hot-bed) of the disease in any of the quarters of the city. The inhabitants are rather in the presence of a number of sporadic cases which the Ufficio is trying to minimise by increased surveillance over the *acqua potabile*. To this water it recommends the public to confine itself, and especially to avoid that furnished from the numerous local wells sunk in the subsoil, which have so often occasioned explosions of diphtheria as well as typhoid fever. A further injunction issued by the Ufficio forbids the eating of raw fruit, especially those *cocomeri* (water melons, green and red) so grateful to the popular palate in the dog days, but nevertheless the frequent cause of intestinal disturbance, rendering easier the lodgment of microbes in the alimentary tract—microbes (*inter alia*) conveyed in the impure ices of universal consumption.

Aug. 1st.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

Epidemic Mastitis.

DR. F. SCHWARZ, of Pécs, has had an opportunity of studying an outbreak of epidemic mastitis during the spring of last year, the patients being twelve women, all of whom developed the disease in the first week following childbirth. There was not one case amongst them in which he could trace the disease to lesions of the skin covering the nipples or to sores in the mouths of the suckling infants. All the patients, however, had been attended by the same midwife, and Dr. Schwarz soon ascertained that she had charge of an infant suffering from stomatitis from whom she had undoubtedly carried infectious germs to the breasts of her other patients. The mastitis ran a somewhat different course from that usually observed. The onset was marked by a severe rigor, which was soon followed by hyperpyrexia, swelling of both breasts, and rapid formation of deep abscesses. Incisions liberated a quantity of thick pus, which was found to contain large numbers of streptococci and staphylococci. The healing of the abscesses, though appropriately treated, was somewhat prolonged.

Rupture of the Urethra caused while Cycling.

This interesting case was published by Dr. S. Baumgarten in the last number of the *Orvosi Hetilap*. The patient was a man, aged twenty years, who, whilst alighting from his bicycle, unfortunately struck his perineum against the edge of the saddle. He had to be carried home, and Dr. Klein found that he had a painful swelling the size of an orange

[1] THE LANCET, July 31st, 1897.

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in the perineum, and that his underclothing was full of blood, which poured freely from the urethra. The bleeding soon stopped, and the swelling gradually diminished under the application of iced compresses. Dr. Baumgarten, who, a fortnight later, was called in on account of very difficult micturition, succeeded in introducing into the bladder along the upper wall of the urethra an English catheter No. 2, which was left in position for two days. Further treatment consisted in gradually introducing catheters of larger size. The normal permeability of the urethra was restored within twenty-two days. The urethroscope, introduced at the end of the treatment, revealed in the bulbous part of the urethra a pink-coloured transverse cicatrix indicating the site and the direction of the rupture.

Post-graduate Lectures in Budapest.

The medical faculty of Budapest has arranged for the delivery of post-graduate lectures in the Hungarian language, together with practical demonstrations of interesting cases, during the summer vacations, the main object of these lectures being to afford our provincial practitioners an opportunity of obtaining an insight into the most recent advances in medicine and surgery.

July 30th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Laws Relating to Pharmacy.

THE New York Legislature amended the public health law so that the article relating to pharmacy does not apply to the sale by retail dealers or merchants of ammonia, bicarbonate of sodium, borax, camphor, castor oil, cream of tartar, dye stuffs, Epsom salts, essence of ginger, essence of peppermint, essence of wintergreen, Glauber's salts, glycerine, liquorice, olive oil, Rochelle salts, sal ammoniac, saltpetre, salts of tartar, soda, and sulphur. In the same section "usual domestic remedies" include also paregoric and essence of anise.

"Knock out Drops" Forbidden.

The New York Legislature also amended the penal code as follows: "A person (other than a duly licensed physician or surgeon engaged in the lawful practice of his profession) who has in his possession any narcotic or anæsthetic substance, compound, or preparation capable of producing stupor or unconsciousness, with intent to administer the same or cause the same to be administered to another without the latter's consent, unless by direction of a duly licensed physician, is guilty of a felony punishable by imprisonment in the State prison for not more than ten years. The possession by any person (other than as exempted in the foregoing sub-division) of any such narcotic or anæsthetic substance or compound, concealed or furtively carried on the person, is presumptive evidence of an intent to administer the same or cause the same to be administered in violation of the provisions of this section."

Abuse of Dispensaries.

The subject of the abuse of out-door medical relief is exciting much discussion in the profession. A novel form of abuse has recently been reported. A physician has been dismissed from one of the dispensaries for taking a fifty-dollar bank-note from the purse of a patient. The purse was left upon the dispensary desk while the lady entered an adjoining room to prepare for examination. The plea made to the governing board by the physician was that he had been overworked, having treated over 400 patients at the dispensary during the three days preceding the temptation which caused his fall, and that during this time he had been able to procure but one full meal. Hunger and the means to appease it may have proved too strong a combination for his overwrought nerves, but this naturally did not weigh with the board.

The Influence of the "Drink-habit" in Causing Crime.

Dr. Wines, of Illinois, one of the most eminent statisticians of the United States, describes some of the statements made on this subject as utterly wild and irrational, without any support, in fact. Such a statement was that 90 per cent. of cases of pauperism, crime, insanity, &c., are due to drink. To say that was pure folly. There are pauperism and crime to be found in Mohammedan countries as well as in Christian countries. Drink is not a cause of crime; the cause of crime lies deeper—in the depravity of the human heart, not in any material thing. He then briefly analyses the police returns of twelve of the largest cities of the United States, showing that about half of the arrests are protection arrests, not for crime, and a large number of the residue are for petty misdemeanours, violations of city ordinances, &c., leaving about one quarter for serious offences. The average of arrests per saloon per year is between six and seven of all sorts, and eliminating the protection arrests and the petty misdemeanours it turned out that the average is one and a half arrests per saloon. Wardens of prisons who are new generally think intemperance the cause of crime. After an experience of a dozen years or so they generally see differently. Liquor never puts into a man a new impulse—it removes the restraint on impulses which he has already. And he remarked that in a number of prisons where convicts are confined for murder there are about as many total abstainers as drinkers.

Caring for Epileptics.

Dr. Rutter, of the Hospital for Epileptics, of Ohio, who has had great success in the treatment of this class, gives a detailed account of the measures adopted, and one interesting feature is that of diet, which he has found was very important. A free meat diet he condemned, and it is used only for the mid-day meal, and then only fresh beef, roasted or boiled mutton, fowl, or fish. Meals are served in courses to ensure deliberation in eating. Fruit, fresh or if not canned or dried, is given freely, and is the principal article for breakfast and supper, supplemented by some cereal and milk. No pastry is allowed, and no article is fried. Bread is usually given stale. Coffee is given for breakfast and milk *ad libitum* for other meals. Many vegetables, like cabbage, cucumbers, &c., have not been found harmful.

July 28th.

Obituary.

HENRY THOMPSON, M.A., M.D. CANTAB, F.R.C.P. LOND.,

SENIOR FELLOW OF ST. JOHN'S COLLEGE, CAMBRIDGE; CONSULTING PHYSICIAN TO THE MIDDLESEX HOSPITAL.

THE death, at the advanced age of eighty-one years, of Dr. Henry Thompson removes from our ranks one of the most learned members of the profession and one of the most unassuming. He was born at Workington, Cumberland, and became a distinguished scholar of Shrewsbury School, then under the headmastership of Dr. Samuel Butler. The well-known "Sabrinæ Corolla" contains some exquisite Greek and Latin verses from Thompson's pen, proving that he had an early bent towards classical studies, which culminated later in his receiving a Fellowship at St. John's College, Cambridge. He elected to follow the profession of medicine, and studied at St. George's Hospital, obtaining his M.D. degree in 1853 In 1855 he was elected assistant physician to the Middlesex Hospital, where he also lectured on Materia Medica from 1855 to 1869, became physician four years later, and in 1872 senior physician. He retired from the acting staff in 1879, but continued to reside in London until his death.

Dr. Henry Thompson was little known in the medical world outside his own hospital, but there he was held in great esteem. Enabled to devote himself largely to hospital work—for he practically had no private practice, nor did he desire to have any—he was most regular and punctual in his attendance, and notable for the care with which he examined and treated his patients. His clinical observations were marked for their accuracy and his judgment was well balanced and sound. He did not teach much at the bedside, but those who had the good fortune to serve under him as house physicians are unanimous in their testimony to his qualities as a physician. His clinical lectures (on the preparation of which he took great pains) were models of terse and thoughtful exposition, and prove that his knowledge was wide and accurate. Some of them have appeared in these columns, and after resigning the office of physician he collected a few into a volume of clinical lectures and cases with commentaries (Churchill, 1880), which is full

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of suggestiveness and practical insight. Those who best knew him have regretted that he did not take a more prominent place, for there can be no question that he was a physician of the first order. But he was as remarkable for his modesty and freedom from ambition as he was for his high talents; he was contented with the life he had chosen, and no one can deny that he did not faithfully and scrupulously fulfil his duties as an ideal hospital physician. He was a man of fine presence, kindly and gentle in manner, earning the admiration and affection of pupils and colleagues. Of late he had become physically very feeble, and his death occurred after a brief illness, an attack of diarrhœa causing exhaustion, from which he could not rally.

Medical News.

VICTORIA UNIVERSITY.—On July 30th the following degrees were conferred by the Vice-Chancellor (Dr. N. Bodington) in the Owens College:—

MASTER OF SCIENCE.

William Henry Moorby, Owens College.

BACHELOR OF MEDICINE AND OF SURGERY.

Second-class Honours.—William Hirst Bateman, Owens College; Joseph Everett Dutton, Walter Graham, and Arthur Stanley Griffith, University College; Harold Hartley, Owens College; David Garnett Hurter, University College; Charles Herbert Moorhouse, Yorkshire College; John Henry Sheldon, Owens College; and Robert Sutherland, University College.

Mark Aungier, University College; Thomas Fletcher Bamford, Owens College; Robert Wilfred Bollans, Yorkshire College; John James Butterworth and James Bertram Clarke, Owens College; Francis Darlow and Philip Henry Fearnsides, Yorkshire College; Henry Martyn Henderson, University College; Arthur Thomas Lakin, Owens College; John Reginald Lambert, Yorkshire College; Alexander Lawson, Owens College; John Harold Mason, Yorkshire College; John Mooney and Archibald McLelland Pilcher, Owens College; Francis Stanhope Pitt-Taylor, University College; John Prestwich, Frank Pritchard, Alexander Low Rhind, and Alfred Wightwick, Owens College; and James Hayward Willett, University College.

In the Faculty of Medicine the following candidates have been successful in the subjects indicated:—

FIRST EXAMINATION.

Part II. Biology.—Roy Appleton and P. W. Ashmore, Yorkshire College; F. H. S. Ashworth, J. B. Barnes, and J. H. Battersby, Owens College; H. M. Berry, University College; C. H. Booth, Yorkshire College; Neville Bradley, University College; S. B. Brentnall, Owens College; R. N. Butterworth, and W. H. Canter, Yorkshire College; J. B. Cook, Alexander Cran, and E. N. Cunliffe, Owens College; S. W. Davies, University College; A. M. Deane, Yorkshire College; Tom Eastham, J. E. Floyd, and F. W. Gatenby, Owens College; G. W. Gelderd, University College; P. H. Green, J. W. Greenwood, and P. T. Harding, Owens College; F. W. Hayes, Yorkshire College; Godfrey Heathcote and Rowland Heathcote, Owens College; J. P. Henderson and A. G. Jackson, University College; S. J. C. Johnson, C. P. Lapage, and Charles Mackey, Owens College; H. C. McManus, University College; C. T. Matthews, Yorkshire College; Herbert Maxfield, Owens College; J. S. W. Nuttall, University College; G. G. Parkin and R. T. A. Patchett, Owens College; H. D. Pearson, Sydney Platts, and M. B. Potts, Yorkshire College; H. H. Rayner and Arthur Richmond, Owens College; William Rotherham, University College; Edwin Saville, Yorkshire College; F. R. Sawdon, G. H. Shaw, W. F. Shaw, S. W. Swindells, and H. G. Tansley, Owens College; J. C. Teasdale and M. G. Walker, Yorkshire College; H. C. Waterhouse and Alwyn Wharton, Owens College; R. G. Wills, University College; E. M. Wilson and J. G. Woolham, Owens College; and F. W. B. Young, University College.

SECOND EXAMINATION.

A.—Anatomy and Physiology.—S. W. Battle, Yorkshire College; George Binns, J. P. Brown, and W. J. Butcher, Owens College; J. S. Byrne, University College; H. H. Bywater, E. W. Falconer, P. A. L. Foulds, Henry Holt, H. S. McLellan, F. A. Morrison, E. S. Nichol, T. E. Regan, and Harry Scholefield, Owens College; G. M. Sharpe, Yorkshire College; Harold Snape, Owens College; W. A. Stott, Yorkshire College; Edward Swales, University College; R. N. West, Owens College; R. D. Willcocks, University College; and P. G. Williamson, Owens College.

B.—Materia Medica and Pharmacy.—Granville Ainsworth and Arthur Anderson, Owens College; E. W. Anderton, Yorks College; M. B. Arnold, E. M. Ashcroft, and J. T. Bailey, Owens College; Herbert Bates, University College; A. D. Beckett, Owens College; Philip Benington, University College; A. T. Blease, Owens College; Henry Brown, Yorkshire College; P. A. Browne and C. W. Budden, University College; Fred. Bullough, E. R. Cooper, J. M. Cort, Daniel Cowin, and C. W. Crawshaw, Owens College; J. L. Dimond, University College; T. H. B. Dobson, Owens College; W. F. Ellis, Yorkshire College; R. J. Ewart, University College; A. H. B. Fletcher, Yorkshire College; H. E. Fox, Mercier Gamble, Walter Garstang, D. G. Gellatly and Reginald Gordon, Owens College; Frederick Griffith, University College; F. G. Hack, C. R. Hall, and W. D. Hamer, Owens College; F. W. Harrowell, Yorkshire College; L. C. Johnson, Owens College; R. E. Kelly, University College; Reginald Lawrence, C. H. Lee, H. S. Lister, and James McIlraith, Owens College; J. C. Mann, University College; H. J. Moon, Owens College; T. F. Pugh, University College; P. A. H. Radcliffe, Yorkshire College; Albert Ramsbottom and Sidney Renshaw, Owens College; E. E. Roberts, University College; J. H. Sutcliffe and R. W. Taylor, Yorkshire College; Thomas Tierney, Owens College; C. R. Willans, Yorkshire College; T. B. Williams, Owens College; F. P. Wilson, University College; and J. D. Windle and W. A. B. Young, Owens College.

FINAL EXAMINATION.

Part I.—D. A. Alexander and J. W. Anderson, University College; D. A. Ashton and J. T. Auld, Owens College; J. W. Barber, Yorkshire College; T. T. Bark, University College; H. P. Clarke and John Craig, Owens College; H. R. Cross, Yorkshire College; William Crozier and S. S. Depree, University College; E. C. Dutton and E. W. Floyd, Owens College; Joseph Goodall, Yorkshire College; J. P. H. Greenhalgh and Roland Hamer, Owen's College; H. F. Hart, University College; T. W. Hart, Owens College; E. M. Hime, Yorkshire College; Frederic Hoyle, Owens College; F. W. Inman, University College; H. H. McNabb, E. J. Martin, and John Mooney, Owens College; S. C. Moore, University College; Harry Osborne, W. H. Richardson, and William Rigby, Owens College; Ambrose Spong, Edward Trotter, and Edward Turton, Yorkshire College; G. C. Walker and L. S. Whitwam, University College; and T. H. Wignall and O. H. Woodcock, Owens College.

Part II.—Mark Aungier, University College; T. F. Bamford and *W. H. Bateman, Owens College; R. W. Bollans, Yorkshire College; J. J. Butterworth and J. B. Clarke, Owens College; Francis Darlow, Yorkshire College; *J. E. Dutton, University College; P. H. Fearnsides, Yorkshire College; *Walter Graham and A. S. Griffith, University College; *Harold Hartley, Owens College; H. M. Henderson and *D. G. Hurter, University College; A. T. Lakin, Owens College; J. R. Lambert, Yorkshire College; Alexander Lawson, Owens College; J. H. Mason, Yorkshire College; John Mooney, Owens College; *C. H. Moorhouse, Yorkshire College; A. M. Pilcher, Owens College; F. S. Pitt-Taylor, University College; John Prestwich, Frank Pritchard, A. L. Rhind, and *J. H. Sheldon, Owens College; *Robert Sutherland, University College; Alfred Wightwick, Owens College; and J. H. Willett, University College.

* Awarded second-class honours.

In the Faculty of Science the following candidates have passed the Intermediate Examination:—

D. M. Alexander and Helen P. Auld, University College; A. R. Dwerryhouse and E. L. Gill, Yorkshire College; J. L. Hawkes, University College; Alexander Hodgkinson, Owens College; and C. O. Jones, W. G. Lloyd, and E. A. Rosenheim, University College.

The Diploma in Public Health has been awarded as follows:—

J. H. Ashworth, H. P. Butterworth, W. E. Davies, and T. W. H. Garstang.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Paul Silex, First Assistant of the University Ophthalmic Clinic, has been promoted to an Extraordinary Professorship.—*Breslau:* Dr. Henle, of the University Surgical Clinic, has been recognised as *privat-docent* in Surgery.—*Montpellier:* Dr. Rodet, *agrégé*, has been appointed Professor of Microbiology.—*Paris:* Dr. R. Blanchard, *agrégé*, has been appointed Professor of Medical Natural History.—*Zürich:* Dr. Georg Ruge, Professor of Anatomy in Amsterdam, has been offered the Chair vacated by Professor Philipp Stoehr on his migration to Würzburg. He was formerly Gegenbauer's assistant in Heidelberg, and has written a good deal on Descriptive and Comparative Anatomy and also on Embryology.

THE CHOLERA SEASON IN INDIA.—Although there is a certain amount of cholera and choleraic diarrhœa in Bombay and Poona, and a somewhat increased prevalence of these diseases at Sholapoore, it appears that the summer in India generally has so far been a healthy one as regards epidemic disease. Cholera, which threatened to be severe in the central parts of the country in the spring, has died out, according to the *Pioneer Mail*, except in the Deccan, and the plague has practically now ceased as regards its epidemic form.

MANCHESTER SOUTHERN HOSPITAL.—The annual meeting of the Manchester Southern Hospital was held on July 21st in the Lord Mayor's Parlour, Sir John Harwood presiding. The report showed that 5656 cases have been treated during the year. At the Clifford-street branch of the hospital 146 women and 283 children had been admitted as in-patients, while 994 women and 2820 children attended as out-patients. There were also 1233 maternity cases treated at their own homes and 180 admitted as in-patients. The income for the year was £2596 and the expenditure £3644, showing a deficiency of £1048. It was stated by the secretary that the trustees of the late Mr. David Lewis had offered to provide a building fund for a new hospital or amalgamated institution consisting of the Southern Hospital and St. Mary's Hospital, and the committee of the Southern Hospital were willing to accede to the proposals; but to their regret the scheme had not been carried out.

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HEALTH OF LIVERPOOL.—435 births and 240 deaths were registered in the city during the week ending July 17th. The patients under treatment in the city hospitals for infectious diseases numbered 261; 40 patients were suffering from typhoid fever and 196 from scarlet fever.

MEDICAL MAGISTRATES.—Mr. Wm. J. Morton, M.D. Aberd., L.R.C.P., L.R.C.S Edin., of Inverell, New South Wales, has been appointed a visiting justice to the gaol at Inverell.—Mr. James Jamieson, M.D., Ch.M. Glasg., of Melbourne, Victoria, Australia, has been appointed a Justice of the Peace.—Mr. Thos. A. Grieves, L.R.C.P. Lond., M.R.C.S. Eng., of Wyalong, New South Wales, has been appointed a Justice of the Peace for the colony.

ROCHDALE INFIRMARY.—In commemoration of the Queen's long reign the people of Rochdale resolved to add a new wing to their infirmary, and this extension was formally opened by Lord Stanley, M.P., on July 24th. The proceedings commenced by the mayor and corporation, preceded by a band of music, walking in procession from the Town Hall to the infirmary. Lord Stanley was then presented with a gold key, with which he unlocked the door of the new building. In the course of an address delivered by Mr. S. Turner, president of the infirmary, it was stated that the committee had for some time been desirous of enlarging their premises, and during the present year the gift of a sum of £18,000 received from the trustees of the late Mr. James Holden enabled them to erect this extension, which will be designated the Holden Wing. The Holden trustees had on a former occasion given £2000, and other contributions have resulted in the formation of a guarantee fund amounting to £24,000.

DIPHTHERIA IN LONDON.—In the four weeks ended on July 17th the amount of diphtheria in London, as gauged by the certificates of notification, was in excess of the preceding period of like length. In fact, we have to go back to the four-weekly period ended on Nov. 28th last to find a total of notifications higher than that of the July period, although it is true that the five-weekly period which concluded last year, ending on Jan. 2nd, 1897, also yielded a larger weekly average of cases notified. In the July period the notified attacks numbered 1011, yielding a weekly average of 253 against averages of 224 in June, 288 in December, and 290 in November. But if we compare the July period of this year with that of 1896 we find that the record of last year exceeds the current one by 58 notifications in the four corresponding weeks. In the July period of the present year all the sanitary areas of London were invaded; five of them had respectively 50 or more notified attacks, with an aggregate of 331, whilst other five had only 14 notifications of diphtheria amongst them. The registered deaths in the June period were 137, and in July 135; but the per case rates of mortality varied more, being in June 15·3 and in July 13·3 per cent. of the notifications. In July of last year the deaths were 167, and the rate 15·6 per cent.; in November, 220 and 19·0 per cent. respectively; and in December (five weeks) 257 and 17·8 per cent. respectively. Thus, with an increasing amount of diphtheria, we seem this year to have, for the time at least, a milder form of the disease.

PRESENTATIONS TO MEDICAL MEN.—Mr. Richard Youl, M.D. St. And., M.R.C.S Eng., City Coroner of Melbourne, Victoria, Australia, was the recipient, on May 26th last, of an enlarged and framed photograph of himself as a token of esteem.—Mr. Edwin Hinchcliff, M.D. Edin., M.R.C.S. Eng., received on his leaving the Bendigo District, Victoria, Australia, a handsome present from the Sandhurst No. 1 Fire Brigade, of which he was the honorary surgeon.—Mr. L. F. Praagst, M.B., C.M. Melb., late medical superintendent of Horsham District Hospital, Victoria, Australia, was, on May 27th last, given a complimentary entertainment on his leaving the district.—Mr. L. G. Fraser, M.B., B.S. Durh., of North Shields, at a meeting on the 27th ult. of the North Shields Centre of the St. John Ambulance Association, was presented by the women's class with a lamp, and by the men's with an illuminated address, in recognition of his instructive lectures to the classes.—At the annual meeting of the Western Branch of the British Dental Association, held at Exeter on July 23rd, Mr. J. T. Browne-Mason, L.D.S. Eng., the honorary treasurer, was presented with a pair of silver bowls, and Mr. T. A. Goard, M.R.C.S. Eng., L.R.C.P. Lond., L.D.S., the honorary secretary, received a silver salver. The presentations were made by Mr. Dudley, of Bath, on behalf of the members of the western branch of the association.—Certificates in connexion with St. John Ambulance classes at Trethosa and Nanpean were presented on July 22nd, when Mr. A. Shaw, M.B., C.M. Glasg., was the recipient of a handsome riding whip and a silver butter cooler in appreciation of his services as honorary lecturer.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—At a meeting held on July 16th, Dr. Milligan (President) in the chair, Mr. George Stoker showed two cases of Suppurative Otitis and a case of Ozæna, which had been treated successfully by oxygen gas after prolonged treatment by other methods had given a negative result. The gas employed was a mixture of oxygen and purified air, as pure oxygen was, as a rule, found too irritating to be employed alone.—Dr. Macnaughton Jones pointed out that the great difficulty in treating cases of suppurative otitis lay in keeping the patients a sufficient time under observation to enable the local treatment to be efficiently carried out. He had treated ozæna with oxygen by means of Mr. Stoker's apparatus without any success.—Mr. Bark showed a case of Epithelioma of the Right Vocal Cord removed by thyrotomy. The patient, aged forty-one years, had suffered for two years from hoarseness due to the presence of a greyish white papillated growth in the right vocal cord, which, together with the ventricular band and the arytenoid cartilage, was removed after thyrotomy, the patient making a rapid and uneventful recovery.—Mr. Lennox Browne reported a case of Epithelioma of the Soft Palate in a man aged forty-eight years. The soft palate was greatly infiltrated and the seat of a warty growth which extended to the faucial pillars, but did not appear to involve the tonsils; the tongue and larynx were perfectly free. The growth was successfully removed under cocaine, and the patient made an excellent recovery, with a rapid increase in weight. The growth proved on examination to be a typical epithelioma.—Dr. Middlemass Hunt opened a discussion on "The Preliminary Training and Methods of Operating on Laryngeal Growths," and referred to the great assistance cocaine was in intra-laryngeal operations, both in shortening the time required to complete the operation and simplifying the necessary manipulation. It did not, however, do away with nervousness on the part of the patient, and certain preliminary training was necessary in most cases. Under cocaine anæsthesia cutting forceps had taken the place of snares, guillotines, caustics, &c., and the rough and uncertain methods of Voltolini had utterly disappeared.—Dr. Milligan and others took part in the discussion.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Workmen's Compensation Bill.

IN the course of the consideration of this Bill in the House of Lords an amendment was inserted providing that if an injured workman objects to the employer's medical man or to his report he may submit himself for examination to one of the medical men appointed for the purposes of the Act, whose certificate shall be conclusive evidence as to his condition.

London University Commission Bill.

Although this Bill got through all its stages in the House of Lords, when it reached the House of Commons it was threatened with serious opposition from various quarters; and in view of the pressure of other work and the arrangements for concluding the session Mr. Balfour decided to withdraw it. In intimating this decision he expressed the hope that next session the Government may be in a position to deal with the subject.

London Water Question.

In both Houses of Parliament the London water question has been a good deal discussed during the week. In the House of Lords there was a second reading debate on the Metropolitan Water Companies Bill, in the course of which Lord James of Hereford explained in detail the nature of the inquiry to be carried on by the Royal Commission. In the House of Commons Mr. Chaplin answered a great many questions with reference to shortness of supply in East London.

HOUSE OF COMMONS.

THURSDAY, JULY 29TH.

The Army Medical Department.

Captain Norton asked the Under Secretary of State for War whether it had been brought to his notice that officers of the Army Medical

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Department suffered severely from frequent moves at short notice, coupled with difficulty of obtaining leave, to such an extent that an officer of eleven years' service serving at home had recently to pay about £30 to enable him to obtain a part of the ordinary leave to which he was entitled by regulation, although the leave in question was for urgent private affairs—namely, to visit a sick wife at his proper station, he being on detachment; and whether he would take steps to deal with these hardships.—Mr. Brodrick replied: Officers of the Army Medical Staff are moved from station to station as seldom as possible and only when the necessities of the public service demand. Ordinarily a departmental officer can only have leave of absence when it does not cause additional expense to the public; but as the home establishment is under strength and inconvenience resulted, arrangements have been made whereby a substitute for an officer on leave is provided without expense to that officer when the establishment of the district is not full.

Beri-beri in Ireland.

Mr. Sheehy asked the Chief Secretary to the Lord-Lieutenant of Ireland whether he was aware that the medical superintendent of the Richmond Asylum had been complaining about the overcrowded condition of his institution in his annual reports since 1886 to the governors; and that a contract, involving nearly a quarter of a million sterling on the new asylum at Portrane, was given away by the Board of Control, which was an unrepresentative body, without consultation with the Board of Governors; whether he would state to the House the amount of money expended on temporary buildings which had been condemned by Dr. Patrick Manson, of London, and by Sir Thornley Stoker, of Dublin; and whether his attention had been called to the statement in the Inspectors' Report for 1891 that the Richmond Asylum was originally constructed for 600 patients, that there were now considerably over 1800 patients in the asylum, and that the additional temporary accommodation did not even provide for the increase in the numbers, since the inspectors reported in 1890 that the congestion paralyses every effort to treat the insane.—Mr. Gerald Balfour replied that the fact was as stated in the first paragraph. It was not true that the contract for the Portrane Asylum was given away by the Board of Control without consultation with the Board of Governors. The expenditure on the temporary buildings which were erected with the concurrence of the governors amounted to about £12,000. The medical gentlemen referred to considered wooden buildings unsuitable for the treatment of beri-beri patients, but the buildings erected at Richmond had been designed with every possible attention to sanitary requirements, and were, in the opinion of the inspectors of lunatics, suitable for the accommodation of the insane.

MONDAY, AUG. 2ND.

Sale of Food and Drugs Bill.

At this sitting Mr. Chaplin formally introduced a Bill to amend the Acts relating to the sale of food and drugs. He explained that it gives effect to some of the least controversial of the recommendations of the Select Committee on Food Products Adulteration, but that it was only introduced now in order that during the recess the general drift of opinion on the subject might be ascertained.

The Vaccination Question.

During the discussion in Committee of Supply on the vote for the salaries and expenses of the Local Government Board Mr. Channing complained of the delay in dealing with the vaccination question, and suggested that in the meantime a circular should be issued to boards of guardians advising them not to repeat prosecutions.—Mr. Chaplin said that after he received the report of the Vaccination Commission he found it necessary to have further inquiries made by the experts of the department, and the results of these inquiries had only recently reached him. From a hasty perusal of them he was led to believe that sooner or later there would be a complete reform of all the laws relating to vaccination.

TUESDAY, AUG. 3RD.

Vaccination Commission.

Sir M. White Ridley, in reply to Colonel Dalbiac, said that the appendices to the report of the Royal Commission on Vaccination could be presented at once, and would probably be circulated in two or three weeks. The delay was attributable to the fact that the necessity for a separate presentation of these appendices was, through some misunderstanding, overlooked.

BOOKS, ETC., RECEIVED.

ADLARD AND SON, Bartholomew-close, London, E.C.

King's College Hospital Reports. Vol. III. (Oct. 1st, 1895, to Sept. 30th, 1896). 1897. Price 7*s.* 6*d.*

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.

Franzensbad. An Austrian Health Resort. Illustrated. 1897.
A Handbook of Diseases of the Nose and Pharynx. By J. B. Hall, M.D. Lond. Third Edition. Illustrated. 1897. Price 7*s.* 6*d.*
Diseases of the Gall-bladder and Bile Ducts. By A. W. M. Robson, F.R.C.S. 1897. Price 7*s.* 6*d.*
A Manual of Practical Medical Electricity. By Dawson Turner, B.A., M.D., F.R.C.P. Edin., M.R.C.P. Lond. Second Edition. 1897. Price 7*s.* 6*d.*
Anatomy and Physiology of the Female Generative Organs and of Pregnancy. By A. E. Giles, M.D., B.Sc. Lond., M.R.C.P. Lond., F.R.C.S. Edin. Price 3*s.* net.

BERGMANN, J. F., Wiesbaden.

Die Therapeutischen Leistungen des Jahres 1893. 8. Jahrgang. 1897.
Die Diagnostik Innerer Krankheiten mittels Röntgenstrahlen. Von G. Rosenfeld. 1897.
Stereoskopische Bilder. 24 Tafeln. Zum Gebrauch für Schielende. Von Dr. A. Pflueck. 1897.

BLACK, ADAM AND CHARLES, London.

Through Finland in Carts. By Mrs. Alec Tweedie. 1897.

CASSELL AND COMPANY, London.

The Practitioner. Edited by Malcolm Morris. Old Series, Vol. LVIII. New Series, Vol. V., Jan. to June, 1897. 1897.

CHURCHILL, J. & A., Great Marlborough-street, London.

Convergent Strabismus and its Treatment. An Essay. By Edwin Holthouse, M.A., F.R.C.S. 1897. Price 6*s.*
A Handbook of Medical Climatology. By S. E. Solly, M.D., M.R.C.S. Illustrated. 1897. Price 16*s.*

CLAY, C. J., Ave Maria-lane, London.

The Life-Histories of the British Marine Food-Fishes. By W. C. McIntosh, M.D., LL.D., and A. T. Masterman, B.A. Cantab., B.Sc. Lond. 1897. Price 21*s.*

FISCHER, GUSTAV, Jena.

Lehrbuch der Physiologischen Chemie. Für Studirenden und Aerzte. Von R. Neumeister. Zweite Auflage. 1897.
Allgemeine Physiologie. Von Max Verworn. Zweite neu bearbeitete Auflage. 1897.
Bibliographischer Semesterbericht. Von Dr. G. Buschau. Zweiter Jahrgang, 1896. Zweite Hälfte, 1897.
Handbuch der Speciellen Therapie Innerer Krankheiten. 1. Supplementband. 2. Heft. Von F. von Winckel. 1897.
Die Werthemessung des Diphtherieheilserums. Von Dr. P. Ehrlich. Sechster Band. 1897.
Handbuch der Anatomie. Von Dr. K. von Bardeleben. Fünfter Band. Erste Abtheilung. 1897.
Handbuch der Therapie Innerer Krankheiten. Von Drs. F. Penzoldt und R. Stintzing. Zweite Auflage. Erste Lieferung. 1897.

GOVERNMENT PRINTING OFFICE, Washington.

Reports on Vital and Social Statistics in the United States at the Eleventh Census, 1890. By J. S. Billings, M.D. Parts 2, 3, and 4. 1890.

HIRSCHWALD, AUGUST, Berlin.

Studien über Säuglingsfäces, &c. Von Dr. M. Blauberg. 1897.
Die Hefen als Krankheitserreger. Von Dr. C. Busse. 1897.
Vorlesungen über Kriegschirurgie. Von Dr. L. Lühe. 1897

JENKINS, W. R., Sixth-avenue, New York.

A Text-book of Veterinary Ophthalmology. By George G. Van Mater, M.D., D.V.S. Illustrated. 1897.
Exercises in Equine Surgery. By P. J. Cadiot. Translated by A. W. Bitting, D.V.M. Edited by A. Liautard, M.D., V.M. Illustrated. Authorised Edition.

JOUVE, HENRI, Paris.

La Maladie de Thomsen. Par Dr. A. Kornhold. 1897.

LEWIS, H. K., Gower-street, London.

A Contribution to the History of Leprosy in Australia. By J. A. Thompson, M.D., D.P.H. 1897.

LONGMANS, GREEN, AND CO., Paternoster-row, London.

Wounds in War: the Mechanism of their Production and their Treatment. By Surgeon-Colonel W. F. Stevenson, A.B., M.B. 1897. Price 18*s.*

MACMILLAN AND CO., London.

A System of Medicine. By Many Writers. Edited by T. C. Allbutt, M.D. Vol. III. 1897. Price 25*s.* net.

MASSON ET CIE., Paris.

Artérites et Scléroses. Von A. Brault.
Les Troubles Auditifs dans les Maladies Nerveuses. Par Dr. F. J. Collet.

SCOTT, W., Paternoster-square, London.

Hallucinations and Illusions: A Study of the Fallacies of Perception. By Edmund Parish. 1897. Price 6*s.*

SIMPKIN, MARSHALL, HAMILTON, AND CO., London.

The Epic of Sounds: an Interpretation of Wagner's Nibelungen Ring. By Freda Winworth. 1897. Price 3*s.* 6*d.*

SOCIÉTÉ D'ÉDITIONS SCIENTIFIQUES, Paris.

Vade-Mecum de Posologie et de Thérapeutique Infantiles appliquées. Par Dr. H. Dauchez. 1898.
Les Poussières Atmosphériques. Par J. R. Plumandon.

STEINHEIL, G., Paris.

Le Cervelet; Étude Anatomique, Clinique et Physiologique. Par Dr. A. Thomas. 1897.

THE F. A. DAVIS COMPANY, Philadelphia.

Eye Strain in Health and Disease. By A. L. RANNEY, A.M., M.D. Illustrated. 1897.

THE NEW SYDENHAM SOCIETY, London.

The New Sydenham Society's Lexicon of Medicine and the Allied Sciences (based on Mayne's Lexicon). Part 23. Puke—Scap. 1897.

THE IDEAL PUBLISHING UNION, Farringdon-street, London.

Fruits and Farinaceæ, the Proper Food of Man. By John Smith. 1897.

THE SANITARY PUBLISHING COMPANY, Fetter-lane, London, E.C.

Dangerous Infectious Diseases. By Francis Vacher. Reprint 1897. Price 1*s.* 6*d.*

WILLIAMS AND NORGATE, Henrietta-street, Covent-garden, London.

Outlines of Psychology. By Wilhelm Wundt. Translated by Charles H. Judd, Ph.D. 1897.

The New Book on Aluminium: from the Aluminium Supply Company, 38, Victoria-buildings, Manchester, 1897.—The Middlesex Hospital Reports for the Year 1895 (H. K. Lewis, London, 1896); price 2*s.* 6*d.* net.—The London Manual, 1897-98: edited by Robt. Donald (Horace Marshall and Son, Fleet-street, London); prices 1*s.* 6*d.* and 1*s.*—The

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Journal of Mental Science, July, 1897 (J. & A. Churchill, London).—Medical and Surgical Reports of the Boston City Hospital: eighth series (published by the Trustees, Boston, Mass., 1897).—Diet Chart and Alimentary Index: suggested by M. J. Kenny, L.R.C.P. Edin., L.R.C.S. Irel. (J. Wright and Co., Bristol, 1897); price 1s 6d. net.—Magazines, &c., for August: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Sunday Hours, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, English Illustrated Magazine, Knowledge, and Humanitarian.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ATKINSON, J. M., M.B. Lond., D.P.H. Camb., has been appointed Principal Civil Medical Officer at Hong Kong, vice Ayres.

BENNETT, F. G., L.R.C.P., L.R.C.S Edin., L.F.P.S. Glasg., has been appointed *pro tem.* Officer of Health for the Shire of Alberton, Victoria, Australia.

BLACKMORE, G. J., M.B., C.M. Edin., has been appointed Assistant Medical Officer for the Workhouse of the Nottingham Union, vice W. P. Byford, resigned.

BOND, F. S., L.R.C.P. Lond., M.R.C.S. Eng. has been appointed a Public Vaccinator at Bruthen, Victoria, Australia.

BUICK, JAMES, M.B., Ch.M. Glasg., has been appointed Resident Surgeon to the Bendigo Hospital, Victoria, Australia.

CLAYTON, F. M., M.B., B.S. Durh., has been re-appointed Medical Officer of Health by the Felling Urban District Council.

CONNAL, JAS. G., M.B., M.S. Glasg., has been appointed a Physician to the Throat and Nose Department of the Glasgow Central Dispensary.

DAVIES, J. L., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Munslow Sanitary District of the Ludlow Union.

FRANCIS, H., M.B., B.S. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Arnold Urban District Council.

GOING, J. A., M.R.C.S. Eng., has been appointed Medical Officer to the Mungindi Hospital, New South Wales.

GOWAN, B. C., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Hendon Rural District Council.

HARDING, R. F., L.R.C.P., L.R.C.S. Irel., has been appointed Assistant Medical Superintendent to the Hospital for the Insane, Goodna, Queensland.

HARRIS, G. J., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Glenfield Sanitary District of the Blaby Union.

HENRY, L., M.D. Wurzb., L.R.C.P. Lond., has been appointed a Certifying Medical Officer under the Factories and Shops Act for the Metropolitan District of Victoria, Australia.

HINE, A. E. B., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed a Public Vaccinator for South Australia.

JAMIESON, JAS., M.D., Ch.M. Glasg., has been appointed an Official Visitor to the Yarrow Benevolent and Metropolitan (Kew) Lunatic Asylums, Victoria, Australia.

KELLY, H. G., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Public Vaccinator at Pyramid Hill, Victoria, Australia.

LAYTON, HENRY A., M.R.C.S. Eng., L.R.C.P. Edin., has been appointed Medical Superintendent to the Cornwall County Asylum, Bodmin, vice Richard Adams, resigned.

LIDDLE, P. H., M.B., Ch.B. Melb., M.R.C.S. Eng., has been appointed Officer of Health for the Shire of Mansfield, Victoria, Australia.

MCDOUGALL, MARY ROSS, M.B., C.M., has been appointed Resident Medical Officer to the Edinburgh Hospital for Women and Children.

MORCOM, A., L.R.C.S., L.M. Edin., has been re-appointed Medical Officer of Health by the Luton Rural District Council.

READ, S. J. D., M.B., Ch.B. Melb., has been appointed a Resident Surgeon to the Rockhampton Hospital, Queensborough.

SHAW, F. C. S., M.B., Ch.M. Syd., has been appointed a Government Medical Officer and Vaccinator for the District of Emmaville, New South Wales.

SLADE-KING, B. J., M.D. Edin., L.R.C.P. Lond., M.R.C.S., D.P.H. Edin., has been re-appointed Medical Officer of Health by the Dulverton Rural District Council.

THANE, E. H., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed a Surgeon to the Wagga Wagga Hospital, New South Wales.

THOMSON, WM. E. F., M.D. Edin., has been appointed Professor of Physiology at the Anderson's College Medical School, Glasgow.

VENTERS, ISABEL, M.B., C.M., L.R.C.P. & S. Edin., has been appointed Assistant Medical Officer to the Edinburgh Hospital for Women and Children.

WARRINGTON, W. B., M.D. Lond., M.R.C.P., has been appointed Demonstrator in Pathology in University College, Liverpool.

WILLIAMS, J., M.D. Edin., M.R.C.S. Eng., has been appointed a Member of the Medical Board of Victoria, Australia, vice J. D. Tweeddale.

WILSON, FRANCIS KENNETH, M.B., B.S. Lond., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to Westminster Hospital.

WORTS, H., L.R.C.P. Lond., M.R.C.S., has been re-appointed a Surgeon to the Essex and Colchester Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House Physician. Salary £65 per annum, with board, lodging, and washing in the Hospital.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Senior House Surgeon. Salary £100 per annum, with board, washing, lodging, &c.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE, 101, Great Russell-street, London, W.C.—Bacteriologist to the Antitoxin Department at Sudbury. Salary £200 per annum, with dwelling accommodation on the premises.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon. Rooms, coals, and lights provided.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W. — Clinical Assistant.

CHILDREN'S HOSPITAL, Nottingham.—House Surgeon (non-resident) for six months. Salary at the rate of £100 per annum.

CORNWALL COUNTY ASYLUM, Bodmin.—Junior Assistant Medical Officer, unmarried. Salary £100 a year, increasing £10 yearly to £120 a year, with board, lodging, &c.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, London.—Senior Resident Medical Officer. Salary £70, with board and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—House Physician for six months. Salary at the rate of £60 per annum, with board, lodging, and washing.

GUEST HOSPITAL, Dudley.—Resident Medical Officer. Salary £100 a year, increasing £10 a year to £120, conditionally, with board, residence, attendance, and washing.

HUNTINGDON COUNTY HOSPITAL, Huntingdon.—House Surgeon. Salary £50, with board, lodging, and washing.

LANCASHIRE ASYLUMS BOARD.—Medical Attendant on the Patients for the Idiot Boys' Asylum at Winwick, near Warrington. Inclusive salary 100 guineas per annum. Applications to the Clerk to the Lancashire Asylums Board, County Offices, Preston

LAWN HOSPITAL FOR THE INSANE, Lincoln.—Assistant Medical Officer.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board and residence in the Institution.

PARISH OF BOLESKINE AND ABERTARFF.—Medical Officer for the Fort-Augustus District. Applications to Mr. A. Urquhart, Inspector of Poor, Gorthleck.

ROTHERHAM HOSPITAL AND DISPENSARY.—House Surgeon for three years. Salary 100 guineas, with board, lodging, and washing.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Board, lodging, and washing provided.

ROYAL SURREY COUNTY HOSPITAL, Guildford. — Assistant House Surgeon. Board, residence, and laundry provided.

Births, Marriages, and Deaths.

BIRTHS.

ARNOLD.—On July 31st, at Oxford-road, Manchester, the wife of F. S. Arnold, M.B., of a son.

ETTLES.—On July 20th, at The Crescent, Minories, E.C., the wife of W. J. McCulloch Ettles, M.D., of a son.

HAWKE.—On July 27th, at Valley-road, Shortlands, the wife of Edward D. H. Hawke, L.R.C.P. Lond., M.R.C.S., of a son.

HUBBARD.—On July 31st, at Hemel Hempstead, the wife of Arthur John Hubbard, M.D., of a son.

PRICE.—On July 31st, at Firside, Walton-on-Thames, the wife of Arthur E. Price, M.B. Lond., L.R.C.P., M.R.C.S., of a son.

MARRIAGES.

ALLAN—CLARK.—On July 31st, at the Church of St. Mary Magdalene, Latimer, Bucks, by the Rev. F. C. J. Long, Arthur Percy Allan, M.B., B.S. Lond., of South Croydon, youngest son of the late John Allan, of Calcutta and Ladbrook-grove, W., to Margaret Hannah, daughter of the late Richard Clark, of Amersham.

BUCHANAN—WOODHOUSE.—On July 31st, at the parish church, Weybridge, Archibald Graham Buchanan, L.R.C.P. Lond., M.R.C.S., Liss, Hants, to Mabel Berkeley, second daughter of Henry Melvill Woodhouse, of Brackenhurst, Weybridge.

HANDS—WHEELER.—On July 29th, at All Saints' Church, Cheltenham, Francis William Hands, L.D.S. Eng., to Margaret Ursula Langham, youngest daughter of the late Robert Wheeler, solicitor, of Cheltenham.

THORNTON—SHEERMAN.—On July 28th, at Holy Trinity, Beckenham, Frank B. Thornton, M.B., B.S. Lond., of Derby, to Florence Anne, eldest daughter of Henry Sheerman, of Newlands Park, Sydenham.

DEATHS.

BLISS.—On July 28th, at Perrysfield House, Oxted, Surrey, Francis Henry Bliss, M.B., eldest surviving son of Sir Henry Bliss, in his 29th year.

PALMER.—On July 28th, at 87, Harcourt-terrace, S.W., Edward Palmer, M.D., in his 81st year.

TOMLINSON.—On July 31st, at Belgaum, India, from typhoid fever, Surgeon-Lieutenant Lionel Philip Tomlinson, A.M. Staff., younger son of Brigade-Surgeon E. D. Tomlinson, of 8, Earl's-avenue, Folkestone. (By telegram.)

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 5th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
July 30	30·30	N.E.	68	63	121	79	63	...	Fine
,, 31	30·15	N.E.	67	62	122	79	62	...	Fine
Aug. 1	30·13	N.E.	60	56	114	79	55	...	Overcast
,, 2	30·10	N.E.	60	57	127	86	56	...	Hazy
,, 3	30·20	E.	62	58	121	81	58	...	Overcast
,, 4	30 09	S.E.	71	66	123	88	62	...	Fine
,, 5	29·84	S.E.	74	68	123	88	65	...	Hazy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which was completed with the issue of June 26th, was given in THE LANCET of July 3rd. It is intended, in future, to include the Index and Title-page for each past half-yearly volume in the first number of the succeeding volume, as in the present case, instead of in the last number of the volume itself, as heretofore.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18s., carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2s., by post 2s. 3d.

To be obtained on application to the Manager, accompanied by remittance.

A QUERY IN OPHTHALMIC SURGERY.

To the Editors of THE LANCET.

SIRS,—May I ask the favour of an answer to this question: A young maiden girl, aged twenty-one years, perfectly healthy, breathing healthy mountain air all the year round, has a ripe cataract in one eye; the sight of the other eye is perfect. This cataract is not traumatic. Would it be desirable to operate? I am, Sirs, yours faithfully,

Llandilo, Aug. 4th, 1897. X. Y. Z.

A HEROIC REMEDY.

To the Editors of THE LANCET.

SIRS,—The enclosed cutting from to-day's issue of a well-known evening paper is not without interest:—

(35,811) EYES.—Will "Bornall, M.D.," please explain? He says (Reply 35,513):—"Paint the part with chloroform of aconite." The part in question is my eyes. How do I paint them?—*Oculist.*

"Oculist" seems to have sought the professional guidance of the gentleman responsible for the inquiry column of that journal, who prescribes with equal confidence and equal light-heartedness for a bruised finger and for an ovarian tumour. The extraordinary advice given in reply to his inquiry seems to have awakened in his mind some faint doubts as to his mentor's infallibility. Hence the mild protest thinly veiled by to-day's query. It would be interesting to know on whose shoulders the responsibility would have rested if this confiding sufferer had adopted the remedy proposed. I am, Sirs, yours faithfully,

T. R. HENDERSON, M.B., C.M. Edin.

Ivycroft, Balham, S.W., July 31st, 1897.

Verax.—The M.R.C.S. of the date mentioned was considered to possess a medical qualification. If a registered medical practitioner were required he clearly was able to fill the post.

SUSCEPTIBILITY OF CHILDREN TO HOSPITALISM.

A CORRESPONDENT in America writes to us as follows: "There is a tendency just now towards the multiplication of special hospitals for infants (at any rate, so it is in America), and it may not be out of place to sound a note of warning on some of the dangers attending such a course. Children should only be sent to hospitals when it is impossible to care for them properly at their own homes and in cases of acute illness. This statement applies particularly to infants; the younger the child the greater the pernicious influence of hospital life, and instances of quick or satisfactory recoveries in a hospital are rare. This fact has been exemplified in a striking manner in several of the large hospitals in France, especially in the case of 'l'Hôpital Trousseau,' which was characterised a year or two ago as a veritable death-trap. Dr. Chapin, of New York, has lately drawn attention to the great susceptibility of infants to hospitalism; he says: 'One of the first conditions to be noted is a progressive loss of weight that is not dependent on the original disease, as it often takes place after recovery when the child is not sent out soon enough. This atrophy bears an inverse ratio to the age and is especially marked under six months. Beginning atrophy, not depending upon a lesion, should be an indication for immediate discharge from the hospital. If it gets beyond a certain point no change of environment or food will save the infant. As a general rule young infants should not be kept in hospital longer than a fortnight." Another danger that is most difficult to guard against is the great risk of contagion, and the larger the hospital the greater the danger. The nursing should be of the highest possible description; ordinary efficiency in this respect will not suffice. In many cases a good nurse should be supplied to four or five infants, and in some a nurse may be required for only two patients. The infants should be under the most careful oversight, and at the first signs of hospitalism should be discharged without delay."

Undergrad.—What has been told our correspondent is correct concerning the diploma in question. For details he should consult the Students' Numbers of THE LANCET for the past nine years.

G. W.—No. The more usual style is Dr. ——, provided that the owner of the card is a graduate in medicine of a recognised university.

F. W. ELLISON FUND.

The following sums have been received:—

	£	s.	d.
THE LANCET Relief Fund	15	0	0
Sir T. Smith	10	10	0
Dr. Lauder Brunton ...	5	5	0
Mr. Howard Marsh ...	5	5	0
Sir Dyce Duckworth ...	3	3	0
Mr. W. H. Hatfield ...	2	2	0
Mr. H. A. Francis, of Victoria, British Columbia	2	2	0
Vicar of St. Paul's, Macclesfield	1	1	0
Mr. W. Bruce Clarke ...	1	1	0
Mr. Harrison Cripps ...	1	1	0
K. W. M.	1	1	0

Fair Play.—Our attention is called to the advertisements of "Camwal Table Waters and the testimonials from leading practitioners of Brighton by which they are supported. We entirely agree with our correspondent that such testimonials are to be disapproved, as they amount to an advertisement of the medical man who writes the testimonials. We think, however, that the General Medical Council could hardly be expected to give time to the consideration of the matter, while we believe that the medical men in question have been sinned against.

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"THE PATHOLOGY OF DISTEMPER."

To the Editors of THE LANCET.

SIRS,—I do *not* say that distemper in the dog will produce scarlet fever or diphtheria in human beings, but that it is only a stage in the life-history of these organisms, comparable to the tæniæ. Although we do not know the intermediate host at present, despite the high authority of the men you mention, I believe we shall be able to find one. How do you explain the clinical symptoms, which correspond so closely? I am, Sirs, yours truly,

Ashton-under-Lyne, Aug. 1st, 1897. F. W. MANN, M.B. Edin.

Ellershouse.—We do not know the book in question, so that we cannot recommend it or one "giving similar information." But perhaps our correspondent refers to the well-known little book by Mr. Jukes de Styrap, entitled "A Code of Medical Ethics," and published by H. K. Lewis, Gower-street, E.C.

O. L. is referred to his or her medical attendant. Firstly, we do not prescribe or suggest medical treatment, and secondly, we do not understand our correspondent's question.

A CORONER ON DEATH CERTIFICATES.

THE *Western Morning News* of July 20th and July 24th gives an interesting account of the proceedings at an inquest held at Gwennap, near Redruth, on July 19th. The deceased was nine months old and was the son of a labourer; the body had been buried, but was exhumed for the purpose of the inquest. Mr. William Hichens, who was deputy for his brother, the parish medical officer, said that he visited the deceased on March 4th, March 7th, and May 31st, and found that he had slight bronchitis. On July 9th he received an urgent request for a death certificate and gave a note worded as follows: "I hereby certify that six weeks ago I saw the baby of Mrs. Samuel Collins. It was then suffering from a slight attack of bronchitis. Since then I have not seen it." That was not a certificate; he told the grandmother that he did not know the cause of death and could not certify. Mr. Thomas Curnow, the registrar of births and deaths, said that on the information given him by the child's grandmother and the note from Mr. Hichens he registered the death as not certified. He had known the people a long time. The registrar had absolute discretionary power as to registering a death except where it was sudden, violent, suspicious, or the cause unknown. The coroner (Mr. Laurence Carlyon) said his complaint was that the information in this case was not sufficient or satisfactory, so as to warrant the registering of the death. The jury returned a verdict of "Death from natural causes," and added a rider that medical men should give death certificates on the proper form or not at all. At a meeting of the Redruth board of guardians, held on July 23rd, the clerk, who is also the superintendent registrar, said that the coroner, in reference to death certificates, showed ignorance of the Registrar-General's regulations. He added that Mr. Hichens's letter was a most proper one, and it was clearly the registrar's duty to register the death as uncertified.

Enquirer.—From our correspondent's account we do not think that C can be held to blame. The situation is an annoying one, and we understand that he honestly tried to escape from it. B and C should take care not to allow their professional intercourse to be in the least affected thereby.

Socratine.—There can be no doubt that the owners of the diplomas mentioned are wrong in their assumption of the title of "Dr." unless they have other claims.

F. P. P.—The information has been forwarded to our correspondent.

THE PATHOLOGY OF OPIUM SMOKING.

DR. COLBORNE, writing in the *Phonographic Record*, says, from personal experience in China, that the Chinese can detect an opium smoker by the expression of his face. There are a flattening of the features, a general want of expression, and a look of ill-health, as if the motor nerves of the muscles of the face were more or less permanently interfered with. These or similar nerves would probably be influenced in the same way in thought and the higher cerebral operations, and the altered facial expression probably indicates a deterioration in the action of the higher cerebral nerves generally. From this Dr. Colborne concludes that the evil effects of the habit—the carelessness, shamelessness, and deterioration in public and private actions—are easily explained, and, moreover, that they are due to the absorption of morphia, of which the ill-effects are sufficiently well known. Although this opinion is not corroborated by the conclusions of the Opium Commission, Dr. Colborne contends that the question cannot be considered settled, and that in many opium smokers it is possible to recognise the traces of the habit, just as medical men in England detect the effects of drink upon some patients who consult them.

TUBERCULOSIS AND MEAT.

To the Editors of THE LANCET.

SIRS,—Would any of your readers kindly supply me with authoritative information as to the degree of tuberculous disease which should render the carcase of a cow unfit for human food? If one lung was found completely destroyed by the disease, should the whole carcase be condemned and destroyed? The name of any book or article on this subject would be acceptable.—I am, Sirs, yours truly,

July 25th, 1897. M. S.

ERRATUM.—In our appointment column of July 3rd the appointment was announced of T. F. Keenan, M.B., B.S. Durh., as Medical Officer for the Referagh Dispensary District of the Carrickmacross Union. Dr. T. F. Keenan, of Middlesbro', writes to us to point out that he knows nothing of the place or the appointment in question, and we wish to express our sincere regret that such a mistake should have occurred.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (11th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (12th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (14th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (10th).—ROYAL BOTANIC SOCIETY (Regent's Park).—1 P.M. Annual Meeting. Mr. J. S. Rubinstein will bring forward motions recommending the Council (*a*) to Establish Classes in the Gardens for the Study of Botany to be open to all Students; (*b*) to Invite the Royal Horticultural Society to Confer as to the Feasibility of Effecting a Union of the two Societies; (*c*) to Increase the Facilities for the holding of Exhibitions, Garden Parties, or Receptions in the Gardens by Local Authorities and by leading Societies and Institutions.

During the week marked copies of the following newspapers have been received:—*Manchester Guardian, Staffordshire Chronicle, Yorkshire Herald, Brighton Gazette, Jarrow Express, Hull Daily Mail, Bradford Argus, Sheffield Evening Telegraph, Eastern Morning News, Builder, Lincolnshire Echo, Wolverhampton Express, Middlesex Courier, Times of India, New York Herald, Le Figaro, Pioneer Mail, Le Temps, Rangoon Times, Hampshire Telegraph, Leicester Post, South Wales Daily News, Architect, Brighton Argus, Newcastle Journal, Carlisle Express, Liverpool Daily Post, Cumberland Advertiser, Salisbury Journal, Walsall Advertiser, Bristol Mercury, Rushden Echo, Temperance Record, Western Morning News, Leeds Mercury, Kentish Independent, East Anglican Times, Birmingham Gazette, Yorkshire Post, Cork Examiner, Scotsman, Sanitary Record, Local Government Chronicle, City Press, Hertfordshire Mercury, Weekly Free Press and Aberdeen Herald, Reading Mercury, Brighton Gazette, Mining Journal, Surrey Advertiser, Public Health, Guy's Hospital Gazette, Westminster Review, Gazette (Montreal), Manchester City News, Flintshire Observer, Peterborough Express, Sussex Daily News, West Middlesex Herald, Gloucester Journal, Hexham Courant, Kent County Standard, Local Government Journal, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Dr. J. Adam, West Malling; Abstainer, Lond.; Anderson's College Medical School, Glasgow, Secretary of; Messrs. Ashmore, Benson, Pease, and Co., Stockton-on-Tees; Mr. R. B Anderson, Lond.; Apollinaris Co., Lond.; Dr. T. D. Acland, Lond.

B.—Mr. W. Baker, Lond.; Messrs. Blackie and Son, Lond.; T. B. Browne, Ltd., Lond.; Messrs. Brown Bros., Lond.; Dr. E. T. Blank, Rovio, Lugano, Italy; Dr. W. M. Banks, Liverpool; Dr. Campbell Black, Glasgow; Mr. H. E. Bridgman, Burton-on-Trent; Mr. W. Berry, Wigan; Mr. H. C. Berry, St. Albans; Gebrüder Borntträger, Berlin; Blackburn and East Lancashire Infirmary, Secretary of.

C.—Dr. E. Chaumier, Paris; Mr. A. Cook, Cardiff; Messrs. Cassell and Co., Lond.; Comaltana Wine Co., Heckmondwike; Dr. W. T. Cocking, Sheffield; Mr. H. J. Catmur, Clapham-park; Cæsar, Lond.; Chelsea Hospital for Women, Secretary of; Mr. T. Cooke, Lond.; Messrs. A. and H. Cox and Co., Brighton.

D.—Messrs. J. W. Drysdale and Co., Lond.; Messrs. Deighton, Bell, and Co., Cambridge; Dental Hospital, Lond., Dean of; Mr. H. H. Dodwell, Lond.

E.—Eastbourne Waterworks Co., Chairman of.

F.—Señor el Doctor Fragoso, Seville, Spain; Fromm's Extract Co., Lond.; Dr. T. Fisher, Bristol.

G.—Dr. W. T. Gairdner, Comrie; Messrs. Giles, Schacht, and Co., Clifton; Dr. R. M. Gill, Malaga; John Griffiths Cycle Corporation, Manager of; Dr. T. Gibson, Tranmere.

H.—Mr. H. B. Hewetson, Leeds; Mr. A. E. Huband, Loughborough; Mr. G. F. Hilcken, Lond.; Dr. W. J. Harris, Lond.; Messrs. Hampton and Co., Lond.; Surgeon W. E. Home, Portsmouth; Mr. A. Helbig, Lond.; Mr. J. Heywood, Manchester; Dr. C. Holman, Lond.; Mr. E. Huxley.

I.—Messrs. Ingram & Royle, Lond.; Dr. E. Fletcher Ingals, Chicago.

J.—Staff-Surgeon H. S. Jackson, Chatham; Messrs. W. and A. K Johnston, Edinburgh; Mr. R. Jones, Liverpool; Mr. R. T. Johnson, Southampton; Walter Judd, Ltd., Lond.

K.—Mr. J. Keith, Hamilton; King-street (22), Portman-square; Dr. A. A. Kanthack, Cambridge; K. P., Lond.; Dr. S. Kümmell, Hamburg; Messrs. R. A. Knight and Co., Lond.; Messrs. G. Kelly and Co., Lond.

L.—Mr. J. H. Little, Falmouth; Linotype Co., Secretary of; Dr. J. A. Lowson, Poona, India; Mr. H. K. Lewis, Lond.; Mrs. Lynch, Glasgow; Dr. E. Liveing, Lond.; Ladies' National Association for the Abolition of the State Regulation of Vice, Secretary of; Mrs. M. B. Lawrence, Hemel Hempstead.

M.—Mr. H. Marmion, Edinburgh; Macclesfield General Infirmary, Secretary of; Memo Clock Sales Co., Lond., Manager of; Messrs. Mellin, Lond.; Mr. C. D. Marshall, Lond.; Dr. H. J. Macevoy, Lond.; *La Médecine Scientifique*, Paris, Editor of; Mr. J. N. Mackenzie, Canada; Dr. W. Munro, Ilford; Mr. M. G. Motter, Washington; Messrs. Macmillan and Co., Lond.; M.B., Surbiton.

N.—Messrs. Newbery and Sons, Lond.; National Society for the Prevention of Cruelty to Children, Lond., Secretary of; Mr. C. A. Notley, Catford.

O.—Mr. W. Overend, Keighley; Our Dogs' Publishing Co., Manchester, Manager of.

P.—Mr. F. Piggott, Cambridge; Pollard Cycle Co., Lond.; *Public Health Engineer*, Editor of, Lond.; Dr. J. Bell Pettigrew, St. Andrews; Dr. P. Paquin, St. Louis, U.S.A.; Dr. E. B. Patton, New Kensington, Pa., U.S.A.

R.—Mr. W. Redpath, Lond.; Royal Medical Benevolent College, Lond., Secretary of; Miss Robertson, Lond.; Royal Albert Hospital, Devonport, House Steward of; Royal Surrey County Hospital, Guildford, Secretary of; Mr. Henry G. Rose, Chicago; Royal Hospital for Diseases of the Chest, Lond., Secretary of.

S.—Mr. C. G. Stockton, Buffalo, N.Y., U.S.A.; St. John's Hospital for Diseases of the Skin, Lond., Superintendent of; Messrs. W. H. Smith and Son, Lond.; Shares, Bristol; Messrs. E. Shaw, and Co, Manchester; Dr. E. M. Spencer, Bridgend; Mr. H. Sell, Lond.; Messrs. Street and Co., Lond.; Mr. J. F. Spriggs, Lond.; Dr. J. O. Symes, Bristol; Mr. Noble Smith, Lond.

T.—Mr. W. E. Turner, Caversham; Dr. T. T. Talbot, Dublin; Dr. J. C. Thresh, Chelmsford; Dr. C. Bell Taylor, Nottingham; Tenax, Lond.; Terröl, Ltd., Lond.

V.—Mr. J. W. Vickers, Lond.

W.—Mr. S. T. D. Weston, Handsworth; Messrs. Whittaker and Co., Lond.; Mr. H. S. Walker, Leeds; Mr. E. Wright, Loughborough; Dr. G. Wyld, Wimbledon-park; Mr. H. Willmott, Chesterfield; Dr. W. R. Warrington, Liverpool; Mr. H. B. Wilkinson, Wirksworth; Mr. S. Wand Leicester.

Y.—Yorkshire College, Leeds.

Z.—Zeta, Lond.

Letters, each with enclosure, are also acknowledged from—

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An Address

Delivered to the Young Officers on Leaving the Army Medical School, Netley, on July 30th, 1897,

BY MAJOR-GENERAL SIR WILLIAM F. BUTLER, K.C.B.

GENTLEMEN,—It would be mere affectation on my part were I to speak to you upon the technicalities of the profession you have chosen, the great gateway of which, if I might so call it, you are now about to enter; the most junior member among you would quickly detect the fact that he knew a thousand times more about the subject than the man who was addressing him, and although there is an adage which says that every man must be either a fool or a physician at forty years of age, I shall not be tempted by the cunning sound of that saying, to betray to your intelligent criticism that in not being one of the alternatives I may possibly be the other; but, gentlemen, the man who has passed forty years of age, and still more the man who has spent nigh forty years in the service, must, if he has not deliberately closed his eyes upon the whole panorama of life, have gathered some impressions of men and of affairs of interest, at least to those younger men who are about to begin their careers, and therefore on this occasion I shall endeavour to put before you some thoughts which have come to me when I considered to myself how I should best respond to the invitation with which the President and Senate of the Army Medical School honoured me when they asked me to present the prizes to the successful candidates for commissions in the army to-day.

And first of all, gentlemen, I would desire to speak of the profession you have chosen. I regard it, in one sense at least, as being the highest of all professions. Without it war would be worse than the savagery of wild animals, and particularly would modern war be that, for every invention of its active brain tends more and more to remove from the battle-field the old ideas of personal prowess, chivalry, and individual effort, and to substitute methods of wholesale slaughter by every means which science can invent. You represent, then, the humanising element in the great profession of arms, which still remains great, not because of newer explosives and more destructive methods, but because the men who practise it are ready to devote their lives to their country, and have old maxims and traditions of duty in their hearts, even though they have new Maxim guns and high explosives in their hands. And you represent also another quality, almost as valuable as that of humanity itself. I would call it openness, or freedom of mind; your studies, your inquiries, your familiarities with the great factors of life, and with the causes which end life, all these go to form independent thought, which in no profession is of greater value than in that of arms, where necessarily the chief mental danger is a too restricted idea of the horizon of life. In saying this I am not merely uttering phrases flattering to your personal vanities, I am telling you what I found to be the case in the experience of my own life, and still more in whatever reading of life I have been able to do. I will take as an illustration of my meaning an event which must be familiar to many among you, and which will probably remain in history as long as history remains in the world. I refer to the captivity of Napoleon in the island of St. Helena. In that record of blind official blundering two names stand out in striking contrast from the timid or time-serving actors of that unhappy drama. Both these bright exceptions belonged to your profession. The first stands immortalised in the poetry of Byron as

> "The stiff surgeon, who maintained his cause,
> Hath lost his case, and gained the world's applause."

I take the action of these two brave and honourable gentlemen at St. Helena to represent exactly what I mean by the phrase "open fearlessness of mind." Undeterred by the weight of official censure, fixed in the immutable traditions of honour, truth, and justice, these two comparatively humble men stood out in protest against the mean and stupid persecution to which the great dying soldier was subjected. They alone protested. It is true they lost everything, but they won more than "the world's applause," for in a measure they redeemed the national honour when the action of their official superiors had compromised it.

I turn to another illustration of what I mean when I quote the name, and allude to the professional career, of the great Surgeon-General of the French army, Baron Larrey. When Napoleon at St. Helena was reviewing the lives of all the illustrious soldiers and officials who had served under him, the one he selected as the typical officer was Larrey. "If the army were to raise a column to the memory of anyone, it should be to that of Larrey," he said; and again in his last will he wrote: "I bequeath to the surgeon in chief of the French army, Baron Larrey, 100,000 francs. He is the most virtuous man I have ever known." What a glorious testimony, and the essence of that virtue was a noble and fearless independence of mind, which made the man always greater than his work, however great that work might be.

Gentlemen, you will excuse me if I introduce a reference personal to myself into these few words of mine to you. Nearly five-and-twenty years ago, I, too, was a candidate at Netley; but it was as a candidate for life. I was brought here a mere wreck of flesh and ruckle of bones from the West Coast of Africa, and if I am to-day addressing you, it is, under Providence, because of the care and sympathy and scientific skill which was bestowed upon me by the men then here, among whom were two at least of the distinguished officers whose names are associated with the prizes I have just presented to you. A few of these distinguished men are still among us, but most of them have joined the majority. Gentlemen, if I recall the recollection of that time, now, it is only to wish you, with the deeper feeling which its memory evokes, a career happy and prosperous to yourselves and useful and honourable to your country.

THE RESULT OF OPERATIONS FOR STRANGULATED HERNIA, AND THE RADICAL CURE OF HERNIA.

BY A. MARMADUKE SHEILD, F.R.C.S. ENG.,
ASSISTANT SURGEON AND LECTURER ON PRACTICAL SURGERY, ST. GEORGE'S HOSPITAL.

IT has often been remarked with truth that more is learned from the publication of unsuccessful than successful cases. We are all too apt to notify our striking successes and conceal our failures. In this paper will be found related all the cases of strangulated and radical cure of hernia that I can find the notes of up to the year 1897. Three cases of strangulated hernia are not reported in full, since the notes are incomplete. They all recovered, and may be taken in the calculation of the mortality. I have performed the operation for radical cure and for strangulated hernia in a few other cases of which no notes have been taken. I can recollect that none of these were fatal, and I have been most careful to include in the tables all unfavourable results and fatalities which are recorded. It is hoped that the account of these cases, though comparatively few in number, may serve as a useful illustration to the subject, and fairly represent the results of modern hernia practice. I feel sure that the true value of the radical cure operation for hernia has yet to be learned, and that largely from the results of private practice, where not only can the patients carry out instructions for treatment essential to success, but the final results after terms of years can be sufficiently estimated.

The method of operation in the strangulated cases may briefly be summarised as follows. The parts are shaved and cleaned with hot water and soap and afterwards with turpentine. They are then sponged with 1 in 20 carbolic lotion, and a compress of the same solution is laid upon the site of operation until the operation is proceeded with. In my later cases I have used also perchloride of mercury solution (1 in 1000). A moderate attempt at the taxis is always made, unless serious damage to the gut is suspected. The penis in all cases is wrapped in iodoform gauze. As few instruments are employed as possible. The patient is warmly clad, especially as to the feet and legs. The anæsthetic has generally been chloroform or the A.C.E.

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mixture. Ether has been avoided because of its tendency to cause bronchial catarrh, especially in predisposed or elderly people. The anæsthetic has been lightly given, and the head kept on the side, and I have always urged on the anæsthetist, when not experienced, the importance of carefully watching for, and dealing with, those violent attacks of regurgitant vomiting, which are so sudden, common, and dangerous during the anæsthetic state in all forms of intestinal obstruction. In two bad cases the stomach was washed out before operation with warm water. In performing the operation speed has always been aimed at, and no needless time was wasted in separating the various layers of tissue over the sac with a director. The radical cure has been done at the same time, in all cases unless the patient is seriously ill and collapsed or very aged, when the sac has been merely disinfected by swabbing with strong carbolic acid lotion and has been cut away, the operation being completed with all possible celerity. The sac and ring sutures have been kangaroo tendon in the earlier cases and boiled silk in the later. The skin sutures have been silkworm gut and horsehair. Drainage for six hours has only been adopted in those cases where the operation was extensive, as in cases of large ruptures. The after-treatment of the strangulated and severe radical cure cases consists of nutrient enemata every three hours by the bowel and small quantities of warm water by the mouth for the first six hours, fluid nourishment being gradually given by the mouth according to the severity of the case. Thirst has been relieved by enemata of milk and warm water. Any signs of abdominal distension or distress after the first two days have been treated by the administration of saline aperients, the sulphates of soda, and magnesia with carminatives, and this has been aided by enemata containing turpentine or oil of rue.[1] The action of the bowels has always relieved the symptoms in a remarkable manner, and I am as certain as I can be of any clinical fact that this practice, which it is right and proper to acknowledge I have learned from the teachings of Mr. Lawson Tait, has in my hands saved several lives. In the after-treatment of cases of "radical cure" I have aimed at complete rest for a month and partial rest with slight exercise for another month. In hospital practice this is difficult to ensure, and neglect of rest is one of the causes of failure.

As regards the operations for radical cure apart from strangulation I have always aimed at rigid asepsis. This is especially needful in young children, in whom these wounds are apt to suppurate—at all events, superficially—unless great care be taken in this respect. The method of operation has generally been to place the incision high up away from the scrotum. This important modification, as important in strangulated cases as those we are considering, has a twofold advantage: (1) it enables the operator to separate readily the sac from the cord; and (2) it is remote from sources of septic influences. In strangulated cases it brings the operator close to the site of stricture, and enables him to deal with it more quickly than when the finger is thrust some distance up the canal. Attention was first forcibly drawn to this important detail by Mr. Lockwood. The patients have been prepared beforehand by purgation and enemata, and in cases of large irreducible herniæ all attempts have been made by purgation and position with pressure to lessen the bulk of the rupture or effect its reduction before operation. In most cases complete reduction has been impossible on account of adherent omentum. I have paid special attention to isolating and drawing down the sac and ligaturing it as "flush" with the internal ring as possible. Torsion of the sac has usually been performed. The walls of the canal have been drawn together closely by a succession of sutures passed so as to aim at drawing the transversalis aponeurosis and conjoined tendon to Poupart's ligament and the external oblique. Macewen's method has been adopted in passing the sutures. In some very bad cases, where the opening into the abdomen has been direct and large enough to admit three or four fingers, I have simply closed it as one would do an abdominal section, sewing the peritoneum and muscles deliberately together with fine silk, and this I think is by far the best course to adopt. In removal of omentum small pieces have been transfixed and tied with the ordinary safety knot. Large portions have been tied in small sections, the vessel being "teased" out of the fat until quite distinct. I have found this better than tying the omentum in a large mass. Ligature of omentum is a dangerous proceeding and should be conducted with the most scrupulous care, or intra-peritoneal bleeding will certainly occur.

In one case of operation upon an enormous irreducible hernia containing much intestine there were found almost insuperable difficulties in returning the intestine. On this occasion I opened and drained the intestine. This simple procedure aided me greatly, and alone made the return of the intestine possible. A small puncture is made with a tenotome in a prominent coil of bowel, and the contents of that and neighbouring coils squeezed out by a gentle process of "milking." The puncture being washed and cleansed is next united by a fine Czerny-Lembert suture. The operation does not take long, and does far less harm to the bowel than the prolonged squeezing, kneading, and pushing, cracking the peritoneal coat, which one is apt to witness in these very perplexing cases.[2] In all my later cases I have used boiled silk for ligaturing the sac and uniting the canal. I have had remarkably few cases of "stitch suppuration." I believe the common cause of this undesirable condition is neglect to boil the needles and sutures. In children I have never employed drainage. The wound when closed is varnished over with collodion and iodoform. A gauze dressing is then applied, and over that some wool. Very firm pressure is exercised on the site of operation. The dressings are covered with protective sheeting and varnished. The penis is brought well out through the dressings, and in some cases one has been able to adjust a test-tube, so that the bulk of the urine trickles into it. I attribute the excellent recoveries generally observed in my cases at the Royal Hospital for Children and Women, Waterloo-road, to the care taken in the after-treatment by the house surgeons and nurses of that institution. I have been very particular to keep the child dry and clean, and to see that the skin of the perineum is well cleansed, and a pad of iodoform wool has always been laid there in the dressing. In all the cases where large masses of omentum have been removed some "unpleasant" abdominal symptoms have generally appeared, as severe pain, and especially a tendency to distension of the abdomen, with hiccough or sickness. In Case 24 this was markedly observed. On the fourth day this patient's condition was such as to cause anxiety regarding some obscure internal strangulation, yet under saline purgatives and copious enemata he made an easy recovery, his symptoms absolutely disappearing with the first copious action of the bowels.

So far as I am able to judge regarding the results of operations for the radical cure of hernia it amounts to this. If a surgeon were to select his cases, choosing small ruptures, with a long oblique canal, in young patients who were able long to rest and to avoid laborious occupations after, the percentages of absolute cures would be very high. If, on the contrary, he operates upon all cases as they come under his notice—a practice which is perhaps hardly wise or judicious—he will have a number of relapses, a number only able to wear a truss, and a smaller percentage of genuine cures. I have refused to operate upon several cases where the hernia seemed to be very direct, coming straight out through an opening readily to be appreciated by the finger, and in those whose abdominal walls are weak and lax. The risks of the operation for strangulated hernia vary directly with the severity of the case. With asepsis and rapid operating the mortality in early cases of strangulation should now be exceedingly small. Taking all cases as they come, including some cases in old and feeble people, the mortality exemplified in my tables is, I should think, fairly representative of modern practice.

During the present year, 1897, I have operated upon three successive cases of irreducible hernia, where a "tag" of omentum was firmly adherent to the sac. In two of these money, time, and ingenuity had been fruitlessly expended in trusses, which rather aggravated the symptoms. Mr. W. Haward has read an excellent paper this year upon the importance of adherent omentum,[3] and this condition is one which generally calls for operation when other means of reduction fail.

[1] The old "enema rutæ" has long been used at St. George's Hospital for cases of obstruction with flatulence. It is composed as follows: three drachms of confection of rue and sixteen ounces of infusion of camomile. The warm infusion is poured upon the confection and the two substances are intimately mixed. The enema is administered warm. This valuable remedy deserves more extensive use.

[2] The return of intestine is greatly facilitated by raising the foot of the table considerably, until the intestines gravitate towards the diaphragm. In private houses this can be accomplished by placing blocks of wood or small casks under the feet of the bed or table.

[3] Royal Medical and Chirurgical Society.

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TABLE I.—*Cases of Strangulated Hernia.*

No. of Case.	Sex.	Age.	Nature of case and date of operation.	Operation.	After-complications.	Result.
1	M.	30	Left inguinal hernia as long as he could remember. Had never worn a truss. Acute symptoms of strangulation present for two days. (July 8th, 1892.)	Gut found very black and congested. After division of the stricture and reduction, the sac was well washed out with strong carbolic lotion and cut away. Stump of sac twisted and tied high up with boiled silk. Pillars of ring sewn together with same.	None.	Recovered. Left hospital on July 15th at his own request. The wound was securely healed, with a strong cicatrix. Heard four years after that he had had no return of rupture.
2	M.	61	The patient was very stout and bronchitic. Right femoral hernia; had been tightly strangulated for four days before operation. Symptoms unfortunately overlooked. He was collapsed, with cold extremities and pulse hardly to be felt at wrist. (July, 1880.)	Usual operation. Chloroform administered. Gut proved gangrenous. Offensive black fluid in sac.	—	Died before completion of operation: he seemed moribund at its commencement.
3	F.	65	Right femoral hernia, tightly strangulated for twenty-four hours. Very collapsed at time of operation. (March, 1892.)	Chloroform administered. Operation done as rapidly as possible. Gut very black and congested. No attempt at radical cure beyond ligature of sac.	None. Bowels opened by salines and enemata on fourth day.	Recovered.
4	F.	70	Right femoral hernia. Strangulated for twelve hours. (February, 1891.)	Chloroform administered. Operation done as quickly as possible. No attempt at radical cure beyond ligature of sac.	Serious abdominal distension on fourth day, relieved by sulphates and enemata.	Recovered. This patient has since died from influenza She wore a truss comfortably after the operation.
5	F.	59	Right femoral hernia. Strangulated for sixteen hours. Symptoms very acute. (March, 1891.)	Chloroform administered. Operation done speedily. No attempt at radical cure beyond ligature of sac.	None.	Recovered. Well in 1894; wearing a truss, but no sign of hernia.
6	M.	63	Strangulated right inguinal hernia. (Jan. 22nd, 1894.)	Gut deeply congested; claret-coloured fluid in sac. Radical cure performed.	Bronchitis at the time of operation.	Died next day, very collapsed and cyanosed.
7	M.	17	Right inguinal hernia strangulated acutely. Rupture had only existed for one day. (Jan. 21st, 1894.)	Radical cure performed as well as operation for strangulation.	None.	Recovered: discharged with truss on Feb. 19th, 1894. Writes to say he is quite well one year and ten months after, and is able to do labourer's work.
8	F.	49	Strangulated left femoral hernia existing twelve months. Never worn a truss. (April 14th, 1894.)	Gut deep plum-coloured. No radical cure on account of serious state of patient, excepting ligature and excision of sac.	None.	Recovered: writes two years after that she is well, and with a truss finds no return of rupture.
9	M.	63	Strangulated left femoral hernia for five days. Taxis applied violently outside hospital. Condition apparently desperate. (Sept. 8th, 1894.)	Operation; sac contained intestine on the "verge of gangrene" and claret-coloured fluid. No radical cure.	None, beyond serious collapse combated by nutrient enemata containing brandy. Stitch suppuration at one spot.	Recovered: insisted on leaving on Sept. 23rd, 1894, when the wound was not quite healed.
10	M.	36	Strangulated internal hernia; also had an irreducible right scrotal omental hernia, which added to the difficulties of case. (Sept. 22nd, 1894.)	This case should rather be classed with abdominal section. A coil of deeply-congested gut found strangulated in the mesentery. The diagnosis of this case was quite obscure. Omental hernia left alone.	None.	Recovered. Discharged with abdominal belt, Nov. 10th. writes a year after that he is "quite well." Omental hernia still irreducible.
11	M.	46	Strangulated right inguinal hernia. (Aug. 24th, 1895.)	Radical cure performed as well as operation for strangulation.	Day after operation free bleeding occurred from the wound which was opened up, and clots turned out. No source of bleeding could be found.	Died on Aug. 26th, quite suddenly. There was no certain cause for his death discovered.
12	M.	31	Strangulated right inguinal hernia of large size and long irreducible. (Sept. 9th, 1895.)	Radical cure as well as operation for strangulation. The hernia contained the cæcum. There was no proper sac. Dense adhesions everywhere present. Incision had to be prolonged upwards before gut could be reduced. Considerable portions of fascia left adherent to gut. Operation very prolonged and difficult.	Slight suppuration round one suture.	Recovered. Discharged with sound cicatrix and truss, Oct. 30th, 1895. Writes one year after to say, "The operation is a success." So large is the cicatrix, however, that I should regard this man as being unfit for laborious work.
13	M.	About 40	Left strangulated inguinal hernia. Long previously irreducible. Symptoms very acute. (July 11th, 1896.)	Radical cure as well as operation for strangulation performed. After division of stricture a tight internal peritoneal band was discovered with the finger, pulled down, and divided.	None.	On his discharge six weeks after there was an excellent firm cicatrix. No impulse on coughing; he was given a truss and advised to rest further.
14	F.	75	The patient was feeble and collapsed; with a strangulated right femoral hernia; history quite unreliable. (Date omitted in notes.)	Sac contained deeply congested gut and claret-coloured fluid. No radical cure performed. Operation completed as speedily as possible.	None beyond collapse, treated by nutrient enemata and stimulants.	Recovered; discharged in a month with firm cicatrix.
15	F.	63	Strangulated left femoral hernia. The patient was feeble and collapsed. (June 15th, 1896.)	Sac contained deeply congested gut and omentum. Sac tied and removed. She had been previously operated upon for strangulation in 1889.	Serious collapse; a mild attack of rambling delirium which lasted for two weeks.	Recovered; discharged with good cicatrix on July 31st.

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TABLE II.—*Cases of Radical Cure of Hernia.*

No. of case.	Sex.	Age.	Nature of case and date of operation.	Details of operation, if any.	After-complications, if any.	Final result so far as known.
16	M.	19	Double inguinal hernia all his life. Requested radical cure on account of inability to do any work. (Charing-cross Hospital, May 14th, 1889.)	Both herniæ operated upon. Sac tied with catgut. Pillars of ring and canal sutured together with catgut.	Some fever and pain locally. Recovery delayed by a slight pneumonic attack. Wounds soundly healed by June 4th. No suppuration except round one stitch.	Recovered. On leaving hospital the cicatrices were sound and there was no sign of return. Last heard of three months after discharge, in good condition.
17	M.	27	A large irreducible scrotal swelling on right side. He had suffered from it for five years. Swelling quite incapacitated him on account of its size. (Charing-cross Hospital, Aug. 26th, 1890.)	At operation the whole of transverse colon found in hernia. Large mass of omentum (6 oz.) found adherent. Ligatured in portions and removed. Opening into abdomen would admit three fingers. Sewn together with catgut and boiled silk sutures. Operation prolonged and difficult.	No after-symptoms of importance. Patient left the hospital on Sept. 30th with wound healed. No suppuration except round a superficial suture.	Recovered. Seen four years after operation. No trace of return of hernia. Does not wear a truss.
18	M.	25	Right inguinal hernia and retained testis. Had suffered from boyhood. (Charing-cross Hospital, Sept. 10th, 1891.)	Testis removed. Sac tied with boiled silk sutures high up. Pillars of ring and canal brought together.	Some pain and slight fever for first day. Discharged with wound healed on Sept. 27th. No suppuration.	Recovered. Cicatrix firm when he left hospital six weeks after operation. Not since heard of.
19	M.	21	Right scrotal swelling. Congenital hydrocele, containing gut and a piece of omentum. (Charing-cross Hospital, Feb. 9th, 1891.)	Radical cure performed in usual way. A tongue-shaped piece of omentum found in the sac of a congenital hydrocele.	No after-symptoms of importance. Left hospital on March 17th.	Recovered. Present state not known. Had a firm scar.
20	M.	1½	Inguinal hernia; side not mentioned. (Charing-cross Hospital, Aug. 25th, 1887.)	Radical cure.	Wound healed by first intention. No suppuration.	Recovered. Present state not known. Had a firm scar.
21	M.	15	Left inguinal hernia of twelve months' duration and of large size. (Charing-cross Hospital, March, 1893.)	Radical cure.	None. No suppuration.	Recovered. Left hospital on April 20th. A right inguinal hernia appeared within six months of operation. He did not wear a truss on the side of operation. All went well for three years, when, on making a sudden violent exertion without a truss, the left hernia suddenly came down again. Re-operated upon 1897; at present has a firm cicatrix and wears a truss.
22	M.	15	Left inguinal hernia. Had only been noticed for six weeks; the result of a strain. (Charing-cross Hospital, April 6th, 1893.)	Radical cure. Boiled silk used to tie the sac, and to suture the canal.	None.	Recovered. Discharged with sound cicatrix on April 21st, with instructions to rest.
23	M.	21	Left inguinal hernia all his life. Had attained to size of a cocoa-nut. Trusses kept it up imperfectly. Main part irreducible. (Charing-cross Hospital, Jan. 5th, 1894.)	Radical cure. Hernia first reduced by purgation, elevation of bed, and pressure. Boiled silk employed.	Slight pain and fever. Temperature rose to 100° F. Suppuration round one suture.	Recovered. Wound soundly healed on Jan. 25th, 1894. Good cicatrix.
24	M.	22	Right inguinal hernia since age of eleven years. Retained testis on left side. Trusses always failed to keep up gut. Hernia had been irreducible for nearly twelve months. (Dec. 6th, 1893.)	Radical cure. Hernia congenital and adhesion of coil of ileum to sac. Large mass of adherent omentum ligatured in portions and cut away; weighed 4½ oz. Boiled silk sutures employed to tie sac and suture canal. The patient was kept recumbent two months.	All well until the third day, when he began to suffer from severe abdominal pain and vomited urgently. Large doses of salines given by mouth. Copious enemata. Complete relief after evacuation of flatus.	Recovered. Three years afterwards no sign of return of hernia. Hunts, and leads an active life, without a truss.
25	M.	18	Right inguinal hernia, congenital. Adherent omentum. Had trusses without avail. One attack of strangulation during sea-sickness. (Nov. 1894.)	Radical cure. Adherent omentum removed. Boiled silk sutures employed. Kept recumbent two months.	None.	Recovered. Nearly two years afterwards no sign of return of hernia. Wears a truss as a precautionary measure.
26	M.	4	Congenital right inguinal hernia of large size. No trusses efficacious. (Operation, 1893.)	Radical cure. Very large opening almost directly into abdomen. Sutured with a succession of boiled silk ligatures. Sac contained large intestine. Circumcision also performed.	None. Kept for two months recumbent.	Recovered. Condition three years after: no return of the hernia; wears a truss with a large flat pad as a precautionary measure.
27	M.	18	Right inguinal hernia. Time of duration not stated. (Aug. 28th, 1894.)	No remarks made on operation. It consisted in ligature of the sac and closure of the canal.	None.	Recovered. Discharged to Convalescent hospital, Sept. 24th, 1894. Cicatrix firm. No further report.
28	M.	18	Right inguinal hernia and hydrocele of cord. (Dec. 15th, 1894.)	Radical cure in the usual way; the sac in this case contained an extraordinarily long vermiform appendix, which was removed.	None.	Recovered. Discharged Jan. 23rd, 1895. Seen two years and six months after operation. No return of hernia. Firm cicatrix. Lifted heavy weights and led a laborious life.
29	M.	19	Right inguinal hernia. (May 3rd, 1895.)	Radical cure. No remarks.	None.	Recovered. Discharged June 12th, 1895. Seen one year and three months after. Hernia had partially returned. Result unsatisfactory. Truss now worn.

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TABLE II.—*Cases of Radical Cure of Hernia (continued).*

No. of case.	Sex.	Age.	Nature of case and date of operation.	Details of operation, if any.	After-complications, if any.	Final result as far as known.
30	M.	33	Operation for left bubonocele. (Aug. 7th, 1896.)	Radical cure. Sac not certainly defined. Rings and canal closed.	None.	Recovered. Discharged Aug. 24th to rest at Wimbledon. Wrote a year after to say no return, but still wore truss.
31	M.	40	Large, irreducible, scrotal hernia (side not mentioned). (In autumn of 1895.)	Radical cure. Mass of adherent omentum excised. Very large ring united by a succession of deeply placed sutures of kangaroo tendon. The cæcum was found in this case, and was universally adherent. There was no distinct sac. It was only by the greatest difficulty that the gut was finally returned, with large pieces of fascia adherent to it.	None.	Recovered. Discharged, wearing truss, on Nov. 14th, 1895. Wrote twelve months afterwards that rupture was perfectly cured, but he was cautious and still wore truss.
32	M.	59	Enormous right scrotal hernia of many years' duration. Long irreducible. Penis buried in swelling. Had had one attack of obstruction. (Aug. 1st, 1895.)	Radical cure. Sac contained cæcum and greater part of colon, some small intestine, and large masses of adherent omentum. Omentum ligatured and removed. Intestines could not be returned. Coil of colon opened and drained. Opening closed by Lembert suture. Intestines then readily returned. Large ring closed by direct suturing with boiled silk sutures.	None.	Recovered. Discharged on Oct. 2nd, 1895. Had a large cicatrix, and was furnished with a powerful truss with a large, flat pad. Operation merely palliative, and in this respect most successful. Man never again fit for laborious work.
33	M.	44	Large scrotal hernia which has long existed and could not be kept up by any truss (side not mentioned). (Nov. 28th, 1895.)	Radical cure. No remarks.	None.	Recovered. Discharged Dec. 24th, 1895. Wrote ten months afterwards: "I have no return of the rupture and work very hard. The result of the operation is that I am all right."
34	M.	1	Right inguinal hernia. (Oct. 31st, 1893.)	Radical cure. Large sac strongly twisted.	Sloughing of stump of sac; ultimate suppuration and sepsis.	Died from septic pneumonia. An error in the asepticity of operation.
35	M.	2	Large right inguinal hernia, which could not be kept up by any truss.	Radical cure.	None.	Recovered. Seen two years and two months after operation. Firm cicatrix. No return.
36	M.	3	Large left inguinal hernia. Trusses useless.	Radical cure.	None.	Recovered. Seen three months after, with a firm cicatrix and no return. Present state not known.
37	M.	4	Large left inguinal hernia. (Dec. 31st, 1894.)	Radical cure.	None.	Recovered. Ten months after the patient was well, with no sign of return.
38	M.	1½	Immense right inguinal hernia, which no truss could keep up; large intestine in sac. (August, 1895.)	Radical cure; opening into abdomen, which would admit three fingers, sewn together with fine boiled silk.	None.	Recovered. Discharged wearing a truss with large flat pad, which was discontinued by parents. A year after operation, while screaming in a fit of rage, the hernia suddenly came down, and he was brought to see me. The rupture was readily reducible, and a truss could keep it up, but the result of the operation was a failure.
39	M.	1½	Left inguinal hernia. (Oct. 14th, 1896).	Radical cure.	None.	Recovered. Seven months after operation no return of rupture.
40	M.	1⅔	Very large, left inguinal hernia. (February, 1896.)	Radical cure.	None.	Recovered. Seven months after, firm cicatrix, no return, wore truss as a precautionary measure.
41	M.	1⅞	Very large right scrotal hernia. (March, 1896.)	Radical cure.	None.	Recovered. In August, 1896, the patient's condition was excellent, but he did not wear a truss and the cicatrix was quite uncared for.
42	M.	4½	Very large right inguinal hernia. (April, 1896.)	Radical cure.	None.	Recovered. Firm cicatrix: well without return five months afterwards.
43	M.	1	Very large hernia. Ring admitted three fingers. (May, 1896.)	Radical cure.	None.	Recovered. Result excellent two months after operation.
44	M.	3	Right inguinal hernia. Ring admitted two fingers. (July 6th, 1896.)	Radical cure.	None.	Recovered. Result excellent; no return so far as is known.
45	M.	2	Left inguinal hernia.	Radical cure.	None.	Recovered. Result good; no return so far as is known.
46	M.	1½	Right inguinal hernia. (Aug. 24th, 1896.)	Radical cure.	None.	Recovered. Result appeared to be excellent.

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Statistics in hernia cases are most misleading. For instance, a surgeon may operate upon twenty patients with strangulated hernia without a death if he gets early cases in vigorous subjects. His next series may comprise many instances of neglected strangulation in old and feeble individuals, when his mortality will be as great as his previous success was notable. I believe by rapid operating and great care in anæsthesia the mortality even in bad hernia cases is very much diminished. If the truth were told it would be even now very high, and this has led Mr. Hutchinson to advocate strongly the persevering employment of the taxis before resorting to operation. This important point I cannot attempt to discuss in this article. Undoubtedly much will depend upon the asepticity and experience of the operator, the celerity with which the operation is performed, and the skill and care of the anæsthetist. In old and feeble folk the reduction by taxis, if this can possibly be brought about, is probably less dangerous than operation. In vigorous subjects the same remark does not apply.

The results of operations for radical cure of hernia can hardly be judged fairly from hospital experience. Too often the patients, especially adults, as soon as they are discharged return to laborious occupations, such as lifting great weights, which no operation barrier, however well constructed, could possibly certainly resist. Several of my operations have, however, resisted every effort on the part of the patient to reproduce his hernia, and these truly termed "test cases" may fairly be opposed to the failures. It is absurd to suppose that any operation can be devised by the wit of man which could certainly prevent the return of rupture in a patient who exposes himself to laborious, heavy work, involving strain of the abdominal muscles.

Taking first the cases of strangulated hernia, amounting with the three unrecorded cases to eighteen, I may remark that I have treated a considerable number of strangulated herniæ by taxis, and have thus, perhaps, performed fewer operations than I might otherwise readily have obtained. The mortality is three in eighteen, or about 15 per cent. Of the fatal cases it will be noticed that Case 2 typically illustrates the hopeless sort of strangulated hernia that we are obliged to operate upon with a faint hope of saving life and with a great probability of swelling our mortality statistics. This case is interesting to compare with Case 9, a feeble old man apparently dying, yet who made a perfect recovery. The latter case illustrates how one may sometimes save an apparently moribund patient. Case 6 died from bronchitis, and though I cannot certainly recollect I believe ether was used as the anæsthetic. Operations upon bronchitic old patients in cold weather suffering from hernia or intestinal obstruction of any sort are peculiarly dangerous. Case 11 is a very instructive one, and the disastrous result is plainly due to an error in operation—i.e., leaving undetected and insecure a bleeding vessel. Those who are unaccustomed to operate in these regions scarcely appreciate how important it is to secure every bleeding point. This is particularly the case when the incision implicates the scrotal tissues. In such operations as radical cure of hydrocele or sarcocele too much care can hardly be taken in this important and sometimes difficult matter. This is the only instance in all my cases of any trouble occurring with hæmorrhage. Being fully alive to its possibility I have taken peculiar pains to secure all bleeding points, and the occurrence of the mishap in this case only shows how "reactionary bleeding" may take place in incisions affecting the scrotum and inguinal canal, even in the practice of those aware of the danger and anxious by care to obviate its occurrence. It is worthy of remark that the only "opiate" given in the after treatment was small doses of laudanum (five minims) in the nutrient enemata for the first twenty-four hours. Any signs of abdominal distension on the third or fourth day were always met by saline purgatives and copious enemata. No case of gangrene of the gut presented itself.

The cases of radical cure uncomplicated by strangulation are thirty-one in number. Of these one died plainly from sepsis (No. 34). A mortality of about 3 per cent. is higher than should occur in these cases. If, however, surgeons undertake the cases when the operation is especially beneficial—i.e., in large irreducible herniæ with adherent omentum—they will be fortunate if they can show a smaller mortality. By careful selection of cases, and refusing those which seem risky, any surgeon well versed in care and cleanliness might easily reduce this mortality to "nothing" per cent. Many of the cases in children were severe, and such cases as Nos. 17, 24, and 32 may well be referred to as involving especial operative risk.

Of the strangulated cases in which radical cure was performed two died. The operation for radical cure had nothing to do with the fatal result. The four remaining strangulated cases in which radical cure was performed may be added to the thirty-one uncomplicated cases of radical cure for an estimation of the results. In the thirty-five cases thus compiled only three relapses have been traced. The results of each operation are given as far as known. It is, of course, quite possible that relapses have taken place in some of the cases lost sight of, though great care was taken to impress upon each patient that he was to show himself if this occurred. The recorded results are on the whole satisfactory, especially as some of the patients were engaged in most laborious work, and all those of the hospital class had quite ignored the precautions impressed upon them.

The cases of umbilical hernia must be separately considered. They number seven; of these, four were fatal and three recovered. The causes of death in the fatal cases were as follows: in two the sac had sloughed prior to operation; these were quite hopeless. In one the patient sank from exhaustion, being old, extremely obese, with fatty degeneration of the viscera. In one capillary bronchitis was the cause of the fatal termination. Ether was administered in this case. Of the three cases of recovery, one was a comparatively small rupture, mainly containing omentum. The two remaining were large and formidable, apparently containing the bulk of the intestine, and the method of operation adopted is worth notice. The large rupture being raised, a vertical incision about two and a half inches in length was made in the middle line, opening the hernial sac at its neck, dividing the fibrous ring of the hernial orifice and the linea alba. The finger being then introduced among the complex contents of the rupture, any fine "snare-like" bands that could be felt were pulled upon until they gave way. In one of these cases it was possible to draw bands into sight, when they were divided between double ligatures. The mass being then kneaded, gurgling was appreciated, and some of the intestine returned towards what was left of an abdominal cavity. The incision was carefully closed, and copious enemata were administered, the bowels soon acting freely. This method is, of course, open to the objection of uncertainty, but free from the anxieties and perils which beset the practice of freely opening a huge umbilical hernia containing most of the abdominal contents in a feeble old person. It is right for me to acknowledge that this operation, which may possibly be of advantage to surgeons who have to undertake these desperate cases away from skilled assistance, I first saw performed by the late Sir George Humphry. It would not be applicable to cases where ulceration of the gut at the margin of the ring might be suspected from long continuance of the symptoms.

In conclusion, I must thank Miss Jacobi, the registrar at the Royal Hospital for Children and Women, Waterloo-road; Mr. Lockyer, of Charing-cross Hospital; and Mr. Cooper, of St. George's Hospital, for the trouble they have taken in assisting me to look up the notes of these cases.

Cavendish-place, W.

ON THE USE OF ALCOHOLIC BEVERAGES IN RHEUMATIC AND GOUTY CONDITIONS.

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THE late Dr. George Harley,[1] shortly before his death, advocated—or at any rate sanctioned—the drinking of sweet champagnes by gouty persons. Any statement on gout coming from so high an authority deserves our most careful consideration; but as it is directly at variance with the views generally held and the whole of my own experience, I feel bound, though with much deference and with greater detail than would otherwise be necessary, to enter my protest. It may be noticed, in passing, that the only case he quoted

[1] THE LANCET, July 4th and Aug. 1st, 1896.

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was his own, and the seven arguments which he mentioned on page 309 are examples of the fact that sugar alone taken by healthy persons will not produce gout. From these facts it is inferred that sweet wines may be taken by the gouty with impunity. Now, it is quite conceivable—and I shall mention facts supporting the idea—that although syrupy non-alcoholic beverages may be taken by healthy and even by gouty persons without evil effects, excepting for the dyspepsia they may produce when taken in large quantity, nevertheless, sweet alcoholic beverages may do a considerable amount of harm; although Dr. Thorowgood, also a high authority on this question, who wrote to THE LANCET[2] protesting against Dr. Harley's statement, quotes the case of a very gouty patient who "found that sugar in any form was eminently provocative of an attack," and, adds Dr. Thorowgood, "his experience is by no means singular."

Nothing is commoner in every-day practice than to be called upon to decide whether alcoholic stimulants are permissible in rheumatic and gouty conditions, and in healthy persons having an inherited tendency to these diseases, and if so, what is the form in which they can best be administered. It is the object of this communication to adduce certain facts which go to show, first, that pure ethylic alcohol does very little harm *per se* in such cases, especially if taken at meal times only and in a dilute form; secondly, that the most detrimental component of ordinary alcoholic beverages is the sugar they contain—i.e., that a sweet alcoholic beverage does harm; thirdly, that when certain wines and beers are deprived of their sugar they may be taken with impunity even by those who have gouty and rheumatic tendencies; and fourthly, my experience goes even farther than this, for I find that there are certain cases belonging to the uric acid group—like the two cases of migraine mentioned below—where stimulants judiciously administered actually do good, and that there are certain other cases where some concurrent condition, such as cardiac failure, urgently calls for the use of alcohol, in either of which circumstances it becomes a question of considerable importance how best to administer it. It is hardly necessary to enumerate all the many and various manifestations of these extremely common disorders; suffice it to say that the remarks which follow refer to the various muscular, fascial, and arthritic manifestations of rheumatism, gout, and lithæmia (or, as some prefer to call it, uric-acid-æmia). The symptoms of the latter include headache, lassitude, general stiffness, depression of spirits, incapacity for mental and bodily exertion, and several other familiar symptoms. It is neither necessary nor desirable for our present purpose to enter into a discussion of the pathology of these various conditions, for it is now very generally admitted that uric acid, either free or in combination, is at the bottom of them all. Perhaps I may be pardoned for mentioning at the outset that a unique opportunity for the observation of these complaints has fallen to my lot, because not only for seven years at the Paddington Infirmary did I have under my care many hundred unselected (the converse of hospital practice) examples of their many varieties, but for nearly eighteen years I have myself been a martyr on and off to one or another of nearly every kind of chronic rheumatism known—arthritic, muscular, and fascial.

The principal ingredients of every alcoholic beverage come under one of three headings, as shown in the table below—namely, alcohol, sugary substances, and acidity (i.e., free acid or acid salts); and the proportion of these different ingredients varies very widely in spirits, wines, and beers. Special attention is called to the right-hand column of each constituent, where the ordinary dose or potion of each is given and the actual quantity of alcohol, sugar, and acidity thus imbibed is worked out. Now in every-day life the potion of wine, beer, or spirit is regulated by the amount of alcohol it contains, but by this table the extraordinary difference in the amount of sugary substances and the less marked difference in the acid substances imbibed at the same time is brought out in full relief. Considerable variety of opinion still exists as to which of the three constituents it is that does the harm. Old writers used to pay special regard to the alcohol; then came the sugar crusade; and finally in modern times observers, among whom Dr. Alexander Haig[3] may be mentioned, regard the acidity as quite sufficient to account for all the harmful consequences which arise. Dr. Harley apparently regarded the acidity and the alcohol as the most detrimental constituents.[4]

[2] THE LANCET, July 11th, 1896.

[3] On Uric Acid, third edition.

[4] Loc. cit., p. 15.

An inspection of this table shows that an ordinary dose or potion of spirit, wine, or beer contains approximately the same amount of alcohol, but differs very widely in other respects. Thus, 1 oz. of spirit, such as brandy or whisky (which is perhaps rather smaller than the usual dose), contains little or no sugar, and at the most only the equivalent of one grain of acidity; a wine-glass of port wine (which usually holds 2½ oz.) contains about 50 grs. of sugar, and the equivalent of about 5 grs. of acidity; a glass of sherry 20 grs. of sugar and 7½ grs. of acidity; a glass of claret (holding, say, 4 oz.) from 4 to 8 grs. of sugar, and 8 grs. of acid substances; a glass of hock (containing 4 oz.) varies somewhat as to sugar, but contains about 12 grs. of acid substances; a half-pint of ale contains from 200 to 400 grs. of sugar, and about 10 to 15 grs. of free or loosely combined acids. Represented in this way, the differences in composition are very striking, and much in their relative actions which is otherwise inexplicable becomes intelligible. It will be observed that whereas a relatively small difference exists in the amount of acidity contained in a potion of light wine and in one of beer, the differences in the amount of sugar are very great. Objection may be taken to such a table that it takes no account of the various ethers, tannin, colouring matters, and the various other constituents of what chemists call extractives; but in reply it may be urged that these never exist in large quantity, are none of them very constant, and that they do not materially affect the issue of the question under consideration.

1. *Personal experience.*—Ever since a severe attack of acute rheumatism in 1879 I have been liable to the various manifestations of that disorder in an acute or chronic form unless I take the greatest care in the adjustment of my dietary. As regards stimulants my experience is that pure alcohol, such as pure spirit matured by age in the wood, taken in small quantities well diluted and with meals only, has never aggravated the rheumatic symptoms either at the time or subsequently. On the other hand, alcoholic beverages did harm precisely in proportion to the amount of sugar they contain. For example, port wine and Madeira were bad, but beer was far worse than any. A single glass of any kind of beer (and very many different samples have been tried), although taken at meal times, invariably exacts the most severe penalties, and if persevered in always results in the joints becoming painful (often swollen also) and stiff; or, if they were already affected, they became worse. A glass of port wine produces the same effects, though usually in a less degree, and lasting for a shorter time. Non-alcoholic syrups, if taken occasionally, do not affect me at all in the same way. My principal beverage for many years has consisted chiefly of home-made lemonade;[5] and in summer time "lemon squash," lime juice cordial, occasionally raspberry, and other teetotal syrups. These sugary drinks never increase my rheumatic infirmities unless they are taken sufficiently long and in sufficient quantity to produce dyspepsia.

2. *Infirmary cases.*—It is unnecessary to refer in detail to the numerous cases of gouty and rheumatic affections and lithæmia which were under my care at different times, and in such endless variety, at the Paddington Infirmary. Instead of the cheap inferior brandy usually supplied in these institutions I induced my board to supply the patients with a high-class old Scotch whisky costing in bulk no more than bad brandy; and my choice rested (in those cases which called for alcohol) between this pure whisky without sugar, sweet port wine, and an ordinary beer such as the analysis given above. The invariable result showed, on the one hand, that the whisky never aggravated the gouty or rheumatic symptoms, but, on the other hand, they were always increased directly the patient was put on port wine or beer. The male patients were, of course, very anxious to have beer in preference to anything else, and would often try to hide their symptoms, but the stiffness of their walk, sometimes the swelling of a joint, and often the fact that they took to bed, were all too obvious to escape notice; and then when the change was made to whisky these symptoms disappeared, although all the other conditions surrounding the patient—the diet and general mode of life—remained precisely the same all the while.

3. *Better-class patients.*—At the present time I have under my care a woman, aged thirty-four years, who has for five or

[5] The juice of two lemons, the yellow rind pared thin of one lemon, twelve lumps of sugar, enough citric acid to barely cover the handle of a salt spoon, one and a half pints of boiling water; set aside until cool.

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A Table of Approximate Compositions to show the Relative Proportions of Alcohol, Sugary Substances, and Acidity taken in a single Potion of Spirit, Wine, and Ale respectively. The compositions given represent an average of all the available analyses given in several of the current text-books.

	Alcohol.		Sugary substances.		Acidity, either free acid or in loose combination as an acid salt.	
	Average percentage of alcohol by volume.	Usual dose at one time.	Average proportion of sugar.	Usual dose at one time.	Average proportion of acidity.	Average dose at one time.
Spirits	40 per cent.	1 oz. of spirit, containing from 3 to 4 drachms of alcohol.	From 0 to ½ gr. per oz.	1 oz. of spirit containing from 0 to ½ gr. of sugar.	From 0·2 to 1 gr. per oz.*	1 oz. of spirit, containing from ⅕ to 1 gr. acidity.
Heavy wines such as—						
Port	20 per cent.	2½ oz. of wine, containing from 3 to 4 drachms of alcohol.	20 grs per oz.	2½ oz. of port, containing 50 grs. sugar.	2 grs. per oz.†	2½ oz. of port, containing 5 grs. acidity.
or						
Sherry			8 grs. per oz.	2½ oz. of sherry, containing 20 grs. sugar.	3 grs. per oz.†	2½ oz. of sherry, containing 7½ grs. acidity.
Light wines, such as—						
Claret	10 per cent.	4 oz. of claret, containing about 3½ drachms of alcohol.	1 or 2 grains per oz.	4 oz. of claret or hock, containing from 4 to 8 grains of sugar.	2 grains per oz.†	4 oz. of claret, containing 8 grains acidity.
or						
Hock and Champagne...	13 per cent.	4 oz. of hock, containing about 4½ drachms of alcohol.			3 grains per oz.†	4 oz. of hock, containing 12 grains acidity.
Ale	5 per cent.	10 oz. of ale, containing 4 drachms of alcohol.	From 20 to 40 grains per oz.	10 oz. of ale, containing from 200 to 400 grains of sugar.	From 1 to 1·5 grains per oz.‡	10 oz. of ale, containing from 10 to 15 grains acidity.

* Reckoned as tartaric acid.

† Consisting of racemic, tartaric, acetic, malic, tannic (in small quantity), glucic, succinic, carbonic, and fatty acids, such as formic, butyric, or propionic acids, and acid tartrate of potash; fixed acids being reckoned as tartaric acid, volatile acids as glacial acetic acid.

‡ Consisting of lactic, acetic, succinic, malic, and gallic acids; fixed acids being reckoned as tartaric acid, and volatile acids as glacial acetic acid.

six years, been passing large quantities of uric acid crystals, and amorphous lithates from time to time; and who has also presented the listlessness, want of energy, tendency to headache, and all the classical symptoms of lithæmia. In her case the effects are very similar; small doses of pure spirit well diluted and with meals only do not aggravate any of the symptoms, but a single glass of ordinary good champagne is followed the next day, sometimes sooner, by stiffness and pain in the joints, headache, lethargy, &c.; and the taking of any sweet wine, such as port, is followed by a more prolonged disturbance. It is unnecessary to refer in detail to many other cases which could be quoted of gouty and rheumatic conditions and of lithæmia (which are only too familiar to the profession); they all practically tell the same tale. In brief, alcoholic stimulants aggravate the symptoms of these conditions precisely in proportion to the amount of sugar they contain; and the reason that beer and the heavier, i.e., sweeter, wines, as ordinarily met with, are so inimical to these conditions is readily explained by a glance at the table given above, where it will be seen that the amount of sugary substances contained in the ordinary dose of wine may be 20 or more times as large as that in pure spirit, and that in beer they are from 200 to 400 times (!) as great. If both wine and beer were equally harmful it might be contended that the acidity (column 3) was the deleterious constituent, but in my experience, personal and other, beer is much more harmful than wine (tried, of course, under similar conditions), and we are driven to the conclusion that this difference of effect can only be accounted for by the enormous difference in the sugar contained in an ordinary dose of wine and beer respectively.

4. *Public opinion.*—It is not always well to pay much attention to popular beliefs, but so deeply rooted in the minds of many intelligent and scientific persons is the idea that ordinary beer is more potent than wine or spirits to aggravate rheumatic and gouty conditions, or to produce in them—even when apparently healthy, though living a town life—the lethargy, headache, &c., which we know to be due to lithæmia, that one is bound to admit this popular belief as evidence in support of the contention that it is the sugar which does the harm. The enormous increase of late years in the consumption of good whisky and of Pilsener and Lager beers—i.e., beers containing a lower percentage of saccharine constituents—is only an expression of the same firmly rooted belief. Personally, I find that these lighter ales do produce symptoms, though perhaps in a less degree than ordinary English beer.

5. *The immunity of the Scotch.*—Gout is practically unknown among the working-classes in Scotland. Professor McCall Anderson informs me that he can only remember one case which was undoubtedly gouty admitted during the whole of his twenty-five years' experience at the Western Infirmary, Glasgow, and this was in a man who came from Yorkshire, whose chief beverage had been beer. The absence of this disease in Scotland is fully explained, as Professor Anderson points out, by the fact that the masses of the working population in Scotland drink nothing but whisky. Very striking testimony in support of my opening propositions is to be found in these facts.

6. *Effects of beer when deprived of its sugar.*—All the evidence, then, goes to show that ordinary beer is the worst form of stimulant for gouty and rheumatic cases and for people who, though healthy, have a tendency to these diatheses, because of the relatively high proportion of sugar it contains. But ale is a very popular beverage with many, and I have long endeavoured to find a beer resembling ordinary ale in all respects, but containing no sugar, so that this question might be put to a crucial test by trying the effects of such a beverage, but I have always been assured by brewers that this was impossible. In the autumn of last year my attention was called to a beer which purports to be absolutely sugar-free.[6] In view of what had been told me of the impossibility of manufacturing such an article I asked Mr. Chas. E. Cassal, the public analyst of St. George's, Hanover-square, to analyse this ale for me, and his report fully confirms the statement that it gives "no indications of any fermentable sugar." He also reports that the amount of extractives is "very low," that the acidity is "low" (fixed acidity calculated as tartaric acid, 0·164; volatile acidity as acetic acid, 0·092; total, 0·254 grains of acidity per fluid ounce, as compared with from 1 to 1·5 found in ordinary beer), and that it contains 5 per cent. by weight of absolute alcohol (corresponding to 11·08 degrees of proof spirit). The results of my investigations into the action of this beer up to the

[6] An analysis of this beer appears in THE LANCET, May 22nd, 1897.

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present time afford additional and, as it seems to me, conclusive proof that it is the sugar of alcoholic beverages which does the mischief in gouty and rheumatic conditions. During the last ten months it has been tried in one patient who had consulted me for lithæmia, two cases of chronic muscular rheumatism, one case of chronic gout, one case which I believe to be uric-acid headache, and one case of chronic rheumatic arthritis (in addition to the case of this complaint mentioned below), besides a large number of persons who, though healthy, cannot take ordinary ale. In none of these instances has it been followed by any pain, stiffness, lethargy, headache, or any of the ill-effects which follow the use of ordinary beers or wines. As for myself, for years I have been unable to take beer as a beverage, on account of the lethargy, indigestion, pain, and stiffness which invariably followed such indulgence, but for three months continuously I have taken one glass of this sugar-free pale ale at luncheon without the slightest "rheumatic" effects; and, what is to my mind even more to the point, without interfering with my afternoon's work. This beverage resembles ordinary ale in every respect, excepting that it is deprived of its sugar, and these facts, therefore, show conclusively that it is the sugary constituents of beer which produce the lethargy and other evil effects which follow ordinary beer.

7. *Champagne.*—Let us now turn to champagne, Dr. Harley's remarks concerning which gave occasion for this article. He says (p. 15): "It may, however, be laid down as a general rule that the less acid and the less alcoholic a wine is the less likely is it to disagree with a gouty patient. Hence it is that the sour forms of champagne at present sold in England should in all cases be shunned, no matter what one is told by the uninitiated to the contrary. Champagnes such as the French themselves drink are the safest, for that sugar gives gout is alike contrary to scientific teaching and every-day practical experience." Now this wine as ordinarily met with varies widely in composition, but is always and necessarily a more or less acid—as, indeed, all white wines are—and usually a highly sugary beverage,[7] although the sugar, especially in the newer wines, is generally covered by the "doctoring" which, as Dr. Harley correctly points out,[8] it undergoes for the English market. Not only do the grapes differ widely, but the mode of manufacture varies considerably also, and especially as regards substances added to suit the English palate. Wine that is dry by age—i.e., where nearly all the sugar has become converted by fermentation into alcohol—is one thing, but wine that has been made dry by the addition of acid substances (such as acetic acid) and liqueurs, such as happens to most of the wines specially prepared for the English market, is quite another. In the manufacture of all champagnes a certain amount of sugar is added (usually about 3 kilogrammes of sugar-candy to the 100 litres) to provide for the further fermentation which produces the sparkle, and also a variable quantity of brandy or "liqueur" of a kind which doubtless varies considerably in quality. To get rid of all this sugar by the slow fermentation which goes on in bottle would verily require ages. Taking those wines only of which certified analyses could be procured, the average composition of ordinary champagne, as met with in England, consists of alcohol from 5·8 per cent. to 13 per cent. (by volume), and sugar from 1·36 per cent. to 6·34 per cent. In Parkes' "Hygiene"[9] the average amount of sugar is stated to be 24 grs. per ounce (5·44 per cent.); and the total acidity (present in all *white* wines) varies from 0·74 to 1·63 per cent. There is, however, a variety of champagne which differs in its analysis considerably from the champagne usually met with in the English market. Frezenuis's analysis of this champagne shows alcohol 14·10 per cent. (by volume); sugar, calculated as dextrose, 0·17 per cent.; total acidity, 0·78 This shows that all the natural glucose has undergone total fermentation and that there is no added sugar.

In view of the above facts it is not surprising that champagne as ordinarily met with is a potent agent in producing various gouty and rheumatic troubles—at least, so I have found it, and all those with whom I have conversed on the subject, including many professional and lay persons of great competence. But apart from its value as a remedial agent on account of the nascent carbon dioxide it contains, champagne is a very popular beverage, and when consulted by a patient suffering from gouty or rheumatic pains, or any of those numerous minor troubles to which uric acid gives rise, I frequently ask what champagne they have drunk, and have often been able to trace the causal agency to this. But in the case of the sugar-free champagne to which I have just referred this does not appear to be so. I have myself taken it from time to time for two or three years, and have never found it produce any of those rheumatic or other consequences which always in some degree attend other kinds. This is also the experience of others who could be mentioned, and who, having both the means and the taste for champagne, have tried many different kinds. One gentleman especially who used to consult me from time to time for minor uric acid troubles, but whom I have not seen for many months now, wrote me only a few weeks ago: "As long as I keep to this champagne I am all right, but as soon as I return to the other kinds something goes wrong."

Many more facts might be mentioned, but they are unnecessary in view of this second proof of a kind which Mill called the "double method of agreement and difference," viz., here are two alcoholic beverages possessing *all the usual qualities and composition of such beverages*, with the single exception that they *are wanting in sugar*, and which can be taken with perfect impunity by persons who, whether ailing or in health, cannot take other beers or champagnes without the risk of ulterior consequences, immediate or remote.

8. *Cases requiring stimulants.*—So far we have seen that gouty and rheumatic patients may take alcoholic beverages free from sugar without harm, but the following cases show that, under certain circumstances, these patients actually may *derive benefit from their use.* Take, for instance, a case where the alcohol aids a failing heart or the bitter of the hop improves a weak digestion. A woman, seventy-one years of age, of somewhat plethoric build, has consulted me many times during the past two years for chronic bronchitis and rheumatic arthritis. She has always a certain amount of dropsy of the legs, due to dilatation of the right ventricle consequent on her bronchial trouble; in short, the case represents a type which must be very common in the experience of every practitioner. She has always been very partial to one glass of ale with her mid-day dinner; indeed, she says she has no appetite for her food without it, and that she must have it in spite of the increased stiffness and pain, sometimes accompanied by enlargement of joints and irritability of temper, which ordinarily followed such indulgence. For over six weeks she has taken one glass of sugar-free pale ale with her dinner and supper without the slightest pain or inconvenience, and has enjoyed her meals, because she says it has so much improved her appetite. The dropsy also is slightly less, though she still resists my advice to lay up, and her cardiac condition has greatly improved with the small quantity of alcohol with her chief meal. Space forbids further detail, but one case of diabetes mellitus, aged seventy-two years, which Haig[10] maintains is associated with uric acid, and of obesity, treated on the plan elsewhere described,[11] have been allowed the same article with advantage.

9. *Cases benefited by stimulants.*—Two very severe cases of migraine, apparently of uric acid origin, have also been markedly benefited by alcohol and a liberal dietary. It is now five years since I saw a patient, a woman aged forty-three years, in consultation. She had suffered from time to time for upwards of ten years prior to that date with severe attacks of "sick headache," which were often followed by vomiting and excess of uric acid in the urine. She had seen many medical men and had tried a great many remedies and different modifications of diet, all of which had been directed to the diminution of nitrogen and a general reduction of food, but without avail, and had lost flesh considerably in consequence. In view of the failure of these measures it occurred to me to suggest the opposite plan—viz., four liberal meals of easily assimilable food, two glasses of very old dry Burgundy (which, when really old, is one of the most sugar-free wines) with lunch and two with dinner, and between meals a tumbler of egg-and-milk thrice daily, so arranged that she had nourishment every three or four hours throughout the day. This had the desired effect, and I learn that ever since she adopted this dietary she has been comparatively free from her troubles. About the same time I was consulted by a

[7] In Parkes' "Hygiene" (p. 331) the amount of sugar is said to "vary from 6 to 28 grs., average 24 grs. per oz.," so that a glass of ordinary champagne may contain between 18 and 24 grs. of sugar.

[8] Loc. cit., p. 308.

[9] Eighth edition, p. 331.

[10] Op. cit.

[11] THE LANCET, July 15th, 1893.

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medical man, aged about forty years, who, in a word, was suffering in precisely the same way as the previous patient. His headaches were getting so severe as to impede his practice. I treated him precisely in the same way—a method, be it observed, contrary to all the canons of uric acid, but, nevertheless, attended with a very large measure of success, though not quite so marked as in the previous case.

Before concluding it is only right to add that in all the cases above referred to in which a trial and comparison of the effects of the different kinds of alcoholic beverages have been made attention was paid to the digestive organs and the state of the bowels, which in all such cases is a matter of considerable importance. This is best accomplished by the regular administration of some natural laxative diuretic mineral water each morning I have on a previous occasion[12] pointed out the value of one-fourth or one-third of a tumbler of such water with an equal quantity of hot water taken each morning on waking for keeping the digestive organs in good order. This plan clears away the half-digested products of the day before, so that the ptomaines and other products of imperfect digestion do not remain to become absorbed or to interfere with the digestive processes of to-day. I have not entered into the large question of how or why it is that sugar-containing alcoholic beverages do harm; but clinical evidence seems to indicate some check in the elaborative and oxidative changes which are carried on in the liver and tissues, and this results in an imperfection in the general katabolic processes of the body. Consequently any disorder in the digestion, gastric or intestinal, would greatly aggravate this condition by throwing into the portal vein imperfectly elaborated products of digestion. If this be so it can readily be understood how it is that a natural laxative diuretic mineral water of this kind, by acting on the kidneys and clearing the intestines of these products, comes to be of so much value in gouty and rheumatic conditions, in addition to the various disorders which I have mentioned in the article just referred to; and not being succeeded by constipation as so many other aperients are it can be taken continuously with benefit. A small quantity each morning is better than large doses occasionally.

In the foregoing fragmentary remarks reference has not been made, for want of space, to many additional cases and facts which might have been quoted in support of my opening propositions. But I trust that enough of my own experience and that of others has been adduced to show that pure ethylic alcohol taken at meal times and in a dilute form is harmless, and, moreover, that it may sometimes do good; that it is the sugar in alcoholic beverages which is the most harmful constituent, and that the evil effects vary in proportion to the amount of sugar which is present. The question why the sugar in alcoholic drinks is so harmful is too difficult and too elaborate a question to answer on the present occasion. This problem is not rendered easier by the fact, to which reference has already been made, that teetotal syrups, sweetstuffs, and the like can be taken in much larger quantity and for a longer time without producing rheumatic effects in healthy persons, and even in gouty and rheumatic cases, excepting and unless dyspepsia ensue. In this respect I quite agree with Dr. Harley, who adduces seven illustrations of this circumstance; and I would ask the reader to observe the composition of my own staple beverage until lately. But it is evidently the alcohol and sugar *in combination* which jointly do the harm. Possibly the sugar, by disturbing the digestive processes, however slightly, prevents the alimentary system (including, of course, the liver) from dealing adequately with the alcohol introduced at the same time (as it would otherwise do in an undisturbed state). There are very good grounds for believing that the sugar makes a demand on the same physiological processes as the alcohol; and, both being highly diffusable or absorbable substances, it is possible that the *sudden* demand simultaneously made on the economy by 4 drachms of alcohol and 200 or 300 grains of sugar (the quantities contained in half a pint of ordinary beer) *together* is too great to be satisfactorily dealt with, and so one or the other, or both, pass almost unchanged into the general blood circuit, and give rise to the symptoms some of us know so well. But whatever be the explanation the clinical facts above referred to are beyond dispute.

As regards the part taken by the acidity, I do not wish to contend that it is altogether harmless, but sufficient evidence has been adduced to show that it does not play the leading *rôle*. A glass of some kinds of hock and one of beer may be alike as to acidity, but there can be no question as to which is most harmful. And, on the other hand, sugar-free slightly acid articles can be taken with impunity. If there be much acid (say, roughly, anything over ½ gr. per oz. in spirits, ¼ gr. per 3 oz. in wine, and 1 or 2 grs. per 10 oz. of beer) undoubtedly it may disagree. If in large excess the acidity may perhaps produce some of the same "rheumatic" effects which sweet wines do, and undoubtedly acid wines and other drinks are apt to upset the digestion. This is admitted, but that it does not produce the far-reaching effects which sugar does is evident from the trials above alluded to. A few grains of bicarbonate of soda at the conclusion of the meal will, as aldermen know full well, counteract the effects of the acidity; but not of the sweet alcoholic drink. There seems to be a marked idiosyncrasy in respect to acids, for in some persons a very slight acidity may have a very potent effect. A gentleman I know perspires profusely across the forehead whenever he takes even slightly acid wines, although the acid taste may not be perceptible to the palate; and a very small excess of acid will upset him.

In conclusion, there are not, so far as I am aware, any experiments bearing on this most important practical subject besides those of Buchner,[13] which go to show that a solution of alcohol not exceeding 10 per cent. does not impede artificial digestion, but one of over 10 per cent. does. This is just the limit usually found in ale. But I have no great faith in inferences drawn from artificial conditions which *appear* to imitate gastric digestion, and which are based on what the late Dr. W. H. Stone used to call "the test-tube and pipkin theory of medicine." Against actual clinical experience such experiments—when one remembers the extremely complex and almost unknown conditions present in the human stomach at any given moment—really count for very little.

Upper Berkeley-street, W.

[12] THE LANCET, Nov. 23rd, 1895.

[13] Deutsches Archiv für Klinische Medicin, vol. xxix., p. 537.

DEATH FROM SWALLOWING CHLOROFORM.

BY H. E. BRIDGMAN, L.R.C.P. LOND., M.R.C.S. ENG.

JUDGING by the fact that many text-books on poisons do not allude at all, or only in the most casual manner, to poisoning by swallowing chloroform, I conclude that such an occurrence is somewhat rare. The following notes of a case may therefore be of some interest.

A small, spare man, of very nervous, excitable temperament, aged forty-three years, with damaged mitral valves and adherent pericardium due to an attack of acute rheumatism, had been suffering from sleeplessness consequent on mental distress. On the night of June 30th he returned from business rather late, had a good supper, and retired to bed about midnight. I was called to him on July 1st and saw him first at 10.15 A.M. He was dazed and his manner was incoherent, but on being roused he could answer questions intelligently. The room smelt strongly of chloroform, and the patient's breath was saturated with chloroform vapour. The pupils were dilated, but acted slowly to light. The pulse was irregular, about 65 per minute, but of fair volume. He complained of severe pain in the umbilical and hypogastric region. The bowels had acted several times, and there was constant desire to defecate with much straining. He had vomited once, the vomited matter consisting of some bile-stained fluid smelling strongly of chloroform. The lips were quite normal, but the tongue and back of the throat were red, and the patient described them as being very sore. An ordinary two-ounce phial, containing about an ounce of chloroform, had been found under the patient's pillow, and he said that he had swallowed the other ounce at about 7 A.M. to make him sleep. I was informed that a few minutes after 7 A.M. the patient had called a friend who slept in the next room, had complained of not having slept all night, had said he thought he should go to sleep now, had given some directions

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with regard to his business, and had then fallen asleep before the friend left the room. The friend looked into the room twice afterwards, but noticed nothing unusual until 9.30 A.M., when he sent for me. Between 10 15 A.M. and 12.15 P.M. the patient continued to fall asleep for a few minutes at a time, waking again very shortly on account of the abdominal pain. While sleeping at 11 30 A.M. the pulse was 120, regular, and of fair strength. The respirations were 56 per minute and shallow. At 12 20 P M. the patient commenced passing blood from the bowels. When I saw him at 2 P.M. he had passed about 4 oz. of loose, dark clots and about a pint of highly blood-stained fluid fæces. Vomiting had now become frequent and the vomited matter was slightly blood-stained. As no urine had been passed, notwithstanding frequent attempts accompanied by painful strainings, a gum elastic catheter was passed and about half an ounce of blood-stained urine was drawn off. By this time the smell of chloroform in the breath was slight, there seemed little tendency to sleep, and the patient's mind was perfectly clear and remained so up to the last. At 4 P M. the pulse was 120, weaker, and more thready; the respirations were 30 per minute, the hæmorrhage from the bowels had subsided, and the vomiting was less frequent. The abdominal pain was very intense. Though gradually getting weaker the patient's condition remained much the same until about 7.30 P.M., when he suddenly grew worse and died.

Remarks.—This case is interesting, as death appears to have been entirely due to the effect of the chloroform as a violent irritant poison. The immediate narcotic effects of an ounce of chloroform seem to have been comparatively slight and to have been entirely recovered from. In the absence of a necropsy it seems difficult to say with certainty what was the immediate cause of death; but looking at the symptoms it is not unreasonable to suppose that there may have been perforation somewhere along the intestinal track. In a case reported in the *Medical Times and Gazette*, of Nov. 28th, 1857, the stomach was found, post mortem, to be inflamed in patches and the mucous membrane to be softened. The treatment was directed to sustaining the heart's action, to relieving the pain, and checking the hæmorrhage and sickness. Liquor strychniæ and spiritus ammoniæ co. were administered and a hypodermic injection of digitalis was given. Small doses of opium were given from time to time and hot fomentations applied to the abdomen. Ice was given by the mouth and iced injections were administered, which had a marked effect in stopping the hæmorrhage and relieving the tenesmus.

Burton-on-Trent.

ON SOME GERMAN SANATORIA FOR PHTHISIS.

BY F. RUFENACHT WALTERS, M.D., M.R.C P. LOND.,
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HAVING recently visited three of the German institutions for the treatment of phthisis—those at Falkenstein and Ruppertshain in the Taunus district, and the one at Hohenhonnef on the Rhine—it may interest some of my professional brethren to read a brief description of these places and their methods of treatment. All three institutions owe their existence in great measure to the influence of Dr. Dettweiler, and are therefore conducted on much the same lines. But while the Ruppertshain building is intended for those of small means, and somewhat resembles an English convalescent home for phthisical hospital patients, the other two are almost or quite unrepresented in England, being devoted to patients who are able to pay remunerative fees. Whenever the climatic treatment of phthisis is mentioned in this country most medical men would at once think of an Alpine or marine station, or an elevated table-land such as those of South Africa and Australia. But it should be borne in mind that such climates are by no means essential in every case of phthisis, and that a surprising degree of success may often be obtained in well-conducted and well-designed inland sanatoria, but moderately elevated above the sea-level, provided their sites have been carefully chosen in certain essential particulars. None of the three institutions with which I am just now concerned is in an Alpine climate. Falkenstein is 1300 ft. above the sea-level, and possesses a climate somewhat resembling that of some of our own hills. It is by no means free from fog, has a rainfall varying from half an inch to seven and a half inches per month, and a temperature which is rather lower in winter and a little higher in summer than that of the south of England. With all these drawbacks it is able to report about 25 per cent. of its patients as practically cured. Hohenhonnef is 770 ft. above the sea-level, and has much the same climate, but is probably less rainy and less protected. Taking into account the difference in geographical position, such elevations probably correspond climatically with lower elevations in our own land, and cannot be said to owe their value to an Alpine character.

From the diversity in temperature, moisture, rainfall, and elevation of the various health resorts for phthisical patients which all show a more or less satisfactory record, it is clear that either these factors are not of prime importance or else that different cases require different conditions. There is probably some truth in each of these conclusions. The essential conditions appear to me to be the following. In the first place the soil must be dry and warm, and thoroughly drained; in the next place the air must be pure and free from dust and smoke. There should be enough atmospheric circulation to keep the place dry and well ventilated, but ample protection against strong or cold winds. It is a common experience that most cases of early phthisis do best in a moderately bracing climate; but just as cold baths may be stimulating to one person and depressing to another, so in climate a place may be bracing to this patient, but altogether too keen or too windy for another. No place with a stagnant atmosphere is likely to be suitable in phthisis, and excepting in certain stages and for certain complications a moderate variation in temperature is likely to do good. Strong wind, especially if also cold, does much more harm in pulmonary tuberculosis than in other forms of tuberculous disease, and efficient wind-screens—natural or artificial—are essential in a health resort of this kind. Dust is also very bad for phthisical patients, and some very damp and rainy places are yet good for phthisis, probably in great part because of the absence of dust. Plenty of sunshine is a valuable aid to recovery, not so much from its bactericidal properties as from its influence on general nutrition. But the experience of Falkenstein, which shows very little difference between summer and winter in the proportion of patients who have to keep their beds, proves that sunshine is not as essential as many of us have been inclined to believe. Given plenty of warm clothing and protection against cold winds, phthisical patients in the quiescent stages can remain with advantage in the open air from morning till night even in wet and sunless weather. This is a great feature in the treatment at all these German institutions, where even foggy weather or severe frost and snow are not held to be indications for keeping the patients indoors. My visit to Falkenstein was paid during somewhat chilly and wet April weather, but nearly all the patients were lying out as usual on their cane sofas. The amount of exercise which is good or safe for phthisical patients depends largely on their strength. Febrile and much debilitated patients must be kept at rest; those who are free from fever and moderately strong may take a good deal of exercise, provided they do not go quickly so as to get out of breath. In most of these German sanatoria the paths are arranged in gentle inclines, so that patients may go gradually uphill and return downhill, increasing the distance and difficulty of their walks in proportion to their growing strength, under the directions of the physician, just as is done in heart disease. Such graduated exercise is a great feature at the Goerbersdorff Sanatorium; but at the three with which I am now concerned more stress is laid on rest in the fresh air. In each establishment there are numerous verandahs and summer-houses, where patients lie in the open air on cane sofas, well covered up and well protected against wind and rain, only coming in for meals. To diminish the liability to chills great attention is paid to the hygiene of the skin, which is trained to accommodate itself to atmospheric variations by systematic rubbings with spirit, or the cold, wet sheet, or by douches under the direction of the physicians. At Hohenhonnef cold ablutions are considered sufficient in most cases, and the douche is less used than in the older establishment. It is also found, as would be expected, that an open-air life renders patients less liable to chills. It is one of the problems of such institutions how to ensure rest and quiet without dulness. Beautiful scenery is a great help in this respect; but much will also

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depend on the physicians and their colleagues. The mental factor should indeed never be lost sight of, as it may make a great difference in the results of treatment. Much ingenuity may also be profitably spent in designing the building for such an establishment. It should, of course, be as nearly as possible faultless from a sanitary point of view; but it is unnecessary to dwell here on its construction, as a description of the institutions I have just visited will be of more interest.

Falkenstein Sanatorium is about ten miles north-west of Frankfort-on-the-Main on the southern slopes of the Taunus Mountains, at the upper end of a valley which is exceedingly well protected on the west, north, and east by hills of from 1500 ft. to nearly 3000 ft. above the sea level. The surrounding country is extremely picturesque and well-wooded with extensive forests of beech and other trees. The sanatorium, which has a south-easterly aspect, is built in the shape of a centre and two wings, which diverge from it at an obtuse angle and enclose a stone terrace with deep verandahs, under which the patients lie on cane sofas. From this terrace there is a magnificent view over Cronberg and the low-lying country extending to Frankfort, across which the Main is clearly visible. The central block consists on the ground floor of a large winter garden and a reading-room and cloak rooms, and has in front a well-lighted corridor looking on to the verandah and extending to the wings. Behind are the entrance, grand staircase, porter's lodge, and post and telegraph offices. The ends of the wings contain, one a music-room and a conversation-room, the other a billiard-room and library. The handsome dining-hall, which is placed in a separate building over the kitchens, communicates through a vestibule with the eastern end of the central corridor. It is 78 ft. long, 39 ft. wide, and 32 ft. high, and can easily seat 200 guests. In front of this, diverging at an obtuser angle than the eastern wing, is a corridor 200 ft. long, which leads to the eastern annex. This is a separate building now entirely occupied by patients' rooms. A similar but shorter corridor on the other side of the central block leads to the western annex, of which the basement contains the bath and douche rooms, the rest consisting of laboratories, consulting-rooms, and the private rooms for the three medical men and their establishment. The upper part of the centre block and wings, which is partially built of wood, is occupied by bedrooms in two storeys, with smaller ones in the attics. Some of these bedrooms have balconies, one in the centre over the winter garden being a very large one. On the other side of the road which runs behind the sanatorium, are stables, model cowsheds, and pig-sties, the laundry, steam disinfecting apparatus, and the machinery required in the production of oil-gas for lighting purposes. The latter, when I visited it, was remarkably free from smell. The directors are hoping in the future to instal electric lighting, but there are at present difficulties in the way. The water-supply, which is abundant and of excellent quality, is derived from private springs at the top of one of the neighbouring mountains; but in case of drought there is a supplementary supply from Cronberg. The drainage system, which was constructed in 1883 under the direction of an English engineer, appears to be very good and complete. The water-closets, although not built out, are of good pattern. The sewage, with the rest of the waste water, runs into precipitating tanks in a shed in the grounds, where it is treated with acidulated sulphate of aluminium, and repeatedly clarified by a partially automatic apparatus. The solid sludge is mixed with peat, leaves, or earth, and then used in the garden, while the liquid effluent is allowed to irrigate a field. The whole system when I inspected it was free from objectionable smell and seemed to work very well. The sanatorium with its annexes is heated partly by low pressure steam (Bacon's system) and partly by ordinary German stoves. The patients, however, do not spend much of the day indoors. Excepting at meal times and when consulting the medical officers they lie under cover out-of-doors in the numerous summer-houses or "Liegehallen" with which the grounds are provided, or under the verandah which looks on to the terrace, or take walks, regulated by the medical officer, in the grounds or adjoining woods. These "Liegehallen" are of various shapes and sizes, built substantially of wood and provided with cane lounges or sofas, like those on the terrace, as well as with little tables and other simple furniture. Each patient has his own place, which he can decorate with flowers, pictures, fans, &c., according to taste. Even some febrile patients lie out in these places from morning to night, regardless of rain, cold, or fog, and apparently with great benefit. Patients with acute exacerbations or complications are, however, kept in their bedrooms. There is a strict rule enforcing the use for all expectorations of Dettweiler's flasks or of ordinary spittoons, many of which are placed in the grounds. The dietary seems to be exceedingly good and suitable. The milk-supply is excellent, the cows being regularly tested with tuberculin and all doubtful ones replaced. I was told by a patient that complaints are very common about the food, but these do not seem to me to be justified, if one may judge from a few days' stay. I was informed that the *menu* is chosen to suit the various nationalities in turn, but it must be a task of some difficulty to successfully cater for so cosmopolitan a community. German ways are very different —in food as in other things—from French or English; there are even decided differences in the dietary of different parts of Germany, and what would please one patient might be most distasteful to others. The sanatorium is capable of accommodating over 150 patients, besides those who sleep in the village. The three resident physicians—Dr. Hess, Dr. Besold, and Dr. Adolf Koch—are exceedingly popular with their patients. I cannot speak too highly of their courtesy in giving me the fullest opportunities of investigation, while their thoroughness and devotion to their duties were equally remarkable. They use drugs very sparingly, but pay great attention to the throat complications of phthisis. They have begun to use Koch's new tuberculin for about a dozen patients, but have little or no belief in other reputed specifics. The douche is much less used than formerly, but spirit-rubbing and friction with a wet sheet are systematically done, whenever there are no contra-indications, in order to train the skin to withstand changes of temperature, to check the habit of profuse perspiration, and to improve the general nutrition.[1]

The sanatorium at Ruppertshain is situated in a neighbouring valley about forty minutes' drive from Falkenstein. It has a somewhat similar outlook and sheltering hills, but a more easterly aspect. The building forms part of a circle, the rooms being connected with corridors at the back. Several patients are accommodated in each room, and the furniture and fittings are somewhat plainer than at Falkenstein. There is a large dining-room for the women on one floor, and one for the men on the floor above. The kitchen is situated in a separate block at the south-west end. The terrace is at present somewhat exposed, but when the newly-planted trees have grown it will be better protected. The place, which accommodates eighty-five patients, is heated by low-pressure steam. It was partly built by money earned at Falkenstein, which gives it an annual subvention. Although intended for necessitous patients, these have to pay rather more than one would expect in a similar institution in England; but I understand that the weekly payments are often defrayed by friendly societies. It is simply constructed, carefully designed, and well fitted for its object. I have to thank the resident medical officers for showing me over the building and giving me full explanations of the many interesting features possessed by the sanatorium, which is of quite recent construction.

The sanatorium at Hohenhonnef, although smaller than that at Falkenstein, is a more modern building, and is marvellously complete in its details. It is situated on a hill on the right bank of the Rhine in one of the most beautiful parts of this lovely district, the view extending over the river to the Eiffel Mountains, while the famous Drachenfels forms one of the neighbouring peaks. The sanatorium is built of white stone and plaster in a somewhat conspicuous position, which gives the impression that it is unduly exposed; but the surrounding hills on the north and east are from 300 ft. to 700 ft. higher than the sanatorium, so that, excepting on the south-west, it is fairly sheltered from violent winds. The slopes of the hills towards the river are clad with vineyards or woodland, while a beautiful forest of pine trees protects the building on the landward side. Many more trees have been planted on the hillside near the sanatorium, so that in a few years' time there will be plenty of shelter on all sides. The building consists, as at Falkenstein, of a centre and two diverging wings, the latter a trifle more opened out than at the older sanatorium. The front has a south-westerly aspect, the entrance being at the back. The basement, which is on a level with the terrace in front, is occupied by cloak-rooms, bath- and

[1] Dr. Bezly Thorne has also described this institution in a lecture before the Royal British Nurses' Association.

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douche-rooms, furnaces for heating the building, and a limited number of bedrooms for visitors who are not patients. On the ground floor are handsome reception rooms, reading-room, music-room, ladies' room, billiard-room, winter garden, consulting-rooms, laboratories, a suite of rooms for the managing director, and a few bedrooms for patients, while behind are the post-office and bureaux. Above this floor are three storeys occupied by bedrooms, all in the central part being situated in front, and many having balconies. Four large balconies are placed at the back for use in hot weather. Part of the western wing is at present occupied by the medical officers' private rooms, but these will shortly be available for patients, as new houses are being built in the grounds for Dr. Meissen and the managing director. There are lifts for patients in the sanatorium and rooms for convalescents and nurses' bedrooms on each floor. The handsome dining-hall is situated above the kitchen and store-rooms in a separate block behind the centre of the building, and is approached by a bridge over the entrance. There is no direct communication between the kitchen and dining-hall. The servants sleep in a separate building to the back of the eastern wing. The whole sanatorium is lighted by electricity and heated by means of hot-water pipes, and is arranged in a thoroughly luxurious style. Even the "Liegehallen" round the building and in the woods are provided with electric lights and bells. The steam laundry, steam disinfector, electric motors, and wells for water-supply are placed about half a mile off in a neighbouring valley, and being of modern construction and shielded by the woods cause no objectionable smells or sounds. The drainage system in-doors is based on English models. The sewage and waste waters are clarified by simple subsidence in tanks, the sludge being afterwards mixed with peat and used as manure, while the effluent is discharged into the Rhine. The tanks were quite unobjectionable when I visited them. It is impossible in a brief description to do justice to the completeness with which every detail has been provided for in this sanatorium, which appears to be a model in almost every respect. The senior medical officer, Dr. E. Meissen, who was for many years assistant to Dr. Dettweiler at Falkenstein, is not only a very charming, but also a most capable man, and my best thanks are due to him and Mrs. Meissen, as well as to his junior colleague, Dr. Schröter, and the managing director, for their great courtesy and attention during my brief stay. The system of treatment is much the same as at Falkenstein. Sputa are disinfected with lysol and soft soap, but no spittoons are seen about the grounds. The food is excellent and well chosen, the milk-supply coming from a model dairy belonging to one of the directors. I was much struck with the friendly, sociable feeling amongst the patients, who seem to be very comfortable and well cared for. There is at present room for ninety-three patients, but there will soon be accommodation for a larger number in the building.

Welbeck-street, W.

A CASE OF SEPTICÆMIA SUCCESSFULLY TREATED WITH ANTI-STREPTOCOCCIC SERUM.

BY ERNEST R. G. GROTH, M.D. BERLIN, L.R.C.P. LOND.,
PHYSICIAN TO THE WESTERN DISPENSARY OF THE GERMAN HOSPITAL.

ON May 13th, 1897, I was called upon to attend a married woman, aged twenty-nine years, who had miscarried in the third month of pregnancy. She informed me that there had been considerable hæmorrhage on the previous day. On examination I found some placental débris in the cervical canal; this I removed and hæmorrhage ceased. The pulse remained at 90 and the temperature for four days did not exceed 99·4° F. There was but slight inoffensive lochial discharge, and boracic acid douches were used twice daily. On the 18th, the fifth day after the miscarriage, the pulse rose to 108 and the temperature to 100·8°. On the 21st the pulse further rose to 120 and the temperature to 103°. The uterus was not much enlarged and was freely movable, but as the abdomen was somewhat distended and slightly sensitive I decided to explore the uterine cavity next day. On the following morning (the 22nd) the pulse was 124 and the temperature 103·8°. In the afternoon Mr. Beer saw the case with me and dilated the uterus with Hegar's dilators under ether. Some hardened pieces of placenta were found closely adherent to the fundus uteri, and as much as could be was removed with the curette with antiseptic precautions, and the boracic acid douche continued as before. The removed débris was quite inoffensive. On the third day after the operation the morning temperature was 99° and the pulse 100, the douche returned clear, and no pelvic inflammation or swelling could be detected. The temperature, however, again rose, and on the morning of the 27th had reached 105 8° and the pulse 136, and symptoms of septicæmia were distinctly developed. A specimen of blood, withdrawn with due precautions, from the finger was examined by Mr. W. D. Severn, of the West-end Pathological Laboratory, who telegraphed that the blood submitted to him "contained a few streptococci." Five grains of antifebrin were ordered, and the temperature fell for a short time to 104·4°. I then decided to treat the case with anti-streptococcic serum, which I obtained from the British Institute of Preventive Medicine. The first injection of 20 c.cm. took place at 3 P.M., and the temperature fell in twenty-four hours from 105·5° to 101·8°. A specimen of the urine was also examined by Mr. Severn, who reported as follows:—

"*Physical examination.*—Urine was cloudy and contained a good deal of fine flocculent deposit; the colour was somewhat deeper than that of normal urine. The specific gravity was 1014·1; the reaction alkaline. The odour was disagreeable and savoured of putrefaction.

"*Chemical examination.*—Serum albumin, distinct trace; globulin, distinct trace; proteose, deutero-albumose was present and some other albumose, which has not been identified; sugar, absent; phosphate (P_2O_5) in excess of the normal amount. A trace of diacetic acid was present, and this was carefully differentiated from acetone. The amount of serum albumin was too small to estimate with anything approaching accuracy without employing tedious and difficult methods. Sugar was tested for by the glucosazon reaction.

"*Microscopical examination.*—Numerous highly granular leucocytes of variable size were present and a few red blood corpuscles, four to six in a field, Zeiss D. oc. 4. The principal feature of the microscopical examination was the presence of some rather coarsely granular casts, which were, however, of small dimensions. A few rather large hyaline casts were also present. Some crystals of calcium triple phosphate and a small deposit of amorphous urates was observed. Cover-slip preparations prepared from centrifugated portions of the urine containing deposit and stained by the Gram-Weigert method revealed large groups of staphylococci, the identity of which it would, of course, be impossible to establish without culture experiments. Two species of cocci were present, the smallest of which were morphologically identical with pyogenic staphylococci. No streptococci were observed, and the above organisms were the only ones present which retained the violet after treatment with iodine, alcohol, and aniline."

Serum injections were made on May 27th (20 c.cm.), May 28th (10 c.cm.), May 29th (10 c.cm.), May 30th (20 c.cm.), June 1st (10 c.cm.), June 6th (10 c.cm.), June 11th, 12th, 13th, and 14th (10 c.cm. each day), and the result of these injections was as follows:—

Date.	Serum injected.	Degrees F.—Morning.	Degrees F.—Evening.
May 27th	20 c.c.	105·8	105·0
,, 28th	10 c.c.	101·8	103 6
,, 29th	10 c.c.	100·8	101·6
,, 30th	20 c.c.	101·2	103 8
,, 31st	None.	101·8	104·0
June 1st	10 c.c.	99 4	100 8
,, 2nd	None.	100·0	104·4

From this date the temperature varied between normal and 102° until June 9th, when it was 103° in the evening. On June 10th it was 105° in the evening, and the injections were re-commenced, with the result of a gradual fall in temperature and pulse-rate. After the fifth injection of serum I discontinued its use for four days, as the pulse and temperature were not very high, but on June 6th I gave another injection of 10 c.cm. The urine was again examined and the abnormal chemical and microscopical features were diminished. On the 8th the patient complained of a rash, accompanied with great itching, succeeded on the following day by pain and stiffness in all joints. The tongue was furred and dry, the throat

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reddened and painful, the patient was unable to swallow any food, and appetite had disappeared; the abdomen was distended, tympanitic, and painful; and all the septic symptoms, which had previously disappeared, had now returned. As no vaginal examination had taken place after May 24th I examined her again on June 10th, and in the left broad ligament I found a considerable inflammatory swelling. From June 6th to June 11th no serum was injected, but the patient took daily twelve grains of quinine and ten grains of antifebrin in divided doses. In spite of these febrifuges the temperature rose to 105° and the pulse to 120 on the evening of June 10th; I therefore discontinued medicines and again had recourse to serum injections, with the satisfactory result that after injections on June 11th and 12th the rash, itching, stiffness, pain in the joints and throat disappeared, the appetite returned, the abdomen became softer and less tympanitic, the pulse and temperature gradually fell, until on the fourteenth day after the last injection the pulse and temperature became normal and the patient recovered. It is a noteworthy fact that after the last two serum injections the swelling in the left broad ligament decreased in size, and on June 25th there remained but little of it. During the time the swelling decreased the evening temperature was slightly above and the morning temperature slightly below normal; the pulse varied but slightly. After June 26th there was no deviation from the normal pulse and temperature. A third examination of the urine was made after the final serum injection, and abnormal substances had by this time completely disappeared, which goes far to prove that renal mischief is not caused, as some assert, by the serum, but is entirely due to the disease. The total quantity of serum used in this case amounted to 120 c.cm., or 4½ oz. I regret not having made more frequent vaginal examinations, for this would have given the exact date when extravasation in the left broad ligament began and would have made the case more complete. There can be little doubt that the serum alone saved this patient's life. During the course of the case quinine, antifebrin, and a hydrochloric acid mixture were given, but no drugs appeared to have any lasting influence in reducing either temperature or pulse.

Weymouth-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF GASTRIC ULCER PERFORATING INTO THE PERICARDIUM.

BY COLLINGWOOD FENWICK, M.R.C.S. ENG., L.R.C.P. LOND., L.S.A.

ON July 30th, at 5.55 P.M., I was hastily summoned to attend a man who had been taken suddenly ill. Arriving at his house three minutes after receiving the summons I found him lying dead on a garden chair. The history I obtained from the widow was as follows. Her husband's age was fifty-five years, and until recent years he had been a builder. On the day of his decease he returned home from a walk at about 5.30 P.M., but made no complaint and appeared to be in his usual health. He had never complained of pain after food or suffered from vomiting or any other symptom of gastric disease. Immediately on finishing his meal, which consisted of tea, fish, and bread and butter, he rose from the table complaining of pain and palpitation. After walking a few yards he sat down, and his wife, noticing that he looked very pale, administered some whisky and water, but he expired in about a minute.

Necropsy.—The results of the post-mortem examination, made twelve hours after death, were as follows. The body was that of a stout elderly man. The lungs were emphysematous, the right lung being bound to the chest-wall by strong pleuritic adhesions. The pericardium was found to contain several ounces of tea, which smelt of whisky, and some particles of fish. On the lower surface of the pericardium a small aperture was discovered admitting a stout probe, which was passed downwards through the diaphragm into the abdominal cavity. The heart itself weighed thirteen ounces and was extensively infiltrated with fat; the valves were normal. The anterior surface of the stomach was found to be firmly adherent to the under surface of the diaphragm, and on opening the viscus a chronic ulcer the size of a shilling, with indurated edges, was seen to be situated about the centre of the lesser curvature. From the base of the ulcer a sinuous track led upwards and to the right through the substance of the pericardium. The stomach contained fourteen ounces of undigested material, composed of tea, fish, and sodden bread. All the other organs were apparently healthy.

The rarity of perforation of the pericardium by ulceration of the stomach, and the fact that the fatal accident occurred without any antecedent symptoms of gastric disease, appear to me sufficient warrant to place the case on record.

Ferndale-road, Clapham, S.W.

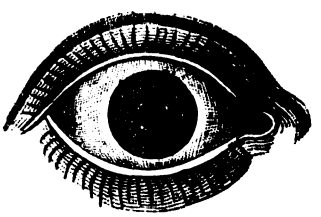
Perforation of a simple gastric ulcer into the pericardial cavity is an event of extreme rarity, and Mr. Fenwick's case is therefore of great interest. We hope to refer to it again shortly.—ED. L.

NOTE ON ARTIFICIAL PUPIL.

BY CHARLES BELL TAYLOR, M.D., F.R.C.S. EDIN.,
SURGEON TO THE NOTTINGHAM AND MIDLAND EYE INFIRMARY.

WHEN examining patients in whom an artificial pupil has been formed one too often finds that the iris has been excised right up to the corneal margin, as depicted in Fig. 1. This

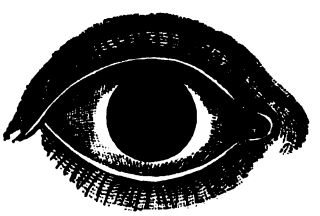
FIG. 1.



Artificial pupil after operation by usual method.

is to be deprecated; the object should be simply to make a slit as small as will answer the purpose opposite a transparent radius of the cornea, the situation of the slit should be inwards in an oblique meridian for choice, and the cornea should be most carefully examined prior to making the selection, as it often happens that the portion seemingly transparent before the operation reveals, opposite the new black pupil, striæ the existence of which was not at first suspected. The late Mr. Critchett sought to secure a sufficiently small pupil by withdrawing a minute piece of iris and fixing the incarcerated prolapse by a suture, M. Wecker by snipping off a portion of the sphincter of that membrane *in situ* in front of the lens, and others by simply

FIG. 2.



Artificial pupil after operation by author's method.

performing an iridectomy more or less up to the corneal margin. Mr. Critchett's operation realised the slit admirably but it was apt to cause glaucoma, prolonged irritation, and even, I have heard, sympathetic ophthalmia. M. Wecker's operation clearly involves considerable risk to the integrity of the lens, and the simple iridectomy is objectionable for cosmetic reasons and on account of the diffused images to which it gives rise.

I have endeavoured to minimise these drawbacks by

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contracting the pupil with eserine prior to incising the cornea, withdrawing a small piece of the inner edge of the sphincter of the iris with forceps, and, the moment it emerges, excising a minute portion—not larger than a pin's head—with specially sharp scissors. In this way I have for some years past succeeded in securing a stenopuic slit quite as effectually as by Mr. Critchett's operation and with none of the drawbacks attending a strangulated prolapse. The appearance presented by the new pupil after recovery depicted in Fig. 2 is sketched from a patient on whom I have recently operated on account of central opacity of the cornea.

Nottingham.

NOTES ON TWO CASES OF AUTO-INTOXICATION AND PREGNANCY.

By ROBERT CRAIK, M.D. GLASG.

CASE 1.—A healthy young woman, twenty-six years of age, in the seventh month of her second pregnancy, complained of an itchy rash on her body and limbs, but chiefly on her legs. It gave her much trouble at night, the itchiness interfering with sleep. On examination the rash was found to be of the nature of urticaria. A history of gastro-intestinal irritation was inquired for, but there seemed no reason to suppose that indigestion or the ingestion of irritants had anything to do with the causation of the complaint; on the contrary, the patient informed me that soon after the middle of her first pregnancy she began to be troubled in the same way for the first time. On that occasion she was treated with drugs and strict diet for a month without benefit and was much troubled with the rash right up to her confinement, but obtained relief soon after delivery. When I saw the patient her urine was free from albumin, there was no history of rheumatism, and she was not constipated. Several mixtures, including one of salicylate and bicarbonate of soda, were tried, but no relief was obtained, and she was advised to await her confinement. The rash disappeared entirely on the third or fourth day after delivery. The child was healthy and well-developed. She informed me that the rash disappeared much sooner after her first confinement—almost at once, in fact.

CASE 2.—A multipara, aged forty-four years, in the sixth month of pregnancy, was taken with labour pains, and in a few hours gave birth to a fœtus which had evidently been dead for a day or two. It was necessary to remove the placenta by the introduction of the hand into the uterus. All went well and she recovered so far as to be able to sit up in a chair for a few hours a day, but she seemed weak and it was found that she had been very poorly for some weeks before the confinement, although able to be about the house till the day of delivery. She gradually became weaker, and soon had to take to bed again, complaining of pains in the limbs and cramps in the legs. Nothing particular was observed till about a month after the confinement, when it was discovered that the muscles of the calves of the leg were flabby and tender on pressure. Sitting on the bed, with her legs dangling over the edge, it was seen that there was considerable wasting of the muscles and ankle-drop, and the knee-jerks could not be elicited in the slightest degree. Her arms were similarly affected, and the grasp was feeble. She was unable to button her night-dress, she complained of numbness of the hands, and had wrist-drop, though not to the extent often seen in alcoholic paralysis. There was no tremor. These symptoms lasted for about three months, but she ultimately made a very good recovery.

Remarks.—In Case 2 delivery was easy, without much exertion or unusual loss of blood. The lying-in period was non-febrile and otherwise satisfactory. There was no suspicion of intemperance and no evidence of lead-poisoning or syphilis. She had had influenza about a year before, somewhat severely. There was no rheumatic or gouty history. No albuminuria was detected during the illness, but the urine was not tested till a fortnight after delivery. The paresis, muscular atrophy and hyperæsthesia, the cramps, and loss of knee-jerks were symptoms that no one could miss when the illness was fully developed. The sensory disturbance was much less marked than the motor.

Consbro', Yorks.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

A CASE OF GUMMA OF THE ISTHMUS OF THE THYROID GLAND; ULCERATION; ŒDEMA OF THE LARYNX; LARYNGO-TRACHEOTOMY; RECOVERY.

(Under the care of Mr. BRUCE CLARKE.)

THOUGH gummata of the thyroid gland have no doubt from time to time been noticed, yet very few indeed have been placed on record. Wölfler[1] only mentions one instance of a gumma in the thyroid resulting from acquired syphilis; it was recorded by Navratil.[2] Demme[3] met with three instances in which gummatous masses were found in the thyroid gland in children who were the subjects of hereditary syphilis. We are not aware that any further cases have been recorded. For the notes of this interesting cas we are indebted to the house surgeon, Mr. Maurice G. Pearson.

A married woman, aged thirty-eight years, was admitted into St. Bartholomew's Hospital under the care of Mr. Bruce Clarke on Dec. 28th, 1896. About four years ago she attended as an out-patient under the care of Mr. Bruce Clarke, and suffered from a gumma of the right arm, which subsided under treatment with iodide of potassium. She ceased taking the medicine, and very soon three gummata appeared on the left side of the face, and were similarly cured. About March, 1896, a gumma appeared on the front of the neck, and again iodide of potassium was given; but in September, 1896, the swelling began to ulcerate, and she treated it by poulticing. She had been married thirteen years and had never been pregnant. No history of syphilis or any of its manifestations (apart from the gummata for which she had been treated) could be obtained either from herself or her husband. A fortnight before admission she began to have a difficulty in swallowing and could take no solids. Her voice became a husky whisper, and during the last week her breathing had been difficult. On admission her temperature was 100·3° F., her pulse was 36 and small, and the respiration was 24 per minute. Her breathing was always difficult, and occasionally severe paroxysms of dyspnœa caused the patient great distress. In the mid-line of the neck anteriorly there was a hard, cylindrical swelling, extending from the hyoid bone to the top of the sternum, so that the thyroid and cricoid cartilages could not be felt. The swelling rose and fell with deglutition. Its upper part was ulcerated, and the ulcer was "punched out" in appearance, and on the surface there was a washleather-coloured slough; in fact, it was typically a gummatous ulcer. With the laryngoscope the mucous membrane of the larynx appeared to be very red, but not markedly œdematous. The abdominal and thoracic viscera were apparently normal. Iodide of potassium was administered, but the patient grew worse rapidly; the dyspnœa increased, the left side of the larynx became very œdematous, and a sub-conjunctival hæmorrhage appeared in the right eye. On Jan. 1st she had another attack of severe dyspnœa worse than any she had had before; she sat up in bed and breathed with difficulty and distress, and was evidently greatly frightened; she said she felt she was dying; the pulse was 130 and very small; the respiration was very rapid and constantly interrupted by fits of coughing; the skin was markedly cyanosed. Laryngo-tracheotomy was performed at once without an anæsthetic, as her condition was not considered good enough to stand one; except during the skin incision she did not seem to suffer much pain. It was found necessary to cut through a thickness of

[1] Archiv für Klinische Chirurgie, 1883, p. 827.
[2] Chirurgische Beiträge, Stuttgart, 1882, pp. 21 and 22.
[3] Handbuch der Kinderkrankheiten, vol. iii., part 2, p. 413.

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one and a half inches of hard, gummatous material before any part of the larynx or trachea was reached. Most of the gumma was divided in the middle line; it appeared to occupy the whole of the isthmus of the thyroid gland and to extend upwards and downwards from it. The cricoid cartilage and the upper two or three rings of the trachea were divided, and a Durham's lobster-tail tube was inserted, as the ordinary tubes had not a shank long enough to reach the trachea. Her condition was relieved at once, the breathing became perfectly easy and slow, her colour improved, and she passed a comfortable night, sleeping well. The iodide of potassium was continued, at first in fifteen-grain doses, but soon increased to thirty grains three times a day. The gumma rapidly dwindled, and large pieces sloughed *en masse*. A piece of the tumour was examined microscopically; it exhibited the character of a gumma, but no thyroid tissue was recognisable, perhaps owing to the sloughy nature of the tissues. On Jan 3rd a laryngoscopic examination was made; the epiglottis, the right side of the larynx, and the right vocal cord were red, but otherwise natural; the left side of the larynx was so œdematous that it projected as far as the middle line, and the left cord could not be seen. No ulceration was visible. The œdema of the larynx subsided, and on the 7th the tracheotomy tube was permanently removed. When the patient left the hospital, on Feb. 6th, 1897, the wound was closed; breathing was perfectly natural and easy; there was still some œdema of the left side of the larynx, and the left cord was almost destroyed, being represented only by a small irregular nodule of tissue. Her voice was still the same husky whisper that it was before operation. It was at first doubtful whether the whole thyroid had sloughed away or not, but the patient has been seen lately (June, 1897), and no signs of myxœdema have appeared. The voice is just as before, and the only change in the larynx is that the œdema has entirely gone. Her general health is excellent.

Remarks by Mr. BRUCE CLARKE.—The rarity of gumma of the thyroid gland, and, indeed, of any gland tissue, is such that the above case deserves to be placed on record. In the earlier stage before ulceration began the gland was well mapped out, and pretty uniformly enlarged, but later the surrounding tissues were so infiltrated that its earlier characters were entirely masked.

HALIFAX ROYAL INFIRMARY.

A CASE OF POLYPUS OF THE EPIGLOTTIS; SUB-HYOID PHARYNGOTOMY; NECROPSY.

(Under the care of Dr. PRIESTLEY LEECH.)

A MAN, aged fifty-four years, was first seen in the early part of January, 1897, by Mr. Topham and Dr. Marshall. The patient then complained that he was always "swallowing wind." On examining his throat a cystic-looking tumour about the size of a Tangerine orange was seen lying in the pharynx just behind the base of the tongue. On Jan. 11th he was seen by Dr. S. Lodge, jun., to whom the patient had been referred by Mr. Topham. The following notes of his condition at this time are by Dr. Lodge. Two years ago the patient first felt the sensation of having a lump in his throat; this lump seemed to change its position. Eructation of wind eased this sensation probably by a lifting of the tumour from the gullet. At first there was only dysphagia, but latterly odynephagia had been fairly constant, at first only for liquids, but afterwards for solids as well; fluids often regurgitated through the nose. Dysphonia came on still later; odynephonia was only present when the throat was dry. There was complaint of pain about the ears and the base of the neck; the pain was aggravated by bending the head backwards. He always slept with his head hanging forwards in bed. The nose and naso-pharynx were free from disease. The patient, a tall, spare man, had during the past three months lost a good deal of weight. He was 5 ft. 10½ in. in height and only weighed 9 st.; in 1892 he weighed 11 st. On pressing down the tongue a pinkish blue swelling the size of a Tangerine orange was seen. Laryngoscopically the vocal cords and glottis were quite free, and the tumour, apparently sessile, was seen to spring from the free edge of the epiglottis. Thinking it was probably a simple retention cyst (as no record of a solid tumour in this situation had come under his notice), Dr. Lodge punctured it with a medium-sized triangular keratome, when alarming hæmorrhage occurred. The edges of the puncture were seized with a pair of Mackenzie's laryngeal forceps, but as this did not stop the hæmorrhage the wire snare was passed over the tumour, and with this as a guide a silk ligature was put round the tumour below the puncture and tied. This checked the hæmorrhage, but next day it recurred, and the patient was sent into the Halifax Royal Infirmary, under the care of Dr. Priestley Leech. On the 12th the patient spoke in a tone of low nasal character; there was no cough, respiratory stridor, or enlarged glands in the neck. The breath had an offensive odour and the tumour was found to be covered with a muco-sanguinolent discharge, but there was no hæmorrhage. The rest of the organs were normal. As the patient was in a weak state operation was postponed until the 19th. As Dr. Leech had had no previous experience of growths in this situation he wrote to Sir Felix Semon to ask his advice whether sub-hyoid pharyngotomy would not be the best method of procedure. He kindly replied and said that either this method or removal through the mouth by the galvano-caustic loop appeared to him to be the most suitable. In order to avoid as far as possible the chance of any hæmorrhage, either primary or secondary, Dr. Leech decided to remove it by sub-hyoid pharyngotomy. As the patient could not lie down, either on his side or on his back, tracheotomy was done with the patient in the sitting posture after the subcutaneous injection of three-quarters of a grain of hydrochlorate of cocaine. The patient said he felt no pain. A Hahn's tube was introduced, and after waiting a quarter of an hour for the sponge to swell chloroform was given through a funnel connected with the Hahn's tube. The sponge, however, had not swollen sufficiently, and the patient breathed for the most part through the mouth, so that chloroform was given by both ways. The sponge swelled more and sub-hyoid pharyngotomy was done. The tumour was found to be attached to the tip of the epiglottis by a flat thin pedicle three-quarters of a inch wide. The tumour was brought out through the wound and the epiglottis, with the glottic folds, clamped; the tumour was removed along with the tip of the epiglottis. Two or three vessels were tied and the clamp removed. Very little blood was lost during the operation. The tumour measured one and a quarter inches wide, one and a quarter inches long, and three-quarters of an inch thick, with a pedicle nearly three-quarters of an inch wide. The wound was sewn up with fine catgut, with silkworm gut sutures for the skin; the Hahn's tube was removed, and the tracheotomy wound dusted over with iodoform and covered with gauze. The patient recovered well from the operation, and went on very comfortably during the rest of the day. No food was given by the mouth, but he was fed by nutrient enemata. In the evening there was some increase in the pulse and respiration rates. On the 18th the patient in the afternoon became somewhat restless and a fœtid smell was noticed from the mouth. The wound looked well. The restlessness increased, and he fell out of bed during the night. The pulse-rate rose to 138 and the respiration rate to 50 per minute, in spite of hypodermic injections of strychnia, rectal injections of coffee and brandy, and the patient died at 6.50 A.M. on the 19th from cardiac failure.

Necropsy.—Permission for a limited post-mortem examination only was obtained with some difficulty. The lungs and heart only were examined. The heart muscle was pale and flabby, but the valves were normal. The lungs were healthy, with the exception of an old cicatrix, with some adhesions at the right apex. A piece of the tumour was sent to the Clinical Research Association, and Mr. Targett reported as follows: "This tumour shows very little on microscopic examination; one can only suggest that it is a polypus composed of vascular fibro-cellular tissue which has become much distended by extravasated blood. There is no evidence of malignant disease in it."

Remarks by Dr. PRIESTLEY LEECH.—The above case is interesting on account of the rarity of the disease, and also because the operation—which is not a very common one—was followed by a fatal termination. This was a great disappointment, and the exact cause is not very clear. Personally I feel inclined to attribute it to the shock of the operation following so closely on the considerable loss of blood. I regret having performed the operation so soon after the hæmorrhage, but the patient wished it to be done as soon as possible, and it was feared a recurrence of the bleeding might take place. Sir Felix Semon drew my attention to the fact that in his series of cases published in THE LANCET of Dec. 15th and 22nd, 1894, the only patient who underwent sub-hyoid pharyngotomy died from some not fully

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explained cause. The mental tension of the tracheotomy under cocaine may have had something to do with the fatal issue, though the patient said he felt no pain while it was being performed. From the experience of this case I think many operations might be performed under cocaine if anæsthesia by ether or chloroform is considered dangerous. As regards the operation itself, it is not difficult to perform, and it gives a splendid view of the epiglottis and the upper part of the larynx.

Reviews and Notices of Books.

Forensic Medicine and Toxicology. By C. O. HAWTHORNE, M.B.Glasg., Lecturer on Materia Medica and Therapeutics, Queen Margaret College, University of Glasgow. Second Edition. Glasgow: A. Stenhouse. Pp. 174. 1897.

THIS work is essentially a manual for students. The recognised facts and principles of forensic medicine, as defined by acknowledged authorities, are here classified and arranged with the object of assisting students engaged in preparing for examination. Such being the aim of the author, he has well succeeded in his endeavours. The book can hardly take the place of larger treatises, as it is a bare statement of facts, but as an aid to students immediately before presenting themselves for examination it would be valuable. All the principal points are selected and clearly enunciated. The section on wounds is particularly well worked out. From a medico-legal point of view the consideration of injuries from mechanical violence, however inflicted, is a very difficult and often complicated problem, and the chapters dealing with this subject in most of our leading text-books on forensic medicine are so involved that the student despairs of ever understanding the numerous traps and pitfalls which await him, should he be called on to testify to the causal relationship of wounds on an injured person or dead body. Dr. Hawthorne, however, has succeeded in placing before the student a concise and clear description of the main points which are involved and to which close attention should be given, and we believe that students will be more easily able to satisfy the examiners who question them on wounds after a study of this section than from the more lengthy descriptions usually found in the larger text-books.

The part of the book dealing with toxicology is also good from an examination point of view. Only those poisons are considered upon which questions are likely to be asked in examinations, others, such as cocaine, which may be met with in practice are omitted.

As an aid to the student preparing for examination we cordially recommend the book.

La Désarticulation Coxo-fémorale. Par le Dr. LOUIS CORONAT, Ancien Externe des Hôpitaux de Paris. (Amputation at the Hip-joint.) Paris: Asselin et Hougeau. 1896. Pp. 104.

AMPUTATION at the hip is probably the most severe operation to which the human body is submitted, and the high mortality which accompanies it makes it a subject well deserving of careful study. Lacroix, of Orleans, though by no means the first to suggest the operation, was the first to carry it out, for in 1748 he amputated at both hips in a boy, aged fourteen years, for gangrene from ergot. An interval of only four days separated the operations, yet the patient survived the second amputation eleven days. In 1773 the first successful case occurred in the practice of Pérault, of St. Maure, who performed the disarticulation on a man, aged thirty-one years, for severe traumatism of the thigh. The operation became a recognised form of treatment, but failures far outnumbered successes, and, in fact, in many series of cases all died; for instance, even so late as in the Franco-German war of 1870 Von Langenbeck records twenty-three deaths in twenty-three cases. A very instructive treatise on the subject was written by Lüning in 1877, in which he gave statistics of 239 cases which he had collected. Of these 5 per cent. died during the operation, 12 per cent. within one hour, and 46 per cent. during the first day.

There are two chief causes of death after amputation at the hip-joint, hæmorrhage and sepsis, and the former is probably by far the more important. The number of methods suggested for disarticulation is very large, but Dr. Coronat considers that the operation may be satisfactorily performed in two ways, one of which the author calls the operation of Ravaton-Veitch, and the other the operation of Verneuil. The first is practically that which in England is usually called the Furneaux-Jordan method, though, as Dr. Coronat points out, it was first described by Ravaton in 1768. It consists in amputating through the upper third of the thigh and then disarticulating by an external incision. In this method the vessels are cut chiefly near their endings, and the hæmorrhage is comparatively slight. In the second method the hæmorrhage is controlled by tying the femoral vessels before cutting those flaps which may be most convenient in the particular case. Dr. Coronat's statistics indicate that for non-traumatic cases the mortality of the second method is more than double that of the first. The author considers that the method of Ravaton-Veitch should always be employed, unless the upper third of the thigh has been attacked by the disease for which the disarticulation is to be performed. A copious bibliography is appended, and statistics of all recorded cases since 1880 are given. The improvement in the statistics of the operation due to the better control of hæmorrhage and the practice of antisepsis is very striking. In 1877 Lüning's statistics gave a mortality of 70 per cent. In 1888 Eisenberg gives 52 per cent., and Alvernhe gives 44 per cent., while according to the author's statistics of cases operated on since 1880 the mortality has fallen to 29·3 per cent.

We have read this treatise with great interest, for it is most scholarly, careful, and complete.

A Treatise on the Surgery of the Alimentary Canal. By A. ERNEST MAYLARD, M.B., B.S. Lond., Surgeon to the Victoria Infirmary, Glasgow. &c. Pp. xxiv.-724. London: J. & A. Churchill. 1896. Price 25*s.*

THE growing importance of the surgery of the alimentary canal naturally leads to the publication of special treatises dealing only with this portion of the body, and we gladly welcome Dr. Maylard's work as a very successful attempt to give in one volume the whole of the surgery of the stomach and intestines. There is a unity in the alimentary canal which renders it specially suitable as a subject for a special treatise; its morbid conditions and the symptoms to which they give rise are so important that they demand a careful study. The author has decided not to deal with the diseases of the mouth and pharynx, though these form no unimportant part of the alimentary canal; the anus also is excluded, and thus hæmorrhoids and fistula in ano are not mentioned; the whole subject of external hernia also is purposely omitted, yet, though so much has been left out, there has been ample material to fill more than 700 pages. Of course, a treatise covering so extensive an area of surgery must give occasion for many differences of opinion, but we must acknowledge that we have not succeeded in finding any statement from which we wish to express our dissent. Dr. Maylard has adopted the practice of illustrating each important injury or disease by the description of a particular case culled from his own practice or from that of others; in all 116 cases are described; thus a much more vivid impression is made on the mind of the

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reader. This custom, though easily carried to excess, is, we are inclined to think, not so common as was formerly the case; this is to be regretted, as it is of great value, and certainly constituted one of the great charms of that classical work, Sir Thomas Watson's Practice of Physic. It would extend this notice far beyond the limits of our space even to mention all the matters dealt with in this volume, but an idea may be formed of the thoroughness with which the subject has been treated if we consider the description the author gives of intestinal anastomosis. Dr. Maylard first points out that there are three ways in which it may be effected—namely, end-to-end anastomosis, lateral anastomosis, and lateral implantation; in the last the end of one piece of bowel is joined to the side of the other portion of intestine. A description then follows of the various methods of suturing bowel, the Lembert and the Czerny-Lembert sutures, those devised by Wölfler, Bishop, Abbe, Maunsell, and Halstead; then come Senn's plates, Paul's tube, Robinson's rubber tube, Mayo Robson's bone bobbins, and Murphy's button; and each of these is fully described and illustrated. The illustrations contained in the work are decidedly good, many being reproductions of photographs. Copious indices of names and subjects conclude the volume. The writing of so full and accurate a treatise as this must have entailed great labour, but the work has been done well, and we can express unreservedly our favourable opinion of the volume.

LIBRARY TABLE.

Burdett's Hospitals and Charities, 1897; being the Year-book of Philanthropy. By Sir HENRY C. BURDETT. London: The Scientific Press, Southampton-street, Strand, W.C. Price 5s.—This excellent volume, of over 1000 pages, contains a vast amount of information, some of which is sure to be needed at some time or other by every practitioner. The introductory chapters are especially valuable, facts and figures in connexion with hospitals and charities being dealt with in a manner which is characteristic of Sir Henry Burdett. The large amount of labour involved in the preparation of this hospitals' and charities' "Whitaker" is a monument to the ability of its compiler.

Plumbing, House Drainage, &c. By WILLIAM PATON BUCHAN. Seventh Edition. London: Crosby Lockwood and Son. Price 3s. 6d.—Whatever tends to the improvement of the practical ability or technical knowledge of those who undertake the work of the plumber is a factor in the diminution of the death-rate. As such, this manual is sure of a welcome, but the combination of a trade catalogue with a professed text-book on plumbing, as in this instance, must fail to commend it to general approval. It is to be regretted that the late Mr. Buchan, who is well known to have done much useful work for the advancement of sound plumbing, allowed the book to be issued in its present form. Had it been condensed and judiciously edited its value would have been materially increased; as it is, some excellent work is obscured by a quantity of matter that might well be spared.

The Fairies' Favourite; or, the Story of Queen Victoria told for Children. By T. MULLETT ELLIS. London: Ash Partners, Limited. 1897. Pp. 56. Price 1s.—This little book deserves a passing notice among the immense amount of literature to which the Jubilee celebrations have given rise. It is, at the title indicates, a child's story-book in which many of the leading events of the Queen's life are interwoven with fairy tales and presented in a "popular" form. The narrative is interspersed with nursery rhymes; the cover is ornamental.

Medical and Surgical Report of the Presbyterian Hospital in the City of New York.—Edited by ANDREW J. MCCOSH, M.D., and WALTER B. JAMES, M.D. New York: Trow Directory Printing and Bookbinding Company. 1897. Pp. xiv. and 272.—Dr. W. Gilman Thompson and Dr. J. P. Thornley contribute articles on Cold Tub-bathing in Enteric Fever Based upon an Extended Experience of the Disease (upwards of 200 cases). If the moribund cases and those which had hæmorrhage or pneumonia before admission be deducted the mortality was between 7 and 8 per cent. Whenever the patients' rectal temperature reached 102·5° F. they were immersed in water at 70° for fifteen minutes, during which time they were vigorously rubbed by the nurses; if at the expiration of three hours the temperature was again above 102·5° another bath was given. Dr. F. Tilden Brown describes some cases of renal tuberculosis, and gives a valuable and copiously illustrated review of the whole subject; the list of works (mostly German) to which he makes reference fills five pages. Dr. N. R. Norton contributes a report on cases of sunstroke during the summer of 1896. On the six days from Aug. 8th to Aug. 13th inclusive about 110 persons were brought to the hospital suffering from the heat. With fifty the symptoms were comparatively mild, but with sixty-one, among whom there were nine deaths, the temperature was 104° or higher, including twelve whose temperatures varied from 110·1° to 115°.

JOURNALS AND REVIEWS.

THE *Practitioner* for August naturally gives up a good deal of the space devoted to editorial matter to subjects connected with the forthcoming medical congresses. Of the original communications, perhaps the most interesting is that by Dr. F. J. Shepherd, the lecturer on Operative Surgery at McGill University, upon the Surgery of Bronchocele. Dr. F. G. Finlay and Dr. W. I. Bradley, of the Montreal General Hospital, report a case of that excessively rare disease, primary sarcoma of the pleura; and Dr. R. C. Kirkpatrick, of the same hospital, a case of perforated gastric ulcer successfully treated by operation. Mr. Christopher Heath supplies an eminently practical clinical lecture upon Epithelioma and Rodent Ulcer, and Dr. Herman Weber writes upon Health Resorts and Waters for the Anæmic. The Hero of Medicine for the month is Benjamin Rush, the great physician of Philadelphia in the eighteenth century. The Medico-Literary Causerie deals with what was perhaps the most degrading of the many follies of fashionable society at the Court of Louis XIV.—namely, the rush of courtiers to have some operation on the anus performed because Le Roi Soleil had a fistula cut.

Birmingham Medical Review.—Dr. Arthur Foxwell gives a description of Llandrindod, Llangammarch, and some other spas of Mid-Wales. Mr. Lawson Tait continues from the May number the discussion of the question, Was Robert Houston, of Glasgow, the First Ovariotomist? He of course replies in the affirmative as before, and fortifies himself with a letter from Dr. Emery Lamphear, of St. Louis, editor of the *American Journal of Surgery and Gynæcology*, who wrote: "With much pleasure I have read your remarks upon Robert Houston's case; I quite agree with you in every particular. One of my latest ovariotomies was of exactly the kind you describe. It gave much trouble in emptying the abdomen; there was no pedicle, nothing but shreds." This paragraph is accompanied by a short article from the pen of the late Mr. J. Greig Smith, of Bristol, who, without entering on a criticism of the operation performed by Houston, seems to ridicule the opinion that it was an ovariotomy.

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Analytical Records
FROM
THE LANCET LABORATORY.

NON-ALCOHOLIC MALT LIQUORS.
(MALTOP AND CO., THE BREWERY, ACTON.)

IT is somewhat interesting in connexion with these beers to find that the same plant and apparatus formerly used in the brewing of ordinary ale is now employed with marked success in the preparation of the non-fermented, and consequently non-alcoholic, beers about to be described. The samples received, and the analytical results they yielded, were as follows:—Mild ale: extractives, 4·26 per cent.; mineral matter, 0·18 per cent.; alcohol, by weight 0·05 per cent., by volume 0·07 per cent., equal to proof spirit 0·12 per cent.; total acidity reckoned as acetic acid, 0·22 per cent. Nourishing stout: extractives, 5·09 per cent.; mineral matter, 0·20 per cent.; alcohol, by weight 0·32 per cent., by volume 0·40 per cent., equal to proof spirit 0·70 per cent.; total acidity reckoned as acetic acid, 0·34 per cent. Lager beer: extractives, 4·15 per cent.; mineral matter, 0·25 per cent.; alcohol, by weight 0·05 per cent., by volume 0·07 per cent., equal to proof spirit 0·12 per cent.; total acidity reckoned as acetic acid, 0·27 per cent. India pale ale: extractives, 4·41 per cent.; mineral matter, 0 22 per cent.; alcohol, by weight 0·05 per cent., by volume 0·07 per cent., equal to proof spirit 0·12 per cent.; total acidity reckoned as acetic acid, 0·28 per cent. Double stout: extractives, 5·62 per cent.; mineral matter, 0·14 per cent.; alcohol, by weight 0·32 per cent., by volume 0·40 per cent., equal to proof spirit 0·70 per cent.; total acidity reckoned as acetic acid, 0·28 per cent. The lager beer is prepared from Bavarian hops and malted barley. The process consists in the mashing of malt as with the ordinary brewing procedure, but the malt sugar thus produced is not allowed to undergo any fermentation. The liquor is then bittered with hops and finally aerated. Thus these beers present exactly the composition of ordinary brewed beers without the alcohol. As the foregoing analyses show, the samples were practically free from alcohol even when reckoned as proof spirit. They may be regarded as genuine hop and malt liquors prepared on approved scientific lines, and of a wholesome character. We found no objectionable preservatives and the flavour was decidedly like that of beer, with a delicate bitter and pleasant malty flavour. It should be added that the water-supply is derived from an artesian well 500 ft. in depth, the quality of which is free from reproach, and at the same time well adapted for brewing purposes.

"VARALETTES."
(ALFRED BISHOP, LIMITED, 17, SPECK'S FIELDS, MILE END NEW TOWN, E.)

"Varalettes" is a distinctive term applied to effervescent tablets, which present in an agreeable and satisfactory form certain medicaments. Foremost we think in interest amongst these is the "varalette" containing piperazine citrate. Piperazine in this form possesses some distinct advantages, since this salt is constant in composition, containing always three molecules of piperazine to two molecules of citric acid; further, it is a neutral salt non-volatile and non-hygroscopic while in the form of citrate, piperazine does not lose its solvent power over uric acid, and moreover leads to no objectionable products of oxidation in the system. "Varalettes" are also prepared containing antipyrin with and without caffeine, lithia bitartrate, lithia citrate, with and without potassium citrate, potassium iodide, and urotropine. They are a very convenient and pleasant form of medicament, yielding a perfectly clear and effervescent solution when dropped into water. "Varalettes" are contained in bottles suitable for placing in the waistcoat pocket.

HOMO BREAD.
(M. AND C. WEST, ASHBURNHAM BAKERY, 48, LOT'S-ROAD, CHELSEA, S.W.)

The process by which this well-baked loaf is prepared is evidently directed towards securing a maximum proportion of the real nourishing constituents of wheat. It contains the germ of wheat, while all irritating branny particles are absent. The loaf proved to possess a good wheaten flavour and presented a good texture.

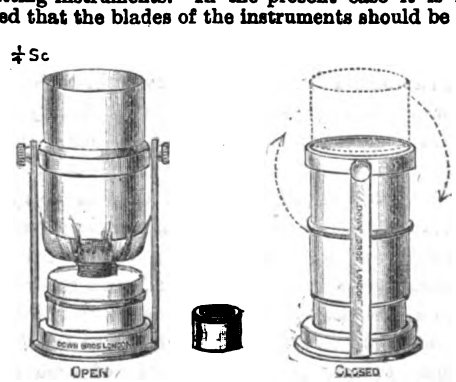
OLD BRANDY.
(GAUTIER FRÈRES, COGNAC.)

The sample of spirit submitted to us was described as "very fine liqueur brandy twenty years old," so that it was manufactured just a year before the phylloxera ravaged the Cognac district. The brandy has a fine mellow taste, and possesses that peculiar fragrance characteristic of a well-matured and genuine grape spirit. The figures of analysis were as follows:—Alcohol, by weight 36·67 per cent., by volume 43·69 per cent., equal to proof spirit 76·56 per cent.; total extractives, 1·20 per cent; total acidity, 0·06 per cent. It will thus be seen that the alcoholic strength is somewhat low, the extractive matter somewhat in excess (the colour also being decidedly dark), while the acidity is practically *nil*; but these are all facts tending to confirm the age and origin of the spirit. It is well known that since the unfortunate devastation which overtook the French vineyards in the Cognac district in 1878 a large quantity of spurious Cognac brandy has been imported into England. As the consuls' reports have shown, this shipment has far exceeded the possible output of grape spirit. We believe the specimen before us is genuine Cognac brandy and part of what must be a small quantity yet left. It may not be generally known that excellent grape spirit can be obtained if desired, and this should be preferred to the stuff which is distilled from maize and other cereals. The product before us, being a genuine grape spirit and possessing those estimable characters in regard to aroma and flavour of real Cognac brandy, is peculiarly well adapted for medicinal purposes.

New Inventions.

NEW PORTABLE EYE INSTRUMENT STERILISER.

THE illustration represents a new portable form of steriliser for eye instruments designed at the suggestion of Mr. Simeon Snell of Sheffield. With the ordinary forms of steriliser the instruments are frequently immersed too long in the boiling water, which results in injury to the edges of the cutting instruments. In the present case it is merely intended that the blades of the instruments should be dipped



in, but it is large enough to allow of the immersion of a speculum and other instruments if desired. The whole apparatus is so portable that it can be easily carried to the patient's house in an ordinary surgeon's bag. The apparatus is made by Messrs. Down Bros., 21, St. Thomas's-street, London, S.E.

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THE LANCET.

LONDON: SATURDAY, AUGUST 14, 1897.

WE have from time to time in these columns insisted most strenuously that some means should be provided whereby antitoxins supplied for the treatment of diphtheria and tetanus, especially the former, should be tested and standardised before passing into the hands of those who are to use them. We first drew attention to this matter in a series of comparative investigations which were undertaken by THE LANCET Special Commission on the Relative Strengths of Diphtheria Antitoxic Serums,[1] and the results then obtained formed a basis for comparison of the various serums at that time in the market. We took the opportunity of drawing special attention to the necessity for the appointment of some central authority, similar to the State Institution in Germany, founded for the definite purpose of testing and controlling the serum sent into the market. Although we strongly urged that the State, through the Home Office or through the Board of Trade, should undertake this work, we were fully aware of the difficulty of converting the official heads of these departments to our way of thinking, and Mr. CHAPLIN, in answer to Mr. HARRY SAMUEL, maintained as a reason for his non-intervention that the department of which he was the official head had only to do with the prevention of the disease and not with its treatment. The Home Office appears to have adopted a similar attitude, for it is now over twelve months since we first drew attention to the subject, and nothing has been done. Fortunately, however, there are public bodies who are fully at one with us in appreciating the importance of having a common standard for, and control of the strength of, antitoxins.

There can be no doubt that, partly as the result of our action in this matter and partly owing to improvements in the methods of production of antitoxin, there has been a marked rise in the antitoxic value of the serum that has been put on the market in this country, which may now be held to compare very favourably with the antitoxic serum prepared abroad. In fact, with the exception of the strongest forms prepared in the German laboratories, it may be said to be equal to any on the market. This is a most satisfactory outcome of our protest—for protest it was—that the serums obtained in this country were not only of comparatively low antitoxic value, but that they differed very greatly from one another, and were not sent out, even from the same establishments, of constant strength, with the result that as there was no strength marked on each sample bottle the practitioner was left in grave doubt as to the dose to be administered and the antitoxic value of each dose sent out. We believe that most of these objections have now to a great extent been removed, but there still remains the fact that no official comparison of the various serums is at present available, and we therefore look upon it as very satisfactory indeed that the Royal Colleges of Physicians of London and Surgeons of England are making arrangements to test any antitoxin that may be sent to them, and to send out with such antitoxin a certificate of strength and purity. Even now from time to time we receive queries as to which serum is the best, which contains the greatest number of units in a definite quantity, and which has been found to give the best results. Now that there is the prospect that a central authority will take the matter up there should be no difficulty in obtaining this information, and medical practitioners will be satisfied that all antitoxins with which a certificate is sent out have been standardised in the same way, and that therefore a knowledge as to the relative number of units contained in a given quantity of different samples of serum may be arrived at by a simple comparison of certificates.

It may be argued that the preparation of antitoxin has improved so much that it is now unnecessary to have such accurate central control. It has been found, however, even in Germany, where there has been such long experience of the manufacture and testing of antitoxin, that differences of opinion are constantly arising between those who manufacture the antitoxin and those with whom rests the control under Government, and it is only the fact that all the serums must pass through the hands of Professor EHRLICH and his assistants that keeps the relative, and approximately the actual, strength of the antitoxic serums at a constant level. That the process of testing is not by any means a simple one is now fully recognised, and Professor EHRLICH, who has been working at the subject for the last four or five years, has only recently published a method differing very materially from his original method, by means of which he is able to get more accurate and constant results than he has hitherto been able to obtain. It appears to be a comparatively easy matter to obtain accurate relative results in any single series of experiments where the same test-toxin standardised from time to time is used, and where exactly the same conditions of experiment are adhered to; but the difficulty hitherto appears to have been the maintenance of the same standard where fresh test-toxins have to be obtained. Professor EHRLICH, by the application of his new method and by careful selection of his test-toxins, seems to have overcome some of the difficulties that up to the present have stood in the way of those engaged in testing antitoxic serums, and it is now possible to determine, not merely the relative, but the actual, strengths of antitoxic serums with a fair degree of accuracy, so that, with the allowance for an error of from 5 to 10 per cent., every serum should be up to the strength that is claimed for it by the manufacturers.

It will be remembered that in our report we stated that the relative strengths of antitoxins was generally indicated, but that it should be distinctly borne in mind that the standard used was an arbitrary one, and that the results obtained might not be absolutely correct; but our Commissioners went on to say: "The astounding variation in the quality of the serum supplied by different makers and the puzzling way in which the antitoxin from certain sources varied from time to time" were constantly making themselves evident and "that the results

[1] THE LANCET, July 18th, 1896.

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obtained by the use of these serums in the treatment of diphtheria should have varied is what must be expected if the antitoxin does exert any influence at all in the course of the disease. It is, under these circumstances, we think, intolerable that the medical man should be kept in ignorance of the strength of the serum which he is making use of, when the want of such knowledge may be but too often a matter of life or death to his patient." Of course, this criticism does not now apply to anything like the same extent that it did when it was made, but there is still evidence that there is a real necessity for a comparison of the serums that are made. The adoption and extension by the Royal Colleges of Physicians and Surgeons of a plan that we so strongly insisted upon does not remove the necessity that each maker of antitoxic serum should take every means of ensuring the accuracy of his own tests, but we are convinced that medical practitioners will hail with satisfaction a second control, especially in so far that it is not in any way in the hands of those who are producing antitoxic serum for sale; and we congratulate the Colleges on the fact that they have taken such an important step with the object of inspiring confidence in a therapeutic or physiological agent that has already contributed materially to the mitigation of the horrors attendant upon diphtheria.

THE subject of the Croonian Lectures[1] lately delivered before the Royal College of Physicians of London was one upon which the lecturer, Dr. HALE WHITE, could speak with authority. His contributions to the solution of the problems of pyrexia have been many and fruitful, and the particular questions dealt with in these lectures were handled with becoming modesty and in the true spirit of scientific candour. At all times interesting, the subject of pyrexia is yet one of the most difficult to investigate and to satisfactorily explain. The phenomena of the condition have been studied from every point of view, but too often conclusions have been reached which are hardly warranted by the data supplied, and it is not a little remarkable that in spite of all that has been done so much uncertainty should still prevail regarding the intimate nature of the changes at the root of the process. It is true that there is general agreement as to the physiological mechanism governing the production and regulation of animal heat, but the application of general physiological principles to the explanation of pathological phenomena is often not so simple as it seems. We may assume, for instance, that the derangement of the normal mechanism excited by pyretogenetic agents may depend on disturbance of the thermotaxic control of the nervous centres, and facts may be cited to prove how such disorder is adequate to the production of pyrexia. On the other hand, it is equally possible to explain pyrexia by reference to an abnormally excited production of heat or, conversely, to a diminished loss of heat from the body by conditions of cutaneous circulation or of deficient activity of sweat glands. Theoretical surmises do not, however, stand on the same level as proven facts; and they may be not only erroneous but very misleading. It is the merit of these Croonian lectures that they are practically limited to an exposition of observed facts; for that very reason they do not offer much ground for comment, whilst they add considerably to the store of knowledge of, and indicate the lines to be pursued by, investigators on those questions.

Dr. HALE WHITE is to be commended for the caution which he has exercised in dealing with the subject. He opened his lectures by adverting to certain fallacies which may vitiate the application of the results of experimental research; whilst his third lecture, which dealt mainly with calorimetry, contained a candid admission that the methods as yet available (which he himself has done much to improve) do not permit any very definite conclusions to be drawn from this line of inquiry. Perhaps the most instructive portion of his lectures was that which dealt with the question whether the production of heat is increased in fever. It was prefaced by an interesting demonstration that the specific heat of a hybernating animal is almost the same as that of the dead tissues, and it was inferred that more calories are required to raise the temperature of the body one degree in pyrexial than in apyrexial states. By a comparative study of the surface temperature and internal temperature of the body and the estimation of the activity of sweat glands under varying circumstances, it was clearly shown that the conditions which raise the temperature of the body operate in different ways. Thus, the effect of the hot bath and of the Turkish bath in raising the temperature of the body is due to the arrest of loss of heat, the restoration to the normal being effected mainly by the excessive sweating which follows the bath. The effect of cerebral injury in raising the internal temperature was shown to be due to an excitation of thermogenesis, for a lesion of the corpus striatum was accompanied by a rise of temperature on the paralysed side in spite of the more active production of sweat on that side. The same line of comparative observations made in various febrile states showed that these do not always depend on the same kind of disturbance. Thus, in typhoid fever the loss of heat by sweating was found to be small, so that this diminished thermolysis as well as the increase of thermogenesis may operate to produce the febrile condition in that disease. In pneumonia the surface temperatures indicated a considerable loss by radiation and conduction, the inference being that the high internal temperature is due to greatly increased production of heat, whilst the abundant sweating which ensues on the crisis serves to keep down the temperature after the febrile process has run its course. In erysipelas, similarly, the evidence of loss of heat being increased during the fever necessarily implies that this latter must be due to greatly increased internal production of heat; whilst in suppuration the rise of body temperature must be in part due to diminished loss of heat. The sweating associated with pulmonary tuberculosis doubtless mainly accounts for the remission of temperature characteristic of that disease. These observations in pathological states were supplemented by others made in health, during and after exercise, which showed that the rise of temperature due to the latter was controlled by excess of heat loss, but that the degree of accommodation varies in individuals.

After referring at length to the evidence afforded by

[1] THE LANCET, June 19th and 26th and July 3rd and 10th, 1897.

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calorimetrical observations—a line of inquiry that should yield much valuable information upon the subject of thermogenesis, but which, as Dr. HALE WHITE pointed out, is not yet sufficiently free from error to be exact—he proceeded in his fourth lecture to discuss the evidence afforded by chemical investigations. The heat-values of articles of diet have been estimated and the amount of heat represented by the amounts of nitrogen and carbon excreted have been calculated, with the main result that in fever proteid metabolism is the chief source of heat production. A pregnant fact is that this destruction of proteids and fats is lessened by administration of grape-sugar, for this can be of service practically as suggestive of a means for preventing excessive waste of tissue in fever. The highly interesting subject of the relations between fever and the micro-organisms which mostly are responsible for exciting it was touched upon towards the close, and facts were stated which seemed to favour the notion that the fever process is really a means of defence against these organisms. That antipyretic drugs have not done what was expected of them seems to be generally admitted, whilst those remedies which do seem to control fever and also improve the condition of the patient are just those which have a directly antagonistic effect on the toxic agent—e.g., quinine in ague, mercury in syphilis, and salicin in acute rheumatism. It is, however, less obvious that drugs which have the power of exciting fever would be practically useful in checking the toxæmia induced by the invasion of micro-organisms, although the question is not so paradoxical as it appears to be. It must not be forgotten that the increased temperature is of itself likely to injure the body, and that in its most vital parts, so that although it may be true that the efficacy of the cold bath in the treatment of typhoid fever is to be ascribed to its action on the nervous system and not to its antipyretic influence, the very fact that the fever is lessened does *pro tanto* diminish the liability to myocardial and other degenerations that constitute one of the most real dangers of the disease. It might, of course, be argued that such changes depended on the toxin itself, and were, therefore, only accidentally associated with the pyrexia; but it is, nevertheless, a clinical fact that the liability to such degenerations of tissue has been markedly lessened under this line of treatment.

A REPORT for the year 1896–97 which was recently issued by the National Society for the Prevention of Cruelty to Children contains much that is, and ought to be, of public interest. During this period the scope of the Society's operations has been much extended. The number of its local committees has increased by 109. The total number of cases investigated has risen from 20,739 to 23,124. Its income is likewise greater by £7756, though this addition has not sufficed to cover a still greater expenditure incurred by its widening sphere of activity, the net result being a deficit of £3178. It is satisfactory to note that its necessarily costly labours have not been wanting in returns of very practical utility. Parochial guardians, clergy, tradesmen, school-teachers, and departmental committees of unions are quoted in evidence of the fact that a new and improved order of domestic life has arisen within the area of its supervision since that began. This fact is further indicated by the simple and instructive chart of its results which has been published by the Society. By this means is shown at a glance the progress made by its efforts during the twelve years of its existence. We note in particular a marked decrease in the number of violent offences against children, which has diminished by more than half. Street offences have also steadily decreased. Neglect constitutes the form of cruelty to children which is now most common, and of its existence there is still abundant evidence.

The cost of preventive treatment per case, we are pleased to note, has much diminished, having fallen from £2 8*s.* 1*d.* to 17*s.* 6*d.* This point derives a special interest from the fact that the past year has witnessed the culmination of a series of attacks mainly directed against the financial administration of the Society. In consequence of these attacks it was decided by the central committee of the Society to institute an inquiry into the Society's acts and *modus operandi*, and the conduct of this inquiry was entrusted to the hands of Lord HERSCHELL and two assessors, Mr. VICTOR A. WILLIAMSON, C.M.G., and Mr. FRANCIS W. BUXTON. It is needless to say that this investigation was thorough and exhaustive. The amount of ground covered by it was also very great. Its results may, therefore, be regarded as being for all practical purposes conclusive. Of these, viewed with reference to their main issues and their collective significance, we can safely assert that they have cast no slur upon the character, purposes, or management of the Society. On the contrary, they bear testimony to the great necessity for its existence, its value as an aid to the legal safeguards of childhood, the integrity and zeal of its officials, and the deserved success of its efforts. It would be remarkable if an examination so searching as this could detect no possibility of improving existing methods in the case of so young a society, but the suggestions made in this sense by the members of the committee of inquiry must be regarded rather in the light of advice than of censure, and as such they are, for the most part, evidently intended. The system of centralisation maintained by the Society has their entire approval, and they propose to render this more effective by allowing a judicious increase of responsibility to branch committees. They are of opinion that a budget estimate of probable income and expenditure should be published annually as a guide for contemplated operations. They consider that the outlay on publications for supply to branches has in some cases been in excess of the demand for it, and they advise retrenchment in this direction, especially now that the work of the Society is more generally known than formerly. At the same time, they admit the difficulty of arriving at an exact estimate of the amount required. So, likewise, they recognise the occasional necessity for what might seem excessive outlay on police prosecutions, while they think that as much as possible of this duty should now be entrusted to the public authorities. Outlay on shelters they believe to be less needful than it was prior to the year 1894, when the charitable powers of parochial guardians were increased, and to this view they have the consent already expressed in the practice of the Executive of the Society. They do not concur in objections which have been raised

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against the expense of office rents, salaries for the staff and inspectors, occasional entertainments for the latter, and certain alleged gratuities. The control exercised by the financial committee they consider to have worked well, but they advise a greater strictness in its methods as calculated still further to secure the Society against the possibility of abuses. They also advise a more precise regulation of travelling expenses, though they do not find that any great loss, if any, has occurred to the Society under this head in the past.

Two clauses from the published report of the investigation may be quoted here: "We believe that the committee and the officials of the Society in the work which they have done for it have been actuated only by a desire to further its interests and to promote a work which they believe to be useful and beneficent;" and "we are far from deprecating criticism of the finances and proceedings of a society administering charitable funds, we think it has a stimulating and healthy effect ..... but it would be a cause for regret if it had the effect of causing funds to be withheld and thus crippling the action of a society which is doing useful work and which would but for its action be left to a great extent undone."

THE recent meeting of the Council of the Metropolitan Hospital Sunday Fund (an account of which will be found in another column) was of more than usual interest. The circumstances of the year have been altogether exceptional, and withal such as to make the members of the Council somewhat anxious as to the success of the Fund. The great effort of H.R.H. the PRINCE of WALES to raise enough money to exonerate the hospitals of London from debt and provide an annual sum that would save them from future differences between receipts and expenditure, a hundred other claims in connexion with the commemoration of HER MAJESTY'S sixty years of reign, and many exceptional appeals to public generosity, have combined to compete with the Hospital Sunday Fund and other annual sources of hospital income. It is most gratifying to have to report that these congenial but as the result showed slightly competitive claims have only served to prove the strength of the hold which the Metropolitan Hospital Sunday Fund has on the confidence of the public. Sir SYDNEY WATERLOW was able to announce at the meeting that £40,000 had been received, an amount only a little below the receipts of an ordinary year, and allowing £39,705 to be distributed among 132 hospitals, 56 dispensaries, and other similar institutions. The result should stimulate the Council to still further energy in the use of their great position till the Fund reaches a sum still more proportionate to the wants of the hospitals. We can only express the hope that all other channels of ordinary hospital incomes will be equally successful in this memorable year. It will be no mean achievement if His Royal Highness should be able to say that he has raised an unprecedented sum for the hospitals of London without seriously entrenching on the ordinary sources of their wealth.

The receipt of money for hospitals is not the only function of the Council of the Hospital Sunday Fund. It has besides, and, indeed, in virtue of this function, another—viz., that of seeing that the hospitals and other institutions which it benefits are well and properly administered. In other words, it has to consider, not only the *needs*, but the *merits* of hospitals. The report of the Distribution Committee shows that its members are increasingly alive to this part of their duties. They point out that they have deemed it necessary to invite the attendance of a much larger number of the representatives of institutions than in former years. Officials from no less than thirty-eight institutions were invited to meet the Distribution Committee to explain matters in their accounts or in their administration which seemed to the committee to need such explanation. The result was a conference with the managers of thirty institutions, which was found to be "useful and mutually instructive." In some cases objections were removed or modified by the explanations; in others the objections do not seem to have been removed, and the committee was "only confirmed in its impressions." Such faithfulness on the part of the Distribution Committee will not only tend to correct errors of management and methods of administration which lower the public respect for the voluntary hospital system, but will raise the Distribution Committee and the Council in public estimation. Half the basis of the demand for a central hospital board would be removed if the Hospital Sunday Fund had been more faithful in the use of its duties as an advisory body, trusted by the public to administer its money for hospital purposes. Can anything be more obvious than this duty of the Council? We may take this conference with thirty of the hospitals as a proof, on the one hand, that they need a little friendly criticism, and, on the other hand, that the Council, through its awarding committee, will not shrink from its duties.

Several subjects were mooted in a cursory way which will doubtless receive more serious attention from the Council. One of these was the question of patients' payments—the light in which such payments are regarded by the Distribution Committee in making their awards. Are they to be encouraged or the reverse? Are they a merit or a demerit? Do they pauperise the patients or give them a proper sense of contributing to their own treatment? Do they raise or lower the estimate of medical service? Do they bring to the hospitals classes for whom they were never intended, and so exclude others for whom they were intended? Do they make the hospital a cheap dispensary and bring it into unnecessary competition with general practitioners in the humbler and more arduous branches of practice? These are grave questions raised chiefly by the Hon. SIDNEY HOLLAND and Sir HENRY BURDETT, and we can scarcely think that these gentlemen would regard them as disposed of in the short replies of Sir SYDNEY WATERLOW. We can only hope that the topic will be raised again for formal consideration by the Council. The question of St. Thomas's Hospital and its claim to a grant from the Council was raised indirectly by a complaint of Sir EDMUND HAY CURRIE that the south of London got so small a proportion out of the Fund and more directly by a question from Sir DYCE DUCKWORTH. Sir SYDNEY WATERLOW said, in reply, that there had been no disposition to refuse help to St. Thomas's Hospital, but that only lately had the treasurer of St. Thomas's Hospital

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expressed willingness to send in the accounts to the Hospital Sunday Fund, which led him to hope that next year this great institution would receive a grant.

The important subject of out-patient abuse was raised by Dr. GLOVER, who showed from the statistics before the meeting that in 1896 the number of out-patients, so far from diminishing, was increasing. Taking fifteen of the principal hospitals, the statistics supplied to them showed an increase of nearly 20,000 as compared with the previous year. Dr. GLOVER was anxious to know when the Distribution Committee was going to give its report to the Council, as requested, on this subject. The answer of Sir SYDNEY WATERLOW was not unsatisfactory. He showed the many-sidedness of the question, and alleged that the committee had already met several times, but were anxious for still more evidence that they might present a report covering the whole subject. Such a report will, indeed, justify a delay of some eighteen months, and if valuable in proportion to the delay, as Sir SYDNEY WATERLOW promises, will do more to raise the amount of the Fund and the credit of the Council than anything it has yet done. We gladly recognise in Sir SYDNEY WATERLOW'S language indications that he and the Distribution Committee are beginning to realise the duty of the Council to grapple with this question and to guide public opinion in relation to it.

Annotations.

"Ne quid nimis."

"MEDICINE, PAST AND PRESENT, IN RUSSIA."

WE regret that, through an unfortunate inadvertency, in the article on the Moscow Congress in our issue of July 31st the portrait of the late Dr. Botkin (Fig. 3, p. 274) was described as that of Professor N. V. Skliffosowski. Similarly, in our supplement published last week, the portrait of Professor Skliffosowski (Fig. 13, p. 373) was labelled Professor S. P. Botkin. We can only express a hope that the error has not been the cause of any annoyance to the esteemed joint president of the organising committee of the Congress.

ALPINE ADVENTURE AND MISADVENTURE.

FROM Arosa, on the 8th inst., a "Holiday Contributor" writes:—"THE LANCET'S view[1] that, more likely than not, Mr. Cooper's disappearance is due to his having fallen into the Visp when overtaken by the senile vertigo or syncope not unnatural in a septuagenarian beside the rush and the roar of a mountain torrent is widely adopted by the Swiss press. The *Neue Zürcher Zeitung*, an ably conducted organ, prints a letter from Herr Albert Fleiner, in which that hypothesis is strenuously maintained as the only rational one, all the more that within short intervals of each other there have been three similar 'disappearances' due to drowning in the Visp, while a fourth case in the neighbouring Findelenbach was just saved from being a 'disappearance' by the opportune arrival of assistance from wayfarers. Of the three men who fell into the Visp the body of but one was ever recovered, and that only after months had elapsed. *Au reste*, the hypothesis of foul play is indignantly dismissed with the remark that Switzerland is not Calabria; that of the Italian workmen employed on the local railway only very few are now retained; and that those at the time of Mr. Cooper's disappearance must have been under effective observation. The season has, indeed, been a tragic one—less so, perhaps, than others, but still sufficiently so to justify the warnings from time to time sounded in THE LANCET. It began with a 'model ascent of Mont Blanc,' significantly enough achieved by a medical party of three—a student and two graduates in medicine, all of them Swiss. They started on Sunday morning, June 13th, at 6 o'clock, from Chamounix; reached the summit on Monday morning, and were back again in Chamounix the same evening. They had no guides and were favoured with weather so exceptionally fine that they passed under the 'séracs du Petit-Plateau,' a feat never attempted by climbers familiar with the risks of Mont Blanc. But then by profession they had the knowledge of the strength and staying power they possessed—'*quid valeant humeri, quid ferre recusent*'; they essayed the ascent, in short, with that best of all equipments—the assured boldness that springs from the ascertained adjustment of means to ends. Very different was the preparation with which two English ladies, as I have just heard, attempted from Zinal (Canton Valais) the ascent of the Garde de Bordon, 10,880 ft. above the sea-level. They had started for the Corne de Sorrebois, reached its summit without difficulty, and were tempted to essay the higher and sterner altitude. This, too, they achieved; but, being without guides, they lost their way in returning, and night surprised them wandering aimlessly among the rocks. At their hotel, meanwhile, solicitude as to their non-appearance deepened into anxiety, and anxiety into alarm, and at 9 P.M. two parties of guides started in search of them by different routes, while as the night wore on the front of the hotel was thronged with sympathising friends on the outlook for some signal intimating that one or other party had come up with the wanderers. At midnight the first party returned, *re infectâ*; the second appeared at 3 A.M. announcing that they had heard appealing cries from the heights, but unable to find the spot whence they proceeded they had abandoned the search, only, however, when the cries ceased. After a brief rest, however, a fresh start was made by the same party under the leadership of Baptiste Epiney, and at 9 A.M. far-off sounds were heard, and rightly interpreted as announcing that the wanderers had been found. By 10 A.M. all doubt was at an end, as the whole party, the two ladies, the five guides, and their leader, re-entered the hotel amid the cheers of the guests. Never venture on the unexplored without a skilled guide is the moral driven home by this adventure, which might easily have become a tragedy. But will the moral be taken to heart? The Alpine experience of the next few weeks must vouchsafe the reply."

[1] THE LANCET, July 24th, 1897, p. 210.

THE INCREASE OF DIPHTHERIA IN LONDON.

IT is a most lamentable fact that with all our outlay on sanitation in London—and it is becoming a formidable element in our expenditure—the disease of diphtheria steadily goes on increasing in prevalence. We know this from the reports of individual parishes. But we have the same information from Mr. T. Duncombe Mann, the clerk to the Metropolitan Asylums Board, in an official statement made to the Board on Aug. 7th. "The disease," he said, "had been steadily gaining ground in London for a considerable time past, and its continuous development had puzzled their medical staff and everybody else who had examined into the matter." The same increase is observed in the provincial towns, but not to the same extent. Thus in them the death-rate from diphtheria rose in ten years from 0·27 to 0·38, while in the same period in London it has

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increased from 0·41 to 0·6 per 1000. This increase obtains even in parts of London otherwise creditable in their sanitary conditions. Thus, the healthy parish of Islington, which has been commended to the public lately by its medical officer of health as a health resort on the score of a mortality lower than that of Hastings—12·6 per 1000, as against 13·0, in one sub-district indeed only 9·0 per 1000—and which formerly enjoyed almost perfect immunity from diphtheria, has to report a mortality of 0·71 per 1000 inhabitants. The fact is one for serious investigation by the local metropolitan authorities acting in concert with one another. At present it is discreditable to sanitary science to be able to give so poor an account of so grave a danger. The disease is five times more fatal at present than scarlet fever, according to the experience of the Metropolitan Asylums Board's hospitals, in which the mortality has been greatly reduced by the antitoxin treatment. It is not improbable that a little more attention to the circumstances of individual cases and the hygiene of the home and the school with which they are associated, together with more perfect arrangements for the early diagnosis and treatment of cases, would bring this grave disease under much more control than at present. Is it quite certain that we are on the right track in relying so entirely on isolation hospitals? It is true that when admitted the patients are well looked after. But everything, both for curing the patient and preventing the spread to others, depends on early diagnosis of the disease. This fact points strongly to the conclusion that every parish should make special arrangements for the early detection and diagnosis of cases at home and for looking closely after the other children of families in which one case has already occurred. Every sanitary authority should have a laboratory and provisions for a prompt report as to the existence of the diphtheria bacillus. This information can be procured in ten or twelve hours in the hospitals of the Asylums Board, and there is no reason why it should not be procured outside with equal promptitude. If cholera were prevalent we should see the parishes making all sorts of extra arrangements for its detection and control. The same principle should be applied in the case of diphtheria. Whatever the excellence of the system of isolation hospitals diphtheria is a disease in which much time is lost by relying on them, and it is by no means clear that parishes have not been made careless in respect to their duties by this system, which seems to relieve them of their individual responsibilities. The subject requires independent and close investigation.

THE SPAS OF MID-WALES.

THE group of spas comprising Llandrindod, Llanwrtyd, Builth Wells, and Llangammarch, is becoming rapidly more widely appreciated in England, especially in the neighbouring counties and in the great towns of Birmingham, Manchester, and Liverpool. We believe, however, that in London this district is still insufficiently known, both amongst medical men and the public, and therefore Dr. A. Foxwell's pamphlet on "The Spas of Mid-Wales"[1] comes opportunely. The mineral waters of this district may be classified into five groups: (1) The common salt waters at Builth Wells and Llandrindod; (2) the muriated sulphur springs of Llandrindod, containing both common salt and sulphuretted hydrogen; (3) the "pure" sulphur springs, chief amongst which comes the sulphur well in Dolecoed Park at Llanwrtyd; (4) the chalybeate springs at Llandrindod and Llanwrtyd; and (5) the so-called "barium water" of Llangammarch, which, with about 2 6 parts of common salt, contains about 1 2 parts of calcium chloride and 0·096 parts of barium chloride in the 1000. The Llangammarch water, therefore, contains slightly more of the barium salt than the "chloride of iron well" at Harrogate, and is without the iron of the latter. A notable difference between the chalybeate and muriated springs of Wales and many of the most noted springs of the Continent is the effervescence of the latter in consequence of free carbonic acid gas. The Llangammarch water is, however, artificially aerated for use as a table water in certain cases. On page 9 of his interesting pamphlet Dr. Foxwell mentions that the medical man at Llangammarch has already prescribed baths of the water and thinks that they had much the same action as those of Nauheim. Here we feel uncertain whether baths of the ordinary barium water are alluded to, in which case the results are astonishing, or whether artificial Nauheim baths are meant, made by the Sandow or some other method. Probably the baths referred to are the artificial Nauheim baths, for an account of their use at Llangammarch was given in THE LANCET of Jan. 4th, 1896, and during a visit to the spa last year we were shown the arrangements for Sandow's method of administering artificial Nauheim baths. All the spas of Central Wales afford good accommodation to visitors, but it is likely that at Llandrindod at least this will have to be considerably increased, for, although the different places are all useful, it cannot be denied that to the average townsman in search of a health resort the more invigorating air of the upper part of Llandrindod offers special attractions. In this respect the Lake Hotel at Llangammarch ranks perhaps next. Those wishing to take the Builth waters at the springs themselves would often have, if there were many of them, to put up at the town; in the beautiful neighbourhood of the Park Wells the accommodation is still very limited.

[1] The Spas of Mid-Wales. Birmingham: Cornish Brothers. 1897. Price 6d.

THE COLLAPSE OF THE POONA ALLEGATIONS.

THE Parliamentary session is, to the great relief of our legislators, over, but it should not be allowed to pass away without leaving some impression behind it of Lord George Hamilton's excellent and statesmanlike speech on introducing the Indian Budget and the debate which followed. India has recently passed through an almost unprecedented series of trials, and a severe strain has been imposed upon the Indian Government. That the Government had to encounter a serious socio-political risk and danger in dealing with plague in India will not be denied by those who know the religious feelings and caste prejudices of the natives of that country. While we had the hearty coöperation of all sections of the Indian community in dealing with famine, and our efforts were gratefully appreciated by the native population, the case was far different as regards the measures that had to be adopted for the suppression of plague. As the Secretary for India forcibly urged, the only effectual methods of dealing with this scourge are unfortunately repugnant to the instincts, customs, and usages of the natives and interfere with the privacy of their home life. To have let the epidemic run its course rather than face the unpopularity of attempting to stamp it out would not only have led to an enormous amount of suffering and great loss of life, but would probably have involved the economic and industrial ruin of India, boycotted as it would have been by the rest of the world—to say nothing of the cowardice and disregard of plain duty of such a course. A systematic method of house-to-house visitation and segregation of the sick had to be adopted, and but for the action of a clique in Poona who have always been hostile to British rule, making it an occasion of stirring up discontent by the spread of wilful and malicious falsehoods, the Poona murders would probably never have occurred. It is now admitted on all sides that the British soldiers acted with great heroism and with extreme kindness and consideration to the natives in performing their difficult task. We sympathise with

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the indignation expressed by Sir M. Bhownaggree, and believe with him that the large mass of the native population in India is well affected to our rule and grateful for what has been done to relieve suffering in time of famine. They are, as a rule, a singularly patient, law-abiding, but ignorant and credulous people, and it is the plain duty of the Government to protect them against malicious attacks on their allegiance to it. The difficulties with which the Indian authorities had to contend in the repression of the plague were extreme, and the way in which they surmounted them is deserving of the highest praise. Sir H. Fowler made an admirable and strong speech in favour of the views expressed by the Secretary of State for India, and did not at all coincide with those who seem never to be so happy as when they are belittling the honest efforts of their countrymen abroad to do their best for the welfare of those they have to rule.

OVERCROWDING OF PLEASURE STEAMERS.

THE captains of several pleasure steamers have lately been fined for carrying an excess of passengers. In one case the number in excess was 461, and for this the fine amounted to £91 15*s*. It may be very tempting to carry as many as possible, and in holiday times there may even be some difficulty in regulating the amount; but those in charge must be given clearly to understand that the public must not be exposed to these additional dangers, and no doubt a heavy fine will bring the matter home to them better than any other method. Overcrowding in all public conveyances is a dangerous thing, and possibly one day we may look for some rules to this effect with regard to trains, which, not only at holiday times, but on ordinary days, are often very much fuller than they ought to be, and each carriage contains a great many more than it is ever intended to hold. Beyond the discomfort of passengers, however, there is, of course, not nearly the danger with regard to trains as with pleasure steamers, where a sudden panic may have the most disastrous consequences.

THE UNIVERSITY OF GLASGOW AND THE DISCIPLINARY POWERS OF THE UNIVERSITIES OF SCOTLAND.

OUR readers know that in the General Medical Council there is great desire to see the universities, and especially the Scottish universities, strengthened in their power of dealing in a way of discipline with offending or unworthy graduates. A most creditable step has been taken in this direction by the University Court of the University of Glasgow. Recognising the seemliness of the Scottish universities acting together and harmoniously in the matter they have adopted a memorandum on July 8th last urging the Scottish Universities Commissioners to leave on record in their final report such an expression of opinion as may tend to bring the Scottish universities into a line with each other or with those universities of the United Kingdom which either already possess or have expressed the desire to obtain further disciplinary powers in accordance with the expressed wish of the General Medical Council. The delicacy of this way of proceeding is very great and should overcome the apparent reluctance of the Edinburgh University to get powers which it needs as much as any other Scottish university. Of the university graduates who have been declared by the General Medical Council guilty of infamous conduct it is found that four held the degree of the University of Edinburgh; four that of the University of Glasgow; one that of the University of St. Andrews; and two that of the University of Aberdeen. It is inconceivable that the great University of Edinburgh should be really reluctant to purge its roll of dishonourable names. Anyhow, the University of Glasgow has made a most reasonable suggestion. If the Commissioners still hold to a Gallio-like attitude the University of Glasgow should make its own appeal to the Privy Council, seeking, if possible, the coöperation of the other Scottish Universities.

STREET RUFFIANISM.

STREET ruffianism is at present far more common than it ought to be, both in London and other large towns. In Liverpool Mr. Justice Bruce has lately passed sentence on no less than fifteen prisoners who had been convicted, and in sentencing them his lordship made some strong remarks upon the subject, stating that one would almost think Liverpool was a barbarous country instead of a civilised community, judging from the use of the knife by men and women. In London, too, we hear of different gangs which infest certain neighbourhoods at night—such, for instance, as the Bethnal-green gang and the Hoxton gang, which have apparently waged war against each other for a long time, much to the danger and annoyance of the more peaceful inhabitants. Weapons of all kinds are frequently used, and it will be remembered that it was in one of these fights that a little girl was recently shot dead. It is a pity these bellicose youths cannot find some more useful outlet for their animal spirits; but if any special romance surrounds these little meetings perhaps a period of hard labour will to some extent make things appear different. We are glad to see that this class of case is being severely dealt with, for it is monstrous that people should not be able to walk about the streets after dark without being liable to annoyances and risks of this description.

MICROSCOPICAL EXAMINATION OF MILK.

IN the *Medical News* (New York) of July 10th of this year is an interesting article on the Microscopical Examination of Milk, by Dr. W. R. Stokes, bacteriologist to the Health Department of Baltimore, and Dr. A. Wegefurth, physician to the North-Eastern Dispensary, Baltimore. They draw attention to the fact that milk is a favourable medium for the dissemination of tuberculosis and also for the development of many other pathogenic bacteria, such as the bacillus of typhoid fever and of anthrax. The paper under consideration, however, deals mainly with another condition—i.e., the means of detecting a serious contamination in milk, namely, pus. The presence of this product of inflammation in any considerable quantity generally points to the existence of some inflammatory condition of the teats or udder of the cow supplying this fluid. Such a condition in cattle is known as "garget." After describing the methods employed in examining milk for pus and giving a detailed account of an epidemic of mild gastro-intestinal irritation in which the most reasonable explanation of the cause seemed to be the drinking of milk containing the products of acute inflammation from a diseased cow, the writers arrive at the following conclusions. Garget, or inflammation of the udder, is a not infrequent condition among the many herds supplying milk to various cities or communities. Milk from such animals often contains many pus cells and the accompanying organisms of suppuration. A study of the epidemic described in the paper as well as of the important work of Booker and others certainly strongly suggests that such milk is capable of causing the various forms of gastro-enteritis, especially in children and infants. The microscopical examination of the centrifugalised sediment of the milk from a herd of cattle, if found to contain an excessive amount of pus, should lead to a careful inspection of the herd. The chance of infection from drinking milk from a large herd can be lessened by making a microscopical examination of the centrifugalised specimen from each cow and by the exclusion of such cows from the

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herd as may be found to give milk containing an excessive amount of pus. The standard for exclusion must of necessity be arbitrary; but, following the method described in their paper, the writers suggest that an average of more than five pus cells to the field of a twelfth-inch oil immersion lens should exclude an animal from the herd. In Baltimore, a city of 500,000 inhabitants, there were 412 deaths from cholera infantum during the year 1896. This disease is more prevalent among children using cow's milk, and Dr. Stokes and Dr. Wegefurth believe that proper legislation looking to the examination of dairy herds and the supervision of dairy stables would prevent many deaths from the various intestinal inflammatory diseases. It is not claimed that milk which has not undergone such tests will necessarily cause disease, but certainly the adoption of such measures will tend towards securing a purer milk supply and lessening the danger of disease through infected milk.

THE UNHEALTHINESS OF BOMBAY.

THE unhealthiness of Bombay continues, and is much commented upon in the Anglo-Indian papers. The official returns regarding the plague are satisfactory, but doubts are expressed as to whether the city is altogether so free from that disease as these returns indicate, and whether some of the prevailing cases of fever attended with pulmonary complications be not really a form of that disease. Anyway, the state of the public health in Bombay is unsatisfactory, the weekly death-rate from all causes having been over 65 per 1000. Cholera has been prevalent and has added much to the mortality. The drainage of Bombay is bad and the soil of certain districts is water-logged and probably more or less contaminated with sewage. The Health Department have adopted vigorous measures and are endeavouring to stamp out the disease. Cholera has also prevailed at Sholapa, Poona, and at a village named Walwan.

"CARDING" THE SCIATIC NERVE.

THE operation of "carding" or "harrowing" the sciatic nerve for very obstinate sciatica was first performed about a year ago by Dr. Delagénière of Mans in a case in which he presumed that the cause of the pain was a varicose condition of the veins surrounding the nerve. The intention was to excise these veins after the method recommended by Quénu, but when the nerve was exposed instead of the varix he expected he found only a number of small serpiginous vessels running along it, causing the surface to present a furrowed appearance. It was obviously impossible to ligature and resect these, so he contented himself with easing or carding the fibres with a blunt forceps throughout the whole exposed portion of the nerve in the hope of destroying the vessels existing in its deeper parts and of thus being able to put an end to the stasis in the venous twigs. The result was that the patient was cured. This encouraged another French surgeon, Dr. Gérard-Marchand, to attempt a similar process which he denominates *hersage* or "harrowing" in sciatica where there was no reason to suppose that a varicose condition existed. The first case was that of a woman, aged thirty-seven years, who was unable to sleep or to stand upright, characteristic scoliosis being present. There were no signs of varicose veins or of hysteria. The second was that of a man, aged forty-five years, with a very old-standing sciatica, no treatment having been of any avail. Here also there were no varicose veins. The operation, which was similar in the two cases, was performed under chloroform, and consisted in exposing the nerve and teasing apart its fibres for a distance of two centimetres by means of a grooved director. The appearances were normal, there being no discolouration and no dilatation of the vessels. After the *hersage* the nerve was flattened out to twice its ordinary breadth. A drainage-tube was inserted and the wound sutured and dressed with iodoform and absorbent cotton wool. For several days the patients complained of pain in the nerve and of numbness in the limb. The pain, however, gradually passed off and sensation returned, complete recovery resulting in both cases. From experiments on animals Dr. Gérard-Marchand has been led to conclude that *hersage* of the sciatic nerve produces temporary loss of sensation in the nerve, while the motor power is not interfered with. He suggests that probably this operation may be found of value in the case of other neuralgias which have resisted all ordinary treatment.

OFFAL COLLECTING AND SAUSAGE-MAKING.

A MAN whose business it is to collect offal for the purpose of making manure should be careful, it might be thought, not to combine that of sausage-making, as the public, did they know, might attach an unpleasant connexion between the two callings. The vestry of St. George the Martyr entertained a suspicion of this sort last week in regard to a butcher, and on inspecting his premises found all the evidences of sausages being in process of manufacture, and in addition pieces of bad meat and mouldy bread. The defendant said that the meat on the counter was waiting to be taken away in the offal van, but he omitted to say anything about the mouldy bread, although he ventured the opinion that thunder had turned the brine sour, and the meat taken out of such a profoundly modified pickle possessed on that account "a nasty smell." We rejoice that Mr. Slade, the magistrate, concluded that, although it might be true that the 113 small pieces of meat in the cellar were only to be used as manure, it must not be forgotten that there were larger pieces of meat in the basement. He ordered the defendant to be fined £20 and 2*s*. costs in each case, and, we hope, the latter will take to heart the teaching of science that manure is an excellent and wholesome food for the plant, but it may mean illness and perhaps death when consumed as human food. It is a pity, we think, in cases of this sort that the person committing the offence is not consigned to imprisonment and compelled to subsist—if that be possible—on the rotten mixture which he prepares for public consumption.

PEMPHIGUS OF THE MOUTH.

THE eruption of pemphigus sometimes occurs in the mouth and on other mucous membranes. That the disease in the mouth may precede that of the skin in the ordinary form of pemphigus—the chronic—is not generally known, though this is what invariably occurs in a rare form, pemphigus vegetans, and that the disease may remain localised to the mouth and adjacent cavities for a long time, and in some cases entirely, does not appear to be at all recognised in this country. In the *New York Medical Journal* of July 3rd Dr. Lewis H. Miller describes a case in which the mouth was affected for twenty months without the skin being involved. The patient was a man, aged seventy-two years, who complained of soreness in his mouth and inability to take solid food. On the roof of the mouth and on the epiglottis were patches of false membrane of considerable thickness, which when removed left a raw, bleeding surface. Some decayed teeth were extracted and antiseptics used, but blebs formed on the roof of the mouth, the soft palate, the cheeks, under the tongue, and on the posterior wall of the pharynx. Bacteriological examination of the membranes gave negative results. There was neither fœtor nor salivation. Whenever the patient attempted to masticate solid food a fresh crop of blebs appeared. We consider this fact of great interest and importance. It is perfectly analogous to what may occur in pemphigus of the

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skin; for local injuries, and even friction or pinching, will in some cases determine the formation of a bulla at the spot. No stronger confirmation of the diagnosis of pemphigus of the mouth when the eruption on the skin is absent could be given than this production of bullæ by such trivial exciting causes. Nothing of the kind, as far as we know, occurs in any other disease. Dr. Miller quotes a number of cases in which the disease existed for long periods, in one as much as eleven years, in the mouth before the skin was affected. The rare disease pemphigus of the conjunctiva may be very instructively compared with pemphigus of the mouth, because in the former disease also a skin eruption may be either absent or present. The treatment is similar to that of pemphigus of the skin, though it does not appear to be very successful. In the case given arsenic seemed to produce some improvement. Opium might be tried. Mr. Hutchinson has shown it to be distinctly curative in some cases of pemphigus in which the mouth is primarily involved.

THE EAST LONDON WATER-SUPPLY.

COMPLAINTS have once more been heard as to a deficiency in the supply of water in certain parts of the East-end of the metropolis. Inquiry at the offices of the East London Waterworks Company appears to have elicited two facts—viz., (1) that a breakdown occurred in the Thames supply main, and (2) that in many instances the water did not flow into cisterns fixed at a point higher than forty feet from the ground. Whether the latter occurrence was due to the former we do not know, but we cannot understand why there should be any serious deficiency in the supply, for as yet we have experienced no prolonged drought, while since the memorable drought in the summers of 1895 and 1896 the company have added enormously to their storage capacity, so that it is now equal to 1,000,000,000 gallons, and the average supply to about 320,000,000 gallons per week. The company do not guarantee a supply of water at a higher point than 40 ft. from the ground, but as, obviously, there are hundreds of poor tenements situated at this height and above it is perfectly absurd that the company should be allowed to shield themselves behind this announcement.

HEREDITARY AND CONTINUOUS SHEDDING OF THE FINGER-NAILS.

IN the June number of the *Journal of Cutaneous and Genito-urinary Diseases* Dr. Douglas W. Montgomery describes the following very curious case. A man, a native of Les Basses Pyrénées, in excellent health, had been troubled ever since birth with constant shedding of the finger-nails. His mother and two of her brothers were similarly affected. One or two of the patient's nails were always falling. The process commenced by the colour growing dull yellowish-white directly over the lunula or on one side of it. The nail then became lifted from its bed from behind forwards until it fell off. The shedding occupied about three months. The new nails grew in from three to eight months and were perfectly normal. There was no pain or inconvenience. The hair grew vigorously and showed nothing abnormal. The teeth were excellent. There was no disease present which is associated with shedding of nails.

UNIVERSITY COLLEGE, LIVERPOOL.

THE report of the Medical Faculty of University College, Liverpool, for the session 1896–97 is highly satisfactory. The numbers of students are again this session the largest on record, and are considerably in excess of last year's increase. The increase is accounted for by a remarkable addition to the numbers of those preparing for diploma examinations. The obvious reasons why these latter examinations are taken in lieu of the university curriculum is the want of adequate secondary education and proper relation between school education and the university entrance examinations. It is hoped that this defect will be remedied in course of time. 139 students have passed professional examinations as against 130 last year (119 being medical and 20 dental). Of the medical students, 78 have passed university examinations, 72 at the Victoria University and 6 at other universities; 41 have passed various examinations of the English or Scottish Corporations. Twelve candidates from University College, Liverpool, presented themselves at the recent final examination of the Victoria University for the degree of Bachelor of Medicine and Surgery, 9 of whom were successful. Of these, 5 obtained second-class honours, representing upwards of 55 per cent. of the honours awarded. The results of this latter examination are highly creditable to the Liverpool School, and accentuate the successes of last year, when, at one of the final examinations, all the honours were carried off by candidates from University College, Liverpool.

THE JOHN LUCAS WALKER STUDENTSHIP.

THE John Lucas Walker Studentship is intended for the furtherance of original research in pathology, and is tenable for three years. It is of the annual value of £250; it is not awarded by the result of a competitive examination, and it may be held by a person of either sex, who shall not necessarily be a member of the University of Cambridge. The holder of the studentship shall undertake original pathological research, and shall not systematically follow any business or profession, or engage in any educational or other work which, in the opinion of those entrusted with the administration of the fund, would interfere with the carrying on of original inquiries. If during the tenure of the studentship the holder is appointed a professor or accepts a Fellowship other than an honorary Fellowship, he shall thereupon vacate the studentship. Candidates are requested to apply not later than Oct. 15th to Dr. A. A. Kanthack, Pathological Laboratory, Cambridge. The place and nature of the studies of the student shall be subject to the approval of the Professor of Pathology; he or she will, however, be required to work at the University during at least three terms of the tenure of the studentship.

THE HEART IN NERVOUS DISEASES.

AVAILING themselves of the opportunities afforded in the out-patient department of La Pitié Hospital, Mdlle. Pokrychkine and M. Capitan have conjointly carried out an extended series of investigations with a view to determining what alterations of shape and volume occur after muscular exertion in the hearts of persons who are suffering from nervous affections. While prosecuting their researches, of which a *résumé* has been communicated to the Société de Biologie, the observers made use of a modified form of Bianchi's phonendoscope; and they also executed careful tracings showing the contour of the cardiac region before and after exercise. The results arrived at by Mdlle. Pokrychkine and M. Capitan may be briefly stated as follows: 1. In normal subjects moderate exercise does not cause any perceptible changes in the heart with regard to shape, volume, or position. 2. In subjects whose nervous systems have undergone deterioration in consequence of hysteria, neurasthenia, or any reflex trouble having its point of departure in a particular part of the organism, the heart grows hyper-excitable, and changes in shape or position the moment it is called upon to do a little extra work. This alteration may present itself in three typical ways. (*a*) The whole cardiac area may be uniformly enlarged, or the increase may be partial and irregular. (*b*) The heart may become retracted and diminished in volume. (*c*) Finally,

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the organ may be dislocated laterally, with or without changes of shape and volume, the displacement being directed towards the mesial line or more frequently towards the axilla.

THE FOUL STATE OF THE BRENT.

THE Brent no longer flows, it stagnates, and since sewage is discharged into it the river (so called) has very naturally become a source of abomination to those who are unfortunate enough to be, or live, in its neighbourhood. And this shocking state of things has come about because more than a hundred years ago a canal company obtained powers to impound practically all the water flowing, in consequence of which in summer very little water comes down at all. What we should like to know exactly is who is responsible for the direct befoulment of the river, as surely it is insisted that no untreated, or imperfectly treated, sewage is discharged into the water. The sooner the flow of the river is restored the better, and whatever else is done steps should be instantly taken to avert the untold mischief of converting the bed into a huge cesspool by the discharge into it of more or less crude sewage. Let the Middlesex County Council bestir themselves in this matter if they would avoid an epidemic, and show the same commendable spirit of activity as they have shown in other matters connected with public health. Since the above was written we learn from the *Times* of the 12th inst. that, as the result of the inquiry in the House of Commons last week, the Local Government Board instructed the chairman of the Middlesex County Council to take immediate steps to have the River Brent cleaned.

HOME-GROWN FOOD IN RELATION TO HEALTH.

CLIMATIC conditions, as is well known, have a good deal to do with the suitability of food. The Esquimaux has an innate craving for fat, which is supplied him in the oleaginous blubber, while the Indian or African or nigger would naturally have an aversion to rich fatty food, and so he eats starchy food and fruits which grow in abundance around him. The same principle is illustrated even in the comparatively narrow range of climatic conditions in this country. Who has the same inclination to eat a large, underdone, juicy steak in the broiling days of our short summer as in winter? We rather have recourse to salads, fruits, vegetables, and if to meat at all it is in sparing quantity and generally cold. But as an agricultural correspondent has most ably and pertinently pointed out to us in a recent very interesting communication, the subject may be pushed a step further, and considered from a point of view which in its general bearings on the question of food supply is of unquestionable importance. As he has observed, the same plant varies in its feeding properties when grown at a different altitude, or on a particular soil, or in a different climate. In other words, the nutritive value of a plant or its fruit, be it seed, fruit, or leaf, is influenced by soil and climate. Herbage composed of grasses and clovers—i.e., pasture—has a marked influence upon the health, development, and early maturity of sheep and cattle according to geographical position and geological character of the soil. Thus "storeland" and "feeding land" are terms used to express the relative character of the soil, and, as our correspondent (who is a farmer) points out, these varying conditions have a well-known influence altering or modifying the type and character of breed or pedigree. Is it a design in Nature, he asks, that plants growing in any particular country shall be more suitable food for animals in that particular country than foreign food or that grown in a different country? As an illustration, linseed or flax seed produced in one country is full of oil, and in another the proportion of oil is distinctly less; a sample of seed in one country again is rich in mucus, while in another it contains very little mucilage, the difference in this respect in Russian, Indian, and English seeds being considerable. Again, he asks, does Assam tea afford a more healthful beverage to the Chinaman than Indian tea? yet the character of the two decoctions made from these respective teas is quite different. To come nearer home, and to touch upon the economic side of the question as closely affecting our own agricultural interests, Is English wheat made into bread a better food for the people in this country than bread made from foreign flour? The baker selects foreign flour because the resulting loaf is lighter, and the flour will take up more water, and a sack will yield a greater number of loaves than an English sack. There could hardly be opened up for discussion a more interesting phase of the subject, and our correspondent has written very pertinently upon a very important question. It is just possible on studying and reflecting upon the issues he has raised that another rational and powerful argument in favour of the consumption of home-grown food may be found.

THE PARISH OF ST. JAMES'S, WESTMINSTER.

IN not a few instances the fine streets of which part of older London is made up convey to the visitor to the metropolis—and, for that matter, to the majority of Londoners as well—a very fictitious idea of the class of houses and people inhabiting certain areas. Behind what must be regarded as a veneer of the fine houses on either side of some of the big thoroughfares there lies a mass of obsolete and closely packed slum property, ill-provided with light and ventilation. Many of these slums have within recent years been opened up to the purifying effects of destruction and light by the handsome avenues which have been constructed through their midst, but there still remains much to be done—more, perhaps, than most people have any idea of. The parish of St. James's, Westminster, contains within its area some of the finest streets and buildings within the metropolis, but most people who have regard to the distribution of the parish on the map of London will be surprised to hear that it still contains some very bad slums. It is, however, perfectly true, as Dr. James Edmunds, the medical officer of health of the district, tells us in his current annual report, that if a line be drawn diagonally across the parish from St. James's Palace to the junction of Wardour-street with Oxford-street, that portion of the line south of Regent-quadrant will traverse a neighbourhood remarkable for its wealth, while that north of the quadrant will lead through a neighbourhood not a little of which is remarkable for its poverty and dirt. This northern area of the parish is to a large extent covered, Dr. Edmunds states, by old houses which are in the hands of "tenement-mongers," and which are let out as lodgings to the dependents of the shops and warehouses in Regent-street, Bond-street, Piccadilly, and St. James's-street. The rents are high, but the accommodation is bad, and the short leases of the tenement-mongers practically debar the freeholders from rebuilding or making substantial improvements. The worst houses and the dirtiest of the inhabitants have been in large part forced out by the need for wholesale warehouses and workshops in this locality, and Dr. Edmunds thinks that the time has now arrived when the process of displacement might be profitably hastened by opening up a new street on the eastern side of, and parallel to, Regent-street. He suggests that such new street might be in direction an extension of Waterloo-place or of the Haymarket, Suffolk-street or Whitcomb-street, and he thinks that a new street running through to Poland-street would have the additional advantage of enhancing the value of the site upon which the Westminster Workhouse stands, while it would be of great use to the metropolis. The poor of the Westminster Union are, Dr. Edmunds tells

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us, "consigned to a deplorable existence," and he asks whether a small receiving house in St. James's and a comfortable workhouse in the country would not be both a blessing to the poor and a great saving to the ratepayers. As to the question of economy we cannot speak, but we can fully confirm Dr. Edmunds's statement as to the conditions of much of the property in the area in question. We have recently visited parts of it, and we were astonished at the sudden transformation scene which took place as we passed from Coventry-street to the district referred to. The opening up of the worst parts of this area is much to be desired, and Dr. Edmunds's proposal is well worthy of being further elaborated.

SIR ARTHUR SULLIVAN has forwarded to the Prince of Wales a cheque for £202 for his Hospital Fund for London, representing the sum paid by Messrs. Eyre and Spottiswoode in respect of royalty on the sales of the late Bishop of Wakefield's Jubilee hymn, of which the copyright had been assigned to him by the author. The donation was accompanied by the expression of a wish from Sir A. Sullivan that it should be considered as a joint gift from the late Bishop of Wakefield and himself, being their share of the proceeds.

THE Queen has been graciously pleased to sanction the following appointments to the Order of the Hospital of St. John of Jerusalem in England:—Knights of Grace: Charles Knott, M.R.C.S. Eng., and Charles Joseph Trimble, L.R.C.P. Edin., from Honorary Associates.

UPON Aug. 11th a bronze statue of Darwin was unveiled in front of the Shrewsbury Free Library, which was formerly the old Shrewsbury school where Darwin was educated.

PROFESSOR MCWEENEY, M.D. R.U.I., has been appointed representative of the Royal University of Ireland at the International Medical Congress to be held at Moscow next week.

Pharmacology and Therapeutics.

CREOSOTE IN GASTRIC AFFECTIONS.

ACCORDING to Dr. Theodore Zanger, of Zürich, who has contributed a paper on creosote to the *Correspondenzblatt für Schweizerische Aerzte*,[1] the present tendency to think that the larger the dose of this drug the better in phthisical cases is by no means justified by experience, for the best results are often obtained with very small doses indeed. He believes that their beneficial effect is due to their action on the stomach, causing it to do its work better and so to improve the nourishment of the system. He finds that in many cases of purely gastric affections, with or without diarrhœa or other intestinal symptoms, minute doses of creosote will often succeed when other remedies have failed. In the gastro-enteritis of children and in the vomiting of pregnancy he has been greatly struck with its effects. The doses he gives vary from one-eleventh of a grain in children to one-third of a grain in adults. He prescribes it with enough spirit to dissolve it in a spoonful of water, with or without mucilage. Black coffee or mint tea may be employed, if necessary, to disguise the taste. Where infantile diarrhœa exists without vomiting he has often found creosote valuable. In the milder forms of the vomiting of pregnancy small doses of creosote have always produced an improvement, and he thinks that even in severe cases a trial of the same treatment should be made.

OXYCAMPHOR IN DYSPNŒA.

Oxycamphor, which, from physiological and clinical observations that have been already made upon its action, bids fair to be reckoned among the more useful of the ever increasing number of artificially prepared drugs, is, chemically speaking, camphor in which a molecule of hydrogen is replaced by one of hydroxyl; it is prepared by reducing camphor-orthochinon by means of powdered zinc and acid. It is a white, crystalline powder with a melting point of about 204° C. It is soluble in cold water to the extent of 2 per cent., but more so in hot water, and readily in all organic menstrua with the exception of ligrosin, the solution in water having a slightly hot and bitter taste. Solutions of albumin are not affected, but myosin is precipitated in flocculi. Oxycamphor is inimical to low forms of organic life, bacterial growth, putrescence, and fermentation being markedly retarded by a 0·1 per cent. solution and entirely stopped by a 0·5 per cent. solution. When added directly to blood oxycamphor causes the hæmoglobin to become converted into methæmoglobin and otherwise appears to hinder the absorption of oxygen. When injected into the lymph sac of a frog oxycamphor behaves like camphor in paralysing the muscular coat by acting on the motor nerve endings; the action of the two drugs on the heart, however, is dissimilar, inasmuch as camphor excites the movements when they have been arrested by muscarin, not only when applied by intravenous injection, but also when a dilute solution is sprinkled on the organ, so that it cannot cause coagulation of the myosin; oxycamphor, on the other hand, however applied, causes retardation, or even actual arrest, of the frog's heart. In warm-blooded animals the difference in the action of the two drugs is even more remarkable, camphor producing in large doses mental excitement and rapid respiration from its irritant action on the fourth ventricle; whereas when 0·25 gramme is given to a dog subcutaneously or a gramme by the mouth the breathing becomes quieter, more regular, shallower, and very much slower. When 0·025 gramme is introduced into a vein the slowing of the respiration is very soon followed by its entire cessation, showing that the drug acts upon the respiratory centre. The vaso-motor centre is not affected, except secondarily through the respiration. Numerous experiments have shown that even long-continued and considerable doses do not set up any by-effects in other organs, so that oxycamphor would seem likely to prove a valuable therapeutic agent in dyspnœa due to circulatory disturbance. Ewald and Kuttner have made some trials with it and have obtained results which are decidedly encouraging. They consider the dose to be from 7 grains to 15, and the quantity per diem from 30 to 45 grains.

DERMATOL AND ITS INTERNAL ADMINISTRATION.

Dermatol is, as is now well known, a basic oxide of bismuth and has been employed with considerable success as a substitute for iodoform in the treatment of wounds, having both the desiccating power of bismuth and the hæmostatic and astringent characteristics of gallic acid. Its employment as a drug for internal administration up to the present has not been at all general, though Colasanti and Dutto have prescribed it with advantage in various cases of intestinal catarrh and Werther has found it useful in chronic intestinal catarrh. Dr. Perlmutter has recently published a paper in the *Münchener Medicinische Wochenschrift* on its employment in gastric ulcer and diarrhœa, his observations being made on an extended series of cases and being inspired by Professor Moritz who recommended it to his notice. In diarrhœa in phthisical subjects and in acute and chronic enteritis he found it most valuable, all cases of this kind benefiting by its use, and the result being by no means only of a transient character. The drug was given in doses of from 8 to 30 grains in water twice a day. It is not poisonous, and produces no by-effects except a tendency to constipation, which can be readily combated by means of glycerine enemata. In gastric ulcer, too, it was very useful, especially in acute cases where patients could be kept at rest and properly dieted and made to lie on the affected side after taking the dermatol so that it might come into contact with the lesion itself. The doses given were 8 grains at the beginning, gradually increasing to 30 grains twice a day. Of course, when bismuth is being given, the stools will be dark, and care must be taken not to mistake them for those coloured by blood.

HYPODERMIC INJECTIONS IN EXTENSIVE BURNS.

Professor Tommasoli, of Palermo, recommends large hypodermic injections of artificial serum—i.e., water containing 0·6 of common salt—in case of extensive burns with the object of washing away the toxins which accumulate in consequence of the suppression of perspiration by the

[1] No. 12, 1897.

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destruction of the sudorific glands. In one very severe case, where this treatment was only commenced after diarrhœa and delirium had set in—although the case proved fatal,—a distinct improvement was observed after each injection. In another where, though the burnt surface was even more extensive, the treatment was commenced almost immediately recovery took place. Here 250 grammes were injected at first, the quantity being increased daily until the fifth injection, when 500 grammes were given. This quantity was continued daily for nineteen days. Of course the wounds were dressed antiseptically.

THE EASTBOURNE WATER-SUPPLY.

HIS GRACE THE DUKE OF DEVONSHIRE, K.G., formally opened the new (Friston) waterworks at Mead's Hill on Aug. 6th. After the interesting ceremony, which consisted of the opening of a valve by his Grace, which caused a fountain to throw forth a stream of water, and the presentation of an address by the Town Clerk on behalf of the Corporation of Eastbourne, the party proceeded to the Queen's Hotel, where an excellent luncheon was rovided.

Eastbourne is one of the most pleasant of watering-places, and its health statistics compare favourably with other towns. The Registrar-General's annual report for 1896 on the health of the 100 large towns of England and Wales shows Eastbourne to have had the lowest death-rate of all the said towns with one single exception. The same report for the first quarter of the present year shows the town to have had at least 50 per cent. fewer deaths from "principal zymotic diseases" than any other of the south coast towns mentioned, there being only two of the whole 100 towns with fewer such deaths. For the same quarter it is shown to be the only town of the whole 100 whose total deaths for the quarter are under three figures, the total inclusive death-rate for that period being but 8·0 per 1000 per annum. Unfortunately, however, certain mineral salts obtained entrance to the water-supply, and a rumour gaining ground that the water was unhealthy the town had in consequence suffered. The corporation, recognising the importance of having a pure water-supply, determined to promote a Bill in Parliament to acquire the water company's rights and also to secure a new supply, but the preamble of the Bill was not proved. At the same time the water company were applying for fresh powers to enable them to obtain a new supply of water from Friston, which supply was formally opened on Aug. 6th. The following analysis by Sir Edward Frankland includes the supplies from Holywell and Wannock as well as from Friston.

Results of Analysis expressed in parts per 100,000 (April 5th, 1897).

Description of well.	Total solid matters.	Organic carbon.	Organic nitrogen.	Ammonia.	Nitrogen as nitrates and nitrites.	Total combined nitrogen.	Chlorine.	Hardness.		
								Temporary.	Permanent.	Total.
Holywell ...	32·24	0·055	0·010	0	0·664	0·674	5·2	14·5	7·3	22·8
Friston Well	37·08	0·041	0·012	0	0·656	0·668	4·3	16·9	7·0	23·9
Wannock Well	25·24	0·043	0·011	0	0·096	0·107	2·6	15 2	4 2	19 4

In considering Sir Edward Frankland's results we may remark that they compare very favourably with the analyses of water-supplies of well-known purity elsewhere. They show that high degree of organic purity characteristic of waters derived from a chalk bed, almost the whole of the nitrogen present being in the form of nitrates. Though somewhat hard, the new supply is not worse in this respect than some of the London water-supplies, notably that supplied by the Kent Company from the deep chalk wells, which contains 27·8 parts per 100,000, while the hardness of the New River supply is not less than 20 parts per 100,000. The proportion of combined chlorine is, however, slightly above the usual average, but this may be attributed to the near proximity of the sea. The old trouble, however, was due to the access of certain salts, and doubtless the corporation authorities will have the water examined from time to time so as to keep a close watch on any variation that may occur in this particular.

Immediately after the ceremony at Black Robin, where the water was formally turned on, the company and guests proceeded to the Queen's Hotel for luncheon, when Alderman Skinner, the mayor, presided, on his right being the Duke of Devonshire, the chairman of the Eastbourne Water Company, and on his left Admiral Field, Member of Parliament for the Borough. Among those present were Sir W. Charley, Surgeon-General Beatson, Aldermen W. H. Burt, W. Pocock, J. Rudd, N. Strange, and H. Sutton; Councillors C. L. Adams, C. Breach, B. Bradford, E. Duke, J. C. Foran, J. Harding, A. C. Hillman, C. O'Brien Harding, R. G. Job, R. C. Lambert, M. Martin, O. Mitchell, A. H. Maude, W. Pearce, T. B. Rowe, A. P. Sherwood, C. F. Simmons, W. Sharp, J. C. Towner, J. White, J. T. Wenham, J. C. Wright, and J. Welch; Mr. H. W. Fovargue, town clerk; Mr. R. M. Gloyne, borough engineer; Dr. W. G. Willoughby, medical officer of health; Mr. A. Allcock, borough accountant; Mr. H. Plumb, chief constable; Messrs. G. E. Quirk and J. H. Wright, borough auditors; Mr. C. Tomes, consulting surveyor; and Messrs. J. Aird, jun., C. Aird, H. Andrews, D. Allum, J. Adams, M.D., Alderman Bray (St. Leonards), Matthews Browne, M.D., H. Colgate, M.D., E. Downes, M.D., Kenneth Frazer, M.D., T. S. Gowlland, H. S. Gabbett, M.D., F. Hollins, H. Habgood, M.D., C. N. Hayman, M.B., J. Jacobs, G. A. Jeffery, M.D., Talfourd Jones, M.B., R. Morland, T. Macqueen, M.B., G. A. Skinner, and W. Muir Smith, M.B.

Following the toasts of "The Queen" and "The Prince and Princess of Wales," which were received with vocal and instrumental honours, came the toast of "The Eastbourne Water Company," proposed by the MAYOR. They had always, he said, at Eastbourne been proud of their abundant supply of pure and wholesome water, but unfortunately about three years ago some little difficulty arose in consequence of the drought and the very rapid growth of the population. This put a great strain on the source of the supply. Subsequently the water became saline, though it was at no time injurious to health. Complaints were made to the corporation, and they made representations to the company, who set to work to obviate the difficulty, which had now been overcome.

The Duke of DEVONSHIRE, in replying, said the prosperity and welfare of Eastbourne depended almost entirely upon the number of visitors it could attract. If the visitors were not satisfied with the air or the water they would stay away. Up to a very recent period among the many advantages which they were proud to think Eastbourne could offer to its visitors was its complete and perfect water-supply, but in the year 1893 or 1894, for the first time after a period of long-continued drought, the supply at Bedford well showed some indications of diminishing in quantity. In consequence of that diminution some new extensions to the works at Holywell were made, by which it was anticipated that the failing supply of water could be recruited. That anticipation was realised. The fresh headings which were constructed did produce an additional supply of water, but unfortunately at the same time a great increase in the amount of chlorine contained in that water became manifest. In consequence of that something approaching to a panic took place, but at no time had the supply of water for Eastbourne been of a character which was injurious in any degree to health. That statement could be verified authentically from the returns of the Registrar-General. Owing to their possession of unrivalled means and connexions with the firms which alone were capable of supplying the necessary engines and pipes, the work at Friston was entrusted to Messrs. Aird and Co., who, in the course of two months, had been enabled to put down the necessary pumping appliances at Friston—a distance of over four miles from Black Robin, separated from that place by two ranges of considerable eminence—to lay down the pipes and supply the reservoirs with 800,000 gallons per day of pure and abundant water. The wants of Eastbourne at the fullest period were estimated at something like 1,500,000 gallons per day. More than one-half of that quantity was now assured from Friston, but they were not dependent even upon Friston alone. In addition to the Friston supply there

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were large supplies from Holywell, from Wannock, from Filching Glen, and from the Warren, which are amply sufficient for all the probable or even possible necessities of Eastbourne. Before concluding his Grace expressed the hope that the proceedings of the day and the extremely kind and cordial address which he had had the pleasure of receiving at the hands of the Corporation would put a final end to any differences which had existed between the water company and themselves. His Grace then proposed the health of the Mayor and Corporation.

In his reply the MAYOR invited the Duke to accept the civic chair on the occasion of the next election.

The toast of "The Visitors" was proposed by Admiral FIELD, C.B., M.P., and responded to by Mr. R. D. M. LITTLER, Q.C. Sir ELLIS ASHMEAD BARTLETT proposed the health of the Press.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

A COUNCIL meeting of the Metropolitan Hospital Sunday Fund was held in the saloon of the Mansion House, London, on Aug. 5th, for the purpose of approving the report of the Distribution Committee for 1897. In the absence of the Lord Mayor Sir SYDNEY WATERLOW presided.

Proposing the first motion, "That the report of the Committee of Distribution for the year 1897 be and is hereby approved, and that the several awards recommended be paid as soon as possible," the Chairman reminded the meeting that this was the silver jubilee of the Fund. During the twenty-five years it had collected £918,432, and distributed £853,013; 35,802 surgical appliances had also been distributed. Referring to the amount collected this year he said that it was not quite so large as last year, when they paid away £41,829, but the deficiency of £2124 was not a serious one considering the difficulties under which the Hospital Sunday Fund had to be worked, and the extent to which the public had responded to other appeals in aid of the hospitals. The committee had decided to divide the money received almost to the last penny. They had never proposed, and he hoped they never would, to build up anything like a reserve fund. They had acted on the principle that the money placed in their hands by the generous public was intended for the relief of disease and sickness in the particular year in which it was given.

Sir EDMUND HAY CURRIE seconded the motion.

Sir DYCE DUCKWORTH wished to know whether St. Thomas's Hospital had applied for a grant, and, if so, why the name of that institution was not on the list of awards.

The CHAIRMAN said that St. Thomas's Hospital had applied, but the distribution committee had not been able to do anything in the matter because the hospital had not complied with the request of the committee that the accounts should be sent in. He, however, was glad to know that the treasurer of St. Thomas's Hospital had intimated his intention of putting the hospital on the same footing as the other hospitals with regard to its accounts, and its friends might then rest assured that the distribution committee would consider its application in as favourable a way as that of any other hospital.

Dr. GLOVER asked when they might expect the report of the committee inquiring into the question of out-patients. He remarked that last year the question of the out-patients at hospitals was gone into and referred to a committee. In some of the hospitals there had been a marked increase in the number of out-patients during the past year. Thirteen or fourteen of them showed an increase of 20,000.

The CHAIRMAN said his colleagues and himself on the committee felt the importance of the question, but it was a very difficult one to deal with. It had to be regarded from several points of view. There were the opinions of medical men to be considered, the views of the clergy, and the views of persons promoting those institutions known as provident dispensaries. The committee who were considering the question had already met several times, but they had not yet secured all the evidence they wish to have. It would be futile to present a report that did not cover the whole of the subject. He would ask Dr. Glover to exercise a little patience and to accept his statement that the committee were delaying their report in order that it might be more valuable when published.

Sir H. BURDETT and the Hon. SIDNEY HOLLAND also made some remarks, and subsequently the motion was passed unanimously as were also the following motions:—

"That the cordial thanks of the Council be and are hereby given to Sir Sydney H. Waterlow, Bart. (chairman), and to the other members of the committee of distribution, for the special care they have taken this year by the interviewing of numerous deputations, and for the considerable attention bestowed in the preparation of the awards they have recommended."

"That the thanks of the Council be and are hereby given to the editors of newspapers who have pleaded the needs of hospitals and advocated the cause of this Fund with a view to increasing this year's collection."

"That the cordial thanks of the Council are now given to the Right Honourable Sir George Faudel Phillips, Bart., Lord Mayor, who, as president and treasurer, has devoted his valuable time and considerable energy to continue the well-being of the Fund."

Annual General Report of the Committee of Distribution to the Council of the Metropolitan Hospital Sunday Fund.

Your committee have now to report their recommendation of awards to 188 institutions, being an increase of 83 since the first awards were made in 1873, and 8 more than last year. The total amount available for distribution after allowing for liabilities and the usual current expenses is about £40,000. Of this total £39,705 15*s.* 6*d.* is now recommended to be paid to 132 hospitals and 56 dispensaries.

Five per cent. of the total sum collected—viz., about £2000—is set apart to purchase surgical appliances in monthly proportions during the ensuing year.

Your committee recommend that all payments to the Fund after this date be carried to the credit of next year's Fund.

In compliance with an order of the Council, and for the special use of its members, tables of statistics have been prepared as usual, showing an analysis of the number of beds in hospitals, the cost of patients both at hospitals and dispensaries, the proportionate expense of management, as well as other valuable information, and copies are sent to every member of the Council.

The amount available for distribution is, as was naturally expected, rather less than the amount available last year, but your committee feel that it is as large a sum as could be anticipated, having regard to the circumstances of the Jubilee year, in which so strong an appeal has been made in other directions and responded to by the public in favour of our metropolitan hospitals.

For the last twenty-five years the public have nobly responded to the earnest appeal made by ministers of religion in nearly 2000 places of worship on Hospital Sunday. Your committee are of opinion that the amount received this year fully justifies them in the conclusion that the confidence of the public in the Metropolitan Hospital Sunday Fund has in no degree abated, and that the collections in future years, which it is to be hoped will be made under ordinary circumstances, will continue to increase from time to time, as they have done in past years. Appeals have been made from year to year mainly on the ground that it is a religious duty for everyone to give what they can towards the relief and assistance of the sick poor of this great metropolis who are unable to provide such help for themselves, and your committee fully believe that an appeal on these grounds will never be made in vain.

In order to arrive as accurately as possible at the needs and merits of the 188 institutions making applications for a grant from the funds at your disposal, your committee have deemed it necessary to invite the attendance of a deputation from the governing bodies of a much larger number of institutions than in former years. They invited representatives from thirty-eight institutions. In thirty cases deputations were sent to confer with your committee; four of the institutions expressed their willingness to leave themselves in the hands of your committee, and four others took no notice of the invitation. The conferences with the thirty deputations were found to be both useful and mutually instructive. In some cases the objections were removed or modified by the explanations given; in other cases the explanations at the conference only confirmed the impressions your committee had formed.

The work was much facilitated by the fact that the accounts are universally rendered on the uniform system.

ARMY MEDICAL SCHOOL, NETLEY.

THE seventy-fourth session of the Army Medical School, Netley, was brought to a close on Friday, July 30th. The prizes were distributed by Major-General Sir William F. Butler, K.C.B., commanding the South-Eastern District, in the presence of Surgeon-Major-General J. Jameson, C.B., Director-General of the Army Medical Staff, Surgeon-General Sir Joseph Fayrer, Bart., K.C.S.I., F.R.S., Surgeon-Major-General Cuffe, C.B., P.M.O. (Portsmouth), Colonel Liddell, A.A.G. Southern District, Surgeon-Major-General C. H. Giraud, formerly P.M.O., Brigade-Surgeon-Lieutenant-General K. McLeod, Sir W. MacCormac, Bart. (President of the Royal College of Surgeons of England), Surgeon-Colonel Tandy, I.M.S. (retired), Surgeon-Major-General W. M. Webb (retired), Surgeon-Captain W. W. Webb (Bengal Army R.P.), Surgeon-Major-General O'Dwyer, P.M.O. (Aldershot), Surgeon-Major-General W. Nash, the professors of the Army Medical School

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and the military and nursing staff of the Royal Victoria Hospital, and a distinguished company.

The report, which was read by Surgeon-Colonel J. Lane Notter, Professor of Hygiene, stated that the work of the session had been satisfactory, all the surgeons on probation who had undergone the final examination had proved themselves fitted to receive Her Majesty's commission. After distributing the prizes Major-General Sir Wm. Butler delivered an address, which will be found in another column, to the young officers. The Director-General in complimentary terms expressed their indebtedness to Sir William Butler for presenting the prizes and for his valuable and interesting address. Sir Joseph Fayrer then offered his congratulations to the surgeons on probation upon the successes which they had achieved, and specially addressing himself to the young Indian officers spoke of the grand career before them in a service which had produced so many brilliant men, a service which he thought would be even better in the future than it had been in the past. The Principal Medical Officer proposed a vote of thanks to Sir Joseph Fayrer for his valuable remarks and this brought the proceedings to a close. The company was afterwards entertained at luncheon by the officers of the Army Medical Staff.

The following lists show the positions of the young officers recommended for commissions in their respective services:—

ARMY MEDICAL SERVICE.

	Combined marks.		Combined marks.
†S. L. Cummins	4871	J. Poe	3942
J. McArdle	4455	H. L. W. Norrington ...	3928
‡C. H. Hopkins	4247	H. G. F. Stallard	3806
L. J. C. Hearn	4227	R. D. Jephson	3654
P. Mackessack	4172	J. Crean	3577
J. McD. McCarthy ...	4147	A. W. N. Bowen	3413
H. Brodribb	4085		

† Gained the de Chaumont Prize in Hygiene.
‡ Gained the second Montefiore Prize.

INDIAN MEDICAL SERVICE.

	Combined marks.		Combined marks.
*J. G. P. Murray	5644	A. Fenton	5093
†S. Anderson	5428	J. A. Dredge	5006
‡F. H. G. Hutchinson ...	5390	R. W. Knox	4885
§J. L. Majoribanks	5208		

* Gained the Herbert Prize of £20, the Martin Memorial Medal, and the Pathology Prize presented by Sir Joseph Fayrer, Bart., K.C.S.I.
† Gained the Maclean Prize for Clinical and Ward Work.
‡ Gained the Parkes' Memorial Medal.
§ Gained the first Montefiore Prize of 20 guineas and Bronze Medal.

THE AMERICAN VICTORIA JUBILEE FUND.

WE have received the following with a request for its publication.

The Executive Committee of the American Victoria Jubilee Fund begs to inform the subscribers that the lists for endowing beds in hospitals are now closed, and the total obtained amounts to more than £4300. The surplus to be given to the Prince of Wales's Fund will remain open for the present, and donations to this will be acknowledged by the hon. treasurer, Mr. Walter H. Burns, 22, Old Broad-street. Mrs. Ralph Vivian having written to Sir Fleetwood Edwards asking him to bring to the notice of the Queen the Fund which had been collected in her honour, and to participate in commemorating the sixtieth anniversary of Her Majesty's reign, has received the following reply:—

"Osborne, July 28th, 1897.

"DEAR MRS. VIVIAN,—I have laid your letter of the 25th inst. before the Queen, who desires me to say how touched she is, and also how grateful to yourself and to all those who have contributed to and collected the American Victoria Jubilee Fund. Her Majesty is deeply sensible of the kindness thus evinced, and greatly pleased that the handsome sum thus realised is to be devoted to so good and useful a purpose as the endowment of the beds in the hospitals you name, while the surplus is to be devoted to the Prince of Wales's Fund. The Queen trusts you will be kind enough to express her sincere thanks to all those concerned for their very kind action.

"Believe me, yours very faithfully,

"(Signed FLEETWOOD J. EDWARDS."

THE SEWAGE DIFFICULTY IN MANCHESTER AND SALFORD.

THE treatment and disposal of sewage is a very serious question for all cities and towns, and now that the county councils have power to appoint committees to look after the pollution of rivers and streams we may expect progress in this important matter. The pollution of our rivers ought to be and must be prevented, and whether the effluent be obtained by filtration through land or by treatment with chemicals or both, it must be of such a nature as to be fit to enter these rivers. The time, however, has arrived when it may be considered which is the best method for a particular district. A deputation recently waited on the Parliamentary Secretary of the Local Government Board, their object being to obtain a relaxation of the rule according to which sewage purification must be carried out by means of filtration through land. The deputation wished that artificial filtration should be allowed. The members of the deputation were representatives of the Mersey and Irwell Joint Committee—namely, Sir J. T. Hibbert (chairman), Sir Henry Roscoe (chemical adviser), Mr. R. A. Tatton (chief inspector), Dr. Hewitt, and Mr. J. Brierley.

Sir J. T. Hibbert pointed out the great importance of the subject to the Mersey and Irwell districts, which contained seven county boroughs, with a population of 1,148,000; eleven non-county boroughs, with 249,000 inhabitants; sixty-two urban district councils, ruling 620,000 persons; and ten rural district councils under whose jurisdiction were 127,000 inhabitants. The total rateable value of the district was £9,731,000. The Joint Committee dealt with four rivers—the Mersey, Irwell, Irk, and Medlock—on the banks of which were 394 manufactories. The committee was formed under the Act of 1888 and had almost succeeded in keeping solid matters out of the streams. The committee congratulated themselves that there were schemes everywhere for preventing the pollution of rivers. The policy of the committee was to deal with every authority, large or small, on the same principles. Action had been taken against both Manchester and Salford, but as yet neither had laid a satisfactory scheme before the committee. The committee, knowing the difficulties of Manchester and Salford in getting suitable land for filtration purposes, instructed their chemical adviser (Sir Henry Roscoe) and their chief engineer (Mr. Tatton) to report on the subject of precipitation and filtration. Sir Henry Roscoe reported: "I am of opinion that the adoption of artificial filters is a move in the right direction, especially in the case of large towns having difficulties in acquiring sufficient area of land and of a suitable character for the purification of its sewage. Land filtration, so far as the chemical results are concerned, is superior to artificial filtration. Unfortunately, however, the volume of effluent that can be treated permanently on land is small as compared with the volume that can be filtered by artificial filters." Mr. Tatton stated: "There seems, therefore, to be ample evidence to show that if filters are constructed to conform with the principles which have been laid down satisfactory results may be obtained. The reasonable view to be taken of the matter seems to be that, instead of any hard and fast rule being laid down, each case should be treated on its own merits; that if suitable land can be obtained it should be used, but that if it cannot be got artificial filters should be sanctioned, but with stringent restrictions as to the volume of sewage allowed on a given area." The committee therefore, on the strength of these reports, approached the Local Government Board to have a more open mind on the treatment of sewage.

Sir Henry Roscoe also pointed out that the only land that Manchester could purchase was not fit for a sewage filter and that Salford and other Lancashire towns were in the same fix. In addition to the want of a sufficiently porous soil the climate was against land filtration, and the most suitable land became waterlogged. He argued that each case should be treated on its merits.

Dr. Hewitt stated that Salford's experts said that a satisfactory effluent could be obtained from the sewage by precipitation and artificial filtration. Oldham and Rochdale had taken land only to find it unfit for the purposes of filtration.

The Parliamentary Secretary (Mr. T. W. Russell, M.P.)

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stated that he had given personal attention to the matter, and had visited Radcliffe and Royton among other places in order to see purification works. The difficulties mentioned had, he said, placed on the Local Government Board a responsibility to examine the whole question afresh. The President (Mr. Chaplin) had authorised him to say that the views of the deputation would receive immediate consideration. It might be necessary to make a full inquiry into the whole subject; but however that might be he could guarantee that the President and officers of the Board would promptly and fully consider everything that had been urged, and, in his opinion, rightly urged.

The importance of sewage disposal in towns and urban districts cannot be concealed. The pollution of rivers must and ought to cease, but to enable public authorities to do this efficiently the Local Government Board must relax its rule as to land filtration and allow such methods to be used as will enable an effluent to be produced that is fit to enter our streams and watercourses. There is no doubt about land filtration giving the best effluent, but precipitation and artificial filtration ought to produce an effluent fit to enter our rivers, and where suitable land is not available local authorities ought to be permitted to adopt such a scheme.

THE SOUDAN CAMPAIGN.

SIR H. KITCHENER knows his own mind and manages to keep his knowledge to himself, in order that the enemy may be quite unprepared for the event until it actually happens. We have been expecting to hear any day that the Nile had risen high enough to permit the continuation of the march from Dongola and its neighbourhood towards the south. The news has now arrived of the capture of Abu Hamed on the morning of the 7th inst. after severe house-to-house fighting with relatively small loss to Major-General Hunter's column, and it is rumoured that the expedition may push straight on to Berber. Life for the English officers has been very trying since Dongola was captured last September, there has been very little leave granted, and the work has been chiefly that of making railroads and forwarding transport. As they go forward on their campaign let us hope that the elements will be kinder to them than last year, and that they may be saved the unnecessary discomforts of dust storms and rain torrents. Cholera is not likely to delay them this summer, for Egypt has been free from it since the autumn. Abu Hamed is rapidly being connected with Wady Halfa by railway, and there will be no difficulty about forwarding transport of all kinds.

By the Nile the army is over 1200 miles from Cairo; and it says something for the efficiency of a handful of British officers that this journey can now be made in two weeks. Fifteen thousand Egyptian soldiers have now been quartered for ten months in the province of Dongola. Most of the food and the whole of the army's equipment and stores have been supplied from Cairo; and while all the necessary supply and transport work has been going on time has been found to lay two railways of a length of nearly 500 miles, and all this without any apparent fuss or trouble. In Egypt the work has been done by three staff officers at Assouan, two at Wady Halfa, and three between Wady Halfa and Dongola; one of these is a colonel and all the others are captains or subalterns, all picked men, certain to be good-tempered under trying circumstances and with that love of responsibility which is the special attribute of so many Englishmen. The health of the troops is uniformly good in the Soudan, in spite of hot days, when every one looks forward to sunset because of the comparatively cool night which braces the men up for the morrow's heat. In the Dongola province the hot months are from May to December, but life is more bearable when the Nile rises and the nights become cooler. The really cool months are from January to April, and then the chief plague is a small black fly, which some of the natives fear so much that they wear on their heads wisps of straw slowly burning to keep off the pest.

Another peculiarity of that part of the Soudan is that the Nile is half a mile wide at Debbeh, and seems to get wider instead of narrower as the traveller ascends it. The climate is healthy enough except for malaria when the Nile is high and later when it is sinking again. If it were not for the healthiness of the desert English officers would hardly have been able to remain for two years and more south of Cairo without any leave. When the whole country is quieted down it is difficult to see who is going to people it. Slavery is no longer permitted, the original inhabitants were killed off by the incursions of Wad el Njuny or have retreated south with the Mahdists. The Egyptian Government has been advised to send pensioners to Dongola, where they might receive land in exchange for part of their pensions. The cultivable portion of Dongola province is 79,000 acres, but the surface under cultivation to-day is only 27,000 acres, and even this can only be worked by old men, women, and children, because the adult males are exceedingly scarce.

According to the latest intelligence, the loss sustained by the Dervishes in their defence of Abu Hamed was considerable, while the casualties on the Egyptian side were, as we have said, relatively insignificant. Two British officers were killed. It is rumoured that the Khalifa is preparing for retreat and is sending his stores from Omdurman in case of the advance of the Egyptian force and the capture of that place.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Cheltenham Urban District.—The Cheltenham public abattoir appears gradually to be growing in favour, and the Council have now obtained a provisional order giving them considerable powers in respect to the closure of existing slaughter-houses. Dr. Garrett furnishes in his report a very interesting account of the colouration of the water in one of the storage reservoirs, that at Dowdeswell, by the growth of an *alga* (Crenothrix polyspora var. Cheltonensis), which gave to the water a markedly red appearance and an unpleasant odour. The water in the reservoir at the time was in a state of considerable stagnation, there being but little fresh water entering it. The filters were unable to separate the organisms, which appear also to have multiplied in the mains. Beyond the red colouration and the disagreeable odour which the organism occasioned no bad results followed, and Dr. Garrett was unable to trace any illness to its consumption. It may be observed that the colouration of the water was most marked during the months of March, April, and May. The colouration of water which occurs from time to time in reservoirs causes much alarm amongst the consumers, and no little anxiety to those who have the management of the waterworks, and those of our readers who are interested in this subject will find in *Public Health* for October, 1896, a very instructive article by Dr. Garrett upon the Cheltenham manifestations, and also a reference to certain occurrences of a similar nature. It may be added that in some cases the covering in of the reservoirs will probably be found a useful preventive measure, and careful filtration is calculated to improve matters. The prevalence of small-pox in Gloucester caused the Cheltenham Sanitary Authority much anxiety, more especially as the baneful influence of Gloucester in the matter of vaccination had not been without its effects in Cheltenham, the guardians having taken up a deplorably weak position in the matter and refused to prosecute defaulters. The sanitary authority, however, took the matter into their own hands and appointed numerous medical practitioners to perform vaccinations in the town free of expense. As a result of this step a very large number of persons were vaccinated or re-vaccinated, and eventually the expenditure thus entailed was allowed, after petitions to the Local Government Board on the matter, to be defrayed by the board of guardians, who in the first instance seem to have been either incapable or undesirous of doing what was obviously their duty. It seems to us that the inhabitants of Cheltenham are much indebted to the medical men of that town for insisting upon the necessity for some prompt action. The justices as well as the guardians of Cheltenham are apparently unwilling to carry out the law in respect to vaccination.

Eccles Urban District.—Dr. J. H. Crocker thinks it not improbable that the pollution of the soil by excrement may be a means by which scarlet fever is spread. He refers to the intestinal and urinary complications of the disease, and

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raises the question whether the excretions from these parts may not contain the specific poison of the disease. Dr. Crocker also points to the seasonal variations of the disease as tending to support in some degree a thesis that the heating of polluted soil during the late summer months may have something to do with the spread of scarlet fever in certain districts where soil pollution takes place in a marked degree. It will be within the memory of some of our readers that Dr. Niven, of Manchester, last year advanced a similar hypothesis.

Truro Urban District.—The Truro sanitary authority continue to allow the sewage of the locality to pass by numerous outlets into the rivulets which traverse the city, and the tourist is still, at the end of a most picturesque journey on the Fal, made unpleasantly aware of the fact, more especially if he is unfortunate enough to arrive at Truro near the time of low water. The subject of dealing with this nuisance has, Mr. Edward Sharp tells us, been in suspense during the past year, and he believes that the sanitary authority are waiting to see the result of the septic tank process at Exeter. He thinks that if this process proves a success it would be more economical than any other the council have as yet had under their consideration. At the same time, he expresses a hope that measures will be taken to relieve the inhabitants around the West Bridge from the dangerous nuisance arising from the outfall sewers during the summer months.

Eastbourne Urban District.—The general death-rate of this district during 1896 was the lowest on record, being but 10·43 per 1000, or excluding the deaths of non-residents 9·10 per 1000. Dr. W. G. Willoughby discusses the factors which have made for this low death-rate, and while allowing for the operation of such influences as age and sex distribution, &c., he thinks that the low death-rate is in part due to the efforts of the sanitary authority. The water-supply of Eastbourne is still in the hands of a private company, but the ratepayers, by a majority of over 1000, have declared themselves in favour of the acquisition of the water-supply by the corporation, and at the present time there are two Bills before Parliament, one promoted by the corporation and the other by the company. There can be little doubt upon general principles as to the desirability of the water-supply of a community being in the hands of its sanitary authority. Dr. Willoughby, in referring to the report of the Royal Commission on Vaccination, points out that the dissentients have not the courage of their opinions, and that nowhere do they express disbelief in vaccination or advise that the machinery of administration shall be done away with. Under the heading of enteric fever Dr. Willoughby mentions six cases in which oysters were the probable cause. The molluscs in question were traced "*vid* Liverpool to a tidal estuary below a very large town famous for typhoid fever. Other medical officers had traced cases to the same district." Let it be added to the credit of the merchant that he was willing to meet all suggestions and to change the source of his supply. Water-borne enteric fever was conspicuous in Eastbourne during 1896, and at least fifty cases were traced to the consumption of specifically polluted water from the Bourne stream, 45 cases being infected directly from the water, and 7 others contracting the disease from those already infected. Apparently the outburst, which occurred between Sept. 17th and Oct. 27th, was due to the fact that many persons preferred to drink the waters of the Bourne stream in preference to the saline water which was at that time being furnished from the public mains. The sanitary authority seem to have done all in their power to warn the people of the danger which they incurred in drinking the Bourne water, but the notices of caution were torn down each time they were put up. In 1870 an outbreak of enteric fever occurred in connexion with the same stream.

Belfast Urban District.—Dr. Whitaker's report for 1896, just published, shows that, notwithstanding that Belfast is continuing to increase in population the deaths during the past year were less numerous than in 1895; but although the death-rate is below the average of the past five years, it is higher than that of any other city or town in Ireland with the exception of Dublin. The deaths from zymotic diseases are very numerous, but the new hospital for infectious diseases will, when built, tend to diminish the mortality and the prevalence of these diseases by allowing isolation and better treatment of such types of cases. 219 cases of typhoid fever, 169 of whooping-cough, 519 of scarlet fever, and 769 of measles were reported during the year. Whooping-cough caused 215 deaths, measles 205, and typhoid fever 136 during the year. There were 1008 deaths from phthisis and 1640 from diseases of the respiratory organs. The annual birth-rate for the year was 34·5, and the death-rate 23·1. Of the 6953 deaths registered during the year, 2648 were attributed to phthisis and diseases of the respiratory organs, while those from zymotic diseases were 1005, these together making a total of 3653, or more than half of the deaths registered from all causes. It is a noteworthy fact that in Belfast diseases of the respiratory organs caused during the past year nearly one-fourth of the mortality from all causes. The dampness of the soil, the moist climate, and the nature of the industrial employments may be the causes of this high death-rate. The deaths (1008) from phthisis, though numerous, were fewer than in any of the six preceding years, 1894 alone excepted. The mortality from diarrhœa and typhoid fever was less than in the preceding year, but it is not satisfactory to learn that Belfast has the highest death-rate from typhoid fever of any city or town in Ireland. The disease seems to prevail, not only in houses with bad surroundings and defective sanitation, but also in those recently built and properly constructed, where no defects can be detected; nor is the disease confined to any district of the city or to any particular kind of soil. It is, indeed, remarkable, as showing how difficult it is to solve the problem of the causation of typhoid fever, that the district of Belfast in which the fewest number of deaths occurred is Millfield—just the one in which the people are the poorest, the streets the narrowest, the houses the oldest, and the sanitary conditions the most unsatisfactory of any in the city of Belfast. It is curious that the deaths from whooping-cough were the largest number of all the zymotic diseases and were nearly double those from the same disease in 1895. The deaths of infants under one year old were less numerous than in 1895. During the year there were treated in the Royal Hospital 90 cases of infectious diseases with 10 deaths, all from typhoid fever; while in the Union Hospital there were treated 554 cases of infectious diseases with 36 deaths. The Corporation have decided to build a new hospital for infectious diseases, and during the year steady progress has been made in improving the sanitation of the city. It would be a very great addition to Dr. Whitaker's most excellent report if he supplied a map of Belfast showing the boundaries of the various dispensary districts.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 5769 births and 5666 deaths were registered during the week ending Aug. 7th. The annual rate of mortality in these towns, which had increased in the five preceding weeks from 14·7 to 22·9 per 1000, further rose last week to 26·9. In London the rate was 25·7 per 1000, while it averaged 27·7 in the thirty-two provincial towns. The lowest rates in these towns were 12·0 in Halifax, 12·3 in Huddersfield, 13·9 in Gateshead, and 16·1 in Sunderland; the highest rates were 34·2 in Nottingham, 35·1 in Sheffield, 41·3 in Liverpool, and 46·2 in Preston. The 5666 deaths included 1994 which were referred to the principal zymotic diseases, against 904 and 1337 in the two preceding weeks; of these, 1543 resulted from diarrhœa, 174 from measles, 62 from diphtheria, 52 from whooping-cough, 34 from scarlet fever, 28 from "fever" (principally enteric), and 1 from small-pox. The lowest death-rates from these diseases were recorded in Swansea, Gateshead, Huddersfield, and Halifax; while they caused the highest rates in Sheffield, Nottingham, Liverpool, and Preston. The greatest mortality from measles occurred in Manchester, Wolverhampton, Blackburn, Salford, and Preston; from whooping-cough in Oldham; and from diarrhœa in Leicester, Birmingham, Portsmouth, Sheffield, Liverpool, and Nottingham. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 62 deaths from diphtheria included 42 in London and 4 in Leicester. One fatal case of small-pox was registered in London, but not one in any other of the thirty-three large towns, and one small-pox patient was under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 7th inst. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the

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end of the week was 3239, against numbers increasing from 2380 to 3106 on the fourteen preceding Saturdays; 376 new cases were admitted during the week, against 381, 396, and 360 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 158 and 146 in the two preceding weeks, rose again to 156 last week, but were 25 below the corrected average. The causes of 57, or 1·0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Oldham, Bradford, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in Cardiff, Birmingham, Blackburn, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns which had been 19·5 and 18 2 per 1000 in the two preceding weeks, rose again to 20·5 during the week ending Aug. 7th, but was 6·4 per 1000 below the mean rate during the same period in the thirty-three large English towns The rates in the eight Scotch towns ranged from 12 8 in Aberdeen and 18·2 in Paisley to 24·2 in Dundee and 26·3 in Leith. The 612 deaths in these towns included 87 which were referred to diarrhœa, 22 to whooping-cough, 19 to measles, 8 to scarlet fever, and 1 to diphtheria. In all, 137 deaths resulted from these principal zymotic diseases, against 100 and 89 in the two preceding weeks. These 137 deaths were equal to an annual rate of 4·6 per 1000, which was 4·9 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 34, 35, and 51 in the three preceding weeks, further rose to 87 last week, of which 65 occurred in Glasgow, 8 in Dundee, and 5 in Paisley. The 22 deaths referred to whooping-cough corresponded with the number in the preceding week, and included 12 in Glasgow, 5 in Leith, and 3 in Dundee. The fatal cases of measles, which had been 15 and 5 in the two preceding weeks, rose again to 19 last week, of which 12 occurred in Leith, 4 in Edinburgh, and 3 in Glasgow. The deaths from scarlet fever, which had been 5 in each of the two preceding weeks, rose to 8 last week, and included 2 in Glasgow and 2 in Dundee. The deaths referred to diseases of the respiratory organs in these towns, which had been 87 and 66 in the two preceding weeks, rose again to 71 last week, and slightly exceeded the number in the corresponding period of last year. The causes of 38, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks from 24 2 to 22·8 per 1000, further fell to 22·4 during the week ending Aug. 7th. During the past five weeks of the current quarter the death-rate in the city has averaged 22·9 per 1000, the rate during the same period being 20·1 in London and 19·6 in Edinburgh. The 150 deaths registered in Dublin during the week under notice showed a decline of 3 from the number in the preceding week, and included 25 which were referred to the principal zymotic diseases, against 20 and 14 in the two preceding weeks; of these, 18 resulted from diarrhœa, 4 from scarlet fever, 1 from diphtheria, 1 from whooping-cough, and 1 from "fever." These 25 deaths were equal to an annual rate of 3·7 per 1000, the zymotic death-rate during the same period being 8 1 in London and 1·1 in Edinburgh. The fatal cases of diarrhœa, which had increased from 2 to 8 in the three preceding weeks, further rose to 18 last week. The deaths referred to scarlet fever, which had been 2 and 1 in the two preceding weeks, rose again to 4 last week. The mortality from whooping-cough and from "fever" corresponded with that recorded in the preceding week. The 150 deaths in Dublin last week included 40 of infants under one year of age, and 34 of persons aged upwards of sixty years; the deaths of infants showed a slight decline, while those of elderly persons slightly exceeded the number recorded in the preceding week. Six inquest cases and 4 deaths from violence were registered; and 43, or more than one-fourth, of the deaths occurred in public institutions. The causes of 8, or more than 5 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING JULY, 1897.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during July in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 11·2 per 1000 of the population, estimated at 4,463,169 persons in the middle of this year. In the three preceding months the rates had been 7·2, 8·1, and 8·7 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Hammersmith, St. George Hanover-square, Hampstead, Stoke Newington, St. Martin-in-the-Fields, Lewisham, and Plumstead; while they showed the largest excess in St. James Westminster, Strand, Holborn, Clerkenwell, St. Luke, Whitechapel, and St. Saviour Southwark. Seven cases of small-pox were notified in London during July, against 11, 10, and 4 in the three preceding months; of these, 2 belonged to City of London, and 1 each to Paddington, St. George Hanover Square, Marylebone, Islington, and Hackney sanitary areas. One small-pox patient was admitted into the Metropolitan Asylum Hospitals during July, and remained under treatment at the end of the month. The prevalence of scarlet fever in London showed a marked further increase upon that recorded in recent months; this disease was proportionally most prevalent in St. James Westminster, St. Giles, Strand, Clerkenwell, Whitechapel, Mile End Old Town, St. Saviour Southwark, and Woolwich sanitary areas. The Metropolitan Asylum Hospitals contained 3064 scarlet fever patients at the end of July, against 2330, 2495, and 2786 at the end of the three preceding months; the weekly admissions averaged 364, against 225, 258, and 272 in the three preceding months. The prevalence of diphtheria in London showed a further increase upon that recorded in recent months; among the various sanitary areas this disease showed the highest proportional prevalence in Clerkenwell, St. Luke, Mile End Old Town, St. Saviour Southwark, St. George Southwark, and Camberwell. There were 957 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of July, against 764, 783, and 864 at the end of the three preceding months; the weekly admissions averaged 139, against 108 and 125 in the two preceding months. The prevalence of enteric fever in London also showed a slight further increase upon that recorded in recent months; this disease was proportionally most prevalent in St. James Westminster, Bethnal Green, Whitechapel, St. George Southwark, and Greenwich sanitary areas. Erysipelas showed the highest proportional prevalence in Strand, Shoreditch, Bethnal Green, Whitechapel, and Newington sanitary areas. The 14 cases of puerperal fever notified in London during July included 2 in Fulham, 2 in Hackney, and 2 in Wandsworth sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas of the metropolis, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, July 31st, the deaths of 6261 persons belonging to London were registered, equal to an annual rate of 18·3 per 1000, against 16·6, 14 9, and 13 9 in the three preceding months. The lowest death-rates during July in the various sanitary areas were 9·8 in Lewisham (excluding Penge), 10 0 in Plumstead, 11·1 in Hampstead, 11 6 in Lee, 11·7 in Wandsworth, 13·9 in Paddington, and 14·1 in Stoke Newington; the highest rates were 25·6 in Holborn, 26·1 in St. George Southwark, 31·3 in St. George-in-the-East, 31 9 in St. Saviour Southwark, 32·8 in Limehouse, and 33·2 in St. Luke. During the four weeks of July 1428 deaths were referred to the principal zymotic diseases in London; of these, 939 resulted from diarrhœa, 160 from diphtheria, 136 from whooping-cough, 99 from measles, 68 from scarlet fever, 25 from enteric fever, and 1 from small-pox. These 1428 deaths were equal to an annual rate of 4·2 per 1000. The lowest zymotic death-rates were recorded in St. George Hanover-square, Hampstead, Lewisham, Woolwich, Lee, and Plumstead; and the highest rates in St. Luke, Shoreditch, St. George-in-the-East, Limehouse, St. George Southwark, and Newington sanitary areas. The single fatal case of small-pox belonged

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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS OF LONDON—JULY, 1897.

(Specially compiled for THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1897.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,463,169	7	2021	1171	—	170	4	14	428	16	3831	11·2	1	99	68	160	136	—	25	—	939	1428	4·2	6261	18·5	221
West Districts.																										
Paddington	126,161	1	47	33	—	3	—	—	14	—	92	9·5	—	—	4	7	4	—	—	—	19	34	3·5	135	13·9	125
Kensington	171,427	—	59	23	—	5	—	—	8	1	102	7·8	—	—	1	5	1	—	—	—	36	45	3·4	228	17·3	252
Hammersmith	106,969	—	23	8	—	—	—	—	7	—	38	4·7	—	1	—	—	12	—	—	—	24	37	4·6	132	16·2	257
Fulham	120,040	—	92	26	—	1	—	2	11	1	133	14·4	—	—	3	3	8	—	—	—	45	59	6·4	174	18·9	251
Chelsea	96,692	—	44	25	—	1	—	—	8	—	78	10·5	—	—	1	4	—	—	1	—	37	43	5·8	150	20·2	309
St. George Hanover-square	80,330	1	9	11	—	1	—	—	1	—	23	3·7	—	—	1	—	—	—	—	—	6	7	1·1	91	14·8	134
Westminster	53,027	—	19	13	—	2	—	—	7	1	42	10·3	—	—	1	1	1	—	—	—	19	22	5·4	75	18·4	313
St. James Westminster	22,576	—	22	7	—	3	—	—	2	—	34	19·6	—	—	1	—	—	—	1	—	2	4	2·3	25	14·4	193
North Districts.																										
Marylebone	140,808	1	34	26	—	4	—	—	17	2	84	7·8	—	1	1	2	4	—	1	—	29	38	3·5	200	18·5	189
Hampstead	77,275	—	21	8	—	—	—	—	6	—	35	5·9	—	—	2	—	5	—	1	—	4	12	2·0	66	11·1	163
St. Pancras	242,255	—	88	49	—	11	1	—	22	—	171	9·2	—	6	2	8	15	—	1	—	44	76	4·1	357	19·2	265
Islington	341,134	1	117	54	—	20	—	1	23	—	216	8·3	—	—	3	10	10	—	3	—	30	56	2·1	376	14·4	122
Stoke Newington	34,136	—	13	3	—	—	—	1	2	—	19	7·3	—	—	—	1	2	—	—	—	7	10	3·8	37	14·1	146
Hackney	216,698	1	88	63	—	5	—	2	20	—	179	10·8	—	11	4	9	3	—	—	—	47	74	4·5	264	15·9	169
Central Districts.																										
St. Giles	37,840	—	24	8	—	2	—	—	2	—	36	12·4	—	—	3	2	1	—	1	—	1	8	2·8	57	19·6	143
St. Martin-in-the-Fields	12,711	—	3	—	—	1	—	—	3	—	7	7·2	—	—	—	—	1	—	—	—	1	2	2·1	22	22·6	333
Strand	23,562	—	24	3	—	2	—	—	4	—	33	18·3	—	—	—	—	1	—	1	—	6	8	4·4	43	23·8	312
Holborn	30 493	—	9	40	—	1	—	—	—	—	50	21·4	—	1	1	3	1	—	—	—	9	15	6·4	60	25·6	268
Clerkenwell	66,162	—	42	51	—	3	—	—	8	—	124	24·4	—	7	—	6	5	—	—	—	12	29	5·7	112	22·1	251
St. Luke	41,279	—	25	29	—	2	—	—	6	—	62	19·6	—	8	3	3	1	—	—	—	15	30	9·5	106	33·2	264
City of London	30,228	2	5	4	—	1	—	1	3	2	18	7·8	1	1	1	—	3	—	—	—	1	7	3·0	49	21·1	162
East Districts.																										
Shoreditch	121,883	—	55	34	—	4	—	—	20	—	113	12·1	—	4	2	5	1	—	—	—	61	73	7·8	232	24·8	321
Bethnal Green	129,098	—	46	38	—	12	—	—	32	—	148	14·9	—	6	2	4	3	—	1	—	24	40	4·0	202	20·4	177
Whitechapel	79,724	—	82	26	—	11	—	—	16	—	135	22·1	—	2	1	1	3	—	1	—	8	16	2·6	124	20·3	207
St. George-in-the-East	47,917	—	25	15	—	1	—	—	3	—	44	12·0	—	1	—	2	—	—	—	—	22	25	6·8	115	31·3	370
Limehouse	58,508	—	34	20	—	4	—	—	1	—	59	13·1	—	3	1	4	5	—	1	—	24	38	8·5	147	32·8	364
Mile End Old Town	111,883	—	55	49	—	3	—	—	9	—	156	18·2	—	1	—	5	—	—	1	—	28	35	4·1	162	18·9	260
Poplar	169,811	—	55	45	—	10	1	1	15	—	167	12·8	—	2	—	8	2	—	3	—	42	57	4·4	259	19·9	272
South Districts.																										
St. Saviour Southwark	24,919	—	18	9	—	3	—	—	4	—	34	17·8	—	2	2	1	1	—	1	—	3	10	5·2	61	31·9	368
St. George Southwark	60,388	—	28	26	—	6	—	1	7	—	67	14·5	—	4	—	7	5	—	—	—	30	46	9·9	121	26·1	301
Newington	122,191	—	71	28	—	3	—	1	21	—	124	13·2	—	2	4	5	4	—	2	—	53	70	7·5	229	24·4	324
St. Olave Southwark	11,480	—	8	2	—	—	—	—	2	—	12	13·6	—	—	—	—	—	—	—	—	2	2	2·2	18	20·4	161
Bermondsey	85,629	—	26	17	—	5	—	—	7	—	55	8·4	—	5	1	4	3	—	—	—	27	40	6·1	129	19·6	240
Rotherhithe	40,643	—	29	6	—	—	—	—	3	—	38	12·2	—	2	2	—	1	—	—	—	10	15	4·8	65	20·8	206
Lambeth	300 048	—	99	66	—	5	2	1	23	9	205	8·9	—	3	10	8	7	—	1	—	63	82	4·0	440	19·1	227
Battersea	168,877	—	117	47	—	—	—	—	15	—	179	13·8	—	4	3	7	7	—	—	—	26	47	3·6	196	15·1	206
Wandsworth	195,612	—	84	42	—	6	—	2	20	—	164	10·9	—	4	2	5	4	—	—	—	20	35	2·3	176	11·7	139
Camberwell	257,575	—	95	127	—	9	—	1	27	—	259	13·1	—	15	1	19	7	—	1	—	64	107	5·4	377	19·1	264
Greenwich	178,367	—	64	55	—	13	—	—	17	—	149	10·9	—	1	4	5	1	—	1	—	30	42	3·1	253	18·5	209
Lewisham (excluding Penge)	86,152	—	23	5	—	2	—	1	3	—	34	5·1	—	2	1	—	2	—	—	—	5	10	1·5	65	9·8	106
Woolwich...	41,409	—	33	12	—	—	—	—	1	—	46	14·5	—	—	—	2	—	—	—	—	3	5	1·6	50	15·7	141
Lee	39,215	—	21	6	—	1	—	—	4	—	32	10·6	—	—	—	3	2	—	—	—	—	5	1·7	35	11·6	91
Plumstead	61,057	—	14	12	—	3	—	—	4	—	33	7·0	—	—	—	2	—	—	—	—	—	2	0·4	47	10·0	59
Port of London	—	—	1	—	—	1	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 13 cases of membranous croup.

† Including deaths from membranous croup.

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to City of London sanitary area. The 99 deaths from measles were less than half of the corrected average number in the corresponding periods of the ten preceding years; this disease was proportionally most fatal in Clerkenwell, St. Luke, St. George Southwark, and Bermondsey sanitary areas. The 68 fatal cases of scarlet fever were 8 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in St. Giles, St. Luke, and St. Saviour Southwark. The 160 deaths from diphtheria were 13 above the corrected average number; the mortality from this disease was highest in Holborn, Clerkenwell, St. Luke, Limehouse, St. George Southwark, Greenwich, and Lee sanitary areas. The 136 fatal cases of whooping-cough were 50 below the corrected average number; this disease was proportionally most fatal in Hammersmith, Clerkenwell, City of London, Limehouse, and St. George Southwark sanitary areas. The 25 deaths referred to enteric fever were 10 below the corrected average number; the mortality from this disease showed no marked excess in any of the sanitary areas. The 939 fatal cases of diarrhœa were 99 above the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Fulham, Chelsea, Shoreditch, St. George-in-the-East, St. George Southwark, and Newington. In conclusion, it may be stated that the mortality in London during July from these principal zymotic diseases was nearly 7 per cent. below the average.

Infant mortality in London, measured by the proportion of deaths under one year of age to registered births, was equal to 221 per 1000 during July, and exceeded the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in Paddington, St. George Hanover-square, Islington, Lewisham, Lee, and Plumstead; and the highest rates in Westminster, St. Martin-in-the-Fields, Strand, Shoreditch, St. George-in-the-East, Limehouse, St. Saviour Southwark, and Newington.

THE SERVICES.

ARMY MEDICAL STAFF.

THE under-mentioned Surgeon-Captains to be Surgeon-Majors:—James H. Curtis, Sydney G. Allen, James S. Green, Cecil A. Lane, Philip C. H. Gordon, Llewellyn T. M. Nash, John H. Brannigan, Michael O'Halloran, Claude S. Sparkes, William H. Pinches, James H. Daly, George J. A. Tuke, Frederick J. Greig, Henry D. Rowan, Howard Carr, Harold G. Hathaway, Benjamin A. Maturin, Thomas Daly, Michael J. Sexton, Herbert E. Cree, William H. Starr, Alexander A. Sutton, Alfred P. H. Giffiths, Frederick J. W. Stoney, and John T. Burke.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Lieutenant J. C. Robertson, Bengal, are placed at the disposal of the Foreign Department. The services of Brigade-Surgeon-Lieutenant-Colonel G. W. R. Hay are placed temporarily at the disposal of the Government of India in the Military Department. The services of Surgeon-Captain C. Milne are replaced at the disposal of the Government of India. The services of Surgeon-Lieutenant H. J. Walton are replaced at the disposal of the Government of India in the Home Department. The services of Surgeon-Lieutenant H. A. Dickson are replaced at the disposal of the Government of India in the Home Department. Surgeon-Lieutenant H. A. F. Knapton is appointed to the medical charge of the Railway Inspection duty at Kalyan.

NAVAL MEDICAL SERVICE.

Fleet-Surgeon Charles Francis Newland has been placed on the retired list of his rank at his own request.

VOLUNTEER CORPS.

Royal Engineers (Volunteers): 1st London: Surgeon-Lieutenant R. Buswell resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the corps on his retirement. *Rifle:* 2nd Volunteer Battalion the Queen's (Royal West Surrey Regiment): Honorary Assistant Surgeon J. A. Lorimer resigns his appointment. 3rd Volunteer Battalion the King's (Liverpool Regiment): Herbert Harrison Marsden, gent., to be Surgeon-Lieutenant. 1st (Hertfordshire) Volunteer Battalion the Bedfordshire Regiment: Surgeon-Lieutenant-Colonel D. B. Balding resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the battalion on his retirement. 1st Volunteer Battalion the Royal Welsh Fusiliers: Surgeon-Lieutenant J. A. Eyton-Jones resigns his commission. 3rd Volunteer Battalion the Royal Welsh Fusiliers: Surgeon-Captain T. E. Jones resigns his commission.

VOLUNTEER MEDICAL STAFF CORPS.

The London Companies: The services of Surgeon-Captain W. E. St. M. Raw are dispensed with; Surgeon-Lieutenant J. Harper, M.D., to be Surgeon-Captain.

THE MEDICAL SERVICES.

The following is a list of candidates for Her Majesty's Army Medical Staff and the Indian Medical Service who were successful at the recent competitive examination held in London:—

ARMY MEDICAL STAFF.

	Marks.		Marks.
H. O. B. Browne-Mason	2933	J. D. G. Macpherson ...	2139
B. Watts	2713	W. P. Gwynn	2129
H. G. Martin	2700	C. J. O'Gorman	2129
F. S. Penny	2671	M. M. Lowsley	2109
S. de C. O'Grady	2441	N. H. Ross	1986
T. H. Gloster	2377	E. A. Bourke	1965
J. G. Berne	2327	A. C. Lupton	1868
A. H. O. Young	2298	P. H. Collingwood ...	1840
J. E. S. Old	2206	G. B. Carter	1800
F. F. Carroll	2176		

INDIAN MEDICAL SERVICE.

	Marks.		Marks.
T. H. Delany	3142	G. Tate	2777
J. W. F. Raft	3020	P. K. Chitale	2776
S. R. Douglas	3012	G. McPherson	2704
S. Hunt	2966	F. D. S. Fayrer	2697
E. J. O'Meara	2937	W. H. Cox	2678
R. F. Baird	2889	de V. Condon	2667
A. T. Gage	2877	H. A. J. Gidney	2648
G. C. Laing	2854	A. G. Sargent	2606
H. Kirkpatrick	2807	W. Lethbridge	2500

THE HEALTH OF THE ARMY IN INDIA.

The Anglo-Indian papers publish the orders which have been issued by the Commander-in-Chief in India in regard to the prevalence of venereal disease. After calling attention to the facts set forth in the official report of Earl Onslow's committee, and dwelling upon their extreme gravity, Sir George White makes a strong appeal to the soldiers serving in India to avoid vicious connexions, and warns them of the deplorable consequences likely to result therefrom. He also calls upon officers commanding regiments and all regimental and medical officers not to stand aloof as spectators, but to do everything in their power to draw the men from the bazaars and other neighbourhoods frequented by loose women, and points out a variety of ways in which their influence may be brought to bear upon soldiers, adding that disciplinary restrictions may be enforced where local circumstances render these desirable. The draft of the new Cantonment Rules has been published in the *Gazette of India*.

THE HEALTH OF MEDICAL OFFICERS IN THE BOMBAY PRESIDENCY.

According to the *Times of India* of the 23rd ult. there is a good deal of sickness among the medical staff, both of the British and Indian services, in the Bombay Presidency. Owing to the medical services being so short-handed at the present time it is very difficult to give them leave. The work that has been imposed upon the medical services of late, owing to the exceptional state of things in Bombay and India, has been great.

THE SEAFORTH HIGHLANDERS IN CRETE.

Among the items of intelligence from Crete it is stated that sickness (fever) has been unduly prevalent of late in the detachment of the Seaforth Highlanders, and that the detachment is moving its quarters in consequence from Canea to a more healthy site at Halefra.

FOREIGN UNIVERSITY INTELLIGENCE.—*Florence:* Dr. Galeotti has qualified as *privat-docent* of General Pathology, Dr. U. Flora as *privat-docent* of Medical Pathology, and Dr. U. Mantegazza as *privat-docent* of Dermatology.—*Siena:* Dr. Angelo Mannotti, of Pisa, has been recognised as *privat-docent* in Surgery.—*Würzburg:* Dr. Casimir Stubenrath has been recognised as *privat-docent* in Forensic Medicine, and Dr. Gustav Wolf, of Carlsruhe, as *privat-docent* of Psychiatrics. Dr. Stöhr, of Zürich, has been appointed to the chair of Anatomy.

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Correspondence.

"Audi alteram partem."

"HOSPITAL ABUSE."

To the Editors of THE LANCET.

SIRS,—The article by your Special Commissioner on "Hospital Abuse in Birmingham," published in your issue of July 31st, only came under my notice a day or two ago, or I should have replied earlier to his grave reflections upon our citizens generally, and the local members of the medical profession in particular. Without impugning your Commissioner's good faith for a single moment, I do not hesitate to say that the charges he makes against us are unjust in the last degree, more especially as they are entirely unsupported by evidence of any kind. It is really monstrous that a casual visitor to our city should take upon himself to assert that the vast majority of our population are not born and bred here (how can he possibly know?), and are only attracted here by sordid motives, with the intention of hurrying away again as soon as they have "made their pile," and that then, having committed himself to that view, he should proceed to convict the medical men of a similar taint and to attribute the failure of hospital reform largely to this fact.

The efforts of THE LANCET in the cause of hospital reform deserve and command the same sympathy here as elsewhere, though we have special difficulties to contend with; but the value and authority of such efforts can only be impaired by the importation into your inquiry of reckless personal imputations which are entirely unsubstantiated. If you desire the coöperation of the medical profession in this city in your laudable endeavour—as I feel sure you do—I venture to think that you will do well to repudiate and withdraw without delay the statements of which Dr. Saundby and I complain.—I am, Sirs, yours faithfully,

Aug. 10th, 1897. ALFRED H. CARTER, M.D., F.R.C.P.

To the Editors of THE LANCET.

SIRS,—You do me too much honour by devoting an entire leading article to my poor self, but as you complain of my omission to "exhibit the cowardice, cruelty, and misrepresentation of which I complain," and as you also accuse me of neglecting the courtesies of debate, I must ask from your justice a sufficient space for reply.

If your readers will only turn to the article in question[1] they will have no difficulty in seeing the nature of the charges against the citizens of Birmingham, and the medical profession in Birmingham, which you would have been more honoured in disavowing than in defending. This article asserts that the citizens of Birmingham are mostly strangers who "rush in from the outside in the eager hunt for money. They simply strive to make their pile and haste away again. Among such a population it is difficult to spread altruistic ideas; it is a wild endeavour all round after business each for himself, and but few pause to consider what are their duties to society." It is true that many citizens of Birmingham are not natives of the place, but it is not only not true, it is ridiculous, to say that these adopted citizens are not active participators in our public life. Birmingham has justly acquired a world-wide reputation for its municipal institutions and for the public spirit of its citizens, and among those who have done most for the city have been these "people from the outside." I need name only Mr. Chamberlain, Sir Josiah Mason, Sir John Jaffray, and Mr. Jesse Collings as instances to the point. A city which has shown so much public spirit that it has been often quoted as a model of municipal progress, which has even earned the perhaps too laudatory title of the best-governed city in the world, but which certainly has within the short space of a generation transformed itself, re-modeled and re-built its institutions so as to be a pattern and example to other places, can afford to disregard the ill-informed opinions you have so rashly published. I leave it to impartial judges to say whether such charges inflict more damage on Birmingham or on its critic.

[1] THE LANCET, July 31st, 1897, p. 284.

But your article proceeds to say that "this spirit"—i.e., of selfish money-grabbing—"also animates more or less—let us hope very much less—the medical profession, and therefore it has been *particularly difficult* to group the medical men together and get them to put their *personal interest* in the background so as to defend the position of the profession as a whole." The italics are mine; but surely this accusation is so serious that if it be untrue it is not undeserving of the title "monstrous" or of being styled a "cowardly cruel libel," and I say that it is not true, but the very opposite of the truth.

There is more to follow. We are told that "in Birmingham it suffices for one set of men to attempt to form an organisation or to start a movement, and at once another set of men are stirred with suspicions, or even moved to open hostility. Instead of inquiring what good cause is to be promoted, they will strive to find out that some personal interest is to be served." I seek in vain either in your article or in my recollection of the medical history of this city for the last twenty years any justification for these charges. To warrant them there surely should have been at least some one serious occasion upon which we showed ourselves unable to coöperate for the common good. "In smaller towns," we are told, "where the spirit of commercialism is not so rampant, organisation has been more easily accomplished." May one not suspect that the size of the town has more than the spirit of commercialism to do with this simplicity of organisation? But where is the town in which this boasted organisation has achieved any notable success? I know only of those in which it has made the state of the profession worse than before. Are we to be blamed because we do not move until we see a prospect of doing so with advantage?

The charge of want of organisation is as ridiculous as is the explanation given of the failure of the report of the Hospital Reform Committee. These only go to show how ill-informed you have been, and upon what an untrustworthy basis your charges have been laid. I cannot trespass farther on your space, but if you will withdraw the charges of which I complain I shall have much pleasure in telling your readers why the report of the Hospital Reform Committee failed.

With respect to your accusation of want of courtesy, I have only to add that if in rebutting accusations which are false and injurious I have been wanting in the courtesy due to those who make such accusations I apologise, but I leave it to the judgment of the profession to say whether such charges should ever have been published and defended in the editorial columns of THE LANCET.

I am, Sirs, yours faithfully,

Birmingham, Aug. 9th, 1897. ROBERT SAUNDBY.

To the Editors of THE LANCET.

SIRS,—I read and re-read your correspondent's article on Hospital Abuse in Birmingham, and I failed to find anything that deserved the epithets used by Dr. Saundby in his letter. For some reason or other Dr. Saundby has not thought fit to lend any countenance to the discussion of a question which has been agitating men's minds for the past thirty years—a question, I may add, that statesmen of the highest eminence and medical men of the highest standing have expressed their sympathy with. Your correspondent does not need any testimonials from any member of the profession, but all those who have carefully perused his articles will bear me out when I say that he has succeeded in presenting your readers with a statesman-like view of the whole question. He has pointed out from time to time that hospitals are abused, not only by the public, but by general practitioners.

It has been a source of gratification to my association to find that at all of their local meetings the many members of the hospital staffs have been in sympathy with our objects and have expressed their determination to bring about a reform of the present unsatisfactory condition of affairs. It is only by a free and frank discussion of this pressing problem that we can hope to arrive at a satisfactory solution; and the continuation of your correspondent's letters will undoubtedly help very materially in this direction.

I am, Sirs, your obedient servant,

T. GARRETT HORDER,

Cardiff, Aug. 9th, 1897. Hon. Sec., Hospital Reform Association.

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MEDICAL AID ASSOCIATIONS AND THE ETHICAL POSITION OF THEIR MEDICAL OFFICERS.

To the Editors of THE LANCET.

SIRS,—I am glad to see in THE LANCET of July 31st some fair and candid criticism of the Loughborough Medical Aid Association. It is evidently a "sweating association," but it is something worse than this. In common with insurance medical clubs it upholds the idea of the exploitation of medical diplomas by lay persons. It always surprises me that our General Medical Council, which is now so much awake to the evil of employment of unqualified assistants, does not also recognise the fact that committees and syndicates can practise for gain under the "cover" of qualified practitioners. The one abuse I hold to be equally "infamous in a professional respect" with the other. It would be practically useless for one or two Colleges, more especially London ones, to take action or express pious opinions in this matter. The men who take these positions are not usually associated with those Colleges. Concerted action of all the qualifying bodies might be of some use, but I still think our strongest point is the action which must in time emanate from the Council. In bringing this matter forward the local unions now being formed may do much, and the British Medical Association, if it lived up to its ideal, might do more. This is no "puny battle." It is one which means victory, self-respect, and the favourable regard of the public, or defeat, degradation, and ill-paid drudgery for the bulk of the profession.

There will always be "wastrels" in every profession. Alcoholic derelicts are not peculiar to our own. They are quite as numerous in the Church and the Law. There will always be men ready to take a "living" in any shape, even though the position be equivalent to that of the caretaker of a tied public-house. It is for us to see that such temptations shall not be offered, that the conditions of medical labour shall be respectable, and that our "derelicts" shall, if possible, reform themselves under rules of service which shall not be calculated to confirm, or even engender, habits of excess. In this matter I have great faith in the Press, more especially in THE LANCET. The pen is mightier than the British Medical Association or the General Medical Council, and I feel assured that your constant advocacy of a good cause will not be thrown away.

I am, Sirs, your obedient servant,

Loughborough, July 30th, 1897. J. B. PIKE.

WHAT A LEPROSY CONGRESS SHOULD BE.

To the Editors of THE LANCET.

SIRS,—In December, 1895, Dr. Goldschmidt and myself began to work for the formation of an international committee against leprosy. It was intended that every Government should appoint an official delegate to become a member of a permanent committee. These delegates were to meet with a congress of leprologists and representatives of the Church and Red Cross. After the congress had been held it was thought that, if nothing else came out of it, this permanent committee would remain active for ever after. Bearing in mind that the discoverer of the leper bacillus has not done one thing for the solution of the universal leper problem, that all the influence of missionaries has been of no avail, and that the disease seems incurable, we thought that no other hope remained but the establishment of the only system which not only promises success, but allows us a certain expectation of it—that is, isolation. This can only be done by edicts of every Government issued simultaneously. To obtain these edicts it was necessary to sound every Government and find out whether it would be willing to appoint an official delegate to our congress, not to be a mere delegate to that congress alone, whose function should stop with the congress, but to form a body active after the dissolution of the congress. Such efforts demanded time. While we were engaged in this work, and when we had already received many assurances of sympathy and promises of Governmental assistance, Dr. Ehlers, of Copenhagen, thinking that we were starting a mere leprosy congress, one of those medical congresses of which the world has seen so many, with the approval of some Berlin men, sent out an invitation to all leprologists to meet in conference at Berlin, and he expressly stated, publicly and in private correspondence, that *he* did not want Government delegates in Berlin. Armauer Hansen also declared that he could not see what good such a committee could do. Neither of these men could understand what our real object was, and Hansen could not see why we did not issue our invitation at once. Had we intended to have a simple conference of learned men and an ephemeral committee of official delegates, we could have issued our call long before Dr. Ehlers bethought himself of taking advantage of the necessary slowness of a very serious enterprise and of issuing his call for a very ordinary and, by its very nature, fruitless debate. Even afterwards, when to placate us the Berlin men deigned to send out invitations through the German Government to other Governments to appoint official delegates, even then they could not get hold of the true idea of our congress. Their official delegates will be appointed without any view to permanency. Had these men joined us, waited and worked with us patiently, we should have obtained that permanent committee. At any rate, it was an object worthy of all the energies of earnest men. The official delegates would have returned home, and each in his own country would have occupied a position endowed with power to act in all matters of leprosy. Thus isolation, if ordered by the congress, would have been effectively declared to the world to be the only sure means for the eradication of leprosy. These men, each in his own country, would have had authority for taking the measures suitable to their countries respectively. When the conference of Berlin has burst like a soap bubble, the necessity for another serious, earnest, practical congress will be felt—a congress like the one which has been delineated above, and which Dr. Goldschmidt and myself have proposed and worked for.

I am, Sirs, yours faithfully,

New York, Aug. 4th, 1897. ALBERT S. ASHMEAD, M.D.

THE INCIDENCE OF MATING.

To the Editors of THE LANCET.

SIRS,—When we find weak native elements clubbing together with their fellows it is reasonable to argue that a subtle law is in operation, governing and regulating such phenomena. It is noteworthy to find that if malignant or tuberculous disease or a neurosis is proved to exist in a husband or wife the coincident occurrence of the same ailment can by diligent hunting be discovered in the members of his or her colleague's family. When such insurgent types join hands the propagation of anarchy might be looked for, but, fortunately for the race, the dispensation of variation interposes. In two catalogues of thirty-two and twelve marriages respectively I find the coupling together of eighty-eight persons who bore no blood relationships towards one another. Regarding the first list, in every instance the individual had annexed to him or her such neurotic impedimenta as insanity, apoplexy, paralysis, epilepsy, tetanus, diabetes, spasmodic asthma, chorea, psoriasis, hysteria, dipsomania, suicide, and homicide. ..... In the second list the members composing it had not only separate entities, but were born in different parts and were all stained with the taint of cancerous disease.

* * * * * * *

The following history of a family will serve to indicate how the members of it sought out and obtained affinities who were at one period apparently strangers to them and to one another, and who dwelt in parts having no contiguity. A man immigrated to this colony more than fifty years ago and married a woman whose predisposition favoured a neurosis or the development of tuberculous disease. After his arrival here his mother and sister died from cancerous diseases and his two brothers became insane in Scotland. In this colony he and his three daughters became afflicted with malignant disease, and he died from this disorder. One son's wife died in a distant colony from cancer of the throat, and he then married the sole survivor of a phthisical family who is apparently healthy; he has now perished from decline. Another son married a girl whose father had had his lip (or a portion of it) excised; another son's mother-in-law died from cancer of the breast; a daughter married a man whose brother perished from malignant disease of the stomach; six other descendants of the immigrant are unimpaired in

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health. Another case was as follows. A woman developed malignant diseases of the ovary and other organs in the pelvic basin, any previous knowledge of such a disorder being disavowed by her relatives. About two years after her death her widower, who was a hearty man to all appearance, contracted epithelioma; he then admitted that his father had died from an abdominal tumour in another country about thirty years previously and that his sister had died from "internal complaint." Almost contemporaneously the intimate lady friend of the lady and widower, who was engaged to be married to the latter, developed scirrhus, and, as usual, denial was made of any historical taint. The associate of husband and wife dwelt in a part situated miles away from her fellow sufferers. The following is an additional instance. In the case of a female who had resided in this colony for fifteen years easily recognised malignant disease appeared after certain dyspeptic symptoms, coupled with alternate diarrhœa and sickness, had prevailed for some days. She had always been strong, but her only son had been killed in a tragic fashion, and her illness dated from the crisis of the catastrophe. As usual, denials were made of the pre-existence of similar disease in the members of her family, but the coincident was announced in the person of her husband's sister, who was not a blood relative and who had never been to the antipodes, but had died from cancer at the other side of the globe a few months previously.

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To sum up. A definite material organism in every individual has a concomitant mind depending upon it, and in pathology, agreement or a law of similarity obtains, which, operating as the attraction of cohesion, governs the incidence of mating. I am, Sirs, yours faithfully,

LAVINGTON G. THOMPSON, M.D. Aberd.

Launceston, Tasmania, June, 1897.

*** On account of the great length of the original communication we have been compelled slightly to curtail the introductory part and to omit several of the illustrative cases.—ED. L.

"MEDICAL GEOGRAPHY AS AN AID TO CLINICAL MEDICINE."

To the Editors of THE LANCET.

SIRS,—Will you kindly let the following corrections in my address on Medical Geography, published in THE LANCET of July 31st, be made in your next issue. Read at p. 238, col. 2, third line from top: "but this is due to the fact that cancer affects the river-valley systems, which protect and shelter the phthisical, whilst they harbour the *materies morbi* of rheumatism, and its too frequent sequel heart disease," instead of what now stands; p. 239, col. 1, line 35, instead of 92, read *92·3*; and at line 37, instead of "a little over 12" read *10·8*. I am, Sirs, yours faithfully,

Aug. 11th, 1897. ALFRED HAVILAND.

MEDICAL MAGISTRATE.—Mr. Charles Harrison M.D. St. And., M.R C S. Eng., D.P.H. Camb., has been placed on the Commission of the Peace for the city of Lincoln.

CLAYTON HOSPITAL, WAKEFIELD.—The 110th annual meeting of the Clayton Hospital, Wakefield, was held on the premises on July 28th, Mr. Tew, J.P., the President, being in the chair. The report showed that during the past year there had been 654 in-patients and 3960 out-patients. Both the income and the expenditure had been materially less than in the preceding year. Mr. J. W. Walker, one of the surgeons, read a letter from Mrs. Louisa Milnes-Gaskell, widow of Colonel Milnes-Gaskell, J.P., of Lupset Hall, near Wakefield, the purport of the letter being that on account of the great interest which her late husband felt in the Clayton Hospital she offered to enlarge the wing containing the present Gaskell Ward so as to make an upper and a lower ward, each with beds for sixteen patients. A portrait of the late Mr. Samuel Fozzard Harrison, who not long ago bequeathed nearly £25 000 to the hospital, was subsequently unveiled by Dr. T. G. Wright, the senior physician. The portrait has been presented to the hospital by Colonel W. W. Clapham, of Manchester, and will be hung in the board-room.

HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

XII.—BIRMINGHAM *(continued)*.[1]

Abuse at the General Hospital.—The Measures taken at the Queen's Hospital.—The General Dispensary as the Chief Offender.—The Committee Captured by the Workmen.

THE attempt at hospital reform which was initiated under the most favourable auspices some seven years ago having, nevertheless, and as described, utterly collapsed, it is now necessary to describe the present state of affairs. My first care was to call on one of the visiting staff of the General Hospital, at which hospital the ticket system is in force except for urgency cases and accidents. If, however, any member of the staff thinks that a patient can afford to pay for medical attendance the patient can be referred to the office for inquiry. But this is not done often. There are too many patients for the members of the staff to think about such questions. It takes less time to prescribe than to inquire into the social position of the patient. That the majority of the applicants are poor people is proved by the fact that their numbers fluctuate according to the condition of trade. At the present moment trade is more prosperous, so the number of patients in the out-door department has considerably decreased, thus suggesting that many of the working classes do pay for private medical advice when they are in full employment. As for the proposal made with a view to reduce the number of out-patients, it was frankly admitted that the hospital visiting staff, but more especially the surgeons, liked to have a large number of out-patients.

That cases of abuse existed at the General Hospital was not denied, and tickets were often very injudiciously distributed. Thus an in-patient, on being told that he would soon have to leave as the time generally allowed was almost terminated, replied that he had "instructed his solicitor to procure him a second ticket." In the out-patients' department a young girl was receiving explanations as to the street where she should go so as to obtain an elastic stocking when she replied, "Oh, do not bother; the cabman will know!" But whatever fault might be found with the General Hospital for treating patients who could afford to pay my informant was of opinion that far greater abuse of this description prevailed among the frequenters of the Birmingham General Dispensary. Further, he complained that the word "charity" had been left out of the recommendation tickets, and the words "a proper subject for relief" substituted. This spread the idea that hospitals were not charitable institutions and accounted for much of the abuse. This conception was still further accentuated by those hospitals which compelled the patients to pay registration fees. On account of subscribing to the Hospital Saturday Fund and the registration fees there were not a few working people who imagined that they only received from the hospitals that for which they had made a full and sufficient payment.

Calling on one of the leading surgeons who has taken a prominent part in the agitation for hospital reform, but who is not on the staff of the General Hospital, I found that he was disposed to criticise severely this institution. A new building for the General Hospital was now almost completed, and it was said that the cost would amount to about £600 per bed. How could the medical staff ask for economy in the face of such conditions? If they objected to this luxurious display it might hurt the feelings of the wealthy and eminent laymen who sat on the hospital committee. It was a source of personal satisfaction to these committee men to be concerned in the building of a palatial and model hospital, and they were not likely to study and understand what might be the economic consequences on the interests of the

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *concluded*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *concluded*) Dec. 12th, 1896, Liverpool; (5) Jan. 2nd, 1897, Manchester; (5 *continued*) Jan. 9th, 1897, Manchester; (5 *concluded*) Jan. 23rd, 1897, Manchester; (6) Feb. 6th, 1897, Leeds; (6 *concluded*) Feb. 13th, 1897, Leeds; (7) April 17th, 1897, Coventry; (8) May 1st, 1897, The Royal London Ophthalmic Hospital; (9) May 8th, 1897, France, United Action and Legislative Action; (10) May 15th, 1897, Leicester; (11) June 5th, 1897, Nottingham; and (12) July 31st, 1897, Birmingham.

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profession as a whole. The principal abuse arose in the out-patients' department. At the Queen's Hospital a superintendent registered the applicants and made inquiries as to their social condition. But if this prevented some well-to-do people from coming to the hospital it did not prevent any number of trivial cases from among the poorer classes. This was the worse abuse. Because a workman paid a penny a week to the Hospital Saturday Fund he imagined he had the right to the services of an expert for the treatment of a slight boil. Every slight accident—even the case of a child who runs a pin into his finger—is at once brought to the hospital. That this is not a necessity is proved by the fact that these trivial cases all come from the immediate neighbourhood of the hospital. If the trivial ailment or accident occurs at a distance of more than half a mile, then the persons concerned have no trouble in getting out of the difficulty without resorting to a hospital. Thus people go to the hospital, not because they cannot do otherwise, but simply because it is convenient and inexpensive. The middle classes also think that they have a right to the services of the hospitals for any accident, even if it is but a simple sprain. Many people who possess ample means believe when they are hurt that they have a sacred right to go to the nearest hospital, and not only have their wounds dressed, but carry off with them bandages and dressing without ever pausing to think that these things cost money. Yet only a lamentably small proportion of the well-to-do classes subscribe to the hospitals. On analysing the subscription-lists to the various medical charities the same names will often occur on three, and even five, different lists, and generally these are the names of persons who are not very rich. It is those whose means are limited who have the highest sense of their public duties. The wealthier classes show far greater selfishness. The number who could subscribe and do not subscribe constitute a large majority. The public also does not sufficiently understand that a hospital is not merely a building; what constitutes the value of a hospital is the quality, not the quantity, of the work done. Cases were mentioned of boys who were on the out-patients' list for five weeks and yet they only suffered from boils. To swell out the list of cases treated by the record of such petty ailments was no real credit to a hospital; but the public does not enter into details, and being deceived by such figures concludes, on the contrary, that the hospital is doing an immense amount of work and therefore that larger subscriptions should be given. These evils would never be overcome till the members of the profession formed themselves into a union, and this must be a fighting union. There had been quite enough talk and discussion as to the grievances, it was now only necessary to study what means of action were available.

On going to the Queen's Hospital I found that the superintendent, Mr. Hulme, had taken his task of preventing abuse seriously to heart. Nevertheless, he was obliged to acknowledge that being alone in the work, and having no machinery for following up the inquiries made at the hospital by inquiries made at the dwellings of the applicants, he occasionally let through persons who were not fit recipients of charity. When a patient goes to the Queen's Hospital he has to enter Mr. Hulme's office and must there give his name, age, address, describe the nature of his employment, and the name and address of his employer. Then he must state the number of his family and what is the available income of his family as a whole. From the address given and the nature of the employment the superintendent can generally form a rough estimate of what the income is likely to be. Thus, on the day of my visit, a young woman, who stated that she was twenty-three years old, and yet had not been out to work anywhere, was refused admittance. Her father earned two guineas a week, and some of his sons were at work, and also contributed to the family income. Such a patient could well be treated through the agency of a provident society or by a private practitioner, particularly if it was a slight case involving no great expense.

My next visit was to a general practitioner who had been for some considerable time on the staff of the Birmingham General Dispensary. He expressed himself energetically against this institution as inflicting great injury on the medical profession. Persons who could well afford to pay medical fees were constantly resorting to this charity. There was often a handsome sprinkling of seal-skin jackets in the patients' waiting room. Taking the Ladywood Branch, for which he had worked, he pointed out how the immense increase of patients was quite out of proportion with the increase of the population. Thus in 1888 there were about 4000 patients attending at the Ladywood Branch. At the end of the year there were about 4800. The population of the district has not increased 10 per cent. in ten years, yet in 1890 there were some 6000 patients, and in 1891 about 6900. At that time some of the outlying districts were taken off the relief lists and the numbers fell, but nevertheless they soon rose again to about 7000. The dispensary is much abused by a class just above the working class—men who earn £2 and more a week. On one occasion some inquiries were made, and during the course of a week 25 per cent. of the patients attending the Ladywood Branch stated that they had more than £100 a year. One case was mentioned of a father who earned £2 a week and his children earned 12*s*., 7*s*., and 4*s*. respectively. He argued that his children were too poor to pay medical fees, and he did not see why he should pay them. Some 7000 tickets had been given away in a year, and so great was the crush of patients that one of the medical officers attached to this branch declared that he had seen as many as 120 patients in a couple of hours. Such hurried work, it cannot be repeated too often, especially by the press the general public read, is not only degrading to the medical profession, but dangerous to the patients. No medical man, however competent, can avoid making mistakes when he has so little time to devote to each patient. This is the side of the question which most affects the general public, and therefore should be specially insisted upon by all who are seeking to reform the present abuses. There are now two medical officers at the Ladywood Branch, so the crush of patients is not so great, but the abuse continued a long time before this improvement was effected. When this branch was first opened a local practitioner declared that it had reduced his income to the extent of £100 a year; and two other practitioners, who have both been in the service of this branch, declared to me that, in their opinion, there was far more abuse at the General Dispensary than among the members of benefit societies and other clubs. Then the fact that the dispensary medical officers visit the patients at their own homes causes a great injury to the general practitioner. Under these circumstances a person with limited means, but still able to pay medical fees for ordinary cases of illness, is strongly tempted to go to the General Dispensary. He will go there, not as the recipient of a charity, but as the purchaser of a recommendation ticket. He will therefore think that he has paid for what he gets. He will not pause to consider if the pay is sufficient; that is the business of those who sell the tickets, and care has been taken to efface the word "charity" from these tickets.

Some years ago the Birmingham General Dispensary published the following announcement: "Notice to workmen's clubs, schools, mothers' meetings, &c. The attention of the committee having been called to the objection felt by workmen's and other societies to the words 'object of charity' appearing in the tickets available for the use of their own members, and paid for by their own contributions, they have decided in future to omit such words from these tickets, retaining them on those issued to subscribers for purely charitable objects. Six tickets will be given for each annual guinea subscription as heretofore, but all extra supernumerary tickets will be charged 4*s*. each."

This simply meant that for certain persons the dispensary was to cease to be a charitable institution and become a provident dispensary without, however, inculcating any true principle of providence. The theory of a provident dispensary is the same as that of insurances against death or accidents. When a person is in sound health he pays generally a penny a week so as to secure medical aid when he is ill. But here it is not necessary to make any provision against a rainy day. It suffices to have 4*s*. at the time of illness to buy a ticket and thus secure the medical aid. Therefore, an institution which was founded as a charitable dispensary, and as such generously supported by the donations and the legacies of the benevolent, degenerated into the position of a sick club, which enables persons devoid of scruple to obtain relief on terms that compete disastrously with the general practitioner. Instead of substituting the words "deserving of medical relief" for the old words "real objects of charity" these latter should not only have been maintained, but printed in big, bold, red letters. How the trade in tickets increased was shown by the committee of the General Dispensary. In their report of January, 1888,

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the following passage occurs: "Having regard to these figures [an analysis of the subscriptions made by their own secretary] and to other information which has reached them they [the committee] are led to believe that from one-fourth to one-third of the dispensary tickets issued are used by the persons (or by the families of persons) who have contributed to the cost of the tickets, and who cannot, therefore, fairly be described as 'objects of charity,' or as the class of persons for whose benefit charitable subscriptions and donations are usually intended. There is reason to believe that this irregular practice is especially prevalent with the extra tickets, and the tendency to increase in this class of tickets is very marked. Thus in 1885 these extra tickets were but 5 per cent. of the whole, in 1875·23 per cent., and at present they are 36 per cent."

Since that time the management of the General Dispensary has to a large extent fallen into the hands of the working-men subscribers. In 1873 the Birmingham Hospital Saturday Fund gave the General Dispensary a donation of £281; in 1896 this sum was increased to £600. As donors, the representatives of the workmen had votes for the election of the members of the committee of management. At the annual meeting held in the commencement of 1893 the representatives of the work-people assembled in force. There were two vacancies on the committee, the Rev. Canon Gregory and the Rev. H. Bonnor being ineligible for re-election because they had attended the fewest number of meetings since the last election. As a result two workmen representatives were elected in their stead. Speaking of the General Dispensary annual meeting of 1894, *Forward*, a small paper which serves as the organ of the Hospital Saturday Fund, says: "The summary of receipts and expenditure shows another fact worthy of notice. For the first time for many years past the receipts from subscriptions, interest on funded property, and donations, have been expended on the general work of the institution. That is to say, that for the first time we believe since the Hospital Saturday Fund has been in existence the donation from it has been applied to the purpose for which it was given. So long as there is scope for additional work in the town we do not think any institution has a right to save money out of its ordinary income. Whether the alteration in the policy of the dispensary is to be attributed to the working-men representatives on the committee or not we cannot say; but whatever the cause may be, the dispensary is to be congratulated on the wise policy which has been pursued during the year."

This passage meets an objection made to me by some of the former medical officers of the General Dispensary. They complained that the dispensary made profits out of the subscriptions, which they employed to build branches at great cost, provided even with bedrooms in the upper part of the building. The fact that the workmen had obtained a strong representation on the committee of the General Dispensary naturally gave rise to many objections, particularly when it was found that the workmen were very regular in their attendance, and, by showing greater devotion to the business at hand, soon obtained a preponderating influence. The fact that they came in an organised body and carried the election caused them to be described as "daylight robbers." They were accused of initiating a "subtle predatory policy," and the gentlemen who gave guineas instead of pennies were warned that they must follow similar tactics to save the charities from being misappropriated by the working classes. Nevertheless, and in spite of the fact that the workmen are now in a majority on the committee, the subscriptions have not fallen off, there is no complaint as to mismanagement, and the average attendance at committee or business meetings has never been so regular and numerous. But all this, however favourable it may be from one point of view, does not meet the question of abuse. It is still the opinion of a great number of general practitioners and others that an enormous amount of abuse prevails at the General Dispensary. It has become less and less a charity, more and more a provident dispensary. Mr. Smelley, the principal organiser of the Hospital Saturday Fund, expressed the opinion that what abuse exists arises out of the patronage of subscribers, who are apt indiscriminately to give away tickets. But, he added, the workmen are interested in preventing abuse, and he invited any medical man connected with the dispensary to signalise any case of abuse, guaranteeing that the name of the person in question would at once be struck off the books.

This, however, is not so easy to do. In the absence of systematic inquiry, the fact that the patient is able to pay proper medical fees is generally only ascertained after he has obtained medical relief. The medical officers also are too busy to make inquiries; this constitutes no part of their work, and it is only accidentally that they discover a few of the many cases of abuse. It is undoubtedly more pleasant to attend a better class of patients and to visit the sick who live in houses that are fairly clean and well kept. Also, many general practitioners now established in Birmingham have commenced their careers as medical officers of the dispensary, and they would not have acquired their present popularity if they had made enemies by inquisitorial proceedings against their dispensary patients. A young practitioner who is seeking to acquire a reputation naturally prefers that his skill should be appreciated by well-to-do people. It is not very probable, therefore, that when he has the good fortune to meet with a better class patient he will at once take measures to have his name struck off the books. In such a case the interests of the present and of the individual clash with those of the future and of the profession. It is only when the young practitioner leaves the dispensary and suffers from the deeds of his successors that he fully realises how his own conduct was lacking in foresight.

(To be continued.)

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Druggists' Prescriptions.

AT a recent meeting of the Health Committee a report was read on a number of samples of medicine prepared from prescriptions by druggists in different parts of the town. In twenty-four instances irregularities were found, but these appeared to be due more to careless or unskilful dispensing than to intention to defraud. For example, in one case the principal drug, though far more expensive than the other items of the prescription, was found to be the one in excess. This, the report pointed out, was a matter of at least as great importance as was the protection of the customer from fraud, as the action of a medicine often depends upon the care with which the proportion of the various drugs mentioned in the prescription is dispensed. After consideration the committee ordered that a prosecution should take place in one case, and that in about a dozen others the druggists should receive a written caution.

Death under an Anæsthetic.

A sad fatality lately occurred in the rooms of a dentist, when a man, aged twenty-seven years, met his death on the administration of A.C.E. mixture taken for the extraction of teeth. There was evidence to show that it was skilfully given by a medical man.

Boxing Contests.

In the recent case of the young man who lost his life at a boxing contest held at the Olympic Club the grand jury at the assizes found no true bill. The case was therefore thrown out. Still, many are of opinion that such contests are brutal and degrading. Some belief exists that the law is sufficient to prohibit such exhibitions, and that in the interests of humanity and social order they should be stopped.

Foul Air in Sewers.

The above subject forms matter of complaint in the local press. A veteran Fellow of the Royal College of Surgeons leads the charge and formulates grave accusations against the system which admits of the escape of foul air from the sewers into the streets and houses. Much is to be said on the subject, which in the future must command the attention of the authorities, though involving great outlay and much consideration.

Aug. 8th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Port Sanitary Authority.

DR. F. W. BARRY, one of the inspectors of the Local Government Board, held a formal inquiry at the Manchester Town-hall on the 28th ult., with regard to the regulations

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laid down under the General Order of the Local Government Board, issued in November last, as to the treatment of persons affected with cholera, yellow fever, or plague, and the prevention of the spread of these diseases in the ports of Liverpool and Manchester. The inspector said the inquiry was really held in order that they might carry out the arrangements made by one of the earlier conferences of the authorities to regulate the dealing with vessels on which there were cases of cholera. Since then the Quarantine Act had been abolished, and they had now to deal also with yellow fever and plague. It was thought that it would be most convenient if Liverpool dealt with such cases, and a draft order had been made giving this power to Liverpool, the cost to be charged on the Manchester Port Sanitary Authority.

Manchester Hospital Sunday and Saturday Fund.

At a meeting of the committee of this Fund the following statement respecting the collections for 1897 was submitted: Balance from last year, £264 15*s.* 2*d.*; collections, 1897—Hospital Sunday, £3959 10*s.* 8*d.*; Hospital Saturday, £4102 19*s.*; bank interest, £21 12*s.* 2*d.*; total, £8348 17*s.*; less expenses, £668 1*s.*; amount available, £7680 16*s.* Of this sum it was resolved to distribute £7500 amongst the medical charities.

Salford Sewage Scheme.

It seems as if at length there were some prospect of an end being put to the hesitation shown by Salford as to the treatment of her sewage. On the 22nd ult., at the Salford County Court, Judge Parry heard the adjourned application of the Mersey and Irwell Joint Committee for a peremptory order to compel the Salford Corporation to carry out a scheme ordered by the Local Government Board for dealing with the effluent from the Salford sewage filtration works. This involved the provision of at least 100 acres in addition to the land already acquired for dealing with the effluent from the filtration works. But the corporation have at length decided on a scheme, and rebel against that of the Local Government Board—not so audacious a proceeding, however, as it at first appears—for a recent deputation to the Board succeeded in showing that it would be impracticable to carry out the scheme ordered, and that Salford could do something better. Certain alterations are to be made in the existing precipitation tanks, and the appliances for sludge removal re-constructed. Two of the twelve precipitation tanks are to be converted into roughing filters. There is to be an area of 24,000 square yards for aerating or bacterial filters, with supply pipes, valves, effluent culverts, &c.; also buildings and machinery for preparing the cinders, &c., for the filters, and for cleansing and renewing the material as required. The engineer, Mr. Corbett, said his plan provided ten acre filter beds, but they proposed to deal with five first, and if necessary with the remaining five afterwards. The resolution of the council provided for the expenditure of £80,000 for doubling the filtration area. His Honour said there would be an extension of time for two years, and it would be for the corporation to give the joint committee particulars from time to time of what they were doing, and if the corporation could not carry out this there would be no alternative, so far as he was concerned, but to put the penalties into force. But even now the scheme is to be opposed, for Salford often takes one step forward and another back.

The Sanitary Committee of the Corporation.

The report of the above committee for the year ending April 30th last shows that an immense amount of work has been done; 45,119 complaints of nuisances were made and attended to; 76,599 inspections were made by the twenty-eight district inspectors and four smoke inspectors. It is stated that there are 2499 registered dairies, cow-sheds, and milk-shops; that 4237 inspections of these were made; and that 1472 cows are kept within the city. During the year 2813 cases of infectious disease were reported to the medical officer of health. It seems that there are 472 bakehouses on the register, respecting which 360 defects—chiefly want of cleansing and lime-washing — were reported. Of 1587 articles of food and drugs procured for analysis 49 were adulterated; 1068 insanitary houses were dealt with by the Unhealthy Dwellings Sub-Committee. The details of the report show considerable and much-needed activity on the part of the committee.

Aug. 3rd.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Sale of Carbolic Acid.

THE facility with which carbolic acid can be purchased by the public was the subject of unfavourable comment by the city coroner in a case of suicide from the effects of that drug investigated by him on the 7th inst. The coroner remarked that it was a lamentable fact that carbolic acid could be purchased as easily as milk, that the legislature had done nothing to restrict the sale of the poison, and it was a great pity that nothing was apparently being done in that direction. The jury concurred in the coroner's strictures, and hoped that greater restrictions would be placed on the sale of carbolic acid to the general public.

Munificence of the David Lewis Trustees.

The David Lewis trustees have intimated to the committee of the Liverpool Nurses' Home their desire to build a central building, to be the central home and office for the district nursing of the city, if the committee will submit a scheme which meets with the approval of the trustees. This will place the Jubilee Commemoration Scheme in a very satisfactory position to make Liverpool a model in the matter of nursing the poor in their own homes. It ensures the erection of a suitable central home, considered necessary as an administrative centre of the newly-organised body; and also expresses in a permanent form the share of Liverpool in commemorating the sixtieth anniversary of the Queen's reign. But when the city is thus organised the new scheme will still require enlarged support, both in subscriptions and in the number of lady superintendents and other workers. A committee of the Jubilee Commemoration Fund was appointed to confer with the committee of the Nurses' Institution in regard to the arrangement of the scheme.

The Bidston Hill Purchase.

Bidston Hill has long been a favourite resort for Liverpool and Birkenhead excursionists. Situated about two miles to the north of Birkenhead and three or four miles distant from Liverpool, it is consequently within easy access of those towns. It contains on its summit—from which charming views of parts of Lancashire, Cheshire, and North Wales can be seen—the Liverpool Observatory, the property of the Liverpool Corporation, close by which are the famous rhododendron gardens, attracting during the season thousands of visitors. The walks on the heathery slopes around the hill, with pleasing views, all combine to make Bidston Hill a most attractive place. It cannot be wondered at, when it was in danger of falling into the hands of the builders, that great efforts were made by both Birkenhead and Liverpool to preserve this healthy lung in its present invigorating condition. Subscriptions were appealed for, and it is satisfactory to record that by the help of a pecuniary grant from the Corporation of Birkenhead the requisite sum of £18,500 has been raised; this amount has enabled the committee appointed for the purpose to purchase about sixty-two acres, and practically the whole of Bidston Hill has been secured for the benefit of Birkenhead and Liverpool. It is in contemplation to lay out the grounds in gardens and to make the hill generally attractive if it be possible to improve its present surroundings. The Corporation of Birkenhead deserve praise for the ready and liberal manner in which they performed their part of this useful and health-giving scheme. As an elevated marine parade in the immediate vicinity of a large and increasing population Bidston Hill has but few rivals; and it is a matter for thankfulness that this salubrious property has thus been purchased, and by these means snatched from the hands of the Philistines.

The New Medical Superintendent of the Mill-road Infirmary.

There were fifty-eight applicants for the vacancy at the Mill-road Infirmary, which is a valuable appointment. Eventually the choice of the guardians rested on Dr. Nathan Raw, who had filled responsible posts at the Borough Lunatic Asylum, Portsmouth; at the Kent County Asylum; and latterly at Dundee. Dr. Raw received his medical education at Newcastle-on-Tyne, and is a graduate in medicine and surgery of Durham University.

Aug. 10th.

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SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University Graduation Ceremonies.

THE summer graduation ceremonial in the Edinburgh University was held on Saturday last. The Principal, Sir William Muir, presided. An unusually large number of gentlemen received the degree of M.D. The ceremonial was held in the Synod Hall, as the MacEwan Hall was not quite ready, and was, as is usual, witnessed by a large gathering of the public. Gold medals were awarded to the following for their theses: Dr. Friedrich Wilhelm Eurich, Dr. William Edward Fothergill, Dr. T. A. Wemyss Fulton, and Dr. David Arthur Welsh. The Ettles Scholarship was awarded to Mr. Edwin Matthew, M.B. The graduates were addressed by Professor Cossar Ewart. He referred to the medicine of the ancients and to their ideas of the causation of disease. Coming down to more recent times, he referred to the more important generalisations that had placed medicine and surgery upon their present footing.

Public Slaughter-house for Aberdeen.

A special committee of the town council have reported that in their opinion the time has come for the corporation to erect a public slaughter-house. They recommend the construction of an abattoir at a cost of £30,000, but name no particular site. The committee's report was approved, and the committee were instructed to report as to the best site to be obtained as well as to other particulars.

Aug. 2nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Epidemic of Beri-beri at the Richmond Asylum, Dublin.

A SPECIAL meeting of the governors of the Richmond Asylum was held in the board-room of the asylum on Aug. 3rd. The meeting was called by the resident medical superintendent, Mr. Conolly Norman, for the purpose of providing some remedy to prevent the further spread of disease in the institution. In his report Mr. Conolly Norman stated that 150 persons in the asylum had been attacked with beri-beri during the last two months, that this was the third year in which this epidemic had appeared, and that the disease had not been absent since last summer—the summer of 1896. He stated, moreover, his opinion that the Richmond grounds were now unsuitable for any building, and suggested that Grangegorman Female Prison should be obtained if possible, in order that a considerable number of his patients might be removed so as to allow the old buildings to be thoroughly aired and disinfected. After a long discussion a resolution, proposed by Mr. B. R. Balfour, J.P., including a memorial to his Excellency the Lord Lieutenant of Ireland for the temporary use of Grangegorman Prison, was unanimously passed, and his Excellency consented to receive the deputation upon Aug. 10th. There are now (Aug. 10th) 172 cases of this disease at the Richmond Asylum, Dublin, consisting of 125 female patients, 42 male patients, 3 nurses, and 2 attendants. The number attacked in this outbreak is therefore nearly as high as in the epidemic of 1894. Since the disease first appeared at the Asylum no less than 459 cases have been under treatment.

The Royal Victoria Eye and Ear Hospital, Dublin.

Her Majesty the Queen has been graciously pleased to direct that the institution recently formed under the Act of Parliament which amalgamated St. Mark's Ophthalmic Hospital, Lincoln-place, and the National Eye and Ear Infirmary, Molesworth-street, shall be called the Royal Victoria Eye and Ear Hospital, Dublin.

The Belfast Water-supply.

Dr. Percy F. Frankland, of Mason College, Birmingham, has, at the request of the Belfast Water Commissioners, made a careful analysis and examination of their water-supply and filter beds, and has issued a very full report with the following conclusions: (1) He believes that from the nature of the gathering grounds the water-supply of Belfast is liable to contain a very large proportion of organic matter; and hence (2) he recommends that it be submitted to prolonged storage and very careful filtration; (3) he considers that Belfast has a most admirable series of filter-beds, constructed on the most approved principles and worked with great care and attention; and (4) he believes from his examination that the filtration is highly efficient in the removal of organic matter and in the removal of micro-organisms. He recommends, to make the filtration complete—(1) running to waste as much of the filtrate as can be spared after each cleaning; (2) uniformity in rate of filtration employed; (3) the employment of the lowest practicable rate of filtration; and (4) the use of the finest sand procurable.

Health of Belfast.

From the report presented by the public officer of health at the quarterly meeting of the City Corporation, held on Aug. 2nd, it is satisfactory to know that the health of Belfast is in a more satisfactory condition than it has been for many years. The death-rate is lower than it has been for a long time past, 17 per 1000, calculated on the population of the city as 300,000. The cases of zymotic disease reported during the month—more especially typhoid fever—have largely decreased, and the deaths are much less numerous. There are still a good many deaths from whooping-cough in spite of the warm weather, while the epidemics of scarlet fever and measles have almost died out.

The Legal Privileges of Druggists.

At an inquest held in Belfast on July 27th in reference to a man who had committed suicide by cutting his throat with a razor, a curious question of privilege was raised in reference to a druggist who was alleged to have prescribed for the deceased some time prior to his death. The coroner having asked the druggist if he had his books containing the prescriptions he had made up for the deceased, that gentleman said these books were his private property containing thousands of prescriptions for individuals throughout the city, and he had been advised not to produce them till he was compelled by a superior court. A solicitor who appeared for the druggist said it would be a most disastrous condition to place a druggist in to make him come into court with books containing the names of different individuals and the prescriptions made up for them as recommended by the several medical gentlemen throughout the city of Belfast. It would be the same as to drag a medical man into the witness-box and ask him with regard to all the patients he had attended during the twelve months the particulars of their complaints and the articles he had given them. He cited the well-known London medical case, so fresh in the recollection of the profession, and said druggists would suffer in their practice if they divulged their prescriptions. No one seeking a prescription would go to a druggist at all if prescriptions were to be placed before a jury showing the ailments in connexion with every family and every individual. Therefore, in the interests of the profession of druggists, he would not advise his client's books being produced unless they were brought forward by the direction of a competent court. The coroner said it was only wanted that the druggist should produce whatever book contained an entry of a prescription in regard to the individual in whose case they were holding an inquest, and as the druggist swore there was no entry in his books in regard to the deceased this question lapsed; but the very interesting point still remains—can druggists be compelled in a court of law to produce the books containing the copies of the prescriptions given them to be made up by customers? It is a point which I do not remember to have come up before, and of course this Belfast case does not by any means settle the matter. In the hearing of the case it came out in evidence that a bottle had been found with the deceased man with a druggist's label upon it, and it was sworn that three years before his death a person went with the deceased to the druggist, who examined (sounded) him and prescribed for him. The coroner, in summing up, said it was of the utmost importance to the public that those to whom they went for medical advice or surgical treatment should be men qualified to give that advice or treatment. It would also place the medical profession in an unfair position. Now it was notorious in Belfast that persons without qualification were extensively doing the work of medical men daily. There were, he was sure, a hundred young struggling men in the medical profession at Belfast, and he thought the men at the head of their medical societies, whose positions as physicians and surgeons were now assured, should look to the protection of the interests of their young brethren, which meant the protection of the interests of the public. He ventured to hope that the Pharmaceutical Society would,

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not only in the interests of the honourable members of their society, but in the public interests, endeavour to put a stop to the practice of prescribing by druggists. The jury found that the man had committed suicide while temporarily insane and that there was not sufficient evidence to show that the druggist had made up any prescription for him.

Presentation to Mr. Fagan, F.R.C.S. Irel.

Mr. Fagan, who is leaving Belfast for Dublin (having been appointed to an official position), has been the recipient of a handsome gift from the members of the medical profession in Ulster. The presentation, which consisted of a quantity of silver plate, was made to Mr. Fagan on July 30th at his country residence, Little Clandebrye, co. Down, on the occasion of a garden-party given by him and Mrs. Fagan to celebrate their silver wedding. A very large number of friends, including members of the medical profession of Belfast and surrounding districts, were present, and, in conveying the presentation, Dr. Walton Browne (senior surgeon to the Royal Hospital, Belfast) expressed the regret felt by the members of the medical profession at the departure of Mr. Fagan and his popular wife from Belfast. In his feeling reply Mr. Fagan alluded to the cordial relations which had always existed between himself and his professional brethren.

North of Ireland Branch of the British Medical Association.

At the annual meeting of this branch, held on July 29th, Dr. Gray (Armagh) was elected president for the ensuing year. Communications on medical subjects were brought forward by Dr. Hall (Monaghan), Dr. Darling (Lurgan), Dr. Calwell, Dr. St. Clair Boyd, Dr. Colville, and Dr. Donnan (Holywood). The annual dinner took place on the same evening, when Professor Whittle (the outgoing president) occupied the chair, and Mr. Fagan, who was the guest of the members, was presented with an address on the occasion of his leaving Belfast.

The Newry Workhouse.

The decision of the Local Government Board in reference to the recent sworn inquiry held by one of their inspectors into the general management of the Newry Workhouse indicates what indeed must be described as a most scandalous state of affairs. The Local Government Board, upon a review of all the facts elicited at the inquiry, have no hesitation in condemning the whole management of the workhouse. They say the conduct of the master has been such as to prove him unfit for such a responsible position, and they call on him at once to tender his resignation. Two nurses are also called on to resign, and a third one the Board would not have allowed to retain her position had she not resigned herself, and they advise the guardians not to give her the testimonial she applied for, having regard to her manifest neglect of duty. The schoolmistress is also called on to resign, the Board regarding her intriguing conduct as subversive of discipline and as being one of the chief causes of the ill-feeling at present existing in the workhouse. The schoolmaster is warned to observe in future the rules as to classification, and to endeavour to maintain the authority of the person who may be appointed the new master. A special meeting of the Newry board of guardians is called for Aug. 17th to consider this report, which indicates a most lamentable condition of matters as existing in the Newry Workhouse.

The New County Tyrone Infirmary.

It is rumoured that the Duchess of Abercorn, who is to entertain the Duke and Duchess of York at Baronscourt during their coming Irish visit, is using her influence to get her Royal Highness to lay the foundation stone of the new county infirmary at Omagh. It is said that the required money for the new building is being rapidly raised.

The Record Reign Collection in Aid of the Cork Hospitals.

The collection made under the above title has amounted to £3350, and on Aug. 7th was allocated as follows by the Executive Committee:—North Infirmary, £500; South Infirmary, £500; Fever Hospital, £350; Women and Children's Hospital, £400; Mercy Hospital, £300; Protestant Incurable Home, £250; St. Patrick's Hospital for Cancer and Incurables, £250; Eye, Ear, and Throat Hospital, £400; Lying-in Hospital, £300; Queenstown Hospital, £100.

Aug. 10th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Hernia.

AT the Academy of Medicine M. Lucas Championnière, in answer to the recent communication of Professor Lannelongue upon the treatment of hernia by the sclerogenic method, recently brought to the remembrance of members the present status of the radical operation which he himself considers one of the most remarkable victories of modern surgery. In M. Championnière's opinion no radical cure is possible except by a very extensive operation, and the more complete and thorough the operation is the better are the results. He brought forward a number of statistics in support of his argument. According to him all petty operations or methods of treatment should be avoided. Injections, in particular, are painful, dangerous, and inefficacious. The following is the best way of operating, according to M. Championnière. The opening into the hernial sac must be very free and must extend into the abdominal cavity so that the operator may be able to have as good a view as possible. As much omentum as possible must be excised, together with the whole of the sac and its neck. All thickened peritoneum in the region of the hernia must be removed, and the abdominal wall must be restored as far as possible by making the margins of the incision overlap and not merely joining them edge to edge. In this way the thickness of the wall in the hernial region is doubled. The wound is closed and drained in the usual way. This method of operating brings about an absolutely accurate restoration of the abdominal wall, but nothing except a very complete and accurate operation is of any use. This operation, which M. Championnière has devised after an experience extending over many years, and with which he has had many successful cases, appears to him to be the best one possible.

Cancerous Alteration of Gastric Ulcer.

At the Société Médicale des Hôpitaux M. A. Mathieu has described the occurrence of cancerous changes in gastric ulcers, and has come to the conclusion that it is not very rare. He reports three cases in which the diagnosis of cancer supervening upon ulcer could be made during life, and in which both the post-mortem and the histological examinations confirmed the diagnosis. In the first case it would appear that the beginning of the disease was marked by an excessive secretion of hydrochloric acid accompanied by pain, which commenced twenty-four years before death. Ten years before death unmistakeable signs of simple gastric ulcer appeared, but the diagnosis of cancer was only made after a laparotomy. In the second case the phenomena of simple ulcer appeared ten years before death. The appearance of acanthosis nigricans and enlargement of the left subclavicular glands led to a diagnosis of cancer nearly two years before death. In the third case the simple ulcer preceded the cancer by nearly two years. At the post-mortem examination the cancerous nature of the lesions was evident by the presence of cancerous nodules in the liver or in the mesenteric glands. In every case there were found in the centre of the cancerous lesion traces of the primitive ulcer, and in one case the ulcer was, as far as naked-eye appearances went, of a simple chronic nature, but there were marked epitheliomatous infiltration and thickening of the muscular coats of the stomach.

Professional Secrecy and the Notification of Epidemic Diseases.

An interesting matter bearing upon public health administration has just been threshed out in the Court of Appeal at Rouen. Last year a medical man of Arpajon, in conformity with the regulation of Nov. 30th, 1892, notified to the mayor of that town five cases of diphtheria in children occurring among his patients. Some days later a municipal councillor, under the excuse of wishing to know if the regulations had been complied with, and if, as was commonly reported in the town, some cases of croup had occurred, asked the secretary of the *mairie* to show him the certificates sent in by the medical man, because, he added, he wished to raise a question about the matter at the next meeting of the municipal council. This proceeding took place without the knowledge of the mayor, and the municipal councillor took advantage of it to criticise the diagnosis of the medical man. Upon the complaint of the latter the secretary

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of the *mairie* was haled before the Correctional Tribunal of Corbeil under the Act for preventing the disclosure of secrets, of which his position made him the legal depositary. It was urged on behalf of the defence that the accused was not bound to secrecy; that he was bound by no oath; that he was only a servant of the mayor; and that medical notifications were not secret, since by the regulation of Nov. 30th, 1892, he had nothing to do with professional secrets. The Tribunal of Corbeil accepted this argument and acquitted him. At the instance of the Procureur of the Republic the affair came before the Cour d'Appel in Paris, where it was further maintained on behalf of the accused that the secretary of the *mairie* could not withhold the documents in question from a municipal councillor who wished to ask a question of the mayor as to what measures he had taken for safeguarding the public health. The Cour d'Appel of Paris, without inquiring whether the secretary of the *mairie* was bound to maintain secrecy, and whether notifications made by medical men in accordance with the law were to be kept secret, accepted this last-mentioned argument, and decided that this servant of the mayor might disclose notifications to a municipal councillor who intended making further investigations on the subject. The Procureur-Général at the Cour d'Appel of Paris appealed against this judgment in the Cour de Cassation, and that tribunal held that the secretary of the *mairie* was the depositary of secrets in his legal capacity, that notifications of epidemic disease were without doubt of a secret nature, that by the regulation of Nov. 30th, 1892, professional secrecy had been made subordinate to the interests of public health, but that both the letter and the spirit of the Act went to show that secrets revealed by a medical man to the authorities under certain definite conditions still remained secret and must not be divulged to any other than the constituted authorities. The Cour de Cassation accordingly reversed the judgment of the Cour d'Appel of Paris, and remitted the case to the Court of Rouen. The Court of Rouen gave effect to the finding of the Cour de Cassation.

Aug. 8th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Heat and Suicide.

I AM writing "Die Sanctæ Mariæ ad Nives," on the feast of Our Lady of Snow, invoked every 5th of August by many suppliants, but by none more fervently than those who pray for the remission of the great heat, with all its disastrous consequences. Among these latter may be enumerated the appallingly frequent suicides, which have this year risen to an unprecedented figure. In Florence alone from May 2nd to Aug. 2nd the cases of self-destruction were no fewer than forty-four. In other cities the proportion was also above the average, but the Tuscan capital, as it was the most heavily visited by the heat, so it has much the largest tale of suicides to tell. The mode of death mainly courted by these unfortunates is also significant—that by drowning. At other seasons the revolver and asphyxia by charcoal placed under the bed in a hermetically sealed room seem to be preferred. But these methods are naturally not in favour with the thermometer standing at 109° F. More than one-third out of the forty-four suicides in the three months above given destroyed themselves by immersion in the Arno, in those parts of the river between the Porta di San Niccolò and the Cascina, where the water maintains sufficient depth. "Dissesti finanziari" (money difficulties) and "miseria" (homelessness and starvation) are among the chief motives, the victims being often far beyond middle life, having reached sixty, sixty-five, or even seventy years of age. With the departure of the foreign, particularly the English-speaking, world the Italian winter city seems to lose all vitality or energy—no money is in circulation, trade is at a standstill or nearly so, servants, waiters, cooks, domestic hangers-on of every kind, all are "a spasso" (on the pavement), counting the hours till the tourist or travelling season returns and money again begins to engorge the shrivelled currency. The pitiless blue sky, the tropical heat, and the high nerve excitation involved under these conditions seem to supply "miseria" with the force to take the final, fatal plunge, and so nearly every second day we have a "suicidio consumato" (an effective suicide) and almost as often a "suicidio tentato" (an abortive one). Of course there are other motives coincident with "Southern blood" which prompt to self-destruction—"miseria" does not account for all. There is thwarted love among the comparatively young or disappointed ambition among the adults. But "mancanza di quattrini" (impecuniosity) and the hardness of living it implies is responsible for the vast proportion of cases—insomuch that one trembles to think what dimensions suicide would attain in Italy if the £20,000,000 in gold annually poured into her coffers by the English-speaking world were withdrawn or even diminished. Yet, with Italy's dependence on that world for so large a portion (actually one-third) of her revenue, there are to be found Italians—and I am sorry to say, medical Italians—who are agitating the Legislature to scare English-speaking visitors away by insisting that they shall have no professional advice or attendance of their own nationality, but be compelled to call in the native practitioner! Such an enactment would be "suicidal" indeed—a confirmation (by Italy, diplomatic Italy!) of the great Swedish diplomatist's memorable saying to his son:—"I, puer, et disce quantillâ sapientiâ regatur mundus" (Go, boy, and learn with how little wisdom the world is governed.)

A Feat of Memory.

The purely intellectual attribute we call memory, which "is not a function, but only a resultant due to the concurrence of the various elementary functions of the mind," is capable of almost illimitable development, as Max Müller's accounts of the recitations of the Brahmins or Sir William Hamilton's references to the feats of the humanists of the Renaissance sufficiently demonstrate. Both the philologist and the metaphysician, however, are at one in thinking that the habits of the present time—above all the desultory, particularly the ephemeral, reading now well-nigh universal—are not favourable to such feats. Indeed, Max Müller says that the daily perusal of the *Times* for ten years would have sufficed to impair the strongest memory ever Brahmin possessed. That the feats, however, of a Scaliger or a Lipsius are, even at the close of the nineteenth century, quite possible, was demonstrated the other day at Sondrio (capital of the Valtellina) where the advocate Signor Edoë, professor in the Istituto di San Lorenzo, repeated, for a wager, in twenty hours consecutively—from 6 P.M. till 2 P.M. of the next day—without prompting or aid of any sort, the entire Divina Commedia of Dante. The achievement came off in presence of a committee of brother professors and literary men, who afterwards entertained the performer at a banquet, not unwelcome, one would imagine, to either party after such an effort of brain-tension and vocal articulation on the one hand, and sustained surveillance *ad aperturam libri* on the other. The Divina Commedia, I need hardly remind the reader, consists of nearly a hundred cantos, and of all poetical compositions is the least diffuse—characterised, that is to say, by the closest condensation of thought and expression. The late Duke of Sermoneta (Sir Walter Scott's *fidus Achates* on his memorable visit to Rome in 1832) could also repeat the Divina Commedia from first to last, but that was the result of life-long study, not, as in Signor Edoë's case, the outcome of comparatively short preparation, begun and ended for the purpose of winning a wager.

Aug. 5th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Operative Treatment of Myopia.

A PAMPHLET on the operative treatment of myopia, which has just been published by Dr. Fukala, has attracted considerable attention in medical circles in Austria. It contains an interesting account of the stages by which the author was led to remove the lens in cases of high myopia, in spite of the fact that the operation was not approved of by ophthalmologists so distinguished as Donders, Graefe, and Arlt. In many cases he has found that the patient's distant vision was good after the operation and that near vision was also improved. Choroiditis is not a contra-indication. The lens is divided into several portions by Graefe's small knife; after some days when there are symptoms of cyclitis and increased tension linear extraction is performed without excision of the iris. Many eminent German

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ophthalmic surgeons have operated in this way and have obtained brilliant results. After the removal of the lens there is a great decrease of the refraction, varying in amount from 15 D. to 16 D., and in one case even reaching 28 D. The detachment of the retina which accompanies high myopia is also checked. Dr. Fukala has succeeded in proving that high myopia is caused, not merely by the lengthening of the axis of the eye, but also by an increase in the refracting power of the lens. Professor Vossius has shown his appreciation of Dr. Fukala's operation by comparing it to the operation for iridectomy devised by Professor Graefe.

Statistics of Anæsthesia.

The Surgical Society has published in the *Journal für Zahnheilkunde* further statistical returns on the subject of anæsthetics, which have been collected by Dr. Gurlt. The administrations reported are 58,769 in number, including 27,000 of chloroform, with 29 deaths; about 19,000 of ether, with 3 deaths; 5000 of Billroth's mixture (morphia chloroform and alcohol), without a death; 996 of bromide of ethyl, without a death; and 5890 of chloroform and ether, without a death. During the last two years 32 deaths have been reported, being 1 death in 1836 administrations. Altogether, 327,953 administrations, with 134 deaths, have been reported since the year 1891, being a proportion of 1 in 2444. Arranged according to the resulting mortality the various anæsthetics appear as follows: Pental, 1 death in 213 administrations; chloroform, 1 in 2039; Billroth's mixture, 1 in 3897; ether, 1 in 5019; bromide of ethyl, 1 in 5228; chloroform and ether, 1 in 7594. The mortality from chloroform has increased from the year 1891 to the year 1897, the figures being as follows: In 1891, 1 death in 2700 administrations; in 1892, 1 in 2300; in 1893, 1 in 4200; in 1894, 1 in 1900; in 1895, 1 in 1300; in 1896, 1 in 1400; and in 1897, 1 in 1126. The mortality due to ether was 1 in 5600 administrations during the first three years, 1 in 3100 during 1895, 1 in 2600 during 1896, and 1 in 6700 during 1897.

The Primary Symptoms of Congenital Syphilis.

At a recent meeting of the Vienna Medical Club Dr. Hochsinger, describing his theory of congenital syphilis, said that the primary symptoms in the fœtus and the young infant show a special tendency to diffuse infiltrations, whereas in the primary forms of acquired syphilis and the secondary forms of hereditary syphilis limited cell proliferations were more common. These diffuse infiltrations are well seen in the visceral affections due to congenital primary syphilis, and developed during the intra-uterine life of the fœtus; localised manifestations are rare, and when they occur may even be ascribed to congenital tuberculosis; for, according to Baumgarten's researches, there is a connexion between congenital tuberculosis and congenital syphilis. Another consequence of hereditary primary syphilis is that changes analogous to those in the viscera of the fœtus occur in the cutaneous tissues of the young infant, the special symptom being a diffuse infiltration of the skin of the palm of the hand and the sole of the foot. Histological examination shows in both the visceral and the cutaneous processes an inflammatory cell proliferation originating in the tunica adventitia and the perivascular tissue of the small arteries. In the skin the primary seat of the affection is in the sudoriparous glands, the arteries of which, as well as the veins and capillaries, show very marked cell proliferation. The fact that the inflammatory process in its first stage is limited to the vessels implies that the virus circulating in the blood irritates the coats of the vessels. Diffuse syphilitic inflammation first manifests itself in the intestinal glands of the fœtus, and it may be said that there is no syphilitic fœtus whose liver is not the seat of a similar process affecting the vessels and the connective tissue; as a rule, this condition occurs also in the kidneys, the lungs, and the pancreas. Eruptions on the skin, on the other hand, are peculiar to extra-uterine life. The explanation of these phenomena must be sought for in embryology. The parenchymata of the visceral glands are formed in the second, third, and fourth months of intra-uterine life, the glandular elements of the skin in the fifth month, and the first vascular lumina in the sudoriparous glands in the seventh month; it is therefore obvious that until the glands of the skin are developed it cannot have the vascular system and the copious blood-supply possessed by the visceral glands at a much earlier date. The palm of the hand and the sole of the foot are exceptions to this rule, for they are abundantly furnished with sudoriparous glands, and are by this anatomical peculiarity rendered liable to congenital eruptions such as congenital syphilitic pemphigus.

Vienna University.

The honourable distinction of Rector of the University of Vienna for the year 1897–98 has been conferred on Professor Toldt, a member of the medical faculty. Professor Toldt is a very able anatomist who has made important investigations on the development of the peritoneum, and has published numerous memoirs on embryological subjects. His most important works are his "Lehrbuch der Descriptiven Anatomie des Menschen" (Manual of Descriptive Human Anatomy) and his "Anatomischer Atlas," which is beautifully illustrated and is expected to be completed very shortly. Dr. Victor Ebner, the eminent professor of histology, has been elected Dean of the Medical Faculty. Some years ago he published researches on the histology of the tubuli seminiferi, in which he explained the origin of the spermatozoa. Two kinds of cells are concerned in the process, Sertoli's cells and the spermatogonia. By division each spermatogonium gives rise to six or eight spermatoids, the nucleus of each of which becomes the head, and the protoplasm the tail, of a spermatozoon. Each spermatozoon enters into combination with a Sertoli's cell, and both form Ebner's spermatoblast.

Aug. 1st.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Congress in Moscow: Excursions to the Caucasus.

SOME details of the excursion to the Caucasus, which has been arranged for members of the International Medical Congress, have already appeared in THE LANCET.[1] The following additional details have now been published by the executive committee. As already stated in the former notice of this excursion the party will divide into two after visiting the mineral waters of the Caucasus; one-half going by the Georgian Military Road to Tiflis, and the other proceeding to Petrofsk, on the Caspian Sea, when they will take steamer to Baku, and thence will travel by rail to Tiflis, where they will join the first half. From Tiflis the re-united party will take the train to Batoum on the Black Sea, breaking the journey at Borjom, where are some mineral springs of considerable repute. From Batoum there will again be a choice of routes: it will be open for the traveller to go direct by steamer to Novorossiisk and Rostof-on-Don, and so by train back to Moscow, or to lengthen the journey by crossing the Black Sea to Sevastopol, where he will have an opportunity of seeing something of the Crimea before returning to Moscow. As a result of this division of the excursionists to the Caucasus into two parties upon two occasions, it follows that there will be four different routes and four different sets of tickets, ranging in price according to the route chosen. The most expensive will cost rather less than £8 first-class and about £5 second-class; while the least expensive will cost about £5 first-class and about £3 second-class. In all, however, there will be some extras to pay; the steamers on the Black Sea and the diligences on the Georgian Military Road not being included in the above prices.

Excursions to the Volga.

Several other trips have been arranged in connexion with the Congress. Two of these will be to the Volga. The first, and shorter, will run from Moscow to Nijni Novgorod; from here the passengers will be taken by steamer down the river to Tsaritsyn, and thence will return by train to Moscow. The second allows of a much longer river voyage. By this route passengers will, after visiting Nijni Novgorod, journey down the whole length of the River Volga to Astrakhan, where it falls into the Caspian Sea; they will then cross the north-west corner of the Caspian Sea to Petrofsk, and from here proceed overland to Kislovodsk, the centre of the Caucasian mineral spa. After inspecting the watering-places they will return by train to Moscow. The cost of these two excursions will be as follows: by the first route, about £6 first-class and £3 5*s.* second-class; by the second route, £7 10*s.* first-class and £5 second-class.

[1] THE LANCET, April 3rd, 1897.

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Excursion to the Crimea.

Another short excursion is the following. By train from Moscow to Theodosia, in the Crimea; after visiting places of interest in the Crimea, by sea to Odessa; thence by train to Kief and Moscow. The tickets by this route will cost only £4 5s. first-class and £2 10s. second-class. As this tour includes a visit to the Crimea, and also to Kief (the oldest and one of the most interesting towns in Russia), it will probably be taken advantage of by many.

Numbers Attending the Congress.

It is probable that by this time most Englishmen who have applied for tickets for the Congress will have received them. Some little disquietude has been expressed at the delay in distributing them. Such delay seems to be characteristic of international gatherings, and in the present instance the clerical work has been increased by the distribution of the free railway tickets in addition to the members' tickets. The number of members of the approaching Congress seems likely to be little, if any, smaller than the number attending its predecessors. A week ago the following figures were published: Number of members already inscribed, 5000 (approximately), including—Russians, 2400; Germans, 800; Austro-Hungarians, 600; French, 500; Englishmen and Italians, each about 250; and of remaining nationalities about 100.

July 28th (Aug. 8th).

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Diphtheria in Victoria.

DIPHTHERIA is very prevalent throughout the colony of Victoria, and more particularly in the metropolitan district. For the fortnight ending June 12th, 162 cases and 20 deaths were reported, of which 96 cases and 12 deaths were in the metropolis. During the fortnight ending June 24th the number of cases reported was 186, 8 of which were fatal. The metropolis supplied 105 of the number with 3 deaths. In Hawthorn, one of the suburbs of Melbourne, the disease has assumed epidemic proportions and the board of health has made a special investigation of the sanitary condition of the district. The majority of the cases of diphtheria were found to be localised in close proximity to three separate "tips," all of which were in a more or less insanitary condition, consisting of thousands of loads of household garbage quite uncovered. An old open disused drain was found to be a trap for the collection of sewage, and the dairies in the town were, for the most part, in a filthy condition. The State schools were found to be dirty and badly ventilated. Where the disease occurred in a household no proper isolation or disinfection was carried out. The health committee of the local council has been roused into activity, and has recommended that the "tips" be abolished and an incinerator purchased, and that the Health Act be amended so as to give councils the power of prohibiting dairies in the city bounds. The council took exception to the report of the board of health as to the condition of the dairies in Hawthorn, and decided to make a personal inspection in company with the board's inspector.

A Medical Man in Partnership with a Quack: Both Prosecuted for Manslaughter.

A case of some interest to the profession has just been concluded in the Melbourne Criminal Court before Mr. Justice Hodges and a jury. Joseph Alfred Davis and Sydney Walter Spark were charged with manslaughter. Davis is a quack who calls himself a "professor" and a "cancer curer." He has only recently been discharged from gaol, after serving a sentence for manslaughter for his unskilful treatment of a case of cancer of the stomach. Spark is a registered medical practitioner whose qualifications are L.S.A. Lond., 1874, L.R.C.P. and S. Edin., 1875. Davis attended a Mrs. Steel, who had a cancer of the breast, which he undertook to cure for the sum of £20—"no cure no pay." He, however, received £10 cash at the outset and other sums subsequently. His *modus operandi* was the same as that employed by him on previous occasions—the application of a plaster to the affected part, which is left on for six weeks. The tissues under it then become mummified and separate from the living by a line of ulceration, to which a simple resin ointment is applied. In this case, after he had made his bargain, he brought Spark with him when he applied the plaster and on his subsequent visits, and Spark in his evidence said that he was in partnership with Davis. Mrs. Steel became very ill and died. Spark gave a certificate that she died from cancer and asthma. An inquest was held and the post-mortem examination showed that the mode of death was by congestion of the lungs and heart failure, probably secondary to blood-poisoning, as the breast and tissues round it were suppurating. An analysis of the mummified skin over the breasts showed the presence of arsenic in the tissues. Spark, in his evidence, said that the plaster applied by Davis was composed of black sulphur, and that arsenic might be present as an impurity. The medical expert witnesses for the Crown were of opinion that the patient might have lived for twelve months or more if untreated, and that her death was due to unskilful treatment by the accused, removal of cancer by escharotics being an unscientific, dangerous, and obsolete method. The defence put in Quain's "Dictionary of Medicine" to show that escharotics were used by medical men, and that their application in such cases was quite proper, and they called a homœopathic physician, who saw the patient just before her death, who maintained that she died from spasmodic asthma, and that arsenic was a proper application to make to such a cancer. The jury acquitted both the accused.

Lunacy in Victoria.

The Inspector-General of Lunatic Asylums for Victoria, in his report for the year 1896 just presented to Parliament, states that during the year 61 additional persons were registered as insane. The actual asylum population however was only increased by 12, as the patients who had been taken out on trial by their friends and those boarded out were 44 in excess of the number for the corresponding period of the preceding year. The daily average of patients resident was 3970, showing an increase of 41 provided for throughout the year. The number of persons admitted during the year was 683, or 33 in excess of the admissions for the previous year. The re-admissions numbered 123. At the end of 1896 the proportion of insane to sane in the population was 1 to every 279, the figures for the preceding year being 1 to every 285. The difference is not due to an increase in insanity, but to loss of population by nearly 7000. In the opinion of the Inspector-General the condition of the asylums has been steadily improving for ten years, but as at present organised they do not give the patients all the advantages that it should be possible to provide for them. He recommends that the patients should be more classified than at present. Epileptics should be segregated and placed in the Ballarat Asylum, and the space gained in the metropolitan asylums devoted to curable cases. All new cases should be sent to Kew, and two wards there fitted up for the treatment of curable cases. Part of the room gained by removing the epileptics should be devoted to paying patients and should be more comfortably furnished and arranged. Criminal patients should be accommodated at the Ararat gaol or at Pentridge gaol.

Ectopic Gestation Twice in the Same Patient within Seven Months.

The June number of the *Australasian Medical Gazette* contains a paper by Dr. Ralph Worrall under the above heading. The patient, a multipara, was admitted to the Sydney Hospital blanched and anxious-looking, with distended and tender abdomen. She had missed a period and thought herself pregnant. She fell five days before admission and had pain in the right inguinal region. Abdominal section was performed, and many pints of dark fluid blood were evacuated. On the posterior surface of the right broad ligament was a ragged opening. The ovarian artery was tied on each side of the tear, and the ragged portion of the ligament cut out and sutured. The patient made an easy recovery. This was in January, 1896. On Aug. 20th she was seen again. She had again missed a period, and the following day was attacked with pain and slight collapse. She remained in bed, and had two further attacks of pain. She was admitted to the Sydney Hospital, and abdominal section was performed, when a large quantity of dark fluid and clotted blood escaped. The bleeding came from the left tube, which was unruptured, but dilated, and held entangled in its fimbriæ a tubal mole. The patient made an uneventful recovery. Dr. Worrall can find only two cases recorded of

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repeated ectopic gestation in the same patient, and both of these occurred after the lapse of several years.

Jubilee Honour to the Profession in Australia.

The knighthood conferred on Mr. J. N. FitzGerald, the well-known Melbourne surgeon, has given great gratification to the profession throughout Australia, and certainly was never better deserved.

June 30th.

Obituary.

FRANCIS HENRY BLISS, M.A., M.B., B.C. CANTAB.

MANY Cambridge and St. Mary's Hospital men will be grieved to hear of the untimely death from hæmoptysis, at the early age of twenty-nine years of Francis Henry Bliss. He was educated at Marlborough College and then proceeded to Sidney-Sussex College, Cambridge, where he took his M.A. degree, and subsequently commenced his medical studies, going afterwards to London to St. Mary's Hospital to complete them. He was characterised throughout his student days by great personal charm and refinement of character, which made him a host of friends, by whom their loss is deeply felt. After qualifying in 1893 he was appointed house surgeon to the Royal Portsmouth Hospital. He then went into practice at Edenbridge, in Kent, and was rapidly building up a large practice, and, as usual, making many friends, when last autumn signs of tuberculous disease of the lungs presented themselves. Acting on medical advice he relinquished practice and spent the winter in Switzerland and Italy. His health had greatly improved, and he was on a visit to friends in England when he was attacked with severe hæmoptysis, which recurred and proved fatal on July 28th. Dr. Bliss was the son of Sir Henry Bliss, of the Indian Civil Service, who had only a short time before lost another son, from typhoid fever while serving in the famous Chitral campaign. Dr. Bliss was buried in Oxted churchyard on July 31st, a number of his fellow students and teachers attending to show their respect to his memory. Much sympathy is felt with his widow and little daughter and with his father in this abrupt close of a promising career and in the loss of a man who inspired all whom he met with both esteem and affection.

PROFESSOR VICTOR MEYER.

BY the death of Professor Victor Meyer at Heidelberg on the 8th inst. chemical science has lost an illustrious exponent. Victor Meyer was born in 1848, and after filling the professorial chairs at Stüttgart and Zürich respectively was appointed professor at Göttingen on Wöhler's death in 1885, and finally went over to succeed Bunsen at Heidelberg in 1889. His labours in chemical science have related chiefly to nitro-compounds and to thiophen, while his name will go down to posterity in connexion with his method for determining the vapour density of volatile compounds. He has added not only considerably to our knowledge of organic chemistry, but has afforded us methods of gaining an insight into the constitution of compounds.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The death of the following eminent foreign medical man is announced:—Dr. Kremnitz, a well-known surgeon of Bucharest, son-in-law of, and formerly assistant to, Professor Adolf von Bardeleben, of Berlin.

QUEEN'S COLLEGE, BELFAST.—At the class examinations held at the close of the summer session the following prizes were awarded, viz.:—Botany—Senior: Archibald George Heron. Junior: Charles James Ross, B.A.; Robert Alexander Stewart and John Stewart Ferguson Weir (equal); and John Armstrong and Robert Stanton Woods (equal). Practical Chemistry—Senior: John Elder MacIlwaine. Junior: Joseph Stewart and Hugh Barkley Steen. Medical Jurisprudence—George Jefferson, Patrick Park, and Hugh Donnelly. Systematic Pathology—Arthur Berry M'Master and Robert Alister Little Graham. Practical Pharmacy—Robert M'Carrison; and Alexandrina Crawford Huston and John Weir West (equal).

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the first examination of the Board in the subjects indicated under the five years' regulations, viz.:—

Part I., Chemistry and Physics:

Anthony, Christie Muthuswamy, Guy's Hospital.
Ball, Charles Rowan Anthony, Cambridge University.
Barnes, Walter Biscoe, University College, Bristol.
Bartlett, John Allen, University College, Bristol.
Beane, Robert Leonard, St. Thomas's Hospital.
Blunt, Thomas Edward, London Hospital.
Bolton, Frank Elliott, University College Hospital.
Boyd, Malcolm Ogilvy, Oxford University.
Bramhall, Charles, London Hospital.
Brayne, Robert Edward, Guy's Hospital.
Brierley, Charles Isherwood, Yorkshire College, Leeds.
Burgess, Harold Lynch, London Hospital.
Butterworth, Rupert, St. Mary's Hospital.
Cheese, Frederick William, St. Bartholomew's Hospital.
Clark, John Wilders Hambly, London Hospital.
Cock, Frederick, Charing-cross Hospital.
Collins, Reginald Thomas, Guy's Hospital.
Conolly, Noel Alfred William, St. Bartholomew's Hospital.
Cox, Clement Harlow, Mason College, Birmingham.
Cox, Ernest Alfred, King's College Hospital.
Crampton, Walter, University College, Liverpool.
Cresswell, Frederick Williams, St. Mary's Hospital.
Croly, Henry Pennington, London Hospital.
Curtis, George William, University College Hospital.
Daft, Leonard, Firth College, Sheffield.
Day, Charles Frederick, Private Study.
Dermott, Edward James, University College, Bristol.
Dickinson, Charles Marshall, London Hospital.
Doble, Henry Tregellas, St. Mary's Hospital.
Downes, Thomas William Hardwick, St. Thomas's Hospital.
Drawbridge, Wilfred Ralph Leycester, St. Bartholomew's Hospital.
Dutton Hugh Reginald, Middlesex Hospital.
Eames, Thomas Richard, Owens College, Manchester.
Edginton, Lewis Spencer, London Hospital.
Elder, George Tathar, St. Mary's Hospital.
Ellis, Francis Heygate, St. Bartholomew's Hospital.
Evans, George Jewel, St. Mary's Hospital.
Everett, Hastings Footman, London Hospital.
Ewen, Gerald Sydney, St. Bartholomew's Hospital.
Forster, Matthew, Cambridge University.
Fullagar, Walter Swainson, St. Thomas's Hospital.
Furnivall, Henry Wallace, University College Hospital.
Gardner, Harry, Firth College, Sheffield.
Gould, Alexander Cyril, St. Mary's Hospital.
Gregory, Arnold, Yorkshire College, Leeds.
Griffith, William Henry, University College, Liverpool.
Grogono, Eric Walter, London Hospital.
Gromitt, John William, Guy's Hospital.
Hayes, George Sullivan Clifford, Guy's Hospital.
Hood Basil, Charing-cross Hospital.
Hubbard, Adrian Russell Fortesque, Charing-cross Hospital.
Hughes, Geoffrey Wallace Grainger, King's College Hospital.
Hutchinson, Thomas, Mason College, Birmingham.
Jackson, Francis William, St. Bartholomew's Hospital.
Jiméniz, Ricardo Suis, Guy's Hospital.
Jobson, Frederick Cuthbert, Westminster Hospital.
Jones, Reginald Lewis, Middlesex Hospital.
Jones, William Watkin Cadwaladr, Guy's Hospital.
Lawrence, Charles John Montagu, Owens College, Manchester.
Leach, Richard Ernest Howell, St. Thomas's Hospital.
Leeming, Alfred, Owens College, Manchester.
Lewellyn, John Woodruff, University College and Cardiff.
Lewis, Ivor Cadwaladyr, St. Bartholomew's Hospital.
Lewis, John Lloyd, London Hospital.
Lowe, George Carter, Guy's Hospital.
Lowsley, Owen Leonard, St. Mary's Hospital.
Lund, John Knowles, Mason College, Birmingham.
McQueen, John Falconer, Clifton Laboratory, Bristol.
MacDowall, William M'Dowall, London Hospital.
McGuire, Herbert Vincent, University College, Liverpool.
Major, Hugh Marcus, St. Mary's Hospital.
Marshall, Reginald Prynne, Guy's Hospital.
Martyn, Frank Dérécourt, Westminster Hospital.
May, Charles Montague Neale, St. George's Hospital.
Miéville, George Christian Blake, University College Hospital.
Miles, Thomas George, Guy's Hospital.
Milner-Moore, Edward Henry, St. Mary's Hospital.
Miskin, Albert Francis, St. Thomas's Hospital.
Moir, Gordon, Guy's Hospital.
Morgan, Frank, Westminster Hospital.
Morris, Herbert William, Guy's Hospital.
Morris, Leslie Miles, St. Bartholomew's Hospital.
Morrison, Harold, Yorkshire College, Leeds.
Moyle, Reginald, Guy's Hospital.
Neville, Thomas Crofts, St. Bartholomew's Hospital.
Osburn, Arthur Carr, Guy's Hospital.
Owen, Charles Lewis Claude, St. Bartholomew's Hospital.
Parbury, Frederick Denis, St. Bartholomew's Hospital.
Parsons, Wilfred, University College Hospital.
Petrie, Alexander Sturrock, St. Bartholomew's Hospital
Phillips, Nathaniel Richards, University College, Cardiff.
Phipps, Charles Arthur Gayer, Owens College, Manchester.
Piggott, Allen Pledger, Pharmaceutical Society's School.
Powell, James Farquharson, St. George's Hospital.
Prall, Sydney Lionel, Guy's Hospital.
Pye-Smith, Charles Derwent, Firth College, Sheffield.

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Reed, Keppel Hart, St. George's Hospital.
Richards, Thomas, University College, Cardiff.
Rivaz, Percy Montgomery, Nonconformist Grammar School, Bishops Stortford.
Rivière, Bernard Beryl, St. Paul's School, West Kensington.
Roberts, William Owen, Guy's Hospital.
Round, Harold, Mason College, Birmingham.
Rowlands, Moses John, University College, Cardiff.
Rugg, Godfrey Faussett, University College Hospital.
Ryley, Charles, St. Mary's Hospital.
Sampson, Bernard Moore, St. Thomas's Hospital.
Sansom, Bertrand Eli, St. Thomas's Hospital.
Scott, Maitland Bodley, St. Bartholomew's Hospital.
Serpell, Hugh Hamilton, St. Bartholomew's Hospital.
Sewell, Henry George, London Hospital.
Shadwell, Lancelot Walter, St. George's Hospital.
Shannon, Stanley Samuel Howard, Guy's Hospital.
Sharpley, Christopher Wilfred, Yorkshire College, Leeds.
Snell, John Percy Brooking, Middlesex Hospital
Stuart, Francis Arthur Knox, St. Mary's Hospital.
Stusser, Israel, London Hospital.
Talbot, Francis, Birkbeck Institute.
Traylen, Charles Leonard, London Hospital.
Trimmer, Francis Inman, London Hospital.
Upcott, Harold, St. Thomas's Hospital.
Vaughan, Walker Frederic Hamilton, St. Mary's Hospital.
Walker, John, St. Thomas's Hospital.
Walters, Joseph, University College, Cardiff.
Wetherell, Marmaduke Cordeux, Guy's Hospital.
Wilson Geoffrey Plumpton, London Hospital.
Wood, Walter James, University College Hospital.
Wood, William Vincent, Cambridge University and St. Bartholomew's Hospital.
Woodwark, Charles Stuart, St. Bartholomew's Hospital.
Wroughton, John Henry, St. Bartholomew's Hospital.

Part II., Practical Pharmacy:

Agate, Henry St Arnaud, St. Mary's Hospital.
Armitare, John James, St. Thomas's Hospital.
Bastian, William, University College Hospital.
Batchelor, Ferdinand Stanley, Guy's Hospital.
Bazalgette, Sidney, St. Thomas's Hospital.
Bishop, Darell Winn, Oxford University and St. Mary's Hospital.
Blick, Penn William Curle, Oxford University.
Bond, Frank Fouracre, Westminster Hospital.
Braddock, William, Owens College, Manchester.
Braugwin, Charles Harold, Guy's Hospital.
Bridge, John Croswaithe, Middlesex Hospital.
Brierly, Charles Isherwood, Yorkshire College, Leeds.
Court, Edward Percy, St. Bartholomew's Hospital.
Crampton, Walter, University College, Liverpool.
De Brent, Harold John, St. Thomas's Hospital.
Dudding, John Scarborough, London Hospital.
Dulgan, Victor John, St. Bartholomew's Hospital.
Dunstan, Robert, London Hospital.
Dutton, Hugh Reginald, Middlesex Hospital.
Edwards, David Richard, University College, Liverpool.
Forward, Ernest Lionel, St. Thomas's Hospital.
Foss, Edwin Vincent, University College, Bristol.
Fox, Hugh Watson, Guy's Hospital.
Froggatt, George Ernest, New Zealand and Middlesex Hospital.
Gibson, Thomas, St. Thomas's Hospital.
Goldie, Walter Leigh Mackinnon, St. Mary's Hospital.
Gray, William Harrington, London Hospital.
Griffith, Richard, Cambridge University and London.
Hackney, Gordon Herbert, University College Hospital.
Howell, Trevor, University College Cardiff
Howkins, Cyril Henry, Mason College, Birmingham.
Howroyd, James Edwin, Yorkshire College, Leeds.
Huelin, Lewis William, St. Mary's Hospital.
Hughes, Norman Alexander Alymer, Yorkshire College, Leeds.
Humphreys, George Jacks, St. Bartholomew's Hospital.
Jeremy, Harold Rowe, London Hospital.
Johnson, William Jerrol Greaves, St. Bartholomew's Hospital.
Keeling, Hugh Nevill, Yorkshire College, Leeds.
Lakin, Charles Ernest, Middlesex Hospital.
Lewis, George Jepson, Guy's Hospital.
Lindsey, Eric Craigie, St. Mary's Hospital.
Littlejohn, Edward Salterne, University College Hospital.
Lund, John Knowles, Mason College, Birmingham.
Maunsell, Bertram Sydney Osmund, St. Bartholomew's Hospital.
Mason, Alfred, Middlesex Hospital.
Meaden, Alban Anderson, St Bartholomew's Hospital.
Miles, William Percival, St. Bartholomew's Hospital.
Miskin, Albert Francis, St. Thomas's Hospital.
Morrish, William John, St. Mary's Hospital.
Moses, David Assur Henry, St. Bartholomew's Hospital.
Nash, Arthur Charles, Guy's Hospital.
Nesfield, Vincent Blumhardt, St. Mary's Hospital.
Pearson, Roland Wilfred, Owens College, Manchester.
Penfold, Fred Bailey, Middlesex Hospital.
Price, Ernest Walters, St. Bartholomew's Hospital.
Raven, Hugh Milville, St Mary's Hospital.
Raw, Herbert Harland, St. Bartholomew's Hospital.
Rice, Frank Melville Pitcairn, St. Bartholomew's Hospital.
Richards, Thomas, University College, Cardiff.
Rutherford, Randolph Henry Neilson, University College, Bristol.
Roberts, Earnest, Guy's Hospital.
Roper, Richard Snelling, Guy's Hospital.
Sale, John Caruthers, St. Bartholomew's Hospital.
Scot, Edward Spencer, London Hospital.
Sewell, Henry George, London Hospital.
Spalding, Archibald Denize, London Hospital.
Stansfield, Frederick Joseph, Yorkshire College, Leeds.
Stokers, Percy Southwell, Firth College, Sheffield.
Tayler, Frederic Ernest, St. Bartholomew's Hospital.
Tayler, Henry Christopher, St. Mary's Hospital.
Thompson, William Atkin, Owens College, Manchester.
Traylen, Charles Leonard, London Hospital.
Tweedie, Alexander Robert, St. Bartholomew's Hospital.
Ward, Bernard Joseph, Mason College, Birmingham.
Ward, Oswald Erasmus, Mason College, Birmingham.
White, Charles Vaughan, St. Thomas's Hospital.
Whitwell, Hugh, St. Bartholomew's Hospital.
Willey, Frederick, Yorkshire College, Leeds.
Winder, Maurice Guy, St. Bartholomew's Hospital.

Part III., Elementary Biology:

Agar, Samuel Annesley, London Hospital.
Alleyne, Evelyn Addison Wentworth, St. Mary's Hospital.
Archibald, Richard James, St. Thomas's Hospital.
Bartlett, Edward Leslie, St. Mary's Hospital.
Beane, Robert Leonard, St. Thomas's Hospital.
Beet, William Ashley, London Hospital.
Benson, Alick Cole, St. Paul's School, West Kensington.
Beverley, Kenneth Harold, University College Bristol.
Bird, Albert Edward, Owens College, Manchester.
Bolton, Frank Elliott, University College Hospital.
Bourns, Frank, Westminster Hospital.
Bramhall, Charles, London Hospital.
Brown, Robert Dixon, St. Thomas's Hospital.
Chell, George Russell Haines, Mason College, Birmingham.
Collins, Reginald Thomas, Guy's Hospital.
Connell, Harry Bertram, Mason College, Birmingham.
Crowther, Sydney Nelson, Westminster Hospital.
Daft, Leonard, Firth College, Sheffield.
Darbyshire, Harold Stewart Casson, Firth College, Sheffield.
Davies, Thomas Sidney, University College, Bristol.
Doble, Henry Tregellas, St. Mary's Hospital.
Eager, Mervyn, King's College Hospital.
Edginton, Lewis Spencer, London Hospital.
Fletcher, Harold, London Hospital
Gater, Arthur William, Guy's Hospital.
Gill, George Frederick, St. Bartholomew's Hospital.
Goldsmith, Hubert St. George, St. George's Hospital.
Gonin, Bertram Winter, St. Mary's Hospital.
Goodall, Alexander, St Bartholomew's Hospital.
Gover, Henry Arthur Sidney, St. Mary's Hospital.
Grogono, Eric Walter, London Hospital.
Hirsch, Leo, Grant Medical College, Bombay.
Holford, Christopher Tredwell, St. Thomas's Hospital.
Huddurt, Cuthbert Edmund Arnold, London Hospital.
Hughes, William Shelbourne, Charing-cross Hospital.
Ide, Harry, Charing-cross Hospital.
Lambert, Francis Courtenay, St. Mary's Hospital.
Lawrence, Charles John Montagu, Owens College, Manchester.
Leach, Richard Ernest Howell, St. Thomas's Hospital.
Lewellyn, John Woodruff, University College, Cardiff.
Lewis, Robert Robinson, Middlesex Hospital.
Lloyd, John Daniel Stuart, Mason College, Birmingham.
McGuire, Herbert Vincent, University College, Liverpool.
Martin, William, St. George's Hospital.
Meiklejohn, Norman Sinclair, St. Paul's School, West Kensington.
Miller, Frederick William, King's College Hospital.
Miller, Guy Witton, St. Bartholomew's Hospital.
Milner-Moore, Edward Henry, St. Mary's Hospital.
Morgan, Frederick William, University College, Bristol.
Morgan, Lewis Wayne, University College, Cardiff.
Morris, Herbert William, Guy's Hospital.
Ommanney, Francis Montague Maxwell, Guy's Hospital.
Parbury, Frederick Denis, St. Bartholomew's Hospital.
Penfold, Fred Bailey, Middlesex Hospital.
Pitt, Robert Cecil, London Hospital.
Pye-Smith, Charles Derwent, Firth College, Sheffield.
Raymond, George, St. Thomas's Hospital.
Ring, Charles Augustus Eamonson, Guy's Hospital.
Rose, Richard Aubrey de Burgh, University College Hospital.
Sharpley, Christopher Wilfred, Yorkshire College, Leeds.
Soper, Arthur Walrond, Guy's Hospital
Tulloch, Forbes Manson Grant, St. Mary's Hospital.
Turtle, Godfrey de Bec, King's College Hospital.
Webster, James Ainsworth William, St. Mary's Hospital.
Wickert, Jacob Hodgson, London Hospital.
Woodruff, Hamilton Augustus, St. Bartholomew's Hospital.
Wright, Arthur Cyril Charles, St. Mary's Hospital.

The following gentlemen passed the First Examination of the Board in the subjects indicated under the four years' regulations:—

Part I., Chemistry, including Chemical Physics:

Bowen, Ernest John Hamilton, London Hospital and University College of South Wales, Cardiff.

Part II., Materia Medica:

Amsden, Walter, St. Bartholomew's Hospital.
Cator, Peter, St. Bartholomew's Hospital.
Cope, Ricardo, St. Bartholomew's Hospital.
Cragg, Edward Henry, Guy's Hospital.
Crispin, Edward Smyth, King's College, London.
Cubley, Arthur, Firth College, Sheffield, and University College, London.
Dewdney, Edward Lucius Day, King's College, London.
Eddison, Francis Ryalls, St. Bartholomew's Hospital.
Gray, Egerton, Queen's College, Cork, and London Hospital.
Hay-Coghlan, William Kedeagh, St. Mary's Hospital.
Jones, Thomas Burnell, St. Bartholomew's Hospital.
McDonnell, Edward Thomas, Catholic University, Dublin, and Queen's College, Belfast.
Miller, Walter George Douglas, Cambridge University and University College, London.
Mitchell, Arthur Henry MacNeill, St. Mary's Hospital.
Park, William Hodgson, Charing-cross Hospital.
Rowland, Robert Sibbold, Cambridge University and Guy's Hospital.
Turner, Walter Edward, St. Mary's Hospital.

Part III., Elementary Physiology:

Parlett, Frank, University College, Bristol.

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UNIVERSITY OF LONDON.—At the Intermediate Examination in Medicine in July the following candidates were successful in the subjects indicated:—

EXAMINATION FOR HONOURS.*

Anatomy.—First Class: William Henry Willcox, B.Sc. (Gold Medal), St. Mary's Hospital. *Second Class:* William Gough, B.Sc., Yorkshire College.

Physiology and Histology.—First Class: William Gough (Exhibition and a Gold Medal), Yorkshire College; John F. Northcott (Gold Medal), Cambridge and Guy's Hospital; and Frederic Agar St. John, St. Mary's Hospital. *Second Class:* Ernest Alfred Miller, Guy's Hospital; and William Henry Willcox, St. Mary's Hospital.

Organic Chemistry.—First Class: William Gough, Yorkshire College; and William Henry Willcox (Exhibition and Gold Medal), St. Mary's Hospital.

Materia Medica and Pharmaceutical Chemistry—First Class: John Atkins, Guy's Hospital; Joseph Moreton, Owens College; and William Henry Willcox (Exhibition and Gold Medal), St. Mary's Hospital. *Second Class:* Isobel Sarah Bryson, London School of Medicine and Birkbeck Institute; Ernest Alfred Miller, Guy's Hospital; and Alfred Richard Spencer, University College.

* Honours candidates are arranged in each class in alphabetical order.

PASS LIST.

Entire Examination.—First Division: Louisa Hamilton and Mary Hannah F. Ivens, London School of Medicine for Women, and Donald Johnstone McGavin, Mason College. *Second Division:* William Fielding Addey, University College; Vernon Cyril Bensley, St. Mary's Hospital; Guy Black, St. Thomas's Hospital; Francis Dawson Blandy, Middlesex Hospital; Susila Anita Bonnerjee, London School of Medicine for Women; Percy Frank Braithwaite, Owens College; Charles Henry Bullen, Mason College; James Alfred Butler and Percy William Leopold Camps, Guy's Hospital; Thomas Chetwood, London Hospital; Harold Collinson, Yorkshire College; Thomas Evans, University College; Harriet Rosa Delo Ford, London School of Medicine for Women; Herbert George Frankling, London Hospital; Alexander Freear, St. Mary's Hospital; Walter Burgess Fry, St. Thomas's Hospital; Edward Lake Gowland, St. Mary's Hospital; Dudley George Greenfield, Guy's Hospital; Walter Clapham Hirst, Yorkshire College; Thomas Hoban, St. Thomas's Hospital; Ernest William Holyoak, John William Hunt, and Bertram Fowler Hussey, St. Mary's Hospital; Frederick Arthur Johns, London Hospital; Robert George Johnson, Medical School and University College, Bristol; Joseph Edward Judson, Owens College and Manchester Royal Infirmary; Robert Blair Kinloch, University College, Cardiff; Thomas Noy Leah, St. Mary's Hospital; George Lewin, Guy's Hospital; Alfred Ernest John Lister, St. Bartholomew's Hospital; Olive McDougall, London School of Medicine for Women; Maurice Taylor Male, University College; Edwin Morgan, University College, Cardiff; Frank Mayo Morris, London Hospital; Christine Mary Murrell, London School of Medicine for Women; Cyril Alfred Rankin Nitch, St. Thomas's Hospital; William Paynter Noall, Owens College and Manchester Royal Infirmary; Harold Rothery Nutt, St. Mary's Hospital; Thomas Christian Orford, Owens College; Hugh McDowall Parrott, Guy's Hospital; William Edward Peck and Arthur Robert George Pocock, University College; Herbert Dean Pollard, London Hospital; Bryan Ellis Reynolds, University College; John Evans Richards, Charing-cross Hospital; Charles Archibald Scott Ridout, St. Bartholomew's Hospital; Bernard Hamilton St C. Roberts, Mason College; Florence Robinson, London School of Medicine for Women; Walter George Rogers, University College, Cardiff; Edward Mello Saunders, King's College; Cuthbert Fennessy Selous, St. Thomas's Hospital; Margaret Sophia Sharp, London School of Medicine for Women; Hugh Frederick Sheldon, Owens College; Frederick Blenkinsop Skerrett, B.Sc., St. Thomas's Hospital; Edwin Stott, Owens College and Guy's Hospital; Eric Wilson Danby Swift, University College; Christopher Thackray, University College, Sheffield; Robert Lewis Thornley, St. Bartholomew's Hospital; Harold John Van Praagh, St. Mary's Hospital; John Samuel Williamson, St. Bartholomew's Hospital; Louisa Woodcock, London School of Medicine for Women; Guy Theodore Wrench, Guy's Hospital; and Philip Roscoe Wrigley, Owens College.

Excluding Physiology.—First Division: Wm. Panckridge Panckridge, Middlesex Hospital; Arthur Wellesley Penrose, Guy's Hospital; and Arthur Tregelles Pridham, St. Bartholomew's Hospital. *Second Division:* Noel Charles Beaumont, St. Bartholomew's Hospital; Alfred John Vernon Betts, Westminster Hospital; Josephine Brown, London School of Medicine for Women; John Ellis Chapman, Sheffield; Lewis Cook, Westminster Hospital; Francis Gerrard H. Cooke, London School of Anatomy and Birkbeck Institute; Margaret Bernard Dobson, London School of Medicine for Women; Alfred Gordon Ede, St. Bartholomew's Hospital; Charles Edward Etheridge, Middlesex Hospital; William Ferris, St. Mary's Hospital; John Edmund Francis, University College; Alfred Jones, London Hospital; Brinley Richard Lloyd, University College, Cardiff; Syed Abul Mahmood, University College; Patrick Thurburn Manson and Oswald Marriott, Guy's Hospital; James Cole Marshall, St. Bartholomew's Hospital; Michael Foster Ranney, London Hospital; Ernest Russell-Risien, St. Bartholomew's Hospital; William Edward Ruttledge, University College; Mary Ethel S. Scharlieb, B.A., London School of Medicine and Birkbeck Institute; Francis Williams Sheppard, St. Bartholomew's Hospital; Nigel Frampton Stallard, Percy Taylor H. Stedman, and Charles Wynn Wirgman, University College.

Physiology only.—Second division: Charles Richard Brown, Harold Burrows, William Henry Cazaly, B.A., and John Moore Collyns, St. Bartholomew's Hospital; Guy Hemming Coltart, Westminster Hospital; Wilfred Henry Coltart, Birmingham Medical School; Mabel Eliza Cousins, London School of Medicine for Women; John Bernard Davey, Middlesex Hospital; Alec. Densham, Guy's Hospital; Susan Jane H. Eastwick-Field, Royal Free Hospital and London School of Medicine; Frederick Fenn Elwes, Middlesex Hospital; Eric Evans, London School of Medicine for Women; Thomas Heber Fox, Yorkshire College; Herbert Bowly Gibbins, St. Bartholomew's Hospital; Ernest Cutcliffe Hadley, Mason College; Philip Maynard Heath, University College; Edward Cecil Brearey Ibotson, Guy's Hospital; Seymour Alfred Millen, St. Bartholomew's Hospital; Herbert Henry Mills, Westminster Hospital and King's College; James Robert Morton, London Hospital; Bertram Wilmore Moss and Edward Erratt Parrett, B.A., Guy's Hospital; Charles Gabriel Seligmann, St. Thomas's Hospital; Walter Grahame Stewart, Guy's Hospital; Philip Graham Stock, Bristol Medical School; Margaret Helen Style, London School of Medicine for Women; John Frederick Walker, London Hospital; Albert John Walton Wells, St. Bartholomew's Hospital; and Robert Kardley Byam Wilmot, St. Mary's Hospital.

UNIVERSITY OF EDINBURGH.—The following degrees were conferred on July 31st:—

Degree of Doctor of Medicine.—‡Sol Jervois Aarons, Australia, M.B., C.M., 1896; Charles MacArthur Allan, Scotland, M.B., C.M., 1887; James Bird Brown, Scotland, M.B., C.M., 1890; James Murdoch Brown, Scotland, M.B., C.M. (with First-class Honours), 1874; †William Hartley Bunting, England, M.B., C.M., 1890; ‡John Ferguson Carruthers, Scotland, M.B., C.M., 1892; ‡Thomas Aldous Clinch, England, M.B., C.M., 1893; ‡Alexander Dall (M.A.), Scotland, M.B., C.M., 1894; Samuel Davidson, Scotland, M.B., C.M., 1893; ‡Richard Davies, England, M.B., C.M., 1892; Thomas Harrison Davison, M.B., C.M., 1883; John Josiah Douglas, Scotland, M.B., C.M., 1889; ‡John Buchanan Duff, Scotland, M.B., C.M. (with First-class Honours), 1893; James Churchill Dunn, New Zealand, M.B., C.M., 1893; Samuel Edgerley (M.A.), Scotland, M.B., C.M., 1891; *Friedrich Wilhelm Eurich, Saxony, M.B., C.M. (with Second-class Honours), 1891; Rufus Easson Evans, England, M.B., C.M., 1892; ‡John Hoggan Ewart, India, M.B., C.M., 1894; Francis Harold Fairweather, England, M.B., C.M., 1894; Arthur Graham Foljambe Forster, England, M.B., C.M., 1894; Arthur Foster, England, M.B., C.M., 1893; *William Edward Fothergill (M.A., B.Sc.), England, M.B., C.M. (with First-class Honours), 1893; ‡Hugh Ernest Fraser (M.A.), Scotland, M.B., C.M., 1891; *Thomas Alexander Wemyss Fulton, Scotland, M.B., C.M. (with First-class Honours), 1884; James Albert Gibson, Scotland, M.B., C.M., 1889; Thomas Anderson Glover, Scotland, M.B., C.M., 1894; ‡Edward Milliken Goldie, England, M.B., C.M., 1890; ‡Edmund Henri Gonin, England, M.B., C.M., 1890; ‡George Douglas Gray, Scotland, M.B., C.M., 1894 (*in absentiâ*); ‡Thomas Arthur Green, England, M.B., C.M., 1890; William Herbert Gregory, England, M.B., C.M., 1892; ‡Robert Grieve, England, M.B., C.M., 1894; John Howell Knight Griffiths, Wales, M.B., C.M., 1895; Arthur Erskine Herbert Cornelius Hallen, Scotland, M.B., C.M., 1889; Frederic Pollington Hearcer, Wales, M.B., C.M., 1889; ‡Ian Dalrymple Clark Howden Scotland, M.B., C.M., 1895; ‡Adam Jameson, Australia, M.B., C.M., 1883 (*in absentiâ*); Thomas Johnstone (M.A.), Scotland, M.B., C.M., 1885; †Thomas Bernard Kenny, British West Indies, M.B., C.M., 1894; James Kirk, Scotland, M.B., C.M., 1895; ‡Robert Knox, Scotland, M.B., C.M., 1892; Francis Kraemer (M.A.), Hungary, M.B., C.M., 1885; ‡John Adolphus Laing, New Zealand, M.B., C.M., 1894 (*in absentiâ*); ‡Cyril Lewis, Wales, M.B., C.M., 1891; †Frederick John M'Cann, Scotland, M.B., C.M. (with Second-class Honours), 1888; John William Macdonald, Nova Scotia, M.B., C.M., 1871 (*in absentiâ*); Angus Vallance Macgregor, Scotland, M.B., C.M., 1892; George Scott Macgregor, Scotland, M.B., C.M., 1888; ‡Henry Deedes Nutt Mackenzie, England, M.B., C.M., 1893; John Coull Mackenzie, Scotland, M.B., C.M., 1894; ‡George Henry Masson, West Indies, M.B., C.M., 1895; George Symers Mill, Scotland, M.B., C.M., 1889; †William Morrison (B.Sc.), Scotland, M.B., C.M., 1881; James Hay Murray, Scotland, M.B., C.M., 1892; Alfred James Meyrick Paget, England, M.B., C.M., 1895; James Pearse, England, M.B., C.M., 1893; Tom Pettey, England, M.B., C.M., 1894; Andrew Philip, Scotland, M.B., C.M., 1893; George Wilfred Pollard, England, M.B., C.M., 1892; George Loraine Kerr Pringle, Scotland, M.B., C.M., 1893; James Carson Rattray, Scotland, M.B., C.M., 1888; John Kildahl Richards, Australia, M.B., C.M., 1894 (*in absentiâ*); Edward Robinson, England, M.B., C.M., 1893; ‡John Grimmond Smith, Scotland, M.B., C.M., 1891; ‡James William Somerville, Scotland, M.B., C.M., 1887; Arthur Paget Stevenson, England, M.B., C.M., 1893; ‡John Steed, England, M.B., C.M. (with Second-class Honours), 1893; †James Purves Stewart (M.A.), Scotland, M.B., C.M. (with First-class Honours), 1894; Gavin Stiell, Scotland, M.B., C.M., 1881; Daniel Gibson Pearce Thomson, Scotland, M.B., C.M., 1883; William Thyne (M.A.), England, M.B., C.M., 1891; ‡Francis Ward, England, M.B., C.M., 1894; *David Arthur Welsh (M.A., B.Sc.), Scotland, M.B., C.M. (with First-class Honours), 1893; ‡Harry Whitfome, England, M.B., C.M., 1892; *John Mackie Whyte (M.A.), Scotland, M.B., C.M., 1882; Alexander Whytt, Scotland, M.B., C.M., 1894; Eugene Stephen Yonge, England, M.B., C.M., 1891; James Younan, India, M.B., C.M., 1890 (*in absentiâ*); and ‡Meredith Young, England, M.B., C.M., 1892.

* Those who have obtained gold medals for their theses.

† Deemed worthy of competing for the theses gold medals.

‡ Commended for their theses.

Degrees of Bachelor of Medicine and Master in Surgery (Old Regulations).—Frederick Anderson, Edinburgh; Richard William Anthony, Edinburgh; Hugh Llewellyn Apthorp, Bedford; James Reginald Atkinson, Crewe; §Harold Sherman Ballantyne, B.Sc., Eskbank, Midlothian; Bertram Mayhew Bone, Lancaster; Satis Chandra Bose, Edinburgh; Francis Wesley Broadbent, Leicester; Smith Osborne Browne, Londonderry; Charles John Caddick, West Bromwich; Lawson Millar Cairns, Bridgend, Langholm; Selwyn Gurney Champion, Burgess Hill, Sussex; Manmatha Nath Chaudhuri, Calcutta; George Lyall Chiene, Edinburgh; Bernard Ramsay Craig Christie, Chryston, Lanarkshire; William Cobden-Rowlands, Brecon, South Wales; Agnes Irene Sinclair Coghill, Ventnor, Isle of Wight; Lewis Archibald Crooks, Whitehall, Black River, Jamaica; Thomas Walter Alfred Daman, Edgbaston, Birmingham; William Gordon Donald, Bridge of Allan, N.B.; Stanley Ducat, Warslap, Arbroath; Robert William Thomas Ewart, Ellerslie, Moffat; Stewart Faed, Edinburgh; ‖William

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Finlay, Edinburgh; John George Forbes, Edinburgh; Harry Fowler, Edinburgh; Robert Gellatly, Fairfield, Manchester; John Frank Gibbon, Edinburgh; William Herbert Goldie, Edinburgh; James Graham, Joppa, Midlothian; Thomas Parker Greenwood, B.Sc., Cononley, *vid* Keighley, Yorks. James Grieve, Viewpark, Lesswade; §William Frederic Harvey, M.A., Edinburgh; Joseph Chambers Hastings, Dunwiley, Stranorlea, co. Donegal; John Henderson, Edinburgh; Edwin Henry Irwin, Armagh; Andries Lourens de Jager, Edinburgh; John Boyd Jamieson, Edinburgh; Thomas Nicol Johnston, Midlothian; Charles Brand Johnstone, Birkenhead; David Thomas Rocyn Jones, Rhymney; ‖Evan Harries Jones, Rhyl, North Wales; ‖Leslie Kingsford, Thornton Heath, Surrey; Gavin Liddell, B.A., Mornington, Dunedin, New Zealand; Lewis Stephens Lyne Liddell, Portobello; Arthur Weir Limont, Alnwick, Northumberland; §George Carmichael Low, M.A., Monifieth, Forfarshire; John Scott Lyle, Newtownstewart, co. Tyrone; David McAskie, Creery, Magheraeriggan, Castlederg, co. Tyrone; Mary Ross McDougall, Edinburgh; James John Lister Macfarlane, Capelaw, Colinton; Charles Clark Macmillan, Hamilton, Victoria, Australia; Angus Duncan Macpherson, M.A., Edinburgh; Harold Malcolmson, Holywood, co. Down; Mack Walter Manuk, London; §Edwin Matthew, M.A., Nairn; Arthur Grove Naylor, Gloucester; Thomas Matheson Ness, M.A., Edinburgh; John Newington, Goodhurst, Kent; James Nicoll, London; Harold Nuttall, M.A., Liverpool; James Harold Patterson, Edinburgh; Edward Laurence Phillips, Bacup; Winifred Jane Pierce, Ajmere, Rajpootana, India; Peter Rattray, Dundee; Robert Railston Richardson, Edinburgh; John Rees Roberts, B.Sc., Denbigh; Edward Charles Robertson-Fullarton, Glasgow; Isidore Eugene Rosenstein, Aberdeen; Thomas Arthur Ross, Edinburgh; Robert Selby, Port William, Wigtownshire; Dosabhoy Cursetjee Sethna, Bombay; James Adam Shoolbread, Corstorphine, Midlothian; Ethel Louie Starmer, Norwich; Thomas Herbert Stevenson, Belfast; James Prain Sturrock (M.A.), Dundee; George Crewdson Thomas, Swainswick, Bath; Isabella Beattie Venters, Stirling; Frederick James Walden, Edinburgh; James Robert Hall Walker, Edinburgh; ‖Andrew Hutton Watt, Edinburgh; Adam Ramsay Wight, Windygates, Fife; Walter Galbraith Wight, Windygates, Fife; and Maurice Beresford Wright, Laurel Hill, Loughgall, co. Armagh.

Degrees of Bachelor of Medicine and Bachelor of Surgery.—‖Bertram Cecil Robert Aldren, Malvern; Victor George Alexander, Portobello; ‖Theodore Robert William Armour, Edinburgh; Thomas Biggam, Laigh, Glenstorkadale, Leswalt, Wigtownshire; Robert Barclay Black, Edinburgh; Henry Wynne Boland, Dundee; Leonard Boyer, Sleaford, Lincs.; William Burns (M.A.), Lochty Bank, Carnoustie; David Clow, Kelso; § Charles Miner Cooper, Draycot, Weston-super-Mare; Llewelyn Wynne Davies, Llansilen, Oswestry; Joseph Espie Dods, Edinburgh; Granville Landsborough Findlay, Warriston, Largs, Ayrshire; James Forrest, Blackburn; Gideon Fourie, Edinburgh; William Hope Fowler, Edinburgh; § John Smith Fraser, Edinburgh; Andrew Gibson, Paisley; William Gorrie, Dundee; § William Hamilton, Middlesbrough; Wroughton Gerald Heath; Rowland Hill, Portobello; Guy Bertram Hollings, London; Patrick Kinmont, Edinburgh; Frederick Oakley Lasbrey, Bedford; Alexander Bremner MacCarthy, West Allington, Bridport Dorset; Thomas John Tyndale M'Hattie, Ealing; Ian Lamont MacInnes, Edinburgh; James Wilson M'Intosh, Edinburgh; William Ernest M'Kechnie, Edinburgh; ‖John Malcolm, Thurso; William Martin, Ballynahinch, co. Down; Francis Watson More, Edinburgh; Edward Fox M'Leod Neave, Dundee; John Hunter Park Paton, Duddingston, Midlothian; Alexander Howard Pirie (B.Sc.), Dundee; Robert George Riddell, Cocklaw, Cockburnspath, Berwickshire; § James Duncan Slight (M.A.), Portobello; William Maule Alexander Smith, Wellbank by Dundee; William Ralph Somerset, Manchester; ‖John William Struthers, Edinburgh; George Alves Vincent, Port of Spain, Trinidad, B.W.I.; Charles Percivale Bligh Wall, London; William Mackenzie Wilson, Stockton-on-Tees.

§ Indicates that the candidate has passed the examinations with First-class Honours.

‖ Indicates that the candidate has passed the examination with Second-class Honours.

The Ettles Scholarship has been awarded to Edwin Matthew, M.A., M.B., C.M.; the Beaney Prize in Anatomy and Surgery to Charles Miner Cooper, M.B., Ch.B.; the Murchison Memorial Scholarship in Clinical Medicine to Percy Theodore Herring, M.B., C.M.; the Buchanan Scholarship in Gynæcology to William Herbert Goldie, M.B., C.M.; the James Scott Scholarship in Midwifery to Charles Miner Cooper, M.B., Ch.B.; the Gunning Victoria Jubilee Prize in Practice of Physic to John Forbes, M.A., M.B., C.M.; the Milner Fothergill Gold Medal to William Edward Fothergill, M.A., B.Sc., M.D., C.M.; the Wightman Prize in Clinical Medicine to Ernest Francis Bashford; and the Pattison Prize in Clinical Surgery to Robert William Mackenna, M.A.

Degree of Doctor of Science.—Frederick Beddow, B.Sc., Alexander Morgan, M.A., B.Sc., and Gregg Wilson, M.A., B.Sc (*in absentiâ*).

Degree of Bachelor of Science.—Ernest Masson Anderson, ¶Alexander Brown, M.A., George Brownlee, and Alexander Campbell Mackay, M.A. *In the Department of Public Health:* Francis Maitland Gibson, M.B., C.M., B.Sc. (Pure Science); Robert Charles Mac-Watt, M.B., C.M.; Bahadhur Kaikhushro Nariman, M.B., C.M.; and Alexander Oswald Cowan Watson, M.B., C.M. *In the Department of Agriculture:* Sydney Francis Ashby, William Grice Mason, Samuel Milligan, M.A., and John Oderton Peet.

¶ Passed with Special Distinction in Mathematics and Natural Philosophy.

In the Faculty of Science the Vans Dunlop Scholarship in Chemistry has been awarded to James Patrick Longstaff and Allan W. C. Menzies, M.A., equal.

The following is an official list of candidates who have completed the first, second, and third professional examinations for degrees in Medicine and Surgery:—

First Professional Examination.—R. V. C. Ash, R. T. Baillie, R. A. Bellilios, A. N. Bond, R. J. Bradley, A. J. Brock, Alfred Brown, E. E. Brown, G. M. Brown, James Brownlee, Henry Buist, E. P. Calder, S. M. D. Campbell, T. F. Cavanagh, C. C. Choyce, B.Sc., R. E. Collins, B.A., P. T. Copeland, John Dalgliesh, W. H. Dickinson, J. L. Duncan, William Eggeling, Alexander Emslie, O. J. Evans, John Ferrier, A. H. Firth, M.A., Gavin Forrest, Catherine Fraser, Alexander Frew, H. J. George, Gavin Grey, M.A.; M. D. Gulland, A. F. Haegert, A. R. Hallam, A. M. Hamilton, William Hamilton, N. C. R. Hansen, R. A. J. Harper, D. C. Henry, L. A. Holcroft, L. J. Hood, C. W. Howe, A. E. Hunter, L. G. Hunter, Richard Imrie, A. R. Johnston, M.A., G. A. Jolly, Edgar Jones, A. C. Keay, Wm. Lee, E. W. Lewis, R. M. Liddell, C. H. Lindsay, Isabella Logie, Samuel Lyle, J. G. M'Bride, S. W. M'Clean, L. T. M'Clintock, Harriet M'Cleghry, J. B. M'Cutcheon, H. K. Macdonald, Wm. Macdougall, M.A., Alexander M'Ewan, P. F. M'Farlan, A. P. M'Gregor, N. F. MacHardy, John M'Kenzie, V. C. M'Laren, Evan Macmillan, K. D. C Macrae, A. M. Malcolmson, H. C. Martin, R. H. Martin, A. F. G. Masson, E. C. C. Maunsell, J. H. Meikle, M.A., B.Sc., W. H. Meyer, G. R. Mill, Joseph Miskelly, John Morrison, G. S. Murray, D. A. Ogilvie, George Pereira, A. C. Peterson, L. W. Pole, D. E. Pratt, W. H. Prentice, M.A., A. H. Reid, O. L. Rhys, Reginald Rorie, Laurence Rundall, H. W. Rusack, C. W. V. Rutherford, C. W. Saleeby (with distinction), R. A. Savage, E. T. Selkirk, J. F. Selkirk, T. B. Shaw, Daniel Smellie, J. A. Smith, M. M. Smith, T. A. Smyth, G. B. A. Speirs, M. M. Stevenson, S. S. Steyn, G. C. Strathairn, John Sullivan, David Sutherland, Paul Telles, H. P. Thompson, T. L. Thomson, P. S. Tillard, E. J. Tyrell, E. A. Walker, A. R. Wallis, C. E. Watts, A. G. Waugh, T. S. B. Williams (with distinction), C. C. Wilson, F. E. Wilson, James Woods, and R. T. Young, M.A.

Second Professional Examination.—W. J. Baird, C. A. J. A. Balck, F. M. Black, P. J. Bodington, Mary Booth, G. A. Brogden, W. J. D. Bromley, A. P. L. Brown, G. H. J. Brown, J. M. Buist, D. A. Callender, J. C. Carr, Morden Carthew, J. B. Cassels, Charles Chilton, J. D. Comrie, M.A. (with distinction), B. J. Courtney, H. B. Dodds (with distinction), D. R. Evans, David Ewart (with distinction), William Ewart, Hugh Faulkner, David Fenton, E. G. Ford, J. J. Galbraith, P. P. Ganteaume, B. K. Goldsmith, C. H. G. Gostwyck, George Haddow, P. W. Hampton, G. G. Hay, A. C. Heath, P. H. Henderson, A. M. Holmes, D. J. Hugher, A. M. Hutchison, W. T. James, P. F. Jardine, Thomas Jenkins, F. J. Jude, F. F. Kerr, J. W. Kerr, D. B. King, M.A., G. R. Laing, C. G. S. Leeds, L. S. Lessing, E. M. Lithgow, J. D. Lithgow, P. N. M. Macdonald, W. R. Macdonald, P. A. Maclagan, R. A. Macneill, L. W. Macpherson, E. W. Martin, F. N. Menzies, M. J. Menzies, D. B. Merry, R. M. Mitchell, H. A. D. Moore, Alexander Mouat, W. A. Murray, A. W. Nankervis, A. C. Neethling, T. P. Oates, T. S. A. Orr, William Park, J. H. Paterson, J. J. L. de Pavillet, R. N. Pringle, S. C. Pritchard, F. G. Ralston, William Reid, M.A., T. R. Robertson, G. B. Robinson, J. G. Ross, J. M. Ross, A. J. Ryle, Aneesa Sayba, J. T. Scott, Sutherland Simpson, B.Sc. (with distinction), A. B. Slater, C. E. Smith, Stephen Southall, W. C. Spooner, K. L. Teng, G. N. W. Thomas, J. A. Thompson, W. G. Thompson, George Thomson, John Thornhill, A. S. Trapaga, C. H. Watson, J. B. Wilson, and E. M. Young.

Third Professional Examination.—T. M. Alexander, A. E. Brookes, J. D. Cameron, Robert Crawford, R. M. Dalziel, F. H. Dommisse, C. L. Dunn, D. D. Farquharson, Alexander Fordyce, A. E. Goldie, J. M. Gray, E. R. Grey, Græme Hamilton, Thomson Henderson, A. M. Hutchinson, B. S. Hyslop, Robert King, James Leggate, P. A. Leighton, E. M. Lithgow, William Lockerbie, J. S. Low, B.Sc., P. L. M'All, John M'Gregor, Robina M'Gregor, D. A. Macvean, J. F. Martin, Ruth Massey, J. W. Mathewson, B.Sc., C. W. F. Melville, L. H. B. Mills, W. J. Nutter, T. A. Price, Robert Pugh, J. M. Reid, J. H. Rhodes (with distinction), Ibrahim Shalaby, G. F. B. Simpson, J. A. C. Smith, F. H. Stirling, William Tarr, A. K. Traill, and K. C. Verley.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

—At the July sittings of the Conjoint Board of the three coöperating authorities above named, held in Glasgow, the following candidates passed the respective examinations:—

First Examination: Five Years' Course.—John M. Morton, Glasgow (with distinction); John Leeming Stephenson, Padiham, Lanc.; John M'Intyre, Rothesay; Donald Duff, Glasgow; Rona Lockhart, Glasgow; Robert Wardlaw, Linlithgowshire; Archibald M'Millan, Glasgow (with distinction); William H. Duncan, Mid-Calder; P. Mackellar Dewar, Glasgow; Charlotte M'Crea, Glasgow; Martin Francis Cusack, Mitchelstown; Evelyn John Evatt, Liverpool; Kallyani Pado Chatterjee, Calcutta; John O'Connor, Ireland; James Joseph Lynch, Mallow; James Charles Galloway, Carlisle; Joseph Edwin Cooper, Egton, Yorkshire; Charles Henry Nash, Cork; and Samuel V. T. Barr, Hull.

First Examination: Four Years' Course.—Charles Alex. R. Hall, Culcutta; David Charles Blair, Redcross, Wicklow; Robert Roberts, Llanddensant, Wales; Arthur Clarence Turner, Copake, New York; James Graham, Dublin; and George A. Thompson, Darwen, Lancashire.

Second Examination: Five Years' Course.—Owen Felix M'Carthy, Cork; William John Buckmaster, Cork; Edward Michael M'Swiney, Limerick; David Fyfe, Glasgow; Charles M'Donnell, Limerick; John Norman Meade, County Cork; John Thomas Bradley, County Clare; William Ogilvy, Cambuslang; and William Arthur Benson, County Durham.

Second Examination: Four Years' Course.—Henry Rhys Battiscombe, Radnorshire; Robert Christie Reid, County Armagh; Thomas B. Saxby, Shetland; John Robertson, Aberfeldy; George Augustus Thompson, Darwen, Lanc.; John Thomas Farren, County Donegal; and Thomas Warren Colthurst, Somersetshire.

Third Examination.—James Moffat Inverarity, Dundee; Robert Stewart, Hamilton; Alexander Johnston Wilson, Newmains; William M'Farlane, Cambusnethan; James Ross, Ballymena; and James Dunlop, Glasgow.

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Final Examination, and admitted Licentiate of the three Coöperating Authorities.—James Robertson Riddell, Pollokshields; Robert Hamilton Fleming, Glasgow; Alexander Ross, Glasgow; Ralph Sedgley Elvins, Handsworth; Robert Henry Munro, Coatbridge (with honours); George Herbert Arthur Taylor, Airdrie; Arthur Charles Adderley, Douglas, County Cork; John Dunlop, Crosshill (with honours); Griffith Llewellyn Jones, Talysarn, Carnarvon; T. Edmondston Saxby, Shetland; John Elliott, Glasgow; Arthur Emlyn, Glasgow; Joseph Sanderson, Glasgow; John Adam Campbell, Ainsworth, Bolton; William George Silvester, Edinburgh; Duncan M'Gregor, Aberfoyle; David Archibald Chalmers, Glasgow; Ernest Frederick Lionel de Jersey, Guernsey; Thomas Spinks Ross, County Antrim; Edgar Huss Sheldon, Leicester; David Charles Rowlands, Edinburgh; Thomas Dow Waddell, Glasgow; and George Barthorpe Simpson, Edinburgh.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—The annual meeting of this association was held at the College of Medicine, Newcastle-on-Tyne, on July 29th and 30th. Dr. W. Julius Mickle, the retiring President, was succeeded by Dr. T. W. McDowall, superintendent of the Northumberland County Asylum, Morpeth. Dr. Urquhart, of James Murray's Royal Asylum, Perth, was selected as President-elect, and Dr. Robert Jones, of Claybury Asylum, Woodbridge, was appointed honorary general secretary, in succession to Dr. Percy Smith. An illuminated address was presented to Dr. Fletcher Beach, who had filled the office of general secretary for seven years. The Gaskell medal and prize was awarded to Dr. C. H. Bond, of Banstead Asylum. After the business meeting Dr. McDowall took up the office of President for the ensuing year, and delivered the presidential address on the Insane in India and their Treatment. He called attention to the defective provision of the care and treatment of the insane in India and said that it was entirely inadequate to the population. The officially known lunatics in India were 4311, or 1 in 70,000 of the population, whereas the last report of the Lunacy Commissioners gave a ratio of 3 lunatics to every 1000 of the population in England and Wales. There could be no doubt there were in India many others uncared for. In the native states there was only one asylum at Mysore; and in the portion of India under British rule there were only 24 asylums with a total of 4311 patients, of whom 1154 were criminals. The tyranny of caste requirements weighed heavily, and the requirements of "purdah" led to the almost total neglect of insane women in India. In the asylums officialism reigned supreme, the medical superintendents being army medical officers who had had little experience in asylum administration and the treatment of the insane. He suggested that asylums for insane women in India must be officered entirely by women, that the criminal element should be entirely removed to separate institutions, and that army medical officers should no longer be superintendents of asylums. He considered that medical women had no career in asylum practice in this country, but that, having gained some experience over here, they would be in a position to carry out much-needed reforms as far as concerned the treatment of insane women in India.—Dr. Eric France read a paper on Tuberculosis in the Insane—its Prophylaxis. He considered that, treatment of tuberculosis being at present very uncertain in its results, prophylaxis must be looked to as affording practically the only chance of reducing the death-rate from phthisis in asylums. Inhalation of tuberculous dust was the most frequent mode of infection in asylums. The most careful systems of ventilation in asylums were not attended by a corresponding diminution of the death-rate from phthisis in such institutions. Efficient ventilation did not prevent the dissemination of tuberculous dust in the wards. He considered that isolation was the only efficient method of preventing the spread of the disease, and to effect this early and absolutely accurate diagnosis must be arrived at. The physical signs being often masked in the insane, he considered the only method of accurate diagnosis to be the subcutaneous injection of minute doses of Koch's original tuberculin. He gave particulars of cases in which he had adopted this method of diagnosis.—Dr. Hayes Newington read a paper on Some Mental Aspects of Music.—Dr. Ford Robertson read a paper on the Normal Histology and Pathology of the Neuroglia in relation specially to Mental Diseases, accompanied by a microscopical demonstration. He combated the views of Bevan Lewis, Andriezen, and Weight as to the structure and functions of the neuroglia, considering it to be merely a supporting net-work for the nervous tissues consisting of cells with fibres radiating from them, and that the cells were not independent of the fibres, as had been taught.—Dr. W. A. Campbell read a paper on the Uses of Formol in the Neurological Laboratory, and illustrated his paper by a series of microscopical specimens. He subsequently read a paper on the Course of the Pyramidal Tract, illustrated by lantern demonstration.

MR. A. CAMERON SKINNER has been appointed secretary of the Victoria Hospital for Children in the place of the late Captain Blount.

LIVERPOOL CONVALESCENT INSTITUTION, WOOLTON.—The twenty-third annual report shows that during the year 1896 there were admitted 2305 patients, being a decrease of 84 on the previous year. The year opened with an adverse balance of £383 18*s.* 11*d.*, which had been reduced to £14 6*s.* 1*d.*, but it was to be regretted that owing to the amount expended on the drainage and the reduction of the balance brought from last year it had not been possible to augment the endowment fund by appropriating any portion of the special donations received during the year. The contribution from the Liverpool Hospital Sunday and Saturday Fund amounted to £275, and the annual subscriptions showed a total of £826, which, with £4385 7*s.* 8*d* received as payments for maintenance of patients, fell short of the expenditure by £14 6*s.* 1*d.*, balance due to the bank. On the whole, the report is considered satisfactory.

PRESENTATIONS TO MEDICAL MEN.—Mr. Hugh F. Hurst, L.R.C.P., L.R.C.S. Edin., has been presented by the Ambulance Classes of the Walker-on-Tyne centre of the St. John Ambulance Association, with a silver teatray as an appreciative recognition of his services as instructor to the classes.—Mr. Hugh Stott, L.R.C.P. Lond., M.R.C.S. Eng., D.P.H., of Friern Barnet, on his leaving the neighbourhood has been the recipient of a solid silver tray and an elegantly illuminated address. The tray bears the following inscription: "Presented with an illuminated address to Hugh Stott, Esq., L.R.C.P., M.R.C.S., L.S.A., D.P.H. Lond., by a large number of friends, on the occasion of his leaving Friern Barnet, as a mark of esteem and gratitude for the many kind services rendered during the past sixteen years. July 23rd, 1897." At the same time Mrs. Stott was presented with a handsome gold bracelet set with diamonds.

TYNEMOUTH INFIRMARY.—A new wing has been added to the Tynemouth Jubilee Infirmary, North Shields, by the liberality of Colonel R. S. Donkin, M.P. for the borough of Tynemouth, and was formally opened by Earl Percy on Aug. 4th. The building is a very desirable addition to the accommodation of the institution and, moreover, produces a pleasing architectural effect. As a compliment to the donor it has been decided that it shall be called the "Ada Dryden Donkin Wing." It contains a ward measuring thirty-two feet by twenty-four feet, in which six cots for children and four beds for female patients will be placed, the remainder of the building being occupied by two isolation wards and by sitting-rooms and bedrooms for nurses; the basement is spacious and will be used as a store-room and boiler-room. The question of appointing a resident medical officer to the infirmary is under consideration, and Mr. H. S. Edwards, of Corbridge, has promised that, in the event of such an appointment being made, he will pay all expenses connected therewith for a period of three years and will, moreover, give a donation of 100 guineas.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, VENTNOR.—On July 31st, as announced in THE LANCET of that date, H.R.H. Princess Henry of Battenberg visited Ventnor for the purpose of laying the foundation-stone of a new block of houses which are in course of erection in connexion with the National Hospital for Consumption and Diseases of the Chest at Ventnor. The proceedings commenced with an address read by Dr. J. G. Sinclair Coghill, senior physician, the Princess's reply being read by Sir Richard Webster, the Attorney-General. The foundation-stone was a marble block bearing the following inscription:—"To the glory of God and in memory of his Royal Highness Prince Henry of Battenberg, K.G. This stone was laid by her Royal Highness Princess Henry of Battenberg, Governor of the Isle of Wight, 31st July, 1897." Mr. P. B. Burgoyne, the treasurer, stated that the building would consist of three houses, the cost of which

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would be defrayed respectively by the estate of the late Mr. Armitage, R A, by Mr. John P. Muller, and by public subscription.

BEQUESTS AND DONATIONS.—The Board of Management of St. Mary's Hospital, London, has received £300 from the treasurer of Smith's (Kensington estate) Charity; also £1000 from the executors of the late Mrs. Overend, £300 from the executors of the late Captain E. Warriner, £100 from Mr. H. J. Allcroft, and £100 from the executors of the late Mrs. Williams.—The treasurer of Charing Cross Hospital, London, has received 100 guineas from the committee of the National Sporting Club; also £10,000 from the executors of the late Mr. David Brandon, being a payment on account of the residue of his estate; also a donation of £1000 from the Dowager Lady Loder for the endowment in perpetuity of a bed in memory of the late Sir R. Loder, Bart., M P., and £3000 from the executors of the late Mr. Andrew Guesdon, being the share assigned to the hospital from the residue of Mr. Guesdon's estate.—The committee of the Miller Hospital and Royal Kent Dispensary, Greenwich, has received a donation of £100 from the trustees of Smith's (Kensington estate) Charity.—The council of the Chelsea Hospital for Women, Fulham-road, has received £100 from the trustees of Smith's (Kensington estate) charity.—The committee of the North London or University College Hospital has received £1020 18s. being the amount collected by the nurses and students of the hospital; also from the People's Contribution Fund, £100.—The governors of the London Lock Hospital have received £200 from the trustees of Smith's (Kensington estate) Charity.—The treasurer of St. Thomas's Hospital, London, has received £933 from the executors of Mr. H. L. F. Morgan; also £5000 from the executors of Mr. W. A. Guesdon, £100 from the executors of Mr. Thomas Courtney, £90 from the executors of Miss E. Comber, £1000 from Mrs. Morgan for endowment of a bed, £1000 In Memoriam from "M. L. R.," £1000 from Mr. C. Gassiot as a Jubilee gift, and £105 from a governor as a Jubilee gift.—The board of the National Hospital for Consumption, Ventnor, Isle of Wight, has received a grant of £100 from the Worshipful Company of Goldsmiths.—The late Mrs. Ellen H. Harris has bequeathed £1000, and the late Mr. James Billing £500, to the Throat Hospital, Golden-square, London.—The treasurers of the Middlesex Hospital have received £10,000 from the executors of Mr. David Brandon, being a payment on account of the residue of his estate; also an anonymous donation of £500 towards the Cancer Ward, per Dr. A. F. Voelcker, and a donation of £157 10s. from the Worshipful Company of Fishmongers.—The committee of the North-Eastern Hospital for Children, Hackney-road, Shoreditch, has received a donation of £100 from the *Star* newspaper.—The executors of the late Mr. Thomas Hall have forwarded a legacy of £500 (less duty) and also a further sum of £225 to the Central London Ophthalmic Hospital, Gray's-inn-road, and a donation of £400 has also been received from Mrs. James Packe.—The committee of the Seamen's Hospital Society (*Dreadnought*), Greenwich, has received a donation of £500 from "An Admiral."—The board of the East London Hospital for Children and Dispensary for Women has received a donation of £100 from the Worshipful Company of Grocers, also £200 from the Worshipful Company of Goldsmiths.—The Committee of King's College Hospital, Lincoln's-inn, London, has received £100 from S.D.R S.D.—The secretary of the Royal Hospital for Diseases of the Chest, City-road, London, has received a donation of £100 from the trustees of Smith's (Kensington estate) Charity, and from the Fishmongers' Company a donation of fifty guineas.—The treasurer of Guy's Hospital, London, has received £10,000 from the trustees of the late Mr. W. A. Guesdon.—The Committee of the Hospital for Epilepsy and Paralysis and other Diseases of the Nervous System, Regent's-park, London, has received from the executors of the late Mr. W. A. Guesdon £1000, and £100 from Mr. and Mrs. G. Robertson.—Sir J. W. Ellis has given 100 guineas towards the Victoria Endowment Fund for the Richmond Royal Hospital.—The following sums have been bequeathed by the late Mr. William Andrew Guesdon: Cardiff Infirmary, £3000; Swansea General and Eye Hospital, £2000; Merthyr General Hospital, £2000; Pembrokeshire and Haverfordwest Infirmary, £500; Rhyl Royal Alexandra Children's Hospital, £2000; Wrexham Infirmary, £500; and Carnarvonshire and Anglesea Infirmary and Dispensary, Bangor, £1000.—The late Rev. Monsignor Clarke, D.D., of Clifton, has bequeathed £100 to the Bristol Royal Infirmary and £100 to the Bristol General Hospital.—The late Colonel P. K. Seddon, J.P., of Gloucester, has bequeathed £1000 to the Grimsby General Hospital.—The late Mrs. Anne Muspratt, the widow of Dr. Sheridan Muspratt, a well known analytical chemist, has bequeathed the following amounts to Liverpool institutions: £500 to University College, Liverpool, for the foundation of scholarships; £200 each to the Royal Southern Hospital, the Northern Hospital, and the Liverpool Society for the Prevention of Cruelty to Children; £300 to the Children's Infirmary; besides several other bequests to local charities.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Close of the Session.

THE session of Parliament which began on Tuesday, Jan. 19th, was brought to a close on Friday, Aug. 6th. Prior to the prorogation a number of public and private Bills received the Royal assent, among the former being the Infant Life Protection Bill, the Scotch Public Health Bill, the Metropolitan Water Companies Bill, the Bill to increase the limit of age within which children are prohibited from taking part in dangerous performances, and the Poor-law Officers Superannuation Act (1896) Amendment Bill.

The Army Medical Service.

During the debate on the Appropriation Bill Mr. Price raised the question of the state of things in the Army Medical Service. He called attention to deficiencies in the number of candidates at different examinations for the service, and urged the Government to make a special effort to ascertain why it was that the medical profession avoided the service in spite of the concessions recently made with the object of attracting candidates. Mr. Powell-Williams, Financial Secretary to the War Office, replying to Mr. Price, said it appeared that the grievances of the service had reference more to conditions than to pay, and the former were at the present moment receiving the very earnest attention of the Secretary of State for War. For one thing, it was hoped that they might be able materially to reduce the length of service abroad.

Experiments on Living Animals.

On the same occasion Mr. Swift MacNeill raised this subject. He insisted that the Act of 1876 had been entirely nugatory, and that even when the inspectors saw the most cruel torture they could not raise a hand in protest. Sir M. White Ridley replied that it was not his business to express an opinion upon vivisection; his business was to carry out the Act of 1876 to the best of his ability; and he asserted most positively that not only during the time he had been at the Home Office, but also during that of his predecessors, the greatest possible care had been taken that licences should only be given to proper persons and that the Act should be carried out in the spirit as well as in the letter. He believed it was not possible to secure better inspection than at present. The hon. Member was opposed to the use of animals for experiments under any circumstances even for the benefit of mankind. He was not, however, supported in this by the majority of the people of this country, who were honestly persuaded that animals might under proper conditions be used as a means of discovering the most beneficial modes of alleviating human suffering.

HOUSE OF COMMONS.

THURSDAY, AUG. 5TH.

Cost of the Brook Hospital.

Mr. Pickersgill asked the President of the Local Government Board whether the cost of the Brook Hospital, recently erected by the Metropolitan Asylums Board, had been £64,000 in excess of the estimates presented to the Board and £50,000 in excess of the actual amounts of contracts entered into; and whether, before he issued a further order for expenditure in respect of the erection of this hospital, he would have inquiry made into the causes of this extraordinary excess.—Mr. Chaplin replied that the facts as regards the amount by which the cost of the hospital exceeded the amounts of the estimates and of the various contracts entered into were, he believed, as stated in the question. The managers had received a report from the committee of the hospital as to these expenses, and the consideration by them of the report had been adjourned. Before sanctioning a further loan the Local Government Board would very carefully consider all the circumstances connected with the actual expenditure and the increase of the cost over the estimates.

Metropolitan Asylums Board and the Care of Children.

Mr. Pickersgill asked the President of the Local Government Board what steps have been taken by the Metropolitan Asylums Board, under the new order, to provide accommodation for juvenile prisoners under

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remand, and when such accommodation would be available.—Mr Chaplin replied that the managers of the Metropolitan Asylums District were proceeding without delay with the consideration of the arrangements which could best be made for the provision for the several classes of children (including the remand children) of whom they were to undertake the care, and the Local Government Board, who had had interviews with the managers on the subject, were rendering such assistance as they could in the matter. But it was impossible at present to state when the accommodation for the children referred to by the hon. Member would be available.—Mr. Pickersgill asked whether the construction of new buildings had begun.—Mr. Chaplin said he did not know whether the managers considered it necessary to have new buildings; he understood they were negotiating for the purchase of existing buildings.

Medical Treatment of Irish Paupers.

Mr. Patrick O'Brien, on behalf of Mr. William Redmond, asked the Chief Secretary to the Lord-Lieutenant of Ireland whether the Tulla board of guardians were surcharged for sending patients who were inmates to Dublin for medical treatment, and whether it was necessary that an inmate should be a certain time, and if so, what length of time, in a union workhouse before being sent to Dublin for medical treatment.—Mr. Gerald Balfour said that the auditor held that the patients whose expenses in Dublin hospitals he surcharged were not *bond fide* inmates of the workhouse, their names having been merely entered on the workhouse books as a preliminary to sending them for special treatment to Dublin. The Act dealing with the matter was the Poor-law Amendment Act of 1862. No particular length of time in a workhouse was specified in the Act as necessary to qualify an inmate for transmission to a special hospital. All that was necessary was that such persons should be *bond fide* inmates at the time they were sent.

Enteric Fever at Agra.

Sir James Fergusson, on behalf of Colonel Kenyon-Slaney, asked the Under Secretary of State for War whether in the 2nd Battalion York and Lancaster Regiment, stationed at Agra, there were, between Feb. 23rd and June 27th, 1897, 77 admissions into hospital from enteric fever, resulting in the deaths of 1 officer and 18 non-commissioned officers and men; whether he could state how many cases of enteric fever were developed in the military hospital by men under treatment for venereal and other diseases; and whether he would institute an inquiry into the causes of this outbreak and into the water-supply.—Mr. Brodrick replied that the returns received from Agra did not extend beyond April 30th. During the months of February, March, and April there appeared to have been 63 admissions for enteric fever and 12 deaths, the great outbreak having occurred in April. There were no returns to show how many cases were developed in hospital in men suffering from other diseases. A special investigation was immediately instituted, with the result that the water supplied by the municipal authorities had been found to be infected with the enteric microbe. Every possible precaution had been taken, and it was stated in the report for April that the epidemic seemed to be abating.

Quarantine at Colombo.

Mr. Chamberlain, in reply to a question by Sir Charles Cayzer, said that his attention had been drawn to the stringent quarantine regulations at Colombo, and he had addressed a despatch to the Governor suggesting modification.

Loss of Life in the Regent's Canal.

Sir M. Bhownaggree asked the Home Secretary if there had been any deaths, and, if so, how many, within the last twelve months by accidental drowning in the East-end portion of the Regent's Canal; and if it was proposed to adopt any special precautions during the winter against accidents likely to result from the unprotected condition of that part of the canal.—Sir M. White Ridley replied: I have not the information which would enable me to answer the first paragraph of the question, but I will call for it and communicate it to the hon. Member. As I informed him on a previous occasion, I have no power to compel the adoption of the necessary precautions, but in accordance with the promise I then gave I brought the matter to the notice of the directors of the company, whose property the canal banks are, and I have been given to understand by them that they do not intend taking any steps in the matter. In these circumstances I propose, after obtaining a special report on the place where the majority of the accidents occur, to consider what further action on my part is desirable and possible in the interest of the public safety.

The Health of the Army in India.

At this sitting of the House during the debate on the Indian Budget several Members referred to the question of venereal disease among the army in India. Mr. James Stuart had intended introducing a resolution to the effect: "That this House disapproves of the repeal of the Cantonment Act Amendment Act of 1895," but the rules of the House prevented him doing so, and he had to content himself with a speech. Some time before Mr. Stuart the House was addressed by Sir Andrew Scoble.—Sir Andrew Scoble said that statistics recently obtained proved most clearly that the freer the hand given to the Government of India in this matter the better it would be for the morality of the British army, for the health of the army, for the people of India, and for the women of India. In 1895, under the pressure of the opinion of this House, an Act was passed restricting the power of the Government of India to make regulations with regard to this form of contagious disease. The Commander-in-Chief, Sir George White, speaking the other day in the Viceroy's Council, supplied the strongest argument for the repeal of that Act, for he said:—

"The statistics of 1895 are in themselves irrefutable proof of the necessity of stronger legislation. In that year, out of 68,331 men in cantonments, the admissions into hospital for venereal diseases were no less than 36,681, or 536·9 per 1000. Of these cases 22,702 were syphilis. The ratio for primary disease has increased 137 per cent. since 1887, and that for secondary disease no less than 188 per cent. in the same period. Secondary syphilis was in 1895 four times more prevalent that it was in 1873."

The Royal College of Physicians of London, who might be taken as an unprejudiced authority, stated in their report:—

"About 13,000 soldiers return to England from India every year, and of these in 1894 over 60 per cent. had suffered from some form of venereal disease. These figures are quoted as showing more forcibly than words can the risk of contamination, not only to the present population of this country, but also to its future generations. Of these men a number die, or, remaining invalids, are more or less incapacitated from earning their own livelihood, and thus become a burden on the rates."

The moral aspects of the question had never been lost sight of by the Government of India. They had carefully desired to give the soldier such employment as might take him away from the gratification of his natural passions, but at the same time a Government which had any regard for its population ought not to hesitate for a moment to apply what it conceived to be the best remedy for putting an end to the existing state of things.

Mr. James Stuart said it would be observed that in the correspondence laid before the House there was no statement of what the Cantonment Act of 1895 provided, and even the best informed organs of public opinion in this country appeared to have fallen into error on the point. For instance, he found THE LANCET saying that "a Bill has been introduced into the Viceregal Legislative Council repealing the Cantonments Act of 1895 and untying the hands of the Indian Government by giving it the same powers in respect of venereal disease that it has in the case of other infectious and contagious disorders." The *Times* went further, and said that the action of the Indian Government simply empowered the bringing of persons affected by the disease under the same regulations as persons affected with cholera, small-pox, &c. Now, the essential part of the Act was to this effect: "Provided that no such rule shall contain any regulation enjoining or permitting any compulsory or periodical examination of any woman by medical officers or others for the purpose of ascertaining whether she is or is not suffering from any venereal disease, or is or is not fit for prostitution, or any regulation for the licensing or special registration of prostitutes or giving legal sanction to the practice of prostitution in any cantonment." What he wished to know was whether the Home Government approved the repeal of this provision. The hon. Member (Sir A. Scoble) argued in favour practically of the re-establishment of the system of regulation which had been so proved and hopeless a failure. He spoke of the increase of disease in the Indian Army since 1873 till now. There had been a great increase, but it took place while the regulations which it was proposed to re-establish existed just as much as since they had been taken out of the way. The Secretary of State had done his best to mitigate the exaggeration which had been indulged in in this connexion, but he had omitted this point, and he had also omitted to state that since the repeal of these regulations disease in the home army had greatly diminished. They could not blow hot and blow cold. They could not say that something that was accompanied by a decrease of disease in this country was the cause of increase of disease in India. Not only so; but they must have regard to the different experiences of stations and of regiments. In one regiment there were four or five times the number of men suffering from the disease that there were in another regiment. He was not going on this occasion to put forward the proposals which he and those who agreed with him on this subject had to offer, but he would say that to deal with this matter effectively they must strike at the vice which was the cause of the disease and endeavour to amend the environment of the soldiers. All he wished to-night was to make it clear that the Indian Government had made a giant stride and had created a new situation which he did not believe was contemplated in the dispatch of the Secretary of State.—Lord George Hamilton said he did not propose to follow the hon. Member at any length. He would say, however, that he adhered to everything in his dispatch. The Indian Government were advised by their legal advisers that if this Act were not repealed the medical officers would not be able to carry on their work under the regulations. These regulations were in strict accordance with his dispatch, and as the Indian Government said they wished to repeal the Act he at once gave his sanction. All that had been done was to give the regulations fair play.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BICKFORD, N. S., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Hospital for Sick Children, Great Ormond-street, Bloomsbury, London.

BULLOCK, W., M.D. Aberd., has been appointed Bacteriologist to the London Hospital, and Lecturer on Bacteriology in the London Hospital Medical School.

CARRUTHERS, E. J. W., M.D., C.M. Edin., has been appointed Medical Officer for the Congleton Sanitary District of the Congleton Union.

DRAFFIN, D. K., L.R.C.P., L.R.C.S. Irel., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Troedyrhiw Sanitary District by the Merthyr Board of Guardians.

HADON, W. F. B., L.R.C.P., L.R.C.S. Edin., has been re-appointed Medical Officer for the Second Sanitary District of the Chipping Sodbury Union.

GARLAND, E. C., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Yeovil Town Council.

GROSS, C. F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 7 Sanitary District of the East Ashford Union.

HONNYWILL, ALFRED ORAM, L.R.C.S., L.R.C.P. and L.M. Edin., has been appointed Medical Officer to the Epsom (Rural), Sutton, Carshalton, and Leatherhead Joint Isolation Hospital.

HOOPER, G. H. J., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Kensington and Chelsea District School.

JAGO, C. S., M.R.C.S., has been appointed Medical Officer of Health for the St. Just Urban Sanitary District.

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JONES, S. C., M.D. Lond., B.S., M.R.C.S., has been appointed Medical Officer for the Lower Town District of Merthyr Tydvil.

KEENAN, JOHN F., B.A., M.B., B.Ch., B.A.O. Irel., has been appointed Medical Officer for the Referagh Dispensary District of the Carrickmacross Union.

LIESCHING, C. E., M.R.C.S., L.R.C.P. Lond., has been re-appointed Medical Officer for the Halberton District of the Tiverton Union.

NEIL, JAMES, M.D. Aberd., has been appointed Medical Superintendent and Secretary to the Warneford Asylum, Oxford, vice J. Bywater Ward, resigned.

PALMER, JOHN, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Snodland No. 5 Sanitary District of the Malling Union.

PARSON, WM., M.R.C.S., has been re-appointed Medical Officer by the Godalming Town Council.

RAW, NATHAN, M.D. Durh., B.S., L.S.Sc., has been appointed Medical Superintendent to the Mill Road Infirmary, Liverpool.

RICHARDS, B. K., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer and Public Vaccinator to the Third District of the Ross-on-Wye Union, vice H. Hamilton Mack, resigned.

ROYDEN, WM., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health for Flegg and the Burgh Sanitary District of the Flegg Union.

SCOTT, ALEX, M.D., C.M. Glasg., has been appointed Certifying Factory Surgeon for the Tollcross District, Lanark.

SPREAT, F. A., M.R.C.S., D.P.H. Lond., has been appointed Medical Officer for the Friern Barnet District of the Barnet Union.

STOCKMAN, RALPH, M.D. Edin., F.R.C.P. Edin., F.R.S., has been appointed Regius Professor of Materia Medica in the University of Glasgow, vice Prof. M. Charteris, deceased.

SUTTON, JAS. B., L.R.C.P. Lond., has been re-appointed Medical Officer for the Hedgerley Sanitary District by the Eton Rural District Council.

WALKER, S. R., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Westminster Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House Physician. Salary £65 per annum, with board, lodging, and washing in the Hospital.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Senior House Surgeon. Salary £100 per annum, with board, washing, lodging, &c.

BOARD OF WORKS FOR THE LIMEHOUSE DISTRICT.—Medical Officer of Health and Public Analyst. Salary £400 per annum, to include any assistance the officer may require in either of the offices; such salary being apportioned thus: Medical Officer £300, Public Analyst £100. Applications to the Clerk to the Board, District Board Offices, White Horse-street, Commercial-road, E.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE, 101, Great Russell-street, London, W.C.—Bacteriologist to the Antitoxin Department at Sudbury. Salary £200 per annum, with dwelling accommodation on the premises.

BRISTOL ROYAL INFIRMARY.—Resident Casualty Officer for six months. Board, lodging, and washing provided, and conditional honorarium of £10.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon. Rooms, coals, and lights provided.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant.

COUNTY ASYLUM, Prestwich, Manchester.—Pathologist and Assistant Medical Officer. Salary £200 per annum, with board, residence, and washing.

COUNTY OF LANARK. DISTRICT OF THE MIDDLE WARD.—Resident Physician for the Middle Ward Isolation Hospital. Salary £140 per annum, with board, &c. Applications to the District Clerk, County Buildings, Hamilton.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon for twelve months. Salary £80 per annum, with board, residence, and washing.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, London.—Senior Resident Medical Officer. Salary £70, with board and washing.

GENERAL HOSPITAL, Birmingham.—House Physician for year. Salary £70 per annum, with residence, board, and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—House Physician for six months. Salary at the rate of £60 per annum, with board, lodging, and washing.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon for six months. Board and lodging provided.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—A Locum Tenens for Assistant Resident Medical Officer until Sept. 30th; £2 2s. a week.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board and residence in the Institution.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Park-place, Cheetham Hill-road.—House Surgeon. Salary £80 per annum, with apartments and board.

PARISH OF SMALL ISLES.—Resident Medical Officer. Salary £100 per annum. Applications to the Inspector of Poor, Parish Council, Island of Eigg-by-Oban.

ROTHERHAM HOSPITAL AND DISPENSARY.—House Surgeon. Salary 100 guineas, with board, lodging, and washing.

ROYAL ALBERT ASYLUM FOR IDIOTS AND IMBECILES OF THE NORTHERN COUNTIES, Lancaster.—Assistant Medical Officer, unmarried. Salary commencing at £120 per annum, and increasing by £15 per annum to £150, with board, apartments, and washing.

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow.—House Surgeon. Salary £50, with board and washing.

ROYAL SEA-BATHING INFIRMARY, Margate.—Assistant Resident Surgeon. Salary £52 per annum, with board and residence. Applications to the Secretary, Royal Sea-Bathing Infirmary, 30, Charing-cross, London, S.W.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Assistant House-Surgeon. Board, residence, and laundry provided.

ROYAL VICTORIA HOSPITAL, Bournemouth.—Ophthalmic Surgeon.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon for six months. Honorarium at the rate of £30 per annum, with board and washing.

SUSSEX COUNTY HOSPITAL, Brighton.—Fourth Resident Medical Officer, unmarried. Salary £30 per annum, with board, washing, and residence in the hospital.

TEIGNMOUTH HOSPITAL, South Devon.—House Surgeon, to act also as Secretary. Salary £60 per annum, with board, lodging, and washing.

VICTORIA HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Edinburgh.—Non-resident Medical Officer for Out-patients for six months. Salary at the rate of £60 per annum.

WESTMINSTER HOSPITAL, Broad-sanctuary, S.W.—Resident Obstetric Assistant for six months. Board and lodging in the hospital provided.

Births, Marriages, and Deaths.

BIRTHS.

BEAUCHAMP.—On Aug. 7th, at Cromwell-road, S.W., the wife of Sydney Beauchamp, M.A., M.B. Cantab., of a son.

CALEY.—On Aug. 5th, at Ealing, the wife of Guthrie Neville Caley, M.D., M.S., of a daughter.

HOOLEY.—On Aug. 4th, at Broxmore, Cobham, Surrey, the wife of Arthur Hooley, M.R.C.S. Eng., L.R.C.P. Edin., of a daughter.

HUBBARD.—On July 31st, at Hemel Hempstead, the wife of Arthur John Hubbard, M.D., of a son.

HUSBAND.—On Aug. 6th, at Crowland, Lincolnshire, the wife of Frank Husband, M.R.C.S., L.R.C.P., of a son.

LACE.—On July 29th, at The Paragon, Bath, the wife of Frederick Lace, F.R.C.S. Eng., of a daughter.

MARRIAGES.

CAPPS—DEACON.—On Aug. 4th, at St. Matthew's, Ealing, Frederick A. Capps, Surgeon R.N., to Helena (Lena), second daughter of Fredk. J. Deacon, of Ealing.

ECCLES—JACKSON.—On Aug. 10th, at the Parish church, Chirk, Arthur Symons Eccles, M.B., of Hertford-street, Mayfair, W., to Annie, eldest daughter of John Jackson, of Caeaugwynion, Chirk, Denbighshire.

GARDINER—DAVIDSON.—On July 26th, at SS. Peter and Paul's, Aldeburgh, John Gardiner, B.A. Oxon., M.R.C.S. Eng., L.R.C.P. Lond., of Oxford, to Florence May, eldest daughter of J. H. Davidson, of Putney.

GILL—BECKLES.—On July 29th, at Christ Church, St. Pancras, Walter Battershell Gill, B.A., M.D. Lond., F.R.C.S. Eng., of Chester-place, Regent's-park, to Jane Gordon, widow of Samuel Husbands Beckles, F.R.S., F.G.S., late of St. Leonards-on-Sea.

KNAGGS—PLAYNE.—On Aug. 10th, at the Parish church, Minchinhampton, by the Rev. C. Hardley, Francis Henry, son of Samuel Knaggs, of Huddersfield, to Martha Isabel, daughter of Charles Playne, J.P., Nailsworth, Glos.

PATERSON—BAKER-GABB.—On Aug. 3rd, at Llanwenarth, Citra, Abergavenny, Donald Rose Paterson, M.D., M.R.C.P., Lecturer on Materia Medica and Pharmacology, University College of South Wales, to Constance Mary, elder daughter of R. Baker-Gabb, The Chain, Abergavenny.

RIGDEN—RIGDEN.—On Aug. 5th, at St. George's, Canterbury, Brian Rigden, M.R.C.S. Eng., to Ellen Morgan Rigden, only daughter of the late John Rigden.

DEATHS.

BARRS.—On Aug. 4th, 1897, at Scarborough, Alice Bywater, aged 34 years, wife of Alfred G. Barrs, M.D., of Leeds, and youngest daughter of Henry Nelson, Esq.

DAVIES.—On Aug. 6th, at Plas Darland, Wrexham, suddenly, Edward Davies, M.D., M.R.C.S., J.P., aged 65 years.

FRICKE.—On July 27th, at Prestwich, Lancashire, Ernest Henry Fricke, M.R.C.S., aged 32 years.

HOLM.—On Aug. 8th, at Putney, John Holm, M.R.C.S. Eng., F.R.C.S. Edin., of Stratford-place, W., aged 57 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 12th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Aug. 6	29·75	S.W.	67	63	122	77	63	...	Cloudy
,, 7	29·88	S.W.	67	61	129	79	60	...	Cloudy
,, 8	29·68	S.E.	66	62	115	73	63	0·56	Cloudy
,, 9	29·75	W.	64	60	110	77	60	...	Overcast
,, 10	29·89	W.	64	60	124	81	60	...	Hazy
,, 11	29·89	S.W.	67	64	111	77	63	...	Overcast
,, 12	30·00	W.	62	58	116	72	55	...	Bright

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which was completed with the issue of June 26th, was given in THE LANCET of July 3rd. It is intended, in future, to include the Index and Title-page for each past half-yearly volume in the first number of the succeeding volume, as in the present case, instead of in the last number of the volume itself, as heretofore.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

SIR ASTLEY COOPER AND TEMPERANCE.

A CORRESPONDENT wishes to know the reference for the following passage attributed to Sir Astley Cooper: "I never suffer ardent spirits in my house, thinking them evil spirits. Spirits and poisons are synonymous terms."

DISPUTED CHARGES FOR SURGICAL ATTENDANCE.

MR. ALFRED KEBBELL, of Flaxton, lately brought in the County-court, York, an action for the recovery of £25 17*s.* 3*d.* in respect of services rendered to Miss Walton, niece of Mr. Mark Broadley. The case was one of disease of the knee-joint calling for amputation. The patient and her friends objecting to this operation, the joint was opened and drained. Long and constant attention was necessary; medicine and surgical appliances were supplied. In all 110 visits were paid by Mr. Kebbell. No disinterested person can dispute that the charges were very reasonable. The defendant pleaded that he was only a poor farmer making a bare living. He had offered to pay £18 in instalments. The judge said it was the defendant's own fault if he preferred the position of a farmer earning nothing to that of an agricultural labourer on another's farm. Mr. Foster, of York, considered the charges very reasonable indeed. The plaintiff's case was well stated by Mr. H. T. Waddy, instructed by Mr. J. E. Jones. The jury found the plaintiff entitled to the amount claimed, but suggested that Mr. Kebbell should reduce the amount. The plaintiff agreed to take twenty guineas, and judgment was given accordingly.

E. J. Blank, M.D.—The following list will perhaps answer our correspondent's requirements:—"The Spas and Mineral Waters of Europe," by Hermann Weber and F. Parkes Weber (London: Smith, Elder, and Co., 15, Waterloo-place, 1896); a French revised edition of this work is in the press, translated by Dr. Doyon and Dr. Spillmann (Paris: Steinheil). Articles on Climatology, Balneology, and Hydro-therapeutics in Professor Allbutt's "System of Medicine," vol. i., 1896 (London: Macmillan and Co.). Dr. Burney Yeo's "Climate and Health Resorts," third edition (London: Cassell and Co.), is excellent, but may be out of print at present. B. Bradshaw's "Dictionary of Mineral Waters," &c., issued annually (London: Kegan Paul, Trench, Trübner, and Co.), has advantages on account of its long list of places and mention of hotels. "The Climate and Baths of Great Britain" (Published for the Royal Medical and Chirurgical Society of London, 1895). "Ireland: its Health Resorts and Watering-places," by D. Edgar Flinn (Dublin: Fannin and Co.; London: Baillière, Tindall, and Cox, 1895). Karl Grube: "Allgemeine und Specielle Balneotherapie" (Berlin: Hirschwald, 1897); this is a very good general treatise. E. H. Kisch: "Balneo-Therapeutisches Lexikon" (Vienna and Leipzig: Weber und Schwarzenberg, 1897). G. Hayem's "Physical and Natural Therapeutics"; translated from the French by Professor H. A. Hare, of Philadelphia (London and Edinburgh: Pentland, 1895). S. E. Solly's "Handbook of Medical Climatology" (London: J. & A. Churchill, 1897), which has just been issued.

BOOKS ON MATERNITY NURSING.

To the Editors of THE LANCET.

SIRS,—I shall be extremely obliged if you or any of your readers can tell me of any books which would be of use to a lady who is going in for maternity nursing, and enters upon her course at Queen Charlotte Hospital in November next. I am, Sirs, yours faithfully,

Aug. 10th, 1897. ENQUIRER.

Bangor.—We never prescribe or give medical advice. Our correspondent should consult his own medical man.

THE NEW GOLDFIELDS.

THERE does not seem to be any doubt about the presence of a rich auriferous region in Klondike and the Yukon river district. The Canadian Government have decided to demand a royalty on all gold mines in Canadian territory. The rush to the Yukon mines is tremendous. The climate during winter is described as Arctic, and the difficulties of transport and those of food-supply are very great. It is confidently expected that those now proceeding there will have to encounter much hardship, and that, as has been the case on previous occasions of the same kind, there will be a good deal of sickness and mortality. The advice given by those best informed is to wait till the winter is over before starting for these territories. We call attention to the subject because it may be that some of the younger, hardier, and more enterprising members of an overcrowded medical profession are considering whether Klondike may not present them with a field for the practice of their profession and for their enterprise. But in that case it would be well to curb their ardour for the present, to await the receipt of further intelligence, and to arrange for proceeding there in the spring or early summer.

THE F. W. ELLISON FUND.

THE following contributions have been received:—Amount already acknowledged, £47 11*s.*; Dr. W. H. Hutchinson (Cambridge), £1 1*s.*; A Friend (Godalming), 10*s.*; Dr. Joseph Kidd (London), £5.

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FISCAL METHODS IN FRANCE.

AN extraordinary, but apparently authentic, anecdote illustrative of Parisian fiscal methods is narrated in the *Éclair*, a physician attached to one of the most important and best known hospitals in Paris being credibly reported as the authority for the following statement: "I am a medical man practising and residing at No. x in Blank-street. I have no other domicile, a fact well known to all my neighbours, and I pay with the utmost regularity all legitimate contributions to the public exchequer. Now the Administration, dissatisfied with its just dues, claims to have received positive information that I do not sleep at home, and I have in consequence been called upon to disburse a formidable sum on account of taxes for the irregular quarters I am credited with. How this amount was arrived at it would be difficult to say, but very likely the highest possible rate was selected to begin with. In reply to any remonstrances I was politely informed that all practitioners are required to pay, not only ordinary taxes, but also professional fees for each dwelling, near or remote, of which they habitually make use. For some time I tried to comfort myself with the thought that this was an official joke and would soon blow over, but the other day a sheriff's officer made his appearance at my real house for the purpose of seizing my effects, and unless I consent to be mulcted for the other fictitious abode they will be sold."

L.R.C.P. would be glad if some brother practitioner could recommend him an asylum within thirty miles of London for a lady patient. The husband is a professional man with only a small income, and could not afford more than 35*s.* per week inclusive. St. Luke's is objected to, and Bethlem would not receive her as the symptoms are of more than twelve months' duration.

"WHAT'S SAUCH FOR THE GOOSH, &c."

To the Editors of THE LANCET.

SIRS,—While admitting that the above old adage has many useful applications in the ordinary affairs of life, I think it singularly inappropriate when applied to the terms upon which the present medical staff of the Carlisle Infirmary hold office. What may be good for the goose may be a bad thing for the gosling; and if the governors at this stage of the history of the infirmary insist upon its medical staff possessing a piquancy, this qualification ought to be imparted with discrimination and fairness all round. When my friend, to whom you refer in your comment as the sauced goose, was told by the infirmary committee that henceforth he must cease laying a portion of his golden eggs, he readily acquiesced, conscious, no doubt, that the loss would be small, and from the fact of his appointment being practically for life in future years a golden opportunity would be afforded of increased oviparation. On the other hand, the gander to whom you give such kind fatherly advice holds office only for seven years, at the end of which time he will receive notice to quit the precincts of the infirmary and search for pastures new. The old statute of the infirmary referred to in your remarks originally made for the honorary medical and surgical staff, becomes bad in principle and worse in practice when applied to the honorary assistant staff. It is well known that one local man eminently qualified for the post of honorary assistant physician has been precluded from applying for the post in case of being asked by the committee to make a sacrifice which no medical man would ever think of submitting to unless he was overburdened with superfluous wealth. It seems somewhat hard that this old and practically obsolete statute of the infirmary, which was considered to be of so little importance that for many years it was totally disregarded, should now be made to apply to the honorary assistant staff. As the rule exists it is clearly the duty of the committee to enforce it, but the sooner the statute is altered the better for the future aspirants for the honorary assistant posts at the infirmary.

I am, Sirs, yours truly,
HONORARY ASSISTANT SURGEON.

Cumberland Infirmary, Aug. 9th, 1897.

Scorbutus.—There is no recent treatise on the subject, but there are excellent articles on it in Russell Reynolds' "System of Medicine," in Ziemssen's Cyclopædia, in vol. vii. of Dr. T. L. Stedman's "Twentieth Century Practice," and in various other works on practice of medicine. The classical authority is Dr. James Lind's "Treatise on the Scurvy," published in 1754.

DANGER TO THE EYES DURING ELECTRIC WELDING.

A COMMUNICATION has reached us written in blue pencil and headed "Danger to the Eyes during Electric Welding, Boring, and other Engineering Operations." It refers to two cases of electric light blindness occurring on H.M.S. *Mars*, and published in THE LANCET of July 24th. As the letter is obviously incomplete, and bears neither the address nor the name of the writer, we cannot insert it, but if he should see this notice we should be obliged if he would supply the deficiencies mentioned.—ED. L.

A QUERY.

To the Editors of THE LANCET.

SIRS,—Why do not the "Incorporated Medical Societies" act as does the "Incorporated Law Society," *vide* paragraph at the top of the page, and if they have not power to do so, why do they not get it?

I am, Sirs, yours truly,
Aug. 11th, 1897. A DISGUSTED M.R.C.S. OF MAY, 1831.

We have received the above from a correspondent. The "paragraph at the top of the page" is a newspaper cutting, which runs as follows:—

"Applications on behalf of the Incorporated Law Society were made in the Queen's Bench Division, before Mr. Justice Lawrance and Mr. Justice Collins, with regard to seven solicitors, and in each case the name of the solicitor complained of was struck off the rolls."

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (17th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (18th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (19th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (21st).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Sheffield Telegraph, Birmingham Mail, Scotsman, Western Morning News, Luton Reporter, Bexhill Chronicle, Somerset City Herald, Kendall Mercury, Elgin Courant, Derbyshire Advertiser, Dewsbury Reporter, Times of India, Pioneer Mail, Clifton Society, Cambridge Express, Manchester Guardian, Huddersfield Chronicle, Irish Times, Dundee Advertiser, Liverpool Daily Post, Glasgow Herald, Middlesborough Evening Telegraph, Brighton Gazette, Builder, Kensington News, Watford Observer, Freemason, Yorkshire Post, Sussex Daily News, Norwood Review, Architect, Wolverhampton Chronicle, Bury Free Press, Harwich Free Press, Bedford Standard, High Peak News, Leicester Post, East Anglian Times, Worcester Herald, Leeds Mercury, Wellingborough News, Eastern Morning News, Hampshire Telegraph, Aberystwyth Observer, Walsall Advertiser, Bristol Mercury, Belfast News Letter, Sanitary Record, Heywood News, Contract Journal, Colchester Mercury, Rocket, Bromsgrove Messenger, Local Government Chronicle, Reading Mercury, Mining Journal, Hertfordshire Mercury, Weekly Free Press and Aberdeen Herald, City Press, Gazette (Montreal), St. Bartholomew's Hospital Journal, Public Health, Engineer, Surrey Advertiser, Ilfracombe Gazette, Newark Advertiser, Family Herald and Weekly Star (Montreal), West Middlesex Herald, Cambridgeshire Times, Harwich and Dovercourt Free Press, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Dr. R. Abbe, New York; Anglo-Swiss Condensed Milk Co., Lond.; Messrs. Allen and Hanburys, Lond.; Army Medical Department, Director-General of; Mr. R. B. Anderson, Lond.; Messrs. Ashmore, Benson, Pease, and Co., Stockton-on-Tees; Mr. H. Anderson, San Francisco; Messrs. Armour and Co., Lond.

B.—Dr. J. B. Bradbury, Cambridge; Mr. R. Bucke, Canada; Birmingham General Hospital, House Governor of; Dr. Lewellys F. Barkers, Baltimore, U.S.A.; Messrs. R. Boyle and Sons, Lond.; Dr. T. Lauder Brunton, Lond.; Messrs. W. H. Bailey and Son, Lond.; Mr. C. Birchall, Liverpool; Dr. B. W. Bond, Godalming; Messrs. Burroughs, Wellcome, and Co., Lond.; Bristol Royal Infirmary, Secretary of; Mr. F. E. Bennett, Lond.; Mr. E. P. Bullar, Southampton; Mr. W. Bernard, Londonderry; Dr. John Baker, Lond.; T. B. Browne, Ltd., Lond.; Mr. A. W. Berkeley, Wrexham; Messrs. Blondeau et Cie, Lond.

C.—Dr. W. J. Collins, Lond.; Dr. R. Craik, Conisborough; Mr. R. Cuffe, Woodhall Spa; Messrs. Cassell and Co., Lond.; Messrs. R. Crooks and Co., Liverpool; Mr. J. Campbell, Small Isles, Elgg; Mr. T. S. Carter, Leeds; Mr. W. F. Cholmeley, Wolverhampton; Messrs. A. H. Cox and Co., Brighton.

D.—Mr. J. Dawson, Kew.

E.—Mr. A. Evans, Bukley; Dr. James Erskine, Glasgow; Surg.-Capt. H. M. Earle, Lond.; Epsom College, Lond., Secretary of; Messrs. Evans, Gadd, and Co., Exeter; Messrs. Evans and Wormull, Lond.; Dr. H. Eyres, Cotherstone; East Suffolk Hospital, Ipswich, Secretary of.

F.—Mr. E. C. Fincham, Shrewsbury; Dr. A. Freudenberg; Berlin; Mr. Collingwood Fenwick, Lond.; Dr. W. E. Fothergill; Manchester; Fromm's Extract Co., Lond.; Messrs. Fannin and Co., Dublin; Formalin Hygienic Co., Lond.

G.—Dr. W. T. Gairdner, Comrie; General Post Office, Lond., Secretary of; Great Eastern Railway Co., Lond., Continental Traffic Manager of; Guy's Hospital Medical School, Dean of; Glasgow University Court, Secretary of; Gebrüder Borntraegar, Berlin; Messrs. Gurney and Jackson, Lond.; Messrs. J. L. Grant and Co., Liverpool; Dr. E. Groth, Lond.

H.—Mr. W. E. Hill, Lond.; Rev. W. J. Hocking, Lond.; Mr. F. Hobday, Lond.; Dr. Hellier, Leeds; Dr. T. Hopkins, Chester; Dr. J. B. Hamilton, Chicago; Mr. T. G. Horder, Cardiff; Mr. J. Heywood, Manchester; Mr. M. C. Hime, Donegal. Huntingdon County Hospital, Secretary of.—Messrs. Irving, Son, and Jones, Liverpool.

J.—Mr. G. Janin, Montreal; Messrs. W. and A. K. Johnston, Edinburgh; J. D. M., Lond.; J. W., Lond.

K.—Dr. J. F. Keenan, Carrickmacross; Kirkwood, Lond.; Dr. C. H. Knight, New York; Messrs. R. A. Knight and Co., Lond.

L.—Mr. W. Lovell, Lond.; Lanarkshire County Council, Clerk of; Dr. A. Laumonier, Vernoil, France; Limehouse District Board of Works, Clerk of.

M.—Dr. J. Miller, Lond.; Mr. C. A. Morton, Clifton; Mr. W. Murray, Lond.; Messrs. Maclehose and Sons, Glasgow; Dr. R. S. Miller, Windsor; Messrs. Matthews Bros., Lond.; Mr. J. Gawler Murray, Scarborough; Mr. P. Munde, Hanover; Manchester Clinical Hospital, Secretary of; Dr. T. K. Morris, Glasgow; Dr. H. Macnaughton-Jones, Lond.; Medical Society of Victoria, Melbourne, Hon. Secretary of; M.R.C.S., Syston; Messrs. J. Maclehose and Sons, Lond.; Messrs. Macmillan and Co., Lond.

N.—Dr. H. S. Newland, Lond.; Dr. H. A. A. Nicholls, Dominica; National Provident Institution, Lond., Secretary of.

O.—Dr. W. Osler, Canada; Messrs. Oppenheimer, Son, and Co., Lond.

P.—Mr. Norman Porritt, Huddersfield; *Pharmaceutical Journal*, Editor of; Mr. A. G. Parrott, Clifton; Mr. Y. J. Pentland, Edinburgh; Dr. G. V. Poore, Lond.; Dr. J. F. Porter, Helmsley; Prestwich County Asylum, Secretary of; Mr. C. Playne, Nailsworth; Messrs. Parke, Davis, and Co., Lond.; W. Poppelreuter, Manchester; Dr. M. E. Paul, Nagasaki, Japan; Messrs. Potter and Sacker, Lond.

Q.—Quidam, Lond.

R.—Dr. J. Crawford Renton, Glasgow; Messrs. Ross, Ltd., Lond.; Messrs. Robertson and Scott, Edinburgh; Miss Rathbone, Beaufort, co. Kerry; Mr. C. Stanford Read, Lond.; Mr. Austin E. Reynolds, Lond.; Royal Surrey County Hospital, Guildford, Secretary of; Mr. T. L. Read, Lond.; Rotherham Hospital, House Surgeon of; Royal Albert Asylum, Lancaster, Secretary of; Royal Victoria Hospital, Bournemouth, Secretary of.

S.—Mr. Hugh Stott, Lond.; Dr. E. Markham Skerritt, Bristol; Service Committee of the House of Commons, Lond., Hon. Secretary of; *Sussex Daily News*, Editor of; Southport Infirmary, Secretary of; Dr. D. J. Sherrard, Hailsham; Sussex County Hospital, Brighton, Secretary of; Dr. H. R. Silvester, Lond.; Mr. A. Siegle, Lond.; Messrs. Salamon and Co., Rainham; Dr. A. E. Sansom, Lond.; Messrs. Smith, Elder, and Co., Lond.; Messrs. W. H. Smith and Son, Lond.; Scotia, Lond.

T.—Dr. C. B. Taylor, Nottingham; Mr. A. H. Tubby, Lond.; Mr. L. A. Tallerman, Lond.; Mr. T. P. Teale, Leeds.

U.—University of London, Secretary of; University of Edinburgh, Dean of; University College, Dundee, Secretary of; University College of South Wales, Cardiff, Registrar of; United Alkali Co., Liverpool.

V.—Mr. J. W. Vickers, Lond.; Messrs. C. R. Voigt and Co., Lond.; Victoria Street Society, Lond., Sec. of; V. E. W., Lond.

W.—Dr. J. F. L. Whittingdale, Sherborne; Dr. A. E. Wright, Netley; Dr. H. V. Würdemann, Milwaukee, Wis., U.S.A.; Dr. W. H. White, Lond.; Westminster College of Chemistry, Lond., Secretary of; Dr. R. M. Wilcox, New York; Dr. A. T. Wilkinson, Manchester; W., Lond.; Mr. W. F. Webster, Lond.; Dr. J. R. Whitaker, Edinburgh; Messrs. J. Wright and Co., Bristol; Mr. E. Walker, Aberdeen.

Y.—*Yorkshire Post*, Leeds, Proprietors of.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. J. Adam, West Malling; A. E. C., Gravesend; Apollinaris Co., Lond.; A. L., Lond.; A. M. Z., Lond.; Anderson's College Medical School, Glasgow, Secretary of; Argon, Lond.; Messrs. T. and M. Armstrong, Lond.; Alpha, Newcastle-on-Tyne.

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THE LANCET.

LONDON: SATURDAY, AUGUST 21, 1897.

ADDRESS TO STUDENTS.

WITH the sanguine hopes which seem to be inseparable from youth several hundreds of young men will in October commence the study of medicine. Year by year the examinations have grown in extent and difficulty, the length of the curriculum has been increased, the percentage of failures has risen, yet the entries at the medical schools show but little signs of diminution. To those who propose to enter a medical school we would urge that it is only after careful consideration that anyone should think of becoming a medical student. Five years of study are required—a large section out of most lives; the intellectual capacity needed is far greater than would have sufficed fifty years ago; the lengthening of the course of study has increased the pecuniary outlay; and, lastly, the physical strain of these five years is by no means small, and only too many "faint by the way." It has recently been suggested that a physical examination should precede the commencement of medical study, that a certain height and chest measurement should be required of all medical aspirants! This is going too far, for such a rule would have excluded many who have been brilliant ornaments of their profession; but it is undeniable that the strain is great, and when qualified the medical man will find that in a busy practice night work and long hours will make the strain greater still. A good constitution, therefore, is invaluable to every medical student.

What should be the mental equipment of a young man commencing the study of medicine? It cannot be too good, for not only can the man who has already studied much all the more easily study more, but a good preliminary mental training is of value in many ways. The student who has scraped through his preliminary examination with the minimum of knowledge will often encounter unexpected difficulties where the man of wider general learning will find none. Even a knowledge of Latin and Greek, which it is now so much the custom to despise, is of value, apart from the effect it has in mental training, in supplying meanings to lengthy technical terms, where the untrained eye sees only a crude concourse of meaningless syllables. The subject of the preliminary education which is desirable naturally leads to the question of the entrance examination in general knowledge. Except in the case of those who are proceeding to the older universities the matriculation examination of the University of London offers the greatest advantages; it is accepted by most of the examining bodies, and, in addition, it affords the student an opportunity of proceeding later to the examinations for the degrees of the University of London, should he be so inclined. It is certainly somewhat more difficult than some of the other entrance examinations, but the difference is not so great as it was.

Having successfully encountered the difficulties of the entrance examination, the question of what hospital should be chosen arises. The numerous excellent medical schools in the provinces which have arisen during the past few years are as well-equipped and arranged as any London school, and the men they turn out are as well trained as those from London, but the clinical facilities of the metropolis are so great that every student would do well to spend at least a part of his hospital course in London. The medical schools of London are numerous, and into the choice of a school many considerations will enter. As a rule, if, as is so often the case, the student is the son of a medical man, he will probably go to the hospital where his father was educated. As to whether a large or a small school is to be preferred, it is difficult to give a definite answer. Each has its advantages and disadvantages; the quality of the teaching necessarily varies according to the abilities of the individual members of the teaching staff, and therefore will depend upon them rather than on the particular school.

Having chosen his medical school, the student sees before him five years of hard work before the goal of qualification can be reached. "*Nil sine magno vita labore dedit mortalibus.*" If the five years are well spent the training which the student has undergone will have fitted him to practise his profession with benefit to his patients and with credit to himself. If the five years are ill-spent he may utterly fail in obtaining any qualification, and may have to fill the very undesirable *rôle* of an unqualified assistant (always provided that the General Medical Council does not entirely prohibit the employment of unqualified assistants), "full curriculum, sine diploma," or should he ultimately obtain a qualification his practice can only be unsatisfactory to others and to himself.

It is rather the custom nowadays to decry lectures; and though, perhaps, in these days of excellent text-books lectures are not of such pre-eminent importance as they once were, yet it is highly desirable that the student should attend all the lectures belonging to the course and attend them diligently, for there is a vitality in the knowledge obtained from a living teacher which cannot be got from even the best text-books. Note-taking has by some been unduly praised, and by others to an equal extent it has been unduly blamed. Anything like verbatim note taking can only serve to distract the student's attention from the substance of the lecture, and the notes will be too voluminous for use; it is quite unnecessary; but note-taking to a reasonable extent not merely offers no hindrance to due attention being paid to the lecture, but materially assists the student is listening attentively to all that is said. The value of the notes taken will vary greatly, but in many cases they will serve as text-books for all ordinary examinations. There can be no doubt that the student will find a knowledge of shorthand to be of very great value.

Practical work at the present time forms so large a part of the student's course that the importance attached to it is obvious. In the present great increase in practical work we see the chief difference between the methods of instruction in use now and those employed in former days. An object seen is much more easily remembered than one which has only been read of, and in practical work also habits of

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accuracy in observation are formed. Accuracy and thoroughness are of the chief importance in all the work a student has to do. Without accuracy knowledge is almost worthless, for it cannot be depended upon, and without thoroughness what has been learned cannot be trusted; one fact well and thoroughly learned is of more value than a dozen facts which have been learned so superficially and so imperfectly that they cannot be easily and accurately recalled.

The whole course of medical study after the passing of the preliminary examination naturally resolves itself into three parts. The first part includes the preliminary science work which has now been adopted by all examining bodies; the sciences taught are chemistry, physics, and biology. In some cases the examination in biology is so superficial that the amount of knowledge required can be of no real use to the student, but in other cases, as at the preliminary scientific examination of the University of London, the examination forms a very useful introduction to the study of the more technical subjects. The second stage includes anatomy and physiology, and on the careful study of these two subjects depends much of the success of the student when he shall come to the study of medicine and surgery, for if the anatomy and physiology have been only superficially learned, endless difficulties will meet the student later. Especially is this the case with anatomy; it is the very foundation on which medicine and surgery are built, and, moreover, it always forms a part of the examination in surgery. Many attempt to learn anatomy from books, but it can only end in failure. What is so learned is quickly forgotten; there is but one satisfactory way of learning anatomy, and that is by dissection.

Until the examination in anatomy and physiology has been passed no hospital work should be done; the work in which the student is engaged is quite sufficient to occupy all his time, and clinical work carried on at the same time would only distract him.

In the third stage come the "final" subjects—Medicine, Surgery, and Midwifery. Most students prefer these subjects to those which precede them, and, indeed, all will allow that there is naturally a greater interest in them, as they will occupy the student in his after life.

We now have to speak of examinations; they are an evil, but a necessary evil, as in no other way can a student's fitness to practise be ascertained. It is of very great importance that the amount of knowledge required for any examination be correctly estimated, for if this is not done a student may fail at an examination, not because of want of diligence, not because of deficiency in ability, but because he has wrongly estimated the quantity or quality of the knowledge required to satisfy the examiners. It is therefore very desirable that the student should not take too narrow a view of any examination, that he should not confine himself necessarily to a single text-book, that he should not refuse to study any particular part of a subject, merely because it is not required at the examination for which he is preparing, for the examination is not everything; the real object of study is to fit him for the practice of his profession, and therefore everything that will render him a more capable physician or surgeon is of value. But it is almost equally important that the student should not fall into the opposite error, and read so much that he has not time to complete all the work required for the examination he has to pass. He must be "just before he is generous." There is another error against which it is necessary to guard; it frequently happens that one subject or part of a subject is more to the candidate's liking than another, and so one subject is diligently studied and the other is neglected. The time at the student's disposal is very limited, the number of subjects which have to be studied is great, and it is necessary to arrange carefully the time devoted to each in order to fit them all in. If the student has regularly attended the lectures and performed the practical work arranged for his examination he should be ready for that examination at the usual time and should pass. As an examination approaches there are few students who do not feel some apprehensions of failure, and the idea of putting off the evil day presents itself to many. It is a very dangerous practice to postpone entering for an examination, as it is only too easily repeated when the next time comes, and thus the whole course is lengthened unnecessarily. Of course, there are unavoidable causes, such as illness, which may necessitate deferring an examination; but with these cases we are not dealing. If the student has worked well he should enter at the appointed time.

We have already spoken of the importance of good physical health to a student at the commencement of his career, but it is equally necessary that he should not allow his health to fail from over-devotion to his studies, and it is still more important that those who at the beginning of their course are in weak health should use all available means to fortify their bodies for the strain which they will have to undergo. Every student should have some form of recreation, and at the present time it cannot be said that there is any lack of opportunities for physical exercise; every medical school has attached to it cricket, football, cycling, and athletic clubs; many of them have extensive grounds a few miles out of London. There can be no excuse for a student who falls ill from want of exercise. The best mental results will be obtained by paying due attention to the physical needs of the body; a healthy active mind cannot long exist in an enfeebled frame. Especially is a healthy body necessary in those who are doing clinical work; hospital sore-throat and kindred diseases only occur in those who are "run down." Many students need the warning we have given, but probably there are many others who should take care that physical exercise does not get more than its share of attention. Cricket and cycling especially are so engrossing that much valuable time may easily be wasted. It is impossible to lay down fixed rules; some men undoubtedly require more exercise than others in order to keep in good health; the amount necessary must be decided conscientiously by every man for himself. Let neither the mind nor the body be neglected, but let each have its due share of attention. Every year, also, the student should take at least a month's holiday, and though an hour's daily reading during his vacation will do him no harm, yet he should endeavour to get as much good as possible out of the entire change of scene and habits of life.

When the five years have come to an end, and the quondam student has obtained the coveted diploma, let him not think that he possesses all the knowledge he will need; every true medical man is a student all his life. Many men

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never realise how little they know of medicine and surgery until the examiners have certified that they are capable of practising. After qualification every man who can possibly do so should obtain a resident post, if not in his own hospital, in one of the numerous hospitals in or out of London to which no medical school is attached. In such a post he will for the first time have real responsibility, with the advantage of the experience and knowledge of his chief in any difficulty.

Later still the paths of medical practice diverge; if a man decides to undertake general practice he will have to buy a practice or a partnership or he must make a practice. Which of these methods he will choose will depend greatly on his pecuniary resources, and in each there are difficulties and dangers of which we have not space to write now. Should he intend to undertake consulting work there will be many years before him in which he must do an immense amount of work for which he will receive no pay, and even after many years of waiting he may never succeed in earning sufficient to pay his expenses. Truly the prizes are great, but the blanks are much more numerous.

Every medical man should endeavour to keep up with the onward march of knowledge; the facilities afforded at present are very great; in addition to the professional journals, medical lending libraries put the latest knowledge within the reach of the country practitioner at a very small cost; and the post-graduate classes which have recently been established are of incalculable value to those who have allowed their knowledge to fall a little behind the times.

In conclusion we offer a hearty God-speed to those who are about to enter on the work which alone can render them fit, and enable them to become legally qualified, for the practice of the profession of medicine.

THE COST OF MEDICAL EDUCATION.

WE have for several years been in the habit of placing before our readers an estimate of the cost of medical education in order that those interested in arriving at the whole amount of this expense—which is by no means limited to such obviously necessary payments as fees, board, and lodging—may have some trustworthy materials before them on which to found a decision about joining a medical school. We obtained our original information from personal communications as answers to a schedule of questions placed by the aid of the deans and registrars of the various medical schools in the hands of a certain number of selected students, who were requested to furnish in the form of replies the data from which a general statement could be prepared for the guidance of others. Although the habits of the individual students necessarily had a great, even a preponderating, effect upon the replies, the returns were sufficiently numerous to yield averages, and it was easy to see that the average man spent more money in the metropolitan centres than in the provinces, and that the standard of living and the cost of maintaining a given standard varied from place to place. The most complete statement that we received came from a provincial student, whose great economy in the matter of personal expenses could only be looked upon as an example to distinctly follow. It would have been unfair to expect that every student could live so frugally as to support himself and pay for rent and food (ten months), clothes, washing, recreation, fees, and even "incidental" and "unaccounted" expenses of the the small annual sum of £65. But these headings will serve as a plan upon which we can discuss the subject generally—premising that only general information can be given that is worth anything, as a medical student as much as any other young man can make his expenses as large as he wishes, while he can only reduce them to the point that is permitted by the circumstances under which he is studying.

The cost of *rent* is the first item to be considered, and naturally enough is a charge which varies greatly with the locality. A student who occupies rooms in desirable quarters of London will pay from £2 to £3 a week on this account alone, whilst in many large provincial centres lodgings are almost as expensive as they are in London. We may take it that a student's rent for furnished apartments ought not to amount to more than one-quarter of the sum that he can fairly count upon receiving as income. If his parents can allow him £150 per annum (a large sum and one that is beyond the power of the parents of many medical students to set aside for one child) his rent should not be more than £1 a week. We are calculating that he will reside at the particular centre of education for about ten months during the year. In London it is not always easy to live near the hospital and obtain lodgings for much less than £1 a week, so that if a student can only expect £2 a week or £6 a month from his parents he is absolutely compelled to spend an imprudent proportion of his income in rent. Clearly none of this applies either to the students who live with their parents or those who are studying at a university for an arts degree concurrently. Nothing more definite on this subject can be said than that a careful man can live as a medical student on £80 per annum if he does not spend more than 10*s.* a week on his lodgings; but he will not always find it easy to obtain the lodgings, and every shilling above this weekly sum will make it very hard indeed for him to make both ends meet. It is true that we heard this year of one medical student who sold the window at the top of the market in the boom of jubilee seats and cleared thereby several times his annual rent, but it would not be prudent for others to expect such good fortune.

Referring to other centres, the rent of lodgings in Edinburgh is considerably less than in London, but in Dublin it is about the same as in the English metropolis. In Edinburgh there is a sort of residential club known as University Hall which affords facilities of social intercourse and mutual aid, as, for example, in the lending of books, which is practised systematically among the resident students. In addition to these amenities, the institution secures them lodgings at a very moderate monthly rent. Glasgow lodgings again run at about the same level, whilst in Birmingham rent is cheaper still. The cheapest district of which we have any full information is Aberdeen, where both in the matter of rent and of food we have heard of an economy that is altogether exceptional, 3*s.* 6*d.* a week in summer and 4*s.* 6*d.* in winter, the additional shilling representing the cost of fuel to cope with the Scottish winter. In towns like Cork and Leeds the average rises above this limit, but 15*s.* a week

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is a somewhat high charge. In the Irish provincial towns the rent of rooms is very low, 5*s.* and 6*s.* being by no means below the average. A somewhat higher rent is asked, but still ranging about 10*s.* a week, in English provincial towns, such as Stockton, or Rugby, or Devonport; but residence in these involves constant railway travelling, and would hardly be adapted for the purposes of a student's career, unless some special considerations influenced the decision with which fine questions of comparative expense would not come into competition. The lodging accommodation afforded by residential colleges, hospitals, and the like institutions should be mentioned. But concerning these a word may suffice. The advantages of residence in a college are manifold, but they are chiefly of the intellectual and social kind. The cost is not less than that of private lodgings thriftily selected. There may also be in some instances impatience on the part of the student of the control imposed by the regulations, which are necessarily devised for the orderly conduct of such institutions. Nevertheless, the select society, and even the inevitable restraint, of such institutions are of great service, especially to young students, who have reason to dread nothing more than solitude and an irresponsible control of any considerable proportion of their own time. On the other hand, the cost of board and lodging in such institutions is not greater than the average cost of the same accommodation in private lodgings in their neighbourhood. A plan that involves no inordinate expense is to place a student in the house of a medical practitioner in the neighbourhood of the school which he is attending. It will be found that when the educational facilities thus placed in his way are taken into account, in addition to the mere commercial value of his board and lodging, the arrangement is usually a very economical one. The opportunities for doing this are, of course, not unlimited, but they are sufficiently numerous to merit mention here. A word of warning must be added. Every man who is willing to receive a student into his house and who offers advantages in the way of private tuition may not be capable of carrying out his promises. The modern curriculum is a severe one, and the preliminary scientific work is more severe than it was a generation or even a decade back. We recommend that the advice of the dean of the school be asked before any bargain is entered upon.

Passing to the next heading, that of *food*, we may observe that here again nothing can be said precisely, but we can indicate the minimum sum that can be spent, and variation from this sum must be dictated by the student's purse. The prevalence of high prices or of low prices, as the case may be, affects such figures very little, and we may say that £30 is, we consider, in London the least sum that will meet necessary expenditure on good food. There will be no real economy for student or parent in the attempt to save in this item. We again refer only to ten months in the year.

Lastly, with regard to *fees*, the composition fee which is published by the various schools, and is in a sense a comprehensive charge, may easily be supposed to be more comprehensive than it is. A glance at our tables will show exactly how it is arrived at and what it covers. Broadly, it may be said to include all the professorial fees; but it does not include *books*—that is a matter of course. Equally it does not include *instruments*, and these two items together cannot be fairly written down at less than £8 a year in an ordinary case. Many circumstances may occur to falsify this estimate. A successful student may largely supply himself with books by prize-winning, or access to a suitable library may minimise his personal requirements in this respect. With instruments, bones, parts for dissection, and the like, the case is somewhat different, and the expenditure under these heads can only be avoided at the expense of the student's education. A niggard hand in such matters makes therefore a grievous mistake, and this should be clearly appreciated at first, otherwise the temptation to undue parsimony will be supported by a grudging mind. Another item which is for very good reason omitted from the composition payment is the *charge for examination fees*. The reason of this will be at once apparent if it is only considered that the teaching bodies and the examining bodies are distinct, and that whereas the composition fee represents a sum payable to institutions of the former class, the examination fees are receivable by institutions exercising the examining function. It will be hard to quarrel with an arrangement which is justified by the importance of paying the fee to the right person. Less obvious, but of the same kind, is the explanation of the circumstance that *tutorial fees* are not included in the composition. Many students pass through their curriculum by the aid of lectures and professorial instruction only. This is very possible when only pass examinations are attempted; but for competitive examinations additional instruction is generally an indispensable preparatory. Such additional instruction must of course be paid for, but its occasional character prohibits its inclusion with the indispensable items in the comprehensive payment.

To sum up, we have this position: The minimum sum that a student must be prepared to spend in London during a year on board and lodging is £60, though £50 will cover his expenditure in these directions in other centres, and less if he is careful. He can save 20 per cent. of this expenditure by living with a fellow-student to their mutual benefit. He must be prepared to spend £10 more at least in books, or instruments, or both. He will be almost the exception if he does not incur one or two extra liabilities in the way of special tuition during his five years' career. He will require another £10 a year as pocket money, and to these figures must be added his fees and the price of his clothes. We do not think that in London any young man should be asked to attempt to maintain himself entirely and pay all necessary fees and expenses of education as well upon a less sum than £100 a year. That many receive less and, to their infinite credit, make it suffice and crown the self-denial of their youth with a success that is sweetened by the struggle to obtain it is undeniable; but many more of their fellow-students receive larger allowances and find them inadequate. Upon individual instances, with their innumerable reasons for special treatment, we do not attempt to dwell, and we desire our readers to remember that, roughly speaking, the figures which we now give for London are a little, perhaps 15 per cent., in excess of those that with the practice of economy would be found to apply to the provinces, Scotland, and Ireland.

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Our advice is very general and is as follows: If a student cannot command personally or by allowance from his parents £100 per annum, and look to receiving it regularly for at least four out of the five years of his curriculum, we consider that he is rash in these exacting days to embark upon our profession. These are almost identical with words that we have previously used in treating this topic, but no alteration in prices or conditions makes them less true.

THE FUTURE OF PHOTOGRAPHY IN ITS APPLICATION TO MEDICINE.

PHOTOGRAPHY has come so rapidly forward of recent years as an aid to our senses, and in materially increasing the value of our observations, that no apology is needed for pointing out briefly the advantages which the practical study of the art would afford the medical student. The extremely sensitive photographic film only illustrates, after all, how dull is the perceptive power of the eye, and how far short of perfection it falls, considered in the light of an optical instrument. In recommending the student to practise photography we do not do so with any wish to burden him with another subject in his already crowded curriculum. We rather enjoin him to acquire a practical knowledge of photography because it tends to sharpen his powers of observation, to lead him to make faithful records, and to cultivate in him the artistic method. Indeed, we suggest it as a pleasant, instructive, and recreative pursuit, and in these days of dry and rapid plates and of cheap yet good apparatus there is nothing so simple as taking a photograph and taking it well. Then, again, the student's recently-acquired or freshened knowledge of chemistry will in no small measure enable him to obtain good results. At most medical schools now dark rooms are provided and other facilities afforded for taking photographs, since a knowledge of practical photography is found to be extremely useful in the dissecting-room, in the post-mortem room, in the ward, and in the operating theatre, while the capacity to take a micro-photograph is essential in the practical study of bacteriology and physiology. Even in these applications photography may be pursued as a hobby, but what a useful hobby! It is but a simple step from the photograph to the block picture used for illustrating published communications, and in describing cases of surgical or of general medical interest photography again and again proves an invaluable aid.

We go a step further than this because the extreme sensitiveness of the photographic film has more recently laid bare certain phenomena which otherwise would probably to this date have remained unobserved. The phenomena we refer to are not interesting merely as phenomena, but, as is now well known, they have led to a remarkable application of photography to the diagnosis of disease and to the discernment with more or less certainty of hidden anatomical abnormalities or even of pathological conditions. We refer to the "x" rays. In addition to a good sensitive plate, the student requires for this work a good induction coil and a vacuum tube, but the camera is no longer necessary. Indeed, for many purposes the sensitive plate may be dispensed with, since the rays may be made visible by means of the fluorescent screen. Examples of photographs showing the internal structure of the body, of the organs, and the bones, or of hidden foreign bodies are now too familiar to need any further description. The discovery has brought to light one extremely important fact—namely, that there exist vibrations which are so rapid as to pass easily through what are otherwise opaque substances, and yet which fail to create an impression upon the optic nerve. But the sensitive plate reveals them just as it records an infinitely greater number of stars than the eye is enabled by the best telescope to see. The demonstrated existence of such highly attenuated matter must have a profound influence upon our preconceived ideas of the nature of that mysterious thing—the elementary substance, or matter. Further, it has recently been shown that light or at any rate vibrations similar to it are emitted by almost all substances. Perhaps the most remarkable example of this kind is afforded by uranium and its salts, which emit a peculiar kind of light which is dark to the eye, but which very distinctly affects the photographic plate. And, strangest thing of all, this property appears to be inexhaustible. Moreover, the radiations so obtained appear to be like the "x" rays, able to permeate such ordinary opaque substances as black paper, celluloid, &c.

Another most promising development in photography, and one which will probably have an important bearing on medicine, is the recently announced discovery of a process by which the objects photographed may be displayed in all the variety of their natural colours. In this process the photograph is taken in the ordinary way and a print obtained. This is then immersed in a certain solution containing apparently a great number of chemical salts. The nature of these salts and the quantity employed are at present a secret. The photographic print when placed in this mixture appears to exert a selective action, and the colouring matters applied to it have a certain tendency to attach themselves to those portions of the print which would be of a similar colour had the image been reproduced in natural colours. Thus, the colouring matters, when applied in succession, so combine or react on each other as to reproduce approximately the tones or tints of the original. The process is not altogether a mechanical one, but requires some amount of skill, chiefly in judging when the intensity of the tones is sufficient in order that the result may be artistic and true. It is quite evident that when the particulars of this process are made known an additional means of great importance and value will be at the disposal of surgeons and physicians for making more exact pictorial records of surgical and anatomical cases and morbid specimens.

We are sure we have indicated sufficiently what profit and instruction may be gained from a knowledge of practical photography and its application, and we are confident that the medical student will not waste or burden his time by taking up this art, but, on the contrary, will find that there is much therein that is profitable and recreative.

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THE STUDENT'S LIBRARY AND ITS USE.

ALL who follow the medical profession must be students for ever—students as much in the fifth year of their curriculum as in the first; students as much at the end of their life's work as when confronted with their earliest patients. From every case for the real physician and the genuine surgeon a lesson has to be drawn: perhaps a new point arises, perhaps only a point confirmatory of what has been previously familiar; but in either instance something worth knowing has to be learned. And this is at once the great difference between book-learning and the learning that is the outcome of practical observation. To a certain extent the need for book-learning may be finite, and to a great extent this need is modified by the idiosyncrasy of the individual. But no man from the moment that he places his foot on the lowest rung of the ladder of medicine can dispense with observation or the results of observation. This need is never finite. A certain quickness in the detection of, and a certain facility in the reading of, the meaning of symptoms and signs and the influence of family history and environment are given to some in an extraordinary degree; but most certainly, should any man, being gifted in this fortunate manner, presume to think lightly of, perhaps to forego, some of the routine of observation, in the end he will be the worse off for his talents. He will make errors, and will speedily know himself, and others will as speedily know him, to be a superficial and unreliable, albeit occasionally brilliant, adviser. For book-learning there is a substitute—practical work; for practical work there is no substitute.

And this difference between book-learning and the learning that is the outcome of practical work and of the use of all opportunities for observation precisely defines the right method of using books. They are to be employed in whatever way will best assist in practical work. They are means to this end only. But all cannot employ books in the same way. Their use must vary immensely with the bent of the student's mind and the habits of work which he finds most readily conduce to the sure and speedy acquisition of knowledge. So that in the selection of a text-book, always a matter of great importance to the student, not only the large number and variety of works render the choice exceedingly difficult, but infallible advice cannot be given; for good council to one man will be less valuable to another. In the appended lists of the standard text-books we have endeavoured by brief general remarks to divide the books more or less into three classes—two comprising books specially designed to assist the student in his examinations, being elementary or comprehensive works required respectively for pass or honour examinations; while the third class includes books of reference not designed to be exhaustively read by anybody, but rather to be consulted as a second or elucidatory opinion where anything in the text-books proper seems obscure or incomplete. But the use that the student will be able to make of these three classes of books will vary entirely with his order of mind. To one man the small elementary book may be well-nigh sufficient reading. He will be able to use it as the skeleton of his knowledge and will endow it with tissues and life from his personal observation, by practical courses in his school, by clinical work in the wards, and by thoughtful attendance at lectures. This is the student into whose work books do not largely enter. But inasmuch as it is easy to examine fairly and thoroughly upon book work, while it is difficult to lay down proper standards, and discover adequate tests, for the appraisement of practical work, the result of examinations must more or less depend upon the ability of the student to answer somewhat in text-book language questions framed somewhat upon text-book lines. Therefore it will be well for the student whose practical order of mind enables him, as it were, to write his own text-book by grafting his practical work on to an elementary manual, to revise his knowledge before entering for an examination by the light of a first-class text-book. This is the best and most feasible way of combining books and practical and clinical work for the formation of a medical education. But it is not in the power of every student to obtain an education in this manner. Practical work is easier to some men than to others, and lectures mean more to some men than to others. The receptive man will benefit by teaching which only arouses opposition in the critical man. The reading of a large text-book by the critically-minded man—the man whose first impulse on hearing a fact is to doubt it or the deductions from it—may very often be the best way in which such a man can gain a knowledge of his subject. He gets an all-round look at it, and though he may not entirely understand everything that he reads he will obtain a general familiarity with this topic, and see the fallacy of the objections which rise in his mind. The bald statements for which alone the small manual can find room would arouse in him nothing but opposition, and he will be well advised to go straight to the big book where the explanations are included with the facts. But he *must* supplement his wider range of reading with as honest and as earnest a course of practical work as his less literary fellow-students. When confronted with his examination he will find, as hundreds of the most promising students of medicine have found to their considerable discomfiture, that practical work is absolutely necessary, that without it book-work is as nothing, that even to pass in the written part of the examination (for which he feels so amply equipped) will be almost impossible unless his knowledge is fortified and made alive by some measure of practical experience, and, lastly, that no amount of book-work will ever enable him to answer questions by word of mouth.

The short notes upon well-known text-books which follow will enable the student to ascertain the scope of each work, and, with the assistance of advice from his lecturer, he will be able to decide which book is most likely to suit him—that is, which book will best enable him to obtain full benefit from his practical work. He will not be able, perhaps, to decide this point at once; if he is just beginning his career he cannot know for certain in which direction difficulties will assail him. But those are the points we desire to make for his information and encouragement: firstly, all good sound text-books have their place, for knowledge presented in one form to one man is more easily digested if presented in another form to another man; and secondly, he must not be disheartened if books (or a particular book) seem to mean more to a fellow-student than they do to him. It is natural that this should be so. If one student finds it difficult to follow the arguments of the larger treatises it is more than possible that to him all sorts of practical work will come as an illuminant. If another man finds that practical work wearies him and puzzles him, although he is earnestly, honestly, and conscientiously desirous of going through his proper course and learning all that it should teach him, it is quite possible that what he requires is a general grasp of his subject, a sort of broad outline of it which would give a meaning to the details that he finds it so wearisome to acquire. It is unnecessary to say that our list of books might be considerably extended. It would be so if we had designed to make it exhaustive. But we do not suggest that the books which we mention are the only ones which the student can read with advantage. His regular course of reading will be dictated properly by advice from the lecturers at his school, and, in a measure, by the prevalent fashion at that school. We have only intended to place before him succinct information that shall guide him in his choice, while pointing out to him that all educational books are but a means to an end, and that end is practical knowledge.

ANATOMY.

The standard text-books on Systematic Anatomy are Quain's and Gray's. Both of these have been recently brought up to date. Quain's is the more scientific work, and is, indeed, the most advanced and comprehensive treatise on the subject in the English language, if not in all languages. Its morphological, histological, and visceral anatomy is unequalled. The volume on Embryology by Professor E. A. Schäfer is the clearest and best history of development with which we are acquainted. An appendix has been published on Superficial and Surface Anatomy by Professor Thane and Professor Godlee. The work is now published in separate parts.

Quain's (*Jones*) *Elements of Anatomy*. Longmans, Green, and Co. The tenth edition. Edited by EDWARD ALBERT SCHÄFER, F.R.S., Professor of Physiology and Histology in University College, London; and GEORGE DANCER THANE, Professor of Anatomy in University College, London. In three volumes. Vol. I., Part I. Embryology. By Professor Schäfer. Illustrated by 200 Engravings, many of which are coloured. 9*s*. Vol. I., Part II. General Anatomy or Histology. By

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Professor Schäfer. Illustrated by nearly 500 Engravings, many of which are coloured. 12*s.* 6*d.* Vol. II., Part I. Osteology. By Professor Thane. Illustrated by 168 Engravings. 9*s.* Vol. II., Part II. Arthrology, Myology, Angeiology. By Professor Thane. Illustrated by 255 Engravings, many of which are coloured. 18*s.* Vol. III., Part I. Spinal Cord and Brain By Professor Schäfer. Illustrated by 139 Engravings. 12*s.* 6*d.* Vol. III., Part II. The Nerves. By Professor Thane. Illustrated with 102 Engravings, many of which are coloured. 9*s.* Vol. III., Part III. Organs of the Senses. By Professor Schäfer. Illustrated by 178 Engravings. 9*s.* Vol. III., Part IV. Splanchnology. By E. A. Schäfer, F.R.S., and Johnson Symington, M.D. With 337 Illustrations. 16*s.* Appendix. Superficial and Surgical Anatomy. By Professor G. D. Thane and Professor R. J. Godlee. With 29 Illustrations. 6*s.* 6*d.*

Anatomy, Descriptive and Surgical. By HENRY GRAY, F.R.S., late Lecturer on Anatomy at St. George's Hospital. The thirteenth edition. 36*s.* London: Longmans, Green, and Co. Re-edited by T. PICKERING PICK, Surgeon to St. George's Hospital, Member of the Court of Examiners, Royal College of Surgeons of England. There are 636 large Woodcut Illustrations, a large proportion of which are coloured, the arteries being coloured red, the veins blue, and the nerves yellow. The attachments of the muscles to the bones in the section on Osteology are also shown in coloured outline.—*Gray's Anatomy* occupies a place only second to Quain's. In popularity it is doubtful if it does not actually precede its larger rival, and for mere everyday work it has points of superiority; in many instances the diagrams are much clearer, if somewhat more diagrammatic, excessive detail being omitted.

Human Anatomy: a Treatise by various Authors. Edited by HENRY MORRIS, M.A., M B. Lond., F.R.C.S., Surgeon to, and Lecturer on Surgery at, the Middlesex Hospital, with 791 Illustrations, nearly all original, and many of them in several colours. 40*s.*—This is an excellent work. We may mention especially the description of the peritoneum, in which the arrangement of that complicated structure is set out with admirable clearness. (In one volume or in three parts.) 1893. London: J. & A. Churchill.

A Manual of Anatomy for Senior Students. By EDMUND OWEN, M.B., F.R.C.S., Senior Surgeon to the Hospital for Sick Children, Great Ormond-street, Surgeon to St. Mary's Hospital, London, and co-Lecturer on Surgery, late Lecturer on Anatomy, in its Medical School. With 210 Illustrations. Price 12*s.* 6*d.* Longmans, Green, and Co.

A Text-book of Human Anatomy: Systematic and Topographical. By ALEXANDER MACALISTER, M.A., M.D., F.R.S., F.S.A., Professor of Anatomy in the University of Cambridge, and Fellow of St. John's College, Examiner in Human Anatomy, University of London. Includes the Embryology, Histology, and Morphology of Man, with special reference to the requirements of Practical Surgery and Medicine. One vol. 1889. 816 Illustrations. 36*s.* London: Charles Griffin and Co.—It is in many respects the most important work on the subject that has appeared in recent years, being thoroughly comprehensive, lucid, and up to date. It is especially suited for senior students.

Wilson's Anatomist's Vade-Mecum. Eleventh edition. By HENRY E. CLARK, M.R.C.S. Eng., F.F.P.S. Glasg., Examiner in Anatomy, F.P.S., and Professor of Surgery in St Mungo's College, Glasgow. With 492 Engravings and 26 Coloured Plates. 18*s.* 1892. London: J. & A. Churchill.

The Anatomy of the Joints of Man. By HENRY MORRIS, F.R.C.S. 1879. 8vo. 16*s.* J. & A. Churchill.—This is perhaps the most complete book on the subject yet published. The work is fully illustrated, and many of the illustrations are in colour. Besides the bones, ligaments, and synovial membranes, the various features connected with the arterial and nervous supply of the joints, the bursæ, and the muscles which act upon the joints are very thoroughly dealt with

In Practical Anatomy the student has the choice of text-books by Ellis, Cunningham, Heath, and Cleland. The favourite dissecting-room manuals are probably those of Ellis and Cunningham.

Ellis's Demonstrations of Anatomy, as edited by Professor THANE, have been studied by generations of dissectors, and for accuracy and thoroughness leave nothing to be desired.—*Cunningham's Practical Anatomy* is a very clear, well-written book, and fully illustrated. It has the advantage of being published in separate volumes. It is steadily growing in favour and has many points of superiority.—*Heath's Practical Anatomy* is a smaller work, clearly written, and forming a compendious introduction to the subject.—*Professor Cleland's Directory for Dissection* is purely a guide, and as it is small and cheap and contains full practical directions to the dissector it will be found most useful in the dissecting-room.

Demonstrations of Anatomy. By GEORGE VINER ELLIS, F.R.C.S. Eleventh edition. 1890. Pp. 782. 12*s.* 6*d.* London: Smith, Elder, and Co.

Cunningham's Manual of Practical Anatomy. Second edition. In two vols., cloth, illustrated with 372 Wood Engravings and two Coloured Plates. Vol. I.: Upper Limb, Lower Limb, Abdomen; Vol. II.: Thorax, Head, and Neck. Price, 12*s.* 6*d.* each volume. Young J. Pentland, Edinburgh.

Heath's Practical Anatomy. Edited by W. ANDERSON, F.R.C.S. With 329 Engravings. 1893. Pp. 744. 15*s.* London: J. & A. Churchill.

Directory for Dissection By Professor CLELAND, M.D. Ed. Third edition. 1888. Pp. 191. 3*s.* 6*d.* London: Smith, Elder, and Co.

Dissections Illustrated. By C. GORDON BRODIE, F.R.C.S. A graphic handbook for students of anatomy; 73 Coloured Plates and 37 Diagrams. 42*s.* London and New York: Whittaker and Co. It is also published in four parts.—This is an admirable book and should find a place in every student's library.

Applied Anatomy may be studied from the works of Treves, Bellamy, Holden, or Maclachlan.

Holden's Landmarks, Medical and Surgical, like all his work, is distinguished by its clearness of arrangement and correctness of detail. The English is perfect and the illustrations excellent. It thoroughly justifies its popularity in every way.—*Treves's Surgical Applied Anatomy* and the *Guide to Surgical Anatomy* by EDW. BELLAMY are both in general use in our schools. The former is particularly full of information, conveyed in such a way that it is likely to "stick" in the student's memory.—*Malachlan's Surgical Anatomy* is better known in Scotland. It is an accurate and comprehensive work.

Landmarks, Medical and Surgical. By LUTHER HOLDEN, F.R.C.S. Fourth edition. 1888. 3*s.* 6*d.* London: J. & A. Churchill.

Surgical Applied Anatomy. By F. TREVES, F.R.C.S. Pp 574. 7*s.* 6*d.* London: Cassell and Co. 1894.

Human Osteology. By LUTHER HOLDEN, F.R.C.S. Edited by Professor Stewart and Robt. W. Reid. M.D. Seventh edition. With 59 Plates. 16*s.* London: J. & A. Churchill. 1887.

Tablets of Anatomy. By THOMAS COOKE, F.R.C.S.—These tablets are designed to help the student to retain what he has acquired in studying either in dissection or from the text-books. A new edition, abundantly illustrated and containing full digests of the results of recent anatomical investigations, will be published in October. London: Longmans, Green, and Co.

PHYSIOLOGY.

Text-book of Physiology. By Professor MICHAEL FOSTER, M.D., F.R.S. Four parts. Pp. 1550. With an Appendix. *The Chemical Basis of the Animal Body*, constituting a separate volume of 270 pages, by A. SHERIDAN LEA, D.Sc., F.R.S. The best English text-book of the subject; suitable for students preparing for higher examinations. Deals with histology as well as with physiology proper. The parts can be bought separately. Part I., The Blood, Tissues of Movement, and Vascular Mechanism. 10*s.* 6*d.* Part II., The Tissues of Chemical Action and Nutrition. 10*s.* 6*d.* Part III., The Central Nervous System. 7*s.* 6*d.* Thoroughly revised and brought up to present date. Part IV., The Tissues and Mechanisms of Reproduction. 10*s.* 6*d.* Appendix, 7*s.* 6*d.* Sixth edition. London: Macmillan and Co. 1895.

An Introduction to Human Physiology. By AUGUSTUS WALLER, M.D., F.R.S.—A very complete manual, though of medium size; thorough and attractively written in all its parts; presupposes good acquaintance with chemistry and physics; well suited to meet medical and other examinations in the subject, but containing very little histology; illustrated. Third edition. 1896. Pp. 640. London: Longmans, Green, and Co. Price 18*s.*

A Manual of Physiology for Students and Practitioners. By Professor G. N. STEWART, M.A., D.Sc., M.D., D.P.H.

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Camb —A first-class text-book of medium size; profusely illustrated; deals fully with medical physiology; contains a number of practical exercises; also some well-coloured histological plates; thoroughly commendable. Pp. 795. London: Baillière, Tindall and Cox. 1895. Price 15*s*.

Kirkes' Handbook of Physiology. Edited by W. D. HALLIBURTON, M.D, F.R.S.—This book may be regarded as a thoroughly reliable exposition of the present state of physiological knowledge. Fourteenth edition. Revised. London: J. Murray. 1896. 14*s*.

Human Physiology. By Professor LANDOIS. Translated and edited by WILLIAM STIRLING. M.D., D Sc. Useful for reference; not suitably arranged for the student; requires much bringing up to present date. Two vols. Pp. 1120. 42*s*. With 845 illustrations. Fourth edition. London: Charles Griffin and Co. 1891.

Text-book of Physiology. By JOHN GRAY MCKENDRICK, M.D., F.R.S. A large work, containing in some directions more than the student requires, but a first-class treatise. 40*s* Two vols. Glasgow: Maclehose and Sons.

Manual of Physiology. By G. F. YEO, M.D., F.R.S. A good book, somewhat smaller than the foregoing. 14*s*. Third edition. London: J & A. Churchill. 1893.

Elements of Human Physiology. By ERNEST H. STARLING, M.D., M.R.C P., Joint Lecturer on Physiology at Guy's Hospital. Second edition, with 126 Engravings. 7*s*. 6*d*. London: J & A Churchill. 1895. Outlines; no histology.

Physiology for Beginners. By Professor MICHAEL FOSTER, M.D., F.R.S, and LEWIS E. SHORE, M.A., M.D.—A capital little book, forming a good introduction to Foster's "Text-book" or to Waller's "Human Physiology." Extremely clearly written and thoroughly illustrated. Not sufficient by itself to meet the requirements of medical examinations in physiology or histology. 2*s*. 6*d*. London: Macmillan and Co. 1894.

PHYSIOLOGICAL CHEMISTRY.

A Text-book of the Physiological Chemistry of the Animal Body. By ARTHUR GAMGEE, M.D. Edin., F R.S. Two volumes at present issued. Vol. I., Blood, Muscle, and Nerve; Vol. II., Digestion —The best manual on the subject, but only suitable for advanced students. Vol. III. still wanting. The volumes can be bought singly, 18*s*. each. London: Macmillan and Co. 1892.

Text-book of Chemical Physiology and Pathology. By Professor W. D. HALLIBURTON, M D., F.R.S —An excellent manual for all students. Illustrated. One vol. 8*s*. London: Longmans, Green, and Co 1891.

Essentials of Chemical Physiology. By the same author.—An excellent and indispensable manual for students in the physiological laboratory. It is a very handy size, 170 pp. Price 5*s* Longmans, Green, and Co. 1893.

The Chemical Basis of the Animal Body. By A. SHERIDAN LEA, D.Sc, F.R.S —A first-rate treatise, constituting the appendix to Foster's Physiology. Smaller, less illustrated, and less expensive than either of the foregoing, containing very complete references to original papers. One vol. Pp. 270. 7*s*. 6*d*. London: Macmillan and Co. 1892.

HISTOLOGY AND EMBRYOLOGY.

Some physiological text-books deal with Histology sufficiently fully for the pass examinations of the medical student; such books are Foster, Landois, and Kirkes (see above). The histological descriptions in Quain's "Anatomy" are unsurpassed. Special treatises are:—

A Course of Practical Histology. By E. A. SCHÄFER, F R.S., Jodrell Professor of Physiology in University College, London; Editor of the Histological Portion of Quain's "Anatomy." Second edition. Revised and enlarged. 1897. 7*s*. 6*d*. London: Smith, Elder, and Co.

The Elements of Embryology. By Professor MICHAEL FOSTER, F.R S, and the late Professor FRANK BALFOUR, F.R.S. Second edition, revised. Pp. 470. 1893. Eminently practical; the best book for those examinations in which practical work and manual skill in the subject are required.—*Practical Physiology*. By Professors MICHAEL FOSTER, F R S, and J. N. LANGLEY, F R.S. Sixth edition. 1895. An excellently selected series of laboratory exercises, with full instructions to the student. Both, London: Macmillan and Co.

Outlines of Practical Physiology. By Professor WILLIAM STIRLING, D.Sc. Third edition. 1895. 12*s* 6*d*. Thoroughly revised and partly re-written, with additional illustrations. Includes chemical and experimental physiology and references to practical medicine; histology not included; the best students' book on the subject; full of information and capitally illustrated.—*Outlines of Practical Histology*. Second edition. 1892 12*s*. 6*d*. Companion volume to the above and equally good; copiously illustrated. Both, London: Charles Griffin and Co.

Text-book of Histology. By A. CLARKSON, M.B., C.M. Edin. A useful student's book, with 200 excellent illustrations, most of them well coloured. Bristol: Wright. 1896. 21*s*.

Atlas of Human Anatomy. By Dr. ARNOLD BRASS, Göttingen. Translated by R. A. YOUNG, M.D., B.Sc. Sixty plates, containing 500 accurately coloured drawings of sections. London: Baillière, Tindall, and Cox. 1897. 31*s*. 6*d*.

Elements of Histology. By KLEIN. 7*s*. 6*d*. London: Cassell and Co.

There are also two small books dealing with histological methods which will be found useful by students and hospital residents:—

Methods and Formulæ. By PETER WYATT SQUIRE. 1892 London: J & A. Churchill.

Section Cutting and Staining. By W. S. COLMAN, M.D. Second edition, revised. 1896 London: H. K. Lewis.

CHEMISTRY AND PHYSICS.

Chemistry: General, Medical, and Pharmaceutical. By JOHN ATTFIELD, F.R.S —A very serviceable manual both for preparation work and reference. It has been designed especially for medical and pharmaceutical students, treats at fair length of both inorganic and organic chemistry, and contains useful data on the analysis and examination of drugs and morbid products—as, for example, calculi, urine, and blood. Fifteenth edition. 1893. 15*s*. London: Gurney and Jackson.

Organic Chemistry. By IRA REMSEN.—A clear account of the principles, including also the preparation of important organic substances. 6*s*. 6*d*. London: Macmillan and Co.

Notes on Analytical Chemistry for Students of Medicine. By A. J. BERNAYS —This is an excellent laboratory book for medical students preparing for examination, and contains also data of service to the practitioner—as, for example, the methods of examination of urinary deposits, the estimation of sugar, and the detection of biliary constituents, &c., in urine. Third edition. 1889. Pp. 150. 4*s*. 6*d*. London: J. & A. Churchill.

Practical Organic Chemistry. By S. RIDEAL, D.Sc.—A very handy little book for use in the laboratory. It covers all the ground of the London synopsis. 2*s*. 6*d*. London: H. K. Lewis.

Physics for Students of Medicine. By ALFRED DANIELL, M.A., D.Sc.—This is a recently published work by Professor Daniell, whose experience of the requirements of medical students in regard to physics is well known. It will be found an excellent companion to lecture work and is suitable for students preparing for the elementary physics examination of the Conjoint Board. It is published by Macmillan and Co., price 4*s*. 6*d*. For the first M.B. Lond. students should possess a copy of the more advanced work—*A Text-book of Physics*—by the same author and publisher.

A Manual of Physics. By WILLIAM PEDDIE, D.Sc., F.R.S.E. Second edition (revised and enlarged). London: Baillière, Tindall, and Cox. 1896. Price 7*s*. 6*d*.—This handy-sized volume will be found a very useful companion to those reading for the London University examinations and the Conjoint Board. It belongs to the University series. It is written to the level of junior students or of schoolboys of a fair average intelligence, but for that reason, we think, might have been more fully illustrated.

Elementary Lessons in Electricity and Magnetism. By SYLVANUS THOMPSON, D.Sc. A standard text-book on the subject. 4*s*. 6*d*. London: Macmillan and Co.

MATERIA MEDICA AND THERAPEUTICS.

Text-book of Pharmacology, Therapeutics, and Materia Medica. By T. LAUDER BRUNTON, M.D., D.Sc., F.R.S. Third edition, containing the additions (1891) to the British Pharmacopœia, 21*s*.; in two vols., 22*s*. 6*d*. Supplement separately, 1*s*.—The student for the higher examinations would be well advised to provide himself with this work. It is equally useful as a practical treatise and as a work of reference and is admirably written. It is not intended for junior students.

A Handbook of Therapeutics. By SIDNEY RINGER, M.D., F.R.C.P., F.R S. This is another large and important work, designed more for reference than for daily use. Thirteenth edition. London: H. K. Lewis.

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Materia Medica. By HALE WHITE, M.D., F.R.C.P., Physician to Guy's Hospital. Second edition. 1897 London: J. & A. Churchill. 7*s.* 6*d.*—*The Handbook of Pharmacology, Materia Medica, and Therapeutics.* By J. MITCHELL BRUCE, M.D., F.R.C.P. Thirty-first thousand. Pp. 582. London: Cassell and Co. 1896.—Two excellent practical books for students engaged in any of the pass examinations.

Essentials of Materia Medica and Therapeutics. By Sir A. B. GARROD, M.D., F.R.S., &c. Fourteenth edition. 1895. Edited by NESTOR TIRARD, M.D., F.R.C.P. The subject is regarded entirely from a practical therapeutic point of view, and the work, though more useful to the practitioner, can still be used as a book of reference by the student. 12*s.* 6*d.* London: Longmans, Green, and Co.

Of other text-books likely to be of value we might mention:—*Materia Medica and Therapeutics: Inorganic Substances.* By C. D. F. PHILLIPS, M.D. Second edition. 8vo. 1894. Pp. 898. 21*s.* London: J. & A. Churchill.—*Guide to Therapeutics.* By R. FARQUHARSON, M.D., F.R.C.P., &c. Fifth edition. Pp. 417. 7*s.* 6*d.* London: Smith, Elder, and Co. 1891.—*Materia Medica and Therapeutics.* By Dr. BARTHOLOW. Eighth edition. Pp. 866. 21*s.* London: H. K. Lewis. 1896.—*The Dictionary of Treatment.* By WM. WHITLA, M.D. Q.U.I. Third edition. Pp. 1000. 16*s.* London: Henry Renshaw. 1894. A capital, practical book, and pleasant reading.—*Notebook on Materia Medica.* By SCORESBY JACKSON. New edition. Edited by RALPH STOCKMAN, M.D., and J. RUTHERFORD HILL. London: J. Thin.

MEDICINE.

The number of text-books on Medicine is so large, and their general excellence so high, that it is impossible to make a selection with which no one could find legitimate fault. It must always appear that some books as good or better than the specified list have been omitted. We do not for a moment pretend that this is the best possible list, but the student who is guided by these books will be in very good hands.

The list might be considerably extended were works dealing with special branches of medicine included. To the aspirant for high medical degrees it may be a matter of moment to make himself familiar with some of these, such as Gowers on the Nervous System, Ashby and Wright on Diseases of Children, Washbourn and Goodall on Fevers; whilst he would find it valuable to refer to special treatises on diseases of the throat, dermatology, and other branches of medicine when engaged in the practical study of the subject. But our purview is not intended to embrace the whole field of medical literature, and the library of the medical school will afford him ample opportunity for consulting such works if need be. His own library should consist of a few selected general text-books, with the contents of which he should make himself thoroughly familiar.

Text-book of the Principles and Practice of Medicine. By the late HILTON FAGGE, M.D., F.R.S., and P. H. PYE-SMITH, M.D., F.R.C.P., F.R.S. Third edition. 1891. Pp. 2209. 40*s.* London: J. & A. Churchill. Two vols.—A work of great interest mainly based on the author's personal experience as physician to Guy's Hospital as well as his wide knowledge of the literature of medicine. It is almost indispensable to the advanced student.

A System of Medicine by Many Writers. Edited by T. CLIFFORD ALLBUTT, M.A., M.D. Cantab., LL.D. Glasg., F.R.C.P. Lond., F.R.S., F.L.S., F.S.A., Regius Professor of Physic in the University of Cambridge. Six vols. Each 25*s.* London: Macmillan and Co.—Three volumes of this admirable work have now appeared. In scope and character it resembles the well-known "System" edited by the late Dr. Russell Reynolds. The articles are replete with information and embrace the latest teachings of science. It should be invaluable to the practitioner as well as to the candidate for higher degrees.

The three following American works are of high class and represent the best teaching of the day.

A Text-book of the Theory and Practice of Medicine By American Teachers. Edited by WILLIAM PEPPER, M.D., LL.D. Two vols. 1893. Pp. 909 and 1046. Philadelphia: W. B. Saunders. London: The Rebman Co.

The Practice of Medicine. By JAMES TYSON, M.D. 1896. Pp. 1184. Philadelphia: Blakiston. Manchester: J. K. King and Son.

The Practice of Medicine. By HORATIO C. WOOD, A.M., M.D., LL.D., and REGINALD H. FITZ, A.M., M.D. 1897. Pp. 1088. London and Philadelphia: J. B. Lippincott Co.

The Theory and Practice of Medicine. By J. S. BRISTOWE, M.D., F.R.S. Seventh edition. 1890. Pp. 1285. 21*s.* London: Smith, Elder, and Co.—A work of sterling merit by a highly-esteemed physician; perhaps more full in clinical and pathological exposition than in therapeutical, but thoroughly sound in teaching.

The Theory and Practice of Medicine. By F. T. ROBERTS, M.D. Ninth edition. 21*s.* London: H. K. Lewis.—Long a deserved favourite with students, for whom it is especially written. Its great feature is the remarkably systematic division of the subject matter; replete with facts, but somewhat restrained in style.

The Principles and Practice of Medicine. By W. OSLER, M.D. Second edition. 1895. Pp. 1143. 24*s.* London: Young J. Pentland.—This work is one of the best text-books now available; it is clearly and pleasantly written, and is thoroughly up to date in science and practice.

Manual of the Practice of Medicine. By F. TAYLOR, M.D., F.R.C.P. Fourth edition, with Thirty Engravings. 1895. Pp. 932. 15*s.* London: J. & A. Churchill.—Perhaps the most widely read of all text-books in the present day, sharing with Osler's work the favour of the student, who is fortunate to have such sound and useful works at his disposal.

Text-book of Medicine. By Professor STRÜMPELL. Second edition. 1893. Pp. 1053. 28*s.* London: H. K. Lewis.—A work of great merit, representing the German school; in originality nearly approaching to the famous text-book of Niemeyer, which was highly appreciated twenty years ago.

Dictionary of Medicine. Edited by Sir RICHARD QUAIN, Bart., M.D. Lond., LL.D. Edin., F.R.S., assisted by F. T. ROBERTS, M.D., F.R.C.P., and J. MITCHELL BRUCE, M.D., F.R.C.P. Two vols. 1895. 40*s.* nett. London: Longmans, Green, and Co.—The arrangement of this work is such that the subjects can be readily selected for study, and the thorough revision to which it has been subjected renders it in all respects a trustworthy guide. The contributors are all of them physicians well qualified to speak on the subjects assigned them.

Dictionary of Practical Medicine. By J. K. FOWLER, M.D., F.R.C.P. 1890. Pp. 942. 21*s.* London: J. & A. Churchill.—A very useful book of reference for the student and busy practitioner.

Elements of Practical Medicine. By A. H. CARTER, M.D., F.R.C.P. Seventh edition. 1895. Pp. 496. 10*s.* London: H. K. Lewis.

Student's Guide to Practice of Medicine. By M. CHARTERIS, M.D., L.R.C.S. Edin., &c. Seventh edition. With Engravings. 1894. Pp. 712. 10*s.* London: J. & A. Churchill.

An Index of Medicine: a Manual for the Use of Senior Students and Others. By SEYMOUR TAYLOR, M.D., M.R.C.P., Senior Assistant-Physician to the West London Hospital. With Illustrations. Pp. 808. 12*s.* 6*d.* London: Smith, Elder, and Co.—The foregoing works are well planned; without being exhaustive, they present the salient facts of medicine in a concise form, and may well be chosen by the beginner.

Medical Diagnosis. By J. M. DA COSTA, M.D., LL.D. Eighth edition. 1896. London: Smith, Elder, and Co.—The leading text-book on diagnosis, replete with practical information.

Medical Diagnosis. By J. H. MUSSER, M.D. 1894. Edinburgh and London: Young J. Pentland.—A voluminous work, less practical than Da Costa's treatise, and resembling rather a systematic manual of medicine, confined to diagnostic points.

Clinical Medicine. By JUDSON BURY, M.D., F.R.C.P. Price 21*s.* London: Charles Griffin and Co.—A very admirable and clearly written work, fully illustrated.

Clinical Manual. By JAMES FINLAYSON, M.D., F.F.P.S. Glasg. Third edition. 1891. Pp. 719. 8*s.* 6*d.* London: Smith, Elder, and Co.—One of the earliest works of its class, thorough and systematic.

Manual of Medical Diagnosis. By Professor H. VIERORDT. With 178 Engravings, many in colour. 1892. Pp. 700. 18*s.* Edinburgh and London: Young J. Pentland.—A translation of a systematic work on diagnosis, which has just reached a fifth edition in the original.

Medical Diagnosis: A Manual of Clinical Methods. By J. J. GRAHAM BROWN, M.D., F.R.C.P., F.R.S. Edin.

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Third edition. 1887. Pp. 380. 10*s.* 6*d.* Edinburgh: Bell and Bradfute.—A sound and reliable manual.

Fenwick's Students' Guide to Medical Diagnosis. Edited by W. SOLTAU FENWICK, M.D. Seventh edition. With 117 Engravings. 1891. Pp. about 500. 7*s.* London: J. & A. Churchill.—This manual has long enjoyed undivided favour; an excellent guide for practical clinical work.

Physical Diagnosis: A Guide to Methods of Clinical Investigation. By G. A. GIBSON, M.D., F.R.C.P. Edin., and WILLIAM RUSSELL, M.D., F.R.C.P. Edin. Second edition. With 109 Illustrations, many coloured. 1893. Pp. 383. 10*s.* 6*d.* Edinburgh and London: Young J. Pentland.—Contains a good exposition of the rationale of the physical signs of disease.

Auscultation and Percussion. By SAMUEL J. GEE, M.D., F.R.C.P. Fourth edition. 1893. Pp. 327. 6*s.* London: Smith, Elder, and Co.—An original and helpful manual for the clinical observer.

Cardiac Outlines. By WILLIAM EWART, M.D., F.R.C.P. With 62 Illustrations. 1892. Pp. 165. 5*s.* 6*d.* London: Baillière, Tindall, and Cox.—Useful as a guide to the thorough examination of cardiac disease and the record of physical signs.

Clinical Diagnosis. By Professor R. VON JAKSCH. Second edition. Translated and edited by JAMES CAGNEY, M.D., M.R.C.P. 25*s.* London: Charles Griffin and Co.—A work of world-wide reputation, dealing exhaustively with microscopical and chemical aids to diagnosis.

A Manual of Clinical Diagnosis. By CHARLES E. SIMON, M.D. 1896. London: Henry Kimpton.—Covers the same ground as the classical treatise of von Jaksch; admirably suited for the clinical laboratory.

Guide to Examination of Urine. By J. WICKHAM LEGG, M.D., F.R.C.P. Seventh edition. 1893. Pp. 136. 3*s.* 6*d.* London: H. K. Lewis.

Notes on Examination of Blood and Excreta. By SIDNEY COUPLAND, M.D., F.R.C.P. Third edition. 1892. Pp. 64. 1*s.* 6*d.* London: H. K. Lewis.—Examples of a large class of small and concise manuals intended to assist the ward clerk in his daily observations.

SURGERY.

The standard English text-book on Surgery for the student is the tenth edition of *Erichsen's Science and Art of Surgery*. It has been brought well up to date. It is comprehensive, but not diffuse, and no student will ever regret having mastered it. *Holmes's Treatise on Surgery* (edited by Pickering Pick) is also a trustworthy manual, though somewhat smaller; the style is very clear. *Walsham's Theory and Practice of Surgery*, though useful for a student commencing the study of the subject, and sufficiently full for the minor examinations in surgery, is by no means sufficient for any of the higher examinations. It is careful and exact. There are several larger treatises on surgery suitable for the more advanced student; of these the latest is *Treves's System of Surgery*; it is excellently printed, very accurate, and fully up to date. *Holmes and Hulke's System of Surgery*, though no recent edition of it has appeared, still remains valuable, as it contains numerous excellent authoritative monographs. *Heath's Dictionary of Practical Surgery* is also useful for reference. For Operative Surgery *Jacobson's Operations of Surgery* is an admirable text-book. The information given includes, in addition to the descriptions of the operations, the reasons for their performance. *Treves's Manual of Operative Surgery* is also excellent, and one of the two should be read by all candidates for any of the higher examinations. *Treves's Student's Handbook of Surgical Operations* gives a short but careful account of the ordinary operations, and is well worth using as a text-book in a course of operative surgery. There are numerous other works on surgery, such as those of Bryant, Mansell Moullin, Druitt, Keetley, and Gant; all these deservedly have their adherents. Both Heath and Pearce Gould have written useful little treatises on Surgical Diagnosis. Minor Surgery and Bandaging may be studied in the works of Heath, Caird and Cathcart, or Berkeley Hill.

The Science and Art of Surgery. By Sir J. E. ERICHSEN, F.R.S., LL.D. Tenth edition. Edited by the late MARCUS BECK, M.S., F.R.C.S., and RAYMOND JOHNSON, B.S., F.R.C.S. 1895. With nearly 1000 Wood Engravings. Two vols. 48*s.* London: Longmans, Green, and Co.

Treatise on Surgery. By T. HOLMES, F.R.C.S., &c. Fifth edition. 1888. Pp. 1004. 30*s.* London: Smith, Elder, and Co.

Surgery: its Theory and Practice. By W. J. WALSHAM, F.R.C.S., &c. Sixth edition. 1895. With 400 Engravings. Pp. 800. 12*s.* 6*d.* London: J. & A. Churchill.

A System of Surgery. Edited by FREDERICK TREVES, F.R.C.S. 1895. With four Coloured Plates and numerous Illustrations. 48*s.* London: Cassell and Co.

A System of Surgery. Edited by TIMOTHY HOLMES, F.R.C.S., and J. W. HULKE, F.R.C.S., F.R.S. Third edition. Three vols. With Coloured Plates and numerous Illustrations. Price £4 4*s.* London: Longmans, Green, and Co.

Dictionary of Practical Surgery. By C. HEATH, F.R.C.S. Third edition. 1889. Two vols. Vol. I, pp. 978; Vol. II., pp. 884. 32*s.* London: Smith, Elder, and Co.

Surgery. By C. W. MANSELL MOULLIN, F.R.C.S. 1891. With 497 Engravings. Pp. 1413. 34*s.* London: J. & A. Churchill.

Manual of Practice of Surgery. Two vols. By T. BRYANT, M.D., F.R.C.S. Fourth edition. 1884. With 750 Engravings. Pp. 1520. 32*s.* London: J. & A. Churchill.

Manual of Surgery. By F. TREVES, F.R.C.S. 1894. Pp. 574. Three vols. 22*s.* 6*d.* London: Cassell and Co.

Druitt's Surgeon's Vade-Mecum. Edited by STANLEY BOYD, F.R.C.S. Twelfth edition. With 373 Engravings. Pp. 1000. 16*s.* London: J. & A. Churchill.

Index of Surgery. By C. R. B. KEETLEY, F.R.C.S., &c. Fourth edition. 1887. Pp. 526. 10*s.* 6*d.* London: Smith, Elder, and Co.

Operative Surgery. By F. TREVES, F.R.C.S. 1894. Pp. 1550. 42*s.* London: Cassell and Co.

The Operations of Surgery. By W. H. A. JACOBSON, F.R.C.S. Third edition. 1897. Pp. 1337. 34*s.* London: J. & A. Churchill.

Senn: Principles of Surgery. By N. SENN, M.D., Ph.D. Second edition. One vol., Pp. 656. With 178 fine wood Engravings and Coloured Plates. 24*s.* 6*d.* London: The Rebman Publishing Company.

Surgical Operations. By A. E. J. BARKER, F.R.C.S. With 61 Wood Engravings. 12*s.* 6*d.* London: Longmans, Green, and Co.

The Science and Practice of Surgery: a Complete Text-book. By F. J. GANT, F.R.C.S., Senior Surgeon, Royal Free Hospital. Third edition, about 1100 Engravings. Two vols. Price 36*s.*

Guide to Surgical Diagnosis. By C. HEATH, F.R.C.S. Second edition. 1883. Pp. 240. 6*s.* 6*d.* London: J. & A. Churchill.

Student's Guide to Surgical Diagnosis. By A. P. GOULD, F.R.C.S., &c. Pp. 584. London: Cassell and Co.

Minor Surgery and Bandaging. By C. HEATH, F.R.C.S. Eleventh edition. 1894. With 158 Engravings. Pp. 389. 6*s.*

A Surgical Handbook. By CAIRD and CATHCART. With Illustrations. Seventh edition. 1896. 8*s.* 6*d.* London: Griffin and Co.

A Text-book of Surgery. Edited by WILLIAM W. KEEN, M.D., LL.D., and J. WILLIAM WHITE, M.D., Ph.D. Third edition. In two parts. Profusely illustrated with Coloured and Black and White Plates. Price 42*s.* London: The Rebman Publishing Company.

MIDWIFERY.

In this subject the student will find it advantageous to have two books; one a small and elementary work, which he can, if he likes, take with him when attending his cases; and the other a larger text-book, for systematic reading.

Of the elementary books we mention four:—

First Lines of Midwifery. By G. ERNEST HERMAN, M.B., F.R.C.P. 1897. London: Cassell and Co.—*Obstetric Aphorisms for Students.* By J. G. SWAYNE, M.D. Tenth edition. Fcap. 8vo, with Twenty Engravings. 3*s.* 6*d.* 1893. London: J. & A. Churchill.—*An Introduction to Midwifery.* By ARCHIBALD DONALD, M.D.—*A short Practice of Midwifery.* By HENRY JELLETT, M.D.—All four are excellent for their purpose—that is, they serve well to instruct the student as to his practical duties and the points to be noted and watched in attending his first cases of labour. Dr. Swayne's book is the old-established favourite. The other two are more modern, but by any of them the student will find himself much fortified.

General Text-books:—

A Manual of Midwifery. By A. L. GALABIN, M.D., F.R.C.P.—A very deservedly popular book; literally a manual as it is in one volume; clear and precise and sufficiently informatory to provide the student with all the information necessary for pass examinations. Fourth edition.

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Crown 8vo. 1893. With 271 Engravings. 15*s*. London: J. & A. Churchill.

The Science and Art of Midwifery. By W. T. LUSK, M.D.—This American work is undoubtedly in many ways the best English text-book on the subject. The amount of information contained is very large, the references complete, and the plan of the book is easy to follow. For honour examinations this book is a necessity. Fourth edition. 1892. Pp. 671. 18*s*. London: H. K. Lewis.

The Science and Practice of Midwifery. By W. S. PLAYFAIR, M.D., F.R.C.P. Eighth edition. Two volumes, each containing 430 and 443 pages respectively.—This has long been a deservedly popular work with students. It practically held the field till the appearance of the two previous treatises, and is still, and we think fitly, the most widely read text-book on the subject. Two vols. Eighth edition. 1893. 28*s*. London: Smith, Elder, and Co.

The student will also find the following books of reference of use:—

Text-book of Midwifery. By the late OTTO SPIEGELBERG. Translated from the second German edition by Dr. HURRY.—This work in two volumes is published by the New Sydenham Society. Although a text-book in name it is not well adapted to the immediate needs of the student, who, however, may be advised to consult it on special points.—*Difficult Labour*, by G. ERNEST HERMAN, M.B., F.R.C.P., will also be found a useful work of reference on its subject.

GYNÆCOLOGY.

A Manual of Gynæcology. By BERRY HART, M.D., and FREHLAND BARBOUR, M.D.—The work consists of two parts and an appendix. Part I. deals with the Anatomy, Physiology, and Methods of Examination of the Female Pelvic Organs, and Part II. with the diseases peculiar to the organs. This favourite manual is especially strong in its anatomical and purely scientific sections, if somewhat less complete as a clinical guide. It has the advantage of giving at the end an Index of Recent Gynæcological Literature. Fourth edition. Pp. 722. Illustrated with Lithographs and 400 Woodcuts. London: W. & A. K. Johnston.

The Student's Guide to the Diseases of Women. By A. L. GALABIN, M.D., F.R.C.P.—A small book that has been useful to several generations of students and will be useful to generations more. Fifth edition. 1893. Pp. 507. 8*s*. 6*d*. London: J. & A. Churchill.

A Practical Text-book of the Diseases of Women. By ARTHUR H. N. LEWERS, M.D.—This is also a small book, but somewhat larger than the above, and treats the subject rather more from the clinical point of view. It is a deservedly popular work with the students because of the extremely practical nature of its information. Fifth edition. 1893. Pp. 439. 10*s* 6*d*. London: H. K. Lewis.

The following books of reference are recommended:—*Clinical Gynæcology*. By T. MORE MADDEN, M.D. This book consists of forty-seven lectures on the diseases of women and may be usefully consulted on special points.—*A Treatise on Gynæcology*. By S. POZZI, M.D. This work, in three volumes, is published by the New Sydenham Society, and while not well adapted for general reading will be found invaluable for reference. The same remark to a greater or less extent, applies to the following books:—*Diseases of the Ovaries*. By LAWSON TAIT, F.R.C.S. Fourth edition. 1883.—*Abdominal Surgery*. By J. GREIG SMITH. Third edition. 1889.—*The Surgical Diseases of the Ovaries and Fallopian Tubes*. By J. BLAND SUTTON, F.R.C.S.—*The Diagnosis and Surgical Treatment of Abdominal Tumours*. By Sir SPENCER WELLS.—*Clinical Lectures on the Diseases of Women*. By J. MATTHEWS DUNCAN, M.D. Fourth edition. 1890.—*The Diseases of Women and their Treatment*. By H. MACNAUGHTON JONES, M.D., F.R.C.S.I., F.R.C.S.E. Sixth edition.

DISEASES OF CHILDREN.

It is only natural that students should be obliged by the medical schools to give some attention to the study of the diseases of children when it is considered that in general practice one patient at least out of every three will be a child. At present some of the examining boards, as the Royal University of Ireland, require candidates for the M.B. degree to produce certificates of having attended a practical course on the diseases of children, and the students are also specially examined in this subject. We therefore suggest for their guidance the following text-books:—*Diseases of Children, Medical and Surgical*. By HENRY ASHBY, M.D., F.R.C.P., and G. A. WRIGHT, B.A., M.B., F.R.C.S. Eng. Enlarged and improved edition, with 192 Illustrations. 8vo. Pp. 248. 25*s*. London: Longmans, Green, and Co. This admirable work, as it deals with diseases of children from both a medical and surgical point of view, can be recommended to students as containing everything that they will require to know.—*The Diseases of Children*. By JAMES F. GOODHART, M.D., F.R.C.P. Fifth edition. Pp. 740. 1894. 10*s*. 6*d*. London: J. & A. Churchill. For those who want to study diseases of children from a medical aspect we can recommend this most popular manual, written, as it is, by one who convinces the reader that he has seen everything he describes.—*The Diseases of Children (Medical)*. By H. BRYAN DONKIN M.D., F.R.C.P. Medium 8vo. 16*s*. London: Charles Griffin and Co. This is in many respects a most original book.—For those students who desire to know the surgical aspect of the affections of children there are two useful text-books, *Surgical Diseases of Children*, by E. OWEN, M.B., F.R.C.S. Eng., price 21*s*., Cassell and Co., Limited, London, Paris, and New York; and *The Surgical Diseases of Children and their Treatment by Modern Methods*, by D'ARCY POWER, M.A., M.B. Oxon., F.R.C.S. Eng., crown 8vo, price 10*s*. 6*d*. London: H. K. Lewis.—A manual which is used a good deal by Edinburgh students is *Disease in Children*, by JAMES CARMICHAEL, M.D., F.R.C.P. Ed. Crown 8vo. Pp. 520. Price 10*s*. 6*d*. Young J. Pentland: Edinburgh and London.—The following larger works are recommended for reference:—EUSTACE SMITH'S *Treatise on Disease in Children*. Second edition. Price 22*s* 1889. 8vo. Pp. 895. London: J. & A. Churchill.—*Lectures on Children's Diseases*. By HENOCH. Two vols. Translated by JOHN THOMPSON, M.B., F.R.C.P. Ed., from the fourth German edition. This treatise is published by the New Sydenham Society.—*Diseases of Children*. Edited by LOUIS STARR, M.D., and sixty Associates. Two vols. Price 42*s*. London: The Rebman Publishing Co. This is one of the most recent large works on diseases of children compiled in America. It is well got up and profusely illustrated.—*Pediatrics: The Hygienic and Medical Treatment of Diseases in Children*. By THOMAS MORGAN ROTCH, M.D., Professor of Diseases of Children, Harvard University. Two vols. Pp. 1124. Price 25*s*. net.—Two other very useful books are those of Dr. CHEADLE: *On the Principles and Exact Conditions to be Observed in the Artificial Feeding of Infants* (London: Smith, Elder, and Co., price 5*s*.), and Dr. LOUIS STARR: *Hygiene of the Nursery* (Sixth edition, crown 8vo, 3*s*. 6*d*. London: H. K. Lewis).

OPHTHALMOLOGY.

Either of the two following handbooks on Ophthalmology will be found to contain all that is necessary to the student of medicine who has no inclination to make a special study of the subject.

Handbook of Diseases of the Eye. By HENRY R. SWANZY, M.B., F.R.C.S.I. Sixth edition. Pp. 608. 1897. An excellent book. Price 12*s*. 6*d*. London: H. K. Lewis, 136, Gower-street.

The Diseases of the Eye. By EDWARD NETTLESHIP, F.R.C.S. Fifth edition. 1890. Student's Guide Series. Price 7*s*. 6*d*. Fcap. 8vo. London: J. & A. Churchill.

By those who wish for fuller information on the subject the larger text-books must be consulted, of which, perhaps, *The Text-book of Ophthalmology*, by Professor FUCHS, of the Vienna University, is the most generally useful. This has been recently translated from the German into English by A. DUANE, and is published in one large octavo volume, with 178 Illustrations, price 21*s*., by H. K. Lewis, 136, Gower-street.

Most students find the study of errors of refraction difficult and unattractive and are consequently inclined to neglect this important branch of the subject. *The Manual for Students on the Refraction of the Eye*, by GUSTAVUS HARTRIDGE, is a most useful little book, as it explains simply the principles on which are based the methods in use in the out-patient department.

It is unnecessary, and, indeed, undesirable, here to enumerate all the text-books which have been written on diseases of the eye, but the following may be mentioned as generally useful books:—

Diseases of the Eye. By GEORGE BERRY, M.B., F.R.C.S. Edin. Edinburgh and London: Young J. Pentland.

Handbook of Ophthalmic Science and Practice. By HENRY JULER, F.R.C.S.

The Fundus Oculi. By W. ADAMS FROST, F.R.C.S. An

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excellent book with admirable illustrations. Price £3 3s. Edinburgh and London: Young J. Pentland.

The Refraction of the Eye. A manual for students. By GUSTAVUS HARIDGE, F.R.C.S., Surgeon to the Royal Westminster Ophthalmic Hospital. Eighth edition. With 100 Illustrations, test types, &c. Pp. 259. Crown 8vo. 6s. 1896. Tenth thousand.

The Ophthalmoscope. A manual for students. Second edition. With 4 Coloured Plates and 67 Engravings. Pp. 156. Crown 8vo, 4s. 6d. 1894.

To those who are conversant with French the "Traité Complet d'Opthalmologie," by L. DE WECKER and E. LANDOLT, may be recommended as the most valuable work of reference. It is published in four large volumes at a price of about 20 francs each volume, and is consequently scarcely adapted for the student's use. A German edition of this work may also be obtained.

PATHOLOGY.

Manual of General Pathology. By JOSEPH FRANK PAYNE, M.D. Oxon., F.R.C.P. Pp. 702. 150 Illustrations.—Deals specially with general pathology and pathological anatomy and the processes and causes of disease, including parasites, both animal and vegetable. Special pathology and pathological histology are not touched upon, but on general pathology it is one of the best books in the language. London: Smith, Elder, and Co. 1888.

A Text-book of Pathology, Systematic and Practical. By Professor D. J. HAMILTON.—An admirably original, but somewhat unequal work. The most complete and systematic work published in the English language. Contains a very full and accurate bibliography. Invaluable for reference and for study for the higher examinations. Published in two volumes (the second volume is divided into two parts), which may be bought separately. Vol. I. (London: Macmillan and Co., 1889, pp. 736, 225 Illustrations, woodcuts, and coloured lithographs, price 21s. net) deals with the technique of the post-mortem room and the histological and bacteriological laboratories. An account is also given of the general pathological processes of the diseases of the blood, the heart and blood-vessels, and of tumours. Vol II., 1895, Part 1 (172 Illustrations, pp. 514, price 15s. net), treats of diseases of the air-passages and lungs, of the liver, of the genito-urinary appartus, and the alimentary tract, except the intestines, whilst Part 2 of Vol. II. (225 Illustrations, pp. 624, price 15s. net) completes the description of the diseases of the alimentary tract and then takes up in turn the nervous system (very good), diseases of the mamma, bones and joints, the skin, malformations, diseases of the fœtal membranes and placenta, vegetable and animal parasites, animal heat and fever.

A Text-book of Special Pathological Anatomy. By ERNST ZIEGLER. Translated and edited from the eighth German edition by DONALD MACALISTER, M.A., M.D., and HENRY W. CATTELL, M.A., M.D. Sections I.—VIII. 1896. London: Macmillan and Co.—A first instalment of a new English edition of a leading text-book notable for its excellent and abundant illustrations and full references to literature. A good text-book for the higher examinations. The subjects treated in this volume embrace the Blood and Organs of Circulation, the Osseous and Nervous Systems. The complete work (published by Fischer, of Jena) comprises a volume on General Pathological Anatomy, as well as the whole of Special Pathological Anatomy, of which the present volume constitutes about one-half.

A Manual of Pathology. By JOSEPH COATS, M.D. Pp. 1180. Numerous Illustrations. London: Longmans, Green, and Co. Third edition. 1895.—An interesting treatise on morbid anatomy and pathology; covers a great deal of ground; in most cases very reliable and a good text-book, especially for the student preparing for the higher examinations.

Practical Pathology. By GERMAN SIMS WOODHEAD, M.D., F.R.S.E. Third edition. 1892. Pp. 652. With 195 Coloured Plates from Original Drawings.—This book is almost an essential to the proper study of the subject. It is not only thoroughly clear and well arranged, but beautifully illustrated. The points where the student might be expected to be most in difficulty have received special attention. 25s. Edinburgh and London: Young J. Pentland.

An Introduction to Pathology and General Morbid Anatomy. By T. HENRY GREEN, M.D., F.R.C.P. Revised and enlarged by H. MONTAGUE MURRAY, M.D., F.R.C.P. 224 Engravings.—An excellent *résumé* of pathology from the student's point of view. Brought well up to date, especially in the sections dealing with inflammation, the specific infectious fevers, and the nervous system. May be confidently recommended as giving a very good and accurate account of the groundwork of pathology and as containing sufficient information to enable the student to pass any ordinary examination on the subject. Price 17s. London: Henry Renshaw.

Text-book of General Pathology and Pathological Anatomy. By Professor THOMA. Translated from the German by ALEXANDER BRUCE, M.A., M.D., F.R.C.P.E., F.R.C.S.E., Vol. I., with 436 Illustrations. London: Adam and Charles Black. 1896.—An admirable work for reference. Professor Thoma treats in this first volume of the natural history of disease, pays special attention to the questions of heredity and malformations, to the physics and mathematics of the laws of pathology, especially of the circulatory system.

A Text-book of Morbid Histology for Students and Practitioners. By RUBERT BOYCE, M.B., M.R.C.S. Pp. 477, with 130 Coloured Photographic Illustrations. 31s. 6d. London: H. K. Lewis. 1892.—Contains good descriptions of morbid histological specimens; also a number of photographs, which, however, are of very unequal merit and value. Exceedingly useful for the advanced student and the laboratory worker. A carefully selected bibliography is appended.

The Elements of Pathological Histology. By A. WEICHSELBAUM. Translated by W. R. DAWSON, M.D. 1895. London: Longmans, Green, and Co.—A work of approved merit, concise and clear in exposition; useful for practical study, and admirably illustrated.

The following books have different uses for students which we have tried to briefly indicate:—

Practical Pathology. By JOHN LINDSAY STEVEN, M.D. Pp. 266. Glasgow: James Maclehose and Sons. 1887.—A concise and well-arranged description of methods and of pathological anatomy and histology. There are no illustrations, but the descriptions are clear and concise. Useful for a student going in for examination or as a supplement to demonstrations.

Practical Pathology and Morbid Histology. By HENRAGE GIBBES, M.D. Pp. 320. Illustrated with 60 Photographic Reproductions. Edinburgh and London: Young J. Pentland. 1891.—A good practical book with a series of photographs of typical pathological microscopic specimens. Useful for private laboratory work rather than for examination purposes.

Surgical Pathology and Morbid Anatomy. By ANTHONY BOWLBY, F.R.C.S. Third edition. Pp. 640. London: J. & A. Churchill. 1895.—A capital little handbook on surgical pathology. Well up to date as regards pathogenesis.

Elements of Surgical Pathology. By AUGUSTUS J. PEPPER, M.S., M.B. Lond., F.R.C.S. Eng. Pp. 532. 99 Engravings. Fourth edition, re-written and enlarged. 8s. 6d. London, Paris, and Melbourne: Cassell and Co., Limited. 1894.—A compact little handbook of surgical pathology.

A Handbook of Surgical Pathology. By W. J. WALSHAM, M.B., F.R.C.S. Eng.; and D'ARCY POWER, M.A., M.B. Oxon., F.R.C.S. Eng. Pp. 634. London: Baillière, Tindall, and Cox. Second edition. 1890. Price 7s. 6d.—A clear and concise description of the specimens in the Museum of St. Bartholomew's Hospital, and therefore specially useful to students of that school or to those that have access to that museum. But the descriptions are so good that this work will serve as a capital text-book to any student preparing for an examination in surgical pathology.

Pathological Anatomy of Diseases. By NORMAN MOORE, M.D. London: J & A. Churchill. 1889. Fcap. 8vo. 8s. 6d.—An accurate and concise. but not very full, student's manual of morbid anatomy of 416 pages, with 110 figures.

Practical Morbid Anatomy. By H. D. ROLLESTON, M.A., M.D., F.R.C.P.; and A. A. KANTHACK, M.D., M.R.C.P. Cambridge University Press. Price 6s. 1894. Pp. 240.—A capital account of the methods and course of procedure to be adopted in the post-mortem room. Practical, but thoroughly scientific throughout.

Section Cutting and Staining. By WALTER S. COLMAN, M.B. Lond. London: H. K. Lewis. Second edition, just ready.—A handy little guide to the preparation of normal and morbid histological specimens. Concise, and gives everything that is really necessary for ordinary class work.

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The following books are hardly to be used as text-books, but for one reason or another the student will do well to supplement his reading by consulting them :—

Lectures on Surgical Pathology. By Sir JAMES PAGET, Bart., F.R.S., &c. Revised and edited by Professor WM. TURNER, F.R.S. Pp. 844. 130 Illustrations. London : Longmans, Green, and Co. 1876. Fourth edition.—Still one of the most valuable books of reference on surgical pathology in our language, and should be read by every student as a model on which to base methods of observation and study.

An Introduction to General Pathology. By JOHN BLAND SUTTON, F.R.C.S. Pp. 390. 14*s*. London : J. & A. Churchill. 1886.—An admirable introduction to the subject of evolution in pathology, well worth study by those who wish to gain more than a mere examination knowledge of the subject.

Lectures on Pathological Anatomy. By SAMUEL WILKS, M.D., F.R.S., and the late WALTER MOXON, M.D., F.R.C.P. Third edition, thoroughly revised by SAMUEL WILKS, M.D., LL.D., F.R.S. London and New York : Longmans, Green, and Co. 1889.—An admirable description of macroscopic morbid anatomy, doing for medicine what Paget's lectures have done for surgery. May be studied with advantage both before and after practical work is engaged in.

Lectures on Pathology. By the late HENRY GAWEN SUTTON, M.B., F.R.C.P. Edited by MAURICE EDEN PAUL, M.D. ; and revised by SAMUEL WILKS, M.D., LL.D., F.R.S. London : J. & A. Churchill. 1891.—An admirable, philosophical, and original work on medical pathology, especially useful for senior and qualified students of medicine.

BACTERIOLOGY.

The following works will be found useful to students either for examination purposes or for special study :—

Ptomaines, Leucomaines, Toxins, and Antitoxins. By Professor VICTOR C. VAUGHAN, Ph.D., M.D. ; and Associate Professor FREDERICK G. NOVY, Sc.D., M.D. Third edition. Revised and enlarged. Philadelphia : Lea Brothers and Co. 1896. Pp. 604. $3.—The best book in the language on bacterial products and poisons. Well up to date as regards methods.

Manual of Bacteriology. By ROBERT MUIR, M.A., M.D., F.R.C.P. Edin., and JAMES RITCHIE, M.A., M.D., B.Sc. Edinburgh and London : Young J. Pentland. 1897.—An exceedingly good text-book for the medical student. Methods, descriptions, and illustrations alike excellent. The principles of bacteriology are well set forth. A most useful list of literature is appended. Well up to date in all respects.

Elementary Practical Bacteriology, including Bacteriological Analysis and Chemistry. By A. A. KANTHACK, M.D., M.R.C.P., and J. H. DRYSDALE, M.B., M.R.C.P. London : Macmillan and Co. 1896. Pp. 180. Sixteen Woodcuts. Price 4*s*. 6*d*.—A guide to the elementary study of bacteriology. The work deals in turn with general and special methods of cultivation and examination of micro-organisms, with the more important species of bacteria, and then with bacteriological analysis and bacteriological chemistry.

Micro-organisms and Disease. An Introduction to the Study of Specific Micro-organisms. By E. KLEIN, M.D., F.R.S. Fourth edition. Revised. Pp. 595, with 20 Illustrations. Price 10*s*. 6*d*. London : Macmillan and Co., Ltd. 1896.—A standard text-book.

Practical Guide to the Demonstration of Bacteria in the Animal Tissues. By Dr. H. KÜHNE. Translated and edited by VINCENT DORMER HARRIS, M.D., F.R.C.P. London : Baillière, Tindall, and Cox. 1890. Pp. 53. Figs. 7. 2*s*. 6*d*.—A practical little handbook.

Applied Bacteriology. By T. H. PEARMAIN and C. G. MOOR. London : Baillière, Tindall, and Cox. 1897. Price 12*s*. 6*d*. net.—A lucid exposition of bacteriology, especially as it relates to the work of the medical officer of health and to the student preparing himself for such work.

Medical Microscopy. By FRANK J. WETHERED, M.D., F.R.C.P. London : H. K. Lewis. 1891. Pp. 250. 40 Illustrations. Price 9*s*.—A guide to the preparation of microscopical preparations and examination of sputum, urine, &c. Useful for advanced students and general practitioners.

Bacteriological Technology for Physicians. By Professor C. J. SALOMONSEN. Translated by WILLIAM TRELEASE. Pp. 162, with 72 Figures in the text. New York : William Wood and Co. 1890.—A most concise and accurate work on methods, well adapted to the use of the student, as the apparatus described as necessary is both simple and inexpensive.

Manual of Bacteriology for Practitioners and Students. With especial reference to Practical Methods. By Professor S. L. SCHENK. Translated by W. R. DAWSON, B.A., M.D. With an Appendix by the Translator. 100 Illustrations, partly coloured. London and New York : Longmans, Green, and Co. 1893.—A really good student's text-book.

Studies on Fermentation. By L. PASTEUR. Translation, with Notes, Index, and original Illustrations, by FRANK FAULKNER and D. CONSTABLE ROBB, B.A. London : Macmillan and Co. 1879. Pp. 418, with 12 Plates and 85 Figures in text.—An admirable work and one that should be read by every advanced student of bacteriology.

On Fermentation. By P. SCHÜTZENBERGER. Fourth edition. London : Kegan Paul, Trench, Trübner, and Co., Ltd. 1891. Pp. 331, with 28 Illustrations. Price 5*s*. (Vol. XX., International Scientific Series.)—A capital *résumé* of the subject for advanced students.

Bacteria and their Products. By GERMAN SIMS WOODHEAD, M.D. 1891. Pp. 459, with 20 Photo-micrographs. London : Walter Scott. Price 3*s*. 6*d*.—Gives a description of the more important micro-organisms and the diseases they produce and of fermentation ; also a short history of bacteriology ; includes an appendix dealing with bacteriological methods and with the classification and identification of micro-organisms. Is in every respect a first-class text-book, excellent in arrangement and clear and full in detail.

A Manual of Bacteriology. By GEORGE M. STERNBERG, M.D. New York : William Wood and Co. 1892.—A most complete and exhaustive work of 886 pages, of which over a hundred are devoted to bibliography. An encyclopædic, painstaking, and usually accurate *résumé* of the subject. Well illustrated with chromo-lithographic plates and 268 engravings. Too ponderous for the ordinary student, but very useful for the advanced worker.

Text-book of Bacteriology. By EDGAR M. CROOKSHANK, M.B. London : H. K. Lewis. 21*s*. net. Fourth edition, reconstructed, revised, and greatly enlarged.—A well-written and well-illustrated treatise on the subject. A good text-book, especially for those who have no opportunity of attending a practical course.

FORENSIC MEDICINE.

Manual of Medical Jurisprudence. By A. S. TAYLOR. Edited by T. STEVENSON, M.D. Crown 8vo. Twelfth edition. 1891. 56 Engravings. 14*s*. London : J. & A. Churchill.—An authoritative text-book.

Text-book of Forensic Medicine and Toxicology. By ARTHUR P. LUFF, M.D., B.Sc. Lond. Two vols. Pp. 416 and 360. 24*s*. With numerous Illustrations. London and New York : Longmans, Green, and Co.—This recently published work is one of the best on the subject.

Principles of Forensic Medicine. By W. A. GUY and DAVID FERRIER, M.D., F.R.S. Seventh edition just published. 16*s*.—The work has been practically rewritten under the direction of Professor W. R. SMITH, M.D., F.R.S. Edin. London : Henry Renshaw.

Forensic Medicine and Toxicology. By J. DIXON MANN, M.D., F.R.C.P., Professor of Medical Jurisprudence and Toxicology, Owens College, Manchester ; Examiner in Forensic Medicine, London University, and Victoria University, Manchester. 21*s*.

A System of Legal Medicine. By ALLAN MCLANE HAMILTON, M.D., Consulting Physician to the Insane Asylums of New York City, &c., and Mr. LAWRENCE GODKIN, of the New York Bar. Illustrated with 14 Coloured Plates and 161 Woodcuts and Half-tone Plate. Fully indexed by 3202 references. Royal 8vo. Two vols. Pp. 1400. 30*s*. per volume. Only sold in sets.

Poisons : their Effects and Detection. By ALEXANDER WYNTER BLYTH, M.R.C.S. Third edition Revised and Enlarged. 1895. 21*s*. London : Chas. Griffin and Co.—A well-known work, much in esteem with toxicologists, partly as a book of reference, but chiefly as an excellent guide to the detection of poisons. The recent edition treats of the cadaveric alkaloids or ptomaines, and contains also a separate chapter on the connexion existing between the arrangement of the constituent parts of an organic molecule and physiological action.

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PUBLIC HEALTH.

Public Health Laboratory Work. By HENRY R. KENWOOD, M.B. Edin., D.P.H. Second edition. London: H. K. Lewis. Price 10*s.* 6*d.*—An excellent little book of reference for the laboratory bench. It is written for students preparing for the diploma of public health, and describes the processes of analysis of food, water, air, &c., with which he must have a practical acquaintance. It also includes an account by Professor Boyce of the methods employed in bacteriological research.

Manual of Public Health. By WYNTER BLYTH, M.R.C.S., L.S.A. London: Macmillan and Co.—An excellent manual dealing with general principles. It is fairly exhaustive and affords a good book of reference.

Water and Water-Supplies. By J. C. THRESH, D.Sc., M.D. London: The Rebman Publishing Company, Limited.—A valuable dissertation on the important subject of water-supply. Besides practical details of the finding of water and the construction of wells, it contains also admirable chapters on the quality of water and the value of chemical and bacteriological analysis in enabling an opinion to be given upon it.

Public Health. Aids to Sanitary Science, for the Use of Candidates for Public Health Qualifications. By F. J. ALLAN, M.D., Dipl. Public. Health Camb., Assistant Professor of Hygiene, College of State Medicine. Price 4*s.* 6*d.* cloth. London: Baillière, Tindall, and Cox

The Elements of Vital Statistics. By ARTHUR NEWSHOLME, M.D. London: Swan Sonnenschein and Co.—A good text-book on vital statistics.

Hygiene and Public Health. By B. ARTHUR WHITELEGGE, M.D., B.Sc. London: Cassell and Co.—This is an admirable text-book in every way. It is well fitted for the student of public health, and it possesses the additional advantage that it can be carried in the pocket.

A Treatise on Hygiene and Public Health. Three vols. Edited by STEPHENSON and MURPHY. London: J. & A. Churchill.—This is quite the standard work at the present time. Vol. III. treats solely of sanitary law.

Knight's Annotated Model By-laws. London: Knight and Co.—This volume is almost essential for the student of public health.

Micro-organisms and Disease. By E. KLEIN, M.D., F.R.S. London: Macmillan and Co. New edition. 1896.—A capital introduction to the study of micro-organisms.

Vaccination Vindicated. By JOHN C. MCVAIL, M.D., D.P.H. London: Cassell and Co.—This is an answer to the leading anti-vaccinationists, and every student of public health should be familiar with it.

MEDICAL ELECTRICITY.

Medical Electricity: a Practical Handbook for Students and Practitioners. By H. LEWIS JONES, M.A., M.D., F.R.C.P. Second edition. With Illustrations, crown 8vo, 10*s* 6*d.* Pp. 454. 101 Figures in text. London: H. K. Lewis.—This is the best work on the subject in a small compass with which we are acquainted. Of course, it does not pretend to go as fully into the subject as the treatises of Von Ziemssen and Beard and Rockwell; but as a thoroughly practical guide to electrical diagnosis, the choice, preservation, and use of electrical apparatus for medical purposes, and the methods of application, it is unequalled. The illustrations, reproduced from photographs of patients with paralysis of particular muscles or groups of muscles, are a most useful feature of the work.

MISCELLANEOUS.

The following works will prove of service:—

Diseases and Injuries of the Teeth, including Pathology and Treatment: a Manual of Practical Dentistry for Students and Practitioners. By MORTON SMALE, M.R.C.S., L.S.A., L.D.S., Dental Surgeon to St. Mary's Hospital; and J. F. COLYER, L.R.C.P., M.R.C.S., L.D.S., Assistant Dental Surgeon to Charing-cross Hospital, &c. With 334 Illustrations. Large crown 8vo, 15*s*

The Anatomy of the Nasal Cavity and its Accessory Sinuses. By Dr. A. ONODI, Lecturer on Rhino-Laryngology in the University of Budapest. An atlas for practitioners and students, translated by ST. CLAIR THOMSON, M.D. Lond., F.R.C.S. Eng., M.R.C.P. Lond. Plates, small 4to, 6*s.* net. London: H. K. Lewis.

The Student's Guide to Diseases of the Chest, including the Principal Affections of the Pleuræ, Lungs, Pericardium, Heart, and Aorta. By VINCENT D. HARRIS, M.D., F.R.C.P., Physician to the Victoria Park Hospital for Diseases of the Chest. With 55 Engravings. Pp. 419. Fcap. 8vo, 7*s.* 6*d.* London: J. & A. Churchill.

Text-book of Diseases of the Ear and Adjacent Organs. By Professor POLITZER, of Vienna. Translated from the third German edition by OSCAR DODD, M.D., and edited by Sir WM. DALBY, B.A., M.B., F.R.C.S. Profusely illustrated. Price 21*s.* Baillière, Tindall, and Cox.—A reliable book, and contains all that is known on the subject.

Diseases of the Ear. Including the Anatomy and Physiology of the Organ, together with the treatment of the affections of the Nose and Pharynx which conduce to Aural Disease (a Treatise). By T. MARK HOVELL, F.R.C.S.E., M.R.C.S., Aural Surgeon to the London Hospital and Lecturer on Diseases of the Throat in the College, &c. 8vo, with 122 Engravings. 18*s.* 1894. London: J. & A. Churchill.

A System of Dental Surgery. By Sir JOHN TOMES, F.R.S., and C. S. TOMES, M.A., F.R.S. Third edition, crown 8vo. With 289 Engravings. 16*s.* 1897. London: J. & A. Churchill.

Dental Anatomy, Human and Comparative. A Manual. By CHARLES S. TOMES, M.A., F.R.S. Fourth edition. Crown 8vo, with 235 Engravings. 12*s.* 6*d.* 1894. London: J. & A. Churchill.

Manual of Botany. Vol. I., Morphology and Anatomy. By J. REYNOLDS GREEN, Sc.D., M.A., F.R.S., Professor of Botany to the Pharmaceutical Society. Crown 8vo, with about 778 Engravings. 7*s.* 6*d.* 1897 Vol. II., Classification and Physiology. 415 Engravings. 10*s.* London: J. & A. Churchill.

Dictionary of Medicine, Biology, and Allied Sciences. By G. M. GOULD, A.M., M.D. Price 40*s.* Baillière, Tindall, and Cox.—This is the best dictionary of medicine terms we have seen. It should find a place in the library of every medical man.

Outlines of Zoology. By THOMSON J. ARTHUR, M.A. Second edition, revised and enlarged, with 266 Illustrations in the text. Price 15*s.* Edinburgh: Young J. Pentland.

POST-GRADUATE INSTRUCTION ABROAD.

MEDICAL study is only nominally complete when a licence to practise is obtained, and all qualified men will acknowledge the importance of keeping themselves well informed in the various improvements in diagnosis and practice which are from time to time introduced. The opportunities afforded by post-graduate courses in this country are periodically referred to in the columns of THE LANCET; and with the object of treating the subject as fully as possible a short series of articles is now published, showing what is being done in this direction at the great continental schools. In this connexion it is not necessary to remind our readers that Vienna, for instance, has for many years been a favourite place of study for medical men desirous of completing their education after having gained their diplomas, and the institution of special courses there, to be carried on in the vacation months, will be a further inducement to resort to this famous centre of medical learning.

FRANCE.

There is not in France any special institution corresponding exactly to the post-graduate schools of some other countries. Students who wish their medical education to be more comprehensive than that which is required for obtaining a diploma usually undertake the additional study before the presenting of their thesis, because they may present their thesis whenever it suits them best, and they usually wait until their class-work is over and they are about to enter on practice. In Paris there are numerous advanced courses of instruction in subjects which are not required at the qualifying examinations, and they are attended by the above-mentioned section of students as well as by foreign medical men, already qualified to practise in their respective countries, who come to Paris in great numbers every year. Such courses

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will be found at the Faculty of Medicine, at the College of France, at the Faculty of Sciences, at the Pasteur Institute, at the Museum of Natural History, in the free lectures delivered at the École Pratique of the Faculty, and in the polyclinics of individual surgeons. At the Faculty of Medicine a private course of bacteriology is given in a laboratory of the École Pratique; it is not official, because there is not as yet a chair of bacteriology at the Faculty; it is conducted by M. Chantemesse, and consists of demonstrations, the use of the microscope, and the making of cultivations, including the study of the most important micro-organisms. Many of the official lectures delivered at the Faculty are, either from the nature of the subjects or from the advanced style in which they are treated, more adapted to medical graduates than to students; lectures to students are the special province of the assistant professors (*agrégés*), who confine themselves to instruction of the usually accepted kind. It may almost be said that medical education in Paris is embodied in the lectures delivered by the assistant professors, and that the lectures of the professors form a kind of school of a higher grade, free from anxiety about examinations and not occupied with matters of common knowledge. All the lectures of the professors and the assistant professors are public, and fees are charged for attendance. The professors' lectures, which are most largely attended by foreigners, are those on general pathology (Professor Bouchard), on Experimental and Comparative Pathology (Professor Chantemesse), on Forensic Medicine (Professor Brouardel), on Hygiene (Professor Proust), on Pathological Anatomy (Professor Cornil), &c. In addition there are at the hospitals four extensive courses on Clinical Medicine, four on Clinical Surgery, four on Nervous Diseases, two on Clinical Obstetrics, one on Syphilis, one on Affections of the Urinary Passages, one on Ophthalmology, and one on Diseases of Children, each of them constituting a small school in which the same organisation is repeated on a reduced scale, the professor discoursing on unusual and difficult cases to advanced students and practitioners who wish to increase their stock of knowledge, whilst the assistants and the *chefs de clinique* deliver more elementary expositions to the students. Moreover, in the majority of the hospitals the physicians and surgeons have of their own accord arranged for an analogous organisation, independent of the Faculty, and some of these courses are very popular on account of the excellence of individual teachers. Under this head may be mentioned the course on Gynæcology given by Dr. Pozzi at the Hôpital Broca, that given by Dr. Doléris at La Pitié, that on Diseases of the Heart and Vessels given by Dr. Huchard at the Hôpital Necker, that on Obstetrics given by Dr. Budin at the Maternité, and those on Surgery given by Dr. Terrier and Dr. Lucas-Championnière, that on Diseases of the Stomach given by Dr. Debove, &c. This constitutes the clinical instruction obtainable in the hospitals; it is free, but is given by physicians and surgeons attached to the hospitals.

At the College of France there are numerous courses in the higher branches of various subjects, some of which have a bearing on medical questions—such, for instance, as that on Experimental Medicine (Professor d'Arsonval), that on the Natural History of Organised Bodies (delivered by Professor François Franck and developed into a course on Physiology), and that on General Anatomy (Professor Rouvier). This last-mentioned chair is in reality an advanced School of Histology; the lectures of the professor are public and free; there is also a special course lasting two months.

At the Museum of Natural History will be found courses on Comparative Anatomy (Professor Filhol), on General Physiology (Professor Gréhant), on Comparative Pathology (Professor Chauveau), and on Anthropology (Professor Hamy). All these lectures are delivered three times a week; they are open to the public and are free.

At the Faculty of Sciences there are lectures on Physiology (Professor Dastre), on Biological Chemistry (Professor Duclaux), and on the Evolution of Organised Beings (Professor Giard).

To all these chairs there are attached spacious laboratories in connexion with an organisation which unites them all under the name of the École des Hautes Études. Admission to these laboratories is always granted on application being made to the professor; in general there is no fee for admission, but any outlay required for the work that is undertaken has to be paid for. The workers are under the control of the professor, whether they undertake original investigation or merely seek to increase their knowledge of recognised subjects; in almost all the laboratories lectures are delivered by the assistants.

At the School of Anthropology there are free public lectures on Prehistoric Anthropology, Medical Geography, Ethnography, Ethnology, Biological Anthropology, Zoological Anthropology, Physiological Anthropology, Sociology, and Comparative Ethnography.

The Pasteur Institute has an admirably organised school of Microbiology and numerous laboratories arranged in five services, with accommodation for fifty persons. In order to be admitted to this school it is necessary to send an application to the institute, together with a description of the investigations or the work contemplated. A person so admitted can remain at the institute for an indefinite time provided that his work is continuous. For working in the laboratories there is a fixed charge of 50 francs (£2) a month, which, however, is remitted in the case of a certain number of students selected by the institute. The five laboratory services above-mentioned are as follows: (1) Rabies (M. Grancher, M. Charrin, and M. Chantemesse); (2) general microbiology (M. Duclaux); (3) technical microbiology (M. Roux), together with laboratory for diphtheria (M. Martin); (4) microbiology applied to hygiene, including vaccins (M. Chamberland); and (5) morphological and comparative microbiology (M. Metchnikoff). The department of technical microbiology presided over by M. Roux is devoted to teaching as well as to original investigation. The course of instruction lasts six weeks, and admission to it is obtained by merely entering one's name and paying a fee of 50 francs (£2). As the places assigned to workers are at present not very numerous it is necessary to enter one's name two years in advance.

Finally, there are in Paris numerous private hospitals and polyclinics which are well attended by both students and practitioners. At some there are lectures open to all-comers and free. In others the medical men who attend accompany the physician or surgeon on his visit, and clinical instruction is given on the cases which happen to be under treatment; such is the case in the celebrated ophthalmological clinics (Galezowski, de Wecker, Landolt, &c.), as well as in those of laryngology and gynæcology. The laryngological clinic of Dr. Castex has recently been incorporated with the School of Medicine, and a fee is charged for instruction. With this exception it is in all cases sufficient to apply to the physician or surgeon for permission to attend his clinic, and the request is immediately granted.

GERMANY.

Post-graduate lectures and demonstrations are given in most of the universities of Germany. As a rule, their duration is from three to four weeks, the university vacation being the usual period. They are delivered partly by the ordinary professors and partly by *privat-docents* or lecturers. These lectures and demonstrations are not included in the official course of university instruction, they are private undertakings; but those who attend them are none the less freely admitted to the university laboratories and hospitals. Medical men wishing to join these courses have no formalities to comply with beyond entering their names and paying the fees for the lectures or the practical work which they happen to prefer. In the event of their intending to study in Berlin they should apply to Mr. Anders, Registrar of the Association for Post-graduate Study, Langenbeck House, N.W. Ziegelstrasse 8. Lists of the lectures may be obtained from this gentleman, and may also be seen in the advertisement columns of the leading German medical journals.

AUSTRIA.

Courses of lectures, the attendance on which is limited to medical men in practice, are delivered in Vienna, but not in any other Austrian University. They have been introduced on the initiative of Professor Wagner, who has for a year been Dean of the Vienna Medical Faculty, and has appointed two months (August and September) during which they are delivered in two series by the most eminent *privat-docents* and assistants of the faculty. Each course lasts four weeks, and the fees vary from twenty gulden (£1 17*s.*) to fifty gulden (£4 13*s.*), according to the subject. The first series began on Aug. 2nd and comprised the following courses: Pathological Anatomy (Dr. Albrecht and Dr. Stoerk), Bacteriology (Dr. Ghon), Experimental Pathology (Dr. Biedl), Pharmacology (Dr. Hockauf), Internal Medicine (Dr. Hammerschlag, Dr. Czinner, and Dr. Türk), Neuro-pathology (Dr. Redlich), Diseases of Children

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(Dr. Franz), Ophthalmology (Dr. Topolanski, Dr. Hanke, Dr. Gruber, and Dr. Königstein), Laryngology (Dr. Grossmann, Dr. Rethi, Dr. Ebstein, and Dr. Koschier). Diseases of the Ear (Dr. Bing and Dr. Kaufmann), Dermatology and Syphilis (Dr. Rille and Dr. Spiegler), Obstetrics and Gynæcology (Dr. Wertheim, Dr. Woyer, Dr. Hink, Dr. Ludwig, Dr. Knauer, and Dr. Savor). The second series will begin on Sept. 1st and will include the following courses:—Anatomy (Dr. Tandler), Pathological Anatomy (Dr. Kolisko and Dr. Albrecht), Bacteriology (Dr. Ghon), Experimental Pathology (Dr. Biedl), Forensic Medicine (Dr. Haberda), Internal Medicine (Dr. Pal, Dr. Schlesinger, Dr. Eisenschitz, and Dr. Sternberg), Surgery (Dr. Fraenkel), Dr. Schnitzler, and Dr. Friedländer), Ophthalmology (Dr. Bernheimer, Dr. Königstein, Dr. Sachs, and Dr. Wintersteiner), Diseases of the Ear (Dr. Bing, Dr. Pollak, Dr. Alt, and Dr. Kaufmann), Dermatology and Syphilis (Dr. Rille, Dr. Spiegler, and Dr. Zeissl), Obstetrics and Gynæcology (Dr. Lott, Dr. Braun, Dr. Herzfeld, Dr. Wertheim, Dr. Neumann, Dr. Woyer, Dr. Ludwig, Dr. Knauer, and Dr. Savor). These courses are likely to be preferred by medical practitioners to those delivered during the session from October to July, as they are not attended by students.

ITALY.

In many Italian medical schools special courses of instruction, clinical and theoretical, are now given to men who are already engaged in practice. Those who attend are mostly either on the one hand dispensary practitioners or divisional surgeons (medici condotti) or, on the other hand, graduates who take up special courses of study (particularly laboratory work) in order to become eligible for public health appointments under Government. For instance, at the University of Pavia a special series of lectures and demonstrations in hygiene has just been brought to a conclusion. The course was organised by Dr. Giuseppe Sormani, professor of the subject in the University, and was attended by graduates from all parts of Italy, attracted not only by the well-known expository power of the professor, but also by the preferential claim to sanitary posts conferred on all who have passed the examinations instituted by the Pavian school. Again, at Genoa, the post-graduate session of Dr. Maragliano, Professor of Clinical Medicine in that school, attracts an increasing attendance from other provinces besides those of the Alta Italia. In this course instruction is given in the refinements of sero-therapy, particularly as applied to pulmonary tuberculosis.

HUNGARY.

Foreign medical men who do not desire to obtain Hungarian qualifications, but merely to increase their knowledge by post-graduate study, will find no difficulty in pursuing their objects. They are allowed to enrol themselves among the "ausserordentliche Hörer" (students in special subjects) at a comparatively low fee, and are given every facility for practical study; vivisection, for instance, is amply provided for. All the lectures are delivered in the Hungarian language, but all the professors and teachers speak German, and some of them speak French and English as well. The cost of living in Budapest is nearly the same as in Vienna; the journey between the two towns takes five hours by railway.

THE INSTITUTE OF CHEMISTRY OF GREAT BRITAIN AND IRELAND.—At the recent July examinations the following were the names of those candidates who passed the Practical Examination for the Associateship: James Bruce, B.Sc. Lond., Harry Burrows, Robert George Grimwood, Robert Ferris Lyle, Robert Curling Styles, Assoc. R.C. Sc. Lond., and Arthur Lee White. The following passed the Intermediate Examination: William Bowen, Harry Thornton Calvert, B.Sc. Vict., Alexander Hugh Dewar, Albert Lucas Entwistle, and Bertram William John Warren. In the Final Examination for the Associateship the successful candidates were as follows:—Reginald Arthur Berry, James Hembrough, Assoc. R.C.Sc. Lond., Robert Dexter Littlefield, Charles Alfred West, Assoc. R C.Sc. Lond., Frederick John Bolt (Fellowship), John Alfred Foster, Albert Edward Parkes, James Darnell Granger, Ph D. Berlin (Fellowship), Gilbert Thomas Morgan, B.Sc. Lond., John Henry Sugden, B.Sc. Vict., and Frederic William Richardson (Fellowship).

SESSION 1897–98.

GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION OF THE UNITED KINGDOM.

Registration of Medical Students.—The following are the General Medical Council's Regulations in reference to the registration of students in medicine:—

Every medical student shall be registered in the manner prescribed by the General Medical Council. No medical student shall be registered until he has passed a preliminary examination as required by the General Medical Council, and has produced evidence that he has commenced medical study. The commencement of the course of professional study recognised by any of the qualifying bodies shall not be reckoned as dating earlier than fifteen days before the date of registration. The registration of medical students shall be placed under the charge of the branch registrars. Every person desirous of being registered as a medical student shall apply to the branch registrar of the division of the United Kingdom in which he is residing; and shall produce or forward to the branch registrar a certificate of his having passed a preliminary examination as required by the General Medical Council, and evidence that he has commenced medical study. The branch registrar shall enter the applicant's name and other particulars in the Students' Register, and shall give him a certificate of such registration. Each of the branch registrars shall supply to the several qualifying bodies, medical schools, and hospitals, in that part of the United Kingdom of which he is registrar, a sufficient number of blank forms of application for the registration of medical students. Applications for special exceptions are dealt with by the Students' Registration Committee, which reports all such cases to the Council.

The Preliminary Examination in General Education, required to be passed previously to registration as a Medical Student, shall be as follows:—

"1. English language, including grammar and composition. 2. Latin, including grammar, translation from specified authors, and translation of easy passages not taken from such authors. 3. Mathematics, comprising (*a*) arithmetic, (*b*) algebra, as far as simple equations, inclusive; (*c*) geometry, the subject matter of Euclid, Books I., II., and III., with easy deductions. 4. One of the following optional subjects: (*a*) Greek, (*b*) French, (*c*) German, (*d*) Italian, (*e*) any other modern language, (*f*) logic."

The Council will not in future accept any certificate of pass in Preliminary Examination in General Education unless the whole of the subjects included in the Preliminary Examination required by the Council for Registration of Students of Medicine have been *passed at the same time*.

Professional Education.—For those who commenced study after Jan. 1st, 1892, the course of professional study after registration shall occupy at least five years. The Final examination in Medicine, Surgery, and Midwifery must not be passed before the close of the fifth academic year of medical study.

H. E. Allen, LL.B., Registrar of the General Council and of the Branch Council for England, 299, Oxford-street, London, W.—James Robertson, Registrar of the Branch Council for Scotland, 48, George-square, Edinburgh.—S. W. Wilson, Registrar of the Branch Council for Ireland, 35, Dawson-street, Dublin.

The following is a list of Examining Bodies whose examinations in general education are recognised by the General Medical Council as qualifying for registration as a medical or dental student the applicant producing satisfactory evidence that he has passed them:—

I.—UNIVERSITIES IN THE UNITED KINGDOM.

University of Oxford.—Junior Local Examinations. Senior Local Examinations. Responsions. Moderations. Examination for a degree in Arts.

University of Cambridge.—Junior Local Examinations. Senior Local Examinations. Higher Local Examinations. Previous Examination. General Examination. Examination for a degree in Arts.

University of Durham.—Examination for Certificate of Proficiency. Preliminary Examination in Arts for Graduation in Medicine and Science. Examination for a degree in Arts.

University of London.—Matriculation Examination. Examination for a degree in Arts or Science.

Victoria University.—Preliminary Examination. Entrance

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Examination in Arts. Final Examination for a degree in Arts or Science.

University of Wales.—Matriculation Examination. Final Examination for a degree in Arts.

University of Edinburgh.—Local Examinations (Senior and Junior). Preliminary Examination for Graduation in Arts or Science or Medicine and Surgery. Examination for a degree in Arts or Science.

University of Aberdeen.—Local Examinations (Senior and Junior). Preliminary Examination for Graduation in Arts or Science or Medicine or Surgery. Examination for a degree in Arts or Science.

University of Glasgow. — Preliminary Examination for Graduation in Arts or Science or Medicine and Surgery. Examination for a degree in Arts or Science.

University of St. Andrews.—Preliminary Examination for Graduation in Arts or Science or Medicine and Surgery. Examination for a degree in Arts or Science. Final Examination for the diploma of L.L.A.

University of Dublin. — Public Entrance Examination. Examination for the first, second, third, or fourth year in Arts. Examination for a degree in Arts.

Royal University of Ireland.—Matriculation Examination. Examination for a degree in Arts or Science.

Oxford and Cambridge Schools Examination Board.—Lower certificate (to include all the required subjects at one time). Higher certificate (to include the required subjects).

II.—MEDICAL LICENSING BODIES.

Royal Colleges of Physicians and Surgeons in Ireland.—Preliminary Examination (Certificate to include all the required subjects at one time).[1]

III.—EDUCATIONAL BODIES OTHER THAN UNIVERSITIES.

College of Preceptors.—Examination for a First Class Certificate or Second Class Certificate of First or Second Division. Preliminary Examination for Medical Students.

Intermediate Education Board of Ireland.—Junior Grade Examination; Middle Grade Examination; Senior Grade Examination (Certificate in each case to include all the subjects required).

Educational Institute of Scotland. — Preliminary Medical Examination.

Scotch Education Department. — Leaving Certificates in Lower and Higher Grades and in Honours.

IV. — INDIAN, COLONIAL, AND FOREIGN UNIVERSITIES AND COLLEGES.

The Certificates from Indian, Colonial, and Foreign Universities and Colleges must contain evidence "that the Examination has been conducted by or under the authority of the Body granting it, includes all the subjects required by the General Medical Council, and states that all the subjects of Examination have been passed in at one time; and copies of the form of the required Certificate will be supplied by the Registrar of the Council for the purpose. In the case of Natives of India or other Oriental countries, whose vernacular is other than English, an Examination in a Classic Oriental Language may be accepted instead of an Examination in Latin."

REGULATIONS OF THE MEDICAL EXAMINING BODIES IN THE UNITED KINGDOM.

UNIVERSITY OF OXFORD.

THERE are two degrees in Medicine, B.M. and D.M., and two degrees in Surgery, B.Ch. and M.Ch.

The B.M. and B.Ch. degrees are granted to those members of the University who have passed the Second Examination. Graduates in Arts (B.A. or M.A.) are alone eligible for these two degrees. In order to obtain the degrees of B.M. and B.Ch. the following examinations must be passed:—1. Preliminary subjects: Mechanics and Physics, Chemistry, Animal Morphology and Botany. 2. Professional. (*a*) First Examination: Subjects — Organic Chemistry, unless the candidate has obtained a first or second class in Chemistry in the Natural Science School; Human Physiology unless he has obtained a first or second class in Animal Physiology in the Natural Science School; Human Anatomy, and Materia Medica with Pharmacy. (*b*) Second Examination: Subjects — Medicine, Surgery, Midwifery, Pathology, Forensic Medicine with Hygiene. The approximate dates of the examinations are as follows:—Preliminaries—Mechanics, Physics and Chemistry, December and June; Animal Morphology and Botany, December and March; Professional (First and Second B.M.), June and December.

The degree of D.M. is granted to Bachelors of Medicine of the University—(1) who took the degree of B.M. previously to the end of Trinity Term, 1886, provided they have spent three years in the practice of Medicine after taking that degree, and have composed a dissertation on some medical subject approved by the Regius Professor of Medicine, before whom it must be read in public; (2) who took the degree of B.M. subsequently to the end of Trinity Term, 1886, provided they have entered their thirty-ninth term and have composed on some medical subject a dissertation which is approved by the professors in the Faculty of Medicine and examiners for the degree of B.M. whose subject is dealt with. A book published within two years of the candidate's application for the degree may be substituted for a dissertation. The degree of M.Ch. is granted to Bachelors of Surgery of the University who have entered their twenty-seventh term, who are members of the surgical staff of a recognised hospital, or have acted as Dresser or House Surgeon in such a hospital for six months, and who have passed an examination in Surgery, Surgical Anatomy, and Surgical Operations. This examination is held annually, in June, at the end of the Second B.M. Examination.

The First Examination for the degrees of B.M. and B.Ch. may be passed as soon as the Preliminary Scientific Examinations have been completed. The subjects of this examination may be presented separately or in any combination or in any order, provided Anatomy and Physiology be passed together.

The Second Examination may be passed after the completion of the first. Before admission to the Second Examination candidates must present Certificates of instruction in Infectious and Mental Diseases, and of attendance on Labours, and of proficiency in the practice of Vaccination.

Scholarships, &c.—Scholarships in some branch of Natural Science (Chemistry, Physics, Biology) of the average value of £80 per annum, tenable for four years and renewable under certain conditions for a fifth year, as well as Exhibitions of a less annual value, are awarded after competitive examination every year by some of the Colleges. Notices of vacancy, &c., are published in the *University Gazette*. In February there is competed for annually, by those who, having obtained a first-class in any school (Moderations or final), or a Scholarship or Prize open to general competition in the University, have passed all the examinations for the degree of B.A., one Radcliffe Travelling Fellowship. It is tenable for three years, and is of the annual value of £200. The examination is partly scientific, partly medical. The holder must travel abroad for the purpose of medical study. A Rolleston Memorial Prize is awarded once in two years to members of the Universities of Oxford and Cambridge of not more than ten years' standing for an original research in some Biological subject including Physiology or Pathology

More detailed information may be obtained from the University Calendar; from the Examination Statutes, 1894, which contain the official schedules of the several subjects of examination in both Arts and Medicine; from the Student's Handbook to the University; from the Regius Professor of Medicine; and from the Professors in the several departments of science.

The Lecturers for the various subjects are as follows:—Regius Professor of Medicine: J. S. Burdon Sanderson, D.M. Pathological Histology and Practical Bacteriology: The Lecturer on Pathology, J. Ritchie, D.M. Edin. Professor of Human Anatomy: A. Thomson, M.A. Waynflete Professor of Physiology: F. Gotch, M.A.; Advanced Course: the Lecturer on Physiology, J. S. Haldane, M.A. Practical Physiology and Histology: G. Mann, D.M. Edin. Lichfield Lecturer in Clinical Medicine: G. J. Wilson, M.A., D.M.Dub. Lichfield Lecturer in Clinical Surgery: W. L. Morgan, M.A. Organic Chemistry in Relation to Medicine, &c., followed by Practical Work: Aldrichian Demonstrator, W. W. Fisher, M.A., and J. E. Marsh, M.A. Lecturer in Materia Medica, J. E. Marsh, M.A. Linacre Professor of Comparative

[1] The Council has recommended that this examination be discontinued.

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Anatomy, E. Ray Lankester, M.A. Elementary Animal Morphology (Practical): the Aldrichian Demonstrator, W. B. Benham, M.A., and assistants. Sherardian Professor of Botany: S. H. Vines, M.A; Wayndete Professor of Chemistry: W. Odling, M.A. Inorganic Chemistry: A. G. Vernon Harcourt, M.A. Laboratory Instruction: W. W. Fisher, M.A.; J. Watts, M.A.; V. H. Veley, M.A.; and J. E. Marsh, M.A. Professor of Experimental Philosophy: R. B. Clifton, M.A. Instruction in Practical Physics: Professor Clifton, M.A.; J. Walker, M.A.; W. F. S. Churchill, B.A.; and J. C. Alsop, B.A. Elementary Heat and Light: R. E. Baynes, M.A. Elementary Mechanics; F. J. Smith, M.A.

UNIVERSITY OF CAMBRIDGE.

The student must enter at one of the Colleges, or as a non-collegiate student, and keep nine terms by residence in the University. He must pass the Previous Examination in Classics, Mathematics, &c., which may, and should if possible, be done immediately on coming into residence in October, or, what is better, obtain exemption through the Oxford and Cambridge Schools Examination Board or the Cambridge Senior Local Examinations, before commencing residence. He may then devote himself to medical study in the University, attending the hospital and the medical lectures, dissecting, &c. Or he may, as nearly all students now do, proceed to take a degree in Arts, either continuing mathematical and classical study and passing the ordinary examinations for B.A., or going out in one of the Honour Triposes. The Natural Sciences Tripos is the most appropriate, as some of the subjects are practically the same as those for the first and second M.B. examinations.

For the degree of *Bachelor of Medicine (M.B.)* five years of medical study are required. This time may be spent in Cambridge or at one of the recognised Schools of Medicine. The first three or four years are usually spent in Cambridge, the student remaining in the University till he has passed, say, the examination for the Natural Sciences Tripos and the first and second examinations for M.B. Cambridge being now a complete School of Medicine, all the requisite lectures and hospital practice may be attended here, and many students remain to attend lectures and hospital practice until they have passed the first part of the third examination for M.B. The supply of subjects for Dissection, Practical Surgery, &c., is abundant.

There are three examinations for M.B. The *first* in Chemistry and other branches of Physics, and in Elementary Biology. These parts may be taken together or separately. The *second* in Human Anatomy and Physiology and in Pharmaceutical Chemistry. These may be taken together or separately. The *third* may also be taken in two parts—viz., (1) Principles and Practice of Surgery (with Operative and Clinical Surgery) and Midwifery and Diseases of Women; and (2) Pathology, Principles and Practice of Medicine, including Pharmacology and Therapeutics, Elements of Hygiene, Medical Jurisprudence and Mental Diseases. The examinations are partly in writing, partly oral, and partly practical, in the hospital, in the dissecting-room, and in the laboratories. An Act has then to be kept in the Public Schools, by the candidate reading an original dissertation composed by himself on some subject approved by the Regius Professor of Physic.

As Operative and Clinical Surgery now form parts of the third M.B. examination candidates who have passed both parts of that examination are admitted to the degree of *Bachelor of Surgery (B.C.)* without separate examination, and without keeping an Act.

The degree of *Doctor in Medicine* may be taken three years after that of M.B., or four years after that of M.A. An Act has to be kept, consisting of an original Thesis sustained in the Public Schools, with *vivâ-voce* examination; and an extempore Essay has to be written on some subject relating to Physiology, Pathology, the Practice of Medicine, or State Medicine.

For the degree of *Master in Surgery (M.C.)* the candidate must have passed all the examinations for B.C. He is required either (1) to pass an examination in Surgical Anatomy and Surgical Operations, Pathology and the Principles and Practice of Surgery, and to write an extempore Essay on a Surgical Subject; or (2) to submit to the Medical Board original contributions to the advancement of the Science or Art of Surgery. Before he can be admitted to the examination two years at least must have elapsed from the time when he completed all required for the degree of B.C.

An abstract of the Regulations and Schedules of the range of the examinations in Chemistry, Physics, Biology, and Pharmaceutical Chemistry may be obtained upon sending a stamped directed envelope to the Registrary, Cambridge. Full information is contained in the *Cambridge University Calendar*.

UNIVERSITY OF LONDON.

The *Matriculation Examination*.—Candidates for any degree in this University must have passed the Matriculation Examination. No exemption either from Matriculation or from subsequent examinations is allowed on account of degrees obtained at other Universities or of examinations of other examining bodies that may have been passed. The examinations take place twice in each year—on the second Monday in January and the second Monday in June; and may be held not only at the University of London, but also, under special arrangement, in other parts of the United Kingdom or in the colonies. Every candidate must, not less than five weeks before the commencement of the examination, apply to the Registrar for a form of entry, which must be returned not less than four weeks before the commencement of the examination, accompanied by a certificate showing that the candidate has completed his sixteenth year, and by his fee for the examination. A certificate from the Registrar-General in London or from the superintendent registrar of the district, or a certified copy of the baptismal register, is required in every case in which it can possibly be obtained. In other cases a declaration of the candidate's age, made before a magistrate by his parent or guardian, or by the candidate, if of full age, will be accepted. As candidates cannot be admitted after the list is closed, any candidate who may not have received a form of entry within a week after applying for it should communicate immediately with the Registrar, stating the exact date of his application and the place where it was posted. Every candidate must pay a fee of £2, and if he withdraws his name, or fails to present himself at the examination, or fails to pass it, the fee shall not be returned to him, but he shall be allowed to enter for any subsequent matriculation examination upon payment at every such entry of an additional fee of £1, provided that he comply with the other regulations. Candidates must show a competent knowledge of: 1. Latin. 2. One of the following languages: Greek, French, German, Sanskrit, Arabic. (No credit will be given for more than one, and candidates desiring to be examined in the last two must give two months' notice to the Registrar.) 3. The English Language, English History, and Geography. 4. Mathematics (Elementary). 5. Mechanics (Elementary). 6. One of the following branches of science: Chemistry, Heat and Light, Magnetism and Electricity, Botany. (No credit will be given for more than one of these subjects. The examination in Botany is only held in the United Kingdom. Candidates in any one of the optional Branches of Science will find it an advantage to have obtained some elementary instruction in the practical use of apparatus.) A pass certificate signed by the Registrar is delivered to each successful candidate after the report of the examiners shall have been approved by the Senate. The first six candidates in the Honours Division, of not more than twenty years of age at the commencement of the examination, shall respectively receive an exhibition or a prize. Any candidate obtaining a place in the Honours Division at the matriculation examination in January shall be admissible to the intermediate examination either in Arts or in Science in the following July.

Provincial Examinations for Matriculation.—These examinations are appointed by the Senate from time to time upon the application of any city, institution, or college desiring to be named as a local centre for one or more examinations, and are carried on simultaneously with the examinations in London under the supervision of sub-examiners also appointed by the Senate. Candidates wishing to be examined at any provincial centre must give notice upon their forms of entry to the Registrar of the University, who will then make all necessary arrangements. Besides the University fee, a fee usually varying from £1 to £2 is

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charged by the local authorities, and must be paid *at the local centre* immediately before the commencement of the several examinations. The answers of the candidates at the provincial examinations are reviewed by the examiners at the same time as the answers of the candidates examined in London, and a list of the candidates who have passed at each provincial examination is published at the time fixed by the regulations at the place where such examination has been held.

The *Preliminary Scientific (M.B.) Examination.*—Professional studies pursued before the whole of this examination has been passed will not count towards the course required for the M.B. degree The examination takes place twice in each year, once for Pass and Honours, commencing on the third Monday in July, and once for Pass candidates, only, commencing on the third Monday in January. Every candidate must, not less than five weeks before the commencement of the examination, apply to the Registrar for a form of entry, which must be returned not less than four weeks before the commencement of the examination, accompanied by the candidate's fee of £5. The subjects of the Preliminary Scientific Examination are divided into two sections: (1) Chemistry and Physics, (2) General Biology. Chemistry includes a written examination in Inorganic Chemistry and a *viva voce* examination in Qualitative Analysis. Physics implies a knowledge of acoustics, heat, magnetism, electricity, and optics. General Biology comprises a knowledge of the elements of zoological (vertebrate or invertebrate), and botanical morphology, physiology, and embryology. Candidates shall be allowed to enter for the whole examination or for either section. Candidates who present themselves for the two sections together shall be credited with either section in which they may have passed, although they may have failed to pass in the other, but no such candidate shall be placed in the Honours List. Candidates must bear in mind that the standard of attainment for the Honours examination is much higher than that for the Pass examination; and they should therefore exercise due caution in making their choice, to which they will be required to adhere. A candidate who has entered for the Pass examination will not be allowed to take the Honours papers; and only under special circumstances will a candidate who has entered for Honours in any subject be transferred to the Pass examination in that subject. The fee of £5 covers the whole of the examination, whether taken altogether or in sections.

Provincial Examinations for the Preliminary Scientific (M.B.) Examination.—These examinations are held in July only at nearly the same places as those appointed for the June Provincial Matriculation examinations. The practical examinations in chemistry are conducted at the provincial centres, but all candidates must attend at the University for the practical examinations in Physics and Biology.

Bachelor of Medicine.—Every candidate for the degree of Bachelor of Medicine will be required—1. To have passed the Matriculation Examination in this University not less than five years previously. 2. To have passed the Preliminary Scientific (M.B.) Examination not less than four years previously. 3. To have been engaged in his professional studies during five years subsequent to matriculation and four years subsequent to passing the Preliminary Scientific Examination[2] at one or more of the medical institutions or schools recognised by this University, one year at least of the four being spent in one or more of the recognised institutions or schools in the United Kingdom. 4. To pass two examinations in Medicine.

Intermediate Examination.—The Intermediate Examination in Medicine takes place twice in each year—once for Pass and Honours commencing on the second Monday in July, and once for Pass candidates only, commencing on the third Monday in January. The subjects of the examination are Anatomy, Physiology and Histology, Organic Chemistry, Materia Medica, and Pharmaceutical Chemistry. The standard of attainment required for Honours is much higher than for a Pass. No candidate shall be admitted to this examination unless he have passed the Preliminary Scientific Examination at least two years previously, and have produced certificates to the following effect:—1. Of having completed his nineteenth year. 2. Of having, subsequently to having passed the Preliminary Scientific Examination, been a student during two years at one or more of the medical institutions or schools recognised by this University, and of having attended a course of lectures on each of three of the subjects in the following list: Descriptive and Surgical Anatomy, Physiology and Histology, Pathological Anatomy, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Obstetric Medicine and Diseases peculiar to Women and Infants, Surgery, Medicine. 3. Of having, subsequently to having passed the Preliminary Scientific Examination, dissected during two sessions. 4. Of having, subsequently to having passed the Preliminary Scientific Examination, attended a course of Practical Chemistry, comprehending practical exercises in conducting the more important processes of general and pharmaceutical chemistry, in applying tests for discovering the adulteration of articles of the Materia Medica and the presence and nature of poisons, and in the examination of mineral waters, animal secretions, urinary deposits, calculi, &c. 5. Of having attended to Practical Pharmacy and of having acquired a practical knowledge of the preparation of medicines. These certificates (as is the case also with all the certificates hereinafter mentioned) must be transmitted to the Registrar at least four weeks before the commencement of the examination. Fee for this examination, £5

M.B. Examination.—The M B. Examination takes place twice in each year—once for Pass and Honours, commencing on the last Monday in October, and once for Pass candidates only, commencing on the first Monday in May. The subjects of the examination are General Pathology, General Therapeutics, Hygiene, Surgery, Medicine, Obstetric Medicine, and Forensic Medicine. No candidate will be admitted to this examination within twenty-one months of the time of his passing the Intermediate Examination unless he be a registered medical practitioner of not less than three years' standing, in which case he must produce a certificate of having gone through the required course of training at some time previously. Every candidate must produce certificates:—1. Of having passed the Intermediate Examination. 2. Of having attended a course of lectures on each of two of the subjects enumerated above in the regulations for that examination for which the candidate had not on that occasion presented certificates. 3. Of having conducted at least twenty labours. Certificates on this subject will be received from any legally qualified practitioner in Medicine. 4. Of having attended the Surgical Practice of a recognised hospital or hospitals during two years, with clinical instruction and lectures on Clinical Surgery. 5. Of having attended the Medical Practice of a recognised hospital or hospitals during two years, with clinical instruction and lectures on Clinical Medicine, including Infectious Diseases and Lunacy. 6. Of having, after having attended Surgical and Medical Hospital Practice for at least twelve months subsequently to passing the Intermediate Examination in Medicine, attended to Practical Medicine, Surgery, or Obstetric Medicine, with special charge of patients, in a hospital, infirmary, dispensary, or parochial union during six months, such attendance not to be counted as part of either the Surgical or the Medical Hospital Practice prescribed in Clauses 4 and 5. 7. Of having acquired proficiency in Vaccination. Certificates on this subject will be received only from the authorised vaccinators appointed by the Privy Council. The fee for this examination is £5.

Bachelor of Surgery.—The examination for the degree of Bachelor of Surgery takes place once in each year, and commences on the Tuesday following the first Monday in December. Candidates must produce certificates to the following effect:—1. Of having passed the examination for the degree of Bachelor of Medicine in this University. 2. Of having attended a course of instruction in Operative Surgery and of having operated on the dead subject. The subjects of the examination are Surgery and Pathology and Surgical Anatomy. Fee £5.

Master in Surgery.—The examination for the degree of Master in Surgery takes place once in each year, and commences on the first Monday in December. Candidates must produce certificates to the following effect: 1. Of having taken the degree of Bachelor of Surgery in this University. 2. Of having attended, subsequently to having taken the degree of Bachelor of Surgery in this University:

[2] Candidates who passed the Matriculation Examination in January, 1885, or previously, will be allowed to date the commencement of their professional studies, as heretofore, from that examination.

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(*a*) to Clinical or Practical Surgery during two years in a hospital or medical institution recognised by this University; or (*b*) to Clinical or Practical Surgery during one year in a hospital or medical institution recognised by this University, and of having been engaged during three years in the practice of his profession; or (*c*) of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Surgery in this University. One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those candidates who at the B.S. Examination have been placed in the first division. 3. Of moral character, signed by two persons of respectability. The examination is conducted by means of printed papers and *viva-voce* interrogation, and the subjects are Mental Physiology (especially in its relations to mental disorder) and Surgery. Any candidate for the degree of M.S. may transmit to the Registrar, not later than Oct. 1st, a printed Dissertation, Thesis, or Commentary, written in view of candidature, or published within two academical years immediately preceding, treating scientifically some special department of Surgical Science; and if the Thesis be approved by the examiners the candidate will be exempt from the written examination in Surgery. The fee is £5.

Doctor of Medicine.—The examination for this degree takes place once in each year, and commences on the first Monday in December. Candidates may present themselves for examination either in Medicine or State Medicine. Those presenting themselves for the M.D. Examination in Medicine must produce certificates to the following effect:—1. Of having attended, subsequently to having taken the degree of Bachelor of Medicine in this University: (*a*) to Clinical or Practical Medicine during two years in a hospital or medical institution recognised by this University; (*b*) or to Clinical or Practical Medicine during one year in a hospital or medical institution recognised by this University, and of having been engaged during three years in the practice of their profession; (*c*) or of having been engaged during five years in the practice of their profession, either before or after taking the degree of Bachelor of Medicine in this University. 2. Of moral character, signed by two persons of respectability. One year of attendance on Clinical or Practical Medicine or two years of practice will be dispensed with in the case of those candidates who at the M.B. Examination have been placed in the First Division. Candidates presenting themselves for the M.D. Examination in State Medicine must produce certificates to the following effect:—1. Of having attended, subsequently to having taken the degree of Bachelor of Medicine in this university: (*a*) to State Medicine during two years, including six months' practical instruction in a laboratory and six months' out-door sanitary work; (*b*) or to State Medicine during one year, and of having held for a period of two years the position of medical officer of health in any sanitary district; (*c*) or of having held for a period of three years the position of medical officer of health in any sanitary district. 2. Of moral character. One year of attendance on State Medicine or one year of holding the position of medical officer of health will be dispensed with in the case of those candidates who at the M.B. Examination have been placed in the First Division. The examination is conducted by means of printed papers and *viva-voce* interrogation, and the subjects are Medicine (or State Medicine) and Mental Physiology. Any candidate for the degree of M.D. may transmit to the Registrar, not later than Oct. 1st, a printed Thesis, written in view of candidature, or published within two academical years immediately preceding, treating scientifically some special department of Medical Science; and if the Thesis be approved by the examiners the candidate will be exempt from the written examination in Medicine (or State Medicine). Fee for this degree, £5.

UNIVERSITY OF DURHAM.

One Diploma and six degrees are conferred—viz., the Diploma in Public Health and the degrees of Bachelor in Medicine, Bachelor in Surgery, Master in Surgery, Doctor in Medicine, Bachelor in Hygiene, and Doctor in Hygiene. These degrees are open both to Men and Women.

For the degree of *Bachelor in Medicine* (*M.B.*) there are four professional examinations.

The subjects of the First Examination are—Elementary Anatomy and Elementary Biology, Chemistry, and Physics.

The subjects for the Second Examination are—Anatomy, Physiology, Materia Medica, Therapeutics, Pharmacology, Pharmacy.

The subjects for the Third Examination are—Pathology, Medical Jurisprudence, Public Health, and Elementary Bacteriology.

The subjects of the Fourth Examination are—Medicine, Clinical Medicine and Psychological Medicine, Surgery and Clinical Surgery, Midwifery and Diseases of Women and Children.

N.B.—It is required that at least one of the five years of professional education shall be spent in attendance at the University College of Medicine, Newcastle-upon-Tyne.[2] Candidates for the First Examination who have passed the First Examination of the Conjoint Board in England will be exempt from the First Examination of the University, except in the subjects of Elementary Anatomy, Chemistry, and Physics, and candidates who hold a qualification from a recognised Licensing Body in the United Kingdom will be exempt from the First Examination of the University, except in the subjects of Chemistry and Physics. Candidates who have passed the First and Second Examinations of the University will be exempt from First and Second Examinations of the Conjoint Board.

For the degree of *Bachelor in Surgery* (*B.S.*) every candidate must have passed the examination for the degree of Bachelor in Medicine of the University of Durham, and must have attended one course of lectures on Operative Surgery and one course on Regional Anatomy. Candidates will be required to perform operations on the dead body, and to give proof of practical knowledge of the use of surgical instruments and appliances.

For the degree of *Master in Surgery* (*M.S.*) candidates must not be less than twenty-four years of age, and must satisfy the University as to their knowledge of Greek. In case they shall not have passed in this subject at the Preliminary Examination in Arts for the M.B. degree they must present themselves at Durham for examination in it at one of the ordinary examinations held for this purpose before they can proceed to the higher degree of M.S. They must also have obtained the degree of Bachelor in Surgery of the University of Durham, and must have been engaged for at least two years subsequent to the date of acquirement of the degree of Bachelor in Surgery, in attendance on the practice of a recognised hospital, or in the naval or military services, or in medical or surgical practice.

The subjects of examination are:—Principles and Practice of Surgery, Surgical Pathology, Surgical Anatomy, Surgical Operations, Clinical Surgery.

For the degree of *Doctor in Medicine* (*M.D.*) candidates must be not less than twenty-four years of age, and must satisfy the University as to their knowledge of Greek. In case they shall not have passed in this subject at the Preliminary Examination in Arts for the M.B. degree, they must present themselves at Durham for examination in it at one of the ordinary examinations held for this purpose before they can proceed to the higher degree of M.D. They must also have obtained the degree of Bachelor in Medicine of the University of Durham, and must have been engaged for at least two years subsequently to the date of acquirement of the degree of Bachelor in Medicine, in attendance on the practice of a recognised hospital, or in the military or naval services, or in medical and surgical practice. Each candidate must write an Essay, based on original research or observation, on some medical subject selected by himself, and approved of by the Professor of Medicine, and must pass an examination thereon, and must be prepared to answer questions on the other subjects of his curriculum so far as they are related to the subject of the Essay.

The University of Durham has instituted a special examination whereby the degree of Doctor of Medicine may be obtained without residence. Candidates shall not be under forty years of age and shall have been in active practice for fifteen years as registered medical practitioners. They shall produce certificates of moral character from three registered members of the medical profession, and if they have not passed an examination in Arts previously to the Professional Examination in virtue of which they have been placed on the Register, they shall be required to pass in Classics and Mathematics. They will be examined in the Principles and

[2] This regulation will not apply to candidates registering as medical students on or after Oct. 1st, 1896. Such candidates must pass in all the subjects of the first examination.

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Practice of Medicine, including Psychological Medicine, Hygiene, and Therapeutics, the Principles and Practice of Surgery, Midwifery, and Diseases of Women and Children, Pathology (Medical and Surgical), Anatomy (Medical and Surgical), Medical Jurisprudence, and Toxicology. The fee will be fifty guineas, of which twenty guineas will be returned if the candidate fails to satisfy the examiners.

Candidates for any of the above degrees must give at least twenty-eight days' notice to Professor Howden, Secretary, College of Medicine, Newcastle-on-Tyne.

VICTORIA UNIVERSITY.

Colleges of the University: Owens College, Manchester; University College, Liverpool; and Yorkshire College, Leeds.

Matriculation, which consists in signing the University Register, must precede entry upon any course of study in a College of the University, if that course is to be counted towards the required minimum of attendance for a degree. Those only can matriculate who are registered students of a College of the University.

Four degrees in Medicine and Surgery are conferred by the Victoria University—viz., Bachelor of Medicine and Bachelor of Surgery (M.B. and Ch.B.), Doctor of Medicine (M D.), and Master of Surgery (Ch.M.).

All candidates for degrees in Medicine and Surgery are required to pass an examination called the Entrance Examination in Arts, or to have passed such other examination as may be recognised by the University for this purpose.[4]

Degrees of Bachelor of Medicine and Bachelor of Surgery.—Before admission to the degree of M.B. or Ch.B. candidates are required to present certificates that they will have attained the age of twenty-one years on the day of graduation, and that they have pursued the courses of study required by the University Regulations during a period of not less than five years subsequently to the date of their registration by the General Medical Council, two of such years having been passed in a College of the University, and one year at least having been passed in a College of the University subsequently to the date of passing the First M.B. Examination. All candidates for the degrees of Bachelor of Medicine and Bachelor of Surgery are required to satisfy the examiners in the several subjects of the following examinations: the First Examination, the Second Examination, and the Final Examination.

The First Examination.—The subjects of examination are as follows:—(1) Chemistry; (2) Elementary Biology; (3) Physics. Candidates must have attended during at least one year courses both of lectures and of laboratory work in each of the above-named subjects. The Examination is divided into two parts: Part 1, Physics and Chemistry; Part 2, Biology; and the candidates may pass in these parts separately.

The Second Examination.—The subjects of examination are as follows:—A: (1) Anatomy; (2) Physiology, including Physiological Chemistry and Histology; B: (3) Materia Medica and Pharmacy. Candidates may pass in A or B separately. Candidates presenting themselves in A alone, or in B alone, and failing to satisfy the examiners, must present themselves again in the same subjects or in A and B together.

The Final Examination.—The subjects of examination are as follows:—(1) Pharmacology and Therapeutics. (2) General Pathology and Morbid Anatomy. (3) Forensic Medicine and Toxicology, and Public Health. (4) Obstetrics and Diseases of Women. (5) Surgery, Systematic, Clinical and Practical. (6) Medicine, Systematic and Clinical, including Mental Diseases and Diseases of Children.

Candidates may either present themselves in all the six subjects of examination on the same occasion, or may pass the examination in two parts, the first part consisting of *two* or *three* of the subjects (1), (2) and (3), the second part of the remaining subjects.

Candidates who fail to satisfy the examiners in the first part must either present themselves again in the subjects as selected or in all the six subjects of examination.

Candidates for the First Part of the examination must have completed the *fourth winter* of medical study.

Candidates for the Second Part of the examination, or for the whole examination, must have completed the fifth year of medical study.

Degree of Doctor of Medicine.—Candidates are not eligible for the degree of Doctor of Medicine unless they have previously received the degrees of Bachelor of Medicine and Bachelor of Surgery, and at least one year has elapsed since they passed the examination for those degrees. Candidates for the degree of Doctor of Medicine are required to present a printed Dissertation embodying the results of personal observations or original research, either in some department of medicine or of some science directly relative to medicine. No candidate will be admitted to the degree unless his Dissertation shall have been recommended by the General Board of Studies to the Council for acceptance. Candidates may be examined on any subject connected with their dissertations.

Degree of Master of Surgery.—Candidates are not eligible for the degree of Master of Surgery unless they have previously received the degrees of Bachelor of Medicine and Bachelor of Surgery, and at least one year has elapsed since they passed the examination for those degrees. The subjects of examination are as follows: (1) Surgical Anatomy; (2) Surgery; (3) Operative Surgery; (4) Clinical Surgery; (5) Ophthalmology; (6) Pathology and Bacteriology.

UNIVERSITY OF EDINBURGH.

Four Degrees in Medicine and Surgery are conferred by the University of Edinburgh—viz., Bachelor of Medicine (M.B.), Bachelor of Surgery (Ch.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.). The degree of Bachelor of Surgery cannot be conferred on any person who does not at the same time obtain the degree of Bachelor of Medicine, and similarly the degree of Bachelor of Medicine is not conferred on any person who does not at the same time obtain the degree of Bachelor of Surgery.

Subject to regulations to be made from time to time by the University Court, the University may also confer diplomas in special branches of medical and surgical practice on graduates of the University in Medicine and Surgery.

Before commencing his medical studies each student must pass a preliminary examination in (1) English, (2) Latin, (3) Elementary Mathematics, and (4) Greek or French or German: Provided always that, in the case of a candidate whose native language is not English, an examination in the native language of the candidate may be substituted for one in either French or German, and an examination in any other classical language for one in Latin or Greek.

No one is admitted to the degrees of Bachelor of Medicine and Bachelor of Surgery who has not been engaged in Medical and Surgical study for five years. No course of lectures will be allowed to qualify unless the lecturer certifies that it has embraced at least one hundred lectures, or fifty lectures, as may be required by the regulations, and that the student has also duly performed the work of the class.

Candidates for the degrees of M.B. and Ch.B. must have attended for at least three academic years the medical and surgical practice either of the Royal Infirmary, Edinburgh, or of a general hospital elsewhere which accommodates not fewer than eighty patients and possesses a distinct staff of physicians and surgeons. They must have attended Clinical Surgery during a course or courses extending over not less than nine months. These courses may be conducted by the professor of clinical surgery, or by professors or lecturers appointed for the purpose by the University Court, or by the ordinary surgeons of the Royal Infirmary, Edinburgh, or of a general hospital defined and recognised as hereinbefore provided, and shall consist of regular instruction at the bedside, along with clinical lectures. A similar course of clinical medicine during a course or courses extending over not less than nine months is required. The candidate must have attended a course of instruction in Mental Diseases given by the University Lecturer, or by a recognised Teacher, consisting of not less than six Class-room meetings for lectures and demonstrations and ten meetings in the Wards of a recognised Asylum for the

[4] The examinations at present recognised are:—1. The Preliminary Examination of Victoria University, provided Latin and Mechanics have been taken up. 2. The Matriculation Examination of the University of London. 3. The Previous Examination of the University of Cambridge. 4. Responsions of the University of Oxford. 5. The Leaving Certificate Examination (Higher) and Local Examinations (Honors) of the Oxford and Cambridge Boards, provided that they include Latin, English, Mathematics, and Elementary Mechanics. 6. The First Examination for Graduation in Arts of any University in Great Britain and Ireland.

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insane. The candidate must have attended a course of twenty-five meetings on Practical Pharmacy in a university or recognised school of medicine, or have dispensed drugs for a period of three months in a hospital or dispensary, or in an establishment recognised by the Pharmaceutical Society. The candidate must have attended, for at least six months, by apprenticeship or otherwise, the out-practice of a hospital, or the practice of a dispensary, or of a physician or surgeon, or of a member of the London or Dublin Society of Apothecaries. He must have acted as clerk in the medical wards and dresser in the surgical wards of a public hospital for a period of six months in each case; and must also have availed himself, to such an extent as may be required by the Senatus, with the approval of the University Court, of opportunities of studying, at a hospital or dispensary, Post-mortem Examinations, Fevers, Diseases of the Eye, Operative Surgery, and one of the two following, viz.—Diseases of Children, and Diseases of the Larynx, Ear, and Nose, or such other special departments as may from time to time be determined. The candidate must have attended, under the superintendence of a registered medical practitioner, twelve cases of labour, or such additional number as the Senatus, with the sanction of the University Court, may from time to time determine; or have attended for three months the practice of a lying-in hospital, or of the maternity department of a general hospital or other public charitable institution, and have conducted personally six or such an additional number of cases of labour as the Senatus, with the approval of the University Court, may from time to time determine. The candidate must have been properly instructed in Vaccination at a public vaccination station, by a public vaccinator, authorised by the proper Government authority to grant certificates of proficiency in vaccination.

Next, with respect to the places and institutions at which the studies of the candidate may be prosecuted, the following regulations have effect:—Two of the five years of medical study must be spent in the University of Edinburgh. The remaining three years may be spent in any University of the United Kingdom, or in any Indian, Colonial, or Foreign university recognised for the purpose by the University Court, or in such medical schools or under such teachers as may be recognised for the purpose by the University Court. Of the subjects of study, sixteen in number—viz., Anatomy, Practical Anatomy, Chemistry, Practical Chemistry, Materia Medica, Physiology, Practical Physiology, Practice of Medicine, Surgery, Midwifery and Diseases of Women, Pathology, Practical Pathology, Physics, Botany, Zoology, Medical Jurisprudence, and Public Health—not less than eight must be taken in the University of Edinburgh or in some other university of the United Kingdom, or in some Foreign or Colonial university entitled to confer the degree of Doctor of Medicine, recognised for the purpose by the University Court, or in a college incorporated with, or affiliated to, a university entitled to confer the degree of Doctor of Medicine, recognised for the purpose by the University Court.

Each candidate is examined, both in writing and orally, and clinically where the nature of the subject admits:—First, in Chemistry, Zoology, Botany, and Physics; second, in Anatomy, Physiology, Materia Medica and Therapeutics; third, in Pathology, and Medical Jurisprudence and Public Health; and fourth, in Surgery, Medicine, Midwifery, and clinically in Medicine and Surgery in a hospital. The examinations are conducted, as far as possible, by demonstrations of objects placed before the candidates. Candidates who profess themselves ready to submit to an examination in the first division of these subjects may be admitted to examination therein at the first period of examination after they have completed their attendance on the necessary classes. Candidates who have passed their examination in the first division of these subjects may be admitted to examination in the second division at the end of their third year. Candidates who have passed their examinations in the subjects comprised in the first and second divisions may be admitted to examination in the third division at the end of the fourth winter session. Candidates who have passed their examinations in the subjects comprised in the first, second, and third divisions may be admitted to examination in the fourth or final division when they have completed the fifth year of study.

The fee to be paid for the degrees of Bachelor of Medicine and Bachelor of Surgery is £23 2*s.*, and the proportion of this sum to be paid by a candidate at each division of the examination shall be as follows—viz.: For the First Division of the Examination (Botany, Zoology, Physics, and Chemistry), £6 6*s.*; for the Second Division (Anatomy, Physiology, and Materia Medica and Therapeutics), £6 6*s.*; for the Third Division (Pathology and Medical Jurisprudence and Public Health), £4 4*s.*; and for the Final Division (Surgery and Clinical Surgery, Medicine and Clinical Medicine, and Midwifery), £6 6*s.* The fee to be paid for the degree of Doctor of Medicine is £10 10*s.*, and the fee to be paid for the degree of Master of Surgery is £10 10*s.*

UNIVERSITY OF GLASGOW.

The University of Glasgow is both a teaching and an examining body, but only candidates whose course conforms to Glasgow regulations can be admitted to examination. Within certain limits provision is made for accepting instruction given by recognised medical schools and teachers, but eight of the subjects other than clinical must be taken in this or some other recognised university entitled to confer the degree of M.D., and at least two years of the course must be taken in Glasgow University. Under the new regulations four degrees, open both to men and women, are conferred: M.B. and Ch.B. (always conjointly), M.D. and Ch.M. A Preliminary Examination must be passed in (1) English, (2) Latin, (3) Elementary Mathematics, and (4) Greek, or French, or German, with possible options to students whose native language is not English in the case of the fourth subject, and on passing the Preliminary Examination candidates must register as medical students in the books of the General Medical Council. For the degrees of M.B. and Ch.B. a curriculum of five years is required, in each of the first four of which the student must attend at least two five months' courses, or alternatively one five months' course and two courses of two and a half months. The minimum of attendance in the first four years includes five months' courses in the following subjects:—Anatomy, Practical Anatomy (two courses), Chemistry, Materia Medica and Therapeutics, Physiology, Practice of Medicine, Surgery, Midwifery, and Diseases of Women and Infants, and Pathology; and courses of two and a half months in the following:—Practical Chemistry, Physics, Botany, Zoology, Practical Physiology, Practical Pathology, Medical Jurisprudence and Public Health. Candidates must attend at least three years the Medical and Surgical Practice of a recognised hospital accommodating at least eighty patients and having a distinct staff of physicians and surgeons. At least nine months' hospital attendance is required on both Clinical Surgery and Clinical Medicine, and the student must have acted as clerk in medical and dresser in surgical wards, and must have had six months' out-door practice; he must also have attended a course of Mental Diseases and of Practical Pharmacy (twenty-five meetings), must have been properly instructed in Vaccination at a public vaccination station, and must have attended at least twelve cases of labour, or three months of the practice of a Lying-in Hospital, six cases being personally conducted. The University also requires further study in Post-Mortem Examinations, Fevers, and Ophthalmology, and recommends study in other special subjects. If a candidate has completed in a University of the United Kingdom a course of study and passed an examination in Botany, Zoology, Physics or Chemistry, qualifying for a degree in Science or in Arts, he is held to have passed the examinations in such subject or subjects.

There are four Professional Examinations, the first comprising Botany, Zoology, Physics, and Chemistry, to be taken after the completion of the included courses (candidates being at liberty to take two subjects at a time); the second comprising Anatomy, Physiology, and Materia Medica and Therapeutics, to be taken at the end of the third winter session; the third comprising Pathology, Medical Jurisprudence and Public Health, to be taken at the end of the fourth winter session; and the fourth or final, comprising Surgery, Clinical Surgery, Practice of Medicine, Clinical Medicine, and Midwifery, to be taken on completion of the fifth year of study.

The degrees of M.D. (Doctor of Medicine) and Ch.M. (Master of Surgery) are higher degrees in Medicine and Surgery respectively, and candidates (not under twenty-four years of age) who have previously obtained the double bachelorship may be admitted to either M.D. or Ch.M. on

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completing the after course prescribed, including an examination in Clinical Medicine for M.D. and an examination in Surgical Anatomy, operations on the dead body, and Clinical Surgery for Ch.M.

Fees.—The fees for M.B. and Ch.B. are £23 2*s*. The class fee in each subject of the curriculum for M.B. and Ch.B. is £3 3*s*. and the present fees for hospital attendance are £21. The fee for M.D. is £10 10*s*. (stamp duty being now abolished), and for Ch.M. £10 10*s*.

The great majority of the students take their hospital course at the Western Infirmary, where clinical instruction is given by professors of the University and other physicians and surgeons. Clinical instruction on Fevers is given at Belvidere Hospital, while special courses, largely of a practical nature and embracing work in Hospital or Asylum wards, are conducted by University Lecturers on the Eye, the Ear, the Throat and Nose, and Insanity. Queen Margaret College, hitherto conducted as a separate institution for the higher education of women, has now been made over to the University, and in it medical classes for women are conducted under University professors and other lecturers appointed by the University Court, whilst for clinical instruction female students are admitted to the Royal Infirmary.

Bursaries and Prizes to the annual amount of about £820 are appropriated to medical students, and Scholarships and Fellowships to the annual amount of about £1600 may be held by medical students who have gone through the Arts course.

Graduations under the regulations for the curriculum of five years introduced in 1892 began in July, 1897. Thus far students have been graduating as M.B. and C.M. on a four years' curriculum under the old regulations, and such graduates may afterwards proceed to the degree of M.D. by Thesis after passing a somewhat more stringent preliminary examination, including Greek. Supplementary regulations passed in 1895 by the Scottish Universities Commissioners allow those holding the degrees of M.B. and C.M. under the former regulations to proceed to the new M.D. by Examination and Thesis in the same manner as those who obtain the double Bachelorship under the new regulations. Candidates electing to proceed in this way will be freed from the preliminary examination in Greek.

UNIVERSITY OF ABERDEEN.

The curricula for the several degrees conferred are nearly the same as in the Universities of Edinburgh and Glasgow.

Professional Examinations will be held twice in each year—namely, in March and July, directly after the close of the winter and summer sessions.

The fees for graduation are the same as in the University of Edinburgh. Matriculation fee, including all dues, for the winter and summer sessions, £1 1*s*.; summer session alone, 10*s*. 6*d*.

Besides the Royal Infirmary, students have the opportunity of attending the following institutions: General Fever Hospital; Sick Children's Hospital; General Dispensary, and Lying-in and Vaccine Institutions daily; Royal Lunatic Asylum; Eye Institution, in which is given clinical instruction on Diseases of the Eye, and on the application of the Ophthalmoscope for their diagnosis.

A diploma in Public Health is granted by the University to graduates in Medicine of a University in the United Kingdom only, after a special examination. The diploma can be entered on the Register of the General Medical Council.

Application for further information should be addressed to the Secretary of the Medical Faculty.

UNIVERSITY OF ST. ANDREWS.

The following are extracts from the Regulations for Degrees in Medicine contained in Ordinance No. 45 (St. Andrews, No. 4) of the Commissioners under the Universities (Scotland) Act, 1889 These regulations came into force on April 19th, 1897. Four Degrees in Medicine and Surgery shall be conferred by the University of St. Andrews—viz., Bachelor of Medicine (M.B.), Bachelor of Surgery (Ch.B), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.). The degrees of M.B. and Ch.B. shall always be conjoined. Before commencing his medical studies each student shall pass a Preliminary Examination in, (*a*) English, (*b*) Latin, (*c*) Elementary Mathematics, and (*d*) one of the following optional subjects:—(α) Greek, (β) French, (γ) German, (δ) Italian, (ε) any other Modern Language, (ζ) Logic. A degree in Arts or in Science in any of the universities of the United Kingdom and in some colonial or foreign universities, shall exempt from the Preliminary Examination. The Preliminary Examination for graduation in Medicine and Surgery, Arts or Science, of the University of St. Andrews is accepted as equivalent to the Registration Examination required by the General Medical Council (the certificate to include the required subjects). Also the Final Examination for a degree in Arts or Science and the final examination for the Diploma of L.L.A.

Candidates for the degree of Bachelor of Medicine and Bachelor of Surgery must have been engaged in medical study for at least five years. In each of the first four years the candidate must have attended at least two courses of instruction in one or more of the subjects of study specified below, each course extending over a session of not less than five months, either continuous or divided into two terms, or, alternatively, one such course along with two courses, each extending over a session of not less than two and a half months. During the fifth or final year the candidate shall be engaged in clinical study for at least nine months at the Infirmary of Dundee or at one or more of such public hospitals or dispensaries, British or foreign, as may be recognised for the purpose by the University Court. The candidate must have received instruction in each of the following subjects of study, including such examinations as may be prescribed in the various classes—viz.: Anatomy, Practical Anatomy, Chemistry, Materia Medica, Physiology, or Institutes of Medicine, Practice of Medicine, Surgery, Midwifery and the Diseases peculiar to Women and Infants, Pathology, Practical Chemistry, Physics (including the the Dynamics of Solids, Liquids, and Gases, and the Rudiments of Sound, Heat, Light, and Electricity), Elementary Botany, Elementary Zoology, Practical Physiology, Practical Pathology, Forensic Medicine and Public Health. The candidate must have attended for at least three years the Medical and Surgical Practice either of the Infirmary of Dundee or of a General Hospital elsewhere which accommodates not fewer than eighty patients and possesses a distinct staff of physicians and surgeons, and is recognised for the purpose by the University Court. Additional subjects of study are Practical Pharmacy, Mental Diseases, Practical Midwifery (twelve cases of labour), and Vaccination.

With respect to the places and institutions at which the studies of the candidate may be prosecuted, the following regulations shall have effect:—1. Two of the five years of medical study must be spent in the University of St. Andrews. 2. The remaining three years may be spent in any University of the United Kingdom or in any Indian, Colonial, or Foreign University recognised for the purpose by the University Court, or in such medical schools or under such teachers as may be recognised for the purpose by the University Court.

Women shall be admitted to graduation in Medicine, subject to the provisions of Ordinance No. 18 [General No. 9—Regulations for the Graduation of Women and for their Instruction in the Universities]: Provided always that every candidate for graduation shall produce evidence of having satisfied the conditions herein laid down with respect to the Preliminary Examination, and shall be examined in all the subjects necessary for graduation by the Examiners of the University of St. Andrews. All the classes necessary for graduation shall be taken in the University of St. Andrews, except in so far as instruction obtained elsewhere is allowed by the said Ordinance.

Professional Examinations for the Degrees of Bachelor of Medicine and Bachelor of Surgery.—Each candidate shall be examined both in writing and orally, and also clinically where the nature of the subject admits, in the following divisions—viz, First, in Botany, Zoology, Physics, and Chemistry: Second, in Anatomy, Physiology, and Materia Medica; Third, in Pathology, and Forensic Medicine and Public Health; Fourth, in Surgery and Clinical Surgery, Practice of Medicine and Clinical Medicine, and Midwifery.

The fee to be paid for the degrees of Bachelor of Medicine and Bachelor of Surgery shall be 22 guineas, and the proportion of this sum to be paid by a candidate at each division of the examination shall be regulated from time to time by the University Court. The fee to be paid for the degree of Doctor of Medicine shall be 10 guineas, exclusive of any stamp duty which for the time may be exigible. The fee to

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be paid for the degree of Master of Surgery shall be 10 guineas.

The following seven qualifying classes are now being taught at the United College, St. Andrews: (1) Physics, (2) Botany, (3) Natural History (Zoology), (4) Chemistry, (5) Anatomy, (6) Physiology, and (7) Materia Medica. These classes furnish two very complete Anni Medici—the period of university residence required by the four Scottish Universities for graduation in Medicine. The three last years of the medical curriculum can be taken at any convenient recognised Medical School in the United Kingdom. It is hoped that medical students who spend their two residential years at St. Andrews will return to their Alma Mater and graduate there. Owing to the munificence of the present Lord Rector—the Marquis of Bute—an important addition to the existing Medical Buildings is being made at a cost of from £8000 to £10,000.

Scholarships and Bursaries.—The following Scholarships and Bursaries for male and female Medical and Science Students are available at St. Andrews: One Scholarship of the annual value of £150, tenable for two years. A second Scholarship of the annual value of £100, tenable for one year and occasionally for two years. (The second Scholarship can be taken by students studying Physiology, Zoology, and Botany, in connexion with the Bachelor of Science degree.) Two Bursaries for male Medical students of the annual value of £50 each, for two years. Three Bursaries for male Medical students of the annual value of £20 each, for three years. Twenty Taylour Thomson Bursaries for female Medical students of the annual value of from £15 to £30 each, tenable for one or two years—viz.: Three Taylour Thomson Bursaries of the annual value of £30 each, tenable for two years. One of the annual value of £20, tenable for two years; eight of the annual value of £15 each, tenable for two years; two of the annual value of £30 each, tenable for one year; one of the annual value of £20, tenable for one year; five of the annual value of £15 each, tenable for one year. The Taylour Thomson Bursaries are Presentation Bursaries, and are awarded to female Medical students who pass the Preliminary Medical Examination at St. Andrews. The Bursaries are awarded in the order of merit, the most valuable ones being given to those students who obtain the highest marks in the Preliminary Medical Examination, and who are prepared to take two Anni Medici at the United College, St. Andrews.

For further particulars apply to the Dean of the Medical Faculty, University of St. Andrews, N.B.

UNIVERSITY OF DUBLIN (TRINITY COLLEGE).

Matriculation.—All students in the School of Physic intending to practise Physic must be matriculated, for which a fee of 5*s.* is payable. No student can be admitted for the winter course after Nov. 25th.

Degrees in Medicine (M.B.), Surgery (B.Ch.), and Midwifery (B.A.O.).—Candidates for these degrees must be of B.A. standing and must be for at least five academic years on the books of the Medical School, reckoned from the date of matriculation. The Arts course may be concurrent with the medical course, and the B.A. degree need not be taken before the final medical examination, but the medical degrees are not conferred without the Arts degree. The following courses must be attended:—(1) Lectures—Systematic, Practical and Applied Anatomy, Chemistry and Practical Chemistry, Surgery and Operative Surgery, Histology, Botany, Zoology, Physics, Physiology, Practice of Medicine, Midwifery, Pathology, Materia Medica and Therapeutics, Medical Jurisprudence and Hygiene; (2) three courses of nine months' attendance on the Clinical Lectures of Sir Patrick Dun's or other recognised Dublin Hospital (one year at a recognised London or Edinburgh hospital before the commencement of the Dublin curriculum may be counted as one year spent in such Dublin hospital); (3) Practical Vaccination, one month's instruction; (4) Mental Disease, three months'; (5) Practical Midwifery with Clinical Lectures, including not less than thirty cases, six months'; (6) Ophthalmic Surgery, three months'. Two examinations have to be passed. The Previous Medical or Half M.B. Examination, including Physics and Chemistry, Botany and Zoology, Anatomy and Institutes of Medicine (Practical Histology and Physiology), may be passed when credit has been obtained for the corresponding subjects, and these may be taken separately if desired. The Final Examination is subdivided into five sections, comprising Applied Anatomy (Medical and Surgical), Applied Physiology, Jurisprudence and Hygiene, Materia Medica and Therapeutics, Medicine, Surgery, Pathology, Midwifery, Gynæcology, Obstetrical Anatomy, Clinical Medicine, Mental Diseases, Clinical Surgery, Operations, Clinical Ophthalmology. The first seven of these subjects may be passed in the fourth year and the last eight in the fifth year. Fee for the *Liceat ad Examinandum*, £10. Fee for the degrees, £17.

Doctor in Medicine.—A Doctor in Medicine must be M.B. of at least three years' standing, or have been qualified to take the degree of M.B. for three years, and must read a thesis before the Regius Professor of Physic. Total amount of fees for this degree, £13.

Master in Surgery.—A Master in Surgery must be a Bachelor in Surgery of the University of Dublin of not less than three years' standing, and must produce satisfactory evidence of having been engaged for not less than two years from the date of his registration in the study, or study and practice, of his profession. He must then pass an examination in the following subjects:—1. Clinical Surgery. 2. Operative Surgery. 3. Surgical Pathology. 4. Surgery. 5. Surgical Anatomy (on the dead subject), and one of the following optional subjects:—1. Surgery in one of the following branches—viz., Ophthalmic and Aural, Gynæcological, and Dental. 2. Mental Disease. 3. Medical Jurisprudence and Hygiene. 4. Advanced Anatomy and Physiology. 5. Comparative Anatomy. Fee for the degree of Master in Surgery, £11.

Master in Obstetric Science.—A Master in Obstetric Science must have passed the M.B. and B.Ch. examinations, and produce a certificate of having attended a summer course in Obstetric Medicine and Surgery.[5] He is then required to pass an examination in the following subjects:—1. Practice of Midwifery. 2. Gynæcology. 3. Anatomy of Female Pelvis and Elementary Embryology. 4. Clinical Gynæcology. Fee for the degree of Master in Obstetric Science, £5.

University Diplomas.—Candidates for the diplomas in Medicine, Surgery, or Obstetric Science must be matriculated in Medicine, and must have completed two years in Arts and five years in Medical Studies. The Course and Examination necessary for the diplomas are the same as for the degrees, except that the candidate is not required to attend the Lectures on Botany and Zoology, nor to pass the Previous Medical examination in those subjects. A diplomate, on completing his course in Arts and proceeding to the degree of B.A., may become a Bachelor by attending the Lectures on Botany and Zoology, passing the Previous Medical examination in those subjects, and paying the degree fees. Fee for the *Liceat ad Examinandum*, £10. Fee for the diplomas in Medicine, Surgery, and Midwifery, £11.

ROYAL UNIVERSITY OF IRELAND.

All Degrees, Honours, Exhibitions, Prizes and Scholarships in this University are open to students of either sex.

Candidates for any degree in this University must have passed the Matriculation Examination. Students from other universities and colleges are included in this rule.

The following degrees, &c., are conferred by the University in this Faculty:—Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, Master of Surgery, Bachelor of Obstetrics and Master of Obstetrics; in Sanitary Science, a special diploma; and in Mental Disease, a special diploma.

The Medical Examinations, except that for the diploma in Sanitary Science, will be held twice yearly—viz., in April and in October. The examination for the diploma in Sanitary Science will be held in July.

The course for degrees in Medicine, &c., is of at least five years' duration.

The First Examination in Medicine.—Students may not be admitted to this examination until the lapse of two academical years from the time of their matriculation. They must also have previously passed the First University Examination. The subjects of this examination are Natural Philosophy, Theoretic Chemistry, Zoology and Botany. The examination in each subject will comprise two parts:—1. A written examination. 2. Practical work and oral examination. For Chemistry the practical examination takes place at the close of the second year. Particular weight will be

[5] Existing graduates in Medicine of the standing of M.D. are not required to attend this course.

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given to the practical part of the examination. Candidates at the First Examination in Medicine who at the First University Examination in Arts did not obtain 30 per cent. of the marks assigned to French or German will be required to present themselves for a qualifying examination in French or German. Failure to obtain 30 per cent. of the marks assigned to either of those languages will involve the loss of the examination.

The Second Examination in Medicine.—Students will be admitted to this examination after the lapse of one academical year from the time of passing the First Examination in Medicine, provided they have completed the second year of the medical curriculum. The subjects for this examination are Anatomy, Physiology, and Practical Chemistry.

The Third Examination in Medicine.—Students will be admitted to this examination after the lapse of one academical year from the time of passing the Second Examination in Medicine, provided they have completed the third year of the medical curriculum. The subjects for this examination will be Anatomy, Physiology, and Materia Medica (Pharmacology).

The Examination for the Medical Degrees.—Students will be admitted to this examination after the lapse of two academical years from the time of passing the Third Examination in Medicine, provided they have completed the course of medical studies prescribed for the fourth year. The examination consists of three parts or divisions:—(*a*) Medicine, including Therapeutics and Pathology, Mental Diseases, Medical Jurisprudence and Hygiene. (*b*) Surgery, Theoretical, Clinical, Operative; Surgical Anatomy, with Ophthalmology and Otology. (*c*) Midwifery and Gynæcology, with Diseases of Children. Each part of this examination must be passed as a whole. Upon completing satisfactorily his examination in all three divisions the candidate will, in addition to the parchment diplomas recording his admission to the Medical Degrees of M.B., B.Ch., and B.A.O., receive a certificate of having passed a qualifying examination in the subjects of Medicine, Surgery, and Midwifery. The fee for this certificate is £10, which must be paid prior to the candidate's admission to the Medical Degrees.

M.D. Degree.—Candidates may be admitted to this degree after the lapse of three academical years from the time of obtaining the degree of M.B. Every candidate will be examined at the bedside, and required to diagnose at least three medical cases, and prescribe treatment, and to write detailed reports on at least two cases to be selected by the examiners and to discuss all the questions arising thereon.

The M.Ch. Degree.—This degree will be conferred only on graduates in Medicine of the University of at least three years' standing. The examination for this degree will comprise Surgical Diseases and Surgery, both theoretical and operative; Surgical Anatomy; Ophthalmology and Otology; and will include—(*a*) a written examination; (*b*) a clinical examination; (*c*) an examination on Surgical Instruments and Appliances; and (*d*) an examination in Operative Surgery.

The Mastership in Obstetrics.—This degree will be conferred only on graduates in Medicine of the University of at least three years' standing. The examination will comprise the Theory and Practice of Midwifery and of Diseases of Women and Children and the Use of Instruments and Appliances and will include—(*a*) a written examination; (*b*) a clinical examination as far as practicable; (*c*) an oral examination, with practical illustrations; and (*d*) an examination on Instruments and Appliances.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.[6]

Regulations relating to the several Examinations applicable to Candidates who commenced their Professional Education on or after Jan. 1st, 1892.

Any candidate who desires to obtain both the licence of the Royal College of Physicians of London and the diploma of Member of the Royal College of Surgeons of England is required to complete five years of professional study at recognised Medical Schools and Hospitals and to comply with the following regulations and to pass the examinations hereinafter set forth.

Professional Examinations.—There are three Examinations, called herein the First Examination, the Second Examination, and the Third or Final Examination, each being partly written, partly oral, and partly practical. These examinations will be held in the months of January, April, July, and October, unless otherwise appointed. Every candidate intending to present himself for examination is required to give notice in writing to Mr. F. G. Hallett, Secretary of the Examining Board, Examination Hall, Victoria Embankment, W.C., fourteen clear days before the day on which the examination commences, transmitting at the same time the required certificates.

The subjects of the First Examination are—Chemistry and Physics, Practical Pharmacy, and Elementary Biology. A candidate may take this examination in three parts at different times. A candidate will be admitted to examination in Chemistry and Physics and Elementary Biology before registration as a medical student, and to examination in Practical Pharmacy on producing evidence of having been registered as a medical student by the General Medical Council, *or he may take Pharmacy* at any time during the curriculum. A candidate rejected in one part or more of the First Examination will not be admitted to re-examination until after the lapse of a period of not less than three months from the date of rejection, and he will be re-examined in the subject or subjects in which he has been rejected. If referred in Chemistry or Biology, he must produce evidence of further instruction at a recognised institution. Any candidate who shall produce satisfactory evidence of having passed an examination for a degree in Medicine on any of the subjects of this examination conducted at a university in the United Kingdom, in India, or in a British colony will be exempt from examination in those subjects in which he has passed.

The fees for admission to the First Examination are as follows: For the whole examination, £10 10*s.*; for re-examination after rejection in Part I. £3 3*s.*, and for re-examination in each of the other parts, £2 2*s.*

The subjects of the Second Examination are Anatomy and Physiology. Candidates will be required to pass in both subjects at one and the same time. Candidates will be admissible to the Second Examination at the expiration of two winter sessions and one summer session (or fifteen months during the ordinary sessions) from the date of registration as Medical Students and after the lapse of not less than six months from the date of passing Parts I. and III. of the First Examination.

A candidate referred on the Second Examination will be required, before being admitted to re-examination, to produce a certificate that he has pursued, to the satisfaction of his teachers, in a recognised place of study, his Anatomical and Physiological studies during a period of not less than three months subsequently to the date of his reference.

The fees for admission to the Second Examination are: £10 10*s.* for the whole examination, and £6 6*s.* for re-examination after rejection.

The subjects of the Third or Final Examination are: Part I. Medicine, including Medical Anatomy, Pathology, Practical Pharmacy, Therapeutics, Forensic Medicine, and Public Health. Candidates who have passed in Practical Pharmacy at the First Examination will not be re-examined in that subject at the Third Examination. Part II. Surgery, including Pathology, Surgical Anatomy, and the use of Surgical Appliances. Part III. Midwifery and Diseases peculiar to Women. Candidates may present themselves for examination in Midwifery and Diseases of Women at any time after the completion of the fourth year of professional study, not less than one year after passing the Second Examination, on production of the required certificates. Candidates may take this examination in three parts at different times, or they may present themselves for the whole examination at one time. They will be required to produce the following evidence before being admitted to any part of the Third, or Final Examination—viz., in Medicine, of having attended Lectures on Medicine, Pathology including Bacteriology, Pharmacology and Therapeutics, Forensic Medicine, and Public Health; Practical Instruction in Medicine; Medical Hospital Practice during two winter and two summer sessions; Demonstrations in the Post Mortem Room during twelve months; Clinical Lectures on Medicine during nine months; of having discharged the duties of Medical

[6] The diploma of Member of the Royal College of Surgeons of England and the Licence of the Royal College of Physicians of London are no longer granted separately except to students who commenced their professional study prior to Oct. 1st, 1884.

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Clinical Clerk; Practice of a Fever Hospital and Clinical Demonstrations at a recognised Lunatic Asylum; in Surgery, of having attended Lectures on Surgery and Pathology including Bacteriology; Practical Instruction in Surgery; of having performed operations upon the Dead Subject; Surgical Hospital Practice during two winter and two summer sessions; Demonstrations in the Post Mortem Room during twelve months; Clinical Lectures on Surgery during nine months; of having discharged the duties of Surgical Dresser, and Clinical Instruction in Ophthalmology; in Midwifery of having attended Lectures on Midwifery; Practical Instruction in Midwifery; Clinical or other Lectures, with Practical Instruction in Diseases Peculiar to Women; and of attendance on 20 Labours.

Fees for admission to the Third or Final Examination are as follows: For the whole examination, £15 15*s*. Part I. For re-examination in Medicine, including Medical Anatomy, Pathology, Therapeutics, Forensic Medicine, and Public Health, £5 5*s*.; for re-examination in Practical Pharmacy (if taken at this examination), £2 2*s*. Part II. For re-examination in Surgery, including Pathology, Surgical Anatomy, and the use of Surgical Appliances, £5 5*s*. Part III. For re-examination in Midwifery and Diseases peculiar to Women, £3 3*s*.

A candidate referred on the Third or Final Examination will not be admitted to re-examination until after the lapse of a period of not less than three months from the date of rejection and will be required, before being admitted to re-examination, to produce a certificate, in regard to Medicine and Surgery, of having attended the Medical and Surgical Practice, or the Medical or Surgical Practice, as the case may be, during the period of his reference; and, in regard to Midwifery and Diseases peculiar to Women, a certificate of having received, subsequently to the date of his reference, not less than three months' instruction in that subject by a recognised teacher.

ROYAL COLLEGES OF SURGEONS AND PHYSICIANS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

These Colleges have made arrangements by which, after one series of examinations, held in Edinburgh or in Glasgow, or in Edinburgh and Glasgow, the student may obtain the diplomas of the three Bodies.

The three Bodies grant their Single Licences only to candidates who already possess another and opposite qualification in Medicine or Surgery, as the case may be, recognised by them. Copies of the Regulations for the Single Licence of any of the Bodies may be had on application to the respective Secretaries.

Professional Education.—1. Candidates who commenced medical study *before* Jan. 1st, 1892, must have been engaged in professional study during forty-five months from the date of registration as medical students by the General Medical Council, which period shall include not less than four winter sessions' attendance at a recognised medical school. 2. The candidate must produce certificates or other satisfactory evidence of having attended the following separate and distinct courses of instruction: Anatomy, during at least six months; Practical Anatomy, twelve months; Chemistry, six months; Practical or Analytical Chemistry, three months; Materia Medica, three months; Physiology, six months; Practice of Medicine, six months; Clinical Medicine, nine months; Principles and Practice of Surgery, six months; Clinical Surgery, nine months; Midwifery and the Diseases of Women and Children, three months; Medical Jurisprudence, three months; Pathological Anatomy, three months. The six months' courses delivered in Scotland must consist of not fewer than 100 lectures. The three months' courses must consist of not fewer than fifty lectures. The number of lectures certified as attended at any school not situated in Scotland should not be less than three-fourths of the total number of lectures delivered in a course. 3. The candidate must also produce the following certificates:—(*a*) Of having attended not less than six cases of labour, three of these to be conducted personally under the direct superintendence of the practitioner who signs the certificate, who must be a registered medical practitioner. (*b*) Of having attended, for three months, instruction in Practical Pharmacy; the certificate to be signed by the teacher, who must be a member of the Pharmaceutical Society of Great Britain, or the superintendent of the laboratory of a public hospital or dispensary, or a registered practitioner who dispenses medicines to his patients, or a teacher of a class of Practical Pharmacy. (*c*) Of having attended for twenty-four months the Medical and Surgical practice of a public general hospital containing on an average at least eighty patients available for clinical instruction and possessing distinct staffs of physicians and of surgeons. (*d*) Of having attended for six months (or three months, with three months' hospital clerkship) the practice of a public dispensary specially recognised by any of the above authorities; or the out-patient practice of a recognised general hospital, or of having acted for six months as pupil to a registered practitioner who either holds such a public appointment, or has such opportunities of imparting practical knowledge as shall be satisfactory to the coöperating authorities; this attendance should be made after the student has passed the First and Second Examinations. (*e*) Of having been instructed by a registered medical practitioner in the Theory and Practice of Vaccination, and of having performed operations under the teacher's inspection, during a period of not less than six weeks.

Candidates shall be subjected to three Professional Examinations, and they may enter either for the whole of an Examination or for a division thereof.

First Examination.—The First Examination shall embrace the two divisions of (1) Chemistry and (2) Elementary Anatomy and Histology, and shall take place not sooner than the end of the first year, including the period of a winter and a summer session. For the whole Examination taken at one time the sum of £5 5*s*. must be paid to the inspector of certificates not later than one week preceding it, after which no candidate will be entered. After rejection, for re-entry in all subjects, £3 3*s*.; for re-entry after obtaining exemption from re-examination in one or two subjects, £2 2*s*.; for entering for one division of subjects separately, £3 3*s*.; and for each re-entry after rejection, £2 2*s*. Any candidate who shall produce satisfactory evidence of having passed an equivalent examination in any of the subjects of the First Examination before any of the boards specified in the Regulations will be exempt from examination in such subjects.

Second Examination.—The Second Examination shal embrace the three subjects of (1) Anatomy, (2) Physiology (3) Materia Medica and Pharmacy, each of which shall constitute a division of the examination, and may be entered for separately. The examination shall not take place before the termination of the summer session of the second year of study, including two winters and two summers. The fees for admission to this examination, payable not later than one week before the day of examination, are as follows:—For the whole Examination, £5 5*s*.; after rejection for re-entry in all subjects, £3 3*s*.; for re-entry after obtaining exemption from re-examination in one or two subjects, £2 2*s*.; for entering for one subject separately, £2 2*s*.; and for each re-entry therein after rejection, £2 2*s*. Any candidate who shall produce satisfactory evidence of having passed an equivalent examination in any of the subjects of the Second Examination before any of the boards specified in the Regulations will be exempt from examination in such subject or subjects.

Final Examination.—The Final Examination shall embrace the three divisions of—(1) the Principles and Practice of Medicine (including Therapeutics, Medical Anatomy, and Pathology) and Clinical Medicine; (2) the Principles and Practice of Surgery (including Surgical Anatomy and Surgical Pathology) and Clinical Surgery; (3) Midwifery and Gynæcology, Medical Jurisprudence, and Hygiene (which divisions may be entered for separately at different times); and shall not take place before the termination of the full period of study. The fees for this Examination, payable not later than one week before the examination day, are as follows: For the whole Examination, taken at one time, in the case of candidates who have passed the First and Second Examinations, £15 15*s*., of which £10 10*s*. shall be returned to unsuccessful candidates. For entering for each of the three divisions of subjects separately, £6 6*s*., and on re-entry after rejection, £2 2*s*. in respect of each division or part thereof. This rule will also apply to any subsequent rejection. Any candidate admitted to the Final Examination, on the footing of having passed in the subjects of the First and Second Examinations at a recognised board, shall, on entering, pay the full fee of £26 5*s*.

All candidates shall be subjected, in addition to the Written and Oral Examinations, to Clinical Examinations

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in Medicine and Surgery, which shall include the Examination of Patients, Physical Diagnosis, the Clinical Use of the Microscope, Examination of the Urine and Urinary Deposits, Surgical Appliances, Bandages, Surface Markings, &c.

REGULATIONS FOR CANDIDATES WHO COMMENCED STUDY *after* JANUARY 1ST, 1892.

In addition to the courses above prescribed candidates are required to attend the following courses: Physics, three months; Elementary Biology, three months; Diseases and Injuries of the Eye, three months; Insanity, three months; Infectious Diseases, three months; and twelve months Hospital Practice with Clinical instruction.

The curriculum lasts for five years; the fifth year should be devoted to clinical work at one or more public hospitals or dispensaries. Six months of the fifth year may be passed by the student as a pupil to a registered practitioner possessing such opportunities of imparting practical knowledge as may be deemed satisfactory by the Committee of Management. The student's regularity of attendance in the wards and out-patient departments of the hospitals and at the post-mortem examinations should be duly ascertained and noted on the certificate.

Candidates shall be subjected to four Professional Examinations:

First Examination.—The First Examination shall embrace the following divisions of subjects—(1) Physics, (2) Chemistry, and (3) Elementary Biology. The fees payable for admission to the First Examination shall be for the whole Examination, £5; for each division separately, £2 10*s.*

Second Examination.—The Second Examination shall embrace Anatomy and Physiology including Histology; and candidates may be admitted to this Examination at the end of the second year of medical study. The fees payable for admission to the Second Examination shall be—for the whole Examination, £5.

Third Examination.—The Third Examination shall embrace Pathology, Materia Medica, and Pharmacy. The fees payable for admission to the Third Examination shall be—for the whole Examination, £5; for re-entry in both subjects after rejection, £3.

Final Examination.—The Final Examination shall not be passed earlier than the end of the fifth year of study, and shall embrace the following subjects:—Medicine, including Therapeutics, Medical Anatomy, and Clinical Medicine; Surgery, including Surgical Anatomy, Clinical Surgery, and Diseases and Injuries of the Eye; Midwifery and Diseases of Women and of New-born Children; and Medical Jurisprudence and Hygiene. All candidates shall be subjected, in addition to the Written and Oral Examinations, to Clinical Examinations in Medicine and Surgery, which shall include the Examination of Patients, Physical Diagnosis, the Clinical use of the Microscope, Examination of the Urine and Urinary Deposits, Surgical Appliances, Bandages, Surface markings, &c. The fees payable for the Final Examination shall be,—for the whole Examination, £15, for re-entry in all subjects after rejection, £5.

There are six periods of Examination annually, four in Edinburgh and two in Glasgow, and candidates may present themselves at either examining centre irrespective of the place of the previous examination. The Registrar in Edinburgh is Mr. J. Robertson, 48, George-square; and the Registrar in Glasgow, Mr. A. Duncan, 242, St. Vincent-street, to whom fees and certificates must be sent.

Note.—In applying for copies of the Regulations students should state whether they commenced medical study before or after Jan. 1st, 1892.

ROYAL COLLEGE OF PHYSICIANS AND ROYAL COLLEGE OF SURGEONS IN IRELAND.

Two sets of Regulations are at present in force, under which examinations take place for the conjoint diploma of these bodies. The following Regulations are obligatory on all students commencing on or after Dec. 31st, 1891, the date already mentioned:—

PRELIMINARY EXAMINATION AND REGISTRATION.

Every candidate for the Conjoint Examinations of the Colleges shall produce evidence—(*a*) of having, before entering on medical studies, passed a Preliminary Examination in general education recognised by the General Medical Council; and (*b*) of having been registered by that Council as a Student in Medicine. Each candidate before receiving his diplomas must produce a registrar's certificate or other satisfactory evidence that he has attained the age of twenty-one years.

Preliminary Examination.—The subjects for examination are identical with those prescribed for the Preliminary Examination by the General Council of Medical Education and Registration.

Professional Examinations.

Every candidate is required to pass four Professional Examinations—at the end of the first, second, fourth and fifth years of his professional studies. No candidate shall be admitted to the Final or Qualifying Examination within three months of his rejection at the Final or Qualifying Examination by any other licensing body. All examinations shall be conducted as far as possible by demonstration of objects placed before the candidates.

First Professional Examination.—Every candidate is required, before admission to the First Professional Examination, to produce evidence—(1) of having passed in the subjects of the Preliminary Examination; (2) of having been registered as a medical student by the General Medical Council; and (3) of having attended a course of—(*a*) Demonstrations and Dissections, (*b*) lectures on Theoretical Chemistry, winter courses; (*c*) Practical Chemistry, three months' summer or winter course; (*d*) Elementary Biology; (*e*) Physics. [*Note.*—Biology and Physics may be studied either before or after registration at institutions recognised for the purpose by the Colleges.] (*f*) Practical Pharmacy—(1) evidence of attendance for three months in the compounding department of a clinical hospital, which hospital shall have satisfied the committee of management that its means of instruction are sufficient, and shall return to the committee the names of its students at the commencement of the course, together with a record of their attendance at its close; or (2) evidence of attendance on a course of Practical Pharmacy in a recognised medical school, the course to consist of not less than twenty demonstrations; or (3) evidence of having served a full apprenticeship of three years, or of having acted as paid assistant for not less than one year, in the establishment of a Licentiate apothecary or of a registered pharmaceutical chemist. The fee for this examination is £15 15*s.*

The subjects of the First Professional Examination are the following:—1. (*a*) Chemistry; (*b*) Physics. 2. Practical Pharmacy. 3. Elementary Biology. 4. Anatomy—viz., Bones, with attachments of Muscles and Ligaments, and Joints. Candidates may take this examination as a whole at one time or in four parts, but no portion earlier than the end of the first winter session.

Second Professional Examination.—Candidates are not admissible to this examination before the end of their second winter session. Every candidate is required, before admission to the Second Professional Examination, to produce evidence of having passed the First Professional Examination; also certificates of having attended—(1) a medico-chirurgical hospital for nine months; (2) Demonstrations and Dissections for six months; (3) Practical Histology for three months; (4) Lectures on (*a*) Anatomy for six months; (*b*) Physiology for six months; (*c*) Materia Medica for three months. Materia Medica may be deferred to the third year. The fee for this examination is £10 10*s.*

The subjects of the Second Professional Examination are the following:—1. Anatomy: the anatomy of the whole human body; (2) Histology; (3) Human Physiology; (4) Materia Medica. The candidate must present himself, in the first instance at least, in Anatomy and Histology; if he pass in either of these subjects he may, at the discretion of the examiners, get credit therefor. Physiology and Materia Medica may, at the option of the candidate, be passed at the end of the second or during the third year.

Third Professional Examination.—Candidates are not admitted to this examination before the end of their fourth winter session. Every candidate is required, before admission to the Third Professional Examination, to produce evidence of having passed the Second Professional Examination; also, in addition to the certificates required for the Second Professional Examination, certificates of having attended—(1) a medico-chirurgical hospital for eighteen months; (2) a midwifery hospital or maternity for six months, including evidence of having been present at thirty labours;[7] (3) clinical instruction in Mental Diseases

[7] May be taken in either the fourth or fifth year.

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at an institution recognised by the Colleges[7] for three months; (4) Operative Surgery, including operations on the Dead Subject, not less than thirty meetings of the class; (5) Demonstrations and Dissections, for six months; (6) Vaccination;[7] (7) Practical Pathology, not less than thirty meetings of the class; (8) Lectures on (*a*) Medicine for six months; (*b*) Surgery for six months; (*c*) Public Health and Forensic Medicine for three months; (*d*) Midwifery, including Diseases peculiar to Women and to New-born Children, for six months. Nos. 2, 3, and 6 may be deferred to fifth year. Satisfactory evidence must be produced of attendance in fever wards in connexion with the hospital attendance in either the third or a subsequent year. The fee for this examination is £9 9*s*.

The subjects for the Third Professional Examination are the following:—(1) Medicine; (2) Surgery; (3) Pathology; (4) Therapeutics; (5) Public Health and Forensic Medicine. A candidate must present himself, in the first instance at least, in Medicine, Surgery, and Pathology. Should he pass in either Medicine or Surgery he shall get credit therefor, even if he have failed in other parts of the examination.

Final Professional Examination.—Candidates are not admissible to this examination before the end of their fifth year of medical study. Every candidate is required before admission to produce evidence—(1) of having passed the Third Professional Examination; (2) of having attended—(*a*) Clinical Instruction in Ophthalmic and Aural Surgery for three months; (*b*) a midwifery hospital or maternity, if not taken in the fourth year, for six months; (*c*) Vaccination, if not taken in the third or fourth year; (*d*) Clinical Instruction in Mental Diseases, if not taken in the fourth year.

The subjects for the Fourth Professional Examination are the following:—(1) Medicine, including Medical Anatomy and Mental Diseases; (2) Surgery; (3) Operative Surgery and Surgical Anatomy; (4) Ophthalmic and Aural Surgery; (5) Midwifery, including Diseases of Women and New-born Children; and (6) the Theory and Practice of Vaccination. Every candidate shall produce evidence of having acted as medical clinical clerk and as surgical dresser. Candidates may present themselves for examination in *all* the subjects of the Final Examination at the *same* time, or in one or more of the following groups:—(*a*) In Medicine, including Mental Diseases, Medical Anatomy, and Clinical Medicine; (*b*) Surgery, including Ophthalmic and Aural Surgery, Clinical Surgery, Operations, and Surgical Anatomy; (*c*) Midwifery, including Diseases of Women and New-born Children, and the Theory and Practice of Vaccination. Candidates must pay the full fee before being admitted to any part of the examination. Candidates may take the groups in any order they please. The fee for this examination is £6 6*s*.

SOCIETY OF APOTHECARIES OF LONDON.

There are three examinations—Primary; Final, Section I.; and Final, Section II. The Primary Examination is held quarterly, on the first Wednesday and on the Monday and Thursday of the same week, in the months of January, April, July, and October. Final Examinations are held monthly.

The Primary Examination consists of two parts. Part I. includes Elementary Biology; Chemistry, the Principles of the Science which bear on the Study of Medicine; Chemical Physics, including the Elementary Mechanics of Solids and Fluids, Heat, Light, and Electricity; Practical Chemistry; and Pharmacy. A synopsis indicating the range of the subjects in the examination will be sent with the regulations on application. Evidence of instruction in these subjects must be produced prior to examination. Part II. includes Anatomy, Physiology, and Histology. This examination cannot be passed before the completion of twelve months' Practical Anatomy with Demonstrations, and these subjects cannot be taken separately except in the event of the candidate having previously passed in one. Evidence must be produced of the candidate's course of study. A schedule for the Primary Examination, to be obtained of the Secretary, must be signed by the Dean of the Medical School or other authority. Section I. of the Final Examination consists of three parts. Part I. includes the Principles and Practice of Surgery, Surgical Pathology, and Surgical Anatomy. Part II. includes the Principles and Practice of Medicine, together with Therapeutics, Pharmacology, and Prescriptions; Pathology and Morbid Histology; Forensic Medicine, Hygiene, Theory and Practice of Vaccination; and Mental Diseases. Part III. includes Midwifery, Gynæcology, and Diseases of New-born Children and the Use of Obstetric Instruments and Appliances. Part III. may be postponed to Section II. of the Final Examination, and candidates may enter for Parts I., II., and III. together or separately. Section I. of the Final Examination cannot be passed before the expiration of forty-five months after registration as medical student, during which time not less than three winter sessions and two summer sessions must have been passed at one or more of the medical schools connected with a general hospital recognised by the Court of Examiners. Section II. of the Final Examination consists of three Parts. Part I. includes an Examination of and Written Report on Surgical Cases, and Operative Manipulation and Surgical Anatomy, Instruments and Appliances. Part II. includes an Examination of and Written Report on Medical Cases and Medical Anatomy. Part III. includes Midwifery, Gynæcology, and Diseases of New-born Children, and the Use of Obstetric Instruments and Appliances. Parts I. and II. of this examination cannot be passed before the end of the fifth year.

The course of study for the Primary Examination is as follows:—Elementary Biology, not less than three months; Chemistry and Chemical Physics, six months; Practical Chemistry, three months; Pharmacy and Dispensing, three months; Anatomy, six months; Practical Anatomy with Demonstrations, twelve months; Physiology, six months; Histology with Demonstrations, three months. The study of these subjects must be pursued at a Medical School or at a place of instruction recognised by the Society. Evidence of having received instruction in Biology and Chemistry before registration as medical student will be admitted. Instruction in Pharmacy and Dispensing must be given by a registered medical practitioner or by a member of the Pharmaceutical Society by examination or in a public hospital, infirmary, or dispensary.

The course of study for the Final, Section I., Examination includes attendance on the Surgical and Medical Practice (with Post-mortem Examinations) at a hospital connected with a medical school for a period of three winter and two summer sessions; lectures on the Principles and Practice of Surgery, six months; Practical Surgery, three months; Clinical Surgical Lectures, nine months; Dressership,[8] six months; Performance of Surgical Operations on the Dead Body; lectures on Principles and Practice of Medicine, six months; Pathology, three months; Clinical Medical Lectures, nine months; Clinical Clerkship,[8] six months; Forensic Medicine, Hygiene, and Insanity, three months; Midwifery and Gynæcology, three months; Clinical Instruction in the same, three months; a course of Practical Midwifery; attendance on twenty Midwifery cases. The course of medical study must extend over the above-mentioned period of forty-five months.

The course of study for the Final Examination Section II. includes either attendance on the Practice of Medicine and Surgery at a hospital or other institution recognised by the Society for a further period of twelve months, or six months as above and six months as a pupil of a registered practitioner holding a public medical or surgical appointment, or attendance at two special hospitals for six months (three months at each hospital), and for six months at a general hospital, all such hospitals to be recognised by the Society. Evidence shall also be given of practical instruction in Infectious Diseases and in Mental Diseases (at a lunatic asylum or in the wards of an institution containing a special ward set apart for the treatment of mental diseases), and in any two of the following subjects: Ophthalmic Surgery, Laryngology with Rhinology and Otology, Dermatology, and Diseases of Children. These courses may be taken at a general hospital recognised by the Society any time after the student has held the post of Dresser and Clinical Clerk. No candidate is eligible for the Final Examination who has not completed the curriculum prescribed by the Society, in evidence of which a schedule, to be obtained of the Secretary, must be produced, signed by the Dean of the Medical School or other authority. Prior to Section II. of the Final Examination the candidate must produce certificates: (1) of being twenty-one years of age; (2) of moral character; (3) of the course of medical study; and (4) of proficiency in vaccination signed by a teacher

[8] These offices may be held at a hospital, infirmary, or dispensary where sufficient opportunities are afforded for the acquirement of practical knowledge.

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authorised by the Local Government Board. Candidates intending to present themselves for examination are required to give fourteen days' notice. A form for this purpose will be sent on application.

The fee for the three examinations is 15 guineas, or 5 guineas for each examination, except in the case of persons holding a foreign diploma, who are required to pay the entire fee of 15 guineas. The Secretary to the Examiners attends at the Hall of the Society, Blackfriars, E.C., from 10 to 12 o'clock daily.

CONJOINT EXAMINATIONS OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND AND APOTHECARIES' HALL.

These examinations are now only carried on for the candidates who entered previously to the year 1895 in this scheme. Examinations are held bi-annually. Communications in connexion therewith should be addressed to the Secretary of the Conjoint Board, Dr. Woods, Merrion-square East.

Apothecaries' Hall of Ireland.—This body is now empowered to grant examinations in connexion with examiners in Surgery appointed by the General Medical Council, and by the direction of the Privy Council to hold examinations in a similar manner to the Apothecaries' Hall of London. The qualification entitles the holder to register under the Medical Act of 1886, and is a qualification in Medicine, Surgery, and Midwifery, and to act as an Apothecary. It also qualifies for appointments in the Naval Service, Military Service, and Poor-law appointments and Colonial appointments. It will be divided into four professional examinations, the first of which is to be held early in October and at intervals of three months; the final examinations twice a year. The regulations will be issued on Sept. 1st.

UNIVERSITY OF BRUSSELS.

British and other practitioners holding registrable qualifications are admissible for the Doctorate of the University of Brussels without further curriculum. Candidates should appear with their diplomas at the Secretary's office not later than 2 P.M. on the day preceding the examination. The fees are—For matriculation, £8 12*s.*; for 1st Part, £4 8*s.*; for 2nd Part, £4 4*s.*; for 3rd Part, £4 8*s.*; for legalisation of diploma, 8*s.*—£22. Unsuccessful candidates may present themselves again three months after rejection. Candidates who have paid in advance the fees for the three examinations, and are unsuccessful in the first, recover the fees paid for the second and third; those who fail in the second recover the fees paid for the third examination. There are three examinations, viz.—1st Part: Medicine, Pathology, and Morbid Anatomy; General Therapeutics; Materia Medica and Pharmacology; Special Therapeutics and Mental Diseases. 2nd Part: Surgery; Midwifery; Hygiene; and Medical Jurisprudence. 3rd Part: Clinical Examination in Medicine at the Hospital; Clinical Surgical Examination; Examination in Midwifery, consisting of obstetrical operations on the mannequin (model of pelvis); Examination in Operative Surgery, consisting of some of the usual operations on the dead subject, such as Amputation, Ligature of an Artery, &c.; Regional Anatomy on the Dead Body, with Dissections; and Ophthalmology. Great importance is attached to practical knowledge, but candidates must also possess sound theoretical knowledge. The standard required varies with the subject. The examinations, which are entirely *vivâ voce*, take place on the first Tuesday in November, December, February, May, and June. Candidates have the option of passing each Part separately or of taking the three together, and the latter is the usual course. The time required for the three examinations seldom exceeds ten days, and is usually less. They are conducted in English. There are in England at present about 600 graduates holding this degree, and an English Association of Brussels Graduates has been formed.

Further information may be obtained from Mr. Walter Reeve, 38, Manchester-street, Manchester-square, W.

THE ARMY, NAVY, AND INDIAN MEDICAL SERVICES.

Consequent upon the issue of the Royal Warrant of August, 1891, alterations have taken place in the designations of the departmental rank of the officers of the Army Medical Staff, and medical officers are also now placed, as regards sick leave of absence on full pay, on the same footing as those laid down for regimental officers. By a subsequent Royal Warrant, dated Nov. 10th, 1891, Art. 1208*b* of the Pay Warrant was revised by inserting the words "an officer of our Medical Staff" after the words "combatant officer," thus giving medical officers an equal title with combatant officers to reckon time on half-pay towards retirement, when the half-pay has been due to ill-health contracted in the performance of military duty. Under the Royal Warrant of July, 1895, time on half-pay not exceeding a year may under similar circumstances also reckon towards promotion. The substantive ranks of officers of the Medical Staff carry precedence and other advantages attaching to the rank indicated by the military portion of it, with such exceptions and within such limits as are laid down in the earlier Warrant.

In the *Gazette* of Aug. 28th, 1891, it was announced that the Queen had been pleased, by Royal Warrant, dated Aug. 7th, 1891, to approve of the following alterations of the designations of the departmental rank of the officers of the Medical Staff now serving as follows:—Surgeons-General, ranking as Majors-General, to be Surgeon-Major-Generals; Deputy Surgeons-General, ranking as Colonels, to be Surgeon-Colonels; Brigade-Surgeons, ranking as Lieutenant-Colonels, to be Brigade-Surgeon-Lieutenant-Colonels; Surgeons-Major, ranking as Lieutenant-Colonels, to be Surgeon-Lieutenant-Colonels; Surgeons-Major, ranking as Majors, to be Surgeon-Majors; Surgeons, ranking as Captains, to be Surgeon-Captains. The substantive rank of the Director-General of the Army Medical Department is that of Surgeon-Major-General.

[For the text of the Warrant of Aug. 7th for the Medical Staff, *vide* THE LANCET of Aug. 22nd, 1891, page 459 *et seq.*]

Admission into the Army and Indian Medical Services is gained as the result of competitive examination. Under special conditions the admission may take place by nomination under the authority of the Secretary of State for War. Candidates for both services must, before being admitted to examination, possess a double qualification to practise Medicine and Surgery, and be registered under the Medical Act. They are also now required to produce certificates of having acted as a medical clinical clerk for six months, as surgical dresser for another six months, and of having had not less than three months' instruction at an ophthalmic hospital or the ophthalmic department of a general hospital, including a course on errors of refraction. They must also furnish satisfactory certificates of moral character. A candidate for the Army must be between the ages of twenty-one and twenty eight, in good mental and bodily health, and must sign a declaration upon honour that he is of pure European descent; for the Indian Service a candidate must be between twenty-one and twenty-eight, of sound bodily health, and a natural-born subject of Her Majesty. Both are examined as to physical fitness by a Board of Medical Officers. These conditions being satisfied, the candidate is admitted to the competitive examination, which is usually held in London twice a year, in the months of February and August. An entrance fee of £1 is required from each candidate admitted to the competition, and is payable at the conclusion of the candidate's physical examination, if he be pronounced fit. No candidate for the Indian Service will be allowed to compete on more than three occasions. The subjects of examination are divided into *compulsory* and *voluntary*. The former comprise Surgery (1200 marks), Medicine, including Therapeutics and the Diseases of Women and Children (1200 marks), Anatomy and Physiology (600 marks), Chemistry and Pharmacy, and a practical knowledge of Drugs (600 marks). The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside. The eligibility of the candidate for admission into the service is determined by the result of this part of the examination. By an Army Order dated May 1st, 1895, no candidate shall be considered eligible who shall not have obtained at least one-third of the marks obtainable in each of the compulsory subjects, and at least one-half of the aggregate of marks for all the compulsory subjects. The *voluntary* subjects are French (200 marks), German (200 marks), and Natural Sciences: (*a*) Physics (300 marks); (*b*) Zoology (300 marks); (*c*) Geology and Physical Geography (300 marks); and (*d*) Botany (300 marks); and for the Indian

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service Hindustani (200 marks). A candidate may not present himself for examination in more than two of the subjects included under the term "Natural Sciences." A number less than one-third of the marks obtainable in each of the voluntary subjects will not be allowed to count in favour of a candidate who has qualified in the compulsory subjects. Although the results of the examination in voluntary subjects do not affect the question of the eligibility of the candidate for a commission, they influence his position on the list, which is determined by the numbers obtained under the two heads conjointly. After having passed this examination, the successful candidates for both services are sent to the Army Medical School at Netley as "surgeons-on-probation," receiving a daily pay of 8*s.* and certain allowances, to go through a four months' course of instruction in the special duties required of them in the service. The staff of the school consists of four professors, all of them men of high standing in their special departments. The Professorship of Military Medicine is held by Deputy Surgeon-General Henry Cayley, I.M.S. Brigade-Surgeon-Lieutenant-Colonel W. F. Stevenson, M.S., is Professor of Military Surgery; Brigade-Surgeon-Lieutenant-Colonel J. L. Notter, M.D., of Military Hygiene; and Dr. A. E. Wright, of Pathology. There is an Assistant Professor for each of these subjects who is an Army Medical Officer. The lectures on Military Surgery include gunshot and other wounds, transport of sick and wounded, duties of army medical officers in the field, on board troopships and transports, recruiting, and other duties incident to military service. Those on Military Medicine treat of tropical and other diseases to which soldiers are exposed in the course of their service, the mortality and invaliding by disease, in peace and war, at home and abroad, the management of lunatics under the conditions of military service, &c. The course of six lectures on Lunacy and Military Asylum work is delivered at the Netley Lunatic Asylum by Brigade-Surgeon-Lieutenant-Colonel Irving. The course of Hygiene comprises the examinations of water and air, the general principles of diet, with the quality and adulterations of food and beverages, the sanitary requirements of barracks, hospitals, and camps, the consideration of the clothing, duties, and exercises of the soldier, and the circumstances affecting his health, with the best means of preventing disease, and instruction in the mode of preparing the various statistical and other returns required of the medical officer. The Pathological course includes bacteriology and demonstrations in physiological chemistry. The surgeons-on-probation are detailed for duty in the wards of the hospital, under the Professors and Assistant Professors of Medicine and Surgery. They spend two months in the medical and two months in the surgical division of the hospital, and there they are taught practically the details of the management of patients in a military hospital, the registration of their diseases, the duties of invaliding, the modes of filling up the regulation statistical returns and other service documents. The surgeons-on-probation are provided with quarters and are extra members of the mess at Netley. After having passed through the course of instruction they are examined on the subjects taught in the school, and their position on the list of those recommended for commissions is determined by the combined results of the competitive and final examinations. At the close of each session eight prizes are awarded: the Herbert Prize of £20 to the surgeon-on-probation who has obtained the highest number of marks at the Netley examination; the Parkes Memorial Bronze Medal to the one who gains the highest number of marks in the examination in Hygiene; the De Chaumont prize of books to the one who takes second place in Hygiene; the Martin Memorial Gold Medal for the highest number of marks in the examination on Military Medicine; the Montefiore Medal and £21, awarded for Military Surgery; the Montefiore Second Prize, a revolver to the surgeon-on-probation who obtains the second highest number of marks in this branch; the Maclean prize of books for Clinical Medicine and Surgery and for Ward Work; and a prize of books for the highest number of marks gained in Pathology.

At the close of the Netley Session those surgeons-on-probation who have obtained one-third of the possible total of marks in each subject are recommended for commissions as Surgeon-Lieutenants. The Surgeon-Lieutenants of the British Medical Service pass on from Netley to Aldershot, where they go through a systematic course of instruction in company and ambulance drill and equitation. The surgeons of the Indian Medical Service do not go to Aldershot, but undergo, whilst at Netley, a course of instruction in company and ambulance drill and in other military duties. The position of the officers of the Indian Service on the list of Surgeon-Lieutenants is determined by the combined results of the London and Netley examinations, and, as far as the requirements of the service permit, they have the choice of commands in India—i.e., Bengal, Punjab, Madras, or Bombay—according to their position in that list. All officers appointed to the Indian Medical Service are now placed on one list. Though ordinarily employed within the limits of the command to which they are posted, they are liable for employment in any part of India.

The Army Medical Staff.—Surgeon-Lieutenants, if duly recommended, are promoted to be Surgeon-Captains on completing three years' full-pay service.

Surgeon-Captains, if recommended by the Director-General, are promoted to be Surgeon-Majors on completing twelve years' full-pay service, of which three must have been passed abroad. Before being promoted they will be required to pass an examination. This examination may be taken at any time after their seventh year of service. It will embrace the following subjects: (*a*) Surgery and Surgical Anatomy; (*b*) Medicine and Pathology; and (*c*) Hygiene, within the limits treated of in "Notter and Firth's Practical Hygiene," also the regulations regarding the sanitation of garrisons, quarters, hospitals, &c., as well as of camps and hospitals in the field, and of transports, troop and hospital ships; (*d*) duties of medical officers at home and abroad and at sea, as defined in the regulations, also hospital organisation and administration in peace and war, including the transport of sick and wounded by land and sea; (*e*) and the administration, interior economy, command, and discipline of the Medical Staff Corps, together with a knowledge of the principles of military law and their practical application (a certificate of proficiency in military law obtained at a garrison class will exempt the holder from examination in the latter).

A certificate will be required from a recognised teacher of surgery in any medical school, at home or abroad, in which operative surgery is taught, showing that the medical officer has gone satisfactorily through a complete course of operative surgery during the period within which the examination must be taken, and that he is a competent operator.

A report on any subject of a practical professional character, to be selected by the officer himself, and certified to be his own composition and in his own handwriting, will also be required. Considerable importance will be attached to the literary and scientific merits of this report, which must be furnished before the officer completes twelve years' service.

The examinations will be conducted by printed questions, which will enter so far into the subject matter of each head selected for examination as to show that the officer's knowledge has been fully tested.

The questions and answers will be forwarded, under a sealed confidential cover, to the Director-General for transmission to the examiners, who will report to the Director-General as to the competence of the officer examined.

The examination in Medicine and Surgery will be held by two gentlemen appointed by the Secretary of State; that in Hygiene by the Professor of Hygiene, Army Medical School, Netley; and that in Regulations, Duties, Military Law, &c., by an administrative medical officer, nominated for the purpose by the Director-General.

Any higher qualification, such as M.D., F.R.C.S. &c., or any diploma in Hygiene and State Medicine, taken after May 1st, 1890, will not exempt Surgeon-Captains from this examination.

Surgeon-Majors are, if duly recommended, promoted to be Surgeon-Lieutenant-Colonels on completing twenty years' full-pay service.

The selection of Surgeon-Lieutenant-Colonels for advancement to the grade of Brigade-Surgeon-Lieutenant-Colonel is made on the grounds of ability and merit (on the recommendation of the Commander-in-Chief), in determining which the following points will be considered:—The officer to be so selected must have been favourably reported on by the several military and departmental officers under whom he may have served, as set forth in their Annual Confidential reports. He must be physically fit for general service and have served abroad for at least eight years.

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A Brigade-Surgeon-Lieutenant-Colonel, to be eligible for selection as Surgeon-Colonel, must have served abroad at least ten years, of which three must have been in India. All promotions from the rank of Brigade-Surgeon-Lieutenant-Colonel to that of Surgeon-Colonel, and from the rank of Surgeon-Colonel to that of Surgeon-Major-General, shall be given for ability and merit, upon the selection of the Commander-in-Chief, with the approval of the Secretary of State, and the grounds of such selection shall be stated in writing. In all such cases the amount of service abroad shall be expressly stated. All officers under the rank of Surgeon-Colonel are placed on the retired list at the age of fifty-five, and those of that rank and of the rank of Surgeon-Major-General at the age of sixty, except that in any particular case in which it may be considered necessary for the interest of the public service the age of retirement of a Surgeon-Major-General may be extended for a period not exceeding two years. From recent promotions which have been made it is evident that Surgeons-Colonel who have passed the age of fifty-seven before being selected for the rank of Surgeon-Major-General will be passed over in favour of younger officers who can, by reason of age, serve a full three years in the rank of Surgeon-Major-General.

Foreign Service.—Army Order 85 of June, 1897, states that the periods of service abroad, reckoning from the date of embarkation at home, will (except in the case of a Surgeon-Major-General or Surgeon-Colonel) be five years for all stations abroad (except that on the west coast of Africa), unless such period should be incompatible with the interests of the public service.

Sick Leave.—An officer of the Army Medical Staff may be allowed full pay during sick leave of absence on the same conditions as those laid down for regimental officers.

Service on the West Coast of Africa.—Officers who entered the Army Medical Staff, or volunteered expressly for service on the West Coast of Africa on or after the 1st of March, 1873, receive double pay while actually serving on the Coast. Candidates who present themselves expressly for service in the Army Medical Staff on the West Coast enter under the same qualifications as other candidates, except that they may be admitted up to thirty years of age. After 3 years' actual service on the coast they are eligible for general service. If, however, it be certified by a medical board that any such officer is unfit for further duty on the coast he shall be eligible for general service, though he may not have completed 3 years' service there. For each year's service on the coast an officer is entitled to a year's leave at home. Each year or portion of a year served on the West Coast reckons double towards voluntary retirement or retired pay, provided that an officer has served 12 months on the coast.

Indian Medical Service.—Officers on appointment are, when possible, provided with passage to India by troopship; when troopship accommodation is not available passage at the public expense is provided by steamer, or a passage allowance granted if preferred. A charge for messing during the voyage is made at the rate of 2*s.* a day. This payment does not include the cost of liquors, which are charged for as extras. Any officer who may neglect or refuse to proceed to India under the orders of the Secretary of State for India within two months from the date of leaving Netley will be considered as having forfeited his appointment, unless special circumstances shall justify a departure from this regulation. The alteration of titles of medical officers in the Indian Service, so as to assimilate them to those of the Army Medical Staff, was promulgated in a Royal Warrant dated Dec. 7th, 1891. The articles of this Warrant were ordered to take effect from Aug. 7th, 1891, the date of the Medical Staff Warrant. By this Warrant the ranks of the medical officers in the Indian military forces were declared to be substantive ranks, and to carry with them the same precedence and other advantages as the corresponding ranks in the Army Medical Staff, including command over the medical officers and subordinates, native and European, engaged in hospital service. The function of military command is subject to the same restrictions as in the British service. An important provision of this Warrant is that Surgeon-Lieutenants "shall be promoted" to the rank of Surgeon-Captain on completing three years' full-pay service, Surgeon-Captains to the rank of Surgeon-Major after twelve years' service, and Surgeon-Majors to the rank of Surgeon-Lieutenant-Colonel after twenty years' service. No examination to qualify for promotion is required. All promotions to higher grades are to be given by selection for ability and merit. In case of distinguished service in the field a medical officer may be at once promoted from any rank to the one next above it. The ages for compulsory retirement are the same as those for the Medical Staff. Officers of the Indian Medical Service below the rank of Surgeon-Colonel may be granted: 1. Privilege leave under such regulations as may from time to time be in force. 2. Leave out of India for no longer period than one year, capable of extension to two years' absence from duty, on the following pay:—After arrival in India, on first appointment, £200 a year; after the commencement of the fifth year's service for pension, £250 a year; after the commencement of the tenth year's service for pension, £300 a year; after the commencement of the fifteenth year's service for pension, £400 a year; after the commencement of the twentieth year's service for pension, £450 a year; and after the commencement of the twenty-fifth year's service for pension, £500 a year. 3. Leave in India, but for the period of one year only, on full military pay and half the staff salary of appointment. No extension of leave involving absence from duty for more than two years, whether taken in or out of India, can be granted except on specially urgent grounds and without pay. An officer unable on account of the state of his health to return to duty within the maximum period of two years' absence, unless he is specially granted an extension of leave without pay, is placed on temporary half-pay or the retired list, as the circumstances of the case may require. An officer is also liable to be placed on half-pay or the retired list should his health require an undue amount of leave, whether in or out of India. Leave may be granted at any time, but solely at the discretion of the Commanders-in-Chief or of the Local Governments in India in the case of officers not under the direct orders of a Commander-in-Chief. Officers of the Administrative grades may be granted one period of leave not exceeding eight months during their tenure of appointment.

Naval Medical Service.—A candidate must be between the ages of twenty-one and twenty-eight, and must be the son of parents of pure European blood. He must declare his readiness for general service at home or abroad. Candidates will be examined by the Board in the following compulsory subjects: (*a*) Medicine, including Therapeutics and Diseases of Women and Children, 1200 marks; (*b*) Surgery, 1200 marks; (*c*) Anatomy and Physiology, 600 marks; and (*d*) Chemistry and Materia Medica, 600 marks. No candidate is considered eligible who does not obtain one-third of the maximum marks in each of the compulsory subjects. Candidates may be examined in the following voluntary subjects: Zoology, 300 marks; Botany, 300 marks; Physics, 300 marks; Geology and Physical Geography, 300 marks (no candidate will be allowed to present himself for examination in more than two of these subjects); French and German (200 each), 400 marks. A number less than one-third of the marks obtainable in each of these voluntary subjects will not be allowed to count in favour of a candidate who has qualified in the compulsory subjects. Successful candidates immediately after passing the examination will receive commissions as surgeons in the Royal Navy and will undergo a course of practical instruction in Naval Hygiene, &c., at Haslar Hospital. Surgeons are promoted to be Staff Surgeons after twelve years from date of entry, provided they pass the requisite examination after completion of eight years' service from the date of entry; and Staff Surgeons to Fleet Surgeons after twenty years' service if recommended by the Director-General. Deputy-Inspectors-General are promoted by selection from the Fleet Surgeons, and Inspectors-General from the Deputy Inspectors-General having three years' foreign service, or four years' mixed, of which not less than two must have been abroad, or five years' home service in such appointments as preclude foreign service, provided they have not refused to go abroad when called upon to do so. Inspectors and Deputy Inspectors-General are retired compulsorily at sixty (except that if in any particular case the Lords Commissioners of the Admiralty may consider that the interests of the public service will be materially advanced by the further retention of an Inspector-General on the active list, the age for retirement of such Inspector-General may be extended to sixty-two) and other grades at fifty-five years of age, and all ranks at any time if an officer has not served for five years. In calculating service for retired pay time on half-pay will be taken as equivalent to one-third service on full-pay. All retired officers are liable, till the age of fifty-five, to serve in time of declared national emergency in a rank not lower than that held on retirement.

The following tables, showing the rates of pay and

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half-pay of the three branches, will probably be acceptable to students who entertain any intention of entering the public service:—

ARMY.

Rank.	*Rates of Pay.*	*Gratuities.*	*With the Rank of*
	Daily.		
Surgeon on probation ..	£0 8 0	— ..	—
	Annual.		
Surg.-Lieut. or Surg.-Captain	200 0 0	— ..	Lieut. or Capt.
Surg.-Capt. aft. 5 years' service	250 0 0	— ..	Captain
	Daily.		
Surg.-Capt. aft. 10 years' service	0 15 0	£1250* ..	Captain
Surg.-Major or Surg.-Lieut.-Col.	1 0 0	— ..	Maj. or Lt.-Col.
Surg.-Major or Surg.-Lieut.-Col. aft. 15 years' service	1 2 6 ..	£1800* ..	Maj. or Lt.-Col.
Surg.-Major or Surg.-Lieut.-Col. aft. 18 years' service	— ..	£2500* ..	Maj. or Lt.-Col.
Surgeon-Lieut-Col.:		*Retired-pay.*†	
,, aft. 20 years' service	1 5 0 ..	£1 0 0 ..	Surg.-Major or Surg.-Lt.-Col.
,, 25 ,,	1 7 6 ..	1 2 6 ..	Surg.-Lt.-Col.
,, 30 ,,	— ..	1 5 0 ..	Surg.-Lt.-Col.
Brigade-Surgeon-Lieut.-Col.	1 10 0 ..	— ..	Lieut.-Colonel
,, aft. 5 years in rank	1 13 0 ..	—	(but always
,, und. 30 years' service	— ..	1 7 6	senior to
,, aft. 30 ,,	— ..	1 10 0	Surg.-Lieut.-Col.)
Surgeon-Colonel	2 0 0 ..	1 15 0 ..	Colonel
Surgeon-Major-General ..	2 15 0 ..	2 0 0 ..	Major-General

Director-General of the Army, £1500 yearly; retired pay from £1125 to £830, according to length of service as Director-General.

Under Army Order 63 of May, 1897, officers of the Army Medical Staff attached to a militia unit during preliminary drill and training are entitled to an allowance in aid of mess at the rate of 4*s.* a day.

* Applies equally to Surgeon-Lieutenant-Colonel, Surgeon-Major, Surgeon-Captain, or Surgeon-Lieutenant, according to periods of service—i.e., ten, fifteen, or eighteen years.

An officer who, on voluntary retirement, has served for less than three years in the rank from which he retires is only entitled to the gratuity or retired pay assigned to the next lower rank.

† Half-pay is also applicable to officers having less than twenty years' service, as follows:—

Surg.-Lieut.-Col., Surg.-Major, Surg.-Capt., or Surg.-Lieut.:

	Daily.
Under 5 years' service	£0 6 0
After 5 ,, ,, ...	0 8 0
After 10 ,, ,, ...	0 10 0
After 15 ,, ,, ...	0 13 6

Pay of officers in India:

	Rs. per mensem.
Brigade-Surg.-Lieut.-Col.	1150
Surg.-Lieut.-Col., after 25 years	1093
,, ,, ,, ...	1056
Surg.-Major, after 15 years	825
,, ,, ...	789
Surg.-Capt., after 10 years	500
,, ,, ,, 5 ,, ...	450
,, ,, or Lieutenant	350

ROYAL NAVY.

Rank.	Daily pay.	Half-pay.	Gratuities and retired pay. Rank.	Gratuity.
	£ *s.* *d.*	£ *s.*		
Surgeon	0 11 6	0 6	Surgeon and Staff	
aft. 2 years' f. p. in rank	..	0 7	‡Surgeon:	
4 ,,	0 13 6	0 8	aft. 8 years' f. p.	£1000
6 ,,	..	0 9	12 ,,	1500
8 ,,	0 15 6	0 10	16 ,,	2250
10 ,,	..	0 11		
Staff Surgeon:				
on promotion	1 1 0	0 12		
aft. 2 years' f. p. in rank	..	0 13		
4 ,,	1 4 0	0 14		
6 ,,	—	0 15		
Fleet Surgeon:			Fleet-Surgeon.	Daily.
on promotion	1 7 0	0 17	aft. 20 years'	£1 0 0
aft. 2 years' f. p. in rank	..	0 18	24 ,,	1 2 6
4 ,,	1 10 0	0 19	27 ,,	1 5 0
6 ,,	..	1 0	30 ,,	1 10 0
8 ,,	1 13 0	..		
Deputy Inspector-General:				
on promotion	2 2 0	1 5		1 15 0
aft. 2 years' f. p. in rank	..	1 7		
4 ,,	..	1 9		2 0 0
Inspector-General	2 15 0	1 18		

The half-pay, retired pay, and gratuities on retirement are liable o reduction in cases of misconduct.

The hospital allowances for Medical Officers at home and abroad, in lieu of provisions for themselves and servants and for fuel and light, are as follows:—

Rank.	At home.	Abroad.
	£	£
Inspector-Generals of Hospitals	85	130
Deputy Inspector-Generals	67	112
Fleet Surgeons and Staff Surgeons	53	112
Surgeons	39	108

Medical officers serving afloat receive an allowance of 1*s.* 6*d.* a day in lieu of provisions, fuel, and lights, as laid down in the Queen's Regulations.

The allowance of 5*s.* a day, in addition to full pay, at present granted to the Fleet Surgeon of a flag-ship bearing the flag of a Commander-in-Chief on a foreign station, will be given to the senior medical officer of such ship, being a Fleet or Staff Surgeon; and an allowance of 2*s.* 6*d.* a day to the senior medical officer, being a Fleet or Staff Surgeon, of the ship of a Commodore or of a senior officer commanding a foreign station.

Candidates will do well to notice that the regulations issued to applicants do not put any limit on the amount of half-pay service which they may be compelled to undergo.

‡ If the health of a surgeon breaks down before he completes eight years' service, even if his disability be contracted in the service or be due to climatic causes, he is liable to be at once placed on the retired list, receiving a gratuity at the rate of £125 for each year of completed service.

INDIAN MEDICAL SERVICE.§

The rate of pay drawn by Surgeon-Lieutenants from the date of passing the final examination at the Army Medical School until arrival in India is 10*s.* a day.

Pay at the above rate is issued in this country up to the date of embarkation, and an advance of two months' pay at the same rate is also made prior to embarkation, which is adjusted in India.

The following are the rates of "Indian pay and allowances" which will be drawn by officers hereafter appointed to the Indian Medical Service:—

Rank.	Years' service.	Indian pay and allowance per Mensem.	
		When not holding an appointment carrying higher pay.	
		Rs. a. p.	
Brigade-Surgeon-Lieutenant-Colonel		900 0 0	
Surgeon-Lieutenant-Colonel	25 and over	888 12 0	
Surgeon Lieutenant-Colonel	20 ,,	852 8 7	
Surgeon-Major	15 ,,	677 6 11	
,, ,,	12 ,,	640 14 6	
		A. When not receiving any staff allowance.	B. When receiving staff allowance in addition.
		Rs. a. p.	Rs. a. p.
Surgeon-Captain ..	10 ,,	500 0 0	450 0 0
,, ,, ..	5 ,,	450 0 0	400 0 0
Surgeon-Captain and Surgeon-Lieutenant	under 5	350 0 0	300 0 0

On first appointment they will only come into receipt of "Indian pay and allowances" from the date of their arrival in India.

Officers holding the principal administrative appointments and substantive military charges of the Indian Medical Service receive at present the following consolidated salaries:—

	Rs. per Mensem.
Surgeon-Major-General, Bengal ..	2700
,, ,, ,, Madras ..	2500
,, ,, ,, Bombay ..	2500
Surgeon-Colonel .. .. from .. to ..	2250 to 1800
Brigade-Surgeon-Lieutenant-Colonel in substantive charge of a native regiment	1100 with Rs. 90 horse allowance in cavalry regiments.
Surgeon-Lieutenant-Colonel in substantive charge of a native regiment	1000 with Rs. 90 horse allowance in cavalry regiments.
Surgeon-Major in substantive charge of ditto	800 with Rs. 90 ditto.
Surgeon-Captain above 5 years' full-pay service in substantive charge of a native regiment	600 with Rs. 60 ditto.
Surgeon-Captain or Surgeon-Lieutenant under 5 years' ditto in substantive charge of a native regiment	450 with Rs. 60 ditto.

The salaries of other substantive medical appointments in the Civil and Military Departments are consolidated and vary from Rs. 1800 to Rs. 400 per mensem.

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Qualified officers of the Medical Service are also eligible for appointments in the Assay Department. The salaries of these appointments are from Rs. 600 to Rs. 2250 per mensem.

Officers are required to perform two years' regimental duty in India before they can be considered eligible for civil employment.

RETIRING PENSIONS AND HALF-PAY.

Officers of the Indian Medical Service will be allowed to retire on the following scale of pension, on completion of the required periods of service:—

After 30 years' service for pension	£700 per annum + £350 after 5 years' active employment in India as a Surgeon-Major-General, or + £250 per annum after 5 years' active employment as a Surgeon-Colonel.
,, 25 ,, ,, ,,	£500 per annum.
,, 20 ,, ,, ,,	£365 ,,
,, 17 ,, ,, ,,	£292 ,,

Officers not entitled to pension, when placed on temporary or permanent half-pay will be granted the British rate of half-pay of their military rank, as under:—

Rank.	Rates of Half-pay.	
	Per diem.	Per annum.
	s. d.	£ s. d.
Brigade-Surgeon-Lieutenant-Colonel ..	} 11 0	200 15 0
Surgeon-Lieutenant-Colonel		
Surgeon-Major	9 6	173 7 6
Surgeon-Captain	7 0	127 15 0
Surgeon-Lieutenant	8 0	54 15 0

INVALID PENSIONS.

An officer who has become incapacitated for further service in India on account of unfitness caused by duty may, after he has been two years on temporary half pay, be granted an Invalid Pension on the following scale:—

	Per annum.
After 16 years' pension service	£272
,, 15 ,, ,, ,, ...	252
,, 14 ,, ,, ,, ...	232
,, 13 ,, ,, ,, ...	212
,, 12 ,, ,, ,, ...	192

§ No staff or regimental allowance can be drawn until the lower standard examination in Hindustani has been passed. As many surgeon-lieutenants have been sent to the frontier immediately on arriving in India, they have found it impossible to study and pass this examination, and have consequently been doing regimental and other work for Rs. 317 8a. a month. Lately a concession has been granted to medical officers so situated on the frontier, but the rule is still most illiberal and requires alteration.

‖ Officers cannot retire *in India* on half-pay (No. 45, Feb. 28th, 1865).

WOUND PENSIONS.

Officers are entitled to the same allowances on account of wounds and injuries received in action as are granted to combatant officers of Her Majesty's Indian Military Forces holding the corresponding military rank.

FAMILY PENSIONS.

The claims to pension of widows and families of officers are treated under the provisions of such Royal Warrant regulating the grant of pensions to the widows and families of British officers as may be in force at the time being.

The widows and families of officers are also entitled to pensions under the Indian Service Family Pension Regulations, for the benefits of which all officers must, as a condition of their appointment, subscribe from the date of their arrival in India.

METROPOLITAN MEDICAL SCHOOLS.[1]

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.—The clinical practice of the hospital comprises a service of 750 beds, of which 676 are for patients in the hospital at Smithfield and 75 for convalescent patients at Swanley. Ten house physicians and ten house surgeons are appointed annually. During their first six months of office they act as "junior" house physicians and house surgeons and receive a salary of £25 a year. During their second six months they become "senior" house physicians and house surgeons and are provided with rooms by the hospital authorities and receive £80 a year as salary. A resident midwifery assistant and an ophthalmic house surgeon are appointed every six months, and are provided with rooms and receive a salary of £80 a year. Two assistant anæsthetists are appointed annually, and receive salaries of £120 and £100 respectively. An extern midwifery assistant is appointed every three months, and receives a salary of £80 a year. Two assistant electricians are appointed every six months. The clinical clerks, the obstetric clerks, the clerks to the medical out-patients, the dressers to the surgical in-patients and to the out-patients, and the dressers in the special departments are chosen from the diligent students. All the appointments are now free.

A college is attached to the hospital, in which students can reside, subject to the college regulations.

The Medical School Buildings include three large lecture theatres, a large dissecting room, a spacious library (containing 13,000 volumes), a well-appointed museum of anatomy, physiology, comparative anatomy, materia medica, botany, and pathological anatomy. There are laboratories for chemistry, physiology, pathology, pharmacology, public health, and biology, giving ample accommodation in every department.

A recreation ground of ten acres has been purchased by the school committee at Winchmore-hill for the use of the Students' Amalgamated Clubs, and all students are expected to become members.

Instruction in Preliminary Science is given to University of London students in chemistry, biology, and physics throughout the year.

Laboratory Instruction for the D.P.H. is provided during the winter and summer sessions, and elementary instruction in Bacteriology is also given throughout the year.

CHARING-CROSS HOSPITAL AND COLLEGE.—Total fees, 110 guineas if paid in a single sum on entry, or 121 guineas if paid in five instalments; the sons of Registered Medical Practitioners pay 100 guineas in one sum or 110 guineas in five sums; for Dental students, 54 guineas, or 60 guineas in two equal instalments. General students pay proportionately lower fees, and are admitted without additional fee to the courses of Clinical Medicine and Surgery and to the practice of the Royal Westminster Ophthalmic Hospital. They alone are entitled to compete for the Scholarships, Gold Medal, and Pereira Prize.

Classes for the Preliminary Scientific Examination of the University of London are held at this Medical School. The fee for the whole course, which begins in October, is 15 guineas. There are also special classes for the practical work for the Department of Public Health and a course in the subject of Diseases of tropical climates.

ST. GEORGE'S HOSPITAL.—Students may become Perpetual Pupils by payment of £150 on entering, or of £160 in four annual instalments. Perpetual pupils are entitled to perpetual admission to lectures and demonstrations as well as to the entire medical and surgical practice of the hospital; they may compete for all prizes and exhibitions, may become clinical clerks during six months and dressers during another six months, or longer if required, without fee, may attend midwifery practice, and may compete for all hospital and school appointments without extra charge. Four house surgeoncies and four house physiciancies, and the salaried offices of obstetric assistant, senior and junior anæsthetists, medical registrars (2), surgical registrar, curator and assistant curator of the Museum, besides demonstratorships and a number of junior hospital appointments, are open to perpetual pupils. Students not being perpetual pupils are admitted to lectures, demonstrations, and hospital practice on payment of £50 annually for two years and £20 annually for succeeding years. Such students may become Perpetual in their third year if they wish and if their conduct has been satisfactory.

GUY'S HOSPITAL.—House physicians, house surgeons, assistant house physicians, and assistant house surgeons, obstetric residents, gynæcological assistants, clinical assistants, clerks to anæsthetists, surgeons' and assistant surgeons' dressers, surgical ward clerks, clinical clerks, post-mortem clerks, extern obstetric attendants, and dressers and clerks in the special departments are appointed from among the students upon the recommendation of the medical staff, according to merit and without extra payment. The house physicians, of whom there are four, hold office for six months each. The assistant house physicians, who hold office for three months, attend in the out-patient department four afternoons in the week, and see all the cases not seen by the assistant physician of the day. The house physicians have the care of the patients in the medical wards, and attend to all emergencies arising in the absence of the physicians. They

[1] For Scholarships see p. 493 et seq.

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The Medical Student's Class Guide.

TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS FOR THE SESSION 1897-98.

LECTURES, &c.	ST. BARTHOL. HOSPITAL.			CHARING-CROSS HOSPITAL.			ST. GEORGE'S HOSPITAL.		
	LECTURERS.	FEES. One Course.	FEES. Unlimited.	LECTURERS.	FEES. One Course.	FEES. —	LECTURERS.	FEES. One Course.	FEES. Perpetual.
WINTER SESSION.		£ s. d.	£ s. d.		£ s. d.	£ s. d.		£ s. d.	£ s. d.
PHYSIOLOGY	Dr. Klein	9 9 0	...	Dr. Pembrey	8 8 0	...	Dr. Buckmaster	7 7 0	8 18 6
							Ditto, *Phys. Chem.*	...	...
BIOLOGY	Dr. Shore	7 7 0	...	Dr. Pembrey	5 5 0	...		...	...
ANATOMY	Mr. Bruce Clarke Mr. Lockwood.	9 9 0	...	Mr. Waterhouse Mr Cantlie (*Applied*)	7 7 0	...	Mr. Turner Mr. F. S Collard	7 7 0	8 18 6
ANATOMICAL DEMONSTRATIONS	Messrs. Waring, Bailey, Furnivall, Sloane, and Miles	10 10 0	...	Mr. Cantlie Mr. Gibbs	8 8 0	...	Mr. Grimsdale Ditto, *Osteology* *Histology*	7 7 0 3 3 0	...
CHEMISTRY	...	7 7 0	...	Dr. Morley	6 6 0	...	Mr. Gardner Mr. Addyman	6 6 0	7 17 6
MEDICINE	Sir D. Duckworth Dr. Norman Moore	7 7 0	...	Dr. Bruce	7 7 0	...	Dr. Cavafy Dr. Ewart	7 7 0	8 18 6
SURGERY	Mr. Marsh Mr. Walsham	7 7 0	...	Mr. Boyd	7 7 0	...	Mr. Bennett Mr. Dent	7 7 0	8 18 6
HOSPITAL PRACTICE:	Drs. Church, Gee,	3 mths.	36 15 0	Drs. Green, Bruce	3 mths.	Full	Dr. Cavafy	12 mths	42 0 0
PHYSICIANS	Sir D. Duckworth,	13 2 6		and Abercrombie	5 5 0	period	Dr. Ewart	10 10 0	
	Dr. Hensley,	6 mths.		[*To out-patients:*	6 mths.	21 0 0	Dr. Owen	2 years	
	Dr. Brunton,	19 19 0		Dr. Willcocks,	7 7 0		Dr. Penrose	21 0 0	
	Dr. Champneys (*Obstet.*)	12 mths 26 5 0		Dr. Murray, Dr. Mott]	12 mths 10 10 0		*Obst. Phys.:* Dr. Dakin		
ASSISTANT PHYSICIANS	Drs. Norman Moore, S. West, Ormerod.	...	...	Dr. Arkle	...	...	Dr. Rolleston	...	...
	Herringham, Tooth.			*Pract. Midwifery:*			Dr. Lee Dickinson		
	Dr. Griffith (*Obstet.*)	3 mths.		Dr. Routh	3 3 0		Dr. Cyril Ogle		
SURGEONS	Messrs. Smith,	13 2 6	36 15 0	Mr. Bloxam	3 mths.	Full	Mr. Pick,	12 months	42 0 0
	Willett, Langton,	6 mths.		Mr. Morgan	5 5 0	period	Mr. Haward,	10 10 0	
	Marsh, and Butlin	19 19 0		Mr. Stanley Boyd	6 mths.	21 0 0	Mr. Bennett, Mr Dent	2 years	
ASSISTANT SURGEONS	Messrs. Walsham,	12 mths	...	Mr. Waterhouse	7 7 0	Full	*Ophth. Surg.:*	21 0 0	
	Cripps, Bruce Clarke,	26 5 0		Mr. Wallis	12 mths.	Med. &	Mr. Frost		
	Bowlby, & Lockwood			Mr. Gibbs	10 10 0	Surg.	Mr. Turner		
	Ophth. Surgs.:					36 15 0	Mr. Sheild		
	Mr Vernon Mr Jessop						Mr. H. Allingham		
PRACTICAL SURGERY	...	7 7 0	...	Mr. Wallis	5 5 0	...	Mr. Sheild	4 4 0	...
PRACTICAL MEDICINE	Drs. West, Fletcher,	...	...	...	...	...	...	...	...
SURGICAL PATHOLOGY	and Horton Smith Mr. Bowlby	...	...	...	...	...	...	...	...
CLINICAL MEDICINE	Drs. Church, Gee, Sir D. Duckworth, Dr. Hensley, Dr. Brunton	...	...	The Physicians and Assistant Physicians	...	...	The Physicians	...	...
CLINICAL SURGERY	Messrs. Smith, Willett, Langton, Marsh, and Butlin	...	...	The Surgeons and Assistant Surgeons	...	...	The Surgeons	...	...
CLINICAL MIDWIFERY, &c.	Dr. Champneys	...	...	Drs. Black & Routh	...	...	Drs. Dakin & Remfry	...	...
DENTAL SURGERY	Mr. Paterson	...	...	Mr. Colyer	...	...	Mr. H. L. Albert	...	...
	Mr. Ackery	...	...						
PUBLIC HEALTH	Sir R. Thorne Thorne ¶	3 3 0	*	Dr. Whitelegge [*Pub. Health, Pract.:* Drs. Morley & Arkle]	3 3 0	...	Dr. Parkes	3 3 0	4 4 0
SUMMER SESSION.									
MATERIA MEDICA	Dr. Calvert	7 7 0	...	Dr. Willcocks	...	...	Dr. Penrose	4 14 6	5 15 6
PHARMACOLOGY	Dr. Brunton		...	Dr. Willcocks	4 4 0	...		...	...
MIDWIFERY, &c.	Dr. Champneys	7 7 0	...	Dr. Black	4 4 0	...	Dr. Dakin	4 14 6	5 15 6
BOTANY	Rev. G. Henslow	...	...	Dr. Willcocks	...	...		...	...
MEDICAL JURISPRUDENCE	Dr. Hensley	4 4 0	...	Dr. Abercrombie Dr. Morley (*Toz.*)	4 4 0	...	Dr. Owen	4 14 6	5 15 6
THERAPEUTICS	Dr. Brunton	...	...	Dr. Willcocks	...	...	Dr. Penrose	4 14 6	5 15 6
PATHOLOGICAL ANATOMY	Dr. Andrewes	7 7 0	...	Dr. Murray	4 4 0	...	Dr. Rolleston	3 3 0	4 4 0
PRACTICAL CHEMISTRY	Dr. Chattaway and Mr. Evans	5 5 0	...	Dr. Morley Mr. Richards	5 5 0	...	Mr. Gardner Mr. Addyman	4 4 0 4 4 0	...
COMPARATIVE ANATOMY	Dr. Shore	2 12 6	...	Dr. Pembrey	...	...	Dr. Buckmaster	4 4 0	...
OPHTHALMIC SURGERY	Mr. Vernon Mr. Jessop (in Winter)	3 3 0	*	Staff of Royal West. Oph. Hosp.	...	...	Mr. Frost	...	...
OPHTHALMOLOGY	...	...	...		...	...	Dr. Lee Dickinson	4 4 0	5 15 6
PSYCHOLOGY	Dr. Claye Shaw	3 3 0	...	Dr. Percy Smith	4 4 0	...			
DENTAL SURGERY	Mr. Paterson	2 12 6	...	Mr. Colyer	...	...	Mr. H. L. Albert	...	...
PRACTICAL SURGERY	...	7 7 0	...	Mr. Wallis	5 5 0	...	Mr. Sheild	4 4 0	5 15 6
PRACTICAL PHYSIOLOGY	Dr. Edkins (and in Winter)	10 10 0	...	Dr. Pembrey (and in Winter)	6 6 0	...	Dr. Buckmaster	...	...
							[*Tropical Medicine:* Dr. Manson]	3 3 0	
PRACTICAL PHARMACY	Dr. Calvert Dr. Fletcher	...	...	Mr. Pearce	2 2 0	...	[*Clinical Lunacy:* Dr. Alexander]		
OPERATIVE SURG. (DEMON.)	Mr. J. Berry Mr. H. J. Waring Mr. McA. Eccles	6 6 0	...	Mr. Wallis	‡	...	Mr. H. Allingham. [*Pract. Midw.:* Dr. Dakin]	6 6 0	...
DISEASES OF THE EAR	Mr. Cumberbatch	...	...	Mr. Waterhouse	...	...	Mr. Bull	...	...
DISEASES OF THE SKIN	Dr. West	...	...	Dr. Galloway	...	...	Dr. Cavafy	...	...
ORTHOPÆDIC SURGERY	Mr. Walsham	...	...	Mr. Wallis	...	...	Mr. Turner	...	...
DISEASES OF THE THROAT	Mr. Bowlby	...	...	Dr. Willcocks	...	...	Mr. Sheild	...	...
FEE for all Lectures and Hosp. Med. and Surg. Practice	£157 10s.; or, 1st yr., £42; 2nd yr., £42; 3rd yr., £42; 4th yr., £42.			£115 10s.; or, 1st Win., £34 13s.; 1st Sum., 2nd Win., 2nd Sum., 3rd Win., £23 2s. each.†			£150; or, 1st year, £50; 2nd year, £50 3rd year, £40; 4th year, £20.§		

* Free to general students of the hospital. † The sons of registered medical practitioners pay 100 guineas in one sum, or 110 guineas in five instalments. Dental students £56 14s., or two instalments of 30 guineas each. A proportionate reduction in their fees will be made to students who have already commenced their education at institutions recognised by the Examining Boards on production of satisfactory certificates on joining the school. ‡ Included in Practical Surgery fee. § Fee for Perpetual Pupils. ‖ And in Winter. ¶ In Summer.

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TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS FOR THE SESSION 1897-98—(CONTINUED).

LECTURES, &c.	GUY'S HOSPITAL. LECTURERS.	GUY'S HOSPITAL. FEES. First Course.	GUY'S HOSPITAL. FEES. Subseqnt. Course.	KING'S COLLEGE AND HOSPITAL. LECTURERS.	KING'S COLLEGE AND HOSPITAL. FEES. One Course.	KING'S COLLEGE AND HOSPITAL. FEES. Perpetual
WINTER SESSION.		£ s. d.	£ s. d.		£ s. d.	£ s. d.
PHYSIOLOGY	Dr. Washbourn and Dr. Starling	10 10 0	10 10 0	Dr. Halliburton, Mr. Beale, and Mr. Lyle	8 8 0	...
ANATOMY, DESCRIPTIVE & SURGICAL	Mr. Clement Lucas and Mr. Lane	10 10 0	10 10 0	Dr. Hughes and Mr. Cadman	6 6 0 or 9 9 0 inc. Prac. Anatomy	...
ANATOMICAL DEMONSTRATIONS	Mr. Fripp, Mr. Steward, and Mr. Handley	10 10 0	10 10 0	Dr. Hughes and Mr. A. W. Cadman	7 7 0	...
CHEMISTRY	Dr. Stevenson and Mr. Groves	5 5 0	5 5 0	Mr. Thomson and Mr. Jackson	8 8 0	...
MEDICINE	Dr. Pye-Smith and Dr. Taylor	10 10 0	10 10 0	Dr. B. Yeo	8 8 0	...
SURGERY	Mr. Howse and Mr. Davies-Colley	10 10 0	10 10 0	Mr. W. W. Cheyne	8 8 0	...
PRACTICAL SURGERY	Mr. Fagge	4 4 0	4 4 0	Messrs. Carless, Burghard, Cheatle, and Beale	3 3 0	...
HOSPITAL PRACTICE		3 months	Perpetual	Dr. Duffin	Summer	42 0 0
PHYSICIANS	Dr. Pye-Smith, Dr. Taylor, Dr. Goodhart, and Dr. Hale White	15 15 0 6 months	42 0 0	Dr. Playfair (*accou.*)	8 8 0 Winter	
	Dr. Galabin (*obst.*)	21 0 0 1 year		Dr. Burney Yeo	11 11 0	
		28 7 0		Dr. Hayes (*accou.*)	1 year	
				Dr. Ferrier, Dr. Curnow	18 18 0	
ASSISTANT PHYSICIANS	Drs. Pitt, Perry, Shaw, and Washbourn	...	...	Dr. Tirard	...	...
	Dr. Horrocks (*obst.*)			Dr. Dalton		
				Sir H. Beevor, Bart., M.D.		
				Dr. Phillipps (*accou.*)		
SURGEONS	Mr. Howse, Mr. Davies-Colley, Mr. Lucas, and Mr. Golding-Bird	3 months 15 15 0 6 months	Perpetual 42 0 0	Mr. W. Rose, Mr. Cheyne, and Mr. Barrow	...	...
	Mr. Higgens (*oph.*), Messrs. Newland-Pedley, Maggs, & Badcock (*dent.*)	21 0 0 1 year		Mr. A. S. Underwood (*surg.-dentist*)		
	Mr. L. Purves (*aural*)	28 7 0		Mr. McHardy (*ophthalmic*)		
ASSISTANT SURGEONS	Messrs. Jacobson, Symonds, Lane, Dunn, Brailey (*oph.*), and Rouw, Pillin, & Hopson (*dent.*)	...	...	Mr. Carless, Mr. Burghard, Mr. Cheatle, and Mr. Beale	...	...
CLINICAL MEDICINE	Drs. Pye-Smith, Taylor, Goodhart and White	...	...		...	...
	In Summer: Drs. Pitt, Perry, Shaw, and Washbourn			Dr. Duffin, Dr. B. Yeo, Dr. Ferrier, Dr. Curnow		
CLINICAL SURGERY	Messrs. Howse, Davies-Colley, Lucas, and Golding-Bird	...	...		...	...
	In Summer: Mr. Jacobson, Mr. Symonds, Mr. Lane, and Mr. Dunn			Mr. W. Rose [*Osteology:* Dr. Hughes & Mr. A. W. Cadman]		
CLINICAL MIDWIFERY	Dr. Galabin & Dr. Horrocks	...	...	Dr. Playfair & Dr. Hayes	...	...
	[*Medical Classes:* Dr. Shaw] [*Surgical Classes:* Mr. Dunn]			[*State Medicine Laboratories:* Dr. W. R. Smith & Mr. Moor]		
SUMMER SESSION.						
MATERIA MEDICA & THERAPEUTICS	Dr. Hale White	5 5 0	5 5 0	Dr. Tirard	5 5 0	...
MIDWIFERY &c.	Dr. Galabin	5 5 0	5 5 0	Dr. Playfair, Dr. Hayes	5 5 0	...
BOTANY	Mr. Beddard, Dr. Stevens, and Mr. Steward	5 5 0	5 5 0	Mr. Bottomley, Ph.D.	4 4 0	...
BIOLOGY		10 10 0	10 10 0	Dr. Halliburton, Mr. Beale, and Mr. Lyle	...	...
MEDICAL JURISPRUDENCE	Dr. Stevenson	5 5 0	5 5 0	Dr. W. R. Smith	5 5 0	...
DISEASES OF WOMEN	Dr. Galabin	5 5 0	5 5 0	Dr. Playfair	...	...
PRACTICAL CHEMISTRY	Mr. Groves, Mr. Wade, and Mr. Hopkins	5 5 0	5 5 0	Messrs. Thomson and H. Jackson	6 6 0	...
PRACTICAL PHYSIOLOGY	Dr. Starling, Dr. Fawcett, and Mr. Hopkins	10 10 0	7 7 0	Dr. Halliburton, Mr. Beale, and Mr. Lyle.	5 5 0	...
NEURO-PATHOLOGY	...	...	...	Dr. Ferrier & Dr. Turner	1 11 6	...
PRACTICAL BIOLOGY	Mr. Beddard, Dr. Stevens, and Mr. Steward	10 10 0	10 10 0	Mr. Beale, Mr. Lyle	8 8 0*	...
NATURAL PHILOSOPHY	Mr. Reinold	5 5 0	5 5 0	Mr. W. G. Adams	2 2 0	...
COMPARATIVE ANATOMY	...	5 5 0	5 5 0	...	...	...
PATHOLOGY AND MORBID ANATOMY	Drs. Pitt, Perry, & Shaw	5 5 0	5 5 0	...	...	...
BACTERIOLOGY	Dr. Washbourn	2 2 0	2 2 0	Dr. Dalton	3 3 0	...
OPERATIVE SURGERY	Mr. Dunn	5 5 0	5 5 0	Mr. Crookshank	3 3 0	...
MORBID HISTOLOGY	Dr. Pitt and Mr. Lane	5 5 0	5 5 0	Mr. Carless	2 2 0	...
OPHTHALMIC SURGERY	Mr. Higgens	3 3 0	3 3 0	Dr. Dalton	5 5 0	...
PSYCHOLOGICAL MEDICINE	Dr. Savage	3 3 0	3 3 0	Mr. McHardy	3 3 0	...
DENTAL SURGERY	Mr. Newland-Pedley	...	...	Dr. Ernest White	4 4 0	...
AURAL SURGERY	Mr. L. Purves	...	...	Mr. A. S. Underwood	...	...
DEMONST. OF CUTANEOUS DISEASES	Dr. Perry	...	...	Dr. Pritchard	...	...
PUBLIC HEALTH	Dr. Sykes	3 3 0	3 3 0	Mr. Carless	...	...
PRACTICAL PHARMACY	Mr. Collier	3 3 0	3 3 0	...	1 1 0	...
				Mr. Wilmot	3 3 0	...
FEE for Lectures and Hospital Medical and Surgical Practice	150 guineas; or by 4 instalments of forty guineas each.			£135; or in two annual instalments of £70; or three of £48; or four of £37 each.†		

* Elementary Course, £5 5s.

† Students having completed their studies in Anatomy, Physiology, and previous subjects, £75.

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TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS, FOR THE SESSION 1897-98—(CONTINUED).

LECTURES, &c.	LONDON HOSPITAL.			ST. MARY'S HOSPITAL.			MIDDLESEX HOSPITAL.		
	LECTURERS.	FEES. One Course.	FEES. Perpetual.	LECTURERS.	FEES. One Session.	FEES. Perpetual.	LECTURERS.	FEES. One Session.	FEES. Perpetual.
WINTER SESSION.		£ s. d.	£ s. d.		£ s. d.	£ s. d		£ s. d.	£ s. d.
PHYSIOLOGY	Mr. Mansell Moullin	7 7 0	..	Dr. Waller	7 0 0	...	Dr. Young	8 8 0	...
EXPERIMENTAL PHYSIOL.	Dr. Leonard Hill	4 4 0	...	Dr. Waller	...	...	...	5 5 0	...
PATHOL. & MORBID ANAT.	Mr. Hutchison and Mr. F. S. Eve and Dr. Percy Kidd	3 3 0	...	Dr. Maguire Mr. Plimmer	4 0 0	...	...	...	...
ANATOMY, DESCRIPTIVE & SURGICAL.	Mr. T. H. Openshaw [*Pract.*: Dr. Keith]	7 7 0	...	Mr. E. Lane	8 0 0	...	Dr. Robinson	9 9 0	...
ANATOMICAL DEMONSTRATIONS.	Dr Leaf Dr Roxburgh	7 7 0	...	Mr. Collier	...	...	Mr. R. Gladstone A. T. Fergusson	5 5 0	...
CHEMISTRY	Mr. Pagè, Mr. Candy [*Pract.*: Mr. Pagè] [*Experim. Physics*: Mr. Pagè]	7 7 0 5 5 0 3 3 0	...	Dr. A. P. Laurie [*Bacteriology*: Mr. H. G. Plimmer]	6 0 0 2 2 0	...	Dr. Plimpton	6 6 0	...
MEDICINE	Dr. S. Mackenzie	7 7 0	...	Dr. Lees	8 0 0	...	Dr. W. Cayley & Dr. S. Coupland	8 8 0	...
SURGERY	Mr. Treves	7 7 0	...	Dr. Phillips Mr. Page Mr. Pepper	8 0 0	...	Mr. A. Clark	8 8 0	...
PRACTICAL SURGERY	...	5 5 0	...	Mr. Silcock	4 0 0	...	Mr. Pearce Gould	8 8 0	...
PRACTICAL MIDWIFERY	Drs Herman & Lewers	5 5 0	...	Dr. Gow	3 0 0	...	Dr. Boxall	5 5 0	...
PRACTICAL MEDICINE	Dr. S. Mackenzie	...	...	...	3 0 0	...	Dr. Pasteur	8 8 0	...
HOSPITAL PRACTICE: Physicians	Drs. Mackenzie, Sansom, Turner, Gilbart Smith, Herman (*Obst.*), Warner, Lewers (*Obst.*)	3 mths. 10 10 0 6 mths. 15 15 0 1 year 21 0 0	26 5 0	Dr. Cheadle Dr. Lees Dr. Sidney Phillips *To Out-patients*: Drs. Maguire, Luff, and Caley	3 mths. 4 0 0 6 mths. 7 0 0 1 year 12 0 0	24 0 0	Dr. W. Cayley Dr. Coupland Sir D. Powell Dr. Fowler *To Out-patients*: Dr. Biss Dr W Duncan (*Obst.*) Dr. Pringle (*Skin*)	3 mths. 5 5 0	...
Assistant Physicians	Drs. Percy Kidd, F. J. Smith, Hadley, Schorstein, Dawson, and Head	...	...	[*Phys. Accoucheur*: Dr. Handfield Jones *Phys. Accoucheur to Out-patients*: Dr. Gow]	...	...	Dr. W. Pasteur Dr. W. R. Wynter Dr. A. F. Voelcker Dr. Boxall (*Obst.*)	...	...
Surgeons	Mr. W. Tay (*Oph.*), Mr. McCarthy, Mr. F. Treves, Mr. C. Mansell Moullin, Mr. Hurry Fenwick, Mr. Eve (*Oph.*), Mr. J. Hutchinson, jun., Dr. Woakes, & Mr. T. M. Hovell (*Aur.*) Mr. Cunningham & Mr. Dolamore (*Dent.*)	3 mths. 10 10 0 6 mths. 15 15 0 1 year 21 0 0	26 5 0	Mr. Owen Mr. Page Mr. Pepper *To Out-patients*: Mr. Silcock Mr. J. E. Lane Mr. H. S. Collier Mr. Critchett and Mr. Juler (*Oph.*)	3 mths. 4 0 0 6 mths. 7 0 0 1 year 12 0 0	24 0 0	Mr. Morris Mr. Andrew Clark Mr. Pearce Gould Mr. S. Bennett (*Dental*) Mr. Lang (*Oph.*) Mr. Stephen Paget (*Aural.*)	3 mths. 5 5 0	...
Assistant Surgeons	Mr. Openshaw, Mr. H. P. Dean	...	...	Mr. Field (*Aur.*) Mr. Morris (*Skin*) Mr. Morton Smale (*Dental*)	...	..	Mr. J. B. Sutton, Mr. J. Murray, Mr. S. H. Kellock, Mr. W. Hern (*Assist. Dental*)	...	...
CLINICAL MEDICINE	The Physicians and Asst. Phys.	...	...	Dr. Cheadle	3 0 0	...	The Physicians	...	...
CLINICAL SURGERY	The Surgeons and Asst. Surg.	...	...	Mr. Owen	3 0 0	...	The Surgeons [*Superintend. of P.-M. exam.*: Dr. F. Voelcker.]	...	...
SUMMER SESSION.									
MATERIA MEDICA	Dr. Warner and Dr. Dawson	4 4 0	...	Dr. Caley	4 0 0	...	...	...	...
THERAPEUTICS				Dr. Caley	...	...	Dr. Biss	5 5 0	...
MIDWIFERY, &c.	Dr. Herman	5 5 0	...	Dr. M. H. Jones	5 0 0	...	Dr. W. Duncan	5 5 0	...
BOTANY	Mr. C. Mitchell	3 3 0	...	Mr. W. G. Ridewood	3 0 0	...	No lectures	...	...
MED. JURISPRUDENCE	Dr. Schorstein	4 4 0	...	Dr. Luff	4 0 0	...	Dr. Wethered	5 5 0	...
TOXICOLOGY	Dr. F. J. Smith	4 4 0	...	Dr. Luff	2 2 0	...	Dr. Plimpton	2 2 0	...
PRACTICAL CHEMISTRY	Mr. Page	5 5 0	...	Dr. A. P. Laurie	4 0 0	...	Dr. Plimpton	5 5 0	...
ORGANIC CHEMISTRY	Mr. Candy	5 5 0	...	Dr. A. P. Laurie	2 2 0	...	‡	4 4 0	...
BIOLOGY	Mr. C. Mitchell (*and Bacteriology*):	...	...	Mr. W. G. Ridewood	3 0 0	...	Dr. Voelcker§	6 6 0	...
PATHOL. HISTOLOGY	Dr. Hadley	3 3 0	...	[*Tropical Dis.*: Dr. J. Anderson]	2 2 0	...	Dr. Voelcker	3 3 0	...
PATHOLOGY AND MORBID ANATOMY.	Dr. Percy Kidd, Mr. Eve	...	...	Dr. Maguire Mr. Plimmer	... 2 2 0	...	Dr. Voelcker	5 5 0	...
OPERATIVE SURGERY	Mr. Dean	5 5 0	...	Mr. Pepper	...	...	Mr. Pearce Gould	5 5 0	...
PRACTICAL PHYSIOLOGY	Dr. L. Hill and Mr. Hutchison (& in Winter)	4 4 0	...	Dr. Waller	...	...		...	...
HISTOLOGY AND THE MICROSCOPE.		...	...	[*Pub Health*: Dr Luff] Dr. Waller	...	...	Dr. Young	5 5 0	...
OPHTHALMIC SURGERY	Mr. Eve	2 2 0	...	† Mr. Juler	3 0 0	...	Mr. Lang	...	...
ANÆSTHETICS	Drs. Hewitt & Probyn Williams	...	...	Mr. Davis	2 2 0	...	Mr. G. E. Norton	1 1 0	...
AURAL SURGERY	Dr. Woakes	2 2 0	...	Mr. Field	3 0 0	...	Mr. Stephen Paget	...	...
DENTAL SURGERY	Mr. Cunningham & Mr. Dolamore	2 2 0	...	Mr. Morton Smale	3 0 0	...	Mr. Storer Bennett (in Winter)	...	...
DISEASES OF THE SKIN	Dr. S. Mackenzie	...	...	Mr. Morris	3 0 0	...	Dr. Pringle	...	...
PSYCHOL. MEDICINE	Dr. Kennedy Hill	...	...	Dr. Hyslop	3 0 0	...	Dr. Mickle	2 2 0	...
DISEASES OF THE THROAT	Mr. Mark Hovell	2 2 0	...	Dr. Spicer	3 0 0	...	Mr. Stephen Paget	...	...
PRACT. PHARM. & DISPENS.	Mr. Robertson	3 3 0	...	Mr. Andrews	...	...	Mr. Fardon	3 3 0	...
				Bacteriology: Mr. H. G. Plimmer.]	2 2 0		[*Pub. Health*: Dr. Pasteur]		
FEE for all the Lectures required by the Colleges & Hall, and Hospital Medical & Surgical Practice	120 guineas; or 130 guineas, by 3 instalments.*			Perpetual studentship £139; or £144 by instalments; 1st year, £46; 2nd year, £40; 3rd year, £30; 4th year, £28.			120 guineas; or 130 guineas by 3 instalments.		

* London Hosp.: *Pub. Health and Hygiene*, Dr. Hadley, Mr. Page, and Dr. Schorstein; Summer and Winter. Fee for the whole course for D.P.H., including material and attendance under a medical officer of health, £21. Medical Tutor, Dr. Head; Surgical Tutor, Mr. Roxburgh. A reduction of £15 15s. will be allowed from the Perpetual Fee if paid in full, or £5 5s. from each instalment to the sons of medical men. Instructors in *Elementary Clinical Medicine*, Dr. Dawson and Dr. Head.

† St. Mary's Hosp.: Med. Tutors, Drs. Caley and Harris; Obst. do., Dr. W. J. Gow; Surgical do., Mr. H. S. Collier—throughout year thrice weekl

‡ Middlesex Hospital: Medical Tutor, Dr. Wynter; Surgical Tutor, Mr. J. Murray. § In Winter.

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TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS, FOR THE SESSION 1897-98—(CONTINUED).

LECTURES, &c.	ST. THOMAS'S HOSPITAL.			UNIVERSITY COLLEGE AND HOSPITAL.			WESTMINSTER HOSPITAL.		
	LECTURERS.	FEES. One Course.	FEES. Perpetual.	LECTURERS.	FEES. One Course.	FEES. Perpetual.	LECTURERS.	FEES. First Course.	FEES. Subsqt. Course.
WINTER SESSION.		£ s. d.	£ s. d.		£ s. d.	£ s. d.		£ s. d.	£ s. d.
PHYSIOLOGY	Dr. Brodie	10 10 0	...	*Professor E. A. Schäfer	3, 5, & 7 gs.	...	Mr. Spencer	6 6 0	2 2 0
PRACTICAL PHYSIOLOGY AND HISTOLOGY	Dr. Brodie	10 10 0	...	*Prof. Schäfer and Mr. B. Moore	2, 4, & 7 gs.	...	Mr. Spencer	3 3 0	...
PHYS. DEMONSTRATIONS	Dr. Brodie	...	...	...	...	...	*Histol.*: Dr. Gossage	6 6 0	2 2 0
ANATOMY, DESCRIPTIVE AND SURGICAL	Mr. Anderson Mr. Makins	10 10 0	...	Prof. Thane	10 10 0	12 12 0	Mr. Black	7 7 0	3 3 0
ANATOM. DEMONSTRATIONS	Messrs. Anderson & Makins,	12 mths. 10 10 0	...	Dr. P. Flemming and Mr. White	8 8 0	...	Mr. Black and Dr. Marett Tims	5 5 0	3 3 0
	Messrs. Parsons, Robinson, * Stabb, & Fisher			Dr. W. J. Mickle (*Mental Phys.*)	2 2 0		[*Morbid Histology*: Dr. Hebb]*	4 4 0	2 2 0
PATHOLOGICAL ANATOMY	Dr. Hawkins (*Practical Course*)	8 8 0	...	Prof. S. Martin (*Pract. Path.*)	3 3 0	...	Dr. Hebb	...	...
CHEMISTRY	Mr. Dunstan	7 7 0	...	Prof. Ramsay	7 7 0	...	Dr Wilson Hake	6 6 0	2 2 0
MEDICINE	Dr. Payne & Dr. Sharkey	7 7 0	...	Prof. F. T. Roberts	9 9 0	11 11 0	Dr. Donkin	6 6 0	...
							Dr. de H. Hall		
SURGERY	Mr. Clutton & Mr. Pitts	7 7 0	...	Prof. Barker	7 7 0	8 8 0	Mr. Stonham	6 6 0	...
SURGICAL PATHOLOGY	Mr. Shattock	...	...	...	...	...	Mr. Paton	...	...
NATURAL PHILOSOPHY	Mr. Le Sueur	5 5 0	...	[*Chem. Physics*: Prof. Ramsay]	1 11 6	...	[*Physics*: Mr. Somerville]	...	...
HOSPITAL PRACTICE: PHYSICIANS	Drs. Payne, Sharkey & Acland, Cullingworth (*Obst.*), (*Throat*)	3 mths. 21 0 0 6 mths. 26 5 0 1 year 36 15 0	73 10 0	Drs. Ringer, Bastian, Roberts, Poore, Barlow, Bradford, Spencer (*Obst.*), & Crocker (*Skin*)	12 mths. 21 0 0	36 15 0	Drs. Allchin, Donkin, Havilland Hall, Potter (*Obst.*), & Fox (*Skin*) [*Neur. & Alienism*: Dr. Mercier, £2 2s.]	3 mths. 5 5 0 6 mths. 8 8 0	...
ASSISTANT PHYSICIANS	Drs. Hawkins, Mackenzie, & Turney, Tate (*Obst.*)			Drs. Blacker (*Obst.*), and Martin	...	...	Dr. Murrell Dr. Hebb, Dr. Wills, Dr. Gossage Dr. Pollock (*Obst.*)	... ...	... ...
SURGEONS	Mr. MacKellar, Mr. Clutton, Mr. Anderson, & Mr. Pitts Mr. Lawford Mr. Fisher (*Ophthal.*)	...	...	Profs. C. Heath, A. E. Barker, R. J. Godlee, J. Tweedy, and V. Horsley Mr. Bilton Pollard Mr. Spokes (*Dent.*)	...	...	Mr. Macnamara Mr. Bond Mr. Stonham Messrs. Glassington & Gardner (*Dent.*) Mr. Spencer (*Throat*) Mr. Hartridge (*Ophth. Prac.*) Mr. Tubby (*Orthopædic*)	3 mths. 5 5 0 6 mths. 8 8 0	...
ASSISTANT SURGEONS	Messrs. Makins, Battle, Ballance (*Aural*), & Robinson	...	...	*Org. Chemistry*: *Prof. Ramsay Mr. R. Johnson Dr. P. Flemming (*Ophthal.*)	3 3 0 ...	...	[*Aural*: Mr. de Santi] Messrs. Cooke, Spencer, Tubby, and de Santi	...	...
CLINICAL MEDICINE	The Physicians	...	...	The Physicians	...	...	The Physicians	...	...
CLINICAL SURGERY	The Surgeons in rotation Sir W. MacCormac (*Special Course*)	...	...	The Surgeons	...	...	The Surgeons [*Minor Surg. & Bandaging*: Mr. Tubby]§	...	...
CLINICAL MIDWIFERY, &c.	Dr. Cullingworth [*Vac.*: Dr. Cory] [*Obstet. Demons.*: Dr Tate]	...	...	Prof. H. R. Spencer and Dr. Blacker [*Bacteriol.*, Dr. Curtis]	... 4 4 0	... ...	Dr. Potter [*Path. Dem*: Dr. Hebb, weekly]§	... ...	... ...
SUMMER SESSION.									
MATERIA MEDICA, &c.	Dr. Mackenzie	5 5 0	...	Prof. J. R. Bradford	6 6 0	7 7 0	Dr. Murrell	3 3 0	...
MIDWIFERY, &c.	Dr. Cullingworth	6 6 0	...	Prof. Spencer	6 6 0	7 7 0	Dr. Potter	4 4 0	1 1 0
BOTANY	Mr. A. W. Bennett	3 3 0	...	Prof. Oliver	4 4 0	...	...	...	...
MEDICAL JURISPRUDENCE	Dr. Cory & Dr. Turney	5 5 0	...	Prof. G. V. Poore	5 5 0	6 6 0	Mr Bond, Dr Pollock, Dr. Dupré (*Tox.*)	3 3 0	1 1 0
PRACTICAL CHEMISTRY	Mr. Dunstan	6 6 0	...	Dr. Ramsay	5 5 0	...	Dr. Wilson Hake	4 4 0	2 2 0
STATE MEDICINE	Dr. E. Seaton	...	...	Prof. Corfield	...	...	...	...	...
MENTAL DISEASES	Dr. Rayner	3 3 0	...	Dr. Mickle	1 1 0	...	Dr. Mercier‖	2 2 0	...
HYGIENE AND PUB. HEALTH	Dr. E. Seaton	3 3 0	...	Prof. Corfield Dr. Kenwood	3 3 0	...	Dr. M. Copeman	1 1 0	...
CLINICAL MEDICINE	The Physicians	...	...	As in Winter	...	...	As in Winter	...	...
COMPARATIVE ANATOMY	Mr. Parsons (with Zoology)	2 2 0	...	†Prof. Weldon	6 6 0	...	Dr. Marett Tims §	2 2 0	...
PATHOL. & MORBID. ANATOMY	Mr. Shattock	8 8 0	...	Prof. S. Martin	6 6 0	7 7 0	Dr. Hebb	4 4 0	2 2 0
BACTERIOLOGY	Mr. Shattock	...	...	Prof. S. Martin	4 4 0	...	Dr. Bloxall	5 5 0	...
OPHTHALMIC SURGERY	§Mr. Lawford	3 3 0	...	†Prof. J. Tweedy	2 2 0	...	†Mr. Hartridge	1 1 0	‡
DENTAL SURGERY	Mr. Truman	...	...	†Mr. Spokes	...	...	Mr. Glassington	2 2 0	‡
PRACTICAL SURGERY	Mr. MacKellar, Mr. Ballance	6 6 0	...	†Mr Bilton Pollard Mr. Johnson	6 6 0	...	Mr. Stonnam, Mr. Tubby	5 5 0	...
PRACTICAL MEDICINE	Dr. Mackenzie Dr. Turney	3 3 0	...	... Profs.	...	...	Dr. Wills	3 3 0	...
ELEMENTARY BIOLOGY	§Mr. Parsons	6 6 0	...	Weldon† & Oliver†	4 4 0	...	Dr. Marett Tims§	4 4 0	...
PRACTICAL OBSTETRICS	Dr. Tate	3 3 0	...	...	...	...	Dr. Rivers Pollock§	...	...
OPERATIVE SURGERY	Mr. Battle Mr. Ballance	5 5 0	...	*Mr. Pollard and Mr. R. Johnson	5 5 0	...	Mr. Stonham§	4 4 0	2 2 0
PRACTICAL PHARMACY	Mr. White	3 3 0	...	Mr Elborne	3 3 0	...	Mr. Tanner§	... 2 2 0	...
FEE for Lectures & Hospital Practice	£150; or by two instalments, £85 and £72 10s.; or by four instalments, £65, £50, £30, and £12 10s.			£141 15s.; or by instalments, £68 5s., £52 10s., and £26 5s.			100 guineas; or two instalments of 55 guineas each; or six instalments of 25 guineas and 15 guineas alternately.		

* In Summer. † In Winter. ‡ Free to students of the hospital. § Winter and Summer. ‖ Lectures, Winter; Demonstrations, Summer.

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TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE LONDON HOSPITALS MEDICAL SCHOOLS FOR THE SESSION 1897-8 (CONTINUED).

LECTURES, &c.	LONDON SCHOOL OF MEDICINE FOR WOMEN AND ROYAL FREE HOSPITAL.		
	LECTURERS.	FEES. One course.	FEES. Unlimited.
WINTER SESSION.			
PHYSIOLOGY	Dr. Halliburton	11 11 0	...
ANATOMY, DESCRIPTIVE AND SURGICAL	Mr. Boyd	8 8 0	...
ANATOMICAL DEMONSTRATIONS	Mrs. Willmott Evans Miss Appel	8 8 0	...
CHEMISTRY	Miss Boole	8 8 0	...
MEDICINE	Mrs. Garrett Anderson Dr. Donkin	8 8 0	...
SURGERY	Mr. A. B. Barrow	8 8 0	...
PRACTICAL SURGERY	Mr. Roughton	1 11 6	...
HOSPITAL PRACTICE:			
PHYSICIANS	Dr. West Dr. Sainsbury Dr. Hayes	... ...	£35, or in 3 instalments of £15, £15, £10.
ASSISTANT PHYSICIANS	Dr. Carr Dr. Crawfurd Dr. Fawcett	... ...	
SURGEONS	Mr. Barrow Mr. Berry Mr. Mackinlay Mr. Battle	... ...	
ASSISTANT SURGEONS	Mr. Roughton Mr. Evans	... ...	Three months, £6 6s.
CLINICAL MEDICINE	The Physicians and Assistant Physicians of the Royal Free Hospital	...	...
CLINICAL SURGERY	The Surgeons and Assistant Surgeons of the Royal Free Hospital	...	...
CLINICAL MIDWIFERY	...	...	...
SUMMER SESSION.			
MATERIA MEDICA AND THERAPEUTICS	Dr. Sainsbury	5 5 0	...
MIDWIFERY, &c.	Mrs. Scharlieb	8 8 0	...
BOTANY	...	...	...
BIOLOGY	Mrs Macdonald	5 5 0	...
MEDICAL JURISPRUDENCE	Dr. Dupre, Mrs. Dowson	5 5 0	...
DISEASES OF WOMEN	Mrs. Scharlieb	...	...
PRACTICAL CHEMISTRY	Miss Boole	7 7 0	...
PRACTICAL PHYSIOLOGY	Dr. Halliburton	7 7 0	...
PRACTICAL BIOLOGY	Mrs. Macdonald	...	...
PATHOLOGY AND MORBID ANATOMY	Dr. Silcock	5 5 0	...
BACTERIOLOGY	Mr. Roughton	2 2 0	...
OPERATIVE SURGERY	Mr. Boyd	5 5 0	...
MORBID HISTOLOGY	Dr. Halliburton	...	...
OPHTHALMIC SURGERY	Mr. Mackinlay Mr. Dodd	2 2 0	...
PSYCHOLOGICAL MEDICINE	Dr. Mercier	2 2 0	...
DENTAL SURGERY	Mr. Todd	...	...
AURAL SURGERY	Mr. Roughton	...	...
DEMONSTRATIONS OF CUTANEOUS DISEASES	Mr. Evans	...	...
VACCINATION	...	...	...
PUBLIC HEALTH	...	...	...
PRACTICAL PHARMACY	Mrs. Clarke Keer	1 1 0	...
FEES for School and Hospital Medical and Surgical Practice.	£135, or in four instalments: 1st year, £56; 2nd year, £40; 3rd year, £30; 4th year, £10.		

are provided with board and lodging in the college free of expense. The house surgeons, of whom there are four, hold office for six months each, and are provided with board and lodging in the college free of expense. The Surgical Casualty Department is in charge of two assistant house surgeons. The surgeons' dressers are selected from those students who have completed their third winter session, and have been most diligent in the junior appointments. They hold office for three or six months. Six are attached to each surgeon, and during their weeks of special duty they are provided with board and lodging in the hospital free of expense. The obstetric residents, two in number, are provided with board and lodging in the college free of expense.

Higher Examinations.—Classes are held throughout the year for the Preliminary Scientific Examination of the University of London; and special courses of instruction in anatomy and physiology are provided for students preparing for the Primary Fellowship examination and the intermediate M.B. examinations of Oxford, Cambridge and London. Two courses of Laboratory instruction for candidates for a Diploma in Public Health are given annually.

The College.—The College stands upon a site fronting the east gate of the hospital, and is connected with it by a subway. The building serves as a Residential College for Students, and at the same time provides accommodation for the Students' Club. The Clubs' Union ground is less than twenty-five minutes' journey from the Hospital. The new school buildings are now open.

KING'S COLLEGE.—Resident medical officers have rooms at the hospital and commons free; they are selected by examination and hold their appointment for six months. There are two physician's assistants, two physician accoucheur assistants, and three house surgeons. Sambrooke registrarships, value £50 per annum, are tenable for two years. Clinical assistants senior and junior of the special departments—ophthalmic, ear, and throat. Senior dressers and dressers, clinical clerks, assistant demonstrators of anatomy and physiology, and prosectors are re-elected by examination, and in consideration of their former work in the medical school as matriculated students. Classes for the science subjects required by the University of London are held by the Professors of the Science Faculty of King's College, and students avail themselves of their laboratories.

Laboratories.—Bacteriology, State Medicine, Pathology, and Neuropathology have special laboratories.

Resident Chambers.—There are chambers at King's College available for a limited number of students; rent, including dinner during terms, £50 to £60 a year.

Athletic Club.—All students are entitled to the privileges of the Athletic Club, which manages a large recreation ground of the College at Wormwood Scrubbs.

LONDON HOSPITAL AND COLLEGE.—The hospital, which is the largest in Great Britain, contains nearly 800 beds. Last year the number of in-patients was 11,337, out-patients 158 002, and the number of accidents 14,625.

Special classes are held throughout the year for the Preliminary Scientific and Intermediate M B. Examinations of the University of London and for the Primary and Pass Examinations for the Fellowship of the Royal College of Surgeons. Special entries can also be made for Medical and Surgical Practice, the Operative Surgery classes, &c.

Instruction is given throughout the year in all the details required for the Diploma in Public Health.

In addition to the regular courses of lectures there will be given during the summer session a course of lectures on Clinical Surgery by Mr. Jonathan Hutchinson, F.R.S., Emeritus Professor of Clinical Surgery.

ST. MARY'S HOSPITAL.—There are three house physicians and three house surgeons, each appointed for six months, and two obstetric officers, each appointed for six months. They board free of expense in the hospital, except that the obstetric officer resides outside the hospital for the first three months. These appointments are awarded after competition, without additional fee. Two demonstrators of anatomy are appointed annually, with a salary of £70 each; and a demonstrator of physiology, at £100 a year. All these officers are eligible for re-election. Two prosectors of anatomy, two or more assistant demonstrators of anatomy, physiology, chemistry, biology and pathology are appointed annually, and receive an honorarium of £5 each. All students are required to perform the duties of clinical clerk and dresser during the last two years of their curriculum. Students of the third year and of subsequent years are also appointed as clerks and dressers to assist the physicians and surgeons in charge of the out-patients. The hospital contains 281 beds. Two wards are appropriated to the Diseases of Children, and one to those of Women; beds are also provided for Ophthalmic, Aural, and Cutaneous cases. There is an out-patient department for Diseases of Children. Special assistance is

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given to intending candidates for the final examinations of the Medical, Surgical, and Obstetric tutors.

Clarence Memorial Wing.—The foundation-stone of this important addition to the hospital was laid by H.R.H. the Prince of Wales and the new out-patient department in it will be completed and opened in October of this year. At the same time the out-patients' rooms will be given up to the school to make additional class-rooms, with a new museum and laboratories. The new wing will present features of the greatest interest in the bearing it must necessarily have upon the future efficiency of the Medical School. The Lying-in Wards will be more especially noteworthy as the first established within a metropolitan general hospital. The prospectus may be had on application to Mr. F. H. Madden, the School Secretary, to Mr. G. P. Field, the Dean, or Dr. A. P. Luff, the Sub-Dean.

A residence for students, 33 and 35, Westbourne-terrace, W., in connexion with the hospital, is under the charge of a warden, Mr. H. S. Collier, F.R.C.S., who is prepared to receive applications from students desiring to enter upon residence during the ensuing session. Terms: £75 for the academical year.

Qualified medical men are admitted to unlimited attendance on hospital practice at a fee of £15 15*s.*

MIDDLESEX HOSPITAL.—The hospital contains 320 beds. There is a special department for patients suffering from cancer, consisting of four wards, containing thirty-four beds; here cancer patients are received and attended for a period limited only by the duration of their disease.

Hospital Appointments.—Clinical Clerkships and Dresserships in all departments are allotted to students without any extra fee. Eighteen Resident Appointments are annually filled from the pupils of the hospital, each appointment extending over six months.

The Curriculum is designed to meet the requirements of the Royal Colleges of Physicians and Surgeons and of the Universities of London, Cambridge, &c. Special Classes are held to prepare students for the Preliminary Scientific M.B. (Lond.) Examination and for the Primary Examination for the diploma of F.R.C.S. Eng.

The new school buildings now in progress will provide a much larger dissecting-room, a room for operative surgery, a complete physiological department, spacious pathological and bacteriological laboratories, and extended facilities for the teaching of Chemistry, Physics, Biology, &c.

A Residential College to accommodate about thirty students adjoins the hospital. The charge for residence is £10 10*s.* and £8 8*s.* per term, according to the position of the room. Breakfast, luncheon, and dinner are supplied in the College Hall at a very moderate charge.

Fees.—The Composition Fee for the entire curriculum is 120 guineas, or 130 guineas if paid in three instalments. The fee for the Dental Curriculum is 54 guineas, or 60 guineas if paid in two instalments. Students from the Universities and students who have passed the London Preliminary Scientific M.B. Examination are received on special terms.

ST. THOMAS'S HOSPITAL.—The composition fee to Hospital Practice and Lectures may be paid in the following ways:—1. £150 on entrance in one sum. 2. £157 10*s.* in instalments: (*a*) by two payments, £85 on entrance and £72 10*s.* at the beginning of the second year; (*b*) by three payments, £75 at the beginning of the first year, £50 at the beginning of the second year, and £32 10*s.* at the beginning of the third year; and (*c*) by four payments, £65 at the beginning of the first year, £50 at the beginning of the second year, £30 at the beginning of the third year, and £12 10*s.* at the beginning of the fourth year. Gentlemen entering at St. Thomas's for Lectures and Hospital Practice of the second and subsequent years pay £130 on entrance, or three instalments of £52 10*s.*, £42, and £42. Students entering for Lectures and Hospital Practice of third and subsequent years pay a composition fee of £80, or £52 10*s.* on entrance and £31 10*s.* one year subsequently. The fee for attendance on the general subjects required of students in Dental Surgery is for the two years £65, or, by instalments, £55 for the first year and £15 for the second year. If certificates for Dental Practice are also required the special fee for that subject has to be paid. Qualified practitioners are admitted on payment of a fee of 15 guineas.

UNIVERSITY COLLEGE, LONDON.—*Composition fees.*—1. For the entire medical education required by the Examining Board in England and the Society of Apothecaries, 135 guineas, if paid in one sum at the commencement of the course; 140 guineas if paid by instalments, as follows—first year, 65 guineas; second year, 50 guineas; third year, 25 guineas. 2. For those students who do not require to attend Chemistry, Pharmacy, and Elementary Biology at a medical school (under the regulations of the Examining Board in England) the fee will be—117 guineas, if paid in one sum; 122 guineas, if paid by instalments, as follows—first year, 55 guineas; second year, 40 guineas; third year, 27 guineas. 3. For the whole course of instruction for the Intermediate Examination in Medicine of the University of London, 55 guineas (paid in one sum). 4. For the course of instruction for the Final M.B. Examination of the University of London, 76 guineas, if paid in one sum; 78 guineas, if paid by instalments, as follows—first year, 45 guineas; second year, 33 guineas. 5. Composition fee for Dental Students, 65 guineas. 6. Composition fee for the whole course of instruction for the Preliminary Scientific (M.B.) Examination of the University of London, 35 guineas.

Eight house physicians, six house surgeons, four senior and eight junior obstetric assistants are selected annually by examination from among the senior students. The house physicians and house surgeons reside in the hospital for a period of six months, and the senior obstetric assistants for three months, receiving free board and lodging.

Several professors and other gentlemen connected with the College receive students to reside with them; and in the office of the College there is kept a register of persons unconnected with the College who receive boarders into their families; among these are several medical gentlemen and clergymen.

WESTMINSTER HOSPITAL.—The hospital contains upwards of 200 beds. There are separate departments for Diseases of the Eye, Ear, Skin, Teeth, and Throat, for Orthopædics, and for Diseases of Women, and a special ward for Children. The Anatomical Museum is open to the students. There are also Pathological and Materia Medica Museums.

A curator of the museum and a pathologist, with salaries of £40 and £50 respectively, and a medical and surgical registrar, each with a salary of £40, are appointed annually. Two house physicians, two house surgeons, and a resident obstetric assistant are appointed for six months after examination, and are provided with rooms and commons; also two assistant house surgeons with commons only. Clinical assistants to the assistant physicians and assistant surgeons, and to the officers in charge of special departments, are appointed from among qualified students of the hospital.

Preliminary Scientific.—Special classes are held in the subjects of this examination—Chemistry, Dr. Hake; Physics, Mr. Somerville; Biology, Dr. Tims. The extra fee to a general student is 12 guineas.

Intermediate M.B.—Advanced Physiology and Histology, Dr. Gossage; Advanced Anatomy, Dr. Tims and Mr. Tubby; Organic Chemistry, Dr. Hake; Materia Medica, Dr. Murrell.

D.P.H.—The course of Laboratory Instruction may now be taken. Physics, Mr. Somerville; Chemistry, Dr. Hake; Bacteriology, Dr. Blaxall. Fee 12 guineas.

Bacteriology.—A course in General Bacteriology is given by Dr. Blaxall. Fee £5 5*s.*

LONDON SCHOOL OF MEDICINE FOR WOMEN, 30, Handel-street, Brunswick-square, W.C.—The winter session of this School, which is in connexion with the Royal Free Hospital, Gray's-inn-road, will begin on Oct. 1st, 1897, and will end on March 31st, 1898. The summer session will begin on May 2nd, and will end on July 30th, 1898. No student will be admitted to the study of Medicine who has not completed her eighteenth year. The admission of students rests exclusively with the Executive Council.

In addition to the list of Scholarships tabulated in another column three Evans Prizes of £3 3*s.*, £2 2*s.*, and £1 1*s.* are given in the Midwifery Class to enable students to take operative midwifery. There is also a small fund from which assistance can occasionally be given to students and to graduates who specially require pecuniary help to obtain additional experience in operative midwifery, &c. The Evans Prize for Operative Midwifery, value £5 5*s.*, will be offered at the end of the winter session, 1898. Two Singleton prizes are offered to students of the School who

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have held posts at the New Hospital for Women. Honoraria from the Boyce Memorial Fund are given to the senior assistant anæsthetist at the Royal Free Hospital. Prizes and Certificates of Honour are awarded in each class at the end of the session. Secretary, fresh appointment shortly.

METROPOLITAN ANCILLARY SCHOOLS AND HOSPITALS AFFORDING FACILITIES FOR CLINICAL OBSERVATION.

BETHLEM HOSPITAL.—This hospital is open for the admission of two Resident Clinical Assistants who have recently obtained their diplomas to practise Medicine and Surgery. They will be permitted to reside in the hospital for a term generally not exceeding six months, and will be provided with such apartments, rations, and attendance as the Committee shall consider reasonable. They will be under the direction of the Resident Physician, and will be elected by the Committee from candidates whose testimonials appear to be most satisfactory. The students of certain specified London Medical Schools receive Clinical Instruction in the wards of the hospital, and qualified practitioners may attend for a period of three months on payment of a fee. Lectures are also given in connexion with the London Post-graduate Course.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Four House Physicians reside in the hospital for a period of six months. Pupils are admitted to the practice of the hospital: terms, £1 1*s.* for one month; six months, £5 5*s.*; perpetual, £5 5*s.* Lectures and Clinical Demonstrations are given throughout the year by members of the medical staff. The next course will commence in October. Clinical Assistants are appointed to the Assistant Physician in the out-patient department and Clinical Clerks to the Physician in the wards. The hospital has been recognised by the Conjoint Board for England as a place where six months of the fifth year may be spent in clinical work. The medical practice of the hospital is also recognised by the University of London, the Apothecaries' Society, and the Army and Navy and Indian Medical Boards. The hospital contains 321 beds in the two buildings.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park.—During the past year 938 in-patients have been admitted, and the large number of 30,532 cases have been treated since the opening of the wards in 1855. The number of out-patients treated during 1896 was 17,451 and 569,329 since the commencement of the institution in 1848. Information as to medical instruction can be obtained on application to the Secretary of the Clinical Sub-committee at the hospital. Consulting Physician: Dr. E. L. Birkett. Consulting Surgeon: The Rt. Hon. Lord Lister, P.R.S. Physicians: Drs. J. C. Thorowgood, Eustace Smith, G. A. Heron, Vincent D. Harris, E. Clifford Beale, and Harrington Sainsbury. Surgeon: Mr. J. F. C. H. Macready, F.R.C.S. Assistant Physicians: Dr. T. Glover Lyon, Sir Hugh R. Beevor, Bart., and Drs. W. J. Hadley, E. H. Colbeck, Arnold Chaplin, and Hugh Walsham.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's-inn-road.—The hospital contains accommodation for seventeen in-patients, and has a very extensive out-patient department, which is open to all medical practitioners and students for the purpose of clinical demonstration and instruction during the hours of the surgeons' visits. During the past year 7200 out-patients and 301 in-patients were treated. Fee for three months' attendance, 3 guineas; for six months, 5 guineas. A course of lectures on the special diseases treated at this hospital is delivered during the winter months by members of the staff. As an evidence of the interest excited by these lectures, it may be mentioned that last year there were over a thousand attendances at the series with an average of eighty at each lecture. The date of these lectures is announced in the medical journals prior to their commencement. They are free to qualified practitioners and advanced students of medicine. Considerable attention is given to scientific work, particularly with regard to Bacteriology of the ear and respiratory passages, for which a special department has been inaugurated. Consulting Surgeon: Mr. Thomas Nunn. Surgeons: Mr. Lennox Browne, Dr. Arthur Orwin, Dr. Dundas Grant, and Mr. Percy Jakins. Assistant Surgeons: Mr. Wyatt Wingrave and Dr. Holloway. Bacteriologist: Mr. St. George Reid. Dental Surgeon: Mr. George Wallis. Defects of Speech: Mr. William Van Praagh. In addition the following appointments are open to qualified members of the profession:—Three Assistant Registrars and Anæsthetists, tenable for twelve months; and twelve Clinical Assistants, tenable for six months. Secretary: Mr. Richard Kershaw.

HOSPITAL FOR WOMEN, Soho-square, W.—In connexion with this institution there has been for some years a well-organised Clinical Department. This has been enlarged under the title of the London School of Gynæcology. To meet the want increasingly felt by medical men of an accurate knowledge of the ordinary diseases of women gentlemen are appointed every three months to act as clinical assistants to the physicians and surgeons seeing out- and in-door patients. The appointments are nominally "open to qualified medical men and to students of medicine after their fourth year," but in the selection of candidates preference is naturally given to gentlemen already engaged in practice. The large number of out-patients affords exceptional opportunities for practical instruction in the use of gynæcological instruments and for the study of diseases peculiar to women. Clinical instruction is also given in the theatre and the wards. Fee for the three months' course, £8 8*s.* Any further information can be obtained by letter addressed to the Dean at the hospital.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road. (Established 1814.)—This hospital has been enlarged by the addition of a very complete out-patients' department, and also by the erection of a new wing, which provides accommodation for 80 in-patients. Expenditure for 1896, £7459; income (including legacies, £2803), £10,108. The attendance of out-patients averages 24,000 annually.

ROYAL EAR HOSPITAL Soho. (Founded 1816.)—Courses of six weeks' duration in Diseases of the Ear and Nose are given by the members of the staff throughout the teaching year. Students can attend one or more surgeons, the fee for each surgeon's course being one guinea. The teaching is of a practical character, and the number of students is limited. The next series of classes will commence on Oct. 1st. For information address the Hon. Sec. of the Medical Board.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Consulting Surgeon: Mr. W. Adams. Physicians: Drs. R. Burnet, E. C. Beale, C. E. Beevor, H. W. Syers, James Galloway, and A. Morison. Obstetric Physicians: Dr. L. Remfry and Dr. Blacker. Surgeons: Messrs. J. Macready, C. B. Lockwood, H. Allingham, P. T. B. Beale, and G. B. M. White. Ophthalmic Surgeon: A. S. Morton. Throat Aural Surgeon: Mr. W. R. H. Stewart. Skin Department: Dr. Cook. Dental Surgeon: Mr. P. Trier Harris. This hospital is now recognised by the Examining Board in England by the Royal Colleges of Physicians and Surgeons as a place of study during the fifth year of the Medical Curriculum. The hospital contains 155 beds, of which 100 are at present occupied. The large rectangular and circular wards, each of which contains 20 beds, the operation theatre, out-patient, general and special, and the pathological departments, have all been erected since 1887. They are specially designed with a view of offering the greatest facilities for clinical work, and contain all the most recent and approved hygienic and antiseptic requirements for the proper care of the sick and for the treatment of disease. Medical practitioners are cordially invited to see the general and special practice of the hospital. Clinical assistants (qualified), clinical clerks, and pathological clerks are appointed in the general and special departments and may receive certificates at the end of their terms of office. Further particulars from Peyton T. B. Beale, F.R.C.S., Hon. Secretary Medical Committee, 61, Grosvenor-street, W.

NEW HOSPITAL FOR WOMEN, 144, Euston-road, N.W.—Physicians for In-patients: Miss Cock, M.D., and Miss Walker, M.D. Surgeons for In-patients: Mrs. Scharlieb, M.D., M.S., and Mrs. Boyd, M.D. Physicians and Surgeons for Out-patients: Miss Webb, M.B., Miss Macdonald, M.B., and Miss Aldrich Blake, M.D., M.S. Ophthalmic Surgeon: Miss Ellaby, M.D. Assistant Physicians for Out-patients: Miss Chadburn, M.B., Mrs. Wilks, M.D., and Miss Caine, M.B. Physician for Maternity Department: Miss Harris, M.B. Anæsthetist: Mrs. Keith, L.R.C.P. A considerable number of the students hold posts in the New Hospital under the visiting staff, and in return for much valued clinical teaching they do the work assigned to students in the wards of a general hospital. Secretary: Miss M. M. Bagster.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W. (Established 1873.)—Physicians: Dr. Wilde, Dr. J. J. Ridge, and Dr. Fenwick. Surgeon: Dr. W. J. Collins, F.R.C.S.

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Dental Surgeon: Mr. A. Alexander. The hospital contains 110 beds. The in-patients in 1896 were 1157, and the out-patients and casualties numbered 17,392 new cases. The medical and surgical practice of the hospital is open to students and practitioners. Special departments for Ophthalmology and Gynæcology. Operations: Mondays and Thursdays, 3.30 P.M. Classes will be held during the winter and summer sessions for students preparing for the final examinations at the Colleges and the Universities. Appointments, vacancies for which are advertised in the medical journals: Registrar and Pathologist; Resident Medical Officer and Assistant Resident Medical Officer. For particulars as to hospital practice and classes apply at the hospital to Dr. W. J. Collins.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Albany Memorial), Queen-square, Bloomsbury.—The hospital, with the Finchley branch, contains 200 beds and cots. The physicians attend every Monday, Tuesday, Wednesday, and Friday at 2 P.M. In- and out-patient practice and electrical-room treatment at that hour. Physicians: Drs. Ramskill, Hughlings Jackson, Buzzard, Bastian, and Gowers. Physicians for Out-patients: Drs. D. Ferrier, Ormerod, Beevor, and Tooth. Assistant Physicians: Drs. James Taylor and W. S. Colman. Surgeons: Messrs. Victor Horsley and C. A. Ballance. Ophthalmic Surgeons: Messrs. R. Brudenell Carter and Marcus Gunn. Aural Surgeon: Mr. A. E. Cumberbatch. Laryngologist: Dr. Felix Semon. Anæsthetist: Dr. Dudley Buxton. Pathologist: J. Risien Russell. Registrar: A. J. Whiting. House Physicians: Drs. Stewart and Collier. The hospital has been recognised by the conjoint Board for England as a place where part of the fifth year may be devoted to clinical work. All communications concerning clinical appointments, lectures, and hospital practice should be addressed to the Secretary and Director at the hospital.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL AND MIDWIFERY TRAINING SCHOOL, Marylebone-road, N.W.—Consulting Physician: Dr. George B. Brodie. Consulting Surgeons: Mr. H. Lee and Sir William MacCormac. Physicians to In-patients: Dr. W. C. Grigg and Dr. W. S. A. Griffith. Physicians to Out-patients: Dr. W. Rivers Pollock and Dr. W. J. Gow. This hospital, which has been recently enlarged, receives over 1100 patients annually, besides having a large out-patient department. Medical pupils are received at all times of the year. Pupils have unusual opportunities of seeing obstetric complications and operative midwifery, on account of the very large number of primiparous cases — nearly three-fourths of the total admissions. Clinical instruction is given on the more important cases which present themselves. Certificates of attendance at this hospital are recognised by all Universities, Colleges, and licensing bodies. Pupil midwives and monthly nurses are received and specially trained. Fees: Medical Students, £8 8*s*. for four weeks; Qualified Medical Practitioners £8 8*s*. for four weeks. Pupil Midwives, £26 5*s*. for three months (including board and lodging); Pupil Nurses, £15 15*s*. for twelve weeks (including board and lodging). There is a residence for students and qualified practitioners within fifty yards of the hospital, with which it is in telephonic communication. Terms for residence and partial board one guinea per week. For further particulars application should be made to Mr. Arthur Watts, Secretary, at the hospital.

SEAMEN'S HOSPITAL SOCIETY, Dreadnought Hospital, Greenwich, S.E. (235 beds). Royal Victoria and Albert Dock Hospital, E. (18 beds). Dispensaries: East India Dock-road, E., and Gravesend.—This institution is established for the relief of seamen of all nations. Casualties are received at all hours. Apartments are provided in the house of the Principal Medical Officer for students, and students are allowed to attend the general practice at either of the hospitals. Facilities are given for the study of Eastern diseases. Honorary Consulting Physicians: Dr. Robert Barnes and Sir Richard Quain, Bart., F.R.C.P. Visiting Physicians: Dr. John Curnow and Dr. John Anderson, C.I.E. Visiting Physician to the Royal Victoria and Albert Dock Hospital: Dr. Patrick Manson. Honorary Consulting Surgeon: Mr. J. N. Davies-Colley. Visiting Surgeon: Mr. G. Robertson Turner. Visiting Surgeon to the Royal Victoria and Albert Dock Hospital: Mr. W. Turner. Principal Medical Officer: Mr. W. Johnson Smith. Ophthalmic Surgeon: Mr. D. S. Gunn. House Physician: Mr. A. E. Griffin. House Surgeon: Mr. D. E. Darbyshire. Branch Hospital:—House Surgeons: Mr. D C. Rees and Mr. J. R. Prior. Gravesend Dispensary:—Surgeon: Mr. C. E. Robbs. Secretary: Mr. P. Michelli.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C., contains 186 beds, divided into 88 medical, 73 surgical, and 25 for special and infectious cases, besides 52 beds at the convalescent branch, Highgate. The hospital having been recognised by the conjoint Board for England as a place where, under the new curriculum, six months of the fifth year may be spent in clinical work, the practice is arranged to meet this need and is open to students who have completed four years of medical study and also to qualified medical men. Appointments are made every three months to six medical clerkships and six surgical clerkships, which are open to students of the hospital. Lectures or demonstrations are given once or twice every week during both winter and summer sessions. The sessions are of ten weeks' duration, and begin in October, January, and March. Fees for hospital practice, three months, 2 guineas; perpetual, 3 guineas. Prospectuses and further information will be forwarded on application to the Secretary, Mr. Adrian Hope, at the hospital.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields.—The hospital, founded in 1804 and considerably enlarged in 1876, now contains 100 beds for patients, which were occupied during last year by 2006 persons. The out-patients are yearly 26,000; attendances, 130,374 in 1896. Operations are performed daily from 10 A.M. to 1 P.M., and three surgeons attend on each day. Students are admitted to the practice. Fee for six months, £3 3*s*; perpetual, £5 5*s*. Classes, demonstrations, and lectures are periodically given, to which perpetual students are admitted free. Students of the hospital are eligible for the office of house surgeons, or may be appointed clinical and junior assistants. The Secretary, Mr. Robert J. Newstead, will furnish further information, as may be desired.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand.—The hospital contains 35 beds; and the patients, who number 11,000 annually, are seen at 1 P.M., and operations performed daily at 2 P.M. The following are the days of attendance of the surgeons: Mr. Hartridge and Mr. Dodd, Mondays and Thursdays; Mr. Frost and Mr. D. Gunn, Tuesdays and Fridays; and Mr. Juler and Mr. Griffith, Wednesdays and Saturdays. The practice of the hospital is open to practitioners and students. Fees for six months, £3 3*s*.; perpetual, £5 5*s*. Students of the hospital are eligible for the post of house surgeon and clinical assistant. Special demonstrations and lectures will be given during the session, commencing in October; for details see weekly journals. Clinical Assistants (who must be duly qualified) to the Surgeons are appointed for periods of six months. Secretary: Mr. T. Beattie-Campbell.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester-square, W.C — The out-patient practice is open to the medical profession at the following times: Every day, except Friday, from 2 to 4 P.M., and Thursday mornings from 10.30 to noon. Specially selected Clinical Demonstrations, also demonstrations on the different diseases presenting themselves in the out-patient department, followed by Lectures, will also be given.

ST. PETER'S HOSPITAL FOR STONE AND URINARY DISEASES, Henrietta-street, Covent-garden. Established 1860. New Hospital built, 1882.—Honorary Surgeons: Mr. F. R. Heycock, Mr. F. Swinford Edwards, Mr. E. Hurry Fenwick, and Mr. Reginald Harrison. Surgeon to the Out-patients, Mr. P. J. Freyer. Pathologist: Mr. E. Hurry Fenwick. The hospital contains 24 beds and 2 private wards. Consultations are held and operations are performed each Wednesday and Friday at 2 P.M. Medical practitioners and students are invited to the clinical instructions which are given in the wards and out-patient department daily, and to the operations in the theatre on Wednesdays and Fridays at 2 P.M. Average beds occupied daily, 19; average out-patients seen daily, 100.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE (with which is amalgamated the COLLEGE OF STATE MEDICINE).—The winter session commences on Oct. 1st and the summer session on May 1st. The laboratories are open daily from ten to five o'clock for the purpose of instruction and original research work, which is under the supervision of Allan Macfadyen, M.D., B.Sc., assisted in the Bacteriological Department by R. T. Hewlett, M.D., M.R.C.P., and in the Chemical Department by Mr. A. G. R Foulerton, F.R.C.S., D.P.H. Camb. Bacteriology in relation to Medicine and Pathology (fee £5 5*s*.). Bacteriology in relation to Hygiene (£5 5*s*.). Biological Chemistry (fee £12 12*s*.). Principles of Hygiene (fee, six months, £15 15*s*.; three

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months, £10 10s.). Every facility is given for original research, and there are departments for clinical investigation, the bacteriology of fermentation, a water laboratory, and a photo-micrographical department. Honorary secretary, Allan Macfadyen, M.D., B.Sc., 101, Great Russell-street, W.C.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—Physicians: Dr. Eustace Smith, Dr. Horatio B. Donkin, Dr. J. A. Coutts, and Dr. Dawson Williams. Surgeons: Mr. R. W. Parker and Mr. L. A. Dunn. Assistant Physicians: Dr. T. H. Arnold Chaplin, Dr. J. A. Hayward, Dr. Morley Fletcher, and Dr. E. Graham Little. Assistant Surgeon: Mr. H. B. Robinson. Resident Medical Officer: Dr. R. P. Cockburn. House Surgeon: Dr. A. B. Tucker. House Physician: Dr. M. S. Paterson. Secretary: Mr. Thomas Hayes. Lady Superintendent: Miss Adelaide Row. The hospital maintains 102 cots, and on an average 178 out-patients are seen daily. Clinical instruction is given by the physicians and surgeons to the hospital, which is recognised by the Conjoint Board for England as a school of medical teaching for students in the fifth year of the curriculum. All particulars may be obtained on application to the Secretary.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Consulting Physicians: Dr. W. S. Playfair, Dr. J. F. Goodhart, and Dr. Frederick Taylor. Physicians: Drs. Nestor Tirard and Frederick Willocks. Physicians to Out-patients: Drs. George Carpenter and W. Soltau Fenwick. Consulting Surgeons: Messrs. H. G. Howse and R. Clement Lucas. Surgeons: Messrs. G. H. Makins and F. S. Eve. Surgeons to Out-patients: Messrs. A. H. Tubby and F. C. Abbott. Dental Surgeon: Mr. R. Denison Pedley. Senior Resident Medical Officer: Mr. J. B. Christopherson. Junior Resident Medical Officer: Mr. O. K. Williamson.

VICTORIA HOSPITAL FOR CHILDREN, Chelsea, S.W.—The hospital contains 70 beds and has a large out-patient department (over 1000 weekly); the home at Broadstairs has 50 beds. Consulting Surgeon: Mr. Cowell. Physicians: Dr. Ridge Jones and Dr. Dawtrey Drewitt. Physicians to the Out-patients: Drs. Montague Murray, Walter Carr, Humphry D. Rolleston, and Raymond Crawfurd. Surgeons: Messrs. Pick and D'Arcy Power. Surgeons to the Out-patients: Messrs. Raymond Johnson and H. F. Waterhouse. Ophthalmic Surgeon: Mr. W. J. Holmes Spicer. Dental Surgeon: Mr. Percy Smith. Anæsthetists: Dr. Paul Frank Moline and Dr. C. J. Harrison. House Surgeon: Mr. H. B. Muir. House Physicians: Mr. Louis B. Hayne and Mr. Walter Allingham. Consulting Physician: Sir Wm. Broadbent, Bart. Secretary: Mr. A. Cameron Skinner. Out-patients are seen as under:—Medical and Surgical Cases: Daily, at 12.30 P.M., and every afternoon at 1.30 P.M. Dental Cases: Saturdays, at 9 A.M.

WEST LONDON HOSPITAL, Hammersmith-road, W.—This hospital has 97 beds at present in use. A new wing providing 80 other beds or thereabout is now complete, and will be opened as soon as possible. About 1700 in-patients and 32,000 out-patients, whose attendances number 75,000, are treated annually. There are appointments for two House Physicians and two House Surgeons, with board and residence, tenable for six months; also appointments for a limited number of Clinical Assistants. Physicians: Drs. D. W. C. Hood, F. G. D. Drewitt, and J. B. Ball. Physician for Diseases of Women: Dr. J. A. Mansell Moullin. Surgeons: Messrs. C. B. Keetley, F. Swinford Edwards, and S. Paget. Surgeon for Diseases of the Eye: Mr. B. J. Vernon. Assistant Physicians: Drs. Seymour Taylor, W. Hunter, W. A. Turner, and A. Whitfield. Assistant Physician for Diseases of Women: Dr. G. H. Drummond Robinson. Assistant Surgeons: Messrs. L. A. Bidwell, G. L. Cheatle, and W. McAdam Eccles. Assistant Surgeon for Diseases of the Eye: Mr. H. P. Dunn. Surgeon-Dentist: Mr. H. Lloyd Williams. Physician-in-Charge of Throat and Nose Department: Dr. J. B. Ball. Surgeon-in-Charge of Aural Department: Mr. S. Paget. Surgeon-in-Charge of Orthopædic Department: Mr. C. B. Keetley. Pathologist: Dr. W. A. Turner. Dermatologist: Dr. P. S. Abraham. Administrators of Anæsthetics: Messrs. T. Gunton Alderton and Rickard W. Lloyd. Assistant Administrator of Anæsthetics: Mr. E. W. Lewis. Electrician: Dr. W. A. Turner. Secretary: Mr. R. J. Gilbert. The practice of the Hospital is open to Post-graduates (on payment of a small fee); no junior students are admitted, but clinical assistants are appointed to the wards, and out-patient department. Courses of post-graduate lectures are given by the staff on Wednesdays at intervals, particulars of which are advertised in the medical journals. The hospital is recognised by the Conjoint Board of the Royal Colleges of Physicians and Surgeons as an institution where 6 months of the fifth year of study may be passed. The course of ophthalmology is recognised by the Army Medical Department. Further information can be obtained on application to the Dean, Mr. L. A. Bidwell, at the hospital.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E. For the sick children of the poor under twelve years of age. Established 1867. City Offices: 27, Clement's-lane, E.C.—Fifty-seven beds. Last year 705 in-patients and 15,272 out-patients (representing 55,149 attendances) were relieved, 180 of the in-patients being under two years of age. Consulting Physicians: Drs. A. E. Sansom, W. Cayley, and F. C. Turner. Consulting Surgeons: Messrs. Jonathan Hutchinson, Waren Tay, R. J. Godlee and Bilton Pollard. Physicians: Drs. W. A. Wills, James Taylor, J. H. Sequeira, and J. Porter Parkinson. Surgeons: Messrs. H. Percy Dean and (vacancy). Three Resident Medical Officers. Ophthalmic Surgeon: Mr. Sydney Stephenson (Wednesday, 9.30 A.M.). Dental Surgeon: Mr. John W. Pare (Tuesday and Friday, 9.30 A.M.). Matron: Miss E. W. Curno. Secretary: T. Glenton-Kerr. The surgeons attend on Wednesdays at 2 P.M. and Fridays at 9 A.M.; the physicians daily at 2 P.M. Applications for permission to attend the practice of the hospital should be addressed to the secretary.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Consulting Physician: Dr. Donald W. C. Hood. Physician: Dr. Harry Campbell. Surgeon: Mr. Frederic Durham. Assistant Physicians: Drs. W. Knowsley Sibley, Leonard G. Guthrie, and James Cagney. Assistant Surgeons: Messrs. M. P. Mayo Collier, J. Jackson Clarke, and George Templeton. Physician for Diseases of the Skin: Dr. J. Herbert Stowers. Obstetric Physician: Dr. John Shaw. Ophthalmic Surgeon: Dr. W. J. Collins. Dental Surgeon: Mr. C. F. Rilot. The hospital, which was established in 1878, provides 53 beds. The average number occupied last year was 47. It is a general hospital. There are two spacious wards for men and women respectively. The children's wards contain 18 cots. There are two Resident Medical Officers—an honorarium at the rate of £50 per annum attaches to the senior post. Operation day, Thursday at 2.30 o'clock. Further particulars from J. Herbert Stowers, M.D., Hon. Sec., Medical Committee, 128, Harley-street.

ROYAL EYE HOSPITAL, St. George's-circus, Southwark, S.E.—There are 40 beds and 2 cots. There were upwards of 46,000 attendances in the Out-patient Department last year, and the new patients number over 16,000 yearly. Operations are performed and out-patients are seen daily at 2 P.M. The following are the days of attendance:—Mr. M. M. McHardy, Tuesdays; Mr. J. G. Mackinlay, Thursdays; Dr. W. J. Collins, Wednesdays and Fridays; and Mr. L. V. Cargill, Mondays and Saturdays. Qualified practitioners and students are admitted to the practice of the hospital upon the recommendation of the medical staff. Fees: £2 2s. for 3 months, £3 3s. for 6 months, and £5 5s. perpetual. Qualified students of the hospital are eligible for the offices of registrar and house surgeon, and may be appointed clinical assistants upon the recommendation of the medical staff for a term of 6 months, and are eligible for re-election. Courses are held on Ophthalmoscopy, Refraction and Diseases of the Eye, fee, £1 1s. for each course, but perpetual students may attend each course once without extra fee. Pathology Class, £1 1s. extra to cover cost of materials. Tutorial or coaching classes for the various examinations arranged as far as possible to suit candidates.

COOKE'S SCHOOL OF ANATOMY.—The school is prepared to admit to its supplementary work all who may wish to join the same, but in regard to its curriculum work it does not receive more than half-a-dozen students in the course of the year. These curriculum students are carefully selected as to ability and are offered thorough practical instruction. The charges are but slightly in excess of current charges. The Bland Sutton Presentation, named after Mr. Bland Sutton, F.R.C.S., Sir Erasmus Wilson Lecturer at the Royal College of Surgeons, Surgeon to the Middlesex Hospital, &c. (a former pupil of the school), confers the privilege of free medical education during the first two years of medical studies. Particulars will be forwarded on application. The school remains open for anatomical work, not only

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during the winter, but also during the summer months. Gentlemen rejected at their Anatomical and Physiological Examinations (Second Conjoint, &c.) can get 'signed up" from this school for the three or six months' supplementary work they are now required to put in before re-examination. This school is also intended to meet the requirements of qualified practitioners wishing to obtain some of the higher qualifications, and is recognised for the special dissections for the Fellowship of the Royal College of Surgeons. The school possesses a good collection of physiological apparatus. The operations of Surgery are performed by the students on the dead body. Private address: 40, Brunswick-square, W.C.

VOLUNTEER MEDICAL STAFF CORPS (LONDON COMPANIES), Calthorpe-street, Gray's-inn-road, W.C. — Hon. Commandant: Surgeon-General Sir William Guyer Hunter, K.C.M.G., Q.H.S., V.D. Commandant: Surgeon-Lieutenant-Colonel A. T. Norton. The Volunteer Medical Staff Corps bears the same relation to the Volunteer Army as the Medical Staff Corps bears to the regular Army. The course of training has the great advantage of affording, in addition to a knowledge of ordinary military duties, special ambulance instruction useful in all ranks of life. All who have gone through the ranks of this corps are capable of rendering valuable aid in any accident, and in cases of emergency may be the means of saving lives which would otherwise be lost. In addition to the Company and Battalion drills of an ordinary infantry corps, the special training includes stretcher and waggon, and cacolet drill; the use of improvised seats and stretchers; the use and application of bandages, splints &c.; lectures by the officers on first aid to the injured, and on the elements of anatomy, physiology, hygiene, and nursing, which are so arranged as not to interfere with the lectures &c. carried on at the various hospitals in London. There is also a Shooting Club in the corps, in which instruction in, and facilities for, the practice of rifle shooting are given. There is a Transport Section in connexion with the corps, the members of which go through a course of instruction in riding and driving and transport work with the regular troops. There are also sections of Cyclists and Signallers. A Gymnastic Class meets once a week at headquarters, under an instructor who teaches boxing and fencing; "the class is under the special direction of the adjutant and officers, who see that the exercises are consistent with the physical development of the men, an advantage possessed by no other Volunteer corps." Lectures are delivered during the winter session. The new headquarters contain a fine drill hall, mess-rooms, canteen, &c., where dinners, suppers, dances, and smoking concerts can be held at any time. The Adjutant, Surgeon-Captain G. T. Rawnsley, will give any information respecting the above on application to the headquarters, Calthorpe-street, Gray's-inn-road, W.C.

SCHOOL OF THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—Chemistry and Physics: J. Norman Collie, Ph.D., F.R.S. Botany: Professor Reynolds Green, M.A., Sc.D., F.R.S., F.L.S. Materia Medica: Professor Greenish, F.I.C., F.L.S., Dean of the school. The session commences on Monday, Oct. 4th. Medical students, or pupils intending to enter the medical profession, are admitted to the lectures and laboratory work in any or all the courses. Certificates of instruction in this school are received by the Conjoint Board of the Royal Colleges. Application for admission to the school, or for further information, may be made to the Secretary of the school, 17, Bloomsbury-square, London, W.C.

THE CITY SCHOOL OF CHEMISTRY AND PHARMACY, LIMITED, 27, Chancery-lane, W.C.—This school was established in 1882 for the advancement of pharmaceutical education. Lecturers and Demonstrators—Chemistry, Physics, and Pharmacy: Mr. F. A. Hocking, B.Sc. Lond., M.P.S., Ph.C; Materia Medica, Botany, and Prescription Reading: Mr. W. Roberts, M.P.S.; Microscopy and Vegetable Histology: Mr. Martin J. Cole (Microscopist to the Birkbeck Institute); Analytical Chemistry and Practical Pharmacy: Mr. F. A. Hocking, B.Sc., Mr. W. Roberts, M.P.S.; Biology (Practical and Theoretical): Mr. L. Orchard, M.A. (Professor of Biology, Univ. College, Lond.). Application for particulars should be made to the Principal, Mr. G. E Skerry, M.A. Classes recognised by General Medical Council and Apothecaries' Hall.

WESTMINSTER COLLEGE OF CHEMISTRY AND PHARMACY, Trinity-square, Borough, S.E.—Established 1872. Principals, G. S. V. Wills, F.L.S., M.P.S., and H. Wootton, B.Sc. Lond. Instruction is given in Chemistry and Physics, Materia Medica, and Pharmacy (Practical and Theoretical), suitable for Medical and Dental students. Nurses and others can also be prepared for the Apothecaries' Hall Dispenser's certificate. Evening classes for Dispensing. Full particulars from E. Walden, Secretary.

GRIFFITHS'S COLLEGE OF CHEMISTRY AND PHARMACY, 12, Knowle-road, Brixton, S.W.—Instruction is given in Chemistry, Physics, Botany, Biology, Pharmacy, Materia Medica, Microscopy, Toxicology, &c., for the examinations of the Apothecaries' Hall, Conjoint Board, First M.B. London, Durham, special examinations for B.A. of Cambridge. During the past academic year 36 candidates passed the examinations of the Pharmaceutical Society, 9 passed the Hall, 7 passed the London Preliminary Science, 1 passed Durham, 2 passed the First M.B. London. This college (which supplements the work of the medical schools) has excellent laboratories, microscopical and Materia Medica specimens, and is fitted with every convenience and apparatus for practical work. Backward students may rely upon the most thorough attention being paid to them in every way. The college is reached in 15 minutes (by tram) from Westminster. Particulars as to fees may be had from Dr. A. B. Griffiths, F.R.S. Edin., F.C.S., at the above address.

ROYAL COLLEGE OF SCIENCE, London (with which is incorporated the ROYAL SCHOOL OF MINES).—Mechanics and Mathematics: Professor J. Perry, F.R.S. Biology: Professor G. B. Howes, F.R.S. (Zoology), and Professor J. B. Farmer, M.A. (Botany). Chemistry: Professor W. A. Tilden, F.R.S., and Dr. W. P. Wynne, F.R.S. Physics: Professor A. W. Rücker, Sec. R.S., and Mr. W. Watson, B.Sc. Astronomical Physics: Professor J. N. Lockyer, C.B., F.R.S. Geology: Professor J. W. Judd, C.B., F.R.S. Metallurgy: Professor W. C. Roberts-Austen, C.B., F.R.S. Mining: Professor C. Le Neve Foster, F.R.S. Agriculture: Professor J. Wrightson. The College re-opens on Wednesday, Oct. 6th, 1897. Communications should be addressed to the Registrar, Royal College of Science, South Kensington, S.W.

ELECTRICAL STANDARDIZING, TESTING, AND TRAINING INSTITUTION, Faraday House, 8 and 10, Charing-cross-road, W.C.—Principal, Mr. Hugh Erat Harrison, B.Sc. Lond., F.C.S., A.M.I.C.E., M.I.E.E. Instructor in Mathematics: Alexander Russell, M.A. Glasgow and Cambridge. Instructor in Chemistry: Chas. J. Wilson, F.I.C., F.C.S. This institution, in addition to its ordinary course of training in electrical engineering, which occupies two or three years, also arranges for special instruction in all branches of electricity and in Roentgen Ray photography, either by private tuition or by a specially arranged course at the college or at the works of the companies with which it is associated. There are Entrance Scholarships of the value of 80 and 50 guineas, and Exhibitions of 40 guineas. Particulars may be obtained on application to the Secretary, Mr. Howard Foulds, Faraday House, Charing-cross-road, W.C.

PROVINCIAL MEDICAL SCHOOLS AND HOSPITALS HAVING SPECIAL CLASSES AND FACILITIES FOR CLINICAL STUDY.[1]

MASON COLLEGE, BIRMINGHAM.—Two Ingleby Scholarships are offered annually after examination in Obstetric Medicine and Surgery and Diseases of Women and Children. The Scholarships are open to students who have completed two years of their curriculum in this college. One or more Sydenham Scholarships are offered annually of the value of 30 guineas each. The orphan sons of former students of the Birmingham Medical School have priority of election. No Sydenham scholars are elected whose age exceeds twenty-three years on the day of election. The Scholarships are held for three years, subject to good behaviour. A Queen's Scholarship is offered annually of the value of 30 guineas. It may be held for three years, one-third being paid each year, subject to good behaviour. A Sands Cox Scholarship is offered annually, of the same value as the last, and is held under similar conditions. The Russell Memorial Prize is awarded annually after examination in Nervous Diseases. There are Faculties of Arts,

[1] For Scholarships see page 493 *et seq.*

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Science, and Medicine, and students are prepared for the various examinations of the University of London. The medical courses qualify for the diplomas of all Licensing Bodies and for the degrees in Medicine and Surgery of British Universities. There are various Scholarships, Entrance and otherwise. The Dental Department, in conjunction with the General, Queen's, and Dental Hospitals, affords a complete curriculum for all Dental diplomas. The Library contains upwards of 24,000 volumes. Syllabuses containing full information as to the various courses of instruction, lecture days and hours, fees, scholarships, &c., will be forwarded on application to the Registrar.

THE QUEEN'S HOSPITAL, BIRMINGHAM. — Consulting Physician: Sir James Sawyer, Knt., M.D., F.R.C.P., F.R.S.E., J.P. Consulting Surgeons: Furneaux Jordan, F.R.C.S., and J. St. S. Wilders, M.R.C.S. Physicians: Alfred H. Carter, M.D., F.R.C.P., Cornelius W. Suckling, M.D., M.R.C.P., and Arthur Foxwell, M.A., M.D., F.R.C.P. Surgeons: Bennett May, B.S., F.R.C.S., Jordan Lloyd, M.S., F.R.C.S., and Frank Marsh, F.R.C.S. Ophthalmic Surgeon: Priestley Smith, M.R.C.S. Obstetric Officer: C. E. Porslow, M.D., M.R.C.P. Physicians for Out-Patients and Pathologists: O. J. Kauffmann, M.D., M.R.C.P., and J. Douglas Stanley, M.D., M.R.C.P. Casualty Surgeons: J. T. J. Morrison, M.A., B.C., F.R.C.S., J. Hazlewood Clayton, M.B., M.R.C.S., and C. A. Leedham Green, F.R.C.S. Provision has recently been made for an increase in the number of beds to 132 for the reception of accidents and urgent medical, surgical, ophthalmic, and obstetric cases. The in-patients treated last year amounted to 2109, the out-patients to 28,820.

GENERAL HOSPITAL, BIRMINGHAM.—Consulting Physicians: Dr. Fletcher, Sir Walter Foster, and Sir Willoughby Wade. Physicians: Drs. Rickards, Saundby, Simon, and Wilson. Surgeons: Messrs. Chavasse, Barling, Haslam, and Heaton. Obstetric Officer: Dr. Malins. Assistant Physicians: Drs. Short and Russell. Assistant Surgeons: Messrs. Lucas and Gamgee. Assistant Obstetric Officer: Dr. Thos. Wilson. Beds, 271; average occupied, 238. Patients in 1896: in-patients, 4486; out-patients, 52,203.

UNIVERSITY COLLEGE, BRISTOL (Faculty of Medicine).—Students can complete in Bristol the entire course of study required for the Medical and Surgical degrees of the University of London, and for the diplomas of the Royal College of Physicians of London and the Royal College of Surgeons of England, the Apothecaries' Society of London, and the Army and Navy Boards. The lectures and instructions given in the Faculty of Arts and Science are adapted to the various Preliminary Arts Examinations above referred to, and also to the Matriculation and Preliminary Scientific Examinations of the University of London; whilst the Faculty of Medicine, the Royal Infirmary, and the General Hospital together provide for every detail of the professional curriculum required by the University of London and the above examining boards. All necessary information may be obtained from the Dean of the Faculty of Medicine, Professor E. Markham Skerritt, M.D., F.R.C.P.

UNIVERSITY COLLEGE, CARDIFF, MEDICAL SCHOOL.—Owing to the very rapid increase in the population of Glamorganshire and Monmouthshire, and the consequent increase in the Infirmary accommodation, the basis on which to build a Medical School in South Wales is amply sufficient for every need. University College, Cardiff, has for some years past prepared students in Physics, Chemistry, Zoology, and Botany; and these students have in considerable numbers passed these subjects as part of their medical curriculum and have finished their studies elsewhere. The recent appointments of a Professor of Anatomy, a Professor of Physiology, and of a Lecturer on Materia Medica and Pharmacy will afford facilities to students who may wish to continue their studies in Cardiff until the end of their third year. Large laboratories are now ready; they comprise spacious lecture-rooms to seat 100 students each, a dissecting-room, anatomical museum, bone-room, and preparation-room; a class-room for practical physiology, physiological preparation and research rooms, and photographic and instrument-rooms, and museum of Materia Medica. Students preparing for the Preliminary Scientific and Intermediate Examination in Medicine of the University of London or Durham may compound for their classes by paying a composition fee of £57 10s. The College classes are recognised by the Scottish Universities. Students who are preparing for the examinations of the Conjoint Board or of the Society of Apothecaries, London, may compound for their classes by paying a composition fee of £35. In all cases the composition fees may be paid in instalments. Twenty-two Exhibitions and Scholarships, open to intending students of medicine, will be competed for in September next. For particulars of these application may be made to the College Registrar. Physics.—Professor J. Viriamu Jones, M.A. Oxon., B.Sc. Lond., Fellow of University College, London, F.R.S. Assistant Professor: A. L. Selby, M.A., Fellow of Merton College, Oxford. Demonstrator and Assistant Lecturer: W. S. Hensley, B.A., Christ's College, Cambridge. Chemistry. — Professor C. M. Thompson, M.A., Trinity College, Cambridge, D.Sc. Lond., F.C.S. Assistant Lecturers: E. P. Perman, D.Sc. Lond., and A. A. Read, F.I.C., F.C.S. Biology. — Professor W. N. Parker, Ph.D. Freiburg, F.Z.S. Assistant Lecturer: A. H. Trow, B.Sc. Anatomy.— Professor Francis Dixon, B.A., M.B. Physiology.—Professor John Berry Haycraft, M.D., D.Sc., F.R.S.E. Materia Medica: D. R. Paterson, M.D. The Infirmary, within three minutes of the College, is provided with 200 beds. Attached to the hospital is a large out-patient department and special departments for the Eye, Ear, and Throat. Further information may be obtained from Dr. John Berry Haycraft, Dean of the Medical Faculty.

BRISTOL ROYAL INFIRMARY (Founded 1735).—270 beds. Honorary and Consulting Physicians: Dr. Edward Long Fox and Dr. William H. Spencer. Honorary and Consulting Surgeons: Mr. Augustin Prichard and Mr. Edmund C. Board. Physicians: Dr. R. Shingleton Smith, Dr. Henry Waldo, Dr. John E. Shaw, and Dr. Arthur B. Prowse. Obstetric Physician: Dr. W. C. Swayne. Assistant Physicians: Dr. P. Watson Williams and Dr. F. H. Edgeworth. Surgeons: Mr. Arthur W. Prichard, Mr. W. H. Harsant, and Mr. J. Paul Bush. Ophthalmic Surgeon: Mr. F. Richardson Cross. Assistant Surgeons: Mr. G. Munro Smith and Dr. James Swain. Dental Surgeon: Mr. W. R. Ackland. Pathologist: Dr. Theodore Fisher. House Surgeon: Dr. Thomas Carwardine. House Physician: Mr. H. F. Mole. Resident Obstetric Officer: Mr. J. C. McWatters. Anæsthetist: Mr. W. H. Cooper. Casualty Officer: Mr. T. W. Bovey. Secretary and House Governor: Mr. E. A. Leonard.

Scholarships and Prizes.—Two Entrance Scholarships, 35 guineas and 10 guineas: examination third Saturday in October in general subjects; Surgical and Medical Suple Gold Medals, 5 guineas each, with 7 guineas added in money; Clark Prize, 11 guineas; Crosby Leonard Prize, 7 guineas; Tibbitts Prize, 9 guineas; Midwifery Prize, 3 guineas in books or instruments; Pathological Prize, 6 guineas; Ophthalmic Prize, 3 guineas in books or instruments; Dental Prize, 3 guineas in books or instruments.

There are five resident appointments—viz., House Surgeon, House Physician, Resident Obstetric Officer, Anæsthetist, and Casualty Officer, the last two of which are intended specially for qualified students of the Bristol Royal Infirmary, who are elected after a practical examination. Medical Registrars and Surgical Registrars are appointed for periods of six months. The Dressers reside in the Infirmary in rotation, free of expense. The Maternity student also has rooms in the Infirmary. The whole of the clinical work is carefully arranged to meet the requirements of the five years' curriculum. There is class instruction in the wards by the physicians and surgeons on five days a week, in addition to the regular clinical lectures. There are special departments for Diseases of Women, the Eye, Ear, Throat, &c., with Clerkships and Dresserships attached, and there is a large Ward for Children only. Practical instruction in Dental Surgery on Tuesdays and Fridays. Clinical Clerkships and Dresserships, 5 guineas for each six months. Perpetual Medical and Surgical Practice, 35 guineas in one sum.

Further information can be obtained from Dr. Arthur B. Prowse, Dean of the Faculty.

BRISTOL GENERAL HOSPITAL.—200 beds. Physicians: Drs. Markham Skerritt, Harrison, and Michell Clarke. Physician Accoucheur: Dr. W. H. C. Newnham. Physician to Throat and Nose: Dr. Barclay Baron. Assistant Physician: Dr. Parker. Assistant Physician Accoucheur: Mr. F. C. Rayner. Surgeons: Messrs. Pickering, Barclay, Morton, and Lansdown. Ophthalmic Surgeon: Mr. Walker.

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Assistant Surgeon: Dr. Firth. Anæsthetist: Mr. Freeman. House Surgeon: Dr. Randall. Physicians' Assistant: Mr. Druitt. Assistant House Surgeon: Mr. Hewetson. Casualty Medical Officer: Mr. Edwards. Clinical Clerkship, six months, £5 5s. Dressership, six months, £5 5s. Obstetric Clerkship, three months, £3 3s. Special clinical instruction is given in Diseases of the Skin, Eye, Ear, and Throat, also in Diseases of Women and in Dental Surgery. Further information may be obtained of the Secretary, at the hospital, or from Dr. Michell Clarke, Dean of the Hospital Faculty.

Scholarships and Medals. — Lady Haberfield Entrance Scholarship: This Scholarship, founded in 1875, of the value of about £30, being the interest of £1000 bequeathed for the purpose by the late Lady Haberfield, is awarded annually at the commencement of the winter session after a competitive examination in subjects of general education. Second Entrance Scholarship: An additional Entrance Scholarship of the value of £20 is awarded when more than six candidates present themselves. Clarke Scholarship: A Surgical Scholarship, of the value of £15, founded by H. M. Clarke, Esq, of London, is awarded annually at the end of the winter session after an examination in Surgery. Sanders Scholarship: A Scholarship founded by the late John Nash Sanders, Esq., of the value of £22 10s., is awarded annually at the end of the winter session after examination in Medicine, Surgery, and Diseases of Women. Martyn Memorial Pathological Scholarships, founded in 1878 by public subscription, in memory of the late Dr. Samuel Martyn, Physician to the hospital: Two Scholarships, each of the value of £10, are awarded annually: one at the end of the summer session and one at the end of the winter session. A student may, at the option of the Faculty, hold both these Scholarships. After a competitive examination in Pathology and Morbid Anatomy the successful candidate is appointed Pathological Clerk to the hospital for the term of six months. Committee Gold Medal: This medal, presented by the committee of the hospital, is awarded annually at the end of the winter session to the student of the fifth year who has most distinguished himself during his career at the hospital and medical school. Committee Silver Medal: This medal, presented by the committee of the hospital, is awarded annually at the end of the winter session to the next most distinguished student of the fifth year. The rules relating to the several Scholarships may be had on application.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Clinical Lectures in Medicine and Surgery, in connexion with Cambridge University Medical School, are delivered at this hospital twice a week during the academical year; and practical instruction in Medicine and Surgery in the wards and out-patients' rooms is given by the physicians and surgeons daily, during the vacations as well as term time. Instruction is also given in all the special modes of medical and surgical investigation. Clinical Clerks and Dressers are selected from students according to merit, and without payment. The composition fee for pupilship is 8 guineas.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, Newcastle-upon-Tyne.—The following Scholarships and Prizes are awarded annually:— Four University of Durham Scholarships, value £25, tenable for four years, for proficiency in Arts, awarded to full students in their first year. The Dickinson Scholarship, value interest of £400, and a Gold Medal, for Medicine, Surgery, Midwifery, and Pathology. The Tulloch Scholarship, value the interest of £400, for Anatomy, Physiology, and Chemistry. The Charlton Scholarship, value the interest of £700, for Medicine. The Gibb Scholarship, value the interest of £500, for Pathology. The Goyder Memorial Scholarship (at the Infirmary), value the interest of £325, for Clinical Medicine and Clinical Surgery. The Luke Armstrong Memorial Scholarship, value the interest of £680 for Comparative Pathology. The Stephen Scott Scholarship in Surgery, value the interest of £1000. Heath Scholarship: The late George Yeoman Heath, M.D., D.C.L., F.R.C.S., President of the University of Durham College of Medicine, bequeathed the sum of £4000 to found a Scholarship in Surgery, the interest to be awarded every second year; the next award will be in 1898. The Gibson Prize, interest on £225, in the department of Midwifery and Diseases of Women and Children. At the end of each session Prizes of Books and Honours Certificates are awarded in each of the regular classes. Assistant Demonstrators of Anatomy, receiving each an honorarium of £5, Prosectors, and Assistant Demonstrators of Physiology and Pathology are elected yearly. Pathological Assistants, Assistants to the Dental Surgeon, Assistants in the Eye Department, Throat and Ear Department, and Skin Department, Clinical Clerks, and Dressers are appointed every three months.

NEWCASTLE-UPON-TYNE ROYAL INFIRMARY. — Physicians: Drs. Drummond, Oliver, Limont, and Murray. Surgeons: Drs. Hume, Page, Mr. Williamson, and Mr. Rutherford Morison. Assistant Surgeons: Mr. Walter Ridley, Mr. A. M. Martin, Mr. H. B. Argus, and Mr. I. V. W. Rutherford. Pathologist: Dr. Beattie. Dental Surgeon: Mr. R. L. Markham. Skin Department: Dr. Limont. Eye Department: Mr. Williamson. Throat and Ear Department: Mr. Ridley. Anæsthetist: Dr. W. D. Arnison. Surgical Registrars: Mr. T. D. Wardale and Mr. John Clay. The infirmary contains 280 beds. Clinical Lectures are delivered by the Physicians and Surgeons in rotation. Pathological Demonstrations are given by the Pathologist as opportunity offers. Practical Midwifery can be studied at the Newcastle Lying-in Hospital. Instruction is given in Psychological Medicine at the Northumberland County Asylum, Morpeth. A Special Course of Instruction is given in the City Hospital for Infectious Diseases by the Superintendent, the City Officer of Health, Mr. H. E. Armstrong.

LEEDS GENERAL INFIRMARY AND MEDICAL DEPARTMENT OF THE YORKSHIRE COLLEGE.—The Leeds General Infirmary has accommodation for 447 in-patients, medical and surgical, including forty-two beds at a "semi-convalescent home" in the country. During the last year 6116 in-patients and 37,623 out-patients were treated. Clinical teaching takes place daily in the wards, and Clinical Lectures are given in Medicine and Surgery by the Physicians and Surgeons. There are Medical, Surgical, Ophthalmic, Aural, and Electrical Departments, in each of which special instruction is imparted to students. A Gynæcological and Extern Obstetric Department, together with Laryngeal and Skin Clinics, are in operation. The Public Dispensary, the Hospital for Women and Children, the Fever Hospital, and the West Riding Lunatic Asylum are other medical institutions which are made use of by the Leeds students. Three years ago the new buildings of the Medical School were opened by their Royal Highnesses the Duke and Duchess of York. Erected on a commanding site, close to the Infirmary, the new School of Medicine contains complete accommodation for the training of medical students upon the most approved modern methods. A very fine dissecting-room, extensive laboratories for Physiology and Pathology, with the most recent improvements in fittings and apparatus, ample lecture-room accommodation, a large Library, and separate Museums for Pathology and Anatomy—these are some of the most striking features of the new buildings. Careful provision for the convenience of students, in the shape of a common-room, a refectory, &c., has also been made a feature of the school. The classes in Systematic and Practical Chemistry, Physics and Biology, and Practical Toxicology are held in the Science and Arts Department of the College, in College-road. Two Entrance Scholarships are offered: one, of the value of 64 guineas, covering admission to all requisite lectures; and the other, of the value of 40 guineas, covering the cost of admission to the medical and surgical practice of the infirmary. Several valuable prizes are given at the end of each session. The following appointments at the infirmary are annually open to students (for some of them, however, a registered legal qualification is required); senior and junior anæsthetists, pathological curator, resident medical officer, resident surgical officer, resident casualty officer, resident ophthalmic officer, appointed for twelve months, and eligible for re-election; resident obstetric officer and 4 house surgeons, for twelve months; 2 house-physicians, for six months; 36 physicians' clerks, for six months; 32 surgeons' dressers, for six months; 16 ophthalmic and aural surgeons' dressers, for three months; 16 gynæcological ward clerks, for three months; 12 gynæcological out patient clerks, for three months; 32 assistant physicians' clerks, for three months; 32 assistant surgeons' dressers, for three months; 32 dressers in the casualty-room, for three months; 32 post-mortem clerks, for three months.

There are appointments open to students in other medical

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TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE PROVINCIAL SCHOOLS OF MEDICINE FOR THE SESSION 1897-98.

LECTURES, &c.	UNIVERSITY OF DURHAM COLL. OF MED., NEWCASTLE-UPON-TYNE.		UNIVERSITY COLLEGE, LIVERPOOL.		OWENS COLLEGE (VICTORIA UNIV.) SCHOOL OF MEDICINE.		UNIVERSITY COLLEGE, SHEFFIELD.	
	LECTURERS.	FEES. One Course.	LECTURERS.	FEES.	LECTURERS.	FEES. One Course.	LECTURERS.	FEES. One Course.
WINTER SESSION.		£ s. d.		£ s. d.		£ s. d.		£ s. d.
PHYSIOLOGY	Prof. Oliver, Mr. Williamson	5 5 0	Prof. Sherrington Dr. Grünbaum	5 5 0	Prof. Wm. Stirling Mr. Myers-Ward Mr. M'Iroy	5 5 0	Dr. Arthur Hall	5 5 0
PRACTICAL PHYSIOLOGY	Prof. Oliver, Mr. Williamson & Mr. R. A. Bolam (*in Summer*)	5 5 0	Prof. Sherrington†† Dr. Grünbaum	...	Prof. Stirling	...	Dr. Arthur Hall	§§7 7 0
ANATOMY, DESCRIPTIVE AND SURGICAL	Prof. Howden	5 5 0	Prof. Paterson, Dr. Dun	5 5 0	Prof. A. H. Young	5 5 0	Prof. Addison & Mr. E. Skinner	5 5 0
ANATOMICAL DEMONSTRATIONS	Prof. Howden [*Prac. Anat.:* Prof. Howden]	3 3 0	Prof. Paterson Dr. Dun	3 3 0	Prof. Young, Dr. Thompson, Dr. Alcock	1 1 0	Mr. Scott	5 5 0
CHEMISTRY	Prof. Bedson	5 5 0	Prof. Campbell Brown,§ Dr. Kohn, Dr. Bailey	3 0 0	Prof. Dixon, Prof. Perkin [*Biology:* Prof. Hickson]	3 10 0 4 14 6	Prof. Williams	4 4 0
PHYSICS	Prof. Stroud	...	Prof. Lodge, Dr. Howard§	6 0 0	Prof. Schuster	...	...	...
MEDICINE	Prof. Philipson	5 5 0	Prof. Glynn	5 5 0	Prof. Dreschfeld	5 5 0	Drs. Dyson and Porter	5 5 0
SURGERY	Prof. Arnison, Mr. Page	5 5 0	Prof. Parker, Mr. Thomas	5 5 0	Prof. Jones, Mr. Thorburn	5 5 0	Mr. Pye-Smith	5 5 0
PRACTICAL SURGERY	Prof. Arnison, Mr. Page.	5 15 6	Prof. Parker, Mr. Thomas	4 4 0	Mr. Wright and Mr. Collier	2 2 0	Mr. Atkin	3 3 0
PATHOLOGY	Dr. Drummond (*in Summer*)	...	Prof. Boyce, Dr. Abram	4 4 0	Prof. Delépine	5 5 0	Dr. Burgess (*in Summer*)	...
BACTERIOLOGY	Prof. Murray	6 6 0	Prof. Boyce	4 4 0	...	...	Dr. Andrew Walker	...
EXPERIMENTAL PHYSICS	Prof. Stroud	2 2 0	Prof. Lodge	6 0 0	Prof. Schuster	2 12 6	Prof. Hicks	2 2 0
PUBLIC HEALTH	Dr. H. E. Armstrong	5 5 0	Dr. E. W. Hope,†† Dr. Manby	4 4 0	Dr. Paget [*Zoology:* Prof. Hickson]	2 2 0		2 2 0
HOSPITAL PRACTICE:	ROYAL INFIRMARY, NEWCASTLE.	6 months	LIVERPOOL ROYAL INFIRMARY.	6 mnths. 6 6 0	ROYAL INFIRMARY.		SHEFFIELD ROYAL INFIRMARY	
PHYSICIANS	Drs. Drummond, Oliver, Limont, and Murray	8 8 0 12 mnths	Dr. Glynn, Dr. Caton, Dr. Barr	12 mnths. 7 7 0	The Physicians	Composition fee, full period, £42	Drs. Dyson, Porter & Cocking	6 m., £66s.; 3 m., £33s.; perp. (Med. & Surg.) £95; or by 2 Instalments of £26 & £22.
SURGEONS	Mr. Williamson, Dr. Hume, Mr. Page, Mr. Morison	12 12 0 Comp.	Mr. Banks, Mr. Parker, Mr. Paul	6 mnths. 7 7 0	The Surgeons		Messrs. Shaw, Hallam, and Atkin	
ASSISTANT SURGEONS	Mr. Walter Ridley Mr. A. M. Martin Mr. H. B. Angus Mr. J. H. Rutherford	†26 5 0 ...	Mr. R. A. Bickersteth Mr. Hamilton Mr. Thelwall Thomas		[*Dent. Mech.:* Mr. Tanner] [*Dent. Anatomy:* Mr. Hooton]†† [*Dent. Metal'gy.:* Dr. Burghardt] [*Pr. and Op. Surg. Dent.:* Mr. Whittaker]†† [*Dent. Hist.:* Mr. Headridge]††	4 4 0 4 4 0 4 4 0 4 4 0 4 4 0	ROYAL HOSPITAL. *Phys.:* Drs. Burgess, Arthur Hall, and Clapham *Surgs.:* Mr. Pye-Smith, Dr. S. White, & Mr. H. Lockwood	
SUMMER SESSION.								
MATERIA MEDICA	Dr. McBean	5 5 0	Prof. Carter (*& Therapeutics*)	2 2 0	Prof. Leech	4 4 0	Dr. Cocking	2 2 0
MIDWIFERY, &c.	Dr. Nesham*‡	5 5 0	Prof. Wallace, Dr. A. Wallace‡‡ (*and Gynæcology*)	5 5 0	Prof. Sinclair Dr. Ashby (*Dis. Chil.*)	4 4 0 2 2 0	Dr. Keeling, ¶ Mr. R. Favell, and Dr. Martin	5 5 0
BOTANY	Prof. Potter	...	Prof. Gibson, Mr. Jones§	3 0 0	Prof. Weiss	2 12 6	Prof. Denny	3 3 0
BIOLOGY	Prof. Potter	5 5 0	Prof. Herdman	6 0 0	...	...	...	...
MEDICAL JURISPRUDENCE	Dr. Murphy	5 5 0	Prof. Paul, Dr. Buchanan	4 4 0	Prof. Dixon Mann	3 3 0	Dr. Rhodes	3 3 0
MENTAL DISEASES	Dr. McDowall	5 5 0	Dr. Wiglesworth	1 1 0	Dr. Mould	1 11 6	...	...
PRACTICAL CHEMISTRY	Prof. Bedson	5 5 0	Prof. Campbell Brown	4 4 0	Prof. Dixon	4 4 0	Prof. Williams	3 3 0
PRACTICAL PHYSICS	Prof. Stroud	2 2 0	Prof. Lodge	...	...	...	Prof. Denny	2 2 0
COMPARATIVE ANATOMY	Prof. Brady	2 2 0	Prof. Herdman	...	Dr. Hickson‡ (*with Embryology*)	2 12 6	...	...
PATHOLOGY AND MORBID ANATOMY	Dr. Drummond	5 5 0	Prof. Boyce	2 2 0	Prof. Delépine	2 2 0	Dr. Burgess	4 4 0
OPHTHALMIC SURGERY	Mr. Williamson	...	Mr. Edgar Browne‡	1 1 0	Dr. Brooke (*Skin Diseases*)	1 1 0	...	...
DENTAL SURGERY AND MECHANICS	Mr. Markham	...	**[*Dental Surg.:* Mr. Phillips]	3 3 0	Dr. Little	3 3 0	Mr. Snell	2 2
	[*Dis. of Throat, Nose, & Ear:* Mr. Walter Ridley]		[*Mechanics:* Mr. Councell]	3 3 0	Mr. G. G. Campion	4 4 0	...	...
	[*Dis. of Skin:* Dr. Limont]		[*Dental Anat.:* Prof. Paul]	4 4 0	[*Dis. of Larynx:* Dr. Hodgkinson]	1 1 0	[*Med. Officer to Skin Department:* Mr. W. Dale James]	
			[*Dental Metall.:* Dr. Bailey]	...	[*Dis. of Ear:* Dr. Milligan]	1 1 0	[*Pharm. & Ther.:* Dr. Cocking]	4 4 0
OPERATIVE SURGERY	Prof. Arnison, Mr. Page	5 5 0	Prof. Parker, Mr. Thomas	[Comp. fee, £50]	Mr. Southam	4 4 0	Dr. S. White	2 2 0
CLINICAL MEDICINE	Physicians and Surgeons of	...	Physicians and Surgeons of		Physicians and Surgeons of		Phys. & Surg. of Gen. Infir.	
CLINICAL SURGERY	of Infirmary		of the Royal Infirmary		the Royal Infirmary	...	& Royal Hospital	...
			[*Dis. of Child.:* Dr. P. Davidson]	2 2 0	Prof. Whitehead		[*Prac. Pathol.:* Dr. Somerville and Dr. Wilkinson]	5 5 0
			[*Dental Path.:* Prof. Boyce‡]	4 4 0	[Comp. fee, Dental course, £50]			
FEE for all Lectures required by the College & Hall	...	73 10 0	[*Hum. & Mamm. Embryology:* Prof. Paterson]	60 0 0‖ 42 0 0	...	70 0 0	...	63 0 0
Ditto for Hospital Medical & Surgical Practice	...	†26 5 0			...	42 0 0	...	45 0 0

* Diseases of Women and Children. † In addition to the above, £2 2s. yearly up to three years. ‡ In winter.
§ Winter and summer. ‖ Except Chemistry, Biology and Fever, Ophthalmic, and Mental Hospital Practice. ¶ Diseases of Women. ** Complete Dental Course, £50. †† In summer.
‡‡ Midwifery in winter, Gynæcology in summer. §§ Practical Physiology: Winter, £3 3s. Practical Histology: Summer, £4 4s.

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TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE PROVINCIAL SCHOOLS OF MEDICINE FOR THE SESSION 1897-98.

LECTURES, &c.	MASON COLLEGE, BIRMINGHAM.		UNIVERSITY COLLEGE, BRISTOL.		CAMBRIDGE UNIVERSITY.		YORKSHIRE COLLEGE, LEEDS.	
	LECTURERS.	FEES. One Course.	LECTURERS.	FEES. One Course.	LECTURERS.	FEES.	LECTURERS.	FEES.
WINTER SESSION.		£ s. d.		£ s. d.		£ s. d.		£ s. d.
PHYSIOLOGY	Prof. F. J. Allen	6 6 0	Prof. G. M. Smith	5 5 0	Prof. Foster	...	Prof. Birch and Demonstrator	10 10 0
ANATOMY, DESCRIPTIVE & SURGICAL	Prof. B. C. A. Windle	6 6 0	Prof. E. Fawcett	5 5 0	Prof. Macalister	...	Prof. Griffith and Mr. Robinson	10 10 0
ANATOMICAL DEMONSTRATIONS	Messrs. Manners-Smith and Haslam	5 5 0	Mr. Bush	5 5 0	Dr. J. Griffiths Prof. Macalister and Demonstrators	...	Prof. Griffith and Demonstrators	...
PRACTICAL PHYSIOLOGY	...	...	Dr. Edgeworth	8 8 0	Prof. Foster (and in Summer)	...	Prof. Birch and Demonstrator	6 6 0
ELEMENTARY BIOLOGY	Prof. Bridge & Mr. W. E. Collinge	5 5 0	Prof. L. Morgan, Mr. Reynolds	5 5 0	Mr. Seward and Mr. Sedgwick	...	Professor Miall	5 5 0
CHEMISTRY	Prof. P. F. Frankland & Dr. Baker	4 4 0	Prof. Young	5 5 0	Prof. Liveing	...	Prof. Smithells & Dr. Cohen	5 5 0
MEDICINE	Prof. Suckling, Prof. Saundby, and Dr. Russell	6 6 0	Profs. Markham Skerritt and Shaw	5 5 0	Prof. Dewar Prof. Allbutt Dr. MacAlister	...	Prof. Eddison and Dr. Churton	6 6 0
THERAPEUTICS	Prof. Carter	3 3 0	...	...	Prof. Bradbury	...	Prof. Barrs	3 3 0
SURGERY	Prof. Barling, Prof. B. May, and Mr. Morrison	6 6 0	Profs. Morton and Swain	5 5 0	Dr. J. Griffiths	...	Prof. Robson	6 6 0
HYGIENE AND PUBLIC HEALTH	Prof. B. Hill	3 3 0	Dr. Davies	4 4 0	Dr. Anningson	...	Mr. Ward (*Prac. Surg.*)	4 4 0
GYNÆCOLOGY	...	...	...	...	Mr. Douty	...	...	...
HOSPITAL PRACTICE:							Dr. Hellier	3 3 0
PHYSICIANS	GENERAL HOSPITAL AND QUEEN'S HOSPITAL. (*See Additional Information on Schools.*)	3 months 5 0 0 6 months 7 0 0	BRISTOL ROYAL INFIRMARY, AND BRISTOL GENERAL HOSPITAL.	...	ADDENBROOKE'S HOSPITAL. Dr. Latham, Prof. Bradbury, Drs. MacAlister & L. Humphry	Perpet. 8 8 0 ...	LEEDS GENERAL INFIRMARY. *Physicians:* Drs. Churton, Barrs, Chadwick and Braithwaite	...
SURGEONS	...	1 year 11 11 0	(*See Additional Information on Schools.*)	...	Mr. Wherry, Mr. Deighton, Dr. Griffiths, Mr. Douty	...	*Assist. Phys.:* Drs. T. W. Griffith and Trevelyan *Surgeons:* Messrs. Robson, Ward, Brown, Littlewood, Nunneley, and Hewetson *Assist. Surgs.:* Messrs. Knaggs, Moynihan and Walker	... ...
	[*Ophthalmology:* Mr. Priestley Smith. No fee.]						Prof. Barrs	4 4 0
SUMMER SESSION.								
MATERIA MEDICA, &c.	Mr. Whittles	1 1 0	Dr. Prowse	3 3 0	Prof. Bradbury and Mr. Marshall			
MIDWIFERY, &c.	Prof. E. Malins, Prof. Savage and Dr. Purslow	5 5 0	Prof. Aust Lawrence	4 4 0	Mr. Douty		Prof. Wright and Mr. Croft	6 6 0
GYNÆCOLOGY			...	...	...		...	...
PRACTICAL SURGERY	Mr. Jordan Lloyd	2 2 0	Mr. Prichard	3 3 0	Mr. Wherry		Mr. Ward	...
OPERATIVE SURGERY			Mr. Pickering	3 3 0				...
BOTANY	...	...	...	3 3 0	Prof. Marshall Ward Mr. Darwin, Mr. Blackman		Prof. Miall	5 5 0
HYGIENE AND PUBLIC HEALTH	...	...	...	...	...		Mr. Hartley	3 3 0
MEDICAL JURISPRUDENCE	Prof. Simon Dr. A. B. Hill	4 4 0	Dr. Eager Dr. Harrison	3 3 0 ...	Dr. Anningson		Mr. Scattergood and Dr. Chadwick	5 5 0
MENTAL DISEASES	Prof. Whitcombe	1 1 0			Dr. Rogers		Mr. Lewis	3 3 0
PRACTICAL CHEMISTRY	Prof. P. F. Frankland	3 3 0	Prof. Young	3 3 0	Prof. Liveing		Prof. Smithells	4 4 0
PRACTICAL PHYSIOLOGY & HISTOL.	Prof. Allen and Dr. Bolton	4 4 0	Dr. Edgeworth	...	Prof. Foster		Prof. Birch	...
CHEMICAL PHYSICS	Prof. Poynting	3 3 0	...	...	Prof. Liveing		Prof. Smithells	6 6 0
COMPARATIVE ANATOMY	Prof. Bridge	2 12 6	Prof. Morgan	4 4 0	*Prof. Newton (Winter, Mr. Sedgwick)		Prof. Miall	...
PATHOLOGY & MORBID ANATOMY	Prof. Kauffmann & Mr. Heaton	4 4 0	Prof. Clarke	5 5 0	Dr. Kanthack		Prof. Trevelyan	4 4 0
PRACTICAL HISTOLOGY	...	...	...	3 3 0	Dr. Hill		Prof. Birch and Demonstrator	...
DENTAL SURGERY	Mr. Huxley	3 3 0	Mr. Acland	3 3 0	Dr. Cunningham		...	...
DENTAL ANATOMY & PHYSIOLOGY	Mr. Humphreys	3 3 0	Prof. G. M. Smith	3 3 0	Dr. Cunningham		...	...
DENTAL METALLURGY	Mr. McMillan	2 2 0	Mr. Hayman	3 3 0	...		...	...
DENTAL MECHANICS	Mr. Goffe	2 2 0	Mr. Hayman	...	...		...	...
CLINICAL MEDICINE	Physicians of the two Hospitals.	...	...	...	The Physicians		Physicians of the Infirmary	...
CLINICAL SURGERY	Surgeons of the two Hospitals.	...	...	...	The Surgeons to Addenbrooke's Hospital		Surgeons of the Infirmary	...
	[*Dean of the Faculty:* Prof. Windle]		[*Pharm. & Ther.:* Dr. Prowse, £3 3s. *Pract. Medicine:* Prof. Shaw, £4 4s.]				[*Practical Pharmacy:* Mr. Branson]	
FEES for all the Lectures required by the College and Hall	...	70 0 0	...	68 5 0 or 57 15 0	...		[*Ophthal.:* Mr. Secker Walker]	3 3 0
Composition Fee for Hospital Medical and Surgical Practice	...	42 0 0	[*Pract. Midwifery:* Dr. Swayne, £1 1s.]	36 15 0	...		...	73 10 0
					*With Zoology		...	42 0 0

The fee for each course of lectures or demonstrations is one or two guineas per term.

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institutions in the town and also in the West Riding Lunatic Asylum.

UNIVERSITY COLLEGE, LIVERPOOL: MEDICAL FACULTY.—The new Physiological and Pathological Laboratories are now in course of erection, and will be ready for occupation during the Winter Session (1897-98). The Chemical Laboratories have been extended at a cost of about £10,000, so as to provide *inter alia* more complete accommodation for medical students and those engaged in Laboratory work for Diplomas in Public Health. Steps are being taken for the extension of the Anatomical Department, and the first instalment of new Anatomical and Surgical Laboratories has been already erected at a cost of £2000 in the form of permanent Anatomical out-buildings and court-yard. The buildings include mortuary, store-rooms, museum work-rooms, and macerating room, along with lavatories, &c. The erection of new Anatomical and Surgical Laboratories will be commenced as soon as practicable. The dissecting-room and theatre have been provided with the electric light. The chair of Pathology has adequate temporary accommodation in Ashton Hall, an institute adjacent to the College, which contains ample class-room and laboratory accommodation for study and research in Pathology and Bacteriology. The museums of Anatomy, Pathology, Materia Medica, and Public Health are furnished with complete provision for the needs of students and have recently been re-organised and revised.

Fees. — The composition fee for lectures and classes is £24 15*s.* for Preliminary Science Classes; £60 for the Medical Classes required for the Victoria University degrees; £70 for all the classes required for the diplomas of the Conjoint Boards. The medical composition fees are payable in two instalments at intervals of twelve months. The fee for hospital attendance at the Royal Infirmary is 40 guineas, also payable in two annual instalments.

Appointments.—Three house surgeons, three house physicians, and one external house surgeon to the Thornton Wards are appointed for six months after (if necessary) competitive examination. Candidates must have a legal qualification. Three clinical clerks for each physician, three or more dressers for each surgeon, and two clerks to the Thornton Wards for Diseases of Women are appointed every three months. Post-mortem clerks are appointed for six weeks; all students are required to perform this duty before the schedule for the Final Examination is signed. Clinical assistants are appointed from among the senior students.

There is a School of Dental Surgery in connexion with the medical faculty. The curriculum includes Lectures and Demonstrations on all the subjects required for the Licences in Dental Surgery of the Royal Colleges of Surgeons of London, Edinburgh, and Dublin, and of the Faculty of Physicians and Surgeons of Glasgow. In addition, Laboratory Courses are conducted in Dental Histology and Dental Pathology.

Practical instruction in Dentistry is given at the Dental Hospital in Mount Pleasant.

Fees.—A payment of £50 on entrance, or in two equal instalments (one-half on entrance and the remainder within twelve months), entitles the student to attendance on all lectures and demonstrations (medical and special) required for the Dental Licence of the Royal College of Surgeons. The fee for two winters' surgical practice is £10 10*s.*, and for two years' dental hospital practice, £12 12*s.* The total expenditure for the whole curriculum is £73 2*s.*

Further information can be obtained from the Dean of the Medical Faculty, Professor Paterson, University College, Liverpool.

SCHOOL OF PHARMACY.—A department of Pharmacy has recently been instituted, comprising the necessary courses for the minor and major examinations of the Pharmaceutical Society in Chemistry, Physics, Botany, Materia Medica and Pharmacy. The composition fee is £17, and the classes may be attended in one or two years.

Prospectus and further information may be had on application to the Registrar, University College, Liverpool.

MEDICAL DEPARTMENT OF OWENS COLLEGE, VICTORIA UNIVERSITY.—This medical school is located in a large building, which forms a part of Owens College. It is provided with large dissecting-rooms, physiological laboratories, private laboratories, and work-rooms, besides lecture-rooms, a museum, and a library. In order to give the fullest possible opportunities for teaching and investigation in the departments of Anatomy, Physiology, Pathology, and Materia Medica, an extension of the school buildings has recently been made. The greater part of the new buildings is devoted to the departments of physiology, pathology, toxicology, anatomy, and public health. The physiological department occupies more than half of the new buildings, and includes a large lecture theatre, accommodating 350 students, with preparation and diagram rooms adjacent to it, and a research laboratory fitted with the necessary apparatus for the use of advanced students, research scholars, or practitioners of medicine undertaking the investigation of some special subject. In the new pathological laboratories ample provision is made for the teaching of pathology and bacteriology and for the prosecution of original research. In the toxicological department there is a large laboratory, capable of accommodating fifty students, lighted from both sides and also from the roof, completely equipped with all that is necessary for the practical teaching of toxicology; also a small laboratory for private research, containing the apparatus and fittings necessary for investigations in toxicological chemistry. In the public health department suitable laboratory accommodation is provided for the study of sanitary chemistry, physics, and practical bacteriology in the departments of chemistry and physics and in that of pathology. A large room is provided in the new buildings for a museum of apparatus, models, plans, and other sanitary appliances for the practical instruction of the students, together with a special library of works on State medicine, hygiene, vital statistics, and sanitary engineering. In addition, a large lecture theatre for general purposes, accommodating 250 students, has been provided, and the existing accommodation for students is supplemented by the provision of a larger common room. The more strictly practical departments of medical study are taught partly in the Medical School and partly in the Royal Infirmary, as well as in a fever hospital, a lunatic asylum, and a convalescent home. Medical and Surgical Clinical Classes are conducted in the infirmary, and separate instruction is afforded in the elements of Medical and Surgical Physical Diagnosis, in Obstetric Medicine, Ophthalmic Surgery, and Pathological Anatomy by the different members of the staff of the Medical School and Infirmary. The following entrance scholarships are offered for award to persons proposing to enter a medical course of study at the College:—Seaton.—One of £40, tenable for two years. Subjects: Greek and Latin Translation at sight, and Prose Composition. Credit given for knowledge of Mathematics (Geometry and Algebra); Elements of English Language, Literature, and History; French and German. Rogers.—One of £40, tenable for two years. Subjects as in Seaton. Dalton.—Two of £40, tenable for two years. Subjects: Geometry (Euclid I.—IV., and VI., or the subjects thereof); Algebra (as far as the Binomial Theorem, inclusive); Plane Trigonometry (to Solution of Triangles); Elementary Analytical Geometry; Conic Sections. Credit given for knowledge of Classics, Elements of English Language, Literature, and History; French and German. Cartwright.—£35 per annum, tenable for three years. Subjects as in Dalton. Hulme.—£35, tenable for three years. Subjects: English Language (Grammatical Structure and Outlines of its History); English Literature (an essay on some subject of English literature); and Modern History (Outlines of English History and Geography); with at least two of the following: Latin (Translation at sight, Grammar, and Easy Composition); Greek (ditto); French (ditto); German (ditto). Credit given for knowledge of Mathematics (Geometry and Algebra). James Gaskill.—£40, tenable for two years. Subjects: Mathematics, Geometry (the substance of Euclid I.—IV. and VI.), Algebra (as far as the Binomial Theorem, inclusive), Plane Trigonometry (to Solution of Triangles), Elementary Mechanics, Chemistry. Credit given for knowledge of Classics, Elements of English Language, Literature, and History, and French and German. Manchester Grammar School.—£18 per annum, tenable for three years. The examinations for all these scholarships are held in the month of May. Kay-Shuttleworth (Sir James Phillips). — £30 per annum, tenable for three years. Subjects: Mathematics, Elementary Mechanics, Chemistry. Dauntesey Medical Scholarships.—Two Scholarships of £35 each are open to all students preparing for a medical course who shall not have attended lectures or Laboratory courses on human anatomy or physiology, or a purely medical or surgical course in the Owens College or any other Medical

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School in the United Kingdom. Candidates will be examined in Zoology, Botany, and Chemistry. Medals are awarded on the results of the various class examinations at the end of each session. A Platt Physiological Scholarship of £50 a year for two years is offered annually to the student who, having studied for one entire session in the Physiological Laboratory of Owens College, has prosecuted the best original investigation in Physiology and has passed a satisfactory examination in Physiology. Two Platt Exhibitions, of the value of £15 each, to be competed for by first and second year students in the class of Physiology. A Dumville Surgical Prize of £15 is offered annually for proficiency in Clinical Surgery. The Turner Medical Scholarship of £20 is awarded annually. The John Henry Agnew Scholarship in Diseases of Children (£30) is also offered for competition each year. Medical and Surgical Clinical Prizes, each of the value of 6 guineas, are open to competition each year for the best reports (with comments) of cases which have occurred in the wards of the infirmary.

MANCHESTER ROYAL INFIRMARY (300 beds).—Consulting Physicians: Drs. Frank Renaud, H. Browne, Sir Wm. Roberts, and Henry Simpson. Consulting Surgeons: Messrs. George Bowring, E. Lund, and F. A. Heath. Physicians: Drs. D. J. Leech, J. Dreschfeld, Graham Steell, and Thos. Harris. Assistant Physicians: Drs. J. S. Bury and A. T. Wilkinson. Consulting Obstetric Physician: Dr. Lloyd Roberts. Obstetric Physician: Dr. Archibald Donald. Surgeons: Messrs. Walter Whitehead, Thomas Jones, Jas. Hardie, and F. A. Southam. Assistant Surgeons: Messrs. G. A. Wright and Wm. Thorburn. Ophthalmic Surgeon: Dr. D. Little. Dental Surgeon: Mr. G. W. Smith. Pathological Registrar: Dr. T. N. Kelynack. Medical Registrar: Dr. R. T. Williamson. Surgical Registrar: Mr. H. W. Pomfret. Administrators of Anæsthetics: Mr. Alexander Wilson and Mr. J. W. Smith. Assistant Medical Officers for Home Patients: Mr. W. B. Pritchard and Mr. G. E. Fryer. General Superintendent and Secretary: Mr. W. L. Saunder.

BARNES CONVALESCENT HOSPITAL, Cheadle, Cheshire (in connexion with the Manchester Royal Infirmary; 136 beds).—Secretary: Mr. W. L. Saunder. Resident Medical Officer: Mr. A. R. Stillwell Freeland.

RADCLIFFE INFIRMARY, Oxford (120 beds).—At this infirmary instruction is given to medical students attending Oxford University. Clinical lectures are given by the Lichfield Clinical Lecturers in Medicine and Surgery. Also tutorial instruction and demonstrations are given in special Regional Anatomy (medical and surgical), methods of Medical Diagnosis, and Surgical Manipulation. Demonstrations of Elementary Pathology are given in the post-mortem room and at the Pathological department of the museum by the Regius Professor of Medicine or his Deputy. Practical Pharmacy is taught in the Infirmary Dispensary. The whole course of study at the museum and infirmary combined is intended for students until they have passed the Second Conjoint Examination or the First Oxford M.B.

UNIVERSITY COLLEGE, SHEFFIELD—DEPARTMENT OF MEDICINE.—The Medical School has recently been incorporated by Royal Charter with Firth College and the Sheffield Technical School, under the title of University College, Sheffield. An entrance scholarship of the value of £110 will be awarded to the best candidate (if of sufficient merit) in Mathematics, Elementary Physics, Inorganic Chemistry, Latin, and English. The examination will be held at the College on Sept. 23rd and 24th. Applications to be sent to the Dean not later than Sept. 16th. Prizes for Clinical Medicine and Surgery of 10 guineas are offered by the Clinical Committee. Prizes in books and certificates are awarded annually. The medical school is provided with dissecting-room, physiological laboratory, museum, library, and class-rooms. The physiological department has recently been entirely reconstructed and equipped in memory of the late President of the school, Mr. Wm. F. Favell, and will in future be called the Favell Laboratory. The department consists of a lecture and demonstration theatre, preparing-room, and galvanometer room. In addition to the usual fittings the theatre is provided with a projection lantern microscope for the demonstration of microscopic slides. Each student has his own laboratory bench, with gas, water, electric light, and the requisite apparatus. The department is lighted throughout by electricity. The course of lectures and instruction is adapted to meet the requirements of the various examining bodies. The Sheffield Royal Infirmary contains 240 beds, including Ophthalmic and Dermatological departments, a museum of Pathology, library, and post-mortem theatre, with microscopes and all the appliances for clinical research. New Ophthalmic wards have recently been erected. The Sheffield Royal Hospital contains 125 beds and a Dental department, and is recognised by the examining bodies. Perpetual fee for hospital practice £45 in one payment; or by two instalments: £26 on entering for hospital practice, and 22 guineas within twelve months afterwards. Composition fee for lectures and practical courses 60 guineas; or in two instalments: 35 guineas at commencement of medical study, 30 guineas at beginning of the second year. Students are also admitted to the practice of the Jessop Hospital for Diseases of Women, to the Borough Fever Hospitals, and the South Yorkshire Asylum.

JESSOP HOSPITAL FOR WOMEN, Gell-street, Sheffield.—The hospital is devoted to Diseases peculiar to Women. There is also an Obstetric Department for the admission of a small number of cases. A staff of midwives connected with the hospital attend lying-in women at their own homes, and, in case of need, are assisted by the members of the medical staff. Out-patients are attended daily. Students can attend the practice of the hospital and be supplied with cases of midwifery. Communications should be addressed to the Secretary, York Chambers, York-street, Sheffield.

DEVON AND EXETER HOSPITAL, Exeter.—Medical and Surgical Staff: Consulting Physician: Dr. Drake. Physicians: Drs. H. Davy, Arthur G. Blomfield, and Wm. Gordon. Consulting Surgeons: Messrs. A. J. Cumming, T. W. Caird, and James Bankart. Surgeons: Messrs. J. D. Harris, E. J. Domville, Charles E. Bell, and A. C. Roper. House Surgeon: Mr. Henry Andrew. Assistant House Surgeon: Mr. W. Ashford. The hospital contains 218 beds (including special children's wards), and has a good library, museum, dissecting room and post-mortem room. Attendance on the practice of this hospital qualifies for all the examining boards. Arrangements can be made by which students can attend Midwifery. There is also a Nurses' Home attached to the Hospital. For further particulars as to fees &c. apply to the House Surgeon. A new wing has lately been added.

WEST OF ENGLAND EYE INFIRMARY, Exeter.—Physician: Dr. William Gordon. Surgical Staff: Messrs. Bankart and Tosswill. Assistant Surgeon and Registrar: Mr. Roper. Secretary: Ernest W. Toby. The infirmary contains fifty beds. Students of the Exeter Hospital can attend the practice of the Eye Infirmary. Patients for the year ending Michaelmas, 1896, 2818. Total number of patients since the opening of the Infirmary in 1808, 90,359. Days of admission: Mondays, Tuesdays, and Fridays, at 11 A.M.

KENT AND CANTERBURY GENERAL HOSPITAL.—Opened for the reception of patients April 26th, 1793. 56,553 in-patients and 100,589 out-patients have been admitted since the hospital was opened. The hospital contains 106 beds. Pupils of the staff are admitted to the practice of the hospital, and have the use of the library of the East Kent and Canterbury Medical Society for £7 7s. Operation day, Thursday, 11 A.M. Physician: Dr. Henry Alex. Gogarty. Consulting Surgeon: Mr. James Reid. Surgeons: Messrs. Frank Wacher, T. Whitehead Reid, J. Greasley, and Sydney Wacher. Dentist: Mr. R. S. N. Faro. House Surgeon: Mr. J. H. Joyce. Assistant House Surgeon: Mr. E. C. Frend. Secretary: Mr. Arthur J. Lancaster. Over 700 in-patients, 2000 out-patients and casualties, and 357 dental cases are attended in a year.

LIVERPOOL NORTHERN HOSPITAL (160 beds).—There is a special ward for the treatment of children. Clinical instruction is regularly given by the physicians and surgeons during the summer and winter sessions. Clinical clerkships and dresserships are open to all students without additional fee. Consulting Surgeons: Mr. W. H. Manifold and Dr. W. Macfie Campbell. Physicians: Dr. E. H. Dickinson, M.A.; Dr. Bushby. Surgeons: Messrs. Chauncy Pozey, Damer Harrisson, and A. H. Wilson. Fees for hospital attendance: Perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s.; Practical Pharmacy, £2 2s. Students can enter to the medical or the surgical practice separately on payment of half the above fees. The foundation-stone of a new hospital of not less than 200 beds has been laid during the past year, in

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which there will be every facility for clinical teaching and accommodation for resident pupils.

LIVERPOOL ROYAL SOUTHERN HOSPITAL (CLINICAL SCHOOLS).—Honorary Consulting Surgeon: Mr. Robert Hamilton. Honorary Physicians: Drs. John Cameron, Wm. Carter, and Wm. Williams. Honorary Surgeons: Messrs. Henry G. Rawdon, Wm. Alexander, and Robert Jones. Consulting Pathologist: Dr. R. W. Boyce, Professor of Pathology, Liverpool University College. Lecturer on Practical Medicine: Dr. C. J. Macalister. Surgical Tutor: Mr. W. H. C. Davey. Pathologist: Dr. F. H. Barendt. Medical Tutor and Bacteriologist: Dr. H. R. Jones. Honorary Ophthalmic Surgeon: Mr. R. Williams. Honorary Aural Surgeon: Mr. C. G. Lee. Honorary Laryngologist: Dr. W. Permewan. Demonstrator of Roentgen Rays: Dr. C. Thurston Holland. Honorary Dental Surgeon: Mr. J. Royston. House Surgeon: Dr. J. A. Craig. Junior House Surgeons: Dr. Barlow and Dr. Kewley. The hospital is situated within convenient distance of the School of Medicine and contains 200 beds. There are special wards for accidents and Diseases of Children, and there are also beds appropriated to the Diseases of Women. Clinical teaching is given in the hospital, and arrangements have been made to render it both thorough and systematic. The members of the staff visit the wards daily, and clinical lectures are given every week. Tutorial classes are also held each day at which the junior students are instructed in the methods of diagnosis and the seniors are prepared for their final examinations. The pathological department has a good laboratory attached in which the students receive practical instruction. Recently a bacteriological laboratory has been added, where students are able to obtain a practical knowledge of bacteriology in relation to medicine. In connexion with the hospital a course of instruction for gentlemen desirous of obtaining a Diploma in Public Health is given, and with this object a chemical laboratory under Mr. Herbert Davies, M.A. Camb., B.Sc. Lond., has been opened. In addition to the usual clinical and post-mortem clerkships, which are open to all students, the resident post of Ambulance Officer is awarded every three months to the student whom the board may consider most suited to hold it. A Scholarship of £20 is competed for annually, which has attached to it some clinical and pathological duties; and three prizes of £5 each are yearly offered for the best series of clinical reports. Fees: Perpetual £26 5*s*.; one year £10 10*s*.; six months £7 7*s*.; three months £4 4*s*. A limited number of resident pupils can be received. Terms (exclusive of fees for Hospital Practice), £15 15*s*. per quarter. The practice of the hospital is recognised by all examining bodies. For further particulars apply to the Dean, Mr. Robert Jones, 11, Nelson-street, Liverpool.

ROYAL INFIRMARY, Liverpool.—The buildings of the new Royal Infirmary were completed and occupied in 1890. They stand on the old site, adjacent to the college, but enlarged by the purchase of a fine frontage in Pembroke-place and of the street known as Pembroke-gardens. Externally, they form a handsome and imposing group of buildings, the general arrangement of which may be gathered from the plan at the beginning of the prospectus. Every available open-air space has been taken advantage of to secure good airing grounds for the patients, and the beauty of the buildings has been not a little enhanced by the numerous balconies, colonnades, and flat roofs adapted to the same purpose for both patients and resident staff. Internally, no point in modern sanitary science has been omitted. There are 295 beds exclusive of the Lock Hospital. The wards—some parallelograms, some circular—have floors of waxed oak blocks laid on an iron and cement substratum. Three operating theatres and a clinical lecture theatre have been provided. There is an electrical room, and provision for special kinds of baths. The out-patient department comprises rooms for the treatment and study of minor medical and surgical maladies, for diseases of the eye, skin, larynx, nose, and teeth, as well as a gynæcological department. There is also a Lock Hospital. A room has been allotted to the clinical tutors, in which they may keep their records, whilst each surgeon and physician has a private room in connexion with his wards, where his dressers and clerks may write up and tabulate cases and investigate morbid products. The pathological department, which is daily becoming of more importance in medical education, has had much pains expended upon it, so as to give proper facilities for the study of morbid anatomy. It is hoped that the facilities for clinical work will be such as not merely to enable the present students to learn the practical parts of their profession thoroughly, but to attract students from over-crowded institutions where the number of pupils is far in excess of the opportunities for the bedside study of disease. In no hospital in the country are the resident physicians and surgeons so comfortably lodged. Each is provided with a bedroom and a private sitting-room in addition to the music-room and dining-room, where all the seven residents meet in common. James Burr, M.D., Secretary of Medical Board, 72, Rodney-street, Liverpool.

NORFOLK AND NORWICH HOSPITAL (220 beds).—Fees: £10 10*s*. for six months', £15 15*s*. for twelve months' medical and surgical practice. Pupils: resident and non-resident. Consulting Physicians: Sir P. Eade, M.D., and Sir Frederic Bateman, M.D. Consulting Surgeon: Mr. W. Cadge, F.R.C.S. Physicians: Dr. Barton and Dr. Burton-Fanning. Surgeons: Mr. Williams, Dr. Beverley, and Mr. H. S. Robinson. Assistant Surgeons: Mr. S. H. Burton and Mr. D. D. Day. Dental Surgeon: Mr. R. Wentworth White. House Surgeon: Mr. H. A. Ballance. House Physician: Mr. S. H. Long. Secretary: Mr. Poole Gabbett.

NORTHAMPTON GENERAL INFIRMARY (established 1743; rebuilt 1793).—The number of beds is 160. Out-pupils are received, and have every opportunity of acquiring a practical knowledge of their profession. Instruction is also given in Anatomy and Materia Medica and Practical Pharmacy. Non-resident pupils are taken at a fee of £10 10*s*.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-on-Trent.—The New Infirmary, opened in 1869, is built on the pavilion plan, has accommodation for over 200 patients, including Children's wards, special Ovarian wards, and a special department for the treatment of Diseases of the Eye. In-patients last year, 1957; out-patients, 9822. The attendance of pupils at this infirmary is duly recognised by all the examining boards; and there are unusual facilities for acquiring a practical knowledge of the profession. Physician: Dr. A. M. McAldowie. Surgeons: Messrs. J. Alcock and W. D. Spanton. Ophthalmic Surgeon: Mr. Herbert Folker. Assistant Ophthalmic Surgeon: Mr. J. F. Arlidge. Assistant Physicians: Dr. S. King Alcock and Mr. H. Nicholls. Assistant Surgeons: Drs. G. S. Hatton and W. Hind. Dental Surgeon: Mr. A. Baines. House Physician: Dr. William C. Allardice. House Surgeon: Mr. John L. Sawers. Secretary: Mr. R. Hordley, Hartshill, Stoke-on-Trent.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL (founded 1845; beds, 230).—A preparatory school of Medicine and Surgery. The pupils have the advantage of seeing the whole of the practice of the physicians and surgeons, and are trained in clinical work by the medical and surgical staff. The attendance of pupils at this hospital is recognised by all the examining boards. Operations are performed every Thursday at 11 o'clock.

SUSSEX COUNTY HOSPITAL (190 beds).—During the year 1896, 1710 in-patients have been treated. The total number of out-patient attendances on the books during 1896 was 30,847. This hospital affords ample facilities for students, possessing a large out-patient department, a library, and a well-appointed museum. The hospital does not take resident pupils, but out-pupils may attend the practice of the hospital for any period not exceeding two years on payment in advance of such a fee, not exceeding 20 guineas, as the Committee of Management shall direct.

MANCHESTER GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury and Gartside-street.—The hospital contains 140 beds, including 28 for scarlet fever. The medical staff visit the hospital daily at 10 A.M. Clinical instruction is given by the medical staff at the Hospital and Dispensary. Out-patients are seen daily at 9 A.M. at the Dispensary, Gartside-street, Manchester. Physicians: Drs. Ashby and Hutton. Surgeon: Mr. G. A. Wright. Assistant Surgeon: Mr. Joseph Collier. Resident Medical Officers: H. E. Izard, M.R.C.S., and A. H. Burgess, M.B. Medical Officer at the Dispensary: Mr. J. Hepworth, M.R.C.S. During 1896 there were 1286 in-patients, and 11,502 out-patients were under treatment at the Dispensary.

THE MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Cheetham-hill-road, Manchester.—The hospital is situated near the centre of the town and contains 70 beds. Out-patients are seen daily at 9.30 A.M. and the wards are visited at 11 A.M. The hospital practice is open free to students and practitioners both in the out-patient department and in the wards during the hours of the medical staff.

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Applications to be made to the secretary, Mr. H. Teague, Barton Arcade, Manchester.

SCOTLAND.

MEDICAL SCHOOLS WITH FULL CURRICULUM.[1]

EDINBURGH.

SCHOOL OF MEDICINE OF THE ROYAL COLLEGES, Edinburgh.—The number of students varies much in the classes and subjects. It is within the limit to say that about 1000 students avail themselves each year of the opportunity of attending the school. The lectures qualify for the University of Edinburgh and other Universities, the Royal Colleges of Physicians and Surgeons of Edinburgh, London, and Dublin, the Faculty of Physicians and Surgeons of Glasgow, and other Medical and Surgical and Public Boards. In accordance with the recent Statutes of the University of Edinburgh one-half of the qualifying classes required for graduation may be attended in this school. The regulations require that the fee for any class, taken for Edinburgh University graduation, shall be the same as that for the corresponding class in the University. The whole education required for graduation at the University of London may be taken in this school.

In accordance with the statutes of the University of Edinburgh, one-half of the qualifying classes required for graduation may be attended in this school, in addition to the class of Practical Materia Medica and the classes of Clinical Medicine and Clinical Surgery. The regulations require that the fee for any class taken for graduation in Edinburgh shall be the same as that for the corresponding class in the University. The whole education required for graduation at the University of London may be taken in this school.

The following Order of Study is recommended as a guide to the student for a five years' course, though not enjoined :—First Year: Biology, Physics, Anatomy, Practical Anatomy, Chemistry, and Practical or Analytical Chemistry. Second Year: Anatomy, Practical Anatomy, Physiology, Practical Physiology, Surgery, and Materia Medica—the last either in this or the Third Year—and Hospital. Third Year: Practice of Medicine, Clinical Surgery, Practical Pharmacy, Clinical Medicine, Pathology, and Hospital. Fourth Year: Surgery or Clinical Surgery, Midwifery and Diseases of Women and Children, Practice of Medicine or Clinical Medicine, Medical Jurisprudence, Practical Midwifery, Operative Surgery, and Hospital. Fifth Year: Classes on Special Subjects, Hospital, and Dispensary Practice.

The appointment of Resident Physician to the wards in the Royal Infirmary under the care of the Ordinary Physicians is open to those members of their clinical class who have clerked in their wards for at least six months. Six Residentships are appointed during the year for a period of six months each. Resident Surgeons are also appointed by the Ordinary Surgeons to the Hospital. In all respects the students are taught under regulations similar to those at the University of Edinburgh and the other Universities of Scotland, and they receive similar certificates at the close of each session. Moreover, the University and College authorities in Edinburgh and the governing board of the school call upon each recognised lecturer to supply them at the close of each session with a statement giving the number of students attending the class, the number of lectures or prelections delivered during the session, the class examinations held, and the general mode of conducting the class. The courses on special non-qualifying subjects have for the last quarter of a century formed a marked feature of the school. Indeed, such medical subjects could be studied in Edinburgh only in this school until lately, when the University of Edinburgh appointed from the school lecturers on Diseases of the Eye, Insanity, and Diseases of Children to take charge of classes intra-murally. A list of the classes and lecturers will be found below. Special courses of instruction for dental students and for women are also included in the curriculum of this school.

Lecturers and fees.—Winter Session: Anatomy, Practical Anatomy, and Demonstrations, Drs. Ryland Whitaker and R. J. A. Berry (£3 5*s.* and £4 4*s.*); Chemistry (Practical, &c.), Dr. S. Macadam, Mr. King, Mr. I. Macadam, and Drs. Aitken and Readman*; Physiology (Institutes of Medicine), Dr. Noël Paton (£3 5*s.*); General Pathology, &c., Drs. Bruce, Russell, and Leith (£3 5*s.*); Botany, Mr. A. N. McAlpine†; Practice of Physic, Drs. Wyllie, James, Affleck, Bramwell, Gibson, Philip, and Graham Brown (£3 5*s.*); Surgery. Messrs. Caird, Hodsdon, Shaw Maclaren, Thomson, and Wallace (£3 5*s.*); Materia Medica, &c., Drs. Craig† and Lockhart Gillespie (£3 5*s.*); Midwifery, &c., Drs. Hart, Murray, and Haultain (£3 5*s.*); Medical Jurisprudence, &c., Dr. Littlejohn (£3 5*s.*); Natural History, Mr. J. Arthur Thomson† (£3 5*s*); Natural Philosophy, Dr. Turner and Mr. Purvis (£3 5*s.*); Hospital Practice (Edinburgh Royal Infirmary): Physicians, Drs. Affleck, Smart, James, and Croom; Surgeons, Messrs. Duncan and Miller, Drs. Maclaren and MacGillivray (perpetual ticket, £12 12*s.*); Clinical Medicine, Drs. Wyllie, Affleck, Smart, James, and Croom (Diseases of Women) (£3 5*s.*); Clinical Surgery, Mr. Duncan, Mr. Miller, Dr. Maclaren, and Dr. Macgillivray (£3 5*s.*); Diseases of Children, Mr. Joseph Bell,† Drs. Burn-Murdoch,† Thomson,† Ballantine,† and Dunlop† (£2 2*s.*); Diseases of the Skin, Drs. Jamieson† and Stirling† (£2 2*s.*); Diseases of the Chest, Dr. Philip† (£2 2*s.*); Vaccination, Drs. Husband,† Buist,† and Cadell (£1 1*s.*); Diseases of Ear, Nose, and Throat, Drs. Kirk, Duncanson,† and McBride† (£2 2*s.*); Diseases of the Eye, Dr. G. Mackay† and Dr. Sym† (£2 2*s.*); Gynæcology. Drs. Croom (Systematic), Brewis (Clinical), and Berry Hart (Advanced) (£2 2*s.*); Diseases of the Tropics and Climatology, Dr. Felkin† (£2 2*s.*). Summer Session: Practical Anatomy and Demonstrations, Drs. Ryland Whitaker and R. J. A. Berry (£2 2*s.*); Practical Physiology, Dr. Paton (£3 3*s.*); Biology, Messrs. Thomson and Turnbull‡ (£3 3*s.*); Botany, Messrs. McAlpine and Turnbull; Practical Chemistry and Analytical Chemistry, Dr. S. Macadam, Messrs. King, I. Macadam, Drs. Aitken and Readman§; Diseases of the Eye, Dr. Mackay‡ (£2 2*s.*); Diseases of the Skin, Drs. Allan Jamieson and Stirling (£2 2*s.*); Medical Psychology and Insanity. Drs. Tuke and Macpherson (£1 1*s.*); Gynæcology, Drs. Brewis and Haultain (£2 2*s.*); Midwifery, Drs. Croom, Hart, Barbour, and Ferguson (£3 5*s.*); Operative Surgery, Messrs. Caird, Hodsdon, Shaw, McLaren, and Alexis Thomson (£3 3*s.*); Practical Pathology, Drs. Bruce, Russell, and Leith (£3 3*s.*); Physics, Dr. Turner‡ (£3 3*s.*); Practical Medicine and Physical Diagnosis, Dr. James (£3 3*s.*); Practice of Medicine, Drs. Bramwell, Gibson, and Philip (£3 3*s.*); Medical Electricity, &c., Dr. Turner (£2 2*s.*); Diseases of the Circulation, Dr. Gibson (£2 2*s.*).

Special Classes for Women, Winter Session: Practical Anatomy and Demonstrations, Drs. Ryland Whitaker and Hardie (£4 4*s.*); Chemistry (Lectures and Practical), Mr. Ivison Macadam and Dr. Aitken (£3 5*s.* and £3 3*s.*); Practice of Physic, Drs. Philip and Graham Brown (£3 5*s.*); Surgery, Mr. Thomson and Mr. McLaren (£3 5*s.*); General Pathology, Dr. Russell (£3 5*s.*); Physiology (Institutes of Medicine), Dr. Noël Paton (£3 5*s.*); Practical Pathology, Dr. Bruce, &c. (£3 5*s.*); Materia Medica, &c., Dr. Craig (£3 5*s.*); Clinical Medicine, Dr. Bramwell, Royal Infirmary (£3 5*s.*); Clinical Surgery, Royal Infirmary (£3 5*s.*); Physics, Dr. Dawson Turner (£3 3*s.*); Biology, Mr. Thomson and Mr. Turnbull (£3 3*s.*); Diseases of Children, Mr. Bell, Dr. Burn-Murdoch, and Dr. Cumming (£2 2*s.*); Vaccination, Dr. Husband and Mr. Cadell £1 1*s.*); Diseases of the Tropics and Climatology, Dr. Felkin (£2 2*s.*); Practical Gynæcology, Dr. Brewis (£2 2*s.*). Summer Session: Practical Anatomy, Dr. Ryland Whitaker and Mr. Hardie (£2 2*s.*); Practical Chemistry, Mr. Ivison Macadam and Dr. Aitken (£3 3*s.*); Materia Medica, &c., Dr. Craig (£3 3*s.*); Operative Surgery and Surgical Anatomy, Mr. Alexis Thomson and Mr. McLaren (£3 3*s.*); Materia Medica and Therapeutics, vacant (£3 3*s.*); Midwifery and Diseases of Women, Drs. Sophia Jex-Blake and R. Milne Murray (£3 5*s.*); Medical Jurisprudence and Public Health, Dr. Harvey Littlejohn (£3 5*s.*); Clinical Medicine and Clinical Surgery, Royal Infirmary (£3 5*s.*); Practical Physiology and Histology, Dr. Paton (£3 3*s.*); Practical Pathology, Dr. Russell (£3 3*s.*); Biology, Mr. Arthur Thomson and Mr. Turnbull (£3 3*s.*); Physics, Dr. Dawson Turner (£3 3*s.*); Diseases of Children, Mr. Bell, Dr. Burn-Murdoch, and Dr. Cumming (£2 2*s.*); Ophthalmology, Dr. Mackay (£2 2*s.*); Insanity, Dr. Tuke and Dr. Macpherson (£2 2*s.*); Practical Gynæcology, Dr. Brewis (£2 2*s.*).

The minimum cost of the education in this School

[1] For Scholarships see p. 501, et seq.

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of Medicine for the Triple Qualification of Physician and Surgeon from the Royal Colleges of Physicians and Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow, including the fees for the Joint Examinations, is about £115, which is payable by instalments during the period of study.

Further particulars regarding the school, also its calendar, may be had on application to Mr. R. N. Ramsay, the Secretary, 24, Forrest-road, Edinburgh.

* Lectures, £3 5*s.*; Practical, £3 3*s.*; Analytical, £2 a month, or £5 for three months. † Also in Summer Session. ‡ Also in Winter Session. § Practical, £3 3*s.*; Analytical, £2 a month, or £5 for three months.

N.B.—Where two or more lecturers appear as teaching the same subjects their lectures are not conjoined, but each gives an independent course.

GLASGOW.

ANDERSON'S COLLEGE MEDICAL SCHOOL, Glasgow.—This medical school was founded in the year 1800. It has given twelve professors to the University of Glasgow, of whom three at present hold office. The following courses are given, which qualify for all the licensing boards and for the Universities of London, Durham, Ireland, Edinburgh, and Glasgow (the latter two under certain conditions):—In winter: Anatomy, Professor A. M. Buchanan, M.A., M.D.; Chemistry, Professor J. Robertson Watson, M.A.; Physics, Professor Peter Bennett; Zoology, Professor Geo. Bell Todd, M.B.; Physiology (vacant); Surgery, Professor T. Kennedy Dalziel, M.B.; Practice of Medicine, Professor Samson Gemmell, M.D.; Midwifery and Diseases of Children, Professor John Edgar, M.A., B.Sc., M.D.; Materia Medica, Professor R. Barclay Ness, M.A., M.B.; Botany, Professor B. G. Cormack, M.A., B.Sc.; Ophthalmic Medicine and Surgery, T. Spence Meighan, M.D.; Aural Surgery, James Erskine, M.A., M.B.; Diseases of Throat and Nose, John Macintyre, M.B.; Hygiene and Public Health, In summer: Anatomy, Practical Anatomy and Osteology, Practical Chemistry, Physics, Zoology, Practical Materia Medica and Pharmacy, Practical Physiology, Operative Surgery, Medical Jurisprudence; Botany; Ophthalmic Medicine and Surgery; Mental Diseases; Hygiene and Public Health, and Aural Surgery. The Chemical Laboratory is open daily from 10 to 6. The Dissecting-room is open in winter from 9 A.M. to 6 P.M., and in summer from 6 A.M. to 6 P.M. The students are assisted in their dissections by the Professor and Demonstrators, by whom frequent examinations and demonstrations on the parts dissected are conducted. The supply of subjects for dissection is ample, and students are consequently provided with parts as soon as they may be ready for them. The Dissecting-room is provided with a complete series of dissected specimens, mounted in plaster-of-Paris, illustrating the anatomy of the human body. Candidates for the licence in Dental Surgery can obtain the full medical curriculum in Anatomy, Chemistry, Physiology, Surgery, Practice of Medicine, and Materia Medica. The courses special to Dentistry are conducted at the Glasgow Dental Hospital and School.

The new buildings are situated in Dumbarton-road, immediately to the west of the entrance to the Western Infirmary, within two minutes' walk of it, and four minutes' walk of the University. Extensive accommodation is provided for Practical Anatomy, Practical Chemistry, Practical Physiology, Practical Pharmacy, Public Health, and Operative Surgery. There are also provided a large library and reading-room and a students' recreation-room.

Fees.—For each of the above courses of Lectures (Anatomy, Chemistry, Botany, Zoology, and Mental Diseases excepted), first session. £2 2*s.*; second session, £1 1*s.* Anatomy Class Fees: Winter, first session (including Practical Anatomy), £4 4*s.*; second session (including Practical Anatomy), £4 4*s.*; third session, £2 2*s.* To those who have had the necessary courses of Practical Anatomy the fee will be £1 1*s.* Summer, Lectures and Practical Anatomy, £2 12*s.* 6*d.*; Lectures alone, £1 11*s.* 6*d.*; Practical Anatomy alone, £1 1*s.*; Osteology and Practical Anatomy, £2 12*s.* 6*d.*; Osteology alone, £1 11*s.* 6*d.* Chemistry Fees: First course, £2 2*s.*; second course, £2 2*s.* Practical Materia Medica and Pharmacy. Fees.—First course, £2 2*s.* Second course, £2 2*s.* Botany fee, £1 11*s.* 6*d.* Zoology fee, £1 11*s.* 6*d.* Mental Diseases, £1 1*s.* Matriculation Fees: Winter, 10*s.* to those taking out two or more classes; 5*s.* to those taking out only one class. The fee of 10*s.* represents a combined fee for the winter and summer sessions. Summer, 5s., except to those who have paid a fee of 10*s.* for the Winter Session. Students who have attended classes at other schools, and who desire to pursue their studies at Anderson's College Medical School, will be admitted to such classes as they may have attended elsewhere at the reduced fees.

Royal Infirmary.—Fees: Hospital Practice and Clinical Instruction, first year, £10 10*s.*; second year, £10 10*s.*; afterwards free. Six months, £6 6*s.*; three months, £4 4*s.*; Pathology, both courses, £3 3*s.* Vaccination Fee, £1 1*s.*

Western Infirmary.—Fees: Hospital Practice and Clinical Instruction, first year, £10 10*s.*; second year, £10 10*s.*; afterwards free. Six months, £7 7*s*; three months, £4 4*s.* Pathology, first course, £3 3*s.*; second course, £2 2*s.* Practical Pathology, first course, £3 3*s.*, second course, £2 2*s.* Vaccination Fee, £1 1*s.*

Eye Infirmary.—Fee: Hospital Practice and Clinical instruction, six months, £1 1*s.*

Certificates of attendance on the lectures at Anderson's College Medical School are received by the Universities of London, Durham, Ireland, Edinburgh, and Glasgow (the latter two under certain conditions); by the Royal Colleges of Physicians of London and Edinburgh; by the Royal Colleges of Surgeons, England, Edinburgh, and Ireland; by the Royal College of Physicians of Ireland; by the Faculty of Physicians and Surgeons of Glasgow; by the Society of Apothecaries, London; and by the Army, Navy, and East India Boards. Communications relating to the Medical School to be addressed to the Secretary of the Medical Faculty, Professor A. M. Buchanan, M.A., M.D., Anderson's College Medical School, Dumbarton-road, Partick, Glasgow. Communications relating to the Preliminary Examination in General Education to be addressed to Mr. Alexander Mackay, LL.D., Educational Institute Office, 40, Princes-street, Edinburgh. Communications relating to the Triple Qualification to be addressed to Mr. Alexander Duncan, B.A., Faculty Hall, 242, St. Vincent-street, Glasgow. Communications relating to the Dental School to be addressed to Mr. D. M. Alexander, 97, West Regent-street, Glasgow.

At *Anderson's College Medical School* Professorships of Physics and Zoology and a Lectureship on Mental Diseases have been recently instituted. Lectures on Physics and on Zoology are delivered in winter and summer, and lectures on Mental Diseases in summer, the fee for Mental Diseases being £1 1*s.* The Kerr Bursary in Anatomy (value £10) is open to students of the Junior Anatomy Class during Winter Session 1897-98.

ST. MUNGO'S COLLEGE AND GLASGOW ROYAL INFIRMARY.—This College was incorporated in 1889. The Glasgow Royal Infirmary was founded in 1791. The Faculty of Medicine of the College occupies new buildings erected for the purposes of a medical school, adjoining and communicating with the Royal Infirmary. The Laboratories, Museums, and Lecture-rooms are equipped and adapted to modern scientific requirements. Recent additions consist of Public Health, Practical Zoology, and Bacteriological Laboratories. The Royal Infirmary, which is at the service of the College for the purpose of clinical and practical instruction, is one of the largest general and special hospitals in the kingdom. It has nearly 600 beds, and will almost immediately have considerably over 600. It has special wards for Diseases Peculiar to Women, for Venereal Diseases, Erysipelas, Burns, and Diseases of the Throat and Nose. At the Dispensary special advice and treatment are given in diseases of the Eye, Ear, Teeth, and Skin, Women, Throat and Nose, in addition to the large and varied number of ordinary medical and surgical cases—over 46,000 per annum—which in a great industrial centre daily require attention. Students of the College and Hospital get the benefit of dispensary experience free of charge. All appointments are open. There are five Physicians' and seven Surgeons' Assistants, who board in the hospital free of charge and act in the capacity of House Physicians and House Surgeons. These appointments are made for six months, and are open to gentlemen who have a legal qualification in Medicine or Surgery, and preference is given to the students of this College and Hospital. Clerks and Dressers are appointed by the Physicians and Surgeons. From the large number of cases of acute disease and accidents of varied character received into this hospital these appointments are very valuable. In the Pathological Department assistants are also appointed. The session will open with an address on Wednesday, Oct. 20th, at the College buildings.

Ophthalmic Department.—The Opthalmic Institution in

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LECTURES, &c.	ABERDEEN UNIV. PROFESSORS AND LECTURERS.	FEES. One Course.	ST. ANDREWS UNIV.§§ PROFESSORS AND LECTURERS.	FEES. One Course.	EDINBURGH UNIV. PROFESSORS AND LECTURERS.	FEES —	GLASGOW UNIV. PROFESSORS AND LECTURERS.	FEES. One Course.	ST. MUNGO'S COLL. & SCHOOL of MEDICINE LECTURERS.	FEES. One Course.	GLASG., ANDERSON'S COLL. MED. SCHOOL. LECTURERS.	FEES. One Course.	GLASGOW WESTERN MEDICAL SCHOOL. LECTURERS.	FEES. One Course.
WINTER SESSION.		£ s.		£ s.		£ s.		£ s.		£ s.		£ s.		£ s.
ANATOMY	Prof. R. W. Reid	3 3	Dr. Musgrove¶ Prof. Mackay‖	3 3	Prof. Sir W. Turner	4 4	Prof. Cleland	3 3	Mr. Kent	4 4	Dr. A. M. Buchanan	4 4§	Mr. Edington	2 2
PRAC. ANAT. & DEMONS.	Prof. Reid	3 3	Dr. Musgrove¶	3 3	...	...	...	3 3	Mr. Kent	...	...	...	Mr. Edington	...
CHEMISTRY	Prof. Japp	3 3	Prof. Purdie¶ Prof. Walker‖	3 3 3 3	Prof. Crum Brown (Adv. Class in Sum.)	4 4	Prof. Ferguson [*Chemical Lab.*: ...	3 3 10 10	Dr. Marshall [*Throat and Nose*: Dr. Fullerton]	2 2	Mr J. R. Watson [*Physics*: Mr. Peter Bennett]	2 2 2 2	Mr. H. V. Craster	...
PHYSIOLOGY (INST. OF MED.)	Prof. MacWilliam	3 3	Prof. Pettigrew,¶	3 3	Prof. Rutherford	4 4	Prof. McKendrick	3 3 3 3	Dr. Barlow	2 2	Dr. D. Campbell Black	2 2	Dr. Ernest Thomson	...
GENERAL PATHOLOGY, &c.	Prof. Hamilton (*Syst. & Pract.*)	3 3	Miss Umpherston,¶ Prof. Reid‖	3 3	Prof. Greenfield	4 4	Prof. Coats	3 3	Dr. C. Workman	4 4	(In Infirmary)	...	...	...
MEDICINE	Prof. D. W. Finlay	3 3	...	...	Prof. Sir T. Grainger Stewart	4 4	Prof. Gairdner	3 3	Dr. Robertson	2 2	Dr. Gemmell [*Zoology*: Dr. Todd]	2 2 1 11 6	...	...
SURGERY	Prof. Alex. Ogston [*Bacteriology*: Prof. Hamilton]†	3 3 3 3	Dr. MacEwan (*systematic*)	2 2	Prof. Chiene	4 4	Prof. Macewen [*Physics*: Dr. Magnus Maclean]	3 3 3 3	Mr. Clark	2 2	Dr. Dalziel	2 2	Mr. R. H. Parry	2 2
MATERIA MEDICA, &c.	Prof. Cash	3 3	Dr. de Wytt	...	Prof. T. R. Fraser	4 4	Prof. Stockman	3 3	Dr. Dougall	2 2	Dr. R. B. Ness	2 2	...	...
MIDWIFERY, &c.	Prof. Stephenson	3 3	...	...	Prof. Simpson (*Dis. Wom. & Child.*)	4 4	Prof. Cameron	3 3	Dr. Stirton [*Bacteriology*: Dr. McCrorie]	2 2 2 2	Dr. Jno. Edgar [*Dis. of Throat & Nose*: Dr Macintyre]	2 2 Free	Dr. Marshall [*Ophthalmology*: Dr. Fergus.]	1 1 1 1
MED. JURISPRUDENCE, &c.	Prof. Hay (In Summer)	3 3	...	...	Prof. Sir H. D. Littlejohn (in Summer only)	4 4	Prof. Simpson† (Law Class, ditto)	3 3 3 3	Dr. Glaister†	2 2	Dr. R. M. Buchanan (in Summer)	2 2	...	...
NATURAL HISTORY	Prof. Nicholson	3 3	Prof. McIntosh¶ Prof. Thompson‖	3 3 3 3	Prof. Ewart	4 4	Prof. Young	3 3	Dr. M. Laurie	2 2	[*Public Health*:	...	...	...
NATURAL PHILOSOPHY	Prof. Niven (*Physics*)	3 3	Prof. Butler¶ Prof. Steggall‖	3 3 3 3	Prof. Tait, Dr. Knott	3 3	...	...	Mr. Blyth (and *Physics*)	2 4 6	[*Dis. of Eye*: Dr. Meighan]	Free	...	...
HOSPITAL PRACTICE:	ABERDEEN R. INF.				EDIN. ROYAL INF.		GLASG. ROY. INF. AND WEST INF.				GLASGOW ROY. OR WESTERN INF.			
PHYSICIANS	Drs. A. Fraser, Finlay, and Edmond (Daily)	One year, £3 10s. Perpetual, £6.	...	...	...	Perpet. ticket, £12.	The Physicians and Surgeons of the Infirmaries (and in Summer)	Perpetual, including Clin. Lectures, £21	The Physicians & Surgeons of the Glasgow Royal Infirmary		The Medical and Surgical Staffs.	1st year, £10 10s.; 2nd, £10 10s.; afterwards, £6 6s.; W.I., £7 7s.; 3 months, £4 4s.	The Physicians & Surgeons in the Western Infirmary.	...
SURGEONS	Drs. Ogston, Garden, & Booth Williamson (*dent.*) Daily		...	...	...		... [*Dis. of Ear*: Dr. T. Barr, £1 1] [*Dis of Throat &c.*: Dr. J. W. Downie, £1 1]	1st year, £10 10s.; 2nd year & perpetual, £10 10s.	... [*Hygiene*: Dr. Glaister] [*Diseases of Skin*: Dr. Alex. Morton†]		...		...	...
ASSISTANT SURGEONS	Drs. Riddell, Sinclair, and Marnoch	...	...	...	...				...	...	...		...	...
CLINICAL MEDICINE	Drs. A. Fraser, Finlay, and Edmond	3 3	The Physicians of the Royal Infirm'ry, Dundee	...	Profs. Sir T. G. Stewart, Fraser, Greenfield, & Simpson (*Dis. Wom.*)	4 4	Pfs. M'Call Anderson & Gairdner (and in Summer)	...	Dr. McVail and Physicians of Royal Infirmary	...	The Physicians [*Dis. of Ear*: Dr. Erskine]	... Free	...	...
CLINICAL SURGERY	Drs. Ogston, Garden, & Booth	3 3	The Surgeons of the Royal Infirm'ry, Dundee	...	Prof. Annandale	4 4	Profs. Buchanan and Macewen (and in Summer)	...	Dr. Knox and the Surgs. of the Royal Infirmary	...	The Surgeons	...	...	...
SUMMER SESSION														
PRAC. ANAT. & DEMONS.	Prof. Reid	3 3	Dr. Musgrove¶ Prof. Mackay‖	2 2	Prof. Sir W. Turner	3 3	Prof. Cleland and Demonstrators	2 2	Mr. Kent	2 2	Dr A. M. Buchanan††	2 2	Mr. G. H. Edington	2 2
BOTANY	Prof. Trail	3 3	Mr. Robertson¶†† Prof. Geddes‖**	3 3	Prof. B. Balfour* [*Physics*: Prof. Tait and Dr. Knott]	4 4 3 3	Prof. Bower	3 3	Dr. Swanson	3 3	Mr. Cormack¶¶	1 11 6	...	...
HISTOLOGY	Prof. MacWilliam [*& Prac. Phys.*]	3 3	...	...	...	...	Prof. McKendrick [*Phys. Lab.*]	3 3 5 5	Dr. Barlow**	2 2	Dr. D. C. Black	2 2	Dr. Ernest Thomson	2 2
COMPARATIVE ANATOMY	...	...	Prof. Purdie¶	...	...	...	...	...	Mr. M. Laurie	2 2	...	...	...	...
PRACTICAL CHEMISTRY	Prof. Japp	3 3	Prof. Walker	2 2	Prof. Crum Brown	3 3	Prof. Ferguson	3 3	Dr. Marshall*	2 2	Mr. J. R. Watson	2 2	Mr. Craster	...
DISEASES OF THE EAR	Dr. McK. Booth	1 1	...	...	...	...	...	3 3	Dr. J. Kerr Love	1 1	[*Physics*: Mr. Peter Bennett]	2 2	...	...
PRAC. PHARMACY	Prof. Cash	3 3	...	...	...	...	Prof. Stockman	...	...	...	...	...	...	...
DISEASES OF THE EYE	Dr. Usher	1 1	...	...	Dr. G. A. Berry	3 3	Dr. T. Reid	2 2	Dr. Ramsay**	2 2	Dr. Meighan	Free	Dr. Fergus.	1 1
DISEASES OF CHILDREN	Prof. Stephenson	1 1	Prof. McIntosh¶	...	Drs. Carmichael & Pr Ewart* [Playfair*	2 2 4 4	...	...	Dr. Adams*	2 2	*Prac. Mat. Med. &*	...	...	...
NATURAL HISTORY	Prof. Nicholson	3 3	Prof. Thompson‖	3 3	Dr. Clouston †	2 2	Prof. Young (*Lab.*)	3 3	Mr. M. Laurie*	2 2	*Pharm.*: Dr. Ness]	2 2	...	...
MED. PSYCHO. & INSANITY	Dr. Reid	1 1	...	...	Prof. Simpson	4 4	Dr. Yellowlees	2 2	Dr. A. C. Clark	2 2	Dr. Carswell	1 1	...	1 1
GYNÆCOLOGY	[*Prac. Mid.*:	...	...	...	[*Prac. Mat. Medica, Anat., Phys., & Path.*]	3 3	Prof. Cameron	2 2	Dr. Kelly*	1 1	Dr. John Edgar	2 2	Dr. Marshall*	...
MIDWIFERY, &c.	Prof. Stephenson] [*Prac. Hygiene*:	1 1	...	...	...	...	...	...	Dr. Stirton	2 2	[*Zoology*: Dr. Todd] [*Public Health*:	1 11 6 ...	...	...
OPERATIVE SURGERY	Dr. Hay]	3 3	Dr. MacEwan‖	2 2	Prof. Chiene*	3 3	Prof. Macewen		Dr. Whitson	2 2		2 2	Mr. Parry	2 2

* Also in Winter. † With Clinical Instruction at an Asylum, £3 3s. ‡ In Summer. § This fee includes Practical Anatomy. ‖ Dundee. ¶ St. Andrews. ** In Winter. †† There is a Winter Session in Botany at St. Andrews, conducted by Mr. Robertson: Theoretical Course, £3 3s.; Junior Practical Course, £2 2s.; Senior Practical Course, £3 3s. ‡‡ With Osteology. §§ By a decision of the House of Lords the union between St. Andrews University and University College, Dundee, has been annulled for the time being. ¶¶ There is a Winter Session in Botany in Anderson's College Medical School, Glasgow, £1 11s. 6d.

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TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE MEDICAL SCHOOLS OF SCOTLAND FOR THE SESSION 1896-97.

(CONTINUED.)

LECTURES, &c.	UNIVERSITY OF GLASGOW, QUEEN MARGARET COLLEGE.	
	LECTURERS.	FEES.
WINTER SESSION.		£ s. d.
ANATOMY	Dr. T. H. Bryce	3 3 0
PRACTICAL ANATOMY AND DEMONSTRATIONS	Dr. T. H. Bryce	3 3 0
CHEMISTRY	Mr. T. Gray	3 3 0
PRACTICAL CHEMISTRY	Mr. T. Gray	3 3 0
PHYSIOLOGY	Professor McKendrick, Dr. Snodgrass	3 3 0
GENERAL PATHOLOGY	Dr. C. Workman	3 3 0
MEDICINE	Dr. J. W. Anderson	3 3 0
SURGERY	Dr. J. H. Pringle	3 3 0
PHYSICS	Mr. Blyth	3 3 0
MATERIA MEDICA	Dr. C. O. Hawthorne	3 3 0
MIDWIFERY	Professor Cameron, Dr. J. M. M. Kerr	3 3 0
HOSPITAL PRACTICE	Glasgow Royal Infirmary	1st year, £10 10s.
CLINICAL MEDICINE	Dr. J. Lindsay Steven	2nd year, £10 10s.
CLINICAL SURGERY	Dr. Adams, Dr. Pringle	
SUMMER SESSION.		
PRACTICAL ANATOMY AND DEMONSTRATIONS	Dr. T. H. Bryce	2 2 0
BOTANY	Mr. W. H. Lang	3 3 0
HISTOLOGY	Professor McKendrick, Dr. Snodgrass, and Dr. Fraser Harris	3 3 0
PRACTICAL PHARMACY	Dr. C. O. Hawthorne	3 3 0
MEDICAL JURISPRUDENCE	Dr. Galt	3 3 0
DISEASES OF THE EYE	Dr. Maitland Ramsay	2 2 0
NATURAL HISTORY	Professor Young and Mr. Rankin	3 3 0
MEDICAL PSYCHOLOGY AND INSANITY	Dr. Yellowlees	2 2 0
OPERATIVE SURGERY	Dr. Pringle	2 2 0
PRACTICAL PATHOLOGY	Dr. Workman	3 3 0

West Regent-street having been amalgamated with the Royal Infirmary the usefulness of this department is very much increased, and greater opportunities are afforded to students for the practical study of Diseases of the Eye. Dr. Ramsay, the ophthalmic surgeon, attends the Royal Infirmary every Monday, Wednesday, and Friday at 12 noon, and daily at the Institution in West Regent-street from 1 to 2 o'clock. Students can attend both without payment of any additional fee. Lectures are delivered twice a week during the winter session. Fee for the course, £2 2*s*.

The fee for each class is £2 2*s*., except for Anatomy, which is £4 4*s*., Pathology £4 4*s*., Zoology £4 4*s*., Botany £3 3*s*., Practical Physiology, £3 3*s*., and for Physics, which is £2 4*s*. 6d., and certain extra classes, for which the fee is £1 1*s*. The hospital fee (including clinical lectures) is £21 for a perpetual ticket. The classes in St. Mungo's College and in the Glasgow Royal Infirmary are for male students exclusively. Further particulars can be obtained in the Calendar of the College (price 1*s*.), which can be obtained on application to the Dean, 86, Castle-street, Glasgow. Remittance should accompany application.

GLASGOW WESTERN MEDICAL SCHOOL.—This School is situated in University-avenue, close to the University and Western Infirmary, in which latter students obtain their Hospital Practice and Clinical Lectures. Lectures and Demonstrations are given on Chemistry, on Anatomy, on Surgery, on Physiology, on Midwifery and Gynæcology, and on the Eye.

Class Fees.—For each course of Lectures the fee is £2 2*s*., or in some cases £1 1*s*. There is no matriculation fee.

QUEEN MARGARET COLLEGE, University of Glasgow.—Queen Margaret College was founded in 1883 by the Glasgow Association for the Higher Education of Women (instituted in 1877), and handsome buildings and grounds near the University were presented to the College in 1884 by Mrs. John Elder. In 1890 a School of Medicine for women was added to its Arts Faculty. In 1892, when the Universities Commissioners issued an ordinance empowering the Scottish University Courts to make provision for the instruction of women, the Council of the College and Mrs. Elder transferred to the University the College, its buildings, grounds, and endowments, on condition that these should be devoted to the maintenance of University classes for women only. The College then became the women's department of the University of Glasgow; its classes are taught by professors of the University and other lecturers appointed by the University Court, and it is governed by the University Court and Senate. The curriculum, regulations, and fees are the same as those of the male students, and the University degrees are open to women on the same conditions as to men. They have access to the University Museum and can borrow books from the University Library, besides having a library of reference in Queen Margaret College. The number of students enrolled in session 1896-7 was 249, of whom 82 were studying medicine, and the rest arts or science. The School of Medicine is a special feature of the College and gives full preparation for the medical degrees of the University. In July, 1894, for the first time in the history of any Scottish university, women students graduated in medicine at the "capping" in Glasgow University. Excellent facilities for clinical work are given in the Royal Infirmary and other hospitals. By a gift of £5000 lately granted for the purpose by the Bellahouston Trust the University Court was enabled to add to the College a large new building for the study of Anatomy and Physiology, which was opened in October, 1895. The Arthur Scholarship is open every third year to students of first year entered the October previously to the award; the George Grant Bursary is held by a woman student, and there are other Bursaries open in Arts as well as in Medicine; and the Universities Commissioners have issued an ordinance making regulations for the admission of women to certain University bursaries, scholarships, and fellowships. A house of residence for the students of the College coming from a distance was opened by the Queen Margaret Hall Co., Limited, in October of 1894.

DUNDEE.

UNIVERSITY COLLEGE, Dundee (University of St. Andrews).—The classes of this College qualify for graduation in the University of St. Andrews and are recognised by the other Scotch Universities; they also qualify for the degrees of the University of London and the Royal University of Ireland and for the Licences of the Royal Colleges. Equipment is provided for the first three years of the medical curriculum; and of recent years the laboratory accommodation in the departments of Chemistry, Botany, Zoology, Anatomy, and Physiology has been largely added to. The Royal Infirmary of Dundee contains about 300 beds, and the clinical instruction and hospital attendance in its wards are recognised by the various degree-giving and licensing bodies. The teaching staff of the school has lately been increased by the appointment of Lecturers on Medical Jurisprudence and Public Health, Mental Diseases, and Ophthalmology, and in these departments, as also in Operative Surgery and Practical Obstetrics, special facilities are offered to senior students.

Scholarships:—First year: (*a*) Three Armitstead Scholarships of £20 each, tenable for one year. (These Scholarships were founded and endowed in 1883 by George Armitstead, Esq., M.P.) (*b*) Three Scholarships of £15 each, tenable for one year. Second year: Three Armitstead Scholarships of £20 each, tenable for one year, to be awarded to day students entering upon their second year. Candidates must have attended not less than two regular courses at the College during the year immediately preceding the competition. (*c*) Bute Bursary, founded in 1893 by the Most Honourable the Marquess of Bute, K.T.; this bursary consists of the free proceeds of £1000. (*d*) Two bursaries of the annual value of £25, and tenable for three years, either "at University College, Dundee, or at any Scottish University."

Fees.—Chemistry, £3 3*s*.; Prof. James Walker, D.Sc. Practical Chemistry: Winter £3 3*s*., Summer £2 2*s*.; Prof. James Walker, D.Sc. Physics: Winter £3 3*s*., Prof. Kuenen, Ph.D., M.A. Zoology, £3 3*s*., Prof. D'Arcy W. Thompson, M.A. Botany, £3 3*s*., Prof. Geddes. Anatomy, £3 3*s*.; Prof. Yule Mackay, M.D. Practical Anatomy: Winter £3 3*s*., Summer £2 2*s*.; Prof. Yule Mackay, M.D. Physiology, £3 3*s*.; Prof. E. W. Reid, B.A., M.B. Practical Physiology and Histology, £2 2*s*.; Prof. E. W. Reid, B.A., M.B. Surgery, £2 2*s*.; Dr. MacEwan. Operative Surgery, £3 3*s*.; Dr. MacEwan. Clinical Medicine, Drs. Stalker and Mackie Whyte. Clinical Surgery, Drs.

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MacEwan and Greig. Hospital fee, £2 2s.; Dispensary, £2 2s. The Lectures and Classes for the winter session will commence on Tuesday, Oct. 5th.

ROYAL INFIRMARY.—The infirmary contains 286 beds, including special wards for the Diseases of Children, Eye, and Lock cases. In addition, there were during last year 7905 out-patients and 6366 home patients. The Royal Infirmary offers exceptional facilities for practical work to students. Three qualified Resident Assistants and Clinical and Pathological Assistants are appointed as vacancies occur. Appointments: Three qualified Resident Medical Assistants are appointed annually. Clinical Clerks and Dressers are attached to the Physicians and Surgeons, and students are appointed as assistants in the Pathological department. There is in connexion with the hospital course a class of Minor Surgery and Bandaging, conducted by the Assistant Surgeons, and a class of Practical Pharmacy and Materia Medica held at the Dispensary. Full information can be obtained from Dr. Nathan Raw, Medical Superintendent.

ROYAL ASYLUM.—Clinical instruction is given at the Royal Asylum. Appointments: One paid qualified Resident Assistant and two unpaid Resident Clinical Assistants.

ABERDEEN.

ABERDEEN ROYAL LUNATIC ASYLUM.—Contains, with hospital attached to main institution and Agricultural Branch, about 820 beds. Medical Superintendent: Dr. William Reid. Assistant Physicians: Drs. C. Angus and W. R. Matthews. Joint Secretaries: Mr. W. Carnie and Charles M. Brown. Clinical instruction is given to students during three months in summer.

ABERDEEN ROYAL INFIRMARY.—Contains about 200 beds. Consulting Physicians: Drs. P. Blaikie Smith and James Rodger. Physicians: Drs. Angus Fraser, Professor Finlay, and George M. Edmond. Assistant Physicians: Drs. John Gordon, A. H. Lister, and Ashley W. Mackintosh. Consulting Surgeon: Dr. J. C. O. Will. Surgeons: Professor A. Ogston, Drs. R. J. Garden and J. McK. Booth. Assistant Surgeons: Drs. J. S. Riddell, W. Sinclair, and J. Marnoch. Ophthalmic Surgeon: Dr. C. H. Usher. Pathologist: Professor David James Hamilton. Assistant Pathologist: Dr. George Dean. Dental Surgeon: Dr. W. H. Williamson. Anæsthetist and Medical Electrician: Dr. J. J. Y. Dalgarno. Assistant ditto: Dr. A. Rudolph Galloway. Clinical Registrar: Dr. W. R. Pirie. Joint Treasurers and Secretaries: Mr. W. Carnie and Mr. Charles M. Brown.

HOSPITALS AFFORDING FACILITIES FOR CLINICAL OBSERVATION.

ROYAL INFIRMARY, Edinburgh.—Beds are set apart for clinical instruction by the professors of the University of Edinburgh. Courses of Clinical Medicine and Surgery are also given by the ordinary physicians and surgeons. Special instruction is given in the medical department on Diseases of Women, Physical Diagnosis, and on Diseases of the Skin; and in the surgical department on Diseases of the Eye, the Ear, the Larynx, and the Teeth. Separate wards are devoted to Venereal Diseases, Diseases of Women, Diseases of the Eye, the Ear, and the Skin, and also to cases of Incidental Delirium or Insanity. Three wards are specially set apart for Clinical Instruction to Women Students. Post-mortem examinations are conducted in the anatomical theatre by the pathologists, who also give practical instruction in Pathological Anatomy and Histology. The fees for hospital attendance are as follows—viz.: Perpetual ticket, in one payment, £12; annual ticket, £6 6s.; six months, £4 4s.; three months, £2 2s.; monthly, £1 1s. Separate payments amounting to £12 12s. entitle the student to a perpetual ticket. No fees are paid for any medical or surgical appointment. The appointments are as follows:—1. Resident physicians and surgeons are appointed, and live in the house free of charge. The appointment is for six months, but may be renewed at the end of that period by special recommendation. 2. Special non-resident clerks are appointed for six months. The appointment may be renewed for a like period by special recommendation. 3. Clerks and dressers are appointed by the physicians and surgeons. These appointments are open to all students and junior practitioners holding hospital tickets. 4. Assistants in the Pathological Department are appointed by the pathologists.

ROYAL HOSPITAL FOR SICK CHILDREN, Sciennes-road, Edinburgh.—This hospital, which has been recently built, contains over 100 beds, and is fitted with every modern improvement. A fully equipped out-patient department (medical and surgical) is conducted daily in a building adjoining the hospital. Systematic courses of instruction, which qualify for graduation in the Edinburgh University and elsewhere, are given from time to time throughout the year by the staff. Students may enter at any time. A limited number of Clinical Clerkships are obtainable. Full particulars can be obtained from the Registrar at the hospital.

EDINBURGH EYE, EAR, AND THROAT INFIRMARY, 6, Cambridge-street, Lothian-road.—The Infirmary has been entirely re-arranged and greatly improved by recent structural alterations and the electric light introduced; also the electric power is used for illumination and cauterising purposes in all departments. Clinical Lectures and Instruction are given in this institution, which is open at 1 o'clock daily for out-door patients for Eye Diseases; Mondays, Thursdays, and Saturdays at 12 noon for out-door Ear Patients; and Tuesdays and Fridays at 4 P.M. for out-door Throat Patients. Special Practical Ophthalmoscopic Classes by arrangement. Patients whose diseases require operations or more than ordinary care are accommodated in the house. Consulting Surgeon: Dr. Joseph Bell, F.R.C.S. Surgeons: Dr. J. J. Kirk Duncanson, F.R.C.P.E.; Dr. G. Hunter Mackenzie; Dr. William George Sym, F.R.C.S.E.; Dr. Alexander Black, F.R.C.P.E.; and Dr. Malcolm Farquharson. Dental Surgeon: Mr. G. W. Watson, L.D.S. Treasurer and Secretary: Mr. J. P. Waton, W.S., 13, Hill-street.

GLASGOW HOSPITAL AND DISPENSARY FOR DISEASES OF THE EAR, 28, Elmbank-crescent.—The hospital, which contains twelve beds for in-door patients, is always open for urgent cases. Hours of surgeons' visits, 2 P.M. daily; clinical teaching daily. Out-patients are seen on Mondays, Tuesdays, Wednesdays, Thursdays, Fridays, and Saturdays, at 2 P.M., by Dr. Barr and assistants. Course of Lecutres and Clinical Instruction given during winter months by Dr. Barr.

GLASGOW WESTERN INFIRMARY.—This hospital adjoins the University of Glasgow. Number of beds upwards of 400. Special wards are set apart for Diseases of Women and for Affections of the Skin. In the out-patient department there are special cliniques for Diseases of Women and for Diseases of the Throat, Ear, and Teeth. The Clinical Courses are given by the Physicians and Surgeons, each of whom conducts a separate class, and students require to enter their names at the beginning of the session for the class which they propose to attend. Special instruction is given to junior students by tutors or assistants, and clinical clerks and dressers are selected from the members of the class. All the courses of clinical instruction are recognised by the University of Glasgow and the other boards in the kingdom. In the Pathological Department the course is both systematic and practical, and extends through the winter and following summer; these are likewise recognised by the University for graduation. Nine resident assistants are appointed annually, without salary, from those who have completed their course. The fee for the hospital practice, including the various courses of clinical instruction, is 20 guineas in one payment, or in two equal instalments for the first and second year; for six months, 7 guineas; and for three months, 4 guineas.

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow, situated at Garnet Hill.—This hospital was opened in December 1882, and is now available to medical students for clinical instruction in the diseases peculiar to childhood. The hospital includes 80 beds for non-infectious cases only. A specially designed Dispensary, or Out-patient Department, was opened in October, 1888. Students may be enrolled at any time. Fee £1 1s. per annum, admitting to both Hospital and Dispensary. Particulars on applying to the House Surgeon, 45, Scott-street, Garnet-hill, Glasgow.

GLASGOW OPHTHALMIC INSTITUTION, 126, West Regent-street (30 beds).—Clinical and systematic course of lectures for students during the winter and summer sessions. In-patients, 405; out- or dispensary patients, 11,161. Operations on Wednesdays and Saturdays. Consulting Surgeon: D. N. Knox, M.B., C.M., F.F.P.S.G. Acting Surgeon: A. Maitland Ramsey, M.D. Assistant Surgeon: John Rowan, M.B, C.M. House Surgeons: Robert Taylor, M.B., C.M.; J. H. Wolfe, L.F.P.S., &c. This institution has recently been amalgamated with the Glasgow Royal Infirmary, of which it forms an integral part.

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GLASGOW EYE INFIRMARY, Berkeley-street and Charlotte-street.—This institution, the largest of its kind in Scotland, was founded in 1824. The Infirmary now consists of two large buildings—that in Berkeley-street being occupied as the Infirmary proper, and that in Charlotte-street (new buildings opened June, 1894) as a dispensary. The Infirmary is devoted exclusively to the treatment of Diseases of the Eye, and is intended primarily to provide treatment, and, when necessary, board and lodging, for those who are unable to do so for themselves. The average number of new patients for the last ten years has been 13 053, and the total number of cases treated in 1896 was 20,372. The Medical Staff is as follows:—Senior Surgeon: Thomas Reid, M.D. Surgeons: Thomas S. Meighan, M.D., and A. Freeland Fergus, M.D. Assistant Surgeons: William Robertson, M.D. Andrew Wilson, M.B., C.M., and James Hinshelwood, M.A., M.D. Pathologist: Leslie Buchanan, M.B., C.M. House Surgeon: Francis J. Barker, M.B., C.M. Assistant House Surgeon: Francis R. Hill, M.B., C.M. Clinical Assistants: A. Lewis M'Millan, M.B., C.M.; William Weir, B.Sc., M.B., C.M.; W. Ernest Thomson, M.A., M.D.; Henry L. G. Least, M.D.; W. Cochrane Murray, M.B., C.M.; Thomas D. Moffat, M.B., C.M.; Leslie Buchanan, M.B., C.M.

Regulations as to Attendance of Students.—(1) Gentlemen may attend as students on payment to the treasurer of the following fees:—For six months £1 1*s.*, twelve months £2 2*s.* (2) All students when duly entered in the Infirmary Register may attend the clinical instruction of any or every member of the medical staff on production of their tickets. The days on which the surgeons respectively attend to receive patients may be ascertained at the Infirmary. Students have the privilege of being present in the Dispensaries at such hours as are arranged. They may enter the wards along with the Surgeon whose clinique they are attending when he visits his patients. They may also be present at operations under the sanction of the surgeon operating, but no student may enter the wards or operating-room except under the aforesaid regulation. Students may be allowed the use of the journals and case-books for examination on applying to the House Surgeon. The wards and dispensary are recognised by the University of Glasgow for the purpose of instruction in ophthalmology for graduation in medicine. Secretary: William George Black, 88, West Regent-street.

IRISH SCHOOLS OF MEDICINE.[1]

QUEEN'S COLLEGE SCHOOL OF MEDICINE, Belfast.—Ten Junior Scholarships have been founded in the Faculty of Medicine of the annual value of £20 each. Two are tenable by matriculated students, of the first, second, third, fourth, and fifth years of their course respectively. The examinations for Scholarships take place at the commencement of the session. Class Prizes are awarded at examinations which take place at the close of the session. The Exhibitions, &c., of the Royal University of Ireland are also open to students. Lectures in Medicine at Queen's College, Belfast, will commence on Oct. 19th and end on March 31st. The Summer Session will begin on May 2nd. Clinical instruction is given at the Royal Hospital. The Ulster Hospital for Diseases of Women and Children, the Maternity Hospital, the Ophthalmic Hospital, the Ulster Eye, Ear, and Throat Hospital, the Hospital for Sick Children, and the District Lunatic Asylum are open to students. A pamphlet containing full information can be had free on application to the Registrar, Queen's College, Belfast.

QUEEN'S COLLEGE SCHOOL OF MEDICINE, Cork.—The building is provided with a very large, well-ventilated dissecting-room, with physiological, toxicological, and pathological laboratories, materia medica, anatomical and pathological museums, as well as a room for surgical and obstetrical instruments and appliances. There are well-appointed physical and chemical laboratories, and a large natural history museum in the adjoining building, and part of the College ground is laid out as a botanical garden. The plant houses are well filled with plants, and are open to the students in the class of Botany.

Fees.—For Practical Anatomy and for Practical Chemistry, £3 each course; for Anatomy and Physiology, £3 first course, and £2 for each subsequent course. Other medical classes, £2 first course, and £1 each subsequent course. Eight scholarships (value about £30 each), as well as several exhibitions and class prizes, are awarded every year.

QUEEN'S COLLEGE, Galway.—No particulars received.

[1] For Scholarships see page 502 et seq.

HOSPITALS AFFORDING FACILITIES FOR CLINICAL OBSERVATION.

ADELAIDE MEDICAL AND SURGICAL HOSPITALS, Peter-street, Dublin.—Fee for nine months' hospital attendance, £12 12*s.*; six months, £8 8*s.* Summer, three months, £5 5*s.*

Staff.—Physicians: James Little, M.D., M.R.I.A.; Wallace Beatty, M.D., F.R.C.P.I.; H. T Bewley, M.D., F.R.C.P.I. Surgeons: F. T. Heuston, M.D., F.R.C.S.I.; J. H. Scott, M.B., F.R.C.S.I.; T. E. Gordon, M.B., F.R.C.S.I. Obstetric Surgeon: W. J. Smyly, M.D., F.R.C.P.I. Ophthalmic Surgeon: H. R. Swanzy, M.B., F.R.C.S.I. Pathologist and Bacteriologist: J. Alfred Scott, M.D., F.R.C.S.I. Medical and Surgical Registrar: G. Peacocke, M.B., B.Ch. House Surgeon: S. Horace Law, M.B., B.Ch.

A resident surgeon is elected yearly, and three resident pupils half-yearly. At the termination of the session prizes in Clinical Medicine and Surgery and in Obstetric Medicine will be awarded.

Hudson Scholarship.—In addition to the junior prizes, the Hudson Scholarship, £30 and a gold medal, as well as a prize of £10, together with a silver medal, will be awarded at the end of the session for proficiency in Clinical Medicine and Medical Pathology, Clinical Surgery and Surgical Pathology, Pathological Histology, Surgical Appliances, including instruments and bandaging, Ophthalmology and Gynæcology.

The certificates of attendance are recognised by all the Universities and licensing bodies in the United Kingdom. Further particulars may be obtained from Mr. F. T. Heuston.

COOMBE LYING-IN HOSPITAL AND GUINNESS DISPENSARY FOR THE TREATMENT OF DISEASES PECULIAR TO WOMEN, Dublin.—This hospital contains nearly 70 beds, and consists of two divisions, one of which is devoted to lying-in cases, and the other to the treatment of the diseases peculiar to women. The maternity department is one of the largest in Ireland, 3000 cases being annually treated either as intern or extern patients. A regular course of lectures is delivered in the hospital, and clinical instruction is given daily at the bedside. There are two large dispensaries connected with the institution, at one of which instruction is given on the General Diseases of Women and Children, and in the other on the Diseases Peculiar to Women. There is accommodation for a limited number of intern pupils, who enjoy exceptional advantages of acquiring a practical knowledge of this branch of their profession. Two Resident Pupil Midwifery Assistants and one Clinical Clerk are elected half-yearly from among the pupils of the hospital. Certificates of attendance at this hospital are accepted by all licensing bodies, and the diploma is recognised by the Local Government Board as a full legal midwifery qualification. Fees (six months' course): extern pupils, 8 guineas, half payable in advance; intern pupils, 18 guineas for six months' residence. If pupils enter as interns by the month the fees are £4 4*s.* for first month, and £3 3*s.* for each succeeding month. Intern pupils enjoy very special advantages, which can be learned on application. Registration fee on entrance, 10*s.* 6*d.* Students can enter for attendance at any time. Further particulars may be had on application to the Master or the Registrar at the hospital.

SIR PATRICK DUN'S HOSPITAL.—Fees for attendance of students—nine months, £12 12*s.*; six months, £8 8*s.*; three months, £5 5*s.* The hospital is open to extern students as well as to the students of Trinity College, and the certificates are recognised by all the licensing bodies in the kingdom. Dr. Taylor, Secretary to the Medical Board, will give any further information. The Winter Session begins on Oct. 1st.

MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY.—This hospital was founded in 1753, and now contains 160 beds available for clinical teaching. A new building for the isolated treatment of fevers has recently been added. The certificates of this hospital are recognised by all the universities and licensing bodies of the United Kingdom.

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TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE MEDICAL SCHOOLS OF IRELAND FOR THE SESSION

LECTURES &c.	DUBLIN UNIVERSITY.	DUBLIN R.C. OF SURGEONS.		DUBLIN, CATHOLIC UNIVERSITY.‖		BELFAST, QUEEN'S COLLEGE.		CORK, QUEEN'S COLLEGE.		GALWAY, QUEEN'S COLLEGE.	
	LECTURERS.	LECTURERS.	FEES.	LECTURERS.	FEES.	LECTURERS.	FEES. First Course.	LECTURERS.	FEES. First Course.	LECTURERS.	FEES. First Course.
							£ s.		£ s.		£ s.
HISTOLOGY & PHYSIOLOGY.	...	Prof. Scott	Course, £3 3s., in all Classes, ex. Descr. Anat. (£5 5s.), Oper. Surg. (£5 5s.), Pract. Chem. (£5 5s.), Pract. Histology (£5 5s.).	Dr. Coppinger & Dr. Coffey† Dr. Birmingham	£3 3s. each Course, except Dissections, Pract. Chem., Oper. Surg., Histology, and Pub. Health, which are £5 5s. each.	Dr. W. H. Thompson	3 0	Dr. J. J. Charles.	3 0	Dr. Pye	3 0
ANATOMY, DESCRIPTIVE & SURGICAL	Dr. Cunningham	Prof. Fraser				Dr. J. Symington	2 0		...	Dr. Pye	2 0
PRACTICAL ANATOMY AND DISSECTIONS	Dr. Cunningham	Prof. Fraser		Dr. Birmingham,† assisted by Drs. Fagan & Dempsey		Dr. Symington & Demonstrators	3 0	Dr. Charles and Demonstrators.	3 0	Dr. Pye and Demonstrators	3 0
CHEMISTRY	Dr. Reynolds	Profs. Sir C. Cameron and Lapper		Dr. Campbell assisted by Dr. Frengley		Dr. Letts	2 0	Dr. Augustus E. Dixon	2 0	Dr. Senier	2 0
PRACTICAL CHEMISTRY ...	Dr. Reynolds					Dr. Letts†	3 0	Dr. Augustus E. Dixon	3 0	Dr. Senier	3 0
MATERIA MEDICA AND PHARMACY	Dr. W. G. Smith	Prof. Sir G. F. Duffey		Dr. Quinlan *		Dr. W. Whitla	2 0	Dr. C. Y. Pearson	2 0	Dr. Colahan	2 0
BOTANY AND ZOOLOGY ...	Dr. Wright Prof. Mackintosh	Profs. Minchin and Cosgrove‡		Dr. Sigerson † & Dr. Blaney		Dr. R. O. Cunningham‡	2 0	Professor Hartog	2 0 each	Dr. R. J. Anderson	2 0
INSTITUTES OF MEDICINE AND PATHOLOGY	Dr. Purser	Prof. Myles		Dr. McWeeney		...	...	...	...	Dr. Lynham	2 0
NATURAL PHILOSOPHY ...	Prof. FitzGerald	...		Prof. Stewart†		Prof. W. B. Morton	2 0	Mr. William Bergin	2 0	Prof. Anderson	2 0
HOSPITAL PRACTICE	SIR P. DUN'S OR OTHER DUBLIN HOSPITAL.	THE VARIOUS DUBLIN HOSPITALS.		THE VARIOUS DUBLIN HOSPITALS.		BELFAST ROYAL AND OTHER HOSPITALS.	...	NORTH AND SOUTH INFIRMARIES.	...	GALWAY HOSPT'L, GALWAY UNION HOSPITAL, & GALWAY FEVER HOSPT'L	Sess. 5 0
CLINICAL LECTURES	...	...		...		...	...	...	...	Drs. Kinkead, Pye, Brereton, Colahan, and Lynham	...
SURGERY	Dr. H. H. Bennett	Profs. Sir W. Stokes and W. Stoker		Mr. P. J. Hayes & Mr. McArdle		Dr. Sinclair	2 0	Dr. S. O'Sullivan	2 0	Dr. W. Brereton	2 0
OPERATIVE SURGERY	...					Dr. Sinclair*	2 0	Dr. S. O'Sullivan		...	
MIDWIFERY, &c....	Dr. A. V. Macan	Prof. S. R. Mason		Dr. A. J. Smith		Dr. J. W. Byers	2 0	Dr. Corby	2 0	Dr. Kinkead	2 0
MEDICINE	Dr. Finny	Prof. J. W. Moore		Sir C. J. Nixon		Dr. Cuming	2 0	...	2 0	Dr. Lynham	2 0
MEDICAL JURISPRUDENCE	Dr. Bewley	Prof. Auchinleck		Dr. Roche		Dr. Hodges	2 0	Dr. C. Yelverton Pearson	...	Dr. Senier Dr. Kinkead	2 0
COMPARATIVE ANATOMY ...	Prof. Mackintosh	...		Drs. Sigerson & Blaney†		...	...	...	2 0	[*Modern Languages:* Prof. Steinberger]	...
PRACTICAL PHARMACY ...	Dr. W. G. Smith	Prof. Sir G. F. Duffey		Dr. Quinlan		Dr. V. G. L. Fielden	2 0	Dr. C. Y. Pearson	...	...	2 0
LOGIC	The College Tutors	...		... [*Medical Registrar:* Dr. Birmingham]		Prof. J. Park	2 0	Professor Stokes	1 0	Sir T. W. Moffett	2 0
PHYSICS	...	Prof. Lapper		Prof. Stewart †		...	...	...	...	...	...
PATHOLOGY...	Mr. O'Sullivan	...		Dr. McWeeney		Dr. J. Lorrain Smith	2 0	Dr. Cotter	2 0	Dr. Lynham	2 0
OPHTHALMOLOGY AND OTOLOGY	...	Profs. Jacob, Fitzgerald, and Story		Dr. Werner		Dr. W. A. McKeown	2 0	Dr. Sandford	...	...	...
HYGIENE	Dr. Bewley	Sir Charles Cameron		Dr. Roche		Dr. R. A. Letts and Dr. Henry Whitaker	2 0	Dr. Donovan	...	...	...

* In Summer. † In Winter and in Summer. ‡ Zoology in Winter; Botany in Summer. ‖ Including Biology. ¶ No returns.

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Medical and Surgical Resident Pupils and Clinical Clerks and Dressers are appointed every six months, and a House Surgeon is elected annually. A prospectus giving the complete arrangements for the Medical and Surgical classes for the coming session may be obtained from the Secretary of the Medical Board, R. Glasgow Patteson, F.R.C.S, 20, Lower Baggot-street, Dublin.

MATER MISERICORDIÆ HOSPITAL, Dublin. — Consulting Physician: Sir Francis R. Cruise. Physicians: Sir Christopher Nixon, Drs. Joseph Redmond, Michael Boyd, and John Murphy. Assistant Physician: Dr. Martin Dempsey. Medical Registrar: Dr. John O'Donnell. Surgeons: Messrs. Patrick Hayes, Charles Coppinger, Arthur Chance, and John Lentaigne. Assistant Surgeon: Mr. Hugh Blaney. Obstetric Physician: Dr. Thos. More Madden. Ophthalmic Surgeon: Mr. Louis Werner. Dental Surgeon: Mr. Daniel Corbett, jun. Pathologist: Dr. Edmond McWeeney. Anæsthetist and Surgical Registrar: Dr. Michael O'Sullivan. House Physician: Dr. Whelan. House Surgeons: Messrs. Mitchell, Birmingham, Hamilton, and Kerr. This hospital, the largest in Dublin, at present containing 323 beds, is open at all hours for the reception of accidents and urgent cases. Fifty beds are specially reserved for the reception of patients suffering from fever and other contagious diseases. Instruction at the bedside will be given by the Physicians and Surgeons at 9 A.M. daily. Clinical Instruction will commence on Monday, Oct. 4th, at 9 A.M. A course of Clinical Instruction on Fever will be given during the winter and summer sessions. A certificate of attendance upon this course, to meet the requirements of the licensing bodies, may be obtained. Opportunities are afforded for the study of Diseases of Women in the ward under the care of the Obstetric Physician, and at the Dispensary held on Tuesdays and Saturdays. Ophthalmic Surgery will be taught in the Special Wards and Dispensary. Surgical Operations will be performed on Mondays, Tuesdays, Fridays, and Saturdays at 10 o'clock. Connected with the hospital are extensive Dispensaries, which afford valuable opportunities for the study of general Medical and Surgical Diseases, Accidents, &c. Instruction will be given on Pathology and Bacteriology. Junior Appointments: A House Physician and four House Surgeons will be appointed annually. Eight resident pupils will be elected from the most attentive of the class to hold office for six months. For the current session the elections will take place in the first week of November and in the first week of May. Dressers and Clinical Clerks will be appointed, and certificates will be given to those who perform their duties to the satisfaction of the staff. Leonard Prizes: One Gold and one Silver Medal will be offered for competition annually in the subject of Medicine, and one Gold and one Silver Medal in the subject of Surgery. Junior Leonard Prizes: One prize value £3 and one prize value £2 will be awarded in Medicine, and one prize value £3 and one prize value £2 will be awarded in Surgery. They will be awarded on the aggregate of marks gained for Reports of Cases and at a Clinical Examination to be held at the close of the summer session. For further particulars see prospectus. Certificates of attendance upon this hospital are recognised by all the Universities and licensing bodies in the United Kingdom. Private Wards have been opened for the reception of Medical and Surgical cases. A Training School and Home for Trained Nurses have been opened in connexion with the Hospital.

Terms of attendance.—Nine months, £12 12*s.*; six winter months, £8 8*s.*; three summer months, £5 5*s.* Entries can be made with any of the physicians or surgeons, or with the Registrar, Arthur Chance, F.R.C.S., 90, Merrion-square. A prospectus containing in detail the arrangements for Clinical Instruction, Prizes, &c., may be obtained from the Secretary, Dr. Joseph Redmond, 8, Clare-street, Dublin.

RICHMOND, WHITWORTH, AND HARDWICKE HOSPITALS, North Brunswick-street, Dublin.—These hospitals contain 312 beds—110 for Surgical cases, 82 for Medical cases, and 120 for Fever and other epidemic Diseases. A Resident Physician and a Resident Surgeon are appointed each year, and are paid for their services. Clinical Clerks: Five Resident Clinical Clerks are appointed each half-year, and provided with furnished apartments, fuel, &c. These appointments are open not only to advanced Students as formerly, but also to those who are qualified in Medicine or Surgery. The Dressers are selected from among the best qualified of the pupils without the payment of any additional fee. For prospectuses apply to Sir W. Thomson, F.R.C.S., Treasurer, 54, Stephen's-green East; or to T. O'Carroll, M.D., Hon. Sec., 27, Westland-row, Dublin.

ROTUNDA HOSPITAL, Rutland-square, Dublin.—This institution consists of two distinct hospitals—namely, the Lying-in Hospital and the Auxiliary Hospital, the latter for the reception of patients suffering from Uterine and Ovarian Diseases. There is also a large extern maternity and a Dispensary for Diseases Peculiar to Women, which is open daily. Clinical instruction is given daily (Saturdays excepted) in Midwifery and the Diseases peculiar to Women, special attention being directed to the application of antiseptics in Midwifery. Accommodation is provided for a limited number of intern pupils.

DR. STEEVENS'S HOSPITAL.—This hospital, containing beds for 200 patients, is situated close to the Kingsbridge Terminus of the Great Southern and Western Railway, occupying a position in the centre of one of the busiest manufacturing districts of the city, otherwise unprovided with medical institutions, and affords exceptional advantages for clinical instruction. Immediately adjoining is St. Patrick's (Swift's) Asylum for the Insane. The hospital is easily accessible by two lines of tramways. There is a ward entirely devoted to Venereal Disease, a detached building for Fever Cases, and an extensive Out-patient Department, with separate Clinics for Diseases of the Skin, Throat, Eye, Ear, and Teeth.

The hospital is visited daily at 9 A.M. by the physicians and surgeons. The wards are also visited by the resident surgeon each evening. Clinical Lectures are given by the physicians and surgeons during the session. There is accommodation in the hospital for two medical and six surgical resident clinical assistants.

Fees.—Hospital Practice: Nine months, £12 12*s.*; six months, £8 8*s.*; three months, £5 5*s.* Dressership: £10 10*s.* each three months. Further information may be obtained from the Resident Surgeon or from R. A. Hayes, M.D., Hon. Sec., 82, Merrion-square South.

POST-GRADUATE COURSES.

THE LONDON POST-GRADUATE COURSE.—This course is specially arranged to meet the wants of the practitioner and to enable him during his leisure time to brush up his knowledge on subjects about which he may desire further information. It has been both popular and successful and has been attended by men from all parts of the Empire, from all branches of the Services, from the United States of America, as well as from foreign countries. Members can enter for each or all of the courses of lectures for the term, for half the term, or for all the lectures for one week, and thus each can obtain just what he wants and in the shortest possible time. The Vacation Courses have been attended by large numbers of practitioners and have been much appreciated. By this means men who wished to bring themselves abreast of the scientific knowledge of the day have been able to learn the elements of the technique of bacteriology and the latest advances in hygiene in a fortnight's daily course. The staffs of the following hospitals have associated themselves for teaching purposes—viz., the Hospital for Diseases of the Skin, Blackfriars; the London Throat Hospital; and the Bethlem Royal Hospital for Lunatics; and courses are given at the Bacteriological Laboratory, King's College, at the Parkes Museum on Hygiene, at the Cleveland-street Sick Asylum on Clinical Medicine and Surgery, and at the Institute of Preventive Medicine in Clinical Chemistry. The fees are £1 1*s.*, £2 2*s.*, and £3 3*s.*, according to the number of lectures in the course. Further information can be obtained from, and fees should be paid to, Dr. Fletcher Little, Secretary, 32, Harley-street, Cavendish-square, W.

CHARING-CROSS HOSPITAL.—Special series of clinical lectures and practical demonstrations, exclusively arranged for the convenience of practitioners and post-graduate students, are given at the hospital by members of the staff throughout the year. The lectures for the year are arranged in three courses, each course consisting of ten meetings and lasting ten weeks. Two of these courses are held during the winter and one during the summer. The class meets on each Thursday afternoon at 4 P.M. in the board-room of the hospital, and proceeds thence to the wards or other department in which the demonstration may be held. Practitioners wishing to join the class can receive any further information as to the dates and subjects by communicating with the Honorary Secretary or the Honorary Treasurer at the hospital.

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY.

INSTITUTION.	TITLE OF SCHOLARSHIP, &c.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
LONDON UNIVERSITY ..	No. 1.	£40 per annum.	2 years.	By first place with distinction in ANATOMY at July Intermediate M.B. Examination.	M.B. taken within 3 years.
	No. 2.	£40 per annum.	2 years.	By first place, with distinction in PHYSIOLOGY AND HISTOLOGY at July Intermediate M.B. Examination.	Ditto.
	No. 3.	£30 per annum.	2 years.	By first place with distinction in ORGANIC CHEMISTRY at July Intermediate M.B. Examination.	Ditto.
	No. 4.	£30 per annum.	2 years.	By first place with distinction in MATERIA MEDICA and PHARMACEUTICAL CHEMISTRY at July Intermediate M.B. Examination.	Ditto.
	University Scholarship in Medicine.	£50 per annum.	2 years.	By first place with distinction in MEDICINE at M.B. Honours Examination.	
	University Scholarship in Obstetric Medicine.	£30 per annum.	2 years.	By first place with distinction in OBSTETRIC MEDICINE at M.B. Honours Examination.	
	University Scholarship in Forensic Medicine.	£30 per annum.	2 years.	By first place with distinction in FORENSIC MEDICINE at M.B. Honours Examination.	
	University Scholarship in Surgery.	£50 per annum.	2 years.	By first place with distinction in B.S. Honours Examination.	
ST. BARTHOLOMEW'S MEDICAL SCHOOL	Entrance Scholarships. No. 1.	£75.	....	Open Competitive Examination in PHYSICS and CHEMISTRY.	Full Course at St. Bartholomew's Hospital.
	,, No. 2.	£75.	....	Open Competitive Examination in BIOLOGY and PHYSIOLOGY.	Ditto.
	,, No. 3.	£150.	....	Open Competitive Examination in PHYSICS, CHEMISTRY, and BIOLOGY.	Ditto.
	Preliminary Scientific Exhibition.	£50.	....	Open Competitive Examination in PHYSICS, CHEMISTRY, and BIOLOGY.	Ditto.
	Jeaffreson Exhibition.	£20.	....	Open Competitive Examination in LATIN, MATHEMATICS, and GREEK, FRENCH, or GERMAN.	None.
	Shuter Scholarship.	£50.	....	Competitive Examination among Cambridge Graduates in ANATOMY, PHYSIOLOGY, and MATERIA MEDICA.	None.
	Junior Scholarships.				
	,, No. 1.	£30.	....	Competitive Examination among Students in ANATOMY and BIOLOGY.	None.
	,, No. 2.	£20.	....	Ditto.	None.
	,, No. 3.	£25.	....	Competitive Examination in CHEMISTRY, PHYSICS, and HISTOLOGY.	None.
	,, No. 4.	£15.	....	Ditto.	None.
	Senior Scholarship.	£50.	....	Competitive Examination among Students in ANATOMY, PHYSIOLOGY, and CHEMISTRY.	Study at St. Bartholomew's Hospital.
	Kirkes Scholarship.	£30 and Medal.	....	Competitive Examination among Students in CLINICAL MEDICINE.	
	Brackenbury Scholarships.				
	,, No. 1.	£39.	....	Competitive Examination among Students in MEDICINE.	
	,, No. 2.	£39.	....	Competitive Examination among Students in SURGERY.	
	Lawrence Scholarship.	£42 and Medal.	....	Competitive Examination among Students in SURGERY, MEDICINE, and MIDWIFERY.	None.
	Sir Geo. Burrows Prize.	£10 10s.	....	Competitive Examination in PATHOLOGY among Students.	
	Skynner Prize.	£15.	....	Competitive Examination in REGIONAL and MORBID ANATOMY among Students.	
	Matthews Duncan Medal and Prize.	£20.	....	Competitive Examination among Students in MIDWIFERY and GYNÆCOLOGY.	None.
	Research Studentship in Pathology.	£100.	....	By Election, on the recommendation of the School Committee.	None.
CHARING CROSS HOSPITAL AND COLLEGE	Entrance Scholarships, open to students at the commencement of curriculum.				
	Livingstone.	100 guineas.	....	The Livingstone and Huxley Scholarships are awarded annually at the commencement of each Winter Session, after a competitive examination in the following groups of subjects: — (1) ENGLISH, including LANGUAGE, HISTORY, and GEOGRAPHY; (2) Any two of the following four languages —LATIN, GREEK, FRENCH, and GERMAN; (3) MATHEMATICS,	Open to all general students.
	...	60 ,,	....		Open to all general students.

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY—*continued.*

INSTITUTION.	TITLE OF SCHOLARSHIP, &c.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
CHARING-CROSS HOSPITAL AND COLLEGE—*continued.*	Huxley.	55 guineas.	....	including ARITHMETIC, ALGEBRA, and GEOMETRY; and MECHANICS, including STATICS and DYNAMICS; (4) INORGANIC CHEMISTRY and EXPERIMENTAL PHYSICS, including ACOUSTICS, HEAT, MAGNETISM, ELECTRICITY, and OPTICS; and (5) ANIMAL and VEGETABLE BIOLOGY. No candidate may offer himself for examination in more than three of the above groups of subjects, the selection of the groups being left entirely to the Candidate.	For sons of medical men.
	...	40 ,,	....	....	Open to all general students.
	...	30 ,,	....	....	For dental students.
	Epsom Scholarship.	Free education.	....	....	Epsom Foundation Scholars who have passed Preliminary Scientific M.B. Lond. Univ.
	Universities Scholarship (1)	60 guineas.		Examination in ANATOMY and PHYSIOLOGY, including HISTOLOGY.	Oxford Students who have passed first M.B. Exam.
	Universities Scholarship (2)	60 ,,			Cambridge students who have passed second M.B. Exam.
					London students who have passed Intermediate Exam. in Med. who have not entered at any London Medical School.
	Llewellyn Scholarship.	£25.	— —	Competitive Examination among Fourth-year Students in ANATOMY, PHYSIOLOGY, PHARMACOLOGY, MEDICINE, SURGERY, THERAPEUTICS, and MIDWIFERY.	None.
	Golding Scholarship.	£10.	— —	Competitive Examination among Second-year General Students in ANATOMY and PHYSIOLOGY, CHEMISTRY, and BIOLOGY.	Students must have attended the Classes in each subject at this School.
ST. GEORGE'S HOSPITAL.	Entrance Scholarships. No. 1.	£150.	— —	Competitive Examination among First-year Students, being the sons of medical men, in LATIN, GREEK, FRENCH, GERMAN, MATHEMATICS, PHYSICS, CHEMISTRY, and PHYSIOGRAPHY; three at option.	Previous entrance at St. George's School.
	,, No. 2.	£85.	— —	Competitive Examination among Students being First M.B.'s of Oxford or Second M.B.'s of Cambridge, in ORGANIC CHEMISTRY, ANATOMY, PHYSIOLOGY, ZOOLOGY, and BOTANY; two at option.	Ditto.
	,, No. 3.	£85.	....	Ditto.	Ditto.
	,, No. 4.	£85.	....	Competitive Examination among Students of Provincial University Colleges of similar standing in the same subjects.	Ditto.
	,, No. 5.	£50.	— —	Competitive Examination among Students in the same subjects as Entrance Scholarship No. 1.	To enter St. George's School.
	,, No. 6.	£50.	....	Ditto.	Ditto.
	Wm. Brown Exhibition.	£100 per annum.	2 years.	Competitive Examination among Perpetual Pupils having registrable qualification in the PRACTICE OF MEDICINE, MIDWIFERY, and SURGERY.	Study at St. George's School.
	,,	£40 per annum.	3 years.	Competition among Third-year Students in the same subjects.	Ditto.
	Brackenbury Prize in Medicine.	Interest on £1108.	.. ..	Competitive Examination among Students of not more than five years' standing.	None.
	Brackenbury Prize in Surgery.	Interest on £1108.	....	Competitive Examination among Students of not more than five years' standing.	None.
	Treasurer's Prize.	£10 10s.	....	Proficiency in Clinical Examination of three Medical and three Surgical Cases, together with a written Examination in Medicine, Surgery, and Midwifery.	None.
	H. C. Johnson Memorial Prize.	£10 10s.	— —	Competitive Examination in PRACTICAL ANATOMY.	None.
	Pollock Prize.	Interest on £372.	— —	Competitive Examination in PHYSIOLOGY, PHYSIOLOGICAL CHEMISTRY, and HISTOLOGY.	None.
	Clarke Prize.	Interest on £209.	....	Awarded for Clinical Reports and Commentaries.	None.
	Thompson Medal.	Interest on £185.	....		
	Brodie Prize.	Interest on £220.	....		
	Acland Prize.	£5.	....		
	General Proficiency Prizes. No. 1.	£10 10s.	— —	Competitive Examination in ELEMENTARY ANATOMY, BIOLOGY, CHEMISTRY, and PHYSICS.	None.
	,, No. 2.	£10 10s.	— —	Competitive Examination in ANATOMY, PHYSIOLOGY (including HISTOLOGY), and PHYSIOLOGICAL CHEMISTRY.	None.

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY—*continued.*

INSTITUTION.	TITLE OF SCHOLARSHIP, &c.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
ST. GEORGE'S HOSPITAL—*continued.*	General Proficiency Prizes. No. 3.	£10 10s.	...	Competitive Examination in ORGANIC CHEMISTRY, ANATOMY, and PHYSIOLOGY, including HISTOLOGY and PHYSIOLOGICAL CHEMISTRY.	None.
	,, No. 4.	£10 10s.	...	Competitive Examination in MEDICINE, SURGERY, OBSTETRIC MEDICINE, and PATHOLOGY.	None.
GUY'S HOSPITAL	Entrance Scholarships. No. 1.	£100.	...	Open Competitive Examination among Candidates under twenty years of age in LATIN, GREEK, FRENCH, GERMAN, ARITHMETIC, EUCLID, and ALGEBRA.	Course at Guy's Hospital.
	,, No. 2.	£50.	...	Under twenty-five years of age, ditto.	Ditto.
	,, No. 3.	£150.	...	Open Competitive Examination among Candidates under twenty-five years of age in INORGANIC CHEMISTRY, GENERAL BIOLOGY, and EXPERIMENTAL PHYSICS.	Perpetual Course at Guy's Hospital.
	,, No. 4.	£60.	...	Ditto.	Ditto.
	Arthur Durham Prizes.	£15.	...	Dissections done by Students of more than one year's standing.	
	,,	£5.	...	Dissections by First-year Students.	Ditto.
	Hilton Prize.	£5.	...	Ditto.	
	Junior General Proficiency.	£20.	...	Competitive Examination among Junior Students in ELEMENTARY ANATOMY.	None.
	,,	£15.	...	Ditto.	Ditto.
	,,	£15.	...	HISTOLOGY, and ANATOMY and PHYSIOLOGY.	Ditto.
	Michael Harris Prize.	£10.	...	Competitive Examination among Second-year Students in HUMAN ANATOMY.	Ditto.
	Sands Cox Scholarship.	£15 per annum.	3 years.	Competitive Examination among Second-year Students in PHYSIOLOGY, HISTOLOGY, and PHYSIOLOGICAL CHEMISTRY.	Course at Guy's Hospital.
	Wooldridge Memorial Prize.	£10.	...	Ditto.	
	Senior General Proficiency.	£20.	...	Competitive Examination among Senior Students in MEDICINE, SURGERY, MIDWIFERY, DISEASES OF WOMEN, MEDICAL JURISPRUDENCE, THERAPEUTICS, PUBLIC HEALTH and MENTAL DISEASES.	Ditto.
	,,	£15.	...	Ditto.	Ditto.
	,,	£10.	...	Ditto.	Ditto.
	Golding-Bird Prize.	£20 and Medal.	...	Competitive Examination among Senior Students in SANITARY SCIENCE.	Ditto.
	Bredin Prize.	£25.	...	ORIGINAL REPORTS on Three Medical and Three Surgical Cases.	Ditto.
	Beaney Prize.	£31 10s.	...	Competitive Examination among Students in PATHOLOGY.	Ditto.
	Gull Studentship, Pathology.	£150 per annum.	3 years.	Awarded without Competitive Examination to Students intending to conduct Research in this subject.	
	Beaney Scholarship, Therapeutics.	£31 10s.	3 years.	Ditto.	
KING'S COLLEGE	Warneford Scholarships. No. 1.	£25 per annum.	3 years.	Competitive Examination among Matriculated Medical Students in DIVINITY, ENGLISH, HISTORY, LATIN, GREEK, FRENCH, GERMAN, and MATHEMATICS.	Perpetual Course at King's College.
	,, No. 2.	£25 per annum.	3 years.	Ditto.	Ditto.
	,, Class II.	£25 per annum.	2 years.	Competitive Examination among Matriculated Medical Students in the third year, residing in the College.	
	Sambrooke Exhibitions. No. 1.	£60.	...	Competitive Examination among Matriculated Students in MATHEMATICS, ELEMENTARY PHYSICS, INORGANIC CHEMISTRY, BOTANY, and ZOOLOGY.	Course either as Science or Medical Student at King's College.
	,, No. 2.	£40.	...	Ditto.	Ditto.
	Rabbeth Scholarship.	£20.	...	Competitive Examination among Matriculated Students in Science.	None.
	Science Exhibitions. No. 1.	£30 per annum.	2 years.	Competitive Examination among Candidates under nineteen years of age in MATHEMATICS, MECHANICS, PHYSICS, &c., or alternative Subjects.	None.
	,, No. 2.	£20 per annum.	2 years.	Ditto.	None.
	Medical Entrance Scholarships.				
	,, No. 1.	£73 10s.	...	Open Competitive Examination for Students who propose to take degree at any British University and have passed the Examination at that University in BIOLOGY, CHEMISTRY, and PHYSICS.	
	,, No. 2	£63.	...	Ditto.	

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY—*continued.*

INSTITUTION.	TITLE OF SCHOLARSHIP, &c.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
KING'S COLLEGE—*continued.*	Medical Scholarships. No. 1.	£40 per annum.	1 year.	Competitive Examination among Third- and Fourth-year Students.	
	,, No. 2.	£30.	1 year.	Competitive Examination among Second- and Third-year Students.	
	,, No. 3.	£20.	1 year.	Competitive Examination among First-year Medical Students.	
	,, No. 4.	£20.	1 year.	Ditto.	
	Sambrooke Registrarship. No. 1.	£50.	2 years.	Competitive Examination among Matriculated Medical Students who have filled certain appointments at hospitals.	
	,, No. 2.	£50.	....	Ditto.	
	Daniel Scholarship.	£20 per annum.	2 years.	Open Competitive Examination among six months' Laboratory Students.	
	Carter Prize.	£15.	....	Open Competitive Examination in Botany.	
	Tanner Prize.	£10.	....	Competitive Examination in OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.	None.
	Todd Prize.	£4 4s. and medal.	....	Competitive Examination in Clinical Medicine.	
LONDON HOSPITAL	1. Price Scholarships.	£120.	....	Competitive Examination among Students in subjects of Preliminary Scientific M.B. Examination at University of London.	
	2. Entrance Scholarships.				
	,, No. 1.	£60.	....	Ditto.	
	,, No. 2.	£35.	....	Ditto.	
	3. Epsom College Scholarship.	Free Education.	....	....	
	4. Price Scholarships.	£60.	....	HUMAN ANATOMY AND PHYSIOLOGY.	Study at Oxford or Cambridge.
	Buxton Scholarships. No. 1.	£30.	....	Competitive Examination among Students in subjects of Preliminary Examination.	
	,, No. 2.	£20.	....	Ditto.	
	Scholarship.	£20.	....	Competitive Examination in CLINICAL MEDICINE.	
	,,	£20.	....	Competitive Examination in CLINICAL SURGERY.	
	,,	£20.	....	Competitive Examination in CLINICAL OBSTETRICS.	
	Sutton Prize in Pathology.	£20.	....	Competitive Examination in PATHOLOGY.	
	Duckworth Nelson Prize.	£10.	....	PRACTICAL MEDICINE and SURGERY.	
	Biennially: Letheby Prizes.	£20 and £10.	....	Competitive Examination in CHEMISTRY.	
	Scholarship.	£25.	....	Competitive Examination in ANATOMY AND PHYSIOLOGY.	
	,,	£20.	....	Competitive Examination in ANATOMY and BIOLOGY.	
	Dressers' Prize.				
	,, No. 1.	£15.	....	ZEAL, EFFICIENCY, and KNOWLEDGE OF MINOR SURGERY.	
	,, No. 2.	£15.	....	Ditto.	
	,, No. 3.	£10.	....	Ditto.	
	,, No. 4.	£10.	....	Ditto.	
	,, No. 5.	£5.	....	Ditto.	
	,, No 6.	£5.	....	Ditto.	
	Triennially: Hutchinson Prize.	£35.	....	For the best essay upon a subject in CLINICAL SURGERY.	
	Practical Anatomy Prizes.	£6. £4.	....		
	Biennially: Andrew Clark Prize.	£26.	....	CLINICAL MEDICINE and PATHOLOGY.	
	James Anderson Prize.	£9.	....	Clinical Medicine.	
ST. MARY'S HOSPITAL ..	Natural Science Scholarship. No. 1.	£144.	....	Competitive Examination among Students in NATURAL SCIENCE.	
	,, No. 2.	£78 15s.	....	Ditto.	
	,, No. 3.	£78 15s.	....	Ditto.	
	,, No. 4.	£78 15s.	....	Ditto.	
		£144.	....	For Students from Epsom College being sons of Medical Men.	
	,, No. 1.	£57 15s.	....	Competitive Examination among Students from Oxford, Cambridge, or other University in SUBJECTS OF PRELIMINARY SCIENTIFIC EXAMINATION AT LONDON UNIVERSITY.	
	,, No. 2.	£57 15s.	....	Ditto.	
		£20.	....	Competitive Examination among First-year Students.	
		£20.	....	Competitive Examination among Second-year Students.	
		£20	....	Competitive Examination among Third-year Students.	
		£20.	....	Competitive Examination among Fourth-year Students.	

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY—*continued.*

INSTITUTION.	TITLE OF SCHOLARSHIP, &c.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
MIDDLESEX HOSPITAL ..	Entrance Scholarship. No. 1.	£100.	....	Open Competitive Examination.	Course at Middlesex Hospital.
	,, No. 2.	£60.	....	Ditto.	Ditto.
	,, No. 3.	£30 per annum.	2 years.	Competitive Examination among Students from Oxford or Cambridge. (Subjects: ANATOMY and PHYSIOLOGY, including HISTOLOGY.)	
		£126.	....	To Students of Epsom College, on Nomination of Head Master.	
	Broderip Scholarship. No. 1.	£60.	....	Competitive Examination among Senior Students in CLINICAL SUBJECTS.	
	,, No. 2.	£40.	....	Ditto.	
	Governor's Prize.	£21.	....	Competitive Examination among Students during Sixth Year of Study.	
	Hetley Clinical Prize.	£35.	....	Competitive Examination among the Students during Fifth Year of Study.	
	John Murray Gold Medal and Scholarship.	....	Every third year.	Examination in MEDICINE, SURGERY, and OBSTETRICS.	
	Lyell Medal.	£5 5s.	....	Examination in SURGICAL ANATOMY and PRACTICAL SURGERY.	
	Leopold Hudson Prize.	£11 11s.	....	Examination in SURGICAL PATHOLOGY and BACTERIOLOGY.	
ST. THOMAS'S HOSPITAL	College Prizes.				
SUMMER.	,, No. 1.	£15.	....	Competitive Examination among First-year Students.	
	,, No. 2.	£10.	....	Ditto.	
	,, No. 3.	£15.	....	Competitive Examination among Second-year Students.	
	,, No. 4.	£10.	....	Ditto.	
	,, No. 5.	£15.	....	Competitive Examination among Third-year Students.	
	,, No. 6.	£10.	....	Ditto.	
	Entrance Science Scholarship. No. 1.	£150	....	Competitive Examination in PHYSICS, CHEMISTRY, PHYSIOLOGY, BOTANY, or ZOOLOGY.	Perpetual Course
	,, No. 2.	£60.	....	Ditto.	Ditto.
	,, No. 3.	£50.	....	Competitive Examination in ANATOMY, PHYSIOLOGY, and CHEMISTRY.	Perpetual Course from third year.
WINTER.	Wm. Tite Scholarship.	£27 10s.	....	Competitive Examination among First-year Students.	
	College Prizes.				
	,, No. 7.	£20.	....	Ditto.	
	,, No. 8.	£10.	....	Ditto.	
	Musgrove Scholarship.	£38 10s.	2 years.	Competitive Examination among Second-year Students.	
	Peacock Scholarship.	£38 10s.	2 years.	Ditto.	
	College Prizes.				
	,, No. 9.	£20.	....	Competitive Examination among Second-year Students.	
	,, No. 10.	£10.	....	Ditto.	
	,, No. 11.	£20.	....	Competitive Examination among Third-year Students.	
	,, No. 12.	£15.	....	Ditto.	
	,, No. 13.	£10.	....	Ditto.	
	Cheselden Medal.	....	....	Competitive Examination in SURGERY and ANATOMY.	
	Mead Medal.	....	....	Competitive Examination in MEDICINE and PATHOLOGY.	
	Bristowe Medal.	....	....	Competitive Examination in PATHOLOGY and MORBID ANATOMY.	
	Solly Medal and Prize.	....	....	SURGICAL REPORTS.	
	Treasurer's Gold Medal.	....	....	General Proficiency.	
	Biennially:				
	Beaney Scholarship.	....	....	For SURGERY and SURGICAL PATHOLOGY.	
	Sutton Sams Memorial Prize.	£5.	....	Reports of Cases in OBSTETRIC MEDICINE.	
	Grainger Testimonial Prize.	£15.	1 year.	For work in ANATOMY and PHYSIOLOGY.	
	The Salters' Company Research Fellowship.	£100 annually.	3 years.	Promotion of Research — PHARMACOLOGY.	
UNIVERSITY COLLEGE, LONDON	Entrance Scholarships. No. 1.	131 gs.	....	Open Competitive Examination in CHEMISTRY, PHYSICS, BOTANY, and ZOOLOGY.	Perpetual Course at University College
	,, No. 2.	55 gs.	....	Ditto.	Ditto.
	,, No. 3.	55 gs.	....	Ditto.	Ditto.
	Atkinson Morley Scholarship.	£45 per annum.	3 years.	Theory and Practice of Surgery.	
	Atchison Scholarship.	£55 per annum.	2 years.	Competitive Examination among Medical Students.	
	Sharpey Physiological Scholarship.	£120.	....	Proficiency in Biological Science.	
	Filliter Exhibit'n.	£30.	1 year.	Competitive Examination among Students in PATHOLOGICAL ANATOMY.	

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY—*continued.*

INSTITUTION.	TITLE OF SCHOLARSHIP, &c.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
UNIVERSITY COLLEGE, LONDON—*continued.*	Cluff Mem. Prize.	£15.	....	Competitive Examination among Students in ANATOMY, PHYSIOLOGY, and CHEMISTRY.	
	Erichsen Prize.	£10 10s.	....	Practical Surgery.	
	Morris Bursary.	£16.	2 years.	....	
WESTMINSTER HOSPITAL	Guthrie Entrance Scholarship.	£60 (total).	....	Open Competitive Examination among Candidates under twenty-five years of age in LATIN,* MATHEMATICS, EXPERIMENTAL PHYSICS, CHEMISTRY, and GREEK, FRENCH, or GERMAN.	For Students entering in the Winter Session.
	Entrance Scholarship.	£40 (total).	....	Ditto.	Ditto.
	Dental Scholarship.	£20 (total).	....	Ditto, as above, save that Dental Students only can compete.	Ditto.
	Free Presentation.	....	....	Open to Pupils of the Epsom Medical College, obtained by recommendation.	
	Entrance Scholarship (Governors).	£40 (total).	....	Open Competition in CHEMISTRY and EXPERIMENTAL PHYSICS according to the Synopsis of the Conjoint Board.	For Students entering in the Summer Session.
	Oxford and Cambridge Scholarship.	£40 (total).	....	Competitive Examination among Oxford and Cambridge Students in ANATOMY and PHYSIOLOGY.	
	Natural Science	£60.	....	Competitive Examination in subjects of Preliminary Scientific of London University.	For Students entering in the Summer Session.
	Arts Scholarship (Entrance).	£50.	....	Competitive Examination as for the Guthrie Scholarship, except that the Latin Book is that of the London Matriculation of the preceding January.	Ditto.
	Ditto.	£50.	....	Ditto.	Ditto.
	Treasurer's Prize.	£10 10s.	....	Competitive Examination among First-year Students in ANATOMY, PHYSIOLOGY or BIOLOGY, and CHEMISTRY.	
	President's Prize.	£21.	....	Competitive Examination among Second-year Students in ANATOMY, PHYSIOLOGY, and HISTOLOGY.	
	Sturges Prize in Clinical Medicine.	£10.	....	Notes and commentaries on 6 cases.	
	Clinical Surgery.	£5.	....	Ditto on 12 cases.	
	Chadwick Prize.	£21 in books or instruments.	....	Competitive Examination among Medical Students in MEDICINE and SURGERY, including PATHOLOGY and APPLIED ANATOMY and PHYSIOLOGY.	
	Bird Medal and Prize.	£14 in medal, books, or instruments.	....	Competitive Examination in MIDWIFERY and DISEASES of WOMEN, MEDICINE, and PATHOLOGY among Students who have completed their Fourth Winter Session at the Westminster Hospital School of Medicine.	
	Fish Prize.	£20.	....	PATHOLOGY by paper, also *vivâ voce* in Post-mortem Room and on MICROSCOPIC and MUSEUM PATHOLOGY.	
LONDON SCHOOL OF MEDICINE FOR WOMEN	Entrance Scholarship.	£30.	....	Competitive Examination in ENGLISH, LATIN, ARITHMETIC, EUCLID, and ALGEBRA.	
	Stuart Mill Scholarship.	£30.	4 years.	Ditto.	Candidates must be willing to enter into a legal arrangement to practise in India under the Countess of Dufferin's Fund.
	Fanny Butler Scholarship.	£14 10s.	4 years.	Ditto.	Candidates must be willing to work in connexion with the Church of England Zenana Missionary Society.
	John Byron Bursary.	£20.	2 to 4 years.	....	Offered to students already in the school requiring assistance for the prosecution of their medical studies.
	Two Mackay Prizes.	£20 each.	....	Given to the two Students gaining the highest number of marks in the School Examinations during the first two years of Medical Study.	
	Helen Prideaux Scholarship.	£50.	....	Given to Graduates of not more than 3 years' standing for Original Work.	
OXFORD UNIVERSITY ..	Burdett-Coutts Scholarships.	£80 per annum.	2 years.	Competitive Examination.	....
	Radcliffe Trav. Fellowship.	£200 ,, ,,	3 years.	Ditto.	Foreign Travel for purpose of Medical Study.
	Rolleston Prize.	£60 ,, ,,	....	Original Research.	

* The Latin Book is that of the Matriculation, University of London, in the preceding June.

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY—*continued*.

INSTITUTION.	TITLE OF SCHOLARSHIP, &c.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
UNIVERSITY OF DURHAM	Four Scholarships.	£25 a year each.	4 years.	Examination in GOSPEL OF ST. LUKE in GREEK, LATIN, ARITHMETIC, ALGEBRA, EUCLID, and ENGLISH HISTORY.	Students pursuing their medical studies and not of a sufficient standing to proceed to a Degree in Medicine.
College of Medicine	Dickinson Scholarship.	Interest on £400 and Gold Medal.	....	Examination in MEDICINE, SURGERY, MIDWIFERY, and PATHOLOGY.	Full students of the College of Medicine who have passed the intermediate examination of any of the Licensing Bodies named in Schedule A of the Medical Act, 1858.
	Tulloch Scholarship.	Interest on £400	....	Examination in ANATOMY, PHYSIOLOGY, and CHEMISTRY.	No student is eligible who commenced his medical curriculum more than two academical years before the date of examination.
	Charlton Memorial Scholarship.	Interest on £700	....	....	Open to full students of the College entered for the class on the Principles and Practice of Medicine.
	Gibb Scholarship.	Interest on £500	....	Awarded annually as a Scholarship in PATHOLOGY to full student who passes the best examination in that subject.	No student eligible after completion of his curriculum.
	Luke Armstrong Memorial Scholarship.	Interest on £680	....	Original Essay on some subject in COMPARATIVE PATHOLOGY.	Open to all graduates in Medicine or Hygiene and candidates for these degrees who have spent six months at the University, and whose age does not exceed thirty years.
	Stephen Scott Scholarship.	Interest on £1000.	....	Original essay on any Surgical subject.	Any graduate in Medicine or Surgery of the University or any student of the College of Medicine. Student's age must not exceed 30 years.
	Heath Scholarship.	Interest on £4000.	....	Original essay on CONGENITAL DEFORMITIES: THEIR PATHOLOGY AND TREATMENT.	All graduates in Medicine or Surgery of the University are eligible.
Royal Infirmary...	Goyder Memorial Scholarship.	Interest on £325.	Annually.	Student who most distinguishes himself in CLINICAL MEDICINE AND CLINICAL SURGERY at the Royal Infirmary.	
MASON COLLEGE, BIRMINGHAM	Ingleby Scholarships (1 or more).	£10 to £15.	1 year.	....	Candidates must have spent first two years of curriculum at the College.
	Sydenham Scholarship.	£10 10s. per annum.	3 years.	Award of Council to orphan sons of Medical Practitioners.	
	Sands Cox Scholarship.	£10 10s. per annum.	3 years.	Competitive Examination among sons of Medical Practitioners under eighteen years of age in ARTS SUBJECTS.	
	Queen's Scholarship.	£10 10s. per annum.	3 years.	Open Competitive Examination in ELEMENTARY SCIENCE, with a Modern Language.	
	Dental Scholarship.	£7 17s. 6d.	2 years.	Open Competitive Examination in subjects learned during apprenticeship.	
VICTORIA UNIVERSITY ...	Gilchrist Scholarship.	£50.	3 years.	Awarded annually to the candidate who shall stand highest at the June preliminary examination of the Victoria University provided that he pass in the first division.	Candidates must be over 18 years of age on July 1st in the year of competition.
	University Scholarship in Medicine.	£50.	1 year.	Awarded annually on the results of the second examination for the degrees of M.B. and Ch.B.	
OWENS COLLEGE, MANCHESTER	General Entrance Scholarships.	....	....	....	Open to candidates above 16 and under 20 years of age.
	Rogers.	£40.	2 years.	Subjects: GREEK, LATIN TRANSLATIONS AT SIGHT, and PROSE COMPOSITION.	

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY—*continued*.

INSTITUTION.	TITLE OF SCHOLARSHIP, &c.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
OWENS COLLEGE, MANCHESTER—*continued*	Seaton.	£40.	2 years,	Subjects: GREEK, LATIN TRANSLATIONS AT SIGHT, and PROSE COMPOSITION.	
	Dalton.	£40.	2 years.	Subjects: EUCLID, ALGEBRA, TRIGONOMETRY, GEOMETRY, and CONIC SECTIONS.	
	Cartwright.	£35.	2 years.	Ditto.	
	Hulme.	£35.	3 years.	Subjects: ENGLISH LANGUAGE and LITERATURE, HISTORY, GEOGRAPHY, and (LATIN, GREEK, FRENCH, or GERMAN, any two subjects).	
	James Gaskill	£40.	2 years.	MATHEMATICS and CHEMISTRY.	
	Manchester Grammar School	£18.	3 years.	MATHEMATICS, ENGLISH ESSAY with CLASSICS and PHYSICAL SCIENCE in alternate years.	
	Kay-Shuttleworth	£30.	3 years.	Subjects as in James Gaskill Scholarships.	Pupils of Sedbergh, Giggleswick, or Burnley Grammar School.
	Theodores Exhibition.	£15.	1 year.	Subjects: FRENCH and GERMAN.	Successful candidates are required to enter for a regular University course.
	Robert Platt Physiological Scholarship.	£50.	2 years.	Subjects: PHYSIOLOGY and COMPARATIVE ANATOMY.	Open to Candidates whether or not previously students of the College.
	Dauntesey Medical Scholarships (two).	£35 each.	1 year.	Subjects: ZOOLOGY, BOTANY, and CHEMISTRY.	These Scholarships are open to all students preparing for a Medical Course who shall not have attended Lectures or Laboratory Courses on Human Anatomy or Physiology, or a purely Medical or Surgical Course in the Owens College or any other Medical School in the United Kingdom. Candidates must not be more than 25 years of age on October 1st of the year of competition. Scholars must immediately on election enter for a full course of medical studies.
	Robert Platt Exhibitions (two).	£15 each.	....	....	First and second years' students in Physiology.
	Turner Scholarship.	£20.	....	....	Students who have completed a full course of medical study in the College are eligible only.
	John Henry Agnew Scholarship.	£30.	....	The Scholarship is awarded on the results of an Examination, partly written and partly clinical, on DISEASES OF CHILDREN, MEDICAL AND SURGICAL.	Open for competition annually to all students in the Medical Department who have pursued a regular course of medical study in the College extending over a period of not less than 4 years or more than 6, and who have attended the course of lectures on Diseases of Children.
	Dumville Surgical Prize.	£15.	....	Subjects: SYSTEMATIC, PRACTICAL, and OPERATIVE SURGERY, SURGICAL ANATOMY, and SURGICAL PATHOLOGY.	
BRISTOL GENERAL HOSPITAL.	Lady Haberfield Entrance Scholarship.	Interest of £1000.	....	Competitive Examination among Medical Students in Subjects of GENERAL EDUCATION.	Perpetual Students.
	Second Entrance Scholarship.	£20.	....	Ditto.	
	..	£10 10s.	....	Ditto.	
	Clark Prize.	£15.	....	Class Work of Third-year Students.	
	Clarke Scholarship.	£15.	....	Competitive Examination in SURGERY among Students of Fourth Year.	Ditto.

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY—*continued.*

INSTITUTION.	TITLE OF SCHOLARSHIP, &c.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
BRISTOL GENERAL HOSPITAL—*continued.*	Sanders Scholarship.	£22 10s.	....	Competitive Examination in MEDICINE, SURGERY, and MIDWIFERY of Fourth-year Students.	Perpetual Students.
	Martyn Memorial Pathological Scholarships.	Two annually, each of value of £10.	....	Examination in PATHOLOGY and MORBID ANATOMY.	Ditto.
	Committee Gold and Silver Medals.	....	....	To most distinguished Students of Fifth Year.	Ditto.
LEEDS SCHOOL OF MEDICINE (YORKSHIRE COLLEGE).	Entrance Scholarship.	£67 4s.	....	Competitive Examination among Medical Students who have passed Preliminary Scientific Examination at London or Victoria University.	Complete Course of Lectures and Practical Classes at Leeds School.
	Infirmary Scholarship.	£42.	....	Competitive Examination in ARTS among Students who have passed one of the Preliminary Examinations.	Complete Course of Hospital Practice and Clinical Lectures at Leeds Infirmary.
	Hardwick Prize.	£10.	....	Competitive Examination among Clinical Clerk Students of two years' standing in CLINICAL MEDICINE.	
	McGill Prize.	£10.	....	Competitive Examination among advanced Surgical Students in CLINICAL SURGERY.	
	Thorp Prizes.	£10 and £5.	....	Examinations in Forensic Medicine and Hygiene.	
	Thorp Prize Essay.	£15.	....	Essay or research on some subject connected with FORENSIC MEDICINE, TOXICOLOGY, or PUBLIC HEALTH.	Every three years to former students of the Leeds School.
UNIVERSITY COLLEGE, LIVERPOOL	Holt Tutorial Scholarships (two annually).	£100 each.	1 year.	Vote of Faculty to Student of not less than four years' standing.	Teaching and Original Research
	Lyon Jones Scholarship. No. 1.	£21 per annum.	2 years.	Competitive Examination among Junior Students in 1st M.B. SUBJECTS.	Perpetual Course at Victoria University.
	,, No. 2.	£21.	....	Competitive Examination among Third-year Students in ANATOMY, PHYSIOLOGY, and MATERIA MEDICA.	
	Derby Exhibition.	£15.	....	Competitive Examination among Fourth- or Fifth-year Students in CLINICAL SUBJECTS.	
*EDINBURGH UNIVERSITY	Theses Gold Medals.	....	....	Candidates for M.D. who present Theses of high merit.	None.
	Crichton Research Scholarships in Anatomy, Physiology, Materia Medica, and Pathology.	£100 per annum.	1, 2, or 3 years.	Competitive Examination for M.B.'s of the University of not less than four years' standing.	....
	Syme Surgical Fellowship.	£105 per annum.	2 years.	Competitive Thesis by M.B. of not more than three years' standing.	None.
	Goodsir Memorial Fellowship.	£100 per annum.	2 years.	Competitive Essay by M.B., &c., of not more than three years' standing.	.....
	Leckie Mactier Fellowship.	£80 per annum.	3 years.	Competitive Examination among M.B.'s of not more than three years' standing.	
	Freeland Barbour Fellowship.	£100.	1 year.	Highest Marks in ANATOMY, PHYSIOLOGY, and PATHOLOGY in Professional Examinations	One year's research in Midwifery.
	Sibbald Scholarship.	£40 per annum.	3 years.	Competitive Examination among University Students in CHEMISTRY, BOTANY, PHYSICS, and ZOOLOGY.	Continued study.
	Thomson Scholarship.	£40 per annum.	4 years.	Competitive Examinations in BOTANY, ZOOLOGY, and MECHANICS (Preferential Candidates.)	....
	Hope Prizes (2) Scholarships.	£25.	....	Distinction in MINOR CHEMICAL CLASS.	None.
	Vans Dunlop Scholarship. ,, No. 1.	£100.	3 years.	First place in MEDICAL PRELIMINARY EXAMINATION.	Continued study.
	,, No. 2.	£100.	3 years.	BOTANY and ZOOLOGY.	Ditto.
	,, No. 3.	£100.	3 years.	Competitive Examination in PHYSIOLOGY and SURGERY.	Ditto.
	,, No. 4.	£100.	3 years.	Competitive Examination in ANATOMY and PHYSIOLOGY.	Continued study and research.
	,, No. 5.	£100.	3 years.	MATERIA MEDICA (including PHARMACOLOGY).	Ditto.
	,, No. 6.	£100.	3 years.	PATHOLOGY and MEDICAL JURISPRUDENCE and PUBLIC HEALTH.	Ditto.
	Murchison Memorial Scholarship.	Interest on £1000.	1 year.	Competitive Examination in CLINICAL MEDICINE.	None.
	Stark Scholarship in Clinical Medicine.	£112.	1 year.	Competitive Examination in CLINICAL MEDICINE.	Research in Clinical Medicine.
	Buchanan Scholarship.	Interest on £1000.	1 year.	Competitive Examination and Class Work in MIDWIFERY and GYNÆCOLOGY.	None.
	James Scott Scholarship.	£45.	1 year.	Competitive Examination and Class Work in MIDWIFERY.	None.
	Ettles Scholarship.	£35.	....	Most distinguished M.B., Ch.B. of year.	None.

* Several Fellowships, Scholarships, Bursaries, &c., in the above list are vacant in alternate years.

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY—*continued*.

INSTITUTION.	TITLE OF SCHOLARSHIP, &c.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
EDINBURGH UNIVERSITY —*continued*.	Mackay Smith Scholarship in Chemistry.	£25 per annum.	2 years.	Competitive Examination in CHEMISTRY among University Students.	None.
	Houldsworth Scholarship.	£40	1 year.	Competitive Examination in MATERIA MEDICA among University Students or Graduates.	Research in Pharmacology.
	Sibbald Bursary.				
	,, No. 1.	£30.	....	....	....
	,, No. 2.	£30.	....	....	....
	Heriot Bursary.				
	,, No. 1.	£30 per annum.	3 years.	Competitive Examination among Matriculating Students.	None.
	,, No. 2.	£30 per annum.	3 years.	Ditto.	None.
	Thomson Bursary.				
	,, No. 1.	£25 per annum.	4 years.	Distinction in Preliminary Medical Examination.	None.
	,, No. 2.	£25 per annum.	4 years.	Distinction in Preliminary Medical Examination.	None.
	Grierson Bursary.				
	,, No. 1.	£20.	1 year.	Distinction in Preliminary Medical Examination. (Natives of Crawford or Leadhills preferred.)	None.
	,, No. 2.	£20.	1 year.	Competitive Examination in CHEMISTRY, BOTANY, and NATURAL HISTORY and PHYSICS among Second-year Students. (Natives of Crawford or Leadhills preferred.)	None.
	,, No. 3.	£20.	1 year.	Competitive Examination in ANATOMY and PHYSIOLOGY among Third-year Students. (Natives of Crawford or Leadhills preferred.)	None.
	,, No. 4.	£20.	1 year.	Competitive Examination in MATERIA MEDICA among Fourth-year Students. (Natives of Crawford or Leadhills preferred.)	....
	,, No. 5.	£10.	1 year.	Competitive Examination in PATHOLOGY among Fourth-year Students. (Natives of Crawford or Leadhills preferred.)	....
	Crichton Bursary.	£50 per annum.	4 years.	Distinction in Medical Preliminary Examination.	Born in Scotland.
	Dr. J. A. Carlyle Bursary.				
	,, No. 1.	£28.	1 year.	Proficiency in Class Examinations in ANATOMY and CHEMISTRY.	None.
	,, No. 2.	£28.	1 year.	Proficiency in Class Examinations in ANATOMY and PHYSIOLOGY.	None.
	Mackenzie Bursary.				
	,, No. 1.	£21 5s.	....	Industry and Skill in Junior Class work of PRACTICAL ANATOMY.	None.
	,, No. 2.	£21 5s.	....	Industry and Skill in Senior Class work of PRACTICAL ANATOMY.	None.
	Beaney Prize.	£37 10s.	....	Highest Marks taken in ANATOMY, SURGERY, and CLINICAL SURGERY, by University Student in M.B. and C.M. Examinations.	None.
	Hope Chemistry Prize.	£100.	....	Competitive Examination among University Students.	None.
	Neil Arnott Prize.	£42.	....	Distinction in Natural Philosophy in the M.A. Examination.	None.
	Wightman Prize.	£10 10s.	....	Competitive Reports on Cases by Clinical Students.	None.
GLASGOW UNIVERSITY—QUEEN MARGARET COLLEGE	Mackintosh Mental Science Bursary.	£30.	1 year.	....	Open for competition to students of medicine of either sex who have attended the lectures on Insanity.
	George Grant, jun., Bursary	£45.	4 years.	.....	Nomination by Donor.
	Dr. Thos. Gibson Bursary	£30.	3 years.	.....	Open to medical students preparing to be missionaries in connexion with the Church of Scotland.
	Arthur Bursary	£20.	3 years.	Competition by students of 1 year's standing in the subjects of the First Professional Examination.	Restricted to women students only.
QUEEN'S COLLEGE, BELFAST	Ten Junior Scholarships for Matriculated Students, two for each of the five years' curriculum.	£20 each.	....	....	....

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY—*continued*.

INSTITUTION.	TITLE OF SCHOLARSHIP, &c.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
ROYAL COLLEGE OF SURGEONS IN IRELAND, SCHOOL OF SURGERY...	Class Prizes.	£72.	....	Proficiency in Class Examination.	....
	Carmichael Scholarship.	£15.	....	Examination in ANATOMY, PHYSIOLOGY, HISTOLOGY, CHEMISTRY, MATERIA MEDICA, and PHARMACY.	Open to students of the third year.
	Mayne Scholarship.	£15.	....	SURGERY, MEDICINE, JURISPRUDENCE, MIDWIFERY, and DISEASES OF WOMEN.	Open to students of third and fourth year.
	Barker Bequest	£26 5s.	....	For best DISSECTION.	Open to all medical students.
ROYAL UNIVERSITY OF IRELAND	Travelling Medical Scholarship.	£100.	....	The subjects are in rotation: (1) ANATOMY AND HISTOLOGY; and (2) PHYSIOLOGY AND PATHOLOGY.	Those who have passed the Medical Degrees Examination either in the year of the scholarship examination or in the year immediately preceding are alone eligible.
	Dr. Henry Hutchinson, Stewart Medical Scholarships.				
	,, No. 1	£10.	3 years.	Competition in the subjects of the second examination in MEDICINE.	Candidates must present themselves after the lapse of not more than one academical year from the time of passing the first examination in medicine.
	,, No. 2	£50.	3 years.	Subjects include PSYCHOLOGICAL MEDICINE, DISEASES OF THE NERVOUS SYSTEM, and ANATOMY, PSYCHOLOGY and PATHOLOGY OF BRAIN, CORD, AND NERVES.	Competition among medical students of not more than 2 years' standing for proficiency in the knowledge of Mental Diseases. Fee £2.
	Medical Studentship.	£200.	2 years.	PATHOLOGY and BACTERIOLOGY.	Fee £2.
QUEEN'S COLLEGE, GALWAY	Eight Junior Scholarships.	£25 each and half fees.	1 year.	Competitive Examination in subjects of each year of Medical Course.	Students must be of the standing of the year, and may be of any recognised school of medicine.

NOTE.—*St. Andrews University.*—For Scholarships, &c., see page 458.
NOTE.—*Glasgow University.*—In addition to the bursaries mentioned above in connexion with Queen Margaret College, there will be at least eleven bursaries and prizes of the aggregate value of about £218 awarded during the session 1897-98.

PUBLIC HEALTH.

INSTRUCTION FOR DIPLOMAS IN STATE MEDICINE.

ENGLAND.

THE following recommendations, designed with a view of ensuring "the possession of a distinctively high proficiency, scientific and practical, in all the branches of study which concern the public health," were adopted by the General Medical Council in 1896.[1] The regulations require that—"(1) A period of not less than twelve months shall elapse between the attainment of a first registrable qualification in Medicine, Surgery, and Midwifery and the examination for a diploma in Sanitary Science, Public Health, or State Medicine; (2) every candidate shall have produced evidence of having attended, after obtaining a registrable qualification, during a period of six months, practical instruction in a laboratory approved of by the body granting the qualification; (3) every candidate shall have produced evidence of having for six months practically studied the duties of out-door sanitary work either under a medical officer of health who is a teacher in public health in a recognised school, or under the medical officer of health of a county or of a single sanitary district of 50,000, or a combination of districts of 35,000 inhabitants in England, or of 30,000 in Scotland or Ireland; (4) the examination shall have been conducted by examiners specially qualified, and shall comprise laboratory work as well as written and oral examination; (5) the rules as to study shall not apply to medical practitioners registered, or entitled to be registered, on or before Jan. 1st, 1890." It was enacted by Section 18 (2) of the Local Government Act, 1888 [England and Wales], that after Jan. 1st, 1892, no such appointment (that of medical officer of health) may be made in any county, or in any district or combination of districts with a population of 50,000 or upwards, unless the officer—having, of course, qualifications in Medicine, Surgery, and Midwifery—is registered as the holder of a diploma in Sanitary Science, Public Health, or State Medicine under Section 21 of the Medical Act, 1886, or has during any three consecutive years preceding 1892 been medical officer of a district or combination of districts with a population of 20,000 at least, or has for three years previously to Aug. 13th, 1888, been a medical officer or inspector of the Local Government Board. With the sanction of the Local Government Board, the same person may be appointed medical officer for two or more districts.

London University.—Sanitary Science is included under the head of State Medicine in the M.D. degree, and a certificate has to be produced showing that a course of practical instruction has been attended for the prescribed period, and that the course has included such chemical, microscopical, and meteorological work and exercises as more especially relate to sanitation. The attendance includes six months' practical instruction in a laboratory and six months' out-door sanitary work. Certificates will be received from the holder of any public health office directly or indirectly subject to control by a Secretary of State or

[1] The regulations were last settled on June 9th, 1896, and came into operation on Jan. 1st, 1897.

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a Government Department. If a candidate have studied State Medicine for one year and have held for a period of two years the position of medical officer of health in any sanitary district, or without having studied State Medicine have held for a period of three years the position of medical officer of health in any sanitary district, he will be eligible for the examination.

Cambridge University.—Examinations in so much of State Medicine as is comprised in the functions of medical officers of health will be held in Cambridge, beginning on the first Tuesday in April and in October, and ending in the following week. Any person whose name is on the Medical Register is eligible as a candidate for this examination: Provided (*a*) he be in his twenty-fourth year at least when he presents himself for the first part of the examination, and have attained twenty-four years of age before he presents himself for the second part; (*b*) a period of not less than twelve months shall have elapsed between the time when he first obtained a registrable qualification and the time when he presents himself for either part of the examination; (*c*) he produce evidence of having, before or after obtaining a registrable qualification, attended the clinical practice of a hospital for infectious diseases approved by one of the licensing bodies recognised under the Medical Acts; (*d*) he produce evidence of having, after obtaining a registrable qualification, attended during a period of six months on one or more courses, approved by the Syndicate, of practical laboratory instruction in Chemistry, Bacteriology, and the Pathology of those diseases of animals that are transmissible to man; (*e*) he produce evidence of having, after obtaining a registrable qualification, practically studied for six months the duties of out-door sanitary work under the medical officer of health of a county or large urban district, unless he have himself held an appointment as medical officer of health under conditions not requiring a special sanitary diploma. The provisions (*b*), (*c*), (*d*), (*e*) are not to apply to (*a*) candidates whose names shall have been placed on the Medical Register on or before Jan. 1st, 1890, or who have obtained a registrable qualification on or before that date; (*β*) candidates who have for a period of three years held the position of medical officer of health to any county, or to any urban district of more than 20,000 inhabitants, or to any entire rural sanitary district. The examination is in two parts. The first part will comprise Physics and Chemistry; the principles of chemistry and methods of analysis, with especial reference to analyses of air, water, and food; application of the microscope, including the investigation of micro-organisms; the laws of heat and the principles of pneumatics, hydrostatics, and hydraulics, with especial reference to ventilation, water-supply, drainage, construction of dwellings, disposal of sewage and refuse, and sanitary engineering in general; meteorology in relation to health; sources of water-supply; and statistical methods in their application to public health. The second part will comprise Laws and Statutes relating to public health; origin, propagation, pathology, and prevention of epidemic and infectious diseases, including those diseases of animals that are transmissible to man; effects of overcrowding, vitiated air, impure water, and bad or insufficient food; unhealthy occupations and the diseases to which they give rise; water-supply and drainage in reference to health; nuisances injurious to health; distribution of diseases within the United Kingdom, and effects of soil, season, and climate. The following is a list of Colleges and Schools of Medicine at which the courses of laboratory instruction have, for the purposes of this examination, been already approved by the Syndicate: The Chemical and Pathological Laboratories, Cambridge; the University of Edinburgh; the London Hospital Medical College; St. Bartholomew's Hospital Medical College; King's College, London; University College, London; the Army Medical School, Netley; Owens College, Manchester; the University of Durham Medical School, Newcastle-on-Tyne; Mason College, Birmingham; University College, and Southern Hospital School, Liverpool; St. Mary's Hospital Medical College; Charing-cross Hospital College; University College, Bristol; and Yorkshire College, Leeds. The examination in both parts will be oral and practical, as well as in writing. One day at least will be devoted to practical laboratory work, and one day to oral and practical examination in, and reporting on, subjects connected with out-door sanitary work. No candidate will be approved by the examiners who does not show a high proficiency in all the branches of study, scientific and practical, which concern the public health. Every candidate will be required to pay a fee of £5 5*s.* before admission or readmission to *either part* of the examination. Every candidate who has passed both parts of the examination to the satisfaction of the examiners will receive a diploma testifying to his competent knowledge of what is required for the duties of a medical officer of health. All applications for information respecting this examination should be addressed to Dr. Anningson, Barton-road, Cambridge, Secretary to the Syndicate. Candidates who desire to present themselves for the examination in October next must send in their applications on forms supplied for the purpose and transmit the fees to J. W. Clark, M.A., Registrary, University of Cambridge, on or before Sept. 17th. Cheques should be crossed "Barclay and Co., Ltd." The fee for either part of the examination cannot be returned to any candidate who fails to present himself; but he will be entitled, without an additional fee, to be a candidate on one subsequent occasion. The applications of candidates whose names have not been on the Medical Register for three years should be accompanied by a certificate of birth or other proof of age.

University of Oxford (*Diploma in Public Health*).—An examination, open to all registered Medical Practitioners, conducted partly in writing, partly *viva voce*, and in each subject partly practical, is held in Michaelmas Term in the following subjects:—General Pathology, with special relation to Infectious Diseases, the Laws relating to Public Health, Sanitary Engineering, Vital Statistics. The fee for admission to the examination is £10. Candidates (*a*) must have spent after registration a period of at least six months studying in a public health laboratory approved by the Board of the Faculty of Medicine. Candidates must also (*b*) have had their names on the Medical Register of the United Kingdom for a period of at least twelve months; (*c*) have spent after registration a period of study, of not less than six months in all, under the medical officer of health of a county or of a city or town containing at least 50,000 inhabitants, or under two or more such medical officers of health. Certificates of proficiency are granted to those who pass this examination.

University of Durham.—Sanitary Science is the special object of the degrees in Hygiene. Candidates for the degree of Bachelor in Hygiene (B.Hy.) must be at least twenty-two years of age and registered, and before presenting themselves for examination must have been for at least twelve months graduates in Medicine of a recognised university. They shall spend six months at Newcastle-upon-Tyne studying Public Health, Comparative Pathology, Practical Bacteriology, Outdoor Sanitary Work, Infectious Diseases, Sanitary and Practical Chemistry. They have to pass an examination in Sanitary Chemistry, Physics, Sanitary Legislation, Comparative Pathology, Vital Statistics, Nosology, Distribution of Health and Disease, Sanitary Medicine, and Practical Hygiene. The fee for the examination for the degree of B.Hy. is 10 guineas, and for the degree £6. Candidates for the degree of Doctor in Hygiene (D.Hy.) must have acquired the degree of Bachelor in Hygiene, must for two years subsequently have been engaged in practice as a Medical Officer of Health, and must write an essay upon some practical hygienic subject. The fee for the examination for the degree of D.Hy. is £5, and for the degree £6. The regulations for education and examination for the Diploma in Public Health (D.P.H.) are the same as those for the degree of Bachelor of Hygiene, except that the candidate is not required to be a graduate in Medicine of a recognised university, and the course of study need not be passed at Newcastle-upon-Tyne. The fee for the examination and diploma in Public Health is ten guineas.

Victoria University.—An examination in Public Health is held yearly under the following regulations: The examination is in two parts, and is written, oral, and practical. Candidates before entering for either part of the examination must have held for not less than twelve months a registrable qualification in Medicine, Surgery, and Midwifery, and must present satisfactory certificates of having attended courses of instruction in Public Health and in Chemistry as applied to Public Health in a college of the University, or in a college or medical school recognised for this purpose by the University; of having attended, after obtaining a registrable qualification, during at least six months, practical instruction in a laboratory approved by the University, the courses including Chemistry as applied to Public Health, Bacteriology, and the Pathology of those diseases of animals which

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are communicable from animals to man; of having attended for three months the clinical practice of a hospital for infectious diseases; of having practically studied the duties of out-door sanitary work for not less than six months under the Medical Officer of Health of a county or of a large urban district. Candidates may present themselves for Parts I. and II. separately or at the same time, provided that no candidate be admitted to Part II. unless he has already passed in Part I. No candidate's name will be published until he has satisfied the examiners in both parts of the examination. The fee for each part is £5 5s., and must be paid on or before July 1st in each year. For any subsequent examination in the same part the fee will be £3 3s. Every candidate who has passed both parts of the examination to the satisfaction of the examiners, and who is legally registered, will receive a Diploma in Public Health. The examinations will begin on the third Monday in July each year.

Royal College of Physicians of London and the Royal College of Surgeons of England.—The following are the regulations for obtaining the diploma in Public Health: Section 1: Candidates must be registered under the Medical Act. The examination consists of two parts. The fee for each part is £5 5s. A candidate intending to present himself must give fourteen days' written notice to the Secretary, at the Examination Hall, Thames Embankment, W.C. A candidate registered under the Medical Act on or before Jan. 1st, 1890, will be admissible to Part I. of the examination on producing evidence of being at least twenty-three years of age, and to Part II. on producing evidence of being at least twenty-four years of age. A candidate registered under the Medical Act after Jan. 1st, 1890, will be admissible to examination in Part I. on producing evidence (1) of having been in possession of a registrable qualification in Medicine, Surgery, and Midwifery for at least twelve months; (2) of having attended, after obtaining such registrable qualification, practical instruction in a laboratory recognised by the Examining Board in England during a period of six months; and (3) of being at least twenty-three years of age. A candidate will be admitted to Part II. of the examination on producing evidence (1) of having, during a period of six months after obtaining a registrable qualification, either practically studied the duties of out-door Sanitary Work under the medical officer of health of a county or large urban district or else held appointment as medical officer of health under conditions not requiring the possession of a special Sanitary diploma; (2) of having attended the clinical practice of a hospital for infectious diseases recognised by the Examining Board in England, either before or after obtaining his registrable qualification in Medicine, Surgery, and Midwifery (this certificate is not required in the case of a candidate who produces evidence that he has commenced special study of Sanitary Science before Jan 1st, 1894); and (3) of being at least twenty-four years of age.

King's College, London.—The necessary Laboratory Instruction to comply with the regulations of the various Universities and other Medical Licensing Bodies will be given by Professor William R. Smith, M.D., D.Sc., and Professor Edgar M. Crookshank, M.B. Lond. The syllabus includes Physics, Chemistry, Microscopy; Parasites and other Organisms Infesting Food-stuff or the Human Body; Bacteriology, including the Cultivation and Recognition of Micro-organisms. The course will last six months, four months of which will be spent in the Laboratories of Public Health, and two months in the Bacteriological Laboratory. Fee 20 guineas, payable in advance in the College Office. Under the direction of Professor William R. Smith, M.D., D.Sc., and Demonstrator C. G. Moor, M.A., practical instruction will be given in the laboratories in the methods of Analysis of Air, Water, Foods, &c.; Detection of Poisons. Fees, one month, £4 4s.; three months, £10 10s. The laboratories are also available for original investigations and practical work in Public Health, and are open daily from 9 A.M. to 4 P.M. and on Saturdays to 1 P.M. In Public Health special classes will be held during the winter session by Professor W. R. Smith; fee, £12 12s. The Bacteriological Laboratory is open daily for original research under the direction of the professor and demonstrator of Comparative Pathology and Bacteriology. For one month for original research, 3 guineas. For a longer period by arrangement. For one month for private study, with supervision, 4 guineas. For a longer period by arrangement. Practical course for a month, with attendance on lectures, 5 guineas. For a year, 30 guineas. Professor H. G. Seeley, F.R.S., will deliver a course of six lectures on Physiography. For further particulars connected with any of the foregoing classes apply to Professor W. R. Smith, King's College, London.

University College, Bristol.—A course of lectures on the Principles and Practice of Hygiene is given at the College by D. S. Davies, M.D. Lond., D.P.H. Cantab., on Mondays and Fridays, 10–11 A.M., commencing on the first Monday in October. A six months' course of Practical Laboratory Instruction is given at the Western Counties' Laboratory, Park-street, by Mr. F. Wallis Stoddart, commencing on the first Wednesday in October, and including the subjects of Chemistry, Physics, Bacteriology, and Parasites. Demonstrations on the provisions and practical working of the various Acts relating to Public Health and on the Orders, Circulars, and By-laws of the Local Government Board are delivered by Mr. J. C. Heaven on Mondays and Fridays, commencing on the first Monday in October. Gentlemen taking out the course are admitted to practical out-door sanitary work during the session, under the supervision of the Medical Officer of Health for the city and port of Bristol. They are considered as pupil assistants, and are required to carry out diligently such of the duties of medical officers of health as they may be directed to undertake. Facilities are afforded during the course for the study of those diseases of the lower animals which are communicable to man. Fee for the entire course, 20 guineas.

SCOTLAND.

Edinburgh University.—Two degrees in Science in the Department of Public Health are conferred by the University of Edinburgh—viz., Bachelor of Science in Public Health and Doctor of Science in Public Health. Candidates for the degree of B.Sc. in Public Health must be graduates in Medicine of a University of the United Kingdom, or of some other University recognised for the purpose, and must pass two examinations, for the first of which they must, after graduation in Medicine, have worked for at least twenty hours per week during a period of not less than eight months, of which at least five consecutive months must be in the Public Health Laboratory of the University of Edinburgh and the remainder either there or in a laboratory recognised by that University; they must also have attended lectures on Physics and Geology in some Scottish University. Candidates are not admitted to the Second Examination sooner than six months after having passed the First Examination, nor sooner than eighteen months after having taken their degree in Medicine, and they must have attended two separate courses in Public Health in some University of the United Kingdom, or in such medical school or Indian, Colonial, or Foreign University as may be approved for the purpose by Edinburgh University, each course consisting of forty lectures at least; one of these courses shall deal with medicine and the other with engineering, each in its relation to public health. They must also give evidence (1) that for six months they have practically studied sanitary work under the medical officer of health of a county or borough or district containing a population of not less than 25 000; (2) that they have had three months' clinical instruction regarding fevers and infectious diseases; and (3) that they have had three months' instruction in mensuration and drawing. The subjects of examination include Laboratory work, Physics, Geology, Medicine in its application to Public Health, Sanitation, Sanitary Law, and Vital Statistics. Graduates who have held the degree of B.Sc. in Public Health from the University of Edinburgh for a term of five years may offer themselves for the degree of D Sc. in Public Health in that University. They must then present a Thesis and pass an examination in Public Health. The fees are £3 3s. for the First and £3 3s. for the Second B.Sc. Examinations, and £10 10s. for the degree of D.Sc.

University of Aberdeen.—The Diploma in Public Health (D.P.H.) is conferred only on graduates in Medicine of a University in the United Kingdom; and a period of not less than twelve months must elapse between medical graduation and entrance to the examination for the diploma. Every candidate must produce evidence of having attended, after graduation in Medicine, during a period of six months, practical instruction in Hygiene in a laboratory approved of by the University, together with having for a like period after graduation practically and daily studied the duties of out-door sanitary work under the Medical Officer of Health

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of a county or large urban district, or also of having himself held appointment as Medical Officer of Health. He must also have regularly attended for six months the wards of a general fever hospital containing not less than fifty beds. Every candidate who is not a graduate in Medicine of this University must have attended a course of instruction in the University in one or more of the subjects embraced in the examination for the diploma. The diploma is conferred after an examination in Public Health held in March and July of each year. Candidates desiring to appear for examination at either of these periods must send in their names, with the necessary fee, to the Secretary of the Medical Faculty before the first day of the month in which the examination takes place. The fee for the examination is £5 5*s*. The examination is conducted by specially qualified examiners appointed by the University. Candidates may enter for the whole examination at one period, or they may enter for Parts I. and II. at one period and for Parts III. and IV. at another and subsequent period.

The Royal Colleges of Surgeons and Physicians of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow.—All candidates for the diploma in Public Health must have been qualified for at least one year. Those qualified before 1890 and also those who have held the position of Medical Officer of Health to a county or to an urban district of more than 20,000 inhabitants, or an entire rural sanitary district, do not require to produce evidence of attendance on any special courses. All other candidates must have attended, after qualifying, six months' practical instruction in a recognised public health laboratory or laboratories, and must have studied for six months the duties of out-door sanitary work under the Medical Officer of Health of a county or large urban district, or must themselves have held an appointment as Medical Officer of Health under conditions not requiring the possession of a sanitary diploma. It is also recommended where possible to take out a course of instruction in the diseases of animals transmissible to man.

There are two examinations, and candidates may enter for both at one period or for either separately. The First Examination includes (*a*) Laboratory Work, (*b*) Chemistry, (*c*) Physics, and (*d*) Meteorology; and the Second Examination embraces (*a*) Report on Premises visited, (*b*) Examination at Fever Hospital, (*c*) Examination at Public Abattoir, (*d*) Epidemiology and Endemiology, (*e*) Vital Statistics and Sanitary Law, and (*f*) Practical Sanitation. The fee is 10 guineas for both examinations, or 5 guineas for either of them. The examination is held twice yearly, in May and October. The published regulations provide detailed synopses of the subjects of examination and give lists of books from which to select. The Registrar for Edinburgh is Mr. James Robertson, 48, George-square; and for Glasgow Mr. Alexander Duncan, 242, St. Vincent-street.

IRELAND.

Royal University of Ireland.—This University grants a diploma in Sanitary Science. It is conferred only on graduates in Medicine of the University. Candidates are not admitted to this examination until the lapse of twelve months from the time of obtaining the first registrable qualification; they must give notice in writing to the Secretaries of their intention to present themselves and must pay the fee, £2, at least one month previously to the examination. Candidates are required to produce a certificate of having, after obtaining the degree of M.B., B.Ch., B.A.O., attended six months' practical instruction in a laboratory approved by the University, and also of having for six months practically studied the duties of out-door sanitary work under the Medical Officer of Health of a county or large urban district.

University of Dublin.—The Diploma in State Medicine is conferred, after examination, on the following conditions:—The candidate must be a Doctor in Medicine, a graduate in Medicine and Surgery of Dublin, Oxford, or Cambridge. The name of the candidate must have been on the Medical Register at least twelve months before the examination. The candidate must have completed, subsequently to registration, six months' practical instruction in a laboratory approved by the University and also have studied practically out-door sanitary work for six months, under an approved officer of health. The subjects of examination will be—(*a*) State Medicine and Hygiene, including causation and prevention of disease, contagion in different diseases, morbid diathesis, congenital diseases and malformations, diseases of animals in relation to the health of man, diseases of the vegetable kingdom, famine diseases, causes of origin and spread of epidemics, principles of bacteriology, quarantine, disinfection &c.; (*b*) Chemistry, including air, water, and articles of food and drink, and their chemical and microscopical examination and analysis, the detection of common poisons and recognition of injurious pigments, &c.; (*c*) Physics and Meteorology; (*d*) Engineering; (*e*) Morbid Anatomy; (*f*) Vital Statistics; (*g*) Medical Jurisprudence; and (*h*) Practical Sanitary Engineering.

Royal College of Physicians and Royal College of Surgeons in Ireland.—Stated examinations for the diploma in State Medicine are held in the months of February, May, and November. A special examination for the diploma can be (except during the months of August and September) obtained on payment of £5 5*s*., in addition to the ordinary fees mentioned below, and on giving notice at least one fortnight before the date of the proposed examination. Every candidate for the diploma in State Medicine must be a registered medical practitioner. (Candidates registered or entitled to be registered prior to January, 1890, are exempt from the rules as to study.) He must subsequently to qualification (1) receive six months' laboratory instruction in Chemistry, Bacteriology, and the Diseases of Animals transmissible to man, and (2) during six months either practically study out-door sanitary work under a Medical Officer of Health or himself hold an appointment of Medical Officer of Health under conditions not requiring the possession of a special sanitary diploma. Candidates are examined on four days commencing on the first Tuesday of February, May, and November, and shall as an additional requirement attend a hospital for infectious diseases. Each candidate must return his name to the secretary of the committee of management under the conjoint scheme three weeks before the examination, and lodge with him a testimonial of character from a Fellow of either of the Colleges, or of the Royal Colleges of Physicians or Surgeons of London or Edinburgh. The fee for the examination is £10 10*s*. The examination for the diploma in State Medicine comprises the following subjects:—State Medicine and Hygiene, Chemistry, Meteorology and Climatology, Engineering, Vital Statistics, Law, and Bacteriology. For further particulars apply to the Secretary, Committee of Management Office, Royal College of Physicians, Dublin.

DENTAL SURGERY.

ANYONE who is on the Medical Register is entitled to practise as a dentist, although he cannot register as such without the special licence; but it is of eminent advantage to take the L.D.S., otherwise few dental appointments at general or special hospitals or dispensaries are available, and, what is still more important, the manual dexterity and knowledge of mechanics requisite for the successful practice of dentistry can only be gained by long and careful training at the dental operating chair and in the dental laboratory; and, this having been attained, it costs but little trouble to pass the special examinations. The subjects beyond those included in the general qualification are—Dental Anatomy and Physiology (Human and Comparative), one course; a separate course of Dental Histology, including the preparation of microscopical sections; Dental Surgery, one course; a separate course of Practical Dental Surgery; a course of not less than five lectures on the Surgery of the Mouth; Dental Mechanics, one course; a course of Practical Dental Mechanics, including the manufacture and adjustment of six dentures and six crowns; Dental Metallurgy, one course; a course of Practical Dental Metallurgy; Practice of Dental Surgery at a recognised school, two years, and a certificate of having been engaged during a period of not less than three years in acquiring a knowledge of Dental Mechanics (this may be obtained by apprenticeship to a duly qualified dental practitioner or in the mechanical department of a recognised dental hospital). In the case of qualified surgeons two years will suffice. The Dental Schools in London are the Dental Hospital of London, the National Dental Hospital and College, and Guy's Hospital Dental School. Most of the large provincial towns have now dental hospitals. A convenient arrangement by which the M.R.C.S., L.R.C.P., and L.D.S. can be taken is as follows:—The Preliminary Examination in General Education having been passed, the student should become apprenticed to a qualified dentist and register as a dental and medical student. (This instruction, however, may be taken prior to

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the date of registration as a dental student.) During his apprenticeship the student should receive instruction in Chemistry and Physics, Pharmacy and Elementary Biology, and pass in these subjects before entering the hospital. (The foregoing constituting the First Examination.) Having entered the hospital, the student should attend the dental and general courses contemporaneously, and pass at the end of the second winter the Second Examination—namely, Anatomy and Physiology. At the completion of his second year of study the Dental Examination should be passed. The student should then devote his time to general studies, and pass the third examination. When time permits it is advisable to attend the general hospital only, until after the First and Second Examinations have been passed. At this point a break may be made to admit of the completion of the dental curriculum and the passing of the examinations for the L.D.S. diploma. The best course, however, is to entirely finish the curriculum for the M.R.C.S. and L.R.C.P. and then take the special Dental work. The regulations for the Dental Licence of the Royal Colleges of Ireland and Edinburgh and of the Faculty of Physicians and Surgeons of Glasgow are very similar to those of the English College. The L.D.S. can also be obtained alone.

REGISTRATION OF DENTAL STUDENTS.

The registration of dental students is carried on at the Medical Council Office in London in the same manner as the existing registration of medical students, and subject to the same regulations as regards Preliminary Examinations. Students who commenced their professional education by apprenticeship to dentists entitled to be registered, or by attendance upon professional lectures before July 22nd, 1878 (when dental education became compulsory), are not required to produce evidence of having passed a Preliminary Examination. Candidates for a diploma in Dental Surgery must produce certificates of having been engaged during four years in professional studies, and of having received three years' instruction in Mechanical Dentistry from a registered practitioner. One year's *bonâ-fide* apprenticeship with a registered dental practitioner, after being registered as a dental student, may be counted as one of the four years of professional study. The three years of instruction in Mechanical Dentistry, or any part of them, may be taken by the dental student either before or after his registration as a student; but no year of such mechanical instruction will be counted as one of the four years of professional study unless taken after registration.

It is now necessary for anyone practising Dental Surgery in this country to register, and no foreign qualifications are admitted. Formerly exception was made with regard to the Universities of Harvard and Michigan.

The Royal College of Surgeons of England grants a diploma in Dental Surgery under the following regulations, which apply to all Candidates who have registered as Dental Students after Jan. 1st, 1897. Candidates are required to pass three examinations: the Preliminary Science Examination, the First Professional Examination, and the Second Professional Examination. I. Preliminary Science Examination. Before admission to this examination the Candidate must produce a certificate of having received instruction (which may be taken prior to the date of registration as a dental student) at a recognised institution in Chemistry, Physics, and Practical Chemistry. The examination consists of these subjects, and is identical with Part I. of the First Examination of the Examining Board in England. II. The First Professional Examination. The Candidate must produce the following certificates:—1. Of having been engaged during a period of not less than three years in acquiring a practical familiarity with the details of Mechanical Dentistry, under the instruction (which may be taken prior to registration as a dental student) of a competent Practitioner or under the direction of the Superintendent of the Mechanical Department of a recognised Dental Hospital. In the case of qualified surgeons, evidence of a period of not less than two, instead of three, years of such instruction will be sufficient. 2. Of registration as a dental student by the General Medical Council. 3. Of having attended at a recognised Dental Hospital and School (*a*) a course of lectures on Dental Metallurgy; (*b*) a course of Practical Dental Metallurgy; (*c*) a course of Lectures on Dental Mechanics; and (*d*) a course of Practical Dental Mechanics, including the manufacture and adjustment of six dentures and six crowns. Candidates may present themselves for the First Professional Examination after the completion of six months' attendance at a recognised Dental Hospital and School. The Examination consists of Mechanical Dentistry and Dental Metallurgy; the examination in Dental Metallurgy will be by written paper. III. The Second Professional Examination. The Candidate must produce the following certificates:—1 Of having been engaged during four years in the acquirement of professional knowledge subsequently to the date of registration as a dental student. 2 Of having attended at a recognised dental hospital and school (*a*) a course of Dental Anatomy and Physiology; (*b*) a separate course of Dental Histology, including the preparation of microscopical sections; (*c*) a course of Dental Surgery; (*d*) a separate course of Practical Dental Surgery; and (*e*) a course of not less than five lectures on the Surgery of the Mouth, which lectures may be given at a dental hospital or at a recognised medical school; in the latter case they may form part of the course of lectures on Surgery. 3. Of having attended at a recognised dental hospital or in the dental department of a recognised general hospital the practice of Dental Surgery during two years. 4. Of having attended at a recognised medical school (*a*) a course of lectures on Anatomy, (*b*) a course of lectures on Physiology, (*c*) a separate Practical Course of Physiology, (*d*) a course of lectures on Surgery, and (*e*) a course of lectures on Medicine. 5. Of having performed Dissections at a recognised medical school during not less than twelve months. 6. Of having attended at a recognised hospital the practice of Surgery and Clinical Lectures on Surgery during two winter sessions. 7. Of being twenty-one years of age. The certificates of professional study will be required to show that students have attended the courses of professional study to the satisfaction of their teachers. Candidates may present themselves for the Second Professional Examination after the completion of four years' professional study from the date of registration as a dental student and after the lapse of not less than six months from the date of passing the First Professional Examination. The Second Professional Examination consists of General Anatomy and Physiology, General Surgery and Pathology. Dental Anatomy and Physiology, Dental Pathology and Surgery, and Practical Dental Surgery. The written examination comprises General Anatomy and Physiology, General Pathology and Surgery, Dental Anatomy and Physiology, and Dental Pathology and Surgery. At the Practical Examination candidates may be examined (*a*) on the treatment of Dental Caries, and may be required to prepare and fill cavities with gold or plastic filling or material, or to do any other operation in Dental Surgery (candidates must provide their own instruments); (*b*) on the Mechanical and Surgical Treatment of the various Irregularities of Children's Teeth. There is also an oral Examination. Exemption from the Preliminary Science Examination is granted to candidates who have passed an Examination for a degree in Medicine at a University in the United Kingdom, in India, or in a British colony. Exemption from Examination in Anatomy and Physiology is granted to candidates who have passed the second Examination of the Examining Board in England or the corresponding Examination of the Royal College of Surgeons of Edinburgh, the Royal College of Surgeons in Ireland, or the Faculty of Physicians and Surgeons of Glasgow, or of any University in the United Kingdom. Exemption from Examination in General Surgery and Pathology is granted to candidates who have passed the Examination in Surgery of the Examining Board in England or the corresponding Examinations of the Colleges and Universities above mentioned. The fee for the diploma is 20 guineas, and is payable as follows:—Preliminary Science Examination, 3 guineas; First Professional Examination, 2 guineas; Second Professional Examination, 5 guineas; the balance to be paid on the completion of the Examinations. The Preliminary Science Examination is held in January, March or April, July, and October in each year. The first and second Professional Examinations are held in May and November in each year. Candidates must give twenty-one clear days' notice of their intention to present themselves for examination.

Royal College of Surgeons, Edinburgh.—For the licence in Dental Surgery all candidates must pass a preliminary examination in general knowledge and have their names inscribed in the Register of Dental Students of the General Medical Council. A copy of regulations, giving a list of preliminary examinations recognised for obtaining this licence, as well as of the subjects of the professional examinations, may be obtained from Mr. James Robertson, Clerk to the Royal College of Surgeons, at

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48, George-square, Edinburgh. Students who commenced their professional education by apprenticeship or attendance on lectures before July 22nd, 1878, are exempt from the preliminary examinations. Candidates must produce certificates of having, subsequently to the date of registration, been engaged for four years in professional studies, and of three years' instruction in Mechanical Dentistry from a registered dental practitioner, except in the case of previously registered medical practitioners, when two years will be considered sufficient. Candidates who have commenced their studies *after* Oct. 1st, 1890, must have attended the following curriculum: Anatomy, one course of six months; Practical Anatomy, twelve months; Chemistry, one course of six months; Practical Chemistry, one course of three months; Physiology, one course of six months; Materia Medica, one course of three months; Surgery, one course of six months: Medicine, one course of six months; and attendance on the practice of a recognised general hospital, with Clinical Instruction, twelve months. (Candidates who commenced study in accordance with the regulations in force before July, 1895, shall not be required to attend more than six months' hospital work.) These courses must have been attended at a University, or in an established school of medicine, or in a provincial school specially recognised by the College as qualifying for the diploma in Surgery. In addition to these courses candidates will be required to have attended in a recognised dental hospital, or with teachers recognised by the College, the following special courses of lectures and instruction: Dental Anatomy and Physiology (Human and Comparative), Dental Surgery and Pathology, Dental Mechanics—one course each; two years' attendance at a dental hospital or the dental department of a general hospital recognised by the College. Certificates of attendance on such of these courses of the new curriculum as may be respectively required will entitle candidates to appear either for the first dental examination or for the first and second examinations for the triple qualification, as they may select, and subject to the existing regulations for each qualification. Candidates who have passed the first and second examinations for the triple qualification will be exempt from the first dental examination, and will have the advantage of being admissible either to the Final Dental Examination or to the subsequent Examination for the Triple Qualification, or to both. But the First Dental Examination will not be held as equivalent to the first and second Triple Examinations, and will admit to the Final Dental Examination only. Candidates who are Licentiates of this College, or who may be registered medical practitioners, will be required to produce certificates of attendance on the special subjects only, and will be examined in these only for the Dental diploma. First Professional Examination: The candidate must have attended the courses on Anatomy, Chemistry, and Physiology. The examination embraces Anatomy, Chemistry, and Physiology. The fee is £4 4*s*. Second Examination: The candidate must have attended the remaining courses of the curriculum, must be twenty-one years of age, and must pay a fee of £6 6*s*. The examination embraces Surgery, Medicine, Therapeutics, and the special subjects of Dental Anatomy and Physiology, Dental Surgery and Pathology, and Dental Mechanics. Unsuccessful candidates will be repaid £2 2*s*. in the First and £3 3*s*. in the Second Examinations. Candidates who claim exemption from the First Dental Examination, on the ground of having passed the First and Second Triple Qualification Examinations, will, before being admitted to the Second Dental Examination, be required to pay the total fee of £10 10*s*., payable for the Dental diploma, of which £3 3*s*. will be returned in case of rejection. The fee payable by candidates who begin study after Oct. 1st shall be £15 15*s*.

Faculty of Physicians and Surgeons of Glasgow.—The regulations as to certificates, curriculum, number, and subjects of examinations, fees, &c., are in effect similar to those of the Royal College of Surgeons of Edinburgh. Special provision is made for candidates who intend to qualify both in Medicine and in Dentistry. There is a practical examination in Mechanical Dentistry and also an examination in Practical Dentistry conducted in a dental hospital.

Royal College of Surgeons in Ireland.—All information concerning the licence in Dentistry may be obtained from the Registrar of the College, who will receive the applications of candidates for permission to be examined. The bank receipt for fees, together with all certificates, &c., are to be lodged with him at least seven days prior to the day fixed for the commencement of the examination. The Primary Dental Examinations commence on the second Monday in the months of February, May, and November. The Final Dental Examinations commence on the Thursdays immediately following the Primary Dental Examinations. Candidates are required to pass three examinations—viz., Preliminary (in General Education), Primary Dental, and Final Dental. Preliminary Examination.—All examinations in general education recognised by the General Medical Council are accepted by the College. Preliminary Examinations are held conjointly by the Royal Colleges of Physicians and Surgeons on the third Wednesdays in March and September. Primary Dental Examination.—Fee £10 10*s*.; for re-examination, if rejected, £5 5*s*. Every candidate[2] is required, before admission to the Primary Dental Examination, to produce evidence—(1) of having passed a recognised preliminary examination and of having been registered as a medical or dental student by the General Medical Council; (2) of having, subsequently to registration as a dental or medical student, attended at a recognised medical school the following courses: Lectures on Practical Anatomy, including Dental Anatomy, six months; Demonstrations and Dissections, two courses of six months each; Lectures on Chemistry, six months; Lectures on Physiology including Dental Physiology, six months; Practical Histology; and Practical Chemistry, including Metallurgy, three months; (3) of having attended Clinical Instruction at a recognised general hospital for one year. The subjects of this examination are: (1) Physics;[3] (2) Chemistry, including Metallurgy; (3) Anatomy; (4) Physiology and Histology; and (5) Surgery. Final Examination.—Candidates holding L.R.C.S.I., or students who have passed Primary Dental or Third Professional Examination of the College, £10 10*s*.; re-examination, £5 5*s*. Fees for Final Examination of all other candidates, £26 5*s*.; re-examination, £10 10*s*. Extra fee for Special Examination, £5 5*s*. Candidates must produce evidence of having passed the Primary Dental Examination of this College, or the Third Professional Examination under the Conjoint Board with the Royal College of Physicians in Ireland, or with the Apothecaries' Hall, or an equivalent examination recognised by the College, and are required to produce certificates of having attended: (1) the following courses of lectures recognised by the College: Dental Surgery and Pathology (two courses), Dental Mechanics (two courses); (2) for two years the practice of a dental hospital recognised by the College, or of the dental department of a general hospital so recognised; (3) of having been engaged during four years in professional studies; and (4) of having received three years' instruction in Mechanical Dentistry from a registered dentist. Candidates holding a diploma in Surgery shall be admissible to the Final Dental Examination on producing certificates of having attended: (1) one course of Lectures on Dental Surgery and Pathology; (2) one course of Lectures on Dental Mechanics; (3) for one year the practice of a Dental Hospital recognised by the College, or of the Dental Department of a General Hospital so recognised, where such attendance has been subsequent to the date of diploma (this remission (3) has been made on the understanding that the surgeon devotes his whole time to dental work); and (4) of having been engaged during a period of not less than two years in acquiring a practical familiarity with the details of Mechanical Dentistry under the instruction of a registered dentist. The following are the subjects of examination: Dental Surgery, Theoretical (including Dental Pathology), Clinical, and Operative; Dental Mechanics, Theoretical, Clinical, and Practical (including the Metallurgy of the workshop). Examinations for the Licence in Dentistry *sine curriculo*: The Council has power to admit to examination, *sine curriculo*, candidates whose names are on the Dental Register, published under the direction of the General Medical Council, and who are unable to furnish the certificates required by the foregoing regulations, on presentation of a special schedule of application.

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[2] Candidates educated in England or Scotland are admitted to the Primary Dental Examination on the production of the certificates that would be necessary for both Primary and Final Examinations in their own countries.

[3] Candidates who have passed in Chemistry and Physics at a First Professional Examination under the Conjoint Board with the Royal College of Physicians in Ireland, or with the Apothecaries' Hall, or an equivalent examination, recognised by the College, are exempted from examination in these subjects at the Primary Dental Examination.

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TEACHING INSTITUTIONS.

ENGLAND.

Dental Hospital of London and School of Dental Surgery, Leicester-square.—The school was founded to provide the special dental education required by the Royal College of Surgeons for the licence in Dental Surgery. The general part of the curriculum may be taken at any general hospital. The hospital is open from 9 A.M. to 4 P.M., there being one staff for the morning and another for the afternoon of each day. There is a good mechanical laboratory, and opportunity is afforded students of gaining practical experience in taking models and fitting dentures into the mouth. The demonstrators at the commencement of each session give a course of lectures on Operative Dental Surgery. The five house surgeoncies are held for one year each, and are open to all qualified students. The lecturers, in addition to their lectures, give special demonstrations on the Microscopy of Dental Anatomy and Dental Surgery. The lecturer on Dental Mechanics also gives practical demonstrations in the mechanical laboratory. A scholarship of the value of £20 has been founded by Sir Edwin Saunders and will be awarded to the student who has obtained the highest aggregate number of marks in the five class examinations—viz., the four Lecturers' Prizes, the Operating Prize—and in additional special *viva-voce* examinations in Practical Dentistry. Prizes and certificates are awarded by the lecturers for the best examinations in the subjects of their respective courses, at the end of the summer and winter sessions. A prize of the value of 5 guineas is given by Messrs. Ash and Sons for the best essay on some surgical subject connected with Dental Surgery. The conditions under which this prize is to be competed for are the same as those for the Saunders Scholarship, with this exception, that the papers are to be written in the hospital during the summer session. Consulting Physician: Sir Richard Quain, Bart., F.R.S., M.D., F.R.C.P., LL.D. Consulting Surgeon: Mr. Christopher Heath, F.R.C.S. Consulting Dental Surgeons: Mr. T. Arnold Rogers, M.R.C.S., L.D.S., and Mr. Smith Turner, M.R.C.S., L.D.S. Dental Surgeons: Leonard Matheson, L.D.S.; E. Lloyd Williams, L.R.C.P., M.R.C.S., L.D.S., L.S.A.; W. B. Paterson, F.R.C.S., L.D.S.; W. H. Woodruff, L.D.S. and A. Clayton Woodhouse, M.R.C.S., L.D.S. Assistant Dental Surgeons: J. F. Colyer, L.R.C.P., M.R.C.S., L.D.S.; C. F. Rilot, L.R.C.P., M.R.C.S., L.D.S.; H. Baldwin, M.R.C.S., L.D.S.; H. Lloyd Williams, M.R.C.S., L.D.S.; W. H. Dolamore, L.R.C.P., M.R.C.S., L.D.S.; Percy Smith, L.R.C.P., M.R.C.S., L.D.S.; G. Hern, L.R.C.P., M.R.C.S., L.D.S.; J. G. Turner, L.R.C.P., F.R.C.S., L.D.S.; Russell Barrett, L.R.C.P., M.R.C.S., L.D.S.; Ashley Densham, L.R.C.P., M.R.C.S., L.D.S.; N. G. Bennett, M.A., M.B., L.D.S.; and D. P. Gabell, L.R.C.P., M.R.C.S., L.D.S. Anæsthetists: Dudley W. Buxton, M.D., B.S. Lond., M.R.C.P. Lond.; Frederic W. Hewitt, B.A., M.D. Cantab.; Carter Braine, F.R.C.S.; and Henry Davis, M.R.C.S., L.S.A.; Assistant Anæsthetists: George Rowell, F.R.C.S.; E. A. Bridger M.D.; R. Turle Bakewell, M.B. Lond. L.R.C.P., M.R.C.S. Demonstrators: H. J. Stevens, L.D.S.; W. S. Nowell, M.A. Oxon, L.D.S.; H. Austin, M.D. Lond., L.D.S.; R. Herschell, L.D.S. Medical Tutor: D. P. Gabell, L.R.C.P., M.R.C.S., L.D.S.; Curator of Mechanical Laboratory: W. E. Fletcher. Lecturers.—Dental Anatomy and Physiology (Human and Comparative): Charles Tomes, F.R.S., M.A. Oxon, M.R.C.S., L.D.S., on Wednesdays and Saturdays, at 8 A.M. (Summer). Dental Surgery and Pathology: Storer Bennett, L.R.C.P., F.R.C.S., L.D.S., on Tuesdays and Fridays, at 8 A.M. (Summer). Mechanical Dentistry: E. Lloyd Williams, L.R.C.P., M.R.C.S., L.D.S., L.S.A., on Wednesdays, at 5 P.M. (Winter). Metallurgy in its Application to Dental Purposes: Dr. Forster Morley, M.A., F.I.C., F.C.S., on Thursdays, at 5 P.M. (Winter). During the sessions the surgeons of the day will give demonstrations at stated hours. The house surgeons attend daily while the hospital is open. Fee for two years' hospital practice required by the curriculum, including lectures, £50 in one payment, or 50 guineas in two yearly instalments. The curriculum requires two years to be passed at a General Hospital; the fee for this is about £55. Both hospitals can be attended simultaneously. The Dean, Mr. Morton Smale, attends at the hospital every Wednesday morning from 10 to 12, and daily from 5 P.M. to 6 P.M. from Sept. 28th to Oct. 1st, and from April 29th to May 3rd, or he can be seen by appointment. Letters to be addressed—40, Leicester-square, "to be forwarded."

National Dental Hospital and College.—Winter Session, 1897–98, commences on Oct. 4th at the new building at the corner of Great Portland and Devonshire streets, W.—Consulting Physician: Sir W. H. Broadbent. Consulting Surgeon: Mr. Christopher Heath. Consulting Dental Surgeon: Sir Edwin Saunders. Honorary Visiting Physician: Dr. James Maughan. Honorary Visiting Surgeon: Mr. E. W. Roughton. Dental Surgeons: Mr. F. H. Weiss, Mr. A. Smith, Mr. M. Davis, Mr. T. G. Read, Mr. Rushton, and Mr. C. W. Glassington. Assistant Dental Surgeons: Mr. W. Weiss, Mr. E. Beverley, Mr. W. H. Wheatley, Mr. H. J. Relph, and (vacancy). Anæsthetists: Mr C. H. Cosens, Dr. Flux, Mr. C. J. Ogle, Mr. G. E. Norton, Dr. J. Maughan, and Dr. Harold Low. Lecturers (winter), Dental Anatomy and Physiology: Dr. J. W. Parc, Tuesdays and Thursdays, 5 P.M., in October, November, and December. Operative Dental Surgery: Dr. George Cunningham, Mondays, 6.30 P.M., in October, November, and December. Dental Materia Medica and Therapeutics: Mr. C. W. Glassington, Tuesdays, 7.30 P.M., in October, November, and December. Dental Metallurgy: Dr. W. Lapraik, Tuesdays, 7.30 P.M., in January, February, and March. Dental Mechanics: Mr. H. Rose, Mondays, 7 P.M., in January, February, and March. Summer—Dental Surgery and Pathology, Mr. Hopewell Smith, Mondays and Thursdays, 6 P.M., in May, June, and July. Elements of Histology: Dr. J. Maughan, Mondays and Thursdays, 5 P.M., May, June, and July. The hospital is lighted throughout by electricity and warmed and ventilated by approved methods. Clinical Lectures and Demonstrations are given from time to time, and each student on entering passes through a preliminary course under a demonstrator. The stopping rooms have accommodation for sixty chairs. Dresserships in the extraction rooms are rearranged every three months. An Entrance Exhibition, of the value of £15, is open for competition at the commencement of each summer and winter session. Prizes in medals are open for competition at the end of each course of lectures. Certificates of honour are given in each class. The Rymer Medal for General Proficiency, value £5, is awarded annually to the most meritorious student; and the Ash Prize, value £3 3*s.*, for a Thesis on a subject in Dental Surgery. Total fee for the Special Lectures and Hospital Practice required, 40 guineas. Single Courses: Dental Anatomy and Physiology, Dental Surgery and Pathology, Dental Mechanics, Dental Metallurgy, Dental Materia Medica, Demonstration of Dental Mechanics, £5 5*s.* each. Operative Dental Surgery, £3 3*s.* Hospital Practice to registered practitioners by special permission of Committee, twelve months, £15 15*s.* The Committee also consider applications from medical men who may desire to attend the Anæsthetic Room for a course of instruction in Nitrous Oxide administration. Information respecting the Hospital Practice and the College may be obtained from the Dean, Mr. Sidney Spokes, who attends at the Hospital, Great Portland-street, on Tuesday mornings.

Guy's Hospital.—The work of the Dental Department begins daily at 9 A.M. both in the extraction rooms and in the conservation room. *The Extraction Rooms:* Patients are admitted between 9 and 10.30 A.M., and are seen by the dental surgeon for the day, the dental house surgeon, the assistant dental house surgeon, and the dressers. Such cases as are suitable for conservative treatment are transferred to the conservation room, taking with them a dental chart to indicate the treatment required. *The Conservation Room:* This room is open from 9 A.M. till 5 P.M. There are fifty Monson chairs for the use of the Dressers, who, under the supervision of the Staff, perform the various operations of Dental Surgery. The members of the staff attend every morning and on certain afternoons in the week to give demonstrations and otherwise assist students in their work in the Conservation Room and Mechanical Laboratory. Dental students have the opportunity of attending concurrently at this hospital the two courses of instruction required by the examining board for the L.D.S. Eng., viz., the special lectures and practice of the Dental Department and the general lectures and practice of the Medical School. The fees for these two courses may be paid separately or together, or they may be combined with the fees required to be paid for the course for a medical diploma. Students who enter for a medical as well as a dental diploma are allowed to pursue their study of Dentistry during any period of their medical course most convenient to themselves without further charge. An Entrance Scholarship in Arts of the value of £30 is offered for competition annually in September, and prizes of the

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aggregate value of £35 are awarded for general proficiency and skill in Practical Dentistry. Dental students are eligible for admission to the Residential College and enjoy the other social privileges of students in the Medical School.

London Hospital.—Mr. Cunningham and Mr. Dolamore give practical instruction during the winter and summer sessions on Mondays, Tuesdays, Thursdays, and Fridays at 9 A.M. In selecting from candidates for the office of Dental Assistant priority will be given to those who have attended the greatest number of lectures on Dental Pathology and Surgery, and have also been the most punctual in attendance in the dental department. A class for special instruction in filling teeth will be formed each term. Candidates for Dressership must undertake to attend regularly on Mondays and Thursdays, or on Tuesdays and Fridays, for three months, and to follow the practical course of demonstrations.

Mason College, Birmingham.—The teaching of Dentistry is undertaken by the Mason College, acting in association with the Birmingham Dental Hospital and the Birmingham Clinical Board, so that the students may fully qualify themselves for the Dental diploma of the Royal Colleges. There is a special and well-equipped Dental Museum and Laboratory. Special courses of lectures are delivered on Medical and Surgical Diseases of the Mouth, &c., and there is a special course of Practical Dental Histology and Pathology. An Entrance Exhibition, value £15 15*s*, is awarded annually at the commencement of the winter session. Medals and honour certificates are awarded annually in the various classes.

Liverpool Dental Hospital, Mount Pleasant.—The Liverpool Dental Hospital, founded in the year 1864, combines the work of a most useful charity with all the advantages of a dental school recognised by all the licensing bodies of Great Britain and Ireland. The increased facilities provided by the recent extensive additions and alterations have more than fulfilled the most sanguine anticipations of the committee and staff, and students have been quick to avail themselves of the increased accommodation and conveniences. Special attention has been paid to the ventilation and lighting; the electric light alone is employed for operating during the evening. Each chair has been provided with a specially constructed canting pendant which can be fixed at any angle. The chairs are of the well-known Morrison pattern, which, together with other fittings and fixtures, render this room one of the finest in the kingdom. There is an abundant daily supply of patients. Over 23,000 cases were treated during last year. The hospital staff consists of twelve honorary dental surgeons, one of whom is present each morning and evening. In addition to these there are one or more house surgeons to superintend all the hospital work and devote themselves to clinical teaching, advising and helping the students in their studies. Every facility is afforded to students who are anxious to acquire proficiency in Dental Surgery and to prepare themselves for the Dental diploma of the Royal College of Surgeons. The fee for the two years' Dental Hospital Practice required by the Royal College of Surgeons is £12 12*s*., which must be paid on entrance. Fee as a perpetual student, £15 15*s*. Composition fee for all Lectures: a payment of £50 on entrance, or in two equal instalments (one-half on entrance and the remainder within twelve months). Fee for General Hospital Practice, £10 10*s*. All communications relating to the medical department should be addressed to Professor Paterson, Dean of the Medical Faculty, University College; and all communications relating to the Dental Hospital should be addressed to R. Edwards, 50, Mount Pleasant.

Bristol General Hospital.—Mr. Genge gives practical instruction in Dental Surgery at 9.30 A.M. on Mondays and Thursdays.

University College, Bristol.—Dental Students can enter for the full curriculum at Bristol. The Lectures are delivered at the college. Practical instruction is given at the Royal Infirmary by Mr. Ackland and at the General Hospital by Mr. Genge, both institutions being recognised by the Dental Board of the Royal College of Surgeons of England. Full information may be obtained of the Dean of the Medical Faculty, Professor E. Markham Skerritt, University College, Bristol.

Owens College, Manchester.—Arrangements have been made for dental students to attend the hospital practice at the Manchester Royal Infirmary and the practice at the Victoria Dental Hospital. Lectures on special subjects will be given in the College as follows:—Winter session: Dental Mechanics, Mr. Tanner, Thursday, 4 P.M. Dental Metallurgy, Dr. Burghardt. Summer session: Dental Anatomy and Physiology, Mr. Hooton, Tuesday at 4 P.M., Friday at 2 P.M. Dental Surgery, Mr. Campion, Tuesday and Friday, 3 P.M. Practical and Operative Dental Surgery, Mr. Whittaker, Wednesday: Lecture, 2.30 P.M.; Demonstration, 4 P.M. Lectures in Dental and Practical Histology, Mr. Headridge. Fee for the course £4 4*s*. Dental practice for two years at the Manchester Royal Infirmary, £10 10*s*.; at the Victoria Dental Hospital at Manchester, £12 12*s*., paid in advance, or £8 8*s*. for the first year and £5 5*s*. for the second year. At the Victoria Dental Hospital patients attend at 8.30 A.M. daily, and at 7 P.M. on Monday, Wednesday, and Friday. Consulting Physicians: Dr. H. Simpson and Professor D. J. Leech. Consulting Surgeons: Mr. E. Lund, Mr. F. A. Heath, Professor T. Jones, and Mr. J. Hardie. Consulting Dental Surgeons: Mr. H. Campion and Mr. G. W. Smith. Dental Surgeons: Mr. G. G. Campion, Mr. E. P. Collett, Mr. W. Dougan, Mr. L. Dreschfeld, Mr. J. W. Dunkerley, Mr. W. Dykes, Mr. W. Headridge, Mr. W. A. Hooton, Mr. I. Renshaw, Mr. W. Simms, Mr. W. Smithard, Mr. T. Tanner, and Mr. G. O. Whittaker. Assistant Dental Surgeons: Mr. P. A. Linnell, Mr. F. W. Minshall, Mr. C. R. Morley, and Mr. C. H. Smale. Administrators of Anæsthetics: Dr. A. Wilson and Dr. J. P. Stallard. Dean: Mr. G. G. Campion.

University College, Liverpool, School of Dental Surgery.—There is a school of Dental Surgery in connexion with the Medical Faculty. The curriculum includes Lectures and Demonstrations on all the subjects required for the licences in Dental Surgery of the Royal Colleges of England, Edinburgh, and Dublin, and of the Faculty of Physicians and Surgeons of Glasgow. In addition, Laboratory courses are conducted in Dental Histology and Dental Pathology. Practical instruction in Dentistry is given at the Dental Hospital in Mount Pleasant. Fees:—A payment of £50 on entrance, or in two equal instalments (one-half on entrance and the remainder within twelve months), entitles the student to attendance on all lectures and demonstrations (medical and dental) required for the Dental Diploma of the Royal College of Surgeons. The fee for two winters' hospital practice at the Royal Infirmary is £10 10*s*., and for two years' dental hospital practice £12 12*s*. Further information can be obtained from the Dean of the Medical Faculty, Professor Paterson, University College, Liverpool.

Devon and Exeter Dental Hospital, Castle-street, Exeter.—Established 1880.—The hospital is open daily (Sundays excepted), and patients are admitted between the hours of 9 and 11 A.M. Students attending the practice of the hospital must consider themselves strictly under the control of the medical officers, and must not undertake any operation without the consent of the dental surgeon for the day. Hon. treasurer, Mr. J. M. Ackland; Hon. secretary, Mr. Henry Yeo.

SCOTLAND.

The Incorporated Edinburgh Dental Hospital and School, 31, Chambers-street, Edinburgh.—For the special classes, both theoretical and practical, required by dental students the directors have secured the services of an efficient staff of dental officers and lecturers. There will also be a course of demonstrations in Mechanical Dentistry. Students will receive instruction in Practical Dental Mechanics under the mechanician. The fee for clinics in gold filling is included in the Dental Hospital fee of £15 15*s*. The minimum cost of classes for the whole course of dental instruction amounts to £78 13*s*.

Dental Hospital and School, Glasgow.—The summer session was opened on May 4th, 1897, and the lectures were delivered as under:—Dental Surgery and Pathology, on Tuesdays and Thursdays, at 8 A.M. J. M. MacMillan, L.R.C.S. & P. Ed., L.D.S., lecturer. Dental Anatomy and Physiology, on Tuesdays and Fridays, at 7 P.M. Dr. Wm. Wallace, M.A., M.B., C.M., L.D.S., lecturer. The winter session opens on Nov. 2nd, 1897, and the lectures will be delivered as under: Dental Mechanics, on Tuesday evenings at 7 P.M., beginning Nov. 3rd. Mr. John A. Biggs, L.D.S., lecturer. Fee for each of the above courses of lectures, £3 3*s*. The lectures on Dental Anatomy and Dental Surgery are arranged to extend over two summer sessions, as required by the Royal College of Surgeons of England, thus enabling students to present themselves for examination at any of the four Licensing Boards. The fees for lectures and two years' hospital practice amount to £25 4*s*. Intending students before commencing to attend the lectures or hospital practice must produce evidence of having passed the preliminary examination prescribed by the regulations of the General Medical Council for registration of dental

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students. Dean: Mr. John A. Biggs. Secretary: D. M. Alexander, 97, West Regent-street, Glasgow. The hospital is open daily from 5 to 7 P.M. (Saturdays excepted). Students may enrol at any time, their period of attendance counting from date of entry.

Glasgow Royal Infirmary (Dental Department).—Mr. W. H. Gray, L.D.S., attends at the Royal Infirmary at 3 P.M. on Mondays, Wednesdays, and Saturdays, and gives a course of Dental Surgery on these days in summer. The following course in the curriculum can be taken at St. Mungo's College: Anatomy, six months; Practical Anatomy, nine months; Physiology, six months; Chemistry, six months; Practical Chemistry with Metallurgy, three months; Surgery, six months; Medicine, six months; Materia Medica, three months; Clinical Surgery, six months; Dental Surgery, six months, and attendance for two years on the dental department of the hospital. The attendance on the Dental Clinic is free to students of the hospital; to dental students, one year, £5 5*s.*; perpetual, £10 10*s.*

IRELAND.

School of the Royal College of Surgeons in Ireland.—Dentistry Professor: R. T. Stack, M.D.Univ Dub., F.R.C.S., L.D.S. Eng., Examiner Royal College of Surgeons, Dentist Dental Hospital of Ireland. Arrangements are completed for the education of candidates for the Licence in Dental Surgery of the College, and the following courses are delivered during the session:—Dental Anatomy, Professor Fraser; Dental Metallurgy, Professor Lapper. Fee, each course, £3 3*s.*

Annotations.

"Ne quid nimis."

THE POSITION OF PSYCHOLOGY IN THE MEDICAL CURRICULUM.

As there is no hard-and-fast line between physiology and psychology it follows that in an indirect way psychology is a subject upon which every medical student receives some instruction and in his knowledge of which he must expect to be tested. What is familiarity with the symptoms of many cerebral conditions but psychological knowledge? The universities demand more knowledge of the subject than the licensing bodies, but London University enjoys the distinction of being the only examining body in the United Kingdom which definitely proposes to test by examination the knowledge of their students in this subject as a separate subject. For the study of psychology with an eye on the pass list there are no books so entirely satisfactory as "The Outlines of Psychology" and "The Teacher's Note-book of Psychology," by Professor James Sully, who has served as an examiner in mental and moral sciences at the Universities of Cambridge, London, and Victoria. In Dr. Savage's "Manual of Insanity" will be found special chapters dealing with this subject in its relation to insanity. That the student will generally pick up in the course of his reading upon other subjects sufficient knowledge of practical psychology to enable him to employ psychological knowledge in the affairs of life, when necessary, is undoubted. But knowledge so obtained is apt to be disorderly, the facts hard to find, and the deductions hard to draw. Therefore we strongly recommend every medical student during his last year of study to make a point of reading at least one of the two hand-books we have mentioned.

REPORTED CHOLERA IN BETHNAL GREEN.

AT this season of the year the very name of cholera is enough to strike terror into the minds of most people. Until recently we had not heard of any cases, but an inquest was held on Saturday last in Bethnal-green which, as reported in the daily press, might give rise to some misgivings. The case put shortly was that of a girl, aged seventeen years, employed in paper-sorting, who was taken ill at 1 A.M. and died at 5 P.M., being much collapsed and having suffered from acute vomiting and purging. Medical evidence was given to the effect that the girl died from English cholera, and the jury returned a verdict to that effect. In the reports which we have seen in the lay press the word English was omitted, which naturally makes the case seem more suspicious. We have the best authority for saying, however, that the case was one of English cholera, a disease which is not so uncommon in the summer as many people think, and that the bacteriological examination which has been made quite confirms this view. The recent very hot weather has given rise to a large amount of diarrhœa, and during the month of July the deaths in London from this cause were ninety-nine above the average, while the returns for the first two weeks of August show 575 and 621 deaths from this cause. With the return of cooler weather the diarrhœa death rate will probably decrease, and at present no uneasiness need be felt as regards an outbreak of Asiatic cholera.

SOME OF THE CHIEF APPOINTMENTS HELD BY MEDICAL MEN.

Medical Officer to the Local Government Board.—This appointment is in the hands of the President of the Local Government Board for the time being, and has hitherto been filled by the promotion of one of the two assistant medical officers of that Board.

Medical Inspectors of the Local Government Board.—These appointments also are made by the President of the Local Government Board. Qualification and experience in public health are taken into consideration.

Medical Officers to Poor-law Districts.—These appointments are made by the guardians of the union or parish in question, subject to the approval of the Local Government Board, which approval is primarily concerned with the medical and surgical qualifications of the persons appointed and the locality of their residences.

Public Vaccinators.—The conditions of appointment are the same as those already described for medical officers of Poor-law districts.

District Medical Officers of Health.—The appointments are made by the urban or rural district council in question, subject to the sanction of the Local Government Board, which sanction takes account of statutory qualifications, salary, area of district, &c.

County Medical Officers of Health.—The appointments are made by the respective county councils, with whom the question in all its details absolutely rests.

Lord Chancellor's Visitors in Lunacy.—There are two Visitors in Lunacy nominated by the Lord Chancellor. The appointments are usually bestowed on gentlemen who have distinguished themselves in the specialty.

Prison Medical Service.—Two medical officers are attached to each of the "first-class" prisons and one to several of the larger "second-class" prisons. They are required to devote their whole time to their official duties. The service is a small one and vacancies do not often occur. Forms of application can be procured from the Secretary to the Prison Department at the Home Office. The salary commences at £250 per annum, with free quarters, or an allowance in lieu thereof.

Medical Officers of the Mercantile Marine.—The Merchant Shipping Act, 1894 directs (Section 209) that every foreign-going ship having 100 persons or upwards on board shall carry a duly qualified medical practitioner. Ship's medical officers, however, are more often appointed under the part of the same Act relative to "emigrant ships." For the purposes of the Act an emigrant ship is defined as one which carries more than fifty steerage passengers, and a steerage passenger is defined as one who is not a cabin passenger. Section 303 provides that a medical practitioner shall be carried on board an emigrant ship where the number of steerage passengers exceeds fifty, and also where the number of persons on board (including cabin passengers, officers, and crew) exceeds 300. A medical practitioner shall not be considered to be duly authorised for the purposes of this Act unless (*a*) he is authorised by law to practise in some part of Her Majesty's dominions,

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or in the case of a foreign ship in the country to which that ship belongs; and (*b*) his name has been notified to the emigration officer at the port of clearance, and has not been objected to by him; and (*c*) he is provided with proper surgical instruments to the satisfaction of that officer. If any person proceeds or attempts to proceed as medical practitioner in any emigrant ship without being duly authorised, he shall be liable to a fine not exceeding £100. Surgeons in charge of passenger ships should keep a record of any sickness that occurs on the voyage, whether among saloon passengers, emigrants, or crew, and they are requested to report the same to the emigration officer at the end of the voyage. The remuneration for these appointments is extremely variable, ranging from a free passage to the port of destination to a salary of £10 a month during continuance in the service. The appointments are of course made by the various firms of shipowners and the applicants are sometimes numerous.

FACILITIES FOR CLINICAL INSTRUCTION IN INFECTIOUS DISEASE AFFORDED BY THE HOSPITALS OF THE METROPOLITAN ASYLUMS BOARD.

THE study of infectious disease is a very necessary part of the student's curriculum, but it is only within recent years that proper facilities have been afforded for taking advantage of the valuable material to be found in the fever hospitals of the Metropolitan Asylums Board. In former years the student had but few opportunities of becoming familiar with the natural history of this branch of medicine, and it was by no means an unheard-of event for a student to complete his career without having seen half a dozen cases of infectious disease. That there is still evidence of the state of affairs which formerly obtained may be gathered from the fact that during 1895 no fewer than 1277 patients, or a percentage on the total admission into the Metropolitan Fever Hospitals of 7·6, were, after admission, found not to be suffering from the diseases mentioned in the medical certificates upon which they were removed to hospital, the percentage of mistakes at the Eastern Hospital at Homerton being 11·0 of the total admissions. At the present time five of the admirable hospitals of the Asylums Board—viz., the Eastern at Homerton, the Western at Fulham, the South-Eastern at Deptford, the South-Western at Stockwell, and the North-Western at Hampstead, are open under certain conditions to students and medical practitioners, while instruction in small-pox is also afforded at the small-pox ships in the Long Reach, near Dartford. A student desirous of taking a course at one of the Board's hospitals, must have completed his third year and have held the office of clinical clerk and dresser; he must then obtain the sanction of the Medical School to which he belongs and pay a fee of three guineas for the first three months, and one guinea for each subsequent month to the clerk of the board, from whom he receives a card indicating the hospital to which he is to be attached. At this hospital he must attend at stated times for at least two days in the week for a minimum period of two months, and on the completion of his attendance he receives a certificate from the medical superintendent whose lectures and classes he has attended. While in the hospital the student places himself under the control of the medical superintendent, and is bound to observe the regulations in force for the prevention of spread of infection. These rules comprise the wearing while within the hospital wards of brown holland overalls, consisting of coat, trousers, and cap, which are provided by the board, and the use of what may be termed a discharge block, which consists of an infected room where the overalls are left, a lavatory, and a theoretically uninfected room. The students are further required to keep their hair short and to be efficiently protected against small-pox. A duly qualified medical practitioner has equally to conform to these regulations and obtain the consent of the medical superintendent of the hospital at which he elects to attend. The student who attends these courses will obtain a fair knowledge of infectious disease, which will stand him in good stead in years to come, while he will also get an insight into the management of fever hospitals and the methods of disinfection practised therein.

The provisions with regard to instruction in small-pox differ somewhat from the above, as it is necessary for the student to reside for from two to four weeks on the small-pox ships, where he is provided with rations, apartments, and washing at the extremely moderate sum of 12*s.* per week. The student has to travel to and from the hospital ships on the ambulance steamer and to furnish himself with a suit to which he does not attach much value, in order that it may be disinfected or destroyed at the termination of the period. If the student can take this course during the summer we can promise him, as the result of a personal experience, a most enjoyable and instructive little holiday.

MEDICAL TEACHERS.

MR. R. C. B. KERIN, B.A. London, first in First Class Honours in Classics, assisted by a staff of B.A. and B.Sc. Honour Graduates, prepares candidates in class and by private Tuition for Medical Preliminaries, London Matriculation, Preliminary Scientific Inter. Science, Hospital Scholarships, First Conjoint, First M.B. Oxon. and Camb., &c. Chemical and Physical Laboratories. For last four years 91 London University Successes and 3 Hospital Science Scholarships, &c.—Carlyon College, 55 and 56, Chancery-lane, W.C.

The University Examination Postal Institution prepares candidates through the post or personally for all medical examinations. The four medical tutors have the M.D. or M.S. degree, three being medalists. Preparation also by the other tutors for the Preliminary Arts or Science Examinations. Bacteriological Laboratory for D.P.H. candidates. Numerous recent successes.—Apply to the Manager, Mr. E. S. Weymouth, M.A. Lond., Office, 27, Southampton-street, Strand, London, W.C.

M.D., B.S. Lond., prepares for all the Professional Exams. Small classes are held for the Final College of Surgeons and Physicians, the Hall, the M.D.'s of Brussels, Durham (fifteen years' standing), Tuition by correspondence.—Address, M.D., 23, Wimpole-street, Cavendish-square, W.

Special preparation, in class, privately, and by correspondence, for the Triple Qualification, Edinburgh. Also for Fellowship Examinations of Royal College of Surgeons, Edinburgh, and M.D. Brussels. Resident pupils received.—Address, Class Rooms, 7, Chambers-street, Edinburgh.

Coaching for Examination (University of Brussels). Also Correspondence Course for Provincial Practitioners, with practical and vivâ voce work in London before going to Brussels.—Cantab., THE LANCET Office, 423, Strand, W.C.

INSTRUCTORS IN ELOCUTION, &c.

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Miss BOULTBEE, 37, Gloucester-place, Portman-square, W., gives Lessons in Lip-reading to persons wholly or partially Deaf.

THE SERVICES.

WE are frequently asked for copies of the examination papers set at the competitive examinations of Her Majesty's Army and Indian Medical Services, and the following papers set at a recent examination may be of service to our readers. We omit the questions in Natural Science, which are more or less elementary. Three hours are allowed for each paper.

MEDICINE AND PATHOLOGY (PROFESSOR MCCALL ANDERSON).

1. State fully what the symptoms in the following case imply, giving the grounds for your diagnosis; and what anatomical lesions would you expect to find in the event of a fatal issue:—

A baker, aged twenty-six, whose family and personal history in early life were good, was admitted into hospital on Jan. 1st, 1897. Six years before, after a chill, he was seized with fever, profuse sweating, and pain and swelling in many joints, large and small. The joint affection was erratic—flitting about from joint to joint—but when he recovered their shape and mobility were in no way impaired. Three years thereafter—having in the interval apparently enjoyed excellent health—he began to suffer in an increasing degree from breathlessness and palpitation on exertion, sometimes accompanied by præcordial pain. On examining the heart the apex beat was found to be displaced considerably downwards and to the left of the nipple line, with a corresponding increase of the cardiac dulness, and there was a murmur at the apex accompanying the first sound, with accentuation of the second pulmonary sound at the base. Three months before admission he became suddenly paralysed on the right side, without loss of consciousness. The palsy of the arm and leg was nearly complete, that of the face partial, and mostly of its lower segment. At the same time he entirely lost the power

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of speech, although he could read quite well, and understand everything that was said to him. A few weeks later the following symptoms gradually supervened on the paralysed side: increasing rigidity, tremors on exertion, exaggerated deep reflexes, and occasional spasms of the affected limbs.

2. How can hæmaturia be diagnosed, and what would lead you to suspect that the lesion was in the bladder and not in the urethra or upper urinary passages?

3. Describe the symptoms consequent upon a lesion involving the whole of the right internal capsule, and state what you know of "conjugate deviation" of the head and eyes and of "early" and "late rigidity."

4. How would you treat—(*a*) Passive congestion of the system due to dilatation of the heart; (*b*) the "night sweats" of phthisis; (*c*) myxœdema?

ANATOMY AND PHYSIOLOGY (MR. MAKINS).

1. Describe the triangular ligament of the urethra. State how it is formed and what structures are in relation with it.

2. Describe the form, position, and relations of the spleen. What theories exist as to its function.

3. Describe the structure of heart muscle. Give an account of the theories of its rhythmical contraction.

4. Give the course and distribution of the plantar nerves.

SURGERY (SIR WILLIAM MACCORMAC, BART.).

1. Give the causes, pathology, and treatment of ankylosis of the temporo-maxillary articulation.

2. What causes may induce hæmaturia of vesical origin. Omitting operative details, give the diagnosis and treatment.

3. Give the pathology, symptoms, diagnosis, and treatment of carcinoma of the large intestine. Illustrate your remarks by an example of the disease affecting the sigmoid flexure.

4. Enumerate the causes which may produce thrombosis of the brachial artery, and give the pathology, symptoms, and treatment.

CHEMISTRY AND MATERIA MEDICA (DR. NORMAN MOORE).

1. Describe an experiment by which the presence of carbonic acid in expired air may be demonstrated.

2. How is chlorine made? What are its properties?

3. What are the preparations of opium in the Pharmacopœia, and what proportion of opium does each contain?

4. Mention the chief anthelmintic drugs of the Pharmacopœia. State the method of administering each and the dose of each for an adult.

5. What drugs affect the quantity of the urine, and what drugs affect its physical characters?

THE BENEVOLENT AGENCIES OF THE PROFESSION.

ALL who belong to the medical profession should support the benevolent societies which minister to those in need in that profession, but students may rightly think that the support of such charities as well as their management should be left to their seniors; for whereas most students look to their friends and guardians for pecuniary support, to invite them to contribute to these medical charities is to ask their seniors to add to the subscriptions which they already send. But nowadays a fairly large section of the medical students, we think, are older men possessing independent means. To the notice of these we beg to bring the charities of the profession. All do good work on small incomes, all want further support, and all are economical in their management.

Before mentioning the general benevolent societies of the profession who ask for aid we may perhaps be pardoned if we direct attention to

THE LANCET RELIEF FUND,

founded in 1889 by the proprietors of THE LANCET. Year by year in the month of January the proprietors of THE LANCET provide a sum of at least £300, which is administered free of cost, for the purpose of affording immediate pecuniary assistance to medical men, or their widows and orphans, *in cases of distress and emergency*, by the grant of money by way of loans free of interest, or gifts, as the circumstances of the various cases may require. The fund has for its almoners the Presidents of the Royal Colleges of Physicians of London and Surgeons of England, the President of the General Medical Council, and the Proprietors of THE LANCET, with Sir Henry Pitman, M.D., F.R.C.P., as the honorary auditor. Applicants must satisfy the almoners of the fund that they are qualified under the following regulation: "The recipients shall be such persons as satisfy the almoners that they possess one or other of the following qualifications—that is to say: (*a*) That the applicant holds a registered medical qualification, and that he has fallen into pressing need of immediate pecuniary relief; or (*b*) that they are persons who have been, previously to the date of application, legitimately dependent upon some person holding a registered medical qualification, and that they have pressing need of immediate pecuniary relief." Application forms may be obtained from the secretary. Mr. Edward Davies, THE LANCET Offices, Strand, London, W.C.

THE BRITISH MEDICAL BENEVOLENT FUND.

The objects of this fund are twofold: (*a*) for the relief of medical men in temporary difficulty or distress and for their widows and orphans; and (*b*) for granting annuities to those who are quite incapable of providing for themselves after sixty years of age. Subscriptions for these objects may be sent to the treasurer, Sir W. H. Broadbent, Bart., M.D., F.R.C.P. Lond., 84, Brook-street, Grosvenor-square, W.; Dr. Samuel West, hon. financial secretary, 15, Wimpole-street, W.; and Mr. Joseph White, hon. secretary (cases), 6, Southwell-gardens, Kensington, S.W. The committee meet on the second Tuesday of every month except August. Applications are made by means of a form, which, when filled up by or on behalf of the applicant, must be signed by a subscriber (subscribers of 10*s.* and upwards and donors of £5 in one sum are entitled to this privilege), and should be sent, together with two or more letters of recommendation (one of which at least must be from a medical man), to Mr. Joseph White, on or before the Friday previous to the meeting of the committee. Forms of application for immediate relief may be obtained from any of the hon. secretaries.

ROYAL MEDICAL BENEVOLENT COLLEGE, EPSOM.

This College was established in 1855 to provide pensions for aged medical men and the widows of medical men in reduced circumstances. The school is open to all classes, but the sons of medical men receive special advantages. There are fifty pensioners, who receive annuities of £30, with the exception of a few still occupying rooms in the asylum, who receive £21. There are also eight Pugh pensioners, who receive £30 a year each. There are also annuities for aged daughters of medical men. Pensioners must be legally qualified medical men, who have been for five years registered medical practitioners, or the widows of such. They must not be less than sixty years of age at the time of their application for admission as candidates, and their yearly income must not exceed £60. The school, generally known as "Epsom College," contains about 250 pupils, 50 of whom, being the Foundation scholars, are educated, boarded, clothed, and maintained at the expense of the institution; while the remainder are charged £60 a year each for an education of the highest class, board, lodging, and washing. Boys who are not the sons of medical men pay £70 a year. There are also day scholars; boarders in the headmaster's house, and a few (six under fifteen years of age) are taken by Mr. E. Norman Gardiner. For school prospectus apply to the bursar at the College, Epsom. Foundation scholars must be elected from among the necessitous orphans and sons of such medical men as would be professionally qualified for pensionerships. They must be fully eight years old when proposed as candidates, but no boy can be elected on the Foundation whose age exceeds twelve years on May 1st preceding the date of election. There are nine perpetual presentations for female orphans of medical men and one open to those who are not orphans to the school of St. Anne's Society. Donors of ten guineas are life governors of the College; subscribers of one guinea annually are governors during the continuance of their subscriptions. All subscriptions are due in advance on Jan. 1st in each year. Any information with regard to the details of the institution will gladly be communicated to parties addressing inquiries to the secretary, Mr. J. B. Lamb, at the office of the College, 37, Soho-square, where subscriptions and donations will be thankfully received. Subscriptions will also be received by the treasurer, Dr. Constantine Holman, J.P.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

This society is really a provident as well as a benevolent one. By the small annual subscription of two guineas members are able, should necessity unfortunately arise, to protect their own families from destitution, and benefits are conferred upon those left in indigent circumstances. All legally qualified members of the profession residing within a radius of twenty miles from Charing-cross are eligible for proposal; the mode of admission is by ballot. Proposal papers and other communications for the court of directors should be sent to the secretary three weeks before the first Wednesday in the months of January, April, July, and September. Further information can be obtained from the secretary, Mr. J. B. Blackett, at the office, 20, Hanover-square, W.

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OUR CURRENT NUMBER

Being almost exclusively devoted to information especially interesting to Students, we are necessarily compelled to defer the publication of communications on other important subjects.

We tender our best thanks to those gentlemen who have at considerable personal trouble kindly supplied us with the returns and prospectuses upon which the information given in this Students' Number of THE LANCET *relative to the various medical examining bodies, hospitals, and medical schools of the United Kingdom is based. We regret that in some cases, however, owing to proofs having been either not returned at all or too late, certain inaccuracies will be found.*

TO ADVERTISERS.

Owing to the pressure on our advertisement columns this week many announcements have unavoidably been held over.

Communications, Letters, &c., have been received from—

A.—Dr. J. Altschul, Lond.; Messrs. Allen and Hanburys, Lond; Anglo-Swiss Condensed Milk Co., Lond.; Anderson's College Medical School, Glasgow, Secretary of; Mr. J. W. Arrowsmith, Bristol; Messrs. Armour and Co., Lond.

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V.—Dr. C. B. Voisey, Lond.; *Verulam Review*, Editor of.

W.—Dr. A. E. Wright, Swanage; Mr. E. Wilmshurst, Retford; Mrs. M. Wiseman, Lond.; West Ham Hospital, Secretary of; Westminster Hospital, Lond., Secretary of.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. H. Astley, Portobello; A., Lond.; Anther, Lond; Abstainer, Lond.; Adelphi, Lond.; Ajax, Lond.; A. L., Lond.

B.—Mr. W. Bernard, Londonderry; Brin's Oxygen Co., Lond.; Bristol General Hospital, Secretary of; Mr. E. Baker, Birmingham; Birmingham and Midland Hospital for Skin Diseases, Secretary of; Bona fide, Lond.; Mr. A. W. Berkeley, Wrexham; Mr. N. C. Beaumont, Margate; Messrs. Bishop and Sons, Lond.; Col. Badgley, Exmouth; Dr. T. S. Brodie, Houston; Benedict, Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; B., West Malling; Mr. M. Buchner, Lond.

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T.—Mr. G. M. E. Thorp, Stourport; Mr. J. D. Tiplady, Tow Law.

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Z.—Z., Lond.

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Presidential Address,

Delivered at the Annual Meeting of the British Association for the Advancement of Science at Toronto, 1897,

BY SIR JOHN EVANS, K.C.B., D.C.L., LL.D., Sc.D.,
CORRESPONDANT DE L'INSTITUT DE FRANCE, ETC.

GENTLEMEN,—Once more has the Dominion of Canada invited the British Association for the Advancement of Science to hold one of the annual meetings of its members within the Canadian territory, and for a second time has the association had the honour and pleasure of accepting the proferred hospitality. In doing so the association has felt that if by any possibility the scientific welfare of a locality is promoted by its being the scene of such a meeting, the claims should be fully recognised of those who, though not dwelling in the British Isles, are still inhabitants of that Greater Britain, whose prosperity is so intimately connected with the fortunes of the mother country. Here, especially, as loyal subjects of one beloved Sovereign, the sixtieth year of whose beneficent reign has just been celebrated with equal rejoicing in all parts of her empire, as speaking the same tongue, and as in most instances connected by the ties of one common parentage, we are bound together in all that can promote our common interests. There is, in all probability, nothing that will tend more to advance those interests than the diffusion of science in all parts of the British Empire, and it is towards this end that the aspirations of the British Association are ever directed, even if in many instances the aim may not be attained.

We are, as already mentioned, indebted to Canada for previous hospitality, but we must also remember that, since the time when we last assembled on this side of the Atlantic, the Dominion has provided the association with a President, Sir William Dawson, whose name is alike well known in Britain and America, and whose reputation is indeed world-wide. We rejoice that we have still among us the pioneer of American geology, who among other discoveries first made us acquainted with the "Air Breathers of the Coal," the terrestrial or more properly arboreal saurians of the New Brunswick and Nova Scotia coal-measures.

On our last visit to Canada, in 1884, our place of assembly was Montreal, a city which is justly proud of her McGill University; to-day we meet within the buildings of another of the universities of this vast Dominion, and in a city the absolute fitness of which for such a purpose must have been foreseen by the native Indian tribes when they gave to a small aggregation of huts upon this spot the name of Toronto —"the place of meetings." Our gathering this year presents a feature of entire novelty and extreme interest, inasmuch as the sister association of the United States of America—still mourning the loss of her illustrious President, Professor Cope—and some other learned societies have made special arrangements to allow of their members coming here to join us. I need hardly say how welcome their presence is, or how gladly we look forward to their taking part in our discussions and aiding us by interchange of thought. To such a meeting the term "international" seems almost misapplied. It may rather be described as a family gathering, in which our relatives more or less distant in blood, but still intimately connected with us by language, literature, and habits of thought, have spontaneously arranged to take part. The domain of science is no doubt one in which the various nations of the civilised world meet upon equal terms, and for which no other passport is required than some evidence of having striven towards the advancement of natural knowledge. Here, on the frontier between the two great English-speaking nations of the world, who is there that does not inwardly feel that anything which conduces to an intimacy between the representatives of two countries, both of them actively engaged in the pursuit of science, may also, through such an intimacy, re-act on the affairs of daily life and aid in preserving those cordial relations that have now for so many years existed between the great American Republic and the British Islands, with which her early foundations are indissolubly connected? The present year has witnessed an interchange of courtesies which has excited the warmest feelings of approbation on both sides of the Atlantic—I mean the return to its proper custodians of one of the most interesting of the relics of the Pilgrim Fathers, the log of the *Mayflower*. May this return, trifling in itself, be of happy augury as testifying to the feelings of mutual regard and esteem which animate the hearts both of the donors and of the recipients.

At our meeting in Montreal the President was an investigator who had already attained to a foremost place in the domains of physics and mathematics, Lord Rayleigh. In his address he dealt mainly with topics such as light, heat, sound, and electricity, on which he is one of our principal authorities. His name and that of his fellow-worker, Professor Ramsay, are now and will in all future ages be associated with the discovery of the new element, argon. Of the ingenious methods by which that discovery was made, and the existence of argon established, this is not the place to speak. One can only hope that the element will not always continue to justify its name by its inertness. The claims of such a leader in physical science as Lord Rayleigh to occupy the presidential chair are self-evident, but possibly those of his successor on this side of the Atlantic are not so immediately apparent. I cannot for a moment pretend to place myself on the same purely scientific level as my distinguished friend and for many years colleague, Lord Rayleigh, and my claims, such as they are, seem to me to rest on entirely different grounds. Whatever little I may have indirectly been able to do in assisting to promote the advancement of science, my principal efforts have now for many years been directed towards attempting to forge those links in the history of the world, and especially of humanity, that connect the past with the present, and towards tracing that course of evolution which plays as important a part in the physical and moral development of man as it does in that of the animal and vegetable creation. It appears to me, therefore, that my election to this important post may, in the main, be regarded as a recognition by this association of the value of archæology as a science. Leaving all personal considerations out of question, I gladly hail this recognition, which is, indeed, in full accordance with the attitude already for many years adopted by the association towards anthropology, one of the most important branches or true archæology.

It is no doubt hard to define the exact limits which are to be assigned to archæology as a science and archæology as a branch of history and *belles lettres*. A distinction is frequently drawn between science on the one hand and knowledge or learning on the other; but translate the terms into Latin and the distinction at once disappears. In illustration of this I need only cite Bacon's great work on the "Advancement of Learning," which was, with his own aid, translated into Latin under the title "*De Augmentis Scientiarum*." It must, however, be acknowledged that a distinction does exist between archæology proper and what, for want of a better word, may be termed antiquarianism. It may be interesting to know the internal arrangements of a dominican convent in the middle ages; to distinguish between the different mouldings characteristic of the principal styles of Gothic architecture; to determine whether an English coin bearing the name of Henry was struck under Henry II., Richard, John, or Henry III; or to decide whether some given edifice was erected in Roman, Saxon, or Norman times. But the power to do this, though involving no small degree of detailed knowledge and some acquaintance with scientific methods, can hardly entitle its possessors to be enrolled among the votaries of science. A familiarity with all the details of Greek and Roman mythology and culture must be regarded as a literary rather than a scientific qualification; and yet when among the records of classical times we come upon traces of manners and customs which have survived for generations, and which seem to throw some rays of light upon the dim past, when history and writing were unknown, we are, I think, approaching the boundaries of scientific archæology.

Every reader of Virgil knows that the Greeks were not merely orators, but that with a pair of compasses they could describe the movements of the heavens and fix the rising of the stars; but when by modern astronomy we can determine the heliacal rising of some well-known star, with which the worship in some given ancient temple is known to have been connected, and can fix its position on the horizon at some particular spot, say, three thousand years ago, and then find that the axis of the temple is directed exactly towards

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that spot, we have some trustworthy scientific evidence that the temple in question must have been erected at a date approximately 1100 years B C. If on or close to the same site we find that more than one temple was erected, each having a different orientation, these variations, following, as they may fairly be presumed to do, the changing position of the rising of the dominant star, will also afford a guide as to the chronological order of the different foundations. The researches of Mr. Penrose seem to show that in certain Greek temples, of which the date of foundation is known from history, the actual orientation corresponds with that theoretically deduced from astronomical data. Sir J. Norman Lockyer has shown that what holds good for Greek temples applies to many of far earlier date in Egypt, though up to the present time hardly a sufficient number of accurate observations have been made to justify us in foreseeing all the instructive results that may be expected to arise from astronomy coming to the aid of archæology. The intimate connexion of archæology with other sciences is in no case so evident as with respect to geology, for when considering subjects such as those I shall presently discuss it is almost impossible to say where the one science ends and the other begins.

By the application of geological methods many archæological questions relating even to subjects on the borders of the historical period have been satisfactorily solved. A careful examination of the limits of the area over which its smaller coins are found has led to the position of many an ancient Greek city being accurately ascertained; while in England it has only been by treating the coins of the Ancient Britons, belonging to a period before the Roman occupation, as if they were actual fossils that the territories under the dominion of the various kings and princes who struck them have been approximately determined. In arranging the chronological sequence of these coins, the evolution of their types—a process almost as remarkable, and certainly as well-defined, as any to be found in nature—has served as an efficient guide. I may venture to add that the results obtained from the study of the morphology of this series of coins were published ten years before the appearance of Darwin's great work on the "Origin of Species." When we come to the consideration of the relics of the early iron and bronze ages the aid of chemistry has of necessity to be invoked. By its means we are able to determine whether the iron of a tool or weapon is of meteoritic or volcanic origin, or has been reduced from iron-ore, in which case considerable knowledge of metallurgy would be involved on the part of those who made it. With bronze antiquities the nature and extent of the alloys combined with the copper may throw light not only on their chronological position, but on the sources whence the copper, tin, and other metals of which they consist were originally derived. I am not aware of there being sufficient differences in the analyses of the native copper from different localities in the region in which we are assembled for Canadian archæologists to fix the sources from which the metal was obtained which was used in the manufacture of the ancient tools and weapons of copper that are occasionally discovered in this part of the globe. Like chemistry, mineralogy, and petrology may be called to the assistance of archæology in determining the nature and source of the rocks of which ancient stone implements are made; and, thanks to researches of the followers of those sciences, the old view that all such implements formed of jade and found in Europe must of necessity have been fashioned from material imported from Asia can no longer be maintained. In one respect the archæologist differs in opinion from the mineralogist—namely, as to the propriety of chipping off fragments from perfect and highly finished specimens for the purpose of submitting them to microscopic examination.

I have hitherto been speaking of the aid that other sciences can afford to archæology when dealing with questions that come almost, if not quite, within the fringe of history, and belong to times when the surface of our earth presented much the same configuration as regards the distribution of land and water and hill and valley as it does at present, and when in all probability the climate was much the same as it now is. When, however, we come to discuss that remote age in which we find the earliest traces that are at present known of man's appearance upon earth the age of geology and palæontology becomes absolutely imperative. The changes in the surface configuration and in the extent of the land, especially in a country like Britain, as well as the modifications of the fauna and flora since those days, have been such that the archæologist pure and simple is incompetent to deal with them, and he must either himself undertake the study of these other sciences or call experts in them to his assistance. The evidence that man had already appeared upon the earth is afforded by stone implements wrought by his hands, and it falls strictly within the province of the archæologist to judge whether given specimens were so wrought or not; it rests with the geologist to determine their stratigraphical or chronological position, while the palæontologist can pronounce upon the age and character of the associated fauna and flora. If left to himself the archæologist seems too prone to build up theories founded upon form alone, irrespective of geological conditions. The geologist, unaccustomed to archæological details, may readily fail to see the difference between the results of the operations of Nature and those of Art, and may be liable to trace the effects of man's handiwork in the chipping, bruising, and wearing which in all ages result from natural forces; but the united labours of the two, checked by those of the palæontologist, cannot do otherwise than lead towards sound conclusions.

It will perhaps be expected of me that I should on the present occasion bring under review the state of our present knowledge with regard to the antiquity of man; and probably no fitter place could be found for the discussion of such a topic than the adopted home of my venerated friend, the late Sir Daniel Wilson, who first introduced the word "prehistoric" into the English language. Some among us may be able to call to mind the excitement, not only among men of science, but among the general public, when, in 1859, the discoveries of M. Boucher de Perthes and Dr. Rigollot in the gravels of the valley of the Somme, at Abbeville and Amiens, were confirmed by the investigations of the late Sir Joseph Prestwich, myself, and others, and the co-existence of man with the extinct animals of the quaternary fauna, such as the mammoth and woolly-haired rhinoceros, was first virtually established. It was at the same time pointed out that these relics belonged to a far earlier date than the ordinary stone weapons found upon the surface, which usually showed signs of grinding or polishing, and that, in fact, there were two stone ages in Britain. To these the terms "neolithic" and "palæolithic" were subsequently applied by Sir John Lubbock. The excitement was not less when, at the meeting of this association at Aberdeen in the autumn of that year, Sir Charles Lyell, in the presence of the Prince Consort, called attention to the discoveries in the valley of the Somme, the site of which he had himself visited, and to the vast lapse of time indicated by the position of the implements in drift deposits a hundred feet above the existing river. The conclusions forced upon those who examined the facts on the spot did not receive immediate acceptance by all who were interested in geology and archæology, and fierce were the controversies on the subject that were carried on both in the newspapers and before various learned societies. It is at the same time instructive and amusing to look back on the discussions of those days. While one class of objectors accounted for the configuration of the flint implements from the gravels by some unknown chemical agency, by the violent and continued gyratory action of water, by fracture resulting from pressure, by rapid cooling when hot or by rapid heating when cold, or even regarded them as aberrant forms of fossil fishes, there were others who, when compelled to acknowledge that the implements were the work of men's hands, attempted to impugn and set aside the evidence as to the circumstances under which they had been discovered. In doing this they adopted the view that the worked flints had either been introduced into the containing beds at a comparatively recent date, or if they actually formed constituent parts of the gravel then that this was a mere modern alluvium resulting from floods at no very remote period. In the course of a few years the main stream of scientific thought left this controversy behind, though a tendency to cut down the lapse of time necessary for all the changes that have taken place in the configuration of the surface of the earth and in the character of its occupants since the time of the palæolithic gravels still survives in the inmost recesses of the hearts of not a few observers.

In his address to this association at the Bath meeting of 1864 Sir Charles Lyell struck so true a note that I am tempted to reproduce the paragraph to which I refer: "When speculations on the long series of events which occurred in the glacial and post-glacial periods are indulged in, the imagination is apt to take alarm at the immensity of the time required to interpret the monuments of these ages,

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all referable to the era of existing species. In order to abridge the number of centuries which would otherwise be indispensable, a disposition is shown by many to magnify the rate of change in prehistoric times by investing the causes which have modified the animate and inanimate world with extraordinary and excessive energy. It is related of a great Irish orator of our day that when he was about to contribute somewhat parsimoniously towards a public charity he was persuaded by a friend to make a more liberal donation. In doing so he apologised for his first apparent want of generosity by saying that his early life had been a constant struggle with scanty means, and that 'they who are born to affluence cannot easily imagine how long a time it takes to get the chill of poverty out of one's bones.' In like manner we of the living generation, when called upon to make grants of thousands of centuries in order to explain the events of what is called the modern period, shrink naturally at first from making what seems so lavish an expenditure of past time. Throughout our early education we have been accustomed to such strict economy in all that relates to the chronology of the earth and its inhabitants in remote ages, so fettered have we been by old traditional beliefs, that even when our reason is convinced and we are persuaded that we ought to make more liberal grants of time to the geologist, we feel how hard it is to get the chill of poverty out of our bones." Many, however, have at the present day got over this feeling, and of late years the general tendency of those engaged upon the question of the antiquity of the human race has been in the direction of seeking for evidence by which the existence of man upon the earth could be carried back to a date earlier than that of the quaternary gravels. There is little doubt that such evidence will eventually be forthcoming, but, judging from all probability, it is not in Northern Europe that the cradle of the human race will eventually be discovered, but in some part of the world more favoured by a tropical climate, where abundant means of subsistence could be procured, and where the necessity for warm clothing did not exist. Before entering into speculations on this subject, or attempting to lay down the limits within which we may safely accept recent discoveries as firmly established, it will be well to glance at some of the cases in which implements are stated to have been found under circumstances which raise a presumption of the existence of man in pre-glacial, pliocene, or even miocene times.

Flint implements of ordinary palæolithic type have, for instance, been recorded as found in the eastern counties of England in beds beneath the chalky boulder clay; but on careful examination the geological evidence has not to my mind proved satisfactory, nor has it, I believe, been generally accepted. Moreover, the archæological difficulty that man, at two such remote epochs as the pre-glacial and the post-glacial, even if the term "glacial" be limited to the chalky boulder clay, should have manufactured implements so identical in character that they cannot be distinguished apart, seems to have been entirely ignored. Within the last few months we have had the report of worked flints having been discovered in the late pliocene forest bed of Norfolk, but in that instance the signs of human workmanship upon the flints are by no means apparent to all observers. But such an antiquity as that of the forest bed is as nothing when compared with that which would be implied by the discoveries of the work of men's hands in the pliocene and miocene beds of England, France, Italy, and Portugal, which have been accepted by some geologists. There is one feature in these cases which has hardly received due attention, and that is the isolated character of the reputed discoveries. Had man, for instance, been present in Britain during the crag period, it would be strange indeed if the sole traces of his existence that he left were a perforated tooth of a large shark, the sawn rib of a manatee, and a beaming full face carved on the shell of a pectunculus!

In an address to the Anthropological Section at the Leeds meeting of this association in 1890 I dealt somewhat fully with these supposed discoveries of the remains of human art in beds of tertiary date; and I need not here go further into the question. Suffice it to say that I see no reason why the verdict of "not proven" at which I then arrived should be reversed. In the case of a more recent discovery in Upper Burma in beds at first pronounced to be upper miocene, but subsequently "definitely ascertained to be pliocene," some of the flints are of purely natural and not artificial origin, so that two questions arise: first, Were the fossil remains associated with the worked flints or with those of natural forms? and second, Were they actually found in the bed to which they have been assigned, or did they merely lie together on the surface? Even the *Pithecanthropus erectus* of Dr. Eugène Dubois from Java meets with some incredulous objectors from both the physiological and the geological sides. From the point of view of the latter the difficulty lies in determining the exact age of what are apparently alluvial beds in the bottom of a river valley.

When we return to palæolithic man it is satisfactory to feel that we are treading on comparatively secure ground, and that the discoveries of the last forty years in Britain alone enable us to a great extent to reconstitute his history. We may not know the exact geological period when first he settled in the British area, but we have good evidence that he occupied it at a time when the configuration of the surface was entirely different from what it is at present, when the river valleys had not been cut down to anything like their existing depth, when the fauna of the country was of a totally different character from that of the present day, when the extension of the southern part of the island seaward was in places such that the land was continuous with that of the continent, and when in all probability a far more rainy climate prevailed. We have proofs of the occupation of the country by man during the long lapse of time that was necessary for the excavation of the river valleys. We have found the old floors on which his habitations were fixed, we have been able to trace him at work on the manufacture of flint instruments, and by building up the one upon the other the flakes struck off by the primæval workman in those remote times we have been able to reconstruct the blocks of flint which served as his material. That the duration of the palæolithic period must have extented over an almost incredible length of time is sufficiently proved by the fact that valleys, some miles in width and of a depth of from 100 to 150 ft., have been eroded since the deposit of the earliest implement-bearing beds. Nor is the apparent duration of this period diminished by the consideration that the floods which hollowed out the valleys were not in all probability of such frequent occurrence as to teach palæolithic man by experience the danger of settling too near to the streams, for had he kept to the higher slopes of the valley there would have been but little chance of his implements having so constantly formed constituent parts of the gravels deposited by the floods.

The examination of British cave-deposits affords corroborative evidence of this extended duration of the palæolithic period. In Kent's Cavern at Torquay, for instance, we find in the lowest deposit, the breccia below the red cave-earth, implements of flint and chert corresponding in all respects with those of the high level and most ancient river gravels. In the cave-earth these are scarcer, though implements occur which also have their analogues in the river deposits; but, what is more remarkable, harpoons of reindeer's horn and needles of bone are present, identical in form and character with those of the caverns of the reindeer period in the South of France, and suggestive of some bond of union or identity of descent between the early troglodytes, whose habitations were geographically so widely separated the one from the other.

In a cavern at Creswell Crags, on the confines of Derbyshire and Nottinghamshire, a bone has, moreover, been found engraved with a representation of parts of a horse in precisely the same style as the engraved bones of the French caves. It is uncertain whether any of the river-drift specimens belong to so late a date as these artistic cavern remains; but the greatly superior antiquity of even these to any neolithic relics is testified by the thick layer of stalagmite which had been deposited in Kent's Cavern before its occupation by men of the neolithic and bronze periods. Towards the close of the period covered by the human occupation of the French caves there seems to have been a dwindling in the number of the larger animals constituting the quaternary fauna, whereas their remains are present in abundance in the lower and therefore more recent of the valley gravels. This circumstance may afford an argument in favour of regarding the period represented by the later French caves as a continuation of that during which the old river gravels were deposited, and yet the great change in the fauna that has taken place since the latest of the cave deposits included in the palæolithic period is indicative of an immense lapse of time. How much greater must have been the time required for the more

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conspicuous change between the old quaternary fauna of the river gravels and that characteristic of the neolithic period. As has been pointed out by Professor Boyd Dawkins, only thirty-one out of the forty-eight well-ascertained species living in the post-glacial or river-drift period survived into prehistoric or neolithic times. We have not, indeed, any means at command for estimating the number of centuries which such an important change indicates; but when we remember that the date of the commencement of the neolithic or surface stone period is still shrouded in the mist of a dim antiquity, and that prior to that commencement the river-drift period had long come to an end; and when we further take into account the almost inconceivable ages that even under the most favourable conditions the excavation of wide and deep valleys by river action implies, the remoteness of the date at which the palæolithic period had its beginning almost transcends our powers of imagination. We find distinct traces of river action from 100 to 200 feet above the level of existing streams and rivers, and sometimes at a great distance from them; we observe old fresh-water deposits on the slopes of the valleys several miles in width; we find that long and lofty escarpments of rock have receded unknown distances since their summits were first occupied by palæolithic man; we see that the whole side of a wide river valley has been carried away by an invasion of the sea, which attacked and removed a barrier of chalk cliffs from 400 to 600 feet in height; we find that what was formerly an inland river has been widened out into an arm of the sea, now the highway of our fleets, and that gravels which were originally deposited in the bed of some ancient river now cap isolated and lofty hills.

And yet, remote as the date of the first known occupation of Britain by man may be, it belongs to what, geologically speaking, must be regarded as a quite recent period, for we are now in a position to fix with some degree of accuracy its place on the geological scale. Thanks to investigations ably carried out at Hoxne, in Suffolk, and at Hitchin, in Hertfordshire, by Mr. Clement Reid, under the auspices of this association and of the Royal Society, we know that the implement-bearing beds at those places undoubtedly belong to a time subsequent to the deposit of the great chalky boulder clay of the eastern counties of England. It is, of course, self-evident that this vast deposit, in whatever manner it may have been formed, could not for centuries after its deposition was complete have presented a surface inhabitable by man. Moreover, at a distance but little farther north beds exist which also, though at a somewhat later date, were apparently formed under glacial conditions. At Hoxne the interval between the deposit of the boulder clay and of the implement-bearing beds is distinctly proved to have witnessed at least two noteworthy changes in climate. The beds immediately reposing on the clay are characterised by the presence of alder in abundance, of hazel and yew, as well as by that of numerous flowering plants indicative of a temperate climate very different from that under which the boulder clay itself was formed. Above these beds, characterised by temperate plants, comes a thick and more recent series of strata, in which leaves of the dwarf Arctic willow and birch abound, and which were in all probability deposited under conditions like those of the cold regions of Siberia and North America. At a higher level and of more recent date than these—from which they are entirely distinct—are the beds containing palæolithic implements, formed in all probability under conditions not essentially different from those of the present day. However this may be, we have now conclusive evidence that the palæolithic implements are, in the eastern counties of England, of a date long posterior to that of the great chalky boulder clay.

It may be said, and said truly, that the implements at Hoxne cannot be shown to belong to the beginning rather than to some later stage of the palæolithic period. The changes, however, that have taken place at Hoxne in the surface configuration of the country prove that the beds containing the implements cannot belong to the close of that period. It must, moreover, be remembered that in what are probably the earliest of the palæolithic deposits of the eastern counties, those at the highest level, near Brandon in Norfolk, where the gravels contain the largest proportion of pebbles derived from glacial beds, some of the implements themselves have been manufactured from materials not native to the spot, but brought from a distance, and derived in all probability either from the boulder clay or from some of the beds associated with it. We must, however, take a wider view of the whole question, for it must not for a moment be supposed that there are the slightest grounds for believing that the civilisation, such as it was, of the palæolithic period originated in the British Isles. We find in other countries implements so identical in form and character with British specimens that they might have been manufactured by the same hands. These occur over large areas in France under similar conditions to those that prevail in England. The same forms have been discovered in the ancient river gravels of Italy, Spain, and Portugal. Some few have been recorded from the north of Africa, and analogous types occur in considerable numbers in the south of that continent. On the banks of the Nile, many hundreds of feet above its present level, implements of the European types have been discovered; while in Somaliland, in an ancient river valley at a great elevation above the sea, Mr. Seton-Karr has collected a large number of implements formed of flint and quartzite, which, judging from their form and character, might have been dug out of the drift deposits of the Somme or the Seine, the Thames or the ancient Solent. In the valley of the Euphrates implements of the same kind have also been found, and again farther east in the lateritic deposits of Southern India they have been obtained in considerable numbers. It is not a little remarkable, and is at the same time highly suggestive, that a form of implement almost peculiar to Madras reappears among implements from the very ancient gravels of the Manzanares at Madrid. In the case of the African discoveries we have as yet no definite palæontological evidence by which to fix their antiquity, but in the Narbadá Valley of Western India palæolithic implements of quartzite seem to be associated with a local fauna of pleistocene age, comprising, like that of Europe, the elephant, hippopotamus, ox, and other mammals of species now extinct. A correlation of the two faunas with a view of ascertaining their chronological relations is beset with many difficulties, but there seems reason for accepting this Indian pleistocene fauna as in some degree more ancient than the European.

Is this not a case in which the imagination may be fairly invoked in aid of science? May we not from these data attempt in some degree to build up and reconstruct the early history of the human family? There, in Eastern Asia, in a tropical climate, with the means of subsistence readily at hand, may we not picture to ourselves our earliest ancestors gradually developing from a lowly origin, acquiring a taste for hunting, if not indeed being driven to protect themselves from the beasts around them, and evolving the more complicated forms of tools or weapons from the simpler flakes which had previously served them as knives? May we not imagine that when once the stage of civilisation denoted by these palæolithic implements had been reached the game for the hunter became scarcer and that his life in consequence assumed a more nomad character? Then, and possibly not till then, may a series of migrations to "fresh woods and pastures new" not unnaturally have ensued, and these following the usual course of "westward towards the setting sun" might eventually lead to a palæolithic population finding its way to the extreme borders of Western Europe, where we find such numerous traces of its presence. How long a term of years may be involved in such a migration it is impossible to say, but that such a migration took place the phenomena seem to justify us in believing. It can hardly be supposed that the process that I have shadowed forth was reversed, and that man, having originated in north-western Europe, in a cold climate where clothing was necessary and food scarce, subsequently migrated eastward to India and southward to the Cape of Good Hope? As yet our records of discoveries in India and Eastern Asia are but scanty; but it is there that the traces of the cradle of the human race are, in my opinion, to be sought, and possibly future discoveries may place upon a more solid foundation the visionary structure that I have ventured to erect.

It may be thought that my hypothesis does not do justice to what Sir Thomas Browne has so happily termed "that great antiquity, America." I am, however, not here immediately concerned with the important neolithic remains of all kinds with which this great continent abounds. I am now confining myself to the question of palæolithic man and his origin, and in considering it I am not unmindful of the Trenton implements, though I must content myself by saying that the "turtle-back" form is essentially different from the majority of those on the wide dissemination of which I have been speculating, and, moreover, as many here

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present are aware, the circumstances of the finding of these American implements are still under careful discussion. Leaving them out of the question for the present, it may be thought worth while to carry our speculations rather further, and to consider the relations in time between the palæolithic and the neolithic periods. We have seen that the stage in human civilisation denoted by the use of the ordinary forms of palæolithic implements must have extended over a vast period of time if we have to allow for the migration of the primæval hunters from their original home, wherever it may have been in Asia or Africa, to the west of Europe, including Britain. We have seen that during this migration the forms of the weapons and tools made from silicious stones had become, as it were, stereotyped, and, further, that during the subsequent extended period implied by the erosion of the valleys the modifications in the form of the implements and the changes in the fauna associated with the men who used them were but slight. At the close of the period during which the valleys were being eroded comes that represented by the latest occupation of the caves by palæolithic man when both in Britain and in the south of France the reindeer was abundant; but among the stone weapons and implements of that long troglodytic phase of man's history not a single example with the edge sharpened by grinding has as yet been found. All that can safely be said is that the larger implements as well as the larger mammals had become scarcer, that greater power in chipping flint had been attained, that the arts of the engraver and the sculptor had considerably developed, and that the use of the bow had probably been discovered. Directly we encounter the relics of the neolithic period, often, in the case of the caves lately mentioned, separated from the earlier remains by a thick layer of underlying stalagmite, we find flint hatchets polished at the edge and on the surface, cutting at the broad and not at the narrow end, and other forms of implements associated with a fauna in all essential respects identical with that of the present day.

Were the makers of these polished weapons the direct descendants of palæolithic ancestors whose occupation of the country was continuous from the days of the old river gravels? or had these long since died out, so that after Western Europe had for ages remained uninhabited it was re-peopled in neolithic times by the immigration of some new race of men? Was there, in fact, a "great gulf fixed" between the two occupations? or was there in Europe a gradual transition from the one stage of culture to the other? It has been said that "what song the syrens sang, or what name Achilles assumed when he hid himself among women, though puzzling questions, are not beyond all conjecture"; and though the questions now proposed may come under the same category, and must await the discovery of many more essential facts before they receive definite and satisfactory answers, we may, I think, throw some light upon them if we venture to take a few steps upon the seductive if insecure paths of conjecture. So far as I know we have as yet no trustworthy evidence of any transition from the one age to the other, and the gulf between them remains practically unbridged. We can, indeed, hardly name the part of the world in which to seek for the cradle of neolithic civilisation, though we know that traces of what appear to have been a stone-using people have been discovered in Egypt, and that what must be among the latest of the relics of their industry have been assigned to a date some 3500 to 4000 years before our era. The men of that time had attained to the highest degree of skill in working flint that has ever been reached. Their beautifully made knives and spearheads seem indicative of a culminating point reached after long ages of experience; but whence these artists in flint came or who they were is at present absolutely unknown, and their handiworks afford no clue to help us in tracing their origin. Taking a wider survey, we may say that, generally speaking, not only the fauna but the surface configuration of the country were, in Western Europe at all events, much the same at the commencement of the neolithic period as they are at the present day. We have, too, no geological indications to aid us in forming any chronological scale.

The occupation of some of the caves in the south of France seems to have been carried on after the erosion of the neighbouring river valleys had ceased, and so far as our knowledge goes these caves offer evidence of being the latest in time of those occupied by man during the palæolithic period. It seems barely possible that though in the north of Europe there are no distinct signs of such late occupation, yet that in the south man may have lived on, though in diminished numbers; and that in some of the caves, such, for instance, as those in the neighbourhood of Mentone, there may be traces of his existence during the transitional period that connects the palæolithic and neolithic ages. If this were really the case we might expect to find some traces of a dissemination of neolithic culture from a North Italian centre, but I much doubt whether any such traces actually exist. If it had been in that part of the world that the transition took place, how are we to account for the abundance of polished stone hatchets found in Central India? Did neolithic man return eastward by the same route as that by which in remote ages his palæolithic predecessor had migrated westward? Would it not be in defiance of all probability to answer such a question in the affirmative? We have, it must be confessed, nothing of a substantial character to guide us in these speculations; but, pending the advent of evidence to the contrary, we may, I think, provisionally adopt the view that owing to failure of food, climatal changes, or other causes, the occupation of Western Europe by palæolithic man absolutely ceased, and that it was not until after an interval of long duration that Europe was re-peopled by a race of men immigrating from some other part of the globe where the human race had survived, and in course of ages had developed a higher stage of culture than that of palæolithic man.

I have been carried away by the liberty allowed for conjecture into the regions of pure imagination, and must now return to the realms of fact, and one fact on which I desire for a short time to insist is that of the existence at the present day, in close juxtaposition with our own civilisation, of races of men who—at all events but a few generations ago—lived under much the same conditions as did our own neolithic predecessors in Europe. The manners and customs of these primitive tribes and peoples are changing day by day, their languages are becoming obsolete, their myths and traditions are dying out, their ancient processes of manufacture are falling into oblivion, and their numbers are rapidly diminishing, so that it seems inevitable that ere long many of these interesting populations will become absolutely extinct. The admirable Bureau of Ethnology instituted by our neighbours in the United States of America has done much towards preserving a knowledge of the various native races in this vast continent; and here in Canada the annual Archæological Reports presented to the Minister of Education are rendering good service in the same cause. Moreover, the committee of this association appointed to investigate the physical characters, languages, and industrial and social conditions of the north-western tribes of the Dominion of Canada is about to present its twelfth and final report, which, in conjunction with those already presented, will do much towards preserving a knowledge of the habits and languages of those tribes. It is sad to think that Mr. Horatio Hale, whose comprehensive grasp of the bearings of ethnological questions, and whose unremitting labours have so materially conduced to the success of the committee, should be no longer among us. Although this report is said to be final, it is to be hoped that the committee may be able to indicate lines upon which future work in the direction of ethnological and archæological research may be profitably carried on in this part of Her Majesty's dominions. It is, however, lamentable to notice how little is being or has been officially done towards preserving a full record of the habits, beliefs, arts, myths, languages, and physical characteristics of the countless other tribes and nations more or less uncivilised which are comprised within the limits of the British Empire. At the meeting of this association held last year at Liverpool it was resolved by the general committee "that it is of urgent importance to impress upon the Government the necessity of establishing a Bureau of Ethnology for Greater Britain, which, by collecting information with regard to the native races within and on the borders of the empire, will prove of immense value to science and to the Government itself." It has been suggested that such a bureau might with the greatest advantage and with the least outlay and permanent expense be connected either with the British Museum or with the Imperial Institute, and the project has already been submitted for the consideration of the trustees of the former establishment The existence of an almost unrivalled ethnological collection in the museum, and the presence there of officers already well versed in ethnological research, seem to afford an argument in

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favour of the proposed bureau being connected with it. On the other hand, the Imperial Institute was founded with an especial view to its being a centre around which every interest connected with the dependencies of the Empire might gather for information and support. The establishment within the last twelve months of a scientific department within the Institute, with well-appointed laboratories and a highly trained staff, shows how ready are those concerned in its management to undertake any duties that may conduce to the welfare of the outlying parts of the British Empire—a fact of which I believe that Canada is fully aware. The Institute is therefore likely to develop, so far as its scientific department is concerned, into a bureau of advice in all matters scientific and technical, and certainly a Bureau of Ethnology such as that suggested would not be out of place within its walls. Wherever such an institution is to be established, the question of its existence must of necessity rest with Her Majesty's Government and Treasury, inasmuch as without funds, however moderate, the undertaking cannot be carried on. I trust that in considering the question it will always be borne in mind that in the relations between civilised and uncivilised nations and races it is of the first importance that the prejudices, and especially the religious or semi-religious and caste prejudices of the latter should be thoroughly well known to the former. If but a single "little war" could be avoided in consequence of the knowledge acquired and stored up by the Bureau of Ethnology preventing such a misunderstanding as might culminate in warfare, the cost of such an institution would quickly be saved.

I fear that it will be thought that I have dwelt too long on primæval man and his modern representatives, and that I should have taken this opportunity to discuss some more general subject, such as the advances made in the various departments of science since last this association met in Canada. Such a subject would no doubt have afforded an infinity of interesting topics on which to dilate. Spectrum analysis, the origin and nature of celestial bodies, photography, the connexion between heat, light, and electricity, the practical applications of the latter, terrestrial magnetism, the liquefaction and solidification of gases, the behaviour of elements and compounds under the influence of extreme cold, the nature and uses of the Roentgen rays, the advances in bacteriology and in prophylactic medicine, might all have been passed under review, and to many of my audience would have seemed to possess greater claims to attention than the subject that I have chosen. It must, however, be borne in mind that most, if not indeed all, of these topics will be discussed by more competent authorities in the various sections of the association by means of the presidential addresses or otherwise. Nor must it be forgotten that I occupy this position as a representative of archæology, and am therefore justified in bringing before you a subject in which every member of every race of mankind ought to be interested—the antiquity of the human family and the scenes of its infancy.

Others will direct our thoughts in other directions, but the farther we proceed the more clearly shall we realise the connexion and interdependence of all departments of science. Year after year, as meetings of this association take place, we may also foresee that "many shall run to and fro and knowledge shall be increased." Year after year advances will be made in science and in reading that Book of Nature that lies ever open before our eyes; successive stones will be brought for building up that temple of knowledge of which our fathers and we have laboured to lay the foundations. May we not well exclaim with old Robert Recorde: "Oh woorthy temple of Goddes magnificence: Oh throne of glorye and seate of the lorde: thy substance most pure what tonge can describe? thy signes are so wonderous, surmountinge mannes witte, the effects of thy motions so diuers in kinde: so harde for to searche, and worse for to fynde—Thy woorkes are all wonderous, thy cunning unknowen: yet seedes of all knowledge in that booke are sowen—And yet in that boke who rightly can reade, to all secrete knowledge it will him straighte leade."[1]

[1] Preface to Robert Recorde's Castle of Knowledge, 1556.

VACCINATION GRANT.—Dr. John Hamilton, of Burton-on-Trent, has obtained the Government grant for efficient vaccination in the Gresley District, Burton-on-Trent Union, for the tenth time.

An Address

ON THE

RELATIONSHIP OF PHYSIOLOGY, PHARMACOLOGY, PATHOLOGY, AND PRACTICAL MEDICINE.

Delivered at the International Medical Congress at Moscow on Aug. 7th (19th), 1897,

BY T. LAUDER BRUNTON, M.D., D.Sc. EDIN., LL.D. (HON.) ABERD., F.R.C.P. LOND., F.R.S.

GENTLEMEN,—The desire for knowledge which is common to the lower animals and man, savage or civilised, and has induced members of this Congress to come from the ends of the earth in order to gain information must have led primitive man from the earliest times to study the great problems of physiology, the nature of life, of growth, of reproduction, and of death, as well as to notice the connexion of the latter with mechanical injuries, such as the wounds inflicted by clubs and spears or by the teeth and claws of wild beasts. Next to the problems of physiology come those of pharmacology, by which I mean the poisonous or remedial action of various substances—mineral, vegetable, or animal. A knowledge of this subject is found even amongst the lowest savages and is of the greatest use to them, for it enables them, on the one hand, to avoid eating things which may cause discomfort, pain, or death, and, on the other, to obtain food by poisoning waters and thus catching fish, or by poisoning their arrows to kill game which would otherwise escape. Closely associated with the knowledge of the poisonous is that of the curative powers of herbs, and it is possessed by animals as well as man, for cows avoid noxious plants, and dogs will every now and again eat grass apparently as medicine. Primitive peoples use various substances as remedies in disease with more or less success, and one of the most extraordinary points in their practice is that they seem to some extent to have forestalled the newest researches on venins, anti-venins, and organo-therapy, for in Africa the bushmen are accustomed to drink the poison of venomous snakes as a prophylactic against their bite, and the Hausas prevent hydrophobia by killing the mad dog and making the man it has bitten eat its liver. The occurence of death from wounds or poison is intelligible even to a savage, but when illness and death occur independently of these, men naturally attribute them to invisible powers. Thus the Dyaks of Borneo ascribe sickness to wounds from invisible spears wielded by invisible spirits, and during an epidemic of disease in the middle ages the cry often arose that the wells had been poisoned. These crude ideas contain germs of truth, and when we look at Professor Metchnikoff's drawings of a Daphnia attacked by a Monospora we seem to recognise the invisible darts of the Dyaks, while during an epidemic of typhoid fever we have often to acknowledge that our wells have been poisoned by bacilli.

It is impossible to trace the steps by which the crude ideas of savage peoples regarding physiology, pharmacology, and pathology, have grown into definite sciences, or even to indicate the most important landmarks, though we naturally think of the names of Alkmaon, Galen, and Harvey in physiology; of Nicander, Magendie, and Bernard in pharmacology; and of Morgagni, Virchow, and Pasteur in pathology. During this century these three sciences have developed with almost incredible rapidity, a complete knowledge of them is enough to tax severely the most retentive memory, and it is almost impossible for any individual to keep up with the advance of all three of them. But just as the whole subject of astronomy became suddenly simplified by a change of standpoint at the very time when cycles and epi-cycles became most bewildering, so at the very time when these three sciences are becoming most complex and diverse they appear to be tending to unification and simplification. Pathology, for example, is now becoming to a great extent a branch of pharmacology, for while a few years ago its chief object was to discover, examine, and classify the microbes which give rise to disease, it is now striving rather

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to discover the nature and actions of the ferments and poisons which they form, and by which they are able to cause disease and death in the animals they attack. Pharmacological investigation, instead of being confined to the alkaloids and other poisons formed by higher plants, has now extended to those formed by microscopic plants or microbes, and thus comes to include a great part of pathology. In the same way, though pharmacology is a branch of physiology, inasmuch as it deals with the phenomena of life as modified by drugs, yet physiology may, to a certain extent, be regarded as a branch of pharmacology, because some of the latest researches regarding the processes of life have been made by pharmacological methods, using the products of animal life instead of vegetable poisons. Amongst the pioneers in this line I may mention my two masters, Kühne and Ludwig, the former of whom by his chemical investigations has enabled us to differentiate the various products of albuminous decomposition, whilst the latter, with his pupils Schmidt-Mühlheim and Wooldridge, discovered the poisonous action of albumoses and peptones, and of the juices of various tissues when injected directly into the blood.

Before the proteid constituents of our food can be absorbed they must be split up during digestion into albumoses and peptones; yet these researches show that the very substances which are necessary to repair waste and are indispensable for the continuance of life prove fatal when introduced into the body in a wrong way or in too great quantity. But the products of the digestion of albumin do not normally enter the circulation as albumoses and peptones. During absorption they undergo changes of a synthetic nature in the walls of the intestine, and probably to a certain extent also in the liver, so that they again form harmless substances, and their poisonous properties are destroyed before they enter the general blood stream. But how is it that the ferments which decompose albuminous food and form poisons from it in the intestines do not pass into the blood and kill the animal by digesting the tissues and forming poisons from them? Of course pepsin cannot do so as it only acts in an acid medium, but there is no such hindrance to the action of trypsin, and yet it does not destroy the tissues composing the body itself. In all probability the reason why digestive ferments do not digest the tissues is not that they are destroyed in the digestive canal or yet that they are not absorbed, but that they are altered from active enzymes into inert zymogens which can be stored up without risk, and can again liberate active enzymes when these are required to digest a subsequent meal. In this respect they may be compared to the knives used by wandering peoples to cut up their meat, and which are not thrown away after each meal, but are simply put into sheaths which cover their edges and deprive them for a time of their cutting power.

But it is not in the intestine only that enzymes are found; they are also poured into the blood by the pancreas and probably by the thyroid and other glands. As our acquaintance with the processes of cell life increases it seems more and more likely that the tissue change on which functional activity depends is effected by enzymes, and the truer do the speculations of Van Helmont appear—that life is a process of fermentation. There can be little doubt that if enzymes in a free state were to circulate through the body they would do much harm, and, indeed, we may regard this as well-nigh proved in regard to the enzyme of tetanus. But their action is limited either by their conversion into zymogens or their localisation to the cells or tissues where their action is required. This is more readily seen in plants than in animals, and one of the best examples of it is that in germinating wheat. In the ordinary state of the grain the diastatic ferment is kept apart from the starch by a small layer of cellulose, through which the diastase cannot pass, but during germination another ferment appears which has the power of dissolving cellulose, and by breaking down this dividing membrane it allows the diastatic ferment to act upon the starch, and renders it available for the needs of the growing plant.

Enzymes appear to differ amongst themselves nearly as much as albumin, albumoses, and peptones. Some are easily separated from the cells in which they exist, whilst others are so closely united to the protoplasm that their separate existence apart from it has been denied. The yeast plant, for example, yields an invert enzyme which can be extracted with comparative ease, but the enzyme which splits up sugar into alcohol and carbonic acid is so firmly attached to the protoplasm of the cell that it is only within the last few months that it has been isolated by Buchner by the application of enormous pressure. It is probable that the enzymes contained in the cells of animal tissues differ in like manner, and that by the use of similar methods we may obtain a number of enzymes with which we are at present unacquainted. But it is not merely the products formed in the digestive canal or in the organs of animals during life, or even the alkaloids that are formed by the higher plants, that act as poisons. The processes of life are much the same in the lowest microbes as in animals or in the higher plants, and these microbes, by forming ferments and poisons, give rise to disturbance of function or death in animals. When grown in suitable media outside the body they produce enzymes and poisons, albumoses and alkaloids, and many of them continue to do so after their introduction into the body.

One of the most curious points, both in the chemistry of the higher plants and of microbes, is that they tend to form at the same time a poison and its antidote. In Calabar bean, for example, we find there are two poisons—physostigmine and calabarine, the former tending to paralyse the spinal cord and the latter to stimulate it, so that each poison to a certain extent antagonises the other. The same condition is found even more markedly in jaborandi, of which the two alkaloids pilocarpine and jaborine antagonise one another's action so that, although pilocarpine generally greatly predominates, it might be possible to get a specimen of the leaf having no action at all, although it contained a quantity of alkaloids. When injected into animals the toxins formed by microbes and the venins of serpents cause the production of antitoxins and anti-venins, which neutralise their action apparently by chemical combination in somewhat the same way as an acid and alkali, each poisonous by itself, combine to form a comparatively inert salt. But the two components here, like an organic acid and a mineral base, are unequally affected by destructive agencies, and the anti-venin may be destroyed, so that the venin again regains its activity. The conversion of zymogens into enzymes may be compared to the freeing of venins from their compounds, while the conversion of active venins into inert bodies by combination with anti-venins suggests that a similar process may occur in the case of active enzymes, by which they may be converted into inactive zymogens.

Perhaps the hypothesis I mentioned eight years ago to my pupil and friend, Mr. Hankin, that the germicidal power of organisms is proportional to their power to produce enzymes, may not be altogether unfounded, and possibly we may discover also that immunity, natural or acquired, is nothing more than an extension to the cells of the tissues generally of a power which is constantly exercised during digestion by those of the intestine and liver. This problem is one which pertains to all three sciences and has a most important bearing on practical medicine.

Practical medicine, except when empirical, depends for its advance on physiology, pharmacology, and pathology. A knowledge of the physiology of digestion has led to the satisfactory treatment of dyspepsia by the administration of digestive enzymes, and pharmacological research has enabled us to treat diseases of the circulation with a success previously undreamed of, by teaching us not only how to use aright old remedies, such as digitalis, but also how to apply new ones, such as strophanthus and amyl nitrite, and even to manufacture others, such as nitro-erythrol, which possess the special actions we desire but which are lacking in the drugs we already have. Indeed, new remedies, which shall alter tissue change, lower temperature, relieve pain, and procure sleep, are now being made in such numbers that it is hard to keep count of them. But amongst all the new gains of practical medicine none are so remarkable as those which we owe to pathology. Time would fail me to speak of the prevention and cure of zymotic diseases, but no less astonishing is the discovery that myxœdema depends on inactivity or absence of thyroid gland, and can be cured by the administration of its extract, which seems to act as an enzyme on living tissues, so that the heavy, shapeless features of the patient resume their natural expression, and the sluggish mental processes become quickened. An exhaustive study of enzymes and their products appears to be the most promising way of advancing our knowledge both of the nature and treatment of disease. Probably more is to be hoped for from an investigation into the nature and properties of those enzymes which are intimately associated with the protoplasm of the cells in the various tissues and organs than even of

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those which are poured into the blood by glands having an internal secretion, such as the thyroid. For all organs, even those which like muscles and nerves are not glandular, have an action on the blood comparable to that of the yeast plant, which modifies the fluid in which it lives by the substances which it removes from or adds to it. It is to a knowledge of the processes which occur in the protoplasm of the cells in the intestinal wall and liver and of the enzymes by which these processes are in all probability carried out that we must look for an explanation of the conversion of the poisonous albumoses formed during digestion into innocuous albumins, and of dangerous enzymes into harmless zymogens. Moreover, it seems to me that it is by researches into the nature and action of the enzymes not only of microbes, but in the various tissues of the body in higher animals, that we shall learn how the microbes, like the enzymes of the intestinal canal, produce poisonous albumoses, and how the tissues, like the cells of the intestinal walls or liver, convert them into harmless or even protective substances. In this way we may hope to obtain an explanation of toxins and antitoxins, of pathogenesis and immunity, as well as of the nature of diseases unconnected with the presence of microbes, such as diabetes. Twenty three years ago I attempted to obtain a glycolytic enzyme from muscle, in order to enable diabetic patients to utilise the sugar in their blood. My attempt was unsuccessful, but we may still hope that by other methods we may obtain from animal organs various enzymes, the administration of which may prove as useful in other diseases as the thyroid gland in myxœdema.

Practical medicine depends on physiology, pharmacology, and pathology, but all three are tending to become more and more sub-divisions of the wider and all-embracing science of chemistry. It is to a chemist, Pasteur, that we owe the wonderful development of pathology within the last quarter of a century, and we may fairly regard his fellow-countryman, Lavoisier, as the founder of this science. Men from all countries, and especially from Germany, have aided its development; but it seems fitting that at this Congress, in acknowledging our obligations to this science, we should not omit to mention that at its head now stands a Russian, Mendeleef, whose marvellous prescience enabled him to predict the existence of elements which were then unknown, and even to describe their properties more correctly than those who first verified his predictions by obtaining the substances themselves. When we consider that little more than a hundred years have elapsed since the time of Lavoisier, and contemplate the vast benefits which medicine and its allied sciences have derived from chemistry during this time, our hopes cannot be otherwise than great for the centuries to come.

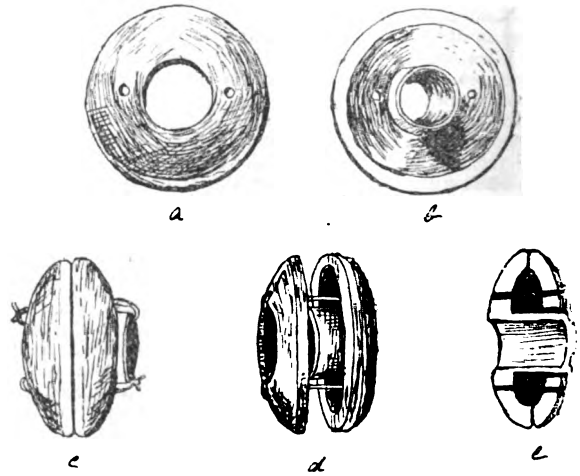
DECALCIFIED IVORY DISCS FOR END-TO-END AND LATERAL ANASTOMOSIS OF THE INTESTINE.[1]

BY DR. R. MARTIN GIL,

MEDICAL DIRECTOR OF THE "NOBLE" HOSPITAL OF MALAGA; CORRESPONDING MEMBER OF THE ROYAL ACADEMIES OF MEDICINE OF MADRID AND BARCELONA, ETC.

OF late years many eminent surgeons have made a special study of intestinal surgery with the result that important improvements have been effected in the treatment with a correspondingly greater number of successful operations. These improvements notwithstanding have not yet reached such a state of perfection as in other operations on the abdomen. The chief objection to Murphy's button is that a foreign body is introduced into the intestine, which may, if not expelled with the motions, itself prove a source of great danger to the patient. It is doubtless for this reason that the anastomotic button has not come into general use in Europe, and when some operators do employ it it is because they have nothing better to use. These buttons further possess the dangerous property of causing stenosis in the place where they are applied to the bowel, for the reason that the circumference of the button is usually smaller than that of the place where it is fixed. Dr. Murphy states that with his system there is no need for suture, which assertion is somewhat at variance with the facts, seeing that when, for instance, he carries out pylorectomy he is obliged to make two sutures, one in the duodenum and another in the pylorus. The same happens in ileo-colostomy after excision of the cæcum, and, finally, in the three sizes in which they are constructed the buttons are too large for the diameters of the bowel of children, which is a great drawback, as obstructions are very common during childhood. Neither can the system of using decalcified bones of different forms be recommended, as in no case where they are employed can suture be dispensed with, and the operation becomes too prolonged. The majority of operators employ suture alone, giving the preference to that of Czerny-Lembert. I have for a long time sought for a substance which should join the serous coat of the bowel and be ultimately digested after producing a perfect cicatrisation, but without giving rise to any stenosis whatever. For over three years my researches have lasted, and after vainly trying ox bones, the ribs of whales, and other substances, I thought of decalcifying pieces of ivory of different sizes, so that they might be large enough for my purpose after being prepared, as ivory, like bone, becomes reduced to half its dimensions under decalcification. I had some pieces of decalcified ivory turned in concavo-convex shapes (*Fig.* 1, A B), and of different sizes, from 8 millimetres

FIG. 1.



Decalcified ivory discs; (*d*) stretched apart to show the elastic; (*c*) in section.

to 6 centimetres in diameter. One piece is furnished with a short hollow stem or shank, to which the other piece is adjusted. The thickness of the pieces is proportioned to their circumference Beside the central hole there are two other very small orifices through which thin elastic bands pass that serve to join the pieces, thus forming a disc, as in C These bands exercise a moderate pressure intended to produce atrophy of the tissue placed between the two pieces while not causing gangrene of the intestine. These bands are tied together with a firm knot, while the ends, to avoid the loosening of this knot before cicatrisation takes place, are also bound together with a silk thread.

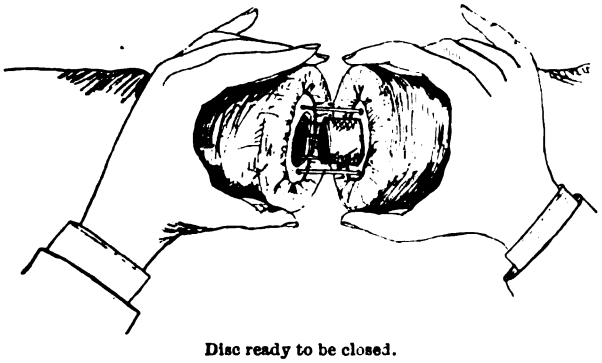
Method of operating; end to-end junction of the intestine.—The bowel is gently emptied by the fingers at the point of operation and clamps are applied. When the bowel is cut through a continuous suture is inserted in it at one end; a cup is introduced, the mouth of the bowel is drawn together, and the thread is tied. At the outer end the same thing is done, and the cups are drawn together by the elastic bands, thus producing a perfect junction of the serous coats of the two ends of the bowel. A portion of the ileum was resected in a dog and the ends joined by the discs. The time spent on the anastomosis of the bowel was six minutes, and the whole operation lasted eighteen minutes. The animal rapidly convalesced, and in four days was well. Three weeks later I operated again and removed the piece of intestine where the junction had been effected. No trace of the disc could be found, and no constriction of the bowel had occurred. When very large discs are required I use three or four elastic bands to ensure their fitting together all round the circumference of the bowel.

[1] Abstract of paper read at the International Medical Congress at Moscow.

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Ileo-colostomy (end-to-end anastomosis) had not previously been possible without employing sutures, but by my method this result is obtained as effectually as in other operations. A cup of corresponding diameter is fixed in the ileum, and in the colon another of larger size to adapt itself to its circumference. On the union of the two cups drawn together by the elastic bands the adjustment of the ileum to the colon is perfect. In one experiment the cæcum was resected and a cup 8 millimetres in diameter inserted in the ileum, and one of 12 millimetres in the colon, the larger cup having no central stalk; the two pieces of bowel were easily approximated, and after the operation, which lasted five minutes, the dog recovered completely. A fortnight later

FIG. 2.



Disc ready to be closed.

the abdomen was opened and a perfect cicatrix without any stenosis was found. The same method is employed in gastro-enterostomy, in which a large cup is inserted into the stomach and a small one into the duodenum. The junction of the two serous coats is thus complete. Lateral anastomosis is effected quite as easily. Cholecystenterostomy is performed with discs of the sizes required, according as the operator wishes to make larger or smaller the opening between the gall-bladder and the duodenum to ensure the escape of the bile. It might happen that an extra large incision might be required in the gall-bladder to remove a bulky gall-stone; in this case a large cup might be placed in that organ and a small one in the bowel, as is done in ileo-colostomy.

The number of dogs I have operated upon is twenty-two, and on them I have made twenty-three experiments. Among these two dogs died; one after anastomosis of the ileum with the colon lived forty hours, and then died from volvulus; the other death occurred from collapse after resection of a portion of the colon.

The discs should form a collection of twenty-seven sizes, from 60 millimetres, the largest, to 8 millimetres, the smallest.

Such are the results of the experiments carried out by me with my discs of decalcified ivory. I have not yet had the opportunity of using them on human beings.

Malaga.

A NOTE ON NEUROPATHIC DYSPEPSIA AND ITS CORRELATIONS WITH DISTURBANCES OF THE RHYTHM OF THE HEART.[1]

BY A. ERNEST SANSOM, M.D., F.R.C.P. LOND.,
PHYSICIAN TO THE LONDON HOSPITAL; PRESIDENT OF THE MEDICAL SOCIETY OF LONDON, ETC.

THIS communication contains a summary of the conclusions I have arrived at from a clinical study of a large number of cases in which there were manifested perversions of the rhythm of the heart in the sense of morbid acceleration (tachycardia), irregularity of action (arhythmia cordis), or abnormally slow action (bradycardia).

Group I., Essential tachycardia.—In those cases in which there was an abnormally rapid action of the heart persisting for long periods manifestations of dyspepsia were usually absent. In 46 cases I found no notable evidence of dyspepsia, paroxysmal or persistent. It was remarkable that an individual whose heart was beating more than 200 times in a minute should manifest no symptoms of distress whatever, but be occupied with his or her usual avocation. In cases manifesting a rate of heart pulsation of 192 and of 260 per minute I have observed a perfect absence of dyspnœa and of any signs of distress, the functions of digestion being to all seeming normally performed. In one-third of my cases there were no subjective symptoms of disorder of circulation, respiration, or digestion, though the condition of rapid heart continued. In another third severe pain at the præcordium was experienced, but there was no complaint of indigestion. It is clear that dyspepsia stands in no defined relation with the degree of tachycardia.

Group II., Tachycardia associated with some of the symptoms of Basedow's (Graves's) disease.—In these cases I found gastro-intestinal symptoms to be evidenced with a high degree of frequency. The association with the recognised signs of exophthalmic goitre might be marked or slight. In 40 per cent. of my cases the three cardinal signs of the affection—exophthalmos, enlarged thyroid, and persistently rapid heart—were present. In 31 per cent. the exophthalmos was not manifested, and in 20 per cent. the symptoms occured without thyroid enlargement. Muscular tremors were manifested in the great majority of cases. The form of dyspepsia manifested in most of these cases was paroxysmal. It occurred in attacks of the nature of gastro-intestinal crisis characterised by epigastric pain, retching, or vomiting, extreme flatulence, and in some cases diarrhœa. During the intervals there were no obvious disturbances of digestion and of necessity no wasting. In another section of the cases, though in these paroxysmal dyspepsia might not be manifested, there was extreme wasting. Cases manifesting very marked wasting constitute a well-marked section in Basedow's disease, and I have found this sign to be of unfavourable import. Consecutive or concurrent changes in the heart bear no relation with the manifestations of dyspepsia. I have noted that dilatation of the heart is more frequently manifested when the degree of tachycardia is slight. Conversely, when the heart-rate exceeds 150 per minute the heart is in most cases found to be small in outline. The paroxysmal dyspepsia is in no relation with the degree of tachycardia or with the co-existing changes in the heart. I have found that a considerable number of cases of tachycardia have been initiated by influenza. In 100 cases observed by myself in which symptoms referred to the heart were consequent upon the infection of influenza I found that persistent tachycardia was manifested in thirty-seven. In many of these there were present some of the signs of Basedow's disease, and I obtained abundant evidence to show that the complete *ensemble* of the affection could be initiated by influenza. In five of the thirty-seven cases of post-influenzal tachycardia there were well-marked crises of dyspepsia. The symptoms of the attacks were flatulence, nausea, gastralgia, and diarrhœa accompanied by dyspnœa. They occurred periodically without obvious provoking cause, and in many cases were manifested during the night. The signs were so suggestive of a neurosis that I termed them "vagus storms." It is a question for consideration whether the failure of nutrition in the section of cases attended with wasting, but not with paroxysmal dyspepsia, is not also due to a disorder of the central nervous mechanism.

Group III., Paroxysmal tachycardia.—It is a matter of common experience that attacks of palpitation of the heart are frequently associated with symptoms of dyspepsia. It is a question to be debated whether in such cases the gastro-intestinal irritation is the cause which disturbs the cardiac reflex or whether both these symptoms are of central nervous origin. I have considered this question in relation with the form of paroxysmal dyspepsia which is independent of disturbances of the heart-rhythm.

Group IV., Persistent cardiac arhythmia.—As in the case of persistent tachycardia, so in that of persistent arhythmia—even in the most extreme forms—there may be no manifestations of disorder of digestion. In many cases of extreme irregularity of the heart's action, as indicated by the sphygmographic and other precise methods of investigation, there has been no evidence of bodily discomfort or of ill performance of the functions of digestion. In such cases it is of the highest importance that the attention of the patient should not be directed to the irregular action of the heart. Such

[1] Abstract of a paper read at the International Medical Congress at Moscow.

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irregularity may occur for months or years without discomfort and without danger; but if the patient's mind be allowed to dwell upon the symptoms subjective discomfort and mental troubles are apt to arise. It is undoubted that dietetic errors can cause irregularity of the heart's action, and that of necessity in such cases symptoms of dyspepsia concur. I have observed cases in which tea-drinking and the eating of potatoes have been the causes of irregular action of the heart, the cardiac rhythm returning to the normal some time after the dietetic errors had been corrected. On the other hand, there have been thousands of cases in which extreme errors of diet have been unattended with any detectable alteration of the cardiac rhythm. I consider, therefore, that for a gastro-intestinal reflex to produce cardiac arhythmia there must be certain predisposing conditions. These from an experience of a large number of cases are (*a*) gout in its acute or chronic manifestation; (*b*) osteo-arthritis (arthritis deformans) and spinal cord diseases, as locomotor ataxy, in which arthritic symptoms are manifested; (*c*) disturbances of the auditory faculty and naso-pharyngeal irritations; (*d*) mental disturbances and effects of severe nervous shock; (*e*) syphilis; (*f*) influenza; and (*g*) Basedow's disease. My clinical evidence shows that in a section of the cases of Basedow's disease extreme cardiac arhythmia is manifested and not tachycardia, as in the majority. I observed two sisters with all the signs of exophthalmic goitre; the one had a very rapid heart and the other manifested extreme cardiac irregularity. In several cases in the male sex I have found an extreme irregularity, a veritable *folie du cœur*. Gastric crises occur in these cases. In many of the cases of Basedow's disease with cardiac irregularity and paroxysmal dyspepsia no primary cause can be traced.

I have had abundant evidence to prove that irregularity of the action of the heart may be the direct consequence of the infection of influenza. Whilst tachycardia was induced by such infection in 37 per cent. of my cases, arhythmia was the consequence in 25 per cent. In twelve out of thirty cases of post-influenzal cardiac arhythmia there were symptoms of paroxysmal dyspepsia. In many these attacks were of great intensity, characterised by extreme agony referred to the abdomen or to the inter-scapular regions, flatulence, diarrhœa, dryness of throat, enfeeblement of voice, and intense depression. In some of the crises there were also dyspnœa, rigors, sneezing, and a sense of suffocation as from a grip at the throat. I observed several cases in which not only irregularity of the heart's action, but also some of the associated signs of Basedow's disease, with gastric intestinal crises, were distinctly traceable to the infection of influenza. Seeing that in my category of cases there were a considerable number in which influenza had initiated well-marked disease of the spinal cord and its membranes, and considering that in some of them the symptoms decidedly indicated neuritis of the vagus, the irregularity of the cardiac rhythm as well as the associated dyspepsia I consider must be due to a disorder of the nerve mechanism of the cardiac reflex as well as that of the nerve agencies regulating digestion. It is, I think, an interesting point, and one not generally accepted, that Basedow's disease with associated tachycardia or arhythmia is not infrequently the result of the infection of influenza. The evidence of pharyngitis in other cases lends a probability that other forms of infection, occult or untraced, may be also causes.

Group V., Persistent bradycardia.—My cases show that as in other forms of disturbance of the normal rhythm of the heart so in bradycardia, when the rate of pulsations is reduced far below the normal there may be no notable deviation from the natural functions of digestion. In a man aged seventy-eight years, observed four years ago, on many occasions the maximum rate of cardiac pulsations was 40 and the minimum 28. These were associations with gout, but no marked dyspepsia and fair health was maintained though the bradycardia continued. In young subjects the rate of cardiac pulsations is seldom below 60. At the ages of nineteen, twenty-two, and twenty-four years I have found it vary from 48 to 56. In these there have been usually some dyspeptic manifestations with symptoms of general depression. In many cases there have been mental aberrations. I have noted in several cases paroxysmal attacks of dyspepsia characterised by nausea, flatulence, and epigastric pain, and in some of these sneezing and enfeeblement of voice. The intensity of the paroxysms was usually less than in the cases of tachycardia and arhythmia. The evidence clearly showed that bradycardia was a very serious condition in a considerable section of the cases. The association with epilepsy, as pointed out by Tripier, was clearly proved. In some the attacks were momentary and of the nature of *petit mal*, in others a defined epileptic seizure occurred. It seemed most probable that the epileptic paroxysm was the result of the ischæmia of the brain due to the arrest of the heart's action. In a case in which the rate of the heart's pulsations varied between 35 and 24 I could predict from the longer arrest of the heart's action that an epileptic attack would occur.

It is shown from the evidence which I have observed that extreme bradycardia may be the result of disease or injury of the cervical portion of the spinal cord. In a case under my close observation I have found a pulse-rate of 38 and 40 per minute, with occasional halts of the heart for five seconds, due, as shown by post-mortem evidence, to involvement of the vagi nerves in a malignant growth. In a considerable section of cases I have found bradycardia to be the result of influenza. In the case of a man, aged forty-six years, who was in good health until he suffered from an attack of influenza, I found the heart-rate to vary between 33 and 19 per minute. Epileptoid attacks coincided. I have had under observation eight cases of post-influenzal bradycardia in which the pulse-rates were 56 (two cases), 54, 52, 48, 40, 36, and 19 per minute. The evidence seems to me to strongly point the conclusion that the bradycardia is due to a morbid condition of the nerve structures of the cardiac reflex. There is either an irritable lesion affecting the vagi nerves or their nuclei of origin, or else a destructive lesion of the *nervi accelerantes* of the heart whereby the inhibitory influences (vagi) are left relatively in the ascendant.

Group VI., Paroxysmal bradycardia.—I have observed in a man, aged fifty-four years, attacks recurring every afternoon for ten days, characterised by a reduction of the habitual heart-rate of from 72 to 48 per minute and coincidently severe epigastric pain, nausea, and extreme depression. The attacks ceased suddenly and the normal heart's action was resumed. In a second case, a man aged forty-six years, the pulse-rate of 80 fell to 56 and 40 per minute coincidently with abdominal pain, vomiting, and diarrhœa, constipation alternating. Both cases were post-influenzal. A complete restoration to normal conditions took place. In seven out of sixteen cases of bradycardia there were decided associations with dyspepsia.

Group VII., Paroxysmal dyspepsia without disturbances of the cardiac rhythm.—In many cases, both male and female, I have observed a train of symptoms, apart from any form of organic disease, which indicate a dyspepsia of neuropathic origin. In a man, aged twenty-four years, a typical athlete of splendid physique, there were periodic crises of severe epigastric pain with vomiting and complete anorexia. Extreme wasting occurred, the patient losing 47 lb. in weight. In a woman, aged forty years, there were similar symptoms with great wasting. In many cases there were alternations of these severe attacks and migraine. In some cases the tendency to the attacks existed from childhood and no determining cause could be traced. Heredity was no doubt a factor. In a considerable number influenza was a potent aggravating or disposing cause.

Conclusions.—1 Essential tachycardia is not accompanied by dyspepsia. 2. Paroxysmal tachycardia and the forms of tachycardia accompanied by signs, even slight, of Basedow's disease are very frequently associated with crises of dyspepsia. 3. Extreme cardiac arhythmia often occurs without manifestations of dyspepsia. 4. Gastro-intestinal irritations do not produce cardiac arhythmia without the concurrence of predisposing causes. 5. Cardiac arhythmia often replaces tachycardia in Basedow's disease. In such cases paroxysmal dyspepsia is frequent. 6. Well-marked bradycardia may exist without signs of dyspepsia. 7. Paroxysmal bradycardia is associated with crises of dyspepsia, and these crises occur in some cases of persistent bradycardia. 8. There is no defined relation between dyspepsia and the structural diseases of the heart which sometimes are manifested in cases of disturbed heart rhythm. 9. It is most probable that all forms of disturbed rhythm of the heart are due to marked affections of the nerve-element at the origin or in the course of the vagi nerves or the nerve mechanism of the cardiac reflex in the upper part of the spinal cord. 10. The attendant dyspepsia is due to an extension of the disturbance to the areas of origin or course of the gastro-intestinal branches of the vagi nerves. 11. All such alterations of the cardiac reflex nerve mechanism as well as the various disturbances of digestion

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may be due to the toxic agencies of influenza or allied forms of infectious disease.

Bibliography.—Bristowe: On Recurrent Palpitation of Extreme Rapidity in Persons Otherwise Apparently Healthy, *Brain*, vol. x., 1888, p. 164; Broadbent: The Pulse, Cassell and Co., London, 1890, pp. 101 and 103; Huchard: Traité Clinique des Maladies du Cœur et des Vaisseaux, Paris, Doin, 1893, pp. 54, 276, 373; Maladie de Stokes-Adams, p. 309; Vincent: Des Tachycardies, Valeur Séméiological et Pathogénique, Paris, Steinheil, 1891; Potain: Clinique Médicale de la Charité; Des Palpitations (p. 139), Paris, Masson, 1894; A. Maude: Cases of Graves' Disease, St. Bartholomew's Hospital Reports, vol. xxvii., p. 9; Grob: Ueber Bradycardie, Deutsches Archiv für Klinische Medicin, 1888, No 42; Riegel: Ueber die Verlangsammung der Schlagfolge des Herzens, Zeitschrift für Klinische Medicin, 1890, p. 221; J. W. Ogle: The Slowness of the Pulse, THE LANCET, Jan. 30th, 1897, p. 296; Sansom: The Rapid Heart, Transactions of the Medical Society of London, vol. xiii.; The Irregular Heart, a Clinical Study, ibid., vol. xvi.; A Review of Cases Manifesting Pain at the Heart or Tachycardia Subsequently to Influenza, Transactions of the Royal Medical and Chirurgical Society of London, vol. lxxvii.; Diseases of the Spinal Cord Occurring after Influenza, Liverpool Medico-Chirurgical Journal, 1895, p. 118; The Irregular Heart after Influenza Brit. Med. Jour., vol. ii., 1894, p. 1042; The Diagnosis of Diseases of the Heart and Thoracic Aorta, London, Griffin and Co., 1892, pp. 68, 137, *et seq.*, 452 *et seq*; Sansom and Torsillian: A Case of Malignant Disease of the Thoracic Mediastinal Glands with Dilatation of the Descending Aorta, Cardiac Intermission, and Bradycardia, Brit. Med. Jour., April 27th, 1895, p. 912; G. W. Balfour: The Senile Heart, pp. 63 *et seq.*, London, A. and C. Black, 1894.

INFANTILE INTUSSUSCEPTION:

A STUDY OF ONE HUNDRED AND THREE CASES TREATED EITHER BY ENEMATA OR LAPAROTOMY, AND A REPORT OF TWO HITHERTO UNREPORTED CASES.[1]

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IT is a strange commentary on the advancement made by our science that at the close of this nineteenth century we are met to consider and decide, if we may, upon the comparative merits of the two methods of treatment for intussusception suggested many centuries ago—that of intestinal distension by air or water by Hippocrates, and that of abdominal section by Praxagoras. For while since their time much therapeutical ingenuity in the treatment of this disorder has been displayed, our greater pathological knowledge has pushed these remedies aside, and at this time we have only left for consideration a choice between enemata and laparotomy for the relief of this condition. Some time since a case of infantile intussusception came under my observation, and the questions which were raised led me to more fully investigate this subject. It was found that, while much attention had been given in England to this form of intestinal obstruction and many cases had been recorded in the medical journals, it had received but scant attention here, and that there were comparatively few recorded cases to be found in American medical literature. The conclusion was reached that either this form of intestinal disorder is of much more frequent occurrence abroad, or that it often fails of recognition here, or that, if diagnosed and treated, it is not deemed of sufficient importance to be recorded. When it is realised that intussusception occurring in young infants is practically a hopeless condition when left to nature's care (98 per cent. of all cases terminating fatally when the immediate or remote effects of sloughing are considered), the importance of the answers to the questions, What is the scientific and, therefore, proper procedure for the relief of these little sufferers? and, What is the prospect of the infant's recovery if this method is resorted to? manifests itself, and warrants a careful consideration of the results obtained by one or other of the methods previously alluded to, and a full statement of unrecorded individual experience in the discussion. In so doing, it is evident that we must determine what foundation exists for the popular belief, both medical and lay, that the method of intestinal distension by air or water is one of safety, and that, if unsuccessful, it in no degree interferes with the performance at a later period of laparotomy, or, on the other hand, that an abdominal section performed on an infant twelve months of age or under must of necessity result fatally, and is, therefore, only to be resorted to after long delay, and the failure of the so-called milder measure to afford permanent relief. Until these questions are finally answered to the satisfaction of the profession at large it is of the utmost importance that all cases of intussusception, whether treated by one method or the other, and with whatever result, should be fully reported. In this connexion the histories of Cases 14 and 15 hitherto unreported, and the abstracts from the histories collected by the writer from the English and American medical literature since the beginning of the present century, will be of interest.

CASES OF INFANTILE INTUSSUSCEPTION SUCCESSFULLY TREATED BY ENEMATA OR INFLATION.

(GROUP NO. 1.)

CASE 1.—A case of intussusception of the ileo-cæcal variety, which occurred during 1879 in a male infant aged six months, is recorded from notes furnished to Mr. Barker by the University College Hospital.[2] The patient was admitted to the hospital thirty-one hours after the beginning of the attack. Abdominal palpation revealed a tumour. Injections of air and water were made into the bowel, causing the disappearance of the tumour, which did not again appear.

CASE 2.—Dr. Andrew records in the *St. Bartholomew's Hospital Reports* for 1892 a case of intussusception occurring in a male infant, aged four months, who came under observation on the second day of the disorder. An enema of eight ounces of water was administered. This procedure caused the apparent disappearance of the tumour, which reappeared the next day. Enemata were given hourly for nine hours, finally causing the tumour to disappear permanently.

CASE 3.—Sir William Savory records in the *St. Bartholomew's Hospital Reports* for 1892 a case of intussusception occurring in a female infant, aged twelve months, who came under observation on the first day. An enema, consisting of a pint of warm milk, was administered within nine hours after the disorder manifested itself. This treatment was followed by the apparent disappearance of the tumour, which, however, reappeared the next day. The enema was repeated with satisfactory results, and there was no recurrence of the trouble.

CASE 4.—Mr. Back[3] records a case of intussusception of the ileo-cæcal variety which occurred during 1885 in a male infant, aged five months. The case came under observation on the first day. Abdominal palpation revealed a tumour. Under chloroform narcosis an enema was administered, and while this was being done the tumour was manipulated between the finger and thumb. Reduction followed and there was no further trouble.

CASE 5.—A case of intussusception of the ileo-cæcal variety, which occurred during 1888 in a male infant, aged seven months, and who came under observation six hours after the disorder began, is recorded from notes furnished to Mr. Barker by the University College Hospital, London.[4] Injections of air and water were tried with successful results.

CASE 6.—A case of intussusception of the ileo-cæcal variety is recorded from the notes of the University College Hospital, London,[5] as having occurred in a male infant, aged nine months, during 1888, and who came under observation on the first day. Under chloroform narcosis the bowel was inflated with air, the abdomen being meanwhile manipulated. This treatment resulted in the gradual disappearance of the tumour and of all the symptoms of the disorder.

CASE 7.—The following case of intussusception of the ileo-cæcal variety occurring in a male infant, aged six months, is credited to the University College Hospital.[6] The infant came under observation within the first twelve hours of the disorder. Abdominal and rectal examination revealed a tumour. Manipulation followed by enemata of air and water were tried with partial success, but the tumour soon reappeared. Reduction was finally effected by an enema, the reservoir being elevated three feet above the patient's body.

CASE 8.—Mr Gee records[7] a case of intussusception which occurred during 1890 in a male infant aged nine months. He came under observation on the second day. Abdominal and rectal examination revealed a tumour. Enemata were administered with successful results.

[1] Read at a meeting of the New York Academy of Medicine on Jan. 2nd, 1896, and published in the "Record."

[2] Brit. Med. Jour., vol. i., 1894, p. 345.

[3] Ibid., vol. i., 1894, p. 346.

[4] Ibid., vol. i., 1894, p. 345.

[5] Ibid., vol. i., 1894, p. 345.

[6] Ibid., vol. i., 1894, p. 346.

[7] Ibid., vol. i., 1894, pp. 345-6

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CASE 9.—Dr. A. Jeffery Wood reports[8] a case of intussusception occurring in a male infant, aged six months, who came under observation on the second day. The infant, after being anæsthetised, was partly inverted and the bowel distended with air, deep massage being meanwhile employed. Under this treatment the tumour disappeared. One quart of warm water was injected into the bowel. This was followed one hour later by a stool. During the night the infant had seven dejections from the bowels, none of which contained blood The disorder did not recur.

CASE 10.—A case is recorded of intussusception of the ileo-cæcal variety occurring during 1892 in a male infant aged ten months.[9] Abdominal examination revealed a tumour. The bowel protruded from the anal orifice. Inflation was tried with success, the tumour disappeared, and the infant recovered.

CASE 11.—Dr. Beeston records[10] a case of intussusception occurring in a male infant, aged seven months, who came under observation on the second day. Insufflations of air were tried, but proved unsuccessful. On the fourth day the patient had copious stools, and passed a piece of fleshy-looking matter having a putrid odour. There was no further trouble.

CASE 12.—Dr. D. J. Caddy records[11] a case of ileo-cæcal intussusception occurring in a female infant, aged six months, who came under observation on the first day. Abdominal palpation revealed a tumour. The infant passed blood from the anus and vomited soon after she was first seen. Water was forcibly injected into the rectum, causing the apparent disappearance of the tumour. Soon after one ounce of blood escaped from the rectum. The next morning the infant was again seized with colicky pains and cried violently. She passed more blood, and a further trial of enemata under increased pressure was made, with a successful result.

CASE 13.—Mr. J. T. C. Williams records[12] a case of intussusception occurring in a male infant, aged eight months, who came under observation on the first day, giving a history of intestinal derangement for one week. Examination of the abdomen showed it to be much distended, and palpation revealed a tumour. Inversion combined with massage and an enema, followed by insufflation of air, were tried, all to no purpose. Two basins were procured, each containing eight ounces of warm water. In one one and a half drachms of citric acid were placed, and in the other two drachms of bicarbonate of soda. The acid solution was thrown into the bowel through a catheter, and was followed by the alkaline solution. The catheter was quickly withdrawn, and the nates held together for several minutes. The tumour could now no longer be felt, the vomiting ceased, and a natural dejection from the bowels occurred two days later.

CASE 14. *Intussusception successfully treated by enemata.*—On June 23rd, 1894, I was requested to prescribe for a female infant, aged four months. It was stated that she had vomited the previous day, and that she was costive and very restless. As no further information was given at this time the diagnosis of indigestion was made and grey powder ordered. On June 24th a message was received to the effect that the child had had two movements of the bowels, consequently no haste was made to reach her. When she was seen the conditions were found to be different from what had been supposed, and the previous history, which was now drawn out, was as follows. The infant had been well from birth. She was nursed, but was given in addition cow's milk, to which sugar and lime water were added. She had been more or less costive from birth. Four days prior to my first visit the mother and child had taken an outing. The infant was fretful, and was in consequence jumped up and down constantly. During the evening she became more restless and vomited greenish fluid. On June 20th the infant was given castor oil, which was rejected, nothing being retained by her stomach throughout the day. An enema was administered, and a movement of the bowels resulted. On June 21st the vomiting persisted, and more oil was given, also another enema, which treatment was followed by a small stool. During the night of June 23rd the restlessness and vomiting became more marked. On June 24th a physician who was called in noticed that the restlessness was caused by colicky pains, and that a stool containing fæcal matter and bloody mucus had been passed. The parents insisted that something should be done for the infant's immediate relief, and the physician administered an enema which contained glycerine. Bloody mucus followed, and a tumour, which soon receded, protruded from the anus. When I reached the patient her bodily temperature was 102·4° F. and her pulse was 170. Palpation of the abdomen revealed a cylindrical tumour in the left inguinal and lumbar regions. It could also be felt on rectal examination. The case was diagnosed to be one of intussusception, probably of the ileo-cæcal variety. The infant was inverted and an enema given consisting of a quart of warm saline solution. The elevation of the reservoir was 3 ft. The enema was forcibly retained for some minutes, the abdomen meanwhile being palpated (not massaged) to prevent over-distension of the colon. When the liquid was allowed to escape it was found that the tumour had partly disappeared. One hour later a small fæcal movement occurred, gas escaped from the anus, and a second and larger stool was voided. Dr. J. Lewis Smith now saw the patient, and concurred in the diagnosis and the previous treatment. As the tumour had partially yielded to the former treatment it was decided to repeat it, the reservoir this time to be raised to 4 ft., and the abdomen kneaded during the administration of the enema. Under these procedures the tumour disappeared. Two hours later a small fæcal movement occurred, and five hours after the disappearance or reduction of the tumour the infant's pulse was 170 and the temperature had fallen to 101°, the face had regained its natural expression and colour, her cry was stronger, and two movements with free escape of gas had occurred. On June 25th it was noted that the infant had slept during the night, that the tumour had not reappeared, that the temperature was normal, that the abdomen was flaccid, and that three soft, yellow, pasty stools had been passed. The further convalescence was uneventful.

CASE 15. *Intussusception successfully treated by enemata.*—I am indebted for the history of the following case of intussusception to Dr. Frank Overton, of Patchogue, Long Island. He reports that during August, 1895, a female infant, aged six and a half months, came under his observation. She had been well from birth. On the morning of the first day she was visited she cried violently, and apparently had colicky pains, which were accompanied by a rise of bodily temperature. This condition yielded to treatment. A few weeks later, on Sept. 25th, 1895, the infant was again seized with severe abdominal pains, cried persistently, and refused to be nursed. The mother gave the infant castor oil and paregoric, and this treatment was followed by a natural dejection from the bowels. In the evening the child began vomiting, and presented a peculiar apathetic appearance, crying continually. Her bodily temperature was 99·5° F. and her pulse was 120. There was no abdominal distension and grey powder was ordered. Early on the morning of Sept. 26th she voided two ounces of blood, and later a smaller quantity. She now cried constantly and vomited frequently. Her temperature was 102° and her pulse was 140, and intussusception was suspected. At 7 A.M. her temperature was 103° and her pulse had risen to 180 At 9 A.M. a consultation was held. Abdominal palpation revealed the fact that there was no distension of the bowels, but that there was a localised point of tenderness in the right side just below the umbilicus, and there a small tumour was finally felt. A reservoir was filled with warm saline solution and raised 5 ft. above the infant's body, which was partly inverted. All the water possible, without causing over-distension of the colon, was injected into the bowel and forcibly retained. Massage was also applied to the abdominal wall. The child became quiet, and after five minutes had elapsed the water was allowed to escape. The tumour could now only be felt with difficulty, and the previously described procedure was repeated. After the escape of the second enema a large fæcal movement was voided containing bloody mucus. The tumour had now disappeared. The change in the patient's countenance was magical, the vomiting ceased, and she fell asleep. During the succeeding hours she was nursed freely. On Sept. 27th it was noted that the infant had slept all night, that her temperature was normal, and that a large fæcal movement which contained neither blood nor mucus was voided. Convalescence was uneventful.

CASE 16.—Dr. Ruff reports[13] a case of intussusception

[8] Australian Medical Journal, vol. i., 1894, p. 287.
[9] University College Hospital Reports in Brit. Med. Jour., vol. i., 1894, p. 346.
[10] Australasian Medical Gazette, vol. ii., 1893, p. 373.
[11] Brit. Med. Jour., vol. i., 1894, p. 126.
[12] THE LANCET, March 3rd, 1894.
[13] Medical News, vol. xl., p. 299.

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occurring in a male infant, aged seventeen days, which came under observation five hours after the first seizure. The infant was partly inverted, and an enema of water given and forcibly retained for five minutes. This proving unsuccessful inflation was tried, and then alternating injections of air and water at intervals for two hours. This treatment proving ineffectual chloroform was administered, and abdominal massage practised without benefit. Morphia was given, then alternating injections of air and water at intervals for six hours. This treatment was followed two hours later by a stool, and four hours after this occurred the infant started suddenly, and the tumour could no longer be felt. There was no reappearance of the disorder.

CASES OF INFANTILE INTUSSUSCEPTION UNSUCCESSFULLY TREATED BY ENEMATA OR INFLATION.
(GROUP NO. 2.)

CASES 1 TO 8.—Mr. Gorham,[11] records eight cases of intussusception occurring in infants whose ages ranged from three to eleven months. They were all treated in the first place by purgatives, and this treatment proving ineffectual by enemata. The cases all terminated fatally.

CASE 10.—Dr. F. Taylor and Mr. Golding Bird[13] report a case of intussusception of the ileo-cæcal variety occurring during 1881 in an infant, aged eight months, who came under observation on the first day. Abdominal and rectal examination revealed a tumour, and there were blood and mucus on the diaper. The bowel was distended with air and the tumour under this treatment apparently disappeared, only to return some hours later. Chloroform was then administered, and inflation again tried with increased pressure, but without avail, as the infant soon died. The necropsy revealed the fact that the invaginated bowel remained unreduced. Forcible inflation with air was tried (without result), and then with water, which reduced the ileum, but left the colon inverted. This proved also to be gangrenous. Under the injection of water the peritoneal and muscular coats of the bowel gave way at several points, leaving the mucous coat intact.

CASE 11.—Mr. Andrews records[16] a case of intussusception which occurred during 1881 in an infant, aged four months, who came under observation on the third day. Four enemata were administered. After the last one the tumour could not be felt. On the following day the infant died. The necropsy revealed the fact that the invaginated bowel remained unreduced. No evidence of peritonitis existed.

CASE 12.—Mr. Barker records[17] a case of intussusception of the ileo-cæcal variety occurring in a female infant, aged four months, who came under observation during the first twenty-eight hours. Inversion and enemata of air and water were tried, causing the apparent reduction of the tumour, but it reappeared nine hours later. The enemata were repeated with apparent success. Two hours later the tumour could again be made out, and it was again apparently reduced by enema. The infant collapsed and died. The necropsy revealed the fact that the invaginated bowel had never been completely reduced and that it was gangrenous.

CASE 13.—Mr. Cripps records[18] a case of intussusception occurring during 1884 in a male infant, aged four months, who came under observation on the fourth day. Under chloroform narcosis an enema consisting of one and a half pints of water was administered. While this was being accomplished the infant vomited, inspired vomited material, and died. The necropsy revealed two lacerations of the bowel, probably caused by the enema.

CASE 14.—Mr. Baker records[19] a case of intussusception occurring during 1884 in a male infant, aged seven months, who came under observation on the eighth day. Two enemata were administered, and the last apparently reduced the invagination, as the tumour could no longer be felt. Five hours later, however, the infant died. No necropsy was made.

CASE 15.—Mr. Andrews records[20] a case of intussusception occurring during 1886 in a male infant, aged four months, who came under observation on the fourth day. Six enemata of oil and two of milk were administered. This treatment was followed by the infant's death. The necropsy revealed the fact that the invagination had been only partially reduced.

CASE 16.—Mr. Mortimer reports[21] a case of intussusception occurring in an infant, aged eight months, who came under observation on the fourth day. Under chloroform narcosis abdominal palpation revealed a tumour. This procedure was followed by collapse. The infant was stimulated and two enemata, each consisting of about two ounces of fluid, were administered. After the last one had escaped the tumour could no longer be felt. Opiates were given, and for two days the only symptoms were occasional expressions of pain and increasing abdominal distension. At the end of this time vomiting re-commenced and the tumour re-appeared. Chloroform was administered a second time and ten ounces of water were injected into the bowel, the reservoir being raised three feet. Following this, three enemata were administered and the tumour partially disappeared. The next day a pint of water was injected at a lower pressure than previously, and it was repeated on the succeeding day. A few hours later the infant expired. The necropsy revealed three points of rupture in the descending colon.

CASE 17.—Dr. J. Aitken Clark records[22] a case of intussusception occurring on Nov. 22nd, 1892, in a male infant, aged five months, who came under observation on the second day. Opium and enemata were administered frequently without result. The child died on the sixth day of the disease. The necropsy revealed the fact that a double intussusception remained unreduced, one at the splenic flexure and the other at the sigmoid flexure of the colon.

CASE 18.—Dr. Edward Deanesly records[23] a case of intussusception of the ileo-cæcal variety occurring in a female infant, aged seven months, who came under observation on the fifth day after the bowel protruded from the anal orifice. A history of a month's previous illness was given. Two days prior to the infant's admission to the hospital the mother returned the bowel inside the anus and gave the infant castor oil. This treatment aggravated the symptoms, the bowel again appeared outside of the anus, and a small stool containing blood was passed. The bowel was returned with ease inside the anus, and on pushing it up the ordinary abdominal tumour was recognised. An anæsthetic was administered, and was followed by an enema of one pint of water having a head of two feet, the abdomen being meanwhile massaged. After the fluid escaped the tumour could no longer be felt. The bowels were moved twice. The next day, as the infant was drowsy, the opiate was discontinued. Towards evening the infant vomited, and during the succeeding twenty-four hours the bowel once more protruded. Under chloroform narcosis it was reduced by enema, but it re-appeared the following day, when reduction was again apparently effected by enema. Twenty-four hours later death occurred. A necropsy revealed the fact that the invagination remained unreduced, and that its reduction could easily have been effected by laparotomy.

CASE 19.—Mr. Winter reports[24] a case of intussusception of the ileo-cæcal variety occurring in a female infant, aged seven months, who came under observation on the second day of the disorder. At this time a tumour protruded from the anus. Under chloroform narcosis one pint of water was injected into the bowel, the receptacle containing it being raised two feet, and the abdomen meanwhile being massaged. Under this treatment the tumour disappeared. The next day a normal stool occurred. Two days later the bowel again protruded. Chloroform was again employed, and a second enema was administered, and reduction of the tumour was apparently effected. The following day the bowel again protruded. Under chloroform narcosis an enema was given with apparently satisfactory results, but on the succeeding day the infant died. At the necropsy it was found that the bowel protruded from the anus, as it had done prior to death. The intussusception was found to lie in the exact centre of the abdominal cavity. It lay down alongside the spine, and was closely attached to it by the mesocolon, and it passed straight downwards from about the third lumbar vertebra to the pelvic outlet. The protruding mass was returned inside the rectum, and an attempt made to reduce it from above by pulling the entering part of the ileum, but it was impossible to do so. The reduction was ultimately effected with ease by encircling the bowel below the apex of

[11] Guy's Hospital Reports, vol. iii., p. 330.
[13] Transactions of the Clinical Society, vol. xvi., p. 67.
[16] St. Bartholomew's Hospital Reports for 1892.
[17] Brit. Med. Jour., vol. i., 1891, p. 345.
[18] St. Bartholomew's Hospital Reports, 1892, pp. 97-111.
[19] Ibid., p. 87. [20] Ibid.
[21] THE LANCET, May 23rd, 1891.
[22] The Edinburgh Hospital Reports, 1894, p. 239.
[23] THE LANCET, March 10th, 1894.
[24] THE LANCET, March 10th, 1894, p. 600.

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the intussusception with the thumb and finger, and holding the bowel a few inches lower down. The apex was then pushed up with the fingers. No adhesions had formed between the opposed peritoneal surfaces of the entering and returning layers.

CASE 20.—Dr. J. Aitken Clark reports[25] a case of intussusception of the ileo-cæcal variety occurring during January, 1894, in a male infant, aged nine months, who came under observation on the third day. The infant was inverted and enemata administered at short intervals, but without result, death occurring on the evening of the third day. The necropsy revealed the fact that the invaginated bowel remained unreduced.

CASES 9, 21, AND 22.—Mr. Hutchinson cites[26] three cases of intussusception within his own experience where infants were treated by enemata of air and water, which treatment was followed by death. The necropsies revealed the fact that the invaginations in all cases remained unreduced.

CASE 23.—Mr. J. D. Mortimer records[27] a case of intussusception occurring in an infant, aged three months, who came under observation on the first day of the disease. The infant had vomited and passed blood from the anus. Rectal examination revealed a tumour. The bowel was inflated with air and the tumour disappeared. Opiates were given. Some hours later the vomiting re-commenced and the abdomen became distended. Collapse followed and the infant died. The necropsy revealed the fact that the invagination had not been reduced. A tube was tied into the rectum and connected with a reservoir containing water and elevated two feet above the cadaver. The water was allowed to pass into the intestinal canal. In a few minutes the invagination was almost reduced but about one inch of the ileum, the cæcum, and part of the vermiform appendix remained tightly ensheathed in the colon. After fifteen minutes of sustained pressure the reservoir was raised from three to four feet, and a slight further reduction of the invaginated portion of bowel took place. This went no further, and in four minutes the colon ruptured in three places just below the intussusception. The invagination, though, was very readily reduced by manipulation from below without obvious damage. There was a little lymph on the peritoneal surfaces of the cæcum, and its mucous membrane was infiltrated and slightly shreddy. The valve was much swollen, and by its obstruction would probably have caused rupture at the moment of complete reduction had this been effected by the enema.

Post-mortem experiments.—Mr. Mole describes[28] some experiments made on infantile cadavers. He found that when one and a half pints of water had been injected into the bowel under a pressure of one and a half pounds to the square inch (3 ft.) the liquid passed through the ileo cæcal valve; also that air could be made to pass the same point. His conclusions were: (1) that no harm can be done to healthy intestine by enemata of fluids under a moderate pressure; (2) that hydrostatic pressure is more uniform, and therefore less likely to cause rupture of the bowel; and (3) that the part most likely to be injured by over-distension is the transverse colon.

CASES OF INFANTILE INTUSSUSCEPTION UNSUCCESSFULLY TREATED BY LAPAROTOMY.
(GROUP NO. 3.)

CASE 1.—Ashurst, in the course of an article entitled the History of Laparotomy for Intussusception,[29] states that the first laparotomy performed on an infant for the relief of an intussusception was by Gerson, and reported by Hackman, of Hamburg. The operation was performed on Sept. 18th, 1828. The subject was a male infant, aged twelve weeks. An oblique incision was made in the direction of Poupart's ligament on the left side. While effort was being made to reduce the invagination the bowel gave way at a gangrenous point, and the operation was abandoned, and the infant expired.

CASE 2.—Spencer Wells reports[30] a case of intussusception occurring in an infant, aged four months, who came under observation on the third day of the disease. The operation was performed on the following day when the infant was collapsed. The child died five hours later.

[25] Edinburgh Hospital Reports for 1894, p. 239.
[26] Transactions of the Medico-Chirurgical Society, vol. lvii.
[27] THE LANCET, May 23rd, 1891.
[28] Bristol Medico-Chirurgical Journal, 1894, p. 65.
[29] American Journal of the Medical Sciences, vol. lxviii., p. 54.
[30] Ibid.

CASE 3.—Mr. Barker credits Busch[31] with a case of intussusception occurring during 1869 in a male infant, aged seven months, who came under observation on the fourth day of the acute illness. Laparotomy was performed; the invaginated gut proved to be irreducible, therefore an artificial anus was made. Death occurred eight days later.

CASE 4.—Ashurst credits Professor Weinlechner, of Vienna,[32] with a case of intussusception of the ileo-cæcal variety, which occurred during 1871 in a female infant, aged six months. Laparotomy was performed on the fourth day, and was followed by death a few hours later.

CASE 5.—A case of intussusception of the ileo-cæcal variety occurring during 1873 in an infant, aged five months, is credited by Barker to Duncan.[33] A history of several days' previous illness was given, but the day upon which the infant came under observation is not noted. Laparotomy was performed, but proved unsuccessful, death ensuing on the following day.

CASE 6.—Mr. Jonathan Hutchinson records[34] a case of intussusception of the ileo-cæcal variety occurring in an infant, aged six months, who came under observation on the third day. Enemata had previously been administered without result. The patient was collapsed and failing, therefore laparotomy was performed at once. The invaginated portion of bowel was reduced with difficulty. The case terminated fatally six hours later.

CASE 7.—Mr. Barker credits Howse[35] with a case of intussusception of the ileo-cæcal variety occurring during 1876 in an infant, aged five months, who came under observation after a month's indisposition. Laparotomy was performed. Death ensued a few hours later.

CASES 8 AND 13.—Stage is credited[36] with two cases of intussusception, one occurring during 1876 and the other in 1880. The first was a female infant, aged six months, who came under observation on the second day. Laparotomy was performed, and death ensued a few hours later. The second was a male infant, aged three months, who came under observation on the first day. Laparotomy was performed, and was followed by death two and a half days later.

CASE 9.—Mr. Smith records[37] a case of intussusception of the ileo-cæcal variety occurring during 1877 in a male infant, aged eight months, who came under observation on the fourth day, giving a history of two days' previous illness, the chief symptoms of which were abdominal pain, vomiting, and the passage of blood from the anal orifice. No tumour could be felt on making either abdominal or rectal examination. Inflation on the second day had afforded slight relief. It was tried again on the third day, and followed on the fourth day by enemata, which seemed to give some relief. Laparotomy was, however, performed on the fifth day. There were no evidences present of peritonitis, although the ileum which had slipped through the ileo-cæcal valve was gangrenous. This portion of gut was excised and an anastomosis effected. Death followed the operation five hours later.

CASE 10.—Mr. Beck is credited[38] with a case of intussusception of the ileo-cæcal variety occurring during 1877 in a female infant, aged eight months, who came under observation five and a half hours after the beginning of the attack. Repeated enemata of oil and air were administered without result, and twenty-six hours from the beginning of the disorder laparotomy was performed. The invaginated bowel, while deeply congested, was easily reduced. The operation, however, was unsuccessful, being followed by death from septic peritonitis.

CASE 11.—Sands is credited[39] with a case of intussusception of the ileo-cæcal variety occurring during 1878 in a male infant, aged six and a half months, who came under observation on the second day. Laparotomy was performed and was followed by death four hours later.

CASE 12.—Corley is credited[40] with a case of intussusception of the colic variety occurring during 1879 in an infant, aged nine months, who came under observation after several days' illness. Laparotomy was performed and was followed by death four hours later.

[31] THE LANCET, Aug. 11th, 1888.
[32] American Journal of the Medical Sciences, vol. lxviii., p. 54.
[33] THE LANCET, Aug. 11th, 1888.
[34] THE LANCET, Dec. 18th, 1875.
[35] THE LANCET, Aug. 11th, 1888.
[36] THE LANCET, Aug. 11th, 1888.
[37] St. Bartholomew's Hospital Reports for 1892, vol. xxviii., p. 106
[38] Brit. Med. Jour., vol. i., 1894, p. 346.
[39] THE LANCET, Aug. 11th, 1888.
[40] THE LANCET, Aug. 11th, 1888.

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CASE 14.—Mr. R. J. Godlee reports [41] a case of intussusception of the ileo-cæcal variety occurring in 1882 in an infant aged fourteen weeks. Laparotomy was performed and the invagination was reduced with difficulty. The infant died, and the necropsy revealed the fact that the reduction at the time of operation was only partial.

CASE 15.—Mr. Walsham is credited [42] with a case of intussusception occurring during 1882 in a male infant, aged seven months, who came under observation on the third day. Distension of the bowel with air and water was tried. This treatment proving unsuccessful, laparotomy was performed, notwithstanding the fact that peritonitis existed. The invaginated bowel was reduced with difficulty. The operation was followed by death.

CASE 16.—Marsh records [43] a case of intussusception occurring during 1882 in a female infant, aged eight months, who came under observation on the second day. Inflation with air was employed, but without success. Laparotomy was then performed, and the invaginated bowel was easily reduced. Death ensued on the following day.

CASE 17.—Braun is credited [44] with a case of intussusception of the ileo-colic variety occurring during 1882 in a male infant, aged three months, who came under observation on the fifth day. Laparotomy was performed, and as the invagination could not be reduced it was excised and an artificial anus made. Death ensued one hour later.

CASE 18.—Dr. Kudlich and Dr. Jacobi record [45] a case of intussusception occurring during 1882 in a female infant, aged two months, who came under observation eighteen hours after the onset. Enemata and massage were first unsuccessfully employed, and were followed by laparotomy. Great difficulty was experienced in reducing the invaginated bowel, and the operation was followed by death.

CASE 20.—Mr. R. J. Godlee reports [46] a case of intussusception occurring during 1882 in an infant, aged seven months, who came under observation on the third day. Abdominal palpation revealed a tumour in the right umbilical region. Enemata of air and water were first tried without success. Laparotomy was performed under chloroform narcosis. The invagination, which proved to be of the ileo-cæcal variety, was reduced with some difficulty. The operation was followed by death, due to septic peritonitis.

CASE 21.—Symonds is credited [47] with two cases of infantile intussusception. The cases occurred during 1884. The first was of the ileo-cæcal variety and occurred in a male infant, aged five months. He came under observation on the seventh day of acute illness following thirteen days of indisposition. Laparotomy was performed and was followed by death.

CASE 22.—The second case occurred in a female infant, aged six months, and came under observation on the twentieth day of sub-acute illness. Laparotomy was performed, and was also followed by death.

CASE 23.—Mr. Beck records [48] a case of intussusception of the ileo-cæcal variety occurring during 1885 in a male infant, aged five months, who came under observation fifty-five hours after the onset. Abdominal palpation revealed a tumour. Injections of air and water were tried, but, proving unsuccessful, laparotomy was performed. The invagination proved irreducible, and the operation was abandoned. Death soon occurred.

CASE 24.—Mr. Edmund Owen reports [49] a case of intussusception occurring in a female infant on the day of her birth, who came under observation on the second day. Prior to this castor oil had been given. Digital exploration of the rectum proved the bowel to be pervious. Under chloroform narcosis an enema was administered, but without result. On the following day (3) the enema was repeated, but without affording relief. Laparotomy was performed, and the first piece of small intestine which presented in the wound was seized, and an artificial anus made. No attempt was made to find the invaginated portion of intestine. The infant survived the enterectomy six days, dying on the ninth day after birth.

CASE 25.—Horseley is credited [50] with two cases of infantile intussusception occurring during 1885. The first case was that of a male infant, aged four months, and was of the ileo-cæcal variety, and came under observation on the fourth day. Laparotomy was performed, and the intussusception proving irreducible it was excised, and an artificial anus was made. Death soon followed the operation.

CASE 26.—The second case also occurred in a male infant, and was of the ileo-cæcal variety. It came under observation nineteen hours after the onset. Laparotomy was performed. Death followed thirty hours later.

CASE 27.—Two cases of intussusception are credited to Jacobson.[51] The first occurred in 1886 in a male infant, aged five months, who came under observation with a history of three weeks' previous illness. Laparotomy was performed, and the invaginated portion of bowel was found to be partly gangrenous and irreducible. The infant's condition at this time was fairly good, but after the excision of the invaginated gut he became very bad and he soon expired.

CASE 28.—The second case occurred in an infant, aged eleven months, who came under observation with a history of a month's previous illness. Laparotomy was performed, and the invaginated portion of bowel was found to be irreducible. The operation was concluded without resection of the tumour in the hope that spontaneous cure would result by sloughing. Death ensued twenty-four hours later.

CASE 29.—Dr. Van Arsdale records [52] the fact that he had resorted to laparotomy three times in the treatment of infantile intussusception. The operation was followed by death in all of the cases. Since this report Dr. Van Arsdale has kindly furnished me with additional details of these cases. They occurred about 1887 in infants under six months of age. In one case peritonitis existed at the time of operation, and the bowels were much distended. The trouble was not satisfactorily located and the operation was incomplete.

CASE 30.—In another of the cases the intussusception was irreducible and an artificial anus was made.

CASE 31.—The same treatment was adopted in the third case.

CASE 32.—Mr. Pick records [53] a case of intussusception of the enteric variety occurring during 1887 in an infant, aged six months, who came under observation with a history of three weeks' previous indisposition, and the last two days of which had been acute. Abdominal examination revealed a tumour in the left inguinal and lumbar regions. The infant was given chloroform, inverted, and the bowel inflated with air. Under this pressure the fingers which had been placed on the abdomen over the tumour felt it suddenly melt away. Opiates were administered, but about nine hours later the infant did not appear as well, and an enema of oil was administered. On the following morning the abdomen was tender and somewhat distended. A few hours later Mr. Pick found the infant collapsed and performed laparotomy. No invagination was found, but a piece of small intestine six inches in length, which was collapsed and showed signs of having been constricted at either end, and looking paralysed. The bowel immediately below this portion of gut was also empty and collapsed. The operation was well borne, but soon after the infant suddenly collapsed and shortly died. Mr. Pick's explanation of this condition was that the first portion of gut found collapsed had been involved in the intussusception, that it had been reduced by the air pressure, but that the gut had been so long constricted that it could not recover itself after its release; therefore, the symptoms continued unchanged after the reduction.

CASE 33.—Mr. Walsham is credited [54] with a case of intussusception occurring during 1888 in an infant, aged eight months, who came under observation on the first day. Laparotomy was performed, and at the point of beginning of the invagination a small sessile tumour was found. Death followed the operation twenty-four hours later.

CASE 34.—Mr. Marsh records [55] a case of intussusception of the ileo-cæcal variety occurring during 1889 in a male infant, aged four months, who came under observation on the fourth day. A previous history of abdominal pain, vomiting, and passage of watery stools, which contained blood, was given. Abdominal and rectal examination revealed a tumour. Laparotomy was performed, and

[41] Transactions of the Clinical Society, vol. xvi., p. 67.
[42] St. Bartholomew's Hospital Reports for 1892, pp. 97 to 111.
[43] St. Bartholomew's Reports for 1892.
[44] THE LANCET, Aug. 11th, 1888.
[45] Medical Record, vol. xxi., p. 299.
[46] Transactions of the Clinical Society, vol. xvi., p. 67.
[47] THE LANCET, Aug. 11th, 1888.
[48] Brit. Med. Jour., vol. i., 1894, p. 346.
[49] Ibid., vol. i., 1885, p. 1201.
[50] Ibid., vol. i., 1894, p. 346.
[51] THE LANCET, June 11th, 1887.
[52] Annals of Surgery, vol. xx., pp. 418-19.
[53] THE LANCET, June 13th, 1891.
[54] St. Bartholomew's Hospital Reports for 1892.
[55] Ibid., p. 111.

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difficulty was experienced in reducing the invaginated bowel. Death ensued a few hours later from exhaustion.

CASE 35.—Mr. Cripps records[56] a case of intussusception of the ileo-cæcal variety occurring during 1890 in a male infant, aged five months, who came under observation on the third day. A previous history of several days' illness was given, the chief symptoms of which were abdominal pain, vomiting, and the passage of blood-stained mucus from the bowel. Enemata of warm water failed twice to reduce the invagination. Abdominal and rectal examination revealed a tumour. Laparotomy was performed, and the gut was apparently reduced, but death occurred two hours later. The necropsy revealed the fact that the intussusception had been only partially reduced. There was no evidence of peritonitis.

CASE 36.—Mr. Walsham is credited[57] with a case of intussusception occurring during 1890 in a male infant, nine months of age, who came under observation on the third day. Laparotomy was performed. The invaginated bowel was easily reduced. Death followed the operation. The necropsy revealed the fact that there was a small perforation in the transverse colon and that death was due to septic peritonitis.

CASE 37.—Mr. A. E. Barker records[58] a case of intussusception occurring in an infant, aged four months, during 1891, who came under observation on the fourth day. An unsuccessful attempt to reduce the intussusception by inflation had been made. On examination the infant was found to be collapsed. A gangrenous odour was emitted. Under chloroform narcosis rectal and abdominal palpation revealed a tumour. Laparotomy was performed. The gut was found to be gangrenous and was excised and the divided ends joined. Death ensued ten hours later. The necropsy proved the sutures of the bowel to be firm, and they resisted strong pressure of water without leaking.

CASE 38.—Dr. F. J. Shepherd records[59] a case of intussusception of the ileo-cæcal variety occurring in an infant, aged seven months, who came under observation on the second day. Examination at this time revealed a dark-coloured protrusion from the anus. Laparotomy was performed under chloroform narcosis. On account of the intestinal distension the invaginated gut was found with difficulty and reduced only after the intestine had been incised. The operation was followed by the infant's death three hours later.

CASE 39.—Mr. Paul Bush reports[60] a case of intussusception occurring in an infant, aged four months, who came under observation on the third day of the disease. Enemata were administered without success. Laparotomy was performed. The intussusception proved to be of the enteric variety and irreducible. The tumour was excised and an artificial anus made. Peritonitis ensued, and the infant died twenty-four hours later.

CASE 40.—Dr. Abbé reported[61] a case of intussusception occurring during 1893, which came under observation sixteen hours after the onset. Laparotomy was performed. The invaginated bowel was reduced with much difficulty on account of the strong adhesions which had already formed. Death followed the operation twenty-four hours later.

CASE 41.—Mr. A. E. Barker records[62] a case of intussusception occurring in a male infant, aged four months, who came under observation on the third day. Abdominal and rectal palpation revealed tumour, and blood and mucus were passed from the anal orifice. Under chloroform narcosis warm water was injected in the bowel from a reservoir raised three feet above the patient's body. When five ounces had entered the fluid began to escape, and the tumour could no longer be felt. An opiate was given, and the infant slept well all night. At 6 A.M. on the following morning the child began to scream, and soon afterwards passed blood and mucus from the anus. Under chloroform narcosis laparotomy was performed, the operation occupying only eight minutes. This was succeeded by collapse and the infant died twenty-four hours later. The necropsy was negative.

CASE 42.—Dr. Briddon, at the meeting of the New York Surgical Society, held on May 23rd, 1894,[63] reported a case of intussusception occurring in an infant, aged eight months, who came under observation on the second day in a state of collapse. Laparotomy was performed. The invagination was reduced with difficulty. Death ensued five hours later.

CASE 43.—Dr. J. F. Erdmann records[64] a case of intussusception of the enteric variety occurring in January, 1895, in a male infant, aged eight and a half months, who came under observation on the fourth day. Enemata had previously been unsuccessfully employed. Laparotomy was performed, and the invaginated portion of the ileum, which proved to be in a gangrenous condition, was removed (six inches), and an end-to-end anastomosis effected by means of a Murphy's button. Septic peritonitis existed at the time of operation, and the infant died a few hours later.

CASES OF INFANTILE INTUSSUSCEPTION SUCCESSFULLY TREATED BY LAPAROTOMY. (GROUP NO. 4.)

CASE 1.—Mr. Marsh reported to the Royal Medical and Chirurgical Society at a meeting held on Dec. 14th, 1875,[65] a case of intussusception occurring in a male infant, aged six months, who came under observation on the first day of acute illness, giving a history of thirteen days of previous indisposition. Examination revealed an abdominal tumour, and there existed a protrusion from the anal orifice. Enemata of air and water were employed without success. A few hours later Mr. Marsh found the infant collapsed. Laparotomy was performed, and the invaginated bowel was readily reduced. Convalescence was uneventful.

CASE 2.—Dr. Henry B. Sands records[66] a case of intussusception of the ileo-cæcal variety occurring in a female infant, aged six months, who came under observation twelve hours after the onset. The infant was collapsed. Abdominal and rectal palpation revealed a tumour. Reduction of the invaginated bowel was first attempted by the fingers, by enemata, by the long rectal tube, by inflation, and again by enemata, and finally, as the tumour persisted in reappearing, abdominal section was resorted to. The invaginated portion of bowel was reduced with difficulty. The bowels moved two days later, and convalescence was uneventful.

CASE 3.—Mr. R. J. Godlee reports[67] a case of intussusception of the ileo-cæcal variety occurring during 1881 in an infant, aged nine months, who came under observation on the fourth day, at which time the bowel protruded from the anal orifice. The pulse-rate was 200. Inflation with air and water was first tried, after the infant had been inverted, but proved unsuccessful. Laparotomy was performed, the invaginated portion of bowel was readily reduced, and recovery ensued.

CASE 4.—Dr. Snowball records a case of intussusception of the ileo-cæcal variety occurring in an infant, aged eight months, who came under observation on the first day. Opiates and enemata having been tried unsuccessfully laparotomy was performed, and the invaginated bowel was reduced without difficulty, but the constriction was too tight to have admitted of its reduction by the enema. Convalescence was uneventful.

CASE 5.—Dr. Howitt, in a paper read before the American Association of Obstetricians and Gynæcologists in 1894, records a case of intussusception of the ileo-cæcal variety occurring during 1888 in a male infant, aged three months, who came under observation on the second day of acute illness. Abdominal palpation revealed a tumour. Cathartics had been given, aggravating all the symptoms. Under chloroform narcosis, and with the pelvis elevated, an enema was administered. When a little more than a pint had been injected the infant suddenly ceased breathing, and was resuscitated with difficulty. As the tumour had only been partially reduced by the enema laparotomy was performed. The tumour was reduced with some difficulty. The cæcum and ascending colon gave evidence of having recently been involved in the invagination. Two hours later the bowels moved, and the convalescence was uneventful.

CASE 6.—The University College Hospital records[68] a case of intussusception of the ileo-cæcal variety occurring during 1889 in a female infant, aged five months, who came under observation on the second day. Abdominal palpation under chloroform narcosis revealed a tumour. Enemata were tried

[56] Ibid., vol. xxviii., p. 111.
[57] Ibid.
[58] THE LANCET, Jan. 9th, 1892.
[59] THE LANCET, Nov. 19th, 1892.
[60] Bristol Medico-Chirurgical Journal, 1894, p. 6.
[61] Annals of Surgery, vol. xx., p. 419.
[62] Brit. Med. Jour., vol. ii., 1894, p. 1237.
[63] Annals of Surgery, vol. xx., pp. 418, 419.
[64] New York Medical Record, vol. i., 1895, p. 475.
[65] THE LANCET, Dec. 18th, 1875.
[66] New York Medical Journal, 1877, vol. xxv., p. 561.
[67] Transactions of the Clinical Society, vol. xvi., p. 67.
[68] Brit. Med. Jour., vol. i., 1894, p. 347.

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unsuccessfully. Laparotomy was performed, and the invagination was easily reduced. Convalescence was uneventful.

CASE 7.—Dr. Frederick Kammerer records[69] a case of intussusception of the ileo-cæcal variety occurring during 1889 in an infant, aged six months, who came under observation sixty hours after the onset. The infant was narcotised with chloroform, inverted, and an enema administered under strong pressure, but without result. Laparotomy was performed, and the invaginated portion of bowel was easily reduced. Recovery resulted.

CASE 8.—Sir William Savory and Mr. Marsh record[70] a case of intussusception occurring during 1890 in an infant, aged nine months, who came under observation on the second day. Abdominal palpation revealed a tumour. Laparotomy was performed, and the invaginated portion of gut was easily reduced. During the night following the operation a stool was passed which did not contain blood. Convalescence was uneventful.

CASE 9.—Mr. Paul Bush[71] records a case of intussusception occurring in an infant, aged four months, who came under observation on the second day (May 21st, 1890). Enemata had been administered without result. Under chloroform narcosis laparotomy was performed. The invagination was of the ileo-cæcal variety and was easily reduced. The patient's recovery was uneventful.

CASE 10.—Macewen records[72] a case of intussusception of the colic variety occurring during 1891 in an infant, aged nine months. When first seen the child was collapsed. Laparotomy was performed, and the invagination was with difficulty reduced, and in making the reduction the peritoneal coat of the gut was injured. Recovery ensued, and three months later the infant was shown in good health.

CASE 11.—Mr. Pollard records[73] a case of the ileo-cæcal intussusception occurring in an infant, aged six months, who came under observation on the first day. Abdominal palpation revealed a tumour. Enemata repeated at intervals were given (with a head varying from two to three feet) unsuccessfully, as the tumour kept re-appearing after short intervals. Laparotomy was performed, and the tumour was withdrawn. It seemed to consist only of the swollen ileo-cæcal valve, the intussusception having possibly been reduced by the enemata. Convalescence was uneventful.

CASE 12.—Mr. Barker records[74] a case of intussusception of the enteric variety occurring during 1893 in a female infant, aged seven months, who came under observation thirty-six hours after the onset. Abdominal palpation revealed a tumour. Enemata combined with manipulation having failed to effect reduction laparotomy was performed, and the invaginated bowel, although strangulated, was easily reduced by pressure from below. Recovery followed the operation.

CASE 13.—Mr. Verrall records[75] a case of intussusception of the ileo-cæcal variety occurring during 1894 in a male infant, aged six months, who came under observation on the first day of the acute attack. Abdominal palpation revealed a tumour. Under anæsthesia an enema of eight ounces of water was administered, the elevation of the reservoir being 2ft. This procedure had no effect on the tumour. Laparotomy was performed, and the invagination was reduced with difficulty. The bowels moved naturally the succeeding day, and the infant recovered.

CASE 14.—Dr. Beatley and Mr. Ridley record[76] a case of intussusception of the ileo-cæcal variety occurring during 1893 in an infant, aged eleven months. When the child first came under observation it was stated that the infant's bowels had been deranged for eleven days. Abdominal palpation revealed a tumour. Under chloroform narcosis enemata had been given at frequent intervals, but without result, and many hours of valuable time were thus lost. Laparotomy was performed. The tumour was reached with difficulty owing to the intestinal distension, but was easily reduced. Before the intestines could be returned within the abdominal cavity they had to be incised to allow the gas to escape. The bowels moved on the second day after the operation. The convalescence was retarded by the occurrence of a persistent diarrhœa.

[69] New York Medical Record, vol. i., 1890, p. 113.
[70] St. Bartholomew's Hospital Reports, 1892, vol. xxviii., p. 110.
[71] Bristol Medico-Chirurgical Journal, 1894, p. 6.
[72] Glasgow Medical Journal, 1892, p. 276.
[73] THE LANCET, Oct. 15th, 1892.
[74] Brit. Med. Jour., vol. i., 1894, p. 345.
[75] Ibid., vol ii., 1893, p. 1375.
[76] Ibid., vol. i., 1894, p. 911.

CASE 15.—Mr. Lockwood records[77] a case of intussusception occurring in a male infant, aged eight months, who came under observation twenty-eight hours after the onset. Enemata were unsuccessfully tried under chloroform narcosis. The first consisted of ten ounces of water with a head of 2½ ft., and the second of twelve ounces with a head of 3 ft. Laparotomy was performed. The time required for the administration of the enemata and the performance of the laparotomy was thirty-five minutes.

CASE 16.—Mr. Barker reports[78] a case of intussusception occurring in a male infant, aged four months, who came under observation during 1894 on the second day. Abdominal palpation revealed a tumour. The infant's general condition being bad enemata were omitted, laparotomy was performed, and the invaginated bowel pressed out of the intussuscipiens. This manipulation injured the peritoneal coat in several places. The cæcum was darkly congested, swollen, and devoid of polish. The operation was followed by little shock, and the bowels moved several times during the night, each movement containing less blood. Convalescence was uneventful.

CASE 17.—Dr. Ainsley records[79] a case of ileo-cæcal intussusception occurring in a male infant, aged eight months, who came under observation on the first day. When seen the infant was collapsed. Abdominal and rectal palpation revealed a tumour. Inflation was unsuccessfully tried under chloroform narcosis, six and a half hours after the onset laparotomy was performed, and the invagination reduced. The time required for the operation was forty minutes. Commenting on this case Dr. Ainsley said: "The difficulty in unravelling the bowel, as well as its congested and œdematous condition, make us believe that had the operation been postponed even for a few hours the chances of success would have been very seriously jeopardised. I am also persuaded that prolonged inflation or injection of water could have done nothing but harm."

CASE 18.—Mr. Pollard records[80] a case of intussusception of the ileo-cæcal variety occurring in a female infant, aged seven months, who came under observation on the first day. Rectal and abdominal palpation revealed a tumour. The dejections had a gangrenous odour. Laparotomy was at once performed. The invaginated bowel was reduced with some difficulty. The infant's bowels acted naturally twenty hours later, and convalescence was uneventful.

CASE 19.—Mr. A. E. J. Barker records[81] a case of intussusception occurring in a male infant, aged five months, who came under observation during 1894. Enemata were administered with apparent success, as the tumour disappeared, but it soon returned. Laparotomy was performed and the invagination was reduced. Recovery followed the operation.

CASE 20.—Dr. Roberts records[82] a case of intussusception of the ileo-cæcal variety occurring in an infant, aged nine months, who came under observation on the fourth day. Enemata were first tried. Then laparotomy was performed and the invagination was easily reduced. The time occupied by the operation was twenty-five minutes. The infant's convalescence was uneventful.

CASE 21.—Dr. Howitt, in a paper read before the American Association of Obstetricians and Gynæcologists, 1894, records a case of intussusception of the ileo-cæcal variety occurring in a male infant, aged six months, who came under observation on the second day. Cathartics and enemata had previously been unsuccessfully employed, as was Senn's plan of rectal insufflation with hydrogen gas. The infant's condition was bad. Laparotomy was performed, and the invaginated gut was difficult of reduction. The infant's bowels moved the same evening, and his convalescence was uneventful.

REMARKS.

The total number of cases of infantile intussusception collected and reported in this paper is 103. Of these, nearly 50 per cent. occurred during the fourth, fifth, and sixth months, and in nearly equal proportions. 75·4 per cent. of the cases occurred in males, and 89 per cent. of the cases were of the ileo-cæcal variety. Pritchard in his paper on Intussusception called attention to the probable part played by external violence in the causation of this disorder during

[77] THE LANCET, June 3rd, 1893.
[78] Brit. Med. Jour., vol. ii., 1894, p. 1237.
[79] THE LANCET, May 19th, 1894.
[80] THE LANCET, Feb. 24th, 1894.
[81] Brit. Med. Jour., vol. i., 1894, p. 345.
[82] Philadelphia Medical and Surgical Reporter, 1894, p. 428.

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early life, particularly the careless manner in which infants are picked up and doubled over the arm of those caring for them, thereby injuring and causing a temporary paralysis of some portion of the intestinal canal. Jacobi has also called attention to this matter, particularly to the way in which infants are violently jumped up and down to quiet their cry. This seems to have been the prime factor in the causation of the invagination in my case. The age during which the infant is most liable to be affected by this disorder seems to substantiate these views. In one case the invagination was caused by an intestinal tumour. In these cases there seems to be nothing of unusual interest in the symptomatology to record. The disorder manifests itself by means of a sudden onset of severe abdominal pain, followed by vomiting and the passage of stools containing blood and mucus. Tenesmus was present to a marked degree only in those cases where the gut protruded from the anal orifice or where the tumour was down in the rectum. The symptoms varied in intensity in the usual manner, in direct proportion to the degree of constriction the bowel was subjected to, as indicated by the character of the pain and the amount of blood passed from the anus. The sign of the disorder, an abdominal tumour, was seldom absent, as was to be expected in such a large proportion of cases of the ileo-cæcal variety. Several of the reporters call attention to the necessity in all suspected cases of this trouble of making a conjoined abdominal and rectal examination, for in some instances a tumour was revealed by this means after abdominal or rectal palpation alone had failed to discover it. A protruding anal tumour occurred in the usual proportion—about 5 per cent. of the cases. Cure by sloughing, which is exceedingly rare in these cases, was met with twice—in Beeston's case and in one recorded by Mr. Cripps in the *St. Bartholomew's Hospital Reports* for 1892, of which a few particulars will here be given, it not being included in the collection. The case occurred during 1882 in a female child, aged three months, who came under observation on the fourteenth day with a gangrenous mass of gut protruding from the anus, a portion of which was removed. The rest sloughed off and the patient recovered. Thirty-nine of the cases were treated only by means of inflation or enemata, or both. Of these sixteen, or 41 per cent., recovered. The average hour after the onset when the treatment began was the forty-first. The histories of these cases are so deficient as to the details of the quantity of fluid or the amount of pressure employed that no deductions can be drawn in regard to these points from this group. In two cases eight ounces of water were used; in two cases one pint; in two cases one quart with a head of from three to four feet; and in one case three quarts under a head of five feet was reported as having been the amount injected into the intestinal canal of an infant seven and a half months of age. In one case nine enemata were required to bring about a permanent reduction of the invagination, as evidenced by the disappearance of the tumour and the subsidence of the symptoms. Chloroform narcosis was employed in three cases while the distension of the bowel was being effected. The cases of this group which terminated fatally were twenty-three in number, a mortality of 59 per cent. The average age of the infants was about five months. The average hour following the onset when treatment was begun was the sixty-ninth. In one case while the enema was being administered under chloroform narcosis, and in the inverted position, the infant vomited, inspired the vomited material, and died. In several cases collapse followed the administration of the enema, and in nearly all cases there was the same story of the inefficiency and uncertainty of the method, the tumour disappearing only to return after a short interval, the treatment being repeated again and again, the occasional repeated administration of chloroform, and alternating injections of air or water combined with massage, often roughly applied, till finally death mercifully came to the infant's relief. In all of these cases where notes of a necropsy were found the same tale was told of gangrenous, unreduced, invaginated bowel; invaginated bowel easily reduced by internal manipulation or traction; or bowel lacerated as a result of the violence caused by the over-distension of the diseased intestine. In one instance the gut was found to have become gangrenous twenty-eight hours after the first onset.

If all the cases are counted in which intestinal distension was practised to reduce the invaginated bowel, some of which cases were afterwards treated by abdominal section, it will be found that their number is seventy-one. Of this number failure to effect reduction occurred in fifty-three instances, or 75·4 per cent., which percentage would have represented the mortality of this method of treatment had not other means been afterwards tried, taking them out of this category. These figures approximate closely those given by Hare as the percentage of mortality following this method of treatment. In one instance where laparotomy was performed after enemata had apparently failed to effect a reduction, as evidenced by a continuance of the symptoms, it was thought that the swollen ileo-cæcal valve had, after the reduction of the invaginated bowel, simulated the tumour; and in another case it was supposed that the invagination had been reduced by the distension, but that the bowel had become paralysed and had been unable to recover itself. While the experiments of Forrest, Curtiss, and others, prove that there is little or no danger of injuring healthy infantile intestine by a hydrostatic pressure of six pounds to the square inch, the experiments of Mortimer and Mole, and the practical experience set forth in this paper, demonstrate conclusively that the conditions are very much altered when one has to do with a portion of gut that has been severely constricted, even for a few hours. Battey and Mole have proved by their experiments that water under a moderate pressure can, when no obstructions exist, be made to pass through the ileo-cæcal valve, and Mole has proved that one and a half pints of water injected under a pressure of one and a third pounds to the square inch into an infantile colon will fully distend it, and that it will pass the valve. Therefore it would appear that if it is desired to treat a case of infantile intussusception by means of intestinal distension (which I freely admit after a careful study of this subject, notwithstanding the fact that the only case which has come under my personal observation was successfully treated by enemata, I would be unwilling to employ) at least one and a half pints of tepid saline solution (one teaspoonful of salt to the quart) should be placed in a reservoir which is not to be elevated above three feet; and if this is not successful after one trial the method should be abandoned and other means to effect a reduction employed. If it is thought that reduction has occurred under this method, as evidenced by the apparent disappearance of the tumour, the infant should be placed in his crib and quieted by other means than by opiates or motion, to the end that if reduction has not really been effected the effect may be made manifest by the symptoms at the earliest possible moment, so that other treatment may be attempted while the chances of a successful outcome, though diminished, are not absolutely gone. It is well to recall the fact that in those cases which were successfully treated by enemata the average hour after the onset at which treatment was begun was the forty-first, and in those cases which terminated fatally it was the sixty-ninth.

Mr. Mortimer, in the course of a paper entitled, "On the Treatment of Intussusception by Injection or Inflation and its Dangers,"[83] said "that in his opinion the chief advantage of this method of treatment lay in the slight parental opposition to its employment." In alluding to the objections of this method he said: "A serious objection to the operation (enema) is that the conditions under which it is performed can only be roughly guessed at. An invagination of a fairly healthy intestine may at one time remain unreduced, when a little more pressure would have completely unfolded it, whilst at another time a very slight force may be enough to cause rupture. There is always afterwards a deceptive lull of some hours due to effects of shock, to the anæsthetic, and cessation of feeding, as well as to the opium which is usually given. Such delay may so alter the general and local conditions as to render hopeless any further procedure. It is also true that an experienced operator may blindly do as much damage as the merest tyro. I need not dwell on the obvious value of being able to feel and see what one has to deal with both as regards the intussusception and the various complications which may accompany it. There is seldom hesitation in performing an operation, perhaps a serious one, in the most unfavourable cases, say, of ruptured aneurysm or obstructed labour, or in ascribing a fatal ending less to the operation than to the condition which necessitated it. To this class acute intussusception in the late stage belongs." In the course of the discussion which followed the report of Mr. Mortimer's case of intussusception unsuccessfully treated by enemata Mr. Bryant

[83] THE LANCET, May 23rd, 1891.

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said: "In my opinion under all circumstances the treatment by intestinal distension is dangerous, although successful cases may be occasionally recorded, and it is only justifiable within the first three days, and in cases not presenting symptoms of acute strangulation." The speaker also considered manipulations through the abdominal wall during the administration of enemata as being dangerous. Mr. Pritchard, in the course of his paper entitled "Intussusception,"[84] said: "I think a child would stand a far better chance of getting well after an abdominal section and the disentangling of the invagination by the fingers than by the influx of water, if the irrigator had to be elevated higher than three feet to bring about a reduction"; and, finally, Dr. Charles K. Briddon, surgeon to the Presbyterian Hospital, New York, in a recent communication to myself, said: "From what I have seen of the cases brought into hospital *in extremis* and the great difficulty of reducing the parts at that time, I should judge the use of intestinal enemas as *simply trifling* with a very grave condition, only to be combated by the institution of radical measures at the outset."

The history of the treatment of infantile intussusception by the method of intestinal distension, by either air or water, as evidenced by the testimony which has been presented, is certainly a dark page in that of our science. It is a story of empirical, rather than scientific, endeavour, one of hope deferred, of uncertainty, of prolonged torture none the less cruel because it was performed in all kindness and was generally considered to be the gentlest method of dealing with the disorder, and finally of a mortality of 75 per cent of disaster. Laparotomy was performed in this group of cases sixty-four times for the relief of infantile intussusception. It resulted successfully in twenty-one, or in 32·8 per cent., of the cases operated upon. The average age of these infants was about six and a half months. The average hour from the onset till the time of operation was the forty-fourth. In seventeen of the cases inflation and enemata, or both, had previously been tried without success. In eight cases the invaginated bowel was readily reduced, and in ten cases it was reduced with difficulty. In three of the histories nothing was stated regarding this point. The length of time required for the performance of the operation was in one instance stated to be eight minutes, and in another thirty-five minutes, which latter included the administration of an enema. Laparotomy was followed by death in forty-three of the cases, giving a mortality of 67·2 per cent. The average age of these patients was about five months, the youngest upon whom enterectomy was performed being only three days old. The patient lived six days after, probably dying from inanition, as the operator opened the first piece of bowel which presented itself in the wound. If these cases are subtracted from our list of unsuccessful abdominal sections in which either the operation was abandoned, the bowel incised and an artificial anus made or resected, and an anastomosis effected, we shall have 45 cases, of which number only 24 resulted fatally, reducing the mortality to 53 4 per cent. If we count only the operations, successful and unsuccessful, that have been performed since the perfected technique of abdominal surgery has become generally known—say, since 1889—and throwing out, as before, the cases in which the operation has not been completed, the bowel incised or excised, we have a total of 18 cases, of which 14 were successful and 4 were unsuccessful, giving a still lower percentage of mortality, or 22·2 per cent., which I believe is a fair estimate of the risk to-day of abdominal section performed on a young infant for the relief of this disorder if performed within the first forty-eight hours of the onset. It would seem that if an infant suffering from this disorder were first seen in collapse it would be wise before attempting the operation to stimulate the infant and, if the child responded, to proceed, otherwise it would be useless to do so. The operators in that case have almost invariably employed the median incision satisfactorily. The best method for reducing the invaginated portion of bowel seems to be that wherein the tumour is encircled below its apex by the finger and thumb, while the intussuscipiens or sheath is held a few inches lower down, the apex of the tumour being pushed in an upward direction. Traction from above the tumour should not be employed. If, however, the tumour proves to be irreducible (although, so far as I have knowledge, there is no recorded case of intestinal resection or an artificial anus in an infant under twelve months of age which has proved successful), it is my belief that the method devised by the late Professor H. Widenham Maunsell is the best that has been devised for treating this most unfortunate complication caused by delay.

Disastrous as the treatment of infantile intussusception by means of intestinal distension has already proved to be, the results obtained from 1828 to 1889, when abdominal section was finally resorted to, seem to have been even more so, giving as it did a higher percentage of mortality, or 84 per cent., as against 75·4 per cent. But it must be borne in mind that it was always a last resort, only employed after the little patient had become collapsed by days of severe pain, inability to take and retain food, persistent, often hourly, torture by inversion, the administration of anæsthetics, enemata of air and water, and massage, to which not unfrequently was added the so-called long rectal tube. Nothing more surely could be devised to unfit an infant or adult to withstand the nervous shock which must necessarily accompany the administration of an anæsthetic, the opening of the peritoneal cavity, and the manipulations of the intestines. As one case of section proved unsuccessful, and its result was reported, it almost certainly added danger to the next case that came under the surgeon's care. In an editorial comment in THE LANCET on a case of intussusception treated by enemata, which resulted fatally, it was said:[85] "It is true that the invagination can always be reduced—at all events in the early stages of the disease—by the operation of laparotomy, but this operation is attended by such a large percentage of mortality when undertaken in infants that the surgeon shrinks from performing it until all other means have been tried and have failed." Mr. Lawson Knaggs, in the course of an able article entitled, "Resection for Gangrenous and Irreducible Intussusception,"[86] said: "This waiting policy, this surgery of hope, has so far been a dismal failure, nor should we forget that in all cases that last chance is far too poor to be relied upon for permanent success, and that in infants it practically does not exist." Rydygier, of Cracow, in discussing intestinal invagination at the last meeting of the German Surgical Congress, held in Berlin during April, 1895, is reported to have said: "The cases are usually treated too long by internal remedies, and accordingly come too late to the surgeon. The mortality is therefore very high—75 per cent.—especially in acute cases." Further testimony or argument would seem to be unnecessary, and we must at least begin to realise the important part played by delay in these cases, as it has in all other forms of intra-abdominal disease, in affecting the prognosis unfavourably. If by this clinical demonstration of the disease, and of the results of its treatment from 1828 to 1895, the general profession and the laity could be impressed with the fact that acute intussusception is in reality a form of strangulated hernia, that the sub-acute variety is an irreducible hernia, that enemata are far from being devoid of danger in their administration, that abdominal section performed under modern conditions and during the first forty-eight hours of the disorder, with a chance of success represented by 78 per cent.—which would speedily rise to 90 per cent. as the cases came more frequently under operation during the first twenty-four hours—it would not be long before we should come to look upon the treatment of this disease by enemata of air and water much as we do to-day upon the pukes, purges, doses of metallic mercury, of gold and silver balls, of mixtures of bird-shot and olive oil, and blood-letting, which were soberly employed by good men not so many years ago for the relief of this distressing disorder, made more painful by reason of the heroic treatment considered necessary for its relief. With the light turned fully upon what modern surgery has already accomplished in this direction, it is a safe prediction that before the dawn of the twentieth century it will be generally acknowledged that our science has fully and finally triumphed over another of her malignant foes—infantile intussusception.

New York.

[84] Bristol Medico-Chirurgical Journal, 1894, p. 7.

[85] THE LANCET, June 13th, 1891, p. 1312.

[86] THE LANCET, June 11th, 1887.

ABERDEEN DEPUTATION TO LEEDS SANITARY CONGRESS. — On behalf of the Aberdeen Public Health Committee Mr. John Robertson, L.R.C.P., L.R.C.S. Edin., Mr. A. T. Gordon Beveridge, M.B. Aberd., Professor Matthew Hay, M.D. Edin., medical officer of health, and Mr. K. Cameron, sanitary inspector, have been appointed to attend the Congress of the Sanitary Institute at Leeds, Sept. 14th to 18th.

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THE OPERATIVE TREATMENT OF DISPLACEMENT OF THE UTERUS.[1]

BY J. CURTIS WEBB, M.A., M.B., B.C. CANTAB.,
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IN an article by Dr. Martin, of Berlin, on Anterior Colpotomy[2] he acknowledges his indebtedness to Dr. Dührssen as the originator of the operation of anterior vaginal fixation; but the operation described is not the Dührssen procedure, but a modification, and, I venture to think, an improvement thereof, which was worked out by Dr. Mackenrodt, at that time Dr. Martin's assistant. Having been for some years now the head of a clinic of his own in Berlin Dr. Mackenrodt, perceiving the great value of the operation in the treatment of the various forms of uterine displacement, has spent much labour and time in perfecting it, and I should like to express my gratitude to him for permission to publish his work in England, and also for his kindness in giving me every possible facility for working in his clinic on the two occasions on which I have visited Berlin.

The operation of vaginal fixation.—Dührssen, of Berlin, claims to be the originator of the operation of vaginal fixation in its present form, and I will therefore describe his method of procedure first, and will then discuss the important modifications introduced by Dr. Mackenrodt. I must acknowledge my indebtedness to Dr. Dührssen for his kindness in supplying me with the very full account of his operation and its result in the shape of a paper read by him before the Gynæcological Society of Vienna in the early part of 1895. He operates as follows: Having pulled the anterior lip of the cervix down to the vulva with a volsellum he curettes the uterus for the endometritis, which nearly always exists in displacements of any duration, and if the cervix is much hypertrophied he performs a low amputation, as a large cervix tends to prevent the organ remaining in the anteflexed and anteverted position in which his operation fixes it. An assistant now holds the volsellum that is drawing down the cervix, and the operator makes a transverse incision 1½ cm. long over the insertion of the anterior vaginal wall into the cervix, the upper lip of the wound is drawn upwards with a volsellum, and the incision is prolonged on each side by 1 cm. The bladder is now separated from the anterior vaginal wall and uterus by the finger inserted through the incision, and is kept out of the way during the rest of the operation by an anterior retractor. The utero-vesical fold of peritoneum is seized with a Spencer Wells' forceps and drawn down. It is opened by a sagittal incision and the edges are sewn to the edges of the vaginal wound with catgut. The body of the uterus is now drawn forward either by inserting a stout steel sound with a considerable curve through the os or by fixing a volsellum into the anterior wall as high up as can be reached, pulling that down, and then fixing another one higher up, pulling that down, and so on until the fundus is reached and drawn out of the original incision. The posterior wall of the organ can now be examined with the finger, and any adhesions torn through or burnt with a thermo-cautery; the ovaries and tubes can also be drawn out and inspected and removed if necessary; and if there be any myomata on the body of the uterus they can be enucleated. Two *silkworm* gut stitches are now passed in through the edges of the incision in the anterior vaginal wall, deep through the substance of the fundus and out through the other edge of the vaginal incision. Before tying them the vaginal incision with the attached edges of the peritoneal cut is closed by a continuous catgut suture. The cervix is now loosed from the volsellum holding it down and pushed up to its proper position, and the silkworm stitches are then tied. The vagina is packed with iodoform gauze, and the operation is complete. Dr. Dührssen says that if there are no myomata or tubal or ovarian disease to be treated he usually completes the operation in from five to seven minutes. There are two dangers to be avoided—viz., cutting one or both ureters or wounding the bladder. The first can easily occur if the initial transverse incision be made a little too long, as they pass close along the sides of the cervix before turning up to enter the trigone. The bladder was wounded only once by Dr. Dührssen; in this case he had already performed vaginal fixation some years previously, but a relapse had occurred owing to metritis and the pressure of a myoma. The uterus was 11 cm. long; after cutting through the vaginal cicatrix he tried to free the bladder, which was somewhat strongly adherent to the cervix, with the finger. In so doing he used some force as the adhesions were strong, and the bladder wall was torn and a vesico-vaginal fistula was left, which subsequently healed spontaneously. He therefore recommends that in cases where the bladder is at all firmly adherent to the cervix, as is the case in a repeated operation, the adhesions be cut through with scissors, keeping the blades very close to the uterus.

In the *Archiv für Gynäkologie*, 1894, Dr. Dührssen publishes statistics of 197 cases operated upon with one death—i.e., a mortality of about 0·5 per cent. In 4 cases the operation was started and then had to be replaced by hysterectomy; 1 died after operation. Of the remaining 192 cases there are 150 cures, varying from a few months to three years. In 12 cases, after relapse had occurred, the operation was repeated. Even in counting these 12 as failures there have been but 42 relapses, of which nearly all occurred in the first nine months and Dr. Dührssen concludes, therefore, that if a cure lasts nine months, it will probably be permanent. To sum up, then, out of 192 cases 42 have failed, leaving 150 successes, or about 77 per cent. In a communication I received from Dr. Dührssen in October, 1895, he states that in the last year and a half he has performed from 120 to 130 cases of vaginal fixation, among which was the one death referred to above and one relapse in the case of a very large uterus with several myomata, which, in spite of enucleation of the myomata, relapsed soon after the operation. All the others have done well, and there has been no relapse, and the patients have been largely or entirely relieved of their symptoms. This considerably improves the statistics I have given.

The modifications introduced by Dr. Mackenrodt in his vaginal fixation were to avoid any risk of cutting the ureters, to make the ultimate position of the uterus not so sharply anteflexed, and to employ absorbent catgut in place of the non-absorbent silkworm gut. His procedure is as follows. Having first curetted the interior of the uterus, and, if necessary, carried out an amputation of the cervix, he draws down the cervix to the vulva with a volsellum, which an assistant holds; another volsellum is now fixed in the mucous membrane of the anterior vaginal wall, about half an inch below the meatus of the urethra. By drawing on the upper and lower volsella, the anterior vaginal wall is everted and put on the stretch. A longitudinal incision is now made from one volsellum to the other, just through the mucous membrane, which is then dissected off the bladder on each side of the incision; the vesico-vaginal septum is cut through and the bladder pushed well up with the finger and kept out of the way by a rectangular retractor. The uterus is now brought forward either by means of a sound or else by grasping it with a volsellum as high up as possible through the vaginal incision and drawing it forward. A catgut stitch is passed through the vesico-uterine fold of peritoneum and deep into the substance of the body and the ends are tied, but left long; these ends are pulled down and another stitch is passed similarly higher up, and so on till the fundus is nearly reached. The object of these stitches is to attach the vesico-uterine fold of peritoneum to the body of the uterus, and so to ultimately obtain peritoneal adhesions, and Dr. Mackenrodt insists strongly on the fundus itself not being wounded. The edges of the vaginal incision are now sewn by interrupted catgut sutures to the body of the uterus to which the peritoneum has been attached, having first, of course, cut off the long ends of the primary row of stitches. The vagina is stuffed with iodoform gauze, and the catheter usually passed for the first twenty-four hours; the patient is kept in bed about a fortnight or three weeks and then allowed to get up, and can begin light work in from a month to six weeks after the operation.

The advantages, I think, of Dr. Mackenrodt's operation are:—1. That the longitudinal incision through the anterior vaginal wall does away with any risk of cutting the ureters or large vessels, and also that, in cases where the vagina is large and lax, this longitudinal incision can be converted

[1] An abstract from a thesis for the degree of M.B. Cantab.
[2] Brit. Med. Jour., Jan. 4th, 1896.

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into a rhomboidal one, and thus an anterior kolporrhaphy can be done at one and the same time as the vaginal fixation, thus strengthening the point of attachment of the uterus and curing any prolapse that may be present. 2. That by using absorbent catgut instead of non-absorbent silkworm gut, the uterus is eventually maintained in place purely by adhesions, which, in the event of subsequent pregnancy, can stretch and allow the uterus to rise out of the pelvic cavity in a normal manner. 3. That by fixing the body, and not the fundus only, the final position of the organ is not one of such extreme anteflexion as in the Dührssen operation.

In regard to the question of pregnancies following vaginal fixation both Dr. Dührssen and Dr. Mackenrodt state that after their respective operations the patients go through a normal period of pregnancy, and that no complications arise in delivery traceable to the operation. It is only right, however, to say that Dr. Mackenrodt states that he saw a case of ruptured uterus occur in a patient on whom the Dührssen operation had previously been performed, and when I was in Berlin Cæsarean section was performed on a woman who had been operated on some time before;[3] and in the out-patient department of the Charité Hospital a patient presented herself who was pregnant and on whom Dr. Dührssen had performed his vaginal fixation. Pregnancy was then about five or six months advanced; the fundus was fixed to the anterior vaginal wall; all the uterine enlargements had taken place at the expense of the posterior wall, and the cervix was drawn up quite out of reach, and, under chloroform, was found to be pointing directly backwards. The patient was sent into the hospital with a view to Cæsarean section, but I left Berlin shortly afterwards, and do not know the further history of the case. When one considers the condition of affairs maintaining after the two respective varieties of vaginal fixation, it is obvious that there is a greater possible risk after the Dührssen than after the Mackenrodt procedure, for in the former the fundus is fixed permanently by non-absorbent material (silkworm gut), and the organ is in the position of marked anteflexion with anteversion, while in the latter operation the uterus, being fixed with absorbent catgut, after a time is maintained in position only by adhesions, which can stretch with the tendency of the pregnant uterus to rise up out of the pelvic cavity, which stretching would be assisted if, as is very likely, these adhesions share in the softening of tissue that takes place in the uterus when pregnancy is in process.

Dr. Mackenrodt was originally only in the habit of opening the peritoneum when he wished to examine the tubes and ovaries for suspected disease, or to remove them if they were known to be affected and to enucleate myomata. Latterly, in case of very long-standing retroflexions or procidentia, or where the uterus from metritis or other causes was very large—in fact, in cases where there would be a more than usual tendency to relapse—he has tried opening the peritoneum, stitching the edges of the peritoneal opening to those of the incision in the anterior vaginal wall, and then sewing the body of the uterus as before. The indications which Dr. Mackenrodt gives for his operations differ from those of Dr. Dührssen in that the former operator says that where the uterus is firmly fixed by adhesions it is necessary to do a ventro-fixation, as when the uterus is pulled forward with the volsella in the tearing of the adhesions damage has been done to the broad ligaments, and even rupture of the uterine artery has occurred and total extirpation been necessary. Considering the experiences of Dr. Dührssen, however, it would seem as if, after opening the peritoneal cavity, the finger could be passed to the back of the uterus and the adhesions gently broken down to a considerable extent, and then, by bringing the organ forwards and keeping the neighbouring parts out of the way with retractors, the separation could be completed and any slight hæmorrhage checked by means of a thermo-cautery.

In the *Berliner Klinische Wochenschrift*, No. 31, 1894, Dr. Mackenrodt published the results of 75 cases of typical vaginal fixation without opening the peritoneum. Of these patients 24 have since become pregnant; there have been 13 normal labours, 2 requiring forceps, 1 artificial induction of labour for placenta prævia, 2 abortions, and 6 pregnancies, of which no accurate notes were obtainable. Of the whole 75 cases there have been 6 relapses—4 spontaneous and 2 after pregnancies. Since that publication Dr. Mackenrodt has treated 70 further cases without opening the peritoneum (of which there have been 2 cases of natural labour; 1 is now pregnant and 1 has relapsed without pregnancy), and 35 cases with opening the peritoneum, of which there has been 1 case of early delivery with turning, 1 is now pregnant, and there have been no relapses. This makes in all a total of 180 cases, of which since the operation 27 have become pregnant and have had no difficulty in the labour that might not occur to any woman, and there have been 7 relapses, or a percentage of 3·8. He has had no fatal case. In place of his original vaginal fixation Dr. Mackenrodt now largely employs a modification which he invented in October, 1895, and which he terms "vesical fixation." He commences the operation with the same longitudinal incision through the mucous membrane of the anterior vaginal wall, separates the two flaps on each side of the incision, cuts the vesico-vaginal septum, and pushes the bladder up out of the way with the finger, at the same time separating a portion of the peritoneum from the posterior surface of the bladder. There is now a fairly large pouch of peritoneum visible between the bladder and uterus. This is grasped by a volsellum and cut completely across high up, thus leaving one free edge of peritoneum on the back of the bladder and another on the front of the uterus, just below the fundus. These are sewn together with two or three catgut sutures, passing the stitches deeply into the substance of the uterus, but, of course, not entering the cavity. The free end of the vesico-vaginal septum, which normally is attached near the anterior lip of the cervix, is now sewn to the body of the uterus about the level of the internal os uteri, and the original longitudinal incision through the mucous membrane of the anterior vaginal wall is stitched with catgut. By this procedure the uterus is fixed in a normal position, being not at all anteflexed and only normally anteverted; it is freely moveable, though it cannot become retroverted (and so cannot prolapse), and only absorbent catgut being used in a short time the organ is held in its place by peritoneal adhesions alone. Since October Dr. Mackenrodt has operated thus on thirty-six patients, and so far there have been no relapses, though, of course, the time is yet too short to allow of any statistics as regards pregnancy after this procedure, though there is no reason why the results should differ from labours following the old anterior vaginal fixation.

Liverpool.

[3] Quoted by Dr Martin in Brit. Med. Jour., Jan. 4th, 1896.

ASEPTIC FOREIGN BODIES IN THE EYE AND ORBIT.

BY W. M. BEAUMONT, M.R.C.S. ENG.,
SURGEON TO THE BATH EYE INFIRMARY.

THE three following cases illustrate the tolerance with which the eye submits to injuries caused by aseptic foreign bodies.

CASE 1. *Foreign body in the vitreous removed by the electro-magnet.*—A young man, aged eighteen years, was using a chisel and mallet repairing an iron pipe when a minute particle of metal flew off and pierced his left eye. He suffered a certain amount of discomfort from photophobia, but did not present himself for treatment at the Eye Infirmary until Feb. 18th, 1897, a fortnight after the accident. The course of the foreign body could be traced by a scar nearly in the centre of the cornea, a second scar a little more internal on the anterior capsule of the lens, and a third still more internal on the posterior surface of the lens, the eye having been pierced in a slightly oblique direction. The scar on the cornea could scarcely be seen, but those of the lens were distinct and their opacity gradually shaded off in the substance of the lens. With the ophthalmoscope the foreign body was at once seen floating in the vitreous, rising and falling with every movement of the eye, and refracting light much as the crystals of cholesterin do in a case of synchysis scintillans. By oblique illumination it could be equally well observed, and when an electro-magnet was brought close to the eye the particle came forward against the posterior surface of the lens, and was held steadily in that position by the attractive force of the magnet. For obvious reasons this experiment was not frequently repeated. As the foreign body had been in the eye

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for a fortnight and there was no opacity of the vitreous it was quite certain that the fragment of metal was aseptic; for unless it were sterile it could not have remained so long a time in such a soil without the development of pathogenic organisms or the formation of an enveloping capsule, Leber's and von Hippel's investigations having shown that inflammatory action in these cases is set up by septic matter introduced at the time of the accident. But apart from sepsis there were other considerations to be taken into account. Even if it did not give rise to trouble by becoming oxidised, still a foreign body freely moving about in the eye is always a source of danger. It was clearly necessary to remove it, and, considering the favourable conditions of the case, it was improbable that there was any risk to fear or difficulties to contend with in so doing. The patient was anæsthetised, and an incision made through the conjunctiva behind the ciliary region and between the insertions of the external and inferior recti muscles. One edge of the cut conjunctiva was then retracted and the sclera transfixed by a Gräfe's knife in such a manner that the wounds of the sclerotic and conjunctiva were at right angles to each other. Through the opening thus made the pointer of an electro-magnet was passed, but on withdrawing it the first time the foreign body did not accompany it. The second attempt was successful, and a minute chip of metal was brought away clinging to the pointer. At the same time there was a slight loss of vitreous. The conjunctiva was stitched up and a pad put over the closed lids to keep the eye perfectly at rest. Two days later the sutures were removed from the conjunctiva, the wound of which had quite healed, and in a few more days the patient was convalescent. An interesting point in the case was the fact that although the foreign body weighed but half a milligramme it acquired momentum sufficient to carry it through the cornea and lens. The opacities in the lens have not increased, and now, six months after the injury, his vision is $\frac{6}{18}$.

CASE 2. *Foreign body embedded in the ciliary region.*—A man, aged forty-two years, whilst working as a blacksmith, was struck by a piece of metal from the anvil on the right eye. He was seen within two hours of the accident (Jan. 27th, 1897), and a piece of iron was found buried in the ciliary region to the outer side of the corneal limbus. The pupil was occluded by, and the anterior chamber half full of, blood. The tension of the eye was slightly decreased (?). Removal of the foreign body by forceps was followed by smart hæmorrhage and the vitreous presented. The jagged wound was carefully washed out with sublimate solution (1 in 4000) and the edges of the torn conjunctiva brought together by silk sutures. The patient was kept perfectly at rest in bed for three days, by which time the blood in the anterior chamber had become absorbed and the conjunctival wound healed, but the pupil was somewhat oval in its horizontal diameter. Eventually his vision was $\frac{6}{9}$, and at no time was there any irritation of the other eye.

CASE 3 *Gunshot wound of the lower lid and orbit.*—On Nov. 25th, 1896, I was asked by Dr. W. H. Lush to see a man who had accidentally been shot the day previous. He complained of intense photophobia and there was much chemosis and hyphæmia of the right eye. The lower lid had been unmistakably perforated and the foreign body had then struck and pierced the ocular conjunctiva a few millimetres below the corneal margin. Noting the direction of the course it had taken through the lower lid to the eye in almost a straight line it seemed probable that the shot had also gone through the sclerotic. But there was one noteworthy point—namely, that the tension was increased rather than diminished. Ether having been administered a probe was passed into the wound, but would not travel far, the sinus appearing to take a downward direction, and it was not until the probe was bent semi-circularly that it would pass. Then holding it as a catheter it glided in without the slightest pressure being necessary. Turning it in any other direction it stopped at once, and it would have required some force to make a false passage. The shot had evidently struck the eye, and had then been deflected by the firmness of the sclera, and so skirted round the globe in the same way as a bullet will often travel round a rib. The probe went in 3·5 cm., but the shot could not be felt. The wound was washed out with sublimate, and gradually healed up, leaving him with V. = $\frac{6}{9}$

In these three cases it is probable that the foreign bodies were made aseptic by heat. They all travelled with great velocity, in the first case sufficiently so to traverse cornea and lens, and in the third the lower lid and orbital tissues. In the second case the wound was a ragged and jagged one in the ciliary region, just such an one as might be expected to result in sympathetic mischief in the other eye. But at no time was there any sign of irritation in the left, and the wound itself healed quickly. There is no doubt much truth in de Wecker's statement that frequently injured eyes have not contracted sympathetic ophthalmia in consequence of the wounds, but in consequence of the operations which have been resorted to for their relief. But this risk is now minimised by Listerism, which has done so much for wounds of the ciliary region. It seems probable that the time will come when wounds in that dangerous zone will lose in some measure their evil reputation, and operations be as little dreaded there as those in that once fatal region, the peritoneum, now are by abdominal surgeons. In experiments made by Orio[1] he found that the discharge of a gun rendered shots aseptic, and if under these circumstances they entered the eye they never became encapsuled. Tornatola, in twenty-one cases of perforating wounds of the eye by shots, only saw one case of sympathetic ophthalmia, the freedom being due, he thinks, to the antiseptic treatment of the wound and to the fact that shot fired from a gun are aseptic. "In experimental shot wounds in the eyes of rabbits and guinea-pigs the eyes retained their form and tension in eight cases out of ten when the eye had been disinfected before the injury and the wound subsequently treated antiseptically. But of twenty eyes similarly injured when no such treatment was instituted, fourteen became phthisical from irido-choroiditis, five suppurated, and but one retained its normal appearance." The probability of a wound of the eye caused by a missile from a gun, or from the anvil, or by one which has in any way been raised to a great heat being aseptic is generally recognised by those whose practice constantly brings them in contact with such cases, and its recognition is of considerable importance in prognosis: in the first place, because such a wound, if kept aseptic, will more quickly heal; and in the second place, even though it be in the ciliary region, will heal with little or no risk of sympathetic mischief arising in the other eye. In Leber's well known experiments wounds of the cornea in which the foreign body was retained caused very little reaction unless they were septic; and as long ago as 1881 both he and Snellen found micrococci in the optic sheaths of eyes enucleated for causing sympathetic disease. Their examinations were confirmed but little later by Abraham, Story, and Deutschmann, and at the present day the theory holds the field that the optic nerves are the route and micro-organisms the means by which mischief is communicated to the sound eye. Leber has asserted that sympathetic ophthalmia only occurs after infectious septic inflammation of the exciting eye. If, then, the wound is an aseptic one, and can be kept so during the healing process, there should be little risk of that disease. But at the same time this fact does not justify us in leaving a foreign body in the eye when there is a reasonable hope of removing it, for any foreign body, whether of iron or of that (ocularly) still more objectionable metal, copper, be it never so aseptic, may start an inflammation; and an inflammation once started may go on to suppuration.

Bath.

SOME UNUSUAL CASES.

BY HENRY LEE, F.R.C.S ENG.,
CONSULTING SURGEON TO ST. GEORGE'S HOSPITAL.

(*Concluded from p. 189.*)

CASE 5.—A female hospital patient under my care was suddenly seized with violent pain in the stomach and died shortly afterwards. Upon inspection a pin was found in the vermiform appendix, the point of which had evidently fretted its way through the end of the appendix. The opening this made communicated with an abscess in the peritoneal cavity. In any similar case friction in order to relieve pain might do much harm.

CASE 6.—When the original Taplow Station was being built a workman fell some 20 ft. on his head. He made a very slow and imperfect recovery and was never quite

[1] Archives of Ophthalmology, xxvi., 163.

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himself again. A pint of beer would make him appear intoxicated, and he remained deaf on one side. He was given some light work to do on the line, and was struck and killed by an engine. It was found that there had been an extensive fracture of the petrous portion of the temporal bone. A considerable part of the fracture had been smoothly and firmly united. In other parts there were intervals. There was no appearance of any callus having been thrown out. The preparation is in the museum of the Royal College of Surgeons of England.

CASE 7.—A private patient had long suffered from some irritation in passing urine, and had an instrument introduced. After this he passed a small calculus, and on one side of this there was an accurate mould of the openings of the spermatic ducts. It was placed in the museum of St. George's Hospital.

CASE 8.—In Norfolk one day I met a clergyman riding on horseback. During our conversation his horse suddenly became restive, and jumped about a good deal. Very soon after this gentleman told me that a small stone had passed from the urethra. In this case, as in the last, the calculus doubtless came from the prostate gland.

Queensborough-terrace, W.

REFLEX EPILEPSY.

BY WILFRED J. HARRIS, M.B.CANTAB., M.R.C.P.LOND.,
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EPILEPTIC fits associated reflexly with some cause such as irritation of a scar, a diseased eyeball, or disease of the nasal mucous membrane, have occasionally been met with. That is, such cases have developed an epileptogenous zone, analogous to Brown-Séquard's guinea-pigs rendered epileptic by hemisection of the spinal cord, and in some cases removal of the peripheral source of irritation has been followed by cessation of the fits. Dr. Hughlings Jackson[1] is of opinion that every patient subject to fits has an epileptogenous zone, that in every epileptic patient there is a "discharging lesion" somewhere in the brain, and that disturbance of the part of the periphery (cutaneous, visceral, &c.) most especially represented in this discharging lesion may provoke a fit. Sir W. Gowers,[2] on the other hand, states: "It is excessively rare for cutaneous irritation to excite a fit. Epileptogenic zones, analogous to those of Brown-Séquard's guinea-pigs are practically unknown." Two cases have hitherto been recorded of epileptic fits following a touch on the head—one by Dr. James Dunsmure[3] in 1874, and one by Dr. Hughlings Jackson[4] in 1887. Both these cases were in boys, and in each there was partial hemiplegia, more marked after the attacks. In the older case there was slight right hemiplegia, with temporary right-sided paralysis after the attacks. In Dr. Jackson's case the weakness was left-sided. In both fits were producible during sleep, and also touching any part of the head in either case, if the patient were unaware that he was going to be touched, produced a sudden fall or fit lasting a few seconds. Dr. Dunsmure's case was watched for eighteen years, the falls becoming less frequent after the onset of severe epileptic fits, and improvement was marked during the administration of bromides, as in Dr. Jackson's patient. In each case the attack began at the age of two and a half years, but the attacks, being so short in duration, momentary falls only, loss of consciousness during them could only be surmised, though it was probable. Through the kindness of Dr. Jackson I am enabled to give the details of another somewhat similar case which was under his care at the National Hospital for the Paralysed and Epileptic recently, though in this case there were never any unilateral symptoms or hemiplegia, nor were any fits ever produced during sleep.

A girl, aged five and a half years, was admitted to the National Hospital for the Paralysed and Epileptic on Nov. 10th, 1896. She was a seven-months' child, the labour having been natural, and no instruments used. The father was stated to have suffered from syphilis before his marriage. There were three other younger children, all healthy, with no history of epilepsy in the family. The patient had not had chorea, rheumatism, or scarlet fever. When three years old she had a series of convulsions during one morning, but had no further attacks until nine months previous to admission. One month before this attack she had a fall, striking the back of her head, and she was dazed for some time afterwards, though whether the fall was due to a fit could not be ascertained for certain. A month later she began to fall about especially in the morning, and at first always fell on the back of her head, though later she always fell forwards. Her parents said that the fits were always slight and momentary; her eyes turned up and the face sometimes twitched and she suddenly fell down, often striking her head or biting her lip. She had these attacks sometimes once only, sometimes a dozen during the day. After she had suffered from them for between two and three months her mother noticed that the fits were induced by touching her on the head, as by putting the hand on her forehead, or when smoothing back her hair, or in putting on her hat. If she was expecting a touch, no fit followed. On the day of her admission the nurse, in going to her to take off her hat, accidentally touched her head, and the child immediately fell forwards, the father remarking that that was what frequently happened. The same day, when her left cheek was suddenly touched without her expecting it she immediately fell forward, her eyes rolled up, and she foamed at the mouth, there being definite transient loss of consciousness, followed by crying. There was no weakness of any limb nor any sign of hemiplegia, and at no time were there any one-sided symptoms, as in both the previously recorded cases. The knee-jerks were normal and there was no affection of sensation. The eyes were normal and there was no affection of any cranial nerve. She was a quick, nervous child, but of uncertain temper, and her intelligence was probably below the normal. She was under observation in the hospital until March 7th of this year, and during her four months' stay she had numerous fits, only occasionally a day passing without one, though she was taking six grains of bromide of potassium three times daily during the whole time. All the fits except two were of nearly the same character, often occurring when she was sitting up in bed, and she would fall with some violence against the iron bed-rail, giving herself a black eye, or sometimes biting her lower lip, and generally crying afterwards, even if not hurt. The nurse noticed several fits induced by smoothing back her hair, and after her admission three sudden fits, momentary falls, followed by crying, were produced during the first month by suddenly tapping her on the head without her knowing the touch was coming. Touching her during her sleep never produced a fit or any sudden change of colour or alteration in respiration, as in the two cases referred to above. During the latter half of her stay in hospital no fit could be induced by sudden touches, the child seeming to become accustomed to the not infrequent testing, and the spontaneous fits were also slightly less numerous. Only two severe fits were seen, with general convulsion and cyanosis, one a fortnight after admission, and another ten weeks later. It is noteworthy that about this time the reflex fits produced by sudden touches ceased; and in Dr. Dunsmure's patient it was noticed that the sudden falls became less numerous when ordinary epileptic fits supervened.

Craven-terrace, W.

[1] Transactions of the Medical Society of London, vol. x., 1887.
[2] Manual of Diseases of the Nervous System, p. 742.
[3] Edinburgh Medical Journal, October, 1874; also quoted by Dr. Hughlings Jackson in THE LANCET, Feb. 2nd, 1895.
[4] Loc. cit.

A CASE OF CARBOLIC POISONING FROM THE APPLICATION OF A CARBOLIC COMPRESS TO THE SKIN.

BY R. CLEMENT LUCAS, B.S. LOND., F.R.C.S. ENG.,
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IN THE LANCET of June 1st, 1895, I published, in conjunction with my colleague, Mr. Lane, two cases of severe carbolic poisoning caused by the absorption of the poison through the skin when applied for the purpose of disinfecting the skin previously to operation. The principal symptoms were those of collapse and coma, lasting several hours; but, severe as the symptoms were, both recovered. Since that

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period it has been the custom in my wards to apply a 2 per cent. solution of lysol for the purpose of disinfecting the skin, and no untoward circumstance has followed the use of this agent. A constant change of dressers, however, occasionally causes an alteration in the routine of the wards, and this enables me to place on record another similar case to those already published, though less severe in character. My present house surgeon, Mr. R. P. Rowlands, happened to be my dresser at the time the other cases occurred, and so at once recognised the cause of the patient's illness, and to him I am indebted for very careful notes of the symptoms. It will be seen that this patient had been previously prepared with a lysol compress, but the operation had then to be postponed owing to the admission of an urgent case.

The patient, a girl, aged five years, was admitted into Lydia Ward, Guy's Hospital, on account of antero-external bending of the lower third of each tibia due to rickets. On July 15th, 1897, the left leg and foot were thoroughly washed and a lysol compress (2 per cent. solution) was applied in the morning, it being intended to perform an osteotomy in the afternoon, but owing to the admission of a case of strangulated hernia it became necessary to postpone the operation until the following day. At 11.45 A.M. on July 16th the limb was again cleansed and a compress of carbolic lotion (5 per cent. solution) was applied on lint. This was applied over the foot and the lower half of the leg. At 12.30 the child was crying lustily for her prohibited dinner, and she seemed to be quite well at that time. At 1.30 she was noticed to be lying back in her cot listless, pale, and sleepy. She gradually became worse, more drowsy and pale, until at 3 P.M. the house surgeon was called to see her. The child was then very pale, cold, clammy, and sweating profusely, especially about the head; the lips and tongue were of a peculiar dark colour, almost black, very different from ordinary cyanosis. The dark blood could also be seen through the pale skin, and added to the pallor of the latter a ghastly leaden undertint, which was very striking and led Mr. Rowlands correctly to interpret the cause of the symptoms. The patient was not absolutely comatose, as she could be roused by painful stimulation such as the use of a hypodermic syringe. She then threw her arms about for a moment before lapsing into her former limp and unconscious state. The limbs were flabby and could be dropped in any position, but were capable of movement under severe reflex irritation. The reflexes were all very dull and slow, that of the conjunctivæ was never absolutely lost, but very slow and feeble. The pupils were widely dilated and almost fixed. She passed her urine under her—a rare event for her—and she was sick several times. The pulse was feeble and running, almost imperceptible, and not to be counted at the wrist. The rate taken in the carotids was from 140 to 150. The heart's impulse was feeble, diffused, and displaced outwards, half an inch beyond the nipple line, and the cardiac sounds were muffled and tumbling in character. It was evident that there was considerable dilatation of the right side of the heart. The respirations were hurried and shallow, from 40 to 50 per minute. The temperature was 95° F. in the rectum. The compress was immediately removed and the limb washed. Hot bottles were applied and the child was wrapped in warm blankets Ten minims of brandy were injected hypodermically at 3 P.M , and again fifteen minims at 4 P.M. About 4.30 P.M. the patient was better; the pulse was slower and stronger, and a pink flush had displaced the ghastly pallor of the cheeks. The skin was warmer. The pupils were now contracted. The patient was again sick several times, bringing up bilious-looking fluid. At 9 P.M. the temperature rose to 97°, and the coma gradually decreased, but she was not really sensible until the following morning. The skin became dry and rough towards morning, and the pupils dilated to normal. The temperature did not rise above normal at any time. She was not delirious nor did she try to get out of bed, but remained in a state of collapse. The urine passed in the night and early on the morning of the 17th was of a peculiar smoky green colour, which darkened almost to black as it became ammoniacal. The child was again cheerful, but pale and weaker. The anæmia continued several days, but otherwise she appeared well.

The symptoms present in this case very closely resemble those present in the two cases published in June, 1895—a general appearance of shock or collapse, with cold sweating skin and actual diminution of normal temperature. With this an exceedingly rapid pulse is found, imperceptible at the wrist, but counted elsewhere it was in one case 200, in a second case 150, and in the present instance from 140 to 150 per minute. Vomiting occurred at intervals, the vomit being of a pale, dusky blue appearance. Coma was more or less complete, and often there was stertorous breathing. The pupils in the present case were at first dilated, but afterwards contracted. The heart in the case now reported was found to be dilated and overdistended, so that its apex was felt external to the nipple. Dark-coloured urine was passed after some hours. Convulsive twitchings were noticed in the other cases similar to what are seen in uræmia, and the urine was for a time suppressed. With a return of warmth the coma gradually subsides, but the patient remains for a time pale, weak, and drowsy.

Wimpole-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF ENGLISH CHOLERA.

By R. G. STYLE, M.R.C.S. ENG.,
SURGEON TO QUEEN ADELAIDE DISPENSARY.

ON Aug. 12th, at 11 A.M., I was called to see a girl, aged seventeen years, a paper sorter by trade. On examining her I found her to be in a state of extreme collapse; the face, body, and extremities were of a leaden hue. The tongue was clean, the eyes were sunken. There was no radial pulse. The temperature was 94° F. The nails were livid and the hands were somewhat contracted. There was no abdominal tenderness or distension, the patient only complained of slight pain in the bowels; she was restless, and her countenance was peculiarly anxious-looking besides the leaden hue. The history I obtained was as follows. The previous night she had had a supper of bread, cheese, and tomatoes, and subsequently, going out for a walk, she bought and ate some fried potatoes at a fried fish shop. She went to bed at 11.30 P.M., and at 1 A.M. woke up with vomiting and had several loose evacuations. She was removed from her own bed to that of her parents, and, they state, slept quietly till 10 A.M. Shortly after this they noticed the colour of her face, and I was sent for. I administered injections of ether, and gave brandy and a diffusible stimulant mixture, ordered hot water bottles to the extremities, and a sinapism to the cardiac region. She was seen every hour till death occurred at 5.30 P.M.; she had only one stool after I saw her, which was described as frothy water. A necropsy was made twenty hours after death; rigor mortis was well developed. The brain substance was studded with ecchymoses, the sinuses were full of dark-coloured fluid blood. On opening the thorax the lungs were seen to be very collapsed, their lower edge corresponding with the fourth rib; they were congested at the bases; there were no ecchymoses. The pericardium did not contain any fluid; there were ecchymoses on it and many on the apex of the heart. The right ventricle and auricle contained clots of dark-coloured blood, typically "tarry" in character; there were ecchymoses in the right auricle; the left ventricle contained a small ante-mortem clot. The gall-bladder was full of greenish bile. The liver was normal; the spleen and both kidneys were congested. The stomach contained about a pint of reddish-coloured fluid, mostly medicine and brandy and water. The whole of the intestines, from the duodenum to the rectum, were full of a creamy-coloured, semi-flocculent, inodorous fluid. The bladder was empty. Portions of the large and small intestines and the stomach have been submitted to bacteriological examination by Dr. Klein, the result being negative; no cholera vibrio was present, but the symptoms and post-mortem evidences were so suspicious that I think I did wisely in notifying the case to the local authorities and having disinfection promptly attended to.

Cambridge-road, N.E.

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CASE OF ABDOMINAL WOUND, WITH PROTRUSION OF THE ENTIRE STOMACH.

By C. BUCHANAN HUNTER, M.B. GLASG.

THE following case may be of interest to those who concern themselves with abdominal surgery, in that the whole stomach protruded through a very small opening on the right side of the body, the result of an accident. The patient was a little girl, aged eight years, who was running on an errand for her mother, carrying a pint bottle in her right hand. She appears to have tripped and fallen forward on to the neck of the bottle, which caused a V-shaped wound at the lower part of the ribs, in a line with the right nipple, into the abdominal cavity. It was stated that immediately afterwards there was protrusion of something which had increased to more than twice the size of what it was at the time. She was brought to hospital two hours after the accident. The child was seen at once, when the entire stomach was found protruding, with a small part of the first portion of the duodenum. The stomach was very much distended with gas and quite tense. The child was suffering from shock slightly and a little pain. She was at once put under chloroform, the stomach and surrounding parts were cleansed with soap and water and mercurial lotion, and an attempt was made to return the displaced organ, without avail, which necessitated an incision being made about two inches long from the inner side of the wound towards the mesial line, through the abdominal wall; after this the stomach was replaced and the wound was closed. After completion of the stitches it was found that the dimensions of the original wound were three-quarters of an inch in one direction and half an inch in the other. The patient made a good recovery, the temperature being normal all the time of her residence in the hospital. The wound was dressed with iodoform and healed by first intention.

Secunderabad.

NOTE ON WIDAL'S REACTION IN THE INFANT CHILD OF A MOTHER WHO DURING GESTATION HAD CONTRACTED TYPHOID FEVER.

By H. BATTY SHAW, M.B. LOND.,
LATE HOUSE PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL.

THROUGH the courtesy of Dr. Ringer I have been enabled to forward for publication the following observations. A woman was admitted to the Yates Ward of University College Hospital on Feb. 22nd, 1897, with symptoms of typhoid fever. The diagnosis was confirmed by Widal's reaction, and during the patient's six weeks' stay in the hospital the test was repeated several times, and always with positive results. The patient was also found to be in about the fifth month of pregnancy. The illness followed the usual course and without complications. The patient was discharged on April 4th. The child was born on June 14th—i.e., a little more than four months after the mother came under observation. Unfortunately the blood was not tested until the child had reached five weeks of age owing to a misunderstanding on the part of the mother. On July 21st Widal's test was tried. The mother's blood reacted well and at once; the child's blood failed to give the least reaction, and a similar negative result was given by my own blood. In about twenty-one hours, however, both the latter specimens showed very slight clumping, the unaffected bacilli being, however, very active. On the 24th the mother's blood reacted very well in seven hours, and after the same interval of time, some clumping, though very little, was seen in the child's blood. No control experiment was made. On the 27th neither the mother's nor the child's blood gave typical reaction at once, and even after twelve hours' waiting only slight clumping was found in both specimens. At the end of twenty-one hours the reaction had not advanced, and without looking at the labels it was quite impossible to distinguish one specimen from another by the reaction which had occurred. A control experiment with the blood of a case of typhoid fever in another ward gave a distinct reaction at once. On the 30th the mother's blood reacted in a very short time and in about eight hours the clumping was most marked. With the same interval of time, the child's blood failed to react at all, nor when examined twenty-one hours later was there any reaction; a control experiment on another case of typhoid fever gave reaction readily and much quicker than the mother's blood did. Thus, out of the four sets of observations, two—those of July 21st and 30th—were in favour of the infant's blood not giving Widal's reaction. The other two experiments—July 24th and 27th—were not so definite; that of the 24th merely showed that there was slight reaction on the part of the infant's blood, not nearly so marked as in the case of the mother. In the experiment of July 27th the observation was valueless as it was found that the mother's blood did not react when the blood from a known case of typhoid fever reacted perfectly. In conclusion, I may say that the child was quite healthy and was being fed at the mother's breast.

Oban.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

A CASE OF PERSISTENT HÆMOPTYSIS IN PHTHISIS RELIEVED BY VENESECTION.

(Under the care of Dr. W. EWART.)

THE extent of the employment of venesection at the beginning of the century is only equalled by its practical disuse now that the century is drawing to its close. Yet we cannot think that a practice which was held in such high estimation by the most careful physicians can have been entirely valueless. Venesection was the recognised treatment for hæmoptysis. For instance, George Burrows writes: "The treatment of hæmoptysis, occurring as an early symptom of the development of tubercles, will not essentially differ from that recommended when it results from general plethora; we must employ general bleeding until an impression is made upon the activity of the circulation and the pulmonary hæmorrhage is arrested."[1] How venesection acts it is difficult to say; the slight increase in the coagulability of the blood and the temporary diminution of blood pressure can have but little effect.

A man, aged thirty-two years, suffering from hæmoptysis, was admitted into St. George's Hospital under the care of Dr. Ewart. Six years previously he was an in-patient suffering from pneumonia and pleurisy, and two months after leaving the hospital, and also occasionally since, he has had hæmoptysis. In December, 1896, he was admitted again into the hospital on account of the same symptom. He has never had rheumatic fever, and has had no other illness. There was no family history of tubercle. On the evening of April 15th, 1897, he coughed up about half a pint of blood and went to the hospital, and was immediately admitted. It was then noticed that the pulse was strong and tense and the patient was flushed. The hæmoptysis continued, and on the evening of the day of admission he was ordered a hypodermic injection of half a grain of morphia, ice was given him to suck, and a saline aperient was ordered. On account of the patient's condition no examination of the chest was made. On April 16th the hæmorrhage still continued, and as the bowels had not acted the saline aperient was repeated and two minims of croton oil in two ounces of castor oil were given, followed by a soap and water enema. Copious evacuations ensued, but the hæmoptysis was still severe, therefore a third of a grain of morphia was given hypodermically, and this was repeated in the evening. On auscultating the chest abundant râles were heard at the right apex, where also there was a distinct

[1] A System of Practical Medicine, edited by A. Tweedie, vol. v., p. 32

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increase in the vocal fremitus. On the 17th, in the morning, the hæmoptysis was somewhat less, and the saline aperient was continued. In the afternoon suddenly a large amount of blood was coughed up, and Dr. Ewart, finding that the high tension of the pulse had not yielded to the purgatives and the morphia, and bearing in mind the favourable results reported by Dr. Huggard, of Davos, determined to bleed the patient. Accordingly eight ounces of blood were withdrawn from the arm. Immediately the patient expressed himself as feeling much easier. On the 18th there was decidedly less blood in the sputum, but the cough was very troublesome and there was much expectoration. By the 23rd the expectoration had much diminished in quantity, and no blood had been noticed in the sputum since the 21st. Except for a little blood in the sputum on the 24th there was no further hæmoptysis. The cough became much less severe, but the physical signs indicating tuberculous disease at the right apex were unaltered.

WESTERN INFIRMARY, GLASGOW.

A CASE OF EXCISION OF THE CÆCUM FOR MULTIPLE FISTULÆ, WITH USE OF MURPHY'S BUTTON; RECOVERY.

(Under the care of Dr. J. CRAWFORD RENTON.)

WHATEVER may be the verdict of posterity as to the desirability of employing Murphy's buttons in intestinal anastomosis, cases like the following conclusively demonstrate that the button is a rapid and simple method for uniting two portions of bowel. The untoward occurrences which sometimes accompany the use of the button may in time be found to be preventable, or some other method to which no objections can be raised may be devised. Dr. Renton's case is especially noteworthy on account of the long duration of the fæcal fistulæ and their rapid cure by operation.

A man, aged thirty years, was admitted to Professor McCall Anderson's wards in 1891 with a hard swelling on the right iliac region, and in the absence of Professor Buchanan the patient was seen by Dr. Renton. It was agreed that an abscess had formed, and this was opened. On the second day after the operation a free discharge of fæcal matter took place. The discharge, although diminishing, never completely stopped, and in 1892 Dr. Renton attempted to close the opening by dissecting away the infected skin and closing the opening which passed into the cæcum. This diminished the opening, but the man found it troublesome, and in 1894 Dr. Renton again tried to close it, but without success. Circumstances prevented the patient from returning until July, 1896, when it having been explained to him that Dr. Renton wished to remove the diseased portion of bowel entirely, he agreed to the operation, and entered the infirmary. Assisted by Dr. Burnside Buchanan and Dr. Walker (Professor McCall Anderson was unable to be present), Dr. Renton opened the abdomen freely, and found, on clearing away all the diseased skin, that there were several openings into the cæcum, in one direction so extensive that it was decided that it must be removed. This involved a good deal of laborious dissection, but after some trouble the diseased parts were isolated along with the appendix, which was ulcerated and adherent. Having clamped the ileum and colon with the clamp made for Dr. Renton by Messrs. Down Brothers, of London, and which is shown in the accompanying woodcut, he divided the



bowel above and below the disease. The ends of the Murphy's button were now inserted in the usual manner and joined together, the mesentery being stitched with catgut and the bowel returned to the abdominal cavity. Owing to the number of previous operations, and the amount of ulcerated skin that had to be removed, the gap to be closed was considerable. This was done successfully, and the wound has healed well, leaving very slight bulging of the abdominal wall. The patient was fed on soups and barley water, and progressed favourably (passing the button with some difficulty on the seventeenth day). He was kept at rest for six weeks, which in a serious operation such as this is of great importance. At the end of three months he commenced his work, and has continued to be quite well, so that he may now be regarded as recovered.

Remarks by Dr. RENTON. — Being a non-tuberculous ulceration of the cæcum it was a favourable case for operation by excision. Murphy's button is quickly applied, and when it passes easily supplies a most efficient means of end to end union of bowel. At the same time it is fortunate that we have several ways of uniting bowel, as each case must be treated according to circumstances. It is important when using the button to be sure that it is not too tight, as it would lead to too much gangrene of the bowel and failure of the operation. The clamp used I have found very efficient, and I have pleasure in recommending it. This patient had an attack of jaundice on each occasion that he had chloroform, which is one of the results which from time to time is met with, but he is the first patient I have had who regularly has had a distinct attack.

Reviews and Notices of Books.

Pathologie und Therapie der Perityphlitis Von Dr. ED. SONNENBURG. Dritte Auflage. Leipzig: F. C. Vogel. 1897. Preis 10 Mk. (*The Pathology and Treatment of Perityphlitis* By Dr. ED. SONNENBURG. Third edition. Leipzig: F. C. Vogel. 1897. Price 10*s.*)

THIS monograph, by Professor Sonnenburg, director of the Surgical Department of the Moabit Hospital at Berlin, is one of the most useful and practical that has been written upon the subject of appendicitis, which has now quite a literature of its own. The plan of the work is excellent. An introductory chapter deals with many points of interest, as, for instance, the rarity of typhlitis stercoralis as a primary condition, the author remarking that of 230 cases operated upon by him in not one was there any typhlitis proper found, although the symptoms were such as were wont to be attributed to that condition. He does, indeed, give one case where the appendix was found to be unaffected, but a portion of the cæcal wall was inflamed and thickened. This was not due to tuberculosis or syphilis, and the cause of the lesion could not be satisfactorily explained. The outcome of wide experience upon the varying conditions found at these operations is to the effect that perityphlitis is essentially a disease of the vermiform process, usually of slow progress, often extending over years, frequently spontaneously recovering, but in the great majority extending, often characterised by acute exacerbations which ultimately lead to perforation or gangrene of the part. Thus if once affected it remains a continual source of probable discomfort and danger. Yet in some cases of relapsing typhlitis the appendix does not undergo any profound disorganisation, but apart from adhesions retains the form and character of the normal structure, some thickening of the mucous membrane alone indicating the recurrent attacks of inflammation to which it has been subjected. The classification adopted by Professor Sonnenburg is simple. He divides the main conditions met with into the three groups of Appendicitis simplex, Appendicitis perforativa, and Appendicitis gangrenosa, and his experiences enable him to subdivide those groups according to the various complications that may be met with. His records of 209 cases, each of which is detailed, and in each of which an operation was performed, comprise 51 cases of the "simple" variety, all of which recurred; 132 cases of "perforation," of which 30 died, the deaths being almost wholly comprised of those cases in which there was peritonitis (general) or multiple abscesses; and, lastly, 26 cases of "gangrenous" appendicitis, 9 of which

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were fatal, all those being cases of diffuse peritonitis, the 17 recoveries having only circumscribed peritoneal inflammation.

Wounds in War: the Mechanism of their Production and their Treatment. By Surgeon-Colonel W. F. STEVENSON, A.M.S., Professor of Military Surgery in the Army Medical School, Netley. London: Longmans, Green, and Co. 1897. Price 18*s*.

FOR two reasons the surgical treatment of gunshot wounds in the wars of the future will vary much from what has obtained in the past; the science of surgery has altered, and the injuries to be treated will be modified by the changes which have been made in the weapons and projectiles employed. Bearing these facts in mind, we feel that Surgeon-Colonel Stevenson's work will be welcomed by the medical officers of the Army, Navy, Reserve Forces, and Indian Medical Service, as well as by many men in civil practice who take an interest in the subject treated. It is the only volume which has appeared in this country save the second edition of Sir Thomas Longmore's work on "Gunshot Injuries" since the teachings of Lister and Pasteur have revolutionised the treatment of wounds, and we regard it as the first work on military surgery which has been published in English of real practical utility; for good as the work of Sir Thomas Longmore was considered to be in its day, and interesting as it is from a historical point of view, yet it failed to be of the great service which we hope and think the newly issued work will be, inasmuch as the treatment recommended by Longmore was almost always indefinite and general in its tenor.

A very large portion of the newly issued volume is devoted to detailed practice and particular methods. Surgeon-Colonel Stevenson's aim has clearly been to bring to the notice of his readers the treatment which will give the best results for each injury, and is based on results already attained or on the careful consideration of the different possibilities of treatment under the most modern conditions and system of practice.

The book of rather more than 400 pages is divided into fourteen chapters, a considerable portion of the first of which is devoted to the Mechanism of Projectiles, while the second treats of Wounds by Small-arm Bullets and by Large Projectiles or their Fragments. The third chapter deals with the Primary Phenomena and Symptoms accompanying Gunshot Wounds; the fourth and fifth chapters are concerned with the Treatment of Wounds in War. In succeeding sections the following subjects are considered—Gunshot Wounds of Joints; Gunshot Wounds of the Hip-joint; Gunshot Injuries of the Diaphyses of Long Bones; Wounds of the Head; Wounds and Injuries of the Chest; Wounds and Injuries of the Abdomen; Injuries of the Pelvis; and the Effects of the use of Modern Small-arms in the Wars of the Future. In connexion with the last-mentioned topic we think the War Office authorities will do well to ponder on a well-reasoned opinion of the author when he states that it is "evident that the work of collecting the wounded at the first post of surgical assistance cannot in future be performed in European armies as at present laid down by regulation." In the final chapter, which is headed "The Geneva Convention," the nine articles of the Convention are briefly and clearly set forth, and Mr. Furley's last suggestions, pointing out the lines on which organisation should proceed to enable the civil societies to amalgamate with the Army Medical Service in time of need and give their assistance, are recapitulated.

We would specially call attention to the handling of the subject of Wounds and Injuries of the Abdomen. We regard this as the best chapter of a very useful book—best, not only from the standpoint of subject matter, but also from that of literary excellence. In discussing the treatment of penetrating wounds Surgeon-Colonel Stevenson presses on the attention of his readers the grave wrong of the "expectant" plan, and the contra-indications for the administration of opium; his pages on laparotomy are clear and valuable, and the illustrations of the method of suturing perforations in the intestine and of Maunsell's method of performing excision of a portion of the gut are excellent.

The one fault which we find in the book is the tendency to repetition—a fault which may, however, perhaps be excused in a work of this nature, intended as it is for reference often under very difficult circumstances, when many cross references would be unsuitable. We can strongly recommend the book to the Service members of our profession, and we congratulate the author on the completion of the first edition of a work which we know will prove of true utility. It is thoroughly up to date as far as it is possible for such a work to be so in the absence of statistics which only a great modern war can supply, and the author clearly indicates the lines of treatment which should be attempted and followed under the varying conditions of warfare. A pocket edition will no doubt appear later. We think a copy should form a portion of the baggage of every medical officer ordered on service.

The present edition is well indexed and freely illustrated. The diagrams and illustrations are for the most part very clear, but we doubt whether the upper part of Fig. 11 will convey much information to the reader. The type, materials, and general get-up of the book are worthy of the publishing house from which it is issued.

The Diseases of Infancy and Childhood. By EMMETT HOLT, A.M., M.D. London: Henry Kimpton. 1897.

THIS work is a substantial volume of nearly eleven hundred pages and contains two hundred and four illustrations. It is confined to the diseases of children from birth to the age of seven or eight years. Questions of surgical procedure are only considered so far as they come under the notice of the physician. Pathology and morbid anatomy, on the other hand, are dealt with in more detail than is usual in such works, because, as the author points out, the morbid processes of early life receive scant attention in ordinary pathological works. The first section consists of a concise exposition of the general care of infants, their growth and development, and the peculiarities of disease at this age. The second part is confined to the diseases of the newly born. In the third, nutrition and its disorders are fully considered, scurvy and rickets being wisely here included. The remaining sections deal seriatim with the diseases of the different systems, the specific infectious diseases, and general diseases.

The chapters on nutrition are excellent. The author points out that temporary success in artificial feeding may mean ultimate failure, and that the prolonged use of predigested foods is a mistake. Sterilisation receives sufficient notice, and stress is laid on the fact that sterilised milk requires the same modification for feeding of infants as uncooked milk. The author is rather inclined to under-estimate the danger of tuberculous milk, considering it to be a good deal exaggerated. Proprietary foods receive quite sufficient attention. Malnutrition and marasmus are rather unnecessarily considered in different chapters—since their differences are in degree rather than in kind. Diarrhœal affections are classified partly according to their severity, and partly according to the supposed anatomical distribution, of their lesions. A more general description would have been shorter and equally satisfactory. The classification of laryngeal affections is good, and fully supported by the most recent results of bacteriology. The section on diphtheria embodies a careful description of the antitoxin

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treatment, with its dosage, limitations, and results, and is well up to date.

As a whole the work is distinguished by a due sense of proportion; common ailments are fully considered, while rare affections receive a shorter though adequate description. Chronic bronchitis is perhaps insufficiently noticed, and the prognosis of heart disease is neither definite enough nor quite in accordance with the views held in this country. Cervical opisthotonos, again, is passed over with scanty description. The author's style is good, and the work is pleasant reading; the illustrations are as a rule excellent, and, in spite of the few trivial details to which we draw attention, the work is, in our judgment, one of the best yet published on the subject of children's diseases.

Practical and Operative Gynæcology. By J. CLARENCE WEBSTER, M.D., F.R.C.P. Edin., Fellow of the Royal Society of Edinburgh, &c. Illustrated with fifty-four figures. Edinburgh and London: Young J. Pentland. 1896

DURING the last six years the author has been engaged in the work of teaching practical obstetrics and gynæcology in the University of Edinburgh. He says, "In this book I have recorded with some degree of elaboration the gynæcological part of my instruction." There is some excellent general advice in the chapter on case-taking—e.g., "a physician may possess great knowledge regarding the pathology and treatment of diseases of women, but he will not make great headway in the practice of gynæcology unless he ever appreciates the subtleties and peculiarities of the psychical organisation of women. Delicacy, tact, patience, and judgment must be brought into employment. Thoroughness, also, must be particularly enjoined." A man must be blessed or otherwise with extraordinary self-confidence, not to say assurance, who flatters himself that he is always able to appreciate "the subtleties and peculiarities of the psychical organisation of women." Even the youngest gynæcologist of them all might be forgiven for feeling some degree of misgiving as to his certainty in this direction. Again, no exception will be taken to the following: "Finally, downright honesty should be the motto of the physician. There is no sphere in which there has been more dishonest practice, and it is not out of place to utter a strong protest again the crime practised ["practised" here strikes us as distinctly good in relation to the profession of crime] by those who, for the sake of gain, trade on the fears which naturally fill the minds of many women when their reproductive apparatus is out of order, and who elevate into an unnecessary importance conditions which are but trifling." The intention of all this is excellent, but its application is frequently a matter of difficulty. Gynæcologists are, unfortunately, no exception to the proverbial tendency to differ affecting members of our profession. We think it would be a pity not to recognise honest differences of opinion and a mistake to be too ready to impute unworthy motives to those whose views may not coincide with our own. Still there are, no doubt, some sparks of fire in the smoke of Dr. Webster's warning.

The author's teaching seems to us to be generally reliable. There are some slips of course, and a few things are omitted that we should have expected to find. Thus "deciduoma malignum" is not to be found in the index, nor does it appear to be referred to, although many observers consider it to be a sarcoma of the body of the uterus, and thus rather gynæcological than obstetric. Again, in the description of the operative treatment of fibroids, the intra-peritoneal method is not given as it should be at the present time. The ligature of the uterine arteries outside the uterus as an indispensable step of the operation is not insisted on, in fact, the technique given seems to be more or less that of the old intra-peritoneal operation which had so high a mortality. The section on antiseptics, and the methods needed to ensure asepsis, is excellent. We see that the author rather prefers alcoholic solutions of perchloride of mercury for disinfecting the hands.

Lectures on the Action of Medicines. By T. LAUDER BRUNTON, M.D. Edin., F.R.C.P. Lond., F.R.S, Physician and Lecturer on Pharmacology and Therapeutics to St. Bartholomew's Hospital. London and New York: Macmillan and Co. 1897. Pp. 673.

THESE lectures formed the course on Pharmacology and Therapeutics delivered at St. Bartholomew's Hospital during the summer session of 1896. They are intended to give a general sketch of the mode in which drugs act upon the body, and they are arranged very much in accordance with the schedule for the examination in pharmacology which was instituted by the Royal Colleges of Physicians of London and Surgeons of England, but which was abolished before any examination had actually been held. Fortunate were the students who heard that course. We have never read a book on this subject which has given us so much pleasure. Most works on drugs and their actions are useful as works of reference, but every page of Dr. Brunton's book is interesting, and we read on for the delight of doing so, gaining numerous useful hints for treatment and refreshing our knowledge of physiology as well as of pharmacology. Let us take, for example, the action of drugs on the circulation. Some physiological points are first noticed, the effect of temperature on the heart as shown by the demonstration of a frog's heart on a heated plate, and here is noted the effect of fever on the human heart. "Just as you can recover the frog's heart from the effect of high temperature, so you can, in many cases, recover the hearts of your patients from the effect of high temperature by cooling them down. ..... By cooling the patient down you cool the blood, and thus allow the circulation to go on again." Then follow some considerations on blood-pressure, and attention is drawn to the three large channels through which the blood finds its way from the arteries into the veins, stress being laid on the vessels of the muscles, which "are so large that they will allow as much blood to pass through them in a given time as both the vessels of the skin and of the vessels of the intestines together." Regulation of blood-pressure is fully described, with many useful directions as regards treatment. Next follows a short *résumé* of cardiac disease in general and then the drugs which are usually employed. Digitalis naturally holds the first position, and an exhaustive description is given of its uses and modes of action. An instructive section is that on the four active principles of digitalis, showing that one of them, digitonin, is to a great extent antagonistic to the other three. Other drugs acting on the heart are then considered, including an account of the effects of nicotine. Students with athletic tendencies will read with especial interest the remarks on "training." The mechanical treatment of chronic heart disease has considerable space devoted to it. The much-discussed "Nauheim Treatment" is favourably reviewed provided that suitable cases are chosen. Many practitioners still consider the Nauheim treatment as quackery or at least a fad; Dr. Brunton's anecdote may well be considered by those who hold these extreme views. "I was a good deal astonished a little while ago when I recommended a patient to go to Nauheim to receive a letter from the general practitioner who had been in attendance upon him, saying that the Nauheim treatment was too new to enable him to form any opinion about it, that he did not think it was any good, and therefore he advised the patient not to

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go. The man in question simply knew absolutely nothing about it; he had not taken the trouble to inquire, and so he decided upon a basis of pure ignorance." We have taken the chapters on Circulation as an illustration of the general scope of the work; as much could be said in every division. We feel that we cannot speak in too high terms of the book, but cordially recommend it to practitioners of medicine and students. The former will find ample material for help and study, whilst the latter will discover in it a welcome change from the ordinary text-book, at the same time obtaining knowledge which will be useful to them throughout the whole of their professional life.

LIBRARY TABLE.

A Contribution to the History of the Respiration of Man, being the Croonian Lectures delivered before the Royal College of Physicians in 1895, with Supplementary Considerations of the Methods of Inquiry and Analytical Results. By WILLIAM MARCET, M.D. Edin., F.R.C.P. Lond., F.R.S. London: J. & A. Churchill. 1897. Price 12*s.* 6*d.*—This handsome volume comprises a study of the intimate nature of respiration, largely based on experiment. It shows the importance of a sufficient supply of oxygen to the proper and full exercise of the functions of the body, in which the tissues themselves play an essential part. The ordinary conception of the respiratory process requires some modification, since everything points to metabolism being initiated in the tissues which demand a supply of oxygen adequate for their needs rather than evolved by the oxygen conveyed in the circulating blood. Some of the most interesting facts described are those which clearly demonstrate that the exercise of so purely psychical a function as volition depends upon absorption of a sufficiency of oxygen, so that the act of volition influences the amount of respiration, and conversely the deficiency of oxygen in the atmosphere (as at high altitudes) may have a powerful restraining influence upon the exercise of the will. The lectures with the supplementary chapter on methods will no doubt be especially studied by physiologists, but the suggestive application of respiratory training, in the form of the favourite recreation of cycling, as a remedial agency in asthma deserves the attention of the practical physician.

L'Hygiène du Cycliste. Par le Docteur O. LAURENT, Professeur à l'Université de Bruxelles. Brussels: Alfred Castaigne. 1897. Pp. 119.—Dr. Laurent recommends cycling as an admirable exercise for average individuals of both sexes, but he earnestly cautions his readers against over-fatiguing themselves, against undue effort in going up hills, and against riding at an excessive speed. About nine and a-half miles (fifteen kilometres) per hour is, in his opinion, a sufficient pace for the ordinary rider. Neither children under ten years of age nor elderly men who are unaccustomed to active exercise ought to cycle; but those who have paid due attention to their physical condition will find cycling advantageous even in advanced life, and Dr. Laurent quotes the case of Dr. Tarrier, an American practitioner eighty-nine years of age, who used a tricycle when visiting his patients. Considerable space is devoted to the subject of cycling for females. In the absence of special diseases in an acute stage the exercise is recommended both to the single, the married, and mothers of families, always with the caution that it should be used in moderation. Dr. Laurent enumerates several diseases and morbid conditions which are benefited by this form of exercise, and cyclists, whether beginners or proficients, will find in this little book a large amount of useful information.

JOURNALS AND REVIEWS.

Bristol Medico-Chirurgical Journal.—The opening article in the current number of this well-known quarterly is a valuable contribution to medical biography, being an account of the life and work of the late James Greig Smith, an obituary notice of whom appeared in THE LANCET of June 5th, p. 1567. Mr. Greig Smith was editor of the *Journal* on its first appearance in 1883, and conducted it most ably until his retirement in 1892. Some idea of his literary activity and success may be formed from the fact that his large treatise on Abdominal Surgery has reached its fifth edition, while the list of his contributions to the medical journals fills three pages. Dr. P. Watson Williams has an interesting article on Paroxysmal Tachycardia, and describes two cases; one of the patients being a man, eighty-one years of age, who had suffered from occasional attacks for at least fifty-three years, and the other being a female, sixty-two years of age, whose first attack came on about six years before Dr. Williams first saw her. He considers that the disease is a neurosis of the intra-cardiac ganglia. Mr. J. Lacy Firth describes two cases in which intracranial pressure caused death by paralysing the respiratory centre in the medulla.

Scottish Medical and Surgical Journal.—The present number has ten original articles and three full-page plates. Dr. R. S. Thomson and Dr. E. L. Marsh, of the City of Glasgow Small-pox Hospital, contribute an instructive paper on the Antitoxin Treatment of Small-pox. The serum they employed was prepared and supplied by the Health Department, Brooklyn, New York, and was named "variola antitoxic serum." It was derived from calves rendered immune to cow-pox by inoculation with vaccine lymph, not with the virus derived directly from a variolous patient. Six cases of small-pox treated with this serum in October and November, 1895, are very fully described. Five of them recovered. The sixth case was one of hæmorrhagic small-pox, and proved fatal on the ninth day. The authors are of opinion "that in no single instance did the treatment as employed by us modify the disease." Numerous references to the results of other observers are given. Mr. F. M. Caird, of Edinburgh, describes a difficult operation, in which a renal tumour weighing 3½ lb. was removed by a lumbar incision. The patient made a good recovery.

Edinburgh Medical Journal.—Dr. A. E. Garrod contributes a valuable paper on the Spectroscopic Examination of the Urine. Dr. Byrom Bramwell continues his series of lectures on Aphasia. Mr. W. Bevan Lewis describes a modified sublimate method which has given him excellent results in the staining of sections of nervous tissues. Dr. J. Cunningham Bowie recommends the treatment of asthma by intra-laryngeal injections of menthol, iodine, or oil of hop dissolved in almond oil.

Dublin Journal of Medical Science.—The principal article is Sir Richard Quain's paper on the Mechanism by which the First Sound of the Heart is Produced; it was read before the Royal Society last June and appeared in THE LANCET of June 19th, 1897.

Mercy and Truth contains an interesting historical account of the mission hospital in Kashmir and of Dr. Elmslie's labours there. There are also articles on missionary work in the land of Moab and in Central China.

Le Vélo Médical.—This paper circulates among medical cyclists and is now published weekly. A recent number contains portraits of two celebrities who are well known to be partial to this exercise, namely Professor d'Arsonval, and Dr. Lucas Championnière, the latter of whom has been photographed in company with his little son and three daughters, all five mounted on bicycles.

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Analytical Records
FROM
THE LANCET LABORATORY.

GENEVA (U.S.A.) MINERAL WATER.
(AGENCY: 10A, GREEN-STREET, LEICESTER-SQUARE, W.C.)

OUR analysis of this water is as follows: total solids 196 grains per gallon, of which at least 170 grains are sulphate of lime. It contains also small quantities of magnesium salts, and common salt to the extent of 4½ grains per gallon. Its total hardness exceeds that of the average London water-supply by over ten times the amount. This would condemn it, in our opinion, simply for drinking purposes, and this enormous degree of hardness is not removable on boiling. We cannot imagine upon what ground this water is offered for curative purposes. So great is the amount of calcium sulphate contained in it that it produces an immediate precipitate when mixed with alcohol. Referring to the solubility of calcium sulphate in water, we find, according to this analysis, that Geneva (U.S.A.) water is a saturated solution of this salt.

TANOCEA TEA-TONING TABLETS.
(THE TANOCEA TABLET CO., BLETCHLEY STATION.)

The composition of tanocea tablets is based upon a sound enough scientific principle, and in practice, as a matter of fact, they will be found to effect certain important improvements in the character of an infusion of tea. They are composed of gelatin and carbonate of soda, so that when placed in the teapot with a teaspoonful of leaves and the usual quantity of boiling water the first action is the rapid extraction and neutralisation of the tannin by the soda present. The solution of tannin so obtained then immediately attacks the gelatin, which renders the tannin insoluble and inert. Thus the tanocea tablet exerts a distinct softening effect on the infusion, a muddy precipitate subsiding after a time. On adding the solution of a tanocea tablet to an ordinary clear decoction a precipitate of astringent principles is at once obtained, and the clear supernatant fluid will be found to be free from all bitterness and styptic property. The restorative and stimulating principle caffeine is not affected in any way by this process, nor is the agreeable flavour of the tea altered. It is the simplest, most effectual, and least objectionable method of removing from tea those astringent substances which are so frequently a source of discomfort to many who could otherwise drink tea with pleasure and advantage. We have tried this simple device in one or two cases where ordinary tea could not be taken without marked gastric disturbance, and the results have been very satisfactory. Since the tannin is thrown out of solution as soon as it is extracted, the leaves may be allowed to infuse for a much longer time, and thus the maximum amount of stimulating principle in the infusion is ensured.

VIFERA WINE.
(R. P. GEMMEL, 49, VIRGINIA-STREET, GLASGOW.)

Two kinds of wine have been received, one red and the other white, answering respectively to ordinary Burgundy and Chablis or white Burgundy. The results of analysis were as follows: Burgundy: extractives, 2·63 per cent.; mineral matter, 0·34 per cent., containing 0·6 per cent. of iron; sugar, 0·34 per cent.; tartaric acid, 0·33 per cent.; acetic acid, 0·12 per cent.; alcohol, by weight 11·62 per cent., by volume 14·37 per cent., equal to proof spirit 25·18 per cent. Chablis: extractives, 2·62 per cent.; mineral matter, 0·42 per cent., containing 0·48 per cent. of iron; sugar, 0·34 per cent.; tartaric acid, 0·47 per cent; acetic acid, 0·16 per cent.; alcohol, by weight 11·62 per cent., by volume 14·37 per cent., equal to proof spirit 25·18 per cent. From these results it is evident that the wines were in sound condition, free from the slightest excess of objectionable acidity (especially volatile acid). They are, however, decidedly heavy in character and full-bodied. For table purposes they are best diluted. There can be little doubt of their tonic character, iron being an important constituent of the mineral matter. Both are undoubtedly pure and natural products of the grape, possessing the vinous characteristics of the rich generous wines now sent to this country by our colonies.

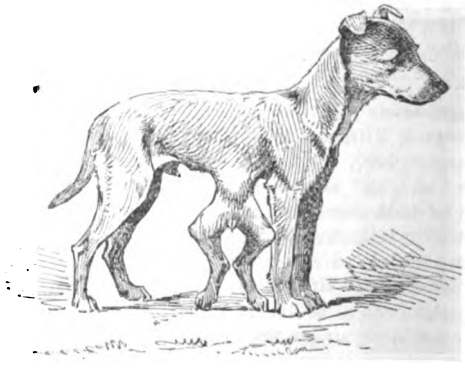
EXT. RADICIS PERNIONIS.
(ARTHUR AND CO., 69, BERNERS-STREET, W.)

This is described as a new preparation for the treatment of chilblains, and is stated by its makers to be "the best application that has yet been known." It is also adapted, it is said, for the treatment of itching and bruises. It proves from the results of laboratory examination to be a spirituous extract of a well-known root. On diluting with water it turns turbid, but the turbidity is removed by ether, the ether yielding on evaporation an oily residue of peculiar smell.

A POLYMELIAN CANINE MONSTROSITY.

WE have received from the editor of *Our Dogs* the following account of a curious freak of nature occurring in a puppy which has recently been brought under his notice. The animal is a mongrel puppy, about six months old, belonging to Mr. Dewhurst, of Accrington, sired by a fox terrier dog out of an Irish terrier bitch. Although in fair condition it is rather smaller in size than a fox terrier puppy of the same age.

According to the description given by Mr. W. A. Taylor, F.R.C.V.S., in *Our Dogs*, the animal has a single complete head and male trunk, with limbs perfectly formed, whilst dependent from the lower portion of the right sternal region there is an extra pair of posterior limbs and a portion of pelvis. Both these legs possess, apparently, all the bones of the hind limbs as far as and inclusive of the femur; there is no hip-joint, as the pelvis is not entire, but there is a piece of floating bone which appears to be a part of the pubic portion. The skin and hair covering the extra limbs is continuous with that forming the



lower portion of the right wall of the chest, there being no bony union. Distinct arterial pulsation can be felt at the point of attachment. One of the most curious features in connexion with this extra portion is that it is, to quote Mr. Kipling, "a kind of a giddy harumfrodite," there being present evidences of both male—a rudimentary penis without a meatus—and female generative organs. There is also a constant dribbling of urine from the female urethra, clearly indicating either the presence of a kidney or kidneys or else a communication with the urinary apparatus of the body of the animal. There is no anal outlet or trace of coccygeal bones, the tail being represented by a small fold of skin.

As a freak of nature the animal will doubtless arouse a certain amount of interest, and it is to be hoped that, should death occur, the owner will allow some scientific expert to make a post-mortem examination in order that the result may be recorded.

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THE LANCET.

LONDON: SATURDAY, AUGUST 28, 1897.

THE report to the Local Government Board on the preparation and storage of glycerinated calf vaccine lymph, drawn up by Sir R. THORNE THORNE and Dr. COPEMAN, constitutes an admirable supplement to the report of the Royal Commission on Vaccination. It will be in the minds of most of those who studied this latter report at all carefully that the general trend of the recommendations of the Commissioners was that every parent who desired it should have facilities for having his or her child vaccinated with calf lymph. There were, as Sir R. THORNE THORNE points out in his introductory letter to the President of the Local Government Board, "two points to which the Royal Commission gave prominence in their report. The first of these—one which the Commissioners put in 'the forefront'—is the recommendation in Section 437 of their report 'that parents should not be required to submit their children to vaccination by means of any but calf lymph.' The second, which is referred to in Section 448," is "that the addition of glycerine, whilst it leaves the efficacy of the lymph undiminished, or even increases it, tends to destroy other organisms."

For the last six or seven years Dr. MONCKTON COPEMAN has paid special attention to the subject of glycerination of calf vaccine lymph; indeed, it may be gathered that he was one of the first, if not the first, to put this method into actual practice; but so far from the method being generally adopted in this country, we learn from the report that Sir R. THORNE THORNE and Dr. COPEMAN had to go abroad—to Paris, Brussels, Berlin, Dresden, Cologne, and Geneva—in order that they might see the method worked on any extensive scale, and in order that statistics of results might be obtained that would be convincing to the lay minds of those in authority. It may be argued that we are a very "safe" people, both individually and collectively, and certainly if slowness and safety are convertible terms the argument may be sustained, for we find that most of the Governments and other authorities concerned in the countries visited by Sir R. THORNE THORNE and Dr. COPEMAN have since 1891, when Dr. COPEMAN announced the results of his experiments, been engaged on sustained and elaborate investigations into the best methods of preparing and storing glycerinated calf lymph. The result is that whilst we are paying attention to anti-vaccinationists and are occupying ourselves with refuting their arguments, Germany has perfected a system of vaccination in which arm-to-arm inoculation plays no part, and has succeeded in obtaining sufficient lymph from a single calf to vaccinate 6000 or even 15,000 individuals, we being, or having been, content to reserve sufficient lymph from every calf at the Local Government Board's animal vaccine establishment to vaccinate only 200 or 300 children.

It may possibly be suggested that this enormous dilution, or economising of the actual quantity of lymph, must lead to less efficient vaccination; but, as a matter of fact, what do we find is the case? Sir R. THORNE THORNE and Dr. COPEMAN brought a quantity of the most "dilute" lymph with them from Berlin, and at intervals of nine, eleven, and thirty-seven days after its collection made seventy-six vaccinations by five insertions in every case, with a mean insertion success of 92 per cent. With other samples of lymph, diluted with glycerine to only about one-third of the amount of the above sample, insertion successes were obtained in 97, 98, 99, and 100 per cent. when the lymph had not been preserved for more than thirty-one days.

It is now generally recognised abroad that the addition of considerable quantities of glycerine does not in any way interfere with the activity of the vaccine lymph taken from calves. Dr. COPEMAN, who demonstrated this fact some time ago, further pointed out that, curiously enough, the added glycerine exerts a distinct bactericidal effect on organisms that may by accident find their way from the skin of the calf to the lymph. Thus he showed that lymph taken with ordinary precautions often contained micro-organisms of various kinds, whilst the same lymph to which a certain proportion of glycerine had been added soon became entirely free from viable micro-organisms, as demonstrated by plate cultivations. Even the pus-forming organisms, which are fairly resistant to the action of most bactericidal agents, are killed by the glycerine which is added for the purpose of diluting the lymph. It has frequently been objected that under certain, no doubt remote, contingencies, tuberculosis might be transmitted from child to child or from calf to child. Glycerination of the lymph appears to remove the last fraction of danger on this score, as it has been experimentally proved that the tubercle bacillus, when added to a mixture of lymph and an aqueous solution of glycerine, rapidly loses its vitality. It appears, indeed, that glycerination of calf vaccine lymph should cause the disappearance of most of the objections now raised by those who are afraid to have their children vaccinated as a protection against small-pox.

What are the advantages of this glycerination of calf lymph? In the first place the amount of active lymph to be obtained from a single calf can be increased from twenty to fifty times, so that the difficulty of obtaining a supply of good lymph may be said to have been reduced to a minimum. It is frequently stated that calf lymph has, when inoculated into certain children, set up erysipelas, sometimes of a very grave form. The addition of the glycerine ensures the removal of any germs which might possibly produce erysipelas, suppurative changes, or, as we have already seen, tuberculous infection, the three conditions which are said to be possibly resultant from the use of calf vaccine lymph. Hitherto most people have preferred the vaccine taken from the arms of healthy children for the vaccination of their children, but for some time past there has been a rapidly increasing minority who have had a distinct preference for carefully collected and preserved calf lymph, and now that this marked improvement in the method of preservation has been adopted there can be no doubt that Sir R. THORNE THORNE's recommendation, that "vaccination, both primary and

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secondary, carried out under the auspices of the Government, should be performed exclusively with vaccine lymph derived from the calf," will find favour in the eyes, not only of parents, but of medical practitioners also. One great advantage attending the addition of glycerine appears to be that the vaccine may be kept for a lengthened period in a moist form without losing its activity. In all probability the explanation of this rests, in part, at any rate, on the fact that putrefactive and fermentation germs are incapable of living and carrying on their special disintegration processes in the presence of glycerine, and the active vaccine agent is thus not destroyed. It is curious that the glycerine should exert so little effect on the vaccine if the active agent is of animal or vegetable origin, for, although under prolonged keeping the glycerinated lymph undoubtedly loses its activity, the falling off is so slow that no actual diminution of strength can be observed within a month or even longer, but at the end of three months a marked fall is observed, whilst in one instance the lymph had become inert in six months.

In their report Sir R. THORNE THORNE and Dr. COPEMAN go very fully into the whole question of the preparation of vaccine lymph as it is now carried out in the countries they visited, and what strikes the reader most forcibly is that vaccine establishments are no longer clean calf-houses; they are carefully thought out and well-equipped laboratories. In the report the calves are followed from the time they are purchased to the time they reach the butcher's table, where a careful examination is made for the presence of any tuberculous lesion in the carcase. Until this examination has been completed not a single tube of lymph is sent out for use. In some countries the animal is first tested with tuberculin; but in view of the above post-mortem examination the tuberculin test appears to be unnecessary, especially as its application involves a considerable amount of trouble and in some cases a certain loss of time. It should be stated, however, that the calves are usually kept isolated and under observation for about a fortnight before they are brought under treatment and are dieted most carefully, the diet varying of course in different countries. The various methods of cleansing the skin, of making the incisions or insertions, of collecting the lymph, of cleaning, emulsifying and glycerinating it are all given with a considerable amount of detail, and we are lead to expect that hairs and large epithelial particles similar to those that have been seen in samples of glycerinated lymph obtained in this country are in most cases removed by some contrivance or other. Details concerning the storage and distribution of lymph also occupy considerable space, but for these we refer those who take a special interest in the question to the report itself. It is interesting to note, however, that those who have had most experience of the preparation and action of glycerinated lymph are not by any means at one on some important, but perhaps minor, points. For example, some take the vaccine from the calf on the fifth day, others—and these appear to be in the majority—remove it on the sixth day from inoculation. Some, on the score of cleanliness, use cow calves only, others prefer bull calves, on the ground that the insertions on the skin of the scrotum give such good results. In Paris a certain number of patients are vaccinated directly from calf to arm, whilst in Germany and the other countries visited the lymph, before it is used, is always kept for some short time after the addition of the glycerine has been made. Centrifugalisation of the lymph has been tried in Berlin, but the nature of the results of this method of purification is as yet undecided. The lymph is undoubtedly of better appearance and contains fewer micro-organisms, even before the addition of the glycerine has taken place; but it is argued that if the active agent in vaccine virus is particulate and is locked up specially in the epithelial cells, continued centrifugalisation would remove it, and the lymph would lose its activity.

In the different laboratories very different proportions of glycerine are added. For example, in Paris the lymph is diluted with an equal bulk of glycerine; in Brussels twice the bulk of glycerine is added; whilst in Berlin fourteen parts of a solution of equal parts of glycerine and boiled water are added to one part of the epithelial pulp scraped from the vaccine vesicles. Some of the operators remove the vesicles by a single scraping movement, thus avoiding the collection of hairs and the admixture of blood with the epithelial mass and the fluid lymph, whilst others scrape the vesicles several times with the sharp spoon in order that they may remove as much as possible of the active material. These differences, however, are, after all, matters which can only be settled by direct experiment, and for their settlement well-equipped laboratories and expert workers are absolutely necessary. Such laboratories are now in full working order in most of the institutes visited, and much valuable work is being done in them, and we fully agree with Sir R. THORNE THORNE that laboratory accommodation with all the necessary appliances for the study of vaccine lymph should be added to the Local Government Board's animal vaccine establishment as soon as possible. A laboratory is now a necessary part of every hospital—there bacteriological and chemical investigations of various kinds are constantly being carried on for diagnostic purposes—and of every brewery and sugar refinery, where the purity and strength of beers, yeasts, and sugars have to be from time to time determined. How much more is such accommodation necessary for the examination of such material as vaccine lymph, which if not pure in every respect should never be used for purposes of inoculation? It has been due to the want of some means of testing and guaranteeing the purity of lymph that those who are opposed to vaccination have been enabled to make capital out of some of the objections that have from time to time been raised against it. The practical and statistical side of the vaccination question has been studied most carefully in this country, but much still remains to be done on the scientific side, especially from a bacteriological point of view, and we hope that the publication of the report now under consideration will cause those in authority to recognise the necessity of our being no longer dependent on the workers in other countries for the elucidation of problems already partially solved by our own workers. In the meantime we commend this report to the careful consideration of all who take an interest in the question of the preparation of good vaccine lymph.

THE Presidential Address delivered by Dr. SYMES to the Pharmaceutical Conference at Liverpool presents in a compendious form, not only a view of matters affecting the

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interests of pharmacists at the present moment, but also of the progress which has been made in various directions since the foundation in 1863 of the institution under the auspices of which the address was delivered. The review is not less interesting than the view, and brings to light a very remarkable success, the result of corporate enterprise on the part of the pharmacists themselves, supported and supplemented by well-devised legislation. The great success of that period has undoubtedly been the perfecting of a system of dispensing drugs by the double process of reducing the manufacture to system and educating the dispensers to their work. For both these results the Pharmaceutical Society and the Pharmaceutical Conference are entitled to great credit each in its own way, although, of course, in a matter of this kind private enterprise, even although coöperative, could have accomplished little if it had not been reinforced by the strong arm of the law. The result is one upon which the great public have abundant reason to congratulate themselves, for it has enormously increased the success of the healing art, while the whole body of those who are engaged in the practice of that art—pharmacists, physicians, and others—to whom drugs are tools with which their daily work has to be accomplished, have special reason to rejoice in the circumstances which have brought those tools to their present perfection. It is difficult for the modern practitioner to imagine how disheartening must have been the working conditions of the good old days, when preparations were of no definite strength and purity was imperilled, not only by the unchecked abuse of adulteration, but also by legitimate differences of opinion as to formulas. That is now matter of history, and therapeutics has acquired the character of a science, because the materials with which it is conversant have assumed the exact nature of chemical compounds. Drugs, even though they remain physical mixtures of different materials, are not less susceptible of calculation and mathematical definition with reference to the purposes for which they are used than true chemical compounds themselves.

One-half of the gain resulting from this great advance in the art of compounding drugs would have been lost to the public if there had not proceeded *pari passu* with the improvement so introduced a corresponding improvement in the professional efficiency of the dispensers of them. A perfect tool is but an imperfect instrument in unskilled hands, and this work of education, even more perhaps than the work of standardising, is one upon which the Pharmaceutical Conference may congratulate itself. It is a work less easy to accomplish, and when accomplished more easily undone than the other. It pre-eminently needs the moral impulse which an annual conference can impart and the vigilant and authoritative criticism which a conclave of experts is alone competent to utter. The pharmacists have in this particular good reason to indulge in some professional pride. Not only has the standard of general and technical education within their ranks been raised with their coöperation during the past thirty years in a remarkable degree, but the material advantages of this change have accrued almost exclusively to the public. The pharmacist, far from rising in popular esteem in proportion to his increased merit, has simply dropped in that proportion out of the public eye. In any craft when technical education reaches a perfect result—that is to say, when the ordinary practitioner attains to finished skill in the use of his materials—the individual merges in the class. It is so in most of the mechanic arts; it is so in seamanship. TUBAL CAIN and PALINURUS would have no vogue in modern times. It is so with the pharmacist. The average standard is so high that within the limitations of the art it is difficult for anyone to be excellent in an eminent degree. There is in Dr. SYMES'S address some echo of a complaint that this is so; but it is precisely here that we hesitate to commit ourselves altogether to the view that he expounds. It is idle to repine at the want of recognition at the hands of the public, to which the most accomplished pharmacist must accustom himself, and not wise to construe it as a slight. It signifies only that the public reposes such complete confidence in the competency of the average pharmacist that it is not concerned to inquire who is more and who less accomplished. Such a frame of mind on the part of the universal patron shuts the door, no doubt, upon private ambitions; but no good citizen would desire to alarm the public out of its ungrateful security at the cost of exposing it to the dangers which alone could make it appreciate the trained pharmacist at his true value.

AT length the oracle has spoken. It is just half a century since, in 1847, the Poor-law Commissioners by a General Order provided in Article 99 that "any pauper of the fourth class whom the master may deem fit to perform any of the duties of a nurse or assistant to the matron may be so employed in the sick wards." Paupers of the fourth class were women "infirm through age or any other cause." Similarly, it was enacted that men "infirm through age or any other cause" might be employed in like manner as nurses in the males' sick wards. It was also enacted that the duties of a Poor-law nurse should be "to attend upon the sick placed under her charge and to carry out the orders of the medical officer in regard to their treatment." Until a few weeks ago these were the only orders or regulations issued by the Poor-law Commissioners or Local Government Board that had relation to the duties of a nurse. Many things have happened since then; nursing itself has developed into a profession, and the training that is necessary nowadays is of a very special kind. It is no longer left to SAIREY GAMP, but is a calling that exacts the devotion of a lifetime of educated and high-minded women. Nevertheless, the Local Government Board neither saw nor heard these things, and nothing was ever done to keep up with the times. It was left to a private philanthropic organisation, started by the efforts of Miss TWINING and a few other ladies seventeen years ago, to do a great deal that has been done in the way of improving workhouse nursing. They have done, it is true, very excellent work in the face of great difficulty, but it has always been by private influence, and not always with the concurrence of the guardians, who naturally look upon any outside agency with suspicion, that they have accomplished so much.

However, the Local Government Board has spoken at length, and though the Order dated Aug. 6th, 1897, which

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is to be known as the Nursing in Workhouses Order, 1897, does not do all that it might, nevertheless, we have much to be thankful for, seeing that something has at length been done. Grave scandals have from time to time made their way into the public press, when patients have been scalded to death or otherwise neglected through the inadvertence and incompetence of the so-called "pauper help"—i.e., women infirm through age or any other cause. But we are glad to find that Article 99 of the Poor-law Commissioners' Order above referred to is by the new Order to be repealed, for Article 1 states distinctly: "Notwithstanding anything to the contrary contained in any of the Orders above referred to, no pauper inmate of the workhouse shall be employed to perform the duties of a nurse in the sick or lying-in wards of the workhouse or be otherwise employed in nursing any pauper in the workhouse who requires nursing." It also makes the very desirable regulation that even such pauper inmates as may be employed to do work in the sick or lying-in wards shall be subject to the approval of the medical officer of the workhouse. Article 2 enacts that persons employed as nurses or assistant nurses must have had proper training, such as "will render them fit to act in that capacity." In other words, it makes the employment of the trained nurse a necessity. A question, we fear, will arise out of this, for, if we are correctly informed, there exists considerable difficulty among some country guardians, who do not lay themselves out to make their officials particularly comfortable, in procuring the services of trained nurses. Much has hitherto been done to remedy this defect by the Working Infirmary Nurses' Association, which has, at the cost of considerably over £3000 collected by voluntary subscription, found suitable young women, and, if not sufficiently trained, has provided training for them for such situations. We learn from a report of the association that no fewer than 764 nurses have been thus supplied in the eighteen years during which it has been in existence. But we hear rumours that this admirable association has become so disheartened in its work as to actually entertain the idea of bringing its existence to a close. We sincerely trust it may not be so. But undoubtedly the question of providing trained nurses will have to be faced sooner or later. The demand for skilled nurses has so much increased of late years, the openings for them have become so much more numerous both in hospital and private work, that the supply, although it has increased, is not sufficient. The attractions of a country union are not very great, and the proverbial cheese-paring policy of the guardians prevents them from offering sufficient salary. It is not therefore surprising to hear that some country unions advertise repeatedly without obtaining any reply. What, then, is to be done to increase the supply? Some of the London infirmaries train their own nurses, and it seems to us that the sooner the authorities take the matter into their serious consideration the better. That the question should be faced either by the guardians in coöperation or by the Local Government Board as a State department would seem to be only reasonable.

Article 3 provides that where there is a staff of three or more nurses and assistant-nurses in a workhouse the guardians shall either appoint a superintendent nurse or, with the consent of the Local Government Board, direct that one of the nurses shall act as such. This, again, is a most desirable reform. One of the chief difficulties in the existing state of matters, and one which no doubt diminishes the supply of candidates in many instances, is that an untrained and sometimes an uneducated matron is placed in authority over skilled nurses. We do not think this ought to have so much weight as it is sometimes allowed to have, because the nurse should have no difficulty in getting on with her superior when she receives her orders practically from the medical man alone, and she ought to be able to act in harmony with those with whom she dwells. Often by displaying a little courtesy and deference friction may be avoided, and no institution can be governed by divided authority. The new Order, however, will help undoubtedly to diminish this friction. Finally, the new Order empowers the master, on the recommendation of the medical officer, to engage a temporary nurse in times of emergency. The Order, unfortunately, does not deal with the important question of the remuneration of nurses in workhouses, which, in our opinion, is hardly adequate considering the skill required and the various drawbacks to the situation, especially in provincial workhouses and infirmaries. Nevertheless, we heartily congratulate both the Local Government Board and the Poor-law service generally in obtaining at length a very important reform in workhouse nursing. In view of the fact that the metropolitan infirmaries alone contain some 13,000 sick persons, it is a question which affects the well-being of a very large section of the community, and it is naturally a question in which we take great interest, seeing that the Founder of THE LANCET initiated the great reform of 1847.

Annotations.

"Ne quid nimis."

"AN OVERCROWDED PROFESSION."

SUCH is the heading of a correspondence now appearing in the columns of the *Standard*, in which a poor account is given of the medical profession as a means of living on the twofold ground that it is overcrowded and that the immense growth of medical charity in recent years draws away the patients of medical men in ever-increasing numbers. "A Medical Man," who opens the correspondence, avers "that he is not far from the truth in stating that the average income of a medical man in the present day does not reach £250, and that this sum must be still further reduced should candidates continue to flock into the profession at the rate they have done in recent years." There are no very accessible data for the verification of this estimate. It is not seriously refuted by reference to the difficulty of filling up army vacancies. It is, perhaps, a little under the mark; but even so the compensation is a poor one for work so responsible and laborious, and representing an education so prolonged and costly. This correspondent is followed by another signing himself M.A., M.B., M.R.C.S., who enlarges on the way in which the hospitals are being invaded by classes of persons for whom they were never intended, in the belief that they will see a Fellow of the College of Physicians or Surgeons, but who oftener see the young resident physician or surgeon. In this way the private practitioner is robbed of his patients, the hospital physician is not

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benefited, the patient is demoralised, and the charitable public are cheated. This correspondent endeavours to show how dearly the patients who go to hospitals pay in wasting time, incurring weariness, and having their cases often very cursorily treated. He quotes an instance of a mother taking two children to the waiting-room, all three suffering from diphtheria. It was alleged that on a recent hot day no fewer than sixteen patients fainted in one morning, yet the hospitals go on enlarging and ventilating their waiting-rooms and introducing amenities which invite the very classes that have no right to use them. The only plausible answer to such representations is of the sort given in the letter of "Mater," who had failed to get her child cured by private practitioners and was told that at the hospital they would soon make him well. In this way she justifies herself—presumably of the lower middle class—going to a hospital and getting a consultant's advice for the petty pence paid by out-patients at some hospitals. But the excuse is a poor one. No medical man wishes to exclude those who cannot pay a consultant and whose diseases are prolonged or difficult of treatment from the benefits of the hospitals. The contrary is the case—as the letter of "Audi Alteram Partem" shows. But "Mater" does specifically say that she could not afford a reasonable fee to a consultant. One great part of the remedy for hospital abuse lies in a better understanding on this subject between consultants and general practitioners. The writer who initiates the correspondence does so because the winter session of the various medical schools is rapidly approaching and by way of warning to intending students and their parents It does not admit of a doubt that the profession is overcrowded and that there is a growing disposition on the part of an ever-increasing section of the public to get medical attendance for nothing or on terms which in no way remunerate a professional man who has spent five or six years in medical education, to say nothing of the preliminary years spent in preparing himself for the medical schools. These facts have been demonstrated over and over again in the pages of THE LANCET and in the statistics of the General Medical Council and of the Metropolitan Hospital Sunday Fund. It is fit that they should be present to the mind of every young man who contemplates entering the medical profession. There is some reason to think that they are being pondered by those whom they concern, and it is to be hoped that they will be increasingly considered. It is too soon to despair of altering the social and economic facts on which half of the argument is based. The hospitals must be restored to the poor and restricted to such as cannot be treated properly at home, or they will suffer in public estimation and support. The physicians and surgeons whose skill makes them attractive surely will not persist in being parties to such a use of them as demoralises the public and injures the prospects of the men whom they educate. At the same time there is enough in these gloomy estimates of the profession as a calling to give pause to all who are not prepared to work hard in it, and so cope effectually with the competition of hospitals and low methods of practice. The proper form of medical attendance for all persons is the best private practitioner their means can command. There is a virtue in the continuity of the medical attendant. Such a relation has immense advantages which do not attach to stray interviews with a stranger at a hospital, and private practice is now conducted on terms almost too considerate to the poor and those of modest means. To men who realise the dignity of medical service and of the medical calling there is still room in our profession; but those who do not and who look for their reward in large incomes will do well to consider in the weeks which intervene between now and Oct. 1st the problems raised by the letters in our contemporary. We have written for the most part from the point of view of the medical student and practitioner. But the question of hospital abuse is a public one with wide bearings, involving fundamental ideas of charity and social morals.

"A PLEA FOR PUBLIC HEALTH."

IN connexion with the newspaper and other discussions regarding the Public Health (Scotland) Bill the *Scotsman* recently published a contributed article under the above title. Our attention was called to it only through a particularly feeble reply which appeared in another newspaper. Fortunately, the controversy in Scotland regarding the status of the medical officer of health is now in large measure settled by the amendments which were carried in the Report stage of the Bill in the House of Commons, but the article to which we refer is so good that we cannot refrain from quoting the latter part of it.

"In the nature of things ..... it is impossible to erect within the domain of public health two separate and independent departments. In local government there are many official spheres which are absolutely independent. The subject matter of their business is perfectly different. Their paths only cross occasionally, as those of every member of a civilised community must. Can there be a medical officer's and a sanitary inspector's departments in the sense that there is a town clerk's and a chief constable's? Can they act with no more 'relations' than the burgh engineer and the inspector of cleansing? It is obviously impossible. The sanitary department is as much an administrative unit as the department of town clerk or burgh surveyor. Writing of municipal government Dr. Bryce says[1]: 'Americans are sufficiently adept in the administration of large business enterprises to understand that in any such undertaking some one man must be given the power of direction and the choice of his chief assistants; they understand that power and responsibility must go together from the top to the bottom of every successful business organisation.' Unfortunately in Scotland it has hitherto been supposed either that the administration of public health falls naturally into two independent businesses, or that, being one large business enterprise, it could yet be successfully prosecuted under two responsible heads. We have shown that the former supposition is incorrect. Our legislators seem to imagine that alone of all businesses that of public health administration can prosper under conditions which in the abstract are inconsistent with prosperity. 'Can two walk together except they be agreed?' In the course of the discussion of this Bill it has become apparent, if it never has been so before, that medical officers and sanitary inspectors are not agreed. Let the inference be drawn that they do not walk together. It is no fault of theirs. Indeed, it shows a great deal of forbearance and self-restraint somewhere that no glaring public scandal has so far arisen. But there is daily friction and daily injury to current business, and daily loss to progress in sanitary knowledge. The sanitary inspector may go on removing 'nuisances' for ever, registering them in folios, and summing up their number in billions, but if he is independent of the medical officer their influence on disease will never be discovered. The medical officer may study the returns of deaths provided for him by this Bill until he is grey, and laboriously tabulate their nosology, but he might almost as usefully classify the flora of his district unless he can at the same time direct the investigation of the 'nuisances' related thereto. You place those officials in a false position and you are astonished if they disagree, and you believe that, disagreeing, their common work is still well done. In the present Bill you place them in a more false and impossible position than ever. So far as a statute can do such a thing, you give equal value to the opinion of these officials on questions of injury to health. How this will work out in courts of law it is easy to foresee. Ninety-nine per cent. of the 'nuisances' are removed for the asking, and in the larger burghs are never even seen by the statutory official. Anybody can see them and might sign the document which advises their 'author' of their existence. The signature of the subordinate who inspects and sees would be quite as efficient as that of the statutory sanitary inspector which may be affixed by a mechanical stamp. The case is exactly the same

[1] American Commonwealth, first edition, vol. ii., p. 303.

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as that of the medical officer in the removal of cases of infectious disease and carrying out of disinfection. At one time warrants were frequently required. Now seldom or never. It would be quite as reasonable, and, in fact, be the true logical sequence of authorising the sanitary inspector to certify injury to health in the one per cent. of cases of nuisance which require resort to legal process for removal, to authorise him to inspect and certify for compulsory removal or disinfection the moiety of cases of infectious disease in which removal to hospital or disinfection are resisted. It is vain to assert any necessity of administration in some counties to justify such departures from principle. No local authority has ever said such a necessity exists. There is no evidence whatever of its existence. On the contrary, there can be no local peculiarity to which competent organisation is unable to adapt a sound principle."

The article was reprinted in full from the *Scotsman* and issued to Members of Parliament. A few copies remain, and can probably be obtained by our readers from the secretary of the Society of Medical Officers of Health for Scotland, Dr. Maxwell Ross, Avenel, Maxwelltown, Dumfries.

FIRST-AID FOR SAILORS.

OF the value of ambulance lectures there can be no two opinions. They enable men who are otherwise untrained to afford assistance to the injured during the interval between the occurrence of the accident and the appearance of a medical man on the scene. In hæmorrhage a minute may be of the utmost importance, and in fractures first-aid is of great utility, as the popular method of diagnosing a fractured leg is by seeing if the patient can walk. Though all must acknowledge the great value of first-aid, yet it is very necessary that those who have undergone this instruction should not take upon themselves to treat conditions which are beyond their skill. A letter appeared in the *Morning Post* of Aug. 14th urging the importance of first-aid lectures being given to the officers and men of the merchant service. With this we fully agree, but we cannot help thinking that the instance which was put forward in that letter as an example of a case in which first-aid would have been of value was hardly one which would have been likely to benefit by such treatment. One of the officers of the ill-fated steamship *Aden* had his shoulder dislocated, and it was not reduced until a fortnight later. Most lectures on first-aid hardly do more than mention dislocations, and the volume, "First-Aid to the Injured," issued by the St. John Ambulance Association, distinctly and properly says: "No one but a medical man should attempt to reduce or replace a dislocation, as this operation requires a very great amount of technical knowledge."

THE DANGERS OF ARTIFICIAL RESPIRATION.

THE most obvious thing to do when a patient fails to take air into his lungs while he is under the influence of an anæsthetic is to adopt one or another form of artificial respiration. In most cases the treatment is a correct one, and leads to a successful recovery of the patient. It must not, however, be assumed that in every case in which the breathing stops artificial respiration is the first act to be performed or is it a proceeding free from danger. In more than one instance resort to this method has led to fracture of the ribs owing to some excited assistant pressing too vigorously upon degenerate bones. There must in every case be a cogent reason for trying to force air into the chest and a clear knowledge that at the same time no impediment exists in the upper air passages to its free entrance and exit. There have been numerous cases in which foreign bodies—balls of worsted, artificial teeth, and masses of undigested food—have become engaged in the air passages, and have only been discovered after futile efforts at artificial respiration had been abandoned, as they had failed in their object. Not infrequently when abdominal section has to be performed to relieve intestinal obstruction there is a fatal tendency for the stercoraceous vomit so liable to occur during the operation to get sucked back into the larynx. This is the great peril of the anæsthesia in such cases, and every instance of death under it is a warning. Through the courtesy of Mr. W. F. Cholmeley, the house surgeon of the Wolverhampton and South Staffordshire Hospital, Wolverhampton, we are able to give the particulars of a case which illustrates this point, although we have no doubt that the actual performance of artificial respiration was indicated in this particular case. It appears that a man, aged fifty-eight years, exhausted by disease, was to be operated upon to relieve obstruction, caused, as was found at the necropsy, by annular carcinomatous growth constricting the intestine at the ileo-cæcal valve. The general condition of the patient was very bad, and the operation had to be delayed by the patient's refusal to give his consent, so that at the time he was given the anæsthetic his state was a grave one. He took the ether well. What degree of anæsthesia was obtained we are not told. In ten minutes, the abdomen being opened and the surgeon being engaged in handling the intestines to discover where the constriction was, the patient commenced to vomit. He became livid and a gurgling was heard in his trachea. Artificial respiration was resorted to for a short time without improving the man's condition, and then tracheotomy was rapidly performed. A quantity of stercoraceous vomit issued from the tracheal tube, and although the artificial respiration was kept up the man died. There can be no doubt that in cases where it is certain that vomit has entered the lungs the first thing to do is, as was done in the present case, to perform tracheotomy and draw out with some pump all the fluid which can be got from the air-passages. Artificial respiration when done by pressing upon the ribs and moving the arms can only force the stercoraceous vomit into the finer bronchi and effectually cut off any chance of the patient's recovery. It has been suggested that preliminary washing out of the stomach lessens the risk of vomiting, but it is not at present certain how far this can be relied on as a safeguard, since, as the stomach is emptied, a renewed regurgitation from the intestines is liable to occur. It seems probable that the inevitable manipulation of the intestines induces the reversed peristalsis which culminates in vomiting. Were this danger considered imminent it might justify a preliminary opening of the trachea and plugging above the tracheotomy tube, so as to effectually shut it off from the pharyngeal space. Whether such a procedure would increase too much the peril of the case experience alone can decide.

MINERAL WATERS AND MUDS OF RUSSIA.

VISITORS to Russia for the International Medical Congress will have the opportunity of visiting some of the interesting Caucasus spas. Considering the immense size of Russia it is only natural that she should possess an extraordinary number and variety of mineral waters. Dr. Frank G. Clemow's English pamphlet on "The Medicinal Waters and Muds of Russia"[1] comes in good time, and is of great interest even if English medical men, or their French and German colleagues, are not likely at present to send many patients to Russian spas. Three hundred mineral water springs and muds have been already examined and described in Russia, but others are known to exist, and when railways have opened up the vast Russian empire, it is to be expected that some out of the many Russian spas will become as famous and as much visited as the well-known health resorts in Central Europe. Moreover, balneology and balneo-therapeutics are being much studied

[1] St. Petersburg, 1897.

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in Russia; balneological societies have been formed in the Caucasus and at Odessa, there are professors of balneology in the principal Russian universities and in the St. Petersburg Army Medical Academy, and the Caucasus springs have been placed under the control of a separate State department. The assistance of French engineers, who had made a speciality of mineral water springs, was obtained in dealing with some of the Caucasus sources, and a school of similar engineers has already sprung up in Russia itself. The Caucasian mineral waters may be divided into four chief groups: (1) the thermal sulphurous waters of the neighbourhood of Piatigorsk, with the Maria Theresa spring not far distant, a bitter aperient water; (2) the thermal iron-containing waters of Jeleznovodsk; (3) the muriated alkaline waters of the Essentuki group, of which the best-known (No. 17) spring, according to the most recent analysis, contains 4·3 parts carbonate of sodium and 3·6 parts common salt per 1000 (the dried salts from this spring are sold in different parts of Russia); the Essentuki sulphurous alkaline waters are used for baths; and (4) the cold, weakly mineralised Narzan spring and other springs near Kislovodsk, used both internally and externally. Besides all these waters there are excellent alkaline springs at Borjom, resembling some of the less thermal springs of Vichy. The salt lakes or brine pans on the northern shore of the Black sea, especially near Odessa and in the Crimea, furnish abundance of strong common salt waters; from the bottom and neighbourhood of these lakes ("limans") the mud for the already well-known mud baths of Odessa is obtained. Besides the salt mud baths, as used at Odessa and in the Crimea, a dilute kind of mud bath is used at Piatigorsk in the Caucasus, Hapsal in Esthonia on the Baltic coast, and at other places. A third kind of mud bath, or rather a peat bath, resembling the famous peat baths of Franzensbad in Bohemia, is employed at Lipetsk, in the south-central government of Tambof. Finally, as curiosities, come the very hot springs of Goriatchevodsk, Bragoun and Kalvadjar in the Caucasus, and of Banauin and Karkin, some of which are at boiling point, but they are equalled by the Great Geyser in Iceland, the waters of which have been ascertained to reach 212° F., and at ten metres below the surface even 219° F.

A FALSE MEDICAL CERTIFICATE.

IT is gratifying to find the Registrar-General showing due vigilance in the prosecution of offenders under the Registration Acts. On the 17th inst. at the North London Police Court, Mr. S. Kent Jones, medical assistant, unqualified, was summoned for making a false certificate of the cause of death of a child, Flora Stone Mack, contrary to the provisions of the Births and Deaths Registration Act, 1894, Section 40. The offence happened in this wise. Mr. Jones was acting as the assistant of Mr. Isaac Cohen, 151, Blackstock-road, N., who was absent for a holiday. The defendant's instructions, according to the report in the *Islington Gazette*, were curious. He was to sign "ordinary certificates for black eyes, injured fingers, and the like," but in the event of more serious cases he was to call in a medical man who was named. When the serious case arrived the medical man named had gone away and left no one in his place. The defendant was "horrified" at the situation in which he found himself, but "to save the trouble of an inquest and a post-mortem examination to the parents" he signed a certificate of death from pneumonia. The certificate was signed neither in the name of the defendant nor in that of his principal, but as "J. Cohen." As Mr. Cohen always signed "Isaac Cohen" the fraud was detected. The facts were elicited with great clearness by Mr. Charles Townley, Superintendent Registrar of Islington, who prosecuted, and they did not admit of dispute. The solicitor for the defendant admitted them at once and relied on the evidence of previous good character, which, however, as both Mr. Townley and the presiding magistrate, Mr. D'Eyncourt, argued, made his error worse in a sense, seeing that he should have known better. It is much to be regretted that there was no necropsy and no medical evidence; in such cases the fullest information should be obtained. In the end Mr. D'Eyncourt, recognising the gravity of such offences, inflicted the full penalty of £10 with Treasury costs of £1 16*s.* 6*d.*, or one month's imprisonment. The case is one of much public importance. It is amazing, in the light of all that has been done to discourage the employment of unqualified assistants, that Mr. Cohen should go away and leave the greater number of his patients in charge of such a person. It is not to be supposed that he authorised his assistant to use a false name or to sign death certificates, but he authorised him to sign other certificates and he placed him in the responsible position of a locum tenens. Mr. Townley said that doubtless such action would be dealt with by the General Medical Council. It is for the Registrar-General and the Council respectively to do their part and to protect the public from unqualified practice as far as their powers enable them to do so.

"EYELID SYMPTOMS IN GRAVES'S DISEASE."

IN a recent number of the *Edinburgh Medical Journal* Mr. Arthur Maude has published an interesting and suggestive paper on this subject. The two chief abnormal variations in movements of the eyelid are von Graefe's sign—the eyelid descending not synchronously with the descending globe, but more slowly and it may be more jerkily, and Stellwag's sign, consisting in retraction of lids and consequent increase in the width of the palpebral fissure. This retraction is most obvious in the upper lids and is frequently associated, as is seen when the patient's gaze is directed downwards, with a cupping of the lower lid. Both these signs are quite independent of exophthalmos, and their clinical value is difficult to estimate. They are neither constant nor pathognomonic, and are variable even in the same individual. Von Graefe ascribed the deranged movement to spasm of the fibres of Müller. More recently Ferri has advanced the theory that the retraction of the lid is the result of the mechanical shortening of the levator palpebræ due to the increased volume of blood-vessels distributed in its substance. Mr. Maude is of opinion that such an explanation might be true in a few outstanding cases, but could scarcely be so in all. Two theories are open as an explanation—viz., that the conditions are due to spasm of the raising muscles or to paresis of the orbicularis. That irritation of the sympathetic can produce retraction of the lids was shown by Remak's experiment and is further demonstrated by the action of cocaine as an irritant of the terminations of the sympathetic. Two difficulties present themselves with regard to accepting irritation of the sympathetic as an explanation, first, that this irritation does not affect the iris or ciliary muscle, both of which react very readily to external stimuli, and secondly, that the phenomena of retraction of the lid and impaired movement, although often variable, may be constant for long periods—a condition scarcely likely to be the result of irritation. On the other hand, it is stated that there is direct evidence that paresis of the orbicularis and other upper facial muscles is almost constant in Graves's disease. This group of muscles as regards its nervous supply is closely connected with the oculo-motor nucleus, and it would thus seem that the eyelid symptoms in this disease are intimately associated with changes in the third nerve nucleus. Mr. Maude's paper, it will be seen, gives an interesting and comprehensive statement of the

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varying explanations offered in reference to the movements of the eyelids, and he himself evidently leans to the last-mentioned theory—viz., an affection of the oculo-motor nucleus and a consequent paresis of the upper facial group of muscles. But it might be objected to such an explanation that if, as is stated, this group of muscles is almost constantly weak, the movements of the lids should also be constant, and, as is well known, this is by no means the case, so that perhaps a satisfactory explanation for all cases is not yet forthcoming.

HOSPITALS FOR SOUTH LONDON.

ONE practical remedy for the want of hospital accommodation in South London is to get rid of hospital abuse and reserve St. Thomas's Hospital and Guy's Hospital severely for the really poor and for fit cases, instead of catering for the well-to-do. The proposals to transfer hospitals on the north side to the south side of the river sound slightly impracticable. The managers of all our hospitals are gratuitously undertaking the impossible task of catering for huge classes who can well take care of themselves and for whom the charitable public will not much longer feel it their duty to provide.

A NEW METHOD OF STUDYING THE PATHOLOGY OF THE VERMIFORM APPENDIX.

THOUGH the number of cases in which the appendix vermiformis has been removed is undoubtedly very large, but little work has been done in investigating the exact conditions present in the appendix. Dr. R Abbe, of New York, published a paper in the *Medical Record* of July 10th, in which he showed that, by distending the appendix with 95 per cent. alcohol and then immersing the organ in alcohol of the same strength, the pathology could be investigated much more satisfactorily than by the ordinary methods. The illustrations which accompany the paper show the chief types which are met with, and the differences, which are great, must be of importance in the pathology. The method is obviously of great value, and the results obtained should be of practical value in treatment.

ANOTHER DEATH FROM ANTHRAX.

AT an inquiry held at Bradford on Aug. 11th, regarding the death of a woman who had been engaged in wool-sorting, some interesting facts were brought to light concerning the way in which the new wool-sorting regulations are carried out, or rather set on one side. The medical officer of health of the district is of opinion that the case was one of anthrax, and, taking into consideration the circumstances under which the death occurred and the fact that a microscopical examination of the blood was made, there appears to be little doubt as regards the diagnosis. Although the infection was probably through the respiratory passages it seems that this woman was allowed to go to work whilst wearing bandages rendered necessary by the infliction of a wound on the arm. The dust from the dust chambers removed once a week should by the regulations laid down be burnt, but it is alleged that it was given away for the purpose of being transformed into an artificial fertiliser or manure. It seems incredible that people should think of using such a material for land. It was urged that disinfectants were sprinkled over the floors of the rooms in which the wool-sorters were working. It seems absurd with our present knowledge of the resisting power of anthrax spores to play with them in this fashion. Nothing but the most careful disinfection can be of the slightest value, and the mere sprinkling of disinfectants simply leads to a false sense of security and to the neglect of real precautions. What with the minimising of the draught, the contracting of the flues, the irregularities as regards opening bales in rooms not specially set apart for the purpose, and similar breaches of regulations, the astonishing thing is that fallen Persian wool, even when greasy, does not give rise to more cases of anthrax than are at present attributed to it. The manufacturers may complain that the restrictions put upon their trade interfere with the rapidity of work and therefore with their chance of competing in the open market; but as the various questions bearing on wool-sorter's disease are now no longer debatable it is surely time that an effort should be made to compel compliance with the new regulations, which, good as they are, in many respects might still with advantage be made more strict. Until, however, an effort is made to enforce even the present regulations we must expect from time to time a recurrence of these sad cases of death from anthrax.

UNQUALIFIED PRACTITIONERS AND DEATH CERTIFICATES.

WE publish in another column the account of an inquest held on Aug. 5th at Rosedale Abbey, Pickering, Yorkshire. As will be seen by the evidence the deceased, a woman aged fifty-six years, was under the treatment of an unqualified practitioner. The latter gave a certificate that death was due to "inflammation of the bladder and peritonitis." The registrar refused to accept the certificate on the grounds that it was not signed by a legally qualified medical man and that the death was sudden. On the case being reported to the coroner he decided to hold an inquest, and issued an order for a post-mortem examination. The necropsy revealed acute inflammation of the kidneys. The bladder was empty and contracted and free from disease. There was no peritonitis. What was in reality suppression of urine had been regarded as retention. It seems strange on the diagnosis that a catheter was not passed. What symptoms there could have been to suggest cystitis we are at a loss to understand. Even qualified medical men are liable to err, since medicine is not an exact science, but with the facts before them it is astonishing to a degree that the jury should for one moment have unfavourably criticised the registrar's action in refusing to register the death. It might have been thought that they would have expressed and recorded their approval of the course he took, instead of condemning both him and the coroner in the rider to their verdict that "the post-mortem examination and the inquest were unnecessary." We consider the case was eminently one for the fullest inquiry.

MATERNITY CHARITIES AND UNMARRIED WOMEN.

AN attempt to define the normal relation between childbirth and the work of charitable relief might at first sight appear to be superfluous. Yet the fact remains that such a definition is still unknown, or if it does exist is too imperfectly understood to command general approval. Where the antecedents to matrimony have been quite regular there is of course no difficulty save that of the expense incurred. The case of illegitimate childbirth on the other hand is quite different. Questions of moral responsibility have entered in here, and the consequence is that public institutions which freely accept as inmates poor and deserving married women have no offer of help for a maiden mother. While we are willing to spare by every due consideration the feelings of the former class with regard to social surroundings, we cannot but think that the distinction in treatment so favourable to them is unduly neglectful of their erring sisters. It cannot be defended on the ground of charity, unless we accept the much wider proposition that every mischance of illness which is the direct outcome of a vicious

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practice is outside the province of the charitable healer. The close connexion between illegitimacy, concealment of birth, and infanticide needs no explanation. Such preventive measures as have hitherto been employed to destroy this mischievous and criminal combination have not been highly successful. The question remains whether they should not be supplemented by such public and charitable aid as is plainly needful to secure the safety of mother and child at the time of birth. We would answer this question in the affirmative. Mr. Frederick Lowndes, in a paper recently reprinted, advocates a similar view. He proposes that midwives attached to maternity hospitals should be eligible for attendance on cases of labour without distinction outside the walls of these hospitals, and that provision should be made for the reception of a certain number of necessitous cases within the wards also. We believe that the adoption of these or similar suggestions would neither, in a well-regulated institution, tend to lower our present standard of morality nor act upon the recipients of charity as an encouragement to do evil. A judicious selection of cases for admission would of course be imperative, and a preference, though not wholly exclusive, would naturally be given to married women. Defended by such needful safeguards, the arrangement suggested should, we consider, work well and should prove in the end to be both a humane and a politic measure.

THE OPERATIVE TREATMENT OF SPINAL CURVATURE.

AT the French Academy of Medicine M. Chipault has from the commencement of his researches on the reduction or correction of spinal deviations maintained that the correction will not be permanent unless the vertebral column is kept in its new position by direct fixation of the spinous processes; this applies both to scolioses and to the results of Pott's disease. All the authorities on the subject now agree with him. M. Regnault has, in the first place, demonstrated before the Anatomical Society that Pott's disease and spinal curvatures (scolioses) if left to themselves tend to recovery by ankylosis of the posterior portions of the vertebræ, and that metallic fixation of the processes consequently does no more than anticipate in a most logical way the natural process of recovery. In the next place, M. Ménard has exhibited to the Academy and to the Surgical Society a series of anatomical preparations which proves the harmlessness of the operation for reduction. So far as the spinal cord and the parts surrounding the vertebral column are concerned, the correction of these deviations sometimes produces a remarkable change in the configuration and dimensions of the space lying in front of the vertebral column, and these anatomical preparations show that for the purpose of rendering the improvement permanent it is necessary that the spine shall be fixed in the new position. Many cases of recent occurrence in which distortion returned when fixation was neglected after correction of the deformity prove the absolute necessity for fixation of the processes. The attention of surgeons in many different places seems at the present time to be directed to this subject, and M. Chipault has now given an account of the improvements which he has during the last few months made in the operation originally devised by him. It consisted, as will be remembered, in tying the processes with stout silver wire, a method which is satisfactory and will continue to be employed under certain circumstances, but is nevertheless sometimes difficult of application on account of the stiffness of the wire. In place of the wire he therefore now uses hooks of four different forms, two for lateral deviations and two for antero-posterior deviations; each form of hook is made in two qualities, one being rigid, for use when it has been possible to correct the distortion completely, and the other being pliable, so as to be available when the correction of the deviation is only partial. The hooks can be applied with the utmost ease. They cause no local disturbance and do not interfere with the development of the portion of the spine to which they are applied.

A PATIENT FINED FOR LEAVING A HOSPITAL.

A PATIENT has lately been fined for leaving a fever hospital while suffering from typhoid fever. He had been an inmate for some time and had apparently been very ill, but during his convalescence he thought he was well enough to go and so walked out one day without saying anything to anyone. Patients in general hospitals not infrequently practise this mode of departure, which probably does little harm to anyone except the patient himself; but in the case of infectious hospitals things are different, for unless the patient and his clothes are properly disinfected disease may be spread to any extent. It is thus right that patients should understand that although they may risk doing harm to themselves by leaving hospitals against advice, they must not be allowed to convey infectious diseases to other people who are unfortunate enough to come in contact with them.

THE FAMINE IN INDIA.

THE news from the famine districts of India has been so uniformly good for some weeks that we hope we are now within a measurable distance of the ending of the acute stage. But before the famine passes out of men's minds or is crowded out by the more exciting news of frontier wars, it may be well to recall the chief causes of the scarcity of food in the famine-stricken districts. No rain, no food for cattle, then starvation of the earth and its dwellers. Cattle are fed during the year for three months corresponding to the rainy season upon green grass, and then for the next four months they are fed upon hay made from this same grass; but at the end of seven months the supply is exhausted, and for five months the animals get only millet stalks as their staple food. It must be remembered that beans, barley, and oats grow only in Upper India. When the supply of rain is abnormally diminished the grass and hay are deficient, and the cattle die for want of food. The dearth of cattle puts an end to all bullock traffic, to the carting of grain for human needs, to ploughing, and to all agricultural work. Ploughing in India is done twice a year and is impossible except after the rains, because the ground at other times is too hard and fissured. In the old days the natives used to bury grain for years, and so in famine times there was a hidden store of food for men and cattle, but to-day the grain is all exported by rail to Bombay, and thence out of India. This is a necessary sequence of the modern extension of railways throughout country districts.

POLYNEURITIS.

AT the recent meeting at Baden Baden of the South-west German Society of Neurologists and Alienists[1] Professor Strumpell directed attention to some points in the symptomatology of this disease. He mentioned in particular the occurrence of double facial palsy in alcoholic neuritis as a result of an affection of both facial nerves. This condition he had observed on two occasions. He also referred to a hitherto undescribed affection of the auditory nerves which had been described by Professor Kiesselbach—viz., true nerve deafness on each side—passing off in three weeks, and being replaced by noises

[1] Neurologisches Centralblatt, p. 610.

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in the ears lasting for a long time, the result, doubtless, of neuritis of the auditory nerve. He also referred to the frequent occurrence of psychical disturbances in this disease, and especially the difficulty experienced by the patients in retaining in the memory any fresh impressions. The patient referred to as suffering from nerve-deafness was unable to recall words repeated to her or objects shown to her after the lapse of a quarter of an hour. Anatomically the conditions found in alcoholic polyneuritis consisted in slight changes in the anterior horn cells, profound degeneration in the peripheral nerves, and very slight changes in the muscles in spite of complete reaction of degeneration. Professor Strumpell expresses the opinion that the anatomical conditions underlying this phenomenon of degenerative reaction still require investigation.

THE INTERNATIONAL JOURNAL "JANUS" AND EPIDEMIOLOGY.

THAT enterprising journal, *Janus*, which we commented upon in our issue of Jan. 9th, 1897, is anxious to bring about an international system of reporting epidemiological data, and thus to give warning of epidemic storms in somewhat the same way that atmospheric disturbances are now heralded so that precautionary measures may be taken. To quote the words of the editor:—

"In furtherance of these aims we purpose giving, as soon as arrangements can be made, a bi-monthly record of the progress of epidemiology, which shall include—(*a*) current statistics of the morbidity and mortality from epidemic diseases—contagious, miasmatic, and miasmatic-contagious—from states, provinces, and cities for which such data are available, accompanied when possible by the meteorology; (*b*) original observations on epidemic diseases; (*c*) historical records of epidemics in particular countries and cities, and their periods of prevalence and quiescence; (*d*) special communications on subjects of epidemiological interest. We shall feel deeply indebted to any of the collaborateurs or readers of *Janus* who will undertake to furnish accounts of epidemic diseases in their respective countries, or who will regularly supply copies of official bulletins of morbidity and mortality relating to the districts in which they reside which might otherwise be inaccessible to the Rédaction, or who may be disposed to assist us in any other way. Communications on this subject, in English, French, German, or Italian, to be addressed to Dr. A. Davidson, 30, Morningside-drive, Edinburgh."

We can only wish the editor of *Janus* every success in his project—one which we think is very valuable, but at the same time very difficult to carry out.

MEDICAL EXAMINATION OF CANDIDATES FOR THE ARMY.

SOME correspondence has recently taken place in the columns of the daily press relative to the system in force for the physical examination of candidates for Woolwich. It appears that a boy who went up straight from Cheltenham College passed in first at the last competitive examination for the Royal Military Academy, and was a few days afterwards rejected as medically unfit for the service. It is needless to say that this involved a great waste of time, work, and money, and that the result must have been a very keen disappointment to the boy, his family, and all concerned. It is impossible not to sympathise with them. The competition for commissions in the army is very severe and the standard for Woolwich is very high, and the wasted effort, when it is wasted, is consequently a really serious matter. A communication signed "H. C. D.," which subsequently appeared in the *Times*, contains some sensible comments, and puts the case fairly. It points out that the medical and physical requirements are very clearly set forth in the published official regulations on the subject, which can be obtained through any bookseller, and that if the parents or guardians of the intending candidate would only procure a copy of these regulations and take them and the boy to any careful and competent medical practitioner in order to see whether he fulfilled all the conditions laid down before commencing the requisite course of study and training, much, if not all, of this great disappointment would be saved. It is, nevertheless, pointed out that practically a preliminary examination might be made available for candidates at the hands of the Army Medical Staff by making use of the existing machinery at the headquarters of district commands and regimental districts where there are qualified medical officers with the necessary experience and the test appliances required for the examination of army recruits. Such a preliminary examination, which could, of course, only deal with existing conditions and states of health, would, at any rate in many cases, obviate the bitter disappointment of wasted effort.

PERFORATION OF A GASTRIC ULCER INTO THE PERICARDIUM.

THE probability of a gastric ulcer perforating the wall of the stomach depends chiefly on its situation. An ulcer on the anterior surface of the stomach will almost certainly lead to perforation if the ulcerative process continues; but should the ulcer be situated on the posterior wall adhesions form very readily, so that the stomach becomes adherent to the diaphragm or to the left lobe of the liver; but the diaphragm itself may become perforated by an extension of the ulceration, and then the ulcer may open into the left pleural cavity or into the pericardium. Perforation of the diaphragm by a gastric ulcer is decidedly a rare occurrence, and even when it does occur the pleura is much more frequently affected than the pericardium. Of twenty-eight cases of perforation of the diaphragm by gastric ulcers collected by Ludwig Pick[1] only ten were cases in which the ulceration had perforated the pericardium. In THE LANCET of Aug. 14th we recorded a very interesting case which occurred in the practice of Mr. Collingwood Fenwick, in which a gastric ulcer had perforated the pericardium with an immediately fatal result, and yet no previous symptoms had occurred to point to the presence of the gastric ulcer. In four of the ten cases collected by Pick the two surfaces of the pericardium had become adherent before the ulceration had perforated, so that the ulcerative process involved the substance of the heart itself.

WE regret to announce that Sir Joseph Désiré Tholozan died at Teheran (Persia) on July 30th in his seventy-seventh year. Sir Joseph Tholozan had held the appointment of physician to the Shah since 1858. He was a Commander of the Legion of Honour, a corresponding member of the Institut de France, and an Honorary K.C.M.G.; various orders and decorations were also conferred on him by the Persian, Russian, and Italian Governments.

PROFESSOR CORFIELD has been elected an honorary member of the Royal Society of Public Health of Belgium, of which he has been a corresponding member for some years. The honorary members consist of Ministers, Ambassadors, and other high State officials, and a few foreign hygienists. Professor Corfield is the only Englishman who has received this honour.

THE Queen has been pleased to appoint Mr. Henry Edgar William Hoffmeister, M.R.C.S. Eng., L.R.C.P. Lond., Surgeon

[1] Zeitschrift für Klinische Medicin, vol. xxvi., p. 473.

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Apothecary to Her Majesty at Osborne, jointly with Mr. William Hoffmeister, M.D. Heidelb., and Mr. John Bates Hoffmeister, M.R.C.S. Eng., L.R.C.P. Edin.

THE vestry of St. James's, Westminster, have contributed £100 to the Middlesex Hospital and £150 to the Prince of Wales's Hospital Fund out of the surplus profit derived from the grand stand erected in Waterloo-place to view the Jubilee procession.

MR. W. ERNEST THOMSON, M.A., M.D. Edin., has been appointed to the chair of Physiology at Anderson's College, Glasgow, in room of Dr. Campbell Black.

THE BRITISH ASSOCIATION AT TORONTO.

IT would seem as though the members of the British Association this year had conspired together to make the scientific proceedings at their annual meeting at Toronto of more interest than usual. If so, the conspiracy has succeeded, for a more interesting and a more comprehensive list of subjects for the opening addresses could hardly have been selected. And many of them possess a special interest for medical men, since though, of course, each subject was dealt with in its proper section, yet many of them were related very closely to the science which concerns our readers most. The presidential address was delivered by Sir John Evans, K.C.B., who, though leaning naturally enough to the consideration of archæology as a science, did not forget to generalise so as to include in his discourse pertinent references to the progress of geology, palæontology, chemistry, and the allied sciences, chiefly in their bearing upon the history of man and of the world. How far Sir John Evans succeeded in his task of delivering an address on science in general our readers will be able to judge for themselves, as we print the address in full this week.

At first sight it is not apparent why Professor Michael Foster took for the theme of his address to the Physiological Section the physiology of the last thirteen years. But, as he pointed out, the past thirteen years do in a certain sense mark a break between the physiology of the past and that of the future. The last thirteen years have seen the removal of eminent men like Darwin, Claude Bernard, Bowman, Brown-Sequard, Brucke, Du Bois Reymond, Donders, Helmholtz, Ludwig, and Huxley, one prominent inquirer being left in the person of Albert von Kolliker, who "in his old age is doing work of which even he in his youth might have been proud." Despite the great losses in the ranks of physiological students during the last thirteen years physiology has not been idle, and Professor Foster deduced convincing examples in support of this statement. We are nearer a better understanding, he said, as to the exact nature of the fundamental changes which bring about contraction and as to the relations of those changes to the structure of muscular fibre. Then, again, another problem—the beat of the heart—has been strenuously studied with satisfactory results. Again, enormous advances have been made in what Professor Foster said may perhaps be called the new physiological chemistry. He referred mainly to the admirable researches of Kühne on the composition and constitution of proteids, and again to the remarkable work of Emil Fischer on the synthesis of the sugars. He even expressed the hope that as the old problems were attacked by the new chemical method—the old physiological chemistry passing surely but slowly away—we may at any time receive the news "that the stubborn old fortress of the proteids has succumbed to the attack." Finally, Professor Foster dwelt upon the relation of physiology to medicine. Physiology is (Professor Foster says), and always must be, the basis of the science of healing. But, as he pointed out, physiology not only heals, but governs and educates, "and if, as the whole past history of this science leads us to expect in the coming years, a clearer and clearer insight into the nature and conditions of that molecular dance which is to us the material token of nervous action, and a fuller, exacter knowledge of the laws which govern the sweep of nervous impulses along fibre and cell, gives us wider and directer command over the moulding of the growing nervous mechanism and the maintenance and regulation of the grown one, then assuredly physiology will take its place as a judge of appeal in questions, not only of the body, but of the mind; it will raise its voice, not in the hospital and consulting-room only, but also in the senate and the school."

A more interesting historic survey of the progress of botany could hardly have been compiled than is contained in the address to the Botanical Section by its President, Professor H. Marshall Ward. In this address we find the story of bacteriology and its development. Needless to add, the President dwelt considerably upon those researches bearing upon fermentation. Professor Ward some time ago defined alcoholic fermentation as the oldest form of microscopic gardening practised by man, and it is perfectly true. And what an important bearing this has had upon the fermented beverages of the nation. The production of these beverages depends upon the destructive action of certain fungi upon a saccharine liquid, and it is the altered or fermented liquor which is consumed. The theory, however, of alcoholic fermentation seems destined to receive its severest blow by the announcement by E. Buchner of the isolation of an alcoholic enzyme which will convert sugar into alcohol and carbonic acid without apparently the agency of plant life at all. It is impossible to dwell upon the interesting ramifications of Professor Ward's paper, so wide a field does his interesting address cover. Suffice it to mention that in the paper are considered the functions of specific bacteria in the development of quality in butter, cheese, and even tobacco, and the address concluded with an admirable account of those fungi which are antagonistic to our well being. Professor Ward referred to the best means of extinguishing those fungi which are injurious to vines and to hops. As he pointed out, we must learn the habits of the fungus and its life-history before this can be done satisfactorily, or, in other words, see how it is possible to step in at the critical moment and interfere with these relationships in the direction desired by human interests.

If we mistake not the address to the Chemical Section by Professor Ramsay will possess distinct historic importance. He announced the discovery, if we may so put it, of an undiscovered gas. In his laborious work on the properties of argon and helion he was led to surmise the existence of a new gas. In spite of failure to separate this gas, which probably is associated with helion and argon, Professor Ramsay is able to predict the properties of the unknown element. Thus its atomic weight has been approximately fixed, and the new gas, he says, will resemble argon and helion in being indifferent to the action of reagents and in not forming compounds. Listeners to his most interesting address will agree that Professor Ramsay fulfilled his promise to combine a little history, a little actuality, and a little prophecy. The history, as he said, belongs to the old world, and he had endeavoured to share passing events with the new, and hoped that much of the prophecy would meet with its fulfilment "on this side of the ocean."

In his address to the Zoological Section Professor L. C. Miall, expressed his conviction that we study animals too much as dead things. His address dealt mainly with

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reproduction and animal transformations. The latter subject is, indeed, a most wide one, and, as Professor Miall observed, "how great is the part of adaptation in nature!" But comparatively modern adaptations may be of vital importance to the species and particularly luminous to the student because at times they show us nature at work.

Sir William Turner took as the basis of his address to the Anthropological Section "Some Distinctive Characters of Human Structure," in which he dwelt upon the differences of action between the animal and man, the former being guided by its instincts alone, while the instinctive acts of the latter are under the influence of the reason and intelligence. As the scale of humanity is ascended the more perfect does this control appear, and it was for scientific inquiry to determine, as far as the anatomical conditions will permit, the proportion which the association centres bear to the other centres both in man and other mammals, the period of development of the association fibres in comparison with that of the motor and sensory fibres in different animals, and, if possible, to obtain a comparison in these respects between the brains of savages and those of men of a high order of intelligence.

In the address to the Mathematical and Physical Section Professor A. R. Forsyth took occasion to remark that if in the range of human endeavour after sound knowledge there is one subject that needs to be practical it surely is medicine; yet in the scientific field it has been found that branches such as biology and pathology must be studied for themselves, and be developed by themselves with the single aim of increasing knowledge; and it is then that they can be best applied to the conduct of living processes. So also in the pursuit of mathematics, the path of practical utility is too narrow and irregular, not always leading far, but of the effective assistance which mathematics lends to general natural philosophy there can be no doubt.

These are but a tithe of the papers of equal scientific interest which were read before the Association, but in giving a general and necessarily brief sketch we have confined ourselves to those which have a distinct bearing upon medicine, and are therefore of particular interest to our readers. From the point of view of a record in the annals of science there can be little doubt that the meeting of the British Association in 1897 at Toronto was an unqualified success, and the great objects for which these annual meetings are convened—viz., the gathering together the results of a year's scientific labour, to measure how nearer we are to the truth, to open up or suggest new paths of inquiry, and to encourage and stimulate all those engaged in research for the truth's sake—were more than fulfilled.

UNQUALIFIED PRACTITIONERS AND DEATH CERTIFICATES.

AN adjourned inquest was held on Aug. 5th at the Crown Hotel, Rosedale Abbey, Pickering, Yorkshire, by Mr. W. W. Stenart Corry, deputy coroner, concerning the death of Jane Thompson, aged fifty-six years, who died somewhat suddenly while under the treatment of an unqualified practitioner named Alexander, of Castleton, whose death certificate, to the effect that the deceased died from "inflammation of the bladder and peritonitis," Mr. Thomas Richardson, registrar for the district, refused to accept. The following is an account of the proceedings:—

The evidence of James Thompson, taken at the previous inquiry on July 31st, in which he identified the deceased as his wife, having been read over, Mary Ann Mortimer, daughter-in-law of the deceased, was called. She said that to the best of her knowledge and belief the deceased had not passed any water since the morning of the day previous to her death; during the time she was present nothing was done by way of operation to give relief.

Mr. Geo. Agnew Robertson, of Pickering, who made a post-mortem examination of the body of the deceased, next gave a clear and succinct account of the condition in which he found the various internal organs, all of which he described as healthy except the left lung, which showed signs of an old-standing pleurisy; the heart, which was enlarged, flabby, and empty; and the kidneys, both of which were enlarged, congested, and in a state of acute inflammation. He told the jury he believed that death was due to "failure of the heart, the result of inflammation of the kidneys." He further emphasized the fact that the bladder was empty, contracted, and perfectly healthy.

Thomas Richardson, registrar of births and deaths for the Lastingham sub-district, who while giving his evidence was severely heckled by the foreman of the jury as to his reason for refusing to accept Alexander's death certificate, stated that he did so because the death was sudden, the deceased having been out at work on the day previous to her death, and because the certificate was not signed by a registered medical practitioner.

The evidence of Sergeant Kemp, who was also called, was of an official character, and described his action in carrying out the instructions of the coroner, Dr. Porter, of Hemsley, on whose authority the present inquiry was being held.

The deputy coroner, who had previously sworn himself and given evidence as to the state of health of the deceased when he himself last saw her professionally, about a month before her death, in addressing the jury, pointed out the discrepancy that existed between the result of the post-mortem examination and Alexander's death certificate, the statement in which in no one respect corresponded with the actual facts of the case; he explained the difference between retention of urine and suppression of urine, and pointed out that any operation, even the use of an instrument like a catheter in the latter case, however it might complicate matters, could give no relief, the supposition that the deceased was suffering from retention of urine, the result of inflammation of the bladder, being completely negatived by the medical testimony; he further said that as there was no evidence that Alexander had performed any operation, not even having passed a catheter, and there was no charge of malpractice against him, he, the deputy coroner, did not think it necessary to summon Alexander to appear and give evidence, as he otherwise should have done. Having made these remarks he left it with the jury to say what was the cause of death.

The jury, most of whose sympathies seemed to be on the side of Alexander, the unqualified medical attendant, brought in a verdict of "death from natural causes," adding as a rider that "they were of opinion that the post-mortem examination, the inquest, and the expenses incurred thereby were unnecessary."

BRITISH DENTAL ASSOCIATION.

THE annual general meeting of the British Dental Association, which commenced its proceedings in Trinity College, Dublin, on Aug. 17th, concluded a most successful meeting on Aug. 19th.

Mr. F. Canton, of London, the retiring President, in his valedictory address referred to the progress of dentistry during the last sixty years, and briefly indicated the vast improvements that have been made in the treatment for the preservation of the teeth. Dr. Stack, of Dublin, the incoming President, in an address of great interest to dentists, alluded to the establishment of the new Dental Hospital in Dublin, which owes its origin so much to the stimulus afforded to philanthropic effort by a former meeting of the association in Dublin.

The Rev. Dr. Samuel Haughton, Pro-Provost of Trinity College, on behalf of the University, expressed to the members the gratification the authorities had experienced in welcoming within the College walls such a scientific and educational body as the British Dental Association, and he trusted that on some future occasion when Ireland might be visited a similar opportunity for a display of their goodwill and hospitality might be afforded.

Various reports were read, including those of Mr. W. B. Paterson (London), the honorary secretary; Mr. W. Hern (London), the treasurer; and other business was concluded by the passing of hearty votes of thanks to the local committees in charge of the various sections of the meeting.

Besides many papers and demonstrations of special interest to dental surgeons which were given during the progress of the meeting there were others of considerable value in a general scientific sense; especially was this so in the section devoted to dental microscopy, a subject in which English dentists have already won considerable renown, both at home and abroad.

The social festivities during the meeting included a brilliant reception by the President and Mrs. Stack at the Science and Art Museum on Aug. 18th, attended by over 1500 people, a dinner in hall at Trinity College, and several other entertainments, including two on the invitation of Sir John Banks, K.C.B., and Sir John Power.

The meeting was well attended by members from all parts of England, Scotland, and Ireland, and was generally voted a most successful one.

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GUARDIANS AND LUNATICS.

IT is necessary to have some place to which a person suspected of being a lunatic can be taken during the fourteen days set aside by law in which the medical men and justices engaged in the case can come to a conclusion as to whether he is a fit person for removal to an asylum. In the opinion of our legislators the workhouse is deemed the most suitable place, and in most such institutions there is accommodation of a more or less suitable kind for such cases. In the case of wandering lunatics, and whenever a person is in doubt as to whether a friend or relative is bordering on insanity, application is made to the relieving officer of the parish. The relieving officer then lays information before a lunacy justice, and the next move is for the latter to summon to his assistance a qualified medical practitioner. It rests entirely with the justice whom he calls and what fee he orders to be paid to the medical man in such circumstances. It is an order on the guardians to pay a certain sum for the examination of the alleged lunatic. The justice, in most cases, calls in the medical officer attached to the workhouse, because, for obvious reasons, he is more likely to be acquainted with the case, for the alleged lunatic being in the workhouse is under his care day by day, and he can watch the individual more closely than one called in from the outside. Strange to say, nothing is commoner than for the guardians to resist these payments and to try to cut them down. Indeed, it is periodical with some guardians to raise objections to these fees, though on what grounds it is extremely hard to say. The medical officer is an officer of the board, it is true, but the special work which he is called upon by the justice to perform does not come within the scope of his duties as defined by the Local Government Board. It is, moreover, work requiring very special knowledge, both legal and medical. It requires great judgment and necessitates a great deal of time to be spent on any particular case and additional inconvenience in the way of keeping appointments with the justice at unsuitable times, making special written reports, filling in certificates, and, finally, even in the present state of the law, though matters are much improved, considerable risk of an action-at-law is incurred. It seems to us, therefore, that this work should be paid for by extra remuneration, and we fail to understand why the guardians should object to the payment. These gentlemen consist, it is true, as a rule of persons to whom the medical man's salary seems, perhaps, a very large sum; but they forget that the exercise of his profession has necessitated a large expenditure of time and money in the acquisition of special scientific technical knowledge, and in this case the mastering of Acts of Parliament.

We have lately received a copy of a circular letter which runs as follows:—

PARISH OF ST. MARY'S, ISLINGTON.

LUNACY FEES.

Guardians' Offices, St. John's-road, Upper Holloway, N., July 19th, 1897.

DEAR SIR,—I am directed by the guardians of this parish to state that they have had under consideration the subject of the payment of fees in and about the examination of alleged lunatics. In this parish, as in many others, it is the custom for nearly all alleged lunatics dealt with by the parish officers to be admitted into the workhouse under Section 20 of the Lunacy Act, 1890, and they are in due course examined by justices who attend at the workhouse for that purpose. The justice attending always calls to his assistance in his examination the resident medical officer of the workhouse, and in a general way this is, no doubt, the best course. It is part of the duty of such officer to see to the needs of the lunatic before and after examination whilst in the workhouse, and this is covered by the salary he receives; but for the short time the examination takes place a fee is payable. The guardians believe that in many places, especially where there is a large and increasing number of alleged lunatics, dissatisfaction exists in regard to this matter, and that boards of guardians would rather increase the salary of a medical officer to a suitable amount than pay, as now, a salary, with the addition of a capitation fee for every person admitted into the Lunacy Wards.

At the present time there is before the House of Lords a Bill, introduced by the Lord Chancellor, to amend the Lunacy Acts, 1890 and 1891. The guardians of this parish are now asking the Lord Chancellor to introduce a provision into the Bill by which the justice shall call the medical officer of the workhouse or infirmary, as the case may be, to his assistance in the examination, and that it shall be part of the duty of the medical officer as such to render the assistance, reserving, however, the right for the justice to call in another medical man if special circumstances require it.

The guardians are also asking the Local Government Board for their support. If the guardians of your union agree with the proposal it is requested that they will be good enough to cause letters to be sent to the Lord Chancellor and the Local Government Board in support of the same.

I am, dear Sir, yours truly,
EDWIN DAVEY, Clerk.

It is, in other words, one of those periodical attempts on the part of the guardians to deprive one of their most underpaid and overworked officers of legitimate remuneration, and we trust sincerely, for the credit of the various boards of guardians into whose hands this letter may fall, that they will resist this as an injustice to one of their most deserving officials. Guardians are apt to forget how much the chief spending departments of the parish rest in the hands of their medical man, and if they would only take a liberal view of these things and treat their medical officer well they would keep his heart in his work, and would induce him voluntarily to reduce the expenditure of the parish by many hundreds a year. As a matter of fact, the guardians have, as the law now stands, no option in this matter of payment, but we prefer to present the case for their consideration on other and more liberal grounds, and thus to urge them to act fairly towards their medical officers.

OPENING OF THE MEDICAL SCHOOLS.

WINTER SESSION, 1897-98.

METROPOLITAN.

St. Bartholomew's Hospital.—The session will begin on Oct. 1st, and the annual dinner of old students will take place in the Great Hall on the evening of that day.

Charing-cross Hospital.—The session will commence on Oct. 4th, when an introductory address will be delivered in the anatomical theatre of the Medical School at 4 P.M. by Dr. Wm. Carter, Professor of Materia Medica in University College, Liverpool.

St. George's Hospital.—The session will open on Oct. 1st with an introductory address at 4 P.M. by Dr. Patrick Manson. The Medical School dinner will be held in the evening at the Whitehall Rooms, Dr. T. T. Whipham presiding. Dr. Alex Hill, Master of Downing College, Cambridge, will distribute the prizes on Oct. 29th.

Guy's Hospital.—The session will commence on Oct. 4th. On that day the first meeting of the Physical Society will be held and will be preceded by a house dinner at the Students' Club.

King's College Hospital.—There will be a reception and distribution of prizes on Oct. 1st.

London Hospital.—The session will commence on Oct. 1st. The old students' dinner, which will take the place of an opening ceremony, will be held in the library of the Medical College on that evening, the chair to be taken by Dr. A. Ernest Sansom.

Middlesex Hospital.—The session will commence on Oct. 4th, at 3 P.M., when Sir Donald Smith, G.C.M.G., LL.D., Chancellor of M'Gill University, Montreal, will address the students and distribute the prizes. The dinner of the past and present students will take place at the Café Royal on the same evening, Mr. Storer Bennett, F.R.C.S., in the chair.

St. Mary's Hospital.—The session will be opened on Oct. 1st, at 4 P.M., with an introductory address by Dr. William J. Gow. The annual dinner of past and present students will be held the same evening in the King's Hall, Holborn Restaurant. Mr. A. J. Pepper, F.R.C.S., will occupy the chair.

St. Thomas's Hospital.—The session will commence on Oct. 2nd. On the same day, at 3 P.M., the prizes will be distributed in the Governors' Hall, and the annual dinner will take place at the Whitehall Rooms at 6 30 P.M., Sir William MacCormac, Bart., President of the Royal College of Surgeons of England, in the chair.

University College Hospital.—The session will be opened on Oct. 4th, at 4 P.M., when the prizes will be distributed, after which an introductory lecture will be delivered by Mr. Raymond Johnson, F.R.C.S. On the same day, at 6 30 P.M., the annual dinner of the old and present students will be held at the Hôtel Cecil, Victoria-embankment, Dr. H. Charlton Bastian, F.R.S., in the chair.

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Westminster Hospital.—The session will begin on Oct. 1st. The distribution of prizes, followed by a conversazione, will take place at the Westminster Town-hall on Sept. 30th, at 8.30 P.M.

Royal Free Hospital (London School of Medicine for Women).—The session will begin on Oct. 1st, when the opening address will be given at the Royal Free Hospital, Gray's-inn-road, by Mr. Grosvenor Mackinlay, F.R.C.S. Edin., at 8 30 P.M.

PROVINCIAL.

Mason College, Birmingham.—The opening of the winter session of the Queen's Faculty of Medicine of this College will take place on Oct. 1st. on which, occasion Sir James Crichton Browne, M.D., F.R.S., will deliver the address. In the evening the medical men in Birmingham and the neighbourhood have been invited to meet Sir James Crichton Browne, at a conversazione.

University College, Sheffield, Medical Department.—The Medical School will open on Oct. 1st. The introductory address will be delivered at 4.30 P.M. in the lecture-hall of the College by Dr Philip Henry Pye-Smith, F.R.S., senior physician and lecturer on Medicine, Guy's Hospital.

At *University College, Bristol, Yorkshire College, Leeds, University College, Liverpool*, and *Owens College, Manchester*, the session will commence on Oct. 1st.

SCOTLAND.

Anderson's College Medical School, Glasgow.—The session of this school will open on Oct. 14th. There will be no special function of any kind. Each professor will meet his own students and give them a short introductory address connected more particularly with his own subject.

Western Medical School, Glasgow.—The school will re-open on Oct. 19th.

IRELAND.

Queen's College, Cork.—The session will open on Oct. 19th.

Queen's College, Belfast.—The first term of the session will begin on Oct. 19th.

CHANGES IN THE MEDICAL SCHOOLS AND HOSPITALS.

METROPOLITAN.

St. Bartholomew's Hospital.—During the past year numerous changes have taken place in the medical and teaching staff of the hospital and school. Mr. W. J. Walsham has been appointed Joint Lecturer on Surgery in Mr. H. T. Butlin's place, and Mr. Lockwood has succeeded Mr. Walsham as Lecturer on Anatomy; Dr. F. W. Andrewes is Pathologist and Lecturer on Pathology, vice Dr. Kanthack; Dr. Chattaway takes the place of Dr. W. J. Russell as Lecturer on Chemistry; Dr. P. Horton-Smith has been appointed Assistant Demonstrator of Practical Medicine, and Mr. J. Berry and Mr. D'Arcy Power Demonstrators of Practical Surgery. Mr. D'Arcy Power has also been elected a Demonstrator of Operative Surgery. The Curatorship of the Museum is in the hands of Dr. Andrewes, and Mr. T. S. Pigg acts as Assistant Curator. Dr. F. E. Batten and Dr. J. A. Hayward have been appointed Casualty Physicians. Mr. Bruce Clarke has been appointed Lecturer to Probationary Nurses.

Charing-cross Hospital.—Mr. Wallis has been appointed Lecturer on Operative Surgery in place of Mr. Waterhouse, who was appointed Lecturer on Anatomy. Dr. Arkle has been appointed Vice-Dean in place of Mr. Waterhouse, and Mr. Hardcastle has been appointed Medical Registrar to the hospital to succeed Mr. Senior.

St. George's Hospital.—Dr. Whipham has retired by the twenty-year rule and has became Consulting Physician. Dr. Penrose has been elected as full Physician and Dr. Cyril Ogle as Assistant Physician. Dr. A. Latham has been elected Curator of the Museum, Dr. Davidson and Dr. Fenton have been appointed Medical Registrars, Mr. F. Jaffray Surgical Registrar, and Dr. H. Menzies and Dr. Blumfeld Anæsthetists. Mr. F. S. Collard becomes Demonstrator of Anatomy, Dr. Ewart replaces Dr. Whipham as Joint Lecturer on Medicine, and Mr. Bennett and Mr. Dent lecture on Surgery instead of Mr. Pick.

London Hospital.—Dr. Ramskill, Consulting Physician, who was appointed an Assistant Physician as long ago as 1859, died on June 22nd last. Mr. Walter Rivington, Consulting Surgeon, who was appointed Assistant Surgeon in 1863, died on May 8th last. Dr. Samuel Fenwick has been appointed a Consulting Physician, and Dr. Henry Head has been appointed an Assistant Physician. Mr. Frederick Treves has resigned the Chair of Surgery and has been succeeded by Mr. Mansell Moullin. Physiology and Histology will now be taught by Dr. Leonard Hill and Mr. Hutchinson. Dr. Dawson has been appointed Demonstrator of Materia Medica, Mr. Jenkinson Demonstrator of Biology, and Mr. Roxburgh Teacher of Practical Surgery and Demonstrator of Anatomy. Dr. Bullock has been appointed Bacteriologist to the Hospital and Lecturer on Bacteriology and Pathological Chemist to the College. Dr. Dawson and Dr. Head have been appointed Instructors in Elementary Clinical Medicine, and Medical and Surgical Tutors have been appointed.

Middlesex Hospital.—The hand of death has taken away Dr. Henry Thompson, Consulting Physician, and Mr. Leopold Hudson, Assistant Surgeon and Surgeon in the Ear and Throat Department. Mr. T. H. Kellock has been appointed Assistant Surgeon and Surgical Registrar, and Mr. Stephen Paget Surgeon in the Ear and Throat Department. Dr. C. R. Biss has been appointed Physician to Out-patients. Mr. G. Murray has been appointed Tutor in Surgery, and Mr. Stephen Paget Lecturer in Laryngology and Otology. The Demonstrators for the Session 1897-98 are as follows: Anatomy, Dr. R. Gladstone and Mr. A. S. Fergusson; Physiology, Mr. J. S. Goodall and Mr. N. Navaica; Biology, Mr. J. S. Goodall; and Chemistry, Mr. G. E. Froggatt.

St. Mary's Hospital.—Mr. Owen is now Lecturer on Clinical Surgery, and Mr. Pepper Joint Lecturer on Surgery; Mr. Silcock and Mr. Collier are Joint Lecturers on Operative and Practical Surgery; Dr. Caley is Physician to Out-patients, Lecturer on Materia Medica, and Senior Medical Tutor; Mr. Plimmer, Joint Lecturer on Pathology; Mr. H. S. Collier, Surgeon to Out-patients and Warden of the College; Dr. J. F. H. Broadbent, Casualty Physician; Dr. F. J. Poynton, Medical Registrar; Mr. V. W. Low, Surgical Registrar; Dr. W. J. Harris, Junior Medical Tutor and Editor of the *Gazette*; Dr. A. F. Bill, Curator of the Museum and Demonstrator of Pathology; and Dr. E. J. Steegman, Demonstrator of Hygiene.

Westminster Hospital.—The changes on the hospital staff are the appointment of Mr. Macnamara as Consulting Surgeon, Mr. W. G. Spencer as Surgeon, and Mr. W. Turner as Assistant Surgeon. Dr. Dupré has relinquished the post of Lecturer on Chemistry after having held the chair for thirty-three years and has been succeeded by Dr. Wilson Hake. Dr. Hebb has become Dean on the retirement of Mr. Spencer, and Mr. A. H. Tubby has been appointed Vice-Dean.

St. Thomas's Hospital.—Sir Felix Semon has resigned his charge of the Throat Department, and his successor will shortly be appointed. Dr. Barry Blacker has been appointed Superintendent of the x-ray Department, and Dr. L. L. Jenner Superintendent of the new Clinical Laboratory. Dr. C. R. Box has been appointed Resident Assistant Physician, and Mr. C. S. Wallace Resident Surgeon; while Dr. A. E. Russell, Mr. E. O. Thurston, and Dr. A. F. Stubb have been appointed Medical, Surgical, and Obstetric Registrars respectively.

PROVINCIAL.

Sheffield School of Medicine.—Dr. C. Addison has been appointed Arthur Jackson Professor of Anatomy in the New College, Dr. Hugh Rhodes Lecturer on Forensic Medicine in place of Dr. Harvey Littlejohn, Dr. Andrew Walker Demonstrator of Bacteriology, Mr. Baynes Smith Laboratory Assistant in the Physiological Department, Dr. John Robertson Lecturer on Public Health, and Mr. A. Cuff and Mr. L. T. Giles have been appointed Demonstrators of Anatomy.

Mason College, Birmingham.—Dr. Robert M. Simon, Physician to the General Hospital, has been appointed Professor of Forensic Medicine, in place of Professor J. St. S. Wilders, who has been compelled, owing to ill-health, to resign the chair which he has occupied for thirty years. The council have appointed him an Emeritus Professor. Dr. Swale Vincent, having been

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appointed Research Scholar of the British Medical Association, has vacated the position of Demonstrator of Physiology, and has been succeeded by Dr. J. S. Bolton. The Lectureships in Ophthalmology and Operative Surgery have been constituted Professorships, and Professor Priestley Smith and Professor Jordan Lloyd have been elected to fill these chairs. Mr. C. Leedham-Green, surgeon to out-patients at the Queen's Hospital, has been appointed Assistant Lecturer in Bacteriology.

University College, Bristol.—Mr. C. A. Morton, F R C S., and Dr. J. Swain, M.S. Lond., have been appointed Joint Professors of Surgery, in the place of the late Mr. Greig Smith.

SOME LITERATURE CONCERNING THE PLAGUE.

WE have already alluded very briefly to some recently published reports[1] regarding the plague, and we may now notice them somewhat more in detail, although it will be difficult, if not impossible, to do so at any length, seeing that the literature on the subject is somewhat voluminous. Taking them in chronological order we may start with the report regarding the prevalence of bubonic plague in the colony of Hong-Kong during the years 1895 and 1896 by the Acting Colonial Surgeon, J. M. Atkinson, M.B. Lond., D.P.H. Camb. This, it will be seen, deals only with the history of the disease in Hong-Kong during those years and refers to the able report by Dr. Lowson, Acting Superintendent, Government Civil Hospital, for the history of the epidemic in 1894. In view of the important practical questions that have engaged, or are engaging, the attention of many experts in Europe and India, the author has endeavoured to set forth such deductions as seemed to him reasonably warranted from the data at his command and to enumerate the more important facts to be noted in preventing or limiting the occurrence and spread of the disease.

The report contains a brief history of the plague in China and Hong-Kong during modern times, drawn from that by Dr. Rennie on the disease at Canton in 1894 contained in the Imperial Maritime Customs Medical Reports, and from Allbutt's System of Medicine, 1896, together with a sketch plan drawn to scale showing the several places referred to and illustrating the progress and route taken by the disease. Touching the prevalence of plague in Hong-Kong in 1895 it is shown that the total number of cases reported was forty-four; that the disease commenced at the end of April and continued more or less during the remainder of the year; that the greatest number of cases occurred during the months of June and December, but that the disease did not assume such proportions as to constitute an epidemic; and that, with the exception of Heung-lane, in no portion of the colony did it obtain any serious hold. The procedure adopted on the receipt of information that the disease had re-appeared consisted of house-to-house visitation, the removal and segregation of the sick, together with the isolation of the infected, the notification of infected localities, and the application, general and special, of sanitary regulations, disinfection, cleansing, the removal of overcrowding, and the strict and steady application of the powers conferred by public health ordinances to tenements, lodging-houses, &c. The condition of Hong-Kong as regards the overcrowding of houses on a given space, their vicious construction of cock-lofts, mezzanine floors and back-yard obstructions, involving overcrowding, absence of light, ventilation, cleanliness and decency, was something terrible and called for wholesale changes in every direction. Although much has probably been done of late years under the pressure and influence of the alarm caused by the epidemic of plague it is impossible to believe that there does not even now remain a good deal to be carried out in the same direction. Passing from the sanitary and prophylactic measures required in this and in all cases of epidemic disease, we come to the medical aspect of plague. The pathology, symptoms, and morbid anatomy having been described in Dr. Lowson's report of the plague in 1894 and in Dr. Wilm's later report, the author confines himself to the facts elicited by the further experience of 1896, and the following are some of the facts and deductions set forth in his report. The main channel by which the bacillus gains access to the body appears to be the digestive tract; infection by the skin (inoculation) is relatively rare, and the immunity of those who attended plague patients or were engaged in the inspection and disinfection of infected houses shows that the plague bacillus is not commonly received by the respiratory tract through the medium of the air. The plague bacillus was not detected, it may be mentioned, in the course of many examinations of hospital ward air made for that purpose. Rats, mice, monkeys, pigs, and fowls have been proved to have acquired plague after having been fed with fragments of organs of animals that have died from the disease. In addition to the fæces, the bacillus leaves the body by the urine, as demonstrated by the result of culture experiments. The period of incubation seems to be generally from three to five days, although one case is related by Dr. Wilm of fifteen days. About 70 per cent. of the deaths of those attacked by the disease took place during the first six days. In 95 per cent. of the cases albumin was found in the urine, varying in amount from one-tenth to one-half.

The general conclusions to be drawn from the experience of bubonic plague in Hong-Kong in 1895 and 1896 are stated in the report as follows:—*A.* That the occurrence of plague is favoured by: (1) Long prevalence of drought or of abnormally low rainfall; (2) atmospheric temperature below 82° F.; (3) absence of sunshine; and (4) general insanitary conditions such as obstruction to the free access of light and air to domestic dwellings. *B.* That the steps to be taken to retard the progress of the disease are: (1) General cleanliness and the free admission of light and air to domestic dwellings; (2) the immediate isolation of the sick and those who have been in close contact with the disease; and (3) the careful and systematic disinfection of all premises in which cases occur and of latrines.

(To be concluded.)

[1] THE LANCET, July 24th, 1897.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Enteric Fever at Hucknall Torkard, by Dr. Buchanan.[1]—Hucknall Torkard, a small town in Nottinghamshire of some 15,000 inhabitants, has more than once suffered from enteric fever, and last year no less than 141 cases were reported there. In considering the causes of this outbreak Dr. Buchanan arrived at the conclusion that there had been no common infection by reason of occupation, food, or milk; that in view of the two distinct systems of sewers these could not be held to be primarily responsible; and that there was no evidence that the public water-supply, which was general to the whole town, had caused the epidemic or was exposed to any source of pollution. But there had been a heavy incidence of the disease on certain streets and localities, and in a number of houses the occurrence of multiple attacks was remarkable. Detailed investigation of such localities brought out the fact that there were present frequent conditions of dirt, unpaved and badly-drained yards, pollution of soil from waste water and soakage of middens, undue overcrowding, and conditions affecting pail-closets which favour retention of infection. These are conditions which notoriously facilitate the spread of enteric fever, they are conditions which are known by those who have only the most superficial knowledge of public health to be those which sanitary administration should deal with; and yet in certain towns like this one they are allowed to persist to the danger of public health year after year. Nothing accounts for persistently recurring enteric fever more than does the disgraceful practice still so common in many parts of England of storing up excreta and refuse in close proximity to dwellings in receptacles open to rainfall

[1] Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis, and Co., Dublin. Price 3d.

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and sun and sunk into the ground. If people had wanted to design something which by fouling the air; by polluting food supplies in pantries, &c., opening on to back yards; and by storing up infection in a polluted soil would ensure recurring typhoid fever, midden-systems such as those which exist in Hucknall Torkard and other places would certainly have to be accredited with having achieved the end aimed at. It is to be hoped that after this renewed experience the District Council will amend these dangerous conditions by carrying out the recommendations attached to Dr. Buchanan's report.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Blackpool Urban District.—Dr. Jasper Anderson traced, he thinks, during the year 1896 an epidemic of enteric fever to the consumption of mussels which were procured from a spot where the sea water had an opportunity of becoming fouled by sewage. It seems that there were 21 cases notified in October, as against 8 in September and 8 in November; and in 10 out of the 21 cases notified in October a history of eating mussels was obtained. It seems, however, that in certain cases the period which elapsed between the consumption of the mussels and the development of the disease was rather long for enteric fever. A complication is introduced, too, by the seasonal increase of enteric fever occurring at a time when the mussels are regarded as in good condition at Blackpool. However, we have little doubt that enteric fever may be conveyed by sewage-polluted mussels, and we quite agree with Dr. Anderson as to the desirability of preventing their consumption.

Southampton Urban District.—The recent extension of this borough has done much towards bringing its population up to 100,000, and it was estimated for 1896 at 98 002. Mr. Wellesley Harris, owing to the necessary uncertainty of the estimate under conditions of extensive and of considerable immigration, urged the desirability of a census being taken, but the council was unwilling, it appears, to undertake the task. The general death-rate of the district was for 1896 16·47 per 1000, as against a rate of 18 27 in 1895, the rate for the town proper being 17·63. There were nine cases of small-pox notified during the year, several of them being imported by ships frequenting the port. One case was apparently caused by a bag of dirty linen sent home from the Cape. The history of 1896 *re* small-pox teaches, Mr. Harris observes, the wisdom of having provided the floating hospital in which the cases were well isolated. In former years the introduction of a case of small-pox into the old hospital appears to have been liable to cause the spread of the disease to the surrounding district. Scarlet fever became epidemic in Southampton during the year, and the hospital accommodation was quite inadequate to deal with it, only 31 per cent. of the cases being isolated. Mr. Harris thinks that had there been sufficient accommodation the epidemic would have been much curtailed, and he furnishes instances in support of his contention. Everything seems to have been done to control the epidemic, and the public were educated up to their responsibilities by means of leaflets, &c. Under these circumstances we are glad to learn that the sanitary authority have acquired a suitable hospital site, and have applied to the Local Government Board for sanction to borrow £30,000 for the erection of a hospital. School closure was resorted to on two occasions for preventing the spread of measles, and in each case this action, Mr. Harris states, was attended with excellent results. Complaints in reference to the discharge of sewage on the foreshore have been made from time to time, and it has, it seems, been decided by the Council to accept the proposal of Mr. Harris to collect and treat the sewage and to discharge the purified effluent at one point on the ebbing tide. Mr. Harris advocates that samples of the effluent should be taken regularly and submitted to the borough analyst for examination.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 7195 births and 6212 deaths were registered during the week ending Saturday, August 14th. The annual rate of mortality in these towns, which had increased in the six preceding weeks from 14·7 to 26·9 per 1000, further rose during the week to 29·5. In London the rate was 26·2 per 1000, while it averaged 31·7 in the thirty-two provincial towns. The lowest death-rates in these towns were 14·6 in Swansea, 15·8 in Halifax, 16·4 in Croydon and in Huddersfield, and 18·2 in Bristol; the highest rates were 39·6 in Salford, 40·9 in Liverpool, 42·6 in Preston, and 43·0 in Birmingham. The 6212 deaths in these towns included 2368 which were referred to the principal zymotic diseases, against 1337 and 1994 in the two preceding weeks; of these, 2038 resulted from diarrhœa, 134 from measles, 70 from whooping-cough, 54 from diphtheria, 36 from scarlet fever, and 36 from "fever," principally enteric. The lowest death-rates from these diseases were recorded in Halifax, Bristol, Swansea, and Huddersfield; and the highest rates in Salford, Leeds, Sheffield, Preston, and Birmingham. The greatest mortality from measles occurred in Swansea, Birmingham, Birkenhead, Salford, Blackburn, and Preston; from scarlet fever in Huddersfield; from whooping-cough in Plymouth, Wolverhampton, and Blackburn; from "fever" in Derby; and from diarrhœa in Birmingham, Leicester, Nottingham, Liverpool, Leeds, and Sheffield. The 54 deaths from diphtheria included 38 in London, 3 in Birmingham, and 3 in Leicester. No fatal case of small-pox was registered during the week in any of the thirty-three large towns; and there were no small-pox patients under treatment in any of the Metropolitan Asylum Hospitals on the 14th inst. The number of cases of scarlet fever in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3341, against numbers increasing from 2380 to 3239 on the fourteen preceding Saturdays; 347 new cases were admitted during the week, against 396, 390, and 376 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 146 and 156 in the two preceding weeks, declined during the week to 118, and were 63 below the corrected average. The causes of 68, or 1·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Manchester, Hull, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in Leicester, Liverpool, Sheffield and Sunderland.

In thirty-three of the largest English towns 6796 births and 6058 deaths were registered during the week ending Aug. 21st. The annual rate of mortality in these towns, which had increased in the seven preceding weeks from 14·7 to 29·5 per 1000, declined again last week to 28·7. In London the rate was 24·2 per 1000, while it averaged 31·8 in the thirty-two provincial towns. The lowest death-rates in these towns were 12·0 in Halifax, 12·8 in Huddersfield, 17·2 in Swansea, and 18·9 in Bristol; the highest rates were 42·9 in Birmingham, 45·2 in Hull, 45·3 in Preston, and 52·6 in Wolverhampton. The 6058 deaths in these towns included 2319 which were referred to the principal zymotic diseases, against 1994 and 2368 in the two preceding weeks; of these, 1997 resulted from diarrhœa, 138 from measles, 74 from whooping-cough, 42 from diphtheria, 34 from scarlet fever, 34 from "fever" (principally enteric), and not one from small-pox. The lowest death-rates from these diseases were recorded in Huddersfield, Halifax, Swansea, and Oldham; and the highest rates in Manchester, Birmingham, Wolverhampton, Hull, and Preston. The greatest mortality from measles occurred in Salford, Blackburn, Birmingham, Manchester, and Preston; from scarlet fever in Wolverhampton; from whooping-cough in Gateshead; and from diarrhœa in Leeds, Manchester, Burnley, Salford, Leicester, Birmingham, Wolverhampton, and Hull. The mortality from "fever" showed no marked excess in any of the large towns. The 42 deaths from diphtheria included 29 in London and 3 in Liverpool. No fatal case of small-pox was registered last week in any of the thirty-three large towns, and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals during the week ending Saturday last, the 21st inst. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3400, against 3106, 3239, and 3341 on the three preceding Saturdays; 340 new cases were admitted during the week, against 360, 376, and 347 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 156 and 118 in the two preceding weeks, were 119 last week, and were 53 below the corrected average. The causes of 61, or 1·0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a

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coroner. All the causes of death were duly certified in Cardiff, Salford, Oldham, Sunderland, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Liverpool, Burnley, and Bradford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·2 and 20·5 per 1000 in the two preceding weeks, declined again to 19·0 during the week ending August 14th, and was 10·5 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 10·2 in Aberdeen and 14·4 in Edinburgh to 23·7 in Greenock and 25·6 in Perth. The 565 deaths in these towns included 113 which were referred to diarrhœa, 18 to whooping-cough, 12 to scarlet fever, 7 to measles, 4 to "fever," and 2 to diphtheria; in all, 156 deaths resulted from these principal zymotic diseases, against 89 and 137 in the two preceding weeks. These 156 deaths were equal to an annual rate of 5·2 per 1000, which was 6·0 below the mean rate for the week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 35, 51, and 87 in the three preceding weeks, further rose to 113 during the week, of which 79 occurred in Glasgow, 12 in Greenock, and 6 in Dundee. The 18 deaths referred to whooping-cough showed a decline of 4 from the number recorded in the preceding week, and included 9 in Glasgow and 6 in Edinburgh. The fatal cases of scarlet fever, which had been 5 and 8 in the two preceding weeks, further rose to 12 during the week; 9 occurred in Edinburgh and 2 in Dundee. The 7 deaths from measles showed a marked decline from the number in the preceding week and included 4 in Leith. Of the 4 deaths referred to different forms of "fever" 2 were recorded in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 66 and 71 in the two preceding weeks, declined to 58 during the week, and were 13 below the number in the corresponding week of last year. The causes of 38, or nearly 7 per cent., of the deaths in these eight towns during the week were not certified.

The annual rate of mortality in the eight Scotch towns, which had been 20·5 and 19·0 per 1000 in the two preceding weeks, rose again to 21·6 during the week ending Aug. 21st, but was 7·1 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·6 in Perth and 16·9 in Aberdeen to 24·2 in Dundee and 31·3 in Greenock. The 643 deaths in these towns included 147 from diarrhœa, 21 from whooping-cough, 6 from measles, 5 from scarlet fever, 4 from diphtheria, and 4 from "fever." In all, 187 deaths resulted from these principal zymotic diseases, against 137 and 156 in the two preceding weeks. These 187 deaths were equal to an annual rate of 6·3 per 1000, which was 4·7 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 51, 87, and 113 in the three preceding weeks, further rose to 147 last week, of which 89 occurred in Glasgow, 21 in Greenock, 8 in Edinburgh, and 8 in Dundee. The 21 deaths referred to whooping-cough exceeded by 3 the number in the preceding week, and included 16 in Glasgow, 2 in Edinburgh, and 2 in Dundee. The 6 fatal cases of measles showed a slight further decline from those registered in recent weeks, and included 3 in Leith. The deaths from scarlet fever, which had increased from 5 to 12 in the three preceding weeks, declined again to 5 last week, of which 4 occurred in Glasgow. The 4 fatal cases of "fever" corresponded with the number recorded in the preceding week, and included 3 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 71 and 58 in the two preceding weeks, were 62 last week, and slightly exceeded the number in the corresponding period of last year. The causes of 36, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the four preceding weeks from 24·2 to 22·4 per 1000, rose again to 26·5 during the week ending August 14th. During the first six weeks of the current quarter the rate of mortality in the city has averaged 23·5 per 1000, the rate during the same period being 21·2 in London and 18·8 in Edinburgh. The 178 deaths in Dublin during the week showed an increase of 28 upon the number in the preceding week, and included 51 which were referred to the principal zymotic diseases, against 14 and 25 in the two preceding weeks; of these 39 resulted from diarrhœa, 5 from whooping-cough, 4 from "fever," and 3 from scarlet fever. These 51 deaths were equal to an annual rate of 7·6 per 1000, the zymotic death-rate during the same period being 8·5 in London and 4·1 in Edinburgh. The fatal cases of diarrhœa, which had increased from 2 to 18 in the four preceding weeks, rose to 39 during the week. The mortality from whooping-cough and from "fever" considerably exceeded that recorded in any recent week. The deaths referred to scarlet fever, which had been 1 and 4 in the two preceding weeks, declined to 3 during the week. The 178 deaths registered in Dublin included 42 of infants under one year of age and 32 of persons aged upwards of sixty years; the deaths of infants showed a slight increase, while those of elderly persons were slightly below those recorded in the preceding week. Twelve inquest cases and 6 deaths from violence were registered; and 49, or more than a fourth, of the deaths occurred in public institutions. The causes of 12, or nearly 7 per cent., of the deaths in the city during the week were not certified.

The death-rate in Dublin, which had been 22·4 and 26·5 per 1000 in the two preceding weeks, declined again to 24·3 during the week ending Aug. 21st. During the past seven weeks of the current quarter the rate of mortality in the city has averaged 23·6 per 1000, the rate during the same period being 21·6 in London and 18·5 in Edinburgh. The 163 deaths registered in Dublin during the week under notice showed a decline of 15 from the number in the preceding week, and included 39 which were referred to the principal zymotic diseases, against 25 and 51 in the two preceding weeks; of these, 31 resulted from diarrhœa, 3 from scarlet fever, 2 from whooping-cough, 2 from "fever," and 1 from measles. These 39 deaths were equal to an annual rate of 5·8 per 1000, the zymotic death-rate during the same period being 7·7 in London and 2·7 in Edinburgh. The fatal cases of diarrhœa, which had increased from 2 to 39 in the five preceding weeks, declined to 31 last week. The deaths referred to scarlet fever, which had been 4 and 3 in the two preceding weeks, were again 3 last week. The mortality from whooping-cough and from "fever" showed a decline from that recorded in the preceding week. The 163 deaths in Dublin last week included 48 of infants under one year of age, and 28 of persons aged upwards of sixty years; the deaths of infants showed a further increase, while those of elderly persons showed a slight further decline from those recorded in recent weeks. Seven inquest cases and 4 deaths from violence were registered; and 55, or rather more than a third, of the deaths occurred in public institutions. The causes of 10, or more than 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL CALEB K. POWELL retires on retired pay. The under-mentioned Surgeon-Majors to be Surgeon-Lieutenant-Colonels: William T. Johnston, Abraham W. Browne, Robert D. Hodson, Hugh C. Kirkpatrick, John Armstrong, William W. Kenny, Philip M. Ellis, and James F. Brodie. The under-mentioned Surgeons on probation to be Surgeon-Lieutenants: Stevenson Lyle Cummins, Joseph McArdle, Charles Hensley Hopkins, Lewis Julius Christopher Hearn, Peter McKessack, John McDonald McCarthy, Ernest Brodribb, John Poe, Henry Lawrence Weekes Norrington, Hamilton George Frampton Stallard, Robert Dalkeith Jephson, and Arthur Winniett Nunn Bowen.

Surgeon-Captain C. J. W. Tatham will embark for service at Mauritius next month. Brigade-Surgeon-Lieutenant-Colonel F. Lyons has joined at Colchester for duty.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Captain J. Gould (Bengal) are replaced at the disposal of the Military Department, and also those of Surgeon-Captain Cleveland (Bombay), Surgeon-Captain Seton (Bengal), Surgeon-Lieutenant James

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(Madras), and Surgeon-Lieutenant Dee (Madras). Surgeon-Lieutenant-Colonel Cook is appointed to be Surgeon, 3rd District, Madras, in succession to Brigade-Surgeon-Lieutenant-Colonel H. J. Hazlett, retired. Surgeon-Lieutenant-Colonel G. L. Walker to be Surgeon, 1st District, Madras, and Medical Inspector of Emigrants, vice Surgeon-Lieutenant-Colonel Cook. Surgeon-Lieutenant-Colonel W. A. Lee is appointed to be District Medical and Sanitary Officer, Tanjore, vice Surgeon-Lieutenant-Colonel G. L. Walker. Surgeon-Major J. C. Marsden is appointed to be District Medical and Sanitary Officer, South Arcot, vice Surgeon-Lieutenant-Colonel W. A. Lee. Surgeon-Major A. J. O'Hara is appointed to be District Medical and Sanitary Officer, Godavery, vice Surgeon-Major J. C. Marsden. Surgeon-Major W. F. Thomas, M.D., is appointed to be District Medical and Sanitary Officer, Cuddapah, vice Surgeon-Major A. J. O'Hara. The services of the undermentioned officers are replaced at the disposal of the Government of India, Home Department:—Surgeon-Captain W. P. Barter, A.M.S., Surgeon-Lieutenant E. R. Steel, A.M.S. The services of Surgeon-Lieutenant F. Wall (Madras) are placed temporarily at the disposal of the Chief Commissioner of the Central Provinces for employment on famine duty. Transfers:—Surgeon-Captain C. Thomson, Supernumerary Civil Surgeon, from Aligarh to Fatehgarh. Surgeon-Lieutenant C. B. Harrison, on plague duty, from Agra to Jhansi. Surgeon-Lieutenant C. H. Bensley, on plague duty, from Cawnpore to Meerut. Surgeon-Captain A. W. Dawson from plague duty at Hardwar to that at Saharanpur.

NAVAL MEDICAL SERVICE.

The following appointments are announced: — Staff Surgeons: William E. Horne, M.D., B.Sc., to the *Tamar;* Richard A. Fitch to the *Barrosa;* Henry B. Beatty to the *Royalist;* William Spry to the *Calypso;* Robert Hickson to the *Philomel;* John Lowney to the *Melampus;* and Cyril J. Mansfield, M.D., to the *Hotspur.* Surgeons: Charles S. Facey, M.B., to the *Pembroke,* and Louis E. Dartnell to the *Triton.*

Staff Surgeon Henry William Duffield Walsh has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet.

ARMY MEDICAL RESERVE OF OFFICERS.

The under-mentioned officers having resigned their Volunteer appointment, cease to belong to the Army Medical Reserve of Officers:—Surgeon-Lieutenant-Colonel Thomas Michael Dolan and Surgeon-Captain John Cunningham.

VOLUNTEER CORPS.

Artillery: 2nd Cheshire (Railway): James Reginald Atkinson, gent., to be Surgeon-Lieutenant. *Rifle:* Galloway: Surgeon-Captain R. Bell Lorraine resigns his commission. 1st Volunteer Battalion the Hampshire Regiment: Surgeon-Lieutenant W. A. Griffiths to be Surgeon-Captain. 19th Middlesex (St. Giles's and St. George's, Bloomsbury): Surgeon-Captain Alexander MacGregor, M.D., from the Volunteer Medical Corps (Aberdeen Company), to be Surgeon-Captain.

VOLUNTEER MEDICAL STAFF CORPS.

The Aberdeen Company: The resignation of Surgeon-Captain A. MacGregor, is cancelled.

THE INDIAN NEWS AND THE MEDICAL SERVICES.

It has often been said that the British are a warlike but not a military people, and we certainly generally manage to be engaged in some small war or other. At the present time we have many expeditions and wars on our hands. On the Indian frontier there is the expedition in the Chitral-Swat district, that in the Trochi valley, and the tribal outbreak on the Khyber-Peshawar border, to say nothing of the Nile expedition in the Soudan, the fighting in South Africa and in other parts of the world. The fact is that our empire is so extensive and widely spread that it is nearly hopeless to expect there will be peace throughout the whole extent of our territories at any given time; it is one of the responsibilities of our position that we must always be ready to meet and repel an attack somewhere or other. By far the most important news at the present time comes from India regarding the serious outbreak of the tribes, and especially of the large and powerful tribe of Afridis, in the Khyber Pass, and of their attack in force on the posts in the immediate vicinity of Peshawar. That the Government of India regard the situation as serious and the disaffection as likely to spread to other places and tribes on the frontier, and give rise to much future trouble and expense, is clear from the large force that has been concentrated on the frontier generally and in the vicinity of the Khyber Pass, at Khohat, and other places. Those medical officers who took part in the last Afghan wars will be familiar with the country and with the names of the posts and districts occupying a more or less prominent place in the descriptions that are appearing in the papers regarding these tribal revolts. It is nearly certain that the Ameer of Afghanistan has taken no active part whatever in these outbreaks; the most that can be said is that he does not seem to have shown any alacrity in warning the Indian Government or in attempting to repress them. These wars on the frontier are not to be reckoned as a source of any serious danger to our power in India, so long as they are not so successful as to damage our prestige, but they are very costly and embarrassing. We have now a large and splendid European army in India, and the native army is in a high state of efficiency, reliable and well-affected to the Indian Government, its main source of weakness being that it is greatly under-officered as far as British officers are concerned. All the medical officers on leave in this country from India have been recalled. The work imposed upon the medical officers of both the British and Indian services is unusually arduous, and it behoves the War Office authorities in this country to lose no time in doing all they can to render the Army Medical Service more attractive to candidates, for medical officers must be greatly required under existing conditions in India.

THE POONA ALLEGATIONS.

It is an old story now, but we do not think that the retractation of Professor Gokhale could be put more strongly or succinctly than it was in his telegram to H.E. the Governor of Bombay, preliminary to the reception of his more extended report: "Have just posted full statement containing explanation, full retractation, and unqualified apology." Lord Sandhurst, the Governor of Bombay, in closing the late Budget discussion, according to the *Times of India* of the 6th inst., made a strong statement vindicating his policy with regard to the plague. The continued prevalence of plague and famine had strained, not only the powers, but the utmost possibilities of the administration of the Government. His lordship characterised the statements that had been made against the action of the authorities as ridiculous, ruthless, and heartless allegations. The operations for the suppression of the plague in Poona were carried out with the utmost regard to decency and the feelings of the people.

DEATHS IN THE SERVICES.

Surgeon-General William Henry Muschamp (retired), aged sixty-four years, on the 21st inst. He entered the service in 1855 and served in the Crimea, being present at the siege and fall of Sevastopol and the attack of Sept. 8th, 1855 (medal with clasp and Turkish medal). He served also in the North-West Provinces in suppressing the Mutiny of 1857–58, and was present at the operations at Cawnpore, the actions of Kali Nadi and Khankur, the capture of Bareilly, the relief of Shahjehanpur and the affairs of Mahomdi, Shahabad, and Bunkagahon (medal).

ENTERIC FEVER AT CHERAT.

The *Times of India* reports that there has been a severe outbreak of enteric fever at Cherat. One officer, fifty men, two women, and a child are in hospital from that disease.

SURGEON-CAPTAIN P. HEHIR.

The Bombay Government have refused the extension of this officer's services for five years in the Nizam's State, and he consequently reverts to the Bengal Medical Service.

THE MERTHYR TYDVIL GENERAL HOSPITAL.—The half-yearly meeting of this hospital was held on Aug. 12th. The report showed that during the half year ended June 30th 100 in-patients had been admitted. The balance standing to the credit of the institution on Jan. 1st was £429, and £571 had been received since then, making a total of £1000. The expenditure for the six months amounted to £800. It was stated that of the £10,000 proposed to be raised for the endowment of the Diamond Jubilee Ward only £1000 was still required to make up that amount.

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Correspondence.

"Audi alteram partem."

"HOSPITAL ABUSE."

To the Editors of THE LANCET.

SIRS,—Will you kindly announce that we are organising a conference on the hospital reform question and that we propose to deal more especially with the administration of the out-patient department and with the formation of a Central Hospital Board? The dates provisionally fixed are Oct. 20th and 21st. Sir Henry Burdett and Mr. C. S. Loch have already expressed their willingness to take part, and I should be glad to hear from others who would like to do so also.

I am, Sirs, yours faithfully,

T. GARRETT HORDER,
Honorary Secretary, Hospital Reform Association.

Cardiff, Aug. 17th, 1897.

To the Editors of THE LANCET.

SIRS,—I also fail to understand the charges of unfairness directed at your Special Commissioner, whose accurate gauge of the present situation and also the able manner in which he has presented every side of the question is to be commended. Undoubtedly the enemies of the medical profession are to be found in its own ranks, as instance the deplorable fiasco, the moribund Leicester Medical Union. The committee rejected the resolutions of the sub-committee; they then formed deputations to wait upon every dispensary and club management, and even then some benefit would have accrued if some five or six medical officers to the provident dispensary, whilst yet being members of the said union, had not met privately at one of their own houses and drew up a resolution requesting the manager of the provident dispensary to notify some twenty odd of their fellow medical officers to this effect—viz., that if they were not satisfied to tender their resignation. So that these few dealt the death-blow to the said union and reinstated their manager again, directly and indirectly, master of the local medical profession.

I am, Sirs, yours faithfully,

ERNEST WILLIAM HAYDON, M.B. Glasg.

Leicester, Aug. 23rd, 1897.

"AMYLACEOUS DYSPEPSIA."

To the Editors of THE LANCET.

SIRS,—Since the introduction of taka diastase some attention has been given to amylaceous dyspepsia; but the indiscriminate praise which is being given to that drug, of which Dr. Taylor's paper in THE LANCET of Aug. 7th is an example, can only lead to its indiscriminate use and subsequent neglect. The great fault of the papers on this form of dyspepsia is that they say nothing about its cause, not a single word as to why the fermentation began originally. And the treatment of the disease is as defective; the main advice is to use taka diastase, and in a secondary, half-hearted way we are advised to look after the eating and the drinking. Fenwick strongly advises a man whenever possible to get at the cause, as in treatment a knowledge of the cause is at least as important as the diagnosis, and this is especially true of the diseased conditions known as dyspepsia. Does the defect lie in the quantity and quality of the food, or in the saliva, the teeth, or the stomach? If the saliva be deficient, as, for example, in fevers, give taka diastase; but as it has never been shown to be deficient in dyspepsia there must be some cause for its defective action during the period that intervenes before the HCl is in sufficient amount to stop its action. The causes of amylaceous dyspepsia are bolting the food, badly chewed food where the teeth are rotten and deficient, badly cooked pastries (in these three conditions the saliva never gets intimately mixed with the food), and pastry made from rancid butter or lard when the butyric acid is carried ready made into the stomach. It is easy to see that taka diastase alone must be of very temporary benefit, and that the treatment must begin with removal of the cause, and the defect pointed out to the patient. Not long ago I saw two patients in consultation who had had all kinds of drugs administered to them for their dyspepsia (one gentleman had got tired and had given up drugs), but whose teeth had never been looked at. In these two, as in many others in the past, cure was attained by attention to eating, no drug except a bismuth lozenge being used (Sir W. Roberts's method, but not his lozenge, which I have found inferior to the ordinary bismuth lozenge). New teeth must be ordered when necessary, bolters must chew their food dry, flesh meat must in many cases be minced, the quantity of starchy matter and sugar decreased in others, and in all no tea must be drunk, not even tasted, till the end of the meal. Taka diastase will aid and will often be of more use than a dinner pill. To turn for a moment to a physiological question. Dr. Boyd speaks of the products of the digestion of starch by taka diastase being absorbed by the stomach. Does this take place? Does it not rather take place, if not altogether, at least to a very large extent in the intestines?

I am, Sirs, yours faithfully,

JAMES GARDNER.

Chorlton-on-Medlock, Manchester, Aug. 25th, 1897.

"A NOTE ON ARTIFICIAL PUPIL."

To the Editors of THE LANCET.

SIRS,—Dr. Bell Taylor is usually so well informed in all ophthalmic subjects that I confess to a feeling of surprise when I find him indulging in ancient history in his note on artificial pupil in THE LANCET of Aug. 14th. The operation which he there describes was performed by my late father as far back as 1867, and he subsequently used it on many occasions within my knowledge. I have operated by this method both in my hospital and private practice for more than twenty years, and I have every reason to believe that it has long been in general use amongst ophthalmic surgeons.

I am, Sirs, yours faithfully,

G. ANDERSON CRITCHETT.

Harley-street, W., Aug. 14th, 1897.

WHAT IS THE CAUSE OF DIPHTHERIA?

To the Editors of THE LANCET.

SIRS,—Where does diphtheria originate? and why is it that with all the advance in sanitary reform that has been made in the last twenty-five years the disease is on the increase? These two questions need answering if further progress is to be made with this particular disease. I believe the answer to the second question to be that microscopic investigation has been directed to material derived from the patients instead of material taken from their surroundings.

We all know that in some way or other dampness is a factor in producing the disease. I remember reading in THE LANCET many years ago a letter from one whose name I forget pointing out a connexion between stable manure and diphtheria. Eight years' country practice in a district where the disease only occurred sporadically convinced me that after a flood had dried up, the disease was more rife than at other times. Seven years' suburban practice in a district that may be described as marsh land covered in convinced me still more that damp was the great *causa causans*. I am now living in flat land where vegetable refuse is supposed to be burned, but is not. On the contrary, it is put down dust shoots and thrown into small back-yards to fester and decay. In the streets at night there is a sour smell of decaying vegetable matter suggestive of an old-fashioned farmhouse pig-cistern. The district is frequently attacked by diphtheria. The solution of the problem contained in the first question seems to me to be $d + D = \Delta$, or in the vernacular, damp and decaying vegetable matter cause diphtheria. I believe that if bacteriologists will seek material in dust bins and decaying vegetable matter where cases of the disease occur, before long they will find the breeding-place of the diphtheria bacillus and we shall then have a complete answer to question No. 1. If this be right it should be noted that the increase of the disease coincides in date with the introduction of flats into London; I believe this was after the 1867 Paris Exhibition and a direct consequence of it. Dust shoots and bins ought to be abolished and all dust collected every day by the bucket system. I have known a dead dog to be put down a dust shoot here and be left for a week. I have ignored the

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question of infection, as that is generally recognised, but would point out that cats must not be overlooked as carriers.

I am, Sirs, your faithfully,

VERE G. WEBB, L.R.C.P. Irel.

New Kent-road, S.E., Aug. 18th, 1897.

A DISCLAIMER.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to state that I am not the Dr. Aveling who spoke at the Anarchist meeting in Trafalgar-square last Sunday?

I am, Sirs, yours faithfully,

CHARLES T. AVELING, M.S., M.D. Lond.

Cedar House, Stamford-hill, N., Aug. 25th, 1897.

UNQUALIFIED ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—The perennial question of the unqualified assistant has again elevated its head. Without raising the many vexed issues which have been argued with such acerbity I would venture to draw attention to one class of unqualified practitioners which has not received adequate notice. I am a medical practitioner living in a very highly rated parish in West London. If an accident occurs within a few yards of my door, and the victim falls into the hands of the police, he or she is at once "treated" in accordance either with the preconceived notions of surgery of the active and intelligent constable or with such knowledge as First Aid learning may have imparted. But it appears to be a canon with the force to avoid calling in qualified medical aid where by any possible means this can be done. Should any unfortunate result accrue to the patient no notice is taken of the fact that the preliminary treatment was applied not merely by an unqualified but by an amateur surgeon. If, on the other hand, the patient were brought to my surgery, and by any chance in my absence were to be attended by an unqualified assistant, skilful and as perfectly competent as many men in practice, and any mischance of whatever kind eventuated, an outcry would at once have been raised as to the employment of the unqualified assistant. There is also a further view of the case. Departmental ideas, whether local or otherwise, upon this subject do not always synchronise with the practice of the departments. To take a concrete case. On the Saturday preceding Bank Holiday my unqualified assistant saw a case which proved to be scarlet fever. He immediately referred the matter to me, and I, diagnosing the case, informed the parents that it required either isolation or removal to hospital, giving them, of course, the option, but informing them that in any case I must notify it. I notified it; but though I am to a certain extent anticipating, I may say that my notification, posted in due observance of the law on the Sunday, was received and opened only on Tuesday morning. In view of possible complications which might have arisen, and also in view of some which did arise recently in a somewhat similar case in which I was to a certain extent—by implication, at least—concerned, I took measures to have the case removed at once. The curious part of the whole matter is that the medical officer of health who took high ground recently when the unqualified assistant question was a feature in the case, but where his own department was proved to demonstration to be utterly and hopelessly in the wrong, has now left the professional work of his department to an *unqualified assistant*. Wanting information as to the propriety of notifying certain doubtful cases in connexion with a very high death-rate (about 70 per 1000), I was told I could not see the medical officer till his return from a six weeks' holiday, but I might see his chief clerk. I draw no inference. I enclose my card.

I am, Sirs, yours faithfully,

Aug. 24th, 1897. A QUALIFIED PRACTITIONER.

IT has been decided by the committee of management of the Westminster Hospital to entirely close their out-patients' department for the purpose of renovation and repairs, from Aug. 23rd to Sept. 18th, both days inclusive. The out-patient department of the Royal Free Hospital is also closed until Sept. 1st, and St. Mary's Hospital is entirely closed until the end of September

THE BRUSSELS INTERNATIONAL EXHIBITION.

(FROM A SPECIAL COMMISSIONER.)

WHAT with numerous congresses, the exhibition, and the fine weather, Brussels is crowded with visitors. The town looks all the more animated as the authorities have decorated the main streets leading to the exhibition with festoons, flags, banners, some gilt plaster statues, and coloured electric lights. Twice or three times a week there are illuminations. Under these circumstances it is not surprising that many persons have selected to spend a part of their holidays at Brussels. The exhibition is, of course, small when compared with the great international exhibitions of Paris, but it is large enough to thoroughly exhaust the visitor, especially if he desires to see everything in the course of two or three visits. It is large enough also to comprise an important section devoted to hygiene and a good many exhibits of surgical instruments and pharmaceutical products. The members of the profession, therefore, who visit Brussels may combine utility with pleasure, for they will find at the exhibition several things of technical interest. Unlike many other exhibitions, that of Brussels is of easy access. The town is admirably provided with a network of electric and ordinary trains, so that speaking generally the exhibition can be reached with little waiting or crowding and at but small expense.

On entering the grounds by turning to the right the visitor reaches the main building through a number of minor structures, which are, for the most part, cafés and restaurants, where, and also in contra-distinction to other exhibitions, meals can be obtained at moderate cost. Behind these there is a small oriental bazaar where the sounds of wild Arab music are to be heard and Moorish women dance. On the way to the main building there is also a separate and large circular structure, occupied exclusively by the French food section. Here may be seen how the French have imitated English biscuit manufactories, how the trade in preserved and tinned meats and vegetables has been developed, and there are also specimens of olive oil, wines, cognacs, &c.

Entering the main building by one of the smaller doors close at hand, and which is inscribed Bosnia and Herzegovina, the visitor is at once in the Austro-Hungarian section, and can note what care has been taken to develop these Serb provinces, now annexed by the Austrian Empire. On the walls large paintings give some idea of the beautiful scenery of these provinces, and show that they are likely to become favourite resorts for future tourists. Of the artistic products of Austrian industry—glass, pottery, carpets, furniture, and fancy articles—I need not speak. It is known that the *article de Paris* is often made in Vienna, and I allude to this section merely to say that the section of hygiene is situated immediately behind. The exhibits of the Ghent Bacteriological Institute deal principally with the analysis of meat and the bacteria found in some ham which had caused an epidemic in 1895. There are photographs of various animals taken after injections of an infusion of this meat. On the same spot the Belgian Temperance Society makes a brave show of sensational pictures and sections of the human liver so as to forcibly illustrate the evils of alcoholism. Then there are various models of masks to be worn by workmen engaged in dangerous industries, while the Belgian manufacturers of surgical instruments show how they apply antiseptic principles. For the operating-room furniture they seem to prefer copper or brass to nickel. Stools for the operating surgeons are made like piano stools, screwing up or down. The seat is a round concave sheet of brass, and the leg is partly brass and partly nickel. The tables, shelves, &c., are, of course, of plate-glass. To the operating table can be affixed a carefully cast copper seat that can be passed under the patient's back so as to raise the pelvic region while the subject is still lying down. The sanitarian will be interested to note in this section how Belgian manufacturers have imitated the well-known models of English drain-pipes, traps, &c., including methods for applying the smoke-test to household drains. There are also some Belgian pharmaceutical specialities and a carriage used by the Brussels town authorities for conveying the insane. It is in the shape of a small omnibus, and the front

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part is divided into two padded compartments. The windows are of a special ground glass, of double thickness and unbreakable.

To the left of this section, close by, but walled off, are the extremely important and complete exhibits of the Ministry of Agriculture and Public Works. Here the Belgian Government show a model State laboratory and the measures taken for the enforcement of the various laws dealing with public health, and notably the prevention of the adulteration of food. To describe these exhibits would be to review the whole Belgian Legislature on the subject, and an entire volume might be written on such a topic. Fortunately there is a great deal of literature distributed here, so that the visitor can carry away with him the text of various laws, with details as to their application, so as to study them at his leisure. Thus, for instance, he can secure an official circular on the law of Nov. 18th, 1894, in which it is said that milk offered for sale must not be placed in leaden tins or metallic tins that have a lead alloy, such as certain forms of zinc. Article I. stipulates that milk from which cream has been removed must only be exposed for sale in receptacles bearing inscribed in large letters the words *lait écrémé*. The laws relating to beer, wine, meat, &c., are likewise set forth in printed circulars, which are at the disposal of the public, and thus visitors to the exhibition have a good opportunity of ascertaining what is the law on these subjects.

In the galleries that surround the vast hall devoted to machinery in motion there is another hygienic and social reform department. Here the French have a large demographical section with many charts and diagrams dealing with death-, birth-, and marriage-rates. Labour statistics, details as to charitable institutions, such as night asylums, *crèches*, &c., abound here. The French society for the better housing of the poor cover several partition walls with their drawings and plans. Other drawings, more especially connected with hygiene, illustrate plans and schemes for the draining and the water-supply of large towns. Among these I noted a scheme by M. Tusson, civil engineer, dealing with the town of Antwerp much on the lines which were indicated in the articles in THE LANCET on the cholera epidemic which prevailed a few years ago in that town. There is also a variety of drawings of public and private buildings which, though placed under the denomination of sanitation, are in reality of more interest to the architect than to the hygienist for most of these drawings contain no indication whatsoever of the methods of either ventilation or drainage it is proposed to employ. By far the best are the coloured drawings of the drainage scheme now in course of application to the town of Marseilles and those already mentioned, which it is proposed to apply to Antwerp. In both cases it is easy to see what is meant. In this gallery will also be found a vast exposition of diagrams and statistics setting forth the working of the workmen's compulsory insurance laws in Germany.

The military exhibits are very extensive, and several nations give specimens of field ambulances. The Red Cross Association of French Ladies has a large exhibit of its methods of training nurses and of providing help in cases of accidents and in the event of war. Among their equipment porous flannel shirts are in great demand, especially for the colonies. A convenient shirt for the wounded is also shown. This opens down one side and is fastened with tapes. No buttons are allowed, as it is sometimes difficult to fasten a button over a wound. All furniture is non-porous and easily pulled to pieces. Here also is a model of Dr. Gruby's tent. The metallic framework and the canvas weigh 2120 kilogrammes. The tent contains fourteen beds, and has two small separate compartments at each end. The Belgian Red Cross Society have established a working ambulance in a court close by. It is made by Messrs. Christopher and Unmack, of Copenhagen. The walls are of painted canvas stretched over a wooden framework. As there are two coatings of canvas the wall feels as if it were rather more than an inch thick. The separate rooms for the pharmacy and the surgeons are placed in the middle of the oblong tent. Thus the far end is well separated from the side where the sick or wounded are brought in. Three beds are ready in the event of any serious cases and the patients can be kept away from noise or disturbance in the further compartment. A nurse and medical men are in constant attendance, and of course there are stretchers and bearers at hand.

In another similar small inner court a variety of drain-pipes, gullies, and sections of sewers are exhibited; but I failed to notice anything new, though I did see several old and bad models. There are also numerous earth and peat closets with seats, which under the pretext of cleanliness seemed to realise the maximum of discomfort. Various filters are likewise shown here. In the main building, scattered in different directions, are different models of scaffolding, &c, devised in the hope of preventing accidents to workmen. Among these there is a ladder, "La Prévoyante" employed for window cleaning. Within the room it opens out and forms a letter V reversed; but if turned upside down two iron hooks enable the servant to hitch the point of angle made by the ladder to the window-sill. The steps of the ladder then protrude upward outside of the window and form a framework which prevents the window-cleaner from falling in the street. The Association of Belgian Manufacturers for the Prevention of Accidents have a model engineer shop worked by steam power and various styles of machinery all in motion, but so protected and guarded as to render accidents most unlikely if not impossible. This practical illustration of well-known theories is most interesting and to the point.

It cannot be said that the British section is very remarkable, at all events from the medical and sanitary point of view. Of course, there are the well-known tabloids of Messrs. Burroughs, Wellcome, and Co.; and considering the interest taken in Belgium in the colonisation of the Congo the adaptability of this form of pharmacy to tropical regions is well set forth. They have added some micro-photographs of cultures from their physiological laboratories and a general display of chemical substances used for pharmaceutical purposes. Close by Messrs. Ronald and Sérin, sanitary engineers, show how they apply Jennings' well-known sanitary apparatus to Belgian houses. John Dummock and Co. have also much enameled and porcelain sanitary hardware which is very elaborately decorated with floral designs.

In regard to education both in the French and Belgian sections there are many exhibits of interest. One in particular consists of a Belgian school of housekeeping, with a number of young girl pupils hard at work. Some are ironing, others are mending linen, and others are engaged at various household duties that all so largely contribute to maintain the comfort, happiness, and health of the home. This is a phase of education and a form of exhibit that greatly deserves encouragement. Of course there are numerous mineral waters and sanitary drinks to be found in different directions. Moreover, there is furniture for invalids, for field hospitals, and for tropical countries. In fact, it would be difficult to enumerate all that is of interest to the medical practitioner and to the sanitary reformer. Enough, perhaps, has been said to make it manifest that there is something to be learnt by a visit to the Brussels exhibition. As the means of communication are easy, the journey from England short and inexpensive, and life in Brussels is cheap and pleasant, there can be but little doubt that many persons will be tempted to avail themselves of these facilities and inducements.

Brussels, Aug. 15th.

PROFESSIONAL PROSPECTS IN ITALY.

(FROM A CORRESPONDENT.)

As a place of resort for the invalid or convalescent the future may well-nigh be said to belong to Italy. She has numberless sun-traps with marine or mountain exposure in winter; she has delightful airing grounds in the Apennines and on her sub-alpine slopes during summer; while her spring and autumn, particularly the months of May and October, are as nearly perfect for the robust or the weakly alike as are to be had in the temperate zone. Add to this that she is exceptionally rich in mineral waters, mud-baths, and thermal springs, and the result is an *ensemble* of conditions that put her at a singular advantage over other nations of Europe. Of her other attractions for the votary of art, literature, and even science there is no need now to speak.

But she has tremendous lee-way to make up before civilisation can reap the full benefit of those advantages and before she herself can draw from them the pecuniary return she requires so sorely. Out of the beat of tourist resort she

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is little better than mediæval in hotel accommodation, appointments, and *cuisine*; while even at her recognised and frequented health resorts she is so far behind trans-alpine Europe that the superiority she owes to nature over her rivals is more than neutralised by the defective conditions referred to.

Still she is making progress in many ways, and the next century cannot be much beyond its teens before she has put herself level with contemporary civilisation.

One stimulating element in this direction is the presence of the English-speaking world and the representatives of English-speaking practice in her midst. By the admission of her more competent and most candid public men of all professions, she owes much to the object-lessons in civilisation imported especially from the British empire. To minimise or even materially to reduce that invigorating and refining influence, it might be thought, would be the last thing her legislature should attempt. And yet, if an agitation now proceeding in her professional circles and already making itself felt in her parliament takes practical effect, she will do herself the great injury of deterring the English-speaking world from visiting her shores, and with it all the influences, refining and invigorating, just indicated.

The agitation in question concentrates itself in the so-called Santini Bill for excluding English-speaking practitioners from the English-speaking world, resident or migratory, she annually receives. That measure, already in its initial stages before the Camera dei Deputati, has frequently been commented on in the columns of THE LANCET, and the later, maturer opinions formed of it inside and outside the profession are not favourable to its becoming law. Signor Serena, Under Secretary of State in the Department of Grace and Justice, in his replies to Dr. Santini's interpellations, seems unwilling to commit the Government to more than to the exclusion of English-speaking practitioners from Italian *clientèles*. He has no objection to the continuance of the existing arrangement by which the English-speaking world shall have the power of calling in compatriot medical advice. In other words, he is by no means inclined to make Italy follow the ungracious lead of Switzerland and France, and render it impossible for English-speaking patients to avail themselves of English-speaking consultants.

This is as it should be, but it remains to be seen whether the Di Rudini administration adheres to the enlightened policy embodied in Signor Serena's replies, or whether it will yield to the pressure under which all Italian ministries are apt to become pliable. For one thing, Signor Serena seems to have mastered the situation so far as to appreciate the active and powerful opposition the Bill will encounter from the commercial, the hotel-keeping, the railway, and similar interests, deriving, as these do, so essential a part of their revenue from the English-speaking visitors and residents. Meanwhile, as matters stand, Italy remains a tempting field for the young British or American practitioner. Indeed, the presence of such a duly qualified medical adviser is often of itself sufficient to determine the tourist or valetudinarian public to resorts having every other attraction that nature can vouchsafe. A case in point is that of Sicily, whose recommendations as a winter residence for the weakly or the ailing, often vaguely surmised, have now been beyond cavil established in the columns of THE LANCET. The accommodation demanded by the civilised world and the presence of such practitioners as the British-American schools annually produce alone seem wanting to redeem that "island of Prospero" from the financial and other straits she has so long laboured under. And what is true of Sicily is true of Italy as a whole.

LITERARY INTELLIGENCE.—Messrs. J. and A. Churchill announce that they have recently published the sixth edition of "The Theory and Practice of Surgery," by W. J. Walsham. The book has been increased by 50 pages, though the price remains the same. Other new editions just ready include the third of Hartridge's Ophthalmoscope and the fourth of Clowes' and Coleman's Quantitative Analysis.—The Rebman Publishing Company, Limited, London, and Mr. W. B. Saunders, Philadelphia, will issue shortly an entirely new work on "The Diseases of Women," written for students and practitioners by Mr. J. Bland Sutton and Dr. Arthur E. Giles. The book will be profusely illustrated with woodcuts, most of which have been drawn expressly for it.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Sewage Again.

THE continued recurrence of the sewage question, the stringent but justifiable requirements of the Mersey and Irwell Joint Committee, the pitiful position of the Manchester Corporation, distracted by ever-varying counsels, which sometimes advise one course and then urge another, have by this time become familiar and probably wearisome to those who take any interest in municipal or sanitary questions. A short time ago artificial filtration seemed to be in favour as against the scheme of a culvert to the estuary of the Mersey, but the annual cost of the working, and the renewal of the filters every three or four years, would involve an estimated annual outlay of £31,820, to which the majority of the Rivers Committee of the corporation are opposed, and a sub-committee unanimously decided to recommend to the Rivers Committee that the effluent, after chemical treatment, should be taken to the tidal waters of the Mersey. This means that the Ship Canal will be deprived of the six or eight million gallons of purified effluent which should flow into it daily. In the meantime, the period of a year allowed by His Honour Judge Parry to the corporation for the preparation of a scheme having almost expired, the corporation asked for six months more grace, and have been granted three months. While all this time is being spent the river and the Ship Canal remain in a condition so foul and disgusting as to be a disgrace to a civilised people. Unfortunately, however, civilised people, so-called, do not appear to care about some of their surroundings more than, if so much as, many so-called savages, for where chemical industry and the mechanical arts are found the streams are invariably polluted and filthy.

Libel by an Insane Patient.

Mr. Mould, the superintendent of the Cheadle Asylum, has recently been the subject of libellous proceedings on the part of a former patient, who was brought up on remand before Mr. Headlam, the Manchester stipendiary, on the 18th inst. for publishing libels on Mr. Mould. Such an occurrence is one of the amenities to which superintendents of asylums sometimes become accustomed. In this case he was associated with Mr. Harley, the postmaster of Manchester, and Mr. Malcolm Wood, the chief constable of the city. The defendant said, as usual, that he was perfectly sane and the victim of a foul conspiracy, and proceeded with an excited harangue. In the end the poor fellow had to be removed and was afterwards conveyed to an asylum.

The Food Question in Workhouses.

A discussion took place at the meeting of the Prestwich guardians on the 19th inst. on a resolution proposing that an inquiry should be made as to the waste of food, if any, at the workhouse and the manner in which it is served. The chairman said that by the regulations of the Local Government Board the food had to be weighed and a certain quantity served to each inmate. One of the guardians instanced the Chorlton Workhouse, where "tons of bread were wasted at table," and the Local Government Board refused to sanction a system by which this might be avoided. The resolution was adopted.—At the meeting of the Chorlton guardians on the 20th inst. the chairman, Dr. J. M. Rhodes, alluded to the statements made at the meeting of the Prestwich board, and said they were carrying out the system started four months ago and did not intend to alter it. The Local Government Board had difficulties. There were some boards of guardians "whose main object seemed to be to screw expenses down and where there were workhouse masters bent on a stringent policy." It may be hoped, however, that the experiences of Oliver Twist could not now be repeated in the most unsympathetically managed workhouse in the kingdom. Dr. Rhodes also stated that the Local Government auditors found that the new system was less costly than the old, and that the Board was coming round to their view. He believed "that the system they had inaugurated benefited both the ratepayers and the poor" where the departments were under the management of well-paid and efficient officers.

Singular Death.

A washerwoman, aged twenty-five years, living at Weaste, was washing some blankets on the 5th inst. and wished to use

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some ammonia. Having some difficulty in drawing the cork she got hold of it with her teeth. It came out suddenly and a quantity of the liquid went into her mouth. She was taken to the Salford Hospital, but died early on the morning of the 9th inst.

Aug. 24th.

WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Proposed Convalescent Hospital for Bristol.

MR J. S. FRY, who had previously subscribed £3000 towards the proposed Convalescent Home for Bristol, has promised to substitute for this an offer of £10,000, provided that £40,000 is raised before Dec. 1st. Sir W. H. Wills has offered to increase his original contribution of £1000 to £5000 with the same stipulations. The balance now required to render the institution self-supporting is £13,000, and doubtless a strong effort will be made to secure these generous donations.

The Bristol General Hospital.

A sum of £1500 has been given by an anonymous donor to the Bristol General Hospital to be devoted towards defraying the cost of the enlargement and reconstruction of the laundry. Since the recent extension of the hospital the laundry and kitchens have been found to be inadequate. The proposed alterations will cost more than the £1500, but it is hoped that other subscriptions will be received.

A Nuisance at Merthyr.

At Merthyr Tydvil police-court on Aug. 9th the proprietor of a candle factory at Caedraw, Merthyr, was summoned for carrying on his business in such a way as to be injurious to the public health. It was complained that the pipe leading from the vat used for melting the fat was in a defective state, and that the shaft into which it was carried was insufficiently high, the result being that noxious smells were emitted. The Bench held that the defendant had not carried on his business with proper care and imposed a fine of £5 and costs.

"Prejudice against the Doctor."

At the last meeting of the Yeovil Board of Guardians Mr. A. W. Sinclair, L.R.C.P. & S. Edin., the surgeon for the South Petherton district, attended and gave an explanation with reference to a complaint made to a lady guardian for South Petherton by the mother of a boy who had recently fractured his leg. It was stated that the medical officer had only visited the lad on three occasions. Mr. Sinclair said that the whole story of his neglect was a fabrication, and proved from the entries in his visiting list that he had attended the boy almost daily until he was removed to the hospital. Mr. Sinclair stated that it was exceedingly disagreeable to him for guardians to show such animus towards him whilst residing in his district, and added that this was the second time he had been accused of falsehood. The board did not think a further statement from Mr. Sinclair was necessary, and passed a resolution stating that there was not sufficient evidence in the case. The Rev. W. D. Armstrong, who strongly supported this, said that he ventured to think there was "some sort of prejudice against the doctor." Mr. Sinclair is to be congratulated on the result of this inquiry, and for the future it is to be hoped that such groundless complaints will not be made by any of the guardians.

Aug. 24th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Visit of the Duke and Duchess of York.

THE visit of the Duke and Duchess of York to Ireland is obviously much appreciated by a large proportion of the population, their Royal Highnesses having been everywhere enthusiastically received. On the 20th inst. addresses were presented to His Royal Highness by the Presidents of the Royal Colleges of Physicians and Surgeons respectively. Sir George Duffey, the President of the Royal College of Physicians, who was accompanied by Dr. Wallace Beatty, Dr. Lombe Atthill, Dr. James Craig, Sir John Banks, Physician-in-Ordinary to the Queen in Ireland, and Dr. William Moore, Physician-in-Ordinary to the Queen in Ireland, read the following address of the Royal College of Physicians:—

"TO HIS ROYAL HIGHNESS, GEORGE FREDERICK ERNEST ALBERT, DUKE OF YORK, EARL OF INVERNESS, AND BARON KILLARNEY.

"MAY IT PLEASE YOUR ROYAL HIGHNESS,—

"We, the President and Fellows of the Royal College of Physicians of Ireland, on the occasion of your present visit to this country beg to offer to your Royal Highness a hearty welcome to Ireland, and a renewed expression of our devoted loyalty and attachment to her most gracious Majesty the Queen.

"We would also assure you of the great gratification we feel that you have been pleased to honour Dublin with your presence at so memorable a time as this, when we have been celebrating the completion of the sixtieth year of the Queen's reign.

"We desire also most respectfully to express our satisfaction that you are accompanied by her Royal Highness the Duchess of York, sharing as we do most warmly in the feeling of attachment with which all loyal citizens welcome the visit of members of a Royal Family so universally and justly beloved.

"Signed on behalf of the College.

"GEORGE F. DUFFEY, M.D., Knt., President.
"JAMES CRAIG, M.D., Registrar."

Sir William Thomson, the President of the Royal College of Surgeons, read the following address on behalf of that body. He was accompanied by Dr. A H. Jacob, Mr. Henry Gray Croly, Mr. W. I. Wheeler, Sir Thornley Stoker, and Mr. H. R. Swanzy:—

"TO HIS ROYAL HIGHNESS, GEORGE FREDERICK ERNEST ALBERT, DUKE OF YORK, K.G.

"MAY IT PLEASE YOUR ROYAL HIGHNESS,—

"We, the President, Vice-President, and Council of the Royal College of Surgeons in Ireland, beg most respectfully to offer to your Royal Highness and to the Duchess of York a cordial welcome on the occasion of your visit to our country.

"As a member of the family of Her Majesty, our revered Queen, and as the lineal representative of their Royal Highnesses the Prince of Wales and the Princess of Wales, your advent to Ireland affords us great satisfaction, and will, we believe, be received as a manifestation of your desire to acquire that personal knowledge of Her Majesty's Irish subjects which can only be obtained by direct observation. We are convinced that frequent association of your Royal Highness and other members of the Royal Family with our people will be attended by the most beneficial results by confirming and increasing the attachment of this country to the Throne and by maintaining in the Royal Family a warm interest in the prosperity of Ireland.

"We beg further to assure your Royal Highness of the determination of our College to aid in maintaining in the future as in the past those loyal and dutiful relations with Her Majesty and her august Family which have hitherto existed.

(Signed) "WILLIAM THOMSON, President.
"ROBERT L. SWAN, Vice-President.
"CHARLES CAMERON, Secretary of the College.
"ROBERT H. WOODS, Secretary of Council.
"GEORGE F. BLAKE, Registrar."

The Mater Infirmorum Hospital, Belfast.

The Belfast and County Down Railway Company, at their half-yearly meeting, held on Aug. 10th, agreed to subscribe £200 out of the revenue of the company, to the fund for the erection of the Mater Infirmorum Hospital.

Belfast District Lunatic Asylum.

Dr. William Graham, medical superintendent of Armagh Asylum, has been transferred by the Lord-Lieutenant to the Belfast District Lunatic Asylum, as successor to Dr. Merrick (resigned). Mr. George Lawless, of the Sligo Asylum, has been appointed to Armagh.

Kilkeel Dispensary.

Dr. Floyd was, on Aug. 24th, unanimously elected medical officer of Kilkeel Dispensary, No. 1 district, in place of Mr. Gordon, resigned.

Belfast Royal Hospital.

At the quarterly meeting, held on Aug. 23rd, it was reported that during the past three months there had been 539 intern and 6690 extern patients. At the close of the previous quarter the debt against the hospital was £2624 13*s.* 9*d.* Since then the receipts have been £1704 19*s.* 11*d.*, and the expenditure £2298 15*s.*, which brings the indebtedness to a sum of £3218 8*s.* 10*d.* at the end of July. This large sum owing by the hospital is to be accounted for to a considerable extent in an expenditure on necessary alterations in the house, and a sum of £2500 was voted to meet this indebtedness, which, when realised, will bring the actual debt down to £718 8*s.* 10*d.* Professor Cuming, M.D. R.U.I., was re-elected staff-physician.

Untrained Nurses in Union Hospitals.

Pauper nursing in union hospitals has recently been the subject of much comment, and at the last meeting of the Kilrush guardians the medical officer, Dr. Foley, strongly urged the appointment of properly trained nurses. In the course of the discussion which ensued Dr. Foley gave the

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following forcible description of the evils likely to result from entrusting the care of the poor patients to unpaid pauper attendants: "The pauper helpers receive more kicks than halfpence, and any work they do has to be squeezed out of them. It is not human nature to expect under the circumstances that they will show feeling and consideration to the inmates. Besides, their misfortunes sour their dispositions. Then they levy blackmail, and the patient who does not give a few pence is certain to be neglected." The guardians were evidently impressed by their medical officer's representations, and decided on holding a special meeting for the purpose of considering the question in all its bearings.

Vaccination in the Kenmare Union.

At the last meeting of the Kenmare board of guardians Dr. Browne, Local Government Board inspector, complained of the very backward state of vaccination in the union, and he said that he had learned from the dispensary medical officers that this was due to the fact that the guardians declined to enforce the law to compel parents to comply with the provisions of the Compulsory Vaccination Act. In reply one of the guardians explained that the great majority of the board objected to the system of vaccination from arm to arm, but that they would be prepared to carry out the law if lymph taken directly from the calf were used. A discussion ensued, and Dr. Browne announced that calf lymph could be procured by the union medical officers whenever the parents of children so desired.

Aug. 25th.

PARIS

(FROM OUR OWN CORRESPONDENT.)

Anti-choleraic Serum.

M. GAUTHIER laid before the Academy of Medicine on behalf of Dr. Ferran, of Barcelona, a claim of priority with respect to the treatment of cholera by anti-choleraic inoculations—a treatment the good effects of which the medical faculty in Spain as well as the public experienced in 1889. MM. Brouardel and Bertrand observed that the methods of the Spanish medical man, which date from 1885, the date when a commission of French medical men visited him for the purpose of investigation, did not at that time by any means give the beneficial results which their author claims for them to-day. On the other side, Dr. Ferran refused in 1885 to give up the formula of the composition of his vaccine, and has continued to persist in this refusal. Under these conditions the Academy has declared that it can neither give any decision as to the curative virtues of a preparation of which it knows nothing, nor give any support to Dr. Ferran in his claim for priority.

Isometropic Lenses of Baryta Glass.

For some time past so-called isometropic lenses made of baryta glass for spectacles have been used in Paris, which are said to be better for the sight because their curvature is less than that of ordinary lenses of the same focus. MM. Druault and Tscherning have examined these lenses in the ophthalmological laboratory of the Sorbonne, and have decided that they are very inferior to lenses made of ordinary glass. Their index of refraction is higher—namely, 1·576 instead of 1·534—and the difference of curvature is about 8 per cent., which is of no practical advantage. The baryta lenses are no harder than those of ordinary glass; they are slightly more transparent, but they have no other advantages.

Floating Hospitals.

Dr. Burot, Professor at the Naval School of Medicine, has just published the results of an inquiry into the working of hospital ships. During the late Madagascar expedition an interesting trial of hospital ships was made, the results of which merit every recognition. These results were very good, says Dr. Burot, and hospital ships are undoubtedly destined to render very valuable services in colonial expeditions. The *Shamrock* was the name of the ship which was employed on this service in 1895, and, according to Dr. Burot, all the sick soldiers were most anxious to be sent on board, and the greater part of them considered themselves quite safe as soon as they saw their names on the list for removal. There were only sixty deaths out of a total of two thousand sick. Counting the period of service of this ship at six months, this number works out at ten deaths per month, a mortality of 3 per cent., and one very much lower than that which existed during the same time in the hospitals in Madagascar. It is also a great deal lower than that of the hospitals either at Toulon or Saint Mandrier.

French Scientific Congresses.

The Congress of the French Association for the Advancement of Science has just taken place at St. Étienne. The question of actinomycosis brought out some very remarkable researches, especially those of MM. Poncet and Bérard.—A meeting of French alienists and neurologists has been held at Toulouse to consider the question of general paralysis and the organisation of the medical service of lunatic asylums.

Drinking-water in Paris.

Every speaker, whether in the Chamber or in the Senate, during the recent discussion declaring the intended works for utilising the Loing and the Lunain as a source of water-supply to be of public importance, has called the attention of the Prefect of the Seine to the insufficiency of the supply of drinking-water to Paris. This supply, which sometimes rises to 240,000 cubic metres for a population of 2,500,000 within the walls, fell to 197,000 cubic metres during the drought in 1895, so that it was necessary to supply certain quarters with water from the Seine, a most unsatisfactory proceeding. The Prefect of the Seine, M. de Selves, has therefore determined to study the methods of meeting the present evils, and with the assistance of all the leading exponents of science has started a commission to examine the various questions which arise as to the supply of Paris and its suburbs with a good drinking-water.

Aug. 24th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The New Tuberculin.

THE recent numbers of the *Deutsche Medicinische Wochenschrift* contain further instalments of the articles on the new tuberculin, some account of which has already been given in THE LANCET.[1] In the children's department of the Charité Hospital, Berlin, the remedy was tried in five cases, reported by Dr. Slawyk, assistant physician to that hospital. One child was given twenty-three injections, one was given twenty-one, and three children were given two. The smallest quantity injected was $\frac{1}{10\,000}$ milligramme of tuberculin, and the largest was six milligrammes. The injections were performed strictly in accordance with Professor Koch's directions. One child, a boy, aged eight years and nine months, suffered from marked scrofulosis, the symptoms being swelling of the cervical and submaxillary glands, cicatrices on both sides of the neck, blepharitis, swelling of the abdomen, chronic catarrh of the right lung, and enlargement of the liver and spleen; there was, however, no fever. The injections, although they did not at first exceed the small dose mentioned above ($\frac{1}{10\,000}$ milligramme), were, as a rule, followed by severe reactions—rise of temperature to 39 6° C. (103·3° F.), profuse perspiration, collapse, and hyperæmia at the place of the injection. It was also noticed that the sites of former injections became swollen when a new injection was made. The reaction, as a rule, began on the day of the injection; it often continued for several days, and was not liable to be attended by troublesome symptoms, notwithstanding the high temperatures. An alarming collapse, however, occurred in one case, the last injection (of six milligrammes of tuberculin) having been given twenty-two hours previously; the child became unconscious, the colour of his face was livid, the respiration stertorous, and the pulse weak. In the evening, about thirty hours after the injection, the collapse had reached its maximum, the respirations being 96 per minute and the pulse 186. During the night the child's state improved and about noon next day the danger was over. The injections were of course no longer continued with this patient. This untoward occurrence could not be attributed to the manner in which the operation was performed; probably the dose was too large for a child of that age. Another child, aged eight years, who suffered from pulmonary tuberculosis, together with symptoms of scrofulosis, had a more favourable experience than the child just mentioned; febrile reaction only happened after the last injections and in

[1] THE LANCET, July 17th, 1897, p. 171.

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a slighter degree. With regard to the curative influence of the injections the report states that in the last case the objective symptoms in the lungs had diminished; in the first case the swelling of the glands also decreased during the treatment — Dr. Wörner, physician to the hospital of Schwäbisch-Gmünd (Würtemberg), has used the tuberculin on eight patients, four of whom suffered from lupus, one from scrofulosis, and three from pulmonary tuberculosis. He recommends that the dose of the tuberculin should be increased very slowly—about 0·002 or 0·005 milligramme every second day. In this way febrile reaction may be avoided. In his experience unpleasant symptoms occurred in only one case and were apparently due to the tuberculin being of too high activity. The bottle was sent out by the Hoechst factory on the same date as that which had caused the severe symptoms in the case under the care of Dr. Bussenius in the Charité Hospital of Berlin.[2] Apparently the degree of virulence of the individual samples is apt to vary a good deal. Of the cases of lupus one patient who had for a long time suffered from the disease is nearly cured; two who had been operated on some time before the injections have had no relapse, and the patient suffering from scrofulosis is nearly cured. The effects on pulmonary tuberculosis have not hitherto been obvious enough to be recorded; there is, however, no indication of the treatment disagreeing with the patients.—A very interesting case of tuberculosis of the genital organs is described by Dr. Seeligmann, of Hamburg. A woman, twenty-eight years of age, suffering from lupus of the nose, complained also of menstrual troubles, and double pyosalpinx was found together with ulcerations in the vagina. The vaginal secretion contained tubercle bacilli. After forty injections there was a great change for the better in the patient's condition; menstruation was regular, the lupus of the nose was healed, the enlargement due to the pyosalpinx had disappeared, and tubercle bacilli were no longer discovered in the vagina.

Aug. 8th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Health of the Pope.

THE "mythopœic spirit," so familiar to the student of the past, is not less *en évidence* in the present; witness the inventions and fabrications that figure as "news" regarding the thoughts and actions, even the physical condition, of leaders in the contemporary world. Probably no personage gives such occasion for its exercise as the Supreme-Pontiff, whose "health" inspires so much solicitude in continental journals that hardly a fortnight passes without their commenting on it. I read, for instance, in an influential organ of the Alta Italia that "on the evening of the 16th inst. the Holy Father had two fainting fits (*svenimenti*), which recurred with equal gravity on the morning of the 17th. Professor Ceccarelli never leaves the Vatican so as always to be in attendance on Leo XIII. There is much anxiety in Rome," adds the chronicler who telegraphs the "news" from that city, "on account of this intelligence." Having read an obituary notice of the self-same distinguished Professor Ceccarelli in THE LANCET some five years ago[3] my scepticism as to the authenticity of the "intelligence" was rather more accentuated than usual, so I thought I would inquire at the only quarter whence information as to His Holiness can be obtained at first hand. I received for answer, "Il Papa sta benissimo" (The Pope is very well indeed); followed by the request, "Smentite la voce che il Papa fosse ammalato, tanto che il medico del Pontefice ricevette dispacci dalla Francia e dalla Germania che chiedevano notizie" (Contradict the rumour that the Pope was so ill that the pontifical physician received telegrams from France and Germany asking for particulars). That "counter" to which so many untruths are "nailed" would need to be of illimitable expansion!

Honours to Professor Sanarelli.

Siena is naturally proud of the alumnus whose discovery of the microbe of yellow fever has put the study of that tropical scourge on so advantageous a footing for its prophylaxis and clinical treatment, and the ex-rector of her school, Professor Domenico Barduzzi, still one of the most respected of her medical staff, in whose clinique young Sanarelli was trained, has expressed the mind of his colleagues in the following inscription, on the lines of which another will be inscribed on a memorial tablet to be unveiled in Sanarelli's honour on the university walls:—

GIUSEPPE SANARELLI—discepolo valoroso, maestro preclaro—nell' Ateneo Senese—giovane di anni, maturo di studi severi—fondatore dell' Istituto di igiene sperimentale—in Montevideo—svelando sulle rive del Plata—fra disagi, ansie, pericoli—il germe insidioso violento della febbre gialla—apriva nuova sicura mirabile via—contro tanto flagello.—All' amico, al collega carissimo—Domenico Barduzzi—manda plaudente fervidi auguri—di altre conquiste per la vita umana, per la scienza—di nuovi imperituri trionfi per l'Italia.

Siena, luglio MDCCCXCVII.

(To Giuseppe Sanarelli, a pupil of power, a teacher of distinction in the Sienese University; young in years, mature in severe study; founder of the Institute of Experimental Hygiene in Montevideo; disclosing, on the banks of the Plata, amid difficulties, anxieties, and dangers, the insidious yet violent germ of yellow fever, and opening up a new way, as secure as it is wonderful, to combat so formidable a scourge—to the well-beloved friend and colleague, Domenico Barduzzi sends with applause his ardent auguries of yet other conquests for human life and science and of fresh, immortal triumphs for Italy. Siena, July, MDCCCXCVII.)

A "Serum Anti bubonicum."

The event of the day in professional circles is the return of the Florentine bacteriologists from Bombay, whither the Di Rudini Ministry sent them to try to discover a prophylactic serum against the "pestis bubonica." These gentlemen, all from Florence—Professor Lustig, Dr. Malenchini, and Dr. Galeotti—received from the Bombay Government every encouragement and every facility in their researches; and their findings and conclusions, embodied in a report shortly to be made public, are stated to be eminently satisfactory. The Lustig serum, as it is called, differs from that of Yersin in being not curative but preventive; it belongs not to clinical but to State medicine. In its preparation, moreover, it offers much fewer difficulties than Yersin's. It is absolutely free from bacteria, it is dry, and, what is of capital importance, its effects on man and beast are quite harmless. Inoculated under the skin in small doses dissolved in water alkalinised and sterilised, it produces only a slight local œdema, which disappears in twenty-four hours. Tested repeatedly on rats, guinea-pigs, horses, and apes, the serum (particularly in the case of horses) had, in Professor Lustig's language, "risultati rapidi e soddisfacenti" (results speedy and satisfactory). Nor did the experiments stop with the lower animals. Professor Lustig, Dr. Malenchini, and Dr. Galeotti made trial of the serum on their own persons, and with gratifying effect. Further investigations confirmed the value of the "vaccino preventivo," as the report designates it; so that, unless three of Italy's most accomplished bacteriologists have been misled by some unforeseen source of error or some undetected fallacy they may be congratulated on having added a defensive weapon to State medicine in a quarter where it has long been desiderated.

Cholera Shadows.

On board the same peninsular liner, the *Britannia*, that landed Professor Lustig and his colleagues at Brindisi occurred two cases of cholera which caused some detention in that port before "*libera pratica*" (free course) was obtained. The disease declared itself in the Red Sea, and the patients were made to disembark at Suez, together with those in attendance, and were all of them placed under surveillance at the International Sanitary Station at the Wells of Moses. The steamship was thereafter allowed to traverse the Suez Canal in quarantine. The brevity of the interval between the disembarkation of the cholera patients and the arrival at Brindisi is held to justify the Italian Government in forbidding at the latter port the landing of the passengers and goods till the certificate of "*libera pratica*" could be granted.

Aug. 23rd.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

The late Professor Joseph Kovács.

BUDAPEST University has received a heavy blow by the death of Professor Kovács, who succumbed to diabetes on

[2] THE LANCET, July 17th, 1897, p. 172.
[3] THE LANCET, Feb. 25th, 1893.

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Aug. 6th, in his sixty-fifth year. When he was only sixteen years of age Kossuth roused the Hungarians against their Austrian rulers, whereupon he left college and served in the army which fought for the liberty of the country. After the revolution he continued his studies in Budapest and Vienna, and having received the degree of M.D. he soon became the assistant of Dr. Balassa, then Professor of Surgery in the Budapest Medical Faculty. At the age of thirty years he was appointed Lecturer on Surgery. During the Austro-Prussian war in 1866 he was entrusted with the surgical treatment of the wounded who had been removed to Budapest, and he executed this difficult task with great credit to himself and satisfaction to the profession. In 1868 he was appointed to the ordinary Professorship of Surgery, which he held until his death. He was also adviser to the Minister of Public Instruction. The name of Professor Kovács was little known in the medical world outside Austria-Hungary, but those who had the good fortune to witness his extraordinary skill in performing operations or to listen to his teaching at the bedside were all aware that he was not only an accomplished surgeon but a keen observer and a clear-headed man, possessing a sound and well-balanced judgment. He had the great merit of having trained in this country a number of surgeons who now occupy responsible posts and are celebrated for the ability which characterises their work. The memory of Professor Kovács will long be cherished, both by his pupils and by all who have known him.

Aug. 16th.

Obituary.

WILLIAM JOHN PILCHER, F.R.C.S. ENG., L.A.H. DUB., J.P.

GENERAL and sincere regret has been caused in South Lincolnshire by the announcement of the death of Mr. Pilcher, one of the best-known residents in Boston. His last illness was of about a fortnight's duration, and he died at his residence in the High-street on Aug. 16th. Mr. Pilcher was born in Antigua in 1837. He studied medicine in Dublin University and in the schools attached to the Royal College of Surgeons in Ireland, becoming qualified as L.A.H. in 1858, L.M. (Rotunda Hospital) in 1859, and M.R.C.S. Eng. in 1860. His first professional engagement was as surgeon on board a Cunard mail steamer. In 1863 he settled in Boston, where he acquired an extensive practice and took an active part in the social and public life of the town. Mr. Pilcher was admitted to the Fellowship of the Royal College of Surgeons of England in 1869. His professional attainments were of a high order and the soundness of his judgment was generally recognised. He was one of the founders of the Boston Hospital, which dates from 1871, and has grown to its present size from a very small beginning, the patients having been at first accommodated in two cottages in Irby-street; its prosperity caused him the greatest satisfaction, and at the time of his death he was the oldest member of its medical staff. He was also a medical officer of the Boston Provident Dispensary, and had been President of the Midland Branch of the British Medical Association. He was made a Justice of the Peace for Boston in 1873; under the last Liberal Government he was also appointed a Justice of the Peace for the county, but he did not proceed to full qualification for this latter office, and never took his seat. Owing to the esteem in which he was held by his fellow townsmen he was chosen to fill various positions of local importance, being chairman of the Steam Laundry Company, deputy chairman of the Deep Sea Fishing and Ice Company, a charity trustee for Boston, and a trustee of the Parry Scholarship and Gold Medal. He also took a prominent part in connexion with the organisation of the University Extension lectures and the Gilchrist Trust lectures in Boston during 1895 and 1896. In November, 1895, he was elected an alderman by the town council. The funeral took place in Boston Cemetery on Aug. 18th in presence of a very large assemblage and amid general tokens of public mourning.

THE TWELFTH INTERNATIONAL MEDICAL CONGRESS.

MOSCOW, AUG. 19TH—26TH.

THE Twelfth International Medical Congress, held under the "high protection" of His Imperial Majesty the Emperor Nicholas II. and the "august patronage" of His Imperial Highness the Grand Duke Sergé, was formally opened by the Grand Duke at Moscow on Thursday, Aug. 19th, 1897. We shall be pardoned by our readers if we explain that in Russia there is official usage of what is called "old style" in the matter of dates; therefore in Moscow the Congress is held to have been opened on Aug. 7th, the "old style" being twelve days behind the rest of Europe.

Moscow, the wonderful many-coloured capital of ancient Muscovy, was looking its best on the opening day, and its best almost defies description. The painted towers, the gilded domes, the quaint spires, the old cathedrals, the new public buildings, the palaces, the shrines, and the hovels, each have their individuality and combine to make a whole the general effect of which cannot conceivably be summed up in a phrase or two. Brilliant colour seen against sober neutrality, civilisation, if not in all its most convenient forms, certainly in many of its hyperæsthetic developments, nodding to barbaric simplicity, palaces of the fourteenth century contiguous to seminaries of the nineteenth, the East arm-in-arm with the West,—these things make up a medley which can be imagined but hardly described.

The city is very full, but the English-speaking visitors are in a minority. There is no doubt that the lack of early organisation on the part of the Executive Committee of the Congress led to the abstention of many visitors, and particularly of many who had to come from a very long distance. Some who had paid their money and had been enrolled as members did not care to venture so far East without receiving any definite response to their requests for information as to lodgings or hotel accommodation. Others did not obtain acknowledgment of their cheques and their railway passes sufficiently early to enable them to arrange to make Moscow the seat of their usual summer holiday. "We who are in Moscow, however," writes one of our Special Correspondents, "can testify to the cordiality of our reception, but so full is the city that we are selfish enough not to be sorry that England is so badly represented."

The Germans have turned up in enormous numbers, and, as has been observed at these Congresses before, they all seem to know each other. The large hotel, the Slaviansky Bazar, and the enormous restaurant contiguous to it, are both the constant scene of big reunions of bearded savants, who all greet each other with an effusion that would go far to show that professional jealousy has not any abiding-place in the German empire. To other members of Congress there is present occasionally a certain anxiety about their ignorance of Russian customs and language, but into the German breast such apprehensions do not seem to enter. With one accord they seem to have decided that the Congress offers an opportunity to them for a picnic and a renewal of their student friendships.

We allude to Moscow advisedly as the capital of Russia, for this it is although the official Government has its seat in St. Petersburg. But round Moscow the real Russian tradition clings. Here we have the holiest fanes, and

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here, in the famous Kremlin, are the ancient documents which tell the story of the evolution of the empire. Geographically, also, Moscow is the centre of the present Russian empire, and in whichever direction, if any, the territorial expansion occurs Moscow will be the focus of all business organisation, being in touch alike with Siberia and Tartary, with Finland and the Crimea. But whether Moscow is an ideal place for a medical congress is another question. It is a difficult city to reach, and when reached it has but indifferent accommodation to offer to the visitor. There are few hotels, and only one of any size, while the use of *Meblivoranni Komnatie*, or large blocks of furnished apartments under the supervision of a landlady, is not one into which the ordinary traveller quickly falls. Let us hasten to add that every attempt has been made on the part of the organisers of the Congress to make the visitors comfortable and to avoid the annoyance and inconveniences of arrival in a strange city; but Moscow does not lend itself to the sudden addition of 7000 persons belonging to what in Russia are the upper classes within a few hours. Consequently, we know that many visitors to the Congress have been very uncomfortable, while the impossibility of explaining their wants to a population which speaks for all practical purposes nothing but Russian has added to their troubles.

The Congress informally opened on Aug. 18th, when all members were invited to attend a general meeting in the Palais d'Exercice, and then meet the committee of the section under which they were enrolled and obtain any information or tickets which they required. This palace, which is popularly known as the *Manége*, is well-fitted for the purpose to which it has been put, as the headquarters of business arrangement, for it is an enormous building in the centre of the city, easily accessible, near the University, and not a great distance from the *cliniques*. But the general trouble and turmoil of travel upset the fore-planned arrangements. Everyone was hot, dusty, and dirty, and in a short time the true uses of the preliminary meeting were lost sight of, the various alcoves which were designed to be the headquarters of different sections were completely deserted, while the centre of the building was used as a smoking promenade by everyone who was not struggling around the *poste-restante*, the restaurant, and the lavatory. The first two, it should be said, were admirably worked, but of the shameful inadequacy of the last a plain word must be spoken. One urinal and one water-closet were placed at the disposal of the whole Congress, and both were in the same little wooden hut, divided from each other by no partition. Moscow is according to European ideas very inadequately supplied with latrines, while the unblushing publicity of the East concerning the performance of all the offices of nature to a great extent prevails; but those responsible for the arrangements of the public meeting in the *Manége* ought to have remembered that the meeting was an international one, and not an oriental one.

The arrangements for the reception of ladies were much better, but there were, of course, by no means so many ladies to be provided for. They were well looked after by a competent local committee, who had taken all pains to make orderly provision for probable wants. From this little fact one lesson may be deduced, and that is that the numbers who attend these congresses are now so large that proper organisation for comfort is impossible. Thousands of persons surging into a foreign town cannot be made to feel at home, though hundreds possibly can. If the congresses could be confined to delegates the standard of comfort would be much higher, and the scientific character of the meetings would lose nothing by such a limitation. But as these congresses are at present constituted an enormous number of people have to be provided for, and temptation must be placed before them to pay their guinea and attend, for without a good sum of money in hand the meetings must result in a pecuniary loss, while there is no very clear reason why any State, or any individual, should meet that loss. But speculation on this point would lead us to speculation upon the uses of scientific congresses, a large subject not now under consideration.

On Thursday evening, Aug. 19th, there was a well-attended soirée in the Galleries of Commerce, all members of the Congress being invited to be present. The galleries are enormous new buildings constructed over vast arcades, with shops on either side, and form a prominent feature of modern Moscow, all the more prominent because their ornate, white façades in modern Italian style abut on the old red walls of the Kremlin. The programme of the evening included performances by Russian, Cossack, and Tzigane choirs, while refreshments were provided in the different galleries with truly Russian magnificence.

A generous offer has been made by a number of merchant princes in Moscow, who propose to endow an infirmary for epileptics and the weak-minded of both sexes to commemorate the Congress.

THE FIRST GENERAL MEETING.

Those who were fortunate enough to be present at the opening ceremony of the Congress witnessed an extremely brilliant sight. The organising committee, in selecting a suitable place for the three general assemblies, have been placed in a position of no little difficulty. To find a building capable of accommodating even a moiety of the 7000 members of the Congress, many of whom are accompanied by ladies, was an obvious impossibility. In ultimately selecting the Grand Theatre (*Bolshvi Tëatr*) the problem appears to have been solved in the best possible manner. This fine theatre, the largest in Europe, stands in the centre of a plain, just outside the *Kitai Gorod*, or "Chinese Town," a characteristic part of the city of Moscow, surrounded by walls which almost rival those of the Kremlin itself. The interior of the theatre was entirely renovated last year for the occasion of the gala spectacle at the time of the Coronation. On this occasion every seat appeared to be occupied some time before the opening of the Congress, which was fixed for 1 o'clock. As seen from the stage the sight was certainly a striking one. The prevailing dress appeared to be the ordinary evening dress of civilisation, but in all parts of the house this was relieved by more than a sprinkling of uniforms and decorations, and orders of all nationalities were worn by a goodly number of those present. The stage was occupied by the official representatives and delegates of the various nationalities, and here, as was to be expected, there was a brilliant array of official uniforms and decorations. Throughout the house, too, the summer toilettes of the ladies present, of whom there were many, added conspicuous touches of colour. Her Imperial Highness the Grand Duchess Elizabeth, the wife of the Grand Duke Sergé, occupied the stage box on the left side. Punctually at 1 o'clock the audience rose as the august patron of the Congress, the Grand Duke Sergé Alexandrovitch, took his seat at the centre of the table, which occupied the whole length of the front of the stage. To his Highness's right was the Minister of Public Instruction, his Excellency Count Delianof, and to his left Professor Sklifosovski, the President of the Organising Committee of the Congress. At the table were seated also the Mayors of Moscow and St. Petersburg and many of the representatives of foreign countries. The remainder of the stage was completely filled by foreign delegates and members of the national committees. The back of the stage was occupied by a full-length portrait of the Emperor, surrounded by numbers of tropical plants and trophies of flags of all nations.

The Grand Duke having declared the Congress officially open, Count Delianof rose and delivered a short address of welcome in the Latin tongue. He spoke of the lofty aims which had brought the members together and wished success

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to their joint labours. Professor Sklifosovski, as president of the Organising Committee, who spoke in French, then gave a brief address. He welcomed the members of the Congress in the name of the oldest of the Russian universities. Russia, he continued, was no longer separated, as in the past, by a Chinese Wall from the rest of Europe. It had been the lot of Russia to protect the West from those fatal Asiatic influences which had for so long prevented her own development. He then passed on to discuss the question of languages. The multiplicity of languages had, he said, in the past been one of the great bars to international intercourse, and he proposed that an attempt should be made at the present Congress to come to some decision on the question of what language or languages should be employed at this and succeeding international gatherings. He suggested that each nation should elect two representatives, who should collectively form a committee to discuss this subject.

Professor Roth, the general secretary, then gave an account of the preliminary labours of the organising and executive committees. The present Congress was larger than any of its predecessors, the number of members exceeding 7300. Prince Galitzin, the Mayor of Moscow, then welcomed the members of the Congress in the name of the city of Moscow, and added that to commemorate the event the municipality had decided to offer a triennial prize for the best work on some selected medical subject, under conditions already described in THE LANCET. The speeches of the representatives of foreign countries then followed. The majority spoke in French, but the German and Austrian representatives spoke in German, the English in our own tongue, and the Czech and Bulgarian in Russian. The first and the most eloquent address was that of Professor von Koller, surgeon-general of the Prussian army, whose speech was received with loud applause. Space will scarcely permit of more than the mention of the many countries whose delegates addressed the house at more or less length. The representatives spoke in the following order: Germany, Austria, Czech, Hungary, England, Belgium, Denmark, France, Mexico, Italy, Japan, the United States, Spain, Norway, the Netherlands, Roumania, Portugal, Sweden, Turkey, and Switzerland. Professor Tarnovski, of the Russian Medical Council, and M. Dekhteref, representing the city of St. Petersburg, then spoke; the latter, in the course of his speech, cordially inviting the members of the Congress to visit St. Petersburg after their labours in Moscow were at an end.

Professor Roth then read the names of the representatives of foreign countries. The names, particularly the more familiar ones, were received with loud applause, which in many instances was not silenced until the owner of the name had risen and bowed his acknowledgments. Germany is represented by Professor Virchow, Professor Leyden, Professor Ziemssen, and Professor Waldeyer; Austria by Professor Gussenbauer, Professor Hlava, Professor Pertik, and Professor Riedeger; Belgium by Professor Crocq; Great Britain by Sir William MacCormac, Sir William Stokes, and Professor Simpson, of Edinburgh; the United States by Dr. Sayer, Dr. Senn, and Dr. Billings; Spain by Dr. Robert, of Barcelona; France by Professor Lannelongue, Professor Le Dentu, Professor Grassé, and Professor Pinard; Italy by Professor Dantona, Professor Bottini, and Professor Lombroso; and Switzerland by Professor Kocher and Dr. Roux.

After the addresses of the delegates, many of whom of necessity spoke with great brevity, there was an interval of five minutes. On the house re-assembling Professor Virchow at once ascended the rostrum on the left side of the stage to read his address on "The Continuity of Life as the Basis of Biological Science." His appearance was the signal for a loud outburst of applause, and it was some moments before the veteran professor could begin his speech. The subject of his address had been changed almost at the last moment, his original communication on "The Rôle of the Vessels in Inflammation" being reserved for one of the sectional meetings. The beginning of the address, which was delivered in German, was devoted to an interesting *résumé* of the various views of the nature of life which had been held at different times and by different observers, and of the successive discoveries which had widened man's knowledge of the nature and mechanism of vital action. Paracelsus had held that the life of a living organism was twofold; there was the life of the separate parts, the "*vita propria*"; and the life of the whole, or "*vita communis*." The speaker then passed in brief review the great discovery of Harvey of the circulation of the blood, the labours of Malpighi, the discoveries of Pasteur, and the great philosophical work of Darwin. All these had brought us nearer to the secret of what life is and what is its source, but it still remains a secret. Only two or three years remain to the opening of another century, and the orator concluded his address by expressing the hope that before the close of the twentieth century the problem of life might be solved.

The second address was that of Professor Lannelongue, of Paris, who received a scarcely less enthusiastic welcome from the audience than the preceding orator. The subject of his address was "The Surgical Treatment of Tuberculosis." Professor Lannelongue, who spoke in French, said that in former times local affections of all sorts, now known to be tuberculous in character, had been called by a number of different names. It was only by the recognition of the so-called tuberculous nodule that the common origin and character of all these different affections had been established. Later still the discovery by Koch of the tubercle bacillus had proved beyond a doubt, not only their identity, but also their infectious character. What was the duty of the surgeon in view of these conclusions? Obviously he must endeavour to remove the local centres of infection, which threatened the whole organism—to remove them as early as possible and as completely as circumstances would allow. The objections which had been raised to this method of reasoning do not bear criticism. It had been said that the tubercle bacilli are accompanied by other micro-organisms, the action of which will continue although the centres of tuberculous infection are removed. But the presence of other organisms is in the majority of cases the result of the open condition of the specific tuberculous centres, allowing access to the body of extraneous micro-organisms which would not otherwise obtain access to the tissues. In such cases there is doubtless a mixed infection. The method of surgical interference was in many such cases not available, particularly if it was uncertain where the original source of infection was situated. In these cases conservative methods must be followed; immobilising, extension, rest, and bloodless methods generally gave better results than operation. Sometimes good results could be obtained by the injection of microbicidal fluids into the tissues at the centre of infection. But the number of such cases was limited. In a majority of instances the watchword of the surgeon should be "*Agir tôt, agir vite*"—remove at the earliest opportunity the source of the infection—the tubercle bacillus.

Dr. Lauder Brunton, of London, who wore his Doctor's gown of scarlet cloth, then read an address on "The Relations between Physiology, Pharmacology, Pathology, and Practical Medicine," which will be found in another part of our present issue. Dr. Lauder Brunton spoke in French, and as the hour at which he rose was already a late one he greatly condensed his interesting address.

THE LATE MR. JOHN PHILLIPS, C.E.—Mr. John Phillips, who recently died at his residence, Disraeli-road, Putney, in his eighty-first year, had a considerable share in the introduction of the sewerage system which rescued London from the cesspool abominations and rendered it a healthy well-drained city. The evidence given by him before the Metropolitan Sanitary Commission in 1847 contains some woeful pictures of the filthy state of the basements in many localities due to overflowing of the cesspools. The egg-shaped sewer, now universally used, was invented by him—a question easily settled by reference to the Blue-books for 1847 (report of the Sanitary Commission)—and the first sewers of that section were laid down by him and the late Mr. John Roe, who was surveyor to the Holborn and Finsbury Commission. He was also the inventor of street gullies, and was among the first to make use of stoneware drain-pipes. During his active years Mr. Phillips held the appointment of chief surveyor to the Metropolitan Commissioners; he had, however, for many years lived in retirement, occupying himself with antiquarian studies relative largely to the past history of Putney and the connexion between it and the families of Oliver Cromwell and Thomas Cromwell, Earl of Essex. Papers on these subjects were published by him in the *Antiquarian* in 1880, and in the *Antiquarian Magazine* in 1882.

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Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examinations, and having complied with the by-laws and regulations, have been admitted Members of the College, viz :—

Abbott, Horatio White, L.R.C.P. Lond.
Ackland, Charles Herbert, L.R.C.P. Lond.
Adams, Arthur Reginald, L.R.C.P. Lond.
Alcock, George Herbert, L.R.C.P. Lond.
Aldridge, Arthur William, L.R.C.P. Lond.
Alford, Herbert Thomas Marmaduke, L.R.C.P. Lond.
Allan, Herbert William, L.R.C.P. Lond.
Allan, Humphrey, L.R.C.P. Lond.
Anthony, Frederic, L.R.C.P. Lond.
Aslett, William Stacey, L.R.C.P. Lond.
Atkinson, George Louis, L.R.C.P. Lond.
Bahadurji, Jamshed Nassarvanji, L.R.C.P. Lond.
Baker, Alfred Eaton, L.R.C.P. Lond.
Barrett, Frederic Walter, L.R.C.P. Lond.
Barton, Eustace Robert, L.R.C.P. Lond.
Barton, John, L.R.C.P. Lond.
Batchelor, Ferdinand Stanley, L.R.C.P. Lond.
Battye, Walter Rothney, L.R.C.P. Lond.
Baylis, Henry, L.R.C.P. Lond.
Beckton, William, L.R.C.P. Lond.
Benham, Charles Henry, L.R.C.P. Lond.
Bennett, Henry Charles Plant, L.R.C.P. Lond.
Bennett, James, L.R.C.P. Lond.
Bergin, William Marmaduke, L.R.C.P. Lond.
Betteridge, Thomas, L.R.C.P. Lond.
Bonnin, James Atkinson, L.R.C.P. Lond.
Brett, Henry Clarence Marshall, L.R.C.P. Lond.
Brewer, Dunstan, L.R.C.P. Lond.
Brown, Robert Pollock, L.R.C.P. Lond.
Cade, Harry Mills, L.R.C.P. Lond.
Cardin, Herbert, L.R.C.P. Lond.
Chapman, Charles Leopold Granville, L.R.C.P. Lond.
Chapple, William Allan, M.B., Ch.B. New Zealand.
Charles, John Roger, L.R.C.P. Lond.
Cheesman, Herbert Hilton, L.R.C.P. Lond.
Churchill, Joseph Henry, L.R.C.P. Lond.
Cleveland, Arthur John, L.R.C.P. Lond.
Clifford, Harold, L.R.C.P. Lond.
Claud, Frank Henry Loveless, L.R.C.P. Lond.
Cobb, Ernest Herbert, L.R.C.P. Lond.
Coleman, Edward Hayling, L.R.C.P. Lond.
Collier, Robert Stanley, L.R.C.P. Lond.
Cotterill, Albert Ernest, L.R.C.P. Lond.
Deakin, Frank Newstead, L.R.C.P. Lond.
Dent, Howard Henry Congreve, L.R.C.P. Lond.
Dixon, Henry Cuthbert, L.R.C.P. Lond.
Dotson, Joseph Faulkener, L.R.C.P. Lond.
Downes, Godkin, L.R.C.P. Lond.
Dudgeon, Herbert William, L.R.C.P. Lond.
Duncan, George Ernest, L.R.C.P. Lond.
Dykes, Campbell, L.R.C.P. Lond.
East, William Norwood, L.R.C.P. Lond.
Ferguson, William, Alexander, L.R.C.P. Lond.
Fergusson, James Herbert, L.R.C.P. Lond.
Fox, Edward Hamilton Bruce, L.R.C.P. Lond.
Gaskell, Leonard Sandgrove, L.R.C.P. Lond.
Gervis, Charles Berkeley, L.R.C.P. Lond.
Gibbons, Charles James Preston Telford, L.R.C.P. Lond.
Godwin, Herbert James, L.R.C.P. Lond.
Greaves, Henry, L.R.C.P. Lond.
Haines, Aubrey Wheeler, L.R.C.P. Lond.
Hardwicke, George, L.R.C.P. Lond.
Harvey, Frederic, L.R.C.P. Lond.
Hitchins, Frederick Charles, L.R.C.P. Lond.
Hodgson, Cortis Rawsthorne, L.R.C.P. Lond.
Holmes, John, L.R.C.P. Lond.
Hughes, Sidney, L.R.C.P. Lond.
Hull, Alfred John, L.R.C.P. Lond.
Jackson, Wilfred Anthony Legh, L.R.C.P. Lond.
Jago, Thomas Dinnen, L.R.C.P. Lond.
Jamieson, Harold Henry, L.R.C.P. Lond.
Jeaffreson, Alfred Ernest, L.R.C.P. Lond.
Jones, Arthur Reginald, L.R.C.P. Lond.
Jones, John Llewelyn, L.R.C.P. Lond.
Kay, Richard, L.R.C.P. Lond.
King, Nevill Pearce, L.R.C.P. Lond.
Kirk, John Lamplugh, L.R.C.P. Lond.
Knechtel, Robert, L.R.C.P. Lond.
Lamb, Archibald Walter, L.R.C.P. Lond.
Lankester, Cecil Pryor, L.R.C.P. Lond.
Latham, Denyer William Fellows, L.R.C.P. Lond.
Lewis, Colton Taylor, L.R.C.P. Lond.
Lloyd, Lewis Jones, L.R.C.P. Lond.
Long, John Reginald, L.R.C.P. Lond.
Lord, Cyril Courtenay, L.R.C.P. Lond.
Lucas, Joseph John Scammell, L.R.C.P. Lond.
McClure, James, L.R.C.P. Lond.
Macdonald, John Norman, L.R.C.P. Lond.
Mackie, Frederic Percival, L.R.C.P. Lond.
McNally, George Johnston, L.R.C.P. Lond.
Mainprise, Cecil Wilmot, L.R.C.P. Lond.
Mannington, Frank, L.R.C.P. Lond.
Marles-Thomas, Theodore, L.R.C.P. Lond.
Martin, John, L.R.C.P. Lond.
Martin, Thomas, L.R.C.P. Lond.
Maver, Patrick Alpine James, L.R.C.P. Lond.
Maxwell, James Burns, L.R.C.P. Lond.
Maxwell, Richard Drummond, L.R.C.P. Lond.
Mayau, Marmaduke Stephens, L.R.C.P. Lond.
Meacock, Henry Charles, L.R.C.P. Lond.
Meade, Frank Elliott, L.R.C.P. Lond.
Meade, Norman Gerald, L.R.C.P. Lond.
Morgan, Walter Harmon, L.R.C.P. Lond.
Morland, Egbert Coleby, L.R.C.P. Lond.
Musselwhite, William, L.R.C.P. Lond.
Myers, Charles Samuel, L.R.C.P. Lond.
Newland, Henry Simpson, L.R.C.P. Lond.
Ogilvie, James, L.R.C.P. Lond.
Paterson, Archibald Richard, L.R.C.P. Lond.
Payne, Alfred Ernest, L.R.C.P. Lond.
Price, David, L.R.C.P. Lond.
Ransome, Gilbert Holland, L.R.C.P. Lond.
Roberts, David Faulkes, L.S.A. Lond.
Riley, Arthur, L.R.C.P. Lond.
Ryland, Robert Felix, L.R.C.P. Lond.
Sanderson, Edgar Stanley, L.R.C.P. Lond.
Sangster, John Ikin, L.R.C.P. Lond.
Sansome, Thomas, L.R.C.P. Lond.
Scott, Henry Harold, L.R.C.P. Lond.
Smith, Hugh Victor, L.R.C.P. Lond.
Snowden, Arthur de Winton, L.R.C.P. Lond.
Stephen, Lionel Henry York, L.R.C.P. Lond.
Spencer, Thomas, L.R.C.P. Lond.
Storrs, William Townsend, L.R.C.P. Lond.
Tempest, James, L.R.C.P. Lond.
Tomlinson, John Henry, L.R.C.P. Lond.
Turner, Philip, L.R.C.P. Lond.
Turner, Sydney Duke, L.R.C.P. Lond.
Tuxford, Reginald, L.R.C.P. Lond.
Walker, Herbert John, L.R.C.P. Lond.
Wallis, James Garfit, L.R.C.P. Lond.
Watson, John Harry, L.R.C.P. Lond.
Watson, John William, L.R.C.P. Lond.
Way, Montague Harold, L.R.C.P. Lond.
Weld, Alfred Edmond, L.R.C.P. Lond.
Whincup, Frank, L.R.C.P. Lond.
Whipham, Thomas Rowland Charles, L.R.C.P. Lond.
Whitfield, Allan, L.R.C.P. Lond.
Wood, William Bird Herapath, L.R.C.P. Lond.
Woolley, Edward John, L.R.C.P. Lond.

FOREIGN UNIVERSITY INTELLIGENCE. — *Amiens (Medical School)*: Dr. Bax has been appointed Professor of Clinical Medicine.—*Barcelona*: Dr. Eusebio Oliver y Aznar, Professor in the Granada Medical School, has been appointed to the Chair of General Pathology.—*Berlin*: Dr. P. Silex has been promoted to an Extraordinary Professorship of Ophthalmology.—*Berne*: Dr. Max Stoos has been appointed Extraordinary Professor of Children's Diseases. — *Bonn*: Dr. B. Schörndorff has been recognised as *privat-docent* in Physiology. — *Breslau*: Dr. Kader, Assistant to the Professor of Surgery, has been recognised as *privat-docent* in that subject; Dr. Kühnau has been recognised as *privat-docent* in Internal Medicine; Dr. Henle has been recognised as *privat-docent* in Surgery. — *Chicago (College of Physicians and Surgeons)*: Dr. A. H. Burr has been appointed Assistant Professor of Medicine.—*Göttingen*: Professor Nicolaier has been appointed Principal Physician of the Medical Clinic.—*Freiburg (Baden)*: Dr. Bulius has been promoted to an Extraordinary Professorship of Gynæcology.—*Königsberg*: Dr. Bumm, Professor in Basle, has been offered the Chair of Midwifery and Gynæcology in succession to Dr. Dohrn.—*Lemberg*: Dr. Gregor Ziembicki and Dr. Victor Wehr have qualified as *privat-docenten* in Surgery.—*Rome*: Dr. Luigi Tarulli has been recognised as *privat-docent* in Physiology, Dr. Fillipo Rho as *privat-docent* in Medical Pathology, Dr. Raffaele Bastianelli as *privat docent* in Surgery, and Dr. Domenico Lo Monaco as *privat-docent* in Materia Medica and Pharmacology.—*Strasburg*: Dr. Karl Spiro, of Berlin, has qualified as *privat-docent* in Physiological Chemistry.—*Tübingen*: Dr. Albert Doderlein, Professor of Medicine in Gröningen, has been appointed Professor of Midwifery in succession to the late Dr. von Saxinger. — *St. Petersburg (Military Medical Academy)*: Dr. Georg Vlaieff and Dr. Nikolai Kulbin have been recognised as *privat-docenten* of Internal Medicine.—*Vienna*: Dr. R. Kretz has been recognised as *privat-docent* of Pathological Anatomy, and Dr. Lode as *privat-docent* in Hygiene.—*Würzburg*: Dr. Andreas Rosenberger has been appointed Extraordinary Professor of Forensic Medicine.

THE CHEMISTS' EXHIBITION.—This annual exhibition grows in importance and this year has arrived at the dignity of an international exhibition as certified under the provisions of the Board of Trade. Pharmacy affords an excellent opportunity for making a bright and attractive show and the preparation and compounding of drugs is a rapidly developing branch of home industries, and it is not surprising to learn that next year, consequent upon the excessive demands upon space, the exhibition will be held in the Agricultural Hall. Some may have been led to exclaim, "To what base uses, &c.," but the exhibition recently held in Covent Garden Theatre was well and tastefully arranged and the scene viewed from the upper tiers was quite Oriental while the perfumes in the air added reality to the picture. It is evident that the Chemists' Exhibition has become very popular all the leading chemists, druggists, and perfumers, now taking an active and interested part in it. We congratulate the organisers, the proprietors of the *British and Colonial Druggist*, on having initiated a successful movement

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THE annual meeting of the Nottingham Medico-Chirurgical Society was held on July 21st, Dr. W. B. Ransom, president, being in the chair. The annual reports of the secretaries, treasurer, and librarian were severally read and adopted. The following were elected as officers for the ensuing year:—President: C. H. Cattle. Vice-Presidents: W. B. Ransom and E. Snell. Council: J. H. Cox, G. B Wray, A. E. Nuttall, F. Rothera, and C. Macmillan. Secretaries: W. E. Tresidder and E. C. Kingdon. Librarian: W. J. Stephens. Treasurer: T. Geraty. Library Committee: A. W. C. Peskitt, F. J. Lander, J. S. Bolton, and J. Mackie. Pathological Committee: Miss Gray, E. J. O'Mallane, and A. Waring. Finally, on the motion of Mr. Tresidder, seconded by Dr. Cattle, it was resolved that the best thanks of the society be accorded to the retiring president, Dr. W. B. Ransom.

FREEDOM OF THE CITY OF MANCHESTER.—At a special meeting of the City Council on the 18th inst. it was unanimously resolved to present the freedom of the city to Dr. A. W. Ward, the Principal of Owens College, who is shortly about to retire from that position, and also to Mr. Herbert Philips, a much respected member of a family honourably connected with Manchester for more than a century. The College will lose in Dr. Ward a man who has well represented the dignity of culture and done much to uphold and extend the influence of the College. Mr. Herbert Philips has for many years taken a prominent part in philanthropic work, and has particularly interested himself in schemes for the physical recreation of the people. He has long been a valued member and vice-president of the Sanitary Association, and is also vice-president of the Smoke Abatement League.

DONATIONS TO ABERDEEN HOSPITALS, &c.—The Thurburn Cooking Depôt, Aberdeen, having been discontinued, and the trust being wound up, the trustees have allocated the funds as follows:—Aberdeen Royal Infirmary, £1200; Aberdeen Hospital for Incurables, £1200; Aberdeen Hospital for Sick Children, £1000; Aberdeen Asylum for the Blind, Aberdeen Dispensary, and the Association for Improving the Condition of the Poor, £750 each; Aberdeen District Nursing Association, £500; Aberdeen Soup Kitchen and the Ophthalmic Institution and Hospital, £250 each; Aberdeen Free Breakfast Mission, Female School of Industry, and Seabank Home for Fallen Women, £150 each. Total, £7100; any available balance to go to the Royal Infirmary. The result of the Hospital Saturday Demonstration will be the distribution of £750 among the Aberdeen hospitals. The Special Jubilee Fund for the hospitals amounts to £5300.

THE UNITED KINGDOM POLICE SURGEONS' ASSOCIATION.—The annual meeting of this association was held at Exeter Hall on July 28th, when the report of the council was received and adopted and copies were ordered to be sent to all police surgeons whose addresses are known. A resolution congratulating the retiring President, Sir H. D. Littlejohn, on his being appointed Professor of Forensic Medicine in the University of Edinburgh was unanimously adopted, and Mr. E. K. Houchin, metropolitan police surgeon and deputy coroner for East London, was chosen as his successor. A form for taking notes of post-mortem examinations, which had been issued under the sanction of Dr. Danford Thomas, the coroner for Central Middlesex, was considered and adopted, and it was resolved that a copy should be sent to each member of the association. A letter was read from Dr. Craig, of Birmingham, urging that coroners should be communicated with, suggesting on the part of the association that police surgeons should be called in to make necropsies and give evidence in cases where no medical man had been in attendance during life, and it was resolved that this should be done.—The following officers and council were elected for 1897-98:—President: E. K. Houchin, L.R.C.P. Edin. Vice-Presidents: T. Holmes, F.R.C.S. Eng., T. Bond, F.R.C.S. Eng., Sir H. Littlejohn, M.D. Edin., and H. Barnes, M.D. Edin. Treasurer: H. Nelson Hardy, F.R.C.S. Edin. Hon. Secs.: F. W. Lowndes, M.R.C.S. Eng., and H. C. Hopkins, M.R.C.S. Eng. Council: J. R. Baumgartner, M.R.C.S. Eng., J. F. Craig, M.D. Aberd., C. Eastwick-Field, M.R.C.S. Eng., G. H. Heald, M.R.C.S. Eng., W. J. Heslop, F.R.C.S. Edin., D. McDonnell, M.D. Irel., L. Maybury, M.D. Irel., H. W. Roberts, M.R.C.S. Eng., W. Roocroft, M.R.C.S. Eng., C. Templeman, M.D. Edin., W. Washbourn, L.R.C.P. Lond., and S. Wyborn, M.R.C.S. Eng.

PRESENTATIONS TO MEDICAL MEN.—To mark their appreciation of the services rendered by Mr. J. Dickinson Leigh, M.B., C.M. Edin., &c., as honorary instructor to the St. John Ambulance Classes formed in connexion with the Lumpsey and Huntcliff mines, the members presented him with a case of silver-mounted dessert knives and forks at a meeting held at Brotton-in-Cleveland, Yorkshire, on Aug. 9th.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Zd. Nieszkowsk, editor of *Medyzyna*, a Warsaw medical journal of considerable repute amongst Polish medical men.—Dr. Don Cesareo Magdalena, a Madrid bacteriologist.—Dr. Ask, Professor of Surgery in the University of Lund.—Dr. Finotti, *privat-docent* of Surgery in Gratz.—Dr. Sousa Martins, of Lisbon, a well-known authority on hygiene and the representative of Portugal at the Vienna Conference. It was due to his initiative that severe measures were undertaken in Portugal against the spread of cholera and yellow fever.

THE NEXT LORD MAYOR OF MANCHESTER.—In accordance with a requisition signed by every member of the council Mr. Alderman Gibson, chairman of the Gas Committee, has consented to become the next Lord Mayor of Manchester. When thirteen years of age he was apprenticed to Mr. Pittinger, a medical practitioner, of Sutton-on-Trent. This gentleman it seems had a druggist's shop in Newark, in which much of Mr. Gibson's time was spent. He did not proceed farther in his medical career, but in course of time began on his own account as a druggist in Manchester. He subsequently established himself as a medicated lozenge manufacturer, and the business has become both extensive and very prosperous. As may be remembered, a recent deputation to him as chairman of the Gas Committee with respect to the use of water gas did not meet a very encouraging reception.

LAUNCESTON GENERAL HOSPITAL, TASMANIA.—The report of the General Hospital, Launceston, Tasmania, for the year 1896 shows that 70 patients were under treatment on Jan. 1st; 780 were admitted during the twelve months, 693 were discharged, 83 died, and 74 remained on Dec. 31st. The daily average number of in-patients was 76, and the average stay in hospital was between thirty-five and thirty-six days. There were also 1178 out-patients treated, among whom there were 8 deaths. The present building was erected as a hospital and has been established thirty-two years. It is a general hospital, with the exception that lying-in cases are not admitted. There are 122 beds. The town and district have a population of about 50,000. The cost of construction was defrayed by the Government, and the whole of the annual maintenance is contributed by the Government, except what is received from patients who pay fees. The gross expenditure for 1896 was £5762, and the patients' payments were £632. The resident medical staff consists of a surgeon-superintendent (Mr. F. J. Drake, M.A., M.B., B S Melb.), and a house-surgeon. Two students have attended the medical practice and two students the dental practice. There are four members of the honorary consulting staff and two dental surgeons. The course of instruction for nurses consists of lectures on General Anatomy and Physiology, on Minor Surgery, and on Nursing, the latter section comprising lectures on "Hospital Etiquette," and on the "Distinction between the Work of Doctor and Nurse." The hospital statistics are of the usual character. They include 29 cases of phthisis, 21 of general paralysis of the insane, 30 of pneumonia, 31 of cancer, and 65 of enteric fever, of which latter only one case was admitted from the end of June to the end of November.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ARKLE, G. M., L.S.A. Lond., has been appointed Medical Officer, West Derby Union; North part of No. 2 District.

BEADLES, H. S., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Grimsby and District Hospital.

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BENNETTS, A. J., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Assistant House Surgeon to the Royal Albert Hospital, Devonport.

BROWNING, B., L.R.C.P., Lond., M.R.C.S. Eng., D.P.H., has been re-appointed Medical Officer of Health to the Weymouth Urban District Council.

CARRUTHERS, E. J. W., M.D. Edin., has been appointed Medical Officer of the Congleton District of the Congleton Union.

CLAY, JOHN, M.B., B.S. Durh., has been appointed to the post of Surgical Registrar in the Royal Infirmary, Newcastle-on-Tyne.

DINGWALL, A., M.B., M.S. Univ. Aberd., has been appointed Medical Officer of the Pembridge District.

FERNIE, J. F., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Staffordshire General Infirmary.

FRY, W. W. B., M.B., M.S. Edin., has been appointed Medical Officer of Health to the Builth Urban District Council.

GOWING, B., M.R.C.S. Eng., L.S.A. Lond., has been appointed Medical Officer, No. 5 District, Wortley Union.

GROSS, C. F., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer of Health to the East Ashford Union, No. 7 District.

KENDALL, H. W. M., M.R.C.S. Eng., L.S.A. Lond., has been appointed House Surgeon to the Central London Ophthalmic Hospital

KINGDON, WILFRED R., M.D. Durh., has been appointed Resident Medical Officer of the Ticehurst Asylum, Sussex.

MANNERS, WILLIAM F., B.A. Cantab., M.R.C.S. Eng., has been appointed Medical Officer of the Pewsey District and of the Workhouse, Pewsey Union.

MUNDEN, CHARLES, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer of the No. 2 District of the Chard Union.

PALMER J., M.R.C.S. Eng., L.R.C.P. Lond., L.S.A. Lond., has been appointed Medical Officer of the Snodland 5th District of the Malling Union.

PERKINS, J. J., M.A., M.B. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Assistant Physician to the City of London Hospital for Diseases of the Chest.

STIRK, PERCY H., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the General Hospital, Henford, vice A. M. Watts, resigned.

STOKES, R. McCLEAN, L.R.C.P. Edin., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Monmouth District of the Monmouth Union.

VERDON, E. S., M.B., B.S. Camb., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the Norfolk and Norwich Hospital, Norwich.

WOODHOUSE, WM., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer of the Vale District, Wantage Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN.—House Surgeon. Appointment for six months. Board, lodging, &c., provided.

BETHLEM HOSPITAL.—Two Resident Clinical Assistants for six months. Apartments, complete board, and washing provided.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House Surgeon. Salary £50 per annum, with apartments and board.

BOROUGH OF GRAVESEND.—Medical Officer of Health. Salary £300.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Senior House Surgeon. Salary £100 per annum. with board, washing, lodging, &c.

CARLISLE DISPENSARY.—House Surgeon. Salary £130 per annum, with apartments (not board).

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Junior House Surgeon. Salary £60 per annum, with board, lodging, and washing.

COUNTY ASYLUM, Prestwich, Manchester.—Pathologist and Assistant Medical Officer. Salary £200 per annum, with board, residence, and washing.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon for twelve months. Salary £80 per annum, with board, residence, and washing.

DUNDEE ROYAL INFIRMARY.—Medical Superintendent. Particulars as to duties and salary may be learned on application to the Secretary, D. Gordon Stewart, Solicitor, Dundee.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House Surgeon. Board, residence, &c., are provided, and an honorarium of £15 15s. at the completion of six months' approved service.

GLASGOW EYE INFIRMARY.—Resident Assistant House Surgeon. Salary £50, with apartments and board.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, W.—Junior Resident Medical Officer. Salary £50 per annum, with board, lodging, and washing.

HUDDERSFIELD INFIRMARY.—Junior House Surgeon. Salary £40 per annum, with board, lodging, and washing.

LINCOLN LUNATIC ASYLUM.—Assistant Medical Officer. Salary £5 a month, with board, lodging, and washing.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon for six months. Board and lodging provided.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer. Salary £150 per annum, with board and residence.

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow.—Dispensary Assistant Surgeon (non-resident). Twelve months' appointment. Salary £80.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—House Surgeon. Salary £100 per annum, with board and lodging.

SHEFFIELD UNION WORKHOUSE INFIRMARY.—Junior Assistant Medical Officer (unmarried). The appointment will be for six months and an honorarium of £12 will be granted for that time.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for a period of six months (renewable for a further similar period). Board, residence, and an honorarium of £10.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House Surgeon. Salary £30 per annum, with board, lodging, and washing.

TOWNSHIP OF TOXTETH PARK.—Junior Assistant Resident Medical Officer of the Workhouse Infirmary. Salary £75 per annum, subject to a deduction under the Superannuation Statute, with board, washing, and apartments.

WEST HAM HOSPITAL, STRATFORD, E.—Junior House Surgeon. Board, washing, and residence in the hospital, with a salary of £35 per annum.

Births, Marriages, and Deaths.

BIRTHS.

BEALE.—On Aug. 23rd, at Clapham-road, S.W., the wife of Arthur A. Beale, M.B., of a daughter.

BIDWELL.—On Aug. 23rd, at Wimpole-street, Cavendish-square, W., the wife of Leonard A. Bidwell, F.R.C.S., of a son.

BLUCKE.—On Aug. 10th, at Rowbury, Donhead, Salisbury, the wife of Fredk. H. Blucke, M.R.C.S., L.R.C.P., of a son and daughter (twins).

CARRUTHERS.—On Aug. 16th, at Halton, Cheshire, the wife of W. Hodgson Carruthers, M.D., of a daughter.

COLDSTREAM.—On Aug. 13th, at Belford, Northumberland, the wife of George Probyn Coldstream, M.B., C.M., of a daughter.

DICKSON.—On Aug. 17th, at The Gables, Marlow, the wife of J. Dunbar Dickson, M.D., of a son.

DRAKE-BROCKMAN.—On Aug. 19th, at Mussoorie, North-West Provinces, India, the wife of Surgeon-Captain H. E. Drake-Brockman, Indian Medical Service, of a daughter.

EVELYN.—On Aug. 17th, at 24, Micklegate, York, the wife of W. A. Evelyn, M.D., of a son.

HEPBURN.—On Aug. 15th, at Marine-parade, South Lowestoft, the wife of Malcolm L. Hepburn, M.D., F.R.C.S., of twin girls (prematurely).

JONES.—On Aug. 19th, at Ty-mawr, Aberdare, the wife of E. J. Trevor Jones, L.R.C.P., M.R.C.S., of a son.

MORTON.—On Aug. 15th, at Bath-road, Wolverhampton, the wife of Edwin Morton, M.D., of a daughter.

MULLEN.—On Aug. 14th, at Ladywell Sanatorium, Eccles New-road, Salford, the wife of John W. Mullen, Medical Superintendent, of a daughter.

MURDOCH.—On Aug. 17th, at The Oaks, Hythe, Kent, the wife of Alan Murdoch, M.R.C.S., L.R.C.P., of a son.

SENIOR.—On Aug. 20th, at Hamilton Villa, Herne Bay, the wife of H. W. Senior, M.R.C.S., L.R.C.P., of a son.

MARRIAGES.

COLEMAN—SMITH.—At the parish church of Cannock (Staffs), on Aug. 12th, W. E. Coleman, M.R.C.S., of Wednesbury, to Florie E. Smith, of Cannock.

COWNIE—WORTON.—On Aug. 24th, at St. John's, Cardiff, Jas. F. Cownie, M.B., C.M. Edin., to Di Worton, third daughter of the late John Worton, Esq., J.P., of Blaenavon.

DE KORTE—OSBORNE.—On Aug. 10th, at Graaff Reinet, South Africa, Dr. W. E. De Korte, M.D., to Annie E. Osborne.

GIBSON—WATT.—At St. John's Wood Presbyterian Church, Marlborough-place, London, on July 28th, by the Rev. J. Monro Gibson, M.A., D.D. (father of the bridegroom), Henry N. Gibson, M.B., to Jane Grant, eldest daughter of A. P. Watt, 29, Abbey-road.

DEATHS.

BREACH.—On Aug. 19th, John Frederick Breach, L.R.C.S. and L.M. Edin., L.S.A. Lond., of Aston Upthorpe, Wallingford, Berks, aged 46.

DU PASQUIER.—On Aug. 20th, at Clifton House, Church-road, Upper Norwood, S.E., Claudius Francis Du Pasquier, F.R.C.S., formerly of 62, Pall Mall, late Surgeon-Apothecary to Her Majesty and late Surgeon-Apothecary to H.R.H. the Prince of Wales's Household, in his 86th year.

FULLER.—On July 26th, at South Vale, Upper Norwood, James Fuller, M.R.C.S., L.S.A., aged 77.

HOWDEN.—On Aug. 17th, at Sunnyside, Montrose, James Cunningham Howden, M.D.

HUMBLE.—On July 15th, at Viedma, Argentina, George Arthur Humble, M.D., for over 30 years Medical Missionary of the South American Mission, aged 66.

PILCHER.—On Aug. 16th, at Boston, Lincolnshire, William John Pilcher, F.R.C.S., aged 59.

SMITH.—On Aug. 13th, at Ostend, Katie, wife of E. Stanley Smith, M.D., of Kensington-gardens-square, and Stratford-place, and second daughter of the late Lieut.-Colonel H. M. Garstin. No cards.

TAYLOR.—On Aug. 13th, at his residence, The Hollies, Hathersage, Derbyshire, Joseph Henry Taylor, L.F.P.S. Glasg. and L.S.A., aged 76 years.

THOMPSON.—On Aug. 18th, at Lightburne, Ulverston, Lancs., Abram Thompson, M.D., Medical Officer of Health, Ulverston Urban and Rural and Grange-over-Sands Urban Districts, aged 60 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 28th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Aug. 20	29·71	S.W.	61	59	102	70	56	0·07	Overcast
,, 21	29·52	W.	66	60	120	75	60	...	Stormy
,, 22	29·63	W.	64	57	120	72	57	0·02	Cloudy
,, 23	29·74	W.	61	57	107	67	56	...	Cloudy
,, 24	29·62	SSW	63	59	103	67	57	0·40	Cloudy
,, 25	29·62	N.E.	60	58	107	66	56	0 06	Hazy
,, 26	29·76	S.W.	60	57	109	69	54	...	Fine

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which was completed with the issue of June 26th, was given in THE LANCET of July 3rd. It is intended, in future, to include the Index and Title-page for each past half-yearly volume in the first number of the succeeding volume, as in the present case, instead of in the last number of the volume itself, as heretofore.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

DUPLICATE PERIODICALS.

THE Dundee Medical Library has on hand a number of duplicate volumes of the *Edinburgh Medical Journal, Medical Times and Gazette, Journal of Mental Science*, &c., which the committee is desirous of giving in exchange. Full particulars can be obtained on application to the Assistant Librarian, Medical Library, University College, Dundee.

Arytenoid.—We see no objection provided that the source of the degree be added after the letters signifying the same.

M.A.D. (Lowestoft).—We never prescribe in any way. Our correspondent must consult her own medical man.

AN OBJECTIONABLE ADVERTISEMENT.

IN our issue of Aug. 14th an advertisement was inserted which commenced "£25 down and £25 in a month." The advertisement was sent to our office accompanied by a covering letter in which the advertiser was described as "Dr. Young." It is obviously impossible to check the genuineness of every advertiser, although our clerks use every care. They can only take a person's description of himself as correct unless it is proved to be otherwise. We are sorry to find that "Dr. Young" is an irregular practitioner whose style and methods of practice may be judged from the following circular issued in his name:—

Read this Attentively.

When suffering from a disease or illness which others cannot cure,

CONSULT WITHOUT DELAY

the far famed and well tried experience of

MR. J. J. YOUNG

UNREGISTERED

CONSULTING PHYSICIAN AND SURGEON,

HIGH STREET, MIDSOMER NORTON,

SOMERSET,

PERSONALLY OR BY LETTER.

Who was legally apprenticed for 5 years in Ipswich, Suffolk, to one of the leading practitioners of the town, in the year 1840. Mr. Young also graduated at Oxford University, and duly walked the London Hospitals and passed through every ordeal of the profession with classical honours. Professor of the principles and practice of physic, the symptoms, causes and treatment of all diseases, from the period of birth to an advanced age, from a practical experience of upwards of 50 years.

For 25 years Mr. Young acted as general medical assistant, having had at intervals entire charge of some of the largest and best practices in England, Scotland and Wales.

The following are a few of the diseases which have claimed for him a reputation for the cure of which, as yet, he has had no rival:—

The Eye. The Ear. Gout. Rheumatism, Sciatica, Neuralgia, Wounds. Ulcers, Bad Legs, Sores, Skin Diseases, Lung and Chest Diseases, Cancerous affections of all kinds and all irregularities in respect to males and females from whatever cause,

which have baffled the skill and puzzled others of the profession.

Mr. Young has for years past associated with men of eminence in the consulting ranks of the profession, whose work makes the last part of the 19th century memorable in the history of medicine & Queen Victoria, and has prescribed for Princes, Lords, Dukes, and Noblemen. N.B.—but boasts proudly of the supreme honour and national pride of being indebted to the working classes, from which circle sprang his matchless and unlimited fame. Mr. Young was for upwards of 20 years in practice in Ipswich, Suffolk, where he left an undying fame for practical skill, recognised alike by the public and the profession at large.

HOURS OF ATTENDANCE—10 A.M. to 9 P.M.

CHARGES—In all cases will be most moderate and within the reach of all.

ADVICE GRATIS.

E. P. B. (Southampton).—The results of such an investigation would be most valuable. It would, however, require an enormous amount of work—house-to-house visiting and bacteriological examinations. We think that probably the best person to undertake such a task would be a "research scholar."

AN URGENT APPEAL.

To the Editors of THE LANCET.

SIRS,—May I crave a small space in THE LANCET for an appeal to the more successful members of our profession on behalf of the widow and eight children of the late Mr. Campe, a medical man practising in this neighbourhood, who died quite suddenly on Sunday last. The post-mortem examination showed extensive heart disease, which so sadly crippled his untiring efforts to support his wife and large family. They are, I regret to say, left absolutely unprovided for, and I earnestly entreat all who can to forward me a subscription, however small, which I will gratefully acknowledge (through your courtesy) in THE LANCET; especially do I desire to enlist the generous sympathy of members of his own school (Guy's).

I am, Sirs, yours faithfully,

WM. ASTLEY COOPER.

36, New-road, Rotherhithe, S.E., Aug. 25th, 1897.

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HOSPITAL REFORM ASSOCIATION.

MR. T. GARRETT HORDER, the hon. secretary, has received a donation of ten guineas from Mr. William Allingham, F.R.C.S. Eng., towards the funds of the Association.

A. B.—The query of our correspondent is dealt with in Part XI. of the Lunacy Act, 1890. Section 315 (1) is as follows: "Every person who, except under the provisions of this Act, receives or detains a lunatic, or alleged lunatic, in an institution for lunatics, or for payment takes charge of, receives to board or lodge, or detains a lunatic or alleged lunatic in an unlicensed house, shall be guilty of a misdemeanour, and in the latter case shall also be liable to a penalty not exceeding fifty pounds." Apart from the question of legality we think that the circumstances of the case which our correspondent puts are such as cannot fail to be detrimental both to the individual referred to and to the other inmates. They are also highly prejudicial to the best interest of the cause which the institution professes to serve.

Cymric would be greatly obliged for any information as to the best books or tuition in London for the purpose of acquiring an elementary knowledge of the Welsh language.

Mr. C. E. Murphy.—The paragraph is certainly in execrable taste, but we are quite certain that the medical man alluded to objects more than anyone else to its insertion.

F. D. B.—We should say the fairest arrangement would be to divide the fee.

Dr. L. Kidd.—We do not consider the matter worth further notice.

"A QUERY IN OPHTHALMIC SURGERY."

To the Editors of THE LANCET.

SIRS,—I have waited for a more prominent ophthalmic surgeon than I am to answer the "Query in Ophthalmic Surgery" in THE LANCET of Aug. 7th. But as no answer has as yet appeared I, believing "X. Y. Z." to be anxious to hear the opinion of someone experienced in eye surgery, venture to give my advice for what it is worth. The question, Shall a cataract be removed from one eye while the sight of the other eye is perfect? has often been discussed. Though knowing that many medical men are inclined to give an answer in the negative, I would advise an operation in the case mentioned, because: (1) a cataract will make the condition of the afflicted eyeball the more amblyopic the longer it is allowed to remain; (2) should the as yet unaffected eye become similarly diseased the chances of success of operating may be less favourable than they are at present; (3) the cataract in the case mentioned is most probably of a soft, milky nature—cataracta Morgagniana—the removal of which by lance cut or needle discission (absorption) is a comparatively trifling operation; (4) even if the operation should be unsuccessful in restoring sight (amaurosis could be diagnosed previously to operation) the cosmetic advantage should be considered,—the patient being a young female; and (5) with the present "technique" in removing cataracts no anxiety in regard to a failure of the operation as such need be entertained. Should "X. Y. Z." remain still doubtful what to do he may leave the decision to the girl herself.

I am, Sirs, yours faithfully,

Grosvenor-street, W., Aug. 23rd, 1897. B. SCHWARZBACH, M.D.

Mr. Ed. E. Mayer.—The Royal College of Surgeons of England admit to the second, third, and final examinations candidates holding foreign diplomas, which entitle the holder to practise in the country where he obtained the diploma and which have been granted after education and examination equivalent to those required by the College. He would ascertain whether the College would so consider his degrees by specific inquiry of the Secretary of the College. There is a regular course of instruction at the National Hospital for the Paralysed and Epileptic, Queen-square. Particulars can be obtained by applying to the Secretary.

Mr. T. F. McDonnell.—The Infectious Diseases (Notification) Act only provides a fee of 1*s.* when a case is notified by a medical man which "occurs in his practice as medical officer of any public body." It is held that a Poor-law medical officer serving a board of guardians comes within that provision, and that he is only entitled to a fee of 1*s.*

L.S.A. Lond., L.M. Dub.—Judging by the statement before us B was right in going the first time, as it may have been a case of urgency. He should, however, have given up the case entirely to A, if, indeed, A chose to go on with it, and not have offered to see it "in conjunction" with A.

Mr. S. Gross.—Text-book of Chemical Physiology and Pathology, by W. D. Halliburton, M.D., B.Sc. Lond. (London: Longmans, Green, and Co.)

Mr. M. D. Rogers.—We regret that we are unable to assist our correspondent.

THE MANCHESTER MEDICAL GUILD.

WE have received the following letter, with a request for its publication, from the Secretary of the Manchester Medical Guild:—

[COPY.]

"Manchester, July 15th, 1897.

"DEAR SIR,—It has been reported to the Council of the Medical Guild that you have permitted yourself to become the instrument of a Medical Aid Association, which is promoting it objects against the unanimous opinion of the medical practitioners of the district, and I am requested to point out to you that such action on your part (without considering it as it affects your medical brethren) will, if persisted in, have a most baneful influence on your own future career. These associations are held in such evil repute by the profession that the medical journals will not knowingly insert their advertisements when they are in need of medical officers.

"No man can set at nought the opinion of his profession without injuring his own usefulness, and I venture to express the hope that you will see your way to retire from a position into which you may have been led unwittingly. Any doctor can make a living amongst a working-class population by conducting his practice in the time-honoured manner. I am assured he can do so from the very start, and every year his position becomes more secure; but it is not so with men who become the servants of organised laymen.

"Yours truly,

"ALEXANDER STEWART, Hon. Sec. the Medical Guild."

"THE CLIMATE OF CORSICA."

To the Editors of THE LANCET.

SIRS,—At page 235 of THE LANCET of July 24th I notice a query by "O. H." regarding the climate of Corsica, and have seen no reply given. If he will consult Section 7:6 of the *Medical Digest* he will be able to obtain all the information he requires, as therein are several references to the literature of this subject. I am, Sirs, obediently yours,

RICHARD NEALE, M.D. Lond.

Boundary-road, South Hampstead, Aug. 25th, 1897.

Professional Reader has omitted to enclose his name and address.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (31st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.). Cancer (2 P.M.).

WEDNESDAY (1st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (2nd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (4th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Wrexham Advertiser, Leeds Mercury, The Aberdeen Weekly Free Press, Local Government Board Journal, Local Government Board Chronicle, Carmarthen Weekly Reporter, The Walsall Observer, Freeman's Exmouth Journal, Yorkshire Post, Reading Mercury, Midland Weekly Herald, Wellingborough News, The Malvern Advertiser, The Keighley News, The Alloa Advertiser, North Wales Guardian, Windsor and Eton Express, The Bristol Mercury, Montreal Weekly Gazette, The Lincoln, Rutland, and Stamford Mercury, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Dr. W. D. Aubin, Jersey; Dr. A. L. Ashmead, New York; *Australian Trading World*, Lond., Editor of; Messrs. Allen and Hanburys, Lond.; Messrs. Armbrecht, Nelson, and Co., Lond.; Anderson's College, Glasgow, Secretary of; Mr. W. B. Alderson, Lond.

B.—Dr. G. P. Bate, Bethnal Green; Surg.-Capt. W. J. Buchanan, Bhagalpur, India; Mr. N. F. Bunshaw, Ghadechi, India; Mr. D. N. Boutagy, Jaffa, Palestine; Messrs. Burgoyne, Burbidges, and Co., Lond.; Miss E. F. Boultbee, Lond.; Messrs. A. Bishop and Sons, Lond.; Messrs. Banks and Co., Bolton; Messrs. Blondeau et Cie, Lond; Mr. A. D. Brash, Lond; Messrs. Billows and Co., Keighley; Mr. C. Birchall, Liverpool; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs. Baillière, Tindall, and Cox, Lond.; Messrs. Brady and Martin, Newcastle-on-Tyne.

C.—Dr. W. B. Clarke, Lond.; Mr. W. W. S. Corry, Pickering; Cortland Wagon Co., Lond.; Messrs. Crossley, Moir, and Co., Lond.; Carlisle Dispensary, Hon. Secretary of; Central London Throat and Ear Hospital, Lond., Secretary of; County Asylum, Prestwich, Secretary of; Messrs. J. and A. Churchill, Lond.; Chelsea Hospital for Women, Secretary of.

D.—Mr. J. R. Dundas, Lond.; Mr. H. H. Dodwell, Lond.: Dr. F. J. Drake, Launceston, N Z; Dr. Kedarnath Das, Calcutta; Mr. H. Downes, Burnham; Dr. A. S. Dick, Lond.; Dr. F. H. Decker, Dover, N.J., U.S.A.

E.—Messrs. Eason and Son, Dublin.

F.—Messrs. J. S. Fry and Sons, Bristol.

G.—Mr. S. Gross, Lond.; Dr. J. Gilroy, Boclefechan; Dr. G. Gresswell, Louth; G. P., Lond.; General Post Office, Lond., Secretary of.

H.—Mr. W. J. Harris, Lond.; Mr. T. Garrett Horder, Cardiff; Dr. M. C. Hime, Donegal; Staff-Surg. W. E. Home, Lond.; Mr. A. Hind, East Finchley; Hospital for Diseases of the Throat, Lond., Secretary of; Messrs. Hodder and Stoughton, Lond.; Messrs. C. J. Hewlett and Son, Lond.: Mr. G. Hermanni, jun., Lond.; Huddersfield Infirmary, Secretary of.

I.—Dr. E. Fletcher Ingals, Chicago; International Intelligence Bureau, Lond., Directors of.

J.—Mr. F. T. Jackson, Ulverston.

K.—Surg. R. A. Kirby, Portsea; Messrs. Krohne and Sesemann, Lond.; Messrs. Knoll and Co., Ludwigshafen; Mr. B. Kühn, Lond.; Messrs. H. and T. Kirby and Co., Lond.

L.—Messrs. A. W. Latham and Co., Lond.; Messrs. Lee and Nightingale, Liverpool; *Les Annales d'Oculistique*, Paris, Director of; Linotype Co, Lond.; Mr. A. Longman, Salisbury.

M.—Dr. G. H. Milnes, Derby; Dr. H. O. Marey, Boston, U.S.A.; Middlesex Hospital, Lond., Secretary of; Maltine Manufacturing Co, Lond.; Messrs. Moser and Sons, Kendal; Messrs. Mather and Crowther, Lond.; Manchester Children's Hospital, Pendlebury, Lady Superintendent of; Mr. L. P. Mark, Lond.; Dr. Macnaughton-Jones, Lond.

P.—Mr. D'Arcy Power, Lond.; Miss F. Emily Phillips, Putney; Messrs. Parke, Davis, and Co., Lond.; Princeps, Lond.

Q.—Queen's Faculty of Medicine, Birmingham, Secretary of.

R.—Mr. C. Roebuck, Huddersfield; Royal South Hants Infirmary, Southampton, Secretary of; Mr. A. J. Riddett, Lond., Dr. T. G. Roddick, Montreal; Mr. C. Reidy, Cardiff; Dr. J. B. Rhodes, Chicago; Messrs. Reynolds and Branson, Leeds; Dr. J. C. Renton, Glasgow; Royal Aquarium, Lond., Manager of.

S.—Mr. G. Slater, Sheffield; Mr. T. Smith, Lond.; Messrs. Street and Co., Lond.; Dr. D. Sime, Lond.; Dr. F. M. Sandwith, Cairo; Stafford Infirmary, House Surgeon of; St. Mungo's College, Glasgow, Secretary of; South Devon and East Cornwall Hospital, Plymouth, Hon. Secretary of; Messrs. A. G. Spalding and Bros., Lond.; Mr. A. Sykes, Huddersfield; Mr. Noble Smith, Lond.

T.—Mr. Lawson Tait, Birmingham; Mr. S. J. Thomson, Lucknow; Mr. J. Tyson, Philadelphia, U.S.A; Tutor, Lond.; Dr. M. Thomas, Llanfair; Mr. W. Thorburn, Manchester.

W.—Dr. J. K. Watson, Lond.; Messrs. Wyckoff, Seamans, and Benedict, Lond.; Messrs. Wright, Dain, Peyton, and Co., Birmingham; Wigmore Nurses' Institution, Lond.; Weymouth Urban District, Medical Officer of; Dr. F. Kenneth Wilson, Lond.; Messrs. W. M. Wills and Co., Lond.; Mrs. Wiseman, Lond.; Messrs. Wyleys, Birmingham; West Riding, Lond.; Dr. W. Hale White, Lond.

Z.—Zomela Co., Birmingham.

Letters, each with enclosure, are also acknowledged from—

A.—Adelphi, Lond.; A. B. C., Lond.

B.—Mr. R. Barrett, Liverpool; Messrs. J. J. Burnett and Sons, Southampton; Mr. F. W. Beville, Lond.; Bromley, St. Leonards-road (151); B., Southport; Bristol, Royal Infirmary, Secretary of; Mrs. L. Breach, Aston, Upthorpe; Mr. T. H. Brocklehurst, Kinson; Mr. W. S. Battiss, Chester; Mr. W. Bowes, Aldington; Mr. W. Byford, Chesterfield; Dr. J. L. Bond, Ukiah City, U.S.A; Mr. L. Bostock, Huddersfield; Beta, Lond.; Miss L. Bennett, Lond.

C.—Mr. W. E. Coleman, Tenby; Dr. W. H. Carruthers, Halton; Mr. F. Cavers, Newcastle-on-Tyne; Messrs. S. B. Clark and Son, Lond.; Dr J. F. Cownie, Cardiff; Mr. W. V. Cane, Nagpur, India; Messrs. Cassell and Co., Lond.; Christian, Lond.; Charts, Lond.; Mr. P. A. Colmer, Yeovil; C., Sheffield; Crystalline, Lond.; Chronos, Lond.; Surg.-Major J. Clarke, Dalhousie; Mr. J. W. Carruthers, Lond.

D.—Mr. S. G. Denton, Lond.; Dorset, Lond.; Delta, Bristol; Mr. H. H. Dodds, Boston.

E.—Dr. W. A. Evelyn, York; Edina, Lond.

F.—Mr. J. J. Fanning, Wilton; Fitz, Lond.; Mr. G. Foy, Dublin; Mr. E. A. Ford, St. Briavel's Castle; Fromm's Extract Co., Lond.; F. W. H., Lond.

G.—G. E. D, Lond.; Mr. A. B. Griffiths, Lond.; Genuine, Lond.; G. S., Lond.; Greer, Blofield; Messrs. R. W. Greeff and Co., Lond.; Mr. W. C. Gent, Bristol; Messrs. H. Garnett and Co., Rotherham; Surg. H. W. G. Greene, Esquimalt.

H.—Mr. P. Hayes, Bury; Messrs. Hughes and Harber, Longton; Mr. T. F. Hale, Barrow Hill; Hamilton Association, Lond.; Mr. J. Heywood, Manchester; Mr. F. S. Hall, Southampton; Hills, Lond.; Miss Homersham, Canterbury; Mr. W. Heap, Liscard; Dr. M. C. Hime, Buncrana.

I.—Dr. R. N. Ingle, Palling by-the-Sea; Ipecac, Lond.; Messrs. Ingram and Royle, Lond.; Isis, Lond.

J.—Mr. J. M. Jones, Alresford; Jenner Institue for Calf Lymph, Secretary of; J. M., Hampton Hill; Junior, Lond.; Dr. H. J. Jones, Horsham; *Janus*, Gerolstein, Redaction of.

K.—Mr. C. P. Kelly, Navan; Mr. W. Kuhlenthal (Rio Chemical Co.), Lond.; Kent, Lond.: Mr. R. C. B. Kerin, Culham; K. P., Lond.; Dr. J. L. Kerr, Crawshawbooth; Messrs. C. Kinlock and Co., Lond.: Miss Kennedy, Ballymoney; Messrs. G. Kerry and Son, Lond.; Mr. A. C. Kemble, Godalming

L.—Surg. G. Ley, Bermuda; Leeds Hospital for Women and Children, Secretary of: L. M, Lond: Mr. H. B. Long, Burwell; Mr. W. W. Leigh, Treharris; Levis, Lond.

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N.—Nicholas, Lond.

O.—Mr. C. A. P. Osburne, Norwich; Opifex, Lond; Mr. F. Owens, Kington; Mr. F. Orchard, Lond.

P.—Mr. J. L. Pinchin, Leytonstone; Mr. H. Powell, Nenagh; Mr. J. T. Pawlett, Wymondham; Pharmaceutical Society of Great Britain, Edinburgh, Assistant Secretary of; Dr. J. F. Porter, Helmsley; Peritus, Lond.; P. G., Lond.

Q.—Quintus, Lond.; Quadrant, Lond.

R.—Mr. R. Roberts, Llanddeusant; Mr. A. Reichwald, Lond.; Rita, Lond.; Rest, Ilfracombe; Messrs. Rivington and Co., Lond.; Dr. A. Richardson, Aberlour; Dr. R., Frensham.

S.—Dr. Spicer, Lond.; Capt. M. J. Sweetman, Dover; Staffordshire General Infirmary, Secretary of; Dr. C. E. Soulby, Grimsby; Statim, Lond.; Surg.-Major C. Seymour, West Brighton; Mr. P. W. Shepherd, Leeds; Messrs. A. F. Sharp and Co., Glasgow. Surgeon, Kettering; Mr. G. Sharp, Leeds; Dr. T. M. Scott, Burnley; Scabbard, Lond.; Mr. E. Simpson, Epperstone; Mr. H. M. Speechly, Farkgate.

T.—Mr. F. Tyrrell, Ramsgate Thresh's Disinfector Co., Chelmsford, Secretary of; Dr. A. G. A. Thomson, Millbrook; Mrs. C. M. Thompson, Workington.

U.—Mr. J. B. Unwin. Dunchurch.

V.—Surg. A. H. H. Vizard, H.M.S. *Crescent*, Halifax, N.S.; Veritas, Lond.; Verax, Lond.; Volens, Lond.

W.—Mr. D. O. Williams, Glandovey; W., Lond.; Mr. J. C. Webb, Liverpool; Mr. H. Webster-Jones, Munich; Mr. W. Walker, Greenock.

X.—X. Y., Manchester.

Y.—Yorkshire, Lond.

Z.—Zeta, Lond.; Z., Lond.

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Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

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Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

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ABSTRACT OF THE

President's Address

ON

CANADA IN ITS MEDICAL ASPECTS.

Delivered at the Sixty-fifth Annual Meeting of the British Medical Association at Montreal, August–September, 1897,

BY T. G. RODDICK, M.D.,

PROFESSOR OF SURGERY IN MCGILL UNIVERSITY, MONTREAL.

GENTLEMEN,—I rise to welcome you on behalf of the medical profession in Canada, and to thank you for the honour conferred on this city and country by your presence here to-day. Would that I could find suitable language in which to thank you also for the high honour you have done me in electing me to preside at this great meeting of the British Medical Association—an honour which is appreciated none the less by the consciousness that it is not a personal matter, but a compliment to Canadian medicine.

This meeting of the British Medical Association in Canada is an event which will serve still more to impress upon the memory of our people the year 1897, the year of the Diamond Jubilee of our beloved Sovereign, Queen Victoria. In no part of her vast empire—not even its very heart—did her subjects celebrate the great event with more enthusiastic loyalty and devotion than in Canada, especially in this province, the home of the French Canadians. We Canadians of both tongues love and honour our Queen. Long may she live. Deeply, too, have we appreciated here the splendid reception accorded in the old home to our Premier, the Right Hon. Sir Wilfrid Laurier, whose distinguished bearing and grace of manner eminently fitted him for the important part it was his peculiar privilege to play in the magnificent ceremonies of the Jubilee. A French Canadian, Sir Wilfrid Laurier's presence in England as the chosen representative of the Dominion was an object lesson to the empire and to the world in the harmony existing between the two nationalities which comprise the Canadian people. And here let me express, on behalf of every representative from the British Isles, and on behalf of every Canadian present, the genuine pleasure we feel in having among us on this memorable occasion so many of our brethren from the United States. This only proves the cosmopolitan character of our profession; this is only another recognition of the unity of medicine. Legislators may squabble, the air may be filled with wild alarms, and war may appear imminent day by day, but our relations are not disturbed in the slightest degree; our interests are common—we are kinsmen in science; we go forward hand in hand, irrespective of race or creed or colour, having one intent only—the advancement of our noble profession, and through that the amelioration of the ills of mankind. It is my privilege also to welcome the representative of another Republic, La Belle France, to whose gifted men of science our profession is so greatly indebted. This gentleman, who bears the credentials of his Government and officially represents the great nation of which he is so bright an ornament, is known far and wide as the Professor of Physiology in the University of France, Dr. Charles Richet. In coming to Canada it cannot be said, nor will he feel, that he comes to a foreign country, for in the Province of Quebec he will find another France, with a delightful mingling of the old and the new—his own beautiful language spoken with all the grace and purity of the old *régime*. But we are further honoured by the presence among us to-day of the most illustrious surgeon of our generation, Lord Lister, who stands for the rise and zenith of modern surgery. It has been well and truly said that as long as surgery is scientifically discussed Lord Lister's name cannot fail to be mentioned. We have only to compare the surgery of the time before 1873 with the surgery as practised to-day to appreciate all that he has done for the science. The remark is frequently heard that Lord Lister has made operative proceedings possible which only twenty-five years ago would have been considered criminal. Undoubtedly, the most powerful agency in the development of surgery in this century has been the introduction of the antiseptic and aseptic methods of wound treatment which he initiated. It is due to his efforts that surgical wards have been freed from pyæmia, and the mortality of lying-in hospitals reduced to the limits of normal parturition. For the past twenty years honours many and great have been showered upon him. Oxford, Cambridge, Edinburgh, Glasgow, Dublin, Toronto, and now McGill have vied with one another in hastening to do him homage. Our Sovereign, in conferring upon him the richly deserved distinctions which he bears with such gracious dignity, only gives expression to the general feeling of his countrymen throughout the empire and his admirers the world over. We are glad, I say, to have him with us to-day; his presence is an intellectual stimulus and an energising force in our deliberations.

It is, I understand, an unwritten law of the Association that the President shall not in his address encroach upon the topics which belong by right and usage to the readers of the main addresses and to the presidents of the various sections. I have observed that the majority of my predecessors have contented themselves with discoursing on objects and circumstances of local interest; they describe the town or city in which the meeting is held, or perhaps they discuss questions of a public character. In the absence of an address on Public Medicine others have taken that for their theme. It has been my unhappy lot to select and consider subjects only to find in quick succession that they had already been appropriated, either by the Association *Journal*, in describing so fully Montreal and its surroundings, or by the editors of the official guide or souvenir, who have given a very comprehensive description of Canada, or by some of the gentlemen who preside over the sections, who, I have been led to understand, purpose discussing questions of medical education. I fear, therefore, that what I have to say this afternoon will fall far short of the brilliant presidential addresses which members of this Association have been accustomed to in other years. Indeed, when I look at the long roll of eminent men who have been my predecessors in this high office—men oftentimes distinguished for their literary gifts as well as for their exalted position in the medical world—I confess that I marvel at my temerity in accepting so great a responsibility. In speaking of my predecessors allow me especially to refer to the retiring President, Dr. Henry Barnes, whose courteous and kindly manners, together with his sterling ability, make us all glad to know that his election as a Vice-President for life ensures his continued official and active connexion with the Association. Here might I also be permitted to say how greatly I appreciated the many kindnesses and courtesies extended to me by the President (Dr. Saundby) and members of the Council when in London last winter making the initial arrangements for this meeting. With respect to the other addresses which it is customary to deliver on these occasions, medicine will be dealt with by one whose reputation is now world-wide—by our Osler—whose professional education was in great part received in this city, and who, I am happy to say, is still a Canadian. How he has been able to escape the alien law is a puzzle to many; but he has really only been borrowed for a time; he is merely passing through the United States in bond. We are only waiting until we can find a place large enough to hold him, when we shall coax him back. Sorry am I that his old colleagues in his own department of medicine—Howard and Roes and Macdonnell—are not here to share with us the genuine pleasure we experience in finding him in the position which he occupies to-day. You will hear addresses in Surgery and Public Medicine delivered by gentlemen who have devoted their lives to their special subjects. Before proceeding, however, with the remnants of subjects which my *confrères* have been graciously pleased to leave for my share on this occasion, allow me first, for the benefit of those who may not be acquainted with the work of the British Medical Association, to give in as few words as possible a general idea of its organisation.

[Dr. Roddick then gave an account of the foundation and objects of the British Medical Association and continued:]

The Canadian people, and especially the citizens of Montreal, are highly gratified that Canada should be the first country without the United Kingdom to be honoured by a meeting of the British Medical Association; and while they hope that it will not be long before the honour is repeated, our people are not insensible to the claims of other portions of the empire, more especially the great island continent of the Antipodes, Australia. Either Sydney or Melbourne would be a fit meeting place for such an imperial organisation as this; and should the next meeting which is held outside the British Isles be held under the Southern

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Cross our hospitable Australian kinsmen may count on a large contingent from the Dominion of Canada.

CLIMATIC CONDITIONS OF CANADA.

As it may be presumed that to the majority of those present here to-day Canada is almost an unknown country, I have thought that among one or two other subjects a few remarks on the atmospheric conditions and health resorts of the Dominion would not be without interest. The best way to understand the atmospheric conditions of a country is first to understand its physical features. The physical features of Canada are very remarkable. Broadly speaking, the country is separable by climatic and physical conditions into three great regions—the Eastern, Central, and Western Regions—which approximately run north and south in the general trend of the continent. The eastern region, which includes the older provinces of the Dominion—Ontario, Quebec, Nova Scotia, New Brunswick, and Prince Edward Island, besides the great fur territory stretching far to the east and north-east of James's Bay—extends from the Atlantic to Lake Superior and the chain of Great Lakes running in a northerly direction from Lake Superior to the Arctic Ocean. Between this great chain of lakes and the eastern base of the Rocky Mountains is the immense interior continental plain which constitutes the central region of Canada, its southern part consisting of open prairie, its northern part of forest lands. The third part of the division, the western region, is naturally very well defined, consisting of the wide and wild mountainous border of the continent on the Pacific side—the Rocky Selkirk and Gold Ranges, which form the great Cordilleran belt, whose average width in Canada is 400 miles. Eastern Canada, our first and largest region, is geologically of very ancient origin. Here geologists have placed the nucleus of the continent—the broad belt of crystalline rock of great antiquity called the Laurentian Plateau. This region is remarkable for its immense number of lakes, large and small, and for its irregular and winding rivers with numerous rapids and falls. Between the Laurentian Plateau on the north and the Appalachian mountain system on the south lies the great valley of the River St. Lawrence. The basin of this majestic river covers 530,000 square miles, of which 460,000 are in Canada. Above the city of Quebec the base of the Laurentian highlands and the ridges of the Appalachian system diverge, and the mighty river flows through an extensive low country of notable fertility, in earlier days the great granary of Canada. It may be added *en passant* that Mount Royal, which gives such distinction and character to our city, represents the basal remnants of a volcanic vent of great antiquity. From its picturesque summit may be seen similar abrupt elevations far off towards the east and south—Montarville, Belœil, or St. Hilaire, Mount Rougemont, with Mount Yamaska behind it, Mount Shefford, and the conical Mount Johnson or Monnoir. The Adirondacks are visible in the distance to the south-west, and the Green Mountains to the south-east.

Included in the Eastern Region is one of the most remarkable geographical features of Canada—the great fresh water lakes or inland seas, Superior, Huron, Erie, and Ontario, which form the perennial reservoirs of the St. Lawrence. Together with Lake Michigan, which is wholly in the United States, they have an aggregate area of 94,750 square miles, an area larger than that of Great Britain. They stand at four distinct levels above the sea—Ontario 247 feet, Erie 573 feet, Huron 581 feet, and Superior 602 feet. The Niagara Falls, the greatest and most impressive of the natural wonders of our continent, are the direct result of the great height of Lake Erie above Lake Ontario, the river connecting the lakes being only a few miles long. Besides the St. Lawrence, Eastern Canada has several other great rivers, notably the Ottawa, which has a course of 1800 miles and a basin of nearly 1,000,000 square miles, the St. Maurice, the Saguenay, and the St. John, the glory of New Brunswick, which, together with the Atlantic Slope, has a basin of 50,214 square miles. The Central and Western Regions also have their abundant share of large and small lakes and great rivers, an account of which would fill reams of paper. It should be noted that the Canadian rivers and lakes collectively cover an area of 130,000 square miles, and contain one-half the fresh water on the globe. I draw special attention to this series of vast lakes and rivers because it exerts an immense and beneficent influence on the climate of Canada. It preserves the mean temperature, while the land experiences the extremes. In summer the water is cooler and in winter warmer than the land conditions, which tend to modify the differences and to favour uniformity of climate. Without these waters, too, we should have vast regions of comparatively little value, as in Africa, Asia, and in the United States west of the Mississippi river, where large tracts of land far from water are nothing more than arid wastes. Our climate is more uniform than that of Europe; the meteorological differences are produced by position alone, but Europe has a higher mean temperature, and the extremes there are not so marked or so wide apart as in Canada. Owing to the great area of Canada, extending over 20° of latitude, or from the latitude of Constantinople to that of North Cape in Norway, the range of temperature is naturally very wide. The southern boundary stretches over fully 4000 miles, along which line we find that Southern Ontario has the latitude of Central Italy, Nova Scotia that of Northern Italy, Manitoba and Vancouver that of Central Germany. Speaking generally, the Canadian summer may be stated at from 60° to 70° F. From its vast and varied extent Canada may be said to be the possessor of several climates. Taking Solly's classification as to position, we have in Canada all the three land climates—the low, the medium, and the high. The first has an elevation up to 2500 ft., the second up to 4500, and the third from 4500 upwards. As to temperature and humidity, Canada comes under the category of "cold, moderate, and dry."

HEALTH RESORTS.

In the eastern region of the Dominion there are at least two localities which have been proved to possess many of the qualities which constitute a climate for convalescents from fevers and other depressing diseases, and also for phthisis in the incipient stage. I refer to the region in the Province of Quebec among the Laurentians north of this city, of which the village of Ste. Agathe is the centre, the other being the Muskoka District, in Ontario. The first has been called the Adirondacks of Canada, having many of the features, physical and climatic, of that now celebrated plateau situated in the north-eastern part of New York State, and stretching from the Mohawk Valley in the south 150 miles north, almost to the frontier line. The average elevation of the two regions is about the same, being from 1600 to 1800 feet. The immense pine forests, together with the moderate temperature, constitute the chief characteristics of the Canadian district from the medical point of view. No very systematic meteorological observations have yet been taken of the Ste. Agathe region, but the indications will probably prove to be very similar to those of the American resort. It is in contemplation to erect a sanatorium on Trembling Mountain, overlooking the village of Ste. Agathe, which will doubtless in time rival the Adirondack Cottage Sanatorium near Saranac Lake Village, which has proved such a marked success under the able management of Dr. E. L. Trudeau. The elevation of the sanatorium will be 2500 feet, thus having an altitude of nearly 900 feet greater than the establishment at Saranac. It is the intention of the Quebec Government to set apart a sufficient portion of the Crown lands to form a natural park in that part of the province. It will be called the Trembling Mountain Park, and will cover an area of 100,000 acres of land, in which are several beautiful lakes. Within the boundaries of this park the sanatorium will be constructed. There is therefore no reason to doubt that we will shortly have within our own lines a health resort possessing all the advantages of the Adirondacks region, and capable of affecting for good the same class of patients now so decidedly benefited by a residence in those mountains.

One hundred miles north of Toronto, in the highlands of Ontario, is the Muskoka Lake region, an area of about 10,000 square miles, perhaps the most picturesque portion of the whole province. Within this district, which has a mean altitude above the sea of about 800 ft. (200 ft. above Lake Huron), there are nearly a thousand lakes and ponds, connected by innumerable streams. The chief lakes are Muskoka, Rosseau, and Joseph. These contain about 400 islands. It is a region abounding in pine forests; the climate is dry, and the air pure and invigorating. The Muskoka region has been found undoubtedly to possess remarkable climatic advantages for those with phthisical tendencies. The death-rate from phthisis in this section of Ontario is proved to be less than one-tenth the rate which obtains in other parts of the province. At Gravenhurst the Muskoka Cottage Sanatorium for the cure of incipient phthisis has recently been founded, under the best auspices,

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with accommodation for forty patients. The present sanatorium consists of a large and well-planned main building, surrounded within easy distance by a number of small cottages. The grounds, which embrace seventy-five acres, are situated on Lake Muskoka. Pine forests and rocky ridges protect the buildings on the north and west sides, whence come the colder winds in winter. Like the Adirondacks Sanatorium, the intention is to occupy it all the year round. The progress of this institution, at present in the experimental stage, will be watched with much interest.

In the central region of Canada, that section of the north-west territories known as Southern Alberta—the home of the cowboy—has much to recommend it as a health resort. This strip of prairie and hill country is bounded on the north by the Canadian Pacific Railway and on the south by the international boundary line: its eastern boundary extends as far as Medicine Hat; its western boundary to the summit line of the Rockies and British Columbia, comprising in all an area of about 20,000 square miles. The plain here has an elevation above sea level of 2,700 ft., which gradually increases up to the entrance of the Crow's Nest Pass, where the elevation is 4500 ft. Calgary, the capital of Alberta, is itself 3500 ft. above sea level. With this gradual incline from a low to a high level altitude the patient can choose the locality which suits his particular case. In a long experience Kennedy knew of only two cases of phthisis originating in that country: one of acute tuberculosis with a strong hereditary taint, which proved fatal; the other, of the ordinary type, recovered without leaving the place. He claims for the climate of Southern Alberta a dry aseptic atmosphere and a dry soil, the greatest possible number of sunshiny days (90 per cent.), with cool nights. Patients can live there all the year round, and, with the exception of an occasional snowstorm, which may cover the prairie to a varying depth, nothing need interfere with their practically living in the saddle. The so-called Chinook wind has a remarkable influence over all this western section of Canada. It is a warm wind, which blows with varying intensity from west to south-west. McCaul, who describes it very graphically, speaks of its approach being heralded by the massing of dark clouds above the mountain tops, and a distinct wailing and rumbling from the passes and gorges. Its effect in winter is little short of miraculous. When the real Chinook blows the temperature often rises in a few hours from 20° below to 40° above zero. The snow which in the morning may have been a foot deep disappears, and before night everything is dripping; but in the space of a single day all the water is lapped up by the thirsty wind, and the prairie is so dry that a horse's hoof hardly makes an impression. The cases which have been most especially benefited by Alberta's climate are pulmonary tuberculosis in the earliest stage, although neurasthenics and anæmic women are likewise favourably affected to a marked degree. It is well known that delicate lads sent from the British Isles to this section of the north-west to work on the cattle ranches become in a year or two healthy and vigorous men, and are scarcely recognised on their return. Still farther west, and nearly midway between Calgary and the Pacific Coast, is the beautiful valley of Kamloops, another all-the-year-round resort which has much to commend it to those suffering from many forms of tuberculous disease. This picturesque valley, which lies between the Rocky Mountains and the Cascade Range, has a low altitude climate of 1100 ft., but is exceeding dry, showing an annual rainfall of only 11·05 inches, with an average of about seventy-five rainy days in the year. The rain soon disappears, the soil being light and gravelly. In this region we have an illustration of the local variability of climate recently pointed out by Bryce, who, in referring to the two not very distant localities of Vancouver and Kamloops, showed that whereas the former has an annual rainfall of 35 inches, the latter records but 11 inches and a decimal. The mean annual temperature of the valley of Kamloops is 46·03° F., the annual range being only 22·8°. The tuberculous patients who appear to be most benefited by a residence in Kamloops are those in whom there is a tendency to chronic congestion. Cases of bronchitis are likewise said to do well there. The climate can also be recommended for phthisical patients where cardiac disease exists as a complication.

That Canada is an exceptionally healthful country is the general testimony of the army and navy surgeons who have been stationed in Canada with the different regiments from the time of the conquest to the present day. Crawford, who was attached to one of the regiments stationed in Montreal many years ago, and who subsequently left the army and practised in this city, published elaborate and carefully-collected statistics to prove that few portions of the British Empire have a climate equal to that of Canada. In fact, his statistics prove conclusively that out of every 1000 of the troops stationed at the various garrisons throughout the empire, the percentage constantly ineffective from sickness was smaller in this country by 7 per cent. than at Gibraltar, which was then taken as the type. I think it can be satisfactorily proved that Canada is expressly fitted to develop a hardy race capable of great endurance. The races of the British Isles and the French race have certainly not degenerated here. Hingston proved this very conclusively some years ago by observations made upon the medical students attending the various schools in this city. He found that the lumbar strength of the British Canadian of the third generation exceeded by 20 lb. that of the recently-arrived English and Scotch students. But the French Canadian of the tenth generation did better than all by nearly 30 lb. Not only has the French Canadian increased in strength, but also in height and weight, over the original Normandy stock.

[Dr. Roddick next referred to the Canadian spas, mentioning particularly Banff, and continued:]

Banff, now a picturesque town magnificently situated in the heart of the Rocky Mountains, yet within the limits of that division of the North-West Territories known as Alberta, has become one of our noted health resorts, although frequented more on account of its remarkable thermal springs than for its climatic advantages. The town is built on the banks of the Bow and Spray rivers, two large glacier streams, and is surrounded by mountains towering many thousands of feet above the level of the sea. The winter is short, beginning in December and ending in February, and is much milder than Ontario. Very little rain falls, and the days, as a rule, are bright and cloudless. Prolonged periods of warm weather are experienced during winter. March and April are variable; May is warm and bright; June is the month in which the greatest rainfall occurs; July, August, September, and October are very warm and very dry, with cool nights. At all seasons, with the exception perhaps of June, the air is dry and notably aseptic.

[Dr. Roddick then gave an analysis of the springs and mentioned their therapeutic value. He then passed to consider medical education in Canada. He continued:]

MEDICAL EDUCATION IN CANADA.

The general question of medical education is one of great importance and of unceasing interest, nor is this interest confined to the profession; it is becoming universal. The needs of medical education are fortunately being more fully realised by those who on account of their wealth and influence are in a position to render that substantial assistance which is so requisite. The time was when every medical school was a purely proprietary concern, "run" for the money that was in it. We feel in Canada, and I think I can speak for the profession in the neighbouring republic, that this day is passed, that high-minded philanthropists like Sir Donald Smith, the late John Henry Molson, and others with us, and the Johns Hopkins, the Stanfords, the Vanderbilts, the Rockfellers, the Miss Garretts, and others with them are beginning to realise that unendowed instruction in medicine must lead to imperfect results, and that private endowment, in the absence of State aid, has become an absolute necessity to a proper medical training. I am not an advocate for State aid to universities, and I rejoice that the University to which I have the honour to belong is not so dependent, as it might thus be deprived of those gifts of private munificence to which I have just referred. All honour to those far-seeing, open-handed men and women who are giving of their abundance in order to elevate the standard of medical education, and by so doing benefit their kind. As Gould very tersely puts it in one of his clever articles: "I think our reliance must be upon private bequests, and these can be secured only as we interest the rich. We must never weary in showing the neglect of the greatest, most palpable, most certain means of doing good. There is a strange fatality in men, an unaccountable inability of seeing the need that lies nearest the good that is dearest. There is more money to-day devoted to astronomy than to the prevention of disease. It is positively wonderful to think that men should be more

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interested in stars and constellations than in their bodies and their physiological life."

A question which is nowadays agitating the minds of those especially interested in medical education is the kind of groundwork which is likely to bear the most direct relation to the future studies of the medical student. I think it is now conceded by all that he is placed at a greater advantage who first passes through an arts or a science course. I am happy to be able to report that from 15 to 20 per cent. of those who are studying medicine in this country to-day have had a collegiate training in either arts or a science. Which of the two should the parent or guardian choose? Had I a son whose instincts were in the direction of medicine I think I should choose for him the science course. The late Professor Huxley thought it was a most self-evident proposition that the educational training for persons who proposed to enter the medical profession should be largely scientific; not merely or even principally because an acquaintance with the elements of physical and biological science is absolutely essential to the comprehension of human physiology and pathology, but still more because of the value of the discipline afforded by practical work in these departments in the process of observation and experiment, in inductive reasoning, and in manipulation. The subjects in the science curriculum might be specially selected for the future medical student. Of course, it may be said in favour of the arts course that many of the subjects, such as physics and chemistry, constitute part of the curriculum; but then calculate the loss to the future surgeon of that training of the hand and eye which would lead him up to be a skilled operator; or to the scientific physician whose complicated instruments of precision employed in the diagnosis of disease need some mechanical knowledge for both their use and repair. Besides, the number of those has been increasing in number and complexity with the increase of scientific knowledge. But can we not make a new departure? Can we not urge that a special scientific education be arranged by the university for those who desire to enter the medical profession? Such a course would embrace elementary Latin and Greek, French and German, physics, chemistry, biology, psychology, elementary mechanics, a practical laboratory course on electricity, and drawing. After two years' study this might entitle the successful candidate to the degree of Licentiate in Science. Something of this kind has been recently attempted in the University of McGill. By a special arrangement with the Faculty of Arts it is now possible for students to obtain the degree of B.A. along with M.D., C.M., after only six years of study. It has been decided to allow the primary subjects (anatomy, physiology, and chemistry) in medicine to count as subjects of the third and fourth years in arts. It follows, then, that at the end of four years' study a student may obtain his B.A. degree and have two years of his medical course completed. The last two years of study are, of course, devoted to the third and fourth year subjects in medicine. A certificate of Licentiate in Arts will be given along with the professional degree in medicine to those who previously to entrance upon their professional studies proper have completed examinations therein. By this plan, also, during the first two years of the arts course the medical student practically completes his studies in physics, chemistry, botany, and elementary psychology. This scheme is still in the experimental stage, but there is every reason to believe that it will result satisfactorily. What deters so many from taking a full course in arts or science before entering medicine is the length of time consumed before the doctorate degree is reached. I might state that the standard for the ordinary matriculation examination for entrance to medicine exacted by all universities and licensing boards in this country is, with one or two exceptions, very high. I doubt if the requirements in this way of the General Medical Council of Great Britain are any higher.

[Dr. Roddick here compared the Canadian medical schools with those of the United States and continued:]

In clinical teaching also we have made marked advances. A creation of the last few years is the clinical demonstrator, who takes small classes of students into the wards or the outdoor department of our hospitals, and gives them that "bedside instruction" which is so essential, leaving the clinical professor to deal with the full classes in the lecture or operating room. Thus each student is enabled personally to examine the case, to study the physiognomy of disease, and to make deliberate, thorough, and systematic examinations. He thus learns to use his special senses, and gets into careful habits of observation which once thoroughly acquired will be found to contribute largely to future success. With this in view, we encourage students to attend the out-patient department of the hospitals as early as the second year. In order to make the clinical instruction more complete and more thorough chemical and bacteriological laboratories have been added to the pathological departments of our hospitals. Thus it will be seen that laboratory methods everywhere prevail, all with the idea of developing the scientific spirit in students and of cultivating methods of thought with observation. The question sometimes arises, however, May the student not be getting too much of a good thing? Is it not possible that laboratory teaching may be overdone? because, as Welsh very truly says, "The student whose knowledge of a subject is derived exclusively from laboratory courses is likely to lose his perspective in details, to acquire only a fragmentary knowledge of the subject, to fail to comprehend the general bearing of observed facts; and not to acquire the general principles and systematic conceptions which are essential. Laboratory work should be accompanied and supplemented by the reading of text-books and by lectures." I am convinced that with us in Canada laboratory work is not overdone, but, on the contrary, in some departments needs and deserves further encouragement. I hope every laboratory teacher in the country realises that the object of a college is to give a good general education and not to make experts in various branches. I have long felt myself, however, that the didactic lectures were being unfairly dealt with. There is a feeling abroad that they should be practically elbowed out of sight. I think the didactic lecture has its place in the medical course; and while I quite feel that the old plan of compelling students to listen to five didactic lectures a week in all of the great subjects was a mistake, I still feel that a good lecturer can teach in this way a certain something which cannot be imparted by practical instruction or by recitations. The personal influence of a good lecturer very often makes an impression which nothing else can make; and if such lectures are made also demonstrative, as by the use of diagrams, the lantern, experiments, &c., they must of necessity fill a very important place in the medical course.

Hygiene is at last receiving in this country the attention which its importance demands; all medical schools in Canada have facilities for teaching it. In McGill University the scope of the teaching of hygiene has been vastly extended, thanks to the generous endowment of that department recently by the chancellor, Sir Donald Smith. The subject can now be taught in a scientific, and at the same time eminently practical, manner. There will be three teachers associated with the professor himself—namely, the heads of the Department of Practical Chemistry, of Pathology, and of Bacteriology. This is following very much the German system, also adopted by the University of Pennsylvania, the chemical and bacteriological aspects of the subject being really regarded as the most important. An extensive working museum, with sanitary apparatus of every kind, forms part of the scheme, and will doubtless add greatly to the efficiency of the course when it is completed. Should the experiment succeed you will be rejoiced to hear at no distant date that the other schools in Canada have followed the lead of their elder sister. I fear I have given you a very imperfect idea of medical education in Canada, and it may be charged against me that I have been partial in my description to my own university; but I assure you that such was furthest from my thoughts. The medical faculty of McGill University has the right of seniority, and might fairly, I think, be taken as a type of Canadian medical schools. Be assured there is no mean spirit of rivalry abroad. We are all working with one object only—the advancement of medicine in Canada. The teaching facilities of some medical schools in this country may be, and are, actually greater than others, owing to the munificence of citizens, and the school attached to McGill is, I am happy to say, in that position; but although assistance has been rendered in a general way, with two exceptions the chairs are still unendowed; yet we have great expectations, which we hope will be realised in the near future. Let us hope that our sister universities throughout Canada will be equally fortunate, so that before long we shall be able to report that we are all marching abreast equally equipped. The facilities for clinical teaching in the larger cities of Canada are admirable. Speaking for the city of Montreal, we have in the five general hospitals—the Hôtel Dieu, Montreal General, Notre Dame, Royal Victoria, and Western Hospitals—nearly

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800 beds. The number of students attending the three medical schools was last session 646; and, considering that only about half—those of the third and fourth years—have access to the wards, there will be at least two beds for each student. The number of out-door patients attending the five hospitals daily would aggregate at least 300, so that there could be no possible cause for complaint regarding both the quantity and quality of clinical material available in this city.

While on the subject of hospitals I would take this opportunity of saying that the training schools attached to the larger English hospitals are in a very flourishing condition, and are found to contribute not a little towards the thoroughness of the practical teaching. It was my intention to have referred at some length to the whole question of nurses and nursing, but the limits of this address forbid. I might say, however, while as a profession we feel the absolute necessity for the training school and thoroughly appreciate the services of the well-trained nurse, both in hospital and in private practice, there is the fear that the supply may soon exceed the demand. A project is on foot now, however, which may delay, if not actually prevent, such a result. I refer to the recent establishment by that most estimable and charitable woman, the Countess of Aberdeen, of the Victorian Order of Nurses—another outcome of the Jubilee of our beloved Queen. Her Excellency's idea in establishing this Order is to supply the sparsely settled parts of our great north-west, the outlying districts of Canada generally, and the poor in towns and cities with nursing aid. In this great work hundreds of nurses will in time be employed. The scheme, which is purely non-sectarian, and appeals to all irrespective of nationality, when thoroughly worked out and more generally understood will become one of our national institutions. Let us wish it every success.

MEDICAL LEGISLATION IN CANADA.

Time will not permit of my discussing the subject of medical legislation in Canada at any length; and, besides, you will find it very fully treated in the excellent Souvenir or Local Guide prepared for you by the executive committee. In addition, I might explain, however, that when the British American provinces became federated in 1867, under the British North America Act, the governance of educational matters was taken away from the Federal authorities, and handed over to the provinces, each to look after them in its own way. In consequence we have since had a curious complexity of medical legislation, there being practically no uniformity amongst the provinces in regard to standard of study or qualification for practice. Each province has its own medical board or medical council, as the case may be, which has the power to grant licence to practise either after examination or on simply presenting the diploma of certain recognised universities. In the provinces of Ontario and British Columbia an examination is exacted; in the others the licence is given under certain restrictions on presentation of the degree, although in the Maritime Provinces an examining board is now about to be established. In this way, as can readily be seen, a Chinese wall is built round each province, and the frontier is carefully guarded, so that it is unsafe for a medical man to pass from one to the other unarmed with a licence because of the risk of fine or even imprisonment. Such a condition of affairs is hardly credible, and probably exists nowhere else to the same extent. What is the remedy? Two remedies have been suggested—either the establishment of a central examining board in each province with a uniform standard of matriculation and a uniformly high standard of curriculum which shall in time lead up to a general scheme of reciprocity; or, secondly, a Dominion Examining Board. The first scheme is at present under serious consideration, although there are many difficulties in the way of its accomplishment, none of which is insuperable, however, providing a spirit of conciliation prevails. The second alternative (a Dominion Examining Board) would in many respects be more desirable, because not only could the licentiate practise in any part of the Dominion, but he could register in Great Britain, and thus receive recognition all over the empire. As you are doubtless aware, we as a profession suffer in this country from being inhabitants of provinces which are confederated. In an enactment, now of some twelve years' standing, the British Medical Council decided in effect to recognise the degrees of universities situated in autonomous provinces only. As a consequence, Australians obtain privileges which are denied to us, being permitted to register in Great Britain without examination. We are being punished for belonging to a colony whose form of Government is recognised to be in advance of theirs and likely to be imitated by them. Let us give our Australian brethren a hint; if the confederation of your provinces be in contemplation, see to it that all matters of professional education are left in the hands of the Central Government, at least as far as qualification for registration is concerned. By so doing you will avoid the almost inextricable tangle in which we in Canada find ourselves. Let common school education go to the various provinces if you will, but for the profession of medicine (and doubtless law also) there should be a uniform standard of matriculation, a uniform curriculum of medical studies, and one Central Examining and Registering Board composed of the best men from all the universities. We hope in Canada to reach that ideal at no distant date; in fact, I have the very best authority for stating that it is not impossible of accomplishment. Some scheme of reciprocity first arranged would doubtless make the task less difficult, but, failing that, our duty is to arrange for some legislation which shall give our better and more ambitious students an opportunity of passing a Dominion Licensing Board (or whatever it may be called) which shall give the privilege of practising their profession, not only in any part of their native country, but in any part of the world over which the British flag flies. Such a scheme need not interfere in any way with the autonomy of the provinces. Each may still retain its Provincial Board for the purpose of examining and issuing licences to those candidates who are satisfied to practise their profession in the limited sphere of their own provinces. I think the legislators of this country will some day (and not far distant either) be induced to see that the system which at present obtains is unworthy of a great and growing country.

In conclusion, allow me to express the hope that the arrangements made by the executive committee for the entertainment of our guests may meet with appreciation and approval, and that the memories of the brief sojourn here may be all that is bright and happy. The loyalty and unanimity with which the profession throughout the Dominion has coöperated with us in Montreal to make this meeting of the British Medical Association a success from every point of view deserves and receives our heartiest thanks. We are also greatly indebted for the kind and ready assistance of the Dominion Government, the Quebec Government, and the Civic Government of Montreal. Our hands have been strengthened, and the cause we have so much at heart has been furthered, by the active goodwill of the country's official representatives. One word more. It is a good thing to be here to-day in the midst of this great gathering so full of power and vigour. The fruits of such a gathering should be tangible, enduring—not ephemeral, nor for to-day, but for all time. To our kinsmen from beyond the great seas let me express the earnest hope that in the future our kinship will be a more real and living thing than in the past. We are members of one great family, members one of another, in a peculiar and very real sense. Let that once be recognised and the statesman's task will be an easy one. In more than words has Canada shown herself worthy of her high heritage, worthy of a part in the Empire, worthy to share in its trials and triumphs. We who know her history can say with well-founded confidence:

> "So in the long hereafter this Canada shall be
> The worthy heir of British power and British liberty,
> Spreading the blessings of her sway to her remotest bounds,
> While with the fame of her fair name a continent resounds.
> True to her high traditions, to Britain's ancient glory,
> Of patient saint and martyr, alive in deathless story;
> Strong in their liberty and truth to shed from shore to shore
> A light among the nations till nations are no more."

CLAYBURY ASYLUM.—On Aug. 30th Dr. Collins, the chairman of the London County Council and a prominent member of the asylums committee, to whose advocacy the pathological laboratory for the London asylums is due, distributed the certificates of the Medico-Psychological Association for Proficiency in Mental Nursing to the Male and Female Staff. He delivered an interesting address, reviewing the treatment of insanity from the early days of "Bedlam" in 1653, when the victims of disease were imprisoned and ill-treated for being a "displeasure to God and an annoyance to the King's subjects." He urged upon nurses and attendants the cultivation of forbearance, gentleness, and graciousness in their dealings with the insane, that their duty was to extend human happiness and lessen human pain, and that kindness and softness of manner would go far to assist in the recovery of those whose lives had probably been, before a stern and relentless fate decreed otherwise, full of hope, energy, and happiness.

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Address in Medicine:

BRITISH MEDICINE IN GREATER BRITAIN

Delivered at the Sixty-fifth Annual Meeting of the British Medical Association at Montreal, August–September, 1897,

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THE MAKING OF GREATER BRITAIN.

GENTLEMEN,—To trace successfully the evolution of any one of the learned professions would require the hand of a master—of one who, like Darwin, could combine the capacity for patient observation with philosophic vision. In the case of medicine the difficulties are enormously increased by the extraordinary development which belongs to the history of the present century. The rate of progress has been too rapid for us to appreciate, and we stand bewildered, and, as it were, in a state of intellectual giddiness, when we attempt to obtain a broad comprehensive view of the subject. In a safer "middle flight" it is my purpose to dwell on certain of the factors which have moulded the profession in English-speaking lands beyond the narrow seas—of British Medicine in Greater Britain. Even for this lesser task (though my affiliations are wide and my sympathies deep) I recognise the limitations of my fitness, and am not unaware that in my ignorance I shall overlook much which might have rendered less sketchy a sketch necessarily imperfect.

Evolution advances by such slow and imperceptible degrees that to those who are part of it the finger of time scarcely seems to move. Even the great epochs are seldom apparent to the participators. During the last century neither the colonists nor the mother country appreciated the thrilling interest of the long-fought duel for the possession of this continent. The acts and scenes of the drama, to them detached, isolated, and independent, now glide like dissolving views into each other, and in the vitascope of history we can see the true sequence of events. That we can meet here to-day, Britons on British soil in a French province, is one of the far-off results of that struggle. This was but a prelude to the other great event of the eighteenth century, the revolt of the colonies and the founding of a second great English-speaking nation—in the words of Bishop Berkeley's prophecy, "Time's noblest offering." Surely a unique spectacle that a century later descendants of the actors of these two great dramas should meet in an English city in New France. Here the American may forget Yorktown in Louisberg, the Englishman Bunker's Hill in Quebec, and the Frenchman both Louisberg and Quebec in Chataquay, while we Canadians, English and French, in a forgiving spirit, overlooking your unseemly quarrels, are only too happy to welcome you to our country, this land on which, and for which, you have so often fought. Once, and only once, before in the history of the world could such a gathering as this have taken place. Divided though the Greeks were, a Hellenic sentiment of extraordinary strength united them in certain assemblies and festivals. No great flight of imagination is required to picture a notable representation of our profession in the fifth century B.C. meeting in such a colonial town as Agrigentum under the presidency of Empedocles. Delegates from the mother cities, brilliant predecessors of Hippocrates of the stamp of Damocedes and Herodicus, delegates from the sister colonies of Syracuse and other Sicilian towns, from neighbouring Italy, from far distant Massilia and from still more distant Pauticapæum and Istria. And in such an assemblage there would have been men capable of discussing problems of life and mind more brilliantly than in many subsequent periods, in proportion as the pre-Hippocratic philosophers in things medical had thought more deeply than many of those who came after them.

We English are the modern Greeks, and we alone have colonised as they did—as free people. There have been other great colonial empires—Phœnician, Roman, Spanish, Dutch, and French; but in civil liberty and in intellectual freedom Magna Græcia and Greater Britain stand alone. The parallel so often drawn between them is of particular interest with reference to the similarity between the Greek settlements in Sicily and the English plantations on the Atlantic coast. Indeed, Freeman says: "I can never think of America without something suggesting Sicily, or of Sicily without something suggesting America." I wish to use the parallel only to emphasise two points, one of difference and one of resemblance. The Greek colonist took Greece with him. Hellas had no geographical bounds. "Massilia and Obia were cities of Hellas in as full a sense as Athens or Sparta." While the emigrant Britons changed their sky, not their character, in crossing the great sea, yet the home-stayers had never the same feelings towards the plantations as the Greeks had towards the colonial cities of Magna Græcia. If, as has been shrewdly surmised, Professor Seely was Herodotus re-incarnate, how grieved the spirit of the "Father of History" must have been to say of Englishmen, "Nor have we even now ceased to think of ourselves as simply a race inhabiting an island off the northern coast of the continent of Europe." The assumption of gracious superiority, which, unless carefully cloaked, smacks just a little of our national arrogance, is apt to jar on sensitive colonial nerves. With the expansion of the empire, and the supplanting of a national by an imperial spirit, this will become impossible. That this sentiment never prevailed in Hellas, as it did later in the Roman empire, was due largely to the fact that in literature, in science, and in art the colonial cities of Greece early overshadowed the mother cities. It may be because the settlements of Greater Britain were things of slower growth, that it took several generations and several bitter trials to teach a lesson the Greeks never had to learn. The Greek spirit was the leaven of the old world, the workings of which no nationality could resist. Thrice it saved Western civilisation, for it had the magic power of leading captivity captive, and making even captive conquerors the missionaries of culture. What modern medicine owes to it will appear later. "The love of science, the love of art, the love of freedom, vitally correlated to each other and brought into organic union," were the essential attributes of the Greek genius (Butcher). While we cannot claim for the Anglo-Saxon race all of these distinctions, it has in a high degree that one which in practical life is the most valuable, and which has been the most precious gift of the race to the world—the love of freedom.

> "Of freedom in her regal seat
> Of England."

It would carry one too far afield to discuss the difference between the native Briton and his children scattered so widely up and down the earth. In Canada, South Africa, Australia, and New Zealand types of the Anglo-Saxon race are developing which will differ as much from each other and from the English as the American does to-day from the original stock; but amid these differences can everywhere be seen those race qualities which have made us what we are—"courage, national integrity, steady good sense, and energy in work." At a future meeting of the Association, perhaps in Australia, a professional Sir Charles Dilke, with a firm grasp on the subject, may deal with the medical problems of Greater Britain in a manner worthy of the address in medicine. My task, as I mentioned at the outset, is much less ambitious.

THE INFLUENCE OF GREECE ON BRITAIN.

Could someone with full knowledge patiently analyse the characteristics of British medicine he would find certain national traits sufficiently distinct for recognition. Three centuries cannot do very much—and that period has only just passed since the revival of medicine in England—but the local conditions of isolation, which have been singularly favourable to the development of special peculiarities in the national character, have not been without effect on the medical profession. I cannot do more than touch upon a few features, not distinctive, but illustrative—features which will be useful as indicating the sources of influence upon Greater Britain in the past, and which may perhaps be suggestive as to lines of progress in the future. Above the fireplace in Sir Henry Acland's study are three panelled portraits of Linacre, Sydenham, and Harvey; the scroll upon them reads *Literæ, Praxis, Scientia*. To this great triumvirate, as to the fountain heads, we may trace the streams of inspiration which have made British medicine what it is to-day. Linacre, the type of the literary physician, must ever hold a unique place in the annals of our profession. To him was due in great measure the revival of Greek thought in the

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sixteenth century in England, and in the last Harveian Oration Dr. Payne has pointed out his importance as a forerunner of Harvey. He made Greek methods available; through him the art of Hippocrates and the science of Galen became once more the subject of careful, first-hand study. Linacre, as Dr. Payne remarks, "was possessed from his youth till his death by the enthusiasm of learning. He was an idealist, devoted to objects which the world thought of little use." Painstaking, accurate, critical, hypercritical perhaps, he remains to-day the chief literary representative of British medicine. Neither in Britain nor in Greater Britain have we maintained the place in the world of letters created for us by Linacre's noble start. It is true that in no generation since has the profession lacked a man who might stand unabashed in the temple at Delos; but, judged by the fruits of learning, scholars of his type have been more common in France and Germany. Nor is it to our credit that so little provision is made for the encouragement of these studies. For years the reputation of Great Britain in this matter was sustained almost alone by the great Deeside scholar, the surgeon of Banchory, Francis Adams, the interpreter of Hippocrates to English students. In this century he and Greenhill have well maintained the traditions of Linacre. Their work, and that of a few of our contemporaries, among whom Ogle must be specially mentioned, has kept us in touch with the ancients. But by the neglect of the study of the humanities, which has been far too general, the profession loses a very precious quality.

While in critical scholarship and in accurate historical studies British medicine must take a second place, the influence of Linacre, exerted through the Royal College of Physicians and the old Universities, has given to the humanities an important part in education, so that they have moulded a larger section of the profession than in any other country. A physician may possess the science of Harvey and the art of Sydenham, and yet there may be lacking in him those finer qualities of heart and head which count for so much in life. Pasture is not everything, and that indefinable, though well understood, something which we know as breeding is not always an accompaniment of great professional skill. Medicine is seen at its best in men whose faculties have had the highest and most harmonious culture. The Lathams, the Watsons, the Pagets, the Jenners, and the Gairdners have influenced the profession less by their special work than by exemplifying those graces of life and refinements of heart which make up character. And the men of this stamp in Greater Britain have left the most enduring mark: Beaumont, Bovell, and Hodder, in Toronto; Holmes, Campbell, and Howard, in this city; the Warrens, the Jacksons, the Bigelows, the Bowditches, and the Shattucks, in Boston; Bard, Hossack, Francis, Clark, and Flint in New York; Morgan, Shippen, Redman, Rush, Coxe, the elder Wood, the elder Pepper, and the elder Mitchell in Philadelphia—Brahmins all, in the language of the greatest Brahmin among them—Oliver Wendell Holmes—these, and men like unto them, have been the leaven which has raised our profession above the dead level of a business. The *literæ humaniores*, represented by Linacre, revived Greek methods, but the faculty at the end of the sixteenth and the beginning of the seventeenth centuries was in a slough of ignorance and self-conceit, and not to be aroused even by Moses and the prophets in the form of Hippocrates and the fathers of medicine. In the pictures referred to Sydenham is placed between Linacre and Harvey, but science preceded practice, and Harvey's great Lumleian lectures were delivered before Sydenham was born. Linacre has been well called by Payne Harvey's intellectual grandfather. "The discovery of the circulation of the blood was the climax of that movement which began a century and a half before with the revival of Greek medical classics and especially of Galen" (Payne). Harvey returned to Greek methods and became the founder of modern experimental physiology and the great glory of British scientific medicine. The demonstration of the circulation of the blood remains in every detail a model research. I shall not repeat the oft-told tale of Harvey's great and enduring influence, but I must refer to one feature which until lately has been also a special characteristic of his direct successors in Great Britain. Harvey was a practitioner and a hospital physician. There are gossiping statements by Aubrey to the effect that "he fell mightily in his practice" after the publication of the "De Motu Cordis," and that his "therapeutic way" was not admired; but to these his practical success is the best answer. It is remarkable that a large proportion of all the physiological work of Great Britain has been done by men who have become successful hospital physicians and surgeons. I was much impressed by a conversation with Professor Ludwig in 1884. Speaking of the state of English physiology, he lamented the lapse of a favourite English pupil from science to practice; but he added, "While sorry for him, I am glad for the profession in England." He held that the clinical physicians of that country had received a very positive impress from the work of their early years in physiology and the natural sciences. I was surprised at the list of names which he cited—among them I remember Bowman, Paget, Savory, and Lister. Ludwig attributed this feature in part to the independent character of the schools in England, to the absence of the university element, so important in medical life in Germany, but, above all, to the practical character of the English mind, the better men preferring an active life in practice to a secluded laboratory career. Thucydides it was who said of the Greeks that they possessed "the power of thinking before they acted and of acting too." The same is true in a high degree of the English race. To know first what has to be done, then to do it, comprises the whole philosophy of practical life. Sydenham (*Angliæ lumen*, as he has been well called) is the model practical physician of modern times. Linacre led Harvey back to Galen, Sydenham to Hippocrates. The one took Greek science, the other not so much Greek medicine as Greek methods, particularly intellectual fearlessness, and a certain knack of looking at things, Sydenham broke with authority and went to nature. It is an extraordinary fact that he could have been so emancipated from dogmas and theories of all sorts. He laid down the fundamental proposition, and acted upon it, that "all diseases should be described as objects of natural history." To do him justice we must remember, as Dr. John Brown says, "in the midst of what a mass of errors and prejudices, of theories actually mischievous, he was placed, at a time when the mania of hypothesis was at its height, and when the practical part of his art was overrun and stultified by vile and silly nostrums."

Sydenham led us back to Hippocrates; I would that we could be led oftener to Sydenham. How necessary to bear in mind what he says about the method of the study of medicine. "In writing, therefore, such a natural history of diseases, every merely philosophical hypothesis should be set aside, and the manifest and natural phenomena, however minute, should be noted with the utmost exactness. The usefulness of this procedure cannot be easily overrated as compared with the subtle inquiries and trifling notions of modern writers, nor can there be a shorter, or, indeed, any other way of coming at the morbific causes, or of discovering the curative indications, than by a certain perception of the peculiar symptoms. By these steps and helps it was that the father of physic, the great Hippocrates, came to excel, his theory being no more than an exact description or view of Nature. He found that Nature alone terminates diseases, and works a cure with a few simple medicines, and often enough with no medicine at all." Well, indeed, has a recent writer remarked: "Sydenham is unlike every previous teacher of the principles and practice of medicine in the modern world." Sydenham—not Linacre or Harvey—is the model British physician, in whom were concentrated all these practical instincts upon which we lay such stress in the Anglo-Saxon character. The Greek faculty which we possess of thinking and acting has enabled us, in spite of many disadvantages, to take the lion's share in the great practical advances in medicine. The three greatest scientific movements of the century have come from Germany and France. Bichat, Laennec, and Louis laid the foundation of modern clinical medicine; Virchow and his pupils of scientific pathology; while Pasteur and Koch have revolutionised the study of the causes of disease; and yet the modern history of the art of medicine could almost be written in its fulness from the records of the Anglo-Saxon race. We can claim almost every practical advance of the very first rank—vaccination, anæsthesia, preventive medicine, and antiseptic surgery—the "captain jewels in the carcanet" of the profession, beside which can be placed no others of equal lustre.

THE INFLUENCE OF AUTHORITY IN MEDICINE.

One other lesson of Sydenham's life needs careful conning. The English Hippocrates, as I said, broke with authority. His motto was

> "Thou, Nature, art my goddess; to thy law
> My services are bound."

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Undue reverence for authority as such, a serene satisfaction with the *status quo*, and a fatuous objection to change have often retarded the progress of medicine. In every generation, in every country, there had been, and ever will be, *laudatores temporis acti*, in the bad sense of that phrase, not a few of them men in high places, who have lent the weight of a complacent conservatism to bolster up an ineffectual attempt to stay the progress of new ideas. Every innovator, from Harvey to Lister, has been made to feel its force. The recently issued Life of Thomas Wakley is a running commentary on this spirit, against the pricks of which he kicked so hard and so effectually. But there are signs of a great change. The old universities and the colleges, once the chief offenders, have been emancipated, and remain no longer, as Gibbon found them, steeped in port and prejudice. The value of authority *per se* has lessened enormously, and we of Greater Britain have perhaps suffered as the pendulum has swung to the other extreme. Practice loves authority, as announced in "the general and perpetual voice of men" (Hooker). Science must ever hold with Epicharmus that a judicious distrust and a wise scepticism are the sinews of the understanding. And yet the very foundations of belief in almost everything relating to our art rests upon authority. The practitioner cannot always be the judge, the responsibility must often rest with the teachers and investigators, who can only learn in the lessons of history the terrible significance of the word.

In the treatment of fever the fetters of a thousand years were shattered by Sydenham—shattered only to be riveted anew. How hard was the battle in this century against the entrenched and stubborn foe. Listen to the eloquent pleadings of Stokes, pleading, as did Sydenham, against authority and against the bleedings, the purgings, and sweatings of fifty years ago. "Though his hair be grey and his authority high he is but a child in knowledge and his reputation an error. On a level with a child, so far as correct appreciation of the great truths of medicine is concerned, he is very different in other respects; his powers of doing mischief are greater; he is far more dangerous. Oh! that men would stoop to learn, or at least cease to destroy." The potency of human authority among "the powers that be" was never better drawn than by the judicious Hooker in his section on this subject. "And this not only with the 'simpler sort,' but the learneder and wiser we are the more such arguments in some cases prevail with us. The reason why the simpler sort are moved with authority is the conscience of their own ignorance; whereby it cometh to pass that having learned men in admiration, they rather fear to dislike them than know wherefore they should allow and follow their judgments. Contrariwise with them that are skilful, authority is much more strong and forcible, because they only are able to discern how just cause there is why to some men's authority so much should be attributed. For which cause the name of Hippocrates, no doubt, were more effectual to persuade even such men as Galen himself than to move a silly empiric."[1] Sydenham was called "a man of many doubts," and therein lay the secret of his great strength.

MEDICINE IN AMERICA: TO 1820.

Turning now to the main question of the development of this British medicine in Greater Britain I must at once acknowledge the impossibility of doing justice to it. I can only indicate a few points of importance, and I must confine my remarks chiefly to the American part of Greater Britain. We may recognise three periods corresponding to three distinct waves of influence: the first from the early migrations to about 1820, the second from about 1820 to 1860, and the third from about 1860 to the present time. The Colonial settlements were contemporaneous with the revival of medicine in England. Fellow students of Harvey at Cambridge might have sailed in the *Mayflower* and the *Arbella*. The more carefully planned expeditions usually enlisted the services of a well-trained physician, and the early records, particularly of the New England colonies, contain many interesting references to these college-bred men. Giles Firman, who settled in Boston in 1632, a Cambridge man, seems to have been the first to give instruction in medicine in the new world. The parsons of that day had often a smattering of physic, and illustrated what Cotton Mather called an "angelical conjunction." He says: "Ever since the days of Luke the Evangelist skill in physic has been frequently professed and practised by persons whose more declared business was the study of divinity." Firman himself finding physic "but a meane helpe" took orders. These English physicians in the New England colonies were scholarly, able men. Roger Chillingworth, in Hawthorne's "Scarlet Letter," has depicted them in a sketch of his own life: "Made up of earnest, studious, thoughtful, quiet years, bestowed faithfully for the increase of knowledge; faithfully, too, for the advancement of human welfare; men thoughtful for others, caring little for themselves, kind, just, true, and of constant if not warm affections"—a singularly truthful picture of the old colonial physician.

Until the establishment of medical schools—University of Pennsylvania, 1763; King's College (afterwards Columbia), 1767; and Harvard, 1782—the supply of physicians for the colonies came from Great Britain, supplemented by men trained under the old apprentice system and of colonists who went to Edinburgh, Leyden, and London for their medical education. This latter group had a most powerful effect in moulding professional life in the pre-revolutionary period. They were men who had enjoyed not alone the instruction, but often the intimate friendship, of the great English and European physicians. Morgan, Rush, Shippen, Bard, Wistar, Hossack, and others had received an education comprising all that was best in the period, and had acquired the added culture which can only come from travel and wide acquaintance with the world. Morgan, the founder of the medical school of the University of Pennsylvania, was away seven years, and before returning had taken his seat as a corresponding member of the French Academy of Surgery, besides having been elected a Fellow of the Royal Society. The War of Independence interrupted temporarily the stream of students, but not the friendship which existed between Cullen and Fothergill and their old pupils in America. The correspondence of these two warm friends of the colonies testifies to the strong professional intimacy which existed at the time between the leaders of the profession in the old and new worlds. But neither Boerhaave, Cullen, nor Fothergill stamped colonial medicine as did the great Scotsman, John Hunter. Long weary centuries separated Harvey from Galen; not a century elapsed from the death of the great physiologist to the advent of a man in whose phenomenal personality may be seen all the distinctive traits of modern medicine, and the range of whose mighty intellect has had few, if any, equals since Aristotle. Hunter's influence on the profession of this continent, so deep and enduring, was exerted in three ways. In the first place, his career as an army surgeon, and his writings on subjects of special interest to military men, carried his work and ways into innumerable campaigns in the long French wars and the War of Independence. Hunter's works were reprinted in America as early as 1791 and 1793. In the second place, Hunter had a number of most distinguished students from the colonies, among whom were two who became teachers of wide reputation. William Shippen, the first Professor of Anatomy in the University of Pennsylvania, lived with Hunter on terms of the greatest intimacy. He brought back his methods of teaching and some measure of his spirit. With the exception of Hewson and Home Hunter had no more distinguished pupil than Philip Syng Physick, who was his house surgeon at St. George's Hospital and his devoted friend. For more than a generation Physick had no surgical compeer in America, and enjoyed a reputation equalled by no one save Rush. He taught Hunterian methods in the largest medical school in the country, and the work of his nephew (Dorsey) on surgery is very largely Hunter modified by Physick. But in a third and much more potent way the great master influenced the profession of this continent. Hunter was a naturalist to whom pathological processes were only a small part of a stupendous whole, governed by law, but which could never be understood until the facts had been accumulated, tabulated, and systematised. By his example, by his prodigious industry, and by his suggestive experiments he led men again into the old paths of Aristotle, Galen, and Harvey. He made all thinking physicians naturalists; he lent a dignity to the study of organic life, and re-established a close union between medicine and the natural sciences. Both in Britain and Greater Britain he laid the foundation of the great collections and museums, particularly those connected with the medical schools. The Wistar-Horner and the Warren Museums originated with men who had been greatly influenced by Hunter. He was, moreover, the intellectual father of that interesting group of men on this side of the Atlantic who, while practising as physicians, devoted

[1] Ecclesiastical Polity, Book ii., vii., 2.

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much time and labour to the study of natural history. In the latter part of the last century and during the first thirty years of this the successful practitioner was very often a naturalist.

I wish that time permitted me to do justice to the long list of men who have been devoted naturalists and who have made contributions of great value. Benjamin Smith Barton, David Hossack, Jacob Bigelow, Richard Harland, John D. Godman, Samuel George Morton, John Collis Warren, Samuel L. Mitchell, J. Aiken Meigs, and many others have left the records of their industry in their valuable works, and in the Transactions of the various societies and academies. In Canada many of our best naturalists have been physicians, and collections in this city testify to the industry of Holmes and McCullough. I was regretting the humanities a few minutes ago, and now I have to mourn the almost complete severance of medicine from the old natural history. To a man the most delightful recollections of whose studentship are the Saturdays spent with a preceptor who had a Hunterian appetite for specimens—anything from a trilobite to an acarus,—to such a one across the present brilliant outlook comes the shadow of the thought that the conditions of progress will make impossible again such careers as those of William Kitchen Parker and William Carmichael McIntosh. Until about 1820 the English profession of this continent knew little else than British medicine. After this date in the United States the ties of professional union with the old country became relaxed, owing in great part to the increase in the number of home schools and in part to the development of an American literature. To 1820, 114 native medical books of all kinds had been issued from the press, and 131 reprints and translations, the former English, the latter almost exclusively French (Billings). Turning for a few minutes to the conditions of the profession in Canada during this period, I regret that I cannot speak of the many interesting questions relating to the French colonies. I may mention, however, that with the earliest settlers physicians had come, and among the Jesuits, in their devoted missions, there are records of *donnés* (laymen attached to the service) who were members of the profession. One of these, René Goupil, suffered martyrdom at the hands of the Iroquois.[2] Between the fall of Quebec in 1759 and 1820 the English population had been increased by the settlement of Upper Canada, chiefly by United Empire Loyalists from the United States, and after the war of 1812 by settlers from the old country. The physicians in the sparsely-settled districts were either young men who sought their fortunes in the new colony or were army surgeons who had remained after the revolutionary war or the war of 1812. The military element gave for some years a very distinctive stamp to the profession. These surgeons were men of energy and ability, who had seen much service and were accustomed to order, discipline, and regulations. Sabine, in his "History of the Loyalists," refers to the Tory proclivities of the medical men, and says that they were not so much disturbed as the lawyers and clergymen. Still a good many of them left their homes "for conscience' sake"; and Canniff, in his "History of the Profession in Upper Canada," gives a list of those known to have been among the United Empire Loyalists. The character of the men who controlled the profession of the new colony is well shown by the proceedings of the Medical Board, which was organised in 1819. Dr. Macaulay and Dr. Widmer, both army surgeons, were the chief members. The latter, who has well been termed the father of the profession in Upper Canada, a man of the very highest character, did more than anyone else to promote the progress of the profession, and throughout his long career his efforts were always directed in the proper channels. In looking through Canniff's most valuable work one is much impressed by the sterling worth and mettle of the old army surgeons, who in these early days formed the larger part of the profession. The minutes of the Medical Board indicate with what military discipline the candidates were examined, and the percentage of rejections has probably never been higher in the history of the province than it was in the first twenty years of the existence of the Board.

One picture on the canvas of those early days lingers in the memory, illustrating many of the most attractive features of a race which has done much to make this country what it is to-day. Widmer was the type of the dignified old army surgeon, scrupulously punctilious and in every detail regardful of the proprieties of life. "Tiger" Dunlop may be taken as the very incarnation of that restless, roving spirit which has driven the Scots broadcast upon the world. After fighting with the Connaught Rangers in the war of 1812, campaigning in India, clearing the Sangur of tigers—hence his sobriquet "Tiger"—lecturing on medical jurisprudence in Edinburgh, writing for *Blackwood*, editing the *British Press* and the *Telescope*, introducing "Beck's Medical Jurisprudence" to English readers, and figuring as director and promoter of various companies, this extraordinary character appears in the young colony as "Warden of the Black Forest" in the employ of the Canada Company. His life in the backwoods at Gairbraid, his "Noctes Ambrosianæ Canadensis," his famous "Twelve Apostles," as he called his mahogany liquor-stand (each bottle a full quart), his active political life, his remarkable household, his many eccentricities,—are they not all pourtrayed to the life in the recently issued "In the Days of the Canada Company"?

[2] Parkman: Jesuits in North America.

AMERICA: 1820–1860.

Turning now to the second period, we may remark in passing that the nineteenth century did not open very auspiciously for British medicine. Hunter had left no successor, and, powerful as had been his influence, it was too weak to stem the tide of abstract speculation with which Cullen, Brown, and others flooded the profession. No more sterile period exists than the early decades of this century. Willan, a great naturalist in skin diseases, with a few others, save it from utter oblivion. The methods of Hippocrates, of Sydenham, and of Hunter had not yet been made available in everyday work. The awakening came in France, and such an awakening! It can be compared with nothing but the renaissance in the sixteenth and seventeenth centuries, which gave us Vesalius and Harvey. "Citizen" Bichat and Broussais led the way, but Laennec really created clinical medicine as we know it to-day. The discovery of auscultation was only an accident—of vast moment, it is true—in a systematic study of the correlation of symptoms with anatomical changes. Louis, Andral, and Chomel extended the reputation of the French school, which was maintained to the full until the sixth decade, when the brilliant Trousseau ended a long line of Paris teachers, whose audience had been world-wide.

The revival of medicine in Great Britain was directly due to the French. Bright and Addison, Graves and Stokes, Forbes and Marshall Hall, Latham and Bennett, were profoundly affected by the new movement. In the United States Anglican influence did not wane until after 1820. Translations of the works of Bichat appeared as early as 1802, and there were reprints in subsequent years, but it was not until 1823 that the first translation of Laennec—a reprint of Forbes's edition—was issued. Broussais's works became very popular in translations after 1830, and in the journals from this time on the change of allegiance became very evident. But men rather than books diverted the trend of professional thought. After 1825 American students no longer went to Edinburgh and London, but to Paris, and one can say that between 1830 and 1860 every teacher and writer of note passed under the Gallic yoke. The translations of Louis's works and the extraordinary success of his American pupils—a band of the ablest young men the country has ever seen—added force to the movement. And yet this was a period in which American medical literature was made up largely of pirated English books, and the systems, encyclopædias, and libraries, chiefly reprints, testify to the zeal of the publishers. Stokes, Graves, Watson, Todd, Bennett, and Williams furnished Anglican pap to the sucklings as well as strong meat to the full grown. In spite of the powerful French influence the text-books of the schools were almost exclusively English. In Canada the period from 1820 to 1860 saw the establishment of the English universities and medical schools. In Montreal the agencies at work were wholly Scottish. The McGill Medical School was organised by Scotsmen, and from its inception has closely followed Edinburgh methods. The Paris influence, less personal, was exerted chiefly through English and Scottish channels. The Upper Canada schools were organised by men with English affiliations, and the traditions of Guy's, St. Bartholomew's, St. Thomas's, St. George's, and of the London Hospital rather than those of Edinburgh, have prevailed in Toronto and Kingston. The local French influence on British medicine in Canada has been very slight. In the early decades of the century, when the cities were smaller, and the intercourse between the French and English somewhat closer, the

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reciprocal action was more marked. At that period English methods became somewhat the vogue among the French; several very prominent French Canadians were Edinburgh graduates. Attempts were made in the medical journals to have communications in both languages, but the fusion of the two sections of the profession was no more feasible than the fusion of the two nationalities, and the development has progressed along separate lines.

AMERICA, 1860–1897.

The third period dates from about 1860, when the influence of German medicine began to be felt. The rise of the Vienna school was for a long time the only visible result in Germany of the French renaissance. Skoda, the German Laennec, and Rokitansky, the German Morgagni, influenced English and American thought between 1840 and 1860, but it was not until after the last date that Teutonic medicine began to be felt as a vitalising power, chiefly through the energy of Virchow. After the translation of the "Cellular Pathology" by Chance (1860) the way lay clear and open to every young student who desired inspiration. There had been great men in Berlin before Virchow, but he made the town on the Spree a Mecca for the faithful of all lands. From this period we can date the rise of German influence in the profession of this continent. It came partly through the study of pathological histology under the stimulus given by Virchow, and partly through the development of the specialities, particularly diseases of the eye, of the skin, and of the larynx. The singularly attractive courses of Hebra, the organisation on a large scale in Vienna of a system of graduate teaching, designed especially for foreigners, and the remarkable expansion of the German laboratories combined to divert the stream of students from France. The change of allegiance was a deserved tribute to the splendid organisation of the German Universities, to the untiring zeal and energy of their professors, and to their single-minded devotion to science for its own sake.

MEDICINE IN AUSTRALASIA.

In certain aspects the Australasian settlements present the most interesting problems of Greater Britain. More homogeneous, thoroughly British, isolated, and distant, they must work out their destiny with a less stringent environment than, for example, surrounds the English in Canada. The traditions are more uniform, and, of whatever character, have filtered through British channels. The professional population of native-trained men is as yet small, and the proportion of graduates and licentiates from the English, Scottish, and Irish Colleges and Boards guarantees the dominance of old country ideas. What the maturity will show cannot be predicted, but the vigorous infancy is full of "crescent promise." On looking over the files of Australian and New Zealand journals one is impressed with the monotonous similarity of the diseases in the Antipodes to those of Great Britain and of this continent. Except in the matter of parasitic affections and snake bites, the nosology presents few distinctive qualities. The proceedings of the four Intercolonial Congresses indicate a high level of professional thought. In two points Australia has not progressed as other parts of Greater Britain. The satisfactory regulation of practice, so early settled in Canada, has been beset with many difficulties. Both in the United States and in Australia the absence of the military element, which was so strong in Canada, may in part at least, account for the great difference which has prevailed in this matter of the State licence. The other relates to the question of ethics, to which one really does not care to refer, were it not absolutely forced upon the attention in reading the journals. Elsewhere professional squabbles, always so unseemly and distressing, are happily becoming very rare, and in Great Britain and on this side of the water we try at any rate to wash our dirty linen at home. In the large Australian cities differences and dissensions seem lamentably common. Surely they must be fermented by the atrocious system of election to the hospitals, which plunges the entire profession every third or fourth year into the throes of a contest in which the candidates have to solicit the suffrages of from 2000 to 4000 voters. Well indeed might Dr. Batchelor, in his address to the Fourth Intercolonial Congress, say: "It is a scandal that in any British community, much less in a community which takes pride in a progressive spirit, such a pernicious system should survive for an hour."

MEDICINE IN HINDUSTAN.

Of India, of "Vishnu-land," what can one say in a few minutes? Three thoughts at once claim recognition. Here, in the dim dawn of history, with the great Aryan people, was the intellectual cradle of the world. To the Hindus we owe a debt which we can at any rate acknowledge; and even in medicine many of our traditions and practices may be traced to them, as may be gathered from that most interesting "History of Aryan Medical Science," by the Thakore Sahib of Gondal. Then there arises the memory of the men who have done so much for British medicine in this great empire. Far from their homes, far from congenial surroundings, and far from the stimulus of scientific influences, Annesley and Ballingall, Twining, Morehead, Waring, Parkes, Cunningham, Lewis, Vandyke Carter, and many others have nobly upheld the traditions of Harvey and of Sydenham. On the great epidemic diseases how impoverished would our literature be in the absence of their contributions. But then there comes the thought of "the little done, the undone vast," when one considers the remarkable opportunities for study which India has presented. Where else in the world is there such a field for observation in cholera, leprosy, dysentery, the plague, typhoid fever, malaria, and in a host of other less important maladies. And what has the British Government done towards the scientific investigation of the diseases of India? Until recently little or nothing, and the proposal to found an institute for the scientific study of disease has actually come from the native chiefs. The work of Dr. Hankin and of Professor Haffkine, and the not unmixed evil of the brisk epidemic of plague in Bombay, may arouse the officials to a consciousness of their shortcomings. While sanitary progress has been great, as shown in a reduction of the mortality from 69 per mille before 1857 to 15 per mille at present, many problems are still urgent, as may be gathered from Dr. Harvey's Presidential Address in the Proceedings of the Indian Medical Congress. That typhoid fever can be called the "scourge of India," and that the incidence of the disease should remain so high among the troops, points to serious sanitary defects as yet unremedied. As to the prevalence of venereal disease among the soldiers, an admission of nearly 500 per mille tells its own tale. On reading the journals and discussions one gets the impression that things are not as they should be in India. There seems to be an absence of proper standards of authority. Had there been in each Presidency during the past twenty years well-equipped Government laboratories in charge of able men, well trained in modern methods, the contributions to our knowledge of epidemic diseases might have been epoch-making.

THE FUTURE OF MEDICINE IN GREATER BRITAIN.

In estimating the progress of medicine in the countries comprising Greater Britain the future rather than the present should be in our minds. The strides which have been taken during the past twenty years are a strong warrant that we have entered upon a period of exceptional development. When I see what has been accomplished in this city in the short space of time since I left I can scarcely credit my eyes. The reality exceeds the utmost desires of my dreams. The awakening of the profession in the United States to a consciousness of their responsibilities and opportunities has caused unparalleled changes, which have given an impetus to medical work which has already borne a rich harvest. Within two hundred years who can say where the intellectual centre of the Anglo-Saxon race will be? The mother country herself has only become an intellectual nation of the first rank within a period altogether too short to justify a prediction that she has reached the zenith. She will probably reverse the history of Hellas, in which the mental superiority was at first with the colonies. At the end of the next century ardent old-world students may come to this side, "as o'er a brook," seeking inspiration from great masters, perhaps in this very city; or the current may turn towards the schools of the great nations of the south. Under new and previously unknown conditions the Africander, the Australian, or the New Zealander may reach a development before which even the "glory that was Greece" may pale. Visionary as this may appear, it is not one whit more improbable to-day than would have been a prophecy made in 1797 that such a gathering as the present would be possible within a century on the banks of the St. Lawrence.

Meanwhile to the throbbing vitality of modern medicine the two great meetings held this month, in lands so widely distant, bear eloquent testimony. Free, cosmopolitan, no longer hampered by the dogmas of schools, we may feel a just pride in a profession almost totally emancipated from the bondage of error and prejudice. Distinctions of race, nationality, colour, and creed are unknown within the portals

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of the temple of Æsculapius. Dare we dream that this harmony and cohesion so rapidly developing in medicine, obliterating the strongest lines of division, knowing no tie of loyalty but loyalty to truth—dare we hope, I say, that in the wider range of human affairs a similar solidarity might ultimately be reached? Who can say that the forges of Time will weld no links between man and man stronger than those of religion or of country? Some son of Beor, touched with a prophetic vision, piercing the clouds which now veil the eternal sunshine of the mountain top, some spectator of all time and all existence (to use Plato's expression) might see in this gathering of men of one blood and one tongue a gleam of hope for the future—of hope, at any rate, that the great race, so dominant on the earth to-day, may progress in the bonds of peace—a faint glimmer, perhaps, of the larger hope of humanity of the day when "the common sense of most shall hold a fretful world in awe." But these, I fear, are the dreams of the closet student who knows not the world or its ways. There remains for us, Greater Britons, of whatsoever land, the bounden duty to cherish the best traditions of our fathers, and particularly of the men who gave to British medicine its most distinctive features; of the men, too, who found for us the light and liberty of Greek thought—Linacre, Harvey, and Sydenham—those "ancient founts of inspiration," and models for all time in literature, science, and practice.

ABSTRACT OF THE

Address in Surgery:

THE SURGEON OF OLD IN WAR.

Delivered at the Sixty-fifth Annual Meeting of the British Medical Association at Montreal, August-September, 1897,

BY W MITCHELL BANKS, M.D. EDIN.,

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GENTLEMEN,—I am indeed greatly honoured by having to deliver to you to-day an Address in Surgery. Fortunately for me the title is a wide one, and I shall take advantage of that fact to diverge from the strict consideration of surgical disease, and shall offer you instead a brief sketch of some of the most notable work done of old by a body of members of our profession who have never received their due reward—those, namely, who have devoted their lives to the succour of the sick and the wounded in war.

MILITARY SURGEONS IN THE ROMAN ARMY.

Twelve months ago my friend, Dr. Barnes, of Carlisle, ex-President of this Association, made me acquainted with a remarkable paper by the late Sir James Simpson, entitled, "Was the Roman Army provided with medical officers?"—a paper exhibiting such profound learning, so charmingly written, and so little known, that I need not make any apology for acquainting you with some of its chief points of interest. The most careful investigations have failed to make out from their writings whether the Romans regularly appointed physicians and surgeons to their armies or not, although nearly every other question relating to their military organisation has been treated of, sometimes very fully. Curiously enough, what little information we possess on the subject comes mainly from mortuary or from votive tablets. Borcovicus, in Northumberland,—now called Housesteads—was one of the principal stations on the line of Hadrian's wall. Here, about seventy years ago, was found a monumental tablet, now in the Newcastle Museum. On it is the following inscription:—

D M	D(IIS) M(ANIBUS)
ANICIO	ANICIO
INGENUO	INGENUO
MEDICO	MEDICO
ORD COH	ORD(INARIO) COH(ORTIS)
I TUNGR	PRIMAE TUNGR(ORUM)
VIX AN XXV	VIX(IT) AN(NOS) XXV

The First Tungrian Cohort is known to have been present at the battle of the Mons Grampius, and to have served at Castlecary, at Cramond near Edinburgh, in Cumberland, and at Housesteads. The tablet is highly ornamented, and antiquarians hold that a rabbit and round bucklers carved in the upper part, which are emblems of Spain, show that the young military doctor was probably a native of that country. From various works treating of Roman inscriptions, Simpson was enabled to find that four more tablets, in which surgeons of cohorts are mentioned, existed. They were found at Rome. One of them is a votive tablet, the inscription upon which intimates that it was dedicated by Sextus Titius Alexander to Æsculapius and to the safety of his fellow soldiers. It was cut in the year of the consulship of F. Flavius Sabinus, which is known to have been A.D. 83. As the Roman legion consisted of ten cohorts, it is interesting to know that there were not only medical officers attached to each cohort, but also one attached to the legion—a sort of surgeon-colonel, as we should call him nowadays. Three tablets have been discovered in which the *medicus legionis* is mentioned. One found at Verona was a tablet raised by Scribonia Faustina to her dearest husband J. Caelius Arrianus, medical officer to the Second Italian Legion, who died at the age of forty-nine years and seven months. Furthermore, Simpson routed out of Mommsen's Latin inscriptions of Naples a tablet, now in the Dresden collection, which was found in the Elysian fields near Baiae, close to the Portus Julius, which was the station of a division of the Imperial fleet. The inscription tells that M. Satrius Longinus, *medicus duplicatorius* to the Trireme Cupid, and the heirs of those freed by Julia Veneria erected the tablet to the manes of that deserving lady. The term *duplicatorius* means that by reason of long or meritorious service he was entitled to double pay and rewards. These little gleanings from Simpson's paper show what an interesting one it is, and one is astonished at the labour that must have been expended in digging up the information contained in it.

AMBROISE PARÉ. ROBERT CLOWES.

[Mr. Banks here gave an outline of the work of Ambroise Paré (1517-1590) in the course of which he remarked: "The world will ever believe in a glorious trio—Paré, the Frenchman, who invented the ligature; Morton, the American, who discovered anæsthetics; and Lister, the Englishman, who introduced antiseptics." He then passed on to Robert Clowes (1540?-1604) who served in France in the army commanded by the Earl of Surrey, and was afterwards for several years in the navy. He finally settled down in London, where he was very successful in practice, and was made surgeon to the Queen. He wrote several works in English, of which the most important is entitled, "A profitable and necessarie Booke of Observations for all those that are burned with the flame of gunpowder, &c., and also for curing of wounds made with musket and caliver shot, and other weapons of war commonly used at this day both by sea and land." Mr. Banks continued:]

PETER LOWE.

Contemporary with Clowes was a most interesting character—Maister Peter Lowe—who was born in Scotland about 1550, and lived some sixty or sixty-five years, reaching well into the seventeenth century. Like many of his countrymen he went to France when very young, where he lived, for some say ten, some twenty years. Then he returned to Glasgow, where he lived and died a citizen of much renown, having obtained in 1599 from King James the Sixth a charter for the Faculty of Physicians and Surgeons of Glasgow, which he thus founded. A few years ago Dr. Finlayson published a most charming account of Maister Peter. His most important work is termed "A Discourse of the whole art of chirurgery, compiled by Peter Lowe, Scottishman, Doctor in the Faculty of Chirurgerie at Paris, and ordinary Chyrurgion to the French King and Navarre." The first edition dated from 1597, and is one of the earliest, if not the very earliest, work embracing the whole art of surgery published in English. It is clear that Lowe must have seen a good deal of military service abroad, being "Chirurgion Major to the Spanish regiments two years at Paris, and since that time following the king of France my maister in the warrs." In his day, as we have seen, the surgical world was still greatly exercised about gunshot wounds and burning by gunpowder as it was believed that they were injuries of quite a peculiar and very poisonous character. Lowe, however, treats of them with great good sense. Thus: "*Of Wounds done by Gun-shot.*—These wounds come indifferently to all parts of

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our body whereof there are divers opinions; some think that there is a venenosity in the powder, and burning in the bullet, which is false, for the things whereof the powder is ordinarily made, as Brimstone, Saltpeter, coales of divers sorts of trees, Water, Wine and Aquavitæ, have no venenosity in them; likewise there is no burning in the bullet, for if the bullet of lead being shot a great way, should burne, through heat would be melted itself. I have cured divers within these thirty yeares of divers nations which have followed the warres in Fraunce and other countries, in the which I have found no more difficulty than in any other contused wounds." Here, again, we have a most important advance made by a military surgeon, for only those who are acquainted with the medical literature of Lowe's time can understand the ridiculous views then held about gunshot wounds and the dreadful consequences to the patients which followed from them. We have seen that Paré lived between 1517 and 1590. and that Peter Lowe was in France between 1570 and 1580; consequently, he probably learned all about the ligature for the arrest of hæmorrhage. When treating of amputations he describes the whole process of the operation up to the removal of the limb. Then he says: "One of the Assisters shall put the extreamities of his fingers on the great vains and arteries to stay them from bleeding till the Chyrurgion either knit or cauterise them one after another. Where there is putrefaction we stay the flux of blood by Cauters actuals, and where there is no putrefaction, malignitie, nor humour venomous we use the legator."

WOODALL'S "VIATICUM."

In 1628 appeared the first work in England specially devoted to military and naval surgery. Some eleven years later a second edition appeared, and this is its title—"Viaticum, being the Pathway to the Surgeon's Chest, containing chirurgical instructions for the younger sort of surgeons imployed in the service of his Majestie or for the Common-Wealth upon any occasion whatsoever intended for the better curing of wounds made by Gunshot," by John Woodall. A perusal of the "Viaticum" shows that Woodall was a very practical surgeon and an eminently religious man, and the way in which he mixes up pills and piety is sometimes very diverting. After some excellent general advice to the surgeon's mate, including a warning against "being given and dedicated to the Pot and Tobacco-pipe in an unreasonable measure," he enumerates the instruments for the Surgeon's Chest, including among others Catlings, Rasours, Trapans, Trafine, Lavatories, Cauterising Irons, Storks bills, Ravens bills, Crowes bills, Terebellum, Probes or flamules, Glister Sirings, and (what would have utterly damned his book in the present day) "one bundle of small German instruments." Then comes a list of medicines under the heading Unguentum, Aqua, Sol, Oleum, Chemicall Oyles, Syrups, Conserva, Electuariæ, and so on, winding up with a list of the Simples and of the Herbs and Roots most fit to be carried. A long and careful description of the uses of the instruments and drugs follows, and then come chapters on wounds, aposthumes, fractures, dislocations, amputation, scurvy, the plague, gangrene, and other topics. He observes that the cauterising irons had gone somewhat out of fashion, and he did not use them much himself "because of the feare they put the Patient into and for speech of people who are ready to scandalise an Artist upon each light occasion." In amputation, moreover, they are "now wholly forborne for reasons aforesaid, and for that a more pleasant course is known better for the patient and the Artist by making a ligature upon the veine, wound, or artery, which is the binding of each end thereof, being first caught and holden with some fit instrument, and tied with a sure and strong thread." Woodall advances the cure of wounds a distinct step, once more putting us under an obligation to the soldier-surgeon. This he does by sharply attacking all through his works the inordinate and meddlesome use of strong caustics.

RICHARD WISEMAN.

I wish I had time to give you a proper account of the adventurous life of Richard Wiseman, who has been termed the Father of English Surgery, and that not without reason. Born in 1620, dying in 1676, he lived in the time of Charles I., of the Commonwealth, and of Charles II. He was a naval surgeon to begin with, serving in the early part of his life in the Dutch navy. Being, however, a devoted Royalist he served with the armies of Charles I., and after his death went into exile with his son in France. He was present at the battle of Worcester, where he was taken prisoner, and afterwards confined in Lambeth House for awhile. During the Commonwealth he was naturally under a cloud, and even went off for three years to serve in the Spanish navy. At the restoration the King did not forget his old surgeon, who had done and suffered so much in his service, but appointed him his surgeon-in-ordinary and afterwards serjeant-surgeon. The first edition of his work, printed in 1672, is quite a small book, and is entitled "A Treatise of Wounds," but it afterwards expanded into a very large volume.

Wiseman believed in the need for giving stimulants to a man who was in the habit of taking them if that man was in a dire strait. After describing the parlous case of a certain patient, it seems that the "man swooned and complained that he could not live without wine. I complied with his desire; he drank again as he pleased, his sickness went off, his wound digested, and he cured. This I have often seen in some of our Dunkirkers at sea, who drank extraordinarily and who were full of drink in our sea fights. I could scarce ever cure them without allowing them wine, and thereby their spirits were kept up and I had the liberty to bleed them as I thought fit." From this it is clear that the old saying about Dutch courage has a distinct origin in fact. But if the unhappy Batavians were liable to be bled at once by the lance of the enemy and the lancet of the surgeon, one can hardly wonder at their taking something to keep their spirits up. When speaking of gunshot wounds he insists upon the bullet being searched for and extracted at once. "The part is at first dressing, with what diligence you can, to be cleared of all such Foreign Bodies as have made violent Intrusion into it, while the patient is warm with the heat of Battel, and the wound fresh and very little altered by either Air or Accidents, so that less pain must necessarily follow upon the extraction. In the *Armada Naval de Dunquerque*, where we Chirurgeons were oft employed in this Service, we after every fight went together visiting one another's wounded men. Amongst us it was thought a great shame if any of this work of Extraction was there to be done. It hath been the cause of the death of many a brave Souldier, and every Battel produces instances of it, to the discredit of our profession." This is good surgery, and I think it must have been a fine spectacle to have seen these old surgeons walking round to see each other's patients and learning how best to mend their mistakes.

BARON LARREY.

[Mr. Banks here referred at some length to Baron Larrey, "the Chirurgien-en-Chef de la Grande Armée, the friend and body surgeon of Napoleon, the greatest military surgeon that ever lived," of whom he said in concluding,]

The retreat from Moscow called into play all Larrey's resources, and many an interesting story could be told of his efforts. Think of the awful battle of the Borodino, where under Larrey's own direction 200 amputations were performed, where there were neither couches nor blankets nor covering of any kind, and where the food consisted of horseflesh, cabbage stalks, and a few potatoes; think of cold so intense that the instruments requisite for the operations too often tumbled from the powerless hands of the French surgeons. Larrey succeeded in getting over the Beresina with the Imperial Guard, but discovered that the requisites for the sick and wounded had been left on the other side. At once he re-crossed the river only to find himself in the midst of a furious struggling crowd. He was on the point of being crushed to death when providentially the soldiers recognised him. No sooner did they do so than they carried him across the river in their arms, with the cry, "Let us save him who saved us!" and forgot their own safety in their desire to preserve the man whose tender kindness they had so often experienced. Following his adored master through victory and defeat, Larrey at last stood at night on the field of Waterloo alone, except for some medical officers and the wounded who lay groaning around them. Down upon them came a squadron of Prussian lancers. Expecting no quarter he fired his pistols at them and galloped away. They shot his horse and sabred him as he lay on the ground. Leaving him apparently dead they went off; but he recovered his senses, and tried to crawl by cross roads into France. Again he was seized by another detachment of Prussian cavalry. They robbed him promptly of all he possessed, and took him before a superior officer, who ordered him to be shot. What a reward from a soldier to one whose life had been passed in succouring soldiers! About a quarter of an hour before the sentence was to be carried out a surgeon-major recognised Larrey.

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He had attended with deep interest a course of lectures which Larrey had delivered in Berlin six years previously. The prisoner was brought before Bulow, and finally presented to Blücher, whose son in the Austrian campaign had been badly wounded and captured by the French, and who owed his life to Larrey's exertions. Larrey's honourable and glorious life terminated in 1842. Napoleon, when he made his will at St. Helena, wrote in it: "I bequeath to the Surgeon-in-Chief of the French Army, Larrey, 100,000 francs. He is the most virtuous man I have ever known." From Napoleon's lips the words of free spontaneous, ungrudging praise such as this rarely fell.

PESTILENCE MORE DEADLY THAN THE SWORD.

In the middle of last century, while surgery had distinctly improved, the gross neglect of the Government and the pig-headed obstinacy of the generals was such that our unfortunate soldiers and sailors were hardly any better off than they were in the days of Paré. It has been maintained that Smollett, in the appalling picture of naval life as witnessed in the miserable expedition to Carthagena which he drew in "Roderick Random," and which is known to have been the record of his own experience as a surgeon's mate, grossly exaggerated the evils thereof. I do not believe this. Look at the awful and unsuccessful expedition to Portobello in 1726, when nearly the whole of the crews of the ships were destroyed by fever three times over; where two admirals, ten captains, fifty lieutenants, and about 3000 to 4000 inferior officers and men perished without striking a blow. Look at the taking of Havannah in 1762. The Earl of Albemarle took with him in the fleet 11,000 soldiers. Between June and the middle of October, when Cuba was ours, we had lost 560 men by wounds and 4708 by sickness. At the end of the Seven Years' War a statement was drawn up in the "Annual Register" for 1763 from which it appeared that in all the naval battles of that war there were but 1512 sailors and marines killed, while 133,738 had died from disease or were "missing." Look even at the end of last century and consider the wretched and disgraceful Walcheren campaign. Never did our poor soldiers fight with more gallantry than in that campaign, only to perish beside Dutch ditches and canals from fever and ague and dysentery.

MILITARY COURAGE.

As we have just seen, Baron Larrey's whole life shows that, while absolutely devoted to the work of his profession, he displayed a cool courage on the field of battle not less heroic than the more dazzling deeds of his fellow combatant officers. Not less does it mark the military surgeon of the present day. Have you ever heard of Surgeon Thomson who, during the Crimean War, when the army marched off after the battle of the Alma, volunteered, with his servant, John McGrath, to remain behind on the open field with 500 terribly wounded Russians, and passed three awful days and nights—these two Englishmen alone—among foreign foes, some dead, some dying, and none able to raise a hand to help themselves? Have you ever heard of Assistant-Surgeon Wolseley, of the 20th Regiment, who, at the battle of Inkerman, had quietly established his field hospital in that awful place, the Sandbag Battery? When the 150 men, who were all that remained of its defenders, were forced to desert it, about 100 of them fell back in one direction, and in that they found, at thirty paces from them, a Russian battalion blocking their path. There was not a combatant officer left, so the assistant surgeon took command. He had not even a sword with him, but, laying hold of a firelock with a fixed bayonet on it, he spoke a few words to the men within range of his voice, and told them that what they now had to fight for was not victory but life. Then he gave them the word of command: "Fix bayonets, charge, and keep up the hill." The soldiers answered him with a burst of hurrahs, sprang forward to the charge, and the next instant were tearing through the thickest of the Russians. One half of these reached the other side alive. Have you ever heard of Surgeon Landon, who was shot through the spine while attending to the wounded on Majuba Hill? His legs were paralysed, but he caused himself to be propped up, and continued his merciful work till his strength ebbed away. When unable for more he quietly said: "I am dying, do what you can for the wounded." Have you ever heard of Surgeon-Captain Whitchurch, who gained the Victoria Cross at the beleaguering of Chitral for the most determined courage in endeavouring to save the life of Major Baird? Yes, you have, for last year at Carlisle you gave him the gold medal of the Association, the highest honour which our Association can give to its members. There died the other day a certain Surgeon-General Reade, C.B., V.C. During the siege of Delhi, while attending to the wounded at the end of one of the streets of the city, a party of rebels advanced from the direction of the bank, and having established themselves in the houses in the street commenced firing from the roofs. The wounded were thus in very great danger, and would have fallen into the hands of the enemy had not Surgeon Reade drawn his sword, and, calling upon a few soldiers who were near to follow, succeeded under a very heavy fire in dislodging the rebels from their position. Surgeon Reade's party consisted of about ten in all, of whom two were killed and five or six wounded. Surgeon Reade was a Canadian, and the son of a colonel of the Canadian Militia. Of the 118 wearers of the Victoria Cross 14 are surgeons—nearly 12 per cent. of the whole number. They stand in the proportion of 9½ per cent. of all the officers of the army, so at all events they have contributed not less than their fair share of the deeds of valour which alone can win that glorious distinction.

THE ARMY MEDICAL SERVICE TO-DAY.

I have diverged from the beaten track common to the givers of addresses such as this to tell you what splendid men have been the military and naval surgeons of old, who not merely did their duty nobly and courageously as such, but who have in their day enormously contributed to the advance of the art of surgery. I have done it with a purpose; with the hope of attracting more strongly than ever the sympathy and help of this great Association to their military brethren in a critical juncture of their history. To-day Her Majesty's Government cannot induce candidates to come forward for the medical service of the Queen's army. And why? Because it has persistently treated the Army Medical Department meanly and shabbily. To-day the Government of India can secure the services of the pick of our newly-fledged doctors for its army. And why? Because it has always treated the Indian Medical Service liberally and generously. I am not going to enter into the reasons for this; I desire merely to emphasise one point—namely, that money is not at the bottom of this difficulty. The soldier-surgeons of to-day are the same men now that they were in the days of William Clowes, who winds up his book, as I shall my address, with these verses:—

"When valiant Mars, with brave and warlike band,
In foughten field with sword and shield doth stand,
May there be mist a surgeon that is good,
To salve your wounds and eke to stay your bloud.

"To cure you sure he will have watchful eie,
And with such wights he means to live and die,
So that againe you must augment his store,
And having this he will request no more."

A FURTHER COMMUNICATION ON THE OCCURRENCE OF A HITHERTO UNDESCRIBED FORM OF CHRONIC NEPHRITIS UNASSOCIATED WITH ALBUMINURIA.[1]

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IN two previous communications on this subject[2] I drew attention to a small group of personally studied cases of evident chronic nephritis, in all of which, with quite similar clinical characters, the urine was persistently albumin-free during the period in which they were under observation. I regarded these cases as representing, perhaps, a not uncommon, although hitherto unrecognised, variety of nephritis, the symptoms of which in all agreed more or less in certain important particulars. The character of these

[1] Read before the Association of American Physicians at Washington, May, 1897.

[2] On the Occurrence of a Form of Chronic Bright's Disease Other than Typical Fibroid Kidney, without Albuminuria, Transactions of the First Pan-American Congress, and the American Journal of the Medical Sciences, December, 1893. Further Remarks on the Occurrence of a Form of Non-albuminous Nephritis other than Typical Fibroid Kidney, Transactions of the College of Physicians, 1894, and the "Medical News," April 14th, 1894.

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were such, I remarked, as to place them clinically without the boundary of the well-known varieties of the so-called Bright's diseases, such as chronic desquamative nephritis and the fibroid or granular kidney.

Concerning the absence of albumin in chronic nephritis I pointed out that it had been long known that cases of fibroid kidney could occur, especially in the early stages of the malady, without albumin in the urine, or with albumin existing, if constant, only in traces, or to be found in certain portions of the twenty-four-hours urine. I said that the occurrence of typical granular kidney without albuminuria had been first noted by Wilks, of Guy's Hospital, nearly half a century ago, but it was Mahomed, some three decades later, who especially investigated cases of this phase of the disease, describing a considerable number of them in Guy's Hospital Reports for 1879 and 1880–81. But it was doubtful if many of Mahomed's cases, such as I cited, were actually cases of renal disease, though they could be properly included in the category of chronic Bright's disease as Mahomed employed the term. The symptoms of numerous of these were in the main referable to other organs, and in a minority of those in which a necropsy was obtained the kidneys were stated to be normal.

Cases of chronic nephritis occurring other than at the degenerative period of life, in which, without evident indications of accompanying arterial sclerosis, and in which the symptoms were so frankly of kidney origin as to indicate that the affection was beyond everything else a primary renal disease, to which changes in the vascular system were subsidiary and in all probability a result of a toxic blood state induced by the imperfect functioning of the damaged kidneys, were not recognised by Wilks or by Mahomed, and their even rare occurrence is still regarded by many as apocryphal. If such a case with pronounced symptoms is accepted to be one of nephritis, it is commonly thought that the absence of albumin, if such is proved, is either an ephemeral condition or that the ailment as yet is too limited in its seat and too early in its course for albumin to appear. It was to such cases as these that I especially directed attention, reporting a small group in which the symptoms were so distinct and separable from those of the well-recognised forms of nephritis as to indicate for it a distinct pathology. As to these symptoms I stated in my former paper that "with an oliguria as persistent and as marked in certain cases as in the most outspoken type of chronic parenchymatous nephritis, and with a urine as concentrated, yet with absence of cardiac debility and of dropsy to indicate its source, there occur as grave continuous symptoms of renal inadequacy—those, indeed, of pronounced uræmia. These are associated, too, as in chronic parenchymatous nephritis, with as marked diminution in urinary solids, notably diminution in urea and mineral ingredients, indicating undoubted secretory involvement; yet totally unlike what is distinctive of parenchymatous nephritis, albumin is so persistently absent from the urine, even with the existence of the aggravated symptoms of renal incompetency, as to clearly indicate that its presence need form no part of the assemblage of symptoms or have any relation to the morbid condition."

There must exist some radical pathological difference in the renal condition of such cases in which, whether with or without the presence of albumin in the urine, but with the constant occurrence of casts, and more or less steady diminution in the excretion of urea, symptoms of retention of nitrogenous waste are totally absent, even though there may be present a typical retinitis Brightii, indicating that the disease is in an advanced stage. I recently studied several cases of this sort for Dr. L. Webster Fox, in three of which symptoms referable to the kidney were totally absent. Headache did not occur, vertigo was uncommon, and the general health was quite well preserved. The patients regarded themselves as in good health apart from failing vision. In all Dr. Fox had encountered what he termed "non-albuminuric retinitis." In one case "the right eye was a mass of retinal hæmorrhages, with here and there colloid degeneration, so characteristic of morbus Brightii"; in the other cases a quite similar retinal condition was evident. Albumin had been found absent in a number of examinations made both by Dr. Fox and the attending physician of the cases. In the urine of one of the three I found in several examinations a trace of albumin; this was evident to the heat test, and trichloracetic acid gave an instantaneous sharp ring. In the others traces of albumin were absent to heat. These cases clinically rather fell into the category of those described by Wilks and by Mahomed, in which, perhaps, with extensive renal fibrosis, the excretion of toxic products was not far from the normal. Of the personally studied cases I reported, unfortunately but one has remained under observation to the present. The others were studied for one month in one case, three months in another, and from six months to four years in the remainder. Whether any of those that disappeared from observation have died in the interim, or, if living, changes have occurred in the character of the symptoms, in all save one, a brother of the case specially detailed, is quite unknown to me. Of the pathological conditions in the kidney of this case (Case 2 of the series described) I am able to make a report. This is of special interest, since the case may be regarded to be clinically a good example of this group.

The patient was a man, aged thirty-four years.[3] He first came under observation in the early part of 1893. Symptoms of his ailment had then existed for about two years. These were, briefly, more or less severe headaches and spells of vertigo. There had been from the first more or less prostration of strength, with incapacity for physical or mental exertion. This physical weakness had greatly increased in the last two years. But slight continuous exercise of mind or body induced severe headache, with vertigo and a sensation of great body weariness. There had been a tendency to more or less loin tire, and often to actual ache. There was also disturbed sleep, during which night terrors were common and limited clonic spasms occurred. The blood-pressure was habitually very high, the sphygmograms showing always a pulse of markedly raised tension. During the early period in which he was under observation a strictly vegetable diet, on which he was placed for a few weeks, greatly lowered blood-pressure, so that it became practically normal. This diet could not be continued on account of the dyspeptic symptoms originated by the food and the marked oxaluria so induced. The patient had lost 20 lb. in weight during the first two years of his ailment. This loss had not been regained. There had been no decided anæmia evident. Blood examinations made at intervals commonly showed a nearly normal blood-count. The skin was more or less habitually dry, and the complexion the past three years had been of a decidedly sallow hue. Debility, headaches, and vertigo were so prominent in this case, and these and other symptoms were always so aggravated on exertion, that although previously when in good health he had led a most active life he had been compelled to abandon his pursuits and become against his will a valetudinarian. Remedial measures had been of no permanent value for the relief of the symptoms. The urine had always been free from albumin to the present, excepting immediately succeeding the reni-puncture and excision of the small portion of the kidney. The urine had from the first been habitually much diminished in amount. When he first came under observation his habits were, as now, very methodical, and taking almost daily the same quantity of food and fluid the urine, measured for seven or more consecutive days, at intervals of a month, stood steadily between 700 and 800 c.c. The past year between 500 and 600 c.c. were more common. The amount voided in twenty-four hours not being known a single specimen as concerns colour, specific gravity, and absence of albumin would be regarded as normal. Even under thyroid extract and other remedies, the use of which tends to increase nitrogenous output, urea excretion had been very low, rarely exceeding 15 grammes. It commonly, estimated over long periods, ran between 13 and 15 grammes, about half the normal output for a person of his weight on the diet employed. Uric acid elimination was normal; at times it was a trifle high; the chlorides, as in all of these cases, were, as with the urea, habitually diminished in amount.[4] Microscopically the urine was found to invariably contain cylindroids, commonly in some amount. Hyaline casts were usual, and granular-hyaline, or finely granular, were not rare. Occasionally epithelial casts are found. Free uric acid and calcium oxalate crystals are common. As the specimens examined microscopically were commonly those of the mixed twenty-four-hours urine, which had stood for some little time after voiding, the presence of these could not be regarded as of significance. It is, however, a fact worthy of note that in all of these cases calcium oxalate and free uric acid crystals were frequently

[3] For more detailed history of this case see the American Journal of the Medical Sciences, December, 1893, p. 665.

[4] Diminished output of chlorine, in face of a normal or lessened HCl secretion, as had been ascertained in this and in several other of the cases, is of special significance, as was remarked in my previous paper.

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seen in the specimens examined shortly after voiding. Irritability of the bladder, such as is usual with a free output of uric acid of the oxalates, had never been present. So much was this absent here that the patient not only never arose at night to urinate, but almost never emptied the bladder oftener than two or three times in the twenty-four hours. As in the other cases, albumin was never present in any of the examinations in amount to be detected by the application of the most reliable of all methods for its detection—heat, and the subsequent employment of acetic acid. By the more refined and less accurate tests, such as trichloracetic acid, the urine gave no instantaneous reaction. Commonly, with the employment of a super-saturated solution, a response only occurred at the expiration of from one half minute to several minutes, and then was slight in character. This, as I have elsewhere shown, is usual in all normal urines. My own urine and that of several other healthy individuals working in my laboratory, often tested coincidently, commonly showed a more marked response to trichloracetic acid.[5] Recently I was fortunate in securing a section from one of the kidneys in this patient for pathological study. This opportunity was suggested by the results obtained by Reginald Harrison in his cases recently reported, in which reni-puncture, and slitting a too tightly distended capsule in cases of extreme congestion of the kidney, occurring in the course of nephritis, had been followed by decided symptomatic relief. Although slight benefit was to be expected from such a procedure in this case, and but scant hope of it extended, the patient acquiesced, and Dr. Keen exposed one of the kidneys, depleted it by spearing, slit the capsule, and subsequently removing a small section of the organ for histological examination. The kidney was of normal size, but extremely hyperæmic. Despite this congestion, immediately before etherisation a specimen of urine obtained was still found to be free from albumin, although cylindroids abounded and hyaline casts were moderately numerous. For several weeks succeeding operation the urine contained albumin, as might be supposed. During this time there were abundant blood-corpuscles, blood-casts, and a profusion of epithelial, granular, and hyaline casts present in all specimens. The albumin gradually diminished in amount, and finally disappeared at the end of a month. Although the patient was somewhat buoyed with hope no benefit followed the operation. On the contrary, there has recently been an aggravation in his symptoms. The specimen removed was submitted to Dr. A. O. J. Kelly for examination who reported as follows: "The bloodvessels are distended and generally filled with blood. The intima in some few isolated places shows a slight proliferation of the endothelial lining. The media is thickened and stains rather homogeneously. It is, however, the adventitia that is especially involved. It is greatly thickened, and from it as a focus there proceed in various directions radiations of homogeneously staining connective tissue. In some places this perivascular connective-tissue overgrowth extends quite a little distance from the vessel, and it is here and there the seat of a slight round cell infiltration, though usually this is not evident and is never marked. This connective-tissue overgrowth is also present in areas in which no blood-vessels can be seen, but it is doubtless connected with blood-vessels that do not appear in the section. It is especially evident about blood-vessels in the neighbourhood of the glomeruli. The capsule of Bowman is associated in the process; it is thickened and rarely, if ever, shows any cellular infiltration. Thus originating about the blood-vessels near the glomeruli, involving the capsule of Bowman, this sclerosis spreads to a limited extent and surrounds the uriniferous tubules in the neighbourhood. The epithelial lining of the capsule of Bowman is frequently proliferated, and in some instances is free, doubtlessly artificially produced. Many of the convoluted tubules show a slight degree of degeneration; the epithelial cells are more granular than is normal; in many instances the lumen of the tubule is filled, and not rarely the nuclei stain imperfectly, exceptionally failing to take the stain at all. Not rarely formations resembling casts are seen. There are other more extensive areas of sclerosis in which the bands of connective tissue are much thicker, and in the midst of which the uriniferous tubules are smaller, not a few atrophic, and now and then one is seen obliterated. In a few places there is a very marked proliferation of the epithelial lining of the glomeruli and great thickening of the capsule of Bowman. From this latter the connective tissue overgrowth extends quite a distance surrounding the uriniferous tubules. The tufts of bloodvessels in the glomeruli are usually distended. In those glomeruli, however, about which there is such an excessive overgrowth of connective tissue they are diminished in size and at times quite atrophic. Exceptionally one notes a roundish area faintly fibrillar, containing not a few slightly staining round cells, the whole being suggestive of an obliterated glomerulus or blood-vessel." Microscopic sections of the kidney were submitted to Professor William H. Welch, of the Johns Hopkins Medical School, who reported in substance that he could confirm Dr. Kelly's observations of chronic interstitial changes as stated. The changes, according to Dr. Welch, although of slight extent, were unquestionably evident, and consisted of new growths of connective tissue about certain of the blood-vessels and some of the glomeruli, with atrophy here and there of a few tubes and a few glomeruli. Here and there also he noted a slight thickening of the intima of the blood-vessels.

In discussing in my first paper the probable pathological renal condition which underlay these cases I remarked that although the assemblage of symptoms was typical of no distinct form of chronic nephritis their trend was suggestive of granular kidney. But they had in common several points, the mingling of which in granular kidney has before been undescribed, such as absence of marked cardio-vascular change and of dropsy, with habitual diminution in the amount of urine and in the urinary solids, and especially in urea, together with the presence of obtrusive signs of a toxic blood state. Unfortunately, we know too little of the intimate physiological processes occurring in the kidneys in health and disease to more than conjecture as to the mode of production of symptoms from what to us is evident in the post-mortem condition. Although the gross changes present in this kidney may not be regarded as sufficiently marked in any one direction to readily explain the symptomatic condition, they are, in certain particulars at least, suggestive. In first reporting these cases I remarked as to the pathological renal condition, that there might be present glomerular changes of the nature of thickening of the capsule of the Malpighian tufts and of the afferent vessels, which could account for the diminution in the amount of urine voided—a symptom common in these cases, and not rare in others of supposed granular kidney in which dropsy is absent. Mahomed had thought that absence of albumin in certain cases of chronic nephritis might be due to a similar thickening of the vessels of the tufts, through which it would be difficult for albumin to pass, and also to thickening of Bowman's capsule, preventing distension of the vessels. It is significant, at least, that such thickening of vessels and of Bowman's capsule is, according to Dr. Kelly, usual in the specimen. Whether, however, it exists to such a general extent as to cause obvious symptoms, otherwise apparently inexplicable, is questionable. The absence of numerous granular, and especially of epithelial, casts, was strongly against decided changes in the tubules, and yet, as in all, the habitual imperfect elimination in nitrogenous waste, with symptoms resulting therefrom, point strongly to alteration in the secretory epithelia of the tubular system, which changes, since not marked microscopically, must, perhaps, be rather of a molecular or bio-chemical nature. Present indications support the view of Luff[6] that a long-continued so-called functional affection of the epithelium of the convoluted tubules may antedate those cases of gout in which structural alteration in the kidney is not evident. This change, although molecular, may be none the less evident in its effect; a similar involvement of that part of the tubular system concerned in the elimination of these toxins, the undue retention of which induces a uræmic blood state, may be the chief pathological condition underlying the symptoms in those cases of nephritis in which intoxication is evident without marked apparent implication of the secretory system of the kidney to account for the symptoms. So little is known of the intimate nature of the toxins inducing so-called uræmia, whether they are always similar poisons and not foreign to the organism in health, such as bodies allied to the xanthin group, the toxicity of

[5] Many of the examinations in the past year in this case, both chemical and microscopic, were made for me by Dr. A. A. Ghriskey, to whom I am much indebted. It is needless here to describe the technique employed in the examinations for albumin in these cases. This is given in detail in my previous papers.

[6] See Gulstonian Lectures on the Pathology of Gout, THE LANCET, April 3rd, 1897, p. 944.

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which is little if at all apparent without damaged kidneys, because of its free elimination, or whether they be substances unknown normally, which are generated either in the kidney or on the other side of it, in the organism, from waste products in themselves harmless, is at present conjectural. Our knowledge is, indeed, but conjecture as to the mode of origin and manner of excretion of such waste products as urea and uric acid and the allied xanthin derivatives. At present the trend of evidence is in favour of the view that except in conditions of hyperleucocytosis uric acid is formed only in the kidney, and, perhaps, by the epithelium of the convoluted tubules, which is concerned, too, in its subsequent excretion. It is held on good evidence that uric acid excretion is commonly deficient in gout, and that its accumulation in the blood, through imperfect elimination, is one of the causes of an outbreak of the malady. This is the view of Garrod, of William Roberts, of Levison,[7] and others. This faulty elimination is now regarded as probably due in nearly all cases to preceding disease of that portion of the kidney concerned in the excretion of uric acid. Such changes, as has been said, are looked upon in certain instances as being at first merely functional. As concerns intimate knowledge of urea formation and its mode of excretion we are still somewhat in the dark. Apparently its seat of formation is the liver and its source the proteids of the food. Some experiments I recently began (the details of which, as they are yet but in their incipiency, I shall not here give) as to the influence of urea ingestion on urea excretion in the subjects of chronic nephritis tend to show that diminished urea excretion in at least some cases of nephritis, and those, too, with frankly damaged kidneys, is not so much the result of urea retention as it is of deficient formation. If subsequent experiments support these results the situation will still be more perplexing. This suggests either that the long overtaxed, crippled kidney has gradually called a halt on urea formation in the liver, although the nitrogenous intake remained high, and the digestive condition for its transformation into soluble products, the supposed antecedents of urea, remains good, or that the kidney itself is at least somewhat concerned in urea formation, and that its seat of formation here, as with uric acid, may not also be the seat of its excretion.

The purposes of this paper do not permit of a discussion of these problems, which are mentioned here merely to point out our lack of knowledge of many points in the pathology of chronic nephritis. The most important practical point in the matter is the recognition of such cases as I have described, occurring as they do with an albumin-free urine, a single specimen of which as regards absence of albumin and as regards colour and specific gravity might be viewed as normal. I need not here again call attention to the necessity for searching microscopical examination of the urine for morphological kidney elements, which steadily evident cannot but indicate structural change. The constant presence of casts can have but one meaning when associated with imperfect elimination of urinary solids, such as urea, and with the occurrence of such symptoms arising from inadequate kidneys, such as headache, vertigo, debility, and persistent presence of raised blood pressure.

Philadelphia.

[7] Levison believes that renal diseases always antedate gout, and that such disease has its seat in the epithelium of the convoluted tubules. He holds that this portion of the kidney is the starting place of granular kidney, from which such interstitial changes as occur are secondary. Greenfield regards the glomeruli as the seat of the incidence of granular kidney, from which the degeneration in the epithelium of the convoluted tubules and the connective-tissue changes are secondary.

FOREIGN UNIVERSITY INTELLIGENCE. — *Jena:* Dr. Richard Neumeister, Extraordinary Professor of Physiological Chemistry, has retired.—*Königsberg:* Dr. E. von Esmarch, Extraordinary Professor of Hygiene and Bacteriology, has been appointed to the chair of Hygiene. The chair of Gynæcology is still vacant as it has been declined by Professor Bumm, of Basle.—*Marburg:* Dr. A. Schirmer, of Basle, has been appointed to the newly-established Professorship of Odontology. Dr. A. Dubler, Extraordinary Professor of Pathological Anatomy and Bacteriology, has been obliged, owing to the weak state of his health, to retire.—*Vienna:* Dr. Hugo Wintersteiner has been recognised as *privat-docent* in Ophthalmology.

CURATIVE TREATMENT OF VAGINAL HYDROCELE BY THE INJECTION OF SOLUTION OF CORROSIVE SUBLIMATE.

BY JAMES MILLER, L.S.A. LOND., L.F.P.S. GLASG.,
VISITING SURGEON TO THE SOUTH LAMBETH, CLAPHAM, STOCKWELL, AND NORTH BRIXTON DISPENSARY.

"THE improvements in surgery within the present century are undoubtedly numerous and of considerable importance; but as the art is still progressive it seems the duty of every practitioner to memorise whatever by experience he finds useful, and to endeavour to increase a fund of knowledge which successive observations have gradually accumulated." So, in 1796, wrote James Earle, senior surgeon to St. Bartholomew's Hospital, and it is just as true in 1897 as it was over a century ago. It is this "duty of every practitioner to memorise what he finds useful" that must be my excuse for again bringing forward a subject which, though simple in itself, has even of late given rise to a fair amount of controversy—viz., the treatment of hydrocele of the tunica vaginalis. In 1886 I recorded in THE LANCET[1] four cases which I had treated by the injection of solution of corrosive sublimate. This treatment gives no more inconvenience to the patient than the simple tapping, as after drawing off the fluid the solution is injected into the sac of the tunica vaginalis before the cannula is withdrawn. I have since had the opportunity of treating four other cases with complete success, and to gather notes of nine cases so treated by other surgeons since the publication of my paper in 1886.

CASE 5.—The patient, a man, aged forty years, was sent to me for operation by Mr. Weston. He had been troubled with a hydrocele on the right side for some months. On Aug. 4th, 1888, having withdrawn the hydrocele fluid, I injected fifteen minims of the one-grain-to-the-ounce solution = $\frac{1}{32}$ grain of the salt. He was highly nervous and fainted with the tapping, but he soon rallied. I saw him again on Nov. 10th, 1888. The hydrocele of the tunica vaginalis had all gone, and the testicle was felt in its normal position. He was quite well, and had only stayed away from work one day. There was, however, a small fluctuating swelling between the external ring and the testicle on the right side, which moved a little up and down, but did not disappear in any position. There was no pain, and the swelling had come on gradually as the former one had gone. As it was not large it was left alone for a time. On Aug. 1st, 1892, he came to me saying that the small swelling had grown larger and was beginning to give him trouble. On examination there was found a globular tumour, tense and fluctuating, evidently a hydrocele of the cord. I tapped it, and drew off three ounces of fluid, and injected as for the hydrocele of the tunica vaginalis. On the 4th there was a recurrence of the swelling, but no pain, and the patient had not been prevented from working. I saw him again on the 16th, and the swelling had all gone.

CASE 6.—The patient, a man, aged forty-six years, came to me on Dec. 20th, 1889. About fifteen years previously he hurt his testicles and was laid up for a few days. Soon afterwards he noticed that the testicle on the right side was larger than it used to be, but there was no pain. It thus remained until about five weeks before, when it began to increase rapidly. He was tapped, and eighteen ounces of hydrocele fluid were taken away, and fifteen minims of solution were injected. I saw him on the 23rd, and there was a good amount of re-accumulation, but the patient said it was smaller then than it was the day before. I saw him again at the end of three weeks, when the fluid had all been reabsorbed and the scrotum was quite natural. He did not lose any time from his work, and at the beginning of 1896, when I last heard of him, he was quite well.

CASE 7.—On March 1st, 1890, a man, aged forty years, came to me. Five years before he had noticed a swelling of the right testicle, which was tapped after six months, and seven ounces of fluid came away. He was tapped again nine months later, and the same amount of fluid came away. The right side again swelled, but not so much. About twelve

[1] THE LANCET, Dec. 4th, 1886, p. 1072.

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months after the second tapping the left side of the scrotum began to swell, and had gone on increasing until the present time. There was now a large hydrocele on the left side, and he complained of a dragging pain in the groins for the last three weeks. He was tapped and ten ounces of blood-stained fluid of specific gravity 1025 were removed, and the microscope showed blood corpuscle. He was injected with 20 minims of the solution. On the 5th the scrotum was swollen and of a dull red colour. The patient said that on the 2nd the scrotum was nearly as large as before it was tapped. It had become smaller since, the fluid being re-absorbed. On the 8th it was much smaller. By April 19th the fluid had re-accumulated; the swelling was tapped again, and eight ounces of fluid were removed and 15 minims of the solution were injected. On the 22nd the patient was going on all right, and from this date the swelling gradually disappeared. At the present time there is no sign of it.

CASE 8.—The child of a neighbouring medical man, aged three months, in November, 1883, developed a hydrocele of the tunica vaginalis. Evaporating lotions were tried, but there was no result. The fluid was therefore drawn off and 10 minims of the solution were injected. In a few days the swelling had all disappeared, and there has been no return of it.

Remarks.—In addition to these eight cases of my own I have been able to gather the following. In 1887 Dr. Wintle, of Forest-hill, S.E., treated a case with injection of solution of corrosive sublimate with perfect success. This case, he states, "had previously resisted every sort of treatment." In 1889 Mr. Hind, of St. Heliers, Jersey, mentions four cases which he had treated with injection of solution of corrosive sublimate, all of which were cured.[2] In the same year Dr. Barnard, of Alderney, mentions three cases treated by the same method, and in none of which was there any return of the hydrocele.[3] In October, 1895, Mr. Swinford Edwards, at the general meeting of the Medical Society of London, during a discussion on the Radical Cure of Hydrocele by Excision of the Sac, related a case of a medical man who had cured himself of a hydrocele by the injection of solution of corrosive sublimate, one grain to the ounce. In November, 1895, Mr. N. W. Holmes records a case[4] of a man, sixty-eight years of age, whom he treated by the injection of corrosive sublimate, and there was no return of the hydrocele. A second case was sent to me by Mr. Weston and was treated in the usual way, but he left England for Canada three days later, and as I have no after-knowledge of the case I do not include it in this review.

I should also say that in Case No. 2 recorded in my former paper there was a return in 1889. It was treated as before, and the surgeon who had the patient under treatment at the beginning of last year informs me that there was no sign of any hydrocele then.

We have here, therefore, the history of seventeen cases, all cured by the use of this injection, only two of which had to be operated on a second time. In a paper by Mr. Lockwood,[5] giving a report for ten years of cases operated upon at St. Bartholomew's Hospital, he says: "Seventy-four patients were treated by injection; in five of these the results were doubtful and were not cured when last seen. In twenty-four the injection had undoubtedly failed. The injections used were iodine, black wash, and carbolic acid. Thus the chances of relapse after an attempt at cure by injection are very considerable, rather over 32 per cent., according to the statistics of St. Bartholomew's Hospital. Evidently the operation is not one to be recommended with confidence." This is certainly not very encouraging for treatment by injection, but I should like to see a further trial given to injection by substituting the solution of corrosive sublimate for the various other medicaments which have been used. The most convenient strength for the solution is one grain to the ounce, of which, after the withdrawal of the hydrocele fluid, 15 minims (= $\frac{1}{33}$ grain of the salt) are to be injected into the tunica vaginalis and left in. There is very seldom any pain, and if there is any it is easily allayed by the application to the scrotum of a little belladonna liniment. In the course of two days there is a re-accumulation of fluid (which may somewhat disappoint the patient), but on the third day this usually begins to be reabsorbed, and the whole thing subsides in the next few days. If treated in this way there is no need for the patient to discontinue his employment. If more of the salt is used it usually produces an excessive amount of inflammation in the scrotum and a corresponding amount of systemic disturbance. In the case reported by Mr. Holmes, referred to above, there was a good deal of inflammation and systemic disturbance, which necessitated the patient keeping his bed for three days, but this I should attribute to the amount of the salt used, viz.: $\frac{1}{4}$ grain instead of $\frac{1}{33}$ grain. The same thing occurred in Dr. Wintle's case, and also in Case 7 as above. As to the cases that are suitable for the treatment, I can only say that it has answered perfectly in cases from the age of three months to sixty-eight years, and as well for the old-standing hydrocele with thickened walls as for the newly acquired. If by the minimum amount of palliative treatment we can obtain the maximum result of curative treatment there is certainly a distinct gain. That some cases will fail I make no doubt, but that the percentage of failures will be very much reduced I feel as fully assured.

South Lambeth-road, S.W.

[2] THE LANCET, July 6th, 1889, p. 14.
[3] THE LANCET, July 20th, 1889, p. 147.
[4] THE LANCET, Nov. 16th, 1895, p. 1223.
[5] THE LANCET, Oct. 19th, 1895, p. 968.

A CASE OF LEAD-POISONING COMPLICATED BY ULCERATIVE COLITIS.

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I HAVE thought this case worthy of publication on account of the extreme rarity of the complication.

A man, aged thirty-seven years, was admitted to the Tottenham Hospital on Aug. 14th, 1896, with the following history. He was a painter, but had been out of work, with the exception of the last few days, for some time. About seven years before he had suffered from an attack of lead colic, but with that exception he had been, apart from occasional attacks of "gout," a healthy man. He came to Tottenham Hospital complaining of severe abdominal pain and constipation, which began on Aug. 11th, three days previously. There was much sickness on the 12th, and the pain continued with exacerbations till the day he was admitted. He had then walked up to the hospital, a distance of four miles, accompanied by a friend, and he arrived in a very collapsed state. There had been no action of the bowels since the 10th.

Condition on admission. — The patient was a poorly nourished man, very anæmic, with a sallow complexion. He seemed to be in a collapsed condition; the pupils were equal, contracted, and with slight reaction to light. The teeth were much decayed; the gums of the lower incisors and canines had retracted, presenting a marked blue line, and there was a brown fur on the dorsum of the tongue. The grasp of the hands was good and equal and there were no signs of extensor paralysis. The knee-jerks were present. The pulse (after recovery from the collapse) was 100 and of good tension, and the artery was not rigid. The heart was natural. The abdomen was slightly distended; it moved freely on respiration. General pain, not relieved by pressure, was present, but no tender spot was noted. The urine was of specific gravity 1020, of acid reaction, and with a slight cloud of albumin.

Treatment.—At first a saline purge was administered with iodide of potassium, and on the same night (Aug. 14th) the bowels were opened three times, the motion on the third occasion consisting chiefly of blood. The pain was not relieved by the evacuations. On the 15th the patient had eight actions, consisting of slime with shreds of mucous membrane and a little blood. The pain in the abdomen continued to be severe and there was some tenderness over the ascending colon. Belladonna fomentations were applied, but were discontinued as pressure seemed to increase the pain. The hæmorrhage and diarrhœa continued throughout the 16th, the abdominal pain had ceased, but tenderness was still present over the ascending colon. During the day he passed only nine ounces of urine, which had the same characters as before. The hæmorrhage then ceased, with the exception of two small clots on the 20th, but the diarrhœa (from six to seven actions a day, each action containing some mucous shreds) continued till the evening of the 26th, when he had a large hæmorrhage and, becoming collapsed, died

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at noon on the 27th. During the six days preceding his decease the patient's condition became gradually weaker and he was at times delirious, but usually comatose. He could always be roused from the coma by asking questions, and would answer sensibly, then almost at once relapsing into his former condition. Whilst delirious he would mutter to himself, and occasionally groan and cry out, but he never complained of any localised pain. Throughout the illness the temperature only rose on three occasions as high as 99·6° F. and was never below 98°, except on admission, when he was collapsed, and at the time of, and following, the final hæmorrhage, when it fell to 97°.

Necropsy.—The lungs were emphysematous and somewhat congested. The heart and stomach were natural. The small intestines contained a quantity of very offensive fæcal matter. The lower end of the ileum was much congested and contained shallow ulcerated patches not confined to the solitary follicles. The whole of the large intestine presented the characters of an ulcerative colitis. The mucous membrane, which was dark-coloured, was stripped off the bowel in places and hung in shreds. There were no signs of perforation, but the ascending colon was firmly adherent to the capsule of the right kidney. There was no general peritonitis. The liver was small and cirrhotic. The spleen was small and densely hard. The capsule of the kidneys peeled readily and there were no signs of cirrhosis.

Remarks.—The rarity of the complication is shown by the omission of all mention of it in the great majority of text-books. The first account I find is that given by Tanquerel des Planches,[1] in which he says: "Lead colic may be concomitant not only with other lead diseases, but with maladies arising from causes unconnected with lead preparations. These complications exist independent of colic; they are not in the least influenced by the treatment, yet they modify the character of the colic." The complications mentioned are gastritis, enteritis, peritonitis, and dysentery. In a short paragraph in which this writer discusses enteritis as a complication he draws attention[2] to "the swollen abdomen" and to the facts that "pain tends to generalise itself, but is often more acute in parts, constant, increased by pressure, becoming more severe at times" and that "evacuations give no relief." All these points are well brought out in the case above described, and it will be noticed that colic and constipation, two of the most constant symptoms of lead poisoning, were to a great extent obscured by the colitis to which is attributable the localised pain and diarrhœa. Under the head of "Lead Poisoning" Osler[3] mentions a case with similar features to the present one, which came under his care in the Philadelphia Hospital. The patient "had vomiting, constipation at first, afterwards severe diarrhœa and melæna, with distension and tenderness of the abdomen. There were albumin and tube-casts in the urine. The temperature was usually subnormal. Death occurred at the end of the second week. There was found the most intense entero-colitis, with hæmorrhages and exudation. These acute forms develop more frequently in persons recently exposed." With regard to the causation of the colitis, in spite of Tanquerel's statement, above referred to, that the malady arises from causes unconnected with lead preparations, it seems possible that, in some cases at least, lead may be the direct cause. Dr. Oliver[4] says: "It seems to me as if lead first irritated the sympathetic and intestinal ganglia; this is followed by spasm of portions of intestines and arteries." And again[5]: "How far a degree of heightened arterial tension, associated from time to time with the minor attacks of pain in the abdomen and the constipation which so usually accompanies it, aid in developing anæmia or cachexia by causing malnutrition through impeded flow of blood it is impossible to say." Arguing on these lines, then, is it not possible to consider the colitis due to malnutrition of the mucous membrane of the colon, caused by impeded flow of blood through the vessels to the affected parts. Another possible explanation is that lead may, in some cases, have an action on the trophic centres of the cord governing this area, for such centres must assuredly exist. In this connexion Dr. Oliver mentions[6] Oeller's case of lead-palsy where hyperæmia and atrophy of the ganglion cells in the anterior cornua of the grey matter of the cord were demonstrated microscopically.

My thanks are due to Dr. Overend, under whose care the patient was admitted, for permission to publish these notes.

Tottenham.

[1] Dana's Translation, 1848, p. 101.
[2] Ibid., p. 103.
[3] Principles and Practice of Medicine, 1895, p. 1064.
[4] Lead Poisoning, Acute and Chronic (Goulstonian Lectures), p. 39.
[5] Ibid., p. 44.
[6] Ibid., p. 67.

VITALITY.[1]

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VIII.—THE INTERSTITIAL CIRCULATION IN ALL LIVING THINGS (*continued*).

THE constantly flowing currents necessary for the life and increase of the living matter, and instrumental in preserving the integrity and activity of the formed material of the tissues and organs of living forms, originate in, and are maintained by, the particles of living matter (bioplasm) which are seen to be embedded in enormous numbers in all parts of every tissue.

To form a correct idea of the actual arrangement of the particles of the living matter, and to gain a knowledge of the important part they play in connexion with the interstitial circulation, it is necessary to examine very thin sections of the tissue; but in this inquiry it is almost impossible in the case of many very soft textures to obtain the requisite degree of thinness without seriously disturbing the natural relations of the parts. One may often get more accurate information from a careful examination of a naturally thin portion of the tissue, such as is sometimes to be found here and there as an extension from the organ or tissue under investigation. In this the tissue elements and bioplasts, with the capillaries and nerves, will be seen in their natural position, not forming more than a single layer. Such specimens may be made still thinner by careful pressure if the structure has been allowed to soak for some time in glycerine or syrup. Tissues preserved in such media can be examined with very high magnifying powers, and will retain their characters for thirty years or more if carefully mounted. The details of preparation by this method were described in "How to Work with the Microscope," and will also be found in papers in the Transactions of the Royal Microscopical Society many years ago. Dilute solutions of glycerine and syrup in which the fresh specimen is immersed, if kept for some time at a temperature of 100° F., will undergo considerable but very gradual concentration without the relation of the tissue elements to one another being in the slightest degree disturbed. At the same time great transparency is obtained, and very delicate structural points can be clearly demonstrated by the aid of powers magnifying 700 diameters and upwards.

Every organism, as I think I have distinctly proved, every organ, every structure forming part of a living thing, from the smallest to the most colossal forms, from the most ancient to the most recent, consists of matter in two distinct states or conditions—the one *living*, the other *formed*. All the formed material or tissue, however firm or dense and hard and dry, was once in the state of soft, moist bioplasm, living or germinal matter. During this state the arrangements upon which its tissue-characters depend were made. The ultimate form, properties, and composition of all formed material depend upon the vital changes which occurred in the bioplasm before the formed material was produced. So delicate and transparent are some even fully formed tissues that their actual arrangement can hardly be demonstrated with the highest powers. Their structural elements would collapse but for the support they receive from the fluid that lies in the spaces between the delicate fibres. In some organisms even contractile muscular tissue and nerve fibres are transparent and are supported by the fluid medium—the interstitial fluid which during life is always undergoing change—around them. Not only are nutrient matters dissolved in the interstitial fluid, but certain substances formed during the action of the living matter and others from the

[1] Nos. I., II., III., IV., V., VI., and VII. were published in THE LANCET of Feb. 22nd, April 11th, June 13th, Aug. 29th, Oct. 17th, 1896, Jan. 23rd, and July 31st, 1897, respectively.

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disintegration of the formed material become mixed with the nutrient matters brought within the sphere of action of the bioplasm for its nutrition. These two classes of substances, the one about to live, the other resulting from changes during life and from the disintegration of that which has lived, are very intimately mixed together in water in which both are dissolved.

The multitudes of the living particles (bioplasts) which exist in all tissues and organs of every living thing, although having very different powers and forming very different matters structurally and chemically, are in all cases the direct descendants of the original living particle of germinal matter or bioplasm which gave rise to each particular individual organism. Every one and every part of one is dependent for nutrition, growth, multiplication, and action—for life itself—upon the free supply of interstitial fluid. Sometimes the living matter is not in distinct, separate, and detached particles, but the little masses are stellate in form and the rays are continuous, so that we have a network of bioplasm extending through the tissues. At an early period of life when a sufficient number of detached or continuous particles of living matter have been produced, formed material begins to appear around and between. After a time the living matter is embedded in this formed material, which has been produced by the bioplasm, and is dependent for the preservation of its integrity upon the free and continual circulation of the interstitial fluid. The more recently developed, the younger bioplasts of a portion of tissue, are larger than the older ones and have a thinner layer of formed material around them. In multitudes of the mature lowest forms of life, and at the earliest period of individual life in all, there may be but a single mass of living matter, generally less, and sometimes very much less, than one-thousandth of an inch in diameter. In many organisms the bioplasm particles are far more minute than this, but in every one and in the formed material around each there is interstitial circulation.

In no tissues that are active are these little particles separated from one another by distances much greater than three or four times their length or diameter, and the intervening formed material is everywhere the seat of interstitial circulation. In parts of many nerve centres and in secreting and other organs where active changes are constant the particles of bioplasm are near together, and in certain structures that are constantly being formed through life even in the adult they almost touch one another. At a very early period of development in all living things, present and past, the whole organism consists of these little bioplasts or particles of living matter so close together that only a thin layer of transparent semi-fluid matter intervenes and enables us to define the several particles. In many situations the bioplasts are in the proportion of millions to a cubic inch of tissue. In the deep layers of the cuticle, on the surface of certain mucous membranes, and in the superficial layer of the cerebral convolutions just beneath the pia mater, they are very close to one another throughout life in health, and in the last situation the interstitial circulation is very active, and special arrangements exist by which a free and rapid interchange of fluid is ensured. Each of the millions upon millions of bioplasts in a moderate-sized organism possesses active vital power and takes part in the interstitial circulation as long as life lasts; each, in fact, causes and is dependent for its life upon the interstitial circulation. Each draws to itself some of the surrounding fluid, selecting and appropriating certain of its constituents, and also yields up to the fluid certain matters that are eventually removed from the organism.

Everything taken up by living matter must be in solution in water, and before substances resulting from disintegration which takes place in every part of living organisms can be removed they must also be dissolved. Water is the principal constituent of all nutrient substances, and is more than the mere vehicle for carrying the solids to their destination. It is always present in large proportion where active growth is proceeding All active tissues and most passive ones contain it in large proportion, and in rapid changes much is required. Even tissues that seem to be dry contain some water. Fluid containing various matters is found pervading the tissues, not only passing through the interstices, but moistening every part of the anatomical elements, and, as I have before remarked, every form of bioplasm invariably contains much water. It is probable that there is not a molecule—not an atom of the matter of which a living particle is constituted—that is not free to move in all directions amongst its neighbours and coalesce with them by reason of the fluid medium which is essential, if, indeed, water is not actually combined with some of the constituents of living matter.

The proportion of water to the dissolved constituents is largest at an early period of existence when the changes in living matter are most active. The interstitial fluid is always changing in composition, always receiving certain constituents, always giving up some to be converted into living matter, and some to be changed in order that they may be eliminated altogether. In all cases, however, the proportion of water to the solids in the interstitial fluid is so considerable that it usually amounts to more than 95 per cent. A very high state of dilution seems to be universal in the case of solutions taking part in vital phenomena. The smallest quantity of water that is absolutely necessary has not been determined, but it is certain that a very moderate degree of concentration is detrimental, and may cause serious derangement both in the living matter and in the formed material. Solid matters may be deposited in the substance of the tissues, the action of which may be seriously impaired, and the death of the living matter would probably occur before a considerable degree of concentration could be reached.

Wherever the atoms of living matter undergo those wonderful alterations in position and relation to one another which invariably occur preparatory to tissue formation of any kind, and to the production of substances of definite chemical composition and properties, the interstitial circulation is most active; but when tissue and definite substances have been formed, and vital changes are carried on but slowly, locally or generally, as in old age, the interstitial fluid is small in amount, and its movement comparatively slow. In cases where part or the whole of a tissue has become hard and dry, or almost dry, as in the oldest portions of some bony tissues, in fully-formed dentine, enamel, and shell, in the oldest and driest parts of hair, nail, and horn, the interstitial fluid circulation will have entirely ceased and the bioplasm will have disappeared.

In all fully-formed, mature, complex organisms the food substances and water required for growth, nutrition and action are, as we well know, introduced in one part of the body, modified in composition, and then distributed to parts at varying distances from the seat of introduction by special tubes or vessels with very thin walls, which have been formed for the purpose at an early period of development. In some cases the network of minute tubes extends through every part of the entire organism wherever living matter exists. In others the new matter passes into minute vessels soon after it has been introduced, and from these into larger ones, and at last into a single trunk, which perhaps has propelling power or is connected with a special propelling apparatus or heart. The mixed fluid at length reaches other networks of minute vessels, by the thin walls of which a part is filtered into the tissue spaces.[2] This is the interstitial fluid, which is at once brought very near to the bioplasts of the adjacent tissues, by the vital action of which it is caused to be drawn through the layer of formed material around and introduced into the very substance of the living matter. In this way the bioplasm of every one of the millions of elementary parts in every portion of the body of the most complex organisms is freely and regularly supplied with the dilute solution, which contains everything required for nutrition, growth, and the production of formed material and for the production of chemical substances of highly complex composition for special purposes or for elimination.

The weak solution in water from which the living matter obtains all the substances it requires for its life and for conversion into new living matter is caused to flow towards the bioplasm by the vital movements of the bioplasm itself. In this way each individual particle of bioplasm of the most

[2] It is not perfectly correct to say "filtered," for the interstitial fluid is not merely a dilute solution of certain substances which has passed through passive membrane. The so-called nuclei (bioplasts) of the capillary walls take up a solution from the blood, select and appropriate certain suitable matters, convert these into bioplasm, a portion of which soon undergoes change, and a weak solution of the resulting substances becomes the interstitial fluid. This process, in which bioplasm takes up certain substances and converts some into new living matter, a portion of which at the same time becomes resolved into lifeless compounds, really occurs in every particle of living matter through nature, and so far no other way has been discovered in which the various structural and chemical substances characteristic of the various living organisms, their tissues and organs, can be produced in anything that lives.

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colossal organisms is as well supplied with what it requires if it is to live and perform its vital acts as the minute individual particle free to move, to grow, and to multiply in a medium laden with the substances upon which it lives dissolved in the proportion of water which suits it.

It will be found that the same principle holds with regard to the vital actions of living things in every department of nature—every particle of living matter being dependent for its life upon an interstitial circulation which is established and sustained by itself, which begins with its life and ceases at its death. In every particle of living matter, then, we have a laboratory without apparatus and without any visible chemist, where analytical and synthetical operations are always being conducted in the most perfect manner. Movements and work proceed without any mechanical appliances and in the absence of any tangible designer, constructor, regulator, governor, or conductor. Here atoms are moved about in all directions, and may be placed above one another notwithstanding the influence of gravitation. Transformation of energy is effected in this clear, colourless, structureless substance, consisting largely of water; and movement, heat, light, electricity, and possibly other modes of motion may be evolved. Moreover, this clear, soft, structureless, living matter is capable of endless multiplication. It also differs from matter in every other known state in that it possesses powers unknown elsewhere, which have been derived from pre-existing living matter and are capable of being transmitted to particles of matter which do not yet live, and this without any loss. These wonderful vital powers, according to Lord Kelvin's most recent computation, have been passing from living to lifeless particles for about 20,000,000 years. If this be so, we may be sure that colourless, structureless, living matter, with its interstitial circulation, has existed for the same period, and that the universal vital characteristics have never ceased or been dormant for a single moment.

(To be continued.)

PUERPERAL ALBUMINURIA AND THE ACTION OF SULPHATE OF QUININE ON THE GRAVID UTERUS.

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I SUBMIT the following cases with the hope that they may be of some interest.

CASE 1.—A primipara, aged twenty-two years, had been pregnant about eight months, and had suffered from œdema of the extremities for one month. This was the short history I obtained at midnight on March 13th, when I was for the first time consulted owing to the sudden onset of severe and frequent convulsive attacks. Half-drachm doses of bromide of potassium somewhat relieved these attacks. On the following morning the patient lay on her back in a stupid half-conscious condition, taking no notice of anything and being unable to answer questions. The tongue was lacerated. There was marked œdema of the extremities, the face, the labia, &c. The abdomen was enlarged, due to the advanced stage of pregnancy. There was an entire absence of any indications of commencing labour. The urine was scanty, pale in colour, and contained, roughly estimated, 20 per cent. of albumin. The bowels were constipated. There was no history of recent attacks of intermittent malarial fever. Compound powder of jalap with elaterium was ordered, also a diuretic mixture and milk and soda-water diet. No quinine was given. This briefly was the case, and the prognosis was not favourable. The marked absence of any indications of approaching labour and the prospect of having to induce it added to the seriousness of the case. On the following day there was a little improvement: the patient answered questions; there was no recurrence of the fits; the urine was less scanty, and the bowels were freely purged, but the œdema was distressing. On the next day there was some further improvement; the œdema was slightly less, but that of the labia had become painful owing to the appearance of sloughs. There were no symptoms of recurrence of convulsions and there was entire absence of any indications of labour. In spite of the slight improvement the case was regarded with anxiety. I leave this case at this stage to pass on to the next.

CASE 2.—On the day after I had seen Case 1 I was called to attend a primipara, aged twenty-four years, in about the eighth month of pregnancy. There was enormous œdema of the upper and lower extremities, the labia, the face, &c. The patient was intensely anæmic, with hurried action of the heart and hæmic murmurs and some dyspnœa. The œdema was of a recent and acute character. The urine was scanty and pale and charged with albumin. There had been no indications of convulsions. Mentally the patient was clear and intelligent. There were no signs of labour. She was, in addition, suffering from intermittent attacks of malarial fever. Treatment on general principles was prescribed, and five-grain powders of sulphate of quinine were given three times daily owing to her attacks of fever. Within forty-eight hours of taking the quinine she was delivered of a still-born child—a desirable result considering her general condition.

To return to Case 1. I ordered and issued six powders of sulphate of quinine of ten grains each, one to be given every fourth hour. I did so with the object of bringing about labour and to test the action of quinine in this direction. I was agreeably surprised at its action. Before the sixth powder was given labour pains had set in, and when I saw the patient she was in the second stage with a normal presentation. In due time she was delivered of a still-born child, large and well developed. The further clinical progress of these cases does not come within the scope of this paper. They both did well.

Remarks.—That quinine can and may induce uterine contractions and thus bring about premature labour or abortion I think there are grounds for believing. This I have before now noted, and it is also the experience of some practitioners with whom I have had opportunities of discussing the subject. I think Case 1 points to this. In treating pregnant women (the subjects of malarial fever) with quinine it is proper always to mention the possibility of abortion or premature labour (more frequently the former) taking place, and to diminish the possibility of such an occurrence one has to administer, and that cautiously, only small doses of this drug. Whether quinine acts directly on the gravid uterus or indirectly through the nerve centres is, perhaps, of no immediate importance, though information on this point would be acceptable. In the available literature on cinchona and its compounds little is said as regards the action of quinine on the uterus. Ringer's "Therapeutics" has the following sentences:—"Quinia is sometimes useful in the vomiting of pregnancy." "American writers believe that quinia strengthens the contractions of the womb during delivery and some use it in preference to ergot." "Other writers deny this action to quinia ..... quinia does not induce premature labour, though some writers have asserted the contrary."

It must be admitted that many women when pregnant take quinine with no evil results whatever. Considering that this drug is largely used in the colonies further information of its action in the direction here indicated would be interesting and valuable.

Trinidad, West Indies.

THE RELATIVE HEIGHTS AND WEIGHTS OF BENGAL PRISONERS.

BY W. J. BUCHANAN, M.B., DIPL. STATE MED. DUB.,
SURGEON-CAPTAIN, INDIAN MEDICAL SERVICE; SUPERINTENDENT, CENTRAL GAOL, BHAGALPUR.

IN THE LANCET of Aug. 24th, 1895 (p. 476), I published a table giving the relative heights and weights of Bengal prisoners. I have since collected a large number of weights and measurements—viz., 28,863—and the result has been to confirm almost absolutely the accuracy of the formula I then published. This formula runs as follows:—"Taking 100 lb. as a normal average weight for a man of 5 ft. add 3 lb. for each inch above that weight—e.g., 5 ft. 3 in. = 109 lb." That this formula gives as accurate an average height as can be expected is also shown, I think, by the fact that the results of examining 5000, 8000, 20,000, and the above total practically correspond, and the

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results of a collection of some 7800 cases in the other large gaols in Bengal published in the Administration Report for 1896 are practically identical with the above formula. I have purposely avoided parts of an inch. Mr. Havelock Ellis[1] has shown this to be useless. I must note that these figures have all been taken from prisoners of the peasant class, chiefly from the Behar portion of the Province of Bengal, and are confined to adult men of the ages of from twenty-five to forty years. They do not apply to hill men, Burmese, aboriginal tribes, or to the tall, well-made Rajputs, but are representative of the average Behar and Bengal peasant.

Height.	Weight.	Number of observations.	Percentage.
5 ft.	100 lb.	1863	6·5
5 „ 1 in.	102 „	2069	7·2
5 „ 2 „	106 „	5226	18·0
5 „ 3 „	109 „	5787	20·0
5 „ 4 „	112 „	6107	21·3
5 „ 5 „	115 „	3040	10·0
5 „ 6 „	118 „	2498	8·7
5 „ 7 „	122 „	1389	4·8
5 „ 8 „	125 „	623	2·1
5 „ 9 „	129 „	220	0·7
5 ft. 10 in. to 6 ft.	—	51	0·1

A glance at the second column in the above table will show how closely the weights for height correspond with my formula given above. It will also be seen that one inch in height practically means 3 lb. increase in weight. Lombroso's rule for Italians, beginning with 5 ft. = 110 lb., gives an increase of about 5 lb. per inch for his countrymen; Allen's table of heights and weights for Englishmen gives also about 5 lb. per inch above 5 ft.; that given by Liharzik varies from 3 lb. to 7 lb. These are all the observations of this kind I can lay my hands upon at present. The above table also shows that, taking the Bengal prison population, which fairly represents the peasant classes generally, the vast majority of them are of short stature. Taking, with Mr. Havelock Ellis, heights between 5 ft. 4 in. and 5 ft. 9 in. to be medium, below that short, and above it tall (these of course are European ideas) we find that from an European point of view 51 per cent. would be classed as short, an almost equal number as medium, and almost none as tall. for out of 28 863 men measured I could only collect 51 (0·1 per cent.) of 5 ft. 10 in. and above. I have frequently had prisoners of this height, but they were generally Rajputs, or men of better social position than the average prisoner. I have also found that the average weight of this large number of men was 109 lb. In calculating relative diet scales[2] I took 110 lb. as the average, which is now shown to be practically correct. T. Lewis, F.R.S., put the average weight of the Bengali as 105 lb. The above figures are sufficiently large, I think, to draw safe conclusions from. It is not meant that these figures can be applied accurately to every individual case, but they furnish as accurate as possible a standard for healthy men of this class. Apart from their use in gaols they can be used, as has been the case during this year of famine, to compare the relative health and physique of persons of this class in unhealthy or famine years compared with normal conditions. It is much to be regretted that anthropological figures are not more frequently collected in India.

Buxar, India.

[1] The Nineteenth Century, July, 1897.
[2] THE LANCET, May 2nd, 1896.

LITERARY INTELLIGENCE.—The *American X Ray Journal* is the name of a new monthly journal devoted to the medical and surgical applications of the Roentgen rays. It is published in St. Louis and is edited by Dr. Heber Robarts.

DR. J. ASHBURTON THOMPSON, President of the New South Wales Board of Health, has been elected an honorary Fellow of the Incorporated Society of Medical Officers of Health of Great Britain.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF ANEURYSM.

BY F. W. THURNAM, M.B., C.M. EDIN.

A MAN, aged fifty-four years, married, but having no children, decorator, consulted me on Feb. 15th, 1897, complaining of "rheumatic" pains at the back of the head, side of the neck, and towards the right shoulder, with slight cough There was no history of syphilis, and beyond helping to lift a heavy case of goods three months before, which had been followed by an attack of faintness, there was no history of exertion. He was said to have had gout (or rheumatism) many years back. He was ordered a mixture containing salicylate of soda and compound tincture of camphor and a liniment of turpentine and acetic acid. He was allowed to go for a week's change to Epping Forest during the first week in March. No mention had been made to me of a "sensation of internal tumour behind the collar-bone," neither had any swelling been noticed, though looked for, by himself or his wife during the three weeks of its existence. While away, on the evening of March 9th, his neck, shoulder, and upper part of the right chest were rubbed with the liniment by a relative, and though there was much pain no enlargement was seen. Next morning, however, a tumour was clearly visible above the sternal end of the right clavicle. On the 12th over the region of the right sterno-clavicular articulation was a swelling the size of a goose's egg, pulsating and indistinctly expansile, without bruit over the tumour or along the vessels; pain was felt over the site, up the neck, and down the arm, which was somewhat œdematous; the heart's apex was in the fifth space, displaced out to the nipple line; the sounds were faint; there were no murmurs; both the radial arteries were atheromatous; and there was no appreciable difference in their pulses. There were a troublesome hacking cough, some difficulty in swallowing, and alteration in the voice. My diagnosis was aneurysm of the innominate artery. A mixture containing iodide of potassium and tincture of opium was given. On the 15th the patient was seen in consultation with Dr. H. B. Carter, and, to exclude the possibility of abscess, disease of the joint or other growth, an exploratory aspiration was made with a hypodermic needle, but it showed no pus and only withdrew blood. A red blush over the swollen area, with increased fluctuation in the centre, gave the impression that the skin was much thinned. There was exophthalmos of both eyes, more particularly of the right, the pupil of which was more dilated as compared with the left. The ophthalmoscope showed the vessels of the right retina to be more distended than those on the left side. The laryngoscope showed no laryngeal paralysis. The cough was due to irritation by compression of the right recurrent laryngeal nerve. On the 31st the patient was admitted to the London Hospital, under the care of Mr. Hurry Fenwick, to whom my thanks are specially due for the summary of the notes taken during the patient's stay there of one week. "Rapidly growing innominate aneurysm; inoperative; doubled its size while in hospital." On April 7th the patient was discharged from the London Hospital, where an ice-bag had been used which was continued intermittently, as well as the iodide and opium mixture. There was no œdema of the arm at that time. There was slight delirium at night. In May the prominence and extent of the aneurysm seemed to vary; it was generally fuller at night; there were frequent convulsive twitchings of the arm and leg, more so during sleep. The appetite was fairly good, but capricious. As little fluid as possible was allowed in his diet. In June the aneurysm was increasing in size and extending to the left across the episternal notch. There were frequent attacks of sickness and diarrhœa, alternating with constipation. There was more pain in the neck and arm. The patient was confined to bed throughout. In July the position of the right clavicle had become much more pushed downwards than its fellow, and, partly owing to

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more tenderness and erythema over the sac, no articulation with the sternum could be made out. In August there were increasing asphyxia, loss of power, and pain in spite of pushed doses of opium, chloral, and bromide, as well as belladonna locally. For the last three days of life there were œdema of both hands and much sweating. His florid complexion was maintained till the morning of his death, for two hours before which there were marked pallor and complete unconsciousness.

Necropsy.—The post-mortem examination was made on Aug. 12th, eleven hours after death. An examination of the chest only was allowed. The aneurysm was of the arch of the aorta, saccular, not diffuse, and there had been no rupture of it. The sac was the size of two fists and extended upwards to above the cricoid cartilage, and, having destroyed the right sterno-clavicular joint, depressed the clavicle and overlapped the right half of the sternum to below its junction with the second rib, the sternal end of the clavicle and the outer and posterior upper portion of the manubrium being completely eroded. The aneurysm commenced just internally to the origin of the innominate artery, which, beyond compression by the sac, was scarcely, if at all, implicated in it.

Remarks.—The points of interest in this case are the sudden appearance of the aneurysm, its rapid growth, and peculiar distribution. The possibility of its being aortic was not lost sight of: but certainly at the time of diagnosis and, indeed, until the extension of the enlargement to the left, two months later, all the symptoms pointed to its having an innominate origin. The one point of consolation is that no operative interference was resorted to.

New Cross, S.E.

TWO CASES OF PHTHISIS IN WHICH KOCH'S NEW TUBERCULIN WAS TRIED.

BY F. M. SANDWITH, M.D. DURH., M.R.C.P. LOND.,
PHYSICIAN TO KASR-EL-AINI HOSPITAL, CAIRO.

CASE 1.—The first patient was a German who for four years has had tubercle of both lungs. Koch's instructions were followed in all particulars, and the initial injection was $\frac{1}{500}$ milligramme, or two micro-milligrammes. The patient's temperature taken at 7 A.M. and 7 P.M. ranged before treatment from 97·8° to 99·4° F., but the injection was invariably followed by a reaction, sending the evening temperature up to 100·2° or 101°, and after three micro-milligrammes had been injected the evening thermometer showed 101·4° and 101·6. But the morning temperature never rose above 97·8°, showing that the reaction only lasted a few hours. The injections were all made at 10.30 A.M. For the first two days the expectoration notably diminished, but then increased, especially at night. After three weeks the injections had to be discontinued because of slight pleurisy and hæmoptysis. From the previous history of the patient I do not think that either of these complications were due to the tuberculin TR. The pulse and respiration rate hardly changed in spite of the temporary rise of temperature, being always 70 and 13 to 14 in the mornings and 97 and 20 to 22 in the evenings.

CASE 2.—The second patient was a Greek, also suffering from chronic tuberculous lung disease. In his case there was also a temporary rise of 1° F. after injections of two, and again later after injections of three, micro-milligrammes. In his case there was also some local reaction, as shown by the appearance of pain and some diminution of swelling in a tuberculous epididymis. His lung symptoms seemed to improve under treatment. It is of course quite likely that Koch himself would have thought these two cases unsuitable for his new discovery.

The tuberculin TR contains not the toxin but the components of the bacilli themselves, and will probably be found very useful for lupus without complications. If all lung cases react as easily as mine, the injections might be used as a method of diagnosis more delicate and less dangerous than the old tuberculin. At present one is a little shy of a remedy which is to be increased in dosage from $\frac{1}{5000}$ milligramme to 20 milligrammes—i.e., the minimum dose is 10,000 times smaller than the maximum. To become popular the new remedy must be made easy to obtain, less costly, and must be diluted in a less cumbersome way, if "the dilution is always to be prepared at the time it be used." The tuberculin itself is painless, but the glycerine in the solution causes a little stinging.

Cairo.

A CASE OF CÆSAREAN SECTION FOR CYESIS COMPLICATED BY MALIGNANT DISEASE OF THE RECTUM.

BY ALBERT J. RIDDETT, M.R.C.S. ENG., L.R.C.P. LOND.,
LATE OBSTETRIC HOUSE PHYSICIAN, MIDDLESEX HOSPITAL.

ON Aug. 3rd, 1897, I was hastily summoned by a midwife to see a patient, aged thirty-seven years, who according to the account given me had been in labour twenty-four hours. I found the patient in a marked degree of prostration, the pulse 120 and occasionally intermittent; she had also vomited two or three times. On abdominal palpation I found the fœtus lying transversely with the cephalic extremity to the right side of the pelvis; per vaginam the posterior vaginal wall was found to be pushed forwards, and a hard irregular mass could easily be made out blocking up the pelvic outlet. The true conjugate diameter only measured two and a half inches. Per rectum about four and a half inches from the anus a hard nodular swelling was felt, which bled even on careful manipulation. Uterine contractions were frequent and strong, so I at once gave a quarter of a grain of morphia hypodermically; this was at 6 A.M. and effectually stopped the contractions. From the cachectic appearance of the patient, the evident wasting, a history of occasional diarrhœa, together with the presence of a tumour and the patient's age, I had no doubt that it was a case of malignant disease of the rectum, which had taken on a rapid growth during the later weeks of pregnancy. This was, I learnt, the sixth confinement, the five previous ones having been quite normal. I put it to the patient's friends that either craniotomy or Cæsarean section must be performed, strongly advocating the latter, inasmuch as I thought craniotomy would be dangerous, probably causing sloughing of some portion of the growth and consequently septic mischief. I saw the patient again at 9 A.M., when, as the uterine contractions were recommencing, I gave another injection of morphia (quarter of a grain), and had her prepared for operation, the patient and her friends having given me permission to perform Cæsarean section. Ether having been administered I opened the abdomen by the ordinary laparotomy incision; then my friend, Dr. Owen Williams, who kindly assisted me at the operation, firmly compressed both broad ligaments, thus effectually controlling the blood-supply to the uterus; the latter organ was quickly opened by a median longitudinal incision, sponges having been placed on either side to prevent escape of liquor amnii into the peritoneal cavity; the fœtus was extracted, and the placenta (which was on the posterior uterine wall) with the membranes expressed. There was but an insignificant quantity of blood lost. The uterus contracted well under the stimuli of pressure and hot sponges. The muscular wall of the uterus was closed by twelve deep silk sutures, which did not include the mucous membrane; superficial Lembert's sutures were next inserted, so that the peritoneal surfaces accurately approximated. The Fallopian tubes were next tied and divided. The uterus, which had been partly withdrawn from the abdominal cavity, was now replaced and the abdominal wall sutured in three layers—(*a*) the peritoneum with catgut, (*b*) the sheath of the rectus with silk, and (*c*) the skin and superficial tissue with silkworm gut.

I may say that the case resembles somewhat one Dr. Wm. Duncan had whilst I was his house physician at the Middlesex Hospital, and in the operation I have recorded I endeavoured to follow as closely as possible Dr. Duncan's methods. The patient is now practically convalescent and has had an uninterrupted recovery save slight vomiting which commenced about twelve hours after the operation; this was stopped by means of iced champagne. The child (a male) is alive and doing well.

Leicester.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, Newcastle-on-Tyne.—The prizes and scholarships will be presented at the opening of the Winter session by the Right Honourable Lord Barnard.

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A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

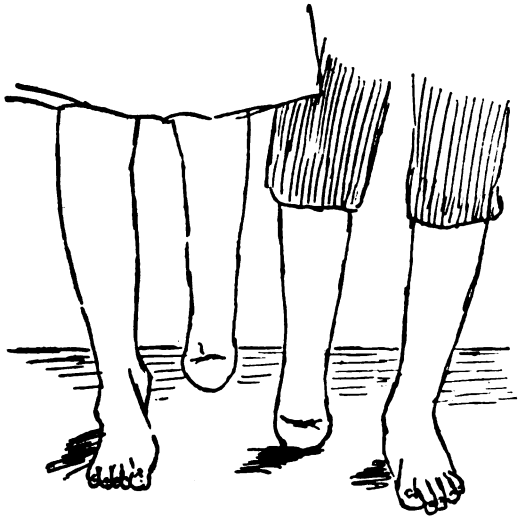
LONDON TEMPERANCE HOSPITAL.

A CASE OF PIROGOFF'S AMPUTATION.

(Under the care of Dr. W. J. COLLINS.)

WHEN amputation at the ankle is required for disease of the foot there is a general consensus of opinion that Syme's operation affords a better chance of the complete removal of the disease than Pirogoff's, in which a portion of the os calcis is retained. This is especially the case in tuberculosis of the tarsus, for it is rare to find such extensive disease of the tarsal bones as to require amputation without the calcaneum being affected. In the case of amputation for injury obviously this objection does not apply. Instrument makers assert that it is more difficult to adapt an artificial foot to a Pirogoff stump than to that resulting from a Syme's amputation, but this is really an imaginary difficulty. The greater suitability of the stump for walking is the chief reason for preferring the Pirogoff operation to the other; in the former it is practically the thick heel pad supported by a rounded bony surface which comes in contact with the ground, while in Syme's the freshly sawn surfaces of the tibia and fibula press against the skin flap.

A boy, aged thirteen years, whose family history was unimportant, was said to have injured his right foot when jumping some three weeks before his admission to the London Temperance Hospital on Nov. 3rd, 1896; an abscess formed and broke below the internal malleolus, leaving a sinus which was discharging. A probe indicated carious bone. The patient was in much pain and was subject to starting at night; the temperature in the evening ran up to about 101° F. A week later no improvement had resulted from rest; the boy looked worse, was losing weight, and was in much pain. On the 11th, under chloroform, Dr. Collins performed Pirogoff's amputation of the foot. The sawn surfaces of the tibia and os calcis appeared to be healthy to the naked eye, and were brought into accurate apposition by silk sutures passed through foramina bored with a brad-awl. The wound healed well, though the temperature ranged high for a week or two. On Jan. 2nd, 1897, he could walk without a boot and was gaining weight rapidly. When fitted with a dummy foot he walked without any lurch, and so well that some who saw him could not believe that the foot had been amputated.



Sketch showing relative lengths of stumps after Syme's and Pirogoff's amputations.

Remarks by Dr. COLLINS.—The Moscow meeting will doubtless afford occasion for reviving the fame won by Nikolaus Pirogoff in many fields of human activity. As a profound anatomist, a military surgeon, a hospital organiser, and a university reformer he has impressed his rugged personality upon the history of his time. True, that to the ordinary English student his name is known almost exclusively by his osteoplastic modification of Syme's amputation, of which an account with a diagram is to be found in his "Klinische Chirurgie," published at Leipzig in 1854. But this improvement in amputation of the foot, as he practised it, as also as more recently modified by Lefort and Günther, was in itself a valuable reform. I recently happened to have in my wards two children of about the same age and height; in one case I performed Syme's amputation as the caries was too extensive to save any of the tarsus, and in the other case (the notes of which are given above) I performed Pirogoff's modified operation. It occurred to me to photograph the patients side by side. The accompanying illustration (which I have reproduced faithfully from the photograph) shows the advantage in length in the case of the boy as against the shortening in that of the girl, in which Syme's unmodified operation was done. The difference in the gait was not less noticeable even when the shortening in the latter case was corrected by a cork sole.

ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE.

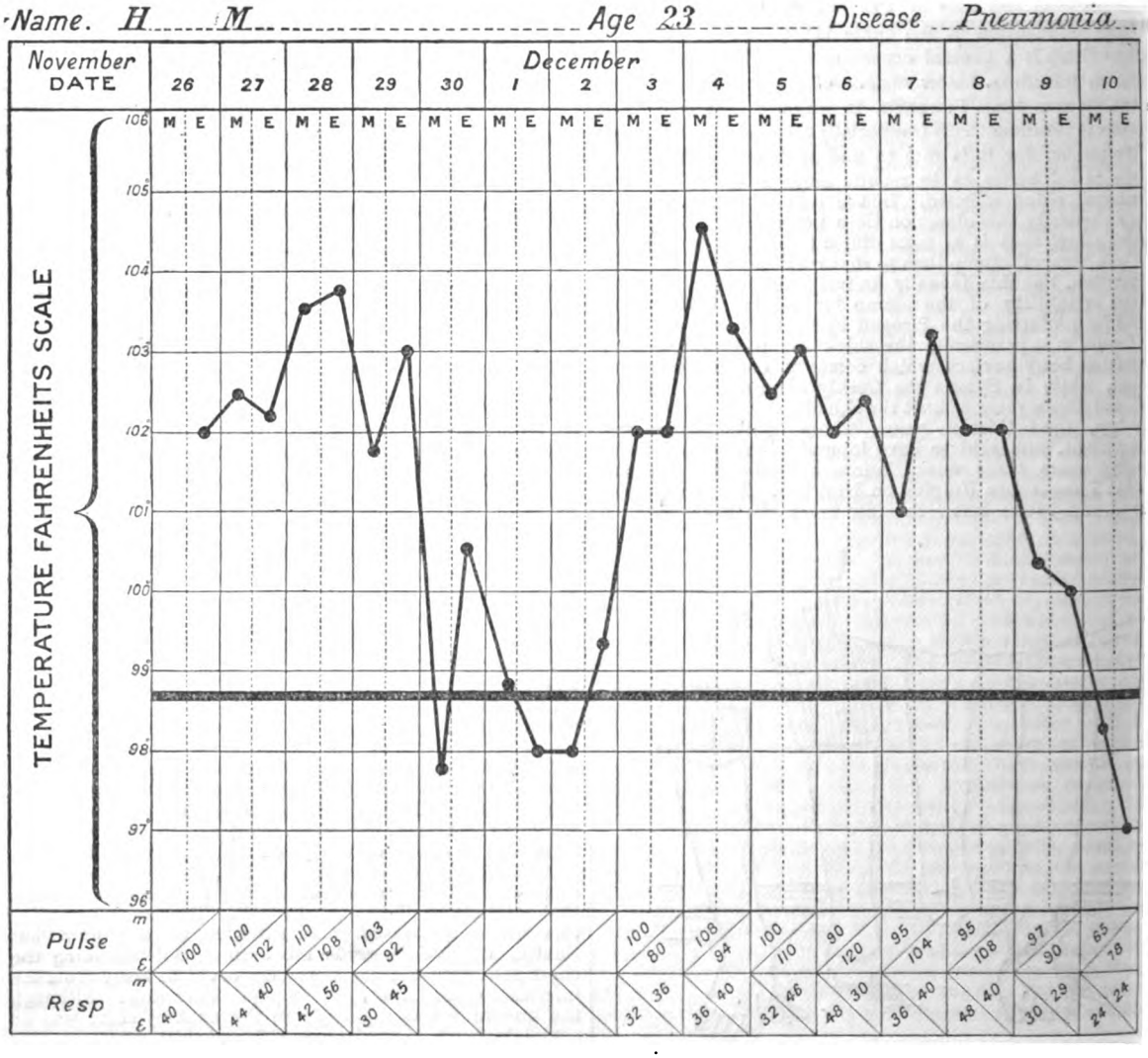
A CASE OF RELAPSING PNEUMONIA.

(Under the care of Dr. THOMAS OLIVER.)

A MAN, aged twenty-three years, was, on Nov. 26th, 1896, admitted into the Newcastle Royal Infirmary under the care of Dr. Oliver. As the patient was delirious no history of the illness was at this stage obtainable, except from the remark volunteered by a friend that he had been in bed for five days. Subsequently when he recovered it was ascertained from him that while at work on the 21st he had been suddenly seized with a violent shivering at 11 A.M., that do what he might he could not get himself warm, and that in the afternoon he felt so unwell he was obliged to go to bed. On the morning after his admission into the infirmary he had a flushed face and rapid breathing, his mind was still wandering, and he was the subject of short cough and rusty expectoration. He was too ill for a careful examination to be made. All that could be done, therefore, was to make an examination of the front of the chest, by which was detected a limited area that was dull on percussion, commencing a few inches below the right clavicle, and over this area distinct tubular breathing could be heard. The left chest and heart were healthy. On the 28th, while there was evidence of the percussion note over the upper part of the right chest being less dull, there was detected a small area of dulness external to the right nipple and also that the base of the lung was dull. The area which gave this altered percussion note extended in an upward but slanting direction towards the axilla. On examining the chest posteriorly tubular breathing could be heard from the inferior angle of the right scapula downwards. Although the breathing was rapid (56 to the minute) there was no actual dyspnœa, the pulse was 110, and the temperature was 102° F., having fallen 2° since the previous night. Later in the course of the day there was a considerable degree of muscular twitching, but this disappeared on discontinuing the liquor strychninæ which for the past two days he had been taking. On the 30th he seemed to be rather better. His temperature on the previous afternoon was 105·2°, but by midnight it had fallen to 98·4°, and with the fall of his temperature the delirium disappeared. For brevity's sake, although the four hours' chart is quoted from, it is not reproduced. For the next two days the patient seemed on the whole to be fairly well; but although his temperature had fallen he never exhibited that look of well-being which is discernible in any one who, having passed successfully through a sharp illness like pneumonia, may be said to have "turned the corner." He was heavy and listless, so much so that when, after remaining thus for a few days, and the temperature again began to rise, and the dulness at the right

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base had extended to the sixth rib, the possibility of a commencing empyema suggested itself. On Dec. 5th the patient was the subject of a short hacking cough. The respiration was 32 and the pulse was 100; the tongue was coated. There was slight diarrhœa, the stools being thin and watery, yellow, and of a disagreeable odour. Although his temperature on the previous night was 104·5° he was stronger than he was and abler to bear examination. The dulness previously detected at the level of the third right rib had entirely disappeared and the percussion note was now almost hyper-resonant. There was still dulness at the extreme base of the right lung. Over the upper part of the right lung the breath sounds were coarse and accompanied by muco-crepitant râles, while at the base a friction sound was heard and there was rather a deficiency of the respiratory murmur. Beyond a degree of coarseness and loudness of the breath sounds the left lung presented nothing abnormal. The heart was healthy and there was no splenic enlargement. On examining the chest posteriorly the dulness at the right base was most marked in the axillary line, and here the respiratory murmur was deficient. As the physical signs suggested pleural effusion a needle was inserted into the right chest, but only a few drops of dark venous blood were withdrawn. On the 8th there was very marked tubular breathing with increased vocal fremitus and vocal resonance over the extreme right apex, back and front, but especially posteriorly. On the 10th the patient was bathed in perspiration; his breathing was less rapid and his condition, generally speaking, was favourable. On the 11th he still perspired very freely. He had apparently passed through a second attack of pneumonia, in which the temperature began to fall on the sixth and seventh days. On the eighth it was subnormal (97·4°), the pulse was 65, and the respiration was 24. He looked pale and was prostrate. He had the look of a man who had passed through a severe illness, but with it all he had a clearer and brighter expression than he had ever had since his admission. On the occasion of his first crisis the observer was struck by the want of mental clearness, but in this there were a brightness and intelligence which were not present previously. There was still cough, and the sputa were now muco-purulent. It is interesting to note that in the second attack of pneumonia the sputa, which had lost their typical character, again became rusty on the second day of the illness and continued thus until the sixth. On examining the blood after the first crisis there was almost a complete absence of leucocytes, but in this, although a few more were observed, there was still a very noticeable deficiency. The patient's prostration was still too great to allow of any lengthened physical examination, but there could be detected dulness over the right apex, crepitation and bronchial râles, with tubular breathing. On the 14th, although looking pale, the patient was progressing satisfactorily. There was still profuse perspiration; the pulse was 60, and the respiration was 24; the temperature for the past four days had been sub-normal. The expectoration was becoming increasingly less purulent and more mucous, and was gradually diminishing in quantity. Over the right apex there were heard coarse bronchial breathing and large crepitant râles. The heart and the left lung were healthy. The urine throughout the illness had been free from albumin and sugar. On the 19th the patient looked and felt remarkably well; he had an excellent



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appetite, and there was no cough or expectoration. The right chest was resonant from the clavicle to almost the base of the lung; the respiratory murmur was full and free, and there was no longer any râle heard in front except at the extreme base, where occasionally a friction sound could be detected during inspiration. In the axillary line there were diminishing dulness at the base, friction sound, and feeble respiratory murmur. These by degrees gradually disappeared, and the patient made an excellent recovery and has maintained (August, 1897) his health since.

Remarks by Dr. OLIVER.—Whatever view we hold as to the nature of a recurrence of acute pneumonia in a patient a few days after his apparent recovery, the fact is sufficiently uncommon to attract attention and to merit the few remarks I feel disposed to make upon it. Typical as pneumonia frequently is, it still exhibits many peculiarities, particularly as regards its duration and crisis. A relapse occurs occasionally and may even be repeated. Under most circumstances it is not always easy to distinguish a relapse from a pseudo-crisis, from pneumonia progrediens, or from a form spoken of as migratory and defined by Homburger as a pneumonia which in its course shows successive invasion of different parts of the lung, while the physical signs disappear from the parts first affected. To constitute a true relapse there must have been complete apyrexia and more or less advancing resolution. Osler alludes to pneumonias in which after the subsidence of fever any time between the ninth and eleventh days, and when the temperature has remained normal for a day or two, it again rises and persists for eight or ten days. The second attack is said to be mild, the duration of the pyrexia in the relapse being usually shorter than in the primary illness by several days. Since a true relapse is a rare occurrence we have some difficulty in really knowing what it means. Walshe, in dealing with the question of the frequency of relapse in pneumonia, states on the authority of Briquet that it occurs in one-fifth, and according to Grisolle in one twenty-eighth of the cases. Our experience certainly leads us to say that Briquet very much overstates the frequency, and, without expressing the ratio in numerical terms, we would simply state that a true relapse announced by a fresh rigor, rusty expectoration, crepitation, and a well-defined period of pyrexia is in this country a very much rarer circumstance than these French physicians would lead us to believe. The patient whose illness supplies the above facts was a young, strongly built, and apparently healthy man, but of such an age as to have sometimes raised in my mind during the course of his illness the question as to the possible existence of a deeper constitutional malady than pneumonia. It is noteworthy that the relapse was not ushered in by a rigor, but by a fairly rapid rise of temperature and an increased number of respirations; that the sputa became rusty on the second day; that the pyrexia lasted about seven days, terminating in a lysis accompanied by profuse perspiration; and that, just as in a primary attack of pneumonia, the physical signs in the chest lagged behind those indicating constitutional disturbance. Some time ago Dr. A. E. Wright,[1] in a paper on the Bacteriology and Pathological Chemistry of Pneumonia read before the Pathological Society of London, showed how, as the crisis in this illness was reached, there occurred the triple phenomenon of disappearance of leucocytes and bacteria from the blood, accompanied by tumefaction of the spleen. In my patient the disappearance of leucocytes from the blood after the pseudo-crisis was very noticeable, also after the relapse; but there never occurred any perceptible enlargement of the spleen.

[1] THE LANCET, Feb. 9th, 1895.

NORTH DEVON INFIRMARY, BARNSTAPLE.—The annual meeting of the North Devon Infirmary was held in the board-room on Aug. 24th, Lord Ebrington being in the chair. The report showed that on June 30th, 1896, there were 44 in-patients remaining under treatment; 691 were admitted during the twelve months, 23 died, and 657 were discharged, leaving 55 under treatment on June 30th, 1897. The out-patients were 2967 in number. The average daily number of in-patients was 51, the average period of residence being between 25 and 26 days. The total income was £3318, including £1211 balance at the banks last year; the expenditure, however, had materially exceeded the income, so that it was necessary to withdraw £500 from deposit.

Reviews and Notices of Books.

Allgemeine Dermatologie, oder Allgemeine Pathologie, Diagnose und Therapie der Hautkrankheiten. (General Dermatology, or General Pathology, Diagnosis, and Therapeutics of Diseases of the Skin.) Von Dr. ERNST KROMAYER. Berlin: Borntträger Brothers. 1896. Price 10 marks.

THIS book, published in the form of lectures, will afford to those acquainted with the German tongue a very useful introduction to diseases of the skin. As its name implies, it treats the subject from the general point of view only. Descriptions of special diseases form no part of its scheme, and diagnosis and therapeutics are dealt with from a broad and general standpoint also. The first part of the book treats of general pathology in its relation to the skin, and the writer justly points out that, owing to its superficial position and accessibility to observation, the skin offers a peculiarly favourable field for the study of pathological processes. The first two lectures are devoted to a detailed account of the structure of the skin and its appendages, illustrated by useful diagrams and micro-photographs. The author then passes on to the subjects of active and passive hyperæmia and anæmia of the skin; the account of atonic hyperæmia is a very excellent and lucid one. Subcutaneous and papillary œdema are next dealt with very thoroughly. Inflammation receives attention in three lectures, in which the subject is treated at considerable length and in a scientific spirit. In the next two lectures the author deals with the pathology of the chronic papular and tubercular eruptions, grouping them together on the ground of their common basis in tissue proliferation; the widely different nature of such diseases as tuberculosis, psoriasis, and ringworm leads us to doubt the expediency of such a classification, however excellent the description of the pathological processes in question may be. Hypertrophy, atrophy, pigmentation, new growths, and ulceration form the subjects of the remaining lectures of this the largest section of the book. The section on general diagnosis comprises two lectures only, in which the writer discusses the principles upon which the genus, rather than the species, of the disease is to be determined. The third section consists of three lectures, in which are set forth the principles of dermatological therapeutics and the mode of action of the different groups of remedies. Both these sections are well worthy of attentive study.

We know of no book in the English language, and, indeed, no book of such moderate size in any language, which has precisely the scope and aim of the one before us. We are, indeed, sadly lacking in short but thorough introductory treatises of the kind. No one after reading Dr. Kromayer's lectures can fail to bring to the diagnosis and treatment of skin diseases a clearer mind and a more rational and scientific spirit. We can recommend it heartily to all who can read it in the original, and we trust that it may be worth someone's while to translate it for the benefit of those who are unfamiliar with German.

Manual of Static Electricity in x Ray and Therapeutic Uses. By S. H. MONELL, M.D. New York: W. B. Harison. 1897. Royal 8vo. Pp 614.

THIS book has a threefold interest, first, because it is the most important book in the English language on Modern Applications of "Statical" Electricity to Therapeutics; secondly, because it supplies reprints, most useful for purposes of reference, of the reports of Addison, Golding-Bird, and Sir William Gull on the subject of statical treatment in the earlier part of this century; and, thirdly,

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because it draws attention to the advantages of the electrostatic machine for x ray work.

In England the excitation of x ray tubes by electrical machines seems to have been tried and abandoned, the probable reason being that good machines are extremely uncommon in this country. Theoretically, an apparatus capable of supplying a steady electro-motive force high enough to excite the tubes should present advantages over the intermittent current of the induction coil, and practically it is so. With a good Wimshurst machine there is a brilliant illumination of the phosphorescent screen far superior to the flickering light given by a coil, and time is saved in exposures of photographic plates. Dr. Monell claims to have procured with five minutes' exposure results as good as could have been obtained in half an hour with coils. He writes with confidence and is evidently an experienced worker with the x rays. A machine with twelve 36 in. plates is the size which he finds best, and though his work was done with a Holtz machine (the type most used in the States), the Wimshurst machine is certainly as good and probably is better for the purpose.

Turning now to his account of the therapeutic uses of electrostatic treatment, we find much which is calculated to afford food for thought. In England the statical machine has not yet been seriously taken up, but it is evident that Dr. Monell finds in statical treatment a most valuable agent for the relief of rheumatic and other painful states, such as neuralgia and sciatica; also in neurasthenia and in melancholia and other morbid mental conditions, where he finds it to have a general tonic effect which is productive of good.

The style of the book is spirited and practical; it supplies a want, and should lead to a further study of electrostatic methods in this country.

LIBRARY TABLE.

Tuberculosis, or Flesh-eating a Cause of Consumption. By JOSIAH OLDFIELD, M.A., B.C.L. The London Vegetarian Society, Memorial Hall, Farringdon-street, E.C. 1897. Pp. 62. Price 6*d*.—The principal question discussed in this little book relates to the trustworthiness of official inspection as a means of recognising tuberculous meat. The author concludes that a large proportion of the carcasses which are passed by the inspectors are nevertheless sufficiently infected with tubercle to be dangerous to the consumer, and that the system is almost worse than useless, for it deludes the public into relying on a security which is non-existent. He points out that the ordinary cooking of meat does not necessarily destroy the tubercle bacillus and its spores, and he advocates vegetarianism as a complete solution of the difficulty. At the same time he recommends a much more careful and thorough examination of meat than is at present enforced, together with compensation to butchers who find that the animals which they have bought are diseased.

Mrs. Keith's Crime. By Mrs. W. K. CLIFFORD. London: T. Fisher Unwin. 1897. Price 6*s*.—This is a new edition of a powerful if sombre work which appeared first in 1885. On its first appearance some interest was aroused among medical men as to the exact nature of the complaint from which the heroine suffered, opinions being pretty equally divided between a mediastinal tumour and some form of morbus cordis. In any case, it is a rare occurrence to find medical matters treated in lay writings as correctly as they are in this book.

In the *Phonographic Record* for August Dr. Colman tells how a case of intense pain in the hand and arm after lasting for five months was cured by rest and continuous irrigation for ten days with weak spirit and water. Sir W. R. Gowers asks for information as to the duration of the blue line in lead poisoning, and Mr. Peyton Beale emphasises the importance of purification of the skin of the patient and the hands of the surgeon before an operation. When wounds become inoculated with micro-organisms at the time of an operation, in nearly every case the micro-organisms come from the hands of the surgeon; and Mr. Beale thinks that in nine-tenths of the operation wounds which go wrong the inoculation with septic organisms takes place at the time of the operation. Short notes and a reference to medical phonography in Australia, where Dr. Grant, who has used shorthand for a quarter of a century, testifies to its advantages, complete the number.

JOURNALS AND REVIEWS.

Brain: A Journal of Neurology. Parts 77 and 78. Spring and Summer, 1897. London: Macmillan and Co., Ltd.—It seems to us a pity that the abundant material apparently at the disposal of the Neurological Society should be as it were saved up until there is sufficient to make a double number of *Brain*. The amount of reading in over 250 pages of neurological material is considerable, and we venture to think that the society would consult the convenience of all readers of *Brain* if it reverted to the excellent custom of issuing more or less regularly its single quarterly numbers. The double number before us is one of much interest. Dr. Savage's presidential address on Heredity and Neurosis occupies the first place. Dr. Michell Clarke next has an article on the curious disease known as Huntington's Chorea, and there are numerous other clinical and experimental records by Dr. Risien Russell, Dr. Wiglesworth, Professor Hill, and others. One of the most important papers is probably that of Dr. F. E. Batten dealing with the muscle spindle under pathological conditions. There are several reviews of neurological and psychological works, and a comparatively novel feature is a short abstract of the proceedings of the Neurological Society.

SOCIETY FOR THE SUPPRESSION OF THE OPIUM TRADE.—We have received the report of the annual meeting of the Society for the Suppression of the Opium Trade, which was held at the Memorial Hall, Farringdon-street, E.C., Sir Joseph W. Pease, Bart., M.P., presiding. It mentions that the majority report of the Royal Commission on Opium recommended that the Indian Government should abandon in all provinces the licensing of shops for the manufacture and sale of opium-smoking preparations, and this reform has now been carried into effect. The Indian Government has also undertaken to ascertain the opinions of local governments on the question of legislation against the use of rooms as smoking saloons, but the replies received from the various local governments have not yet been presented to Parliament. Information, however, has reached the Society from reliable sources to the effect that the opium-smoking establishments have in fact been closed almost all over India, apparently without any fresh legislation. To the great mass of the Indian population the closing of these places means the suppression of opium-smoking, as in India very few have the skill or the facilities for preparing opium for their own smoking. Another measure, enacted at the close of 1896, is that by which in the Straits Settlements the Malay population has been excluded from such places, and thus practically protected from the opium vice altogether, as opium is not usually consumed there in any other way. Another race among whom the use of opium has recently been prohibited are the Chins of Upper Burmah, imprisonment or fine, or both, being the punishment for cultivating or dealing in opium, ganja, or bhang in the Chin Hills. The report goes on to state that the Indian Government, although it is endeavouring to check opium smoking in India, nevertheless prepares in its own factories, and sells for export every year, mainly to China, 36,000 chests, containing 5,040,000 lb. of opium specially prepared to suit the taste of Chinese smokers.

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THE LANCET.

LONDON: SATURDAY, SEPTEMBER 4, 1897.

THE first meeting of the British Medical Association beyond the limits of the four seas is naturally an event of special mark, and it is fitting that in this year of Empire the meeting place chosen should have been the greatest of our self-governing colonies. The note of unity was prominent in the addresses of Dr. RODDICK and Dr. OSLER, reports of which will be found in another column. The President took for the main subject of his address the Medical Aspects of Canada—a wise selection, for we fear that to most of the British delegates that great country is almost an unknown land. Some few books have been published on this side dealing with it, notably the delightful work of EARL MILTON and Dr. CHEADLE, and the "Great Lone Land" of BUTLER; but even these are not well known, and both, if we remember rightly, appeared some thirty years ago. The natural resources of Canada are very remarkable, and her special feature—namely, the enormous area of water-way—is to be matched in no other land, save possibly Finland. British practitioners will owe Dr. RODDICK a debt of gratitude for the clear and concise way in which he has summarised the advantages of his country.

The subject of Professor OSLER'S address in Medicine was a very fitting theme for a meeting held in a great British colony. He dealt with the growth of medical knowledge in the English-speaking countries beyond the seas. The nearest parallel to the Greater Britain which has grown up within the last three hundred years is to be found in Magna Græcia, and as the Grecian cities scattered about the shores of the Mediterranean looked for help and support from the Greece they had left, so the early British colonies received their knowledge and their learning from the land whence they themselves had come. Hardly three centuries have elapsed since the revival of medicine in England, and three names naturally suggest themselves as representative of the progress which has come from that revival. LINACRE, HARVEY, and SYDENHAM are typical of the literary, the scientific, and the practical aspects of modern medicine. LINACRE comes first in point of time; not only was he in a large measure responsible for the revival of Greek thought in England, but he was also directly the cause of the more careful study of HIPPOCRATES and GALEN in the original. The truly scientific character of so much of GALEN'S work formed a most striking contrast to the crude empiricism which was current in LINACRE'S day, and in rendering available once more this ancient knowledge LINACRE prepared the way for his successor HARVEY. The revival of the study of the Greek Medical Classics could not but benefit and assist the careful scientific study of medicine. HARVEY'S great discovery of the circulation of the blood was in a way an outcome of the further consideration of the methods of the "father of medicine," and this discovery was itself the true foundation of modern experimental physiology.

If there is any special quality which may be said to be characteristic of the British it is certainly the practical nature of all their work, and so HARVEY did not content himself with remaining a theoretical physiologist—he was also a practising physician; and though the public of that day is said not to have appreciated as it should this union of the science with the art of physic, yet the union cannot but have been beneficial to medicine itself. The same tendency has been seen even up to the present day; those who have done most for physiology and the allied sciences have been for the most part engaged in the practice of medicine or surgery. We turn to the third member of the triad. If we may look upon HARVEY as typical of the science of medicine we may regard SYDENHAM as a good representative of the practical physician of to-day. At the start he was weighed down by the accumulations of many centuries of false facts and baseless theories; these he resolutely put aside, and in the very spirit of HIPPOCRATES he applied himself to the exact and careful study of the phenomena of disease; the practical nature of SYDENHAM is seen in all his work, and though we may not claim for Britain the distinction of advances in the scientific aspects of medicine, such as can be claimed by the countries of LAENNEC, PASTEUR, VIRCHOW, and KOCH, yet all the most important practical advances, as vaccination, anæsthesia, and antiseptic surgery, are the products of the English-speaking countries.

Professor OSLER divides the development of medicine in North America into three periods. In the first period, which may be considered to extend from the foundation of those colonies to the year 1820, all the medical knowledge was derived from the mother country, and until the formation of medical schools in America, commencing soon after the middle of the eighteenth century, the supply of medical men was derived almost entirely from Great Britain, and many colonists came to London and Edinburgh to study medicine. In this way the teaching of HUNTER had a very far-reaching effect; his former pupils included many of the foremost physicians of America, and reprints of his works were circulated widely. The second period may be considered to extend from 1820 to 1860. The important advances in clinical medicine due to the researches of BICHAT, BROUSSAIS, and LAENNEC naturally attracted many American students to Paris, and the influence of the French school could not fail to be deep and wide; in this way Great Britain lost much of the influence she had formerly possessed, but even during this period medical literature in America consisted almost entirely of reprints of English works. The third period Professor OSLER considers to extend from 1860 to the present time, and it is characterised by the growth of appreciation of the German school. In 1860 appeared in America the first translation of VIRCHOW'S "Cellular Pathology," and the stream of American students turned in the direction of Berlin and of Vienna.

In Australia the majority of those practising medicine have received their professional education in Great Britain, but medical schools have now for a long time been established and the number of native-trained men is yearly

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increasing. India is a vast field for medical research, and Professor OSLER expressed his great regret that the British Government had not done much more than it has to aid the scientific investigation of disease in that country. What the future may bring forth, who can say? No one in 1797 would have ventured to predict that the present year would see such gatherings as have just been held at Montreal and at Moscow, and to science is due the honour of first having united for one common cause men of different race, speech, and creed. Professor OSLER regretted that the literary aspects of medicine had not received of late years the attention in Great Britain which they deserved, but when we have the privilege of reading such an eloquent, learned, and scholarly address as that which he delivered at the Montreal meeting we cannot but think that there are worthy successors of LINACRE at the present day.

Mr. MITCHELL BANKS, who delivered the address in Surgery, took for his subject the military surgeon. At the present time, when the British Government finds it impossible to obtain a sufficient number of surgeons for the army, it is very useful to consider what has been the position of the army surgeon in past times. Some very interesting particulars were given of our scanty knowledge of the surgeons attached to the cohorts and legions of the Roman army; all our information is derived from a few votive and mortuary tablets. Mr. MITCHELL BANKS gave AMBROSE PARÉ his due share of credit for the reforms he effected in the treatment of wounds, and then he went on to speak of PETER LOWE, who, after having seen a great deal of practice in military surgery in France, returned to Glasgow, where he founded the Faculty of Physicians and Surgeons. At the end of the sixteenth century he published a "Treatise on Surgery," in which he expressed very sensible views as to the treatment of gunshot wounds; his methods of arrest of hæmorrhage were good, for he advised the actual cautery if the wound was foul, but a ligature if the wound was sweet. Thirty years later WOODALL'S "Viaticum" appeared, which is of interest as the first English work specially devoted to military surgery. A name which is even better known is that of RICHARD WISEMAN, who served as surgeon in the armies of CHARLES I., and published in 1672 a "Treatise on Wounds." A very interesting account was given of Baron LARREY, NAPOLEON'S great surgeon, who served with much distinction in the Russian and Waterloo campaigns. The danger of death in a naval or military expedition was formerly much greater from disease than from wounds, and several instances illustrating this fact were quoted. On the field of battle military surgeons run at least as much risk as the members of those branches of the army which are specially called "combatant," and members of the medical staff have received a larger proportion of Victoria Crosses than the other branches of the service. Many instances of the great courage displayed by army surgeons were mentioned, and similar gallant deeds to those related will without doubt be performed whenever the occasion shall arise.

INTRA-TRACHEAL medication has been extensively tried by numerous observers. Some physicians have been fully satisfied with the results; others, however, have found that not only does this method of applying drugs to the respiratory apparatus cause considerable discomfort to the patient, but no better results are obtained than when the drugs are given in the usual way by the mouth. These remarks, of course, do not apply to laryngeal medication. In the *Journal of the American Medical Association* of June 26th a paper appears by Dr. J. A. THOMPSON, of Cincinnati, detailing the results of his experience of tracheal injections, which has been very large, and his conclusions are decidedly favourable to that mode of treatment. He considers that there are several reasons for the slow growth of this manner of treatment in professional favour, the principal one being that few physicians are sufficiently expert in the examination and treatment of the upper air passages to employ it. Possibly there is some truth in this statement, and it may account in some measure for the discomfort experienced by the patients after an injection has been administered; if properly given very little, if any, inconvenience is experienced. Dr. THOMPSON claims for this method of treatment several advantages. In the first place, he says, we get the direct local action of the medicines on the diseased areas, and he instances bronchiectasis as being particularly suitable for tracheal injections. He is of opinion that "no medicine given by the mouth will prevent the decomposition of the secretions in the dilated bronchi; the odour and the absorption of septic material from them cannot be controlled. A few tracheal injections will usually disinfect the cavities so that the odour disappears." With these remarks we agree; but whether this principle of local action can be extended beyond dilated bronchi is doubtful. If a large tuberculous cavity communicates with a bronchus it is possible that a tracheal injection of guaiacol might prove beneficial; but that the drug acts locally on the lung tissue itself, especially at the apices, has by no means been proved.

Another point brought forward by Dr. THOMPSON is well worthy of consideration. Medicines used by tracheal injections are not changed by passing through the digestive organs into unknown compounds, and for this reason we can be more certain of their action. "No one would think of treating a tuberculous laryngitis by internal medication alone. There is just as much reason for applying medicines of known beneficial local action directly to the lungs as there is for using them in the larynx." The weak point in this suggestion is that we cannot get at the diseased portions of the lungs as we can at the larynx, but at the same time if guaiacol has a local action on tuberculous deposits, if the injection is well tolerated, inspiratory efforts may carry the drug some little distance into the lung, and some of it may be absorbed by the parenchyma of the lung, and so the desired effect be produced. Dr. THOMPSON also points out that when medicines are injected directly into the trachea they have no deleterious effect on the organs of digestion. Guaiacol and similar preparations frequently produce ill effects when taken by the mouth, and have to be discontinued; so also various expectorants, such as are used in acute and sub-acute catarrhal diseases, act injuriously on the stomach and intestine. The name of one class, nauseating expectorants, testifies to the universal recognition of this fact.

The diseases most suitable for this form of treatment,

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according to this writer, are pulmonary tuberculosis, pulmonary syphilis, chronic bronchitis, inflammation of the trachea, asthma, and bronchiectasis. Tracheal injections have been most extensively tried in pulmonary tuberculosis and with varying success by different observers. Dr. THOMPSON speaks very highly of this method in chronic bronchitis. He believes "there is no comparison between the two methods of treatment. The results are so much more rapid and satisfactory by intra-tracheal medication that no patient who has once been given this treatment is ever willing to continue internal medication." The most serviceable solutions are menthol (2 per cent.), guaiacol (1 per cent.), creosote (1 per cent.), and camphor (from 2 to 3 per cent.). The vehicle used should be one of the light petroleum oils or olive oil. The method will doubtless be given an extended trial, and the experiences of other physicians will be awaited with interest.

WE have so often found fault with the loose manner in which medical education and medical practice have been conducted in the United States of America, that it is only fair to be ready to recognise a healthier and more creditable state of things in that country when such an occasion arises. We find such an instance reported by, and commented on in, our contemporary the *New York Medical Record* of Aug. 21st. The case in point occurred in Louisville, Kentucky—a state creditably known in respect of its medical legislation and, what is more, of the application of such legislation. For more than twenty years—namely, since 1874, Kentucky has had a law regulating the practice of medicine in the State, one or two clauses of which we may insert as a guide to those who are impressed with the inadequacy of our own Act.

Clause 2 of the Act of 1874 and amended in 1888 is as follows:—

"That on and after the first day of April, 1889, it shall be unlawful for any person to practise medicine in any of its branches within the limits of this State who has not exhibited and registered in the county clerk's office where he is practising or intends to commence the practice of medicine his authority for so practising medicine as prescribed in this Act."

Clause 3 prescribes the authority to practise under the Act, viz.: (*a*) a reputable diploma from some legally chartered school of the State or from a foreign country; and (*b*) an affidavit claiming exemption on the ground of having been in practice before 1884.

Clause 8 is as follows:—

"Any person living in this State, or any person coming into this State, who shall practise medicine or attempt to practise medicine in any of its departments, or who shall perform or attempt to perform any surgical operation for or upon any person within the limits of this State *for reward or compensation* [the italics are ours] in violation of the provisions of this Act shall, upon conviction thereof, be fined fifty dollars, and upon each and every subsequent conviction shall be fined one hundred dollars and be imprisoned thirty days, or either, or both, in the discretion of the jury; and in no case where the provisions of this Act have been violated shall the person so violating be entitled to receive compensation for services rendered."

A valuable clause in the same sense was "approved" on May 24th, 1890, which ran as follows:—

"Nothing in this Act or the Acts to which this is an amendment shall be so construed as to authorise any travelling empiric to register or practise medicine in any county in this State: to open office for such purpose, or to announce to the public in any other way his readiness to practise medicine in any of its branches in any county, shall be to engage in the practice of medicine within the meaning of the law."

Such is the law in Kentucky; and so long ago as 1890 Dr. J. N. MCCORMACK, Secretary of the Kentucky State Board of Health, testified that it was working well with the approval alike of the profession and the public, and that four or five hundred men had been forced to retire from practice or leave the State. Writing in reference to the case alluded to below, he gives a report significantly different from the dispiriting reports of all those who try to use our lame legislation for the repression of quackery and the vindication of regular practice, though our system of medical education and registration is, of course, very much more exacting than that of Kentucky. He says: "Our law has now been in operation nearly four years. It has been tested upon every point, and, so far, we have not failed to secure a conviction in each case tried. We convicted the Copeland people, the K. and K.'s, and all other concerns of that kind doing business here, and are able to report that there is not now an itinerant or advertising doctor within the limits of this State." When shall we be able to say the same of the United Kingdom? It only remains for us to state the particulars of the case which has called forth this striking testimony to the efficiency of the law of Kentucky. First let us say that it was brought into court by the Kentucky State Board of Health. It was that of a member of the bone-setting fraternity who styled himself "a Professor of Osteopathy" and who was charged with practising medicine within the meaning of the Act of the State. He sought to meet the charge by saying that he was "not practising medicine," but "simply manipulating the muscles with the hands." Good, simple man. Unfortunately for him, Judge THOMPSON was not so simple, but considered "that in his ignorance of the fundamental principles of the profession he subjected the child, who was suffering from tuberculous disease of the hip, to cruel and unnecessary torture, affecting his health and necessitating the employment of a physician to treat him for fever resulting from his ineptitude." The court ruled—and the ruling is expected to be a precedent in future cases—that "any person who *for compensation* professes to apply any science which relates to the prevention, cure, or alleviation of the diseases of the human body is practising medicine within the meaning of the statute." No wonder that good law, construed with so much force and common sense and so protective of suffering humanity, is popular with the public as well as with the profession.

Annotations.

"Ne quid nimis."

INSUFFICIENCY OF THE 40TH CLAUSE OF THE MEDICAL ACT.

A CASE is reported, in the *Accrington Gazette*, showing the hopelessness of prosecutions under the 40th Section of the Medical Act. The defendant was John Haworth, of 366, Blackburn-road, Accrington, charged with falsely

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implying that he was recognised by law under the Medical Act, 1858, Section 40. Mr. Haworth was not unknown to the Bench or to Accrington, for in 1896 he was fined 40*s.* and costs for a similar offence. The facts were very simple. The defendant had on the fanlight over the front door the words, "Dr. Haworth, Homœopathic Physician," in gilt letters; and on the brass plate on the front door of the house the words, "Dr. Haworth, Homœopathic Physician and Massage Institute." On the outer gate of the house was a brass plate with the words, "Dr. Haworth, M.D. Canada"; the word "Canada" was under the words "Dr. Haworth, M.D.," and in very small letters, not to be made out by persons standing any distance from the plate. The chief defence was that the word "Canada" made all the difference and enabled persons to see that the defendant made no pretence to be recognised by English law as a medical man. Another point in the defence was curious and not very complimentary to homœopathic practitioners. Mr. Sutcliffe, representing the defendant, said there was not a fully-qualified medical man or registered practitioner in Accrington, or even in Lancashire, who used the words "homœopathic physician." He really made a point of this as showing that "Dr. Haworth" made it clear that he was not a qualified medical man within the meaning of the Act. On such weak grounds Mr. Sutcliffe defended his client, who called himself "a physician" and M.D. in two instances without even the qualification of the word Canada, which in this bare form means absolutely nothing. The diploma was said to have been procured after examination from a university in Canada. But it was not produced, and the magistrate's clerk advised the Bench to take no notice of it. We should have thought the offence very obvious. But the Bench was hopelessly, because equally, divided. What will Mr. Muir Mackenzie say to this fresh illustration of the insufficiency of the 40th clause, and to which moiety of the Bench of Accrington will he award praise? Meantime the British public are effectually deceived, and the vagueness of Acts of Parliament is painfully demonstrated.

CHLOROFORM IN DENTAL PRACTICE.

A DEATH under chloroform occurred at Rhyl on Aug. 13th under circumstances which confirm our often expressed opinion that chloroform is not a desirable or safe anæsthetic for dental practice. The patient in this case was a woman, aged twenty-nine years, in good health, and described as being strong and free from fear of the anæsthetic. She had very bad teeth, and a local dentist advised the extraction of twenty-seven of them. A medical man was called upon to give an anæsthetic, and he advised the use of chloroform. In his evidence[1] he said that he had examined the patient and judged she was in a fit state to take the anæsthetic. He considered nitrous oxide gas would be insufficient for so extensive a clearance, and added: "It was quite a usual thing to administer chloroform in cases of dental surgery which occupied some time, *and chloroform was as safe as any other anæsthetic.*" It is to be presumed that this statement, besides its general application, was meant in particular to apply to dental surgery, and it is in this connexion that we cannot but feel so sweeping a pronouncement is hardly in consonance with either the facts of this particular case or with the experience of the last fifty years. To refer for one moment in detail to the case. The patient was placed in a chair, and after the chloroform had been given from a mask for fifteen minutes the medical man signed to the dentist to commence the extractions. This was done, and after three teeth were removed the operator was requested to stop, as the patient had become "blue in the face" and "the breathing had stopped." It is further stated that just before the operation the patient struggled slightly, "as was usual in cases of the sort." They lifted the patient out of the chair, "but she was dead three or four minutes after she was placed on the floor." It would seem, therefore, that when the patient struggled she was not fully under chloroform, and this was after about thirteen or fourteen minutes of inhalation, then she at once became fully under the influence of the anæsthetic and the operation was proceeded with. Probably during that struggle the overdose was inhaled, and the interval before the chloroform actually stopped respiration by its action upon the medullary centres was taken by the dentist in drawing three teeth. It is obvious that the actual manipulation of the tooth extraction interferes both with respiration and the proper watching of the chest movements. Many medical men on such occasions assist their dental colleagues by holding the patient's head, and so have their attention withdrawn from the function of respiration and the condition of the patient. These are manifest objections to using chloroform, and a still further one is that it has been shown that the sitting position is one which increases the patient's risk under that anæsthetic. But the most cogent adverse reason to the use of chloroform in such cases is the extremely high mortality which reference to the report of THE LANCET Commission appointed to Investigate the Subject of the Administration of Chloroform and other Anæsthetics from a Clinical Standpoint, in 1893, shows only too plainly. We cannot agree with any statement that chloroform in dental operations is as safe as ether or the A.C.E. mixture. It is a very great question whether it is wise to attempt to remove twenty-seven teeth at one sitting; but if cases do arise in which such an heroic proceeding is considered justifiable, then certainly ether or a mixture should be used rather than chloroform. The only way in which the last-named anæsthetic can be at all safely employed in dental surgery is where the patient is placed under the same conditions as if he or she were about to undergo a major surgical operation. This cannot be done in the ordinary routine work of the dental surgery. The patient must be prepared by abstention from heavy food, must have all clothing absolutely removed and replaced by a dressing-gown, and must be placed in the recumbent position. We cannot but feel that for so comparatively trifling a matter as having teeth out no one's life should be jeopardised by the use of chloroform unless the fullest precautions are taken and the risk looked clearly in the face. Many country dentists may point to a large experience of chloroform without mishaps, but their fortunate cases cannot counterbalance or lessen the horror of a fatality such as that at Rhyl. We cannot speak too emphatically. This case is almost identical with one which happened only recently and which was recorded in our columns.

[1] Liverpool Mercury, Aug. 16th, 1897.

THE DUKE OF DEVONSHIRE ON HOSPITALS AND NURSES.

THE Duke of Devonshire may always be trusted to seize the prominent points of a question and treat them in the most practical fashion. He gives indication, too—if not always expression—of a sense of humour beneath the more obvious meaning of his words. His primary duty at Bradford on Monday was to lay the corner stone of the new nurses' home at Bradford in connexion with the infirmary there. This, of course, involved a few words on the subject of nurses and nursing. Not every old woman or even every enthusiastic young girl was fit for the work. It required training, intelligence, and assiduity. Indeed, the work was only second to that of the medical profession itself. Some critical prompter seems to have suggested to him that

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nurses were apt to fancy that patients existed for the display of the importance of their art instead of regarding them as needing their consideration. And he gave this hint, which the best nurses will take in good part, with all his unfailing grace and good taste. The share of the medical profession in the work of hospitals was, of course, amply acknowledged by so careful an observer. The "patience, perseverance, and assiduity of the members of the noble profession had awakened the public conscience to the duty of seconding the efforts so nobly made by the profession." The Duke of Devonshire enlarged on the marvel of our voluntary hospital system, and maintained that, though involving great care and responsibility on the part of hospital authorities, and heavy indebtedness, it did not suffer in efficiency. He showed the indirect advantages which the public reaped from hospitals as places where professional education and skill were promoted. If there was any defect in his Grace's handling of this great subject it was in the absence of a word as to the abuse of hospitals, which discourages charity and promotes pauperism.

DEATH BY LIGHTNING.

THE effects of lightning as it passes to earth through the body of a man vary within an astonishingly wide range. It sometimes happens that a person is killed outright without any symptoms or sign of injury. It may be that death is preceded by collapse, paralysis, or convulsion, usually there are marks where the current has entered or left the body, or clothes may have been scorched, or hæmorrhages may have occurred, and more than one case has been recorded where boots have been torn off the feet and nails driven out of the soles of the boots. Seldom does it happen that lightning leaves such appalling evidence of its transit as that disclosed at an inquest held at Hulford House, near Guildford, on Saturday last. The evidence showed that on the previous Wednesday there had been a single flash of lightning and a clap of thunder, and about half an hour afterwards Major Jameson was found lying on his face in a field quite dead. Around him, in a radius of several yards, were his clothes and boots, which had been torn and scattered about in an extraordinary manner. The lightning appears to have struck him on the right side of the head, tearing his cap to pieces and burning his hair off. It then passed inside his collar down the front of his body and both legs into his boots, which were torn to pieces, and then passed into the ground, making a hole about eighteen inches in circumference and three inches deep. His collar was torn to pieces, the front of his shirt was rent into ribbons, the jacket and under-vest were literally torn to shreds, and the knickerbockers he was wearing were stripped from him and scattered on the ground. His stockings and gaiters were similarly torn in pieces, and on the boots the lightning had a remarkable effect. They were burst open, some of the brass eyelet-holes were torn out, nails were forced out, and the soles torn off. The skin had been torn off the chest, and the right leg was torn and blackened; blood was issuing from the mouth and right ear. In connexion with this fatality two circumstances of a more or less unusual kind may be noticed. There is, first, the single lightning flash, neither preceded nor followed by others in the neighbourhood; and secondly, the fact that the person who was struck was "in the open." The latter comparatively seldom happens, perhaps because shelter is instinctively and perhaps unwisely sought: Here there was no warning and no time for this, and so, without any neighbouring object at hand to subdivide and share the discharge, the latter had only one route to earth—viz., the body of its victim. The wet or dry condition of the clothes is an important point in such cases. It often happens that in persons exposed to a thunderstorm the clothes are wet, and therefore afford a comparatively easy passage to any electric current. In the case above detailed the clothes were presumably dry, and therefore bad electrical conductors, and the destructive effect of the lightning would be in proportion to the resistance encountered in transit.

"VESTRIES AND QUACK ADVERTISEMENTS."

IN THE LANCET of May 29th, 1897, we referred to this matter and quoted a letter from a correspondent on the subject. Our correspondent now writes: "In consequence of my further remonstrances with individual members of the vestry, together with your paragraph, the vestry gave fresh consideration to the matter, and a sub-committee was appointed to inquire into it. The sub-committee reported that the advertisement in question was an improper one for the vestry to exhibit, and in accordance therewith the vestry resolved that it should be removed. I am glad to say that this has been done, and the clock with the objectionable advertisement has disappeared." We are pleased to find that the action of our correspondent and our own protest have had the desired effect. The abuse of advertisements is becoming a serious matter. There is a place for everything, but public buildings in towns and fields bordering our railroads are emphatically not the places for the display of commercial enterprise.

DIET DURING COURSES OF MINERAL WATERS.

DR. F. PARKES WEBER, writing in a recent number of *Treatment* on the dietary suitable for patients at mineral water resorts, says that C. von Noorden, Karl Grube, and many others have pointed out that the true rules of diet to be observed whilst undergoing a course of mineral water are the rules suitable to the individual constitution of the patient and the complaint from which he is suffering. Amongst articles of diet which were supposed to be specially unsuitable at Carlsbad butter and fats were the most noteworthy because they are such extremely important foods. The mineral water was supposed to prevent their proper digestion and assimilation. Not only was fat prohibited with sulphated alkaline waters, such as that of Carlsbad, but with muriated waters, such as those of Kissingen and Homburg. Recently, however, F. Kraus has shown experimentally that a course of sulphated alkaline waters does not prevent the proper absorption and assimilation of the fat taken with other food; and C. Dapper had already proved the same to be the case in regard to courses of muriated waters, such as those of Kissingen and Homburg. Kraus gave considerable amounts of fatty food to patients suffering from complaints likely to be met with at Carlsbad, treating them at the same time with fair daily doses of Carlsbad (Mühlbrunnen) water, and he found that the percentage of the ingested fat which could be recovered again in the fæces of these patients was not unduly increased by the use of the mineral water. Dr. Parkes Weber hereupon remarks that a fatty diet gives rise to trouble in certain cases independently of spa treatment, and in such cases the diet whilst the patient is at the spa will have to be regulated. For instance, patients who suffer from obesity or from gastric dilatation due to fermentation of the contents of the stomach must have their diet regulated with respect to fatty and fat-producing foods. There is no doubt that the facility for regulation of diet at some spas, such as Carlsbad, has greatly helped in their reputation for the treatment of certain affections, especially diabetes and obesity. Spas where by a strict *à la carte* system of dining the carrying out of dietetic rules is made comparatively easy are likely to outstrip their rivals where a *table d'hôte* system

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prevails. Moreover, the strict quantitative limitation of the evening meal must have had, and still does have, a wholesome effect at many health resorts. The patients can go to bed earlier after a light meal—a great advantage when they have to rise at a very early hour to drink the waters—and in most persons when free from excessive mental work the digestive powers are probably strongest during the middle of the day. In many persons, also, temporary discontinuance of strong tea or coffee in the morning can do no harm, and can best be carried out at health resorts during periods of rest from the mental work of ordinary life. The substitution of farinaceous soup, &c., which formerly constituted the morning meal at various spas, might still often be recommended.

THE INDIAN RISING.

THE rapid spread and extension of the rising among the tribal populations on the Indian frontier, especially at the present time, when India is only just emerging from a series of calamities of plague, pestilence, famine, and earthquake, is a grave business. The revolt of the tribes seems to have been quite unexpected by the Indian Government; and, notwithstanding that it has a large force in and about the frontier, the season is an unfortunate one for commencing military operations in a mountainous and very difficult country, and the transport and commissariat arrangements for such an expedition cannot be made without some necessary loss of time. Those who are opposed to the "forward policy" followed by the Indian Government will, of course, attribute the insurrection among the hill tribes to this cause, and probably with a certain measure of truth, but what has now to be done is to act and not to argue. The rising must meanwhile be put down, and the Khyber Pass and that of Kohat secured if we are not to lose military prestige and meet with further difficulties and disaffection. The task is an arduous and expensive one, but it has to be accomplished. An expedition at this season will, we fear, be attended with a good deal of inefficiency on account of sickness among the troops, and great demands will be made upon the military medical services in India. The strength and efficiency of the field hospital system of that country will be put to the test. We may add, however, that there is every reason to believe it is in a very different and improved condition to that which existed at the beginning of the last Afghan campaigns. Some difficulty will, we imagine, arise from the numerical strength of the medical departments being insufficient to cope with all the work that has to be performed in India at the present time. Malarious fever, often of a severe type, is usually prevalent in the Peshawar valley at this season, and cases of dysentery and enteric fever will almost certainly occur among the troops. Up to the present time the health of those taking part in the different expeditions is reported to be good.

TREATMENT OF PULMONARY TUBERCULOSIS.

FROM the time that Koch startled the medical world by the discovery of tuberculin numerous attempts have been made to purify this substance and so avoid the injurious effects produced by it. Hitherto these efforts have not met with success, although it is too early to speak definitely of Koch's new tuberculin. In the *Medical News* (New York) of July 3rd a most interesting paper appeared by Dr. J. O. Hirschfelder, of San Francisco, detailing certain experiments made by him. He proposed a theory that is certainly original. This theory was not evolved from the therapeutical results of his injections, but "the method of treatment was a consequence of the biological proposition." He drew attention to the successful results which had followed operations for tuberculous peritonitis, and stated his opinion that "it appears most probable that in these cases the entrance of air into the peritoneal cavity must have been the important factor; that an oxidation of the tuberculin present in the effusion was thus brought about; and that it was this oxytuberculin which effected the cure both of the local and of the general tuberculosis." Acting upon this hypothesis the problem of finding a method of oxidising the toxin without completely destroying it presented itself, and various methods of accomplishing this result were investigated. Dr. Hirschfelder found in the course of his experiments that the peroxide of hydrogen was the substance for which he was seeking. He then gave a detailed description of the preparation of his tuberculin and the method of oxidising it, and remarked that the greatest possible care was necessary in the preparation of this oxytuberculin, for if any appreciable quantity should escape oxidation fatal tuberculin poisoning might result from the large quantities which must be administered. The liquid when injected caused no greater local disturbance than any indifferent fluid would produce. There was no rise of temperature or any other unpleasant constitutional effect. Within a few days the cough and expectoration diminished, and the most striking effect was the rapid improvement in the appearance of the patient. He further went on to say: "The patients that have been treated by me with the oxytuberclin, those who came in the very early stage of the disease before cavities were present, have been rapidly cured ..... Patients in whom the disease was moderately advanced have likewise rapidly improved, and some have entirely recovered. Of the very advanced cases, many have shown marked improvement, and many patients that I have declined to treat as being too far advanced, but who pleaded so hard for the treatment that I could not refuse, have impressed me by the wonderful improvement they have shown." Tables were printed at the end of the paper giving the number of patients and the treatment at various stages of the disease, and the results as shown were certainly very satisfactory. We cannot comment further until more extended observations have been made, and meanwhile await with interest the results obtained by other physicians who may use oxytuberculin in the treatment of tuberculosis, pulmonary and otherwise.

SICILY AS A HEALTH RESORT

OUR Rome correspondent, under date Aug. 30th, writes:—"A mass of correspondence before me attests the impulse, as opportune as it is welcome, given by THE LANCET to Sicily's development as a health resort. The whole island, now that its advantages in point of climate, internal resource, and general attractiveness have received the *imprimatur* of medical science, seems to have realised the future that lies within its grasp, socially and economically, if only it follows up the indications and suggestions so clearly set forth. Take, for example, that lovely seaboard winding gently inland between Palermo and Cefalù—a marine exposure rich in attraction of every kind—and pause for a moment at the balneary station of Termini-Imerese. It is difficult to say whether the advantages of the place are more pronounced in summer or in winter—the former season admitting of *al fresco* bathing under the most favourable conditions and for a longer period than elsewhere; the latter with its supply of thermal waters only awaiting more effective utilisation than its 'Stabilimento microscopico' (as a correspondent playfully calls it) has hitherto vouchsafed. For Termini-Imerese possesses in a degree but partially shared by other thermal resorts in Italy, and hardly shared at all by its transalpine sisters, the advantage of being as available for the 'cura sudorifera' and for all-round balneary treatment during the winter months as during the summer. The opportunity, indeed, of combining escape from a northern winter

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with the prosecution of a thermo-mineral 'cure' is one which many a British sufferer from gout or rheumatic arthritis would eagerly embrace, and Termini-Imerese presents this under every desirable condition, essential and accessory, except one, and that is the 'Stabilimento' itself. As already said, this establishment is on a very small—well-nigh Liliputian—scale, sufficient, possibly, for those who have hitherto frequented it, but quite unequal to the *clientèle* which nature and science clearly mark out for it. As a correspondent suggests, it has remained in this undeveloped condition because, between Cefalù and Solunto, it has always been absolutely without a rival, which is another way of saying that the balneary resources of that exceptionally favoured line of coast have had, like Sicily generally, to await such a demonstration as THE LANCET has been the first to give. But, as I now learn, it will not long be allowed this excuse for neglect of opportunity. The spirit of competition is awake and abroad, and in self-defence, if from no other motive, Termini-Imerese will have to 'march with the times' and add to its accommodation and appointments if it is not to be distanced by more enterprising neighbours. The requirements of civilisation—particularly of English-speaking civilisation—'che le attrattive del sito e le esigenze dei tempi reclamano a voce alta' (which the attractions of the situation and the conditions of the times so loudly demand) will have to be complied with; and then, but not till then, we shall see Termini-Imerese taking its proper place among less favoured rivals in counterpoising the 'Riviera Levante' and the 'Riviera Ponente' by a yet more to be recommended 'Riviera Siciliana.'"

CHOLERA IN THE DONGOLA EXPEDITIONARY FORCE, 1896.

WE may safely congratulate Brigade-Surgeon-Lieutenant-Colonel Gallwey not only upon his report,[1] but also upon the successful way in which he and the medical officers under him treated the cholera epidemic which so inconveniently hampered last year's military advance upon Dongola. Campaigning in the Soudan means warring against any dervishes who happen to be in that part of the desert, but it means much more—fighting against the elements of nature and getting gunboats through difficult cataracts during the few weeks of high Nile flood. Consequently the expedition had to continue its advance in spite of cholera, and the sanitary duties were necessarily subordinated to the hard work of the campaign. The infection reached Assouan by means of a native servant on June 8th; the first case in the Egyptian army occurred on June 12th and the last on Aug. 31st. The only time the disease became in the least virulent was from the end of June to the end of July, and the whole epidemic spread over 500 miles of river, road, and railway. Details are given of one healthy regiment which reached a cholera-infected barge on June 12th and developed cholera on the 14th; also a second regiment which arrived healthy on June 21st, while cholera broke out in it on the 23rd. We therefore fail to see why the writer in two places states that the incubation stage was usually seven or eight days. From the experience of three separate outbreaks he points out that the disease may be stamped out in six days in a military camp where early intelligence of the first case is received; where absolute control is possible, and where the water-supply can be efficiently protected from contamination. He is evidently a consistent believer that cholera is a water-borne disease, and though "it was not possible to boil drinking water for the troops protection of the supply formed the chief point in all camps." The regulations for barge traffic, for camp followers, and for native villagers were well planned and carried out, and included notification, isolation, disinfection of personal effects by boiling, and of dwelling places by disinfectants. The military cases numbered 403, with a death-rate of 58 per cent.; the civilians furnished 897 cases of cholera, with the higher death-rate of 82 per cent. It is satisfactory to note that in the Egyptian army of 16,000 men "not a single attendant on patients contracted the disease." Many of our readers will remember that Surgeon-Captain Trask, while on inspection duty, contracted cholera at Ferket on the morning of July 25th, and died the same afternoon.

[1] Cholera Report of Frontier Mudiria and Dongola Expeditionary Force, 1896; pp. 15.

DEATH OF DR. ALFRED HALL, OF BRIGHTON.

WE have to record the death on Aug. 30th of Dr. Alfred Hall, of 75, Lansdowne-place, Brighton. His work was long since done and his age was ripe; but his stately form, his genial face, and his kind heart were all in evidence till a very recent period—a fact which makes his removal still to seem premature. Dr. Hall attended as physician both the Founder of THE LANCET and his wife, and a link with the past of peculiar interest to ourselves is now broken. We hope next week to give more detailed notice of his life.

OXIDE OF IRON IN BACTERIA.

THE association of oxide of iron with certain bacteria has been remarked by various observers, and an instance of this phenomenon occurring on a large scale has been investigated by Professor Manabu Miyoshi, who holds the chair of botany in the University of Tokio in Japan. His observations are published in German, and appear in Vol. X. of the *Journal* of the College of Science, Imperial University, Japan. The material examined by him was a ferruginous mud from the hot springs of Ikao; it is formed upon stones and earth under the influence of the warm ferruginous water which trickles from crevices in the rocks, and on account of its therapeutic properties it is often collected by persons who go to the springs to bathe. This mud consists entirely of bacteria, and can be easily separated from the ferruginous matter which contains few or no bacteria, as it has a pale ochre-yellow colour, and a homogeneous, fibrous, slimy consistence, whereas the latter is of a dirty brown colour and a finely granular consistence. Microscopic examination proves that the mud consists entirely of bacteria cells. The smallest possible portion spread evenly on a cover-glass and dried over a spirit lamp shows innumerable yellow, thread-like cells of unequal length, varying from $\frac{1}{4}\mu$ to 1μ in diameter; they are both straight and curved, and they may be either solitary or grouped in masses. With these thread-like cells there are mingled a number of minute rod-shaped cells. The bacteria seem to resemble the *Leptothrix ochracea* of Kützing; further observations are necessary in order to determine whether they are a new species or not. When the cells are treated with moderately strong hydrochloric acid they not only lose their yellow colour but their outline disappears without leaving a trace behind, and the subsequent addition of ferrocyanide of potassium produces the blue colour characteristic of iron. If a much weaker acid is applied to one side of the preparation the cells become gradually decolourised, and ultimately there remain hyaline fragments of cells, which are seen with difficulty but become easily visible after staining with fuchsin solution. The action of hydrochloric acid led Professor Manabu Miyoshi to believe that the oxide of iron is not deposited on the walls of the cells, but is more or less intimately incorporated with them. The cell walls were entirely free from coarse granules, but on careful examination with Zeiss's $\frac{1}{12}$ immersion lens and No. 4 eyepiece he found extremely minute particles on many cells. In addition to the thread-like and rod-shaped cells the bacterial mass contained a small number of cells resembling

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spirochæta (some of them similar to the *spirillum ferrugineum* of De Thoni), which were often associated in ramifying groups. No others of the more common iron-containing bacteria—such, for instance, as *crenothrix Kühniana* (Rabenhorst)—were found in this particular mud, but fragments of broad, thread-like cells, with diagonal walls, were sometimes seen, which were probably psichohormium; diatoms were also often observed in the less pure portions of the mud. On account of the minuteness of the bacteria cells it could not be determined whether they contained plasma or not. The natural conditions at these mineral springs are highly favourable to the growth of bacteria; the water contains 0·021 gramme of bicarbonate of iron per litre, and has a temperature varying from 41° to 45° C.

THE ISOLATION OF CONVALESCENTS FROM DIPHTHERIA.

IT is well known that diphtheria bacilli are sometimes to be found in the throats of patients long after recovery from the clinical symptoms of the disease is complete, and under such circumstances both these convalescents and their relatives may be very sceptical when informed that the risk of infection being communicated to others is not yet at an end. In a series of 605 cases of diphtheria the bacteriologists of the New York Health Department found that in 304 cases the bacilli disappeared within three days. In 301 cases they persisted for a longer time—viz., in 176 cases for seven days, in 64 cases for twelve days, in 36 cases for fifteen days, in 12 cases for three weeks, in 4 cases for four weeks, in 4 cases for five weeks, and in 2 cases for nine weeks. With reference to this subject the Department makes the following important statement: "The bacilli which, in a certain proportion of cases, persist in the throat after an attack of diphtheria, are always virulent for some time. In the exceptional cases in which the bacilli persist for a very long time it is found that they occasionally lose their virulence a few days before their final disappearance, while in other cases they retain their virulence to the end." The rule laid down by the Department in its circular of May 1st, 1896, is in the following terms: "Persons who have suffered from diphtheria should be kept isolated until cultures prove that the bacilli have disappeared from the throat. When cultures cannot be made, isolation should be continued for at least three weeks after the membrane is gone."

UNQUALIFIED ASSISTANTS AND DEATH CERTIFICATES.

WE have often remarked on the little effect that seems to be produced on certain practitioners and their unqualified assistants by the publication of offences under the Registration or Medical Acts, and of the grave penalties incurred thereby. One offender succeeds another protesting entire ignorance of the previous offences and their punishments. All the newspapers of London lately gave publicity to a case in Islington where an unqualified assistant who ought to have known better forged a certificate of death and was duly punished for it. Now in the very same parish the superintendent registrar exposes before the coroner another case where a poor woman took her child to the surgery of Mr. Day, 1, Benwell-road, N., the patient being prescribed for by Mr. Charles Day's son—Mr. Alfred Harry Day—who had assisted his father for twenty years, but had had no other medical education. He attended the child till death, and then gave a certificate in his father's name. In this case, as distinguished from the other, medical evidence was given by Mr. Jackson Clarke, who had made a post-mortem examination. He found catarrh of the stomach, and regarded the treatment as being usual in such cases, and the cause of death as natural. Of course, this does not dispose, as the coroner said, of questions that may be raised elsewhere. It was explained that the wife of Mr. Day, senior, had died, and that Mr. Day was absent from town in consequence. Everyone will sympathise with Mr. Day in this respect, but it is to be regretted that he did not make provision for having his patients seen by a registered *locum tenens*.

DEATH OF DR. BRAXTON HICKS.

THE death is announced of Dr. J. Braxton Hicks, F.R.S., who has been residing in Lymington, Hampshire, since his retirement from practice. Next week we hope to publish an extended notice of the career of this distinguished obstetrician.

ACUTE PNEUMOCOCCUS INFECTION.

DR. W. R. TOWNSEND describes in the *New York Polyclinic* an unusual case of bacterial infection, the patient being a girl, six years of age, who required to have a tenotomy performed and was consequently admitted to the Hospital for the Relief of the Ruptured and Crippled. At the time of admission she was otherwise in very good health, but a few days afterwards she suffered from abdominal pain and vomiting, her temperature at the same time rising to 104·2° F. Her throat was congested, but showed no exudation, and bacteriological examination yielded no result. She had a slight convulsion twenty-four hours after the commencement of the symptoms, and six hours later she died. A post-mortem examination was made fourteen hours after death, the appearances noted being as follows: The body was fairly well nourished. The brain was normal, but the pia mater was congested. Both lower lobes of the lungs were intensely congested and œdematous, the bronchi contained frothy mucus, and the lining membrane was reddened. The spleen was congested and soft. The kidneys were normal in size, their capsules were adherent in several places, the cortex was thickened, and the markings were very indistinct. Bacteriological examination showed a general pneumococcus infection complicated by a streptococcus infection of the blood of the lungs and heart. The brain contained pneumococci. The blood in the heart, the lower lobes of both lungs, the spleen, and both kidneys contained pneumococci and streptococci. The case is a highly interesting one and is moreover a notable example of the value of bacteriology in diagnosis.

THE EMPLOYMENT OF GLOVES IN SURGERY.

FOR some time past Dr. J. Mikulicz, who is Professor of Surgery in the Faculty of Medicine at Breslau, has been in the habit of wearing gloves while performing most of his operations, and especially when engaged in laparotomy. If, however, the intervention is connected with regions that are specially exposed to infection—such, for example, as the rectum, the urethra, or the buccal cavity—he does not cover his hands, holding that gloves under such circumstances could only favour contamination by helping to convey noxious germs from the diseased parts to those still remaining healthy. Unlike Dr. Zoge von Manteuffel, Dr. Mikulicz does not make use of india-rubber gloves, as he finds them embarrassing, but employs the ordinary thread article, which can be readily washed and sterilised under steam. All the assistants and attendants have to wear gloves like the surgeon, but as thread gloves are, of course, far from impermeable the wearers are required before putting them on to disinfect their hands by means of alcohol and corrosive sublimate. As a rule a single pair of gloves suffices for a short operation, but when the intervention is of longer duration two or

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more pairs are used in succession. As an additional precaution Dr. Mikulicz likewise dons a muslin mask when about to operate; it is suspended from his calotte, and covers his nose, mouth, and beard in such a way that neither speech nor respiration is interfered with, while the wearer can even cough or sneeze without any risk to the patient. According to a French medical journal[1] Dr. Mikulicz has obtained very satisfactory results since he adopted the above-mentioned method of procedure. Formerly in his practice operation wounds used frequently to become infected, while suppuration round suture-points was of constant occurrence, but now these disheartening complications never by any chance show themselves. He consequently looks upon gloves as an unfailing remedy for the greatest defect of modern aseptic surgery, to wit, the insufficient disinfection of the hands of the operator. The above-quoted authority further states that Dr. Küstner, Professor of Obstetrics at Breslau, wears thread gloves in all his laparotomies, and that Professor Trendelenburg, of Leipzig, and his assistant, Dr. G. Perthes, both make use of long gloves of fine silk reaching to their elbows.

WE desire to express to the Postmaster-General of Canada our hearty thanks for the kind privileges accorded to us in connexion with the posting of our Special Canadian Supplement of THE LANCET throughout the Dominion. Owing to the liberality of his department the distribution of copies to the entire medical profession of Canada will be effected at a merely nominal cost.

SIR WILLIAM GOWERS, M.D. Lond., F.R.S., has been elected an honorary member of the Société des Médecins Russes de St. Petersbourg. This society is one of the oldest in Russia, dating from 1833, and almost the only one instituted in the reign of Nicholas I. The present president is Professor Popoff.

THE total contributions to the Prince of Wales's Hospital Fund for London up to September 1st (excluding the proceeds of the sale of the hospital stamps) amounted to £181,741 12*s.* 9*d.*

DR. THOMAS D. REED has been appointed to the Commission of the Peace for the district of Montreal, Canada. The commission was gazetted on July 24th last.

THE Sixth Report of the Royal Commission appointed to inquire into the subject of Vaccination, with minutes of evidence and appendices, was issued on Wednesday last.

WE are informed that the University of Cambridge was represented at the International Medical Congress at Moscow by Professor T. Clifford Allbutt.

Pharmacology and Therapeutics.

EFFECTS OF PYOGENIC MICROBES AND THEIR TOXINS.

DR. MOLODOVSKI publishes in the form of a Thesis for the St. Petersburg M.D. an account of a series of observations on the comparative effects in ophthalmic operations of infection with a pure culture of staphylococcus pyogenes aureus and with the toxin of this microbe. His experiments were conducted on rabbits, the wounds being infected with two days old cultures or with toxin obtained by filtration of cultures through a Chamberland's filter. In another set of experiments the toxin was introduced into the anterior chamber of an eye that had been operated upon to the amount of 0·2 cubic centimetre. Altogether sixty-five experiments were made. Twenty-four hours after the infection of a wound involving the cornea only, or the cornea and also the lens, by a culture, muco-purulent inflammation developed in the conjunctiva together with purulent iritis. A wound of a more serious nature naturally produced even more grave complications. Thus, when the lens was extracted without any loss of vitreous, infection with colonies of pyogenic cocci caused purulent inflammation of the iris and choroid, while if the extraction of the lens was accompanied by loss of vitreous the whole of the coats of the eye were involved—that is to say, panophthalmitis resulted. When the toxin was employed as the infective agent and the operation was confined to wounding the cornea and lens, simple catarrh of the conjunctiva with serous inflammation of the iris and ciliary body with hyperæmia of the anterior portion of the choroid resulted. When the lens was extracted with or without loss of vitreous the serous inflammation involved the choroid. All the wounds infected by the culture became purulent, but those infected with the toxin only healed by first intention. The development of inflammatory signs was slower in the case of cultures than in that of the toxin, but was of much longer duration, continuing indeed long after the toxin inflammation had ceased and the wound had cicatrised. When the toxin was introduced into the anterior chamber of an eye that had been operated on it was found that if the lens had only been incised the inflammation set up was not of a serious character, the lesion being cured generally in about a fortnight. If the lens had been extracted without loss of vitreous, capillary inflammation of the iris and ciliary body occurred, with the result in the majority of cases of loss of the eye from formation of connective tissue in the anterior chamber. When the extraction of the lens had been accompanied by loss of vitreous the result was in all cases fatal to the organ from development of connective tissue both in the anterior and in the posterior chamber. A somewhat similar series of 127 experiments has been made by Dr. Solovieff on the comparative effect of cultures of pyogenic microbes and the toxins produced by them on rabbits' eyes that had not been operated on. The conjunctival sac of the rabbit's eye appears to form an excellent culture medium for these organisms, and when a pure culture of the staphylococcus pyogenes aureus or of a pyogenic streptococcus is introduced into the sac some catarrh is produced, which, however, soon passes off. The toxin of the staphylococcus produces more effect—acute conjunctivitis lasting for one or two days—and the toxin of the streptococcus a still more acute form of inflammation with extravasations of blood in the conjunctiva. Both toxins also pass into the cornea, the former producing infiltration of that body together with serous inflammation of the iris, and the latter toxin causing inflammation of the cornea and capillary inflammation of the iris and ciliary body. Inoculation of the cornea either with one of the cultures or with one of the toxins sets up purulent keratitis with hypopyon and cyclitis. Introduction of one of the cultures into the interior chamber produces purulent inflammation of the whole of the coats of the eye with ultimate atrophy of the organ. When the toxins are introduced into the anterior chamber the same results are obtained as when they are used to inoculate the cornea. When the cocci are introduced directly into the posterior chamber violent inflammation is at once set up which destroys the organ. The toxins introduced into the posterior chamber produce the same effects on the deep structures of the eye as are observed when the cultures are introduced into the anterior chamber. Neither the microbes nor their toxins when introduced into the vitreous humour appear to penetrate into the substance of the brain or even into the optic nerve, owing probably to the closing of the lymphatic canals by the violence of the inflammatory process, so that however serious their presence may be for the eye there does not seem to be much danger to life in such cases by extension of the inflammation to the cerebral membranes or to the brain itself.

[1] Gazette Hebdomadaire des Sciences Médicales de Bordeaux.

NOTE UPON THE TOXIC EFFECTS OF THE SWEAT OF A HEALTHY MAN.[1]

BY S. ARLOING.

I.

THE toxic character of sweat eliminated in the course of an infectious disease ("*d'une infection*") is generally admitted at the present day; but that of sweat from a

[1] Translated from Comptes Rendus, vol. cxxv., No. 4, July 26th, 1897, p. 218.

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healthy man is much disputed, notwithstanding that the older physicians attributed to the secretion of the sudoriparous glands a definitely depurative action. This question can only be put to the test by injecting into the blood of animals suitably chosen sweat secreted by healthy human subjects. In consequence probably of the difficulty encountered in procuring the reagent the question has been attacked by very few experimenters. So far as I am aware Röhrig and Queirolo alone have experimented with injections of sweat. The first named, who made only a single injection upon a rabbit, came to the conclusion that the effect was toxic; the second, who made fourteen injections, thinks that the sweat of healthy persons does not eliminate any toxic substance. I have thought it necessary to renew the study of this subject, and have obtained the elements of sweat by divers processes and many specimens of normal sweat, thanks to the coöperation of M. Berthe and Dr. Sonrel. The experiments have accordingly been very various. From all these experiments I have come definitely to the conclusion that toxic matters are present in the sweat of a healthy man. Injected into the blood sweat causes the death of a dog following upon an average dose of 15 c.c. per kilogramme of the living animal; of a rabbit with a dose of 25 c.c. after an interval of from twenty-four to sixty-two hours. It will also kill a guinea-pig if introduced in a sufficient dose subcutaneously into the peritoneum or the connective tissue. Although I have not yet produced immediate death, the injections always occasion an illness of a certain duration. The duration of the illness, the gravity of the symptoms, and the dose necessary to cause death vary with the conditions under which the sudoriparous glands have performed their functions. For instance, sweat secreted under violent muscular exertion possesses a toxic efficacy exceeding by one-fourth or even by one-third part the ordinary toxicity. Furthermore, other things being equal, sweat obtained by artificial sudorific means exhibits a minimum of toxicity.[2]

The toxicity of normal sweat being established, I proceeded to ascertain the nature of the poisoning, and take for illustration the troubles experienced by a dog. As a general rule the introduction into the jugular vein of the first quantities of sweat occasions a lively excitement, quickly followed by a remarkable sedative effect, which continues throughout the course of the injections. The dog is thrown into a state of the most complete calm, the eyelids are half-closed, under the influence as might be supposed of a narcotic; but it is nothing of the kind, for the dog briskly regains its feet if set at liberty. Very soon it becomes profoundly miserable. The principal muscles are attacked by tremblings. The eyes are tearful. At this stage the temperature is notably elevated, and it may be observed that the dog is attacked by disorders of the digestive system, such as repeated vomitings, at first alimentary, afterwards bilious; abdominal pains; diarrhœic stools; strainings (*épreintes*), and sometimes slight intestinal hæmorrhages. The breathing is short and rapid. The beating of the heart, much accelerated at first, resumes after some hours its ordinary rhythm; then it becomes accelerated afresh and gradually feebler. The arteries are soft and compressible and the pulse is barely perceptible. The extremities become cold, the animal grows indifferent to its surroundings, its prostration becomes extreme, its temperature falls below the normal, and finally it succumbs after having exhibited a series of symptoms which strikingly recall those that follow upon the administration of certain microbic toxins. When the poison does not assume this aggravated form the malady lasts for several days. The animals manifest an improvement at the end of four-and-twenty hours—a transient improvement, followed by a moderate degree of fever, loss of appetite, profound exhaustion, and sometimes a loss of power in the members bordering on paralysis. In this case, as in the preceding, the subject succumbs with subnormal temperature. If the dose of sweat injected is less strong or the subject more resisting two results may follow: the animal may recover completely or it may fall into a cachectic condition which carries it off in the space of from fifteen to thirty days.

Having thus given a summary account of sweat poisoning I propose to give details of some of the principal disturbances. In this note I will deal with the troubles arising to the circulation which I have studied minutely with the aid of the graphic method. When first introduced into the blood the sweat produces disturbances of which the intensity varies with the degree of toxicity or of concentration. They are exhibited from ten to twenty seconds after the commencement of the injection. Amid manifestations of excitement, cries, and complaints, the pulse suddenly becomes small and accelerated; from 120 pulsations a minute it mounts to 240 and 300; simultaneously the arterial pressure rises and attains sometimes 200 mm., then rapidly falls to about 70 mm. Considering the rapid descent of the curve and the smallness of the pulse one begins to fear for the life of the subject, and this the more since these symptoms usually coincide with irregular and superficial respiration. With certain animals and certain kinds of sweat these troubles are less acute, and being more moderate they are more easy to observe. They are least when the sweat employed is a secretion obtained artificially after long repose. This crisis is feeble or absent after subsequent injections. The crisis over, the pressure gradually falls and reaches a point below the initial pressure; the heart becomes calm and beats with greater energy, so that after an hour or an hour and a half the circulation is no longer disturbed in proportion to the gravity of the situation. But if the animal be left to itself for eight or ten hours, and then the arterial system be again examined by means of graphic apparatus, a considerable fall of arterial pressure and acceleration and enfeeblement of the pulse will be detected. Thus, in one experiment before injection the pressure amounted to 176 mm. of mercury and the pulse was 96. One and a half hours after the injection of the poison the pressure had fallen to 160 mm. and the pulse had gone up to 120. Nine hours later the pressure was 110 mm. and the pulse 156. This noticeable change in the pressure, pulse, and heart coincides with the phase of prostration and with the establishment of an abundant sero-sanguineous exudation (*exhalation séro-sanguinolente*) upon the gastro-intestinal mucous membrane rather than with any general phenomenon of vaso-motor dilatation. I have observed that at the moment of most severe distress in the circulatory system, when the pulse is most accelerated, the excitability of the moderating nerves of the heart remains intact. The sudoral poison therefore acts chiefly upon heart exciting centres and the muscular fibre of the heart.

In a subsequent note I propose to examine the disturbance occasioned to other important functions.

[2] Vide Comptes Rendus de la Société de Biologie, séances du 19 Décembre, 1896, et du 29 Mai, 1897.

IMMORALITY AMONG SCHOOL BOYS.

BY MAURICE C. HIME, M.A., LL.D.,
SOMETIME HEAD MASTER OF FOYLE COLLEGE, LONDONDERRY.

I RECEIVED so many letters concerning the special form of immorality indicated in the above heading from readers of THE LANCET since the appearance of a letter signed "Father" in its columns,[1] that it seems to me to be of sufficient general interest to justify me in asking for space wherein to express the result of my thirty years' experience as a head master in regard to this vice at somewhat greater length than I could conveniently adopt in a letter to each of my several correspondents.

I will speak, first, of the prevalence of the vice in boys' schools; next, of the duty of headmasters regarding it; thirdly, of the best means of preventing and checking it; and I will conclude with a few words of encouragement to the educator, whether schoolmaster or father, who strenuously exerts himself, with the help of God, to safeguard the boys entrusted to his charge from the sin in question.

That the vice exists, to a greater or less degree, wherever many boys are gathered together under one roof, who with any knowledge of boys will deny? Some schoolmasters have spoken to their pupils on the subject; others have written pamphlets about it for private circulation; others have urged fathers to caution their sons concerning it before sending them to school; purity societies have issued leaflets that can be purchased at their offices; and medical men have published books, numerous and important, on its cause and cure. And yet, the above facts notwithstanding, hundreds of head masters go on year after year as if blind to this truth,

[1] THE LANCET, June 12th, 1897, p. 1649.

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ignorant or affecting to be ignorant of it. It is so painful to believe. As well expect a neglected garden to be free from weeds as a school managed by one of these "blind guides" to be free from this vice. How absurd to suppose that the devil, who forced his way into Paradise, will not force his way also into boys' schools, most of all into those schools the head masters of which "having eyes see not, having ears hear not, neither do they understand"!

The prevalence of this vice in most boys' schools may accordingly be taken for granted. This then being so, it follows that every professional educator is plainly bound by the duties attaching to his office to endeavour by all means in his power to defend his pupils, and help them to defend themselves, from this and every other pollution. Educator I say, rather than schoolmaster; for a schoolmaster's duty is far more, be it noted, than merely to instruct his pupils in classics, mathematics, and the other school subjects. "Oh, but let fathers warn their sons of the prevalence and deadly nature of this vice before sending them to school. It is their duty to do so." Undoubtedly, it would be satisfactory if fathers were to forewarn their sons of the terrible temptations and dangers awaiting them at school, showing them how these temptations may be best resisted, and pointing out to them the fearful consequences of yielding to them. As a general rule, however, boys are not forewarned on the subject, as schoolmasters are only too well aware. Are schoolmasters, therefore, themselves to neglect warning them because their fathers have done so? Is A to shirk his duty because B shirks his? Furthermore, there are some boys whose fathers are dead; others whose fathers are dull, coarse, and indifferent, not caring a straw how their sons conduct themselves at school; others whose fathers are themselves sensualists of the commonest type; others whose fathers are so particularly fastidious, so hyper-sensitive, as to be unable, or at least unwilling, to speak to their sons on such an unsavoury subject. And what of the sons of such parents as any of the above? In short, it is all nonsense a schoolmaster's trying to evade his own obvious duty and impose it on someone else. By his own voluntary undertaking, of his own freewill and accord, the schoolmaster professes to develop the religious and moral as well as the intellectual faculties of his pupils, for the performance of which duty he receives, not only fees from their parents, but also in many cases an endowment, as headmaster of the school, as well. The schoolmaster who does not faithfully discharge this his manifest duty is indubitably an unfaithful steward, and utterly unworthy of the noble, self-sought name of educator.

As to the best means of preventing and checking this vice opinions will differ. The following I personally have found effectual. I will divide them into A, school arrangement; and B, moral suasion.

A.—1. Cubicles I would have none of. The dormitories in Foyle College had been fitted up with cubicles shortly before my appointment as headmaster, but I insisted on their being removed before I undertook the duties of my office. Cubicles I regard as mere inventions of Satan the better to enable boys, weak-minded or sensually disposed, secretly to indulge in odious habits. Cubicles are, besides, productive of increased dust, dirt, gloominess, disagreeable smells, and defective ventilation. Well ventilated, airy dormitories, with rows of beds, not too close, that can be all seen at a glance by the superintending master, with a master's bedroom at opening of each dormitory, were an essential part of my system; besides, the manly and good boys, who are always in a considerable majority in every well-regulated school, render in such dormitories the practice of this vice well-nigh impossible. Such odiousness would not be tolerated by them for a moment. But where there are cubicles it can, obviously, go on with impunity, unchecked, in secret, no matter how excellent the tone of the school may be. 2. Lying in bed in the morning—"soaking," as the boys express it—was discountenanced in every way. At a certain hour every morning the bell for getting up rang, and the moment it rang it was the duty of the master in charge to oblige the boys to get up—on Sundays and holidays just as promptly as on working days. The prolonged enjoyment of luxurious sloth is apt to demoralise even the best-disposed. 3. A sufficiently large staff of masters to enable me to have one or another of them always on duty during play hours was another essential part of my system. The companionship of a suitable master was always agreeable to the boys. He helped them with their games, prohibited loafing, bullying, filthy conversation, profane language, and other juvenile misdemeanours, while his very presence made smoking an impossibility. On the injury done to the growing brain and growing body of a little boy by the use of tobacco I need not dwell, neither need I dwell upon the sneaking, underhandedness, falsehoods, deceptions, misspending of pocket money, with the common results of such mis-expenditure, inseparable from indulgence at school in the forbidden weed. 4. Intimacies between older and younger boys were discouraged. I seldom or never observed such a friendship springing up without suspecting that, in all probability, the younger boy was being injured by the older one—instructed or misinstructed in forbidden things, rendered conceited, spoilt for companions of his own age, and so forth. 5. The letting out of boys during school-hours "for a minute," as the request to go out is generally worded, was reduced to a system. Only one boy was let out at a time, and on one master, and that my principal master, devolved the duty of giving or refusing, according to his discretion, the asked-for permission. The boy was expected not to remain outside for more than three or four minutes at the very most. Going out during school-hours was, in short, a good deal discountenanced. Boys were trained to expect that they would generally be required to remain in the schoolroom for as long, say, as a two hours' railway journey, or an ordinary Sunday morning church service. Think of the iniquities that have been transacted by boys in privies at schools where little or no vigilance was exercised by those in authority in regard to the number and the characters of the boys let out at once, or the length of time that they might stay out! The card playing, drinking, shameful bullying, and beastliness of every kind! I speak now from my own personal experience as a boy, and that in more than one school. The longest continuous period of class instruction—three hours—I broke up in the middle by permitting, or rather compelling, every boy then to leave the school for ten minutes' relaxation, during which period the doors and windows were all opened wide for ventilation purposes. Concerning the conduct of the boys during these ten minutes I entertained no misgivings. There is safety in a multitude, and all the more so when the great mass of the multitude is right-minded and well-disposed. When the great mass of the boys in a school is not right-minded and well-disposed there must be something strangely amiss in the head master; he would certainly not appear to me to be the right man in the right place. 6. Occupation of some sort, whether in the playfield or, on a wet day, in or about the school, was insisted on. Out-door games were obligatory on all boys except those forbidden them by a medical man—an exceedingly small, but usually most troublesome, minority. Where out-door games are not compulsory there there will be loafing. Where there is loafing, there impure thoughts—if not filthy acts and filthy talking—will be indulged in. The letting off of superfluous energy by means of out-door games—long walks being substituted for these games on Sundays—contributes much to the suppression of the lusts of the flesh in boy and man alike. "That Satan finds," &c., is a proverb that, where schoolboys are concerned, contains so much solemn truth that one wonders how it is that any schoolmaster can ever endure to see his boys loafing about unoccupied. "Work or play," "Labour or refreshment," should be the motto of every school. Boys thus incessantly occupied have no time for impurity, no desire for impurity—none, at least, compared with that pervading the hearts of the unemployed. 7. Reading during play hours was not allowed. The reading of fiction, except such fiction as the boys' mothers or sisters might safely read, was not allowed at any time. The mischief done to boys by the reading of highly sensational immoral literature is incalculable. 8. There was a rule in my prospectus that "The trousers must have no pockets in them." To see boys sitting or slouching about continually fumbling with their hands in their trousers' pockets or, only a degree worse, between their trousers and their skin or shirt, was more than I could endure with unruffled temper. The objections to the habit are obvious; it is dirty, disgusting, loathsome, ungainly. So far for the school arrangements. And, with much respect, I would like to add that, quite apart from their special bearing on the vice treated of, these arrangements will not be found unprofitable in any school.

B.—As to the moral suasion method, I on one occasion seriously addressed the boys when all specially assembled together, concerning this secret, unmentionable sin. I spoke

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to them at once so pointedly that the guilty boys all quickly understood what I was speaking about, yet so generally that none of the others did. They only knew that I was speaking about something awful, and that the less thought or spoken about it the better. I explained to them how that a vice to which some misguided boys were addicted was (α) a sin—impurity of every kind, the impure thought and look as well as the impure act, being forbidden by Jesus; (β) unnatural—the best part of our nature, conscience, being utterly opposed to it, as was also self-love; and (γ) followed, if persisted in, by the most injurious, sometimes even fatal, physical consequences, such as irritability of the entire nervous system; debility, general or local; injury, irremediable to the sexual organs; overmastering, lustful desire; impotency; insomnia; insanity; idiotcy—although these consequences may be sometimes slow in overtaking the sinner; that, further, the utter deterioration of one's spiritual and moral natures also resulted from indulgence in this sin, sin thus leading on to more and ever more sin. On each of these points I dwelt at some length so as to make them, one and all, perfectly clear to those especially addressed. I, further, explained to them that we schoolmasters were not slow in recognising those guilty of this pernicious self-indulgence; that reverie at class, dislike to out-door games, moping, defective memory, a disinclination to look at one straight in the face, usually mark out these self-polluters. I implored of them to pray to their Heavenly Father, with all the sincerity of which they were capable, and that not once only but every morning and every evening of their lives, that the meditations of their heart, the words of their mouth, and all their acts might be always acceptable in His sight. I entreated of them to take the pledge, as it were, against this accursed sin—a sin so destructive of soul and mind and body alike. I begged of them to busy themselves always with some lawful, innocent occupation, an idle brain being, as they themselves knew, so abundantly prolific of evil thoughts. And, finally, I explained to them what efforts my masters and I were making so as to render it the more easy for them to eschew the terrible evil, telling them the meaning of the different school arrangements that had been made with this object in view, and beseeching them to fall in with these arrangements in the same spirit as that which prompted me in making them, for that I felt sure that, with my boys on my side, Satan could be effectually resisted, but that without their willing assistance my efforts must be, to a great extent, in vain. The boys listened to my address with breathless attention, all of them, with the exception of a few little boys who were evidently innocent of the sin, and did not understand to what exactly I was referring. Boys, I have generally found, not only listen attentively to such warning, but are most grateful for it. Many of them have indulged in the vice without fully realising its exceeding sinfulness, or being in the least aware of the evil consequences, especially as these are so often slow in manifesting themselves. Even when, as sometimes happens, the evil consequences do quickly overtake one guilty of this sin, they are frequently misunderstood, and often assigned to a totally wrong cause.

Such was the tenor and gist of my general address, but my efforts did not end here. To new boys coming subsequently to the college I spoke separately on the same lines, more or less distinctly according to the sort of boy each was and his age. Even the youngest and most innocent boy, I felt, could not but be benefited by being warned generally of the possible temptations awaiting him; of the best means of avoiding and resisting them; and of the injurious effects of sinful self-indulgence of every kind. "But is it not possible that such plain-speaking may do actual harm to the innocent boy?" No; good advice, given at once wisely and affectionately by an experienced and discreet schoolmaster, cannot, I venture to reply, do harm to any boy, good, bad, or indifferent—least of all to the first-named, the innocent boy, who had grown up to boy's estate without, we are supposing, ever dreaming or hearing of this abominable sin. At all events, I, personally, cannot recall any instance of a boy being injured by such warning; whereas I have known numerous instances of boys being immensely benefited by it. The greatest good of the greatest number is, in any case, the object at which we all should aim; and, obviously, there is no way of dealing with this, or any other prevalent sin, at which someone might not be found to cavil. And one thing is clear—this even objectors to the system herein recommended will themselves admit—that, whatever the best course to be adopted in dealing with this abominable practice may be, the usual silent system, the ignoring of the vice as though it did not exist at all, has been the source to mankind of infinite mental and bodily suffering.

Expulsion of the boy reasonably suspected, or actually detected, is the plan adopted by some schoolmasters—an absurd, injurious, and most unfair plan in my opinion. For in the first place the expelled boy may have been by no means the worst or single offender in the school; and accordingly the only effect of the expulsion may be, (*a*) so far as he is concerned, to mar materially his prospects in life, while of his odious self-indulgence he may not be in the least degree cured; and, (*b*) so far as the other boys are concerned, those not detected, to induce them to go on in their sinful ways, only more secretly than ever. For so long as even one boy in a school practises the vice, it is likely to spread. And how much more likely in a school the head master of which is satisfied to believe that the expulsion of a boy and the purifying of his school mean one and the same thing, and that with the expulsion his efforts after purity may be securely relaxed. Bad weeds grow apace, and a single diseased sheep may taint a flock of thousands. In the next place, the expelled boy or boys may be, in reality, the cleverest in the school, and even, only for their indulgence in this accursed practice, the most promising. Thus the school may have in reality lost rather than gained by the expulsion—expulsion for the contracting of an evil habit of which, wretched boys, perhaps they never heard until they went to the very school from which they are now turned out as outcasts! Moreover, it was assuredly to heal those that were sick—a fact apparently forgotten by these expelling schoolmasters—to call sinners to repentance, that Jesus came. What right, then, has a schoolmaster to attempt to wash his hands of the anxiety and trouble inseparable from his profession, properly understood? What right has he to pretend to retain as pupils in his school those boys only who in his opinion—an opinion for which there is rarely any sure foundation—"need no repentance"? A boy once desired to speak to me privately in my study. In real tribulation he assured me that since he came to the school, some months previously, he had never committed the sin of which I spoke to him on his arrival, but that every night he had most disturbing dreams—a doctor can guess all the rest of his admissions—and that he felt very ill, and thought he had better come and tell me; and that he hoped I would not expel him. "Expel you, my poor boy!" I said, "No, God help you! You have already, surely, been visited with sufficiently severe punishment—the punishment that has naturally followed your sinful conduct. I will call in the school physician, and we will see what can be done to relieve your sore sufferings and trouble." The outcome of the interview, briefly, was this: after the lapse of some months, this boy, almost quite recovered from his alarming infirmity, was one of the best behaved and most generally popular boys in the school—thoroughly trustworthy, first-rate at games, attentive at class, and diligent during preparation hours.

It should be a great encouragement to the schoolmaster, who leaves no stone unturned to eradicate this vice from his school, to remember that it is not boys only whom he his safeguarding against mental and bodily pollution, but men also. And what a scourge to themselves and to others impure men are! The purer the boy the purer the man. Similarly, the more impure the boy the more impure the man. Habit is a second nature. The boy who unwarned, undetected, uncensured, has secretly practised this abominable vice for years and years together, and so stimulated, unnaturally, the lusts of his flesh, is just the person, when he becomes a man, to yield to every temptation to gratify these lusts; that is, assuming that he has not damaged beyond cure his virile powers by the self-abuse he indulged in as a boy. "What is the harm of sexual gratification?" the youth who has deadened his conscience by self-abuse at school is likely to ask himself: "I never was told it was either sinful or injurious all the time I was at school." The undisciplined, ill-trained youth thus begins life at an immense disadvantage, caused by the supineness and blindness of his schoolmaster, whose bounden duty it unquestionably was to have explained to him the sinful nature and destructive effects of this vice. The boy, on the other hand, who has been accustomed to keep his passions under due control, and enters life, whether the university or a bigger world still, with a sound mind in a sound body, innocent, yet properly instructed as to the unnaturalness, the sinfulness, and the pernicious consequences, slow but sure, of this deadly sin,

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is likely, if anyone is, to keep his body, when he becomes a man, in temperance, soberness, and chastity unto his life's end.

Cluain Fóis, Buncrana.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Sunderland Urban District.—Sunderland has a notoriety for enteric fever, and it is to this subject that Dr. Harold Scurfield devotes considerable space in his annual report. During 1896 there were but two of the thirty-three great towns that had a higher death-rate from enteric fever than had Sunderland. Wolverhampton heads the list with a death-rate of 0·41 per 1000. Bolton follows with a rate of 0·39, and Sunderland with one of 0·37. In, too, the matter of diarrhœa Sunderland is in bad company, but its rate in this respect is exceeded by Wolverhampton, Leicester, Salford, Birmingham, Liverpool, Preston, Bolton, Sheffield, and Hull. It appears that the excessive incidence of enteric fever in Sunderland began to manifest itself about 1889, and after a sudden drop in the wet cold summer of 1894 it reached the highest rate yet recorded in 1895, but in this year it has to be noted that a considerable amount of the increase was due to a milk epidemic. Dr. Scurfield finds that, taking the average rates for diarrhœa and enteric fever since the year 1888, the greatest number of deaths from the former disease occur in the thirty-fourth week of the year, while for enteric fever the maximum figure is reached in the thirty-sixth week; and in a very interesting special report which he has presented to the sanitary authority of his district Dr. Scurfield shows that during 1890–95 enteric fever was more prevalent in towns in which privy-middens largely obtained than in towns where the excrement was removed by means of water carriage, and on examining the figures for 1896 he finds that the same rule holds good. "Privy-midden towns" are regarded as those in which the number of privy-middens approximates or exceeds 5 per cent. of the population. Dr. Scurfield observes that the bacillus of enteric fever, being capable of resisting frost, can, when thrown on to a privy, live in the soil throughout the winter, and propagate itself when the ground gets hot in the ensuing summer, and he furnishes in his report instances where probably this phenomenon has occurred and where certain houses and even streets have become again and again invaded by enteric fever. Although the privies are nominally disinfected it is obvious, as Dr. Scurfield observes, that the chances of really destroying all the infection which may lie in the surrounding soil are remote in the extreme. To sum up, Dr. Scurfield urges that the privies are largely responsible for the enteric fever of Sunderland for the following reasons: *Negatively*, there is no reason to suspect the water-supply, the milk supply (save for a certain period of 1895), or the sewers as cause. *Positively*, it is found that enteric fever is more prevalent in privy-midden towns than in water-closet towns, and in towns where both systems of excrement disposal are in use the chief incidence of enteric fever is found in the houses and districts provided with privy-middens. Furthermore, certain houses and streets in Sunderland where the privy-midden system is in vogue have been frequently re-invaded by the disease. It is interesting to note in reference to the relation of prevalence and type of enteric fever in Sunderland that during 1895 there were 840 cases, with a fatality rate of 15·4 per cent., while in 1896 the 260 cases yielded a fatality rate of 20·8 per cent. As a sort of sequel to Dr. Scurfield's interesting report he and the borough engineer have made an estimate of the saving to the cleansing department of the borough which will accrue from the general adoption of the water-carriage system in Sunderland.

St. Helens Urban District.—Dr. John Robertson has recently made some very interesting and instructive observations upon the behaviour of enteric fever, and a notice of them may appropriately follow that of Dr. Scurfield's report, which we have just considered. As in the case of Sunderland, the notifications of enteric fever in St. Helens during 1896 were relatively small, while the deaths were relatively large in number. Dr. Robertson has calculated from the weekly returns from certain large towns which are sent to the Local Government Board the sickness rates from enteric fever per 1000 of the population in the thirty-one towns in question. It seems that in the matter of sickness incidence St. Helens, with a rate of no less than 2·07 per 1000, easily takes the lead, the next highest being Sheffield, with one of 1·81 per 1000. The lowest rate is that of Plymouth, 0·31 per 1000. As regards the seasonal prevalence of the disease at St. Helens a chart is given in the report before us which shows the weekly number of cases in relation to the temperature of the soil at a depth of four feet and of the air. Dr. Robertson has now furnished these charts in his reports for some years, and they show a distinct relationship in point of time between the prevalence of enteric fever and the temperature of the earth at a depth of four feet. Allowing a period of three weeks as a reasonable average time between the ingestion of the poison and the notification of the disease, it is found that from 1892 to 1896 inclusive enteric fever became prevalent in St. Helens three weeks after the soil temperature at four feet had risen to 52° F. Conversely, three weeks after the soil temperature fell below 52° a rapid diminution of cases took place. The experiments to which we have already referred were as follows, and their object was to ascertain if the soil of St. Helens offered a suitable nidus for the growth of the enteric fever bacillus. In order to ascertain this point three patches of soil—apparently *in situ*—were liberally sown with a diluted broth culture of enteric fever organisms, and later three other patches were similarly sown. The organisms grew and flourished during June, July, and August, while the weather was dry and there was abundant sunshine. Similarly during September and October, when the weather was wet and dull, the organisms were still plentiful. In addition to these experiments other patches of soil were sown at a depth of from nine to eighteen inches below the surface, and, what is a most interesting and instructive point, it was found that in every instance the organism had grown to the surface within two months. Again, another most suggestive point, it was found that in the case of all the samples by Nov. 20th the organisms could no longer be detected in the specimens of soil in which they were sown. As Dr. Robertson points out, it is by no means improbable that during the summer (the present time), when the temperature of the soil is favourable to the growth of the organism, its presence will again be discovered, and thus there may be furnished an object lesson of the manner in which enteric fever may disappear from a locality in the winter and re-appear with the heat of the following summer; in a word, Dr. Robertson considers that the soil pollution of St. Helens is a most potent cause of enteric fever in that place, and he furnishes statistics in support of that view. Dr. Robertson has also made some investigations to ascertain whether the degree of bacterial activity going on in the soil held any relation to the prevalence of enteric fever, and the amount of carbonic acid was taken as a measure of such activity. These observations are being extended, as also, it seems, are others in connexion with the height of the ground water in relation to the prevalence of enteric fever. The value of the serum diagnosis of enteric fever is spoken of very highly by Dr. Robertson, and he furnishes many instances in his report where this test cleared up existing doubts. The blood of forty-six persons was examined, and the conclusions are set forth in five groups. Group 1. Blood from persons in good health, who had never suffered from enteric fever. Results negative in every case. Group 2. Persons in good health, but who had, one to thirteen years previously, suffered from enteric fever. All of these—with the exception of one man who had gone through a typical attack of the disease a year previously—gave a definite reaction. Group 3. Patients suffering from diseases which were definitely not enteric fever. All save one case gave negative results; and this case, although the first test gave a positive result, subsequently yielded negative results, so that Dr. Robertson thinks there may have been an error in the test. Group 4. Patients suffering from undoubted attacks of typhoid fever. Nine cases were examined, and in each one a well-marked reaction was obtained. Group 5. This was the most important group, as it contained all the doubtful cases. Of 21 cases 10 gave a positive and 11 a negative result, and in each of the negative cases the result was proved correct by the subsequent history.

Durham County District.—Dr. Eustace Hill finds that in the annual reports of the district medical officers of health proper corrections are not always made in respect to the

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inhabitants of the district who die outside the district, although it seems that, as a very general rule, "foreigners" who die within the district are rigorously excluded. The general death-rate of the county during 1896 was 17·5 per 1000, the rate for the six boroughs being 16 3 per 1000, and for the other urban districts 18·4 per 1000. Dr. Hill attributes the lower borough rates to better sanitary administration, and it is a noteworthy fact that the enteric fever death-rate in the non-county boroughs was materially below those of the other districts in the county. In deploring the absence of uniformity in the matter of notification of disease Dr. Hill observes that the cost of administering the Notification Act can hardly be adduced as a reasonable excuse for its non-adoption, seeing that the cost in the administrative county during 1896 was but £1 3*s.* 6*d.* per 1000 of population. There was a marked decrease in the prevalence of enteric fever throughout the county during 1896, but there was a slight increase in the fatality rate. The largest number of cases was notified during August, while in former years the maximum has occurred in September or October. At Jarrow and Houghton-le-Spring certain cases of enteric fever were regarded by the district medical officer of health as having possibly been caused by shell-fish. Dr. Hill thinks that little good results under existing circumstances from the notifications of puerperal fever, since no supervision seems to be exercised by the officers of the local authority in the county. Surely some preventive measures should be taken in cases of this kind. As regards isolation, there are still nine urban and six rural districts which are as yet unprovided with isolation hospital accommodation. There are several schemes in hand for the improvement of the water-supply of the county, and the Local Government Board has refused to sanction the application of the Bishop Auckland Urban District Council to borrow money for taking water from the River Wear after it has received the unfiltered sewage of a population numbering several thousands. The Durham County Council opposed the application, and it is clearly a matter for congratulation that they were successful. The condition of the River Tees above the Darlington intake has, we are glad to hear, been considerably improved, much of the sewage of Barnard Castle having been diverted, and schemes are in progress for still further reducing the pollution of the river from the Durham side. The Yorkshire villages are, however, it seems, still contributing their sewage. The County Council took action in certain instances last year, under the Housing of the Working Classes Act, in cases where the local authority had neglected its duty. Dr. Hill again insists that the excessive prevalence of enteric fever and diarrhœa in the county is in large part due to the pollution of the subsoil around dwellings by the percolation from privy-middens. If, he points out, the model by-laws of the Local Government Board were adopted and enforced throughout the country the objectionable ashpit privies could no longer be erected.

Cheshire County District.—The population of the administrative county is estimated for 1896 at 536,644. The birth-rate of the population was 28·5 per 1000, the rates ranging from over 38 per 1000 to 14·8 per 1000. The general death-rate of the district was 15·6 per 1000, the rates ranging from 23·4 to 8·2 per 1000. The infantile mortality in the district was markedly lower than in 1896, but in one district—that of Mottram urban—the rate was no less than 265 per 1000 births—a rate for which the district medical officer is apparently unable to account. Mr. Vacher, in dealing with the subject of stillborn children, points out that stillbirths are not officially recognised, and that it is open to any one to bring the body to the sexton, together with a certificate from the midwife or nurse, and to have the body thereupon interred. It is desirable, Mr. Vacher insists, that every birth, stillborn or otherwise, should be subject to compulsory registration. The zymotic death-rate in Cheshire during 1896 amounted to 1·6 per 1000, the rate for diphtheria and croup being 0·35 per 1000, and that for fever 0 15. It appears that there is very little provision made in the county for the bacteriological examination of suspicious cases, and many of the medical officers of health lament this fact in their reports. An instructive outbreak of enteric fever occurred at the County Asylum, Upton, and was traced to the agency of specifically polluted water infected through the admission of surface water past a ball valve, which had dropped down during a diminution of pressure in the mains. With regard to the progress of notification, it is interesting to read that at the beginning of 1897 there were but two districts, Congleton municipal borough and Nantwich rural district, which had not adopted the Act. Some progress has been made in isolation accommodation, but, as Mr. Vacher observes, such accommodation is still singularly inadequate to a population of 572,000. The County Council appear to have been most energetic in pressing the provisions of the Isolation Hospitals Act, 1893, but it has not been an easy matter to persuade the authorities to undertake the necessary expenditure. In some cases the local authorities seem to have preferred to proceed under the provisions of the Public Health Act, 1875, and in such cases the County Council were willing to subscribe towards the cost of erection and maintenance provided they had seats on the Joint Hospital Board. It was held, however, by the Local Government Board, to whom the question was submitted, that a county council could only contribute to such hospitals as were erected under the Isolation Hospitals Act.

Hackney Sanitary District.—Dr. King Warry reports that, in his opinion, the inability on the part of the Metropolitan Asylums Board to remove in the summer of 1896 all cases of scarlet fever concerning which application for admission was made resulted in a spread of the disease, and he insists in this connexion on the desirability of removing first cases. Dr. Warry furnishes the subjoined table showing the number of applications for removal to hospital which were made in certain cases:—

Number of applications	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Cases removed after above number of applications... ...	97	93	28	14	9	9	9	1	3	3	2	–	1	3	1

In the matter of diphtheria Dr. Warry furnishes very strong evidence for believing that one of the Board schools acted during 1896 as a centre for the propagation of diphtheria; and it is pointed out that, although it is not possible to connect each case with a preceding one, this fact does not destroy the thesis that the probable infection at school was the cause of the exceptional incidence on the children attending that school. The existence of mild unrecognised cases has, he rightly observes, been definitely established. As a means of diminishing the power of schools for harm in the propagation of diphtheria Dr. Warry advises that during the prevalence of the disease in a neighbourhood the schools shall frequently be examined by a medical man, and that any cases of sore throat shall at once be excluded from the school, a notification as to the exclusion being sent at once to the medical officer of health of the district. Analyses from the water of the River Lea show that its pollution continues, and Dr. Warry has no hesitation in stating that it is distinctly dangerous to the health of those who are exposed to its effluvia. The London County Council constructed a pool alongside the river, which is replenished by water percolating through from the river, and proposed, it seems, to encourage bathing by the erection of sheds for undressing, &c. Water was only to be admitted into the pool by percolation, or, if necessary, at times of high water or during the floods. Dr. Warry, however, strongly opposed the proposal, as he considers it highly dangerous for bathing to take place in such water as had been admitted at high tide or during periods of flood. Organisms of disease are, Dr. Warry thinks, plentiful in the Lea water, and he considers it "extraordinary that anyone should entertain the idea that water of less purity than that used for domestic purposes is good enough for bathing in." The project has since been abandoned. Dr. Warry reports that there is reasonable ground for suspicion that during the summer of 1896 certain cases of enteric fever were caused by the consumption of oysters.

Huddersfield Urban District.—Mr. E. G. Annis is to be congratulated upon his first annual report, and he has laid a capital foundation for the future study of the statistics of the district by constructing a Huddersfield Life Table. This table has not been altogether agreeable in its revelations to the people of Huddersfield, and it goes to show that there is much to be done in the district before the sanitary authority can congratulate themselves upon the expectation of life of the inhabitants. It seems that at birth the expectation is 12·79 years less than that of England and Wales as a whole, 10·13 years less than that of London, 3·72 years less than Glasgow, and 13·66 years less than Brighton; while, on the other hand, the expectation of Huddersfield is 1 90 years greater than that of Manchester township; there does not

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seem to be much difference in the relative rates at the different age periods. The recorded death-rate of Huddersfield was 16·5 per 1000, a rate which places it in this particular below only four of the thirty-three great towns for the same period, but when regard is had to the corrected death-rate it is found that Huddersfield is as low down as fourteenth in the list of corrected death-rates.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6828 births and 5180 deaths were registered during the week ending August 28th. The annual rate of mortality in these towns, which had been 29·5 and 28·7 per 1000 in the two preceding weeks, further declined last week to 24·6. In London the rate was 20·4 per 1000, while it averaged 27·4 in the thirty-two provincial towns. The lowest death-rates in these towns were 14·4 in Huddersfield, 15·5 in Bristol, 17·2 in Swansea, and 18·5 in Bolton; the highest rates were 32·5 in Salford, 34·5 in Birmingham, 41·9 in Hull, and 47·6 in Preston. The 5180 deaths included 1783 which were referred to the principal zymotic diseases, against 2368 and 2319 in the two preceding weeks; of these, 1490 resulted from diarrhœa, 106 from measles, 71 from whooping cough, 45 from "fever" (principally enteric), 39 from diphtheria, and 32 from scarlet fever. The lowest death-rates from these diseases were recorded in Huddersfield, Swansea, Bristol, and Birkenhead; and the highest rates in Birmingham, Salford, Hull, and Preston. The greatest mortality from measles occurred in Birmingham, Oldham, Manchester, Blackburn, and Preston; from whooping-cough in Sunderland; from "fever" in Derby; and from diarrhœa in Wolverhampton, Birmingham, Leicester, Salford, Preston, and Hull. The mortality from scarlet fever showed no marked excess in any of the large towns. The 39 deaths from diphtheria included 28 in London. No fatal case of small-pox was registered last week in any of the thirty-three large towns; and no cases of this disease were under treatment during the week in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3448, against 3239, 3341, and 3400 on the three preceding Saturdays; 356 new cases were admitted during the week, against 376, 347, and 340 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 118 and 119 in the two preceding weeks, declined again last week to 102, and were 64 below the corrected average. The causes of 48, or 0·9 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Leeds, Hull, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in Norwich, Leicester, Birkenhead, and Burnley.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·0 and 21·6 per 1000 in the two preceding weeks, declined again to 19·6 during the week ending August 28th, and was 5·0 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 17·3 in Leith and 17·4 in Edinburgh to 23·7 in Greenock and 23·8 in Paisley. The 585 deaths in these towns included 96 which were referred to diarrhœa, 23 to whooping-cough, 8 to "fever," 7 to scarlet fever, 2 to measles, and 1 to diphtheria; in all, 137 deaths resulted from these principal zymotic diseases, against 156 and 187 in the two preceding weeks. These 137 deaths were equal to an annual rate of 4·8 per 1000, which was 3·9 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 113 and 147 in the two preceding weeks, declined to 96 last week, of which 50 occurred in Glasgow, 12 in Edinburgh, and 10 in Paisley. The 23 deaths from whooping-cough showed a slight further increase upon the numbers recorded in recent weeks, and included 12 in Glasgow, 5 in Dundee, and 3 in Greenock. The *deaths* referred to different forms of "fever," which had been 4 in each of the two preceding weeks, rose to 8 last week, of which five occurred in Glasgow. The fatal cases of scarlet fever, which had been 12 and 5 in the two preceding weeks, rose again to 7 last week, and included 4 in Edinburgh and 2 in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 58 and 62 in the two preceding weeks, further rose to 77 last week, and exceeded by 10 the number in the corresponding period of last year. The causes of 29, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 26·5 and 24·3 per 1000 in the two preceding weeks, further declined to 23·0 during the week ending August 28th. During the past eight weeks of the current quarter the rate of mortality in the city has averaged 23·5 per 1000, the rate during the same period being 21·4 in London and 18·4 in Edinburgh. The 154 deaths registered in Dublin during the week under notice showed a decline of 9 from the number in the preceding week, and included 39 which were referred to the principal zymotic diseases, against 51 and 39 in the two preceding weeks; of these 32 resulted from diarrhœa, 3 from "fever," 2 from scarlet fever, 2 from diphtheria, and not one either from small-pox, measles, or whooping-cough. These 39 deaths were equal to an annual rate of 5·8 per 1000, the zymotic death-rate during the same period being 5·4 in London and 3·0 in Edinburgh. The fatal cases of diarrhœa, which had been 39 and 31 in the two preceding weeks, were 32 last week. The deaths referred to different forms of "fever," which had been 4 and 2 in the two preceding weeks, rose again to 3 last week. The 2 fatal cases of scarlet fever were within one of the number recorded in the preceding week; and the 2 deaths from diphtheria exceeded the number registered in any recent week. The 154 deaths in Dublin last week included 41 of infants under one year of age and 27 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from those recorded in the preceding week. Seven inquest cases and 3 deaths from violence were registered; and 47, or nearly a third, of the deaths occurred in public institutions. The causes of 5, or more than 3 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN CROSS, 1st Life Guards, is selected for promotion into the Royal Horse Guards, vice Surgeon-Major Mitchell (retired). Surgeon-Lieutenant Waring assumes temporary Medical Charge of Women and Children, Aldershot. Brigade-Surgeon-Lieutenant-Colonel Macnamara departs for service in Malta and Surgeon-Major G. F. A. Smythe for service in Egypt. Surgeon-Captain Bray joins at Colchester for duty. Surgeon-Captain Hennessy is warned to be in readiness for service in India.

Brigade-Surgeon-Lieutenant-Colonel M. M. Gallwey is placed on retired pay. Surgeon-Lieutenant-Colonel Swayne to be Brigade-Surgeon-Lieutenant-Colonel, vice Gallwey.

INDIA AND THE INDIAN MEDICAL SERVICE.

The Queen has approved of the following admissions to Her Majesty's Indian Medical Service:—To be Surgeon-Lieutenants:—John George Patrick Murray, Samuel Anderson, Francis Hope Grant Hutchinson, James Leslie Majoribanks, Alexander Fenton, James Allen Dredge, and Robert Welland Knox. The Queen has approved of the retirement from the Service of the under-mentioned Officers:—*Bengal Establishment:* Brigade-Surgeon-Lieutenant-Colonel Charles John Walford Meadows, Surgeon-Lieutenant-Colonel Alfred Henry Williams, and Surgeon-Lieutenant-Colonel Augustus Edward Richard Stephens. *Madras Establishment:* Brigade-Surgeon-Lieutenant-Colonel Henry James Hazlett and Surgeon-Lieutenant-Colonel Stanley Locker Doble. *Bombay Establishment:* Brigade-Surgeon-Lieutenant-Colonel George Archibald Maconachie and Surgeon-Lieutenant-Colonel Saunders Barton Haliday.

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NAVAL MEDICAL SERVICE.

The under-mentioned Surgeons have been promoted to the rank of Staff Surgeon in Her Majesty's Fleet:—William Edward Home, Richard Aubrey Fitch, Henry Bullen Beatty, William Spry, Percy Edmund Maitland, James Joseph Walsh, John Moore, Cyril James Mansfield, Robert Hickson, Herbert Parke Shuttleworth, John Lowney, and Octavius Stephens Fisher.

VOLUNTEER CORPS.

Royal Engineers: 1st Cheshire: William Lawton to be Surgeon-Lieutenant. 1st Lanarkshire: Surgeon-Major A. Meehan resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the corps on his retirement. *Rifle:* 1st Volunteer Battalion the King's Own (Royal Lancaster Regiment): Surgeon-Captain J. Murray to be Surgeon-Major, to resign his commission; also to be permitted to retain his rank and to continue to wear the uniform of the battalion on his retirement. 3rd Volunteer Battalion the South Staffordshire Regiment: Surgeon-Lieutenant E. Morton from the 2nd Volunteer Battalion the Worcestershire Regiment, to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Oxfordshire Light Infantry: Surgeon-Captain J. J. A. Raye resigns his commission.

VOLUNTEER INFANTRY BRIGADE.

Tyne and Tees Brigade: Surgeon-Lieutenant-Colonel A. Wilson, 2nd Volunteer Battalion the Northumberland Fusiliers, to be Brigade-Surgeon-Lieutenant-Colonel on being appointed Senior Medical Officer to the Brigade.

THE HEALTH OF THE ARMY IN INDIA.

We have frequently called attention to the fact that it is quite a mistake to suppose, and a libel on the Indian Government and the military authorities to assert, that nothing has been, or is being, done to improve the moral and social condition of the British soldier in India or to strengthen his powers of self-restraint and increase his self-respect. It is on account of the large and increasing prevalence of venereal disease in India, in spite of all that has been attempted in these directions, that most sensible people are agreed as to the necessity of having recourse to restrictive measures of a physical kind. Our army in India is a celibate army, composed of men of an age when the animal passions are strongest and the judgment weakest, and no one who regards human nature as it is and looks the facts fairly in the face can doubt that under such circumstances there must be a great deal of yielding to temptation where so dominating an instinct as the sexual instinct is concerned. But we altogether deny that those who hold that venereal disease should, in the interest of public health, be treated like any other contagious disease are neglectful of the application of moral measures and influences. By all means let those who believe in the adequacy of these measures to accomplish the end in view try them. It is somewhat pharasaical, however, for those who are happily married to inveigh against the sin of incontinence in the case of soldiers living in enforced celibacy. An article appeared in the *Times* of Aug. 24th last on the British soldier and habits of self restraint, in which all that has been done of late years for the soldier serving in India is set forth, especially in the directions recently reported upon by the Army Temperance Association and the Army Health Association. It is remarkable how much has been accomplished during the last quarter of a century.

Surgeon-Major Horace Henderson Pinching, who took part in the late Mission to Abyssinia, has been granted Her Majesty's authority to wear the Insignia of the Order of the Star of Ethiopia of the Second Class conferred upon him by the Emperor Menelik II.

STEAM MOTOR DUST WAGGONS.—The Urban District Council of Chiswick has just commenced the collection of dust and house refuse by motors, the first of two "steam tip waggons" ordered for the purpose having commenced to work last week. Mr. Ramsden, the surveyor to the district council, reports that a week's experience with one of the cars shows that they are very easily controlled and far more economical than horse labour. The steam waggon does the work of three ordinary carts, and Mr. Ramsden estimates that the council will save between £500 and £600 a year by the adoption of the new system.

Correspondence.

"Audi alteram partem."

BATTEY'S OPERATION.

To the Editors of THE LANCET.

SIRS,—Is Battey's operation a justifiable procedure to prevent the recurrence of pregnancy in the case of those who have been the subjects of severe dystocia from whatever cause arising; and if so, under what circumstances may the operation be permissible? This question has probably occupied the thoughts of many medical men at one time or another, but I have not seen any literature bearing on the subject, and I should be glad to hear of any such.

The patient whose case suggested this inquiry to me is thirty-four years of age, and was delivered of a male child on the morning of June 10th last. Her previous (and first) confinement took place eight years before, when she was in labour for more than three days. On that occasion there was continuous, and at times profuse, hæmorrhage for eight hours previous to the commencement of labour and it did not cease until the birth of the child; it was evidently due to separation of part of the placenta as the secundines were born with the child, a portion, however, remaining behind which did not come away until the fifth day. Delivery was effected by forceps and the perineum was badly torn. Stitches were inserted into the perineum on three occasions during the puerperium; in the first place immediately after the confinement, secondly on the fifth day, when the passage of the remainder of the placenta had torn open the wound, and thirdly on the seventh day, when the bowels acted and scybalous masses of fæces were passed through the vagina, the back stitches again giving way. Union did not take place, and for eleven months the patient had no control over the bowels, which were evacuated through the vagina, and she was in a pitiable state. At this time perineal repair was performed at the Chelsea Hospital for Women. It was remarked that the case was the worst rectal tear which had been operated on at the hospital. The result of the operation was distinctly good, inasmuch as only a small fistulous opening remained in the bowel through which the motions, when loose, occasionally passed to a slight extent into the vagina. She was told on her discharge, that the perineum would probably not bear the strain of another confinement.

At the next confinement, which happened last June, as already mentioned, she delayed sending for me, so that the child was actually born on my arrival, the first and second stages having been remarkably rapid. The perineal tear on this occasion, although extensive, did not actually involve the sphincter ani. Otherwise the labour was easy and normal. I stitched up the perineum and conducted the case in the usual way. Union has not, however, been complete. The present condition, four weeks after confinement, is, however, on the whole, very satisfactory. In front of the anus, which, as already mentioned, has not been involved, is a small sinus communicating with the vagina, being separated from the vaginal orifice by a fairly strong bridge of cicatricial tissue. The patient can get about with moderate comfort and expresses herself as feeling very different as compared with the state she was in after her previous confinement. The operation required on this occasion to repair the perineum will be a comparatively easy one. The patient assures me she cannot undergo the ordeal of another confinement which might reasonably be expected to occur under existing circumstances, and with the object of preventing this she has asked my opinion as to the advisability of undergoing an operation for removal of the ovaries.

This operation has a moral as well as a scientific aspect. It is a recognised procedure in various diseases of the uterus and adnexa as well as in certain neuroses such as hystero-epilepsy; but in a healthy woman in the prime of life is it justifiable to remove the ovaries because her confinements have been complicated by accidental hæmorrhage and severe perineal tear, even although there is a prospect of her future confinement or confinements being similarly complicated? I think that most medical men would be inclined to decide against the operation under circumstances such as this, and

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this for the following reasons: (1) the second confinement was in every way more satisfactory than the first, as there was no excessive hæmorrhage and, apart from the perineal tear, which was much less extensive than on the previous occasion, the labour was easy and normal; (2) there is every probability that should the patient again become pregnant, her confinement will be easier than heretofore; (3) it may be possible to prevent any laceration of the perineum by inducing premature labour at a suitable time, when the child will be smaller than at term; and (4) perineal rupture is seldom a complication of labour which is fraught with actual danger to life. Apart from these considerations, the responsibilities and claims of married life cannot be overlooked; and however willing a husband may be to abstain from sexual intercourse with his wife, it is not right that such restrictions should be imposed upon him unless there be a very good cause for so doing. Another question which must arise is, can a married couple in the prime of life live together as happily after such an operation as before?

Finally, what are the guiding principles to be followed in deciding for or against the prevention of pregnancy by means of Battey's operation, providing always that the patient desires the operation and her husband, understanding the risk of the operation and its consequences, gives his consent in writing? In the event of removal of the ovaries being determined upon, ought the operation to be performed by the vaginal method or by abdominal section? The latter is usually chosen as being the more satisfactory and complete. It has been proved beyond doubt that the removal of diseased ovaries does not unsex a woman. Can the same be said for the removal of ovaries presumably healthy?

I am, Sirs, yours faithfully,

JAMES KENNETH WATSON, M.D., C.M. Edin.

Byfleet, Surrey, Aug. 21st, 1897.

"FIRST-AID TO SAILORS."

To the Editors of THE LANCET.

SIRS,—With the annotation on "First-aid to Sailors," which appeared in THE LANCET of Aug. 28th, those most deeply interested in spreading knowledge of the subject have every reason to be satisfied, excepting in respect of some comments towards the end, and these are evidently due to lack of full information. At the Ambulance Classes held under the auspices of this society the lecturers, being reminded of the circumstances that accidents to sailors do occur in places where it may be impossible to obtain qualified surgical assistance for weeks or months, extended their teaching of how to handle dislocations, fractures, hæmorrhage, burns, &c., beyond the limits of "First-aid to the injured," into what they are pleased to call "Second-aid," giving practical demonstrations. Mr. C. Alan Palmer, to whom this society is much indebted for assistance during a long period, knew of this practice when writing as he did. Having seen and heard much of permanent deformity and intense suffering due to the absence of First-aid knowledge among sailors, being greatly interested in the question, and jealous of Mr. Palmer's credit, I hope to be excused for troubling you with this letter and that you will give insertion to it, or its cardinal points, in your next issue.

I am, Sirs, your obedient servant,

Aug. 21st, 1897. A. G. FROUD, Lieutenant R.N.R.

THE MALARIAL HAND.

To the Editors of THE LANCET.

SIRS,—It is well known that long residence in a malarial climate causes, in a large majority of cases, such changes in the colouring matter of the skin that, instead of "sunburn" a peculiar "putty-like" appearance is produced. With some this appearance disappears after a short residence at home, with others it is permanent. This "West-coast complexion" is so commonly recognised as to need no comment here. The peculiar phenomenon to which I wish to draw the attention of the profession is one which I have called "the malarial hand." I have noticed during my sojourn in the Niger Territories, among those Europeans who have resided on the Niger more than two years, a singular rose-pink colouration of the skin over the thenar and hypothenar eminences and also over the under surfaces of the last phalanges of both hands. This colouration comes on imperceptibly and increases gradually until the appearance is as if these surfaces had been dipped in red ink. I have not noticed it in persons of any particular complexion, but it seems to affect fair and dark alike, and it always appears simultaneously on both hands, never on one alone or on one before the other. It would be very interesting to hear if a similar manifestation exists in other malarial climates, and if so to what it has been ascribed. Personally I am not yet in a position to give an opinion on the subject, but would be very interested to hear that of *confrères* who have noticed the peculiarity.

I am, Sirs, your obedient servant,

EDWARD E. CRASTER,

Principal Medical Officer, Niger Territories, West Africa.

Aug. 10th, 1897.

DR. HOLME WIGGIN ON INFANTILE INTUSSUSCEPTION: A CORRECTION.

To the Editors of THE LANCET.

SIRS,—Permit me to correct a trifling inaccuracy in Dr. Holme Wiggin's interesting paper on Infantile Intussusception in THE LANCET of Aug. 28th. "Case 18" and "Case 19" refer to the same case and not to two separate cases. The mistake has evidently arisen from two abstracts having been made of the same case, one from a reference to my own name and another from a reference to that of Mr. Winter. The case was reported and figured by myself by permission of Mr. Winter, the honorary surgeon, under whose care the case was admitted to the Wolverhampton General Hospital.—I am, Sirs, yours faithfully,

EDWARD DRANESLY, M.D. Lond., F.R.C.S. Eng.,

Hon. Casualty Surgeon, Wolverhampton and Staffordshire General Hospital.

Waterloo-road, S., Wolverhampton.

IS "MEDICAL DEFENCE" DEROGATORY TO THE DIGNITY OF MEDICAL MEN?

To the Editors of THE LANCET.

SIRS,—To the competent observer of medical affairs this must necessarily appear to be the vital question of the day in the medical world, on the answer to which will turn the future and the destinies of the medical profession. For those who should take the lead in defence of medical rights and interests rely, in refusing to do so, almost solely on the assertion, or assumption, or insinuation that for them or for the bodies they represent to do so would involve some loss of dignity and prestige, some humiliation, some course of conduct or some motive less worthy than that pursuit of science which should, they contend, be the sole aspiration and motive of its devotees. The coarsest form assumed by this assertion is that medical defence is trades unionism. The more refined terms in which it is expressed are a deprecation of it in the particular case or cases—an assumption that it would be an unsatisfactory new departure for bodies that have been and should be devoted to science; sometimes an evasion, sometimes a more direct repudiation of such functions—with or without an audible deprecation of them; but whatever terms are used or course adopted, the reason, expressed or implied, is that regard for our common rights and material interests is beneath alike the magnanimous practitioner of a humane profession and the earnest student of science.

To quote the expressions of individuals would unduly restrict proper criticism. Classical illustrations may, however, be given. Such is the recent evasion by the Council of the Royal College of Surgeons of England of the applications made to it to employ its disciplinary powers in restricting the exploitation of its Members for the profit of the lay public in methods and under conditions opposed to the ethics of the profession. In this instance the application was evaded by an oracular reply: "Such an exercise of its powers would interfere with the legal rights of its Members." But this was the question to be considered, and it is not considered by the answer being assumed. The legal right to practise does not include or legalise conduct which the College on proper proceedings pronounces to be "disgraceful in a professional respect." The College would not hesitate to denounce direct touting and advertising or covering to be "disgraceful conduct in a professional respect." If there is no distinction between this and the indirect touting, advertising, and profit earning

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for lay persons complained of, then these also are "disgraceful conduct in a professional respect." If there be a distinction it is not unreasonable to expect the College to define it in the interests both of the profession and the public, and not merely to postpone the evil day with complete indifference to the ill effect of existing conditions on "the study and practice of the art and science of surgery," which it is the function of the College and duty of the Council to "promote."

At the recent half-yearly meeting of the Fellows of the College this was the keynote of the occasion. "Admitting, for the sake of argument, that By-law 15 were binding on the Council, would it not be most deplorable for this great scientific institution to become identified with individual interests, however meritorious, and mixed up with actions at law?" That the most essential rights and privileges of its Members in "the study and practice of the art and science of surgery" might be involved in such actions was admitted, but was not regarded as rendering participation by the College in such actions for the defence of those rights less "deplorable"; and in this instance also the opposition offered depends entirely on the assumption that the defence of their rights and interests is derogatory to the dignity and unworthy the attention of men engaged in the pursuit of science and of an institution devoted to the advancement of science.

Even the Hunterian Oration has become the vehicle of the same views enunciated on the same assumption of axiomatic certainty. In other more or less widely distinct scenes and centres contempt for, and dislike of, what is called "medical defence" finds no less confident and influential expression. No one who has attentively watched the proceedings of the General Medical Council can have failed to perceive the dislike manifested to this subject, or the lofty air of superiority with which it is, whenever possible, relegated to a later day. At the last meeting, after a year's successful evasion by the exclusion and suppression of letters, the Council was brought to the consideration of its duties in maintaining inviolate the rights of registered practitioners under the Medical Acts. Any real and open debate of a subject so shocking to all sense of propriety was avoided by means of a motion of doubtful regularity that decided the point at issue without considering it, not ascertaining or even permitting expression of the views of members upon the merits, but accepting as sufficient the *ipse dixit* of an irresponsible legal adviser. But it is encouraging that on this occasion the closure met with resistance. In the late extraordinary general meeting of the Metropolitan Counties Branch of the British Medical Association it may almost be said that the whole strength of the opposition to medical defence consisted either of the argument that the association is a scientific body, and that medical defence is unworthy of a great scientific institution, or of fears of difficulties and of dangers of becoming involved in discreditable cases—of dissatisfaction, dissension, and disunion—put forward with really remarkable effect upon the result of the meeting. A final instance may be given of no less importance than these, and perhaps even more convincing. The exclusion of the Members of the College from all share in the government of their great corporation is defended on the ground that the presence of Members of the College, or even of Fellows representing them, on the Council would mean the importation into the transactions of the Council of discussion and even of action relating to the rights and interests and affairs of the Members throughout the world; whilst a part of the same argument is that the College is a scientific body—a silent repudiation of its functions as our greatest professional guild. Therefore, before the opposition to medical defence on the part of the leaders of the medical profession can be overcome it is necessary to convince them that medical defence, properly understood, is not derogatory to the dignity of medical men; and that in the eyes of their professional brethren the assumption or assertion that it is derogatory is not merely a grave error, but a grave offence.

I am, Sirs, your obedient servant,
REGISTERED PRACTITIONER.

"GLYCERINATED CALF VACCINE LYMPH."

To the Editors of THE LANCET.

SIRS,—In the first leading article in THE LANCET of Aug. 28th it is said: "For the last six or seven years Dr. Monckton Copeman has paid special attention to the subject of glycerination of calf vaccine lymph; indeed, it may be gathered that he was one of the first, if not the first, to put this method into actual practice." When I was a student at the London Hospital between the years 1868 and 1872 there was a small-pox scare in London, and the staff thought it desirable that hospital patients who did not object should be vaccinated or re-vaccinated, and as the supply of lymph was short the "happy thought" of diluting the vaccine with glycerine was adopted, and, I believe, with great success.

I am, Sirs, yours truly,
AN OLD LONDON HOSPITAL HOUSE SURGEON.

Aug. 30th, 1897.

"HOSPITAL ABUSE."

To the Editors of THE LANCET.

SIRS,—I can congratulate you heartily on the two articles in which your Special Commissioner so ably and so truthfully sums up the situation in Birmingham. Some ten years ago I was resident officer in the General Hospital and in the Queen's Hospital and at the General Dispensary. My remembrance of the abuse of these charities (?) confirms your correspondent in every way. The worst abuse I found existed at the General Dispensary, especially after the committee weakly yielded to the clamour of the organised workmen and expunged the words "object of charity" from their tickets. Soon after my appointment to the General Dispensary I became aware of two glaring cases of abuse, which I confirmed by personal inquiry and reported to the committee, giving details of each case. My zeal was soon quenched by a letter informing me that such reports should proceed, if from anybody, from the secretary, and that *my* work was to attend to the people who brought tickets.

I am, Sirs, yours faithfully,
Aug. 30th, 1897. A GENERAL PRACTITIONER.

HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

XII.—BIRMINGHAM *(continued)*.[1]

The Eye Hospital.—The Ticket and Registration System.—The Lock Hospital and Commercialism.

AT the Eye Hospital various proposals have been made with a view to limiting the number of patients. It was suggested that only sixty, or at most a hundred, new patients should be seen in a day. But who would select these patients? If it were only the first-comers who were admitted this might mean the neglect of very urgent cases because they happened to come last. Also, it would be very hard to send back without advice those who had travelled perhaps forty or fifty miles to reach the Eye Hospital. What would be better is a method of registration and the appointment of inspectors to make inquiries at the patients' homes and verify the truth of the details given for registration. One of the visiting staff of the Eye Hospital told me that nearly every week one or more of his private patients would declare that it was foolish to pay fees when their friends went to the hospital and obtained the same advice for nothing. A patient from a neighbouring town who made about £10 a week was reproached for going to the Eye Hospital and he replied: "I know I can afford to pay, but I am not going to pay. Is it because I have been steady all my life and have saved money that I am to be punished for these virtues by being called upon to pay? If I had

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *concluded*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *concluded*) Dec. 12th, 1896, Liverpool; (5) Jan. 2nd, 1897, Manchester; (5 *continued*) Jan. 9th, 1897, Manchester; (5 *concluded*) Jan. 23rd, 1897, Manchester; (6) Feb. 6th, 1897, Leeds; (6 *concluded*) Feb. 13th, 1897, Leeds; (7) April 17th, 1897, Coventry; (8) May 1st, 1897, The Royal London Ophthalmic Hospital; (9) May 8th, 1897, France, United Action and Legislative Action; (10) May 15th, 1897, Leicester; (11) June 5th, 1897, Nottingham; (12) July 31st, 1897, Birmingham; and (12 *continued*) Aug. 14th, 1897, Birmingham.

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been thriftless and a drunkard I should have been a proper patient and admitted without question." Some little while ago my informant removed a cataract from a person of limited means and was paid a 12-guinea fee for the operation. This patient had a friend who also suffered from cataract. The friend had a pension of £150 a year and some £3000 to £4000 capitalised. This man went to the Eye Hospital, paid a shilling registration fee, and had his cataract removed. Afterwards he used to laugh at his friend, exclaiming, "How much did your eye cost you? Twelve guineas; mine only cost twelve pence."

Undoubtedly at the Eye Hospital tickets are given away too freely. People go there who have only a stye in the eye or a slight cold. These trivial cases, at least, might go to the general practitioners. But when the New Eye Hospital was built—and as a structure it is one of the best eye hospitals in England—the sale of tickets had to be forced up from £1500 to some £3000 a year. Many subscribers in the course of the year ask and pay for more tickets. This they often do very reluctantly; but there is such a demand for these tickets that subscribers are compelled to purchase many more tickets than they originally intended. There are business connexions, workmen and others, whom a subscriber is so often called upon to oblige, and whom he cannot very well refuse. It must be borne in mind that a man in business who is solicited for a ticket by a customer cannot very well ask his customer whether the person for whom the ticket is intended is a fit object of charity. A business man's first thought is to oblige his customer. By the side of this necessity the question of hospital abuse holds a very small place in his mind. All these circumstances enabled the managers of the Eye Hospital to save in four or five years enough to build a new wing that cost some £5000, and this without asking the public for a single penny. Any patient going to this hospital is seen for the first time, even if he has not a ticket, and if the case is urgent he will be seen again so long as the urgency continues; afterwards he must obtain a ticket if he wishes for further advice and medicine. This system works very well from the financial point of view. The subscriptions in 1883, before the new hospital was built and before any effort was made to force them up, amounted to £1361. When the ticket system was enforced the subscriptions rose in 1889 to £2409, in 1893 to £2800, and in 1894 to £3080. Though the ticket system favours much abuse, it is difficult to suggest its abolition in the face of these financial results.

In the eye department of the Queen's Hospital it was decided not to see more than twenty-five new cases in each of the two days devoted to diseases of the eye. This made fifty new cases per week, and as many as 150 new patients have applied in the course of a week. The last comers were not admitted, and it often happened that from twenty to thirty patients went away unrelieved. It also frequently occurs that ophthalmic surgeons receive in their private practice patients who have grown tired of waiting for their turn at the hospitals, and these patients from the hospitals have not only paid the guinea consultation fees, but they have also sometimes paid operation fees, and this at the ordinary rates. This fact in itself indicates the high-class character of many of the patients at the eye hospital. It also opens out the question as to whether what would constitute an abuse at a general hospital is to be considered an abuse at a special hospital. For a general hospital it may be urged that anyone who can pay a 2*s.* 6*d.* fee or who can subscribe to a provident dispensary has no right to go to the hospital. But the ophthalmic surgeon's fee is generally a guinea, and therefore it is urged in some quarters that all those patients who cannot pay guinea fees are entitled to go to the Eye Hospital; this it is that explains why a much better class of patients frequent such hospitals. At Birmingham there is also a much better class of patients at the Ear and Throat Hospital. Many of the patients have been in the habit of paying 5*s.* fees to their ordinary medical man, but cannot afford to give a guinea to the consultants who make this class of disease their speciality. Therefore, if, as sometimes occurs, the general practitioner fails to effect a cure such patients resort to the Ear and Throat Hospital. Here they gain admission either by ticket (and six tickets can be obtained for a guinea) or else by paying a registration fee of 3*s.* 6*d.* In-patients are only admitted by ticket unless it be an urgent case, and very poor patients are accepted free of any charge when especially recommended.

The payment of registration fees is not looked upon with favour by the majority of medical men. The sum charged is too large to cover the cost and trouble of registering the applicant's name, &c., and it is not sufficient to defray the cost of his treatment. Nevertheless, in its February, 1895, issue, *Forward*, the organ of the Hospital Saturday Fund, says in its leading article: "The registration fees are regarded by most of the patients at what are termed the free hospitals as payments for value received. The Queen's Hospital makes a charge of a shilling per patient; at the Women's Hospital the charge is half-a-crown, with a repetition of the payment every month if the patient continues in attendance. Similar charges are made at the Children's Hospital, the Skin and Lock Hospital, the Ear and Throat Infirmary, the Dental Hospitals, and others. The registration fees represent in the aggregate upwards of £4000 per annum. At the Queen's Hospital they amount to 39 per cent. of the total subscription list, at the Children's Hospital 36·5 per cent., at the Skin and Lock Hospital 209 per cent., at the Women's Hospital 200 per cent., at the Ear and Throat Hospital 81 per cent., and at the Dental Hospital 238 per cent." Thus it will be seen that the patients, in the main, think they are paying fully for all they receive; and, on the other hand, that in some of the hospitals they do by their registration fees cover more than two-thirds of their cost, since for £100 subscribed more than £200 are received in registration fees. This system dates back to the year 1870, when the experiment of a free hospital was made at the Children's Hospital. As there was no restriction to the admission of patients the number of applicants soon became so great as to be absolutely unmanageable. It was then decided to charge a sixpenny registration fee, and this kept away the very trivial cases. In 1875 the Queen's Hospital followed this example by instituting a shilling registration fee, and other hospitals soon did the same.

Perhaps the strongest complaints in regard to registration fees are against the Skin and Lock Hospital. Not only does this hospital advertise and charge a very high registration fee, but there are baths for which a charge is also made. Finally, and to ensure a plentiful supply of patients who are practically paying patients, the consulting hours are in the evening. Thus a workman who has contracted a venereal disease can, without inconvenience to himself, be treated after his working hours. It is a good thing, not only for the patient, but more particularly for the public at large, that all those who suffer from a contagious disease should have every opportunity of getting cured so that they should not spread the complaint to other and more innocent persons. Still, it does seem peculiar that there should be greater facilities for the cure of shameful diseases than for ordinary complaints. If the visiting staff of a hospital for venereal disease may be consulted at the hospital in the evening and after the day's work, why should not the visiting staff of all the hospitals be at the disposal of the public after other than the wage-earning hours of the day? It seems odd that those who suffer from venereal disease should be especially privileged, and under such circumstances it is not surprising that the Lock Hospital should be denounced as an institution run on a commercial basis. This permeation of commercialism in hospital management is in part the fault of the medical men themselves, for they do not attend with sufficient assiduity the meetings of the management committee, and then the lay members of these committees, who are for the most part commercial men, naturally introduce non-professional ideas and policy. The decision of the committee of the Lock Hospital that the honorary surgeons should receive patients at the hospital in the evening certainly shows a tendency to truckle to the working-class population — a tendency which, however, is not based on any abstract principle, but is due rather to the fact that of late the working class has become one of the chief paymasters. This, indeed, is what I have been made to feel throughout the whole inquiry, and every question asked seems to have been echoed by the other question: "Yes; but there is the Hospital Saturday Fund, and what will the workmen say?" Three out of every four workmen in Birmingham subscribe to the Hospital Saturday Fund, and they raise so large a sum that they hold the medical charities of Birmingham in their grip. There is hardly a hospital in the town which would not be bankrupt to-morrow if the workmen withdrew their support. This is a state of affairs pregnant with so many threatening contingencies that it must be studied carefully.

(To be continued.)

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NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Munificent Gifts to Newcastle Charities.

MR. HILTON PHILIPSON, a well-known solicitor and coal owner, son of the late Mr. Ralph Park Philipson, who was for many years the town clerk of Newcastle, has given the sum of £2000 to the Home for Destitute Crippled Children. This most valuable institution, for which the town is mainly indebted to Mr. W. T. Sanderson, is destined to do an immense amount of good in the neighbourhood. A new home at Gosforth is just ready for occupation, but it still has a debt of £1500 upon it.—Mr. John Hall, a wealthy ship-owner in Newcastle, has offered to build and equip at his own expense a new infirmary, provided that the building be erected upon another site and that the sum of £100,000, already raised by the ex-Mayor of Newcastle, Mr. Riley Lord, for the purpose of building a new infirmary on the present site, be transferred to the sustentation fund. Hitherto the infirmary authorities have utterly failed in getting from the town council another site or even an augmentation of the present one. The town council is the only source from which an eligible site can be obtained, and it is to be hoped that this generous offer of one of Newcastle's most prominent philanthropists will induce the council to reconsider its refusal to grant a site. Mr. John Hall's name will go down to posterity as one of Newcastle's greatest benefactors should it be found possible to profit by his noble offer.

The Policeman's Baton.

An inquest has just been held upon the body of a pitman, who died in the Royal Infirmary, Newcastle-upon-Tyne, from fracture of the skull the result of a blow from a policeman's baton. A verdict of manslaughter has been returned, and in due time it will have to be explained how the deceased's head got in the way of the baton. In the meantime the case is another illustration of the danger of striking a man on the head with such a weapon as the policeman's truncheon.

Home for Aged Miners.

On Saturday last, at Barmoor, a few miles from Newcastle-upon-Tyne, the foundation-stone of a home for aged miners was laid by Mrs. J. B. Simpson upon ground given by the Stella Coal Company. The home is to consist of eight one-storey and two two-storey cottages, and it will be erected at the sole expense of Mr. J. B Simpson, a local coal-owner, as a memorial of his late father. The institution will be known as the "Robert Simpson Memorial Homes for Aged Miners." The relations between capital and labour in this district ought certainly to be most amicable, and if the large sums of money which are so constantly being given for charitable purposes be any indication they must be so, notwithstanding the ill advised strikes which do so much to cripple the best friends of the employed—the capitalists.

A Sign of the Times.

Miss Norah Kemp, M.B., C.M., has entered upon her duties as *locum tenens* for the assistant medical officer at the Northumberland County Lunatic Asylum at Morpeth.

Aug. 31st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

The Aboyne Hospital Site Question.

THE Local Government Board has declined to interfere as to the proposal to change the site of the fever hospital now being erected at Aboyne, Aberdeenshire, on the ground that no guarantee has been given for the extra cost (upwards of £2000) involved. The Marquis of Huntly, however, has addressed a representation to the Local Government Board in favour of a new site, but as the roof is now on the buildings in progress his objection will probably end in nothing practical. Lord Huntly contends that the demands of the county medical officer are extravagant, and that the cost of removal to another site need not have exceeded £1000, the sum guaranteed by Sir W. C. Brooks, Bart., of Glen Tana.

Aug. 31st.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

The Local Government Board and the Mitchelstown Union.

SOME months ago the board of guardians of Mitchelstown Union appointed a Mr. Lagherty, clerk of the works, in connexion with the erection of a dispensary residence for the medical officer at Galbally at a remuneration of £1 per cent. on the necessary outlay. The guardians subsequently brought an action against him to recover £500 for negligence and non-fulfilment of his contract. This not alone failed but resulted in the former being condemned to pay the defendant's costs—viz., £60. During the trial it moreover transpired that the defendant at the time of his appointment was eighty-three years of age and was by trade a carpenter. The Local Government Board have now notified their intention to seize the workhouse in consequence of the action of the guardians, chiefly in reference to their non-payment of this bill of costs; and the position of the union is rendered critical by the fact that the guardians have been already surcharged by the auditor of the Local Government Board to the amount of £123, while further heavy surcharges in connexion with the dispensary house are pending. At a specially convened meeting of the guardians held on Aug. 28th, a resolution was passed requesting the Local Government Board to permit a cheque to be passed for the amount of the bill of costs irrespectively of other matters in dispute. There seems to have been some grave irregularity in the procedure adopted by this board of guardians recently, and as a consequence the completion of the much required dispensary residence at Galbally is likely to be long delayed.

Aug. 31st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Moscow Congress.

MOST of the learned societies are taking a holiday, and the two which continue to sit—namely, the Academy of Medicine and the Academy of Sciences—have received no communication of importance, all the interesting papers having been reserved by their writers for the Moscow Congress. The daily press is full of matter about this meeting. As a rule the French members of the Congress express great regret at the insufficient organisation in France preparatory to the Congress. Relatively few members have attended from France, especially among the prominent medical men attending the Congress, and it is certain that the Germans, being nearer the scene of the Congress, have attended in greater numbers. It is especially to be regretted that military medicine had only one French representative and nearly a hundred German. The excessive cost of the journey, due mainly to the fact that Germany refused any reductions to foreigners going to Russia, is partly accountable for the scarcity of French members.

Holothyrus Coccinella.

M. Mégnin recently showed before the Academy of Medicine a parasite of a fairly large size which had been sent to him from the Mauritius by Dr. Charmoy for the determination of its zoological position. It is the Holothyrus coccinella of Gervais. Its popular name is "Trouille canard," and poultry farmers know its noxious properties so well that they have given up breeding birds in those elevated and damp regions of the island where this parasite abounds, lying hidden during the day under the moss and stones. Even children have often fallen victims when, having found a "trouille canard," they have put their fingers in their mouths after having touched it, for the tongue and pharynx become affected with an exceedingly painful swelling, so that they are in danger of asphyxia. With his last consignment of these parasites M. Mégnin tried some experiments to verify the existence of these unheard-of properties. If one is applied to the skin and kept there by a bandage a burning sensation is felt which after a time becomes very disagreeable, although the skin is only slightly œdematous and exhibits no change of colour. Upon mucous membranes the effect is very much more pronounced.

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The Control of the Hospices in the South of France.

The General Council of the Bouches-du-Rhône have adopted a resolution for laicising the Hospices, which has been accepted by the Administrative Commission of the Hospitals, and the municipal council has made itself responsible for the sum of 45,000 francs, which will be the probable increase in the expenses caused by the suppression of the nuns. The prefect, considering that this sum will not be enough, has not yet approved the idea. M. Charles Roux voted against the proposal, not because he had any scruples as to the laicising, but because he considered the 45,000 francs would not be enough to provide for the new organisation, and before making any change it would be better to increase the number of beds, which are now so notoriously deficient that, as he says, every day more than twenty patients are refused admission at every hospital in Marseilles.

The Bacteriological Laboratory.

The total number of diagnoses made at the bacteriological laboratory of the Prefecture of the Seine during July, 1897, was 183. Of these 122 were diagnoses of doubtful sore-throats, and in 24 of them Löffler's bacillus was found, which brings the percentage of diphtheria observed during the month to 19·6. These figures are higher than those (namely, 18·1 per cent.) which obtained during the month of June, and the increase is entirely due to a short-lived rise in the number of cases of croup observed during the first fortnight of July. In the second fortnight of this month the number of cases of sore-throat underwent a marked diminution. Of the remaining cases sent up for diagnosis 47 had reference to suspected tuberculosis, and in 17 of them Koch's bacillus was discovered.

The late Dr. Jules Bernard Luys.

Dr. Jules Bernard Luys, the eminent alienist physician, Member of the Academy of Medicine and Officer of the Legion of Honour, has just died suddenly in his sixty-ninth year at Divonne-les-Bains (Ain), where he was passing the summer with his family. Born in Paris in 1828, resident medical officer at the hospital in 1853, and graduated as M.D. in 1857, Dr. Luys became in 1862 physician to the Salpêtrière and the lunatic asylum at Ivry (Seine). His researches were more particularly devoted to the study of the structure and disease of the cerebro-spinal nervous system, and his numberless writings have spread abroad his theories throughout the whole scientific world. He is credited with the discovery of two portions of the grey matter before undescribed, to which has been given the name of corpora Luysii. His best-known work, "The Brain and its Functions," was published in 1878. Dr. Luys was for a long time professor at the Salpétrière, afterwards at the Charité, where he devoted himself specially to the study of the phenomena of hypnotism. To support his ideas on this subject he published two books, "On the Emotions in Hypnotics" and "Clinical Lectures on the Principal Phenomena of Hypnotism." Lately the scientific world followed with the deepest interest some curious experiments of Dr. Luys relative to radiography—that is to say, photography of the "effluves" of the human body, an account of which was given in my letter published in THE LANCET of June 12th, 1897 (p. 1641).

Aug. 31st.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Typhoid Fever at Milan—a Warning.

FOR a month and more the Lombard capital has been a prey to typhoid fever, which may be said to be almost endemic within its walls. My last reference to the fact[1] indicated rather the wide diffusion than the intensity of the malady; now I learn on authority that, while its area is extending, the cases "assumono nella maggior parte forme piuttosto gravi" (assume for the most part rather grave features). Indeed, Milan, in city and suburb, is face to face with a very serious recrudescence of one of her generally latent, never absent, scourges, shown in the increasing typhoid fever admissions into her Ospedale Maggiore, whose many wards are all "piene zeppe" (full to bursting) with cases. At the city gates matters are not a bit better. At Sesto di Monza, for instance, there were on the 24th inst. more than 100 cases including those in hospital and those under treatment in their own homes; while further afield, in the country districts, the malady is as severe as it is widespread. These facts must give pause to the tourist world, which will soon be on the wing, and which, after a brief sojourn on the Alpine levels or at the lakes, is wont to use Milan as a halting-place before resuming its southward flight. If that great *entrepôt* of travel finds itself shunned this autumn, or, indeed, till it can honestly publish a clean bill of health, it will have only itself to thank. "Acqua inquinata" (polluted water) is the nursing mother of typhoid fever, and until the wealthiest of Italian cities has the public spirit to provide itself from the not too distant Alps with a pure and abundant supply of that necessary it must expect the stranger within its gates to be (as Americans say) "a stranger some more." Nestling in the Lombard plain, Milan has far too long, or far too exclusively, relied for her drinking-water on wells sunk in the subsoil, and it is high time that she should follow the example of her much poorer sister, Naples, whose Serena aqueduct is at once salutary to her health and creditable to her enterprise. Not that Naples makes the most of her advantages. Water otherwise excellent she allows to be contaminated with impurities from public baths or worse, and as a consequence I am told that in the Pizzofalcone barracks an epidemic of typhoid fever has broken out in the 10th Regiment of Bersaglieri, of whom over a hundred are now in hospital.

An Odyssey under Quarantine.

"Pazienza!" sighs the Italian where the Englishman clamours for "reform"; and certainly Italy acquiesces in abuses and grievances which in the British Isles would scarce survive a sitting of Parliament. Quarantine as enforced at Italian seaports is an instance in point, the latest victims to its formalities being four distinguished Italians themselves, with whom, as with most Englishmen, "time" is indeed "money." Professor Lustig, Dr. Malenchini, Dr. Galeotti, and Dr. Levi, all members of the Florentine Medical School, sent by the Di Rudini Government to Bombay, there to study the plague and the best means of preventing it, had returned, on the completion of their task, as passengers in the *Britannia*, which unfortunately had on board three Hindoo stokers or firemen all down with Asiatic cholera. On nearing Brindisi, the health conditions of the liner becoming known, "libera pratica" (free course) was denied it and the passengers were prevented from landing. Meanwhile, a party of Florentines had come all the way to welcome their returned kinsmen, but were told they could not approach the compromised vessel. In vain were protests raised by the passengers whose voyage terminated at Brindisi that at least they might be landed in Italian waters and accommodated for the statutory time at the not distant Lazzeretto Alberoni di Venezia. They were not only compelled to remain on board, but to pursue the ship's voyage to London. So in spite of themselves some fifty passengers, including the four Tuscan pathologists, had to test the virtues of "Pazienza" and go on to the British metropolis, thereby postponing the welcome and the business awaiting them in Italy from the third week of August to the first week of September. The Italian press is indignantly asking for what purpose marine sanitary stations like the Lazzeretto Alberoni di Venezia are maintained if, in circumstances like those referred to, they cannot be utilised. Well indeed it may. But Italians must be reminded that their own legislation is chiefly responsible for the enforcement of quarantine in the Mediterranean and that the English-speaking world for generations has had to sacrifice even more valuable time than theirs by the perpetuation of formalities at sea which should long ago have gone the way of "sanitary cordons" on land.

Dr. Maurizio Sacchi.

The fate of this young and gifted nature-student is still one of the dark problems of what (for Italy at least) I have called "the doubly Dark Continent." He was, it may be remembered, the surgeon and medical adviser of the ill-starred expedition under Captain Bottego and was believed to have escaped the massacre that befel all but two of his comrades by the accident of his having been sent, just before the catastrophe, on a special mission to the coast. Now it is surmised that on his return journey, presumably to rejoin the main body whose destruction was unknown to him, he himself was murdered. Doubt, however, has

[1] THE LANCET, Aug. 7th, 1897.

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been thrown on this conjecture — for it is imperfectly supported by facts—and now I hear that from his native Mantua a traveller has offered to go in quest of him if alive, or of his remains or of details concerning him if dead. This volunteer is no other than the intrepid African explorer, Signor Emilio Dal Seno, who in July, 1893, was rescued from a savage prison in Lugh by poor Captain Bottego in person. The Società Geografica Italiana is deeply interested in this quest, for it is known that Dr. Sacchi had amassed much novel and valuable information (including specimens of the flora and fauna), not only in the natural history, but in the geographical and meteorological features of the country between Lake Rodolfo and the seaboard.

Aug. 28th.

MONTREAL.

(FROM OUR OWN CORRESPONDENT.)

The Royal Victoria Hospital.

THE third annual report of this hospital has just been issued. It is an interesting pamphlet of ninety pages, and gives more information than is usually furnished in annual reports. It gives a brief epitome of the more important cases observed and treated. This splendid institution, founded and endowed by Lord Mount-Stephen and Lord Stratherna and Mount Royal of Glencoe, has an income from capital of £11,000, but this is not sufficient, as the expenditure for the last year was £16,000. With an average of 167 beds occupied daily, the expense represents 5*s*. 9*d*. per patient per day. Of the 2016 patients treated 50 per cent. were Protestants, 44 per cent. Roman Catholics, and 6 per cent. of other faiths. Of the adults there were 912 males and 908 females; and the children under twelve years of age numbered 196. The total mortality was 5 per cent., a not unusual rate for a general hospital. Bathing is favoured for typhoid fever. Of 68 cases of typhoid fever 47 were given baths; the number of baths varied from 1 to 79, and averaged 28. All the patients recovered. In 78 per cent. there was manifest eruption, and in 66 per cent. the spleen was palpable. The febrile period existed from three days to eighty-four days, the average being twenty-four days. Diarrhœa was present in 8 per cent. of the cases and constipation in 91 per cent. Baths were given every three hours when the temperature remained over 102° F. The patient was immersed in water at 90°, and the water was rapidly cooled to 80°. Later, colder water was used, down to 65° in some cases. On the surgical side there were 77 cases of appendicitis with 5 deaths. Appendectomy was performed 58 times, but the mortality is not given. In the gynæcological department there were 53 cœliotomies, with 1 death. The one death occurred in a case of abdominal hysterectomy. 8 other cases of abdominal hysterectomy and 11 vaginal were successful. Ventro-fixation of the uterus was done 28 times, with 27 recoveries and no deaths. In the eye, ear, nose, and throat department there were 176 patients, with 1 death, and this one died from diabetes. In the pathological report a case of septicæmia is noted, with bacillus aërogenes capsulatus and emphysema of the spleen.

Variola.

The city has been free from small-pox since the great epidemic of 1885–86. In July of this year a case developed, but the source could not be traced; since then 13 cases, with 4 deaths, have occurred; in the west-end suburb of Westmount 4 cases occurred, with 1 death. The health authorities have been stirred to great activity by the outbreak, and as but one infected house now remains under supervision, it is hoped that the worst is over. The difficulty, arising from divided control of the Civic Infectious Diseases Hospital referred to in a former communication has been surmounted by giving the entire control of the institution to the medical health officer, Dr. Laberge. The building itself is in very bad condition, but hurried repairs have been made in the portion set apart for small-pox cases. Free vaccination is performed at numerous stations throughout the city.

Lord Lister.

The visit of Lord Lister to Canada to attend the meetings of the British Association for the Advance of Science has been taken advantage of by the medical profession to do honour to one so eminent in medicine and in science. The Medico-Chirurgical Society of Montreal will entertain his lordship at dinner at the Windsor Hotel on Aug. 31st, when a congratulatory address will be presented to him, referring to his elevation to the peerage. It was intended to make the presentation some time ago, before it was known that he would be in Montreal. Lord Lister will remain in the city throughout the meeting of the British Medical Association.

British Medical Association.

Among the men of science who came over for the Toronto meeting, there were a number of medical men who will also attend the British Medical Association's meeting in Montreal. An immense programme has been prepared for this latter; the scientific features and the entertainments would be, either of them, sufficient for two conventions. The hospitality offered consists of garden parties, receptions, concerts, dinners, golf, steamboat excursions, trolley rides, masonic meetings, chess, &c. An enthusiastic wheelman, Dr. Lapthorn Smith, will take a party whose lives are insured to the top of Mount Royal at seven o'clock in the morning of Sept. 1st, to descend by bicycles a two mile route by gravitation.

Jubilee Nurses Home.

The Victorian Order of Nurses' scheme is in abeyance at present, but the authorities of the Montreal General Hospital have succeeded so well with a project for the building of an establishment for the accommodation of nurses in training and nurses awaiting calls, that ground has been broken on a site convenient to the hospital, and Lord Lister has accepted the invitation to lay the corner stone. In the management of this enterprise, it is intended to supply a part of the remuneration of the nurses from a fund, as the usual charge of 8*s*. per day, is prohibitive to many families.

Chemistry Building.

The latest addition to the group of buildings in the McGill Park is the Chemistry Building; it is nearing completion and will be in occupation during the coming season, though not at the beginning. It is a benefaction from a wealthy manufacturer, Mr. W. C. Macdonald, whose numerous contributions to the university can only be described as princely. When Sir H. E Roscoe was visiting Montreal he said in a speech that the only thing needed to complete the splendid equipment of McGill University was a special building entirely devoted to chemistry. Mr. Macdonald said it would be supplied and would be of the very best description.

Aug. 21st.

AUSTRALIA[1]

(FROM OUR OWN CORRESPONDENT.)

Vital Statistics of New South Wales.

THE annual report of the Registrar-General on the vital statistics of New South Wales shows that in the metropolitan district the ratio of deaths per 1000 of the population has in ten years declined from 20·87 to 13·18. The decline has not been uniform, but since 1890 the variation has been no more than 3 30 per 1000. The decrease is not due to exemption from infectious disease, but is ascribed to the excellent water-supply and drainage system of the metropolis. Infantile mortality still remains high. In the metropolis it is higher than in the country, and higher in the suburbs than in the city itself. North Sydney, the fashionable suburb, has the lowest mortality from all causes.

Diphtheria in Sydney.

In my last communication reference was made to the prevalence of diphtheria in the neighbourhood of Melbourne, and from a report of the medical officer to the Sydney Water and Sewage Board it appears that this disease has been very prevalent in the sister metropolis also. During the present year 123 cases had been reported and investigated. There was no appreciable difference in the number of cases between the sewered and unsewered districts, and the idea of any connexion between the disease and sewers is discountenanced, and the cause is more probably to be sought in the imperfections of ordinary domestic sanitation. Many of the dwellings in which the disease made its appearance were very dirty and showed gross signs of individual neglect. Fowls were kept in small yards and allowed to remain about the houses. The aggregation of children in schools under faulty sanitary conditions is regarded by the medical officer and the Board as one of the most potent agencies in spreading the disease. The milk supplied to the various reported

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cases came from all parts of the country, and it would be impossible to charge any particular supply with disseminating the disease. One of the reported cases, however, came from a milk shop, and the sale of milk was allowed to continue even after the existence of the disease had been established beyond all doubt. Great stress is laid on the necessity of a stricter supervision of the milk-supply.

Supervision of Milk Supply in New South Wales.

This subject has been receiving a good deal of attention from the health authorities in New South Wales lately, and has evoked a long correspondence in the Sydney press. The Richmond River district has recently risen into importance from the extent of its dairying industry, so that the Dairies Supervision Act has been administered in it only by local authorities. For a few months past the veterinary inspector of the Board of Health has been supervising the local authorities in their duties under the Act, and has had to require many alterations, involving outlay of money. This interference has been resented by the dairymen thus compelled to abandon their happy-go-lucky methods. The President of the Board of Health has insisted on the necessity for the adoption of the most rigid precautions by dairymen to ensure the purity of the milk-supply, and especially for inspection of the dairy herds by veterinarians to see that they are free from tuberculosis. In this view he has been supported by the leading medical practitioners in Sydney, though some statements as to the frequency of tubercle in children have been challenged. The press has also strongly advocated rigid inspection of all dairy herds, the general use of tuberculin as a diagnostic agent, and the destruction of all tuberculous and diseased animals, while the price of milk must be raised proportionately.

Presidential Address.

Dr. A. A. Lendon, the retiring President of the South Australian Branch of the British Medical Association, in his address, dealt more particularly with the subject of the federation of the different Australian medical societies. He advocated that the colonial branches should be grouped into a division of the British Medical Association, and that to this Australian division the Council should grant a greater degree of autonomy. A divisional or federal council should be established (in part elected by the branches, in part nominated by the Council) which should elect members of the Association in Australia, and have power to expel members and to create new branches. This Australian Council would be directly represented on the London Council, and the necessary funds would have to be provided for by a rebate on the subscriptions at present forwarded to London. Such an arrangement, in Dr. Lendon's opinion, would really strengthen the ties between the present Association and its numerous colonial offshoots and is perfectly feasible. There is, I am aware, a growing dissatisfaction among members in the colonies at the present arrangements, especially as regards unattached members and powers of expulsion of members, and the troubles in Adelaide over the hospital and the action of the London authorities with reference to Dr. Napier and Dr. Smith have served to accentuate this feeling in some measure. The question of the amalgamation of the various societies into one body was ventilated at the last meeting of the Inter-colonial Medical Congress, but did not seem to meet with much approval.

Dinner to Sir Thomas FitzGerald.

On July 22nd the medical profession in Victoria entertained Sir Thomas FitzGerald at dinner, in commemoration of the honour of knighthood recently conferred on him. The gathering was thoroughly representative and most enthusiastic. Dr. Neild, who presided, said it was the largest medical dinner, the most unanimous, and the most representative he had witnessed during an experience of over forty years in the colony. The honour conferred on the guest was exceptional, in that it was the first time in the Australian colonies an honour of the kind had been conferred on a medical man purely and solely on account of his professional eminence. Sir Thomas FitzGerald, by his scientific attainments and rare merit, had raised himself to such a position as to thoroughly deserve the dignity. He asked the company to drink Sir Thomas FitzGerald's health and long enjoyment of his title in a spirit of brotherhood, and the toast was drunk with the greatest possible enthusiasm. Sir Thomas FitzGerald, on rising to respond, received a tremendous ovation, the whole company rising, waving their handkerchiefs, and cheering vociferously. Speaking with considerable emotion Sir Thomas FitzGerald said he hardly knew how to express his feelings. He had always tried to do his best to advance the profession, and he could honestly say that he had never wittingly been guilty of a breach of professional etiquette. He wished to do all he could to elevate the profession, and for this reason he had accepted and welcomed the honour, not as a personal, individual compliment, but as an incentive to the profession, which was thus honoured through him as a member of it, and he trusted he would not shuffle off this mortal coil before he had the pleasure of seeing several of his friends similarly honoured. He then gave some reminiscences of his early struggles, and concluded by thanking the gathering for the very great compliment they had paid to him. The staff of the Melbourne Hospital then presented him with a handsome illuminated address worded as follows :—

"Sir Thomas Naghten FitzGerald, Knight, F.R.C S.I., Surgeon to the Melbourne Hospital; President of the Inter-colonial Medical Congress, 1889.

"DEAR SIR THOMAS,—Upon the auspicious occasion of your knighthood at the hands of Her Most Gracious Majesty the Queen in connexion with the sixtieth anniversary of her glorious reign, we, your colleagues on the staff of the Melbourne Hospital, welcome the opportunity of offering you our warmest and most sincere congratulations. Your term of office amongst us is the longest in our annals. The fertility of your conception and the brilliancy of your operations have shed a lustre upon the institution which we all delight to serve, and directed as they have ever been by a high sense of professional honour they have won for you the esteem and affection of every member of the staff, the admiration and respect of successive generations of students, amongst whom more than half the present staff are proud to number themselves, and the veneration and confidence of innumerable hosts of patients. We thus look upon your official recognition, not only as a deserved, although long delayed, honour to the profession generally, but as conferred upon one of whom the practically unanimous verdict of his fellow practitioners throughout Australasia would have been given as 'of all the most worthy.'"

Sir Thomas FitzGerald, in replying, said he loved the hospital and he loved the staff, and he thanked them most sincerely. An address of congratulation was then presented from the Ballarat District Medical Society, and Mr. Gaffney conveyed the congratulations of the profession in Bendigo. During the evening songs were contributed by several members of the profession, and the proceedings closed with a vote of thanks to the chairman.

An Epidemic of Pemphigoid and Furuncular Skin Disease due to a hitherto undescribed Micrococcus.

At the last meeting of the Medical Society of Victoria Dr. James A. Reid contributed a paper in which he described a series of cases of skin affections characterised by bullæ, lymphatic inflammation, boils, and vesicles. In all the cases a definite micrococcus was found on bacteriological examination. It generally occurred as a diplococcus, liquefied gelatin, and was actively motile. It was aerobic and facultatively anaerobic, and pathogenic to man, mice, and guinea-pigs. Injections of pure cultures into mice and guinea-pigs caused abscesses the pus from which contained the same organism. Dr. Reid can find no previous description of a motile pathogenic micrococcus. Demonstrations were given of the organism in various culture media.

Death of Dr. Cutts.

The news, received by cablegram, of the death in London of Dr. William Henry Cutts came as a shock to his friends here. Dr. Cutts used to be a very prominent figure in the medical world of Melbourne, where he practised as a physician for many years and was very greatly respected. He came to the colony in 1852, and was shortly after appointed honorary physician to the Melbourne Hospital, a position he held for seventeen years. He was also for many years a member of the Council of the Melbourne University. He assisted in founding the Medical Society of Victoria and the *Australian Medical Journal*. Later he helped to found the Victorian Medical Benevolent Society and the Victorian Branch of the British Medical Association, of all of which he was at one time or another president.

July 24th.

Obituary.

CLAUDIUS FRANCIS DU PASQUIER, F.R.C.S. ENG., L.S.A. LOND.

CLAUDIUS FRANCIS DU PASQUIER was born in London on Nov. 23rd, 1811. His father was a native of Neufchatel.

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He received his education at Mr. Pollard's, Blemill House, Brompton, and subsequently was bound at the Apothecaries' Hall and served his apprenticeship to Mr. John Nussey, of Cleveland-row, St. James's. In due time he became a Licentiate of the Society of Apothecaries and passed the examination for the Membership of the Royal College of Surgeons. He then had the appointment of assistant apothecary to St. George's Hospital, where he remained between two and three years, when he was admitted into partnership with Mr. Nussey. Mr. Du Pasquier was appointed surgeon-apothecary to Her Majesty in 1862, having already attended the late Prince Consort as apothecary. Later he became surgeon-apothecary to the Prince of Wales's household. After being in practice for forty years he retired from the profession and went to reside at Norwood.

An old friend, Mr. Edward Tegart, writes the accompanying lines:—"The late Mr. Du Pasquier deserves more than a mere formal notice because he was so excellent a representative of that class which socially is so important, the trusted family adviser. A gentleman in feeling and conduct, incapable of anything ungenerous or unhandsome, he was one in whom thorough confidence could be placed. With his sensitive disposition he shrank from seeking the prominent position which he might have taken, but those who knew him best valued him all the more. He had resources in himself besides his profession, and was especially fond of natural history pursuits and gardening. He had retired from practice many years before his death; indeed, his health required this. From his advanced age he has survived most of his old friends, and those who remain will think of him with affection and regard. I had known him intimately for so long that I deem it a duty to offer my tribute to his memory."

Mr. Du Pasquier died at his residence, Upper Norwood, on Aug. 20th, in his eighty-sixth year. He married the youngest daughter of Mr. John Bidwell, of the Foreign Office, who survives him. During the years he was in practice he lived at 62, Pall-mall, and was for some years on the court of the Society of Apothecaries, of which he was offered the mastership, an office he declined. He was always proud of having been a fellow-student of Sir Prescott Hewett, with whom he kept up a great friendship. During his later years he suffered frequently from attacks of eczema. He had been failing very much in health for the last year or two and had become very feeble during the last few months. A week before his death occurred he had to take to his bed owing to a slight gouty attack, from which he never rallied.

HENRY VINCENT GARMAN, M.R.C.S. ENG., L.S.A. LOND.

THE death of Mr. Henry Vincent Garman, at the age of seventy-three years, took place on Aug. 25th. Mr. Garman was one of the oldest and best-known practitioners in East London, having held, besides several other appointments, that of police surgeon at Bow for the very long period of forty-six years. He had not been in active practice for the last five years.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men have been announced:—Dr. Holmgren, Professor of Physiology in the University of Upsala, died suddenly from a cardiac affection on Aug. 14th. He was born in 1831, and worked for many years under Brücke, Du Bois Reymond, and Helmholtz. He was appointed to the chair of Physiology in 1864, and had the honour of establishing the first physiological institute in Sweden. He was chiefly known in this country from his researches on colour-blindness and his plan of testing the colour sense by means of wools.—Dr. T. Bogomoloff, Professor of Medical Chemistry in the University of Kharkoff, at the age of fifty-four years.—Dr. Franz Walser, *privat-docent* of surgical operations in the University of Gratz.—Professor Carl Liebmann, a well-known gynæcologist of Trieste.—Dr. Guardia, formerly Assistant Librarian of the Paris Academy of Medicine.—Dr. Gros, Professor of Clinical Medicine in the Algiers Medical School.—Dr. Enrique Moresco y Larado, Professor of Children's Diseases in the Cadiz Medical School.

THE TWELFTH INTERNATIONAL MEDICAL CONGRESS.

MOSCOW, AUG. 19TH—26TH.

THE Congress came to a formal conclusion on Friday, Aug. 27th, but many members had already left Moscow, being unprepared for the wave of tropical heat which spread over the city during the week. Indeed, so early as Monday, Aug. 23rd, but two clear working days after the opening of proceedings, as many as a thousand members returned to their homes, or started on one or other of the various excursions.

The crowding, however, did not visibly decrease, so very excessive has the number of members been in proportion to the accommodation provided by the resources of the city. It is doubtful whether the great crowd of 7000—and some put the total figure at nearly 9000—have been really and genuinely medical men. There was no scrutiny made of the demands to be enrolled as a member. The form had to be filled up and returned to the General Secretary with a guinea or its equivalent and the rest followed. Now to all dwellers upon or near the frontier who became enrolled the Congress presented an excellent opportunity for sight-seeing and a cheap holiday, for to them the free passes to and from Moscow meant a vacation free of travelling expenses. Consequently, there is no doubt that a large number of persons only indirectly connected with the medical profession availed themselves of the advantages going begging for one guinea, and have swelled the numbers of the Congress without a corresponding addition to the deliberative wisdom of the assemblies. To English and American people there has been no temptation to visit Moscow to make a cheap holiday, as the total distance to be travelled made the gift of a free ticket for the last 450 miles no very serious inducement.

The work in the sections was lightened by the tropical heat. Flesh and blood could not stand many long hours of confinement in crowded rooms, however large, with a thermometer persistently above 88° F. in the shade, and as a consequence the proceedings were got through with an expedition that was more due to absence of debate than to any great precision of arrangement. In some cases this was to be regretted, as many valuable and interesting communications, which might well have provoked comment, have fallen quite flat, and we must await the publication of the special records of the Congress for the rescue of these papers from oblivion.

The heat did not, however, deter the members from making the different excursions with vigour and determination. Of these there were several to choose from, as the officials had organised expeditions all over Russia, in Europe from St. Petersburg to Sebastopol, and from Nijni Novgorod to Odessa. But next to the Sparrow Hills, only a few miles away from Moscow, far the most popular excursion was the one to Nijni Novgorod, where the great fair was in full swing. The great fair is no longer what it was when Laurence Oliphant made us all long to see it. Then it was the great meeting-place of the producers of the coarse material coming from the east and the wholesale merchants coming from the west. Now the salesmen are the western shopmen who take to Nijni Novgorod the manufactured articles for sale into the more outlandish east. As a consequence the fair has lost much of its ethnological interest and all its picturesqueness. It is a very big and very dusty bazaar, full

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of tin pans, bad *ikons*, and ugly American cloth. There are other articles on sale, but these and cheeses predominate.

Many of the English-speaking people in Moscow wondered at the absence of all attempt to organise an English-speaking bureau, where information might be obtained, and it was very generally felt that the English committee ought to have done something for the convenience of their brethren. It was comparatively easy work for any clear-headed man with a working knowledge of French or German to acquire a very good idea of the trend of the proceedings of the Congress. But every Englishman does not speak French or German, and every man away from his home is not as clear-headed as he is in his usual environment. To these a bureau, where during, say, one hour in the morning and one hour in the evening they could apply for ordinary information concerning *wagon lits*, passports, postage rates, excursions, &c., would have been of the greatest possible service, and we cannot understand why such a bureau was not organised. Sir William Mac Cormac was presented to the Czar as the representative of the English Committee, and there all the work of the committee stopped. Sir William Mac Cormac would have greatly obliged some of his humbler brethren if he had brought to bear his well-known powers of organisation for their convenience. In England the whole burden of organisation fell upon Mr. G. H. Makins, and, as everyone knows, he discharged his thankless task admirably. Some other members of the committee might have been found to continue the work in Moscow.

For Moscow is not like Rome, Berlin, Vienna, Paris, or St. Petersburg, where many people know a little English, and all have a smattering of some other tongue than their own. Moscow is Russian to the core, and only Russian is spoken, so that the need for a little help was felt by many of the English-speaking members, hardly one of whom knew six words of Slav. Moreover, all the official notices were freely printed in German and Russian and occasionally in French, but never in English. This was perhaps as well if the Russians were to depend on their own efforts and not to employ an English translator, as the following extract from a circular addressed in the official journal of the Congress to all members in their own tongue will show:—

"NOTIRE.

"In commemoration of the XIIth International Congress of Physicians in Moscow, there will be edited an elegant album of photographs of the Members of this Congress, with short biographical notices & facsimiles of each. This album is intended to be presented to the Imperial Protectors of the Congress—His Imperial Majesty, the Emperor Nicolas II and H. I. H. the Great Duke Serge Alexandrowitch.

"The album will contain besides photographs a wiew of the monument of Pirogoff, of the Moscow Clinics & the best views of the town.

"S take therefore the liberty of inviting yon dear zir, to favour me with your visit at my artistical installation to the effect of being graciously photographed, or to lit me kindly hane a portrait of yours whereof S could take a copy. Price of the album be Rs. 5. My adress is noted at the head of this. The installation is oper: the days of Congress from 8. o'clock in the morning untill the evening; all ather days from 10 to 5. in the afternoon."

In particular members would have been glad of information concerning the police formalities to be complied with before leaving the country, for the notices issued were contradictory in the extreme, members being told in one breath, firstly, that all passports must be *visé* at the *chef du police*, and secondly, that in the case of *Messieurs les Congressistes* such formalities were unnecessary. Detention on the frontier was a possibility which it was difficult for those who had made other and definite plans to contemplate with equanimity.

But if the English-speaking members were not helped by any committee, they were helped as far as possible by their thoroughly genial and kindly hosts. In every direction, and from top to bottom of society, the desire to make the twelfth Congress a pleasant recollection in the minds of its members has been obvious. And pleasant that recollection will be in most cases we are sure, for Moscow is above almost all cities in the world one whose panorama can be carried away in the eye—it is so simple and yet so gorgeous. And if any member in reverting in his mind to this Congress should be inclined to dwell upon delays at railway stations, hard and not altogether lonely beds, or extortionate drivers of *droschkys*, let him close his eyes and call up reminiscences of the quaint unnatural beauty of the Church of St. Basil, the lavish gleaming magnificence of the Cathedrals of the Annunciation, the Assumption, and the Archangel and the gilded cupolas of the bell tower of Ivan Véliki, seen against a background of azure sky, or green roof, or cobalt tower, or chocolate wall, then will he conclude that the little hardships were as nothing compared to the benefits that accrued to him during his sojourn in Holy Moscow.

THE SECOND GENERAL MEETING.

The second general meeting of the Congress was held in the Grand Opera House on Sunday, Aug. 10th (22nd), at two o'clock in the afternoon. The theatre, which is said to be capable of seating between three and four thousand people, appeared to be filled to its utmost capacity. The stage, as before, was occupied by the office-bearers, official delegates, and distinguished members of the Congress. Immediately preceding the general meeting a special meeting had been held, at which only the presidents of sections and presidents of national committees had been present, in order to discuss the question of the place of meeting of the next International Congress. At this smaller gathering, at which some eighty persons were present, invitations were received from the representatives of France and of Spain, and the choice lay between Paris and Madrid as the scene of the Thirteenth Congress. By a very large majority it was ultimately decided to accept the French invitation. The decision appeared to cause general satisfaction, as the next Congress will coincide with the great exhibition to be held in Paris in 1900, just as the first International Medical Congress coincided with the first Paris Exhibition of 1867. Professor LANNELONGUE (Paris) having been elected President of the next Congress, he was asked to take the chair at the second general meeting of the present Congress on Sunday last. The first address at this meeting was read by Professor KRAFFT-EBING (Vienna), whose subject was the Etiology of Progress in Paralysis. Professor Krafft-Ebing, who spoke in German, dwelt at some length upon the influence of contemporary social conditions on the human nervous system. Never before, he said, had so severe a demand been made upon the mental faculties as in the present century. Never before our own age, which might well be called the Nervous Age, had the brain been called upon to receive so many new, involuntary impressions. Social and political changes, the struggle for existence, increased facilities of travel and communication, and the competition inseparable from modern conditions of life, had all thrown a great strain upon the nervous system. The agriculturist had been driven to the town, where he lived under unhygienic conditions; the small tradesman and artisan had been crowded out by the large manufacturers. And this struggle for existence had told, not only on men, but to a considerable extent on women also. To these influences must also be added the growing use of alcohol, and the political changes which had substituted for the old patriarchal *régime* the government of the people by themselves. After a brief description of the symptoms of progressive paralysis the lecturer stated that the almost invariable cause of the disease was syphilis. Syphilis and progressive paralysis had both increased with the growth of civilisation, and it was a duty which Governments owed to their subjects to use every effort to combat the scourge. No age was exempt from the danger. The disease, which formerly attacked persons about the age of thirty-nine or forty years, now appeared in subjects at a much earlier

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age. There are certain classes of the population, Professor Krafft-Ebing added, which appear to be specially liable to it—such, for instance, as labourers and officers in the army, while other classes seem to be peculiarly exempt from it. In conclusion, he expressed a hope that the necessary measures would be taken to check the growing evil.—Professor SENN (Chicago) then read an address on the Classification and Surgical Treatment of Acute Peritonitis.—He was followed by Professor METCHNIKOFF (Paris), who received quite an ovation from the audience. The title of Professor Metchnikoff's address was simply "Sur la Peste," and it was devoted principally to an interesting account of the recent work done in the bacteriology of plague. The lecturer briefly recapitulated the history of the discovery of the bacillus of plague and the mode of preparing the antitoxin. The work of Roux and Yersin was fully described. Roux had obtained the virus of plague in pure cultivation, and by immunising animals with this virus was able to obtain an antitoxin from the blood of animals so immunised. The horse was the animal usually selected. Even a weak serum had considerable effect in reducing the mortality from plague. Prophylactic injections had also proved to be of real value. In conclusion Professor Metchnikoff warmly protested against the attacks which were sometimes made upon science. Science was far from regarding with indifference the disappearance of the weakly in the struggle for existence. On the contrary, the most recent and most brilliant discoveries in medicine had shown that science, and science alone, could aid and protect the weakly in this struggle. Professor Metchnikoff's address was loudly applauded.—The meeting was brought to an end by Professor ROBERT'S address on the Characteristics of Human Pathology and its Relations to Therapeutics.

The Subscription Banquet.

A dinner for members of the Congress, at a charge of five roubles a head, was held on Wednesday evening, Aug. 13th (25th). The dinner was held simultaneously in four different places. Sections I., II., VII., and XV. dined at the "Cercle du Commerce"; Sections III., IV., V., VI., VIII., XIII., and XIV. at the "Cercle des Chasseurs"; Sections IX. and X. at the "Grand Hôtel de Moscow"; and Sections XI. and XII. at the Hermitage Restaurant. A very fair dinner of five courses, coffee, and "one glass of champagne," was provided. The dinners were attended by a considerable number; the proceedings were quite of an informal character. At the "Cercle des Chasseurs" Professor Virchow proposed the toast of "The Emperor," and a few other toasts followed. The dinner began at 6 o'clock, and by 9 o'clock most of the guests had dispersed.

The International Prize, Instituted by the City of Moscow.

On Saturday, Aug. 9th (21st), a meeting was held of the honorary presidents and presidents of sections under the presidency of Professor Sklifosovski. At this meeting a committee was elected to consider the conditions of the prize which the municipality of Moscow has offered to commemorate the holding of the Twelfth International Congress in Moscow. The committee elected was constituted as follows: M. Virchow (Germany), president; M. Fuchs (Austria), Professor Simpson (Great Britain), M. Crocq (Belgium), M. Bloch (Denmark), M. Robert (Spain), Professor Sayers (United States), M. Lannelongue (France), M. Homen (Finland), secretary; M. Pertik (Hungary), M. Romiti (Italy), M. Ogata (Japan), M. Lavista (Mexico), M. Laache (Norway), M. d'Ornellas (Portugal), M. Roth (Russia), and M. Kocher (Switzerland). The committee met on Tuesday, the 12th (24th), and has since issued the following statement:—

1. M. Roth reports that the Municipal Council of Moscow, at meetings held on June 10th (22nd) and July 29th (Aug. 10th), 1897, decided to institute a prize in commemoration of the Twelfth International Medical Congress. This triennial prize, to be awarded by successive international congresses, either for the best work upon medicine or hygiene, or for eminent services rendered to suffering humanity, will amount to 5000 francs (£200), representing the interest at 4 per cent. on the capital of 16,450 roubles voted by the municipality. The Council has also voted an additional sum of 5000 francs to be awarded by the present Congress. The municipality will decide later the conditions under which the payment of the sums named will be made.

2. M. Romiti proposed that the warmest thanks be expressed to the city of Moscow for its generous gift, and the proposal was accepted with acclamation.

3. M. Virchow proposed that at the present Congress the Prize of the City of Moscow be awarded to M. Henri Dunant for the services he has rendered to humanity in the part he has played in founding the Red Cross Societies.

4. The committee accepted unanimously the following proposal as to the method in which the prize should be awarded by future Congresses. The organising committee of each Congress will elect a preliminary commission which will collect all the preliminary data in connexion with the award of the prize. The commission, which will definitely choose the candidate to be named at one of the general meetings of the Congress, will be constituted as follows. The honorary presidents of the Congress and of the sections will meet at a special gathering summoned by the president of the Congress, and will name a member of each nation officially represented at the Congress. This committee will eventually be completed in such a manner that each section shall have at least one representative.

THE THIRD GENERAL MEETING.

Closing of the Congress.

The final meeting of the Congress was held in the Grand Opera House on Thursday, Aug. 14th (26th), at 2 o'clock in the afternoon. The theatre, as before, was crowded in every part. On the proposal of Professor SKLIFOSOVSKI, Sir William MacCormac took the chair as Honorary President of the meeting. The first address was that of Professor LUKIANOF, the Director of the Imperial Institute of Experimental Medicine in St. Petersburg, upon Inanition of Cell Nuclei. This paper contained an interesting and able account of a prolonged investigation carried out by Professor Lukianof in this particular branch of cellular pathology.—It was followed by an address by Professor LEYDEN (Berlin) on the Contemporary Methods of Treating Tuberculous Patients, and the Need of Government Control over them. Professor Leyden, who spoke in German, pointed out that tuberculosis caused more deaths than any epidemic, and that in Europe about one million persons annually fall victims to the disease. After describing the nature of the disease, and giving a brief account of its bacteriology, he said that there were two ways in which the disease might be combated. Either the bacillus might be directly attacked, or the constitutional powers of the individual might be strengthened and reinforced so as to enable him to withstand the influence of the bacilli. The efforts of Koch to produce a curative "tuberculin" were described; up to the present they could not be regarded as crowned with success. Until such an ideal curative material could be produced the best method of dealing with tuberculous patients was to treat them in specially constructed sanatoria. The principal points in this mode of treatment were the following: (1) choice of a suitable climate; (2) a good air, free from dust; (3) good nourishment; (4) exercise; (5) methodical treatment of the patient in special institutions; and (6) medicinal treatment as auxiliary to the general treatment. Cold fresh air was of the greatest importance; exercise, riding on horseback, or bicycling should also be permitted. All the various points in a successful scheme of treatment were only attainable in a properly constructed sanatorium. Many countries had already recognised the need of such institutions, and Russia had not been behind the other nations, as she already possesses three such sanatoria. Professor Leyden's address was received with loud applause.—Professor LOMBROSO, the Italian criminologist, who followed, spoke in French. The subject of his address was New Horizons and New Applications in Psychiatry. He spoke of the necessity of clear conceptions in the subject of psychiatry, not only for medical men, but for literary men, specialists in criminology and legal medicine, and for many other workers and thinkers in the field of sociology. He also discussed at some length the theory of heredity in connexion with the criminal instinct. Professor Lombroso's address was warmly applauded.—At the close of it Professor ROTH, the general secretary of the Congress, announced the conditions under which the prize of the city of Moscow will in future be awarded, and stated that the first award of the prize had been made to M. Henri Dunant, of Geneva. The thanks of the Congress were formally expressed to the city of Moscow for its institution of the prize.—Professor SKLIFOSOVSKI then spoke. The thanks of all the members of the Congress, he said, were due, first, to His Majesty the Emperor Nicholas II. for the honour he had

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done the Congress in taking it under his patronage.—On the proposal of Professor LEYDEN a telegram, the text of which was read, was despatched to the Czar in the name of the Congress.—Secondly, Professor SKLIFOSOVSKI continued, thanks were due to His Imperial Highness the Grand Duke Sergé Alexandrovitch and the Grand Duchess Elizaveta Feodorovna, to whom a second telegram was also despatched. Further thanks were expressed to the Minister of Public Instruction, Count Delianof, to the University of Moscow, to the municipality, the director of theatres, the police and postal authorities, and to many others who had coöperated in furthering the success of the Congress. Finally, Professor Sklifosovski thanked the ladies' committee, the foreign Governments and institutions who had sent representatives, and all the members of the Congress, many of whom he hoped to see again three years hence in Paris. "Je ne dirai pas adieu," he said, "mais au revoir—à Paris."—Professor VIRCHOW then rose and, in the name of all the foreign members of the Congress, thanked the President and organisers of the Congress for the warm welcome they had received in Moscow and the admirable manner in which the great series of gatherings had been organised.—Professor SKLIFOSOVSKI, who was deeply touched, and whose voice was much broken by emotion, briefly responded.—Sir WILLIAM MACCORMAC, who spoke in French, made a brief closing speech. "The Twelfth International Congress," he said, "is almost at an end; its object is attained. Its success has been marked. Its labours will make an impression in the east and in the west. As regards the social and scientific gatherings of this Congress our Russian *confrères* have shown us an example which it will, indeed, be hard to imitate. They have welcomed us here, in the very heart of Russia, with all that is beautiful and all that is magnificent in this immense empire. And so we offer our most sincere and deepest thanks to our kind Russian colleagues, many of whom we trust to meet again at the next Congress in Paris."

Amidst loud applause the Congress then came to an end.

The extreme heat which set in just before the opening of the Congress has remained unbroken to the end. The last day was, in fact, the hottest of all. On Friday, the 15th (27th), the thermometer registered 94° F. in the shade at ten o'clock in the morning.

On Wednesday evening, August 13th (25th) a reception was held by the Ladies' Committee in the Salle de Noblesse, and was largely attended. The hall, a fine one, was effectively decorated with plants and flags, and a very good concert of orchestral and vocal music was performed. Madame Tairova recited a poem specially composed for the occasion, and some interesting pictures of Russian views and types of Russian character were shown on a screen by a lantern. Some national Russian dancing followed, certain of the dances being very curious and characteristic. The evening ended by the singing of the National Anthem.

SECTION I. (A, B, AND C).

ANATOMY, ANTHROPOLOGY, AND HISTOLOGY.

Considerable interest was taken in this section owing to Professor Lombroso and Professor Virchow being much in evidence. In the Anthropological Sub-division Professor LOMBROSO read a paper on the Influence of Climate on Anthropological Characteristics, and this was followed by one by Dr. ARBO on the Cephalic Index in Norway and the Difference in Form of Cranium in Different Districts in Relation to the Stature of the Inhabitants.—Professor VON LUSCHAN (Berlin) showed several Skulls with evidence of primitive trephining amongst the natives of Teneriffe.—Several papers were read on Polydactylism by, among others, Professor C. DEBIERRE (Lisle), Professor RANKE (Munich), and Professor BARDELEBEN (Jena), the question principally discussed being whether it was a deformity or a phenomenon of atavism.—Dr. WEINBERG compared the brain form of the Poles with that of several other races in neighbouring localities.—On the 23rd Professor VON LUSCHAN read a paper on the Anthropology of Certain Asiatic Races, and Dr. DENIKER on the Races of Europe. Professor VIRCHOW took part in the discussions.—Dr. IVANOVSKY (Moscow) gave some observations on the Anthropological Character of the Kurds of Ararat and also on the Characteristics of the Mongolian Skull.

Those interested in anthropology had the advantage in Moscow of having open to their inspection an extremely interesting anthropological collection, the popular character of which in some way reminded English visitors of the inimitable collection in the British Museum, though the science of anatomy was also well represented in the specimens.

SECTION II.

PHYSIOLOGY AND PHYSIOLOGICAL CHEMISTRY.

This section was not well attended, and no particularly noteworthy papers were announced.

SECTION III.

GENERAL PATHOLOGY.

There were many important papers set down for reading and discussion in this section, so many that a large proportion of them were taken as read. Professor HUEPPE (Prague) opened a debate which went to the very root of all the questions that arise in the discussion of modern pathology. His paper was entitled, "De la constance des espèces chez les microbes pathogènes au point de vue de la botanique et de la specificité des maladies." Among other papers of interest may be mentioned one by Professor LÉPINE (Lyons) upon the Genesis of Diabetes in its Different Forms; one by Professor CORNIL (Paris) upon the Pathology of Thromboses, in the preparation of which he was assisted by M. MARIE; and one by Professor BEHRING (Berlin) and Professor BOUCHARD (Paris) (represented by Professor ROGER, of Paris), upon the Rôle of the Antitoxins in the production of Artificial Immunity.

SECTION IV. (A, B, AND C).

GENERAL THERAPEUTICS, PHARMACOLOGY, BALNEOLOGY, CLIMATOLOGY, AND PHARMACY.

In this oddly-assorted section there were some interesting papers read under the different headings.

The proceedings in General Therapeutics were opened by an introductory address by Professor VON ZIEMSSEN upon the Therapeutics of the Present Day, which was listened to with the attention that the learned author always commands.—Dr. L. H. PETIT (Paris) then followed with a paper in which he advocated a prophylactic treatment of Pulmonary Tuberculosis by the establishment of sanatoria for those suffering from the disease.—Professor LEWASCHEV (Kazan) read a paper upon the Treatment of Diabetes, showing diagrams to illustrate the superiority of jambul over any other therapeutic agent.—Dr. PAUL PETRINI (Bucharest) recommended a method of feeding those suffering from the Dyspepsia of Deficient Secretion, or Atony of the Stomach, with the stomachs of cattle and decoctions made from them, and gave statistics of good results from this treatment.

Tuesday, Aug. 24th, was entirely devoted to Electricity and Electro-therapeutics.—Dr. APOSTOLI gave his recent experiences of the "undulatory current," and claimed for it that it was analgesic, that it diminished congestion, and that it was a good muscular excitant.—Professor BERGONIÉ (Bordeaux) advocated the electric treatment of trigeminal neuralgia, and also described experiments of the effects of Roentgen rays upon the bacillus of tubercle.—Dr. CHATZKY, Dr. DESCHAMPS, Dr. SASSOLI, and others also read papers upon electrical subjects.—Dr. PHILLIPS (London) was in the chair.

On Wednesday, Aug. 25th, a short *séance* was held, which was occupied entirely by a communication from Dr. PETRUSCHKI upon the Tuberculin of Koch, with notes of two cases in which it had been successfully used.

At the opening meeting of the sub-division of the section devoted to Pharmacy Professor CLAUDE VERNE (Grenoble) gave a description of his method for rendering tar entirely soluble in water, and later read an essay upon Pharmaceutical Education, strongly urging that the practical work should follow the theory and book-work, and not precede them, as at present.—Other papers were read at the two meetings upon, the Excretions of Plants, and upon some Atropine-containing Seeds, by Professor TSCHIRCH (Berne); Organo-therapeutic Preparations, by Professor POEHL (St. Petersburg); Oxydising Ferments, by Professor BOURQUELOT (Paris); while to more than one author it occurred to insist upon the formation and adoption of an international standard in pharmacy.—Professor MOELLER (Graz) recounted his recent experiments upon the Origin of Storax, which had brought him to the

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conclusion that it was not a physiological secretion, but a pathological product.—Among other papers upon various drugs may be mentioned that of Dr. COLLIN (Paris) upon the Anatomical Characters of Leaves and Powders used in Medicine, and that of M. JOLCZINSKY (Moscow) upon Cheap Chinese Teas. Both these papers were of importance from the point of view of adulteration, and it need hardly be said that the adulteration of tea is a most important subject in a country like Russia, where tea is the national beverage.

On Tuesday, Aug. 24th, a paper by Professor TSCHIRIKOFF upon the best method of preparing "l'Eau d'Amandes Amers" was read in his absence.—Professor DAVIDOFF (Warsaw) discussed Ephedra Vulgaris; Dr. WARNER (Philadelphia) Ferula Sumbul; and M. KRESLING (St. Petersburg) dealt with Sero- and Organo-therapeutic Preparations from a pharmaceutical point of view; while Professor LEWIN read a communication upon Military Pharmacy.

Wednesday, Aug. 25th, was occupied by a visit to the Pharmaceutical Laboratory of M. FERREIN.

SECTION V.

MEDICINE.

Some valuable papers were also announced to be read in this section, but, contrary to the usual custom in these congresses, Medicine did not receive the same perponderating attention that it has done upon other occasions.—Professor VON LEYDEN (Berlin) read a paper on the Clinical Classification of Nephritis, in which he attempted to bring order into what is admittedly a rather disorderly subject.—Professor CELLI (Rome) discussed with intimate knowledge the theory that different forms of malaria have different parasitic origins; Professor CHARRIN and Professor GILBERT (Paris) and Dr. GRAWITZ (Berlin) read a thesis upon the Causes of Chlorosis; and Professor CARMONA Y VALLE (Mexico) and Professor RIBAS Y PERDIGÓ (Barcelona) read notes upon the Various Forms of Hepatic Cirrhosis, treating the subject from a clinical standpoint.—Dr. PAVY was invited to deliver a paper upon Diabetes.

Sir DYCE DUCKWORTH (Honorary Vice-president of the section) on Aug. 24th read a paper (in French) on Cases of Cerebral Disease in which the Function of Respiration entirely Ceases for Some Hours before that of the Circulation. He said: "The cases which I proceed to relate illustrate a remarkable point to which attention has not hitherto been much directed in clinical study—viz., the persistence of life for some hours in the absence of all respiratory effort. Such cases cannot be of frequent occurrence or they would certainly have been more fully recognised in the present day when attention is so carefully directed to the minutest clinical details. As I shall point out, however, several surgeons have observed the facts of which I now proceed to give details. I append the notes of four cases in which the respiratory function ceased for varying periods of time before death. Not to weary my audience with minute details of these, I give the following short abstracts of them: Case 1.—A girl, aged fifteen years, had suffered from purulent otitis for a year; cerebellar abscess followed. She was trephined, and pus was sought, but not found. The breathing ceased, but artificial respiration was employed *for nearly four hours* before the circulation stopped. The temperature was subnormal latterly. Case 2.—A young woman, aged twenty-one years, was admitted to hospital for headache and otitis. Respiration ceased; artificial respiration was carried on, and the skull was trephined and pus withdrawn from a temporo-sphenoidal abscess. The pulse failed, but was restored by oxygen and artificial respiration. The heart continued to beat with artificial respiration for *four and a half hours*, when it ceased. The temperature was 100·4° F. on admission on the eighteenth day, but afterwards became normal. Case 3.—A man, aged thirty-six years, was admitted to hospital with headache and otitis. Coma supervened on the seventeenth day of the illness, and on the nineteenth day the breathing ceased. Artificial respiration with oxygen and injections of strychnine were employed, and some improvement followed. The skull was trephined, and a temporo-sphenoidal abscess was tapped. The respiration ceased for *two* hours before the heart ultimately failed. The temperature varied from 96·2° to 102° F. Case 4.—A man, aged twenty-six years, was struck on the head by a heavy letter-bag in a post-office. Headache and coma followed, with left hemiplegia. The patient was trephined, and blood was removed from below the dura mater. The pulse had fallen to 44, but improved at once after the operation, but the respiration ceased and could not be restored. Artificial respiration was kept up for *five* hours before the heart stopped. A large cavity full of blood was found below the cerebral cortex. The temperature was never above normal. The patient lived for two days after the injury. Professor Macewen, of Glasgow, referred briefly to cases illustrating the peculiarity in question in his work on 'Pyogenic Infective Diseases of the Brain and Spinal Cord,' published in 1893, and in several of the cases related in this work there were observed depression of respiratory function together with a slowing of the cardiac action. In his lectures at San Francisco last year he reported cases where the pulse-rate was lowered to 40 and 20 in the minute as the intracranial pressure increased. He noted the occurrence also of modified respiration, somewhat of the Cheyne-Stokes type, in cases of abscess of the cerebellar fossa, leading to death from pressure on the respiratory centre, the pulse remaining quick and strong. In one case artificial respiration was carried on for twenty-four hours, the pulse never flagging all the time.[1] Professor Macewen informs me that he has lately met with two cases in each of which the breathing was re-established after hours of artificial respiration, and in one of these he opened and evacuated a cerebellar abscess while artificial respiration was being practised. In this case the relief of the cerebellar pressure greatly improved the general condition, and soon afterwards the respiration became voluntary. The patient recovered temporarily, dying from cardiac failure, probably due to exhaustion. The restored breathing continued perfect to the end of life. Professor Macewen has observed this phenomenon in a case of apoplexy, and in a very peculiar one, in which the brain-centre was active, but where the respiratory apparatus was destroyed by a crush, the heart continuing to beat and producing at each impulse a crackling of the broken ribs. Mr. Victor Horsley called attention to cases of this kind in a paper published in the *Quarterly Medical Journal* for July, 1894, referring to the fact that patients suffering from cerebral hæmorrhage, cerebral tumours, depressed fractures of the skull, and sudden and violent concussion, especially when applied in the occipital region, die from respiratory and not from cardiac failure, as is often supposed; and he quotes Dr. Hilton Fagge's observation that some cases of cerebral tumour and of abscess die from failure of the respiration.[2] He also points out that Leyden demonstrated in 1866 the effects of increased intra-cranial pressure in slowing the pulse, causing stertorous respiration and arrest of the latter.[3] Horsley and Walter Spencer confirmed these researches, and Leonard Hill has since re-confirmed them. Horsley's clinical studies show that in cases of cerebral tumour, hæmorrhage, and inflammatory foci death is apt to occur suddenly from arrest of the respiration, and that such is the common end of all cases of pathological intracranial tension, especially when the disease is extremely chronic. He offers the suggestion that in cases where patients fall apparently dead after sudden blows on the head, and are believed to die from cardiac failure, the real cause may be an arrest of the respiratory function, and possibly remediable by the practice of artificial respiration. Direct experiments prove that bullet wounds of the cerebral hemispheres are followed by an arrest of the breathing, and that recovery may follow when artificial respiration is employed, provided no hæmorrhagic pressure is exercised upon the respiratory centre. Again, in death by hanging the function of respiration is suspended before that of the circulation. The temperature in the foregoing cases was chiefly noteworthy in respect of the absence of pyrexia save in the third instance. The tendency in all was towards subnormal temperatures, and in the case in which the highest figure was reached there was a rise from 96·8° to 102° within sixteen hours, and operative procedures were begun at that time. These low temperatures are noteworthy in view of the several processes which were in progress within the skull. This thermic depression is, however, now well recognised in the secondary stages of cerebral abscesses, and is a feature of such cases. With the

[1] Occidental Medical Times, San Francisco, November, 1896.

[2] Principles and Practice of Medicine, 1886, pp. 526 and 551. In one case the respiration ceased thirty-five minutes before death, in another of multiple cerebral abscess in the posterior and middle lobes the breathing stopped ten minutes before death occurred.

[3] Virchow's Archiv, vol. xxxvii., 1866.

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cessation of respiratory function we might expect a marked reduction of temperature to an even greater degree than occurred in these cases. In my case there had been a free employment of phenacetin, which might have still more reduced the temperature. The occurrence of suspended respiration for several hours in the highest mammalian organism, together with that of continued circulation of the blood for long periods, is very remarkable. Respiration may be carried on in animals which have been depleted of their blood and have had water introduced in place of it. But, in fact, with respiratory cessation death has practically already begun, and the respiratory centre, unless relieved of undue pressure, ceases to act. Although in such close proximity to the cardiac centre, the former is clearly much the more sensitive of the two, and lesions involving both tell primarily and with most force upon it. We may take it that the respiratory centre is the first to give out, and that it is the most vulnerable of all the great organic nerve-centres, the first to resent undue intracranial pressure. The clinical lessons of cases such as I have described are the following: 1. That efforts be made promptly to relieve intracranial pressure by trephining and probing. 2. To maintain artificial respiration diligently as long as necessary; that is, until the respiratory centre can resume its function independently. 3. To regard a lowered temperature as no contra-indication of purulent foci or hæmorrhagic foci in the brain. The fact of depressed or normal temperature is as significant in these cases as is the same occurrence in many examples of purulent peritonitis. I desire to express my thanks to my hospital colleagues for kindly allowing me to make use of their cases for this communication."

Dr. J. LINDSAY STEVEN (Glasgow) read a paper on a Case of Hypertrophic Pulmonary Osteo-arthropathy of Marie, without Pulmonary Disease, in the Section of Medicine, on Wednesday, Aug. 25th. Water-colour drawings, photographs, and skiagrams in illustration of the salient features were exhibited. The patient was a man, aged forty-eight years. He had been ill for about nine months. He first noticed enlargement of the hands and feet, but had not been disabled until eight or nine weeks before admission, when pain in the ankles and inability to close the hands obliged him to give up work. The deformity of the hands was typically that described by Marie as characteristic of pulmonary osteo-arthropathy. Skiagrams showed that this was due to subperiosteal new formation of bone. There was a corresponding deformity of the feet. There was no deformity of the face, trunk, or spine, and there was no retro-sternal dulness. There was, however, some deficiency of the temporal half of the visual field, and the daily average quantity of urine was decidedly excessive. There was absolutely no sign of disease in the chest, either in the heart or lungs. The relationships of the disease to acromegaly, osteitis deformans of Paget, and Marie's osteo-arthropathy were fully considered. On the whole Dr. Lindsay Steven considered that the symptoms conformed most to the last of these three affections. It was remarkable, however, that there was no pulmonary disease to account, on Marie's hypothesis, for the causation of the bone affection.

SECTION VI.

DISEASES OF CHILDREN.

The proceedings of this section on the first day were of great interest, a paper upon Chronic Nephritis and Albuminuria in Childhood from Professor HUEBNER evoking discussion from Professor COMBY, Professor VON STARCK (Kiel), Professor LEVESTRE, Professor VARGAS, Dr. LANGE, Dr. KATZ, and Dr. HOCHSINGER — Professor VON RANKE read a paper giving the results of cases of "ponction en ceinture" in Hydrocephalus, which was discussed by Professor MONTI, Professor FALKENHEIM, Professor RACZEWSKY, Professor CONCETTI, Professor BOKAY (Budapest), Dr. ALEXANDROFF, Dr. MARTIN GIL (Malaga), Dr. MEINERT (Dresden), Dr. LANGE, Dr. MENDEZ, Dr. TOLOSI-LATOUR, and others. — Papers were also read upon Empyema in Children by Dr. CAMILLO HAJECH (Milan); the Normal Properties of Blood and their Different Modifications in the Sick of Various Ages, by Professor BAGINSKY (Berlin); Icterus Neonatorum, by Dr. WERMEL (Moscow); and Organo-therapy with Kidney Substance in Renal Disease, by Professor CONCETTI (Rome).

In the same section on Saturday, Aug. 21st, Professor MONTI read a paper upon the Results of Laparotomy in Tuberculous Peritonitis; Dr. VIOLI (Constantinople) dealt with Whooping-cough complicated with Influenza; Dr. JALABERT (Barcelona) with Serum Therapeutics in Various Diseases of Childhood; Dr. ROMNICIANO (Bucharest) with Hereditary Syphilis; and Professor MONTI presented Some Statistics of the Results of Serum Therapeutics in Diphtheria and other Diseases.—In the afternoon there was a discussion upon Intubation of the Larynx, in which, amongst others, Professor BOKAY (Budapest), Dr. BOULAY, and Dr. TSAKWIS took part.

On Sunday, Aug. 22nd, combined *séances* were held between this section and those of Hygiene, Laryngology, and General Therapeutics.—Discussions took place upon the Influence of Mental Work upon the Health and Physical Development of Children and upon Physical Education, in which, amongst others, Dr. WIRENIUS (St. Petersburg), Dr. MENELLA (Rome), Madame WINOGRADOWA-LUKIERSKAJA (Moscow), Professor BARANOWSKY (Lemberg), and Professor PALMBERG (Helsingfors) took part.—Papers upon Infant Mortality, Vaccination, &c., were also read.

On Monday, Aug. 23rd, the Sections of Therapeutics, Diseases of Children, and Laryngology held an important combined *séance*, when a large number of statistics were presented by various members of the Results of the Use of Anti diphtheritic Serum, which were uniformly good and encouraging.—Dr. FIBIGER (Copenhagen) submitted the figures relative to a series of cases treated in the Blegdam Hospital, and constituting a year's practice in the hospital, concerning which he made the following claim: "*On a ainsi fourni une épreuve indiscutable de l'efficacité du serum anti-diphthérique, comme les résultats le prouvent*"—and Dr. VIOLI (Constantinople) spoke with hardly less emphasis.—Professor ROMNICIANO (Bucharest) read a useful paper upon the Possible Accidents Attendant upon Sero-therapy in Diphtheria, the net result of his conclusions being to recommend that no injection should be made until a bacteriological examination of the throat has confirmed the diagnosis of diphtheria.—Dr. PUJADOR Y FAUVA (Barcelona) recommended a new treatment of Scarlet Fever by Hypodermic Injections of Turpentine, which in his opinion not only cut short the disease, but was a prophylactic of scarlatinal nephritis.

On Tuesday, Aug 24th, a discussion took place upon the Artificial Feeding of Infants, in which, among others, Professor ESCHERICH, Professor JOHANNESSEN (Christiania), Dr. COTTON (Chicago), and Dr. FLACHS (Dresden) took part.—The Russian System of Foundling Hospitals and its Results were described and discussed by Dr. VAN PUTEREN (St. Petersburg), Dr. MASSINI (Genoa), and Dr. ARGUMOSA (Madrid).

On Wednesday, Aug. 25th, a short sitting was occupied with papers upon Vaccination and Disorders of the Gastro-intestinal Mucous Membrane by Dr. VIOLI (Constantinople) and Professor FEDE (Naples).

SECTION VII.

MENTAL DISEASES.

This section was opened with a few words of welcome by Dr. KOJEVNIKOF, one of the Presidents, the members present afterwards at his request announcing in turn each his name, which was received with plaudits varying with its being more or less generally known. Amongst those present were: Dr. Mierzeiewsky (St. Petersburg), Dr. Konstantinowsky (Moscow), Dr. Krafft-Ebing (Vienna), Dr. Erb (Heidelberg), Dr. Lombroso (Turin), Dr. Pitres and Dr. Régis (Bordeaux), Dr. Bernheim (Nancy), and Dr. Bérillon (Paris); and as delegates from Great Britain, Dr. Yellowlees, Dr. Finegan, Dr. Fletcher Beach, Dr. Cassidy, Dr. Macdonald, Dr. Shuttleworth, and Dr. Sutherland. The first day's papers were exclusively in French and German, authors of English communications promised not being present when called on.

The first subject discussed was that of Obsessions and Fixed Ideas. Dr. PITRES and Dr. RÉGIS presented a lengthy "Report," and other papers were read by Dr. BOUCHER (Rouen), Dr. MARIE and Dr. CH. VALLON, Dr. OTTO DORNBLÜTH, and Dr. KONSTANTINOWSKY. — Dr. RÉGIS distinguished between (1) panophobic and monophobic states, and (2) obsession properly so called, dividing the latter into ideative, impulsory, and hallucinative obsessions. He discussed the etiology, course, prognosis, and termination of obsessions, and distinguished them, on the one hand, from fixed ideas, and, on the other hand, from psychoses, such as melancholia, and from neuroses, such as hysteria

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and neurasthenia. In conclusion, he discussed the moral and medical means of treatment of such cases, stating that they were apt to prove refractory to hypnotic suggestion, but that gentle, soothing measures, with baths, electrotherapy, and physical exercises were beneficial.

Dr. BOUCHER read a paper on Hereditary Erythrophobia (fear of the colour red), and Dr. MARIE discussed other forms of obsessions, whilst Dr. KONSTANTINOWSKY gave instances of psychic phenomena with the character of irresistibility, which he contended did not properly fall under the category of obsessions as set forth by Westphal. The pathogeny of general paralysis of the insane and its delimitation from other forms of disease presenting similar symptoms (such as syphilitic disease, tabes, and, in the early stages, neurasthenia) was the next subject discussed.—Professor BINSWANGER (Jena) treated the subject from the pathological standpoint, and Dr. MURATOW (Moscow) and Dr. GREIDENBERG (Symferopol) from that of clinical experience, the latter contending that general paralysis is becoming an "aristocratic" disease amongst men and a "democratic" disease amongst women.

Professor HOMÉN (Helsingfors) read an interesting account of three cases of Juvenile Progressive Dementia in three children of the same parents, probably from inherited syphilis.

On the third day of Congress there was a combined sitting of the sections of Neurology and Histology to consider the subject of the Pathology of the Nerve Cell. Reports were presented by Professor VAN GEHUCHTEN (Louvain) Professor OROSIANERIKOW (St. Petersburg), Professor APATHY (Hungary), and Professor MARINESCO (Bucharest). Professor VAN GEHUCHTEN agreed with the observations of Cajal as regards the reticulated structure of the achromatic substance; and Professor MARINESCO concludes that the nerve cell consists of three essential elements: (1) a chromatic element, highly colourable by aniline, which he designates *élément chromatophile*; (2) an achromatic figured element; and (3) an amorphic achromatic element, the last giving substance, the two first-named giving definite form, to the cell.

On Sunday, Aug. 22nd, Professor LOMBROSO presided, and the theme was Hypnotism and Suggestion in their Relation to Legal Medicine and Mental Maladies. Professor BERNHEIM (Nancy) had prepared a report on this subject, the conclusions of which were as follows: 1. "Suggestibility" is a physiological property of the human brain; it is the tendency of the brain to realise every idea accepted by it. 2. Every accepted idea is a suggestion. Hypnotism is not a special state; it is putting into action the property of suggestibility, with or without sleep. 3. Suggestion can be made to call forth in certain persons criminal acts, whether by instinctive impulsion or by hallucination or by perversion of the moral sense. 4. Suggestion cannot destroy a robust moral sense, or create it when it is absent; it can but develop existing germs of good and bad. ..... 7. Congenital feebleness of the moral sense and proneness to suggestibility facilitate suggestions to crime. ..... 10. Absolutely free choice of action does not exist. It is often impossible to apportion the degree of responsibility in a given case. Society has but the right of self-defence and of social prophylaxis. 11. Education ought to intervene to neutralise germs of evil and oppose to natural instinctive impulses the counterpoise of restraining suggestions.

Dr. TOKARSKY (Moscow) afterwards read a paper on the Application of Hypnotic Suggestion in the Treatment of Mental Maladies, laying stress upon its beneficial effect in the period of convalescence; and Dr. BÉRILLON (Paris) recommended hypnotic suggestion in the education of children hereditarily degenerate.

The sitting of Aug. 23rd was devoted to the discussion of Tabes Dorsalis, its Pathogeny and Treatment. Professor OBERSTEINER (Vienna) presented a report on the subject, discussing its etiology and its pathological anatomy. The same subject was treated specially in relation with its cerebral localisations by Professor PIERRET (Lyon) and Professor ERB and Professor BENEDIKT also stated their views at considerable length. Dr. BROWN (Chicago) contributed observations on the treatment of the disease, founded upon its pathology as a sclerosis terminating in hypertrophy of the connective tissue and a destruction of the sensory neurons of the cord. Recognising the syphilitic origin of some 90 per cent. of the cases, he approved of anti-syphilitic treatment in the very early stage of the affection (pre-ataxic), but later preferred chloride of gold and sodium as an alterative. He placed reliance also on phosphide of zinc, alternated with arsenic. Rest, an equable climate, electricity, cold or tepid baths, and in recurring cases suspension were specially indicated. The paper which attracted most attention with reference to the treatment of tabes was that read by Dr. GRASSET (Montpelier). In eloquent language he discussed the nosology of tabes, pointing out its anatomical and clinical features, and defining it as a "syndromic" manifestation of multiple sclerosis, the origin of which was frequently of complex character. He admitted that syphilis was a preponderant cause, but the neuropathic constitution was also an element in the disease. Though cure was rare, it was possible in the clinical sense though certain anatomical lesions might remain. Treatment must be directed (1) to the causal elements; (2) to the lesions; and (3) to the symptoms, anti-syphilitic and anti-arthritic remedies being useful for the first, ergot and the iodides to the second, and sedatives for the lightning pains. For the ataxia Frenkel's methods were of service, and in certain cases hypnotism, hydro-therapeutics, and electric treatment were called for.—Subsequently Dr. FRENKEL (Heiden) read a paper on the Treatment of Tabes and gave a demonstration of apparatus used by him; and Dr. G. E. SHUTTLEWORTH made an interesting communication upon Hereditary Neurosis in Children, of which the following is an abstract. Dr. Shuttleworth defined neurosis as an abnormal condition of the nervous system tending to disorder of function, not obviously connected with structural change, but often associated with trophic defect. He proceeded to show how hereditary neurosis implied abnormal irritability of nervous tissue, and consequent instability of function manifesting itself by sensory, motor, and psychic disturbances. In so-called nervous families were found mentally and morally defective children—children liable to eclampsic, convulsive, and choreic affections, and children who suffered from every form of "nerve-storm." Neurotic inheritance varied in form of manifestation in different generations and in members of the same generation; and this fact was illustrated by typical genealogical tables. The history of a degenerating family was passed in review in its downward course towards extinction. Statistics were given as to the hereditary influence of mental and nervous disease, of strumous and syphilitic taints, of alcoholism, of consanguinity, of senility, &c., in the parentage in determining neuroses in the offspring. The views of Richarz and others as to pre-potentiality of one or other parent in the transmission of neurosis were considered, and the variety of form of inherited nervous disease in children was discussed. From the sociological standpoint the necessity of educating public opinion as to the harmfulness of the intermarriage of neurotic persons was insisted on; and the paper closed with some remarks upon the precautions called for in the up-bringing and education of children of neurotic inheritance.

On Tuesday, Aug. 25th, at the morning sitting, Professor JOLLY (Berlin) read a paper on the Psychical Accompaniments (Störungen) of Polyneuritis, and this was followed by a paper by Dr. ALEXANDER ROBERTSON (Glasgow), on Some New Methods of Treatment in Diseases of the Central Nervous System. In the first portion he referred to the application of heat and cold at graduated temperatures to the head and spine as a means of stimulating the brain and spinal cord to more active metabolic processes. Cases in which such treatment had proved beneficial (e.g., of stuporose insanity and catalepsy with stupor) were cited, and it was stated also to be useful in inflammatory and degenerative diseases of the spinal cord. The apparatus used was shown. Subsequently the mode of percussion of the skull useful in the diagnosis of tumour or other gross lesion of the surface of the brain was demonstrated. The subjects of psychic impression, the use of prolonged cold douche to the head, and electrisation of the medulla oblongata were also dealt with by Dr. ROBERTSON.

A communication by Professor MACEWEN (Glasgow) on Brain Surgery was promised for the combined sitting of the Neurology and Surgery Sections on the afternoon of the 24th, and a paper by Dr. J. F. SUTHERLAND (Deputy Commissioner in Lunacy for Scotland) on the Legal Bearings of the Transitory Mania of Alcoholic Drunkenness was read on the 25th.

SECTION VIII.

DERMATOLOGY AND SYPHILOGRAPHY.

In this section among other important papers may be mentioned one upon Acanthosis Nigricans by Professor

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JANOWSKY (Prague), which led to a discussion between the author and Dr. HEUSS (Zürich), Dr. COUILLAUD (Paris), and Professor PETRINI (Bucharest); and one upon the Etiology of Area Celsi by Dr. H. RADCLIFFE CROCKER (London).

The section was opened on Friday, the 20th, under the presidency of Professor POSPÉLOW, who in his introductory address gave a historical sketch of the Rise and Development of Dermatology in Moscow and its culmination in the magnificent new clinique in which the *séances* of this section were held. The clinique was opened to patients on Sept. 1st, and will be the finest clinique devoted to dermatology in the world. It contains sixty beds, a complete system of baths, laboratories, &c. The lecture theatre, where this section met, was large and well lighted, and the walls were lined with glass cases containing models and drawings of diseases of the skin. There were about 200 members present. Dr. RADCLIFFE CROCKER was the only English representative of dermatology, and was one of the Presidents for the day. The first speaker was Professor TARNOWSKY, who read a paper on Syphilis as it Occurs in Russia, where it is very prevalent in some districts, varying from 20 per 1000 inhabitants to 25 per 1000 in Tambow and Saratov.—Professor GAY followed on the same subject, and then Professor HALLOPEAU and Professor GAUCHER (Paris) opened a discussion on Toxins as Pathogenic Factors in Diseases of the Skin, and adduced strong arguments to show that toxins would play an important part in etiological researches in the near future. Dr. LASSAR, Dr. UNNA, and Dr. BARTHÉLÉMY joined in the discussion.

On Saturday, Aug. 21st, Professor KAPOSI (Vienna), Professor SCHWIMMER (Budapest), and Dr. SACH (Heidelberg) opened a discussion on Tuberculosis of the Skin, taking respectively Miliary, Primitive, and Verrucose Tuberculosis of the Skin.

On Sunday, Aug. 22nd, the Methods of Treatment of Syphilis by injection of soluble and insoluble salts of mercury and by mercurialised serum engaged the attention of the section throughout the *séance*, Dr. WOLFF (Strasburg), Dr. JULLIEN (Paris), Dr. GAUCHER (Paris), Dr. SOFFIANTINI (Milan), Dr. TARNOWSKY and Dr. JAKOWLEFF (St. Petersburg) being the chief speakers.

On Monday, Aug. 23rd, the Time when the Treatment of Syphilis should be Commenced and How Long it Should be Continued produced an animated discussion by Dr. SCHWIMMER, Dr. WATRASCHEWSKI (Warsaw), Dr. JULLIEN, Dr. LASSAR, Dr. VON ZEISSL, junior, Dr. COLOMBINI, and Dr. ROSENTHAL.—Dr. DE AMICIS then read a paper illustrated by numerous drawings on the Varieties of Sarcoma of the Skin.—This was followed by a discussion on the Pathogeny of Alopecia Areata, introduced by Dr. RADCLIFFE CROCKER, of which the following is an abstract. The conclusions are based on 432 hospital cases and 200 consecutive cases in private practice. The hospital cases show a frequency of 2·5 per cent.; 232 were males and 200 were females. No case occurred under two years or over sixty years (in private practice there were three cases between sixty and sixty-five years). Between the ages of five to fifteen years there were 180 cases, from fifteen to twenty-five years 90 cases, from twenty-five to thirty-five years 89 cases, from thirty-five to forty-five years 49 cases, and from forty-five to fifty-five years 16 cases. Thus between the ages of five and thirty-five years there were no less than 359 cases out of the whole 432, while there were as many cases between five and fifteen years as there were between fifteen and thirty-five years, clearly showing that the disease largely predominates in childhood. Dr. Crocker considers that the diseases known as alopecia areata are divisible into two great classes—(1) alopecia neurotica; and (2) alopecia parasitica. Each class may be subdivided. Class I., although probably not representing 10 per cent. of the whole, may be divided into—Type I., alopecia universalis; Type II., alopecia localis *seu* neuritica; and Type III., alopecia circumscripta of Neumann placed provisionally in this class. Class II., to which alopecia areata should be restricted, is probably entirely parasitic and constitutes 90 per cent. of all the cases. There are two types at present recognisable: Type I., cases allied to, or connected with, tinea tonsurans; and Type II., cases connected with seborrhœa capitis. While Dr. Crocker believes that Type I. comprehends the great majority of cases he cannot state what is the proportion between the two types. Moreover, it is probable that just as there are several varieties of parasite which produce the condition we call tinea tonsurans, so there may be more than one kind of microbe capable of producing smooth bald patches such as we comprehend under alopecia areata. Thus the pea-sized smooth patches so often recorded in local outbreaks might well be due to a special form of microbe. Again, there might possibly be some differentiation between the band form and the patch form, though Dr. Crocker hitherto had been unable to form the conclusion that they were pathologically distinct. He brought forward evidence to show that the disease is to a limited extent contagious for adults as well as children; that there was reason to believe that it might be spread by various means, such as shaving, hair cutting, especially by the *tondeuse*, theatrical wigs, dirty cushions, as in railway carriages, &c., as well as directly from one person to another; that persons in close contact with ringworm sometimes developed alopecia areata; that ringworm itself might develop into alopecia areata; and that in those countries where tinea tonsurans was most common alopecia areata was also most common. With regard to seborrhœa and alopecia areata he described certain peculiarities in many of the cases in which bald patches were associated with extreme seborrhœa, but did not think that Sabouraud's conclusions, that the seborrhœic microbe was the cause of all alopecia areata, were conclusively proved or that it was consonant with all the clinical facts. Dr. Crocker asked the meeting to confine the discussion to Class II, as there was a general agreement as to the neurotic origin of Class I., and the only point left was as to whether it should be included under alopecia areata at all. With regard to Class II., he asked the meeting to state their views as to what proportion of cases the two classes represent; how far they agreed with the view that Class II. was parasitic, and what was the relation of alopecia areata to tinea tonsurans on the one hand or seborrhœa on the other, or was it due to some microbe unconnected with either? If the meeting admitted that Class II. was due to a parasite and therefore contagious, even though only in a very slight degree, should children affected with it be kept from school and segregated from other children? Dr. Crocker was followed by Dr. LASSAR (Berlin), Dr. MANASSÉÏN (St. Petersburg), and Dr. CIARROCCHI (Rome).—Dr. PETERSEN gave an interesting communication on Initial Forms of Leprosy, adducing two cases where the interior of the nose was first affected, possibly by inoculation of bacilli by the finger.

On Tuesday, Aug. 24th, the *séance* was held at the old clinique of Professor Pospélow, which contains 400 beds, almost all containing cases of syphilis. Three cases of leprosy were shown and a few cases of interest were exhibited on the previous days, but as a whole the number of clinical cases shown was very small.

The rest of the session was devoted to the reading of papers by Dr. CAMPANA, Dr. ROSENTHAL, Dr. UNNA, Dr. LASSAR, and others. The last two days, judging by the programme, would be occupied chiefly by subjects connected with gonorrhœa and syphilis. On the whole, except as regards the paucity of clinical material, the Section of Dermatology was very successful, well-organised, and well-attended.

SECTION IX.

SURGERY.

This section, like the Section of Medicine, suffered much by the multiplication of special sections, so that many papers which we are wont to regard as on purely surgical subjects were read in sections dealing with Diseases of Children, with Ophthalmology, Odontology, and Otology, &c. Among interesting papers may be mentioned one by Professor VON BERGMANN (Berlin), upon the Operative Treatment of Jacksonian Epilepsy; one by Professor CZERNY upon the Various Methods of Treatment of Strictures of the Œsophagus and Rectum; and one by Professor OLLIER (Lyons) upon the Syphilitic and Gonorrhœal Affections of Joints.—Dr. J. LUCAS-CHAMPIONNIÈRE also made an interesting communication upon the Treatment of Certain Forms of Fracture, where the fractured ends are very mobile. He lays no stress upon the maintenance of complete immobility, but employs massage from the beginning.

SECTION X.

MILITARY MEDICINE.

Such very varying subjects as Ambulance Procedure on the Field of Battle, the Provision of a Good Water-supply

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for a Marching Army, and the Best System of Education for an Army Medical Service, provided topics for discussion in this section.

SECTION XI.

OPHTHALMOLOGY.

Among the papers in this section which led to discussion or attracted notice may be mentioned one by Professor ANGELUCCI (Palermo) and one by Professor KUHNT (Königsberg) on the Treatment of Trachoma; one by Dr. KNAPP (New York) on the Nature and Mechanical Treatment of Granular Conjunctivitis; one by Professor PAGENSTECHER (Wiesbaden) on the Treatment of Asthenopia; and one by Professor L. BELLARMINOV (St. Petersburg) upon the organised work of the Société Marie in Russia for the Alleviation of the Blind.

SECTION XII. (A AND B).

DISEASES OF THE EAR, THROAT, AND NOSE.

The most important work done in this section has already been referred to in the Section of Diseases of Children. The testimony of the special workers to the efficacy of the antitoxin treatment of diphtheria was especially valuable.

SECTION XIII. (A AND B).

OBSTETRICS AND GYNÆCOLOGY.

Under the heading of Obstetrics three subjects led to discussion among the members who attended the work of this section, viz.: Symphyseotomy, upon which operative measure Professor VARNIER (Paris), Professor ZWEIFEL (Leipzig), and Professor BOSSI (Genoa) addressed the meeting; Sero-therapy Applied to Puerperal Septicæmia, upon which Professor BAR (Paris), Dr. WEINSTEIN (Odessa), and Dr. WALLICH (Paris) spoke; and the External Examination of the Uterus, when the meeting heard the views of Professor LEOPOLD (Dresden), Professor HENNIG (Leipzig), and Professor PINARD (Paris).

Under the heading of Gynæcology the chief theme of discussion was Colpotomy in Inflammation of the Adnexa and in Neoplasms of the Uterus, when Professor CANDELA (Valence), Professor DOYEN (Rheims), Professor DÜHRSSEN (Berlin) and Professor MARTIN (Berlin) spoke. Several papers were also announced on the Electrical Treatment of Fibroids and of the results of Extra-Uterine Conception. Among these may be mentioned a paper by Dr. T. P. NEDOBODOFF (Moscow) entitled "Le Traitement et Guérison Complète par l'Électricité de la Grossesse Extra-utérine et de ses Suites," in which the author came to the following conclusions: (1) the first stages of extra-uterine pregnancy can be successfully treated by electricity; (2) until the middle of the fourth month electrical methods can probably be employed with advantage; (3) where degeneration into hæmatosalpinx has taken place electrical therapeutics are the only ones practicable; and (4) even in slowly forming peri-uterine hæmatoceles electricity may be tried with success.

SECTION XIV.

HYGIENE, PUBLIC MEDICINE, SANITARY STATISTICS, AND EPIDEMIOLOGY.

This section was throughout largely attended, and many of the papers set down to be read in it would have been naturally read in the Section of Medicine, which certainly suffered by these elaborate sub-divisions. On the first day (Aug. 20th) there were interesting papers read, among others, by Dr. BURGERSTEIN (Vienna), upon the Propagation of Sanitary Knowledge among the Populace; and by Professor VICTOR C VAUGHAN (Michigan, U.S.A.) on the Bacteriological Examination of Drinking Water. Professor VAUGHAN said that he had been engaged for the past nine years in making bacteriological examinations of water suspected of causing typhoid fever. The examination had consisted of the ordinary plate tests and counting the number of germs per cubic centimetre, but in addition to this animals had been inoculated with mixed and pure cultures of the germs obtained from each of the waters examined. The pathogenic germs which were found could be divided into two classes, first, those of the colon group, and, second, those resembling the typhoid bacillus. Waters containing germs belonging to the colon group had not been condemned by him, while those containing germs resembling the typhoid bacillus had been condemned. The fact that in every instance the epidemic of typhoid fever had ceased on the discontinuance of the condemned water indicated that such analyses were of practical value.

On the following day, Aug. 21st, an interesting paper was read by Mme. M. I. POKROVSKAÏA, (St. Petersburg) upon Workmen's Dwellings Abroad, in which she came to the following conclusions:—(1) That good workmen's dwellings are always popular; (2) that if worked upon economical lines they can be made a paying form of philanthropy; and (3) that the necessary rules and sanitary organisation conduce much to the sanitary well-being of the lower classes.

Professor EDWARD NOCARD (Alfort) read a paper upon Serum Therapeutics in Tetanus. He considered it under the headings of (*a*) its use as a curative agent and (*b*) as a prophylactic. He came to the following conclusions under the above two headings:—(*a*): 1. When tetanus has once declared itself the antitoxic serum has no action. It is powerless to arrest the fatal result of the malady, and this whatever be its strength or the amount of the dose injected. Those alone are cured who would have got well in any case. 2. The serum treatment is, however, useful even in declared tetanus, for even if the number of cures is not increased, yet those who do recover do so more quickly, the tetanic crises are less numerous and less violent, and the period of convalescence is much shorter. (*b*): 1. The antitoxic serum, even in a weak dose, if injected at the moment of reception of the suspicious injury, or even some time after its reception will prevent the onset of tetanus. 2. The dose injected must be both larger and stronger according to the length of time intervening between the reception of the wound and the employment of the serum. Intravenous injections are better than hypodermic; the attack of tetanus is not always warded off, but, as a rule, if it does appear, it is of a mild quality and the animal soon gets well even when it has received a dose of toxin invariably fatal to a control animal.

The members of this section were escorted one afternoon to see the abattoirs of the city of MOSCOW, which are situated some miles outside the city. The abattoirs are large, well-arranged, and well managed, and their being situated thus far from the city obviates one source of sanitary nuisance.

SECTION XV.

LEGAL MEDICINE.

Among the topics set down for discussion in this section may be mentioned the Creation of a Special Profession to be known as Médecins-Légistes, a suggestion brought forward by Professor PATSNNKO (Kharkof); the Application of Bacteriological Research to Medical Jurisprudence, a paper on which subject was read by Professor LACASSAGNE (Lyons); and the Adequate Penalty for Sexual Crime, which subject was introduced by Professor KRATTER (Graz).

In this section an interesting paper was read by Dr. J. F. SUTHERLAND, Deputy Commissioner in Lunacy for Scotland, on the Temporary Mania of Intoxication and the Anomalous Attitude of Civil and Criminal Law. The following is a brief *résumé* of the paper. The writer, in respectfully submitting to the medical jurists and specialists of every civilised nation assembled in the ancient capital of Russia his views on the attitude of the criminal law with respect to crimes committed by persons in a state of intoxication, contends that the criminal code which regards the authors of crimes such as murder, culpable homicide, &c., as fully responsible to the law, and thus places them on the same footing as criminals actuated by *malice prepense*, is not only not in harmony with the views expressed by modern schools of jurisprudence and ethics in the closing years of the nineteenth century, but is positively cruel and unjust, and warranting the suggestion, if not the appellation, of such a code being a draconian one. The position of Great Britain is not an enviable one. In regard to her criminal code, and her attitude towards drunkenness and habitual drunkenness, her place is not in the European concert. But her voluntary exclusion, it is to be hoped, is only a matter of time. Drunkenness is a perfect picture of insanity—none more so in the whole range of lunacy. The anomalous, not to say illogical and unjust, attitude of the criminal law is heightened by a consideration of the attitude of the civil law, which to all intents and purposes shields the drunkard from the consequences of civil acts, testamentary dispositions, and contracts made in a state of intoxication. As a justification of their position it has been urged by a school of jurists, who neither admit the insanity plea nor

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take cognisance of important questions such as free will, biology, sociology, &c., that the scaffold, the guillotine, and electrocution are deterrents to the drunkard. There could be no greater delusion. They may be, and no doubt are, to the deliberate murderer, but they come not within the vision, mental or physical, of the man intoxicated. When he begins imbibing he does not mean crime, least of all murder. When he has drunk he is past the reflective stage, and with will power paralysed acts like a madman. In this connexion it is worthy of observation that most drunkards are potential murderers. It is the merest accident that the assaults they commit do not terminate fatally, and that as a consequence capital punishments are not multiplied a thousandfold. It is not their fault; the violence is not measured. Everyone recognises alcohol as a brain poison, producing certain well defined mental derangements—in short, insanity. But drunkenness, says the law, is a form of insanity which must not, like the other insanities induced by alcohol or by vice, exculpate or modify guilt. Judged by criterions of responsibility—above all, that laid down by the bench of judges in 1843—such a view is illogical and untenable. There are, apart from the views of the law and its criterion of responsibility, other considerations more or less significant which should make jurisprudence — ofttimes hampered by a fetich regard for precedents—more merciful towards such offenders. In considering the fate and punishment of drunkards who have committed crimes regard should be had by the judiciary and by juries to—(1) the attitude of the civil law, which protects the drunkard from the consequences of his acts, practically recognising his condition as being one of *non compos mentis*; (2) the attitude of the law towards drunkenness *per se* and habitual drunkenness (as a matter of fact, both are winked at by the laws of Great Britain until a crime is committed); with such a state of matters as this there is no excuse for the severity of the criminal code; (3) the nature of the toxic beverage—made highly toxic by the presence of adulterations and sold freely with the sanction of law; (4) climate, race, and temperament—the Teutonic being as a rule more prone to excesses than the Gallic, and the Gallic than the Slavonic; and (5) the fact that the defence of such criminals is left to youthful and inexperienced lawyers, who have no means provided to make the best case possible by the employment of eminent counsel and skilled witnesses, while the prosecution is conducted with the most powerful resources of the State.

THE MEETING OF THE BRITISH MEDICAL ASSOCIATION AT MONTREAL.

THE sixty-fifth annual meeting of the British Medical Association commenced upon Aug. 31st at Montreal. Upon Sept. 1st the McGill University conferred honorary degrees upon the following:—Lord Lister, Professor Richet, Sir Walter Foster, Sir William Turner, Dr. H. Barnes, Dr. Michael Foster, Dr. Gaskell, Mr. Christopher Heath, Dr. Alexander Macalister, Dr. Saundby, and Mr. Wheelhouse.

Owing to the pressure upon our columns, due to the International Medical Congress at Moscow, we are unable to find space this week for all the addresses, but that of the President and those of the Presidents of the Sections of Medicine and Surgery will be found in another column. Abstracts of the others, together with details of the proceedings, will be published in future issues.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the subjects indicated:—

Surgery.—L. L. Allen, St. Bartholomew's Hospital; P. S. Blaker, Calcutta; J. B. Cautley (Section I.), St. Bartholomew's Hospital; J. W. F. Rait, University College Hospital; L. Tong, Manchester; C. A. Trouncer, Cambridge and Guy's Hospital; and E. M. Vernon (Section II.), Royal Free Hospital.

Medicine.—E. L. Anderson, Liverpool; S. R. Bhagtani, King's College Hospital; E. C. Corfield, St. Bartholomew's Hospital; D. F. Maunsell, St. Thomas's Hospital; C. C. Poole, Guy's Hospital; G. Steel, Cambridge University; C. A. Trouncer, Cambridge and Guy's Hospital; E. M. Vernon (Section II.), Royal Free Hospital; S. K. Vines, Birmingham; and A. M. Weir, Royal Free Hospital.

Forensic Medicine.—H. A. Ahrens, King's College Hospital; E. L. Anderson, Liverpool; E. C. Corfield, St. Bartholomew's Hospital; D. F. Maunsell, St. Thomas's Hospital; C. C. Poole, Guy's Hospital; W. A. H. B. Smith, King's College Hospital; G. Steel, Cambridge University; C. A. Trouncer, Cambridge and Guy's Hospital; S. K. Vines, Birmingham; and J. H. Wilson, Middlesex Hospital.

Midwifery.—E. L. Anderson, Liverpool; S. R. Bhagtani, King's College Hospital; E. C. Corfield, St. Bartholomew's Hospital; D. F. Maunsell, St. Thomas's Hospital; C. C. Poole, Guy's Hospital; G. Steel, Cambridge University; C. A. Trouncer, Cambridge and Guy's Hospital; S. K. Vines, Birmingham; and A. M. Weir, Royal Free Hospital.

The diploma of the society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery:—E. C. Corfield; J. W. F. Rait; G. Steel; C. A. Trouncer, E. M. Vernon, and S. K. Vines.

REGISTRATION OF PLUMBERS.—An examination of master and operative plumbers applying for registration under the National Registration of Plumbers was held on Aug. 28th by the Worshipful Company of Plumbers at the Borough Polytechnic Institute. Twenty-six candidates were present from various parts of London and the following provincial towns:—Lyme Regis, Maidstone, St. Peter's (Kent), Bishops Stortford, Southend-on-Sea, Eton, and Haywards Heath. The practical tests included lead bossing, pipe bending, and joint making. The examination questions included the subjects of roof covering, contamination of drinking water from faulty connexions, arrangement of bath, sink, and closet wastes, drainage of town houses, and disconnexion with sewers. The examiners were:—Mr. Charles Hudson, Chairman of the Board of Examiners, Mr. J. Knight, Master Plumber, Mr. G. Taylor, Foreman Plumber, Messrs. F. Randall and F. Barter, Representatives of the United Operative Plumbers' Associations of great Britain and Ireland, and Mr. C. T. Millis, Principal of the Educational Department, Borough Polytechnic Institute. Five candidates succeeded in passing the examination in practical workmanship.

THE QUARTERLY COURT OF THE MIDDLESEX HOSPITAL.—A meeting of the Quarterly Court of Governors of the Middlesex Hospital was held on Aug. 26th, and a summary of transactions of the weekly board of Governors was laid before the meeting. Among other things the board had the honour to report that His Royal Highness the Duke of Cambridge, K G, Vice-President, in accordance with the resolution of the Special General Court held in May last, presented the loyal address of the Governors and medical staff of the hospital to their most gracious patron the Queen on the auspicious occasion of the sixtieth anniversary of her beneficent reign, and the address was very graciously received by Her Majesty. The foundation-stone of the new wing for female cancer patients had been laid on July 15th by Her Royal Highness the Princess Christian of Schleswig-Holstein. The erection of a temporary building in the hospital garden has been sanctioned to enable the school authorities to carry on the work of the Anatomical and Chemical Departments while the proposed alterations and extensions to the medical school are in course of progress. The Council has announced that Baron Strathcona and Mount Royal of Glencoe, K.C.M.G., High Commissioner of Canada, and Chancellor of McGill University, Montreal, will address the students at the opening of the Winter Session on Oct. 4th next. Among the legacies received during the quarter the further munificent sum of £10,000 has been paid over by the executors of the late Mr. David Brandon, being on account of one-sixth of the residue of his estate bequeathed to the hospital, in addition to the specific bequest of £3000 already paid and reported to the last court. The donations list for the past quarter includes £1000 from "Cambridge" and £500 "Anonymous" (per Dr. Arthur Francis Voelcker), both to the Cancer Fund. The Convalescent Home at Clacton-on-Sea has been kept full, no less than 251 patients having been admitted during the quarter ending June 30th. With deep regret the board had to record the death of Dr. Henry Thompson, consulting physician to the hospital, who died on July 22nd. The board have approved with other hospitals a scheme for the formation of a Central Association of Representatives of London Hospitals with Medical Schools, the object of the association being to consider any matter in which the hospitals have a common interest and to promote joint action in regard thereto.

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THE LONDON HOSPITAL.—The quarterly court of governors of the London Hospital was held on Sept. 1st. The secretary read the quarterly report, stating that the number of patients discharged cured was 1297, number relieved 1131; died 260; giving a total of 2688. The out-patients numbered 14,363. The chairman, in moving the adoption of the report, said that they had received from the Brandon legacy £10,000 during the present quarter, in addition to £3000 received from the same source before The Grocers' Company had continued their donation of £1000, and Mr. Page had given £1000. He was opposed to such an organisation as a central hospital board. The Prince of Wales's Fund had not as much effect as they had expected in the direction of a reduction of subscriptions, but nevertheless it had had some. The idea with which the fund was started was a grand one, but he was afraid that only a sixth of the necessary amount had been promised. Although their expenditure at the London Hospital was £60,000 per annum, and their assured income was only £20,000, he was confident they would carry on their work with the same efficiency as in the past. This motion was seconded by Mr. J. Hall and adopted.

CHURCH SANITARY ASSOCIATION.—We have just received the report of the annual meeting of the Church Sanitary Association, which was held at 1, Hamilton-terrace, London, on May 11th, under the presidency of Dr. Norman Kerr, in the unavoidable absence of the Bishop of Coventry. Founded six years ago with the view of promoting sanitary reform in every parish, this society has adopted the method of making use, as far as possible, of the parochial organisation of the church, and of endeavouring to induce preachers and teachers to enforce the obligation that rests upon all, to care "as well for the body as the soul." The Gospel appointed to be read in every church on the seventh Sunday after Trinity has been suggested as affording an opportunity of bringing the aims of the society to the notice of the public generally. During the past year sermons were preached, meetings were held, leaflets and pamphlets were distributed, and numerous communications were sent to the press; a memorial to the Government asking for proper inspection of meat before it was offered for sale was very largely signed, and during the Church Congress at Shrewsbury special efforts were made to have instruction respecting the health and temporal welfare of mankind reckoned as an integral part of the Church's work. The Archbishop of York is president of the association, the Duke of Westminster and Major E F. Coates are patrons, and the Rev. F. Lawrence, Westow Vicarage, York, is treasurer and secretary.

BOOKS, ETC., RECEIVED.

BALE, JOHN, SONS, AND DANIELSON, Great Titchfield-street, Oxford-street, London.
The Relief and Cure of Spinal Curvatures. By Dr. P. G. Lewis. Illustrated. 1897. Price 7s. 6d. net.

BORNTRAEGER, G., Berlin.
Das Wesen der Rhachitis und Skrophulose und deren Bekampfung. Von Dr. K. Elze. 1897.

CHURCHILL, J. & A., Great Marlborough-street, London.
The Students' Guide to Medical Diagnosis. By S. Fenwick, M.D., F.R.C.P., and W. S. Fenwick, M.D., B.S. Lond., M.R.C.P. Eighth Edition. 1897. Price 9s.

FISCHER, GUSTAV, Jena.
Die Pathologie der Tabischen Hinterstrangserkrankung. Von Dr. Emil Redlich. 1897.

KEENER, THE W. T. COMPANY, Chicago.
Crime and Criminals. By J. S. Christison, M.D. 1897.

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., London.
The Book of Tephi. By J. A. Goodchild. 1897.

LEWIS, H. K., Gower-street, London.
Practical Muscle Testing and the Treatment of Muscular Atrophies. By W. S. Hedley, M.D. Illustrated. 1897. Price 3s. 6d.

LIPPINCOTT, J. B., COMPANY, London.
System of Diseases of the Eye. Edited by W. F. Norris, A.M., M.D., and C. A. Oliver, A.M., M.D. Vol. II.
Examination of the Eye, School Hygiene, Statistics of Blindness and Antisepsis. Illustrated. 1897. Price 21s. net.
Lippincott's Medical Dictionary. By R. W. Greene, A.B., and others. 1897. Price 31s. 6d.

LIVINGSTONE, E. & S., Edinburgh.
The Insane in Private Dwellings and Licensed Houses. By J. F. Sutherland, M.D., F.R.S.E. Second Edition. 1897. Price 1s.

MACMILLAN AND CO., London.
Elements of the Comparative Anatomy of Vertebrates. Adapted from the German of Dr. Robert Wiedersheim. By W. N. Parker, Ph.D. Second Edition. Illustrated. 1897. Price 12s. 6d.

MARSHALL, H., AND SON, Fleet-street, London, E.C.
The London Manual for 1897-98. Edited by Robert Donald. Price 1s. 6d., and paper covers 1s.

MURRAY, JOHN, Albemarle-street, Piccadilly, London.
A Guide to Zermatt and the Matterhorn. By E. Whymper. Illustrated and Maps. 1897. Price 3s.

POTTER AND CLARKE, Artillery-lane, London, E.
Etidorhpa, or the End of Earth. The Strange History of a Mysterious Being. Communicated in manuscript to Llewellyn Drury, which was assumed by J. Uri Lloyd. Illustrated. Third Edition. 1897.

SAMPSON LOW, MARSTON, AND COMPANY, Fetter-lane, Fleet-street, London.
Homburg and its Waters, with articles on Obesity, Gout, Weak Heart, &c. By N. E. Yorke-Davies, L.R.C.P. Lond. 1897.
Twentieth Century Practice. Edited by T. L. Stedman, M.D. In twenty volumes. Volume IX.
Diseases of the Digestive Organs. 1897.

SIMPKIN, MARSHALL, HAMILTON, AND CO., London.
The A B C of the X Rays. By W. H. Meadowcroft. Illustrated. Price 4s.

STEVENS AND SONS, Chancery-lane, London.
Monopolies by Patents, and the Statutable Remedies Available to the Public. By J. W. Gordon, Barrister-at-Law. 1897. Price 18s.

SWAN SONNENSCHEIN AND CO., Paternoster-square, London.
A Bibliography of Medicine, being the sections relating to that subject in the best books and the reader's guide. By W. Swan Sonnenschein. 1897.

THE EDWARDS AND DOCKER COMPANY, Philadelphia.
The Eye as an Aid in General Diagnosis. By E. H. Linnell, M.D. 1897.

THE OFFICE OF "THE VEGETARIAN," Farringdon-street, London, E.C.
Tuberculosis; or, Flesh-eating a Cause of Consumption. By Josiah Oldfield, M.A., B.C.L., Barrister-at-Law. Second Edition. 1897. Price 6d.

THE REBMAN PUBLISHING COMPANY, Adam-street, Strand, London.
Rheumatism, and its Treatment by the Use of the Percusso-punctator. By J. Brindley James, M.R.C.S.E. Second Edition. 1897.
The Diseases of Women. By J. Bland Sutton, F.R.C.S. Eng., and A. E. Giles, M.D., B.Sc. Lond., F.R.C.S. Edin. Illustrated. 1897. Price 14s.

WRIGHT, JOHN, AND CO., Bristol.
Our Baby: For Mothers and Nurses. By Mrs. Langton Hewer. Fifth Edition. 1897.

Pauper Children: an Open Letter on the Care and Control of London Pauper Children (P. S. King and Son, King-street, Westminster, 1897); price 6d.—Handy Newspaper List, 1897 (C. and E. Layton, 56, Farringdon-street, London, E.C.); price 6d.—The Great Eastern Railway Company's Tourist Guide to the Continent: edited by Percy Lindley, Illustrated, and with Maps, 1897 (published at 30, Fleet-street and 2, Cockspur-street, London); price 6d.—Illustrated Catalogue of the Instruments, Appliances, and Fittings used in Surgery and Medicine, with an Appendix (Brady and Martin, Newcastle-upon-Tyne), 1897. — Proceedings of the Society for Psychical Research, July, 1897 (Kegan Paul, Trench, Trübner, and Co., Charing-cross-road, London, W.C., 1897); price 3s. 6d.—A Critical Period in the Development of the Horse: by J. C. Ewart, M.D., F.R.S. (Adam and Charles Black, London, 1897).—Magazines, &c., for September: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Sunday Hours, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, English Illustrated Magazine, Knowledge, and Humanitarian.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAMS, WILLIAM FRANCIS, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Senior Assistant Medical Officer to the Cornwall County Lunatic Asylum, at Bodmin.

BARNES, JOSEPH M., M.B., Ch.M. Aberd., has been appointed a Public Vaccinator at Kuaotunu, New Zealand.

BRABENT, R. H. W. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Lee and Blackheath Divisions of the Post Office, vice R. Clarke.

CHASSON, H., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Officer for Taroom, Queensland.

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CLOWES, ERNEST FRANCIS, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Royal Hants County Hospital, Winchester.

COCKILL, T. T., L.R.C.P. Lond., M.R.C.S., has been appointed an Assistant Honorary Physician to the North Staffordshire Infirmary, vice S. K. Alcock.

COVENTRY, C., M.B., B.Ch. Vict., L.R.C.P. Lond., M.R.C.S., has been appointed an Assistant Physician to the Public Hospital, Perth, Western Australia.

COWEN, A., M.B., Ch.B. Melb., has been appointed Officer of Health for Bulu-Bulu Shire, Victoria, Australia, vice R. Smith.

CROSBIE, RICHARD P., M.B., B.S. Irel., has been appointed Extern Surgeon to the Cork South Infirmary, vice N. H. Runciman, resigned.

CROWE, G. E., M.D., B.Ch. Dub., has been appointed Medical Officer for the Second Sanitary District of the Chorlton Union, vice A. H. Guest, deceased.

ECCLES, J. H., L.R.C.S. Irel., has been appointed Officer of Health for Newstead Shire, Victoria, Australia, and Public Vaccinator at Newstead.

EMMS, H. ROBERT, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon and Secretary to the Dispensary, Stourbridge, Worcestershire.

EWING, B. GEO., M.B., C.M. Edin., has been re-appointed Medical Officer of Health by the Ardsley East and West Urban District Council.

FENTON, W. R., B.A., M.B. Dub., has been appointed Police Surgeon at Salisbury, Mashonaland.

FERGUSON, BRUCE R., M.A., M.D. Cantab., has been appointed Surgeon to the Y Division of Police at New Southgate.

FLINT, F. S., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Public Vaccinator for south Australia.

FULLERTON, R. J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Public Vaccinator and Officer of Health at Birchip, Victoria, Australia.

GARDINER, J. M., M.B., Ch.B. Melb., has been appointed an Assistant Surgeon at the Women's Hospital, Melbourne, Australia.

GIBSON, T., M.B., C.M. Edin., has been appointed Resident Assistant Medical Officer for the Workhouse of the Birkenhead Union.

GOODE, E. J., L.K.Q.C.P., L.R.C.S. Irel., as been appointed a Public Vaccinator for the District of Waitara, New Zealand.

GORING, CHARLES, M.R.C.S., L.R.C.P. Lond., has been appointed Senior House Physician to the Great Northern Central Hospital, London.

HANNAY, MARY B., M.B., C.M., Glasg., has been appointed Medical Officer for the Islands of Flotta and Fara, Orkneys.

HARTLEY, J., M.B., Ch.B. Vict., has been appointed Senior House Surgeon to Ancoats Hospital, Manchester.

HARVEY, A. G., M.B., B.S. Camb., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed a Public Vaccinator for the District of Patea, New Zealand.

HEDLEY, CHAS., M.B., Ch.B. Melb., has been appointed a Member of the Public School Board for the Sub-district of Grafton, New South Wales.

HIRST, W., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Howden Sanitary District of the Auckland Union, vice W. R. Tough, resigned.

HOGGAN, B. B., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Public Vaccinator at Strathmerton, Victoria, Australia.

JOHNSTON, JAS. C., M.B., Ch.M. Edin., has been appointed a Medical Officer at Port Phillip Heads, Victoria, Australia.

MCWILLIAMS, G. F., M.B., Ch.B. Melb., has been appointed a Physician to the Public Hospital, Perth, Western Australia.

MURRAY, G. L., M.B., M.Ch. Syd., has been appointed a Government Medical Officer and Vaccinator for the district of Bingara, New South Wales.

NAIRN, ROBERT, F.R.C.S. Eng., L.R.C.P. Lond., has been appointed a Public Vaccinator at Hastings, New Zealand.

NEWTON, R. E., M.B., C.M. Glasg., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Frankshaw Sanitary District of the Milford and Launditch Union, vice M. G. Dundas, resigned.

NICHOLSON, F. D., M.B., C.M. Edin., has been appointed Medical Officer for the Bolton-upon-Dearne Sanitary District of the Doncaster Union.

O'CONNOR, M., M.B., Ch.B. Dub., has been appointed Senior Physician to the Public Hospital, Perth, Western Australia.

OVEREND, E. K., M.B. Melb., has been appointed a Public Vaccinator at Brunswick, Victoria, Australia.

PRAAGST, L. F., M.B., Ch.B. Melb., has been appointed Officer of Health for the Town of Brighton, Victoria, Australia.

RAU, SRINIVASA M., M.A., M.B., C.M. and B.Sc. Edin., has been appointed Chemical Examiner and Bacteriologist to the Government of Mysore, India.

STEPHEN, G., M.B., M.S. Aberd., has been appointed Medical Officer for the West Auckland Sanitary District of the Auckland Union, vice R. J. Nevin, deceased.

SWEETEN, BENJAMIN, M.B., C.M. Edin., has been appointed Medical Officer for the Mexborough Sanitary District of the Doncaster Union.

SYMES, J. O., M.D. Lond., D.P.H., has been appointed Honorary Bacteriologist to the Bristol Royal Infirmary.

TURNER, WILLIAM, M.B., B.S. Lond., F.R.C.S. Eng., has been appointed an Assistant Surgeon to the Westminster Hospital.

WILKIN, R. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 3 Sanitary District of the Newmarket Union, vice T. Kerry, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BATH ROYAL UNITED HOSPITAL.—House Surgeon, for one year. Salary £60, with board, lodging, and washing.

BELGRAVE HOSPITAL FOR CHILDREN, 77, Gloucester-street, London.—House Surgeon for six months. Board lodging, &c., provided.

BETHLEM HOSPITAL.—Two Resident Clinical Assistants for six months. Apartments, complete board, and washing provided.

COUNTY ASYLUM, Prestwich, Manchester.—Pathologist and Assistant Medical Officer. Salary £200 per annum, with board, residence and washing.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, W.—Junior Resident Medical Officer. Salary £50 per annum, with board, lodging, and washing.

HOSPITAL FOR WOMEN, Soho-square, London.—Assistant House Physician, non-resident, for three months.

HUDDERSFIELD INFIRMARY.—Junior House Surgeon. Salary £40 per annum, with board, lodging, and washing.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL, Manchester.—Resident House Surgeon. Honorarium at the rate of £50 per annum and board.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician, House Surgeon, Assistant House Physician, and Assistant House Surgeon. All for six months. Salary of House Physician and House Surgeon each at the rate of £40 a year, and of the Assistant House Physician and Assistant House Surgeon each at the rate of £20 a year.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—House Surgeon. Salary £100 per annum, with board and lodging.

SALOP INFIRMARY, Shrewsbury.—House Surgeon. Salary £100 per annum, with board and residence.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for a period of six months (renewable for a further similar period). Board, residence, and an honorarium of £10.

TYNEMOUTH VICTORIA JUBILEE INFIRMARY, Spring-gardens, North Shields.—Resident House Surgeon. Salary £120 per annum, of which £55 per year will be required to be paid to the Infirmary Committee for board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

AMBLER.—On Aug. 24th, at Ampthill, the wife of Richard Ambler, L.R.C.P., of a son.

ANDREWES.—On Aug. 28th, at Highwood, Hampstead-lane, Highgate, N., the wife of F. W. Andrewes, M.D., of a daughter.

BATTERHAM.—On Aug. 28th, at Fank House, Grand Parade, St. Leonard's-on-Sea, the wife of J. W. Batterham, M.B., F.R.C.S., of a daughter.

CASTLE.—On Aug. 24th, at Holly House, Darfield, Yorks, the wife of R. Feild Castle, M.B., of a son.

HICKMAN.—On Aug. 17th, at Blenheim-gardens, Willesden green, the wife of H. R. Belcher Hickman, M.B., Harley-street, of a son.

HUGHES.—On Aug. 29th, at Melrose, Moorfield-road, West Didsbury, the wife of Geoffrey Hughes, L.D.S. Eng., of a daughter.

HUNTER.—On Aug. 25th, at Abbey Mount, Cork, the wife of Surgeon-Major G. Douglas Hunter, A.M.S., of a son, who only survived his birth two hours.

MERRY.—On Aug. 27th, at 1, Cleveland-square, Hyde Park, W., the wife of William J. C. Merry, M.D., of a daughter.

PEARCE.—On Aug. 31st, at Springfield, Salcombe, South Devon, the wife of Arthur Pearce, M.R.C.S. Eng., of a daughter.

SELBY.—On Aug. 31st, at 20, South Parade, Doncaster, Edith, wife of E. W. Selby, M.D., B.S. Lond., F.R.C.S. Eng., of a son.

WORNUM.—On Aug. 27th, at College-terrace, Fitzjohn's avenue, N.W., the wife of George Porter Wornum, M.R.C.S. Eng., of a son.

MARRIAGES.

BARNES—HOLLIST.—On Aug. 28th, at Lodsworth, H. C. Barnes, M.R.C.S., L.R.C.P., youngest son of J. Barnes, J.P., of Tiverton, to Lilian Capron, second daughter of Lieutenant-Colonel Hollist, of Lodsworth, Sussex.

HILL—WOODS.—On Aug. 24th, at St. Giles's Church, Northampton Ernest Gardiner Hill, M.R.C.S., L.R.C.P., only son of James Robert Hill, M.R.C.S., L.R.C.P., of Parson's green, Fulham, to Mary, youngest daughter of the late John Woods, of Chapel Brampton Grange.

LOGAN—DOUGLAS.—At Free Church of Scotland, Scone, on Aug. 25th, by the Rev. A. K. McMurchy, M.A., James Logan, youngest son of the late James Logan, of Green Vale, Kelso, N.Z., to May, eldest daughter of T. Kennedy Douglas, M.B., C.M., Scone, N.B., and formerly of Tapanui, N.Z.

SAUNDERS—ROLFE.—On Aug. 26th, at All Saints', South Lynn, Allan Lindsey Saunders, M.R.C.S. Eng., L.R.C.P. Lond., of The Limes, Grimston, King's Lynn, to Katie Winifred, only surviving daughter of John Jex Rolfe, of King's Lynn.

SURRIDGE—BIRTWELL.—On Aug. 31st, at St. Elizabeth's Church, Ashley, Edward Ernest North Surridge, B.A., M.B., B.C. Cantab., of Knutsford, to Edith Winifrede, eldest daughter of the Rev. Geoffrey Birtwell, B.A., Vicar of Ashley, Cheshire.

DEATHS.

GARMAN.—On Aug. 25th, at 159, Bow-road, E., Henry Vincent Garman, M.R.C.S., aged 73 years.

HALL.—On Aug. 30th, at 75, Landsdown-place, Brighton, Alfred Hall, M.D., F.R.C.P. Lond., aged 85 years.

HARLE.—On Aug. 23rd, suddenly, at his residence, Danbury-street, Islington, Thomas William Harle, M.R.C.S., L.S.A., and L.M., in his 78th year.

HICKS.—On Aug. 28th, at The Brackens, Lymington, Hants, John Braxton Hicks, F.R.S., F.L.S., M.D. Lond., F.R.C.P., second son of Edward Hicks, Esq., J.P.

HODGSON.—On Aug. 29th, at Green-street, Darwen, Thomas Moore Hodgson, M.B., Surgeon, aged 36 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Sept. 2nd, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Aug. 27	29·78	W.	...	118	71	57	57	61	Fine
,, 28	29·91	S.W.	...	116	72	56	60	64	Cloudy
,, 29	29·81	S.W.	0·21	98	68	55	60	64	Cloudy
,, 30	29·68	W.	0·29	118	72	58	58	61	Cloudy
,, 31	29·67	S.W.	0·55	118	68	51	57	60	Cloudy
Sept. 1	29·79	S.W.	0·40	75	62	54	56	58	Cloudy
,, 2	29·48	S.W.	...	107	67	57	57	61	Squally

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which was completed with the issue of June 26th, was given in THE LANCET of July 3rd. It is intended, in future, to include the Index and Title-page for each past half-yearly volume in the first number of the succeeding volume, as in the present case, instead of in the last number of the volume itself, as heretofore.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

THE TAXING OF MEDICAL MEN IN AMERICA.

IT seems that in some of the States of the American Union medical men have to pay a tax for practising their profession. The *Virginia Medical Semi-Monthly* says that the State of Virginia has been charging for the past ten years or more $25.75 (£5) for the licence of a city medical man who has been in practice five or more years, and for the past two years, in addition to this, the Richmond City Council has imposed the city licence tax varying from $20 (£4) to $75 (£15), according to the income received, a medical man of average prominence having to pay from $40 to $60 (from £8 to £12) a year.

"SAVE US FROM OUR FRIENDS."

SOME indiscreet friend of Sir William MacCormac seems to have the use of the *Cambria Daily Leader*, and draws a melancholy picture of Harley-street without the President of the Royal College of Surgeons. "Sir William has been presented to the Czar, a distinction reserved for only a few of the Conference, which numbers 6000 members. The President of the Royal College, however, is a man who has attained his position by sheer merit, and remains the same plain hard-worker, whatever the courtly honours he receives." Then follows an account of the President's dog and its place in its master's consulting-room. Such accounts are presumably meant to entertain the readers of our Cambrian contemporary in this very dull season, and soothe the crowds of *malades imaginaires* who will have no deputy and sigh for the return of Sir William MacCormac and other distinguished consultants.

Mr. N. Hay Forbes.—We do not think that there is one. "Bellows' French Dictionary" (Trübner and Co.) contains a great many medical and scientific terms and would be found useful.

"KISSING THE BOOK."

THE *Maryland Medical Journal* states that a sanitary Bible bound in celluloid which can be washed has been introduced into some courts.

Medicus.—Experience shows that the rheumatic and bronchial patients who winter in Ilfracombe derive much benefit. The temperature is equable without the humidity found in South Devon. The air is moderately bracing and sheltered from the east. The chief feature about the climate is the rapidity with which the roads dry after rain, the subsoil being of a porous and friable shale, which readily admits of the rapid percolation of surface water.

INCOME-TAX OVERCHARGES.

To the Editors of THE LANCET.

SIRS,—The interest which has been aroused in regard to income-tax by the correspondence in the *Times* and the articles which have appeared in a large number of other metropolitan and provincial papers has resulted in calling attention to many grievances which taxpayers suffer, but there is one practice of the Inland Revenue authorities which we think is quite unjustifiable, and which seems to have been overlooked. The practice referred to is that of sending to traders and others at this period of the year a blue notice of charge, showing an assessment of profits at £160 and allowing the whole by way of abatement, no tax being demanded in respect of the business profits. Of course, where those who receive such notices have no income from any source other than their business no injustice is done; but in the case of such as have income from other sources from which tax has already been deducted the effect is to bar their right to claim repayment, unless the assessment of the business profits be appealed against, the full abatement having already been allowed. It is, therefore, of the utmost importance that those of your readers who are now receiving notices of charge for the year 1897-98 should, if the amount at which they are assessed is greater than the average of their profits for the three years ending April 5th, 1897 (or at such prior date as they usually make up their accounts), at once give notice of appeal in accordance with the instructions on the notice of charge. Moreover, if they find that the profits of the three years named show an average profit less than the amount upon which they paid tax for 1896-97, they should give notice of appeal in respect of that year also, and claim repayment of the amount overpaid. There is no time to lose in business appeals, as this class of claim for repayment should have been made before now; while a claim to set off a loss in farming or business against income from other sources must be lodged before Oct. 6th next. Many people are now entitled to make a claim on one ground or another for three years to April 5th last.

We are, Sirs, yours faithfully,

THE INCOME-TAX ADJUSTMENT AGENCY.

12 and 13, Poultry, London, E.C., Sept. 1st, 1897.

Mr. J. M. B. Atkinson (Shrewsbury).—No very extended account of trional has appeared. A case of urobilinuria following its use was reported in THE LANCET of March 27th, 1897. If our correspondent applies to the agency for Bayer's drugs (The Elberfeld Farbenfabriken Co., 19, St. Dunstan's-hill, E.C.) he will probably be supplied with literature on the subject.

AN UNSEEMLY ADVERTISEMENT.

A CORRESPONDENT has sent us the following cutting from the *Portsmouth Evening News* of Aug. 27th:—

NOTICE.—Dr. Raitt has removed from Outram-road to more central and convenient premises, 38, St. Andrew's-road (corner of Margate-road). From 2 till 3: Private patients and engagements only.

Dr. Raitt should know that if he wishes to intimate a change of address to his patients this is not the way to do it.

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SHARKS IN THE ADRIATIC.

EVER since the opening of the Suez Canal, thirty years ago, by which the Indian Ocean has been connected with the Mediterranean, sharks have increased in the latter sea. They follow the P. and O. liners, whose course involves touching at Brindisi, Ancona, and finally Venice. Some years of excessive sultriness have witnessed these unwelcome visitors in great force, particularly off the Adriatic watering-places. One of these, Sinigaglia—the bright, clean town so frequented for midsummer sea-bathing, celebrated, moreover, as the birthplace of Pius IX.—has suffered disastrously from the scare caused by the capture of several formidable sharks quite close to the land. In fact, the development of the place as a seaside resort in the dog-days has been appreciably affected by the gruesome monsters in question. From Ancona comes the announcement that recently a male shark, 1 metre 20 cm. long, its open mouth 48 cm. in length, was caught, not without difficulty, by some fishermen, who previously to its capture thrust between its jaws a "voliga" (a thick piece of wood the length of a walking-stick), which it instantaneously reduced to matches. Now this shark had doubtless a female consort in attendance—they seldom travel alone, and when not in shoals are almost invariably in couples—the wanderings of which in search of the missing spouse must keep the whole seaboard in alarm. At Venice the famous bathing ground known as the Lido is at this season frequented by thousands of visitors, including many of our compatriots *en route* to or from Egypt, India, or the Antipodes, and it is not without reason that the Venetian and Emilian journals sound a note of warning as to the danger of deep-sea bathing with the aforesaid "widowed cruiser" patrolling their waters. If the "midsummer nightmare" caused by these voracious privateers continues the Adriatic municipalities will have to offer a prize for each one captured, as in India a reward is given for the killing of snakes.

Vigilo et Spero.—We should gladly insert our correspondent's letter if we thought its insertion would do either him or others good. But we doubt this. His case is, we think, if not unique, very rare, and could scarcely be made the ground of an argument. We sincerely trust that his remaining powers and energy will ere long find fit and congenial employment.

"A VEILED NOMENCLATURE."

To the Editors of THE LANCET.

SIRS,—I think it will be an advantage if the next edition of the British Pharmacopœia contains synonyms for the drugs in common use. Medical men are constantly having their prescriptions commented on by their patients because the names of the drugs prescribed are so palpable. At present I am treating a lady who insists on seeing every prescription and on knowing every ingredient used. She has quoted to me from memory what Sir Russell Reynolds gave her; and on seeing a "spray" on her table which I inquired about she informed me that it contained cocaine, glycerine, &c., and was prescribed by Mr. So-and-so. On my writing, a prescription containing ammonium bromide and chloroform water she at once commented on these drugs, and I felt how desirable a "veiled nomenclature," if I may use the expression, would be for such patients.

I am, Sirs, yours faithfully,

Sept. 1st, 1897. M.D.

Mr. Owen Williams (Glandovey).—The statements of the writer of the letter forwarded to us have been exposed and contradicted over and over again.

PULQUE AS AN ANTI-SCORBUTIC.

DR. C. E. IDE, of Buffalo, writing in the *Philadelphia Polyclinic*, recommends pulque, a Mexican drink made from the juice of the Agave Americana, as an efficient prophylactic and remedy for scurvy. The juice of this plant was first employed in the treatment of scurvy by Dr. Peres, of the United States Army, and was considered by him to be superior to all other anti-scorbutics. Pulque is, according to Dr. Lobato, of Mexico, an acid wine, unrectified, produced by fermentation in aguamiel, the juice of the maguey or Agave Americana. This liquor is a familiar drink among the Mexicans and varies according to the region from which the plants are obtained, the best being that which comes from points on the Mesa Central Railroad—namely, from the plains of Apam, Tlaxcala, and Puebla. The aguamiel (juice) is obtained by scraping the maguey. It is a yellowish-white liquor, slightly viscid, with an agreeably sweet taste, and an aromatic smell due to an essential oil. It ferments spontaneously after a few hours' exposure to the air at from 18° to 20° C., developing alcohol; if the fermentation be not checked, acetic acid and, later, lactic acid are formed; finally putrefactive changes occur. Pulque can be administered almost *ad libitum*; it is not easily preserved for a long time, except by the aid of antiseptics.

THE MENTAL AFFECTIONS OF CHILDREN.

WE have pleasure in publishing the following notice:—

"Twenty years have passed since my book on 'Idiocy and Imbecility' appeared. I now desire to bring out a comprehensive treatise exposing my more mature views, gathering up scattered papers, and giving the outcome of the latest scientific inquiry. If I were assured of Two Hundred Subscribers I could, without risk of pecuniary loss, bring out a work on 'The Mental Affections of Children—Idiocy, Imbecility, and Insanity.' The book would contain about 300 pages, octavo, with illustrations, price to subscribers 8s. on delivery.

"I hope that those who make a study of neurology, insanity, and psychology, or take a kindly interest in the training of imbeciles, will help by subscribing for copies, which may be done by filling up a form which will be supplied on application to me.

"WILLIAM W. IRELAND.

"Mavisbush House, Polton, Midlothian."

Mr. H. T. Hamilton.—There are various formulæ which our correspondent will find in books of receipts—e.g., Cooley's Handbook.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (8th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (9th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (11th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Surrey Advertiser, Bristol Mercury, Public Health, Engineer, Weekly Free Press and Aberdeen Herald, Ardrossan and Saltcoats Herald, Reading Mercury, Local Government Chronicle, Leeds Mercury, Midland Free Press, Scottish Guardian, Brighton Gazette, Yorkshire Post, Clifton Chronicle, Hertfordshire Mercury, Liverpool Daily Post, Local Government Journal, Architect, Times of India, Pioneer Mail, Builder, City Press, Scotsman, England, North British Mail, Dundee Advertiser, Manchester Guardian, Glasgow Herald, Devon Gazette, South Wales Daily News, Sheffield Independent, Birmingham Post, Newcastle Leader, Kenilworth Advertiser, Wolverhampton Chronicle, Norwich Mercury, Eastern Morning News, Derby Daily Telegraph, Lancashire Daily Express, Burton Chronicle, Devizes Gazette, Leek News, Cornish Telegraph, New York Herald, Sussex Daily News, Bradford Observer, Hemel Hempstead Gazette, Leicester Post, Hull Daily News, Gillingham Weekly Record, Newark Advertiser, Coventry Times, Northern Ensign, Loughborough Monitor, Jersey Express, Educational Times, Accrington Division Gazette, Le Temps, Weekly Gazette (Montreal), Mid-Ulster Mail, Rangoon Gazette, West Yorkshire Pioneer, Australasian Medical Gazette, Huddersfield Examiner, Ulster Gazette, West Middlesex Herald, La Gaceta (San José), Boletin Judicial (San José), &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Mons. F. Alcan, Paris; Messrs. Allen and Hanburys, Lond.; Mr. H. Aitken, Huntley; Abstainer, Lond.; *African Critic*, Lond., Editor of.

B.—Mr. W. Banks, Bolton; Dr. J. Blumfeld, Lond.; Commander G. Blakeley, R N., Boscombe; Dr. Marcel Baudouin, Paris; Mr. W. Foster Brown, Montreal; Berwick (N.S.) Post Office, Postmaster of; Messrs. Burgoyne, Burbidges, and Co., Lond.; Dr. A. Bouillon, Matane, P.Q., Canada; Blackburn and East Lancashire Infirmary, Secretary of; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs. A. Bishop and Sons, Lond.; Bath Royal United Hospital, Secretary of; Mr. H. Brown, Buckhurst Hill; Mr. C. Birchall, Liverpool; Messrs. Baiss Bros. and Co., Lond.

C.—Dr. J. A. Cutter, New York; J. C., Leeds; Church Sanitary Association, Hon. Secretary of; Dr. J. J. Clarke, Lond.; Mr. J. Cavargna, Birmingham; Dr. J. S. Clayton, Accrington; Mr. F. Clink, Lowestoft; Messrs. A. H. Cox and Co., Brighton; City of Coventry, Town Clerk of; Mr. A. C. Champati, Krishnaggar, India; Mrs. Chapman, Lond.; Comaltana Wine Co, Heckmondwike; Dr. W. H. B. Crockwell, Manchester; Mr. George Culver, Lond.

D.—Messrs. J. Dewar and Sons, Lond.; Devon, Lond.; Derrick Advertising Agency, Lond.; Doctor, Bootle.

E.—Messrs. Eason and Son, Dublin; Esmond Cycle Saddle Co., Lond.

F.—Messrs. Ferris and Co., Bristol; Mr. F. Floyd, Kilkeel; F. J., Lond.; Mr. R. Foskett, Lond.

G.—Dr. Jules Glover, Paris; Mr. W. H. Garner, Clonmel; General Apothecaries Co., Lond.; Golf, Lond.; Mr. R. P. Gemmell, Glasgow; Messrs. Glaisyer and Kemp, Brighton; General Press Cutting Association, Lond.; Glasgow Eye Infirmary, Secretary of; Glasgow Western Infirmary, Secretary of.

H.—Dr. M. C. Hime, Buncrana; Mr. F. S. Hicks, Lond.; Mr. J. Heywood, Manchester; Mr. J. C. R. Husband, Ripon.

I.—Dr. Impey, Cape Town; Income Tax Adjustment Agency, Lond.

K.—Mr. T. H. Knott, Chatham; Kollox Wine Co, Lond.; Messrs. Keith and Co., Edinburgh.

L.—Professor C. Lombroso, Moscow; Mr. J. A. Lillington, Winfrith; Locum, Staple Hill; Messrs. Lee and Nightingale, Liverpool; Dr. J. F. Little, Lond.

M.—Mr. C. J. Maydew, Minster; Meadow Sweet Cheese Co., Birmingham; Medical Society of Victoria, Melbourne, Hon. Secretary of; Male and Female Nurses' Association, Lond., Secretary of; *Midland Counties Herald*, Office of, Birmingham; Mrs. Millard, Hitching; Mrs. G. Mesnard, Sunderland; Manchester Southern Hospital, Secretary of.

N.—Norfolk, Lond.

O.—Mr. J. P. O'Connell, Keighley; Messrs. Orridge and Co., Lond.

P.—Mr. A. D. Pithie, Lymington; Mr. Y. J. Pentland, Edinburgh.

R.—Mr. A. Rollason, Dudley; Messrs. Robertson and Scott, Edinburgh; Messrs. Reynell and Son, Lond.

S.—Dr. C. F. Smith, St. Mary's, Ontario; Sanitas Co., Lond.; Supremus, Lond.; Messrs. Street and Co., Lond.

T.—Dr F. W. Thurnam, Lond.; Dr. A. S. Tayler, Surbiton; Tynemouth Infirmary, North Shields, Secretary of; Tanocca Tablet Co., Newton Longville.

V.—Baroness Von Medem, Florence.

W.—Dr. A. W. Williams, Edinburgh; Dr. Williams, Edinburgh; Dr. J. K. Watson, Lond.; Messrs. Wyckoff, Seamans, and Benedict, Lond.; Mrs. Wm. Whiteley, Lond.; Mr. F. Wilson, Lond.

Y.—Mr. E. W. Young, Eastbourne; Yorkshire, Lond.; Yorkshire College, Leeds, Registrar of.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. J. M. B. Atkinson, Shrewsbury; Dr. W. D. Anderson, Ballachulish; Ancoats Hospital, Manchester, Secretary of; Messrs. Arbuthnot and Co., Lond.; Dr. A. G. Auld, Thurso; A. R. K., Lond.

B.—Mr. R. W. Branthwaite, Rickmansworth; Messrs. Brady and Martin, Newcastle-on-Tyne; Mr. C. R. H. Ball, Cambridge; Barony Parish Council, Glasgow, Clerk of; Miss H. F. Boultbee, Lond.; Birmingham City Asylum, Clerk of; Mr. F. Bagger, Lond.; Mr T. Brayton, Hindley; Dr. R. W. Baxter, Bromley; Dr. D. Beatson, Coldred; Mr. W. Brice, Edinburgh; Breeson, Norwich; Birmingham and Midland Ear and Throat Hospital, Secretary of; Mr. J. P. Balbirnie, Staveley; Mr. W. H. Boger, Fowey; Beta, Lond.; Bank of Africa, Lond.

C.—Messrs. Clarke, Son, and Platt, Lond.; Chemische Fabrik in Halfenberg; Mr. J. Carter, Lond.; Mrs. R Crawley, Lond.; Mr. R. H. Cox, Shanghai; Mr. A. M. Cato, Lond.; Comet, Lond.; Confidence, Lond.

D.—Mr. T. F. Dillon, Rhos; D. P. H., Lond.

E.—Mr. R. Eyton-Jones, Llangefni.

F.—Mr. L. Foster, York; F., Lond.; Mr. P. R. Fort, Horsley.

G.—Messrs. Giles, Schacht, and Co., Clifton; Galen, Lond.; Dr. J. Gillan, Eston; Messrs. W. Gaymer and Son, Attleborough.

H.—Mr. A. H. Heyward, Kenninghall; Hew, Lond.; Mr. J. Hellawell, Manchester; Messrs. Harrison, Ballantyne, and Co., Salford; Mr. H. Hyde, Edinburgh; Messrs. Hooper and Co., Lond.; Mr. F. H. Harris, Great Yarmouth; Messrs. C. J. Hewlett and Son, Lond.; Herbert, Southampton; H., Lond.

I.—Instanter, Lond.; Isis, Lond.; Ipecac, Lond.

J.—Dr. H. B. Jones, Lond.; Dr. C. H. L. Johnston, St. John, N.B.; J. K. G., Lond.; Junior, Lond.; Dr. Jeans, Crowborough Cross; Johnson, Lond.

K.—Dr. L. Kidd, Enniskillen.

L.—Mrs. A. Luxmore, Ramsgate; L. D., Lond.; Locum Tenens, Goole; Lambda, Lond.; Locum, Eastleigh.

M.—Mr. J. W. Moody, Crewe; Mr. S. Mackey, Hodnet; Malto, Ltd., Lond.; Messrs. Moser and Sons, Kendal; Messrs. J. and C. Most, Stafford; Maltine Manufacturing Co., Lond.; Dr. A. W. Miller, Lond.; Medicus, Lond.; Mona, Lond.; Meddyg, Lond.; Medicus, Stamford Hill; Matrix, Lond.

N.—Mr. W. J. Nicholls, Swaythling.

O.—Ozone, Lond.; Omega, Lond.; Dr. E. Oliphant, Buckaburn.

P.—Dr. Pooley, Rochdale; Portland Villa, Leamington Spa.

R.—Mr. R. Roberts, Llanddeusant; Mr. H. B. Roberts, Ludlow; Mr. D. Robertson, Perth; Royal Mineral Water Hospital, Bath, Rita, Lond.; Rus in Urbe, Lond.; Mrs. Rutley, Lond.; Rest, Ilfracombe; Dr. G. Richardson, Rhayadr; Messrs. Read and Co., Bristol; Dr. D. Ross, Inverurie; Dr. R. R. Ross, Huelva, Spain.

S.—Dr. J. G. Smith, Bridgend; Sunderland Borough Asylum, Ryhope, Clerk of; Mr. H. E. Stokes, Lond.; Dr. Smith, Lond.; Senex, Lond.; Mons. H. le Soudier, Paris; Scotia, Lond.; Secretary, Gillingham; Dr. E. W. Selby, Doncaster; Salus, Lond.; Service, Lond.; Statim, Lond.; Secure, Lond.; Surrey Surgeon, Lond.; Swiss Cottage, Lond.; Suburban, Lond.; Mr. D. Sierwright, Strichen.

T.—Mrs. Thompson, Keswick. T. E., Bristol; T. M. S., Lond.; Tower House Retreat, Westgate-on-Sea; Mr. J. Thin, Edinburgh; Tutor, Lond.

U.—Messrs. Uhthoff and Co., Lond.

V.—Veritas, Lond.

W.—Dr. Williamson, Wye; Mr. T. W. Wilson, Cardiff; Dr. R. A. Williams, Ogmore Vale; Welsh Calvinistic Foreign Missionary Society, Liverpool, Secretary of; West Riding, Lond.; Dr. P. W. Williams, Clifton; Mr. S. Wand, Lond.; W., Lond.; Mr. C. E. Winckworth, Shefford; Dr. J. S. Walker, Banff; W., Brentford; Dr. J. H. Waterhouse, Rotherham.

Y.—Yorkshireman, Lond.

Z.—Messrs. A. and M. Zimmerman, Lond.; Z. Z., Lond.

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An Address
ON
ACQUIRED IMMUNITY.

BY G. ARCHDALL REID, M.B.EDIN.

GENTLEMEN,—Against some zymotic diseases—e.g., small-pox and measles—an average individual is able, through illness and recovery, to acquire life-long immunity; against other diseases—e.g., diphtheria and relapsing fever—immunity may be acquired, but is of limited duration only, and in a shorter or longer time the individual, lapsing his acquired powers of making resistance, becomes as liable to infection as ever he was; against a third class of diseases—e.g., tuberculosis and leprosy—immunity can never be acquired; in other werds, experience of such diseases never confers on the sufferer increased powers of making resistance even for a limited time, whence it follows, as a corollary, that such diseases may persist in the individual for a length of time that is only limited by the duration of his life, no matter how long that may be.

Now it is very noteworthy that it is only against diseases the micro-organisms of which produce more or less powerful toxins—as judged by their systemic effects—that immunity can be acquired. When the toxins are feeble or non-existent—e.g., in tuberculosis and leprosy,—when the onset of the disease is unmarked by symptoms of poisoning, when the pathogenic micro-organisms, instead of engaging at long range, enter at the outset into what may be termed an actual physical struggle with the phagocytes, which, undeterred by toxins, at once attack the disease germs, and taking them into their substance attempt to destroy them, then immunity cannot be acquired. Malaria is an apparent exception to this rule, for here the toxins are undoubtedly powerful, yet immunity seemingly can never be acquired; but it seems probable that this disease should rather be regarded as one against which more or less complete immunity is very rapidly acquired and as rapidly lapsed, for thus only can we explain the alternations of extreme illness, during which the parasites are abundant in the blood, with comparative health, during which they are absent or almost absent from it, and when such of them as still survive the assault of the phagocytes probably exist in a comparatively harmless but highly resistant form—e.g., as resting spores. Moreover, the completeness with which immunity may be produced against any disease, though not its duration, seems, generally speaking, in direct proportion to the quickness with which the toxins are produced and to their degree of virulence. The duration of the immunity depends on factors of which we have as yet no knowledge; but it seems more than probable that it is determined by the chemical constitution of the toxins in each disease. It is clear, then, whenever immunity can be acquired against any disease, that it is associated as effect and cause with the fact that in any such disease more or less potent toxins are always present. In a recently published work[1] I endeavoured to show why this must necessarily be so; but recent though the work is, still more recent researches, especially those in snake venom by Professor Calmette and Professor T. R. Fraser, render necessary further developments and emendations of the hypothesis set forth in it—a hypothesis that is founded on Metchnikoff's famous theory of phagocytosis.

Different inquirers have propounded different theories of *rationale* of acquired immunity. It has been supposed (Pasteur) that the pathogenic micro-organisms of each disease against which immunity may be acquired find, every species of them, some special pabulum on which they subsist, but on which no other species subsist, and that when this special pabulum is exhausted they perish from starvation. In diseases against which acquired immunity is usually permanent—e.g., small-pox—this pabulum, it was supposed, is usually not renewed; but when immunity is not permanent—e.g., diphtheria—it is renewed, whereby the individual once more becomes susceptible. Again, it has been supposed (Chauveau) that acquired immunity arises because the waste products of micro-organisms are inimical to their own life, as alcohol is to yeast; and, therefore, when this reaches a certain percentage in the fluids of the host the micro-organisms perish, as yeast perishes when alcohol reaches a certain percentage in a solution of sugar. In diseases against which acquired immunity is permanent it was supposed by this theory that these waste products are permanently bottled up within the host, but that they are eliminated after a time in diseases against which immunity is not permanent. Both these hypotheses are negatived by the fact that the micro-organisms of certain diseases—e.g., anthrax—are able to flourish in the blood serum of animals that have acquired immunity against them. Metchnikoff's theory supposes that certain cells of the body known as phagocytes attack and destroy the micro-organisms when they find entrance, and that when toxins are present these cells acquire powers of resisting or ignoring them; and, further, when immunity is permanent such powers are permanent, but when immunity is only temporary they are after a time lapsed.

It is now beyond dispute that phagocytosis does occur. All that is in dispute is whether it is the sole or even the principal cause of immunity. More recently Behring has propounded the theory, which received very general assent, that acquired immunity is due to the elaboration by the host of specific antitoxic substances which chemically neutralised or antagonised the specific toxins as an acid is neutralised by a base. Lastly, Fraser[2] and others, modifying Behring's theory, have surmised that the antitoxins are constituents of the toxins, or else by the action of the host are produced from them, and, like Behring, Fraser thinks that they chemically neutralise the toxins. The theories of Pasteur, Chauveau, and others which it is needless to mention, had their day, but are now known to be erroneous. Metchnikoff's theory was in vogue for some years, but lately seems to have passed somewhat into the background; whereas Behring's theory, or modification of it, like Fraser's, appears so well to fit many of the ascertained facts, especially those most recently ascertained, that they are now largely accepted. In particular, Behring's theory appears to be in accordance with his own highly important discovery that if the toxins of a pathogenic organism be injected in proper quantities and for a sufficient length of time into the body of one of the higher animals the blood serum of this animal acquires specific antitoxic properties; that is, a given quantity of it tends to neutralise or render harmless given quantities of the toxins of that particular organism, not only when the substances are mixed *in vitro*, or when they are injected separately into the body of another and a susceptible animal, but also during the course of disease, when the specific toxins are produced within the body, and the specific antitoxin alone is injected; while they do not neutralise or render harmless the toxins of any other species of micro-organisms. But apart from the inherent improbability that the animal body is a species of magic bottle, producing at need highly complex chemical substances, the so-called antitoxins, which exactly neutralise or antagonise other highly complex chemical substances, the toxins, the right antitoxin at the right time, as Behring thinks; or that the toxins contain, or are capable of being converted into substances chemically antagonistic to themselves, and to no other toxins, as Fraser thinks, there are certain facts known to us concerning various diseases which prove that neither theory, even if correct, offers a complete explanation of all the facts, while a closer examination furnishes solid grounds for doubting whether either offers a correct explanation of any of them.

For instance, Pasteur killed rabbits suffering from rabies and dried their spinal cords. His treatment for the cure of an infected subject consisted in the injection into him of an emulsion from an old and thoroughly desiccated cord, was continued by injections from fresher and fresher cords, and ended by the injection of an emulsion from a cord that was absolutely fresh and virulent. By these means he enabled many individuals, who already had been infected, and would otherwise have perished, to acquire immunity. It is clear that the immunising agent, the "antitoxin," is here produced in the dead and drying cord, not in the living infected animal from which the cord was taken, since in the latter case such an animal would not perish if left to itself, as it invariably does, and since the immunising substance is procurable from old and dried cords and not from those which

[1] *The Present Evolution of Man.*

[2] Vide Abstract of Lecture, THE LANCET, April 25th, 1896, or a full report in "Nature," April 16th and 23rd, 1896.

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are absolutely fresh. It is therefore not produced by the vital action of the cells, but arises in the absence of all vital action in a dead thing. No doubt chemical changes do occur in a desiccating cord, but it would be strange if these resulted (1) in substances chemically antagonistic to the particular toxins and to no other, or (2) in the conversion of the toxins into substances chemically antagonistic to themselves, or (3) in the destruction of the toxic portion of the poison while a hypothetical antitoxic portion was left unaltered. Again, by submitting the bacilli of anthrax to an abnormal degree of heat (from 42° to 43° C.), Pasteur found that they gradually lost their virulence, and found, moreover, that if sheep were inoculated first with bacilli of little virulence, next with those of greater virulence, and lastly with bacilli of great virulence, the animals could be rendered immune to bacilli of the greatest virulence, and could thereby be protected against the disease. In this case the bacilli are introduced alone or with an insignificant amount of toxin. The "antitoxins," whatever they may be, are elaborated within the sheep, and it is difficult to understand, if they are substances chemically antagonistic to the toxins, why they should be elaborated only when the animal has undergone such treatment and not otherwise. Again, if we pass the virus of small-pox through a series of calves, the organism producing that disease becomes so "attenuated" that if a human being is vaccinated from the calf there results not variola but vaccinia. In this case, as in vaccination against anthrax, only the attenuated micro-organism, with at most an infinitesimal amount of its products, is introduced, yet the result is that the powers of resisting the graver disease are acquired. Here, again, chemical neutralisation cannot possibly play a part. Lastly, the micro-organisms of certain diseases (e.g., malaria) vary greatly in virulence, sometimes being productive of a very grave disease, and at other times of a much milder disorder.[3] To this category belong the bacilli of diphtheria, and it has been found in German hospitals when, owing to the difficulties in the way of efficient nursing during a widespread epidemic, mild cases were admitted among the graver cases that the latter showed a greater tendency to mend than had been observed before. Here, also, the production of chemically antagonistic substances can hardly have had anything to do with the improvement; but we may well believe that in this case also the improvement was due to attenuated bacilli from the milder cases finding their way to the severer, where their weaker toxins furnished stepping stones for the attainment of resisting power against the stronger.

Now these facts and many others, as we shall see, are in full accord with Metchnikoff's theory, but are not at all in accord with Behring's. We may believe that in the drying cord of the hydrophobic rabbit, in the abnormally heated anthrax culture, in the calf infected with the organisms of small-pox, in the mild diphtheritic cases, the pathogenic organisms are so altered that they produce enfeebled toxins, and that by these enfeebled toxins the cells (probably the phagocytes) of the infected animal are so inured, so educated, that they are able to resist the stronger toxins of the normal microbes and to destroy the pathogenic organisms producing them; but it is at the least a gratuitous assumption to suppose that micro-organisms, which have been attenuated or constitutionally modified by subjection to a changed environment, produce secretions chemically antagonistic to those which they produce in their normal surroundings, or, on the other hand, as the only alternative, that the infected animal produces them the more readily for previous experience of these attenuated toxins. The process whereby the infected animal acquires immunity, whereby it becomes so modified that it is able with comparative ease to resist the effects of toxins which before it was incapable of resisting, or could have resisted only with difficulty, is after all no miracle, but only a particular manifestation of that power of acquiring a multitude of fit traits by means of which high animal organisms place themselves in harmony with their enormously complex environment. I have dealt at length with this interesting question of acquired traits elsewhere.[4] It is needless to repeat arguments which, as far as I am aware, have received general assent. It suffices to remark that while such a phenomenon as the production by pathogenic micro-organisms in a changed environment of toxins which are chemically antagonistic to those which they normally produce, or the production by an infected animal of antitoxic substances chemically antagonistic to the toxins of the microbes by which it is assailed, has no parallel in nature, that process of adaptation by means of which, as I here suppose,[5] the phagocytes or the other cells concerned are gradually so modified constitutionally that they are able to resist microbic poisons which before they were unable to resist has innumerable parallels. Thus, for instance, if the mucous membrane or the external skin be subjected to intermittent heat or friction or the action of chemical irritants, the cells of it become so modified, both as regards quality and numbers, that they become capable of resisting degrees of heat and friction, &c., which would otherwise injure or destroy them. Thus, also, muscle cells, under the influence of intermittent exercise, acquire additional powers of resisting fatigue. But the closest parallels are furnished by the increased powers of resistance which man is able to acquire against various poisons—for instance, arsenic, opium, and nicotine (the last two being to all intents and purposes toxins, since they protect the organisms producing them against other organisms to which these are liable to fall a prey). Here again we may well believe that the cells concerned (nerve cells, &c.) become, through experience of these poisons, so constitutionally modified that at length they are better able to resist them when presented in larger and more concentrated doses than before they were able to resist them when presented in weaker doses. I suppose that no one will maintain that increased resistance to opium, arsenic, or nicotine results from the manufacture of a substance antitoxic to these poisons. Yet it would be as reasonable as to suppose that immunity from rabies, anthrax, or small-pox results from similar causes. I think, then, we may fairly conclude that (in the cases cited at least, and probably, as we shall see, in all others) the essential feature of acquired immunity (or increased powers of resistance) is an habituation of the cells concerned to the toxin, as a result of which their phagocytes are able to destroy the pathogenic micro-organisms producing it; and, further, in cases where the toxins are very poisonous, that this habituation, this power of ignoring the toxins and destroying the microbes, is more easily achieved (just as other acquired traits are more easily achieved) gradually, by a series of efforts than at once by a single effort, so that in such an extreme case as rabies, when the toxins are so virulent that normally reaction to them is impossible, immunity may be obtained by subjecting the animal first to weaker and then to stronger toxins, till at last it is able to resist even the strongest toxins, and so escape an otherwise inevitable death.

The principal objections to this view have origin in Behring's discoveries, and from them have resulted his theories and such modifications of them as Fraser's. It was found by him that if toxins—e.g., those of diphtheria—be injected into a living animal—e.g., a horse—beginning with small non-lethal doses and proceeding at intervals to stronger and stronger lethal doses, that the animal experimented on not only acquires immunity against the disease and powers of resisting enormous doses of the toxins, but also that its blood serum (1) when injected into an animal susceptible to the disease tends to render it resistant, just as progressive doses of toxin would (2) when injected into an animal already suffering from the disease tend to bring about a cure, and (3) when injected before or at the same time, or shortly after the toxin, or when mixed with the toxin *in vitro* previously to injection, tends apparently to neutralise or antagonise the toxin; so that, especially in the last case,[6] doses of the toxin much larger than those which are ordinarily lethal can be borne with impunity. Moreover, Fraser found that if snake venom be swallowed, as it may be, in enormous quantities without injury, that then also the animal experimented on acquires immunity and its serum antitoxic properties. In all these instances it was found that the acquired powers are specific—that is, experience of the toxins of any disease confers immunity against that disease alone and not against any other, while the resulting serum also confers immunity against, has curative powers against, and antagonises the toxins of that disease and no other.

Metchnikoff's theory furnishes an explanation of the increased powers of resistance to any toxin which experience of it confers on the serum producer. In this case, as in disease, we may suppose that the cells concerned become

[3] Vide Present Evolution of Man, pp. 239-40.
[4] Ibid., pp. 114-19.
[5] A view first set forth by Tizzoni and Cattani.
[6] At least, so Fraser alleges, though his statement appears now to be disputed.

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habituated to the toxins, hence the high degree of resistance. But the theory as set forth above is totally inadequate to account for the rest of the phenomena just detailed. Presumably the antitoxic serum contains toxins in solution. It follows, then, that this serum, instead of conferring immunity or antagonising the toxins, should add to the effect of them by increasing the dose. The fact, however, is the reverse, for it clearly does confer immunity and apparently also, judging from the experiments *in vitro*, it does antagonise the toxins. Except, then, these difficulties are surmounted we must abandon the theory which supposes that increased powers of resistance are due to increased powers of toleration.

The key to the mystery is probably furnished by Fraser's experiments. We have seen that snake poison may be swallowed in enormous quantities, when, so far from causing death, it actually confers some degree of immunity on the animal swallowing it and some degree of immunising power on his serum. Fraser, indeed, conjectured "that the venom while in the stomach had been subjected to a process of analysis by which the constituents which are poisonous had failed to be absorbed into the blood or had been destroyed in the stomach, while the constituent or constituents which are anti-venomous, or rather antidotal, had passed into the blood in sufficient quantity to protect the animals against otherwise lethal administrations of the venom."[7] But this conjecture seems very improbable and far-fetched. On biological grounds it is highly improbable, to say the least, that snake venom contains a substance antidotal to itself—i.e., that the animal's weapon of offence and defence has combined with it a substance which enfeebles it. Again, it is not in accordance with known facts that the alimentary canal possesses the power of intelligent choice which Professor Fraser attributes to it, by virtue of which it accepts the good and rejects the evil. The function of the canal is digestion; and surely, since animals are not poisoned by huge doses of swallowed venom, we are entitled to assume that the venom, like other proteids, undergoes digestion; and, further, since the swallowing of venom confers on the animal increased powers of resisting the injected poison, and on its serum antitoxic properties that these effects are due to a reaction, induced by the altered, the attenuated, the digested toxins, of a similar nature to that induced by other altered and attenuated toxins—e.g., those of rabies, anthrax, or small-pox. If this be admitted, as I think it must, then we arrive at the conclusion, of great importance in our inquiry, that here the venom is attenuated by ferments secreted by cells lining the alimentary tract, not by the cells themselves—that is, by ferments which digest the toxins extra-cellularly, but are innocuous to the cells themselves.

Now, phagocytosis itself, whether in low unicellular or high multicellular organisms, is nothing other than a process of digestion—i.e., the cells destroy the micro-organisms which they have taken up, not by mechanical means, by pressure, or by tearing, but, as cannot be doubted, by digestive substances which they secrete, and it has been further proved that they are capable of performing the digestive act, not only intracellularly, but like the stomach cells or the cells of the pancreas and the salivary glands extracellularly also. For instance, Metchnikoff found that when the gregarines which infest the male genital organs of the earthworm become passive previously to spore formation they are attacked by wandering cells which form a thick plasmodium round them. The parasite on its part forms a thick cyst-wall, but nevertheless frequently undergoes degeneration and death. Kanthack and Hardy found that when anthrax bacilli are introduced into frog's blood "the coarsely granular oxyphile cells act as unicellular glands, discharging or secreting their granules, and these granules dissolving appear to exert a deleterious action on the bacilli, in consequence of which the hyaline cells are now capable of ingesting them."[8] Other inquirers have made observations of a like tendency. And it has also been found that intruding micro-organisms perish when at a distance from the cells as well as when they are ingested, or when the cells are applied closely to them. Thus Nuttal, on introducing a fine cannula containing attenuated anthrax bacilli into a rabbit's ear, found that phagocytosis reached its maximum after twenty-two hours, but that even then half the bacilli lay free and not ingested by the phagocytes, but exhibited nevertheless as much signs of degeneration as those which had been ingested. Thus also it has been found that during recovery from diphtheria and pneumonia numbers of the pathogenic microbes perish without direct conflict with the cells. It is not too much to assume that the same agent causes the death of free microbes as that which causes the death of those which are actually ingested or those to which the phagocytes are directly applied. In other words, we have good reasons to believe that they perish by reason of a digestive substance secreted by the cells and set free into the fluids of the body, just as pepsin is set free in the fluids of the stomach. Direct evidence of the presence of this digestive substance was furnished by Leber, who placed pieces of copper in the anterior chamber of the eye, producing a purulent collection devoid of micro-organisms, the exudate from which was capable of digesting proteid matter. This, then, since it is highly improbable that there is one substance which destroys the bacilli at close quarters and another which destroys them at long range, is probably the germicidal substance found in the plasma and the serum of immune animals. But of course the digestive substance must be in greater concentration within the cells producing it and in their immediate neighbourhood than at a distance, and therefore it must act more effectively in the former than in the latter case. On the other hand, the toxins produced by the microbes must also be in greater concentration, and must act more effectively on objects in their immediate neighbourhood, and especially on those with which they are in actual contact, for which reason, doubtless, it is that micro-organisms which do not produce toxins, or produce only feeble toxins—e.g., those of leprosy and tuberculosis—are at once attacked and taken up by the phagocytes, while micro-organisms which produce strong toxins—e.g., those of anthrax and diphtheria—are not taken up till a later period, when the phagocytes have become habituated and resistant to the toxins, or even are not taken up at all, but are engaged only at long range. It is probable that the digestive substance produced by the cells is normally present in them, but that its secretion is greatly accelerated by the presence of certain foreign bodies in the blood—e.g., bacteria and their toxins.

But besides the germicidal substance there is irrefragible evidence proving that in the blood of an infected but resistant animal, or in that of a resistant animal into which toxins have been injected, there is present another and probably a distinct substance[9] which destroys or renders inert the toxins; and, reasoning from analogy, this also in all probability is a digestive substance. The commonly accepted theory is that it is a substance which chemically antagonises the toxins; but such a view commits us, as we have seen, to the belief that all the separate toxins of the separate diseases are separately antagonised by different antitoxins—a belief hardly reasonable when we consider the multitude of the diseases and the complex chemical nature of their toxins. On the other hand, it is by no means incredible that a single digestive body is capable of digesting all these "toxalbumins" just as pepsine is capable of digesting a variety of proteid substances, or even that there are two or three different digestive bodies which severally digest the toxic albumoses, globulins, peptones, &c., which the different species of pathogenic micro-organisms produce. Moreover, this antitoxic substance is very rapidly produced, since it has been found in blood drawn from a rabbit's ear immediately after the introduction of the toxin, this seems still further to confirm the view that it is a digestive body; for while appropriate stimulation (that from a toxin) might well cause its rapid secretion by cells that manifestly do perform digestive functions and otherwise closely resemble their remote amœboid ancestors, it is unlikely, not to say impossible, that these cells can instantly elaborate the right chemically antagonistic substance when they are assailed by this or that toxin, especially when the toxin is produced by a microbe of which their ancestry can have had no experience, and against which, therefore, no specific powers can have been evolved. I think we may fairly conclude, then, that the destruction or attenuation of toxins which occur in the body of a resistant animal is due to their digestion by an enzyme secreted by

[7] *Vide* Nature, April 23rd, 1896.

[8] Adami: A System of Medicine, by Many Writers, p. 91.

[9] This would appear from Klein's experiments. That observer found that if pure toxins were injected in sufficient quantities into a horse the serum acquired a high antitoxic but comparatively low germicidal power, whereas if bacilli were injected the reverse occurred. Fränkel claims to have separated the antitoxic from the immunising substance by heat.

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cells that have that special function, and it follows, if this view be true, that when a resistant animal is recovering from a disease in which toxins are abundant, or when repeated doses of toxins are injected into a resistant animal, there must be present in his blood and in his serum when drawn off, firstly, two or more digestive substances, and, secondly, *toxins in all stages of digestion*.

Now we saw when considering Pasteur's experiments that powers of resistance against virulent toxins and the micro-organisms producing them—i.e., against the disease—are much more readily attained by a series of efforts than by a single effort; in other words, immunity is much more readily achieved if the cells concerned have presented to them the toxins in a graduated scale, beginning with toxins of a low degree of virulence and ending with those of a high degree of virulence, in this resembling other kinds of cells when concerned with other deleterious influences—for instance, the cells concerned when nicotine is taken into the system, which are able through habituation to tolerate without injury enormously increased doses. But while there is this general resemblance in the reactions induced by graduated toxins and graduated deleterious influences of other kinds there is a very important difference—viz., that in the presence of large doses of nicotine, arsenic, opium, &c., smaller doses add to the effect of the larger, whereas in the presence of virulent toxins, less virulent toxins do not add to the effect of the former, but, on the contrary, often induce a protective reaction against them. This, for example, we find is the case when attenuated injections from a series of drying infected cords are made into an animal suffering from rabies, in which disease there is present a microbe that produces toxins of such extreme virulence that normally no reaction is possible against them any more than against fatal doses of arsenic, opium, &c., so that the infected animal invariably perishes except the protective injections be made. The explanation of this remarkable phenomenon is probably to be found in the fact that while larger and smaller doses of arsenic, opium, nicotine, &c., are but degrees of the same thing—are but the same thing in different amounts and degrees of concentration—stronger and weaker toxins are not the same thing in different amounts and degrees of concentration, but strong toxins differ somewhat in kind from the weak toxins of the same disease, are probably of a somewhat different chemical constitution, and therefore while moderate heat, friction, fatigue, or doses of nicotine, &c., in the presence of greater heat, friction, fatigue, or doses of nicotine, &c., cannot inure the cells concerned to the action of the latter, the weaker toxin can sometimes, even in the presence of the stronger when these are not too concentrated, inure the cells concerned to the action of the latter, as in the case just cited of an individual already infected with rabies when attenuated toxins are introduced from a slowly drying cord in an early stage of the disease. At a later stage, when the strong toxins are more concentrated, it is useless to inject the weaker, for the poisoned cells are then unable to react and the animal perishes. This view is confirmed by a study of other diseases. In diphtheria, for instance, the pathogenic micro-organisms are limited to a small area of the surface; the toxins are, therefore, in the earlier stages at least, very dilute in the blood, and as a consequence it is often possible to introduce attenuated toxins with advantage, whereas in small-pox, in which the micro-organisms presumably pervade the whole body and the toxins are from an early period concentrated, it is useless to vaccinate after the first symptoms of the disease have appeared.

Apparently, then, acquired immunity consists essentially of an acquired power of tolerance, by virtue of which the cells concerned are able to perform their functions in spite of the presence of toxins. In the case of the cells specially concerned in zymotic diseases—i.e., those concerned in the destruction and removal of the pathogenic micro-organisms and their toxins—this acquired power enables them the more readily to produce the two or more digestive bodies inimical to the ferments and their toxins. But if an animal which has not acquired immunity (in the case of diseases against which permanent immunity may be acquired), or which has lapsed its acquired immunity (in the case of diseases against which permanent immunity cannot be acquired), be infected, then the cells concerned being poisoned may not react at all—i.e., may fail to produce their digestive bodies, when the proliferation of the invading microbes and the elaboration of their toxins will continue unchecked, and the animal will perish; on the other hand, in an animal which has not acquired immunity, or which has lapsed its immunity, the inborn powers of resistance of the cells may be, and is, as regards most animals in relation to most diseases, so great that they are able to produce the digestive bodies to some extent from the first in spite of the presence of the toxins, and therefore most animals are capable of recovering from most of the diseases to which they are liable. Digestion—i.e., attenuation—of the toxins then occurs, till in time there are present in the animal's blood toxins in all stages of digestion, from virulent toxins newly produced, and hardly affected by the enzymes, to toxins long produced, and so enfeebled as scarcely to deserve the name; and, as reasoning by analogy we may suppose, *up that graduated scale it is probable the cells of the animal react till complete immunity is attained*, just as the cells of an animal affected by rabies and anthrax react when treated to the less finely graduated toxins provided by Pasteur's treatment.

Moreover, if the blood serum of such an animal be removed and injected into a susceptible subject, either one not yet infected, or, if infected, one the cells of which are not poisoned beyond the power of reaction, this second animal also will thereby be provided with a means of achieving immunity. If he be not infected the altered toxins will provide him with a scale of graduated poisons up which his cells may react towards complete immunity, the completeness of the immunity acquired by him being proportionate to the virulence of the toxins at the more poisonous or least digested end of the scale. If he be already infected, not only will the injection provide him with a scale of graduated toxins, but it will also provide him with digestive bodies wherewith to attenuate the toxins which are then being elaborated by the micro-organisms infecting him. But of course the blood serum of an animal which has been infected and is recovering from the disease will be infinitely inferior in curative and immunising power to the serum of an animal into which the large quantities of toxin (elaborated in an artificial medium) have been injected in oft-repeated doses extending over a length of time, since in the latter case the quantity of attenuated toxins and digestive bodies will naturally be much greater than in the former. It further follows that, if we mix toxins with fresh antitoxic serum *in vitro* at a suitable temperature and for a sufficient length of time, the digestive bodies present in the latter will attenuate the former, and, therefore, that much larger doses of toxins can be administered without death in this way to a susceptible animal than in any other. Professor Fraser contends that, since antitoxic serum when mixed with toxins *in vitro* "neutralises" the latter more effectually after twenty minutes' contact than after contacts of five minutes, proof is thereby supplied or a probability raised that such a neutralisation is a chemical one in the sense meant when we say that an acid is neutralised by a base; but surely when we remember the comparative rapidity of chemical and the comparative slowness of physiological reaction the probability is that we have here to deal with a digestive process rather than a mere chemical combination, a probability immensely strengthened by the considerations already dwelt upon that it is hardly likely that the animal body is a magic bottle producing at need the right toxins on the right occasion.

Various other considerations lend strength to the belief that acquired immunity against any disease depends essentially on a gradual habituation to its toxins, or an increased power of physiological resistance, as a result of which cells are enabled to perform their functions in spite of the presence of the toxins (which indeed do then but stimulate the cells specially concerned—i.e., those which produce the digestive bodies), not on the production of chemically antagonistic substances; and further that the persistence of immunity depends on the persistence of this power, not on the continued persistence within the system of antidotal substances, whether chemical (in the narrow sense) or digestive. For instance, it was found by Roux and Vaillard that, if too large or too frequent doses of tetanus toxin are injected into the horse, the antitoxic powers of the serum disappear for a time, and the serum actually becomes toxic; yet the horse manifests no symptoms of tetanus, as it would did immunity depend on the production of chemically antagonistic substances and not on a habituation to the poison. In this case it is evident that the cells of the horse are unable to produce digestive bodies fast enough to quickly attenuate the excessive quantity of toxin. Again it was found by Buchner that a mixture of toxin and

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antitoxin—e.g., that of tetanus—in a proportion harmless to an animal of one susceptible species—e.g., a mouse—is still toxic to a weaker animal of the same species or to an animal of a more susceptible species—e.g., a guinea-pig—which could not be the case did the antitoxin contain substances which neutralised the toxin; whereas, if immunity depends immediately on a physiological, not on a chemical, reaction, even an attenuated toxin may be fatal to a very susceptible animal; an inference corroborated by the fact that a non-susceptible animal may be rendered susceptible by influences—e.g., cold or starvation—which lower the vitality.

But, perhaps, the most beautiful and convincing proof is supplied by the study of syphilis, a disease against which immunity may be acquired, but which, owing to the feebleness of the toxins (in this approaching tuberculosis and leprosy), yet persists long enough in a woman to cover the entire period of pregnancy. Normally, as we know, there is no connexion between the placental blood-vessels of a mother and those of her fœtus. But they are in close apposition, and are very thin-walled, so that while solids (e.g., the microbes of disease) are normally stopped, fluids with gases and solids (e.g., toxins) in solutions pass from one to the other by diffusion. Under abnormal circumstances (e.g., during disease) the continuity of the vessel-walls may be broken, and then solids as well as fluids pass from one to the other. It can hardly be doubted that this is what commonly happens in syphilis, and therefore a syphilitic mother very generally bears a syphilitic child. But when in rare cases the continuity of the vessel-walls is not broken, when a syphilitic mother bears a healthy child, or when, as more commonly happens, the healthy partner of a syphilitic father is delivered of an infected child, then is seen a most instructive phenomenon—the healthy individual is seen to be immune to the disease, for such an infant does not acquire the disease when suckled by his infected mother, nor, on the other hand, as Colles proved, does a healthy mother contract the disease when suckling her infected child, though other women do. Here during gestation toxins, passing from the infected to the non-infected individual, inure the cells of the latter to resistance, and as a result they destroy the pathogenic micro-organisms, if at any future time, in the act of sucking or of giving suck, they find entrance. But the children born of a mother who has recovered from syphilis, and who is immune, are not themselves immune, as are the healthy children born to her during her illness. Whence it follows that her continued immunity is not due to the presence of chemical antidotes or digestive bodies; for if it were her offspring would continue to be born immune, just as they did (if uninfected) when she was ill. Her continued immunity is plainly due to the fact that her cells do not lapse the training they received when she was suffering from the disease.

In connexion with syphilis it would be interesting to seek the explanation of some instructive phenomena which often occur in the inherited form of that disease. If a man contracts syphilis then, after a certain number of years, of which the limit has been set at five, he ceases as a rule to be infective to a woman, but for very long after he may have offspring who exhibit all the signs of very virulent infection. If a woman contracts syphilis, then, like a man, she also ceases after a limited time to be infective to another adult, and not only this, but, unlike the man, she ceases also to be infective to her children (Diday's law of decrease). Speaking only in general terms and without regard to the numerous exceptions, which doubtless depend on differences in resisting power in the offspring, the children earliest born to her after infection suffer in the absence of treatment most severely from the disease, those later born less severely, till at length, if she continue to bear children, the latest born do not suffer at all. Her disease tends at first to result in abortions and miscarriages, then in the birth at term of one or more dead children, then in one or more children who survive their birth for a space, next in children who survive, but show signs of disease, and, lastly, in children who show no signs of infection. If such a woman mate with an infected man this law still holds, for which reason the children of a married couple who have the disease, as a rule, even in the absence of treatment, show less and less signs of it, whereas a woman not previously infected may bear grievously infected children to a father who has long ceased to exhibit signs of the disease. Moreover, if a non-infected mother bear infected children, who live, to a diseased father, her children also show less and less signs of it, until at length they show no signs at all.

If I am right in the foregoing part of this paper, acquired immunity to syphilis, like acquired immunity to other zymotic diseases, must depend on an acquired power of tolerating the toxins, the cells concerned (especially those concerned in the elaboration of the digestive bodies) being able to perform their functions in spite of the presence of the toxins, in consequence of which the micro-organisms must gradually be destroyed, or if some of them survive they must survive in the unfavourable environment in a highly resistant, and, therefore, judging by analogy, a very harmless form—e.g., as resting spores. Now we have evidence that pathogenic micro-organisms do not induce disease in susceptible animals when the number in which they find entrance sinks below a certain minimum, which minimum doubtless varies with the species of the invading microbes, with the species of the animal attacked, and even with each individual of the latter. Thus it has been found that to kill a rabbit by artificial infection at least 16,000 virulent anthrax bacilli must be introduced, a lesser number, if introduced, perishing and the rabbit acquiring greater resisting powers (Lubarsch). Again 1 c.c. of a fresh broth culture of bacillus pyocyaneus will infallibly cause fatal disease in a rabbit, which, however, will survive and acquire increased resisting power from the injection of a quarter of that quantity. But immature animals are less resistant than adult animals of the same species;[10] for instance, young guinea-pigs succumb more easily to attenuated anthrax bacilli than do older animals. Presumably, therefore, young animals are capable of being infected by a smaller quantity of microbes than adults, and for this reason it probably is that a father may infect his offspring with syphilis at a time when few microbes survive in him, and long after he has ceased to be infective to a woman; and this readier infectibility of the young probably suffices also to explain the fact that while it is rare for a diseased woman to bear a non-infected child, it is much more common for a diseased child to be born of a healthy mother. Moreover, both the ovum and the spermatozoon are unicellular animals; in them there is no differentiation of tissue for the performance of different functions; in them, therefore, are no cells which can react to the toxins, and therefore neither ovum nor spermatozoon has the power of resisting the microbes, or in other words of acquiring immunity. This power, like the power of acquiring all other acquirable traits, arises later in their cell-descendants when these latter have undergone morphological and physiological specialisation and differentiation into skin, muscle, gland, nerve, phagocytic and other cells. Hence it follows that a man can never confer immunity on his children, for though his spermatozoa be bathed in toxins they cannot react, since the necessary machinery is wanting. So, also, a woman who has recovered from syphilis or any other disease cannot, then, confer immunity on her non-infected children, for though during her illness her ova are bathed in toxins, yet in them also the machinery for reaction is wanting. But if a woman become pregnant during her illness, then in her embryo (that mass of the adherent cell-descendents of her ovum) there are present differentiated and specialised cells, which, like those of her own body, have the power of acquiring various traits, among others that of reacting to the toxins of this or that disease. And, therefore, while a man can never confer immunity on his children, or a woman on children born to her before infection or after recovery, a woman can confer immunity on offspring of which she is pregnant during her illness, for in the latter case the necessary machinery for acquiring immunity is present—i.e., the toxins passing from the mother to the embryo may induce a protective reaction in the cells of the latter, especially in those concerned in the elaboration of the digestive bodies.

But syphilis is a disease of long duration; in other words, immunity against it is only very slowly acquired—that is, the cells only very slowly acquire the power of tolerating the toxins, and of producing the digestive bodies undeterred by their presence. It follows that if a woman become pregnant during the earlier stages of her illness, even if the microbes be stopped in the placenta and the child is not affected, there will pass from her to the embryo toxins which are little or not at all attenuated, and therefore since young individuals are in general less capable of resisting zymotic diseases than the older members of their species the embryo perishes, and the mother aborts or miscarries. But as her

[10] For the biological explanation of this see The Present Evolution of Man, p. 269.

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disease progresses the mother gradually acquires more resisting power; her cells become more and more tolerant of the toxins, and therefore more and more capable of producing digestive substances which attenuate and destroy the toxins, and therefore up to the time of her recovery she becomes more and more capable of conferring immunity on her offspring, since as time lapses there pass from her to the child toxins in greater and greater states of attenuation. Then, even if the child be infected (as usually occurs), the digestive substances he receives through the placenta from the mother tend to destroy the micro-organisms and attenuate the toxins produced in him. At length, before recovery and immunity are achieved, a time arrives, the advent of which varies in different individuals, when the digestive substances produced in the infected mother are of such potency or in such abundance that the toxins are so much attenuated as not to destroy the child, who is then born alive, and he may be of a fat and healthy appearance.[11] In him are present digestive substances, attenuated toxins, and the micro-organisms of the disease. Frequently in such a child the disease reasserts itself, the child begins to pine and ere long perishes. The only feasible explanation of this phenomenon appears to be the following: that the digestive bodies from the mother attenuate the toxins sufficiently to protect the child from injury, but not sufficiently to bring about in the young individual a protective reaction, which is then as impossible to him as a protective reaction to the non-attenuated toxins of rabies is to an adult individual. Therefore, after birth, when the digestive bodies derived from the mother are exhausted, the toxins produced by the microbes within the child, and not now altered, cause his death. But in a still later stage in the mother's disease the toxins are so much attenuated that the cells of the child are able to react, and, therefore, though after birth signs of the disease may be seen, he recovers and is afterwards immune. Still later, when the mother has recovered, when her cells have acquired the power of resisting the toxins and she is immune, the child can acquire from her neither the disease nor the immunity, since toxins, attenuated and otherwise, no longer pass from the one to the other.[12]

On the other hand, if a healthy mother bear diseased children to an infected father we should, if our theory be correct, expect to find (and actually we do find) that each succeeding infant exhibits less and less signs of the disease, and this notwithstanding the fact, other things being equal, that the last child infected by a diseased father tends, when born to a different woman who has not previously suffered from the disease or borne infected children, to have the complaint as deeply as the first; in other words, a woman who has once borne an infected child tends to endow succeeding infected children with greater and greater powers of resistance, the greater powers of resistance being clearly derived from her and not from the father, since other women who have neither themselves been infected nor have borne infected children may bear deeply diseased children to the same father. Here in the case of the former woman toxins from each infected child pass into the circulation of the non-infected mother, inducing a more and more perfect reaction in each succeeding pregnancy; and therefore in each succeeding pregnancy there are elaborated by her more and more digestive bodies, which at length attenuate the toxins so thoroughly that the cells of the child are able to react and the child survives, instead of perishing in intra- or extra-uterine life like its predecessors. In this case toxins pass from the child to the mother, while from the mother to the child pass attenuated toxins and digestive substances.

It follows as a corollary that, if a mother who has acquired immunity either by personal disease or by bearing infected children become pregnant of an infected embryo, she will tend to confer immunity on the embryo, since the elaboration of toxins in the latter will tend to call forth the elaboration of digestive bodies in her; but if the embryo be not infected then immunity will not be conferred, for in such a case no toxins from the child will call forth the digestive bodies from the mother, and these, as we have seen, do not persist in the body in the absence of appropriate stimulation—i.e., in the absence of toxins—but after a space disappear, leaving behind only the power of tolerating the toxins, only the power of readily producing digestive bodies when stimulated by the toxins.

[11] Be it remembered that here I write in general terms only. As is well known, living children may be born to a woman in all stages of her disease, but abortions and miscarriages are most frequent during the earlier stages, and of such children as are born alive the vast majority perish. It is very significant, moreover, that hand-fed syphilitic children are more liable than those who are breast-fed to marasmus (Coutts). It is known that "antitoxins" are secreted in the milk and other secretions, and Ehrlich actually believes that the hereditary transmission of acquired immunity is due to the presence of large amounts of antitoxins in the milk.

[12] I cannot set forth positive evidence proving that the children born of a mother recovered from syphilis and immune to it are not themselves immune, for I am not aware that any observations bearing on the subject have been published. Nevertheless, reasoning from the analogy of other diseases, we may be sure that they are so, for it is a matter of common knowledge that the children of mothers recovered from and immune to pertussis, measles, scarlet fever, small-pox, typhoid fever, typhus fever, &c., are not immune; on the other hand, the children of mothers who during the pregnancy have suffered from small-pox have been found to be immune; and Chauveau claims to have proved that the offspring of sheep suffering from anthrax have, under similar circumstances, exhibited immunity against that disease. I myself hope soon to publish some observations proving that if a mother be vaccinated during the later months of pregnancy immunity against varicella, and therefore against variola, is thereby conferred on her infant. If I am right as to this—and I cannot doubt that I am—the matter may be of some practical importance, since a single vaccination would then protect two individuals, since a strong healthy woman is better fitted to undergo the illness than a delicate young infant, and since many mothers would prefer to take their child's trouble on their own shoulders. The usefulness of such vaccination would, however, be limited, since it would be available in most instances for one pregnancy only, and in many cases not even for that. I should like to add that I would be extremely grateful to any readers if they would, as opportunity offered, perform this experiment and let me know the result.

LITHOLAPAXY IN THE CIVIL HOSPITAL, HYDERABAD, SIND.

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I SUBMIT herewith a list of 204 further cases of litholapaxy performed by me at Hyderabad, making with the 200 cases published in THE LANCET of Oct. 10th, 1896, a total of 404 cases—385 urethral and 19 perineal—between Feb. 1st, 1896, and Feb. 23rd, 1897. I am well aware that there is nothing very unusual in these figures, large as they may appear to British surgeons, and I publish them, firstly, because I believe that enough is not known at home of the nature and amount of surgical work in India, and, secondly, because I understand that the operation of litholapaxy is, after all that has been said and done, still to a large extent under trial in the mother country. I have purposely given somewhat fuller remarks in the list now published as compared with those made in my former communication, and these leave but little for me to add.

It will be seen that I have comparatively seldom had recourse to Keith's operation, not that my appreciation of its value has in any way lessened, but that, having procured for myself one of Weiss's No. 5 fenestrated lithotrites—Keegan's pattern—I have since then only found one case in which the infantile urethra was too small to admit of the performance of the ordinary operation therewith. In such a case the choice of operation, I take it, will be between suprapubic lithotomy and Keith's operation the stone be at all large, and I believe that when, or as soon as, the latter operation is known it will be the one adopted in most, if not in all, cases of this kind. In the case of a small stone Keith's operation, if performed without a hitch, leaves the urethra after operation practically intact (see remark to Case 401 in the accompanying table). Hence I believe that when either (1) no sufficiently large instrument or (2) no instrument for crushing purposes can be introduced into the bladder Keith's operation is indicated; while at the same time I opine that a surgeon armed with Weiss's No. 5 fenestrated lithotrite, made on Keegan's pattern, will but seldom meet with such an instance among his infantile cases.

The last case in the list, No. 404, is a good instance of what may be done with large instruments in the case of boys where the calculus is large enough and hard enough to render an attempt at crushing with a lithotrite that would pass per urethram one fraught with danger to the patient, the instrument, or both. I have given at the foot of the table the summary of results, &c., on the same lines as

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A SECOND SERIES OF LITHOLAPAXY OPERATIONS (204) PERFORMED IN THE CIVIL HOSPITAL, HYDERABAD, SIND.

Number.	Caste.	Sex.	Age.	Date of operation.	Size of lithotrite.	Size of evacuating catheter.	Number of times introduced.	Duration of operation in minutes.	Weight of stone.	Days in hospital.	Result.	Remarks.
				1896.								
201.	Mus.	M.	3	July 13th	8	8	2	15	12 gr.	1	R.	Evacuation delayed by lodgment of fragment in cannula.
202.	Mus.	M.	4	,, 14th	8	8	2	15	1 dr. 20 gr.	1	R.	This calculus should not have necessitated a second introduction of lithotrite.
203.	Mus.	M.	17	,, 14th	12	16	1	15	1 dr. 40 gr.	2	R.	An easy operation; succeeded by priapism, almost continuous for 36 hours.
204.	Mus.	M.	9	,, 15th	8	8	1	11	2 dr.	2	R.	Micturition difficult for 12 hours after operation.
205.	Mus.	M.	48	,, 15th	12	16	1	10	1 dr. 40 gr.	2	R.	—
206.	Mus.	M.	5	,, 15th	8	8	1	9	2 dr.	1	R.	Operation easy and rapid.
207.	Mus.	M.	4	,, 16th	8	8	2	9	40 gr.	1	R.	Ditto.
208.	Mus.	M.	48	,, 16th	16	16	4	82	3 oz. 2 dr.	5	R.	A largish stone in a very emaciated subject. Some cystitis.
209.	Hindu	M.	5	,, 17th	8	8	2	9	1 dr. 50 gr.	2	R.	A single fragment escaped detection, but necessitated second introduction of lithotrite.
210.	Mus.	M.	40	,, 17th	12	16	2	11	3 dr. 30 gr.	2	.	—
211.	Hindu	M.	3	,, 17th	6	8	1	1	10 gr.	1	R.	Soft stone crushed by one turn of lithotrite and evacuated instanter.
212.	Mus.	M.	30	,, 17th	12	16	1	3	1 dr. 30 gr.	1	R.	Operation easy and rapid.
213.	Mus.	M.	3	,, 22nd	6	8	1	7	13 gr.	1	R.	Evacuation at first unsatisfactory.
214.	Mus.	M.	3	,, 23rd	6	8	1	5	13 gr.	1	R.	—
215.	Hindu	M.	4	,, 23rd	6	8	1	6	10 gr.	1	R.	—
216.	Mus.	M.	7	,, 24th	8	12	2	14	1 dr. 50 gr.	1	R.	Evacuation materially hastened by use of larger cannula.
217.	Mus.	M.	32	,, 28th	12	8	2	8	3 dr. 12 gr.	2	R.	—
218.	Mus.	M.	4	,, 30th	6	8	1	6	40 gr.	1	R.	—
219.	Mus.	M.	3	,, 31st	6	8	2	9	36 gr.	2	R.	—
220.	Mus.	M.	5	Aug. 1st	8	8	2	10	1 dr. 6 gr.	2	R.	—
221.	Mus.	M.	5	,, 1st	8	8	1	8	40 gr.	1	R.	
222.	Mus.	M.	48	,, 2nd	12	16	1	10	3 dr. 10 gr.	2	R.	Operations simple and rapid.
223.	Mus.	M.	5	,, 3rd	6	8	2	11	3 dr.	1	R.	
224.	Mus.	M.	4	,, 3rd	6	8	2	8	20 gr.	1	R.	
225.	Mus.	M.	78	,, 3rd	12	16	2	28	7 dr.	4	R.	A very unpromising subject who did well.
226.	Mus.	M.	60	,, 7th	12	16	2	16	1 dr. 30 gr.	3	R.	Slight difficulty in micturition for 24 hours after operation.
227.	Mus.	M.	9	,, 7th	8	8	2	19	1 dr. 40 gr.	2	R.	—
228.	Mus.	M.	8	,, 7th	6	8	1	11	1 dr.	2	R.	—
229.	Mus.	M.	8	,, 7th	6	8	1	5	10 gr.	3	R.	Slight œdema of prepuce.
230.	Mus.	M.	3	,, 8th	6	8	1	6	1 dr. 30 gr.	1	R.	—
231.	Hindu	M.	2½	,, 9th	6	6	1	3	10 gr.	1	R.	—
232.	Mus.	M.	70	,, 9th	12	16	2	15	3 dr. 40 gr.	2	R.	Patient old, but evacuation easy and recovery symptomless.
233.	Mus.	M.	4	,, 10th	8	8	2	9	1 dr.	1	R.	
234.	Mus.	M.	25	,, 10th	12	16	1	5	20 gr.	1	R.	
235.	Mus.	M.	7	,, 10th	8	8	1	3	10 gr.	1	R.	
236.	Hindu	M.	4	,, 12th	6	6	2	9	30 gr.	1	R.	All simple cases.
237.	Hindu	M.	11	,, 12th	8	8	2	8	1 dr. 50 gr.	1	R.	
238.	Mus.	M.	34	,, 13th	12	16	1	14	7 dr. 15 gr.	1	R.	
239.	Mus.	M.	19	,, 13th	12	16	2	16	7 dr. 40 gr.	2	R.	
240.	Hindu	M.	55	,, 13th	12	16	3	30	1 oz. 4 dr.	3	R.	A flabby Hindu subject; slight cystitis.
241.	Mus.	M.	4	,, 14th	6	6	1	1	10 gr.	1	R.	Crushing instantaneous and evacuation immediate.
242.	Mus.	M.	10	,, 14th	8	8	3	23	5 dr. 30 gr.	1	R.	—
243.	Mus.	F.	70	,, 15th	12	16	2	25	3 dr. 10 gr.	2	R.	—
244.	Mus.	M.	3	,, 15th	6	6	1	1	10 gr.	1	R.	Small stone; crushed in one turn and evacuated immediately.
245.	Mus.	M.	35	,, 16th	12	16	2	10	2 dr.	1	R.	Similar to last, larger, but quite soft.
246.	Hindu	M.	4	,, 16th	6	8	2	14	50 gr.	2	R.	A small but rather hard calculus.
247.	Hindu	M.	2½	,, 17th	6	8	1	8	45 gr.	1	R.	Practically the same as No. 244, done on 16th.
248.	Mus.	M.	4	,, 18th	8	8	3	28	2 dr.	2	R.	—
249.	Mus.	M.	30	,, 19th	12	16	2	11	5 dr. 20 gr.	2	R.	—
250.	Mus.	M.	2	,, 19th	4½	6	1	2	10 gr.	1	R.	Another rapid operation, in which a new, small lithotrite was first used.
251.	Hindu	M.	8	,, 19th	8	8	2	14	3 dr. 30 gr.	1	R.	A simple operation of the ordinary type.
252.	Mus.	M.	4	,, 20th	4½	8	1	6	20 gr.	2	R.	Cannula used was unnecessarily large.

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A SECOND SERIES OF LITHOLAPAXY OPERATIONS (204) PERFORMED IN THE CIVIL HOSPITAL, HYDERABAD, SIND—*Continued*.

Number.	Caste.	Sex.	Age.	Date of operation.	Size of lithotrite.	Size of evacuating catheter.	Number of times introduced.	Duration of operation in minutes.	Weight of stone.	Days in hospital.	Result.	Remarks.
				1896.								
253.	Mus.	M.	30	Aug. 20th	12	16	3	24	1 oz. 1 dr. 40 gr.	3	R.	Slight cystitis followed operation.
254.	Hindu	M.	2	,, 21st	4½	5	1	2	35 gr.	1	R.	Calculus larger than No. 250; rapidly crushed and evacuated by smaller instruments.
255.	Mus.	M.	60	,, 22nd	12	16	3	30	1 oz. 1 dr. 20 gr.	5	R.	An old man with an unhealthy bladder. Did well.
256.	Mus.	M.	40	,, 22nd	12	16	3	26	6 dr. 50 gr.	2	R.	—
257.	Mus.	M.	8	,, 22nd	6	8	2	14	1 dr.	3	R.	A hard stone. Some urinary irritation for 48 hours after operation.
258.	Mus.	F.	3	,, 23rd	8	8	1	5	40 gr.	2	R.	—
259.	Mus.	M.	34	,, 23rd	12	16	1	11	1 dr.	3	R.	—
260.	Mus.	M.	3	,, 23rd	4½	5	1	3	35 gr.	4	R.	Small fragment left behind; spontaneously voided on second day.
261.	Mus.	M.	48	,, 25th	16	16	2	10	1 oz. 40 gr.	3	R.	—
262.	Mus.	M.	28	,, 27th	16	16	1	3	20 gr.	1	R.	—
263.	Mus.	M.	42	,, 27th	16	16	2	9	1 dr. 30 gr.	3	R.	—
264.	Mus.	M.	50	,, 28th	16	13	2	16	1 dr. 50 gr.	1	D.	No difficulty in operation; but patient, who had a very foul bladder with stinking contents, never rallied, and died in 20 hours.
265.	Mus.	M.	30	,, 29th	16	16	1	5	2 dr.	2	R.	Operation simple; had an enormous spleen.
266.	Mus.	M.	25	,, 31st	12	16	1	3	55 gr.	1	R.	—
267.	Mus.	M.	65	,, 31st	16	16	1	5	1 dr. 43 gr.	2	R	—
268.	Mus.	M.	7	,, 31st	8	8	2	8	25 gr.	2	R.	—
269.	Mus.	M.	4	,, 31st	4½	6	1	5	20 gr.	2	R.	—
270.	Mus.	M.	6	Sept. 1st	8	8	2	8	25 gr.	2	R.	—
271.	Hindu	M.	30	,, 3rd	12	16	2	10	4 dr. 15 gr.	2	R.	—
272.	Mus.	M.	8	,, 3rd	8	8	2	6	10 gr.	1	R.	A fragment overlooked necessitated second introduction of lithotrite.
273.	Mus.	M.	3	,, 5th	4½	5	2	8	1 dr.	2	R.	—
274.	Mus.	M.	32	,, 5th	16	16	2	14	1 dr. 50 gr.	3	R.	Slight urinary irritation following operation.
275.	Mus.	M.	25	,, 7th	16	14	2	16	4 dr. 40 gr.	3	R.	Ditto.
276.	Mus.	M.	48	,, 7th	16	14	1	7	3 dr. 35 gr.	2	R.	An easily crushed stone for its size.
277.	Mus.	M.	22	,, 7th	8	9	2	9	20 gr.	2	R.	Should not have necessitated second introduction of instruments.
278.	Mus.	M.	70	,, 7th	16	14	2	13	5 dr. 35 gr.	2	R.	—
279.	Mus.	M.	35	,, 7th	16	14	3	44	1 oz. 5 dr. 20 gr.	2	R.	A bulky stone.
280.	Mus.	M.	35	,, 8th	16	14	1	5	10 gr.	1	R.	Stone very small for an adult.
281.	Mus.	M.	60	,, 10th	16	14	2	20	7 dr. 50 gr.	2	R.	—
282.	Mus.	M.	6	,, 15th	8	8	3	18	2 dr. 54 gr.	1	R.	A large stone for the patient's age; did well.
283.	Mus.	M.	55	,, 16th	16	14	2	5	10 gr.	3	R.	Fragment overlooked; hence second introduction.
284.	Mus.	M.	60	,, 17th	16	14	2	21	4 dr. 10 gr.	3	R.	—
285.	Mus.	M.	8	,, 17th	8	8	2	16	2 dr. 30 gr.	5	R	Fragment retained impacted in urethra; removed with forceps on third day.
286.	Mus.	M.	55	,, 22nd	16	14	3	43	4 dr. 20 gr.	3	R.	A hard stone.
287.	Mus.	M.	50	,, 25th	16	14	1	5	52 gr.	1	R.	A small calculus for a patient of this age; operation rapid.
288.	Mus.	M.	35	,, 26th	16	14	1	9	6 dr. 30 gr.	2	R.	Nothing unusual.
289.	Mus.	M.	10	,, 27th	6	7	2	16	3 dr.	2	R.	Ditto.
290.	Mus.	M.	24	,, 28th	16	14	1	4	4 dr. 10 gr.	2	R.	Ditto.
291.	Mus.	M.	30	Oct. 3rd	16	14	1	5	7 dr. 30 gr.	2	R.	Operation rapid and easy.
292.	Mus.	M.	40	,, 3rd	16	14	1	15	4 dr. 10 gr.	2	R.	Nothing unusual.
293.	Mus.	M.	20	,,	16	14	1	10	1 dr. 40 gr.	1	R.	Ditto.
294.	Mus.	M.	60	,, 4th	16	14	1	9	5 dr. 20 gr.	3	R.	A large prostate. Had some retention for first 24 hours.
295.	Mus.	M.	60	,, 5th	16	14	2	16	2 dr. 35 gr.	2	R.	Another large prostate, which, however, gave no trouble.
296.	Mus.	M.	50	,, 5th	16	14	1	14	4 dr. 50 gr.	3	R.	A hard stone. Some urinary irritation for first 24 hours.
297.	Hindu	M.	50	,, 6th	16	14	2	15	2 dr.	2	R.	—
298.	Hindu	M.	2	,, 7th	5	5	1	4	10 gr.	2	R.	—
299.	Mus.	M.	55	,, 7th	16	14	1	6	2 dr. 20 gr.	2	R.	—
300.	Mus.	M.	22	,, 7th	16	14	3	14	1 oz.	2	R.	—
301.	Mus.	M.	40	,, 9th	16	14	1	4	1 dr. 10 gr.	2	R.	—
302.	Mus.	M.	4	,, 9th	6	7	2	9	1 dr. 6 gr.	2	R.	—
303.	Mus.	M.	3	,, 15th	5	5	2	10	50 gr.	2	R.	Bladder very low for a child; stone hard.
304.	Mus.	M.	70	,, 15th	16	14 & 18	3	48	2 oz., 3 dr., 20 gr.	2	R.	A good-sized stone; very large prostate. Patient did very well.
305.	Mus.	M.	35	,, 16th	16	14	2	9	1 dr. 12 gr.	2	R.	—

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A SECOND SERIES OF LITHOLAPAXY OPERATIONS (204) PERFORMED IN THE CIVIL HOSPITAL, HYDERABAD, SIND—*Continued*.

Number.	Caste.	Sex.	Age.	Date of operation.	Size of lithotrite.	Size of evacuating catheter.	Number of times introduced.	Duration of operation in minutes.	Weight of stone.	Days in hospital.	Result.	Remarks.
				1896.								
306.	Hindu	M.	5	Oct. 30th	4½	7	2	16	1 dr. 50 gr.	2	R.	—
307.	Mus.	M.	30	,, 30th	16	14	1	10	1 dr. 40 gr.	2	R.	—
308.	Mus.	M.	45	,, 30th	16	14	1	9	45 gr.	2	R.	Difficulty in finding fragments with lithotrite (too large).
309.	Mus.	M.	9	,, 30th	4½ & 6	7	2	14	1 dr. 40 gr.	2	R.	Lithotrite changed from No. 4½ to 6 as calculus was hard.
310.	Mus.	M.	8	,, 30th	4½	7 & 9	1	5	5 gr.	1	R.	Cannula changed from 7 to 9 to permit of passage of fragment without further crushing.
311.	Mus.	M.	3	,, 31st	5	5	1	3	40 gr.	2	R.	—
312.	Mus.	M.	18	,, 31st	16	14 & 18	3	38	1 oz. 6 dr. 20 gr.	3	R.	Temperature rose to 105·6° F. on second day, but fell at once; did well.
313.	Mus.	M.	5	,, 31st	4½	5 & 7	1	3	20 gr.	2	R.	Cannula changed for reason given opposite No. 310.
314.	Mus.	M.	20	Nov. 1st	16	14 & 18	2	9	5 dr.	2	R.	Ditto.
315.	Mus.	M.	3	,, 1st	4½ & 5	5	1	5	10 gr.	1	R.	A small but very hard stone.
316.	Mus.	M.	3	,, 1st	4½	5	2	4	45 gr.	1	R.	—
317.	Hindu	M.	30	,, 1st	16	14	1	9	1 oz. 50 gr.	2	R.	Operation easy and rapid.
318.	Mus.	M.	50	,, 2nd	16	14	2	24	1 oz. 5 dr.	3	R.	Operation, followed by atony of bladder for 36 hours.
319.	Mus.	F.	9	,, 3rd	4½	7	2	12	40 gr.	2	R.	—
320.	Mus.	M.	8	,, 3rd	4½ & 5	7	1	11	2 dr.	1	R.	—
321.	Mus.	M.	50	,, 3rd	16	14	2	18	5 dr. 40 gr.	2	R.	—
322.	Mus.	M.	30	,, 8th	16	14	1	5	25 gr.	1	R.	Two small calculi for adult patients.
323.	Mus.	M.	28	,, 8th	12	9	1	5	1 dr. 5 gr.	2	R.	
324.	Hindu	M	18	,, 8th	16	14	2	30	4 dr. 12 gr.	3	R.	Temperature rose to 103·8° F. an hour after operation; did well.
325.	Mus.	M.	65	,, 8th	16	14	2	20	7 dr. 10 gr.	2	R.	—
326.	Mus.	M.	8	,, 8th	6	7 & 9	2	27	1 dr. 30 gr.	2	R.	—
327.	Mus.	M.	4	,, 9th	5	7	1	5	20 gr.	1	R.	—
328.	Mus.	M.	20	,, 9th	16	14	1	3	10 gr.	1	R.	Stone small and soft. Operation rapid.
329.	Mus.	M.	2	,, 10th	5	7	1	8	50 gr.	1	R.	—
330.	Mus.	M.	9	,, 10th	8	9	1	9	2 dr. 26 gr.	1	R.	—
331.	Mus.	M.	50	,, 10th	16	14	1	14	2 dr. 50 gr.	2	R.	Prostate large.
332.	Hindu	M.	30	,, 12th	16	14 & 16	2	24	1 oz.	2	R.	—
333.	Mus.	M.	60	,, 16th	16	14 & 16	2	34	7 dr. 35 gr.	5	R.	This old man had rigors, followed by a temperature of 104·4° F., and lost all control over his bladder for 36 hours, but eventually did well.
334.	Mus.	M	2	,, 23rd	5	5	1	2	5 gr.	1	R.	A rapid operation.
335.	Mus.	M.	32	,, 23rd	16	14 & 16	2	32	1 oz. 3 dr. 22 gr.	2	R.	Evacuation a little troublesome. Did well.
336.	Mus.	M.	4	,, 24th	4½ & 5	7	2	28	1 dr. 32 gr.	2	R.	—
337.	Hindu	M.	2	,, 25th	5	5	1	4	12 gr.	1	R.	A family of Marwaris from Jesulmir beyond the Registan Desert. No. 339 came for treatment of an ununited fracture, and finding the operation successful among his relatives volunteered the information that he, too, had a stone.
338.	Hindu	M.	3	,, 26th	5	5	1	5	17 gr.	1	R.	
339.	Hindu	M.	10	,, 26th	8	7 & 9	2	14	2 dr. 30 gr.	2	R.	
340.	Hindu	M.	55	,, 29th	16	14 & 16	2	12	3 dr. 30 gr.	2	R.	
341.	Mus.	M.	50	Dec. 3rd	16	14 & 16	2	10	1 dr. 30 gr.	1	R.	—
342.	Hindu	M.	7	,, 4th	8	7	1	13	40 gr.	1	R.	—
343.	Mus.	M.	4	,, 4th	4½	5	1	5	22 gr.	1	R.	—
344.	Mus.	M.	8	,, 4th	8	7	2	18	1 dr. 10 gr.	2	R.	—
345.	Mus.	M.	8	,, 4th	8	7	1	16	1 dr. 15 gr.	1	R.	—
346.	Mus.	M.	8	,, 10th	8	7	1	4	5 gr.	1	R.	Lithotrite used unnecessarily large.
347.	Mus.	M.	3	,, 10th	5	5	2	11	57 gr.	2	R.	—
348.	Mus.	M.	9	,, 10th	8	7	2	22	4 dr. 10 gr.	3	R.	—
349.	Mus.	M.	60	,, 11th	16	14 & 16	3	45	2 oz. 2 dr.	4	R.	Patient weak. Operation prolonged, but result very satisfactory.
350.	Mus.	M.	55	,, 11th	16	14 & 16	1	12	3 dr. 10 gr.	2	R.	—
351.	Mus.	M.	34	,, 11th	16	14	2	24	5 dr. 30 gr.	2	R.	—
352.	Mus.	M.	40	,, 14th	16	14	1	11	2 dr. 10 gr.	1	R.	—
353.	Mus.	M.	50	,, 14th	16	14	1	3	12 gr.	1	R.	Lithotrite used was here again unnecessarily large.
354.	Mus.	M.	60	,, 15th	16	14 & 16	2	23	4 dr. 40 gr.	2	R.	—
355.	Mus.	M.	5	,, 15th	4½ & 6	7	2	20	dr. 30 gr.	1	R.	—
356.	Hindu	M.	6	,, 15th	5	5	1	4	5 gr.	1	R.	—
357.	Mus.	M.	24	,, 16th	16	16 & 14	3	30	6 dr. 50 gr.	2	R.	—
358.	Mus.	M.	5	,, 17th	4½	7	1	9	35 gr.	1	R.	—
359.	Mus.	M.	60	,, 18th	16	14 & 16	2	22	3 dr. 52 gr.	2	R.	—

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A SECOND SERIES OF LITHOLAPAXY OPERATIONS (204) PERFORMED IN THE CIVIL HOSPITAL, HYDERABAD, SIND—*Continued*.

Number.	Caste.	Sex.	Age.	Date of operation.	Size of lithotrite.	Size of evacuating catheter.	Number of times introduced.	Duration of operation in minutes.	Weight of stone.	Days in hospital.	Result.	Remarks.
				1896.								
360.	Mus.	M.	9	Dec. 19th	5	7	1	2	5 gr.	1	R.	A rapid operation; stone small and soft.
361.	Mus.	M.	8 m.	,, 20th	4½	5	1	3	12 gr.	2	R.	Ditto.
362.	Mus.	M.	5	,, 20th	6	7 & 9	2	14	2 dr.	2	R.	—
363.	Mus.	M.	55	,, 20th	16	14	1	5	10 gr.	2	R.	Instruments used too large.
364.	Mus.	M.	75	,, 23rd	16	14 & 16	2	18	1 dr. 30 gr.	1	R.	—
365.	Mus.	M.	65	,, 23rd	16	14	1	14	3 dr.	2	R.	—
366.	Mus.	M.	30	,, 23rd	16	14	1	15	3 dr. 50 gr.	2	R.	—
				1897.								
367.	Hindu	M.	50	Jan. 3rd	16	14 & 16	1	10	55 gr.	1	R.	—
368.	Hindu	M.	4	,, 4th	5	5	1	5	12 gr.	1	R.	—
369.	Hindu	M.	34	,, 4th	16	14 & 16	1	13	4 dr. 20 gr.	2	R.	—
370.	Mus.	M.	4	,, 5th	8	7	2	16	15 gr.	1	R.	—
371.	Mus.	M.	32	,, 5th	16	14 & 16	1	5	1 dr. 50 gr.	2	R.	—
372.	Mus.	M.	3	,, 6th	4½	5	1	3	10 gr.	1	R.	—
373.	Hindu	M.	3	,, 8th	5	5	1	3	20 gr.	1	R.	—
374.	Mus.	M.	3	,, 10th	5	5	1	5	32 gr.	1	R.	—
375.	Hindu	M.	11	,, 10th	5 & 8	7 & 9	3	18	1 dr. 50 gr.	3	R.	Stone hard, necessitating change of instruments.
376.	Mus.	M.	2	,, 12th	4½ & 5	7	2	22	1 dr. 46 gr.	2	R.	—
377.	Hindu	M.	42	,, 14th	16	14	1	12	1 dr. 10 gr.	1	R.	—
378.	Mus.	M.	3	,, 15th	4½ & 5	5	3	20	1 dr. 13 gr.	3	R.	—
379.	Mus.	M.	5	,, 15th	5 & 8	7 & 9	2	14	55 gr.	2	R.	—
380.	Mus.	F.	5	,, 15th	8	9	3	24	1 dr. 30 gr.	2	R.	—
381.	Hindu	M.	9	,, 16th	8	9	2	18	4 dr.	2	R.	—
382.	Mus.	M.	10	,, 17th	8	9	2	14	1 dr. 40 gr.	2	R.	—
383.	Mus.	M.	50	,, 19th	16	14	2	15	1 oz.	2	R.	—
384.	Mus.	M.	7	,, 24th	8	9	2	14	2 dr. 30 gr.	1	R.	—
385.	Mus.	M.	45	,, 24th	16	14	1	13	3 dr.	2	R.	—
386.	Mus.	M.	13	Feb. 2nd	5 & 8	7	1	15	2 dr.	1	R.	—
387.	Mus.	M.	3	,, 3rd	4½ & 5	5	2	18	1 dr. 15 gr.	1	R.	—
388.	Mus.	M.	45	,, 14th	16	14 & 16	2	27	4 dr. 20 gr.	2	R.	—
389.	Mus.	M.	4	,, 14th	5	5	1	3	20 gr.	1	R.	A series of 6 small calculi, each less than a drachm in weight, varying in age of patients from 2 to 34, and very greatly in difficulty. Nos. 391 and 394 were hard, though small, stones.
390.	Mus.	M.	8	,, 14th	5	5	2	16	50 gr.	2	R.	
391.	Mus.	M.	2	,, 14th	5	5	1	5	55 gr.	1	R.	
392.	Hindu	M.	3	,, 15th	5	5	2	9	50 gr.	2	R.	
393.	Hindu	M.	7	,, 15th	4½	7	2	14	20 gr.	2	R.	
394.	Mus.	M.	34	,, 16th	16	14	1	4	15 gr.	1	R.	
395.	Mus.	M.	50	,, 18th	16	14	1	5	1 dr.	1	R.	—
396.	Mus.	M.	8	,, 18th	4½	9	2	5	55 gr.	2	R.	A very hard stone.
397.	Mus.	M.	50	,, 18th	16	14	1	14	3 dr. 35 gr.	1	R.	—
398.	Hindu	M.	4	,, 20th	5	7	1	4	25 gr.	2	R.	—
399.	Hindu	M.	24	,, 21st	16	14 & 16	1	6	3 dr. 20 gr.	2	R.	—
400.	Hindu	M.	40	,, 21st	16	14 & 16	1	4	1 dr. 10 gr.	1	R.	—

PERINEAL LITHOTRITY.

				1896.								
401.	Mus.	M.	2½	July 23rd	4½	6	1	5	10 gr.	1	R.	Fluid injected into the bladder per urethram immediately after operation; returned clear by the same route.
402.	Mus.	M.	3	Sept. 7th	4½	7	2	10	½ dr.	2	R.	—
403.	Mus.	M.	5	,, 10th	4½	7	3	20	1 dr. 5 gr.	9	R.	Operation followed by fever, which subsided, and patient did well.
404.	Mus.	M.	7	Oct. 30th	16	14	3	30	6 dr. 5 gr.	5	R.	Stayed in hospital till fistula closed.

SUMMARY.—Mussulmans, 168; Hindus, 36. Males, 200; females, 4. Ages: under 1 year, 1; 1 to 3 years, 65; 6 to 10 years, 36; 11 to 15 years, 4; 16 to 45 years, 53; 46 to 55 years, 26; 46 to 65 years, 13; over 65 years, 6. Oldest, 78; youngest, 8 months. Lithotrite, average number of times introduced, 1·60. Average duration of operation, 12 minutes 19 seconds. Average weight of stone, 2 dr. 46 gr. (nearly). Average stay in hospital, 1·853 days. Mortality, 0·49 (nearly) per cent.

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those given in my previous paper. They show some improvement in the averages of number of times the lithotrite was introduced, duration of operation, and stay in hospital in each case; but it will be seen that the average weight of the calculi dealt with is lower in this list, and a large number of cases of small stones in young children come to be dealt with very rapidly after some experience, and this will, of course, show itself in an average statement, somewhat obscuring the fact that large stones, if at all hard, will always take time to crush and evacuate. Thus in Case 208 the removal of a calculus weighing three ounces and two grains took as long as eighty-two minutes from the moment of introducing the lithotrite to that of withdrawing the cannula for the last time, while other very small soft calculi if found and seized at once were pulverised by a single turn of the lithotrite handle and evacuated within a couple of minutes.

Matlock Bath.

NOTES ON A CASE OF APPARENTLY INCURABLE BLINDNESS IN WHICH SIGHT WAS RESTORED.

BY CHARLES BELL TAYLOR, M.D., F.R.C.S. EDIN.,
SURGEON TO THE NOTTINGHAM AND MIDLAND EYE INFIRMARY.

THE patient, a girl, twenty-two years of age, who was presented to the notice of the president and members of the Nottingham Medico-Chirurgical Society, on March 25th, 1897, came under my care in September, 1896. At that time she was quite blind, having bare perception of light with either eye. She had been in this condition for upwards of three years, during which period several ophthalmic surgeons had been consulted, with the result that she was declared incurable, and advised to enter an asylum for the blind without delay. "Is it any use going elsewhere for advice," she asked. "Not a bit! no one can do you any good!" Under these circumstances I told the friends that it would be hardly worth their while to incur the expense of a railway journey; but as an uncle of hers—formerly blind from detached retina, and who had been sent to me by Dr. Metcalf, of Lancaster—had regained his sight, they were very persistent, and I consented to receive her as an Eye Infirmary patient. On admission I found both pupils contracted, adherent to the capsule of the lens, and blocked by dense calcareous masses, while the eyes themselves were



Cataracta complicata accreta.

so shrunken and soft that minus three according to Sir W. Bowman's formula was barely sufficient to express their condition. I concluded that the opacity and calcareous degeneration of the lens—cataracta complicata accreta—was a secondary phenomenon; that sight was probably lost before the pupils were blocked; that there had been impairment of the circulation in the vessels of the uveal tract, liquefaction of the vitreous, and possibly also detachment of the retina in both eyes[1]—a diagnosis which was to some extent borne out by notes of the case which were kindly sent to me by Mr. Bickerton, of Liverpool, from which it appeared that she had originally suffered from cyclitis preceded by choroidal changes and complicated with facial paralysis. She had been for some time an in-patient in the ophthalmic wards of a general hospital before coming under Mr. Bickerton's notice, and was subsequently seen and prescribed for by other specialists. I treated her with constitutional remedies *secundum artem*, with the constant galvanic current, and sub-conjunctival injections, and, when the improved condition of the eyeballs and increased perception of light seemed to warrant the procedure, extracted both lenses with the capsule entire and without iridectomy. The operation—despite extensive adhesions and so many contra-indications and drawbacks—was perfectly successful, and she was very soon able to go about the crowded streets—even after nightfall and in the winter months—unaccompanied, to read the signs over the shop windows, and to enjoy a degree of freedom which was highly appreciated after having been led about for years. A continuance of the treatment, after recovery from the operation, was followed by daily improvement, until the death of a relative compelled her return home, since which time I have had letters from her as well written as any I am in the habit of receiving.

"Shall I ever see again?" is a pathetic query which is often addressed to us, and it is one which it is not so easy to answer as might *a priori* be supposed. I have patients who have recovered their sight after blindness of upwards of thirty years—even loss of perception of light is not always a contra-indication to treatment. Indeed, I have one patient from the Blind Asylum who recovered excellent sight by treatment alone, both for reading and distance, after prolonged loss of all perception of light; and it is quite certain that now and again apparently hopeless cases—such as the one I have recorded—may be restored to all the blessings attendant upon the exercise of that function without which life itself is worth little.

Nottingham.

[1] "Inflammation of the anterior portion of the uveal tract, and especially the ciliary processes—in other words, cyclitis, or degeneration of the vessels of the uveal tract—leads to impairment of the nutrient supply of the vitreous and altered consistency, liquefaction or synchisis, and the retina, losing the support of the vitreous, is apt to become detached."—Leber and Nordensen.

CONGENITAL LARYNGEAL OBSTRUCTION.

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AND
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THIS affection may be described as a form of persistent laryngeal obstruction commencing at, or soon after, birth and accompanied by a peculiar stridor. The affection is not very rare, but is probably often unrecognised, and there are but few references to it in medical literature. Dr. Lees has described a case as a peculiar form of obstructed respiration. Dr. Gee discusses some cases under the heading of "Respiratory Croaking in Babies," and the same affection is evidently referred to by Dr. Goodhart as "infantile laryngeal spasm," by Dr. Löri, of Pesth, as "clonic spasm of the glottis," and by Dr. Robertson as "postical paralysis." Dr. Thomson, of Edinburgh, has written an admirable and full paper on the subject under the title of "Infantile Respiratory Spasm." Within recent years a few cases under various designations have been shown at medical societies, but so far as we are aware no contribution has appeared tending to the further elucidation of the subject. The pathology of the affection has never yet been definitely determined, and the importance of some of its symptoms is not fully recognised. We propose to give an account of the clinical signs and symptoms founded upon the observation of eighteen well-marked cases, to trace the progress of the patients, and to describe exactly the pathological condition of the larynx, which we believe to be the basis of the affection. For the notes of two of the cases we are indebted to our colleague, Dr. Leonard Guthrie.

Predisposing circumstances.—This subject formed part of our investigation, but we have not succeeded in eliciting any facts of importance. Inquiry has been made as to any hereditary tendency to this affection, or hereditary disease associated with it, as to whether any localities are specially

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affected, and as to whether accidents during pregnancy were common, in all cases with a negative result. In no case had more than one member of the same family been affected. The firstborn did not appear to be more liable than the subsequent children. There was no evidence of the affection being in any way traceable to the nature of the confinement.

CLINICAL FEATURES.

1. *Date of onset.*—The stridor is usually observed at, or very soon after, birth. Its onset may be delayed until the end of the second week, but after that time its occurrence is rare. Of these 18 cases the stridor was noticed on the first day in 11, on the second day in 1, on the third day in 1, on the fourth day in 1, on the seventh day in 1, on the fourteenth day in 1, and in the third week in 2. It is probable that those cases in which nothing abnormal was observed until after the first week had a slight stridor at an earlier period, which might easily be regarded as the normal crowing of infancy, until its persistence and increase during the first weeks of life attracted more special attention.

2. *General health.*—As a rule medical advice regarding the infant was sought solely on account of the stridor. Many of the patients were well nourished and apparently in the best of health, and did not appear to be at all inconvenienced by the laryngeal obstruction. As regards associated illnesses, nothing definite or constant has been noted. Syphilis was probably present in one case, but not to a marked degree. In one case there was a history of convulsions, commencing on the eighth day and recurring at intervals until the end of the second month. A moderate amount of rickets was observed several times amongst the infants over three months of age, but not more frequently than is usual amongst hospital patients. Finally, anæmia was present in one patient, another suffered from marked constipation, and several were specially subject to bronchitis.

3. *Character of the stridor.* — Amongst the various descriptive terms applied by the mothers to the stridor there occur the following: "Like a hen," "like a chicken," "like a grunter," "purring like a kitten," and "like croup." Dr. Thomson says: "Inspiration begins with a croaking noise and ends in a high-pitched note; expiration is accompanied by a short croak when the stridor is loud, but at other times it is noiseless." This is a good description of a typical case, but many modifications and variations occur. Inspiratory stridor was always very much louder than expiratory. The variations in the pitch of the inspiratory stridor were striking, the note in some cases being deep, purring, growling, and in others high, clear, squeaking. The expiratory sound was sometimes of a nasal or pharyngeal character. The loudness of the stridor varied at times, and in almost all of the cases there were periods of complete intermission. The influences bearing on these alterations would appear to be as follows. When the breathing was regular and superficial the stridor was diminished or absent. This was observed usually when the child was asleep or was taken from a cold to a warmer atmosphere. When the breathing was irregular or deepened, the stridor was increased. This was observed when the child awoke from sleep, or was taken from a warm to a colder atmosphere, or was put in a cold bath, or was excited, or frightened, or crying, or coughing, or was being fed too quickly, or when dyspnœa was present, as in bronchitis. The cry and cough were always clear and natural, apart from intercurrent disease affecting the larynx.

4. *Signs of obstruction.*—1. Cyanosis may be, and in many of our cases was, entirely absent. Inquiry elicited the fact that eight of the patients had suffered from suffocative attacks, coming on sometimes when the infant was asleep and sometimes when awake, and accompanied by cyanosis and marked stridor. A condition of persistent cyanosis is very rare, but it was a prominent feature in the only fatal case we have met with. 2. Movement of the alæ nasi was not a marked sign, but there was usually some increase in movement when the respirations were deep and the stridor loud. Dr. Thomson noted the absence of this symptom in his cases. 3. Thoracic and abdominal retraction was present in all except the slightest forms of the affection, but, like the stridor, it was intermittent and varied in degree. The retraction may be visible at the episternal notch, at the supra-clavicular fossæ, along the ribs, more especially in the axillary region, and at the epigastrium. When the stridor was pronounced and had lasted for some months the boundaries of the chest became altered as in rickets. In several of the cases epigastric depression with laboured action of the abdominal muscles was a prominent feature. Even when the stridor was temporarily absent retraction was usually present, although to a less extent than when the breathing was noisy. 4. As a rule the lungs are not fully expanded, the breath sounds being feeble towards the bases, and râles or rhonchi being audible over those areas.

5. *Examination of the nose and pharynx* —In none of the cases examined did we find the tonsils much enlarged or adenoid vegetations of any importance, and in none were there any of the symptoms usually associated with these affections. Our experience in this respect agrees with that of Dr. McBride, who examined some of Dr. Thomson's cases, and is at direct variance with that of Dr. Eustace Smith and Dr. Robertson, who apparently consider the presence of adenoid growths an important etiological factor in the affection.

6. *Examination of the larynx.*—After many attempts, most of which were unsuccessful, the following simple method was discovered, by means of which the larynx of the youngest infant could be quite readily and certainly seen without causing it any pain or inconvenience, and without the necessity of having recourse to anæsthetics. The infant being held in the usual position for laryngoscopy, the index finger of the left hand is passed into the mouth over the base of the tongue and the terminal phalanx hooked round the hyoid bone, which is by this means pressed well forward. The rest of the finger holds down the tongue out of the way, and, with the left thumb pressed up under the chin, serves to steady the infant's head. A small laryngeal mirror is now introduced in the usual way and the larynx comes readily into view. When the child was a little older and possessed teeth a copper spatula suitably bent with a small sharp curve at its end was used in place of the finger, and this instrument is also useful when the examiner's finger takes up too much room in the infant's mouth. The infant as a rule keeps the mouth wide open during the examination, but a gag might be necessary in some cases. This method was demonstrated at the meeting of the Laryngological Society of London in February, 1897. By this means the larynx was examined in six cases—all those seen in the last year—and in all of them the following characteristic appearances were found. The epiglottis was sharply folded on itself, the two lateral folds being in close apposition and in some cases in contact. The aryteno-epiglottic folds were approximated, and thus the upper aperture of the larynx was reduced to a long narrow slit. The thin folds bounding this aperture seemed quite flaccid and flapped to and fro on respiration. The inspiratory column of air striking down on these folds drove them together, and on expiration they again separated. In some cases, the "purring" ones, the coarse vibrations of these folds could be distinctly seen. In only a few of the cases could a view of the vocal cords be obtained. They appeared quite white and normal, as the symptoms would have led one to expect.

7. *Progress.*—In the case of a child otherwise healthy the stridor tended to increase in loudness for some weeks or months after birth, then to continue more or less stationary until the eighth or ninth month, and then gradually to diminish until it was lost about the end of the eighteenth month or second year. After that period it was occasionally represented by a short crow or croak under excitement or any action causing long-drawn inspirations. One patient was seen for the first time when ten weeks old and presented a typical stridor, loud and persistent. This condition continued with little alteration until the twelfth month, when the stridor began to be less loud and less frequent, until at the end of the second year it was observed only when the child was "out of breath," or had a cold, or was straining at stool. When last seen, at the age of six years, she was in robust health, the lungs and heart were normal, and the chest showed no signs of deformity. On laryngoscopic examination the epiglottis was seen to be folded laterally on itself and the aryteno-epiglottic folds approximated. These folds closed inwards when the child drew a hurried breath, and a slight stridor was produced. The vocal cords moved freely. Other cases have been observed up to the ages of from two to two and a half years, and the progress has been similar to that above described, the stridor reappearing only under exceptional circumstances and the malformation of the larynx above described persisting.

PATHOLOGY.

Many divergent opinions have been expressed as to the cause of the obstruction. Dr. Lees has described the larynx

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in one case which proved fatal from diphtheria. He found the epiglottis folded on itself and the aryteno-epiglottic folds in contact, the upper aperture of the larynx being reduced to a narrow slit with two minute openings, one between the folds of the epiglottis and the other between the arytenoid bodies. Dr. Gee thought the stridor was produced in the pharynx. Dr. Löri, of Pesth, in a series of cases observed a constantly recurring clonic spasm of the vocal cords. Dr. Robertson believed the affection to be posticus paralysis, due to a reflex disturbance of the nervous mechanism of the larynx set up by the presence of post-nasal adenoid growths. Dr. Eustace Smith has accepted this hypothesis and refers to cases of his own in support of it. Dr. Goodhart accepts Dr. Lees' observations, although he had previously thought that the affection depended upon a valvular action of the upper aperture of the larynx due to the flaccidity of these structures in infants. Dr. Thomson advances ingenious arguments in favour of its being a respiratory spasm, the muscles of respiration being imperfectly coördinated. He considers it to be a developmental neurosis and analogous to stammering. Dr. McBride and others who took part in the discussion on Dr. Thomson's paper also considered the affection to be a glottic spasm. From our own observations we are convinced that the affection depends on a valvular action of the upper aperture of the larynx, a falling inwards of its lateral walls during inspiration, dependent partly on a peculiar congenital malformation of the larynx and partly on the flaccidity of these parts in infants. The larynx described by Dr. Lees presents this deformity in a very marked and probably very rare degree. In all our cases a similar malformation was present, but without the associated valvular action of the laryngeal aperture it would not have been sufficient to produce obstruction. Further, we have shown that as the child grows the malformation remains, but the stridor passes off as the parts forming the superior laryngeal aperture become less yielding. The fact that the folds are wider apart at the commencement of inspiration and close during its course agrees well with the observation that the stridor becomes higher pitched at the end of inspiration—that is, when the chink is at its smallest. The flapping outwards also accounts for the diminution or absence of the stridor on expiration. The above described malformation of the larynx has persisted in our cases as long as they were under observation, in one case up to the age of six years, and it is met with occasionally in advanced life, although we have no knowledge if such cases suffered from stridor in infancy. This observation contradicts the objection which some might urge that the laryngeal condition above described was really the normal infantile type of larynx. Besides, one of us has systematically examined the larynx of every infant coming under his care during many months past and has never yet observed the malformation except in association with this affection.

It cannot be definitely decided that the vocal cords play no part in the affection—that there is not, in fact, in some cases bilateral abductor paralysis. But the above condition appears to us to account quite satisfactorily for all the observed phenomena without assuming the existence of an additional lesion. Further, in some of the older patients in whom the upper aperture of the larynx was larger the cords moved well and were seen to be fully abducted, yet in these cases also stridor occurred on exertion or during a quick inspiration, and was invariably associated with a falling inwards of the aryteno-epiglottic folds. The theory that the affection is in any way a spasm seems to us to be untenable in view of the appearances observed, nor does this theory satisfactorily explain the fact that in some cases the obstruction may persist constantly for months, and even during sleep, chloroform anæsthesia, &c.

DIAGNOSIS.

The affection is readily recognised by all who have once seen or heard it. The chief points to be attended to are the early onset, the peculiar characters of the stridor which occurs all day and even at night, with but short intervals of quiet breathing, the evidences of obstructed respiration—retraction of chest walls, &c.—without as a rule any apparent distress, and the loud, clear cry. In addition, we believe the above-described laryngoscopic appearances to be absolutely characteristic. Attention to the above points will be found sufficient to differentiate this affection from the following conditions which may more or less resemble it—(1) laryngismus stridulus and other forms of glottic spasm occasionally met with in connexion with post-nasal growths, excessive crying, &c.; (2) laryngitis in infants; and (3) papillomata of the larynx.

PROGNOSIS.

The prognosis is favourable provided that the infant's general health is good and the amount of laryngeal obstruction is moderate. In the case of infants who are delicate the obstruction to the breathing will probably be an additional factor in retarding the normal growth and development, and will predispose to pulmonary affections from imperfect expansion of the lungs. An attack of acute illness affecting the respiratory passages, such as bronchitis or pneumonia or diphtheria, is more serious in the case of an infant thus affected than in ordinary cases. The possibility that the obstruction to the breathing may lead directly to death from suffocation must be kept in mind. The occurrence is probably a rare one, as we are not aware of any example of this which has been recorded and have only met with one case in our own experience. This was one of our earlier cases and occurred before we had recognised the nature of the pathology and the gravity of the affection. The patient was an infant, aged two weeks, who had been observed to breathe noisily since birth. The stridor had been increasing, and at times the child got black in the face. There was a well-marked persistent stridor, accompanied by slight blueness of the extremities, retraction of the lower costal region, and strong action of the abdominal muscles. A week later the condition was not much altered, but the signs of obstruction were more marked, the cyanosis having increased in the face and extremities. The child died at home the same night, the breathing getting gradually more laboured, the cyanosis deepening, and convulsions supervening half an hour before death. A necropsy, limited to the chest and abdomen, was made on the following day. The external appearances were those of a healthy, well-nourished infant. The heart and lungs were healthy. The thyroid and thymus glands appeared to be normal. The epiglottis was soft and curved inwards. On examination of the larynx, both macroscopic and microscopic, no structural change was detected. The abdominal organs appeared to be healthy. In another patient the stridor persisted unchanged until the age of twelve months, when bronchitis supervened, the child lost flesh, and died eight months later from pulmonary disease. A third case which terminated fatally was that of an infant presenting, at the age of seven weeks, a well-marked stridor, but only slight evidence of obstruction as manifested by costal retraction. At the age of nine months the stridor was distinctly less, but the child was rachitic and suffered from chronic bronchitis. When she was thirteen months old the stridor had almost disappeared, but she died six months later from pulmonary tuberculosis.

TREATMENT.

In the treatment of our earlier cases various drugs were employed with the view of testing some of the current theories as to the nature of the affection. Among these may be mentioned bromide of potassium and strychnia, which were given for considerable periods without producing any definite benefit. In the later cases our treatment has been based on the belief that the affection is really due to a mechanical obstruction to the breathing, and has therefore been directed to the maintenance of as sound a condition of general health as possible. Cod-liver oil and malt, careful dieting, and attention to the general hygiene represent the chief measures employed. It is important that care should be taken to avoid cold, and that catarrh arising in any part of the respiratory tract should be checked as soon as possible, as any additional obstruction to the breathing is serious. For this reason, also, rickets, if present, must be energetically treated. In cases accompanied by cyanosis or severe suffocative attacks the danger of fatal obstruction must be remembered and tracheotomy performed, or the patient placed in circumstances where it can be performed at once if necessary.

References.—Lees, Transactions of the Pathological Society of London, vol. xxxiv., p. 19; Gee, St. Bartholomew's Hospital Reports, vol. xx., p. 15; Goodhart, Diseases of Children, 1885, p. 251; Löri, Allgemeine Wiener Medicinische Zeitung, 1890, No. 49; Robertson, Journal of Laryngology, October, 1891; Thomson, Edinburgh Medical Journal, September, 1892; Eustace Smith, THE LANCET, May 25th, 1895, p. 1298, and June 8th, 1895, p. 1460.

VACCINATION GRANT.—Mr. F. N. Williams, public vaccinator for Brentford, has been awarded a grant of £29 5*s.* on the report of the medical inspector of the Local Government Board, being the fifth consecutive biennial award.

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THE MECHANISM OF DEATH FROM CHLOROFORM.

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IN 1893 I described in a communication to the Society of Anæsthetists three cases of death from chloroform[1] in which the prominent symptom was vigorous respiration persisting after the pulse had become imperceptible. Comparing the symptoms in these cases with similar ones occurring respectively in death from sudden hæmorrhage, cardiac syncope, and peritonitis, I suggested the conclusion that these chloroform fatalities were due to anæmia of the respiratory centre produced by "failure of the circulation" from either vaso-motor paralysis or cardiac syncope, and not by primary paralysis of the respiratory centre. I used the term "failure of the circulation" as it did not commit me to any definite theory, my chief object at that time being to prove that death was not caused by primary respiratory paralysis. Since then I have met with three similar cases—one, happily, non-fatal—in my own practice, and with two fatal cases related to me by friends. This class of case is important because the significance of the symptoms is not sufficiently appreciated, and signs which are really of grave import are sometimes taken for signs of safety. The indications of danger to which I wish to draw attention are the same as the classical symptoms of death from hæmorrhage, but the latter are more or less masked by the action of the anæsthetic, and are caused in chloroform fatalities by some serious "failure of the circulation" causing sudden anæmia of the vital centres in the medulla.

CASE 1.—The patient was a boy, aged fourteen years, suffering from a simple cystic enlargement of the antrum. Chloroform was given on lint, and at the beginning of the administration the skin was warm, of a healthy rosy colour, and the pulse good. The anæsthetic was taken quietly; when the patient was "under" the mouth was gagged, the head raised rather suddenly on to a high pillow, and a gouge was thrust into the antrum. At this moment the respiration suddenly became more rapid and deeper, of a character expressing extreme "air hunger"; the pupils dilated widely, the pulse became very feeble and almost imperceptible, and the skin changed from a rosy hue to dead pale. I at once lowered the head and began to compress the chest vigorously; by this time the respirations had become very slow. The dependent position of the head and vigorous compression of the chest soon restored the circulation, normal respiration, and colour, but not before the patient had been in extreme peril. The signs of danger were the increased frequency of the respirations, associated with sudden wide dilation of the pupils, very feeble, running pulse, and pallor of the skin. The pallor of the skin of the face was not so marked as that of the body. This was due, I think, to the manipulation of the face involved in the putting in of the gag, cheek retractor, &c., causing a local hyperæmia of the lips and cheeks.

Regarding the cases related to me the information is not so complete.

CASE 2.—A boy, aged fifteen years, had been anæsthetised with chloroform for the removal of post-nasal adenoids. The operation had been completed and the anæsthetic withdrawn, when the patient was noticed to be breathing deeply. The operator observed some peculiarity about the colour of the face, but was reassured by the presence of free respiration. The respirations, however, suddenly ceased, and all efforts to resuscitate the patient failed.

CASE 3.—In this case a child had chloroform given for a slight operation. When the incision was made there was no hæmorrhage. This drew attention to the pulse; respiration, which had been observed throughout the administration, was then going on freely, but the pulse was imperceptible. Respiration soon ceased and a fatal result ensued.

The first case demonstrates the advantage of the line of treatment adopted, and the other two illustrate how easily the signs of danger may be overlooked. The indications for treatment are to get blood to the respiratory centre, to stimulate the heart, and to restore the blood pressure. For this purpose intermittent compression of the chest such as is obtained in artificial respiration is most valuable. It is not enough to get air in and out of the lungs by inflation or faradaisation of the phrenic nerves; the chest must be compressed so that some pressure is brought to bear on the heart. In the case of a rigid chest-wall I have seen benefit from pressure on the epigastrium directed so as to press in the direction of the heart. The value of compression as a stimulant to a failing heart seems well illustrated by the two following cases.

CASE 4.—I once delivered a woman of an apparently healthy, well-formed child, who, in spite of vigorous respiratory efforts, was unable to get air into the chest, and soon died. The difficulty arose from congenital absence of the diaphragm. The point of interest is that the heart continued to beat for some time, and whenever it had apparently ceased pressure over it re-started vigorous pulsations.

CASE 5.—In another instance, a man in a state of collapse, with badly fractured ribs and other injuries, was temporarily improved as regards his pulse by intermittent pressure over the heart, which from the falling in of the ribs could be exerted to great advantage.

In addition to stimulating the heart, artificial respiration, as pointed out in the Report of the Hyderabad Chloroform Commission, is remarkably successful in restoring the blood pressure—so much so, that "when the animal was really dead it was found in some cases that artificial respiration still maintained a small mean pressure in the manometer," and I have seen at least one instance, in the case of a child, in which, judging from the ruddy complexion and colour of the lips, the colour of which actually returned after pressure, a certain amount of blood pressure was kept up by artificial respiration when the patient was dead. The artificial respiration being employed to treat the dangerous failure of the circulation, not merely to get air into the lungs, it should be resorted to at once, before waiting for the cessation of the deep respirations, therefore to delay treatment until the respirations cease is to wait until the vital centres have been damaged beyond recovery and to lose the patient. I believe the value of artificial respiration in the treatment of chloroform accidents lies very largely, if not solely, in its action as a mechanical cardiac stimulant and restorer of the blood pressure, and to be effectual it must be performed so as to compress the chest.

If the above theory as to the cause of death is correct, we have in it an explanation of the mechanism of certain anomalous forms of death from chloroform. I refer to that class in which spasmodic contractions of some or all of the muscles are a prominent feature, the affection of the muscles varying from mere spasm of the jaw muscles, trismus, with fixation of the chest, to general convulsions resembling epilepsy. There are a large number of these cases reported in the medical journals, and I am not aware that any satisfactory theory has been advanced for their explanation. In 1859 Kussmaul and Tenner[2] showed that the convulsions produced by hæmorrhage were due to interference with the nutrition of the motor centres behind the optic thalamus, consequent on the deprivation of blood, whether this deprivation or anæmia was brought about by hæmorrhage or by ligation of the vessels supplying the brain, and a similar sequence of symptoms is apparently produced by drugs which cause sudden paralysis of the circulation—e.g., hydrocyanic acid. The chief symptoms of anæmia of the basal centres, as exhibited in rabbits, are transient contractions of various sphincter muscles of the face, followed by their relaxation, acceleration of the respiration, dilatation of the pupils, extremely violent general convulsions, clenching or alternate opening and shutting of the jaws, and occasionally voiding of urine and fæces. The general convulsions are followed by a period of quiet, in which there are at intervals deep sighing respirations, during which the chest expands enormously and the heart beats vigorously, but the pulse is imperceptible.

An almost identical series of phenomena occurs in death from sudden hæmorrhage or sudden "failure of the circulation" from any cause in man, and the same symptoms, having their origin in a similar cause, are seen in certain deaths from chloroform; but, naturally, they are to a greater or less extent obscured by the degree of general narcosis, and upon

[1] THE LANCET, Nov. 17th, 1894, p. 1148.

[2] Kussmaul and Tenner on Convulsions: New Sydenham Society.

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this depends the various and at first sight conflicting conditions under which death from chloroform presents itself. The anæmia of the respiratory and other centres, which, in a conscious man or animal will produce general convulsions, will in the same being, were he anæsthetised, cause symptoms affecting only the series of muscles not under the influence of the anæsthetic. In accordance with the Law of Dissolution, a general anæsthetic like chloroform should affect the various nervous and muscular system of the body in a certain progressive order, the various portions of the accessory system becoming narcotised first, and the more fundamental systems being affected last. Something like this does happen, for of the various voluntary muscles and muscular systems of the body the jaw muscles and certain facial muscles are affected late, and the respiratory muscles last of all. A patient may be sufficiently unconscious for the performance of a surgical operation, while a number of muscles and organs are unaffected and capable of responding to their natural stimuli. Further, when death does happen under chloroform it is not, as a rule, due to the regular progressive narcotic action of the drug, as in the case of opium poisoning, but it arises from the sudden excessive action of the agent on some vital centre or the paralysis of one centre secondarily to the weakening or death of another. This is proved by the fact that death may and does happen at any stage of the anæsthesia, and the symptoms of death vary according to the stage of anæsthesia. I consider that this death is always from "failure of the circulation," and that the widely divergent symptoms attending dissolution depend upon the degree of narcosis present when the failure of the circulation has reached a point incompatible with the proper nutrition of the vital centres.

The signs of danger have to be taken from the organs which are left intact to give them. Thus, if the failure of circulation takes place at a very early stage, before the general muscular system is narcotised, it will be indicated by accelerated respirations, dilated pupils, and general convulsions resembling epilepsy, the symptoms terminating with deep gasping respirations, ceasing suddenly, as in the following fatal case.[3]

CASE 6.—The patient was a man, aged thirty years, described as not in "robust health." Chloroform was given to him while he was "sitting in a chair," a position conducive to cerebral anæmia; he appeared to be going off comfortably when he began to raise his hands and kept spitting on the lint, and appeared as if about to vomit. Suddenly he was violently convulsed through his whole frame, as if in an epileptic fit. The administration of chloroform was discontinued and he was laid in a semi-horizontal position. The convulsion only lasted for a few seconds, and when it ceased he began to breathe with effort and puffing of the lips, and immediately to gasp irregularly. His pulse was almost imperceptible and intermittent.

If the degree of narcosis is still deeper when the failure of circulation takes place, the anæsthetised muscular system will not respond as a whole, there will be no general convulsions, but only spasm and disordered action of the less narcotised muscles, such as clenching of the jaws and rigidity of the chest muscles, as in the following case, also quoted from Snow.[4]

CASE 7.—The patient, a man aged forty-three years, struggled a good deal. In a short time the inhalation took effect and he began to snore; the chloroform was then removed. The incision was just about to be made when it was noticed that the pulse, previously good, "was gone." At this stage the face was much congested, the jaws were firmly closed, and the pupils dilated. Artificial respiration was begun; in a few minutes he made a long inspiration. This was soon followed by a second, by a third at a longer interval, and at still longer periods by a fourth and a fifth, when all attempts at natural breathing finally ceased. The chest was noticed to be much contracted, to have apparently lost its elasticity, and not to expand when the ribs were forcibly compressed during the artificial respiration—i.e., it remained fixed in a condition of expiration, a state which has frequently been observed.

Failure occurring at the stage of ordinary surgical anæsthesia, when with the exception of the respiratory system all the muscles are relaxed, will be denoted by exaggerated respiratory movements and dilated pupils, as in the cases described in my previous paper. When death ensues without any exaggeration of the respirations it may be assumed that the anæsthetic has been gradually absorbed to such an extent as to paralyse the respiratory centre and render it incapable of expressing its condition of anæmia by the normal method of exaggerated respiratory movements. I think the truth of these conclusions will be confirmed by experiments with a drug which causes sudden paralysis of the circulation, such as hydrocyanic acid or some of the nitrites. The symptoms produced by poisonous doses of hydrocyanic acid are almost identical with those already described as induced by sudden hæmorrhage. There is rapid respiration, convulsions, followed by deep sighing respiration, rapid action of the heart, quick feeble pulse, &c., with general vascular dilatation, all being evidence of anæmia of the motor centres behind the optic thalamus, and manifestly caused by the poison paralysing the circulation. In the case of hydrocyanic acid, as the heart continues to beat for some time, the lesion is evidently a vaso-motor paralysis. By the administration of this drug to animals in different stages of chloroform anæsthesia a similar succession of symptoms could no doubt be produced such as are seen in these various forms of death from chloroform in man. This analogy between the symptoms produced by hæmorrhage and those produced by fatal doses of chloroform also throws some light upon the question of idiosyncrasy, and may explain the occurrence of some fatal cases. In the old bleeding days it was well recognised that certain individuals could not bear loss of blood, however slight, without experiencing serious constitutional disturbances, such as fainting, or general convulsions, which meant that the motor centres of those individuals were so unstable that they were intolerant of any change in their blood-supply. Any alteration in the direction of lowered blood pressure in these persons would be equally productive of similar consequences. May it not easily be the case that in such persons the normal and unavoidable disturbances of the circulation following the inhalation of chloroform would be dangerous and productive of fainting or even fatal syncope? It is clear that in these cases death is not due to primary paralysis of the respirations, but to failure of the circulation.

What is this "failure of the circulation" which causes anæmia of the respiratory and other centres? In my previous paper I suggested that it must be due either to vaso-motor or to cardiac paralysis, and I inclined to the former theory. In some notes on the Hyderabad Chloroform Commission[5] I pointed out that, if those carefully performed experiments proved anything at all, they certainly did prove that the chief danger from chloroform was the induction of vaso-motor paralysis. On looking over the report of the Commission at this interval of time it is difficult to imagine how such careful observers could have ignored the evidence in favour of vaso-motor paralysis as the cause of death in nearly all fatal cases. Professor A. W. Hare, in a recent paper, in which he gives his adherence to the theory of vaso-motor paralysis, shows that the one point upon which all laboratory experiments do agree is that the inhalation of chloroform invariably causes a fall in the blood pressure, and the late researches of Dr. Leonard Hill tend to confirm that view. How far the heart contributes to the fatal result, either by its own inherent weakness or from its becoming affected by the anæsthetic, is a problem still awaiting solution. Dr. Alexander Haig[6] has ably advocated the theory that in the rise of blood pressure which follows the cessation of chloroform inhalation the weakened heart becomes overpowered by the high pressure. This may explain a certain number of cases, but does not apply to the majority.

Considering the experimental evidence, the clinical evidence, the light thrown upon the subject by a comparison of the symptoms with those of death from other well-recognised causes, and the effect of treatment, there can be no doubt that in most, if not all, cases death from chloroform is due to vaso-motor paralysis, or at least the fatal changes are initiated by the fall in blood pressure. The symptoms preceding death vary according to the degree of narcosis that has been reached at the time when the vital centres begin to be affected by the depletion of blood consequent upon the vaso-motor paralysis. Under these circumstances it is of importance to know what means are available for estimating the blood pressure in a patient

[3] Snow on Anæsthetics, p. 190.
[4] Ibid., p. 167.
[5] Medical Chronicle, April, 1890.
[6] THE LANCET, Feb. 23rd, 1895.

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under chloroform. This is a difficult matter, the heart and pulse being in themselves imperfect guides, for as the pressure falls the heart beats more vigorously in attempting to keep it at the normal standard, and what may at first sight appear a good pulse may be only an extra effort on the part of the heart to restore the falling blood pressure. The pulse in chloroform anæsthesia, as in everything else, requires discrimination for its observation and must be considered in conjunction with other signs. Again, the colour or complexion of the patient is not of much help in itself, as there are many instances in which persons who enjoy perfect health have almost corpse-like complexions, and equally many with feeble circulations, or even the dead, may have a colour, as in the case of the child previously mentioned. Probably the best index of the condition of the blood pressure we possess is the circulation in the capillaries, and the best way of testing this is by pressing on the lips or gums and noting the rapidity with which the blood returns after the compression. The circulation in the capillaries is a matter of blood pressure, if the blood returns rapidly the pressure may be regarded as good, if it returns slowly the pressure is low. Some information can also be obtained from the way in which the blood stagnates in dependent parts, such as the dependent cheek or ear, &c.

There are a number of minor signs worthy of study—e.g., movements of the alæ nasi and facial muscles, alteration in rhythm of the respirations, and the like. All of these indicate some change in the condition of the patient. In one instance, in the case of an old man who, towards the end of an operation, was slightly under the influence of chloroform, the first indication of failing circulation was the occurrence of yawning, which led me to lower the head and take measures to stimulate the circulation. Signs such as these are of more value than the mere rate, volume, &c., of the pulse, as they show to what extent the circulation is being efficiently performed and is really effective, and it is well known under what different conditions of pulse an efficient circulation can be kept up.

Note.—Since the above paper was written and sent off Dr. Leonard Hill has published a valuable communication on the Causation of Chloroform Syncope.[7] The conclusions arrived at by Dr. Hill from experimental evidence are, in the main, in accordance with those expressed in the above paper and obtained from a study of the symptoms observed in cases of chloroform syncope.

Manchester.

A CASE OF DOUBLE VASECTOMY; DEATH; PARTIAL NECROPSY.

BY W. FRANK COLCLOUGH, M.B., B.C. CANTAB.,
MEDICAL OFFICER TO THE BRITISH HOSPITAL, OPORTO.

A MAN, aged seventy years, of unusual physique, commenced to have prostatic trouble at the age of sixty-seven years. He had been a free drinker, especially of whisky, but had always led an exceptionally active out-door life. The irritability of the bladder commenced gradually, with attacks every three or four months. I first saw the patient in October, 1894, when he was suffering from an attack of acute cystitis. Confinement to bed, simple treatment, and washing out the bladder had the desired effect, and eventually, with very careful "catheter life," the patient was able to go fishing all day and could walk from ten to fifteen miles. In October, 1894, the prostate was enlarged (both lobes equally to the finger); there was no definite retention, and a large-sized Jacques catheter passed with ease. For the next fourteen months—i.e., until Christmas, 1895—the patient was very comfortable, putting on flesh, and going about his work. In December, 1895, urethritis commenced, and it was necessary to pass the catheter every six hours. The left lobe of the prostate had apparently increased very considerably, and the patient used to complain of pain in the region of the left kidney; this pain was fixed and of a severe, dull, aching character. From this time the patient gradually became worse and worse. He lost flesh, complained terribly of flatulence and dyspepsia (the pain at times was "crippling"), and the urethritis became almost constant. No urine was passed except by the catheter, and there was frequently pain in the perineum and just above the pubes on the left side. Finally the patient's life became almost unbearable, and in the middle of October, 1896, an attack of acute cystitis occurred, with a temperature of 104° F. Treatment improved this, and then, as the patient was comparatively well, double vasectomy was decided upon, in the hopes of relieving the bladder troubles. Mr. Arthur Shillitoe saw the patient with me in consultation. Examination of the prostate was extremely painful; both lobes were enlarged. On the left side the lobe was apparently the size of a large Tangerine orange. On passing the finger into the rectum a definite groove was felt in the mass on the left side, and it was not possible to pass the finger beyond the upper limit of that mass. A large-sized catheter passed easily, and the urine was clear, containing no albumin.

Operation (Nov. 11th, 1896).—The A.C.E. mixture was given by Mr. Arthur Shillitoe. Examination of the left epididymis showed the presence of chronic enlargement. An incision was made over the right cord at the top of the scrotum, as there was a number of enlarged veins. These were separated from the vas; the latter was drawn quite out of the wound, about three-quarters of an inch excised, and the two ends were tied securely with catgut. The wound was dusted with loretin, the edges were brought carefully together and sutured with fishing gut, loretin and boracic acid dusted over, and a sealed dressing of sal alembroth gauze and collodion was applied. The left side was treated in the same way. The patient took the anæsthetic badly, and when "coming to" became wildly delirious, tearing his bandages off, and everything had to be re-dressed. A catheter was passed at 3 P.M., at 7 P.M., and at 10 P.M. During the night the patient passed urine naturally, but with a little pain, every hour. For about six months previous he had never been able to pass urine naturally. On the 12th the temperature was 99° and everything was quite satisfactory. Ten grains of boric acid three times a day were ordered. On the 13th the patient had a good night. He passed urine naturally twelve times in twelve hours with less pain, the quantity passed being three pints and eighteen ounces. The catheter was passed twice. On the 14th the temperature was 99°. The urine contained pus. It was passed freely and naturally and with less pain to the quantity of three pints and six ounces, and was retained once for three hours and twenty minutes. The patient was ordered to sit up in bed. On the morning of the 15th the wounds were dressed. There was primary union. The urine contained a quantity of pus and the patient had diarrhœa. He was ordered to sit up in a chair. In the evening, during the nurse's temporary absence, the patient got up and walked to the closet, which was outside at the end of the balcony, a cold east wind blowing. Here he remained for some time, the result being blood in the urine, a large quantity of pus, and refusal to take food. The bladder was washed out. On the 16th in the morning the patient was flushed, and he complained of flatulence. He had passed a pint and seventeen ounces of urine naturally in twenty-four hours. The bladder was washed out, and two grains of β-naphthol and five grains of bismuth salicylate three times a day were ordered. In the evening the patient was better and the urine clearing. The bladder was washed out. For the first time there was some difficulty in passing the catheter. The temperature was 98°. On the morning of the 17th the patient was better. The temperature was 98·4°. There was difficulty in passing the catheter. The urine was foul but acid. He had passed urine freely and naturally during the night (three pints and four ounces), but owing to the difficulty and pain when the catheter was passed the patient would not permit it to be done during twelve hours. In the evening he was better, and the urine was free from pus. He did not take food well. On the 18th the temperature was 98·6°. A catheter was passed. The bladder was washed out; the residual urine, six ounces, was foul-smelling but acid. The incisions were dressed; the left had quite healed, but the right was rather irritated, and so was the scrotum. The patient had passed three pints and five ounces of urine naturally. On the 19th (the eighth day after the operation) the prostate was examined; the right lobe was about half the size it was before the operation; the left lobe below the groove was distinctly softer, but there was no change in size. The urethra measured roughly by the catheter seven inches. A

[7] Brit. Med. Jour., April 17th, 1897.

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coudé catheter was passed with some difficulty. The urine was in a better state. The patient had had a good night, but suffered slightly from diarrhœa. The temperature was 99·4°. On the 20th the urine was very foul. The patient's appetite was failing. There was less diarrhœa. About two pints of urine had been passed naturally. The temperature was 99·8°. On the 21st the tongue was dry. The bladder was washed out at 6 A.M. The urine was very foul (? ammoniacal). At 11 A.M. the urine was slightly acid, and not so foul; two pints and one ounce were passed naturally. On the 22nd the patient was better. The temperature was 99·2°. The urine was less foul; the quantity passed naturally in twenty-four hours was about two pints. On the 23rd the patient was better. Two pints and five ounces of urine had been passed. On the 24th a large catheter was used. The patient was given a hip bath. He was walking about the room. On this day the nurse left. The patient was fairly comfortable until Dec. 1st, when an attack of acute cystitis supervened, and as there was so much difficulty and pain on passing the catheter, after a consultation on the 3rd with a Portuguese colleague, Dr. Roberto Frias, it was decided to tie in the catheter. The patient was put on milk diet and the bladder washed out every six hours. For a day or so he improved, but on Dec. 14th he became more or less delirious and died in a comatose condition on the 18th. For about two days before death the patient would lie with his legs drawn up, and he complained of terrible pain when they were touched, although the abdomen was quite supple and there was no pain on pressure. This symptom was accounted for after death.

Necropsy.—It was only possible to have a very slight and hurried post-mortem examination. On opening the abdomen

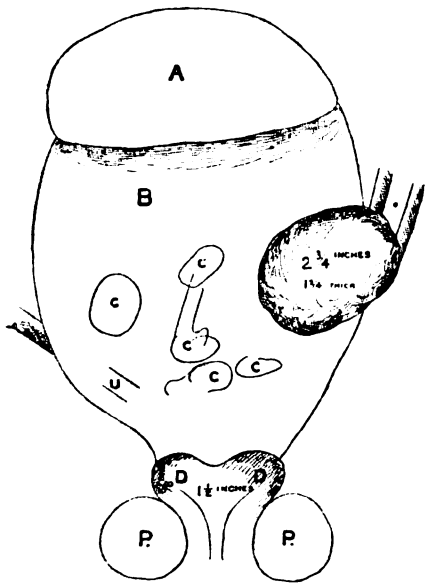


Diagram of bladder laid open by vertical incision viewed from the front. A, The thinned portion of bladder-wall. B, The thickened portion with C, sacculation. U, Opening of right ureter. D, Middle lobe of prostate. P, Lateral lobes of prostate.

the first thing noticeable was that there were several coils of intestine in front of the bladder below, and that the whole of the front surface of the bladder, with the exception of the upper third, was in a state of acute inflammation. The prostate gland was simply a bag of pus, and the bladder itself was anchored down to the posterior wall of the abdomen. The left kidney was with a great deal of difficulty torn away from its surroundings, as it was firmly bound down by recent as well as old adhesions, and to the feel it was simply a bag containing fluid. The left ureter was about the size of one's forefinger. The right kidney was hypertrophied but came away quite easily, and the right ureter was apparently normal. The two kidneys, ureters, and bladder were all taken away for examination. The lower two-thirds of the bladder were very much hypertrophied and thickened; the upper third was just like a bag of parchment. Apparently joining the left ureter was a mass which I at first thought must be malignant growth. On opening the bladder and stretching it out the lateral lobes of the prostate just oozed with pus; the middle lobe was soft and pendulous (suggesting the cause of the difficulty in passing the catheter) and measured an inch and a half from side to side and five-eighths of an inch from above downward. The lower two-thirds of the bladder were sacculated and very much thickened, and there was pus in all the sacculations. The right ureter opened normally, but the left ureter apparently lost itself in the mass of new growth, which was almost circular, measuring two and three-quarter inches in diameter and one and three-quarter inches in thickness (*vide* Figure). Below this mass was a closed-in abscess cavity with thin, smooth walls two and a-half inches in length. The left ureter was very much hypertrophied, about the size of one's forefinger, and lost itself blindly in the mass of inflammatory tissue. The opening could not be found, and it seemed to be quite shut off about two inches from the bladder-wall. There was little or no renal tissue left in the left kidney, which was simply a bag of pus. From the information I gained after death, I should conjecture that the inflammatory growth had been present at least a year, and that probably for many months no urine had passed into the bladder by the left ureter. The condition of old and recent inflammation about the left kidney quite explained the pain the patient had suffered from, as did the condition of the prostate and intestines, the cause of the drawing-up of the legs, although there was no evident peritonitis on the surface of the intestines. Portions of the mass of new growth were sent to the Clinical Research Association. Their report was: "There is no evidence of malignant disease in these portions of bladder. But the muscular coat of the organ is infiltrated with an abundance of dense inflammatory material. There are the indications of fasciculation and sacculation of the bladder, due to the prostatic enlargement. No doubt this induration is due to the chronic cystitis, and by compression of the ureter has caused secondary changes in the kidney."

The clinical evidence of the value of the operation in this case seems to me most satisfactory, for within sixteen hours the patient passed urine naturally. On the eighth day after operation there was definite evidence to the finger that the prostate was not only softer but smaller. I cannot help thinking that the trouble in passing the catheter on the fifth day was due to the middle lobe becoming softer, and therefore acting as a valve, preventing the admission of the catheter, because at times the instrument would pass with the greatest ease. I do not see how the condition of the bladder and left kidney could have been recognised before death, and with my present knowledge my amazement is that the patient lived as long as he did.

Oporto, Portugal.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THYMOL AS A VERMIFUGE.

BY F. M. SANDWITH, M.D. DURH., M R C.P. LOND,
PHYSICIAN TO KASR-EL-AINI HOSPITAL.

FOR many years I have been using thymol as the most perfect destroyer of the ankylostomum duodenale and any accompanying parasites in the intestines of my Egyptian patients. Sometimes it takes many doses of the drug to rid a man of his last remaining nematode, but the following case ought to encourage any doubters to persevere with the thymol treatment.

A man, aged thirty-three years, was admitted from the out-patients on April 29th, 1897. He was a peasant from Assiout, but for the last two years he had worked in Cairo. He was found to have anæmia from ankylostomiasis of twelve years' duration, and for the last year he had had pellagra. On May 2nd he was given sixty grains of thymol in two doses upon an empty stomach followed by a purge. In the fæces that afternoon were found 523 specimens of ankylostomum duodenale besides 55 oxyurides. On the 7th the thymol treatment was repeated. No ankylostomum duodenale was found, but there were 3 oxyurides. On the 17th the thymol treatment was employed for the third time,

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but no worms were passed and no eggs were found microscopically. The three examinations in the case of this patient were made by Professor Looss, of Leipzig, thus precluding all error, and it is fair to say that the cause of this chronic disease was removed by sixty grains of thymol. The patient was extremely anæmic on admission, but three weeks later was much less so, owing to the administration of iron, rest, and better food. His weight remained at 138 pounds before and after treatment. The symptoms of pellagra were a slight roughness of skin on the extensor surface of the hands, forearms, elbows, feet, legs, and knees, the tongue pale and denuded of epithelium, and increased knee-jerks. He was sad and melancholy-looking and unable to smile, and there was tenderness on pressure over the spinal nerves on both sides of the fifth dorsal vertebra. Thymol has, of course, no direct effect upon the poison of pellagra.

Cairo.

A CASE OF A FOREIGN BODY TRAVERSING THE ALIMENTARY CANAL.

BY MAURICE EDEN PAUL, M.D. BRUX., M.R.C.S. ENG., L.R.C.P. LOND.

A BOY, aged three and a half years, swallowed a copper ring on the evening of June 26th, choking and cyanosis ensuing for a short period after it had left the mouth. When I first saw the child, half an hour later, he was sleeping tranquilly. The symptoms had indicated that the ring was a tight fit in the post-tracheal portion of the œsophagus; but I trusted to the well-known rule that any object of simple shape that passes from the mouth to the stomach is not likely to stick lower down, and my confidence was rewarded by the passage of the ring, embedded in a mass of fæces, on the morning of July 1st. The patient had been entirely free from inconvenience while the foreign body was in his alimentary canal.

It is surprising how readily such objects as this pass through the ileo-colic orifice. The orifice is described by Quain as a slit about half an inch in length; and yet in this case a ring only a shade less than three-quarters of an inch in diameter passed without difficulty in a little child.

Nagasaki, Japan.

SEVERE SYMPTOMS FOLLOWING THE ADMINISTRATION OF A SMALL TEASPOONFUL OF CAMPHORATED OIL.

BY FRANCIS S. TIDCOMBE, L.R.C.P. LOND., M.R.C.S. ENG., L.S.A. LOND.

A MALE child, aged one year and ten months, was given a small teaspoonful of camphorated oil instead of "cough mixture." When the mistake was discovered (some two or three minutes afterwards) the nurse gave the child half a teacupful of cold water with a teaspoonful of salt in it. The child did not vomit or show any symptoms until about twenty minutes later, when he fell on the carpet "in a fit." The fit lasted "a few seconds," and the child remained unconscious. The nurse picked him up and carried him to my house (about two minutes' run). On the way he vomited. When I saw him he was quite unconscious, the extremities were cold, the breathing was deep and slow, there was hardly any pulse at the wrist, the eyes were half closed, and the pupils were widely dilated. I applied hot sponges over the heart and administered a weak current of electricity. He rapidly revived and was again sick. As soon as he could swallow I gave him a copious draught of warm milk-and-water, which speedily returned. Within half an hour he was able to walk. He was sick twice more after drinking milk, and was decidedly drowsy all day. The strength of the camphorated oil was about 1 in 4, so he must have taken about 15 grains of camphor.

Guy and Ferrier describe two cases, in one of which 20 grains caused severe symptoms in an adult, and in the other 30 grains proved fatal in a child aged eighteen months. Considering the very frequent use of camphorated oil as an application to the chests of infants and young children it seems to me that it ought always to be sold in distinctive bottles and labeled "Poison."

Bognor.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

NORTH LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.

A CASE OF "CHRONIC MALIGNANT ENDOCARDITIS"; NECROPSY.

(Under the care of Dr. G. D. PIDCOCK.)

FOR the notes of the case we are indebted to Mr. C. Stanford Read, resident medical officer.

A man, aged thirty-four years, was admitted to the hospital on March 2nd, 1897, under the care of Dr. Pidcock, complaining of weakness and shortness of breath. The patient's past history was as follows (some of the details of it have been kindly supplied by the medical practitioner under whose care he had previously been). He had rheumatic fever when five years of age, and subsequently had been subject to rheumatic pains in various parts necessitating his giving up work for a short time. He nevertheless had fair health till September, 1896, when he had to give up his work on account of progressive weakness, cough, occasional vomiting, pains in the chest, and shivering at times. He had had on two or three occasions attacks of pyrexia of a remittent type. Diarrhœa and vomiting were marked symptoms at times, and this his medical attendant had put down to errors in diet in one who was an invalid. In the course of his illness he had pleurisy (? splenitis), bronchitis, and pneumonia, and always the cardiac trouble, but no œdema at any time. On admission the patient looked very haggard and worn, with a slight malar flush on each cheek. The respiration was 20 per minute; the pulse was 108, of medium size, somewhat irregular in force and rhythm, and of fair compressibility; and the temperature was normal. His lungs seemed to be normal, except for some small crackling *râles* at the extreme right base. On examination of the heart the apex beat was seen and felt in the fifth intercostal space (three-quarters of an inch outside the nipple line), the impulse being markedly heaving. On percussion there was distinct evidence of considerable hypertrophy and dilatation of both sides of the heart. There was a well-marked thrill to be felt all over the cardiac area, the exact timing of which was difficult—at any rate, it was mostly systolic. It was especially marked in the second left intercostal space. On auscultation there was heard a long, loud murmur, which it was also very difficult to time on account of the irregular action of the heart. No second sound was detected at the apex. At the base a distinct to-and-fro murmur was heard, especially loud over the second left costal cartilage, where it had a very superficial character. Further examination revealed the fact that the systolic murmur was audible over the whole of the pulmonary area. The other organs presented no abnormalities. The urine was of specific gravity 1018, acid, and contained no albumin or deposits. For some time the patient made good progress; he felt better generally and put on weight, and the heart's action became much more regular under treatment. Pain in his right side was occasionally complained of. All went well till March 24th, when he complained of diarrhœa and sickness accompanied with some abdominal pain. On the 25th he was sick three times and the bowels were opened five times, the stools consisting mostly of undigested milk. On the 26th he was sick twice and the bowels were opened seven times. The pulse was very soft, but only slightly irregular. On the 27th the bowels were opened seven times, the motions being rather foul. There was great tenderness all over the abdomen. The heart condition was the same, but the thrill was not so marked. On the 28th the sickness stopped. He felt very weak. The bowels were opened four times. He complained of giddiness and not being able to see

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well. The abdominal pain was not so acute, but the abdomen was still very tender to palpation. There was a slight icteric tinge in the conjunctivæ. On the 29th there had been no more diarrhœa or vomiting. The patient was gradually sinking; his face was somewhat cyanosed, with the icteric tinge more marked. Great abdominal pain occurred till within a quarter of an hour of death.

Necropsy.—At the post-mortem examination the pericardium was found to be normal, and its cavity contained no excess of fluid. The heart was tremendously hypertrophied, but this was most marked on the right side. The pulmonary artery was seen to be enormously dilated. The pulmonary valves were much diseased and quite incompetent, one valve having been quite destroyed and the others being thickly studded with sloughy vegetations. Inside the right ventricle were vegetations and ulceration, just in the position where the valve that had been destroyed might have flapped back and infected the area. The other valves of the heart were healthy, but the mitral and tricuspid orifices were both dilated, especially the former, and it is probable that mitral regurgitation had taken place during life. The lungs were congested, but otherwise normal; no signs of infarcts, recent or old, were found. From the cardia to the rectum there were signs of a most severe gastro-enteritis, fully accounting for the abdominal pain, diarrhœa, and vomiting. The mucous membrane of the stomach was somewhat atrophied. No signs of emboli or ulceration were observed anywhere in the alimentary canal. The liver and spleen were congested, but otherwise they were normal.

Remarks by Dr. PIDCOCK.—This case presents many features of interest. During the patient's stay in the hospital his temperature, taken twice daily, never rose above normal; nor was there during the last two months of his life or on post-mortem examination any evidence of multiple embolism. The absence of both these most typical signs of ulcerative endocarditis is very remarkable. During his illness (commencing in September, 1896) he certainly had pyrexial attacks, rigors, and occasionally coloured sputum and perhaps an attack of splenitis, all of which were doubtless due to embolism. Still, he had not many of the most usual signs or symptoms of infarction, such as hæmaturia, retinal or cerebral hæmorrhage, or blocking of any of the arteries of the limbs, &c. He had an attack of acute rheumatism at five years of age, which may have affected the endocardium of the right ventricle and pulmonary valves, or, what is even more probable, he may have had endocarditis of the right ventricle during fœtal life. Whether this was the case or not, I think there can be little doubt that the endocardium of the right ventricle and pulmonary valves were infected during the attack of pneumonia which he appears to have had in September, 1896. The intensity of the gastro-enteritis from which he succumbed was also very remarkable. From the stomach downwards the mucous membrane was intensely congested. I cannot see how it could have been caused by emboli, and one would hardly expect an error in diet to have been sufficient cause, and yet nothing else could be discovered to account for it.

DERBYSHIRE ROYAL INFIRMARY.

A CASE DIAGNOSED AS ACUTE INFLAMMATION OF THE PANCREAS, IN WHICH RECOVERY TOOK PLACE.

(Under the care of Dr. MILNES.)

THOUGH cases supposed to be examples of acute pancreatitis were described many years ago by several observers, as by Bécourt,[1] yet, as these opinions were chiefly based on naked-eye appearances found at post-mortem examinations, it is probable that in many of the cases the abnormal appearances were the result of decomposition rather than of inflammation. In fact, doubts even of the existence of pancreatitis arose, and so late as 1869 Grisolle wrote[2]: "We have still absolutely no exact knowledge of either acute or chronic pancreatitis." More recently, however, very many cases have been reported in which certain definite clinical manifestations have been found associated with unmistakable evidences of inflammation of the pancreas, as revealed at the necropsy. Unfortunately, in the vast majority of the cases the making of a diagnosis has only been possible after death, but in a certain number, where the inflammation of the organ has gone on to suppuration, the abscess so formed has been evacuated by surgical means, and recovery has followed. Many have doubted whether recovery is possible in cases of acute pancreatitis, but there can be little hesitation in admitting that such cases do occur. H. Mollière[3] expressly states that at least three cases have been observed in which the inflammation has subsided. Until the disease can be readily recognised by its symptoms, some doubt must always be present as to the accuracy of a diagnosis which has not been verified by a post-mortem examination. Judging, however, from similar inflammations in other organs, it is extremely probable that the disease is much more frequent than is usually thought, and that many cases are missed because they end in recovery.[4] The diagnosis in the following very interesting case is perfectly justifiable, and is the only one which will account for the course of the disease.

The patient, a man aged twenty-one years, was admitted into the Derbyshire Royal Infirmary on July 14th, 1896, complaining of abdominal pain and vomiting. He had always been a strong and healthy man of sober habits. His work involved exposure to great variations of temperature, and the air he breathed was usually loaded with foul gases. No history of any previous illness could be obtained. Three weeks before admission he began to suffer from pain in the lower part of the abdomen. This usually came on when he started to work after a rest and wore off as he worked. According to his own expression "his belly felt hard." About the same time the bowels became obstinately constipated. He continued to work until a few days before admission, the pain getting worse and his "belly getting harder" all the time. He took a certain amount of purgative medicine without much effect; but he did not persevere with it, and he could not remember when the bowels were last moved. On the night before admission the pain suddenly became violent and he was seized with urgent and profuse vomiting, which continued till he came to the infirmary. Dr. Cassidi, who saw him before he came in, described his condition as one of extreme collapse and as strongly suggestive of gastric or intestinal perforation. On admission, on July 14th, 1896, the patient's temperature was 102·4° F., and the usual symptoms of pyrexia were present; his pulse was 116, full, and bounding; the tongue was dry and brown; and the skin was hot and dry. The mind was quite clear, but the face was much drawn and the expression that of great suffering. He referred all his pain to the region of the epigastrium, and the condition of the abdomen was such that he could not pass urine on account of the pain caused by the attempt to micturate. The legs were not drawn up and he lay flat on his back, maintaining his posture with much stiffness. On examination the abdominal wall was found to be retracted to an extreme degree, so that the abdomen presented a concave instead of a convex surface in nearly every direction. It was stiff and quite unmoved by respiration, which was entirely thoracic and not at all hurried. The abdomen was universally and acutely tender to the touch, especially at the upper part, where even a feather-weight pressure caused severe pain. The urine, drawn by catheter, had a specific gravity of 1030; it was acid, highly-coloured, and contained a trace of albumin, but no sugar. No abnormal signs could be detected in any other organ. A third of a grain of morphia was injected hypodermically, and poppy fomentations were applied to the abdomen. Peptonised milk was ordered to be given in small and frequent doses, also four ounces of brandy daily. At 8 P.M. the pain was still severe, and an eighth of a grain of morphia was injected. On the 15th the patient passed a fair night, the pain being less severe; there had been no more vomiting, and no action of the bowels had occurred. The pulse was 110. The abdomen was still retracted, but was less tender to the touch. He was drowsy from the morphia. On the 16th he had three severe attacks of spasmodic pain in the night, which were relieved by poppy fomentations. He still complained of nausea, but there had been no vomiting. He had no pain while lying quiet in bed during the day, and the abdomen was less tender in the lower half. On the 17th he had one severe attack of pain in the night, accompanied by vomiting of bilious material. A sixth of a grain of

[1] Recherches sur le Pancréas.

[2] Pathologie Interne.

[3] Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques, vol. xxv., p. 718.

[4] R. H. Fitz, Medical News, vol. liv., p. 310.

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morphia subcutaneously appeared to give relief. There was almost no tenderness in the lower half of the abdomen, but the tenderness was still acute in the whole abdominal area above the level of the umbilicus. An enema of warm water brought away a small quantity of hard fæces. On the 18th another attack of pain in the night was again relieved by morphia injection. He still had nausea, but no vomiting. An enema was given, but was returned unchanged. A second enema brought away a good stool. On the 19th the patient had two attacks of pain in the night, one severe, and he also had two attacks of vomiting. His tongue was much cleaner, and the pulse was of good volume and averaged 100. The enema was repeated and acted well; no fat was noticed in the stools, although it was looked for every time the bowels acted. In the evening of this day the patient was suddenly seized with collapse and gasping respiration, the pulse becoming almost imperceptible. A second attack followed the first and was much more severe, and death appeared to be imminent. A hypodermic injection of three drops of liquor strychninæ seemed to revive him and he quickly recovered. On the 20th he had two further attacks of faintness during the night, but they were not nearly so alarming as the two before noted. He also had several attacks of pain, but they were not severe. He had been much better since 4 A.M. The abdominal tenderness was markedly less and was now limited to the epigastric region. One spot about two inches above and to the right of the umbilicus was specially and acutely tender. There was also tenderness in the back on pressure just below the twelfth rib on both sides of the spine. The abdominal walls were still retracted and the muscles were rigid, but not so markedly as on admission. The question of surgical interference was seriously considered, but it was decided to wait. A simple enema was ordered to be administered daily. Chicken tea was ordered to be given in addition to the peptonised milk. On the 22nd, though there had been slight vomiting on the previous day, in other respects there was great improvement. His tongue was nearly clean, the pulse was only 76, and there was no fever. The abdomen was still flat and without movement, but it was quite soft and could be handled freely without pain, except at the one spot above and to the right of the umbilicus. On the 22nd and 23rd the patient had a severe attack of pain each night, culminating in vomiting, which gave relief, and on the 24th three minims of dilute hydrocyanic acid with ten grains of bicarbonate of soda were ordered every six hours. No pain or vomiting occurred after this. The daily enema acted well, but every night the temperature continued to rise until on the 27th it reached 102·4°. The enema was then discontinued, and the evening rise of temperature quickly subsided. After six clear days the bowels began to act without artificial stimulation. On the 30th all tenderness was gone from the abdomen, which, however, was still rather flat, and did not move freely with respiration. From this date recovery was uninterrupted, and he was discharged on Aug. 31st, 1896, quite well.

Remarks by Dr. MILNES.—Those cases in which the existence of acute pancreatitis has been proved, either on the operating table or in the post-mortem room, have presented a combination of the symptoms of acute intestinal obstruction with those of perforation of the stomach or bowel. The cardinal symptoms appear to be (1) violent abdominal pain of a spasmodic character; (2) constipation, usually complete; (3) vomiting; (4) recurrent attacks of collapse during one of which the patient usually dies; and (5) the onset is generally sudden, but in a few cases the existence of colicky pain has been noted for a short time before the attack. All these symptoms were present in the above case except the fatal termination. With the exception of the case recorded by Osler, where the diagnosis was made during an exploratory laparotomy, I am not aware of any case of recovery after a diagnosis of acute pancreatitis. Osler's case, however, proves that recovery may take place. In the present case the diagnosis of acute pancreatitis was suggested to me early in the patient's illness by the acting house physician, Mr. Miles. After mature deliberation and consultation of all accessible reports I have come to the conclusion that this diagnosis is the only one that offers a reasonable explanation of the symptoms. The alternatives appear to be—(1) peritonitis of the so-called idiopathic character; (2) ulceration of the duodenum without perforation, causing sudden acute peritonitis; and (3) the passage of gall-stones, causing acute peritonitis. Intestinal obstruction and perforation of viscera are put out of the question by the progress of the case. 1. It is now generally recognised that mere peritonitis is not a sufficient explanation of any illness. There must be some local cause. In this case the local cause of the peritonitis which existed was evidently something in the upper part of the abdomen. It is difficult to suggest any local cause for acute general peritonitis in this region which would not have made its presence manifest by some further symptoms. For instance, perforation or sub-phrenic abscess must have led to events such as never occurred in this case. 2. Ulceration of the duodenum was naturally suggested by the situation of the point of maximum tenderness. The whole course of the disease, the rapid and complete recovery, and the fact that the man was quite well till a short time before the acute symptoms set in, all make against a disease which must have some period of chronicity in its course. The transient nature of the attacks of collapse and the absence of melæna show that these phenomena were not due to hæmorrhage from an ulcer. 3. Taking all the symptoms into consideration, it appears that the only way in which gall-stones could have caused this illness was by a stone becoming lodged low down in the common duct and there setting up ulceration and acute general peritonitis. If this were the case there must have been jaundice, and something must have been heard afterwards of the stone. This latter could hardly have escaped notice owing to the very strict watch kept on the stools throughout the case. Supposing this case to be accepted as one of pancreatitis, I think it adds one or two useful indications for diagnosis and treatment of future cases of a similar character. The local tenderness near the umbilicus, and still more the tenderness below the lowest ribs in the back may be sought for with advantage in doubtful cases. The history of this case further teaches us to leave the bowels alone. After admission of this patient into hospital no attacks of collapse occurred until we began to worry the bowels with enemata. Then, later, the evening exacerbations of temperature seem to have been due to the same cause, at any rate they subsided when the enemata were stopped. Among the cases recorded one is related in which fatal collapse quickly followed the administration of a purgative.

Reviews and Notices of Books.

A System of Medicine. By Many Writers. Edited by THOMAS CLIFFORD ALLBUTT. Vol. III. London: Macmillan and Co. 1897. Pp. 983. Price 25*s*.

HAVING referred on previous occasions to the object and nature of the System of Medicine, edited by Dr. Clifford Allbutt, our review of the third volume does not need any introductory remarks. The first part of this volume deals with "General Diseases of Obscure Causation," such as Rheumatism, Rickets, Acromegaly, Gout, Diabetes, &c., whilst the second contains papers on Diseases of Alimentation and Excretion.

The first article is on Acute Rheumatism or Rheumatic Fever, and is from the pen of Dr. Church. Acute rheumatism, as Dr. Church remarks, is a disease more easily described than defined, and he therefore considers the disease as equivalent to a synovitis accompanied by pyrexia and generally multiple. Such a description shows the courage of the writer, for by it he admits that the exact nature of the disease has not yet been discovered, although it is so widely diffused and occurs with such frequency, as is shown by some carefully compiled statistics accompanied by tables contained in appendices to the paper. In speaking of the etiology Dr. Church remarks that although no satisfactory evidence has as yet been procured of the constant presence of any single specific micro-organism, yet in not a few of its features the whole course of rheumatic fever resembles an infective disease; moreover, the curves of its mortality statistics in this country approximate very closely to those of pyæmia, puerperal fever, and erysipelas—diseases which are certainly associated with specific micro-organisms. The

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evidence in favour of the chemical theory of acute rheumatism is considered to be unsatisfactory, as is also that in connexion with the nervous theory. Attention is drawn to the influence of fatigue and exposure in a dry and otherwise salubrious climate, as shown by the military returns during the Egyptian and Cape wars. The subject of hyperpyrexia is also fully dealt with.

The section on "The Acute Rheumatism of Childhood" is by Dr. Cheadle whose experience in the diseases of children makes his remarks of great value. He first draws attention to the differences between rheumatism as it occurrs in childhood and as it appears in maturer life, especially as regards the occurrence of cardiac complications. He also remarks that the series of rheumatic events is often spread out and scattered over a term of months or years, so that the history of a rheumatism may be the history of a whole childhood. At one time, for instance, there may be an endocarditis, a chorea at another, and an arthritis at another, without any further coincident manifestation of the disease. The difficulties of diagnosis are pointed out, especially as regards mistaking infantile scurvy for acute rheumatism. Dr. Cheadle also argues that mitral stenosis is the special product of the sub-acute, slow, recurrent course which is so characteristic of endocarditis in childhood; but the auscultatory evidences usually do not appear until some years later, when the disease is advanced and the mitral orifice has become permanently narrowed. Another exceptional and special feature of acute rheumatism in children is the development of subcutaneous nodular growths of fibrous tissue. This subject is most ably dealt with, stress being laid on their connexion with changes going on in the fibrous tissues of the cardiac valves or pericardium.

Dr. Archibald Garrod is responsible for the next three articles—namely, those on Chronic Rheumatism, Muscular Rheumatism, and Gonorrhœal Rheumatism. Dr. Garrod's writings are usually characterised by plainness and absence of unnecessary details, and these articles are no exception to the rule. The sections on Treatment are particularly worthy of perusal. The author favours the hypothesis that the so-called gonorrhœal rheumatism is due to a specific systemic infection of the gonorrhœal virus.

The important subject of Rheumatoid Arthritis was undertaken by Dr. Kent Spender, but before he had completed or revised his essay he was compelled to relinquish his task owing to a heavy affliction. Dr. Garrod undertook to revise and finish the work. A full description is given of bacterial investigations which have been made of the fluid from the diseased joints, and these would seem to show that some, at any rate, of the cases included under the name of rheumatoid arthritis actually owe their origin to a specific organism. Attention is drawn to the muscular atrophy of rheumatoid arthritis, which is often independent of the mischief in neighbouring joints. Dr. Spender also describes minutely the disturbances in the skin which he has observed in patients suffering from this disease, and which he believes to be an important diagnostic sign in doubtful cases. A short paper on Rheumatoid Arthritis in Children by Dr. G. F. Still is interesting.

An excellent account of Rickets is given by Dr. Cheadle. The morbid anatomy and histological features are fully and clearly described, as are also the changes which the organs of the body generally may undergo in connexion with this condition. The author sums up his conclusions thus: "Rickets is a disease in which all the leading structures of the body suffer both from defective and from perverted nutrition. This is mainly the results of faults of diet, and consists in a deficiency of certain elements in food. ..... The chief and constant defect appears to be an insufficient supply of animal fat, and therewith also, in certain cases, a deficiency of earthy salts in the form of phosphates; at the same time, if animal proteid be deficient the disease is intensified. ..... The disease is modified in character by the concurrent existence of congenital syphilis or of scurvy."

Mr. Anthony Bowlby is the author of articles on Osteomalacia, Osteitis Deformans, Acromegaly, and Hypertrophic Pulmonary Osteo-arthropathy. Mr. Bowlby is well qualified to write on these conditions, and the only fault we have to find with the articles is that they are too short. Our knowledge of the latest of joint affections with the unwieldy name of hypertrophic pulmonary osteo-arthropathy has considerably increased since Mr. Bowlby wrote his contribution, the x rays and more necropsies having materially altered the views formerly held as regards its pathology.

One of the best articles in this volume is that on Gout, by Sir William Roberts whose researches on the chemical pathology of the "gouty state" have added so much to our knowledge. In his present contribution the author has summarised what is known of the symptoms, etiology, morbid anatomy, pathology, and treatment of gout, and, needless to say, the result is admirable. He lays stress on the conditions "uratæmia" and "uratosis." Uratæmia is not confined to gout, whilst uratosis is. Uratosis cannot occur, so far as is known, without coexisting uratæmia, but it is certainly true that uratæmia may exist for long periods without provoking the occurrence of uratosis.

Dr. Robert Saundby's contribution on Diabetes Mellitus is also a valuable one. His remarks on treatment are especially worth reading. Practitioners will do well to note his directions as to the management of diet. The pathology of the disease is well discussed, and the author's observations on the condition of the pancreas are an addition of considerable value. Phenyl-hydrazin is recommended as the best test for sugar.

Diabetes Insipidus is described by the late Dr. Ralfe whose death has deprived the profession of one of the best authorities on urinary disorders from a physician's point of view. He discusses the classification of diabetes insipidus by Willis and Parkes, and then refers the increased excretion of urinary water and of normal urinary solids respectively to two classes: (*a*) that in which the aqueous superflux is most marked—hydruria; and (*b*) that in which the drain of one or more of the solid constituents of the urine is persistent—polyuria. Each of these divisions is then fully described, showing a large amount of original observation and research.

Dr. Howship Dickinson writes an interesting paper on Lardaceous Disease. Especially interesting are the tables analysing the causes of this condition. The author's sketch of the etiology of the disease is based on a collection of 201 cases obtained from the post-mortem and case books of St. George's Hospital. Suppuration is presented in 167 of the cases—that is, in over three-fifths. Syphilis was the ostensible cause in twenty-three, or in about one-ninth.

Passing to the second division of this volume we come to "Diseases of Alimentation and Excretion." The "General Pathology of Digestion" combines the writings of the late Dr. Ralfe and Dr. W. Soltau Fenwick, whilst the "General Pathology of Secretion" is in the able hands of Dr. J. R. Bradford. Space will not allow us to comment on these two sections, but Dr. Bradford's remarks on the Thyroid Gland will doubtless receive considerable attention.

A good deal of original observation is found in Mr. Louis Cobbett's contribution on Shock and Collapse, whilst Dr. W. A. Wills's description of Diseases of the Mouth is fully up to date. Dr. H. D. Rolleston has evidently taken a good deal of trouble with the rather unsatisfactory subject of Diseases of the Œsophagus. With the exception of stricture of the gullet very little is known concerning such diseases, but œsophagitis deserves more attention than is usually devoted to it in ordinary text-books. Dr. Lauder

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Brunton's writings on digestive disorders are well known; needless to say, therefore, that his article on Dyspepsia in this volume will well repay perusal, especially his remarks on treatment. Dr. W. Soltau Fenwick contributes a short paper on Dyspepsia in Childhood, to which subject he has devoted much attention. The subjects of Acute and Chronic Gastritis are dealt with by Dr. Brunton, and then follows a series of papers on rarer morbid conditions of the stomach by Dr. R. F. C. Leith. The diseases referred to are scarcely mentioned in most books. Dr. Leith gives a full description of their symptoms and pathology. He is to be congratulated on the success with which he has carried out his difficult duties. He first describes Phlegmonous Gastritis—a severe inflammation passing on to purulent infiltration of the stomach wall; next Membranous Gastritis; then the changes produced in the stomach by the ingestion of poisonous doses of various substances (chiefly metallic) or Toxic Gastritis; then follows Gangrene of the Stomach; and, finally, Cirrhosis of the Stomach.

Dr. J. R. Stocker contributes an able article on Seasickness. He proposes an entirely new theory as to the cause of this unpleasant malady; he says: "The difference, then, between a good sailor and a bad one appears to me to be mainly in the difference in their mode of respiration, and the cause of the complaint seems to be seated neither in the stomach nor in the brain, but in the throat."

From his own personal experiences Dr. Clifford Allbutt is able to provide an interesting discussion on Mountain Sickness, but the reports of Sir Martin Conway, Mr. Whymper, and Mr. Clinton Dent are duly recorded. Dr. Allbutt considers that deprivation of oxygen suffices to explain all the essential phenomena of mountain sickness. Dr. Allbutt also writes on Neuroses of the Stomach and Dilatation of the Stomach. His vivid descriptions of symptoms drawn from cases which have been under his own observation are particularly attractive, and both articles are of the highest merit, containing much original thought. We would especially draw the reader's attention to the pathology and treatment of dilatation of the stomach. Carefully compiled articles on Ulcer of the Stomach and Ulcer of the Duodenum, by Dr. Dreschfeld, follow and contain many practical hints as to treatment drawn from the writer's own experience. Dr. Hale White writes on Tumours of the Stomach, primary carcinoma naturally occupying most of the space. The difficult subjects of subphrenic abscess and diaphragmatic hernia are dealt with by Dr. Lee Dickinson. Dr. W. S. Playfair contributes a useful paper on Abdominal Diagnosis from a Gynæcological Standpoint. Mr. Frederick Treves's paper on Enteroptosis concludes this section of the book.

Diseases of the Peritoneum hold the next place, and Mr. Treves opens the subject by an excellent contribution on Acute Peritonitis. Mr. Treves's style of writing is well known, and this paper will in no way detract from his reputation as an author who knows what he is writing about and has the power of conveying his knowledge to others.

The next four articles are by Dr. Allchin: Acute Peritonitis of Undetermined Nature, Chronic Peritonitis, Tubercle of the Peritoneum, and New Growths of the Peritoneum. These are fully up to the standard of the other papers already noticed, and want of space alone prevents us from commenting on each of them separately. They will be found most useful for reference, containing, as they do, all the latest views on the subjects described.

In the section of "Diseases of the Bowels" are several well-written articles: Physiology of Fæcal Evacuation, by Dr. Lauder Brunton; Diseases of the Small Intestine, by Dr. H. D Rolleston; Colic, by Dr. Hale White; Diarrhœa, by Dr. Lauder Brunton; Diarrhœas of Children, by Dr. Eustace Smith; Sprue or Psilosis, by Dr. Patrick Manson; Intestinal Obstruction, by Mr. Treves; Diseases of the Colon, by Dr. Hale White; and the Differential Diagnosis of Diseases of the Anus and Rectum, by Mr. Herbert Allingham.

Medical Climatology. By Dr. S. EDWIN SOLLY, Late President of the American Climatological Association. 1897. London: J. & A. Churchill. Pp 470. Price 16*s*.

THIS is a very complete work on Medical Climatology, well written and containing a large amount of information. The whole subject is dealt with in a scientific spirit, and it is very far from being simply a guide-book or a mass of statistics. The subject matter is divided into three sections. The first of these deals broadly with the principles of medical climatology, and describes the close connexion of this science with physics, meteorology, ethnology, and "geographical pathology." The second section treats of the therapeutics of climate in relation to disease, and it is this section that will especially interest English physicians. As the author states in his preface, no attempt has been made under this head to prescribe special climates for special diseases, and it is obvious that as considerations so many and so different enter into the adaptation of the individual case to the particular climate, this would be a futile effort. The third section is devoted to a description of special climates as typified in selected resorts, and includes comparative and other tables.

The first division is brief, but to those who study climatology will prove interesting. The second section deals mainly with the climatic treatment of pulmonary tuberculosis; this is natural, as being the most important of these diseases in which climate has to be especially considered. We have never read in any other work a more complete consideration of the effects of climate upon this disease than is given by Dr. Solly. He discusses the subject upon a pathological basis and shows the effect upon the tuberculous process of pure air, sunlight, sunheat, temperature, humidity of the soil and air, variability of temperature, mobility of atmosphere, altitude, &c. The actual changes in the blood produced by altitude are then noted, and some remarks follow on the general therapeutic effects. The effect of climate upon pulmonary tuberculosis in its various stages is described, and general conclusions are arrived at as to the class of case suitable for various resorts. Other forms of disease influenced by climate are also described.

The section of the work devoted to an account of special climates is occupied mainly with a very full consideration of American climates, 182 out of 266 pages being thus taken up. The British Isles are dealt with in about eleven pages; most of our health resorts are, indeed, mentioned, but only a few lines are devoted to each. For English medical men who have patients who cannot leave England, this is disappointing. The part dealing with the Riviera is limited to five pages. The American climates, on the other hand, are most excellently described and illustrated with maps, the "relief maps" especially being most beautifully executed. Taking the book as a whole, we consider it to be a good work of reference on climatic resorts, as well as one conveying much information on climate considered from a scientific point of view.

Crime and Criminals. By Dr. J. SANDERSON CHRISTISON. Chicago: The W. T. Keener Company. Pp. 117. 1897. Price $1.

THIS book consists of a series of sketches of various types of criminals, and is illustrated with numerous copies of photographs of criminals and lunatics, and also diagrams of brains. Three essentially different classes of delinquents are described, viewed from a psychological standpoint—viz., the insane (defective in reason), the moral paretic (defective

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in self-control), and the criminal proper (defective in conscience). Twenty-three cases are described illustrating the characteristics of criminals imprisoned for various crimes — from picking pockets to murder. For those interested in the so-called new science of criminology this book will have a considerable attraction. It is well written, although the American expressions occasionally strike an English reader as being quaint. For instance, Case 19 is a "safe-blower" now serving his third term in the penitentiary at Joliet; it is stated that the prison officers "regard this prisoner as one of the brainiest and smartest now in the prison."

Manual of Mental Diseases. By A. CAMPBELL CLARK, M.D. Edin., F.F.P.S. Glasg., Mackintosh Lecturer on Pyschological Medicine, St. Mungo's College, Glasgow; Medical Superintendent of Lanark County Asylum, Hartwood. University Series. London: Baillière, Tindall, and Cox. 1897. Demy 8vo, pp. 484. Price 10*s.* 6*d.*

DR. CAMPBELL CLARK has no faith in the stereotyped apology with which so many books are prefaced, but tersely states that his work must stand or fall on its merits. Merits it has many, and defects not a few. The author makes the somewhat sweeping assertion that the pathology of insanity does not exist and has yet to be written. He has the courage of his opinions, and has ruthlessly excluded all reference to pathological data. In this respect we venture to think he has erred. Comparisons are proverbially odorous, but we could have wished that the author had followed more closely the lines of Dr. Clouston's work on Mental Diseases, in which the subject of pathology occupies a deservedly prominent place. The influence of the teaching of this distinguished alienist is evident throughout the present manual; his opinions are frequently quoted and as freely acknowledged. No doubt Dr. Clark is well advised in omitting from his work the highly speculative and exaggerated theories which have been advanced regarding the pathology of many mental disorders, but surely the pathology of such a disease as general paralysis is sufficiently well known and established to merit inclusion even in a practical text-book like this, which is professedly written in the main for the use of students. In its clinical aspect the work is deserving of much praise; the cases detailed have evidently been selected with care, but we cannot express unqualified approval of the dialogue method which has been adopted in several instances, nor can we say much in favour of the photographic illustrations.

The introductory chapters are devoted to the study of mental constitution and mental character, including mental health. Insomnia and its treatment are dealt with at some length, and this section will repay perusal. The part dealing with causation, prognosis, and treatment is distinctly good. Dr. Clark utters a note of caution regarding the lax way in which the causation of insanity is sometimes discussed, and states that, as a result, the general public imagine they know all about it, and are convinced that two factors account for everything—heredity and alcoholic excess. Under the heading of Treatment we find that his experience of the thyroid extract, except in cases of myxœdema, has been disappointing. The various recognised forms of insanity are lucidly discussed in detail, and their explanation is materially assisted by a series of carefully selected clinical cases and by a number of excellent charts. Perhaps the best chapter is that on Evolutional and Dissolutional Types. Here the author speaks with authority, and he gives a remarkably clear exposition of the mental disorders which are liable to occur in earlier and later life—those due to the physiological stress and strain of puberty and adolescence and those incidental to the approach of the climacteric and the decadence of old age. Not less important are his remarks on the insanities of pregnancy and lactation and also on puerperal insanity. The practical value of these chapters is very considerable. The mental disorders associated with various forms of bodily disease are fully dealt with, the legal and civil relationships of insanity are pointed out, and copies of the various lunacy forms in use in England, Scotland, and Ireland are appended.

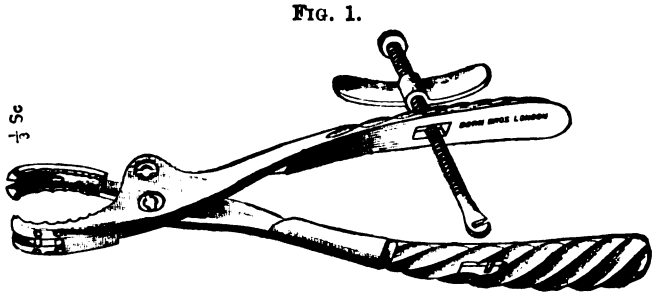
The volume is handsomely bound, well printed, and possesses a carefully prepared index. The book is lucidly written and the meaning clearly expressed. It is intended for the use of general practitioners and students, and to the general practitioner we cordially recommend it. He will find it handy and useful for reference and of much practical value.

New Inventions.

LION FORCEPS FOR USE IN SCREWING, WIRING, AND OTHER OPERATIONS ON BONE.

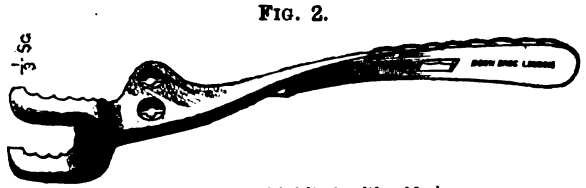
WIRING, screwing, and other devices have been successfully employed by Mr. Arbuthnot Lane and others for the purpose of securing correct apposition of fractured bones and their retention in this position. The results so obtained encourage a further use of these methods and particularly their application to fractures in the neighbourhood of joints. The precision to be attained by these methods is more fully recognised when accurate drilling previous to the deposition of wires and screws is made easy. To meet the requirements in such operations I have devised the above-mentioned instrument which has been referred to by Mr. Lane in his paper in the *Clinical Journal*. Essentially the forceps is a modification of Farabœuf's lion forceps and can be used for all the purposes of a lion forceps. It is further fitted with a detachable approximating screw and an additional limb suitable for the passage of screws or, in certain cases, of wire. A drill grooved along its length with a trocar point is adapted for use with the instrument. Both jaws of the forceps are sawn longitudinally so as to allow wire to be passed free of the forceps. The upper jaw is drilled with holes in two series, the one series being adapted for larger and the other for smaller bones. By this arrangement it is possible to drill a hole in any position up to 40° from the vertical in either direction. This varying angle of impact is obtained by conical holes on either side of the central saw slit. The saw slit is also conically enlarged at suitable points

FIG. 1.



The forceps used with the two narrow-jawed blades.

FIG. 2.



The additional or third limb with wide jaws.

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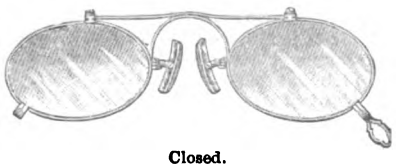
to accommodate the drill without allowing it to slip. The third limb (Fig. 2) has a large forked extremity which will allow of the manipulation of any drill and screws. The forceps can be used either for drilling the two bones in position and subsequent wiring without relaxing hold, or for boring a single piece of the fractured bone. It is so arranged that a wire can be passed from the central slit into the holes in the bone which have been drilled through the side holes of the forceps. If, therefore, one of these lateral holes of the forceps is used to direct the drill, the wire can be adjusted without removing the forceps. The main points connected with the forceps are: 1. A firm grip can be obtained on one or more fractured fragments, and the forceps retained in position by the approximating screw. 2. The drill can be passed precisely, rapidly, and without fear of slipping. 3. The wire or screw can be passed and adjusted without removing the forceps. 4. The instrument can be used as ordinary bone forceps.

The instrument is made by Messrs. Down Bros., to whom my thanks are due for the care they have expended on its manufacture. E. A. PETERS, M.B., B.C.

AN IMPROVED PINCE-NEZ.

THIS new form of pince-nez—the "Revluc"—should recommend itself to those who have a preference for "glasses" of this description. As will be seen from the illustration, placquets are affixed to the periphery of the eye frame next the nose, and are automatically adjusted by means of a spring bridge. The pressure on the nose is firm, but not great enough to cause discomfort or to mark the skin; and there is no tendency of the glasses to tilt forward, an important

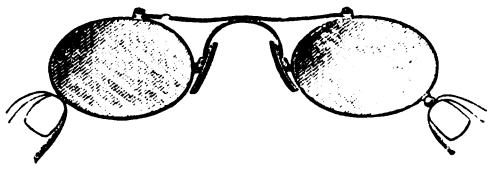
FIG. 1.



Closed.

consideration when, as in the case of astigmatism, the lenses require to maintain a definite position with respect to the eye. A two hours' ride on a bicycle over a moderately bad road is a severe test for any kind of pince-nez, but this the Revluc has stood without becoming displaced. The combination of bridge and horizontal bar strengthens the frame without appreciably increasing its weight, and at the same time ensures the centres of the lenses being always properly

FIG. 2.



Open.

adjusted to the distance between the pupils. The illustrations will show the neatness of appearance and simplicity of construction perhaps better than words; but we may point out that the absence of spiral springs, which have a tendency to collect dust always difficult to remove, enables the frame to be kept clean with little difficulty. The Revluc is manufactured by Mr. George Culver, White Lion-street, Pentonville, London.

THE JENNER MEMORIAL MEDAL.

ON the occasion of the Jenner Centenary it was thought, as was pointed out at the time by the President, that the Epidemiological Society should take some steps which, while celebrating an event of such importance to preventive medicine, would at the same time do something to promote the study of epidemiology at the present time. It was finally decided to found a medal in memory of Edward Jenner, to be conferred by the society from time to time for work of great merit, and a sub-committee, consisting of the then President (Mr. Shirley Murphy), Sir Richard Thorne Thorne, K.C.B., F.R.S., Fleet-Surgeon Theodore Preston, R.N., and Dr. Frank Clemow, together with the treasurer and honorary secretaries of the society, was appointed to consider the design of such medal. This sub-committee, which, on the retirement of Mr. Shirley Murphy from the presidency, had the further advantage of Surgeon-Colonel Lane Notter's advice and experience, finally recommended the society to accept a design submitted by Mr. Allan Wyon, F.S.A., who is now engaged in executing the necessary dies. In the next volume of the Transactions of the society it is hoped that a facsimile of the design for the medal will be presented.

It was thought by the society, in founding a memorial of this nature, that the medical profession in general should be afforded an opportunity of subscribing to the original cost, and it is a matter for congratulation that the response to the appeal which the society made through the medical journals has enabled the dies to be procured at a merely nominal expenditure on the part of the society. The medal, too, from the fact that it was founded by subscription from many parts of the world, cannot fail to be more highly appreciated by the recipients of it than would have been the case had it been founded by the society alone. Below is the list of the subscribers to the fund.

List of Subscribers to the Jenner Memorial Medal.

The Epidemiological Society of London.
Dr. Henry Armstrong.
Dr. Robert Barnes.
Mr. F. Blackwell.
Dr. F. T. Bond.
Dr. W. A. Bond.
Sir William Broadbent, Bart.
Mr. M. Brownfield.
Dr. H. Timbrell Bulstrode (Hon. Sec. of Epidemiological Society).
Dr. Claremont.
Dr. F. Clemow (Cronstadt).
Dr. A. E. Cope.
Mr. Bolton Corney (Fiji).
Dr. Andrew Davidson.
Dr. Dickson (Constantinople).
Dr. Donnett, R.N.
Surgeon-Captain Drake-Brockman (Bombay).
Dr. W. W. E. Fletcher.
Mr. Andrew Fuller.
Dr. E. W. Goodall.
Dr. E. Goddard.
Surgeon-General Sir C. A. Gordon, K.C.B., Q.H.P.
Mr. E. C. Greenwood.
Mr. A. L. Griffiths.
Mr. Grigg.
Dr. S. Hague.
Dr. Hamer.
Dr. Hare.
Dr. Harrison.
Dr. E. Hibberd.
Dr. W. F. Hingston.
Surg.-Gen. Sir Anthony Home, K.C.B., V.C.
Dr. B. O. Hopwood.
Dr. W. Hunter.
Mr. V. Jaynes.
Dr. Joseph von Koröse (Budapest).
Dr. J. Little (Dublin).
Mr. J. Loane.
Dr. G. B. Longstaff.
Dr. J. C. McVail.
Mr. G. A. Miskin.
Mr. T. Mitchell.
Dr. Müller (Budapest).
Mr. Shirley Murphy.
Surgeon-Colonel J. Lane Notter (President of the Epidemiological Society).
Mr. J. Norton
Sir James Paget, Bart.
Dr. Louis Parkes.
Dr. Franklin Parsons.
Dr. J. F. Payne.
Fleet-Surgeon Theodore Preston, R.N.
Dr. Pye-Smith.
Mr. T. F. Rogers.
Mr. M. G. Roundtree.
Dr. Saltet (Amsterdam).
Dr. Sansom.
Sir Edwin Saunders.
Brigade-Surgeon J. B. Scriven.
Dr. Edward Seaton.
Sir John Simon, K.C.B., F.R.S.
Dr. Smart.
Dr. Sonsino.
Dr. Sweeting (Hon. Treasurer).
Dr. Theodore Thomson.
The late Sir J. Tholozan, K.C.M.G. (Teheran).
Sir Richard Thorne Thorne, K.C.B., F.R.S.
Mr. Thomas Wakley, Jun.
Dr. J. W. Washbourn.
Mr. S. Welsh.
Dr. William Williams.
Dr. S. Wheaton.
Dr. B. A. Whitelegge.
Dr. J. T. Wilson.
Dr. C. W. F. Young.

SHEFFIELD ROYAL INFIRMARY.—The annual meeting of the Sheffield Royal Infirmary was held on Sept. 1st, Sir Alexander Wilson, Bart., the retiring Master Cutler, being in the chair. The report stated that next month—namely, on Oct. 4th—the infirmary will have completed a century of its existence, and that the new buildings erected in commemoration of the centenary year are approaching completion. Last year, on the occasion of the Queen's visit to Sheffield, she was graciously pleased to confer upon the institution the title of the Sheffield Royal Infirmary. The house surgeon's report showed that 1869 in-patients, 4103 out-patients, 12,933 casualties, and 2190 dental cases had been treated during the year. The number of beds now available is 202, of which 44 are devoted exclusively to children's cases. The amounts received from the Hospital Sunday and Hospital Saturday Funds were £1095 and £722 respectively. The expenditure had exceeded the ordinary income by £1198. One of the speakers mentioned that something like £5000 was still required to complete the centenary commemoration buildings and the furnishing.

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THE LANCET.

LONDON: SATURDAY, SEPTEMBER 11, 1897.

THE meeting of the British Medical Association in Montreal, or, rather, the opening address of the distinguished President, Dr. RODDICK, Professor of Surgery in the McGill University, has called forth a somewhat severe criticism on the Association from the *Times* which cannot altogether be disregarded. The address and the criticism form an interesting illustration of the different conclusions to which men may come who are presumably equally able and disinterested, showing, as most such illustrations do, the importance of difference of standpoint and of the colour of the medium in which the object is seen. The address, or, rather, that portion of it which seems to have called forth the uncomplimentary side of our contemporary's criticism, was spoken from the President's chair and dealt naturally enough with the noble objects of the Association, its impartial constitution, its accumulating capital, and its great numbers "of earnest men pitted against false dogmas and ever battling for the truth." For such an Association the President could see no future but one of increasing power and usefulness. It was beyond his conception that any age could come which would cease to feel its benign and mighty influence making for the amelioration and elevation of mankind. He even expressed his belief that it would be an important factor in bringing to a successful issue that great scheme of Imperial Federation which now exercises the mind and hearts of the leading statesmen of the empire. What must have been the President's feelings when he opened the *Times* of Sept. 1st to learn that all his eulogy of the Association and its power was a mistake—"the truth being that the absence of such power and influence is one of the most remarkable characteristics of the organisation, and one which has often occasioned much perplexity to those who have been called upon to consider its proceedings." Nor is this the worst that the candid article in the *Times* had to say, for from other passages we learn "that probably no statesman was ever influenced by its [the Association's] views with regard to any matter of legislation," that it "has made some microscopic pecuniary grants for the promotion of scientific research and that nothing very important has ever come of them"; that even at the annual meetings of the Association recreation is generally preferred to science; and that all the work of the profession, whether scientific, charitable, or administrative, is done by independent societies. No English President, concluded the *Times* in leaving that aspect of the question, could have employed the language which Dr. RODDICK used "without, at least, being suspected of irony."

The weakness of the profession is its want of cohesion and concord, of organisation and unity. There are not wanting signs of still more and graver cleavage into sections and coteries. The one great and indivisible profession is to be broken up into bits or into classes. It is a responsible thing in the face of such facts to disparage the greatest association of the profession, and we cannot but ask ourselves what explanation can be offered of such disparagement, and, if possible, what excuse. We have never been blind admirers of the Association. There have been many things in its history which have been unworthy of its very greatness—partialities, personalities, timidities, and favouritisms. It has not always had a soul to call its own. Last year two of the oldest members of the Association, who have since respectively been solaced by the gift of its gold medal, were allowed to drift out of the position of direct representatives in the General Medical Council when a little early and firm support from the Association of which they had been lifelong supporters would have secured their honourable return. Of late years the annual meetings have been less attractive than of old, not so much because of the prevalence of "recreation"—a most legitimate and desirable part of the duty of gatherings of scientific men—or because of the subordination of medical science to so-called medical politics, but because of the abstention from the councils of the Association of those whose influence and whose character would have given them a status from which to deal alike with the demands of medical politics, of medical science, and of medical ethics.

It is impossible to deny these facts with regard to the Association or to shut our eyes to their gravity. But when all has been said we cannot deny the usefulness of the Association or doubt that it has materially affected both medical and sanitary legislation and medical science. Its numbers are great. If its deliberations have not directly affected the laws of the nation to the extent that we might naturally have expected they have at least educated the rank and file of the profession and so, in an indirect manner, have instructed the public at large; and from the position of an improved popular opinion to an improved legislation is generally but a short step. The Association includes nearly half the profession, and even if it never realises the ideal which Dr. RODDICK has painted it necessarily has before it an important future. But it must work conscious of what that future is to be. It must be calm and well ordered. It must have set purposes and a defined scope. In this way its members may know what to expect from it, and by insisting upon taking an active part in its conduct may vivify it and mould it to greatness.

WHAT, we wonder, will Lord HERSCHELL and the other members of the defunct Royal Commission on Vaccination think of the manner in which their posthumous Sixth Report has been presented to Parliament and the public. Of the 187 witnesses whom the Commission examined during its seven years' labours this huge blue-book contains the minutes of evidence of no less than 83. It runs to nearly 800 double-columned and closely printed foolscap pages, and contains, in addition, many maps and diagrams. It will hardly be believed that such a volume has been issued by Government without an index of any sort to help Members of Parliament, or the medical profession, or the anti-vaccinationists, either to digest its contents or to find in it reference to any particular point regarding which they may wish to consult it. It is true that the "Final

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Report (issued many months before this one) was without an index, but the difference between the final report and this report as regards need for guidance is greater than the difference between the king's highway and the maze at Hampton Court. The previous volumes of evidence were much less in size than this one—the four contained amongst them the evidence of only about a hundred witnesses—but each of them was furnished with an ample and excellent analytical index.

What may be the cause—reason there can be none—for this extraordinary neglect we do not know. Most certainly it has not been want of sufficient time to prepare an index, for the evidence recorded in the volume began in November, 1891, and ended in December, 1893. That is nearly four years ago. Moreover, the preliminary note, the so-called "Report," in which the Commissioners submit the evidence to HER MAJESTY, is dated Feb. 14th, 1896, or more than a year and a half ago. In the latter part of the last Session of Parliament questions were repeatedly asked as to when the Report and Appendices would be published. In reply a time was mentioned, and after the promised publication was considerably overdue the matter was again made the subject of question and answer. Now, at length, when Parliament is not sitting, and no question can be asked, the huge tome is placed before the public in such a fashion that the irate reader would be glad to know on whom the responsibility for the form in which it appears rests.

It is simply out of the question to permit this volume to be placed on the library shelves of the country unaccompanied by a good index, and if none is issued in supplement before Parliament meets steps will have to be taken then to press the Government to give the necessary order. We need only mention that the list of witnesses, in addition to containing the names of various leading opponents of vaccination, includes those of Dr. BARRY, Dr. BIRDWOOD, Dr. J. H. BRIDGES, Dr. MONCKTON COPEMAN, Dr. R. J. B. CUNNYGHAME, Dr. HIME, Dr. HUSBAND, Dr. KLEIN, Mr. MCFADYEAN, Dr. J. C. MCVAIL, Dr. OGLE, the late Dr. BEAVAN RAKE, Dr. FREDERICK TAYLOR, Dr. WHITELEGGE, and Dr. SIMS WOODHEAD. No doubt it will take a good deal of trouble to prepare an index, which, judging from those of previous volumes, ought to run to some fifty pages or thereabouts. It cannot be supposed that the Commission would spend two years listening to evidence, and give the eighty witnesses all the labour of preparing it, and yet would in the end fold its hands and declare that it could not supply an index of what these witnesses had said. The matter is justifiable from no point of view. It is a sheer waste of paper and printing and lithographing to send forth a report (costing 14*s*.) without its ordinary and necessary accompaniment. And in the interests of the literature of science it is essential that even yet an index should be published. We strongly suspect that when the Commission ceased to exist as such there must already have been made some more or less complete digest of the contents of this volume. This, indeed, is bound to have been the case, for the Final Report could not have been prepared without it. This digest must be pigeon-holed somewhere. But when the Commission was dissolved, its Final Report being issued, it seems to have been nobody's business to attend to the issue of a great bulk of valuable material on which that Report was largely based. For it must be recollected that not only is there this mass of evidence taken directly by the Commission, but there are also the very important special reports on the small-pox outbreaks which occurred in Dewsbury, Gloucester, Warrington, London, and Leicester, and which were investigated by Dr. SIDNEY COUPLAND, Dr. SAVILL, and Dr. LUFF. Then, also, Dr. THEODORE DYKE ACLAND made inquiry into many cases of alleged injury from vaccination. All this has to be published and all this has to be indexed. In so far as these special reports will be much less voluminous than the minutes of evidence now issued their indexing will be easier, but none the less the duty should not be left to the public. If there is now no one responsible for all this work then it is imperative that some one should forthwith be appointed. The delay that has already taken place is much to be regretted, but that the long-waited-for reports should in the end be launched like ships without rudders or compasses is indefensible.

THE Commissioners of Prisons are to be congratulated on the many satisfactory features of the present report. It breathes a spirit of progressive and enlightened policy which augurs well for the future. Amongst other things which have occupied the attention of the Board may be mentioned the treatment of juveniles on special lines, the segregation of first offenders, the differentiation of the occasional from the habitual criminal, the care and treatment of the weak-minded, and the better preparation of convicts for liberty. All these are steps in the right direction. The number of training schools for prison officers has been increased, and a scheme for the future organisation of aid societies throughout the country has been framed. The numbers of the prison population continue to decrease, and there has also been a satisfactory diminution in the number of the criminal insane. The vexed question of insanity in prisons, on which of late so much attention has been concentrated, and regarding which much ignorance has been displayed by writers innocent of any practical knowledge of the subject, bulks largely in the remarks of the Commissioners and also in the notes of the medical inspector. The matter is discussed at considerable length, and reports from the governors and medical officers of the various convict prisons are given, which should tend to allay the public apprehension concerning the alleged injurious effect of penal servitude on the mental health of prisoners. Anyone who cares to peruse the factors of insanity as set forth in the annual reports of the Commissioners in Lunacy cannot fail to observe that the convict is shielded from the operation of the most dangerous of the insanity-producing causes. His life is regular, his diet is wholesome, he is not over-worked, and his labour is, for the most part, done in association and in the open air; he has a plentiful supply of books, and he is under continual medical supervision. All these are conducive to sanity, and without doubt exercise a beneficial effect on prisoners who are predisposed to mental deterioration. It must be borne in mind that many of these men have led vicious lives, and have contracted disease,

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the insidious and damaging effect of which on the nervous system is well understood; a proportion also are hereditarily tainted, the degenerate offspring of degenerate parents. Possibly the strain of imprisonment on the nervous system is greatest during the first months of imprisonment—during the period of separate confinement. Nowadays a sentence of penal servitude is the measure of punishment awarded for a crime of some magnitude; in connexion with this, the period of suspense before trial, the excitement of the legal proceedings, the subsequent reaction, and the prolonged process of introspection which necessarily follows, are calculated to exercise a somewhat disturbing effect on the higher levels of the nervous system, and in persons of unstable nervous organisation the results may in some instances be unfavourable. The Commissioners, however, with commendable forethought, have foreseen this contingency, and have directed that any prisoner who shows the slightest premonitory symptoms of nervous disorder shall be specially treated, and, if necessary, removed to a prison where he may have the benefit of associated outdoor labour. It is apparent that the authorities are displaying an anxious solicitude for the protection of the criminal in all that pertains to his mental well-being.

Dr. SMALLEY, the new medical inspector who succeeded to the post on the resignation of the late Dr. GOVER, contributes an interesting summary of the year's work in the medical department. In the local prisons, excluding executions, suicides, and one accident, the number of deaths was 104, giving a death-rate of 7·4 per 1000, which is slightly higher than that recorded last year. Death supervened in less than a month after reception in 41 cases, or 2·9 per thousand. This is more than a third of the total number of deaths, and indicates the wretched state of health in which prisoners are often received into prison. In 45 cases pulmonary disease in one form or another was the cause of death. Heart disease proved fatal in 18 and kidney disease in 12 instances. There were five suicides. Considering the large number—namely, 175,604—of all sorts of men and women received during the year this number is small and speaks well for the vigilance and supervision exercised. Seventy-five prisoners were released on medical grounds; they include the cases of 44 females released on account of advanced pregnancy. Dr. SMALLEY deals with the question of insanity in prisons in a clear and convincing manner. He shows how futile it is to attempt a comparison between the rate of lunacy in the prisons and that of the general population, the conditions being so different and so unequal. The number of cases of insanity in local prisons was 380, a decrease of 98 as compared with the number last year; of this number, however, 216 consisted of prisoners either unconvicted or remanded for observation, or found insane on arraignment, or found "guilty but insane" at their trial. Hitherto it has been the custom to include these cases and also the cases of prisoners found insane in prison after conviction in one table—a method which showed an unduly large proportion of insane to the prison population. Hence arose in great measure those erroneous impressions based on false deductions which tended to raise alarm in the public mind. It is neither reasonable nor fair to include the cases of unconvicted prisoners as cases of prison insanity, and, accordingly, they have been excluded this year from the insanity statistics. The remaining 164 cases were convicted and sentenced; of these, 121 were found insane on reception and 43 subsequently. It appears from this that many persons are convicted and sent to prison, their insanity being either ignored or undetected at their trial.

In the convict establishments fifteen prisoners were certified insane and removed to asylums. There were no suicides. The death-rate was 9·7 per 1000. An important feature, from a medical point of view, was the decision of the directors to send all weak-minded prisoners, or any showing a tendency to mental deterioration, to Parkhurst Prison. The scheme seems to be working well; they are under special supervision and are employed at labour suited to their physical and mental condition. On their release efforts will be made to assist them and give them a helping hand. This is a wise, humane, and judicious decision, for such men frequently find their way into prison. On account of their mental infirmity they are unable to obtain suitable occupation, and in the stress and hurry of the busy world they are cast aside, and, almost of necessity, have recourse to acts of an anti-social nature. The prevention of crime and the treatment of criminals are important and far-reaching questions which are being made the subject of inquiry and investigation by many able workers, both in this country and abroad, and it is pleasing to note that the Prison Commissioners are addressing themselves to the work in a scientific and progressive spirit.

Annotations.

"Ne quid nimis."

EASTBOURNE AND VACCINATION.

THE curious muddle into which the Eastbourne guardians have got with regard to vaccination affords another illustration of the need for immediate legislation on the subject. Some months ago a vaccination officer was advertised for and appointed. It seems that he had been told by the board that he would be supported in doing his duty. Having prepared a list of defaulters he wrote to ask for instructions, and the committee before whom the request was laid resolved "that further consideration of the letter be deferred for two months." A local newspaper reports that at the guardians' meeting the Rev. J. W. Parrington said the board had repeatedly stultified itself by refraining from carrying out resolutions which it had arrived at to enforce the Vaccination Act, and he opposed any further stultification. At the same time the vaccination officer was understood to be likely to take legal proceedings against the guardians if they failed to support him in carrying out the Act. On the other side it was urged by Mr. Luck that although the vaccination officer "was appointed to do the work the board had no right to enforce the law; it was optional." He also made the remarkable assertion "that the Royal Commission unanimously decided that prosecutions should be discontinued," and when a statement of this sort was called in question by the clergyman who had previously spoken, Mr. Luck's retort courteous was that when Mr. Parrington understood what he was talking about he would listen to him. Mr. Luck himself

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seems quite unable to understand the difference between prosecutions and repeated prosecutions. He further intimated to the guardians that the Local Government Board were all medical men and pecuniarily interested in vaccination. Moreover, he himself had nailed his colours to the mast, and Jenner had got £30,000, and the death-rate of Eastbourne was the lowest on record, "and why," he asked, "not let well alone?" After all this valuable information and cogent reasoning, the determination to defer the matter for two months was carried by nine votes to seven, though to an outsider it is not clear why this should be described as a "victory of anti-vaccinators." The underlying feeling appears to have been that Eastbourne cannot afford to let the truth be known about its neglect of vaccination, and that, at least, the summer visitors might be allowed to depart before prosecutions were begun. This is a dangerous policy. The longer the neglect the worse may be the punishment. Gloucester, like Eastbourne, purported to trust to sanitation. Mr. George Newman, secretary to the Gloucester Anti-vaccination Society, declared to the Royal Commission that Gloucester was a very sanitary town, one of the public bodies in the town also professed to the Commission its trust in sanitation, and a book was written to show how little vaccination there was in Gloucester, and how little small-pox. Then came Nemesis under the guise of small-pox, and at once the tune was changed. Gloucester was no longer sanitary but highly insanitary, and that cry has been kept up ever since. He is happily wise who is wise by the experience of others, but Eastbourne refuses to be wise. The schoolmaster small-pox is likely to have no lack of pupils when the time comes, and as in the past, the children, alas, will have to pay the penalty of death or disfigurement for the folly of their parents.

ATTENDANCE AND DEATH CERTIFICATION BY DRUGGISTS.

AN inquest at Redruth, held by Mr. E. L. Carlyon in reference to the death of Florence Mary, daughter of Elizabeth Watling, discloses a state of matters as regards the medical care of children, and the ease with which registrars and sextons are satisfied that cannot too seriously or too soon engage the attention of the Registrar-General and the Home Secretary. Mrs. Watling had had thirteen children. A midwife, Mrs. Tirrell, not a certificated nurse, had attended her on five occasions. The present child, born on July 27th, was a fine child at birth. On one occasion the child was still-born and she gave a certificate in the following terms: "I hear by Sertifey that Mrs. Watling was confined of a still born mall child. Susen tirrel." She took the body and the certificate to Mr. Trevena, sexton at Treleigh. She had been a midwife thirty-five years and it had been her custom to give certificates like that. She did not think she had attended more than ten such cases, which she disposed of as follows: She had "given" seven to Mr. Remfry, Redruth parish church sexton, and two had gone to Mr. Henry Peters at the East-end Cemetery. "She had permission from Major Hayes, a magistrate, to give such certificates." A druggist, whom the mother called "Dr. Rowe," had always attended her (Mrs. Watling's) babies—that is, if they required more attendance than that of the midwife. She gave a list of three cases so attended by "Dr. Rowe,' and said that he gave certificates. In the present case he suggested that she should call in Dr. Laurie, but she did not, for "Dr. Rowe" had always attended her babies, and he did not say he was not qualified to attend or to give a certificate. The day after suggesting that Dr. Laurie should be called Mr. Rowe sent another medicine and justified his doing so on the ground of humanity. When the child died he gave a certificate—or, as he preferred to call it, a statement—of death from diarrhœa. Medical evidence was given by Dr. Permewan, who had made a post-mortem examination and found death to be due to diarrhœa. He disapproved of the diet of the child—boiled bread and baked flour and milk. One of the medicines supplied by the druggist was syrup of poppies. In his opinion this implied want of medical knowledge, and he would have blamed himself for ordering it for a child of that age unless he had seen the child and assured himself that the lungs were clear. The coroner spoke in terms not too severe of Mr. Rowe. He spoke of him as a "positive danger to society," though he had been twice warned, and once proceeded against, by the Apothecaries' Society. The jury, some of whom appeared to sympathise with Mr. Rowe, found that the child died naturally. The *Daily Mercury* and the *Western Morning News* show by their full reports their sense of the significance of the facts—we may say, the system—which the coroner has here exposed. But the responsibility rests elsewhere.

SALT IN THE NAVY.

THAT it is only within the last few days that the Admiralty have sanctioned the use of salt in the bluejacket's daily allowance of food will come as a surprise to not a few. Hitherto if the sailor required salt he had to purchase it. It was practically the only condiment omitted from the ordinary cruet list, and the reason of this omission until quite lately is not far to seek. In the old days of wooden ships Jack's diet consisted largely of salted meats, and salt on the table would have been an obvious, and most probably an irritating, superfluity. But owing largely to the increased facilities and improvements in the machinery for preserving meats without the use of salt or added substances at all, as well also to the fact that our modern warships are seldom many days' steam from port, "salt horse" has, greatly to the increased comfort and well-being of our sailors, practically become a thing of the past—at any rate, as an exclusive article of diet. Salt is now, therefore, a necessity wherewith not only to season food, but, as experiments have shown, to assist very materially in its assimilation. As is well known, salt promotes the diffusion of fluids through the membranes, and it very distinctly increases the solubility of certain nutrient substances. It has been said that the entire withdrawal of common salt from food would be fatal, an absolutely saltless diet speedily leading to albuminuria. This concession, therefore, is of the utmost importance, and it is a matter of surprise that the Admiralty have been so tardy in granting it.

SYPHILIS TREATED WITH COLEY'S MIXED TOXINS.

DR. C. S. EVANS and Dr. C. M. Paul have published in the annual report of the Cincinnati Hospital a series of fifteen cases of syphilis treated with Coley's mixed toxins, the patients' symptoms including such varied manifestations as primary chancre, secondary eruptions, broken and unbroken gummata, and condylomata lata. The treatment was in each instance commenced with the minimum dose of two minims, diluted with an equal quantity of water and injected deeply in the muscles of the buttock with an ordinary hypodermic syringe; the side was alternated each time because of the soreness caused; the injection was given every other day, and as a rule the dose was increased at each injection. The maximum dose given was fourteen minims, and it was noticeable that this dose could be continued day after day without any more disturbance than followed the initial dose of two minims. As a rule, some pain followed the injections, but this lasted only a short time and was succeeded by a soreness which persisted for two or three days, but was never so severe as to compel the

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patient to remain in bed. The most pronounced symptom following the injections was malaise, which was felt very quickly, and, as a rule, was peculiarly depressing, but disappeared in a few hours. Headache, diarrhœa, high temperature, and pains in the bones were also met with, but there was no formation of abscesses in connexion with any of the 237 injections which were given, and apart from the symptoms above noted there were no unpleasant after-effects, a thing which cannot be said of mercury. Two of the fifteen patients were treated with mercurial inunction and one with iodide of potassium before the toxin was administered. The remaining twelve were treated with toxin only. The duration of the disease in these cases was respectively five months, seven years and a half, three months and a half, two months, four months and a half, five years, four months, four months, perhaps nine weeks, six months, seven months, and five months. The duration of the toxin treatment in the cases taken in the same order was respectively twenty days, two months, twenty-seven days, thirty-nine days, fifty-seven days, thirty-two days, thirty-five days, thirty-nine days, twenty-seven days, thirteen days, twenty-one days, and twenty-one days. Ten of the twelve patients had ulcerated chancres eight of which were entirely healed and two were almost healed at the end of the treatment. In every case the eruption disappeared, the mucous patches healed, the enlarged glands became smaller, and the patient gained flesh and strength. In conclusion, however, Dr. Evans remarks that the worth of toxin is as yet mere conjecture, and that absolutely nothing can be said as to the ultimate results.

MODERN ALCHEMY.

THE sea-serpent story is beaten. Silver has been transmuted into gold by the simplest possible process, and this at a time when currency is a most vexed question, in which America more than any other country is interested. It is not, therefore, a matter of intense surprise that the transmutation has been effected by an American investigator. He has converted Mexican dollars (why did he not start with pure silver?) into an ingot consisting of a mixture of gold and silver more than nine-tenths "fine," from three-fifths to two-thirds of the precious metal being found to consist of pure gold. Mexican dollars, by the way, contain also copper. All that is required for this transmutation is extreme mechanical pressure. There can be no doubt of America's capacity to supply an abundance of this commodity. Pressure acts, doubtless, upon the silver atoms and gives them a greater density, so that from 108 the atomic weight shoots up to 196. That is, starting with a white metal—namely, silver—of a specific gravity of 10, the effect of an enormous pressure is to increase this gravity by about double (the specific gravity of gold is 19·5), the resulting mass changing colour—presenting, in fact, all the appearance as well as the properties of the noble yellow metal. Bimetallism is doomed and America's financial superiority as a nation amongst nations ensured.

THE MANCHESTER CORPORATION AND CARRINGTON MOSS.

THIS estate, of 1100 acres, was bought for a sum of £38,000, by the Manchester Corporation in 1886, to make provision for the disposal of refuse and other matter from the closet system of the southern part of the city. The greater portion was wild boggy moss-land which yielded annually a few brace of grouse. A sum of £80,000 was laid out for light railways, roads, drainage, rolling stock for the railway, buildings, and other necessary works. An estimate prepared by the city surveyor places the present value of the property at some £12,000 higher than its cost to the city. "The whole moss has, in fact, been developed into highly cultivated farm and garden land." Refuse, chiefly nightsoil, is taken daily by the Ship canal to a wharf conveniently near, lifted from the barges into tanks and taken to various points for distribution over the ground. The Cleansing Committee farm about 400 acres and the remainder is let off to tenants, who are supplied with manure. Since 1890 more than 425,000 tons of collected matter have been distributed over the moss, and by this time the power of absorption by the soil has necessarily somewhat diminished. In future twenty tons of manure per acre will be supplied annually, and the surplus will be taken to Chat Moss, which was recently purchased. At the outset the bog land was thoroughly drained, and, notwithstanding the constant additions of top dressing, there is still a well-defined sinking of the land. In face of the general agricultural depression it is a novelty to learn that "a considerable profit has for some years been made on the working of the farm." Not far from the homestead seventy acres are in charge of the Parks' Committee, where golden elders, acres of rhododendrons, with other shrubs and trees, together with flowers in abundance, are grown for use in the parks and for the decoration of the city squares. These results of the "dry method" are not attainable under the water-closet system which culminates in the scheme for a culvert sixteen miles long, to cost before it is done probably £300,000, in order to provide for the waste of hundreds of thousands of tons of matters having manurial value.

THE LATE DR. WILLIAM GARDNER.

A SURVEY of the progress of medicine and surgery in Australia shows that the present advanced state of devel p-ment is due to the talents and industry of a number of workers, among whom the late Dr. William Gardner deserves honourable mention. Although the greater part of his life was passed in Australia he was not of colonial extraction, having been born in Birkenhead, Cheshire, in November, 1846 He went with his parents to South Australia in 1850, received his early education in Adelaide, and was subsequently employed for some years in the English and Scottish Bank in that city. Having then made up his mind to enter the medical profession he spent the years 1870, 1871, and 1872 at Melbourne University. He then returned to this country and entered at Glasgow University, where he took honours in most of the classes and graduated as M.B., C.M., with first-class honours, in 1874. Immediately after graduating he went back to Australia, and held resident appointments at the Adelaide Hospital from 1875 to 1877. In 1876 he took the degree of M.D. at Glasgow University, his thesis, which was on Hydatid Disease, being awarded commendation and a gold medal. From 1879 to 1891 he was surgeon to in-patients at the Adelaide Hospital. In 1883 he was elected President of the South Australian Branch of the British Medical Association; in 1887 he was appointed lecturer on surgery at the Adelaide University; in 1889 he was instructed by the Government of South Australia to prepare a report on hospitals in India, and the substance of it was published in the *Australian Medical Journal* during 1890. He spent the year 1891 in Europe, and on returning to Australia in the beginning of 1892 he settled in Melbourne, where he was appointed honorary surgeon to the Hospital for Sick Children in 1893, and founded the *Intercolonial Quarterly Journal of Medicine and Surgery* in 1894. At the Intercolonial Medical Congress, held in 1892, he was President of the Section of Surgery. In the midst of his scientific and literary activity, to which was added the responsibility of a busy practice, his health began to give way, and in the end of 1895 he had a severe cerebral seizure, after which it was found that he suffered from considerable arterial degeneration and cardiac

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hypertrophy. He spent most of 1896 travelling in Europe, and about March of the present year he commenced his homeward journey to Melbourne, where his friends expected him to arrive about the middle of April, but to their profound grief he died at Naples. Dr. Gardner's contributions to medical and surgical literature were valuable and very numerous; his favourite subject was the treatment of hydatid disease, for which he adopted Lindemann's operation, and proved its advantages by a series of successful cases.

THE DISPOSAL OF IMPORTED BAD EGGS.

BY some remarkable oversight the Port Sanitary Authorities permitted a cargo of bad eggs to be brought above Gravesend because it was thought that possibly a few good ones might be saved. The proportion of good ones subsequently picked out did not appear, but no less than 472 cases, each containing 1800 eggs, were landed at Limehouse and destroyed. It so happened that during this process an inquest was being held in the neighbourhood, and both the jury and coroner were disgusted, naturally enough, at the foul smell which had intruded into the coroner's court. So nauseating was the stench that several witnesses were taken ill with retching and vomiting. The Port Sanitary Authorities are much to be blamed in this matter for allowing the malodorous cargo to be landed at all, and, worse still, for countenancing the disposal of the eggs in this stupid and clumsy fashion, for it appears that the eggs were disposed of by first smashing them upon the pavement and then washing the resulting product down the drain with disinfectants. Somebody should have been compelled to pay the expenses of putting the ship out to sea again there to leave the loathsome cargo to the purifying and deodorising action of the ocean.

THE DANISH BUTTER INDUSTRY.

WE received recently a copy of an article in *brochure* form, entitled "A Land flowing with Milk and Butter: the Truth about Danish Dairying," &c. The article was written by Mr. D. Young, the editor of the *North British Agriculturalist* from which paper it was reprinted. It is a very grave attack upon the sanitary conditions of the Danish dairies. It purports to show an abnormal prevalence of tuberculosis amongst the cattle there owing to overcrowding and the neglect to ensure efficient drainage. "There can be no question, therefore," the article concludes, "that the extreme prevalence of this disease in Denmark is due primarily to the unsanitary conditions under which the animals are kept, and the ravages of this dire disease, which is communicable from animal to man, is (*sic*) not only one cause of the high death-rate of that country, but is also a serious source of loss to the dairy farmers in that 'land flowing with milk and butter.'" The importation from Denmark into this country of dairy produce is, as is well known, an important business, and if the state of things in Denmark has been correctly described by Mr. Young it is obvious that some steps should be taken to prevent the introduction of a probable source of insidious disease into this country by this means. The connexion between milk and tuberculosis has been well established, and we believe excellent progress is being made in this country towards providing efficient and sanitary accommodation for cows, in short, of placing them under the best possible surroundings which will eradicate the disease. Mr. Young's serious statements have not gone unchallenged. Indeed, they are categorically denied in a letter in the *Times* of Sept. 3rd by Mr. Harald Faber, Commissioner to the Danish Government. Mr. Faber quotes the following paragraph occurring in the final report of the Royal Commission on Agriculture: "It is clear from evidence before us that in some cases the buildings used for cows and the surroundings are in an unclean and insanitary condition, and that insufficient care is taken to keep the dairies perfectly clean. In the coöperative dairies in Denmark cleanliness is enforced by stringent regulations to ensure the supply of sweet, pure milk, and to prevent the spread of infectious disease by dairy products." We do not doubt, however, but that this portion of the subject has been fully inquired into by the Royal Commission on Tuberculosis, and, as their report is not yet issued, it is expedient, we think, in the interests of the public, that a preliminary announcement should be made by the Government to set a very serious indictment at rest.

THE LANDING-PLACE AT BRINDISI.

ACCORDING to a contemporary, certain proposals for altering the berthing-place of the Peninsular and Oriental Company's steamers at Brindisi are not likely to meet with general acceptance. The site chosen by the Public Works Department for a new landing quay is, it is said, doubly objectionable—firstly, as being so exposed to south-west winds as to make the manœuvring of these large vessels at times a matter of difficulty and danger, and, secondly, because at this point the town sewage, with a strange disregard to the public health, is carted into a shallow part of the harbour. The latter objection is obviously an important one in view of the fact that several hundreds of passengers would thus on each voyage be exposed to the danger of conspicuous insanitation. Another plan provides for an extension of the existing railway line and leaves the mooring station of the large steamers in its present situation. We are not informed as to the cost of these alternative proposals. It is estimated, however, that the yearly outlay in connexion with the Peninsular and Oriental Company's traffic in Brindisi is from £40,000 to £50,000, and that in the event of the first-mentioned suggestion being carried out this traffic is in danger of being transferred to Marseilles. The Italian Government, we understand, has not yet given its decision on the subject which evidently calls for reconsideration.

THE TREATMENT OF STRABISMUS.

IN the *New York Medical Journal* of July 24th, 1897, Dr. Prentice describes a new method of treating strabismus, which, however, he appears to have used only in cases of the internal strabismus which accompanies hypermetropia. His idea is to forcibly repress spasm of the ciliary muscles and the associated action of the internal recti by over-correction with strong plus lenses. In an ordinary case of internal strabismus, if a pair of plus 5 or 6 D be used, the strabismus will be seen at once to materially diminish. He also uses prisms to still further repress the action of the internal recti. The following case will make his method plain. A woman, aged twenty-five years, had convergence of about five millimetres. The vision of the left eye was normal, of the right $\frac{2}{3}$. After using atropine ·75 D of hypermetropia was found. Plus 5 D glasses were given for reading, and she was directed to hold the book at the farthest distance that she could read, and to read as long and as frequently as possible. For distant vision plus 2 D glasses were ordered, which gave but $\frac{2}{3}$ of vision. In two weeks there was sufficient relaxation of the internal recti to admit of fusion of objects at twelve inches through the plus 5 D glasses. Three days later 8° of prism with base in were added to the reading-glasses, and the fusion was still maintained. From this time as much prism was from time to time added as could be fused for, thus producing a constant effort of the internal recti to relax their spasm. At the end of two months 24° of prism combined with plus D 5

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spherical were used for reading. Also she could fuse at 12 feet with the plus 2 D or distance glasses, which now gave vision $\frac{12}{18}$. In three months fusion was possible at all points with 4° of prism. A month later the patient could fuse for 8° of prism with the 2 D glasses, which now gave vision $\frac{12}{18}$ instead of $\frac{12}{18}$. Vision was now normal in both eyes with plus 1·50 D The writer concludes that this repression had further relaxed the ciliary muscle and revealed ·75 D more hypermetropia than the atropine had. In six months vision through the 2 D lenses was $\frac{12}{18}$, and their continuance was advised, with the occasional use of the sphero-prisms for reading.

A TERROR-STRICKEN PATIENT.

A SAD story was revealed a few days ago by a woman who applied to a magistrate for assistance in finding her daughter who had suddenly run away. It appears that the girl, who was sixteen and a half years old, had recently been attending a hospital for some illness, and from what was said she thought that an operation was necessary in order that she might regain her health. On leaving the hospital she was told to return again next the day, but instead of doing so she left her situation and disappeared. What the nature of the proposed operation was we do not know, but at any rate the thoughts of it so preyed upon the girl's mind that she ran away from all her friends, and in a letter to her mother she stated her determination to walk on until she found some place where she could die. It can only be hoped that she will soon be found, and that calm reasoning will allay her fears, or at any rate convince her that, whether the operation be necessary or not, the decision of having it done rests entirely with herself. It is easy to imagine that a young girl of neurotic temperament might work her mind into such a state that she would rather run away than face the dreaded ordeal, but fortunately the nerves of the majority are sufficiently strong to bear these unpleasant shocks. Children are especially apt to be easily frightened, and when they go to the hospitals they should always be accompanied by some grown-up person and not, as frequently happens, sent by themselves or in company with other children. By themselves they are often incapable of explaining their own symptoms and also of understanding any directions for treatment which it may be necessary to give them.

HOW DO CLIMATIC INFLUENCES PREVENT THE PROPAGATION OF PHTHISIS?

DR. GARDINER, of Colorado Springs, discusses this subject in the *Boston Medical and Surgical Journal* of July 22nd, 1897. He very reasonably insists that the impression that phthisis is not communicated in the arid or elevated regions of the world is not at all proved by the statistics generally brought forward. The immunising power apparently possessed by a climate may be really due to the manner of life, such as isolation and the like, day and night in the open air, or to the selection of lives, as the early settlers are necessarily strong. It is therefore only after a country has been settled for some time that indoor industries, overcrowding, and the general insanitary surroundings of civilisation exert their full action. Such conditions, however, now exist, as the dry and elevated regions of almost the entire world have populous cities, whose inhabitants lead indoor lives comparable to those of the dwellers in the crowded civilised centres from which our statistics have for years been drawn. The statistics of these cities clearly show that the prevailing opinion as to the influence of climate is well founded. For example, Denver has a population of 150,000, tall buildings which shut out the light, industrial occupations which are conducive to phthisis, and a large proportion of phthisical invalids scattered amongst its inhabitants. Yet only 64 deaths from non-imported phthisis occurred in 1896. The average city would show 450. Again, circular letters were sent to medical men practising in the dry belt which comprises Utah, Arizona, Wyoming, New Mexico, and Colorado, asking the number of cases seen or heard of by them and the number of years each had been in practice; 203 years of observation in practice gave only 130 cases of non-imported phthisis, fully 80 per cent. of which were from Salt Lake City, in native Mexicans in New Mexico, or in an altitude below 3000 ft. The writer attributes the climatic influence to the loss of virulence of the tubercle bacilli when distributed in the form of dust, from exposure to the constant sunshine in the rarified air, and also to the increased depth of respiration which high altitudes produce.

A NEW CORSET.

"MADGE," the editress of "Girls' Gossip" in *Truth*, who may always be depended on to take a sound view of the fashionable fads and fancies of the day, writes as follows in a recent issue of Mr. Labouchere's journal: "A new corset, devised by someone who has little sympathy for flesh and blood, is to transform the ordinary figure into one that measures 20 inches round the waist, 40 round the chest, and 48 or 50 round the hips. Please note this last item in the new development. In the illustration accompanying these particulars the hips rise in a semicircle at either side of the waist. It is a hideous distortion, and I should think it must be some sort of a joke, though letters from artists, physicians, society women, and fashionable dressmakers are printed on the subject. We shall see." The notion, it seems, hails from America, but we very much doubt its ever coming into vogue, either in the new world or in the old. A wasp-like waist is not a thing of beauty in the human species, to say nothing of its physiological inappropriateness. We quite agree with "Madge's" concluding remarks on the subject: "The proper measurements of a woman whose height is 5ft. 7in. are 26 inches round the waist, 34 round the chest, and 40 about the hips. Compare these figures with those I have given above!"

FORCIBLE REDUCTION OF POTT'S CURVATURE.

ONE of the most striking of the recent advances of surgery has been the introduction of the forcible method of reducing the deformity in Pott's curvature of the spine. Though attempts have been made from time to time to diminish the projection of the spinous processes of the affected vertebræ, yet the teaching recognised by practically all surgeons up to almost the present moment has been that no attempt should be made to reduce forcibly the curvature, and that all the surgeon's efforts should be directed to obtain consolidation and thus prevent the increase of the deformity. To Chipault, of Paris, and to Calot, of Berck-sur-Mer, must be accorded the credit of first having successfully employed forcible reduction. Since the publication of the results obtained by these surgeons numerous other papers on the subject have appeared. In many of the earlier cases it was thought necessary to resect the spinous processes of the vertebræ of the diseased area. A very interesting paper was read on this subject at the Moscow Congress by Professor T. Jonnesco, of Bucharest. He performs Calot's operation with certain modifications. In the first place, he never finds it necessary to remove any of the spines; and, secondly, he employs pulleys to obtain the extension. Manual traction is irregular and jerky, and is liable to be unnecessarily strong. The method employed is as follows. The patient, anæsthetised, is placed face downwards on two padded supports, one under the thorax and the other under the pelvis; a sling like that used in suspending a patient when a Sayre's jacket is put on is placed

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beneath the chin and occiput, and a somewhat similar one is fastened round the pelvis, so that longitudinal traction can be made readily. The head sling is attached to the wall, and to the pelvic band is fastened a compound pulley, a dynamometer being interposed. Traction is then made until the dynamometer registers 45 or 50 kilogrammes. Two assistants then fix the pelvis and support the lumbar spine, while the operator presses firmly on the projection. A cracking sound is heard and the prominence disappears. Then a plaster-of-Paris jacket is put on, surrounding the whole trunk and fixing the head. The cases operated on were thirteen in number, and the ages varied from two and a half years to twenty-two years. In most case excellent results were obtained. Three deaths occurred—one patient died under chloroform, another died a week later from broncho-pneumonia, and the third died two days after the operation, but as no post-mortem examination was made no cause could be assigned for the death. As might be expected, recent and slight cases are considered the most suitable for operation, but even severe and long-standing curvatures have been treated with success.

SUPPER-BEER IN SCHOOLS.

WE have received, as might be expected, several communications on the important, if unsavoury, subject brought to the notice of our readers last week by the former head-master of Foyle College, Londonderry. Among these came a temperance leaflet on the impropriety of certain uses of alcohol in schools, written by Dr. Clement Dukes, physician to Rugby school, the teaching of which is so sensible and simple that we desire to recapitulate it. After announcing, *in limine*, that in his opinion no alcohol whatever should at any time be given to the young of either sex save as a remedy in disease, Dr. Dukes made more particular remarks with regard to the domestic management of our big public schools in condemnation of "the cruel and pernicious practice which prevails at most of them of supplying supper at 9 P.M. consisting of various stimulating articles of food, from meat and tarts to cheese and beer." We are not aware how far it is the case that supper of such a character is placed before the boys at most of our public schools—possibly Dr. Dukes's words were spoken when such heavy and ignorant feeding of small boys was more usual both at home and at school — but we are prepared to endorse to the full his views on the mischief that such food might well work if given to growing lads just before the night's rest. Boys do not require the hypnotic influences of beer—most of them find Thucydides or conic sections, Nepos or Xenophon, football or rackets, to fulfil all their soporific needs—while the stimulus given by beer to the animal passions is most dangerous at a late hour in the evening, when no exercise of mind or body will follow to counterbalance the excitation. It cannot be too widely known that to give boys, as a rule, suppers of an indigestible or stimulating character immediately before sending them to bed is to do them a cruel wrong. It is to double their difficulty and to deprive them of their safe-guard, and although the facts hold good in home life as much as in school life, it is, of course, at school that the consequences are most apparent and most disastrous.

CATHETERISM OF THE URETERS IN THE MALE.

IN the *Journal of Cutaneous and Genito-Urinary Diseases*, June, 1897, is published an account of this important innovation, which Dr. Meyer brought before the New York Academy of Medicine. It constitutes an extension to the male of methods devised by Dr. Howard Kelly in the case of the female. The following is the mode of procedure. The bladder is washed out and cocainised and from five to seven ounces of clear fluid are introduced. The ureter cysto-scope containing the ureter catheter is then passed. After the interior of the bladder has been inspected and the ureteral openings have come into view one of them is approached and the catheter is pushed forward. The catheter is not allowed to pass more than two inches into the ureter, and the wire mandrel is withdrawn. As a rule the urine will begin to flow drop by drop. The writer avers that if his directions are properly followed there ought to be no difficulty in skilled hands performing the operation. In only one case did he fail, and here there was evidently congenital contraction of the mouth of the ureter. In the discussion which followed there was a consensus of opinion that the operation was by no means so easy as Dr. Meyer considered. Also it was pointed out that the introduction of the catheter might produce sympathetic anuria in the only working kidney. The value of the operation, especially in cases where nephrectomy is proposed, is obvious.

LEPROSY IN GREAT BRITAIN AND IRELAND.

WE are asked to announce that the authorities of the forthcoming International Leprosy Conference are anxious to obtain particulars of any cases of true leprosy which have come under medical observation during the last ten years or so in Great Britain and Ireland. Members of the profession who may have knowledge of such cases will confer a great favour and will materially assist the inquiry by communicating with Dr. Phineas S. Abraham, 2, Henrietta-street, Cavendish-square, who is secretary to the Leprosy Investigation Committee (National Leprosy Fund). What is asked for is information in the form of a short note giving initials of patient, sex, age, nationality, variety of the disease, length of time affected, in what country acquired, &c. Any facts, negative or positive, which may be supplied will be duly acknowledged at the conference.

THE RISING OF THE BORDER TRIBES.

THE latest news from India is much more satisfactory. There is a lull on the frontier at present. The main elements of a satisfactory kind in the recent intelligence are that the Afridis are beginning to count the probable cost of their action, to be less attentive to the preachings of the Mullahs, and to feel the loss of their subsidies and trade with India, as well as to be alarmed at the prospect of punitive expeditions against them; that the Mohmands are not disposed to rise; and that the Ameer of Afghanistan has not only spoken out, but taken some effective steps to punish those of his subjects disposed to join in the outbreak against British authority. It is the grave financial loss in which the Indian Government will be involved in suppressing a general revolt of the border tribes rather than any actual danger to our Indian rule—for that is comparatively small—that is so embarrassing at the present time. The policy seems to be to deal as promptly as practicable with those of the tribes who have already taken part in the revolt, and once having shown our power and determination to deal with them and compel their submission, to be ready to act in a friendly way to them when it has been obtained. Several punitive expeditions will soon be ready to start on their work, but we may be sure that the Government of India will only be too ready to bring things to as speedy an end as possible. The lesson that is required is the manifestation of our power to deal out rewards as well as punishments. There will be much temporary sickness, no doubt, but the news is not, so far, unfavourable in this respect. The adequate supply of animal transport has always been a difficulty in our military expeditions. We have no doubt that the field medical service system will prove to be good, but it will, we fear, be hampered by the fact that the medical departments of India are shorthanded at the present

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time. The feeding and clothing of the expeditions will be a source of some difficulty; the insufficient supplies of clothing for the native followers and the soldiers of the native army engaged in frontier warfare are a fruitful source of inefficiency and of sickness, especially of a pulmonary kind. The natives of the plains of India, as might be expected, stand cold and exposure very badly, and, especially those who have previously suffered from malaria, frequently die from pneumonia.

LARYNGEAL PERICHONDRITIS AS A COMPLICATION OF TYPHOID FEVER.

LARYNGEAL perichondritis is one of the rarer complications of typhoid fever. In the *Journal of the American Medical Association* Dr. M. H. Fussell records the following case. A man, aged thirty years, had an unusually severe attack of typhoid fever. From the beginning there was much hoarseness. In five weeks the temperature fell to normal. Six days afterwards he ate an apple. Almost immediately he was seized with a severe attack of coughing and the signs of laryngeal stenosis. On the third day after this he was suffering extremely from the stenosis of the larynx and begged for relief. Examination of the larynx showed œdema and no ulcerations. Externally the region of the thyroid cartilage was swollen and extremely tender. Tracheotomy was refused. Two days later the œdema of the larynx had largely disappeared, but the stenosis was as great as before. The laryngoscope showed a pale mucous membrane and a decided narrowing below the cords. The patient died on the seventh day. The usual signs of typhoid fever were found at the necropsy. The interior of the larynx was filled with frothy muco-purulent matter. There was no ulceration of the cords. Section through the posterior angle of the thyroid cartilage, which was necrosed, showed a large perichondrial abscess.

PHARMACY AND THE SALE OF POISONS IN THE ISLAND OF JERSEY.

THE dangers attending the indiscriminate sale of poisons have only recently been recognised by the Legislatures of the Channel Islands, but it is satisfactory to find that two of them have at length made adequate provision for the safety of the public. As is well known, these islands legislate for themselves through the "States," which are the local parliaments, and are quite separate for each island. Guernsey passed a Pharmacy Act in 1882, but in the neighbouring island of Jersey there was no Pharmacy Act and no control whatever over the sale of poisons until Aug. 5th, 1897, on which date the State passed a Bill on the subject, introduced in February, 1896, by Dr. W. Duret Aubin, Deputy in the States for St. Heliers. The Act, or Règlement as it is called, will be in force for three years; it is in the French language, and consists of seventeen articles. It prohibits the practice of pharmacy in Jersey except by permission of the Royal Court, and provides that in future this permission shall be granted only to those who are duly recognised either (1) as "pharmaceutical chemists" or "chemists and druggists" by the Pharmaceutical Society of Great Britain; or (2) as "pharmaceutical chemists" or "chemists and druggists" by the Pharmaceutical Society of Ireland; or (3) as "Pharmacien de Première Classe" or "Pharmacien de Seconde Classe" by one of the Schools of Pharmacy of the University of France. The poison schedule, Parts I. and II., as well as the regulations with regard to the recording of the sale, are practically identical with those which are in force in England, with, however, the important addition that carbolic acid is included in Part II. Carbolic acid is so frequently intentionally swallowed as a means of suicide, and so many accidental poisonings have occurred in connexion with its use as a domestic disinfectant, that we are glad to find that the States of Jersey have set the example of prohibiting its indiscriminate sale, the urgent need of legislation on the subject being apparent from the fact that the Registrar-General's returns for 1895 show that in England and Wales during that year 580 persons committed suicide by poison, of whom 224 resorted to carbolic acid. The Jersey Act makes no reference to the addition of soot or indigo to arsenic, an admixture which is authorised in England.

INQUEST ON A CENTENARIAN.

To hold an inquest on a centenarian is as novel as it is rare, but with the law as it stands the inquiry into the death of Mrs. Mary Neighbour, at Ashurst Wood, Forest Row, Sussex, on Sept. 7th, was a matter of compulsion, the direct cause of death being the result of a fall. The old lady, who was but three months short of her 101st birthday, resided in a humble cottage with a grand-daughter. After taking her tea on Aug. 30th, in the temporary absence of the grand-daughter, the old lady got up from her chair. No one saw what happened, but from the fact that the chair recently occupied by the grand-daughter had been thrown over it was thought that she rested her body with her hand on the chair, which, not being evenly balanced, fell over, throwing the centenarian violently to the ground, her head striking the fender. A sudden and unexpected shock of this kind was quite sufficient to bring about her end somewhat sooner than would otherwise have been the case, for, as was only naturally anticipated, medical evidence showed that deceased was suffering from marked senile decay. She was unconscious when picked up from the floor, and she remained in this condition till the following Sunday afternoon. Her children (four by her first husband and seven by her second) and their descendents number 303, of whom some 200 are still living.

THE INFANT LIFE PROTECTION ACT.

THE amended Infant Life Protection Act, which is to become operative on Jan. 1st, 1898, may be accorded a qualified welcome as providing for the more practical application of a measure which has hitherto stood much in need of improvement in this respect. In the new Act considerable care has been taken to ensure the notification and periodic inspection of nurse children, the respectability of their nurses, and the sanitary condition of their surroundings. Excellent as these provisions are, however, their value is materially diminished by defects in the Act which must very seriously limit its utility. One of these consists in the exclusion of single nurse children from the Act, the other in the exemption of children for whose maintenance a sum exceeding £20 has been paid. The effect of these omissions is obvious. They virtually describe the Act as intended merely to suppress the unregistered crêche, while it leaves untouched the system of putting out to nurse which is at the root of much infant mortality. The unregistered crêche if broken up into its constituent units may still continue to flourish unobserved by the eye of authority. The nursed offspring of a wealthy parent may, under any conditions, escape supervision. The probable effect of these important omissions is obvious. Nurse children, it is well known, are usually illegitimate. They are, as a rule, not desired by their parents. If they should be committed to the keeping of unscrupulous persons one by one, or with a substantial payment, the law is no longer responsible for their safety which must therefore be at best an unknown quantity. We yield to none in appreciation of every honest endeavour to promote the welfare of children. For this reason we willingly acknowledge such advantages as

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the amended Act confers on them. For this reason also we must admit a keen sense of disappointment that the omissions we have referred to have so greatly stultified its intention as to make it practically unreliable for the protection of infant life.

THE NEW INFIRMARY AT NEWCASTLE: A MAGNIFICENT PIECE OF MUNIFICENCE.

SOME two or three months ago we chronicled the interesting fact that Mr. Riley Lord, J.P., had been able to raise £100,000 for the re-building of the Royal Infirmary at Newcastle, of which ancient city he is an ex-mayor. The energy and perseverence that were displayed by Mr. Lord in raising this very large sum—probably the greatest effort in commemoration of the Diamond Jubilee that was accomplished outside the metropolis—have now been emulated by the magnificent generosity of another Newcastle citizen, Mr. John Hall, who has given out of his private purse a similar sum for the same purpose. With £200,000 to spend the city of Newcastle ought soon to have a magnificent infirmary, and as only reasonable conditions are attached to Mr. Hall's splendid donation, which was formally accepted by the Governors of the charity last week, we may expect soon to hear that a site has been selected and a plan approved of. The competing architects have been told of the altered conditions under which their designs may now be constructed, and the time for submitting the plans to the building committee has been extended.

SIMPLE MYOSITIS AS AN OCCUPATION DISEASE.

IN the *International Medical Magazine* of Philadelphia, July, 1897, Dr. Harold N. Moyer publishes the following exceptional case. A wood carver, aged forty-one years, in excellent health, noticed a painful condition on the outer side of the right elbow-joint. It gradually became worse, and soon a swelling was observed, but there was no redness of the skin. A few days' rest would reduce the swelling, but a return to his occupation produced recurrence. He had always been free from rheumatism. He came under observation nine months after the onset of the disease. Examination showed swelling of the muscles, extending downwards from the external condyle of the humerus about two and a half inches. The enlargement was confined to the muscles which arise from the condyle, and especially involved the supinator longus, the extensor carpi radialis longior, and brevior. The muscular bellies were firm and painful on deep pressure. The overlying skin was normal and there was no œdema. Sensation was perfect and no tender points could be found along the nerves. The electrical reactions were normal. There was neither spasm nor incoördination of movement when the patient followed his employment, it was only pain that compelled him to desist. The use of the arm in other occupations did not aggravate the condition. The patient illustrated the usual movements of wood-carving, which showed that the affected muscles were predominantly used, thus conclusively proving that the malady was an occupation disease.

INFECTION AND PARENTAL RESPONSIBILITY.

THE dangers connected with infectious disease have never been so clearly explained or so widely published as in our own day, consequently it is inevitable that the neglect of due precaution in respect of them should be legally punishable. In view of these facts two sentences in the Croydon county court imposing a light fine in each case upon defaulting parents cannot be considered even moderately severe. We mention them here because the offence committed is far from being uncommon, though it probably still escapes notice in a majority of instances. Sometimes it is, no doubt, a result of ignorance, but just as often, if not oftener, it is due to carelessness. How can we explain otherwise the frequency with which an infectious fever is caught at school? At the present date we commonly find that scarlet fever, or measles, if of a mild type, is treated as a mere common-place on the authority of some grandmotherly custom. No medical man is summoned, no sanitary precaution used, no notification, where this is called for, is made. In the case of whooping-cough, a disease of very grave import to young children, though not included in the schedule of the Act, this heedlessness is of daily occurrence. Such facts show clearly that, in spite of an increased knowledge of the power of contagion, many parents have still the most elementary sense of their responsibility with regard to it. It is therefore the more necessary that medical men and sanitary officers should do all that in them lies to instil a proper sense of the duty of precaution into the public mind. No alarmist attitude is required but is rather to be deprecated. The necessity, however, of isolation even in doubtful cases and at doubtful stages of disease, must be kept in view and instilled by precept and example.

THE treasurer of Guy's Hospital has received a donation of £1000 from the committee of the American Victoria Jubilee Fund to endow in perpetuity a "Queen Victoria Bed."

DR. R. R. RENTOUL, one of the recently elected Direct Representatives of the profession on the General Medical Council, has resigned his seat on that body.

DR. BYROM BRAMWELL has been elected an honorary member of the Société des Médecins Russes de St. Pétersbourg.

NOTE UPON THE TOXIC EFFECTS OF THE SWEAT OF A HEALTHY MAN.[1]

BY S. ARLOING.

II[2]

[WE published last week the first of two papers recently contributed by M. Arloing to the *Comptes Rendus* on the toxicity of normal human sweat, and to-day we give the second in the form of an unabridged translation. The following comment contributed by M. Berthollet on the earlier occasion upon which the subject was brought before the Academy of Sciences is of highly curious interest in this connexion. It will be seen from our correspondence columns that it has obtained currency in some of the continental journals in a slightly inaccurate form. M. Berthollet remembered having read the following in a work entitled "Mappæ Clavicula"—collection of ancient recipes (recipe 265): "Sudorem equi, quem in dextera parte inter coxas habuerit, sume, et intinge sagittam. Hoc expertum est utiliter." He suggests that it might be interesting to study the relation of this old prescription with M. Arloing's experiments.]

In a note inserted in the *Comptes Rendus* of July 26th last I briefly indicated the sum total of the characteristic features of poisoning by sweat, and gave in same details the evil effects produced on the circulation. I now propose to set out in the same manner the toxic symptoms produced on some other functions, still taking the dog as the type.

a. The mechanical phenomena of respiration are modified in number, amplitude, and form. I have already remarked in the preceding note upon the profound disturbance

[1] Translated from Comptes Rendus, vol. CXXV., No. 5, Aug. 2nd, 1897, p. 183.

[2] No. I. was published in THE LANCET of Sept. 4th, 1897.

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occasioned to the respiration shortly after the introduction of the first dose of sweat into the blood. This disturbance, indicative of a violent excitement, is modified as a result of subsequent injections, and consists then in a considerable prolongation of the expiratory phase. Little by little, in proportion as the animal passes into a sort of hypnotic state, the respiratory movements diminish in number, become increasingly deep, and give rise to marked variations of arterial pressure. Furthermore, the inspiration is often accomplished by two well-defined efforts. Eventually the pneumographic curves are broken by slight irregularities occasioned by shiverings or tremblings, which shake the body of the subject at this stage. Finally may be noticed the modifications which precede and accompany the vomitings which are usual at this stage of the poisoning process. If, proceeding as I did in the study of the disturbances affecting the circulation, the respiratory movements are registered eight or ten hours after the last injection, during the stage of prostration, it is observed that the respiration has recovered its initial frequency, but is not so deep; that the inspiration is harsh and convulsive; that the thorax contracts rapidly at first, afterwards so gradually that it would be easy to believe that a long pause occurred during expiration. In one experiment, which may be regarded as an average case, there were 21 respirations a minute before the injections, 9 after the injections during the hypnotic stage, and 20 during the stage of prostration. In brief, the respiratory movements show, but rather by their form than by their number, that the nervous centres are affected by the sudoral poisons.

b. The mean temperature commonly falls in the course of the intravenous injections, but it is rapidly recovered, and after about four hours it rises above the normal by from one and a half to two degrees. It is not necessary for the production of a rise of temperature to administer a lethal dose; it may be observed in almost the same measure after the injection of a feeble or moderate dose. It coincides with general shivering attacks, lasts for about two hours, undergoes thereafter a sharp reduction of from a half to one degree, and oscillates for a considerable time about this *febrile* temperature. Then one of two things will occur; either the subject recovers, and in that case the temperature returns by degrees to the normal during the following days, *or* death may ensue, and in that case the temperature falls pretty quickly below the normal. It happens only very rarely that the subject dies, except there be a sub-normal *temperature*. When the dose is large or the sweat hypertoxic the temperature falls continuously after the injection without any further rise till death.

c. Over and above the effects upon the cardio-pulmonary nervous system I ought to mention the influence exerted by the injections upon the nausea-producing centre (*le centre nauséeux*) and upon the spinal marrow. It is impossible to deny that a relation of cause and effect may subsist between the sickness and the violent gastro-duodenal congestion occasioned by the sudoral poison; nevertheless, I can affirm that there is a direct action of this poison upon the nausea-producing centre, for I have observed vomiting to occur at the beginning of injections of concentrated extracts before the occurrence of any of the phenomena of congestion. The sweat secreted during and after muscular effort is more productive of vomiting than the secretion occasioned by artificial means after prolonged repose. The action upon the spinal marrow is manifested in many instances by excessive weakness of the hind limbs and of the lumbar region. There may be adduced, moreover, as evidence of an effect produced upon the nervous axis, the shiverings and tremblings which in the end involve almost all the muscles, shiverings and tremblings which are thrown into rhythmic action by the inspirations, and in some case choreiform movements of the limbs and spasmodic contractions of the diaphragm. Finally, as the sweat diffuses through the blood it produces an immediate exciting effect upon the muscular tissue of the intestine.

d. One of the most remarkable effects of poisoning by sweat is that produced upon the corpuscular constituents of the blood. *This rapidly diminishes from the first day and takes a long time for renewal in case the poisoning does not result in death. Thus in two dogs, four hours after the injections, although the febrile reaction was at its maximum, the number of red corpuscles* had diminished by about 1,000,000 *per cubic millimetre.* The following day the *temperature had returned to normal*, the number of red *corpuscles had diminished in the* one case from 5,940,000 to 3,732,000, and in the other from 5 100,000 to 3,280,000. A month later the subjects were still anæmic, although according to the report they were tending to return to the normal condition. The anæmic condition is accompanied by considerable emaciation; in three or four days the subjects lose more than one-third of their weight. If the malady lasts for a certain time sugar disappears from the blood and from the liver at the moment of death. At this moment also the urine is albuminous. The phenomena of nutrition and of the urinary secretion are therefore more or less profoundly affected by the presence of sweat in the blood. I have endeavoured to obtain evidence of this by an exact study of the excreta and of the chemical composition of the urine of animals submitted to a uniform course of feeding and one calculated to maintain a uniform condition of the organism. Immediately after the introduction of the poison the proportion of urea, of chlorides, and of phosphates in the urine is increased. Although the chlorides attain their maximum at the end of about four-and-twenty hours the urea and the phosphates do not attain theirs before forty-eight hours. Subsequently this proportion gradually falls. At the end of five days the phosphates continue to fall, but more gradually; the proportion of chlorides and of urea, on the contrary, tends to rise anew. But if account be taken of the quantity of urine secreted it will be found that the total amount of these substances eliminated during the five days following upon the injections is slightly below the normal. The greatest difference is presented by the chlorides, then by the urea, and least by the phosphates.

e. Now if we examine the symptoms of poisoning in the rabbit we shall find both analogies and differences. Of course, the vomitings do not occur, but the shiverings may be observed, the reduced temperature, the depression, the prostration, and sometimes the paresis of the hinder limbs. The first doses call forth violent contractions of the intestine, which produce movements of the walls of the abdomen in places. The pulse is much accelerated. The thoracic walls are agitated by rapid and jerky respirations. I have observed some constriction of the small vessels of the ear, but the pupil retains its mobility unimpaired. At last the animal falls into a lethargic condition, râles embarrass the respiration, the sensibility of the cornea diminishes, and a few convulsions precede death.

f. As for the guinea-pig, it becomes miserable, it shudders, its fur stands on end, it huddles itself together, its respiration becomes much accelerated, it utters faint cries from time to time, and finally it succumbs without exhibiting any more characteristic symptoms.

To sum up, if we take a survey of the symptoms described in this article and the preceding one we come to the conclusion that sweat contains some energetically poisonous substances, occasioning more or less derangement to all parts of the organism, disturbing the intimate phenomena of nutrition, modifying the composition of the blood, substances the properties of which possess a strong analogy to certain microbic toxins.

THE INCREASE OF DIPHTHERIA.

MR. D. T. BOSTEL'S letter (which we publish in another column) almost embraces the whole sanitary question—viz., (1) drain air as a means of propagating disease, (2) public sewers, (3) private drains, and (4) the duties of the local authorities. As the subject is at the moment one of very general interest a brief allusion to the points raised may be given.

First, with regard to insanitary surroundings causing or extending an epidemic of diphtheria. The specific infective poison of this disease differs from most others of an infectious nature in that the micro-organisms producing it are never found in the blood or in any of the internal organs. The bacilli in the human subject are only found in the mucous membrane of the throat.

It has been concluded that the action of the specific bacillus upon a weakened mucous membrane gives rise to a specific inflammatory process by the direct action of the poisonous products formed on the surrounding cells and blood-vessels, and produces the false membrane characteristic of the disease. These bacilli, though they may be present in the mouth, can exert little or no injurious effect

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unless the mucous lining of the throat, larynx, &c., is already affected by some minor disease, but inflamed tonsils or ulcerations of the mucous membrane offer at once a favourable field for their operations.

There is a theory prevalent[1] that diphtheria is greatly influenced by damp, or rather by the level of the subsoil water, outbreaks of the disease so frequently occurring on the subsidence of water after a flood. This is, however, most likely due to the pollution of the sources of the drinking water by the flood from the surrounding cesspools, manure heaps, &c., by which means those who drink such water are prepared for the reception of the specific bacillus.

Dr. Klein believes cats to be a frequent source of transmission of infection. He is also of opinion that milk is another means of spreading the disease, though the question of its occasionally producing small pustules on the udder of the cow is still an open one. The wise will, however, see that their milk is boiled before use.

Dr. G. Sims Woodhead advises in any weak condition of the throat, not merely gargles, but application to the throat of antiseptic lotions, while plenty of fresh air and exercise should be taken combined with good food to promote the excretion of effete products, and that the cells may be able to play their part as phagocytes. He also states that the tenacity of life of these organisms at ordinary temperatures is very great—they retain their vitality for six months; and he advises that after a case has occurred the free use of boiling water is the best disinfectant, as a moist temperature of 136 4° F. will completely destroy them in a few minutes.

The very general distribution of the virus of diphtheria in an attenuated form makes it highly important that any unfavourable surroundings that tend to depress the vital powers, such as the emanations from a foul drain, which are especially liable to affect the throat, should be promptly corrected, otherwise a condition is established most favourable to the development of such bacteria, which then rapidly regain their virulence.

Secondly, the defective condition of many public sewers is much to be deplored. It is to be feared that there are few parishes in London in which some old and defective sewers do not exist. In some the brick bottoms have decayed and sunk, permitting large accumulations of deposit. Gases are generated in these to such an extent that the men who have occasion to wade through them dare not do so with a light for fear that their movements would free the gas in such volumes as might cause a fatal explosion.

The third point, relating to private drains. Houses in the neighbourhood of such sewers are liable to be affected by the emanations from them; these may travel along the course, not only of the house drains, but of the gas and water mains leading from the road.

Lastly, as to local authorities. The vestryman, with a view to future election, is often more desirous of spending public money upon improvements that command general attention than upon a buried sewer. The motto, "Let sleeping dogs lie," is one that frequently finds acceptance in connexion with drains and sewers.

The question on drain testing opens up rather a wide subject, but there can be no doubt that a drain that will hold water with a head of two or three feet must be a perfectly sound one. How long it will continue to be so if constructed of stoneware pipes is another matter.

SOME LITERATURE CONCERNING THE PLAGUE.

(Concluded from p. 559.)

THE report of the Commission sent by the Egyptian Government to Bombay to study plague is an excellent and interesting official document. In view of the rapid extension of plague in Bombay, and the possibility of infection of the Mecca pilgrimage by Indian pilgrims, the question very naturally arose of the danger of infection of Egypt, and it was consequently thought desirable that the sanitary authorities of that country should have the opportunity of studying the disease on the spot, as there had been no occurrence of epidemic plague in Egypt since 1845. A mission composed of the Director-General of the Sanitary Department (Dr. Rogers Pasha), the Director of the Hygienic Institute at Cairo (Dr. Bitter), and the Director of the Medical School, Cairo (Dr. Ibrahim Pasha Hassan), with a complete equipment for fitting out a bacteriological laboratory, accordingly started, and arrived in Bombay on Jan. 24th last. The report deals with the epidemiology and medical history, and with the clinical, pathological, and bacteriological aspects of the disease. It did not come within the scope of the mission to enter upon any criticism as to the measures adopted in Bombay for the control of the disease, or to express any opinion as to the practicability of applying measures to that end in a city like Bombay, where so many complex questions of race, caste, and religion arise. The mission found on arrival, a general infection of the city and an extension into the neighbouring country. There was no really efficient system of death-registration in Bombay, and if the official statistics of deaths attributable to plague be taken there was also a co-existing epidemic mortality from other diseases, as was pointed out at the time, and as is clearly shown by comparing the death-rate of the plague year with that of ordinary years, notwithstanding the large exodus which, owing to the fear of plague, took place from Bombay. We gather from the report that the conclusions arrived at were:—that the plague spread through human beings, and that the part played by rats, flies, &c., in the propagation of the disease was probably a very small one, and that, in the first instance, it was the individual, and not the locality, which was infected. It follows, of course, that the prompt isolation of the sick and infected and the evacuation of houses and rooms and their efficient disinfection are essential preventive measures. We need scarcely add that for any disease-cause to take root and flourish there must, as in the case of any seed, be a suitable state of soil and environing conditions, and unhappily these exist in abundance in most oriental cities and places, but the removal of them is difficult, and in any case means the outlay of money and time, as well as, commonly, interference with ignorant prejudices, social and religious customs, and habits. It is easy to understand that, owing to political considerations and questions of expediency, governments are very reluctant to take the necessary steps at the right moment in a matter when time, unfortunately, forms an essential element of success. The usual course is for the local government to neglect the advice of their duly constituted official advisers or to postpone giving effect to it until the mischief is done and the pressure of public opinion begins to be felt, and even then, as in the case of Bombay, extraneous advice is sought for in support of the necessary measures before action is taken. As Dr. Rogers points out, the progress of plague in the Bombay Presidency was relatively slow as compared with that of epidemic cholera, for example, and thus allows of much more time for the application of sanitary and precautionary measures for stamping out the disease, if only the cases can be detected, and for that an effective system of death-registration is obviously necessary. In this connexion we may call attention to the government resolution and papers published in the *Government Gazette* for the North-Western Provinces and Oudh relating to the outbreak of bubonic plague at Hardwár in April, May, and June last, and the measures adopted for its suppression. The outbreak presented some peculiar features, and was a very striking and interesting illustration of what can be accomplished by logical methods of sanitary procedures when wisely and judiciously carried out. The facts detailed in the official correspondence making up the medical and sanitary history of the occurrence are too long for us to set forth, but the sanitary commissioner, Surgeon-Major S. J. Thompson, D.P.H Camb., and all concerned showed considerable administrative ability and skill in the arrangements they made as did the executive and sanitary officers in carrying them out. They certainly merit the highly appreciative terms in which their services are spoken of in the government resolution. The general result was that the outbreak in the great centre of Hindu pilgrimage was fully met and the disease stamped out without prohibiting the holding of the various fairs and bathing festivals. No case of plague occurred among the myriads of pilgrims who visited Hardwár. Returning, however, from this digression to the subject of the report of the Egyptian Sanitary Commission we may say that the system of preventive inoculations is made the subject of critical comment and remarks. That immunisation of the

[1] See THE LANCET, August 28th, 1897, p. 563.

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individual against plague may be arrived at is not only possible but probable; still, their efficacy in this respect has not yet been established. We do not ourselves see why practical sanitary measures should not go on while this method is being tried, but if it should be the case, as suggested, that recourse to such inoculations is likely to lead to the neglect of sanitary precautions of proved efficacy, then there is much force in what is urged in the report under review. It seems to us that the objections which might be urged against the practice are that the efficacy of such preventive inoculations has not yet been demonstrated; that they are painful, and attended with some fever; and that we do not know how long the alleged immunity lasts, and it appears impracticable to carry them out on so extensive a scale as is required for the protection of a population. In our present state of knowledge the recognised methods of dealing with epidemic diseases are the safest and best—viz., to search out and isolate the sick and segregate the infected as soon as possible, and to do all in our power in the intervals of their appearance to remove obvious causes likely to prejudicially affect the public health—by providing pure water supplies, good air, and cleanliness of soil. "Plague," says Dr. Rogers, "is not, in my opinion, and Dr. Bitter shares my views, a disease likely to take very firm hold amongst pilgrims living under canvas and constantly on the move." He considers, too, that there should be no unreasoning panic as to the danger of propagation of plague by commerce. After briefly describing the general state of things and the means available in Egypt for combating epidemic disease the Director-General of the Sanitary Department says that, on the whole, he considers himself justified in stating that the danger to Egypt from plague should not be very great. We have so extended our remarks on this practical and able section of the report that little or no room has been left for the remaining sections, dealing with the more scientific and medical and clinical aspects of the disease by Dr. Bitter and others. It must suffice to say with regard to these that they seem to us to have been very carefully and well done and will well repay perusal and consideration. "The Experiences and Lessons of the Bombay Plague," by Thomas Blaney, is a reprint of some able papers that appeared in the *Times of India*, in which the life of the plague epidemic in the population is traced in an interesting and suggestive way through its three successive stages—viz., its invading or spreading stage, its maximum degree of epidemic extension, and its third or declining stage, with reference to the measures which are applicable to them. The subject is well worked out and lucidly set forth, with a practical aim in view.

SMALL-POX AND VACCINATION IN ZULULAND.

A CORRESPONDENT writes: "As the subject of vaccination is one of never-ending interest the following case may be instructive as well as interesting.

"In November of last year a supposed outbreak of small-pox was reported to me, as one of the district surgeons in Zululand, as having broken out in my district, and on going to investigate I found six cases of a mild type in a convalescent stage. The infection I traced to a native recently returned from Johannesburg. There were four Kaffir kraals, of several huts in each, on the top of a hill, in such a situation as to render them most easy of isolation. I at once vaccinated and re-vaccinated all unprotected inmates, and placed a police guard round the hill, cutting off all communication with the outer world. Owing to part of my lymph being rather old several cases missed and had to be done over again, unfortunately not in time to prevent them contracting the disease; all of them did take it, one, an aged woman, very severely, almost in the confluent form. Her only garment was a short petticoat reaching to her knees. She had the sole charge of an infant, about eighteen months old, whose mother was away. This infant would not leave her night or day, slept with her, and was carried about by her, either on her back, or under her arm, the child being quite naked, rubbing off the tops of the pustules and well rubbing the virus into its own skin. The child had been vaccinated in four places and had taken well. I do not suppose either woman or child was once washed during the whole period of illness, and yet the child escaped small-pox infection. Could there be any better test of the efficacy of vaccination? Also, there were no cases of small-pox among those successfully vaccinated, though they mixed freely with the infected, even sleeping in the same huts. After an interval of twenty-one days from the termination of the last case I supplied each inmate with a piece of carbolic soap and sent them to the nearest spruit (brook) to wash themselves, making them leave their clothing, which was inconsequential, behind; I had it all hung up in the huts during their absence, the entrances being closed and the huts fumigated with sulphur. I would have much preferred to burn both huts and clothing, but was not allowed to do so; however, there was no return of the disease."

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Bristol Urban District.—The population of Bristol was estimated during 1896 at 230,623, but if the proposals for the extension of the borough are carried into effect Bristol will be very considerably increased both in population and in area. In connexion with the subject of water analysis Dr. D. S. Davies reports that twenty-one samples of water from local wells were examined by the city analyst, and with one exception all were found to be polluted. The exception afforded an interesting example of the futility of relying on analysis alone, whether be it chemical or bacteriological. The difference in the analysis during periods of drought and during those of heavy rain was most marked, and afforded a good example of the necessity for gauging risks rather by the surroundings of a well than by the analysis of its waters. Dr. Davies refers in his report to the complaints of the smells arising from the River Avon, but there is really nothing to add to the remarks we recently made on the subject in our columns; in fact, those remarks were in large part founded upon a notice of the report now before us. The subject of public slaughter-houses has been under the consideration of the sanitary committee during the year, and Dr. Davies, in a special report, states that the abattoirs of Bradford pay 6 per cent., of Manchester 4 per cent., and of Birkenhead 5 per cent.; and it seems probable that Bristol will soon be provided with these excellent preventatives of the sale of unwholesome meat, and, we may add, of unnecessary cruelty. The corrected death-rate of Bristol during 1896 was 17·59 per 1000, and the infantile mortality 135·9 per 1000 births. Concerning vaccination Dr. Davies reports that during 1895, the latest available returns, 73·06 of the children born were vaccinated. We wonder in all these cases how many insertions of lymph were made. In considering the bacteriological examination of diphtheria Dr. Davies states that in 1896 the test proved unreliable in 12 per cent. of the cases examined, and he points out that this failure may be due to errors in manipulation, in observation, or through the media being improperly prepared. Of errors in manipulation an instance is given where the wrong side of the cotton swab was applied to the surface of the agar. As Dr. Davies points out, a single negative result must be accepted with extreme caution. Thirty-six cases of small-pox occurred in Bristol during 1896, several of them being traced directly to Gloucester. In reference to the epidemic of small-pox at this latter place Dr. Davies observes that in an epidemic of equal severity in Bristol—assuming that the state of vaccination was similar to that which obtained in Gloucester—there would have been some 2196 deaths of small-pox in the city of Bristol during less than seven months.

St. Olave's District.—Dr. W. A. Bond states in his annual report for this district that he received information of the treatment of 14 cases of anthrax at Guy's Hospital; all the cases were operated upon and recovered. Of the 14 patients 6 worked at wharves in St. Olave's, 6 in the tanyard at Bermondsey, and the remaining two had a relative who worked in the same tanyard. In all instances the patients who had become infected at the wharves had been manipulating goat skins from China within a few days of their

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attacks. Dr. Bond is glad to be able to report that as regards means of prevention there is a decided tendency in the leather trade to adopt the "wet" instead of the "dry" cure, and that the "wet" cured hides are now considered superior to those "dry" cured. As Dr. Bond observes, great care should be taken at the centres of exportation to see that the hides of animals dead from anthrax are not mixed with those of healthy animals.

The City of London Sanitary District.—The figures yielded by the quinquennial census of 1896 furnish some interesting comparisons as regards the City of London with those of the 1891 census, which we noticed fully in our review of the annual report of Dr. Sedgwick Saunders, in which they were dealt with. The 1896 census showed that on the night of March 29th, 1896, the population of the City was 31,711, as against a night population of 38,320 in 1891, or, in other words, there has been in the five years which have elapsed between the two census returns a decrease of 6609. The estimated population for 1896 was 32,843, and the difference between the estimated and the actual population shows, Dr. Saunders observes, the desirability of more frequent enumerations of the people. The general death-rate of the City during 1896 was 17·8 per 1000, as against a rate of 18·3 for 1895, but it has to be noted that in these rates no allowance has been made for age and sex distribution. There were 915 tons of unsound meat seized in the City markets during 1896, the largest quantities being seized in the months from June to September. In his report as public analyst Dr. Saunders gives the result of certain analyses he made of foreign dairy produce, and they are interesting as having a distinct bearing upon the purity of our imported food supply. Samples of New Zealand butter were examined and found to be quite genuine, as also were those of Swedish, Australian, and Danish origin. Dr. Saunders points out that he made these analyses at the wish of the sanitary committee, but that this work forms no part of his duty as public analyst for the City. He considers that the Somerset House authorities might with profit undertake the examination of foreign produce.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS

IN thirty-three of the largest English towns 6071 births and 4362 deaths were registered during the week ending Sept. 4th. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 29·5 to 24·6 per 1000 further fell last week to 20·7. In London the rate was 17·0 per 1000, while it averaged 23·2 in the thirty-two provincial towns. The lowest death-rates in these towns were 10·4 in Swansea, 15·0 in Plymouth, 15·5 in Bristol, and 15·9 in Cardiff and in Huddersfield; the highest rates were 30·8 in Salford, 33·5 in Wolverhampton, 37·5 in Hull, and 44·4 in Preston. The 4362 deaths in these towns included 1272 which were referred to the principal zymotic diseases, against 2319 and 1783 in the two preceding weeks; of these, 1001 resulted from diarrhœa, 83 from measles, 62 from whooping-cough, 57 from diphtheria, 38 from "fever" (principally enteric), and 31 from scarlet fever. The lowest death-rates from these diseases were recorded in Swansea, Bristol, Plymouth, and Cardiff; and the highest rates in Salford, Wolverhampton, Hull, and Preston. The greatest mortality from measles occurred in Birmingham, Manchester, Oldham, Blackburn, and Preston; from scarlet fever in Salford; from whooping-cough in Plymouth and Wolverhampton; from "fever" in Sunderland and Burnley; and from diarrhœa in Blackburn, Leicester, Salford, Wolverhampton, Preston, and Hull. The 57 deaths from diphtheria included 35 in London, 5 in Liverpool, and 4 in Birmingham. No fatal case of small-pox was registered last week in any of the thirty-three large towns; and no cases of this disease were under treatment during last week in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3528, against 3341, 3400, and 3448 on the three preceding Saturdays; 371 new cases were admitted during the week, against 347, 340, and 356 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 119 and 102 in the two preceding weeks, rose again last week to 116, but were 33 below the corrected average. The causes of 39, or 0·9 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Cardiff, Leicester, Nottingham, and in fourteen smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Salford, and Bradford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight principal Scotch towns, which had been 21·6 and 19·6 per 1000 in the two preceding weeks, further declined to 18·1 during the week ending Sept. 4th, and was 2·6 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 6·8 in Perth and 15·1 in Edinburgh to 23·5 in Leith and 23·6 in Dundee. The 538 deaths in these towns included 84 which were referred to diarrhœa, 19 to whooping-cough, 10 to scarlet fever, 5 to measles, 4 to diphtheria, 4 to "fever" (principally enteric), and 1 to small-pox; in all, 127 deaths resulted from these principal zymotic diseases, against 187 and 137 in the two preceding weeks. These 127 deaths were equal to an annual rate of 4·3 per 1000, which was 1·7 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 147 and 96 in the two preceding weeks, further declined last week to 84, and included 38 in Glasgow, 12 in Edinburgh, and 9 in Dundee. The deaths referred to whooping-cough, which had been 21 and 23 in the two preceding weeks, declined again to 19 last week, of which 13 occurred in Glasgow and 4 in Dundee. The 10 fatal cases of scarlet fever showed a further increase upon the numbers recorded in recent weeks, and included 4 in Edinburgh and 3 in Dundee. The deaths from diphtheria, which had been 4 and 1 in the two preceding weeks, rose again to 4 last week, of which 2 occurred in Paisley. The 4 fatal cases of "fever" corresponded with the number recorded in the preceding week, and included 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 62 and 78 in the two preceding weeks, declined to 69 last week, but were 11 above the number in the corresponding period of last year. The causes of 38, or more than 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·3 and 23·0 per 1000 in the two preceding weeks, rose again to 23·1 during the week ending Sept. 4th. During the past nine weeks of the current quarter the death-rate in the city has averaged 23·5 per 1000, the rate during the same period being 20·9 in London and 18·0 in Edinburgh. The 155 deaths registered in Dublin during the week under notice showed a slight increase upon the number in the preceding week, and included 33 which were referred to the principal zymotic diseases, against 39 in each of the two preceding weeks; of these 25 resulted from diarrhœa, 4 from diphtheria, 3 from whooping-cough, 1 from scarlet fever, but not one from small-pox, measles, or "fever." These 33 deaths were equal to an annual rate of 4·9 per 1000, the zymotic death-rate during the same period being 3·2 in London and 3·2 in Edinburgh. The fatal cases of diarrhœa, which had been 31 and 32 in the two preceding weeks, declined to 25 last week. The 4 deaths referred to diphtheria exceeded the number recorded in any week since the end of June, and the 3 fatal cases of whooping-cough also exceeded those registered in any recent week. The mortality from scarlet fever showed a further decline from that recorded in the two preceding weeks. The 155 deaths in Dublin last week included 46 of infants under one year of age and 33 of persons aged upwards of sixty years; the deaths of infants and of elderly persons exceeded those recorded in the preceding week. Eight inquest cases and 6 deaths from violence were registered; and 43, or more than a fourth, of the deaths occurred in public institutions. The causes of 13, or more than 8 per cent., of the deaths in the city last week were not certified.

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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS OF LONDON—AUGUST, 1897.

(*Specially compiled for* THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1897.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,463,169	1	1804	918	1	249	12	20	458	18	3481	10·2	1	108	61	137	109	—	37	—	2079	2532	7·4	8124	23·7	366
West Districts.																										
Paddington	128,161	—	24	27	—	2	—	2	7	—	62	6·4	—	—	2	7	3	—	—	—	52	64	6·6	192	19·8	345
Kensington	171,427	—	47	29	—	4	—	—	23	—	103	7·8	—	—	—	5	1	—	—	—	49	55	4·2	222	16·9	271
Hammersmith	106,969	—	29	18	—	1	—	2	9	—	59	7·3	—	—	—	1	1	—	—	—	66	68	8·4	218	26·8	405
Fulham	120,040	—	70	33	—	2	2	—	18	—	125	13·6	—	—	—	5	5	—	2	—	77	89	9·7	222	24·1	392
Chelsea	96,692	—	46	17	—	6	—	—	4	—	73	9·8	—	1	—	1	2	—	—	—	41	45	6·1	151	20·4	342
St. George Hanover-square	80,330	—	11	10	—	1	—	—	—	—	22	3·6	—	1	2	1	1	—	—	—	7	12	1·9	74	12·0	212
Westminster	53,027	—	19	11	—	2	—	—	6	—	38	9·3	—	—	3	3	—	—	—	—	19	25	6·1	91	22·4	384
St. James Westminster	22,576	—	19	5	—	—	—	—	1	—	25	14·4	—	—	—	1	—	—	—	—	3	4	2·3	30	17·3	237
North Districts.																										
Marylebone	140,808	—	37	17	—	7	—	—	19	—	80	7·4	—	—	1	11	7	—	1	—	44	64	5·9	244	22·6	282
Hampstead	77,275	—	11	3	—	—	—	—	3	—	17	2·9	—	—	2	1	1	—	—	—	13	17	2·9	74	12·5	278
St. Pancras	242,255	1	75	24	—	27	4	3	32	3	169	9·1	1	5	—	7	5	—	3	—	116	135	7·3	467	25·1	430
Islington	341,134	—	111	46	—	20	—	1	28	1	207	7·9	1	5	7	6	13	—	2	—	111	145	5·6	529	20·2	304
Stoke Newington	34,136	—	8	1	—	1	—	—	2	—	12	4·6	—	—	—	1	3	—	—	—	12	16	6·1	51	19·5	338
Hackney	216,698	—	121	54	—	19	—	—	28	—	220	13·2	—	13	2	9	4	—	4	—	105	137	8·2	398	23·9	410
Central Districts.																										
St. Giles	37,840	—	17	2	—	4	—	—	5	—	28	9·6	—	—	—	—	—	—	—	—	10	10	3·4	63	21·7	378
St. Martin-in-the-Fields	12,711	—	5	2	—	—	—	—	2	—	9	9·2	—	—	1	—	—	—	—	—	1	3	3·1	14	14·4	417
Strand	23,552	—	8	1	—	1	—	—	2	—	12	6·6	—	—	—	—	1	—	1	—	8	10	5·5	42	23·2	306
Holborn	30,493	—	13	18	—	3	—	—	3	—	37	15·8	—	—	—	4	4	—	1	—	18	27	11·5	70	29·9	519
Clerkenwell	66,162	—	30	35	—	12	—	—	9	—	86	16·9	—	3	1	1	2	—	1	—	30	38	7·6	130	25·6	339
St. Luke	41,279	—	27	17	—	4	—	—	5	—	53	16·7	—	5	1	2	—	—	1	—	21	30	9·5	99	31·3	257
City of London	30,228	—	9	4	—	—	—	—	3	—	16	6·9	—	—	1	—	—	—	—	—	—	1	0·4	52	22·4	158
East Districts.																										
Shoreditch	121,883	—	69	26	—	21	—	—	17	1	134	14·3	—	7	9	3	1	—	4	—	74	98	10·5	269	28·8	382
Bethnal Green	129,098	—	80	47	—	3	2	2	43	1	176	17·8	—	3	3	4	5	—	—	—	76	91	9·2	269	27·2	356
Whitechapel	79,724	—	60	18	—	3	—	2	8	—	81	13·2	—	6	3	4	—	—	—	—	22	35	5·7	166	27·1	277
St. George-in-the-East	47,917	—	15	12	—	2	1	1	7	—	37	10·1	—	1	1	—	—	—	—	—	20	22	6·0	111	30·2	385
Limehouse	58,508	—	43	11	—	6	—	—	5	—	65	14·5	—	3	—	—	1	—	—	—	21	25	5·6	158	35·2	460
Mile End Old Town	111,883	—	78	24	—	10	—	—	12	—	124	14·4	—	2	2	2	—	—	2	—	48	56	6·5	203	23·6	283
Poplar	169,811	—	66	43	—	15	1	1	14	1	141	10·8	—	2	1	3	5	—	—	—	92	103	7·9	370	28·4	399
South Districts.																										
St. Saviour Southwark	24,919	—	13	12	—	1	—	—	1	—	27	14·1	—	4	—	—	1	—	—	—	16	21	11·0	54	28·2	483
St. George Southwark	60,388	—	30	11	—	1	1	—	7	—	50	10·8	—	6	1	1	1	—	—	—	56	65	14·0	149	32·2	404
Newington	122,191	—	62	20	—	9	—	—	13	—	104	11·1	—	5	4	6	3	—	2	—	78	98	10·5	258	27·5	440
St. Olave Southwark	11,480	—	5	4	—	2	—	—	—	—	11	12·5	—	—	—	—	—	—	—	—	5	5	5·7	23	26·1	321
Bermondsey	85,629	—	35	14	—	1	—	—	7	—	57	8·7	—	3	1	2	5	—	1	—	60	72	11·0	175	26·6	406
Rotherhithe	40,643	—	22	6	—	1	—	—	7	—	36	11·6	—	1	1	2	—	—	—	—	30	34	10·9	84	26·9	574
Lambeth	300 048	—	87	55	—	13	3	1	34	8	201	8·7	—	5	2	12	9	—	3	—	150	181	7·9	583	25·3	353
Battersea	168,877	—	120	69	1	9	—	3	10	1	203	15·7	—	2	4	10	9	—	2	—	80	107	8·3	298	23·0	415
Wandsworth	195,612	—	91	22	—	7	1	—	18	—	139	9·3	—	2	1	3	4	—	2	—	88	100	6·7	308	20·5	386
Camberwell	257,575	—	90	80	—	7	—	1	25	—	203	10·3	—	16	1	12	6	—	1	—	138	174	8·8	462	23·4	359
Greenwich	178,367	—	44	63	—	14	—	1	12	—	124	9·1	—	2	1	5	4	—	3	—	108	123	9·0	370	27·0	452
Lewisham (excluding Penge)	86,152	—	16	8	—	3	—	—	6	—	33	5·0	—	5	—	—	—	—	1	—	37	43	6·5	141	21·3	395
Woolwich	41,409	—	20	8	—	1	—	—	1	—	30	9·4	—	—	2	—	—	—	—	—	28	30	9·4	90	28·3	473
Lee	39,215	—	16	2	—	—	—	—	1	—	19	6·3	—	—	—	1	1	—	—	—	16	18	6·0	57	18·9	392
Plumstead	61,057	—	15	8	—	1	—	—	3	2	29	6·2	—	—	1	1	—	—	—	—	34	36	7·7	93	19·9	310
Port of London	—	—	—	1	—	3	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 11 cases of membranous croup.

† Including deaths from membranous croup.

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VITAL STATISTICS OF LONDON DURING AUGUST, 1897.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during August in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 10·2 per 1000 of the population, estimated at 4,463,169 persons in the middle of this year. In the three preceding months the rates had been 8·1, 8·7, and 11·2 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Paddington, St. George Hanover-square, Hampstead, Stoke Newington, Lewisham, Lee, and Plumstead; while they showed the largest excess in St. James Westminster, Holborn, Clerkenwell, St. Luke, Bethnal Green, Limehouse, and Battersea. Only one case of small-pox was notified in London during August, against 10, 4, and 7 in the three preceding months; this case belonged to St. Pancras sanitary area. No small-pox patient was admitted into any of the Metropolitan Asylum Hospitals during August, and none remained under treatment at the end of the month. The prevalence of scarlet fever in London showed a decline from that recorded in the preceding month; this disease was proportionally most prevalent in St. James Westminster, St. Luke, Bethnal Green, Whitechapel, Limehouse, Mile End Old Town, and Battersea sanitary areas. The Metropolitan Asylum Hospitals contained 3390 scarlet fever patients at the end of August, against 2495, 2786, and 3064 at the end of the three preceding months; the weekly admissions averaged 346, against 258, 272, and 364 in the three preceding months. The prevalence of diphtheria in London showed a marked decline from that recorded in the preceding month; among the various sanitary areas this disease showed the highest proportional prevalence in Holborn, Clerkenwell, St. Luke, Bethnal Green, St. Saviour Southwark, and Battersea. There were 1006 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of August, against 783, 864, and 957 at the end of the three preceding months; the weekly admissions averaged 131, against 108, 125, and 139 in the three preceding months. The prevalence of enteric fever in London during the month under notice showed a marked further increase upon that recorded in recent months; this disease was proportionally most prevalent in St. Pancras, Hackney, St. Giles, Clerkenwell, Shoreditch, Limehouse, and St. Olave Southwark sanitary areas. Erysipelas showed the highest proportional prevalence in Fulham, Clerkenwell, Shoreditch, Bethnal Green, St. George-in-the-East, and Rotherhithe sanitary areas. The 20 cases of puerperal fever notified in London during August included 3 in St. Pancras, 3 in Battersea, and 2 each in Paddington, Hammersmith, Bethnal Green, and Whitechapel sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas of the metropolis, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, August 28th, the deaths of 8124 persons belonging to London were registered, equal to an annual rate of 23·7 per 1000, against 14·9, 13 9, and 18 3 in the three preceding months. The lowest death-rates during August in the various sanitary areas were 12 0 in St. George Hanover-square, 12·5 in Hampstead, 14·4 in St. Martin-in-the-Fields, 16·9 in Kensington, 17 3 in St. James Westminster, and 18·9 in Lee; the highest rates were 28·4 in Poplar, 28·8 in Shoreditch, 29 9 in Holborn, 30·2 in St. George-in-the-East, 31·3 in St. Luke, 32 2 in St. George Southwark, and 35·2 in Limehouse. During the four weeks of August 2532 deaths were referred to the principal zymotic diseases in London; of these, 2079 resulted from diarrhœa, 137 from diphtheria, 109 from whooping-cough, 108 from measles, 61 from scarlet fever, 37 from enteric fever, and 1 from small-pox. These 2532 deaths were equal to an annual rate of 7·4 per 1000, of which no less than 6·1 was due to summer diarrhœa. The lowest zymotic death-rates were recorded in St. George Hanover-square, St. James Westminster, Hampstead, St. Martin-in-the-Fields, and St. Giles; and the highest rates in Holborn, Shoreditch, St. Saviour Southwark, St. George Southwark, Newington, Bermondsey, and Rotherhithe sanitary areas. The single fatal case of small-pox belonged to Islington sanitary area. The 108 deaths referred to measles were 72 below the corrected average number in the corresponding periods of the ten preceding years; this disease was proportionally most fatal in Clerkenwell, St. Luke, Whitechapel, St. Saviour Southwark, St. George Southwark, and Camberwell sanitary areas. The 61 fatal cases of scarlet fever were 28 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Westminster, Shoreditch, and Woolwich. The 137 deaths from diphtheria were 21 below the corrected average number; the mortality from this disease was highest in Paddington, Marylebone, Holborn, Whitechapel, Newington, and Battersea sanitary areas. The 109 fatal cases of whooping-cough were 30 below the corrected average number; this disease was proportionally most fatal in Marylebone, Stoke Newington, Holborn, and Bermondsey sanitary areas. The 37 deaths referred to enteric fever were 8 below the corrected average number; the mortality from this disease showed no marked excess in any of the sanitary areas. The 2079 fatal cases of diarrhœa were considerably more than double the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Fulham, Holborn, Shoreditch, St. Saviour Southwark, St. George Southwark, Bermondsey, Rotherhithe, Woolwich, and Plumstead. In conclusion, it may be noted that the mortality in London during August from these principal zymotic diseases was nearly double the corrected average, owing to the excessive fatality of summer diarrhœa.

Infant mortality in London, measured by the proportion of deaths under one year of age to registered births, was equal to 366 per 1000, and considerably exceeded the average, owing principally to the excessive fatality of diarrhœal diseases. Among the various sanitary areas the lowest rates of infant mortality were recorded in St. George Hanover-square, St. James Westminster, Marylebone, St. Luke, City of London, and Mile End Old Town; and the highest rates in Holborn, Limehouse, St. George Southwark, Rotherhithe, Greenwich, and Woolwich.

THE SERVICES.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel James Fitzgerald Brodie retires on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICE.

The services of the following commissioned Medical Officers are replaced at the disposal of the Government of India, Home Department:—Surgeon-Captains Vaughan, Clarkson, Deare, Oldham, and C. R. Stevens. The services of Surgeon-Lieutenant Gwyther are replaced at the disposal of the Government of India in the Home Department. The services of the under-mentioned officers are replaced temporarily at the disposal of the Military Department:—Surgeon-Captain Dewes (Madras), Surgeon-Captain Kanta Prasad (Bengal), and Surgeon-Captain Williams (Bengal). The services of Brigade-Surgeon-Lieutenant-Colonel Little (Madras), Sanitary Commissioner, Hyderabad Assigned Districts, are placed temporarily at the disposal of the Foreign Department. To be Lieutenant:—Second Lieutenant Ivan Urmston Battye. To be Brigade-Surgeon-Lieutenant-Colonel:—Adam Scott Reid, vice Brigade-Surgeon-Lieutenant-Colonel C. J. W. Meadows, retired.

NAVAL MEDICAL SERVICE.

Deputy-Inspector-General of Hospitals and Fleets Belgrave Ninnis is placed on the Retired List, with permission to assume the rank of Inspector-General of Hospitals and Fleets.

VOLUNTEER CORPS.

Artillery: 7th Lancashire (the Manchester Artillery): Surgeon-Captain D. Macneilage resigns his commission. *Royal Engineers:* 1st Lancashire: Surgeon-Captain E. Williams to be Surgeon-Major. *Rifle:* 2nd Volunteer Battalion the Royal Warwickshire Regiment: Surgeon-Captain W. G. Creswell resigns his commission. Galloway: Surgeon-Lieutenant N. J. McKie resigns his commission. 2nd Volunteer Battalion the Welsh Regiment: David Llewelyn Davies, M.B., to be Surgeon-Lieutenant.

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VOLUNTEER MEDICAL STAFF CORPS.

The Aberdeen Company: Surgeon-Lieutenant C. T. D. Urquhart to be Surgeon-Captain.

THE FIGHTING IN THE TOCHI VALLEY.

The official despatches, consisting of the General Order of the Military Department at Simla on the late field operations at Tochi, together with the military reports thereon from the officer commanding the Tochi Valley troops, having been received by the Secretary of State from the Government of India, have now been published in the *London Gazette* of the 7th instant. The force was a small one, forming the political officer's escort, and an attack was made on it by Madda Khels at Maizar on June 10th last. The circumstances under which this treacherous attack occurred are clearly set forth, and they show that it could not have been foreseen or guarded against, and was not in any way attributable to any negligence on the part of the troops, who were, under the circumstances, compelled to withdraw under exceptionally trying conditions. While we have to deplore the loss of a number of officers and men the despatches will be read with a glow of enthusiastic satisfaction at the great heroism and gallantry, coolness and discipline, displayed by the British officers, the native officers and troops, and all concerned. His Excellency, the Commander-in-Chief in India, submits that this record of a gallant deed of arms is second to none in the annals of the Indian army—a view in which the Governor-General in Council entirely concurs. The conduct of both officers and men on this trying occasion was, it is declared, worthy of the best traditions of the Punjab Frontier Force. No one reading the plain and graphic description of what took place can hesitate to admire the heroic and devoted conduct of the British and other officers in continuing at their posts and work in spite of their wounds. Surgeon-Captain Cassidy was one of the officers wounded on the occasion. Not only was the retreat most deliberately conducted, but the succour and care of the wounded were apparently admirably carried out under very difficult and dangerous conditions.

THE INDIAN RISING.

We have elsewhere alluded to the rising of the tribes on the Indian frontier. The punitive brigades are advancing, and the latest news indicates that the revolt of the tribes is collapsing rather than extending. A number of them are surrendering their arms, the Mullahs are losing their influence, and the news seems altogether more satisfactory than it was a week ago. The European force in India is being strengthened by troops and reinforcements from this country. The following officers of the Army Medical Staff have received orders to proceed to India for duty: Surgeon-Lieutenant-Colonel J. M. Beamish, Surgeon-Major J. S. Green, Surgeon-Major W. B. C. Deeble, Surgeon-Major W. Dugdale, and Surgeon-Captain D. Hennessy.

A NEW NAVAL ANNUAL.

Messrs. Witherby and Co. announce that they will issue in October next a new work entitled "The Royal Navy List Diary and Naval Handbook." The book will contain upwards of 500 pages, and, independently of the Diary portion, there will be a mass of matter touching upon all subjects of interest to naval men, and specially designed for the use of the service afloat and ashore. This should be a useful addition to the excellent "Royal Navy List" issued by the same publishers.

The Japanese are an up-to-date people, for we are informed, says the *Army and Navy Gazette*, that the Japanese Red Cross Society is going to build, at a cost of 1,000,000 yen, two vessels of 2600 tons each for the use of patients in time of war.

THE ROYAL PHOTOGRAPHIC SOCIETY.—We are informed that the forty-second annual exhibition of the Royal Photographic Society will be opened to the public at the Gallery of the Royal Society of Painters in Water Colours, 5A, Pall Mall East, on Monday, Sept. 27th. The exhibition will be open daily from 10 A.M. to 5 P.M., and on Monday, Wednesday, and Saturday evenings (when lantern slides will be shown) from 7 to 10 P.M. The exhibition will close on Nov. 13th. On Saturday, Sept. 25th, there will be a private view of the exhibits, followed in the evening by a conversazione, at which the President (the Earl of Crawford) and the Council will receive the Fellows, members, and their friends.

Correspondence.

"Audi alteram partem."

"TRACHEAL INJECTIONS."

To the Editors of THE LANCET.

SIRS,—With reference to Dr. Thompson's paper on the above subject, published in the *Journal of the American Medical Association*, and to a leading article in THE LANCET of Sept. 4th, may I be permitted to point out that most, if not all, of Dr. Thompson's arguments have been anticipated in my paper, published in the Transactions of the Royal Medical and Chirurgical Society, vol. lxxviii. (1894). Shortly after a *résumé* of this paper was published in THE LANCET[1] I received scores of letters from "America" asking for further particulars, &c. Yet it now comes back as a sort of novelty. There are two points, the one in Dr. Thompson's paper, the other in the leading article, to which I would like to refer.

Dr. Thompson says the vehicle used should be light petroleum oil or olive oil. May I quote myself on this point?

"Observation of this case first suggested to me that olive oil was *not* the best vehicle in which to convey the medicinal agent to the lung. A demonstration of this was easy. I collected some of the dense expectoration from the case in a tube, closed with a cork at one end, and poured some of the oily solution on to it; after twenty-four hours the oil still remained at the top, whilst the lower stratum (which could be smelt by removing the cork) did not appear to contain either menthol or guaiacol. [The case referred to was one of bronchiecstasis.] It is all very well to demonstrate, as Sehrwald and Reichert have done, that the injected material can be found all through the lung tissues after an injection. So could it be found in the bladder. A few minutes after an intra-tracheal injection of turpentine I have noticed the characteristic smell of violets in the urine. The simple tube experiment mentioned suggests that the finding of menthol in the bronchioles, &c., after the injection of an oily solution (not miscible with the bronchial secretions) is more probably due to a secondary effort at *excretion* (subsequent to absorption) so easily noticed in the kidneys; and this, although very probably beneficial, is, I take it, quite different from bringing the original strong solution into *direct contact* with the diseased parts."

As regards your doubt as to the absorption of the drugs by the lung tissue, I will make a simple statement and ask an answer. I inject into the *tracheæ* of patients each week over one quart of fluid. If it be not absorbed what becomes of it?

I am, Sirs, yours faithfully,

Uppermill, Saddleworth, Sept. 8th, 1897. COLIN CAMPBELL.

THE INCREASE OF DIPHTHERIA.

To the Editors of THE LANCET.

SIRS,—I exceedingly regret to learn from THE LANCET of the still continued increase of this horrible disease, and have long thought it is due to the unsound condition of street sewers, the evil being increased on the "combined" systems. If I am right, then, there is no wonder at the steady increase, notwithstanding improved sanitary condition of houses generally. For some few years past it has been an acknowledged fact that the "chemical" and "smoke" tests are not always to be relied upon in detecting any leakage or unsoundness of drains under residences, and at the present moment I know of a vestry which refuses to use the only reliable test—viz., water—in such cases, even where the vestry has been assured of the unsoundness of a drain and the inmates suffering from the effect of the unsoundness. If authorities are so powerless with house-drains, then one cannot be surprised if the public sewers are in such a leaky and unsound condition generally.

I am, Sirs, yours faithfully,

London, Aug. 16th, 1897. D. T. BOSTEL.

"BATTEY'S OPERATION."

To the Editors of THE LANCET.

SIRS,—Dr. Kenneth Watson's letter in THE LANCET of Sept. 4th, 1897, introduces a subject which in these days of family limitation is frequently brought to the notice of the physician. A husband and wife desirous, for varying motives, of having no more children, and yet not wishing to lead single lives, agree to adopt some

[1] THE LANCET, Dec. 1st, 1894, p. 1270.

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more or less harmful method of prevention. In spite of this conception occurs, and a medical man is consulted with a view to inducing abortion. The description given of the ill-health or sufferings of the patient during her last pregnancy and confinement is sure to be an exaggerated one, and the truth can only be estimated by tactful inquiries, which elicit an evident determination to have no more children—a resolve founded usually upon notions of economy. At such an interview one is lead to realise that if this same patient were endowed with a strong maternal instinct, and was keenly desirous of having a living child, the previous one having been stillborn, all these considerations would be made very light of. Unless there is a strong professional reason why another pregnancy or confinement should be prohibited the physician should listen to no social or domestic arguments, and should refuse to countenance any operation which would tend to prevent conception or to terminate an existing gestation.

In Dr. Kenneth Watson's case the first labour was tedious, and was terminated by forceps. It was accompanied by hæmorrhage and a severe perineal rupture. The second labour was unaided and very rapid, and the perineum was again partially ruptured. These conditions might, perhaps, in the opinion of some, be considered indications for inducing premature labour two or three weeks before full term, but would not, in my opinion, warrant a medical man advising either total sexual abstinence, the adoption of preventive methods, or any sterilising operation.

To advise a woman to have her healthy appendages removed for a moderate contraction of the bony pelvis or of the soft parts is never justifiable, for in these days of antiseptic midwifery a premature labour can be easily and safely induced at the appropriate date, and the child, if properly tended, in no way suffers. If the contraction be so marked that Cæsarean section has to be performed the patient may then easily be rendered sterile without extra risk, though even this is not essential. If an extreme degree of pelvic contraction exist, and is only discovered after conception, and it is evident that a viable child cannot be borne, and the risk of a Cæsarean section is dreaded, abortion should be induced; but I doubt whether it would ever be justifiable to castrate the woman even then—it would be a proceeding which would be so likely to be abused that it is to be hoped it will not be advocated. If ever such a course were indicated, apart from Cæsarean section, I should prefer the vaginal rather than the abdominal method. In these respects, I fancy, Dr. Watson's views do not materially differ from my own.

May I correct one statement which Dr. Watson seems to make? Removal of healthy ovaries is *not* "a recognised procedure in certain neuroses, such as hystero-epilepsy." This was Dr. Battey's original dictum, but oöphorectomy, for the treatment of neuroses, has now been discontinued owing to its almost uniform failure to cure.

I am, Sirs, yours faithfully,

Manchester-square, W., Sept. 6th 1897. AMAND ROUTH.

"THE EMPLOYMENT OF GLOVES IN SURGERY."

To the Editors of THE LANCET.

SIRS,—The note in your last issue on the use of gloves in surgery as recommended by Mikulicz and von Manteuffel causes me to beg space for a few observations. I have not in surgical work found evidence of any insuperable difficulty in rendering the hands sterile, but in septic surgical cases there is danger both to the operator and to his other patients. For such cases I now use the same kind of gloves that I have described and recommended in my small work on "Post Mortems." Since the publication of that work last year I have had from time to time inquiries as to exactly the kind of glove I recommend. At my request Messrs. Mayer and Meltzer, 71, Great Portland-street, have laid in a stock of the gloves so that medical men may be able to obtain them without delay. Of course different pairs of gloves must be used for post-mortem and for surgical work, and they should be kept in separate bags and distinct from the bag used for the apron, &c., worn in operating on aseptic cases. Before removing the gloves they should be washed with soap and rinsed first in water and then with carbolic lotion.

I am, Sirs, yours faithfully,

Old Cavendish-street, W. J. JACKSON CLARKE.

POLICE FEES AND THE MEDICAL PROFESSION: AN APPEAL TO THE LARGE TOWNS.

To the Editors of THE LANCET.

SIRS,—In consequence of the irregularity in the charges made by medical men the watch committees of several towns have laid down certain scales of fees which they undertake to pay for ordinary attendance when the assistance of the medical man is sought for by the police. In Newcastle-upon-Tyne the scale is 3*s.* for day and 5*s.* for night visits; in Plymouth 3*s.* 6*d.* and 7*s.* 6*d.*; in Bradford 7*s.* 6*d.* for both day and night; in Stockport 3*s.* 6*d.* and 5*s* 6*d.*; in Cardiff 3*s.* 6*d.* and 7*s.* 6*d.*; in Exeter 3*s.* 6*d.* and 7*s.*; in Liverpool 3*s.* 6*d.* between 7 A.M. and 11 P.M., and 7*s.* 6*d.* between 11 P.M. and 7 A.M.; whilst in London it is 3*s.* 6*d* for day and 7*s.* 6*d.* for night visits. In Portsmouth it has been recently fixed at 3*s.* 6*d.* from 8 A.M. to 10 P.M., and 7*s.* 6*d.* from 10 P.M. to 8 A.M.

It must be borne in mind that these fees were primarily made in many towns to govern payment to the police surgeons, who are called to every possible case. Having so many cases the remuneration was considered sufficient. In the case of general practitioners—who are only called in occasionally, and then only to cases of great urgency when there is no time to send for the regular police surgeon—the fees are totally inadequate. The medical profession in Portsmouth, through its Medical Union, has asked the Watch Committee for payment on the following scale:—

For a visit between 8 A.M. and 8 P.M. ...	Five shillings.
For a visit between 8 P.M. and midnight	Seven shillings and sixpence.
For a visit between midnight and 8 A.M.	Ten shillings.

The grounds upon which the Portsmouth Medical Union based its request were as follows:—1. Calls to police cases are always urgent and require immediate attention; consequently other work has to be suddenly suspended. 2. These cases are most frequently serious, and involve prolonged attendance, as the police do not apply for help in trivial cases or when there is time to send for the regular police surgeon. 3. Very particular attention has to be given to every possible detail of each case, in view of subsequent legal proceedings. This demands extra time in addition to the extra mental strain involved.

Notwithstanding these explanations the Corporation of Portsmouth have refused to accede to the tariff of the Medical Union. In considering this question it has to be borne in mind that these are not the fees of a public medical service, but only for occasional and urgent cases to which the police require our assistance. How many calls not made by the police to street accidents and sudden illness medical practitioners receive without ever getting the slightest remuneration only the medical profession is aware of? If these cases were paid for by the police where the fees were not obtained from the patient, the scale adopted by the various corporations would be acceptable to the medical profession. It cannot be said that 3*s.* 6*d.* is an adequate payment for a sudden call to a police case, although it might be for the less serious street cases to which every practitioner is now and then summoned.

It would seem as if the corporations in their illiberal treatment of professional men had taken advantage of the moral reprobation in public opinion which would follow refusal on the part of a medical man to attend when summoned by the police. Not only public opinion, but feelings of humanity, prompt us to render assistance whenever we are called, whether there be any prospect of remuneration or not; so that for a public body to pay us inadequately for our services under these circumstances is, to say the least, mean in the extreme. It is comparable to being stingy in remuneration to a lifeboat's crew after attendance at a shipwreck, although, if we do not always risk our lives, we might be otherwise, often much more profitably, employed. Portsmouth will have to fight its battle for itself, but I wish to ask the medical men in the towns above mentioned to rebel against the low scale of fees allowed them in these cases and individually, as well as collectively, to notify their watch committees that in future they will require payment on the higher scale. In the event of refusal there is the resort to the county court. Success here, however, much depends upon the sympathies of the presiding judge, and also as to whether the doctor's case is properly laid before him. It seems, at any rate probable, that if a medical man had notified the watch committee of his scale of fees and they were reasonable the committee would be compelled

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to pay. Combination of the profession in each town ought to do a great deal in this matter, as evidence in support of a given case should be easily obtainable. Special cases requiring special services must, of course, be considered on their individual merits. It is sufficient for us now to adopt some uniform scale for ordinary visits. I therefore recommend the above scale of fees of the Portsmouth Medical Union as the most equitable that has been suggested, and would urge upon practitioners in every town to demand payment upon this scale.

I am, Sirs, yours faithfully,

T. FREDERICK PEARSE, M.D.,
Sept. 4th, 1897. Hon. Sec. Portsmouth Medical Union.

"IMMORALITY AMONG SCHOOL BOYS."

To the Editors of THE LANCET.

SIRS,—I have read with great care and interest Mr. Hime's article on the above subject, and whilst fully recognising that the vice to which he refers exists to a large extent, and that it is the duty of all concerned in the rearing of boys (not of head masters only, by the way) to do everything in their power to check it, I cannot for one moment agree with him as to the best means of preventing such habits. He divides these methods into two classes: (*a*) school arrangements; and (*b*) moral suasion. Of the latter of these I have not much to say, except that a few veiled remarks on the subject in the form of a lecture to a body of school boys do not strike me as likely to do much good. Much more to the point is the advice and warning given by him to each new boy on his arrival at school. It is with the school arrangements for preventing immorality that I have to quarrel, for, in brief, what do they amount to? Nothing more or less than a system of continual spying on the boys night and day, during playing and during working hours, without intermission; they are never allowed to be alone. This is a system calculated to bring out all that is underhanded, vicious, and deceitful in a boy, and to repress all that is above-board and honourable. This was not the plan of Dr. Arnold, the greatest of head masters; it approximates too closely to the French system of education to be agreeable to the majority of Englishmen. If, as Mr. Hime claims, "the companionship [during play hours] of a suitable master was always agreeable to the boys," then he must, indeed, have met with a curious collection of them; there is not one other like them in England. Boys, like everyone else, want to be free from restraint occasionally, and this is impossible with Mr. Hime's method of a master's bedroom opening out of each dormitory, with a master always superintending studies during school hours, and with a master always attached to the boys at play. Without going fully into the treatment of this habit I might call your attention to the old classical remedy—plenty of healthy exercise and not too much animal food—and suggest that these are the lines to go on to arrest the immorality of boys, not those of Mr. Hime.

I am, Sirs, yours faithfully,

L. A. PARRY, M.D., B S. Lond., F.R.C.S. Eng.
Bartholomew-road, N.W., Sept. 6th, 1897.

THE HOSPITAL REFORM ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—I have much pleasure in informing you that the Earl of Stamford has kindly consented to preside at our conference on Oct. 21st. This will prove a source of gratification to all who are interested in the subjects we propose to discuss, as it is well known that his lordship has devoted much time and attention to the administration of hospitals. My council would like to suggest that the subject of out-patient administration should be dealt with under the following heads: (1) from a consultant's point of view, (2) from a general practitioner's point of view, (3) from an administrative point of view, and (4) from a patient's point of view.

In order that an expression of opinion may be obtained from as many gentlemen as possible it has been decided to make a time limit for readers of papers and speakers, and fifteen minutes for the former and five minutes for the latter have been fixed. Priority will be given to those gentlemen who have announced beforehand their intention of speaking.

I am, Sirs, your obedient servant,

Cardiff, Sept. 7th, 1897. T. GARRETT HORDER, Hon. Sec.

HEALTH QUESTIONS AT THE ZURICH INTERNATIONAL CONGRESS FOR THE PROTECTION OF LABOUR.

(FROM A SPECIAL CORRESPONDENT.)

A REMARKABLE and, in one sense, an unprecedented Congress has been held at Zürich. THE LANCET, of course, is in no wise concerned with the political aspect of this Congress; but the desire manifested by the members to assimilate internationally laws framed so as to protect the health of the working community of all civilised countries involves many questions in which your readers take a deep sympathetic interest. Undoubtedly one of the most effective arguments against legal restrictions upon unwholesome industries, nightwork, and the hours of labour generally is the danger of foreign competition. On the other hand, if similar laws were simultaneously enacted by other countries this danger might be reduced to a minimum. Such was precisely the aim and purpose of the Congress in question. But it does not suffice to merely express a good sentiment or to make advantageous proposals. Ideal reforms are more readily conceived than realised. The practical point depends on the force of the organisations which adhere to these proposed measures. Therefore it is necessary to say a few words as to the political elements which composed the Congress, not for the sake of dealing with politics, but so as to show that the Congress constituted a demonstration of sufficient importance to have some influence on European governments—an influence which will tend towards the improvement of public health. In advocacy of such restrictions on the freedom of labour as may be necessary to preserve the health of the workers there have been innumerable congresses, both national and international, composed of medical men, of sanitary reformers, and of philanthropists. Nor have the workmen themselves been indifferent to their own interests. The annual congresses of the trades unions of Great Britain invariably adopt a number of resolutions demanding better legislation for the protection of the health of the workers. Resolutions to the same effect are likewise discussed and approved at the political gatherings, national or international, of the working class or labour parties. But when such congresses have been representative congresses—that is to say, when they were composed exclusively of delegates elected by organised bodies—they were purely party gatherings. The Zürich Congress, on the other hand, may be qualified as unprecedented because, though composed of the elected representatives of constituted associations, it was not a party congress, but, on the contrary, brought together men belonging to antagonistic parties, who up till now have waged bitter war against each other. There were 375 delegates, representing fifteen different nationalities; of these, 107 were elected by Roman Catholic working-men's associations, some of these being priests, who, like the Belgian Abbé Daens, have acquired a wide reputation for their advocacy of the poor and oppressed. The Evangelical or Protestant associations sent only a few representatives. The other delegates were either trade unionists or members of political socialist organisations. There were also a considerable number of members of the Belgian, Swiss, Italian, Austrian, and German Parliaments, belonging some to the Socialists and some to the Roman Catholic parties. The chair was occupied alternately by M. Sherrer, a leading Swiss social democrat, and by M. Decurtius, leader of the Roman Catholic party in the Swiss National Council or Federal Parliament. Throughout the greatest order was maintained; most of the resolutions were carried unanimously, and in dealing with the need of international legislation for the protection of labour these old and inveterate adversaries forgot their differences and worked throughout harmoniously and amicably, and this, too, in spite of the trying fact that the Congress sat during eight hours a day for an entire week. That such heterogeneous elements should thus have been brought together shows that the demands made are widely appoved and not confined to one single faction or party, but are supported by both orthodox and heterodox organisations existing in no less than fifteen different countries. Therefore, there can be no doubt but that the Congress will

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exercise some influence on the legislatures of different countries. Consequently, it is of some importance to ascertain what was said and done with regard to the preservation of public health.

The first day was devoted to the question of Sunday rest. Professor Joseph Beck, Doctor of Divinity, of Fribourg, presented a report on this topic. In his opinion the fact that in England there is a lower death-rate than on the Continent was in a measure due to the better observance of the weekly rest. The Swiss law insists that railway servants should have fifty-two days' rest per annum, comprising every third Sunday, or seventeen Sundays in the year. He showed that when the French Revolution tried to establish the *décadi*, or every tenth day, as a holiday this was found insufficient, and after two years' time the weekly holiday had to be restored by the law of Aug. 2nd, 1799. But for the Sunday to be a real day of rest it was necessary that work should cease early on Saturday, so that all domestic work could be done on that day. The Congress was unanimous in demanding thirty-six consecutive hours of rest per week. But it was also unanimous in demanding that traffic should not be stopped, and that all which contributed to the intellectual development or the recreation of the people on Sundays should be sanctioned. The mind as well as the body required a holiday, and this could not be provided during a day of stagnation and dulness. The British delegation were loud in their protest against the dreariness of the English, and more especially the Scotch, Sunday, and maintained that the sole alternative of church or public-house did not constitute a healthy holiday either for the mind or the body. This view was fully endorsed by the Continental delegates. At the same time, the resolution carried made full provision assuring that those who, to meet these views, had to work on Sundays should have a rest of equal duration during another part of the week.

The second day was occupied in the consideration of a report presented by Dr. F. Gehrig, of Berne, on the work of children and young persons. He pertinently inquired why Governments thought young men were not fit for military service till they reached the age of twenty years, and yet allowed them to do what was often equally hard work in factories or mines when they were much younger. Dealing with the medical aspect of the case, he insisted more especially on the derangements produced in the nervous system, and, as a consequence, on the organs of digestion and nutrition. The "pyschosis of overwork" was to be noted among young and too ardent students, but it was more marked among youths who were overstrained by physical work. Among young persons who had to stand for many hours varicose veins, hæmorrhoids, and ulcers were of frequent occurrence. The carrying of heavy weights dilated the heart and produced the well-known X or "factory legs." Flat-feet and hernias had often the same origin. He then pointed to the contrast between the elaborate care taken in good schools to vary the occupations of children, to give them good air, light, and plenty of exercise, and the monotonous nature of the work done in the close, dusty, and often damp atmosphere of a factory. The Congress voted that children should not be allowed to work till they were fifteen years of age, and then only five days a week of eight hours each day till such time as they had reached the age of eighteen years.

On the third day M. Otto Lang, judge of the tribunal of the Zürich district, presented a report on the work of adult males. He pointed out that in several countries, notably Austria, France, and Switzerland, a maximum labour day for adults had been established by law, and this varied from eleven to twelve hours. Of course, women and children have the greatest need of such protection, but men may also overwork themselves. He complained of the attitude of the British Government. The Swiss Government, by its circular of Jan. 28th, 1890, had invited the nations of Europe to an international conference on labour protection, but the British Government refused to participate if the labour of adults was to be included in the subjects of discussion. It was also at the instance of Great Britain that this question was effaced from the programme of the Labour Conference convoked at Berlin in March, 1890, by the German Emperor, yet no authority had been more liberal in the reduction of the hours of labour in State factories, arsenals, &c., than the British Government. The Congress voted in favour of the eight-hours' day, though many speakers admitted that in the lighter occupations adult males could work more than eight hours without physical injury. It was from the moral rather than the physical point of view that the eight hours' legal limit was approved. The clerical element in the Congress was particularly anxious to restore family life which long hours of absence in the factory or workshop tended to destroy. This feeling was very forcibly manifested when on the following day the question of women's work was introduced by M. Jean Sigg, member of the Geneva Cantonal Parliament. He quoted with great effect the report of Dr. Schuler, Swiss Inspector of Factories, who showed that in his particular district the mortality of newly-born infants amounted to from 29 to 30 per cent. of the births, but that this mortality had been reduced to the extent of 5 per cent. by the law which forbids women returning to work till six weeks after their confinement. Among the textile workers of Ghent, on the other hand, the mortality of children, which amounted in 1886 to 452 per 1000, was equal to 482 in 1888, 620 in 1889, and 630 in 1890. More recent figures were not at hand, nor was any explanation given as to whether an epidemic prevailed during the last two years mentioned. But in any case it is evident that the mortality is excessive. On this phase of the question there was no difference of opinion, and the Congress unanimously voted that women should not be allowed to work till six weeks after their confinement. It was also thought that if legislatures should, as suggested in the former resolution, tend towards the reduction of the week's work to forty-eight hours for men, it should not exceed forty-four hours for women, and that women should not work more than eight hours on any one day. The Roman Catholics wanted to gradually but altogether abolish the work of women in factories. All these points were discussed on social, economical, ethical, and political grounds, but they were also related to the sanitary or health point of view. A woman who exhausted herself in factory work could not be a true mother to her children, and their health would consequently suffer. The British delegates, on the contrary, maintained that the work of women in factories was in any case less likely to be excessive and unwholesome than their work in small workshops or in their private homes. They proposed, not the abolition of factory work, but of home work. Neither party carried their point. By a large majority the Congress refused to vote in favour of abolishing women's work in factories, and it decided to refer the question of home work to a future congress. In the course of the discussion on the latter subject Miss Sullivan, of the London West-end Tailoresses Association, referred to many of the abuses denounced by THE LANCET in the course of its numerous Special Reports on the Sweating System.

On the fifth day Dr. F. Erismann, formerly Professor of Hygiene at the Moscow University, introduced the question of night labour, which had only come into existence with the introduction of steam power and the development of modern industrialism. Machinery was so expensive that its owners wished to employ it day and night, and it was only when the health of vast populations had been seriously injured that legislation interfered to protect, at least, the women and children. So far back as the year 1815 the Canton of Zürich forbade the night work of children in factories. This abuse was allowed to continue in England till 1834, and the measures taken were not thoroughly effective till some years after. After reviewing the laws of various countries Professor Erismann mentioned the German law of 1891 by which adult women are not allowed to work after 8.30 P.M. and before 5.30 A.M. Nowhere, except in Switzerland, do the laws absolutely abolish night work for all persons under eighteen years of age. Such work is only restricted, exceptions are made, and in Germany there are no less than 2 000.000 factory hands who are liable to be called upon to do night work. Generally speaking, permissions for night work are too freely granted. The injury that results from night work is more readily proved by the benefits that have followed its abolition. When men had worked during their childhood in factories they became incapacitated for work early in life. Out of 22,094 Manchester workmen only 143 were found to have passed their forty-fifth year. On the other hand, when a check was placed on the excessive work of women and children in England it was proved that the weight of newly-born infants among the factory population greatly increased. The Zemstrov, or County Council of Moscow, has officially reported that among the cotton-spinners of their district a great physical deterioration has taken place, and many of the men are rendered unfit for military service. The mills run the whole twenty-four hours. There are two shifts, which work six hours each, or twelve hours a day, and therefore the men can never sleep much more

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than five hours at a time. But even if sufficient sleep could be obtained during the day the nervous system is bound to suffer from taking rest at unnatural times. Thus, in Alsace-Lorraine, though among the wool-weavers the night hands worked 22 per cent. less time than the day hands, it was found, in 1888 and 1889, that there were 328 and 309 cases of illness per 1000 workwomen during 5641 and 5815 days where no night work was done. In other mills, where there was only partial night work, there were 429 and 413 cases of illness during 8730 and 8865 days of work for every 1000 workwomen employed. With regard to adult males Professor Erismann had no hesitation in saying that night work was also injurious to them, should be suppressed wherever possible, and only sanctioned in exceptional cases, and then it should not last longer than eight hours, and must be followed by sixteen hours' rest. Dealing next with unwholesome industries, statistics compiled by Hirt showed that out of 100 workmen who became ill from breathing the dust of factories, &c., from 13·3 to 18·0, according to the industry, became consumptive; whereas among those who worked in pure air, out of 100 cases of sickness only 11·1 developed phthisis. Where the dust contains some poisonous chemicals the injury done is of course much greater. At least 40 per cent. of the cotton-spinners who die in the hospitals of Russia die from chronic lung-disease. Speaking of mill-stone makers Professor Erismann said that the "sand contained in the lungs of adults was equal to 7 per cent. of the whole; with stone-cutters it amounted to from 23 to 24 per cent.; and, according to Meinel, was equal to 30·7 per cent. among glass-polishers. According to Lewin, the mortality from tuberculosis amounted to 8·25 per cent. among stone-cutters, and their average age was only twenty-four years. The researches made by Sommerfeld set forth that 90 per cent. of the stone-workers die from phthisis of the larynx, of the lungs, or chronic catarrh. Out of 187 stone-workers 25 per cent. had pulmonary phthisis, 7·9 per cent. phthisis of the larynx, and 66·6 per cent. chronic catarrh of the larynx." Thus were the various leading industries passed in review one after the other. Then a synopsis of the laws affecting them in the different countries was likewise given.

It was after thus examining a great mass of information that the Congress voted in favour of the total suppression of night labour for women and young persons, and defined the night as lasting from eight in the evening till six in the morning. It was acknowledged that for men in exceptional cases night labour must be allowed, but must never exceed eight hours in the twenty-four. Dangerous or unwholesome industries should, according to the resolutions carried, be very carefully specified and tabulated in the text of the law. Such industries should only be authorised when the fullest precautions have been applied. The employment of young persons under eighteen years must be absolutely forbidden. In dangerous industries the hours of labour must be shorter than in other occupations, and there ought to be periodical and official or governmental medical inspection of all the workpeople. The employment of poisonous substances wherever possible must be forbidden.

Of course, it will be said that all these demands, however estimable in themselves, are not practicable in the face of the exigencies of business. For this reason the Congress discussed on the sixth and last day the all-important question of ways and means. First, the Congress demanded that in every country a sufficient number of factory and workshop inspectors should be appointed to be able to visit every workplace at least twice in the year. This if costly is not an absolute impossibility. Then they demanded for the working-classes of all countries the fullest possible political freedom, so that they might not only influence legislature in the direction indicated, but form such trade and other societies as would see that laws were not merely enacted, but actually applied. Members of Parliament who sympathise with the objects of the Congress were invited to simultaneously present in their respective Parliaments similar projects of law. They were also to request their respective Governments to join in forming an international office for the protection of labour, where all information on the subject might be centralised and interchanged between the nationalities concerned.

Finally, the Swiss Government is asked to renew the effort it made in 1890 to bring about an international conference between representatives of the European Governments with the view of assimilating as far as possible the laws of the different countries which deal with the age at which young persons and children may work, the prevention of night labour, and the employment of women in dangerous occupations, Sunday rest, the maximum labour day, &c. Of course, the Congress was fully aware that the desiderata laid down in the resolutions was not to be realised in a day; but it felt that if in each country the various organisations, whether clerical or secular, that had these ends in view were to unite instead of quarrelling with each other, something effective would be much more easily accomplished. It would then be more difficult for legislators to neglect these questions, and in the face of such a manifest desire for an international understanding a good deal might be done to mitigate the danger of foreign competition when such reforms were introduced. If the movement follows faithfully these lines there is some chance that a portion, though probably only a small portion, of the measures demanded will be granted at no very distant future. In that case, and however fragmentary such improvements may be, there is little doubt but that they will tend towards an amelioration of public health. Under these circumstances this new and conjoint movement of parties and organisations which on so many other subjects are hostile to each other cannot fail to interest the members of a profession which is so intimately concerned with all that relates to the health of the people.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The High Death-rate.

CONSIDERABLE anxiety has been felt in the city owing to the unusually high death-rate in the last few weeks, reaching as much as 43 per 1000. Various causes have been alleged as the reason for this. Diarrhœa has claimed the greatest number of victims, but with this exception, and that of measles, the zymotic diseases have not appreciably increased the roll; 75 per cent. of the deaths from diarrhœa are in children under a year old. Many believe that defective sewage arrangements are the main cause of this, but the medical officer of health, Dr. Hill, points out that in the month of June, when the sewers had to be flushed without rainfall, the death-rate was very low and there was but little diarrhœa. Many complaints have been made about the sewers, and no doubt the population has increased enormously since these were laid down. At present an inspection is being made by the authorities, who will issue reports as the work proceeds. There are about 260 miles of sewers, so necessarily this overhauling will take some time. A great deal of surface water now runs into the sewers which it is beyond their capacity to carry off. Some means are proposed to divert this and thus limit the work they have to do. Some of the complainants go so far as to say that the town ought to be re-sewered, but the Health Committee point out that this would be a gigantic undertaking, involving many years' work and a probable cost of half a million of money. They are anxious to do all in their power to provide for efficiency, with a due regard to the various problems involved. In the meantime, it is satisfactory to know that the death-rate has been steadily diminishing from the high record noted.

King's Norton Workhouse Infirmary.

The new building at Selly Oak was formally opened on Sept. 3rd and is well calculated to meet the requirements of the population for some time to come. The total cost is estimated at about £210 per bed, and there are now 418 inmates in the workhouse. At present the site is about fourteen acres, and there is a possibility of the number of beds being increased up to 500 in the future. Nothing has been spared in equipment and arrangements to make the building a complete one for the purposes required.

Sept. 7th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Culvert Scheme.

THE report of the deputation from the Mersey and Irwell Joint Committee to the Local Government Board, as given in THE LANCET of Aug. 14th, clearly foreshadows some relaxation of the Board's hard and fast line requiring the filtration

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of sewage through land, and also its sanction, in suitable cases, of artificial filtration. Sir Henry Roscoe, in his dual capacity of adviser to the Joint-Committee and the Manchester Corporation, against whom his committee is carrying out proceedings, has warmly recommended precipitation and artificial filtration, which is said to give a satisfactory effluent at Salford. At the meeting of the Manchester City Council, on the 1st inst., Alderman McDougal, who is not without chemical knowledge, threw grave doubts on the lasting properties of the filters. At the works at Davyhulme, though still doing good work, they are doing less of it. "They were gradually becoming coated, there was less space for water in them, and in three or four years the filters would have to be renewed." It is interesting to note that since the admission of the out-townships to the sewerage system there has been a change in the character of the sewage matters from the large admixture of the effluent from chemical works. "According to the tests of the joint committee twice as much oxygen as before was being absorbed; they were not precipitating as well, and the effluent was worse." But "in Whit week, when they got only domestic sewage, the effluent would have satisfied every requirement of the joint committee." Still, Alderman McDougal holds that the Manchester effluent is a very fair one and if sent into a running stream would do no harm. Unfortunately it goes into the putrescent and practically stagnant water of the Ship Canal. The scheme for applying artificial filtration to the whole of the sewage is found on calculation to be so costly as to be almost impracticable. In addition to the cost of the extension of the filters, which would be almost as great as the construction of the culvert to tidal water, their maintenance would require annually from £30,000 to £40,000. The Council therefore has abandoned the filtration scheme, and has decided almost unanimously in favour of the construction of "a culvert between six and seven feet in diameter and about sixteen miles long from the works at Davyhulme to the estuary of the Mersey." In introducing the question Mr. Saxon stated that it "would convey the effluent after the sewage had been treated by precipitation, as they were treating it at present by chemical processes and precipitation tanks. A very clear effluent would be passed through the culvert." The estimate for this culvert is £258,000, not taking into account law costs and Parliamentary expenses. After giving various reasons—as urgency, &c.—for the scheme he adds a suggestive remark: "The greatest reason of all, however, was that it took the [Rivers] committee out of the jurisdiction of the Mersey and Irwell Joint Committee, and they were consequently freed from their excessive requirements as to purity." It does not appear that the sludge is to be sent down the culvert, so that it will probably be carried out to sea at considerable cost. Alderman Hopkinson said truly that the scheme might be called "a policy of despair," and it is opposed to the ideal of "the sewage to the land."

Sept. 7th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

More Suicides in Liverpool by Carbolic Acid Poisoning.

IN THE LANCET of Aug. 14th comment was made, in the case of a suicide through poisoning by carbolic acid, on the easy means afforded to the public of procuring that drug. During last week no less than three more deaths from the same cause took place in Liverpool, all of which were investigated by the city coroner. Four suicides from the effects of carbolic acid poisoning occurring within one month ought to be sufficient evidence of the danger of allowing it to be so easily obtained by the public at large. Possibly these lamentable occurrences may stimulate the legislature to place greater restrictions on the sale of carbolic acid. Since writing the above it has just come to my knowledge that last night a married woman was admitted to the Royal Southern Hospital suffering from the effects of carbolic acid, and died shortly afterwards.

Increased Accommodation at Rainhill Asylum.

The chairman of the West Derby Board of Guardians intimated at the last meeting that the Lancashire Asylums Board had agreed to provide two hundred additional beds at the County Asylum at Rainhill. By these means the pressure occasioned at the local workhouses by the difficulty of removal will be considerably relieved.

Prospective Closing of Intra-Mural Cemeteries.

The proceedings of the Health Committee at their last meeting contained a recommendation for application to Parliament for power to close St. Mary's Cemetery, Walton-road; the Necropolis; St. George's Churchyard, Everton; St. Mary's Churchyard, Edge-hill; St. Michael's Churchyard; and St. James's Churchyard, Toxteth. It will be remembered that these comprise a portion of the cemeteries which were unfavourably reported upon by the medical officer of health and the closing of which he strongly recommended.

Typhoid Fever and Sewer-polluted Shellfish at Waterloo.

A great number of cases of typhoid fever occurred last month in the Waterloo and Seaforth districts which, on investigation by the health authorities, were proved to be due in a great measure to eating mussels and cockles contaminated by sewage. The shellfish were collected by children from the foreshore, close to the outlet of the south sewers.

Sept. 7th.

WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Proposed Convalescent Home for Bristol.

MR. P. H. VAUGHAN has given £3000 to the proposed convalescent hospital for Bristol. The balance remaining to be collected is now £9500.

The Sewage of Bristol.

At a meeting of the Bristol Sanitary Committee, held on Aug. 26th, a communication was read from the Local Government Board calling attention to an application made by the local authority of Westbury-on-Trym with respect to a scheme in which it was proposed to pour the sewage of the place into the River Avon. The town clerk was instructed to inform the Local Government Board that the sanitary committee are now considering as to the best means of dealing with the sewage nuisance in the river. The chairman remarked that it would be a curious thing if, whilst considering how they could deal with the sewage nuisance in the river, they were to allow the Westbury sewage to be thrown into it.

The Epidemic of Typhoid Fever at Wadebridge.

At a meeting of the St. Columb Major District Council held last week a report was read from the *locum tenens* of the medical officer of health. It stated that the epidemic of typhoid fever at Wadebridge was caused by the deficient sanitary arrangements of that town; also that the water-supply, which is unfitted for the present requirements of Wadebridge, had been contaminated through the absence of a complete system of drainage and the unsuitable method of scavenging which is adopted. The report added that owing to the Infectious Diseases Notification Act not being enforced in the district three weeks had elapsed before the medical officer of health had knowledge of the outbreak, which had resulted in twenty-three cases, with two deaths.

Typhoid Fever Cases in the Swansea Hospital.

Two nurses from the Swansea General Hospital whilst nursing typhoid fever cases in Gower contracted the disease and were admitted into the Swansea Hospital. Some comments have occurred in the local press upon the subject, owing to the fact that enteric cases have not been admitted into this institution for several years, although in 1885 an unsuccessful effort was made to obtain permission for their treatment. It is difficult to see why the authorities of the Swansea General Hospital cannot follow the example of the majority of London and provincial hospitals and admit cases of typhoid fever.

Infectious Diseases Notification Act at Aberdare.

At the meeting of the Merthyr Tydvil board of guardians, held on August 28th, the Rev. Father O'Reilly moved that a representation be made to the Aberdare Urban District Council urging them to enforce the Infectious Diseases Notification Act. He said that in the opinion of the county medical officer of health it was essential that the Act should be adopted. The Rev. Father O'Reilly added that Aberdare was the only parish in Glamorganshire where the Act was not in force

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and commented upon the danger arising from infectious diseases not being notified, stating that at present there were at least three suspicious cases of typhoid fever, and unless precautions were adopted the other inhabitants of the locality would be exposed to risk of infection. The chairman described the Act as unfair, because it provided for the infliction of penalties upon heads of families for failure to report. A division was taken, when twenty-one declared in favour of the motion, no one voting against it.

Sept. 7th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Lunacy in Scotland.

IN the thirty-ninth annual report of the General Board of Lunacy for Scotland, which was issued last week, the number of insane persons in Scotland on the first of January of the present year is stated to have been 14,500, of these 2217 were maintained from private sources, 12,221 by parochial rates and 62 at the expense of the State. During 1896, as compared with the previous year, there was a total increase of 383 registered lunatics. Pauper lunatics, under care for longer or shorter periods during the year, numbered in all 14,082. For these there was a total expenditure of £276,865; of this sum £115,761 was contributed from the local taxation account, and £13,403 was repaid by relatives and others. The average annual expenditure for each patient for the year 1895—1896 was £23 9*s.* 3*d.* The report draws attention at some length to the necessity for providing further accommodation for the poorer class of paying patient. There is at present in Scotland very little provision for that class of patients who are able to pay little or nothing beyond the cost of board for pauper lunatics. The Royal asylums are so much in demand for the wealthy class of patients that it is impossible for them to accommodate more than a small number of patients at the very low rates. The district lunacy boards in Scotland have no power to provide accommodation for private patients. In both England and Ireland, however, this permissive power is held by the district boards. In consequence of these conditions it commonly occurs that persons who are unable to pay the higher rates of board are compelled to apply for assistance to the parochial authorities. The parish council as a rule consents to the admission of the patient as a pauper *lunatic on* the condition that part or the whole of the board be repaid to the parish by the relatives of the patient. As, however, by this procedure the patient is pauperised—is on *exactly the* same level as ordinary paupers, in spite of the payment of money—the relatives, as a rule, gradually endeavour to rid themselves of the burden of payment which, *while* burdening them, is not improving the condition of the patient. The report, therefore, recommends that legislative procedure be taken to confer on the Scottish district lunacy boards a similar power to that held by the boards in the sister countries—the power of providing accommodation for private patients. It recommends that, in framing such a measure, the following principles be kept in view. "1. District lunacy boards should be authorised to receive private patients, and also to provide accommodation for such patients, if they should see fit, by erecting separate buildings or by setting apart for the purpose sections of existing buildings. 2. Private patients being once received should be regarded as having a right of accommodation, and should not be liable to be removed to make room for pauper patients. 3. The rate of board chargeable for maintenance should not be higher than the maintenance rate charged for pauper patients, with the addition, if the district board should see fit, of a sum in name of rent for the accommodation afforded. 4. This sum in name of rent should not exceed a charge calculated on the net cost of what may be required to provide the buildings, and we believe it would be an eventual saving to the ratepayers if the district board were empowered to charge the maintenance rate only in cases where they are satisfied that a higher rate cannot be afforded."

Edinburgh Royal Infirmary.

At a meeting of the managers of the Royal Infirmary held on Sept. 6th Dr. Argyll Robertson was appointed consulting ophthalmic surgeon, *his* term of office as acting surgeon *having expired.*

Sept. 7th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Proposed Isolation Hospital for Dublin.

A DEPUTATION, representing the guardians of the North and South Dublin Unions, waited on the corporation on the 6th inst. and appealed for a site for an isolation hospital at the Pigeon House Fort. After a long discussion the Right Hon. Alderman Meade explained that the Government had proposed to hand over to the corporation the whole of the plot of land at the Pigeon House by April 1st of this year, but had been unable to do so, the portion now in their possession being only a one-third instalment absolutely required for the purposes of the main drainage undertaking. The construction of the isolation hospital, though acknowledged on all hands to be desirable and, indeed, essential, is thus again postponed.

The Richmond Lunatic Asylum.

Arrangements to accommodate some of the healthy patients from the infected Richmond Lunatic Asylum are now being pushed forward. The *Dublin Gazette* of Sept. 3rd contained an order directing that the buildings and premises at Grangegorman, lately known as the Grangegorman Prison, should be made suitable and equipped for the Richmond District Lunatic Asylum at a cost not exceeding £2500.

Simpson's Hospital, Dublin.

The trustees of this old-established hospital will proceed, on Monday, the 13th inst., to elect a trustee in the place of the late Mr. Samuel Hunt Close.

Queen's College, Belfast: The President's Report.

From the interesting report of the President of Queen's College, Belfast, which has just been published, I find that during the past session, 1896-97, there were 380 students in attendance, of whom the large majority—227—were in the Faculty of Medicine, showing the great importance of the College as a medical school. Reference is made to the triennial visitation during the session at which the Senior Visitor—the Marquis of Dufferin—presided, and spoke in most laudatory terms of the work done at the College. During the past year Professor Everett, F.R.S., resigned, and Mr. W. B. Morton, M.A., was appointed in his place. He was an old Queen's College student, and was his predecessor's assistant. Two new departments were opened during last session—ophthalmology and otology—under the charge of Dr. McKeown, and a department of sanitary science under the joint care of Dr. Letts and Dr. H. Whitaker. The event of the year was the celebration of the jubilee of the foundation of the college, when the Lord-Lieutenant, Lord Lister, Lord Kelvin, and Lord Roberts were present, and a special feature of this function was the inauguration of the students' union. The advantages of this most desirable union to the students are very many indeed. At the time of the college jubilee the Lord-Lieutenant opened the new physiological and pathological laboratories, and a special address was delivered by Lord Lister. A fully equipped and endowed chair of pathology and bacteriology is much needed, and it is hoped the present President, who since his appointment in 1889 has done so much for the college, will be able, through his influence with rich Belfast merchants, to induce some of them to endow this chair. In the college library 832 volumes were added during the year, and a professors' reading-room has been arranged and opened, and a new catalogue has been issued. The President makes a strong appeal for a new physical and biological laboratory and for the completion of the chemical buildings, and for more funds for the support of the various scientific departments of the college. This report shows what good work the college is doing, and that if there are to be any changes in university matters in Ireland it has a strong claim to be made the centre of an Ulster or Northern university.

Health of Belfast.

From the report presented at the meeting of the city corporation on Sept. 1st I find that, as stated by the medical officer of health, Dr. Whitaker, "the health of the city is very unsatisfactory and its death-rate abnormally high." The number of deaths from typhoid fever and the number of cases of that disease are nearly double that of the previous month. The heavy death-rate—27·0 per 1000 (7·7 from zymotic diseases and 6·6 from chest affections)—is mainly due to deaths from diarrhœa, which, numbering 13 in the last

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report, have during the past month amounted to 154. The infantile mortality was very high—276 as compared with 98 in the previous month. Dr. Whitaker says that he cannot tell the causes of this excessive number of deaths, nor does he know where they occurred except in a very vague way. He thinks that the main cause was diarrhœa, but he should, he says, be able to state this definitely, as also the streets or houses in which the deaths occurred. It is evident that the "Notification of Infectious Diseases Act" is not being thoroughly worked in Belfast. In the discussion on the matter at the corporation Dr. O'Neill (a councillor) having referred to the necessity of seeing that the cases were notified and that the houses were perfectly examined and put right, a lay member of the Public Health Committee made an extraordinary statement which will have to be considered by the medical societies. Referring to the large number of cases of typhoid fever reported he said that diseases were manufactured—that diseases were reported by some medical men in Belfast that never had any existence. He gave as evidence of this the fact that nine cases of cholera (evidently "English cholera") had occurred in Belfast. This was the way, he pointed out, that diseases, and among others typhoid fever, were reported in Belfast, and considering the action of some of the members of the profession he stated publicly that he regretted having been the means of introducing the Notification of Diseases Act into the city.

Newry Workhouse.

On Aug. 28th the Newry Board of Guardians re-elected as master of the workhouse the person whom the Local Government Board[1] had, as a result of an investigation held by their inspector, called on to resign as being unfit for the office. On Sept. 4th a letter was read at a meeting of the board of guardians of Newry from the Local Government Board transmitting a copy of an order under seal removing the newly-elected master from office and directing him to quit forthwith the workhouse premises.

The Belfast Hospital for Sick Children.

Owing to the resignation of Mr. Stack, Dr. J. S. Morrow has been promoted to the post of visiting surgeon, and Dr. Robert Campbell has been appointed assistant surgeon in his place.

Sept. 7th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Instantaneous Radiographs.

M. PORCHÉ recently brought before the Academy of Sciences a technical detail which is an important improvement in radiography as applied to practical medical use. It is well known how the length of time required for exposure makes the taking of a radiograph exceedingly difficult, especially when the subject is a little child whom it is utterly impossible to keep absolutely still. M. Porché proposes to get over this difficulty by the use of a fluorescent screen, and instead of taking a radiograph directly on the plate to photograph the shadow on the screen. An extremely sensitive plate is required, and this plate must be protected from all other rays emanating from the Crookes's tube except those which actuate the fluorescent screen. The method proposed by M. Porché is practical, but its results depend essentially on the rapidity of the sensitive plate.

Suicides in Hospitals.

A series of suicides has just occurred in the hospitals in spite of the excellent surveillance which exists in these institutions, so that, whether owing to the contagion of example so characteristic of suicides or the large number of hopeless cases which are found in hospitals, this new epidemic is somewhat disquieting. At the Maternity Hospital a young woman, aged twenty-eight years, threw herself from a window on the third storey at five o'clock in the morning and was instantly killed. She had previously threatened the nurse by throwing a tumbler at her head, and it was while the latter went to seek assistance that the patient committed the fatal act. At the Tenon Hospital a woman, aged fifty-five years, who had been under treatment for a long time, destroyed herself in the water-closet in a way which showed remarkable resolution. She set her nightdress on fire at the gaslight, and was so badly burned that she died on the following day. The other hospitals report cases of a similar kind.

The late Sir J. Tholozan.

You have recently announced the death of Sir J. Tholozan, National Associate of the Academy of Medicine, Commander of the Legion of Honour, and Physician to the Shah. Formerly assistant professor at the Val de Grâce, he was nominated by the French Government to fill the difficult and diplomatic post of physician to that monarch. Although loaded with presents by the Shah, whose confidence he always possessed, he frequently asked to be allowed to resign and to return to France, a request which was invariably refused. In 1889, during the visit of the Shah to France, Dr. Tholozan who had secretly conveyed all his property with him, made an attempt not to return to Persia, and another military medical man was nominated by the French Government to take up his office, for it was very important not to break through the tradition that France should be the country to furnish the sovereigns of Persia with their medical attendant who is so frequently a political adviser also. But the Shah could not console himself for the absence of Dr. Tholozan. He sent back his new physician at the end of two years, and most likely would have sought aid from some other foreign nation had not Dr. Tholozan from a strong sense of duty gone back at the age of seventy years to resume the post. He sent a variety of communications to the Academy of Medicine dealing with the pathology, the epidemiology, and the hygiene of Asiatic diseases, and also sundry papers on natural history.

Rabies in Paris.

Reported cases of rabies in animals, especially in cats, are becoming more and more numerous in Paris, and M. Lépine, the Prefect of Police, has just addressed a circular to the police commissaries reminding them of their duties in the matter. The prefect complains that dogs or cats suspected to be rabid which have bitten people are frequently knocked on the head and buried by private people or somebody in authority before any examination has been made to establish the fact whether they were or were not rabid. Moreover, these cases of bites are not reported to the administration or are only briefly mentioned. This method of procedure appears to M. Lépine to be contrary to the spirit of the law, and possibly a matter of great danger to public security. Accordingly the prefect begs the police commissaries to use the utmost care in reporting every case of bite. In cases where the animal was apparently rabid the report should be accompanied by a certificate signed by a qualified veterinary surgeon, stating the condition of the animal found upon two visits made at an interval of six days. In cases of undoubted rabies the report should be as complete as possible as regards the bitten, whether they be human beings or animals. In addition, the prefect recalls the fact that a special service presided over by a veterinary surgeon attached to the prefecture of police has been established in the pound in the Rue de Pontoise, where every day animals suspected of rabies or definitely affected by it are visited or their dead bodies examined. Both visits and examinations are absolutely gratuitous. The circular also requests the commissaries of police to ask the owner of every cat or dog suspected of being rabid—that is to say, one which has been bitten or even knocked over by a rabid animal—to have it killed at once, in conformity with Article 10 of the regulations of July 21st, 1881. With regard to persons bitten by an animal, either rabid or suspected to be so, they are begged to repair at once to the Pasteur Institute, where they will be treated. In conclusion, the prefect asks the commissaries of police of the suburbs to put themselves in communication with the municipal authorities of their district and to ask for their coöperation as to any case of rabies which may be brought to their knowledge, and also points out that in every commune where a case of rabies has been reported no dog may go out except in a leash for the following six weeks.

Prophylaxis in Contagious Diseases at School.

M. Courmont has published at the Congress of St. Etienne a report on the part played by the closing (*licenciement*) of schools in the prophylaxis of transmissible illnesses. According to him similar methods might be employed in families by the dispersion of their members or by their transport in block. There are advantages and disadvantages associated with *licenciement* which is of course difficult of execution,

[1] THE LANCET, Aug. 14th, 1897, p. 420.

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and precautions must be taken in accordance with the rules of epidemiology before the method can be of sanitary service to the community.

Sept. 6th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The "Istituto Antirabico" of Milan.

LIKE "wisdom," the Pasteur Institute in Paris "is justified of all its children"—of none more than the Milanese "Istituto Antirabico," which works on the lines of the parent institute with a fidelity and care that have their reward in a yearly diminishing death-rate from one of the most terrible of maladies. The "cure" it practises is a "prophylactico-preventive cure," so that, in strictness of language, its practitioners do not speak of "patients" or "cures" in the case of persons who, bitten by mad dogs undergo the "cura antirabica," but rather of such as it has "immunised" beforehand against the eventual hydrophobic infection they may have contracted. Thus premised, it is well to recall the fact that before the adoption of the "cura antirabica" out of 100 persons bitten by mad dogs there was a mortality fluctuating between a minimum of 20 per cent. and a maximum of 60 per cent. In this death-rate the Pasteur method immediately wrought a signal diminution, causing it to sink to less than 1 per cent., a result obtained with not inferior success by the Milanese "Istituto," which, indeed, in this respect can boast a record scarcely equalled by the parent institute itself. The following statistics of the mortality in the Milanese "Istituto" suggest their own commentary:—

Years.	Per cent.
1889–91	1·00
1891–93	0·74
1893–95	0 54

In this connexion it may be well to add the figures of death from hydrophobia throughout Italy during the last decennium as these are given by the "Direzione Generale di Statistica" attached to the Agricultural Office under Government:—

Year.	Deaths from hydrophobia.
1886	136
1887	103
1888	106
1889	118
1890	75*
1891	97
1892	83
1893	83
1894	93
1895	53

* The asterisk indicates the year when the antirabic institutes were first opened in the Italian kingdom.

These figures, as I have said, speak for themselves and become even more eloquent when it is remembered that at least two-thirds of the above cited cases of death from hydrophobia are represented by individuals who had not been subjected to the treatment. But to return to the Milanese "Istituto." In the year now passing it had under treatment more than 250 persons bitten by undoubtedly mad dogs and it remanded without treatment some 150 more as not proper subjects for the same. Out of the former total there were 3 cases of hydrophobia, one of them not to be reckoned in the statistics because it terminated fatally twenty days after the bite and in the course of the "cura" itself, while the other two died without these qualifying circumstances. These two deaths out of the 250 cured and restored to perfect health constitute a result which, according to medical authority in the leading Milanese organ, the *Corriere della Sera*, is not only "satisfactory," but "such as to compare well with the results of past years classed as very good." The same journal quotes a distinguished compatriot physician as remarking: "It is not the case that persons under the hydrophobic access suffer those unutterable and unparalleled torments which many descriptive writers are prone to dwell upon. Death in these circumstances, indeed, cannot be called gentle or placid; but those who have witnessed it can attest that it is not more terrible or harrowing than death from tetanus, from various forms of heart disease, from pneumonia, or from typhoid fever. That which truly impresses and saddens the professional beholder is the impotence of the medical art to apply in such cases a treatment other than that of symptoms—its impotence to control a malady which inexorably runs its fatal course." All the more, then, must the putative victim to a hydrophobic bite lose no time in placing himself under the special treatment of the "Istituto Antirabico," whose demonstrated success cannot but supply another condition of "cure"—to wit, the confidence which antagonises the depression so invariably incident to the lesion.

The Water-supply of Milan.

This has long been a *vexata quæstio* in the Lombard capital, never more so than at present, when a formidable epidemic is filling its hospitals and scaring the travelling world from its hotels. At a meeting, on the 2nd inst., of its Consiglio Comunale the subject came up again, and in the course of discussion a number of facts leaked out which show how far the providing Milan with "acqua potabile," pure in quality and abundant in quantity, has yet to travel before being an accomplished fact. Several "consiglieri" were for postponing consideration of the question on the ground that the Junta, being about to resign, could not undertake pledges which would fall upon its successors. A majority contended that the matter was of such desperate urgency that it must be considered, if not put on a practical footing, then and there. Information was accordingly asked from the assessor and engineer, Signor Ponzio, as to the proposal to bring the desiderated supply from Garbagnate, and that gentleman, in a very lucid statement, referred to twenty-five different plans for providing Milan with "acqua potabile," and said that of these a technical commission appointed to consider the matter had cancelled seventeen. Of the remainder five were reserved for consideration, and that for transporting the water from Garbagnate was one of them. This, too, was in turn discarded by the commission, as it did not guarantee sufficient pressure to bring the water to Milan or to distribute it freely when brought; besides, the expenses required for the works were not adequately defined. Signor Ponzio concluded by maintaining that the Garbagnate plan must be relegated to the Greek Kalends, and added (what seems to be a fatal objection not only to it, but to all its rivals) that until the "fognatura" (drainage) was satisfactorily provided for the attempt to add to the volume and distribution of the "acqua potabile" would be tantamount to a blunder (*equivarrebbe ad un errore*). There was no answer forthcoming to Signor Ponzio's remarks, and the matter, though a vital one, remains *in statu quo*.

Experimental Hygiene in the Argentine Republic.

Improvement begets improvement nowhere more steadily than in science, and the "Istituto d'Igiene Sperimentale," founded by Professor Sanarelli in Montevideo, will soon have its counterpart in Buenos Ayres. With that object a Bill before the "Camera dei Deputati" of the last-named capital is rapidly proceeding through the several stages necessary to its becoming law. The management of the new laboratory, I hear, will be given to Professor Ferruccio Mercanti, the able sub-director of the "Istituto" over which Professor Sanarelli presides. Italians are congratulating themselves, and quite justifiably, on the progress their science is making in Southern America.

Sept. 5th.

CAMBRIDGE UNIVERSITY: EXAMINATION IN SANITARY SCIENCE.—The following is the order of examination for October, 1897. *Part* 1.—Tuesday, Oct. 5th: from 9 A.M. to 12 noon, Paper in Hygiene, in the Medical Schools, Downing-street, Cambridge; and from 2 to 6 P.M., Practical Bacteriology, in the Pathological Laboratory. Wednesday, Oct. 6th: from 9 A.M. to 12 noon, Paper in Hygiene, in the Medical Schools; and from 2 to 5 P.M., Practical Chemistry, in the Chemical Laboratory. Thursday, Oct. 7th: from 9 to 10.30 A.M., Paper in Bacteriology, in the Medical Schools; from 10.30 A.M. to 12 noon, Oral, in the Medical Schools; and from 2 to 6 P.M., Practical Microscopy and Oral, in the Physiological Laboratory. *Part* 2.—Tuesday, Oct. 12th: from 9 A.M. to 12 noon, Paper, in the Medical Schools; and from 1 30 P.M., Practical and Oral, in the Medical Schools. Wednesday, Oct. 13th: from 9 A.M. to 12 noon, Paper, in the Medical Schools; and from 1.30 to 5 P.M., Practical and Oral, in the Medical Schools. Thursday, Oct. 14th: at 10 A.M., Oral, in the Medical Schools.

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Obituary.

JOHN BRAXTON HICKS, M.D., F.R.C.P. LOND., F.R.S.

JOHN BRAXTON HICKS was the second son of Mr. Edward Hicks, of Lymington, Hants, some time banker and for many years chairman of the bench of county magistrates, who was himself a native of Milford, Hants, which parish, together with the tything of Efford, originally belonged almost entirely to his immediate ancestors. The subject of this notice was born in 1823, and educated from the age of twelve to fifteen years as a private pupil of the Rev. J. O. Zillwood, of Compton Rectory, near Winchester. He then became an articled pupil of Dr. Fluder, of Lymington, until, on completing his eighteenth year, he entered as a medical student at Guy's Hospital, where he took first prizes in anatomy, materia medica, botany, and practical chemistry. Nor was Mr. Hicks unsuccessful in the world of athletics, for he obtained a medal for double sculling given by the then famous Guy's Hospital Boat Club.

In 1845 he passed with honours the first examination for the degree of Bachelor of Medicine at the University of London, obtaining an exhibition and gold medal for materia medica and a first (bracketed) in anatomy. In 1847 he passed the final M.B. with honours, and shortly afterwards became a Member of the Royal College of Surgeons of England and a Licentiate of the Apothecaries' Company. Four years later—in 1851—he obtained the M.D. at the University of London, and in the following year was elected a Fellow of the Linnæan Society. Ten years later Dr. Braxton Hicks was elected to the Fellowship of the Royal Society. He passed the examination for Membership of the Royal College of Physicians of London in 1859, and in 1866 was made a Fellow of the College. Dr. Hicks was appointed assistant obstetric physician to Guy's Hospital in 1858. Ten years later he became full obstetric physician and lecturer in obstetrics, and in ceasing his more active connexion with Guy's Hospital in 1883 he was made consulting obstetric physician. He was appointed examiner in obstetrics to the University of London and to the Royal College of Physicians of London from 1872–78, and again from 1889–93. In 1888 he accepted the invitation to the post of obstetric physician and lecturer at St. Mary's Hospital, and at the end of his term of service was appointed consulting obstetric physician to the same institution. For many years Dr. Braxton Hicks was physician to the Royal Maternity Charity, and afterwards consulting physician. For some years likewise he was physician to the Royal Infirmary, Waterloo-road. Dr. Braxton Hicks was President of the Obstetrical Society in 1871 and President and Orator of the Hunterian Society in 1879. He was also made an honorary Fellow of the Obstetrical Societies of Berlin, Edinburgh, and Philadelphia (U.S.A.), and of the American Gynæcological Society (U.S.A.). He was also corresponding Fellow of the Gynæcological Society of Boston (U.S.A.). To medical and scientific journalism Dr. Braxton Hicks has been a valued and voluminous contributor; he has also published many papers in Italian, American, and Australian medical journals. He was the original author of the "Combined External and Internal Version" (Longmans, 1864); also joint author of the "Earthworm and House Fly" (Van Voorst), engraving some of the illustrations with his own hand. From his boyhood upward he was a devoted student of natural science, and has published papers on original subjects in the Proceedings of the Royal Society. Among these may be noted "Eyes of the Invertebrata" and "Supplementary Forces concerned in the Circulation of the Uterus." In the Transactions of the Obstetrical Society he also published "Anatomy of Human Placenta." To the Transactions of the Linnæan Society he has contributed many papers on Zoology and Botany, and has described many groups of sensory organs on the surface of insects. In the same Transactions he also published papers on original researches on the "Lichens, Mosses, and Unicellular Algæ"; and papers on "Volvox Globator, Amœboid Vegetable Bodies," and "Gonidia of Lichens" have been contributed by him to the *Microscopical Journal*.

In the Medical Society's Transactions and the *American Journal* he has written papers on the "Effect of Movements of the Body on Respiration" and on "Abdominal Tension." Dr. Hicks was the inventor of some apparatus useful in nursing, in moving patients, also for making broths, &c. He was the founder of the Lymington Ambulance Centre for First Aid, and has given lectures to ambulance classes in the parish of St. George's, Hanover-square. He was also one of the post-graduate lecturers to medical men, and apart from his profession was for five years a vestryman in the parish of St. George, Hanover-square. A few months before his death he was elected Honorary Fellow of the Obstetrical Society.

Dr. Daniel Hooper writes to us as follows: "Braxton Hicks and I entered at Guy's Hospital in October, 1842, and were fellow students there till 1848; we sat on the same benches and fought for the same prizes and honours at the hospital and at the University of London. In those days Sir W. Gull coached the men who were preparing for the London degrees, and in his class were Hicks and myself, Wilks, Habershon, Cooper Forster, and others; now, alas, our coach and all his class, excepting Wilks and myself, have disappeared. Hicks and I were chums and worked together in our own rooms, in the dissecting-room, and in the chemical laboratory; we were both very fond of botany, and in the summer vacation used to exchange specimens of plants; his came from the New Forest, close to his home at Lymington, mine from the Sussex woods on my father's farm near Horsham. Hicks was a favourite pupil of Sir W. Gull and much liked by all who knew him. I shall never forget his amiable, cheerful expression, bright, piercing eyes, and noble forehead; his alacrity was remarkable; he was always busy—I never saw him idle for one moment—he would hurry with a very quick step to the lecture theatre, literally run down the steps (a huge volume of Pereira, perhaps, under his arm) to the bottom bench, and there sit motionless and attentive till the lecture was over. Of course, he carried off many prizes and honours at his school and university; and then, wishing to settle in practice and to marry, I introduced him to the late Mr. W. Moon, of Tottenham, whose assistant I was, and he bought a share of the practice. As a general practitioner he was popular and successful, but he was too good a man for Guy's Hospital to lose sight of, so he was invited to fill the post of assistant obstetric physician there. As is well known, he afterwards became full physician and finally consulting physician in his department. Hicks had an innate aptitude for scientific research, did much good work, and became a Fellow of the Royal Society. The profession has lost a distinguished member and I have lost one of my oldest and most esteemed friends."

ALFRED HALL, M.D. EDIN., F.R.C.P. LOND., &c.,
OF BRIGHTON.

DR. HALL, whose death we reported last week, was born in the year 1812, and so had reached the age of eighty-five years. He was the youngest son of Mr. John Cressy Hall, of Swanwick Grange, Alfreton, Derbyshire, barrister-at-law and Commissioner in Bankruptcy at Nottingham. He was the brother of the late Mr. Frederick Hall, J.P., barrister, of Furze Hill House, Brighton, a prominent and useful citizen. The honourable connexion of his family with the Bar is well continued in the person of his only surviving son, Mr. Marshall Hall, who with his sisters may be assured of the sympathy of a large number of members of the medical profession in the great loss they have sustained Dr. Hall had a large number of qualifications, the earliest obtained being the Licentiateship of the Society of Apothecaries, taken so far back as 1834, and the Membership of the Royal College of Surgeons of England, taken in 1835. He graduated at Edinburgh University in 1840, writing a thesis on Hydrophobia. In 1850 he obtained the Fellowship of the Faculty of Physicians and Surgeons in Glasgow in which city he practised both before and after his marriage. In 1859 he became a Member of the Royal College of Physicians of London, and in 1873 was elected to the Fellowship. The history of Dr. Hall's qualifications well represents his honourable ambition and his standing and work in the profession, "moving up from high to higher," acting the part of a general practitioner most admirably and to the great satisfaction of his patients, first, we believe, in Glasgow, then in Hounslow, where he was in partnership with the late Mr. Frogley about the years 1854–56, and finally in Brighton, where he held a very high position. Those who knew him best, either as a man or as a physician, will most easily understand how he came to be consulted by distinguished members of his own profession in Brighton. Among these was the late Dr. Marshall

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Hall. Though there was no relationship between the families Dr. Alfred Hall's intimacy with Dr. Marshall Hall was that of men who deeply esteemed each other, and Mr. Marshall Hall bears the name, and is the godson, of the famous discoverer of the reflex functions of the spinal cord. Dr. Alfred Hall, too, as will be remembered by readers of THE LANCET, was the medical attendant of its Founder while he was at Brighton during his last illness, and was always much appreciated by him. Dr. Hall did much work in connexion with the medical charities of Brighton, especially the Brighton, Hove, and Preston Dispensary and the Brighton and Hove Hospital for Women. He also took an active interest in the movement for improving the drainage of Brighton.

Dr. Hall, owing to the illness of the late Mrs. Hall, left Brighton for Tunbridge Wells in 1887, but soon after her death he returned to Brighton, for which place he had a great liking. He was a good man and a model practitioner, kind, frank, cheerful, well up in the latest improvements in medicine, and always exercising his mind and good common sense in the treatment of individual cases. His handsome face and form well agreed with his nature, and are not likely soon to be forgotten by his friends.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men have been announced:—Dr. Eduard R. von Hoffmann, Professor of Forensic Medicine in the University of Vienna, on Aug. 27th. He was born in Prague in 1837, and studied there under Purkinje, Jaksch, Haller, Hasner, and Bochdalek. From the time he took his degree in 1861 until 1865 he worked as assistant in the Institute of Forensic Medicine connected with the Bohemian University of that city. He afterwards delivered the professorial lectures until 1869, when he was appointed professor at Innsbruck, where he remained until in 1875 he was appointed to succeed Professor Dlauhy in Vienna. He is chiefly known by his important Manual of Forensic Medicine, which was first published in 1878, and which has been translated into several languages.—Dr. Emerich Poór, Emeritus Professor of Dermatology in the University of Budapest, on Aug. 21st, in his seventy-fourth year. In early life he had been intended for the priesthood and was for some time in a seminary. When the war of Hungarian Freedom broke out he enlisted in the army and fought with his comrades until the battle of Ssény, when he was laid up sick in hospital. His military experiences seem to have changed his views as to entering the priesthood, and instead of returning to the seminary he entered the University of Pesth as a medical student, taking his degree in 1866. After this he studied for a time in Paris and Vienna, and on his return to Budapest was appointed to lecture for Professor Sauer, being subsequently given charge of the skin department of the Rochus Hospital and becoming an extraordinary professor of dermatology. As a medical journalist Dr. Poór takes a high rank, having founded and carried on, for many years alone, and afterwards with Dr. Dulécska as co-editor, the medical journal, *Gyógyászat*. He also deserves the thanks of his medical brethren for his activity in establishing a medical, social, and assurance association, called the *Orvosi kör*, of which he was president. For many years past he had been in bad health, and retired from his hospital work in 1890.

AN IMPROVED LIFEBOAT.—An officer in H.M. Customs residing at Bedminster, Bristol, has obtained a patent for a new lifeboat. He claims that it will live in any sea, is unsinkable, cannot be stove in or founder when put over the side of a vessel; that it can be mechanically propelled, and can be worked by either passengers or crew. There are two rudders, which will obviate the necessity of putting the boat about in a seaway and thus prevent the danger of capsizing.

SINGULAR DEATH AT GLOUCESTER.—An inquest was held in Gloucester on Sept. 2nd upon the body of a little boy aged six years. It appeared that the deceased went home on Aug. 31st and told his mother that he had been eating horse beans and was choking. The boy was sent to a medical man, but died before arriving there. A post-mortem examination showed that there were thirty-nine horse beans in the deceased's stomach and another one in his larynx. The jury returned a verdict of death from suffocation.

THE TWELFTH INTERNATIONAL MEDICAL CONGRESS.

MOSCOW, AUG. 19TH—26TH.

The Grand Duke Sergé's Garden Party.

THE last of the social functions in Moscow in connexion with the Congress was certainly one of the pleasantest. This was the garden party given by the Grand Duke Sergé Alexandrovitch on the afternoon of Friday, Aug. 15th (27th). The garden party was held in the grounds of the Neskoutchnaia Palace—a prettily situated Imperial villa, not far from the famous Sparrow Hills. The central part of the very extensive park consists of terraced lawns sloping down to the River Moskva and thickly dotted with flower beds. In an ordinary summer these gardens must be beautiful, but unfortunately the intense heat of the present summer had quite parched up every blade of grass, and it was pitiable to see what should have been bright green lawns converted into brown, desert-like expanses, with not one green blade of grass left. There appeared to be some 500 or 600 guests at the party, though the number of invitations issued was said to be considerably greater. There were many military bands scattered about the park, and the refreshments, served in two long marquees, were on a truly Royal scale. Shortly after four the Grand Duke Sergé and the Grand Duchess Elizabeth entered the gardens and remained for an hour and a half, talking freely with their guests, of whom large numbers were presented to their Imperial Highnesses.

The Exodus from Moscow.

All through the week the daily number of Congressists leaving Moscow was considerable, and no little strain was put upon the resources of the railway officials, more particularly on the lines to St. Petersburg and to Warsaw. On the Thursday and Friday evenings (and possibly also earlier in the week) special Congress trains were run on both these lines. Some little discomfort was inevitable under the circumstances. The free railway-ticket did not guarantee a sleeping-car, and on the return journey (which in this respect differed from the journey to Moscow) Congressists were unable to secure beforehand a sleeping-berth merely by paying the extra fee on their member's ticket. To obtain a sleeping berth it was necessary to pay the ordinary railway fare as well as the extra sleeping-car fee, and to go by one of the ordinary trains. Many members did this, and so secured a relatively comfortable night. Those who omitted to do so found the special Congress trains somewhat overcrowded.

The Entertainments in St. Petersburg.

Large numbers of Congressists proceeded to St. Petersburg after the close of the Congress in Moscow. Most excellent and hospitable arrangements had been made by the profession in St. Petersburg for their reception. Just as in Moscow, they were met by students at the station, who were ready to give them all information and to help in obtaining rooms or lodgings. A word, and much more than a word, of recognition and gratitude is due to both the students of St. Petersburg and Moscow for the way they have played their part during the past fortnight. They have in many instances gone to immense trouble to be of assistance to members, and have been invariably and under trying circumstances the embodiment of courtesy, kindness, and good temper.

On Saturday the proceedings in St. Petersburg consisted of a private reception by the Prince and Princess of Oldenburg at the Saxe-Altenberg Palace in the afternoon, and a "rout" at the *Duma*, or Town Hall, in the evening. The latter was attended by large numbers of guests. The decorations which had been put up on a lavish scale for the reception of M. Faure a few days before had been allowed to remain. The hall is a fine one at all times, but it looked particularly well thus decorated.

On Sunday invited members of the Congress were conveyed by four special steamer from St. Petersburg to Peterhof. The boats were timed to leave at 10.30 A.M., and Peterhof was reached about noon. The large palace, with its curiously decorated rooms, dating from the time

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of Peter the Great, was thrown open, and at one o'clock a champagne lunch was served in the ball-room and dining-room. The afternoon, which unfortunately turned out wet, was occupied in walking about the park, and watching the wonderful series of fountains, all of which were playing. The fountains of Peterhof are said to surpass those of Versailles, and it seemed quite conceivable on Sunday that this bold statement was true. They are unquestionably a wonderful and beautiful sight. Many members drove round the park and town either in Royal carriages, of which a certain number were provided, or in hired vehicles. The little palace of Monplaisir, built by Peter, and containing many relics of that monarch, seemed to be a centre of attraction. Owing to the bad weather many members returned to town by train, but others braved the rain and remained until the special steamers started on their homeward journey at five o'clock.

On Monday morning a reception was held by the Prince and Princess of Oldenburg at the Imperial (formerly the Oldenburg) Institute of Experimental Medicine. This is certainly a most splendidly equipped institution, and more than one expert present declared his opinion that it must now take its place as the first institution of the kind in Europe, adding that Paris, Berlin, and Vienna cannot show anything to equal it. Whether this is so or not in sober fact an Englishman can only look at this institute in admiration and despair. After an inspection of all parts of the institute lunch was served in one of the larger rooms. In the evening the last social function of the Congress was held. This was a "farewell reception" given by members of the profession in St. Petersburg to members of the Congress. It was held in the *Dvoryanskoé Sobranyé*, or Salle de Noblesse, the largest concert-hall in St. Petersburg. A very excellent concert of Russian music was provided, followed by a series of performances by male and female choirs, and some interesting singing and dancing by a large choir of gipsies. Finally the guests themselves danced the Russian mazurka and some other dances, and an early hour in the morning was reached before the reception came to an end.

SECTION IV. (A).

GENERAL THERAPEUTICS, PHARMACOLOGY, BALNEOLOGY, CLIMATOLOGY, AND PHARMACY.

Dr. P. N. TACOWLEFF (Moscow) read an interesting note on the Treatment of Phthisis, in which he pointed out that even now at the present day there really do not exist any recognised specific methods of treatment, climatic or otherwise, for dealing with phthisical patients. Some forms of phthisis are curable in warm climates, and some improve under the temperature and environment of high mountain altitudes. But whatever the climate or hygienic conditions, two things are common to every environment that is to be of service to the phthisical patient, and they are: the air must be pure and the food good and nourishing; also the regular supervision of a physician is necessary. According to Dr. Tacowleff, climate does not play the important *rôle* in phthisis that has been attributed to it. Hygiene and a due attention to the *régime* of life are of more importance. To send the patient to high altitudes or to low altitudes or to southern resorts, where he obtains no surveillance from a medical man and where no care is taken to see that he is properly fed, is wrong. Far better that any case which requires prolonged treatment should receive that treatment in the country of the patient's birth. For example, with the Russians, Dr. Tacowleff preferred to order sojourn in the Russian plains to any journeying to Southern health resorts. Properly managed sanatoria and special hospitals in Russia could, he was certain, compete successfully with many well-known European localities, warm climate or high mountains not being indispensable conditions to the phthisical. In the case of the poor he considered that the special hospitals should be near the centres of industry, where phthisis is particularly rife, to be of the first use to the community. This opinion became common in Russia in 1892, when the late Emperor Alexander III. founded the first public sanatorium at Chalila in Finland. Last year a separate pavilion for phthisical patients was arranged in the Hospital of the Grand Duke Nicholas at Kief; and in December of the same year the Emperor Nicholas II. gave a large sum of money and a site for the foundation of a similar sanatorium near St. Petersburg. Now the municipality of Moscow proposes to found a popular sanatorium, and suggestions of the same character have been mooted in several other Russian towns. In Russia, particularly in the great towns, public sanatoria for the phthisical poor, however, ought to be replaced, in Dr. Tacowleff's opinion, rather by special hospitals for the sick, hospital discipline diminishing the risk of infection. Moreover, in special hospitals all the sick could be treated without distinction, while in the sanatoria only the curable sick would be treated, and, as a consequence, there must be greater difficulty in enforcing proper regulations as to isolation. Finally, Dr. Tacowleff came to the conclusion that in all the great towns of Russia it was now indispensable to build special hospitals for the gratuitous reception of the sick phthisical poor, and that the present sanatoria should be left for the better class who could pay, and who do not require the discipline of the hospital to prevent the risks of infection. From the hospitals the cases which are curable might be drafted into the sanatoria.

SECTION XIV.

HYGIENE.

Dr. A. M. KOROWINE (Moscow) read an interesting paper upon that familiar subject—the Drink Question. After premising that the question is one eminently for the consideration of medical men rather than of clergymen or lay philanthropists he came to the following conclusions among others: (1) That medical men should arrive at some idea when patients should be considered "moderate drinkers" and when "alcoholics"; (2) that they should study the influence and results of the exhibition of alcohol in disease in the cases of the abstainer and the non-abstainer; and (3) that they should make widely known the urgent need that exists that chronic alcoholic subjects should be treated as insane and be subject to confinement in asylums. Dr. Korowine's other conclusions were all directed towards obtaining for the disastrous effects of the alcoholic subject upon the community more direct notice from the medical profession. He wished his brother medical men to be more ready to recognise and point out to the public what are the ills, direct and indirect, that accrue to a nation through its drunkards, and to be more ready to lend their aid to any organisations at present working in the cause of temperance.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin*: Dr. T. W. Engelmann, Professor of Physiology in the University of Utrecht, has been appointed to the chair vacant by the death of Dr. du Bois Reymond.—*Copenhagen*: Dr. Leopold Meyer has been appointed Professor of Midwifery and Gynecology in succession to the late Dr. Stadfeldt.—*Heidelberg*: Dr. L. Brauer has been recognised as *privat-docent* of Internal Medicine.—*Kharkoff*: Dr. Ponomareff, Extraordinary Professor of Children's Diseases, has been appointed Ordinary Professor.

THE SALE OF COCAINE IN THE UNITED STATES.—It is announced that the State Legislature of Illinois has enacted the following law respecting the sale of cocaine: "Section I.—Be it enacted by the People of the State of Illinois, represented in the General Assembly, It shall not be lawful for any druggist or other person to retail or sell or give away any cocaine hydrochlorate or other salt of or any compound of cocaine or preparation containing cocaine, or any salts of or any compound thereof, excepting upon the written prescription of a licensed physician or licensed dentist, licensed under the laws of the State, which prescription shall only be filled once; Provided, that the provisions of this section shall not apply to sales in the usual quantities at wholesale by any manufacturer or wholesale dealer, when such manufacturer or wholesale dealer shall have affixed to the box, bottle, or package containing such cocaine hydrochlorate or other salt or compound of cocaine or preparation containing cocaine a label specifically setting forth the proportion of cocaine contained in any preparation. Section II.—Every person who shall be found guilty of violation of the provisions of this act shall, for the first offence, be fined a sum not less than $10 nor more than $50, and for each subsequent offence not less than $15 nor more than $200, or imprisonment in the county jail not exceeding thirty days, or either or both, in the discretion of the court."

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HEAVY RAINFALL IN BRISTOL.—It is stated that with one or two exceptions the rainfall of August was the heaviest since 1860. During the month about 8 inches were registered in Bristol, and in the twenty-four hours ended Aug. 31st 2·49 inches fell. The average fall of rain for August for the fifty years 1841-1890 was 2·35 inches, and during August last year only 2·06 inches fell.

THE Sussex County Hospital has received £822 10*s.* 7*d.* out of the fund raised for the celebration of the Queen's Diamond Jubilee in Brighton, towards the cost of erecting the proposed Nurses' Home. This was the surplus left after paying for the various festivities in the town, and a cheque for the amount has been forwarded by the Mayor (Alderman Sir J. G. Blaker) to the hospital secretary (the Rev. W. H. Orton).

BEQUESTS TO ENGLISH HOSPITALS.—The secretary of the Princess Alice Hospital, Eastbourne, has received a communication to the effect that the late Baroness Solvyns left a considerable sum to be divided between the Société de Bienfaisance Belge, the London Fever Hospital, and the Princess Alice Memorial Hospital at Eastbourne, in memory of the late Baron Henry Solvyns, formerly Belgian Minister in London. The executor is prepared to pay £400 at once to the Eastbourne Hospital, and a further sum is about to be obtained from the sale of a house in New York.

THE honorary secretaries of the Prince of Wales's Hospital Fund have received from Mr. W. Y. Campbell, of Johannesburg, South African Republic, the generous contribution of £1602 5*s.* 3*d.*, made up of sums contributed by the following bodies:—The Queen's Record Reign Witwatersrand Celebration (W. Y. Campbell, treasurer)—British residents of Witwatersrand, Transvaal, £1452 5*s.* 3*d.*; Britons of Potchefstroom (per Mr. Mountfield), £120; the Nigel Gold Mining Company, Limited (A. Grant, general manager) and employés, £30; total, £1602 5*s.* 3*d.*

FORMIC ALDEHYDE AS A DISINFECTANT.—Some interesting experiments on the production of formic aldehyde and its efficacy as a disinfectant have been published by Dr. F. C. Robinson, who investigated the subject at the instance of the Maine State Board of Health. He at first used an ordinary lamp with thin platinum, or platinised asbestos, above or surrounding the wick. He found the asbestos better than sheet platinum, but the amount of gas obtained was insufficient, and he subsequently devised the following arrangement, which seemed to him to be very satisfactory. A disc of moderately thick asbestos board was perforated with small holes close together, and then platinised in the usual way, using quite a strong solution of platinic chloride. If now a shallow dish, cylindrically formed, and of such a size that the perforated asbestos disc will just cover its top, be partly filled with methyl alcohol, it serves as the lamp font. If the platinised disc be wetted with the alcohol, seized in a pair of forceps or small tongs, removed from the dish, and the alcohol lighted, it will, by the time its alcohol burns away, be heated sufficiently, so that when placed over the lamp-font again it will continue hot and change the alcohol to formaldehyde. Experience shows that with proper depth of dish and suitable holes for the admission of air the disc keeps of a proper redness to bring about the change most efficiently. In order to avoid all chance of the alcohol catching fire, and to provide for regulation of the air-supply, Dr. Robinson constructed an apparatus the advantage of which is that it is easily used and the amount of alcohol changed in a given time depends upon the size of the disc. A disc about six inches in diameter serves to change a litre per hour, and this is about as much as is ever wanted. This form of apparatus also seems to give a larger yield of aldehyde than any other. It exposes a much larger surface of platinum to the alcohol and air than any other, and keeps it at a more uniform temperature. Having constructed a lamp in the manner described Dr. Robinson next undertook a series of experiments, which in general tended to confirm the results of others. In a room containing about 3000 cubic feet, and having three large windows with very loose sashes, he found that, one litre of alcohol being used and the room being closed for four hours, infected matter was not completely sterilised if it was covered up or concealed to any great extent, but when two litres were used, or even one and a half, complete sterilisation resulted in about three and a half hours. Diphtheria and typhoid cultures were rendered completely sterile, so that there was no turbidity in any of the cultures within two days.

MEDICAL MAGISTRATE.—Mr. Roger R. S. Mackinnon, M.B., Ch.M. Syd., of Warialda, New South Wales, has been appointed a magistrate for the colony.

AT the annual meeting of the School of Mines Bendigo, Australia, Mr. O. Penfold, M.R.C.S. Eng., L.S.A. Lond., Honorary Medical Officer to the Bendigo Hospital, was elected President.

NEGRO MEDICAL PRACTITIONERS.—The Chicago *Railway Surgeon* mentions as an exceptional occurrence that a negro woman, Emma Wakefield, of Louisiana, has graduated in the medical department of the New Orleans Coloured University and lately was licensed to practise by the Louisiana Board of Examiners. According to the *North Carolina Medical Journal* a negress was licensed in North Carolina in 1894. The *Maryland Medical Journal* states that a congress of coloured physicians met in Washington last July to perfect arrangements for a national association of the physicians of that race.

THE SANITARY INSTITUTE.—The sixteenth congress of the Sanitary Institute will be held at Leeds from Sept. 14th to Sept. 18th. A reception room will be opened at the town hall on Sept. 13th, at 12 noon, and on the following days at 9 A.M. for the issue of all tickets in connexion with the Congress. On Sept. 14th the reception of the members will take place in the town hall at 12 30 P.M.; there will be a public luncheon in the large hall, Yorkshire College, at 1.30 P.M.; and the inaugural address by the President (Dr. Robert Farquharson, M.P.) will be delivered in the Yorkshire College at 3 P.M. On Sept. 15th the following conferences will meet: River Pollution (President, Major L. Flower); Municipal Representatives (President, Councillor B. Womersley); Medical Officers of Health (President, Dr. Edward Seaton); Municipal and County Engineers (President, Mr. Thomas Hewton); Sanitary Inspectors (President, Mr. Peter Fyfe, Glasgow); and Domestic Hygiene (President, Mrs. Fawkes). The sectional meetings on the following subjects will be held in the town hall on Sept. 16th and 17th: Section I., Sanitary Science and Preventive Medicine (President, Mr. T. Pridgin Teale); Section II., Engineering and Architecture (President, Mr. Lewis Angell); and Section III., Chemistry, Meteorology, and Geology (President, Mr. William Whitaker). The closing general meeting will be held in the town hall on Sept. 17th, at 5 P.M. Saturday, Sept. 18th, will be devoted to excursions. The health exhibition in connexion with the Congress will be open from Sept. 14th to Oct. 9th.

PRESENTATIONS TO MEDICAL MEN.—Mr. Hugh Kirkland, M.B., Ch.M. Glasg., of Bathurst, New South Wales, was entertained at a smoking concert on June 2nd and afterwards made the recipient of an illuminated address.—Mr. Charles N. Simons, L.R.C.S. Irel., lately of Brighton, Victoria, Australia, has been presented by the residents, on the occasion of his leaving the district, with a purse of sovereigns and an illuminated address. The mayor, on making the presentation, referred to the sanitary improvements in the town effected by Mr. Simons in his capacity as health officer.—Mr. John Wood, M.B. Oxon., L.R.C.S. Edin., of Walsall, Staffordshire, on his removing from that town received the gift of an ebony and gold clock, and a richly illuminated address. The clock bears the following inscription: "Presented to John Wood, Esq., M.A., M.B., on his resigning his position as senior physician to the Walsall and District Hospital, by members of the Committee and a few other friends. August, 1897." Dr. Wood was connected with the hospital for the long period of twenty years, and has rendered valuable and appreciated services to the institution as surgeon and physician.—At the recent annual meeting of the Bentinck Colliery Ambulance Class, held in the Kirby Board School, Mr. John Mackenzie, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., was the recipient of a timepiece, barometer, and thermometer as tokens of acknowledgement for his lectures on First Aid. The class, which is a large and successful one, was held for the first time last year in connexion with the new Bentinck Colliery, and will be resumed during the coming winter.—On the occasion of his leaving Llandilo through continued ill-health, after practising there for eleven years, Mr. Rees Morgan, L.R.C.P. Edin., L.F.P.S. Glasg., has been presented by his patients and friends at Llandilo and district with an artistically printed

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address and an oil painting of himself. At the same time Mrs. Morgan was the recipient of a tea service.

BILLINGSGATE AND THE HOSPITALS.—The *City Press* says: "In 1892 Mr. Sol Parker, of Billingsgate Market, founded a fund in connexion with the market for assisting the various hospitals of the metropolis, and the fund is not only still in existence, but is in a flourishing position. The patrons include the alderman of the ward (Sir Reginald Hanson, Bart., M.P.) and Mr. Deputy Sayer. Last year the amount collected was nearly £150, while there were 540 letters distributed. It is proposed this year to make a further step in advance, and to hold some athletic sports in aid of the fund. These will take place on Monday, the 13th inst., at the Memorial Recreation Grounds, Canning Town. The City Band will be in attendance. Miss Gertrude Sayer has kindly consented to distribute the prizes."

THE DAVID LEWIS TRUST.—The two public recreation grounds given by the Lewis trustees, one for Manchester, at Blackley, adjoining Boggart Ho' Clough, and the other for Salford, on the Broughton side of Peel Park, have recently been opened with some ceremony. The Blackley ground, of about nineteen acres, was bought for £8000, and £9000 have been spent in laying it out. A bowling-green, gymnasium, tennis courts, and bandstand have been provided, but the greater portion has been set aside as a playground for children, mainly for cricket and football. The Salford ground is still larger. It was purchased for £10,000 and laid out at a cost of £5500, and the trustees have promised a further sum of £245 for trees and shrubs. Certain parts of the grounds are to be set aside "for the sports of children of both sexes under fourteen years of age." The deed also prohibits "the holding of meetings, demonstrations, gatherings, or services." The somewhat elaborate scheme of the trustees for the amalgamation of St. Mary's Hospital and the Southern Hospital was burdened with conditions that the managers, of St. Mary's Hospital especially, considered too arduous, and it broke down. At the luncheon at the town hall Sir William Houldsworth, M.P., one of the trustees, gave utterance to a significant remark. Speaking of the difficulty of spending money wisely he said: "At one time they had thought of assisting the hospitals of the city in some way or other, and especially the hospitals for women and children. It was generally supposed that no difficulty would be experienced in giving funds to a hospital, but they at any rate had found one." He went on to say that it might turn out a blessing, for "they seemed now to be going on the lines of trying to prevent disease." Presumably therefore the hospitals must not hope for help from the trust, and the danger is once more shown of looking a gift horse in the mouth. It is certain, however, that these gifts are as wise as they are munificent.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BABINGTON, S. N., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

BATTEN, WM. S., M.R.C.S., L.S.A., has been re-appointed Medical Officer for the Second Sanitary District of the Calne Union.

BOWRING, G. B., B.A. Cantab., has been appointed a Clinical Assistant at the Convalescent Home, Cheadle.

COBB, E. H., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

COOPER, H. G., L.R.C.P., M.R.C.S., has been appointed a House Physician to the Manchester Royal Infirmary.

CURLING-HAYWARD, W., M.R.C.S., L.R.C.P., has been appointed House Physician to Charing-cross Hospital.

FACEY, S. H., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Clinical Assistant, vice W. S. Nicholl, resigned.

FAIRBAIRN, J. S., B.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

FRAZER, W. D., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

GILBERT, L., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

GOODE, H. N., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

GREEN, REGINALD, M.D., B.Hy., has been re-appointed Medical Officer of Health and Medical Superintendent to the Fever Hospital for the County Borough of Gateshead.

HALL, J. S., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

HARTLEY, H., M.B., Ch.B. Vict., has been appointed a House Surgeon to the Manchester Royal Infirmary.

HINDLEY, G. D., B.A. Oxon., L.R.C.P., M.R.C.S. has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

HOPKINSON, E., B.A. Oxon., L.R.C.P., M.R.C.S., has been appointed Senior Ophthalmic House Surgeon to St. Thomas's Hospital.

HUNTER, A., M.B., C.M. Aberd., has been appointed Medical Officer of the Aberdeen Dispensary, vice J. A. R. Glennie, resigned.

JONAS, H. C., L.R.C.P., M.R.C.S., has been re-appointed House Physician to St. Thomas's Hospital.

LLOYD, D., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health by the Newcastle Emlyn Rural District Council.

MCCLEAN, J. F., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

MCDOUGALL, ALAN, M.B., B.Ch. Vict., M.R.C.S., has been appointed Resident Medical Officer at the Manchester Royal Infirmary.

MCDOUGALL, W., M.A., M.B., B.C. Camb., has been appointed House Physician to St. Thomas's Hospital.

MARMION, E. J., M.B. Durh., L.F.P.S. Glasg., has been appointed Medical Officer of Health by the Milton Urban District Council.

MARRIAGE, H. J., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

MORGAN, THOS., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer of Health for the Borough of Montgomery.

MORGAN, W. H., M.R.C.S., L.R.C.P., has been appointed House Surgeon to Charing-cross Hospital.

MUIR, J. O., M.B. Cantab., L.R.C.P., M.R.C.S., has been appointed a House Surgeon to the Manchester Royal Infirmary.

MYERS, W., M.A., M.B., B.C. Camb., B.Sc. Lond., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

OSBORN, E. C., L.R.C.P. Lond., has been appointed First Assistant Medical Officer at the Infirmary, Parish of Kensington.

PATERSON, W. H. J., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

PATTERSON, J. H., M.B., C.M. Edin., has been appointed House Surgeon to the Huntingdon County Hospital.

PENFOLD, OLIVER, M.R.C.S., L.S.A., has been appointed Honorary Surgeon to the Bendigo Gold District General Hospital, Bendigo, Victoria, Australia.

REED, J., M.R.C.S., L.S.A., has been appointed a Public Vaccinator for the Ashurst District, New Zealand.

ROUILLARD, J. A. A., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

SANGUINETTI, H. H., B.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

SCOTT, H. HAROLD, M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Surgeon to the Teignmouth Hospital, South Devon.

SELIGMANN, C. G., L.R.C.P., M.R.C.S., has been re-appointed House Physician to St. Thomas's Hospital.

SMITH, ROBT., F.R.C.S. Edin., L.R.C.P., L.R.C.S. Edin., has been appointed Health and Medical Officer to the Police, Gaols, and Paupers, Tasman and Forestier Peninsulas.

STAINER, E., M.A., M.B., B.Ch. Oxon., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

STANFORD, W. B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Workhouse and Infirmary of the parish of St. Mary, Islington, vice C. S. J. Wright, resigned.

STOKER, H., L.K.Q.C.P. Irel., L.R.C.S. Irel., has been appointed Health Officer and Superintendent of the Quarantine Station, Point Nepean, Victoria, Australia, vice S. H. Browning.

SWEET, G. B., M.B., Ch.M. Syd., has been appointed a Public Vaccinator at Whangarei, New Zealand.

TUKE, A. W., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

TURNER, S. D., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

TYRRELL, F. A. C., B.A., M.B., B.C. Camb., L.R.C.P., M.R.C.S., has been appointed Junior Ophthalmic House Surgeon to St. Thomas's Hospital.

WOOLLEY, G. T., M.R.C.S., has been appointed Health Officer for Castlemaine, Victoria, Australia, vice Dr. Reid.

WOOLLISCROFT, W. W., M.R.C.S., L.R.C.P., has been appointed House Surgeon to Charing-cross Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BATH ROYAL UNITED HOSPITAL.—House Surgeon, for one year. Salary £60, with board, lodging, and washing.

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Birmingham.—Assistant House Surgeon. Salary £50 per annum, with apartments and board.

BRISTOL ROYAL INFIRMARY.—Resident Casualty Officer for six months. Board, lodging, and washing provided. Conditional honorarium of £10.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant.

GENERAL HOSPITAL, Birmingham.—Anæsthetist, for one year. Salary £40.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six month. Board, lodging, and washing in the hospital provided.

HOSPITAL FOR WOMEN, Soho-square, London.—Assistant House Physician, non-resident, for three months.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician, House Surgeon, Assistant House Physician, and Assistant House Surgeon. All for six months. Salary of House Physician and House Surgeon each at the rate of £40 a year, and of the Assistant House Physician and Assistant House Surgeon each at the rate of £20 a year.

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ROYAL CORNWALL INFIRMARY, Truro.—House Surgeon, unmarried. Salary, first year, £120, increasing by £10 a year to £150, with furnished apartments, fire, lights, and attendance.

SALOP INFIRMARY, Shrewsbury.—House Surgeon. Salary £100 per annum, with board and residence.

SOUTHPORT INFIRMARY.—Senior House Surgeon. £80, tenable for two years. Junior House and Visiting Surgeon. £30, tenable six months, and renewable. All found.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House Surgeon. Salary £30 per annum, with board, lodging, and washing.

WEST HAM HOSPITAL, Stratford, E.—Junior House Surgeon for one year. Salary £35 per annum, with board, residence, &c.

Births, Marriages, and Deaths.

BIRTHS.

BLAKE.—On Sept. 6th, at Elsinore, Ventnor, Isle of Wight, the wife of Victor John Blake, M.B., B.S. Lond., M.R.C.S. Eng., &c., of a daughter.

BUCHANAN.—On Sept. 4th, at Hammersmith-terrace, W., the wife of G. S. Buchanan, M.D., of a son.

HAWES.—On Sept. 3rd, at Pangbourne, the wife of G. Charles B. Hawes, M.R.C.S., L.R.C.P. Lond., of a son.

RENDALL.—On Aug. 21st, at Aix-les-Bains, France, the wife of Stanley Rendall, M.D., of a daughter.

WREFORD.—On Sept. 1st, at Mount Edgcumbe-gardens, Clapham-road, the wife of S. Wreford, M.R.C.S., of a son.

MARRIAGES.

HADLEY—CHARRINGTON.—On Sept. 1st, at Holmbury St. Mary, near Dorking, Wilfred J. Hadley, M.D., of Harley-street, Cavendish-square, W., to Joanna Margaret, widow of the late Ernest Charrington, of Parkside, Reigate.

HILDIGE—LIDDELL.—On Sept. 4th, at St. Michael's Church, Burleigh-street, Strand, London, Henry Johnson Hildige, L.R.C.P., and L.R.C.S.I., of Brookfield, Pinner, to Mary Evelyn, youngest daughter of William Liddell, J.P., Banogue House, Donacloney, Lurgan, Ireland.

HOUGHTON—LARKIN.—On Sept. 1st, at the Church of the Sacred Heart, Quex-road, Kilburn, Murtaugh James Houghton, M.R.C.S., L.R.C.P., son of the late Matthew Parsons Houghton, of Radford House, Coventry, to Kathleen, daughter of Hugh Larkin, of Kenilworth-road, Brondesbury.

KEELE—ATKINS.—On Sept. 2nd, at the Parish Church, Rocester, David Keele, M.R.C.S., L.R.C.P., son of George Thomas Keele, M.R.C.S., of Highbury, to Jessie Augusta, second daughter of William Atkins, of Rocester, Staffordshire.

MANNING—COLES.—On Sept. 1st, at the Priory Church, Malvern, Thomas Davys Manning, M.B., B.S., of Hoddesdon, Herts, to May, only daughter of the late Colonel C. H. Coles, Bombay Staff Corps (9th Bo. I.).

RUBEL—WYNNIATT.—On Sept. 7th, at the Church of St. Peter and St. Paul, Temple Ewell, near Dover, by the Rev. John Turnbull, M.A., Vicar, assisted by the Rev. S. M. Statham, M.A., John Leopold Rubel, M.R.C.S. and L.R.C.P., only son of J. Rubel, Esq., Wood-lane, Shepherd's-bush, to Maude, elder daughter of the late James John Wynniatt, late 52nd Light Infantry and 10th Royal Hussars.

SKERRETT—KERRY.—On Aug. 31st, at St. Giles's, Camberwell, Frederick Thomas Skerrett, Surgeon-Captain, Army Medical Staff, to Rose Edith, elder daughter of the Rev. F. F. Kelly, LL.M., Vicar of Camberwell.

WATKIN-DAVIES—METHVEN-ROBERTS.—On Sept. 4th, at All Saints', Margaret-street, E. O. Watkin-Davies, B.A., M.B., T.C.D., younger son of the late Rev. D. Watkin-Davies, M.A., Rector of Llanrhyddlad, Anglesey, to Frances Methven, widow of the late R. Methven-Roberts, of Plas yn Green, Denbighshire.

YOUNG—STRANG.—On Sept. 1st, at All Saints Church, Blackheath, by the Rev. Hamilton S. Cobb, M.A., of St. Mark's, Lewisham, assisted by the Rev. W. L. Groves, M.A., Hugh Corbett Taylor Young, M.D., C.M., of Sydney, N.S.W., to Annie Rankin, only surviving daughter of William Strang, of Blackheath, S.E. Australian and New Zealand papers please copy.

DEATHS.

COLLEY.—On Sept. 1st, at Ladismith, Cape Colony, South Africa, Courtenay Rossiter Colley, M.R.C.S., L.R.C.P. Lond., elder son of the late Charles C. Colley, of Carisbrooke, Mount Nod-road, Streatham, aged 27 years.

DALE.—On Sept. 2nd., suddenly, at Nightingale-park-crescent, Wandsworth-common, George Cornelius Dale, M.D., aged 75 years.

FORRESTER.—On July 22nd, at Wycheproof, Victoria, Australia, after a few days' illness, of pneumonia, Robert Alexander Paul Forrester, B.A., Trinity College, Dublin, and M.B., C.M. Edinburgh University, only son of Paul Robert Forrester, late English master, Kilmarnock Academy, and Fellow of the E.I.S. Friends will please accept this intimation.

TURNBULL.—On Sept. 6th, at Tunbridge Wells, James Muter Turnbull, M.D., F.R.C.P., late of Liverpool, Consulting Physician to the Royal Infirmary, aged 79 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Sept. 9th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Sept. 3	29·79	N.W.	...	110	64	50	50	55	Fine
" 4	29·94	W.	0·08	102	59	45	47	52	Fine
" 5	30·07	S.W.	0·42	66	61	52	53	55	Raining:
" 6	29·78	S.W.	...	96	65	54	56	58	Cloudy
" 7	29·98	N.W.	...	90	64	51	53	55	Hazy
" 8	29·94	N.E.	0·17	76	61	52	52	55	Cloudy
" 9	29·95	E.	...	69	58	52	52	54	Overcast

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which was completed with the issue of June 26th, was given in THE LANCET of July 3rd. It is intended, in future, to include the Index and Title-page for each past half-yearly volume in the first number of the succeeding volume, as in the present case, instead of in the last number of the volume itself, as heretofore.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

THE ISOLATION OF ARMY MEDICAL OFFICERS.

"AN OLD SOLDIER" writes to us on the causes of the alleged isolation of army doctors, which he attributes mainly to two causes—namely, their separation from corps and regiments, and their having been constituted into a separate body for one thing, and their desired assumption of purely military titles for another. The writer of this communication expresses himself with no unkindly feeling to medical officers—quite the reverse; but we do not see that any good would arise from the publication of his letter, which does not accurately state the case. It was not in the interest of the medical officers that their regimental connexion was severed, but in the interest of the State and for the efficiency of military service, and the occasion for the present feeling first arose out of the abolition of relative rank.

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A MODIFIED FORM OF BOTTINI'S PROSTATIC CAUTERY.

BOTTINI'S prostatic cautery has an external tube resembling a catheter with a longitudinal opening on the concave aspect of its bend, this opening being made for the reception of a platinum galvano cautery which is capable of being moved along the stem for a short distance. The wires within the tube convey the galvanic current to the cautery, the remainder of the instrument being kept cool when it is in use by means of a stream of water circulating through it. Dr. Albert Freudenberg, of Berlin, after having repeatedly operated with the instrument in its original form, was led to make some modifications in the details of its construction, whereby it seems to be improved without any departure from the general principles followed by the original inventor. The new instrument has a stout cylindrical handle, through which the cooling water circulates, as well as through the stem. The cautery is not made of platinum, but of platinum-iridium, which is harder than the former and requires less current to heat it, as it has a higher electrical resistance; the two conducting wires are replaced by a much stouter wire which is attached to one end of the cautery, the other end of the cautery being riveted to the rigid tube; finally, the new instrument is three inches shorter than the original one, and its connexions with the wires supplying the current are much less likely to be in the way of the operator. The most important advantage, however, which Dr. Freudenberg claims for his instrument is that it is not injured by antiseptic solutions and may be effectually sterilised by boiling. The cautery not being in sight during an operation, there was in the original instrument no means of ascertaining its temperature, and its power of penetrating the tissues could only be estimated from the sensation of resistance communicated to the hand while its position was being gradually altered. To remedy this defect Dr. Freudenberg has added an electrical accumulator provided with an ampère-meter, which enables the operator to read the strength of the current at any time, and thereby gives him an indication of the temperature of the cautery. This accumulator will, of course, serve for most kinds of galvano-cauteries as well as for Bottini's cautery.

Dr. William Roberts.—The degrees mentioned are not registrable in England, and would not, therefore, legalise medical practice here by gentlemen holding them. Our correspondent is advised to write to the Registrar of the General Medical Council, 299, Oxford-street, London, W., for further information.

C. P. (Dalston).—We never recommend individual practitioners. Our correspondent must obtain the information from his own medical man.

"AN URGENT APPEAL."

To the Editors of THE LANCET.

SIRS,—I desire to gratefully acknowledge the enclosed subscriptions on behalf of the widow and eight children of the late Mr. Campe. Again would I earnestly commend this saddest of cases to the generous sympathy of the medical profession.

I am, Sirs, yours faithfully,

36, New-road, Rotherhithe, Sept. 8th, 1897. WM. ASTLEY COOPER.

	£	s.	d.		£	s.	d.
Mr. Terry (Bath)	5	0	0	Mr. C. T. B. Maisey... ...	1	1	0
J. E. J. (an old Guy's man)	0	10	0	Mr. J. Faraker	0	10	6
Dr. Wm. Easby	0	5	0	G. W. D.	0	5	0
Dr. Domett Stone	1	1	0	Mr. Wm. Astley Cooper...		1	0

Mr. A. H. Nicholson.—Application should be made to the Secretary of the Royal Medical Benevolent College, Mr. J. B. Lamb, 37, Soho-square, W.

Mr. William Moor.—We should advise our correspondent to try yet another "orthodox aurist."

A CURIOUS BICYCLE ACCIDENT.

ONE of our cial correspondents at Montreal writes: "At the annual meeting of the Montreal Bicycle Club, held here on Aug. 28th, a remarkable cycling accident happened. It occurred in the first heat of the two-mile tandem race, when, during a spurt in the last lap at the far curve on the south side of the grounds, where the track curves up against the fence surrounding the grounds, the tandem ridden by L. S. Robertson and J. Drury became unmanageable. The machine actually jumped the fence, which is over three feet high, and the pedals of the one ridden by Provencher and Eaves becoming entangled with it their machine followed it. The four men and the two machines disappeared over the fence as if the earth had swallowed them up. Beyond a few bruises to the men and a broken chain on one of the machines no damage was done. Provencher and Eaves were able to ride in the final heat, but Robertson had to go home in a cab. It was a remarkable incident and a wonder that any of the riders escaped without broken bones."

THE CONVEYANCE OF DEAD BODIES ON AMERICAN RAILWAYS.

IN a paper read not long ago on the Relation of Railway Companies to State Boards of Health Dr. G. P. Conn, chief surgeon to the Boston and Maine Railway, stated that a few years ago the National Association of Baggage Agents formulated the following rules, which have been adopted by railroads and State boards of health throughout Pan-America:—

"Rule 1.—The transportation of bodies of persons dead of small-pox, Asiatic cholera, typhus fever, or yellow fever is absolutely forbidden.

"Rule 2.—The bodies of those who have died of diphtheria, anthrax, scarlet fever, puerperal fever, typhoid fever, erysipelas, measles, and other contagious, infectious, or communicable diseases, must be wrapped in a sheet thoroughly saturated with a solution of bichloride of mercury in the proportion of one ounce of the bichloride to a gallon of water, and encased in an air-tight zinc, tin, copper, or lead-lined coffin, or in an air-tight iron casket, hermetically sealed and all enclosed in a strong, tight, wooden box; or the body must be prepared for shipment by being wrapped in a sheet and disinfected by a solution of bichloride of mercury as above, and placed in a strong casket or coffin, and said casket or coffin encased in a hermetically sealed (soldered) zinc, copper, or tin case, and all enclosed in a strong outside wooden box, of material not less than one and one-half inches thick.

"Rule 3.—In cases of a contagious, infectious, or communicable disease the body must not be accompanied by any articles which have been exposed to the infection of the disease. And in addition to a permit from the board of health or proper health authorities station agents will require an affidavit from the shipping undertaker stating how the body has been prepared and the kind of coffin or casket used, which must be in conformity with Rule 2.

"Rule 4.—The bodies of persons dead of diseases that are not contagious, infectious, or communicable may be received for transportation to local points in the same state, when encased in a strong coffin or metallic case and enclosed in a strong wooden box securely fastened so that it may be safely handled. But when it is proposed to transport them out of the state to an interstate point (unless the time required for transportation from the initial point of destination does not exceed eighteen hours), they must be encased in air-tight zinc, tin, copper, or lead-lined coffin, or an air-tight iron casket, or a strong coffin or casket encased in a hermetically sealed (soldered) zinc or tin case, and all enclosed in a strong outside wooden box of material not less than one inch thick. In all cases the box must be provided with four iron chest handles.

"Rule 5.—Every dead body must be accompanied by a person in charge, who must be provided with a ticket marked 'Corpse,' and a transit permit from the Board of Health or proper health authority, giving permission for removal, and showing name of deceased, age, place of death, cause of death (and if a contagious or infectious nature), the point to which it is to be shipped, medical attendant, and name of undertaker."

Rule 6 refers only to the "transit permit."

"Rule 7.—The box containing corpse must be plainly marked with paster, showing name of deceased, place of death, cause of death, and point to which it is to be shipped, number of transit permit issued in connexion, and name of person in charge of the remains.

"Rule 8.—Disinterred bodies, dead of any disease or cause, will not be accepted for transportation unless said removal has been approved by the state board of health, and the consent of the health authority of the locality to which the corpse is consigned has first been obtained, and the disinterred remains, enclosed in a hermetically sealed (soldered) zinc, tin, or copper lined coffin or box, encased in hermetically sealed (soldered) zinc, tin, or copper cases."

Mr. Edward Barker.—We are unable to understand the enclosure, unless the gentleman named is distributing the cards wholesale.

A COMPLAINT.

To the Editors of THE LANCET.

SIRS,—I enclose herewith a cutting from the *Echo* of to-night's issue. The writer describes himself as an aural specialist, and answers correspondence in the columns of the paper. Mr. Passmore Edwards as a philanthropist claims that the profits of his paper are spent in founding hospitals and libraries, &c.; but surely he is inconsistent in making the *Echo* the recognised organ of quacks and faddists and allowing such attacks as the enclosed to be made upon an honourable profession.

I am, Sirs, yours truly,

Sept. 3rd, 1897. LAUNCELOT ARCHER.

*** The cutting referred to is a letter signed "Lennox."—ED. L.

M.R.C.S., L.S.A.—We are obliged to our correspondent for his information, but the matter being still *sub judice* we cannot comment upon it at present.

Surgeon (Liverpool) has omitted to enclose his name and address.

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"URBER" COMBINATION.

THAT suitable and sensible or, as manufacturers prefer to style it, "hygienic" clothing is of the first importance to health is recognised now by all medical men; but in our climate it is sometimes difficult to devise garments adaptable to a rapidly changing environment. For example, at the present time many people want a wrap that will withstand heavy rain, but which will not by its weight retard the easy motion of the body or by its substance prevent free perspiration. Messrs. T. Burberry and Sons, of 30, Haymarket, S.W., have devised a process of treating light materials to meet these requirements. By this process each separate fibre of the materials is "proofed" so that rain stands on it in beads like quicksilver, ready to be shaken off at the first movement, but a certain amount of passage of air between the fibres takes place. It follows that it is possible to force water through the material, though it is impossible to make the cloth soak it up and become sodden, heavy, and not only uncomfortable, but dangerous. The specimen coats sent for our inspection were lined with a light silk lining, "proofed" by the same process as the homespun. We have tested the garments thoroughly and have found them useful under the circumstances indicated, when heavy ulsters or mackintoshes would be burdensome and uncomfortable.

A. F. M.—(1) Yes. (2) It would have to be written for. (3) There is no regular agent we fancy, but probably Messrs. Baillière, Tindall, and Cox would procure it.

"NOTE UPON THE TOXIC EFFECTS OF THE SWEAT OF A HEALTHY MAN."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Sept. 4th appeared a translation from *Comptes Rendus* of a paper by M. S. Arloing on the toxicity of normal human sweat—a subject which has latterly engaged the attention of many continental writers. In the Spanish medical journals numerous contributions appeared. *El Siglo Medico* of Aug. 22nd had a short but excellent annotation on "Human Sweat," in which the following quotation from an old Latin writer appears: "Take the sweat of a horse from between the ribs of the right side, and with this wet the puncture of a lancet; this wound will be mortal. This action has been performed with desired results."

I am, Sirs, yours truly,

Cavendish-row, Dublin, Sept. 4th, 1897. GEORGE FOY.

An Old fashioned Physician has forgotten to enclose his name and address.

G. S. (Guernsey).—We are unable to help our correspondent. He must consult his own medical man.

A DUEL BETWEEN MEDICAL MEN.

AN armed encounter between members of the medical profession at this the close of the nineteenth century was certainly not to be anticipated, but the old saying that it is always the unexpected which arrives has once more been verified. It is only too true that a duel was recently fought at Bonn, the combatants being both medical practitioners, and most unfortunately one of them met with his death from a penetrating wound of the thorax. It seems that two of the assistants at a surgical clinic, named Reusing and Fischer, had a violent altercation over a professional matter, the former accusing his colleague of malpractice in the conduct of an operation, and as apparently there was no older and wiser person at hand to pour oil upon the troubled waters a hostile meeting ensued, with the above-mentioned deplorable result. That duels should still survive on the Continent, especially in military circles, is, perhaps, not to be wondered at under the existing régime, but happily the vast majority of medical men of all nationalities are the possessors of well-balanced minds, and recourse amongst them to the *argumentum baculinum* for the adjustment of technical disputes must be an altogether exceptional occurrence. Complaints are often heard of the overcrowding of the medical profession on the other side of the Channel, but of all depletory methods the slaying of one's *confrère* is surely the least philosophical. A duel at the present day is an anachronism. As a mode of settling scientific controversy it is not only out of date, but also about the most illogical procedure conceivable. Killing an opponent does not prove the survivor's case; while the gratification of an ignoble feeling of personal resentment is dearly purchased at the expense of life-long remorse. The principals in a duel are, of course, blameworthy, but for them there are excuses, seeing that most human beings are more or less passionate by nature. For the seconds, generally speaking, there is absolutely nothing to be said. They are simply the abettors of a crime in which they run no bodily risk, and it is against them that retributive justice should be mainly directed. If seconds would only consider the heinousness of their position there would soon be an end of duelling.

A FRENCH MEDICAL DICTIONARY.

A CORRESPONDENT writes to us in answer to Mr. Hay Forbes's query:—"Mr. Hay Forbes will find the 'Terminologia Medica Polyglotta, edited by Dr. Theodore Maxwell (London: J. & A. Churchill, price 16*s.*), a very useful book for his purpose."

S. F.—The builder ought to pay with many thanks for the prompt attention. Whether the fee can be recovered from him is another matter and depends wholly on the view a county court judge would take of the question of agency—i.e., whether the workman who called our correspondent was or was not the agent of the builder. One judge might think he was such an agent, another might hold a contrary opinion. That the builder ought to pay is certain.

R. M.—Barnard and Stocker, Medical Partnerships, &c. (London: Stevens and Son), price 10*s.* 6*d.*

L.R.C.P., &c.—Our correspondent has not enclosed his name and address.

ERRATA.—In the Student's Number of THE LANCET published on Aug. 21st, page 445, col. 1, line 70, the word "sixth" should be *seventh*. On page 442, col. 1, line 5, "1895" should read *1896*.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (15th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (16th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (17th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (18th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Greenock Telegraph, Cork Examiner, Hereford Journal, Manchester Courier, Whitehaven Free Press, Court Circular, Science Siftings, Blackburn Times, Lincolnshire Echo, Edinburgh Evening Dispatch, North-Eastern Daily Gazette, Scotsman, Norfolk Standard, Times of India, Pioneer Mail, Birmingham Daily Gazette, Glasgow Herald, Sheffield Independent, Darwen Post, Bristol Mercury, Architect, Preston Herald, Bedford Times, Builder, Bradford Argus, Leytonstone Independent, Devon Weekly Times, Sussex Daily News, Keen's Bath Journal, Bolton Chronicle, Liverpool Daily Post, Luton Reporter, Leighton Buzzard Reporter, Tottenham Herald, Yorkshire Post, Leicester Post, Bexhill Chronicle, Cheltenham Mercury, Observer and Chronicle (Bournemouth), Carnarvon Herald, Bridgwater Independent, Walsall Advertiser, Evesham Journal, Surrey Comet, Portsmouth Times, Newcastle Leader, Norwood Review, Dunstable Advertiser, Leeds Mercury, Salisbury Journal, Brighton Gazette, Buxton Herald, Jarrow Express, Banffshire Herald, Bazaar, Sanitary Record, Western Daily Mercury, Mining Journal, Reading Mercury, Hertfordshire Mercury, Public Health, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, City Press, Brixton Free Press, Gazette (Montreal), Local Government Journal, Surrey Advertiser, Eastbourne Gazette, Sussex and County Herald, Daily Telegraph (Launceston), Swindon Advertiser, The Journal (Carmarthen), Evening Star (Ipswich), West Middlesex Herald, Keighley Herald, Sussex Coast Mercury, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Mr. T. Atkinson, Shrewsbury; Messrs. Adrian et Cie., Lond.; Messrs. Arnold and Sons, Lond.; Mr. T. L. Archer, Lond.; Mr. R. B. Anderson, Lond.; Dr. Apostoli, Paris; Ajax, Lond.; Messrs. Armour and Co., Lond.; A., Lond.; Messrs. Armbrecht, Nelson, and Co., Lond.

B.—Dr. W. H. Bishop, Wylam-on-Tyne; Dr. L. Bolton Bangs, New York; Dr. G. S. Buchanan, Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Birmingham General Hospital, House Governor of; Messrs. Burgoyne, Burbidges, and Co., Lond.; Mr. G. H. Broadbent, Manchester; Bristol Royal Infirmary, Secretary of; Mr. W. G. Benge, Sampford Peverill; Dr. E. J. Boyes, Oakland, Cal., U.S.A.; Sir J. C. Browne, Lond.; Mr. E. J. Beards, Birmingham.

C.—Mr. A. H. Cheatle, Lond.; Mrs. A. Chapman, Lond.; Champness, Boscombe; County of London Asylums Committee, Clerk of; Mr. T. Carwardine, Bristol; Country, Lond.; Chelsea Hospital for Women, Secretary of.

D.—Dr. F. W. Dobbin, St. Albans; Messrs. W. Dawson and Sons, Lond.; Messrs. Dale, Reynolds, and Co., Lond.; Mr. C. Day, Lond.

E.—Mr. F. S. Eve, Lond.; Messrs. A. and C. Emanuel, Lond.

F.—Mr. E. Fennan, Bexhill; Major Fernandez, St. Leonards-on-Sea; Mr. J. J. Findlay, Lond.; Mr. P. T. Forrest, Tunbridge Wells; Fromm's Extract Co., Lond.; Dr. A. Forsyth, Bozeat; Fiducia, Lond.; Mr. F. E. Fremantle, Lond.; Dr. Fragoso, Seville.

G.—Dr. L. Grant, Oban, N.B.; Professor Gairdner, Coomrie; Mr. G. Gresswell, Grimsby; Mr. D. Gilbert, Lond.; Messrs. Grimshaw and Baxter, Lond.; Guest Hospital, Dudley; Dr. Dundas Grant, Lond.; G. P., Lond.

H.—Dr. A. Haviland, Lond.; Messrs. Harrison, Ballantyne, and Co., Salford; Messrs. Hughes and Hughes, Flint; Mr. J. Heywood, Manchester; Mr. P. C. Higgins, Lond.; Mr. A. Braxton Hicks, Lond.

I.—Iodine, Lond.; Ipecac, Lond.

J.—Messrs. W. and A. K. Johnston, Edinburgh.

K.—Dr. H. Kenwood, Lond.; Dr. C. S. Kilner, Bury St. Edmunds; Dr. L. Kidd, Lond.; Mr. R. Knight, Moffat.

L.—Mr. L. C. Lane, San Francisco; Dr. W. Lockwood, Halifax; Mr. H. K. Lewis, Lond.; Messrs. Lee and Nightingale, Liverpool; Mr. F. B. Leeder, Leamington.

M.—Mr. T. J. Morrant, Lond.; Dr. J. Miller, Lond.; Messrs. Mayer and Meltzer, Lond.; Dr. W. Moore, Melbourne; Mr. W. F. Meres, Falmouth; Dr. H. Macnaughton-Jones, Lond.; Maltine Manufacturing Co., Lond.

P.—Mr. M. Perceval, Cambridge, N.Z.; Dr. Phillips, East Croydon; Dr. P. H. Pye-Smith, Grasmere; Mr. Young J. Pentland, Edinburgh; Philips, Lond.; Mr. H. J. Pickering, York.

R.—Royal Photographic Society, Lond., Secretary of; Dr. J. Crawford Renton, Glasgow; Mr. G. V. A. Robertson, Scarborough; Dr. W. Roberts, South America; Dr. S. J. Ross, Bedford.

S.—Mr. T. Smith, Lond.; Salop Infirmary, Shrewsbury, Secretary of; Mr. O. Sivewright, Strichen; Dr. Sydenham, Uckfield; Dr. J. A. Shaw-Mackenzie, Lond.; Dr. G. A. Sutherland, Lond.; Messrs. Street and Co., Lond.; Mr. S. Schenkein, Lond.

T.—Mr. Torbett, Bolton; Terrōl Co., Lond.; Mrs. N. Taylor, Lond.; Mr. C. Thompson, Workington; Tempus, Lond.; Mr. P. Turner, Herne Bay.

W.—Mr. H. B. Wilkinson, Harrogate; Mr. F. Wilson, Lond.; Mr. W. M. Wills, Lond.; Messrs. Wm. Wood and Co., New York; Dr. C. Scott Watson, Guildford; Dr. J. W. Washbourn, Lond.; Mr. A. Wilson, Manchester; West Ham Hospital, Stratford, Secretary of; Messrs. Wright, Dain, and Co., Birmingham.

X.—X., Preston.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. E. Allen, Escrick; Messrs. Allen and Hanburys, Lond.; Mr. Allman, Lond.; Apollinaris Co., Lond.; A. B., Lond.; Arithnos, Lond.; Assistant, Lond.

B.—Dr. J. T. Ballantyne, Darwen; Mr. R. C. Brown, Worthing; Dr. A. O. Bobardt, H.M.S. *Dart*, Barrier Reef, N.E. Queensland; Mr. F. Butterfield, Wheatly; Mr. E. H. Barker, Arcachon; Dr. J. S. Beveridge, Milnathort; Mr. W. S. Battis, Resolven; Belford, Lond.; Baxter, Liverpool; Bristol Hospital for Sick Children, Secretary of; Beta, Lond.; Dr. J. Ballantyne, Littleborough.

C.—Mr. J. W. Cocks, Torquay; Messrs. Curling, Wyman, and Co., Lond.; Messrs. A. Cohen and Co., Lond.; County of Lanark, Hamilton, District Treasurer of; Cyclops, Lond.; Chronos, Lond.; Cœlebs, Lond.; Combination, Lond.; Cyclist, Lond.

D.—Dr. A. S. Dick, Lond.; Doctor, Bootle; Dr. J. W. Davies, Ebbw Vale; Doctor, Wood Green; Devon, Lond.; Duo, Lond.; Duodecim, Lond.

E.—Mr. C. H. Evers, Newbiggin-by-the-Sea; Dr. H. Eyres, Low Fell; East Suffolk Hospital, Ipswich, Secretary of; E. N., West Worthing; E. G. F., Lond.

F.—Mr. G. M. Frean, Babbacombe; Mr. P. V. Fry, Farnworth; F. J., Lond.; Messrs. J. S. Fry and Sons, Bristol; Fax, Lond.; Dr. Fraser, Longsight; Mr. E. Fryer, Lond.; Dr. Forsyth, Eyemouth.

G.—Mr. A. W. German, Leyland; Messrs. Gibbs, Cuxson, and Co., Wednesbury; Golf, Lond.; Messrs. Gilyard Bros., Bradford; G. M. H., Lond.; Mr. W. E. Good, Dorchester.

H.—Dr. E. Hutchinson, Bridlington; Colonel Hopkinson, Harrogate; Mr. G. Hermanni, Lond.; Mr. L. de C. Harston, Pirbright; Dr. T. F. Hale, Barrow Hill.

I.—Ickringill's Patent Hygienic and Elastic Cloth Syndicate, Keighley, Secretary of; Iota, Lond.; Index, Liverpool.

K.—Dr. L. Kidd, Enniskillen; Kingston (Ontario) Post Office, Postmaster of; Kappa, Lond.

L.—Mr. J. A. Lillington, Winfrith; Locum, Staple Hill; L. C., Lond.; L. D., Lond.; Libertas, Lond.; Mr. J. L. Lawry, St. Mellion; Locum Tenens, Leeds.

M.—Dr. J. More, Kettering; Dr. H. C. Marr, Lenzie; Male Nurses' (Temperance) Coöperation, Lond., Secretary of; Meadow Sweet Cheese Co., Birmingham; Miss Mesnard, Sunderland; Mr. J. Maxwell, Tunbridge Wells; Mot, Lond.; M.D., Openshaw; Medicus, Blackburn; Medicus, Lond.; M.D., Croydon; Dr. A. Mackay, Crook; Masonic, Lond.; Medicus, Clapham.

N.—Mrs. C. Neame, Faversham; Nauheim, Lond.; Norfolk, Lond.

O.—Dr. Oliphant, Blackwell; Otto, Lond.; Mr. D. J. O'Brien, Northampton.

P.—Mr. W. C. C. Perrott, Braintree; Peritus, Lond.; Practitioner, Lond.; Dr. A. Packman, Rochester; P. L. B., Lond.

R.—Mr. E. Roberts, Llanddeusant; Mr. H. B. Roberts, Ludlow; Royal Cornwall Infirmary, Truro, Secretary of; Rest, Ilfracombe; Mr. J. L. Rubel, Dover; R. R., Lond.

S.—Mr. R. M. Smyth, Lond.; Mr. C. E. Stanger, Yeovil; Scalpel, Lond.; Swiss Cottage, Lond.; Surrey Surgeon, Lond.; Mr. J. Schofield, Liverpool; Suture, Lond.; Spes Sibi Quisque, Lond.; Southport Infirmary, Secretary of; Dr. J. Stewart, Batley; Spes, Lond.; Stratford, Lond.; Statim, Lond.; Scotia, Lond.; Mr. J. Spencer, Hetton; Scapula, West Brighton; Staffs General Infirmary, House Surgeon of; Mr. P. W. Shepherd, Leeds; Dr. E. W. Skinner, Sussex.

T.—Tamar Indien Grillon, Lond.; Dr. J. C. Taylor, Grouville, Jersey; Mr. J. Thin, Edinburgh.

U.—Dr. A. S. Underhill, Tipton.

V.—Mr. D. Vyhan, Clonakilty; Vectis, Lond.; Village, Lond.; Vesper, Lond.; Vadis, Lond.; Verax, Lond.

W.—Mr. C. O. Wynne, Llanrwst; Mr. D. O. Williams, Pontypridd; Messrs. J. E. Wheatley and Co., Huddersfield; Weston-super-Mare Hospital, Secretary of; Mr. B. Wheeler, Manchester; W. H. H., Lond.; Mr. G. B. White, Enniskillen; Messrs. M. and C. West, Lond.

X.—Xenophon, Lond.; X. Y. Z., Lond.; X., Lond.; X. Y. Z., Liverpool.

Y.—Mr. D. H. Young, Midsomer Norton; Yorkshire, Lond.

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The Action and Uses of some New Medicinal Agents.

ANTIPYRIN.

(PHENYL-DIMETHYL-PYRAZOLONE.)

THE question regarding the importance of the therapeutic action of antipyrin and other drugs allied to it in action and in structure was referred last year to the Therapeutic Committee of the British Medical Association. The report indicated that a large amount of practical experience had been obtained concerning the nature and action of antipyrin and its harmlessness when administered with due regard to suitability of dosage and case. Upon its first introduction it was mostly used as an antipyretic, but a consensus of later opinion showed unmistakably that its principal therapeutic value lay in its effects as a minimiser or remover of pain.

While the information which the committee obtained regarding the nature of any ill effects of this drug was of the greatest theoretical importance, the practical objections to its use were of slight moment, being due principally to an excessive physiological action of the drug probably induced by errors in its administration.

Antipyrin is a drug capable of relieving intense neuralgic pains of functional origin with a completeness which demonstrates that it possesses a very powerful action on the nervous system and through that on the metabolic processes of the body. As an analgesic it is especially active in relieving those pains occurring in paroxysms or which are caused by nerve storms. It proves an active analgesic when pain is due to alterations in the posterior column of the spinal cord, as in the severe lightning pains of locomotor ataxia. It is not accurately ascertained how this action comes about, but it has been supposed that Antipyrin acts by distributing sensory impulses over a greater number of brain cells, so that the initial impulse which gives rise to the pain is, as it were, modified by being spread over a larger receptive area, and is thus diminished or even lost.

Other pains of a spasmodic character—such, for instance, as in sciatica, migraine, colic, and some forms of dysmenorrhœa characterised by spasmodic paroxysms of pain—are greatly ameliorated by the action of this drug.

Another group of diseases which comes under its influence includes those which are dependent upon nervous irritation or excessive excitability of the motor nerve centres, such, for instance, as croup, chorea, and whooping-cough, in all of which antipyrin has a sedative action on the irritable nerve cells. In combination with the bromides its effect is said to be enhanced in such disorders as enuresis. Other nervous disorders of the bladder also have been treated successfully with antipyrin.

As a febrifuge, antipyrin reduces febrile temperature with great rapidity when it is not due to inflammatory processes. It dilates peripheral cutaneous vessels, and thus increases radiation. It also lessens the production of heat, and further diminishes temperature by allowing radiation and by the evaporation of the perspiration which it produces on the skin. It does not, however, act powerfully as a sudorific, but slightly increases the blood pressure. The temperature will remain reduced under the action of antipyrin for from one to twenty hours. Any subsequent recrudescence of fever is not accompanied by marked rigor. It is therefore of great value in many of the specific fevers, especially in typhoid and phthisis, but it has also a powerful effect in reducing the temperature in erysipelas, surgical fever, and in many cases of pneumonia.

Antipyrin has been used also as a hæmostatic in a 4 to 5 per cent. aqueous solution. It can be injected subcutaneously in half its weight of water, and seems to have a special action on the fifth nerve in severe facial neuralgia. It gives a deep red colour with a solution of perchloride of iron, is incompatible with spiritus ætheris nitrosi or nitrites, with which it forms an inert bluish green compound. It is also incompatible with quinine, and liquefies with butyl-chloral-hydrate, salicylate of sodium, and β naphthol.

"Tabloid" Antipyrin is supplied in two strengths—2½ grain, sugar-coated, supplied to the medical profession in bottles of 24 and 100, at 8d. and 2s. 1d., and 5-grain in bottles of 25 and 100, at 1s. 1d. and 3s. 11d. per bottle.

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Since it was originally discovered by Dr. Ross this drug has been tried with much success as an anti-neuralgic and anti-rheumatic, and found effective when other agents have failed. Recent testimony proves undoubtedly that Agathin may be administered with advantage in obstinate cases of sciatica that have resisted other treatment, the pain being speedily and permanently removed. In both articular and muscular rheumatism, also, Agathin has been prescribed with very satisfactory results when salicin, salicylates, sulphur, and the usual run of remedies produced little or no effect. "Tabloid" Agathin, 4 grains, preserves the full efficacy of the drug, two thrice daily being a fair average daily dose for adults. Supplied in ½-oz. and 1-oz. tins at 9s. 3d. per oz.; also "Tabloid," 4-gr., in bottles of 24 and 100, at 2s. 8d. and 10s. per bottle.

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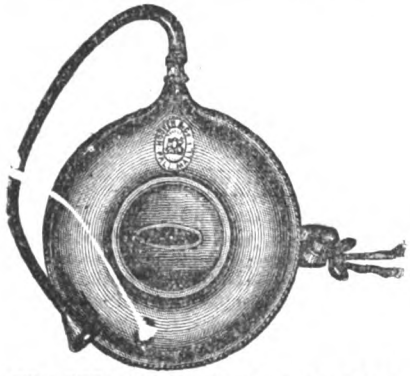


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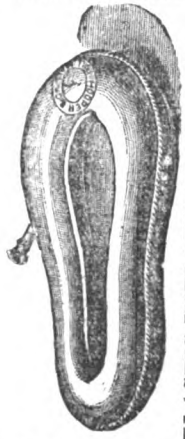
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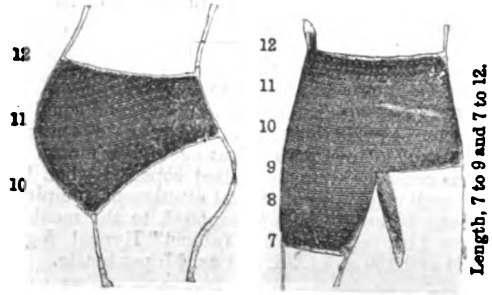
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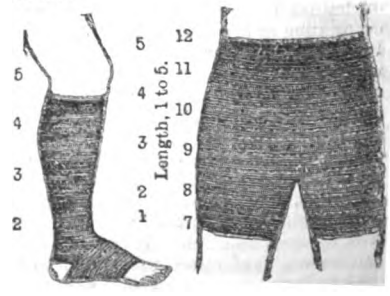
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ABSTRACT OF THE

Inaugural Address

Delivered at the Sixteenth Congress of the Sanitary Institute at Leeds on Sept. 14th,

BY ROBERT FARQUHARSON, M.D. EDIN., LL.D. ABERD., F.R.C.P. LOND., M.P.

GENTLEMEN,—My feelings on rising to address you this afternoon are somewhat mixed, and I venture, although not very confidently, to hope that I may be able to use this platform as an authoritative tribune from which to speak words which may be suggestive if not weighty. Such an opportunity probably only occurs once in a lifetime, and it may well be a subject for anxious reflection how best to use, without abusing, the indulgence of the influential audience I see before me. But other considerations have urgently claimed my attention since Sir Douglas Galton first whispered into my ear the tempting offer of this presidential chair, and as this day drew nearer they also came nearer to my mind.

The responsibility of an introductory orator on such an occasion as this is much increased by the fact that hygiene has now become fashionable, and that most people nowadays know at all events the elementary principles on which it works. All great subjects like this, and more especially those which involve some dislocation of antiquarian superstition and domestic prejudice, must pass through a variety of stages or cycles, and varying waves of interest beat on the mental shore.

First, we have the stage of ridicule, a difficult one to get over, but which we have at last successfully surmounted. Next we find that when the general public recognise that we are in earnest the stage of active opposition sets in, and vested interests and pig-headed ignorance, and the self-complacent argument of "why not let it alone," are marshalled in warlike array against the new broom which tries to sweep the Augean stable clean. But we have now nearly outlived all this; ventilators are no longer stuffed up, the working classes, no less than their employers, are beginning to be connoisseurs in the quality of their atmospheric conditions, enjoy a good wash as much as a university graduate, and are fully prepared to appreciate the advantages of hygienic house accommodation at other people's expense. Associations like our own, and the National Health Society, and the St. John Ambulance Association, and able and zealous missionaries, have not spoken and written in vain, and now we live in an age of sanitary progress, where the little knowledge, which is safe not dangerous, persuades its possessor of its scanty amount, and tells him where to go to make good his deficiencies. For instance, no properly instructed person in these enlightened days would take a house without a thorough inspection of, and report on, its sanitary arrangements; water analysis and food analysis keep us fairly free from adulteration, and most of us know pretty well, or at all events know how to get the information, as to the amount of help given us by the law in keeping our health fairly sound. For the conclusion is inevitable that the race is to the swift and the battle to the strong, and that unless we are well equipped physically for the contest we will be outpaced and shoved aside, and laid on the shelf. The well-worn quotation from Herbert Spencer sums up the whole case: "The first requisite of life is to be a good animal, and to be a nation of good animals is the first condition of national prosperity."

[Dr. Farquharson here regretted the monotony of modern labour, which, he suggested, is largely due to the minute subdivision of employments. He then made some reference to recent advances in physiological knowledge and continued:]

Some will probably ask this question: "It is all very fine talking about fashion and popularity and progress; can you show any tangible results? Is the human race any longer lived, or better, or happier at present than in the good old days of pre-hygiene?" Now if any lingering shade of romantic leaning towards the life conditions of mediæval or post-mediæval England still haunts your mind, you may lay the ghost by diligent perusal of Simon's "English Sanitary Institutions" and the "Health of Nations," in which the work of Edwin Chadwick is reviewed by Richardson—that bright and kindred spirit; and I guarantee that even if imagination still gilds the remote history of the past you will thank your stars that your lines have been cast in the cleaner and pleasanter places of the Victorian era. There is no doubt that the average sum of life has been sensibly prolonged. During the last quarter of a century the death-rate has been reduced from about 22 to 18 per annum, and whilst I give you sanitarians your full meed of praise for having, by your excellent work, abolished some diseases and lessened the incidence of others, we medical men intend to claim some credit too. We diagnose disease earlier and treat it far better, making much less demands on the constitutional vigour of our patients, and keeping in mind the good old principle that prevention is better than cure. For the future let Professor Matthew Hay, of Aberdeen, speak. He writes to me: "Progress of the death-rate downwards must in the future be less than in the past. A death-rate of 10 per 1000 would mean that everybody born lived to 100 years or an average of that. Probably it will be found that the mutual elements of decay in men, as in all living things, which make eventually for death, independently of environment, will not permit of a lower general death-rate than about 14 to 15 even under the most favourable hygienic conditions reasonably attainable. So that by the time we have gone as far in reducing the death-rate as we have come in the past quarter of a century we shall have reached the ultimate minimum, but it will certainly not be in another quarter of a century." More evidence can be found in the Reports of the Local Government Board, where, under the skilful guidance of Sir John Simon and Sir George Buchanan and Sir Richard Thorne Thorne, some of the most acute minds in England have been unravelling abstruse sanitary problems and tracking out from clues invisible to the ordinary eye sanitary defects which were poisoning districts and destroying human life. But these are scattered and not always accessible, and I strongly commend to your attention two capital little books which strike the nail very directly on the head. The first of these is by your respected townsman, Mr. Pridgin Teale, who, in the intervals of a brilliant and successful surgical career, has found time to preach the doctrine that a nation's health is a nation's wealth, and to furnish a series of object lessons of the most clear and practical if alarming kind. The second is by our esteemed friend and associate, Professor Corfield, one of the pioneers of sanitary progress, and it is called "Disease and Defective House Sanitation." It consists of two short lectures, but it is crammed with suggestive matter, and he enumerates the following diseases as directly caused by the defects included in his title—sore throats, diphtheria, scarlet fever, blood poisoning, puerperel fever, pneumonia, diarrhœa, enteric fever, and general malaise. All these have resulted from badly-connected ventilating pipes, badly-trapped waste pipes, defective drains, split soil pipes, foul pan water closets, and very frequently from escapes of gas, a cause more especially of sore throats, new to me, I must confess. May I give you one other illustration? I think it was in 1884 or 1885 that serious complaints began to be made about the drainage and ventilation of the House of Commons. A committee was appointed under the presidency of Sir Henry Roscoe to examine the whole question, and we had to tell the legislators on the basis of a very important investigation by the late Professor Carnelley, that they were actually breathing sewer gas, and that the sooner they put their house in order the better for themselves and the country. So £10,000 were voted *nem. con.*, Shone's ejector cut us off from the main sewer, and I make so bold as to claim for this sanitary operation national importance in improving the health and temper of our senators and enhancing the quality of their work.

The benefits conferred by modern civilisation are, however, accompanied by some drawbacks. In the seventeenth century the death-rate was said to be 7 per cent.; it is now about 18 per 1000, the advantage being mainly between the ages of five and thirty-five, and our chances of reaching this maximum period of longevity are distinctly increased. The majority of us, however, are older than that, and we want to know what is to become of us, and vital statistics do not give us much comfort, for after middle life, when we stand on the tableland and look over the edge, before stepping downhill, we do not live longer and we break down sooner. Why is this? One evil of civilisation is the tendency to crowd into big towns, where houses are dear and often bad, the air is usually poisoned with smoke, and, as Dr. Poore has well shown in his most interesting work on Rural Hygiene,

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there are serious dangers connected with defects in our complicated arrangements for drainage and sewage disposal. This is depressing, but it has its bright side. No doubt it is dangerous to be placed within easy reach of receptacles of foul air and sewer gas, as we all are, and necessarily must be, under the system of water-borne sewage common to our great towns; but the greater the risk the greater should be the care exerted to keep it off. It would be a good thing if workmen, and more especially those who manufacture the complicated structures which modern hygiene requires, should not only feel but carry into practice the full sense of responsibility resting on them in connexion with their trade; and that they should be taught how a bit of scamped work—a leaking cesspool, or a badly placed or constructed drain, or a badly-socketed soil-pipe, or any derangement in the mechanical contrivances designed to keep out the sewer gas which is always trying to force its way in—may destroy human life just as effectually as poison or the knife. This is why I have persistently supported the Plumbers' Registration Bill in and out of Parliament, being convinced, as I am, that without establishing a monopoly, or doing any real harm to any vested interest, the establishment of a defined curriculum, followed by registration and examination, will raise the status and character of the workman, and by increasing his sense of responsibility and his interest in his work will not only confer benefits on him, but also on those by whom he is employed.

The next point I wish to refer to is the curious way in which, when we have abolished one set of diseases, another band of successors sometimes springs up hydra-headed to plague poor humanity. I suppose it must be so, for we poor mortals have not put on immortality, but must shuffle off our mortal coils, in some swift or lingering way, so that if we are prevented from dying from one disease we must of sad necessity die from another, and diminution of one death-rate involves increase somewhere else. Enteric fever remains pretty stationary in the last ten years, but a drop from 309 in 1876 to 175 in 1895 does credit to our sanitary administration, and phthisis has gone down from 26,443 in 1876 to 22,775 in 1894. Small-pox has taken a satisfactory dip downward from 2405 in 1876 to 33 in 1895. Measles, scarlet fever, and whooping cough have killed fewer than formerly, but, *per contra*, diphtheria has largely increased, and that is no doubt due, as Sir R. Thorne Thorne says in a private communication which I have received from him, "to the ever-growing facilities for personal infection, and other similar points have followed on the success in herding our child population into elementary schools at the very age at which they are most susceptible to this disease." Other diseases have also increased, and the point I wish to make is this, that they are mostly diseases connected with the nervous system, and that Crichton Browne was probably right in his opinion that not merely the nervous temperament, but the neurotic diathesis is on the increase among us. To begin with, it is a mournful but I fear an undoubted fact that more people go mad than formerly. I have not by me any statistics to prove this beyond the report of the Registrar-General for 1895, but there I find under the heading of insanity and general paralysis—a disease which was seldom heard of in former years—3620 deaths in 1895, against 933 in 1876.

Angina pectoris, a typically neurotic disorder, has increased within the same period from 397 to 696; valvular disease of the heart, which has some practical sympathy with the neurotic diathesis, has gone up from 274 to 10,072; whilst Bright's disease, the frequent causation of which by sudden mental shock has been demonstrated by Clifford Albutt, shows an alarming rate of increase from 4100 to 8351. Cancer has nearly doubled since 1876, and diabetes reached its highest point in 1895, accounting for 2265 deaths over 910 in 1876, whilst most of us know only too well the firm grip taken by influenza on the British constitution, and the way in which in more recent years it has attacked the nervous system. There seems no doubt, therefore, about the fact that we are now in the midst of a neurotic age, and, moreover, an age which is essentially anæmic. How many young girls in any rank of life escape passing through a bloodless stage, which suggests a strike or a lock-out among their red corpuscles, and a consequent stagnation of their vital processes?

Let us take another glance at the Registrar-General's report, where we will see that deaths from anæmia, chlorosis, and leucocythæmia have advanced from 576 in 1876 to 1883 in 1895, and this, together with a glance at the cheeks of the rising generation, must convince you that this increase of pallor is only too real.

[Dr. Farquharson here remarked that he wished to say a word in favour of sexual selection, commending the Vicar of Wakefield for choosing his wife as she chose her wedding-dress—"on account of her wearing qualities." With respect to vaccination, he suggested that the age should be raised so as to avoid the teething and eruptive periods, and that every infant should have four good marks, the operator being preferably a public vaccinator. He then referred to school life and house accommodation, and concluded as follows:]

Each of us is individually responsible to ourselves and to others for our scheme of sanitation, and then we pass into the hands of local authorities, who are doing good work, who generally give you value for your money, and whose beneficial operations I hope you duly appreciate. But over them stands the House of Commons, and I am glad of this opportunity of saying that I have a very poor opinion of that legislative assembly in its dealings with public health. Both sides are bad, but that to which I belong is, I think, the worst, for suspicion of scientific methods and of progressive sanitation is deep-rooted in certain Radical quarters, and abstract views of personal liberty and distrust of the so-called tyranny of medical men sway a kind of plausible sentiment which is usually irresistible in its paralysing effects on hygienic legislation. As a Member lately remarked with refreshing frankness when we were considering the Public Health (Scotland) Bill, "When I see the doctors on both sides of the House my instinct tells me that something is wrong and I will vote against the amendment." Under such conditions the private Member can do nothing, beyond being usefully employed in stimulating public opinion in and outside the House, until particular problems reach the acute stage and are taken under Government protection. In conclusion, let me reiterate the strong wish I have already publicly expressed in favour of a Ministry of Health, a department of the State which would collect into one harmonious whole the scattered threads of sanitary legislation, which would focus all health questions, and admission to which would be an object of honourable ambition to the best scientific talent of the day.

ABSTRACT OF A

Post-Graduate Address

ON

THE MEDICAL ASPECTS OF APPENDICITIS.

Delivered at the West London Hospital on Feb. 3rd, 1897.

BY DONALD W. C. HOOD, M.D. CANTAB., F.R.C.P. LOND.,

SENIOR PHYSICIAN TO THE WEST LONDON HOSPITAL.

GENTLEMEN,—That form of local peritonitis so frequently met with in the right iliac fossa and known under the various names, typhlitis, perityphlitis, or appendicitis, presents numerous features of interest both to the physician and the surgeon. I have thought that it might be useful on the present occasion to discuss the disease from its medical aspects alone, for while fully acknowledging the brilliant achievements of surgery in connexion with abdominal diseases, I have no hesitation in affirming that we are in danger of looking upon the treatment of appendicitis from a too exclusive point of view, and I fear that many, by forgetfulness of the good results which follow a purely medical course of treatment, lose the valuable opportunities which only come to those who see the disease at the earliest onset.

In considering the diagnosis of appendicitis we must first glance at the forms or varieties under which the disease is met with, and we must consider briefly those affections with which it is liable to be confounded. We meet with appendicitis in one of two principal forms—namely, (1) an acute

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peritonitis due to sudden perforation of the appendix, and (2) localised inflammation in connexion with the cæcum or appendix.

The first variety is happily rare, and I believe is in many cases akin to that form of perforation met with in gastric ulcer and latent typhoid fever. During twenty-five years' fairly active work I have never met with such a case either in private or hospital practice, and I doubt whether such perforation ever occurs without some premonitory symptoms. These cases are usually met with in the post-mortem room, and they may come there without a correct diagnosis, but this scarcely proves that symptoms were entirely absent. Some individuals, however, have an exceptional power of withstanding the constitutional disturbances of severe diseases, this tolerance of disease being especially marked in latent typhoid fever, and in acute perforating gastric ulcer. Hence it is possible for perforation of the appendix to take place even where those symptoms which we consider to be pathognomonic of the condition are latent, if not entirely absent. The following case proved to me that well-marked objective symptoms may be present without producing much constitutional distress. A medical friend called upon me one afternoon, stating that he had not been feeling well for some days, and I was surprised to find the iliac fossa occupied by a large tumour. Within a few hours of seeing me he was examined by a surgeon, who subsequently informed me that he looked upon the tumour as being malignant. However, a few days' rest in bed and opium as a remedy restored my friend to perfect health, and there has been no recurrence of abdominal trouble.

The second or more ordinary form of appendicitis can be subdivided into many clinical states, but I doubt if we gain much by such subdivision. We have clinically to consider two main conditions of localised inflammatory mischief within the right iliac fossa, one with tumour and one without. In other words, the inflammatory mischief may be circumscribed or more diffuse. The first and by far more usual condition can only be overlooked or misinterpreted through carelessness or ignorance; the other form, however, is much less common, and the symptoms are frequently liable to misinterpretation. A good instance of this variety came under my notice last year. The patient had gone to church on a Sunday feeling well; after the service she felt poorly, and it was thought that she had been chilled, the wind having been specially keen and penetrating. That night she was seized with sharp abdominal discomfort and diarrhœa, which continued during the following day, the temperature running up to 101° F. She was given a "dose," but the pain, pyrexia, and diarrhœa continued for the next four days. It was on the evening of the fourth day, that I first saw the patient. She looked very ill, had a small, rapid pulse, raised temperature, dry red tongue, and frequent diarrhœa. The abdomen was flat, and there were no rose spots. Extreme pain was felt on making light pressure on the right iliac area. No tumour could be detected. It appeared to me that the balance of clinical evidence was in favour of the attack being due to local trouble rather than to specific fever. The following day a pultaceous blood-stained stool was passed. The patient was still in a very critical state. The diarrhœa had ceased, there was pain in the iliac fossa, but no tumour or thickening. The next morning on making careful pressure over this area there was decided resistance, giving the sensation of infiltrated tissue. The condition of the patient then improved, and she made a complete recovery, but from first to last there was no decided tumefaction of the part.

The ordinary form of appendicitis as met with in hospital patients is unattended with much difficulty as regards diagnosis, because the disease is well developed and past the primary stage of initial onset, but with private patients the case is different, and more often than not we have the opportunity of investigating the symptoms of the attack within a few hours of their commencement.

The first symptom is pain, which may vary in amount from extreme pain, almost agony, to mere abdominal discomfort. As far as my experience serves me, commencing appendicitis is invariably attended with some rise of temperature. In the larger proportion of simple abdominal ailments attended by pain there is no rise of temperature; but abdominal discomfort with diarrhœa and raised temperature has been far from unusual with certain forms of influenza, and this fact must be kept in view. If, then, in any patient who complains of aching in the abdomen we find a raised temperature, it is necessary to carefully examine the part. This cannot be properly done unless the patient is undressed and lying down. Even in the earliest stages inspection will often give us assistance; aided by good light you will at once be struck by the absence of movement over the affected area. The portion of the abdominal parietes lying between the ribs and the pelvic crest moves but little if at all during respiration. This want of muscular action is far more evident later, but it will be present at first in some degree. I have often been able to demonstrate the absence of movement when not easily detected by the eye by placing on the part a long lever such as a stethoscope. In the first few hours of illness pain, with even but a slight rise of temperature, should be sufficient to place us on our guard, and when, after baring the abdomen, immobility of the part is seen, it is almost pathognomonic of the specific nature of the attack, and scarcely renders necessary the putting to proof the presence of the fourth symptom—tenderness on palpation. In recent years much stress has been laid upon the limitation of pain to one spot, the so-called "McBurney's point," but I prefer to trust to the general conditions rather than to any one limited point of more decided pain than another. Far more help will be given by placing the palm of a warm hand upon the abdomen. Gentle pressure over the iliac fossa will in ninety-nine cases out of a hundred give all the information required, and will be far less likely to lead to error than if the tips of the fingers are pressed into a part which is even in many normal individuals exceedingly sensitive. As time measured by hours passes on we shall find evidence of resistance, thickening of deep parts, and finally tumour, which may in some cases encroach largely upon the abdominal cavity. The whole abdomen may become swollen and tender. The early stage of fever plus abdominal tenderness is well shown in the following case. A girl, aged nine years, had suffered from a sharp attack of appendicitis in December, 1881. On Jan. 15th, 1882, her nurse found her crying in bed and complaining of stomach ache. The child had gone to bed apparently in perfect health and had completely recovered from a previous attack. When seen by me within an hour of the first complaint I found tenderness of the iliac fossa and a temperature of 100° F. The attack was a severe one, the temperature fluctuating between 101° and 103° for eight days. The bowels acted on the ninth day. The patient made a perfect recovery and since the illness has had no return of abdominal trouble.

In addition to the four cardinal symptoms of appendicitis, the pain, fever, local tenderness, and immobility of abdominal walls, there are other symptoms which attend the progress of the attack, the most common being vomiting. I find that in 308 cases this symptom was specially noted in 208 patients. It is a symptom which forebodes neither good nor evil. Appendicitis may be complicated by either constipation or diarrhœa; the former occurred in 145 patients out of 308, the latter (diarrhœa) in 58 patients out of the same number. The presence of diarrhœa in the early stage frequently leads to an erroneous diagnosis, so that it is well to bear in mind this not unusual state of bowel. Of the 58 cases in which looseness of bowel was present, 43 made good uncomplicated recoveries and 3 recovered with abscess. Nine patients died; of these 2 succumbed to general peritonitis and 7 suffered from abscesses.

Some writers make a distinction between those attacks of local peritonitis which are accompanied by exudation of coagulable material but in which the symptoms pass away with more or less rapidity, and that class of cases where the inflammatory mischief leads up to the formation of pus. Clinically I believe it to be absolutely impossible to distinguish between these two classes of case in their earlier stages, and I think it is equally impossible to say whether or not they have the same pathological cause. On this point our hospital cases afford us but little assistance. These patients being admitted at every stage of their illness, any mortality-rate obtained from a series of cases is grossly misleading as to the direct effect of treatment. Dr. Eyre has very kindly and with great care and labour examined the medical records of Guy's Hospital between the years 1867–1895, and has tabulated for me all the cases of appendicitis admitted as such during that period. Thus among 308 cases admitted during twenty-nine years fifty-five patients died. But when these individual cases were examined we found that in a large proportion the patient died within a few hours of admission, and many were admitted after the formation of an abscess. Such statistics

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are of almost no value as indicating the efficacy or the disadvantages of any line of active treatment.

My experience of surgery in connexion with appendicitis is *nil*; every case that has come under my care has hitherto made a complete recovery, with the solitary exception of a man admitted into the North West London Hospital some years ago suffering from a second attack. He was admitted with symptoms of general peritonitis and an operation was not considered advisable. He had apparently quite recovered from the primary attack. The treatment adopted before admission had been that of purging.

The onset of the affection varies much—it may be acutely sudden or creep insidiously on for several days. The following history is of value as it comes from the hand of a medical man who placed himself under my care in May, 1894. The patient stated: "On getting into bed I was suddenly seized with shivering and vomiting; my temperature was 100 6° F. The abdomen generally was tender. I passed a very restless night, nausea and retching being continuous. Abdominal pain was acute, but so far not localised. The temperature was 101°. During the day symptoms were much the same. During the second night the pain became localised in the right iliac fossa and the diagnosis was clear." I saw the patient on the third day of illness. The right iliac fossa was occupied by a large tender tumour. The case did well, the bowels being relieved on the tenth day. There has been no return of the inflammatory mischief.

The symptoms may begin in a most indefinite manner and run a very slow course, in such cases being mostly gastric in character and liable to be treated as such.

[Dr. Hood here gave clinical descriptions of several other cases. He also quoted from Dr. Hawkins's monograph on Diseases of the Vermiform Appendix, and remarked that peritonitis occurring in connexion with the uterine appendages may sometimes create difficulties in the diagnosis. He continued:]

In the course of the last fifty years the treatment of these local inflammations occurring within the abdomen has passed through three stages. During the first period the main treatment was that of opium combined with calomel. Gradually the calomel was omitted from the prescription and treatment remained with opium alone. During later years opium with many has been dreaded, and early operation has taken its place. For my own part I attach the utmost importance to the making of an early diagnosis and to the early use of opium; I scrupulously avoid all aperient remedies.

The cases which have been under my own care include twelve private patients and twenty-three in hospital, all of whom, with the one exception above alluded to, made a good recovery, and in no instance was there suppuration. The cases seen in private have remained under observation and have been free from any form of abdominal discomfort. Hospital cases do not afford evidence of the good results which follow a simple medical treatment, in consequence of the fact that a large proportion of them do not apply until long after the commencement of their symptoms. My patients, on the contrary, with scarcely an exception, came under treatment at a very early stage of illness, and are of value as showing the results of a purely medical treatment. Practically a relapse is not of dangerous omen. Among my private cases in which the subsequent history has been known to me there were three instances of relapse. One was a child who sixteen years ago had two attacks within the same year and has had no return. The second was a man who suffered from a very severe form in 1879 and in 1881 had another, but since that date has had no return or any form of abdominal discomfort. The third was a young man who during 1888–9 had five attacks, in 1890 passed through typhoid fever and since the last attack of appendicitis has had no trouble of any kind referable to the abdomen. These cases were all treated with opium. The patient should be confined to bed and kept absolutely to slop diet—in fact, treated on the same lines as if suffering from typhoid fever. He should have hot applications to the abdomen, and from first to last should be rigorously kept from any form of aperient remedy. I have never seen any harm ensue from the bowels being confined for from seven to double that number of days. My plan has been to wait till the fall of temperature and then when scybalous masses are to be felt in the left iliac fossa to give a simple soap-and-water enema. Opium should be given from the first moment that diagnosis is possible. I prefer to administer it either in its solid form or as Dover's powder, the amount varying with the exigencies of the case, and I think that one is more likely to err from giving too little than from giving too much. In an ordinary case I give half a grain every four or six hours, and I have never seen harm ensue. It soothes the nervous system, renders the restraint of bed more endurable, relieves the pain which if untreated is often very great, promotes physiological rest of the part affected, and, in my opinion, promotes repair and restoration of the inflamed tissue. When I first commenced practice I used to combine belladonna with the opium, but soon gave up the use of the former drug, as I could find no material advantage in the combination and it had the disadvantage of making the throat dry and parched.

CASES OF SURGICAL TUBERCULOSIS TREATED BY KOCH'S NEW TUBERCULIN.

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THE following eight cases are examples of surgical tuberculosis under my care at the Evelina Hospital in which the treatment by Koch's new tuberculin[1] (tuberculin R) has been completed, or nearly so. The first three cases of tuberculous disease of joints without sinuses or evidence of softening of caseous material show the only favourable results. Cases 2 and 3 were examples of early tuberculosis of the elbow and hip respectively. Of these it may fairly be said that the same results might have been anticipated from "surgical rest" and improved diet &c. In Case 1—a patient with relapsing tuberculosis of the knee of four years' duration—it seems probable that the remedy exercised a favourable influence. Case 5 was an instance of tuberculous peritonitis with ascites which was treated immediately after admission by laparotomy. During the administration of the tuberculin there was no re-accumulation of the fluid, but the child continuously lost weight. It was necessary to give the tuberculin very slowly and gradually owing to the weakly condition of the child and to avoid pyrexia; so that at the date of writing the treatment is only just completed. The remaining four cases were all examples of tuberculosis with sinuses. These, with one possible exception, were absolutely uninfluenced by treatment. The sinuses did not heal, and in three instances operation was ultimately required. Case 7, that of a child with tuberculous teno-synovitis of the dorsum of the hand, seems clearly to show that no immunity to tuberculosis was established by the treatment. The tuberculous material had become caseous and broken down with sinus formation, but was not, in the ordinary acceptance of the term, septic. After the conclusion of the tuberculin course all the tuberculous material was freely and carefully removed by operation, no bone disease being found. The wound healed by first intention, but two or three weeks later recrudescence occurred in the scar and subjacent tissues. The exception mentioned above was a patient with tuberculous epididymitis. A sinus remained after the opening of an abscess at the London Hospital just previously to admission to the Evelina Hospital. The sinus healed during the administration of tuberculin.

My own personal impressions[2] of the results of the new remedy may be summed up as follows. Some slight although no markedly favourable influence may be exerted in cases of early tuberculosis of joints or in those in which no evidence of softening of caseous material exists. But the effect where caseous material has broken down, and especially if the disease has become septic, is negative. The subsequent course of the cases described below will be carefully watched.

It cannot be said that the new remedy is altogether free from the drawbacks possessed by the old tuberculin of producing pyrexia and constitutional disturbance. In nearly

[1] Professor Koch's original article announcing the remedy appeared in the Deutsche Medicinische Wochenschrift, April 1st, 1897.

[2] My experience is not confined to the cases here recorded, but I have watched several other cases in which the treatment has not been completed and some under the care of my colleagues in which the course was completed.

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every case a considerable rise of temperature occurred after one or two milligramme doses had been reached, and sometimes before. After this the duplication of successive doses, recommended by Koch, had to be given up for a more gradual increase. The pyrexia in some cases was very great, amounting to a rise of 7° F. Other unpleasant symptoms follow the administration of larger doses, such as vomiting, malaise, headache, and prostration. No local reaction was observed. In several instances abscesses formed at the seat of injection, although strict antiseptic precautions were enjoined. The number of these may in a measure be explained by the fact that during the progress of the trial we had several changes of resident officers. I am much indebted to our registrar, Dr. O. K. Williamson, for the following abstract of the notes of the cases; also to Miss Getz for the great help she afforded us in the administration of the remedy.

CASE 1. *Tuberculosis of the knee-joint.*—A girl, aged seven and a half years, was admitted to hospital on May 15th for a tuberculous knee. It was stated that the left knee became swollen and painful after a fall four years previously. Since then the swelling had increased. About a year before admission the knee became bent; it was straightened at the Dover Hospital and the limb was put in plaster-of-Paris. There were marked wasting of the left leg and swelling of the knee. The synovial membrane generally was much thickened and pulpy. Movements were extremely limited, but there was no displacement of the bones. On May 16th tuberculin ($\frac{1}{10}$ milligramme) was injected. Sixteen doses in all were injected. The dose was doubled each time until 16 milligrammes was the amount reached; after this the dose administered was always 20 milligrammes. The injections were given at intervals of two days until ½ milligramme was the amount reached. The intervals were then increased. Two doses of 20 milligrammes were injected. Sixty-four days was the period of time over which the injections were continued. As the result of the injections there was no local reaction. No marked rise of temperature took place until the dose of tuberculin had reached 4 milligrammes. The temperature on the evening after injection rose to 102° F. (a rise of nearly three degrees). The day after the injection of 8 milligrammes the temperature rose to 101·2° (two degrees rise). The day when 16 milligrammes were injected the temperature rose to 103·2° (from normal). The day after the first injection of 20 milligrammes the temperature rose to 101·2°, and on the day of the second injection the temperature rose to 101° (two degrees rise). After the injection of 16 milligrammes the child was very sick once. After the first injection of 20 milligrammes the child vomited several times, the face was pale, and she complained of headache; after the second injection of 20 milligrammes she was again sick and the face was very pale. On May 17th the knee was put up in a Macintyre's splint, in which it remained until June 25th. On June 24th the knee measured above the patella 8⅞ in. in circumference. On July 30th the measurement was found to be 8⅝ in. There was no apparent thickening of the synovial membrane, except slight fulness at the lower part of the patella on each side. The patella was found to be fixed, there was no movement in the joint, and no pain on percussion or palpation. The child was sent to a convalescent home wearing a moulded leather splint.

Remarks.—In this case the disease was well established, being of four years' duration, but no softening had taken place. The improvement was undoubted, but lapse of time must show if a permanent cure has been obtained. It is impossible to estimate in what measure respectively the improvement was due to rest, abundant diet, and nursing for seventy-six days, or to the tuberculin. Seeing that the disease was of such duration and that the joint had been treated at a seaside hospital I should be inclined to ascribe a large share of credit to the injections.

CASE 2. *Tuberculous disease of the elbow.*—A girl, aged four years, was admitted on April 21st for tuberculous disease of the elbow joint (right). About September, 1896, the mother observed after the child had had a fall that she could not straighten her arm and that the elbow was swollen. There was very little movement in the joint; it could not be extended to more than 120° or flexed beyond a right angle; rotation also was very much limited. The joint felt generally thickened. There was a distinct pulpy swelling in the neighbourhood of the radial articulation. An angular splint was applied. The child was healthy in appearance and well nourished. On May 8th $\frac{1}{10}$ milligramme of tuberculin was injected. Eighteen doses in all were administered. The dose was doubled until 15 milligrammes were reached; four doses of 20 milligrammes were then successively given. The interval between successive doses was two days until 2 milligrammes were reached. There were then intervals of four days and three days until 8 milligrammes were reached. The intervals after this varied from eight to eleven days. Seventy-two days was the period of time over which the injections were given. As the result of the injections there was no marked rise of temperature until 15 milligrammes were injected. After this there was a rise on the same evening to 102° F. (about four degrees). After the first injection of 20 milligrammes there was similarly a rise of temperature to 101·2° (from 97°). A rise occurred after the second injection of 20 milligrammes to 102° from 97 4°; and after the third injection there was an almost exactly similar rise of temperature. The day after the last injection there was a rise to 100 6° from normal. After the second injection of 20 milligrammes an abscess was observed at the seat of injection on the left side of the abdomen. The patient had been fretful in the night and had vomited once. After the third injection she had profuse sweats over the head and face. These were the only effects observed. On May 27th the circumference of the elbow taken round the groove on the front of the elbow and over the point of the olecranon with the elbow at right angles was 6¾ in. On Aug. 6th the circumference was found to be 6⅝ in., and the pulpy swelling had disappeared. The loss of mobility remained practically the same, but there was neither the slightest pain on movement nor tenderness. The child's general condition on leaving the hospital appeared to be thoroughly sound; she was very fat. The arm was put up in plaster bandages. The progress of this case of early tuberculous disease was in every way satisfactory.

CASE 3. *Hip-joint disease.*—A boy, aged five years, was admitted with hip disease (left) on April 21st. The boy limped and complained of pain on walking. The limping was noticed a week after he fell from a seat in March last. There was some fulness in the left groin, and very little movement in the joint could be obtained. The boy was well nourished. On April 24th weight extension (4 lb.) was applied; on May 13th this was stopped and a double Thomas's splint was applied. On May 7th $\frac{1}{100}$ milligramme was injected. Eighteen doses in all were injected. The second dose was $\frac{1}{50}$ milligramme; the dose was then doubled each time until 15 milligrammes were reached; after this four successive doses of 20 milligrammes were administered. Seventy-three days was the period of time over which the injections were continued. The interval between successive doses was usually two days until 2 milligrammes was the amount reached. The intervals after this were in order four, three, eight, eight, eight, eleven, and ten days. As the result of the injections there was no marked rise of temperature until ¼ milligramme was injected. On the evening after this there was a rise of temperature to 100·4° F. (from 97°). The next marked rise of temperature was after the injection of 2 milligrammes. The day after this the temperature rose to 100° (from normal). Again, the day after the injection of 4 milligrammes the temperature rose to 99·8° (from 97°). After the injection of 8 milligrammes there was a rise next morning to 103 8° (from 97°); and after the injection of 15 milligrammes there was a rise to 105·6° (from 97·8°). After the first injection of 20 milligrammes there was a rise of temperature to 103·8° (from 96·4°), after the second injection a rise from 97° to 103°, after the third injection a rise from 97° to 103·6°, and after the fourth injection a rise from normal to 103·2°. After the injection of 15 milligrammes he was sick several times, slept very little, the face and hands were occasionally cold, and he had profuse general sweats. After the first injection of 20 milligrammes he vomited a few times; after the second injection he vomited three times, his face was pale and he complained of pain in the abdomen; after the third injection he had similar symptoms, and after the fourth injection he was once sick. On July 9th there was still some fulness in the left groin. The joint admitted of a certain amount of movement without pain, especially flexion. The thigh could be flexed to an angle of 40° with the horizontal. The boy left the hospital on a double Thomas's splint.

Remarks.—In this case it may be said that the same amount of improvement would have followed "rest" and general

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treatment in a large proportion of cases of disease of the hip-joint.

CASE 4. *Caries of the tarsus.*—A girl, aged six years, was admitted to hospital on Feb. 13th for a sinus discharging thin serous pus on the anterior surface of the left foot. Two and a half years ago the child went into the Forest Gate Infirmary with wasting. She was discharged in August, 1896, apparently well, with the exception of a discharging sore on the left foot. Since Christmas wasting and night sweats had been present. The sinus led to carious bone. The dorsum was swollen and pulpy. On March 12th the scaphoid, cuneiform bones, and cuboid were removed by two incisions on the outer and inner sides of the dorsum of the foot respectively. The bones of the foot were then brought together by means of deep catgut sutures, the wound was dressed with cyanide gauze, and the foot was placed in plaster splints. On admission there was also a large indurated swelling in the right lumbar region with a lateral curvature to the right. On April 6th, of the two granulating wounds on the dorsum and external surface of the foot respectively the outer one had healed and the inner had not. On the 28th a small abscess in the groin (right) was opened. At this date the wound in the foot was nearly healed, but one corner was rather inclined to break down. The child was thin and rather pale. On May 8th $\frac{1}{100}$ milligramme of tuberculin was injected. Eighteen doses in all were injected. The particulars with regard to the doses and the intervals between successive doses were precisely the same as in Case 6. As the result of the injections the temperature was not observed to rise until 1 milligramme had been injected. On the evening after this there was a rise from 97·4° to 101°F. On the day of injection of 8 milligrammes there was a rise from 97° to 101 4°. On the day of injection of 15 milligrammes there was a rise from normal to 104°. On the day of the first injection of 20 milligrammes there was a rise of temperature from normal to 103°; on the day of the second injection of 20 milligrammes there was a similar rise; on the day of the third injection of 20 milligrammes there was a rise of temperature from normal to 101 2°; and on the day of the last injection there was a rise of temperature from normal to 102·4°. After the injection of 15 milligrammes inflammation was observed at the seat of injection, she slept badly, complained of headache, and vomited several times. After the first injection of 20 milligrammes her face was pale and she vomited once. An abscess formed at the seat of injection. After the second injection of 20 milligrammes she vomited several times; after the third and fourth injections there was, however, no sickness. On July 2nd, after having had two injections of tuberculin of 20 milligrammes, the sinuses in the foot were scraped with a sharp spoon and some softened bone removed. The sinus in the right groin was opened and scraped. The edges of the wound were brought together with silkworm gut.

Remarks.—The local disease was apparently uninfluenced by the tuberculin. The child was sent to a convalescent home with a sinus still open on the dorsum of the foot.

CASE 5. *Tuberculous peritonitis (ascitic variety).*—A female infant, aged seventeen months, was admitted on May 14th. The abdomen was greatly distended, with bulging in the flanks, and very tense; a fluid thrill was easily obtained. The child was plump and looked healthy; her colour was good. On June 3rd laparotomy was performed. Much serous fluid was let out from the peritoneal cavity and the peritoneum was found to be studded with tubercles. The operation wound healed well. On June 8th $\frac{1}{100}$ milligramme tuberculin was injected. The dose was very gradually increased, the full 20 milligrammes not being reached until September. The child had lost 4 lb. 4 oz. since admission and looked pale. Distinct nodules were to be felt in the neighbourhood of the wound, but there was little if any reaccumulation of fluid. This patient was transferred to me for surgical treatment by my colleague, Dr. Willcocks.

CASE 6. *Tuberculous dactylitis.*—A girl, aged ten years, was admitted to hospital on April 24th for tuberculous dactylitis. There was thickening of the first phalanx of the ring finger of the left hand, the tissues over the thickened part were inflamed, and there was a large fungating ulcer on the posterior and ulnar surface of the finger. The patient's general condition was good. The forearm and hand were put up in an anterior splint. On May 8th $\frac{1}{100}$ milligramme of tuberculin was injected; eighteen doses in all were administered. The dose was doubled each time of injection until 16 milligrammes was the amount injected. The next dose was 20 milligrammes, and the dose thenceforward was kept at this. The injections were given at intervals of two days until the dose of 2 milligrammes was reached; there was a four days' interval between the injections of 2 and 4 milligrammes; three days between the injections of 4 and 8 milligrammes; seven days between the injections of 8 and 16 milligrammes; and nine days between the injections of 16 and 20 milligrammes. After this the intervals varied from eight to eleven days. The last dose was on July 19th. Seventy-two days was the period of time over which the injections were continued. Four doses of 20 milligrammes each were injected. The temperature did not rise until $\frac{1}{2}$ milligramme was injected. The same day it rose to 101° F. (from 98 4°). The day after 4 milligrammes were injected the temperature rose to 102·2°, after 8 milligrammes to 102°, whilst the same day that 16 milligrammes were injected it rose to 104·6°. On the day of the first injection of 20 milligrammes the temperature rose to 103 8°, on the day of the second injection of 20 milligrammes to 105·6°, on the night after the third injection to 103°, and on the day of the fourth injection to 102 4°. After the injection of 8 milligrammes an abscess was observed at the seat of injection, with inflammation around it. After the injection of 16 milligrammes headache was observed coincidently with the rise of temperature. There were also redness and great tenderness at the seat of injection, and the patient was sick afterwards. After the first injection of 20 milligrammes the hands and face were observed to be cold coincidently with the rise of temperature. After the second injection she complained of headache, the face was very pale, and she was sick once, coincidently with a rise of temperature. On July 30th an operation was performed. An incision was made over the dorsum of the first phalanx, and a sinus was found leading into the interior of the shaft of the bone. Neither joint was affected. On the external surface of the ligaments of the first interphalangeal joint some recent tuberculous granulation tissue was found. The interior of the thickened shaft of the first phalanx was filled with diffluent caseous material. The operation wound healed *per primam*.

Remarks.—Soon after the commencement of the injections the ulcer partially healed and the swelling of the soft parts of the finger diminished. This may have been due to careful antiseptic dressing, rest, and improved diet. Subsequently the condition of the finger became stationary.

CASE 7. *Tuberculous teno-synovitis.*—A boy, aged eight years, was admitted on June 1st for tuberculous disease of the dorsum of the hand, which had been affected on and off for three or four years, but had become worse lately. There was considerable thickening over the fourth metacarpal bone of the left hand, and some ulceration of the skin. The first phalanx of the ring finger was also considerably thickened, and there was a discharging sinus in the palm. The boy was delicate in appearance and decidedly thin. A palmar splint was applied. On June 4th $\frac{1}{100}$ milligramme of tuberculin was injected. Fourteen doses in all were administered, the dose being doubled each time until 16 milligrammes were reached. The injections were made at intervals of two days until $\frac{1}{10}$ milligramme was reached. Then intervals of from three to eleven days were allowed to intervene until 2 milligrammes were injected; then intervals of two days until 16 milligrammes was the amount reached. This was arrived at on July 31st. Fifty-seven days was the period of time over which the injections were continued. As the result of the injection a rise of temperature to 103° F. was observed the day after $\frac{1}{125}$ milligramme was injected (nearly three degrees rise). The day of injection of $\frac{1}{10}$ milligramme the temperature rose to 102° (about three degrees). The next occurrence of marked rise of temperature was on the day after $\frac{1}{8}$ milligramme was injected, when there was a rise to 102 2° (about four degrees). The day after injection of $\frac{1}{2}$ milligramme there was a rise of temperature to 102·8° (about five degrees), the day after injection of 1 milligramme there was a rise of about four degrees, after 2 milligrammes to 102·2° (about three degrees), the next important rise being after 16 milligrammes to 104° (from normal). No other effects were observed. On July 30th the swelling on the dorsum of the hand was incised and found to contain diffluent caseous material connected with tendon sheaths but not with bone. A communication existed with the ulcer on the palmar surface.

Remarks.—Primary union took place; but from two to

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three weeks later the scar became tuberculous and broke down. As the result of treatment the swelling rather increased and the skin over the tuberculous granulation tissue broke down at several points. Two sinuses existed when the child came under observation, but there was practically no suppuration.

CASE 8. *Tuberculous epididymitis.*—A boy, aged ten years, was admitted to hospital with tuberculosis of the epididymis on June 7th. There was a sinus on the left side of the scrotum, the skin around which was adherent to the left testicle. The sinus discharged serous fluid. Marked thickening of the epididymis existed, but the vas was normal. The boy, although thin, looked healthy. Previously to admission at the Evelina Hospital an abscess connected with the left testicle was incised at the London Hospital and the sinus remained. On June 8th $\frac{1}{500}$ milligramme of tuberculin was injected. Nine doses in all were administered. The dose was doubled on each occasion the largest dose reached being $\frac{1}{2}$ milligramme. Forty-three days was the period of time over which the injections were continued. As the result of the injection the first marked rise of temperature was on the day after the injection of $\frac{1}{125}$ milligramme, when it rose from normal to 100·8° F., the next rise being after the injection of $\frac{1}{30}$ milligramme, when it rose from normal to 100·6°. The remaining injections caused apparently no rise of temperature. After the injection of $\frac{1}{30}$ milligramme redness and tenderness were observed at the seat of injection. The sinus healed and the patient was then discharged.

Harley-street, W.

A CASE OF ULCERATIVE ENDOCARDITIS SUCCESSFULLY TREATED WITH ANTI-STREPTOCOCCIC SERUM.

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A FEMALE, aged twenty years, was admitted into Guy's Hospital under my care on Jan. 26th, 1897, complaining of pains in the joints and general malaise. Her father was stated to have died from phthisis and heart disease; otherwise the family history was good. Her occupation was that of a ward maid. She had hitherto enjoyed good health, never having been laid up. The present illness began four days previously with pains in the joints, headache, and shivering. On admission she was found to be a well-nourished, healthy looking young woman. She complained of headache and of pains in the knee and thigh. The heart, lungs, and urine were quite normal and there was no swelling or other evidence of disease in any of the joints. The temperature was 100·6° F., the respirations were 24, and the pulse was 104. On Jan. 27th the temperature, which was taken every four hours throughout the illness, became normal, and remained so for three days. I hoped that she was convalescent, having considered the attack to be one of influenza, but on Jan. 30th the temperature again rose, and from this date until March 16th she suffered from irregular pyrexia. With the exception of three days the temperature rose for a few hours every day to 102°, 103°, or even 105°, and there were frequent rigors and perspirations. During the whole of this period she was carefully examined every day. The heart, lungs, urine, ears, eyes, vagina, and rectum appeared to be perfectly normal. The pulse varied with the temperature, when the latter was normal the pulse-rate was 80 or 90 per minute. The blood shewed slight leucocytosis and slight decrease in hæmoglobin. Some carious teeth were removed, but there was no sign of inflammation in the alveoli. She suffered a good deal from constipation, requiring the frequent use of aperients. In spite of treatment with quinine and salicylate of soda she gradually became worse; the rigors were more frequent, she lost her appetite, and became pale and thin. On March 16th a distinct diastolic bruit developed on the left side of the sternum, its maximum point of intensity being the third intercostal space. It was then quite clear that the pulmonary valve was affected and that the patient was suffering from ulcerative endocarditis. On March 24th anti-streptococcic serum was first injected, and, with the exception of three days, the injections were continued daily until May 25th. The serum employed was that of the British Institute of Preventive Medicine, and it was given in doses of 20 c.c. until the last two weeks of treatment, when the dose was gradually diminished. The treatment lasted altogether nine weeks, during which time 1030 c.c. serum were injected in fifty-nine doses. The effect of the treatment is best shown by the chart, which is, unfortunately, too long for publication. During the first fortnight of treatment there were only two slight rigors, but the pyrexia persisted. On April 6th, a fortnight after the commencement of the treatment, the temperature became normal and remained so until the 26th. By this time the patient was so well that the injections were ordered to be given every other day instead of daily. The effect of this alteration in treatment was that the temperature rose on the 28th to 99.6°, on the 30th to 100·4°, and on May 3rd to 100·6°. The injections were again given daily, with the result that the temperature fell to normal on May 6th, and continued so until July 19th, when the patient was discharged from the hospital. On May 13th the dose of serum had been reduced to 10 c.c., and on the 22nd to 5 c.c. On the 25th the injections were omitted. The general condition of the patient began to improve five or six days after the commencement of the injections, and three weeks later she was to all appearances quite well. On leaving the hospital on July 19th the diastolic bruit in the pulmonary region was still present. Neither now nor on any previous occasion did the heart show any sign of enlargement. The only inconveniences noticed from the frequent injections of the serum were slight pain at the site of injection and an urticarial rash, which appeared on April 1st and lasted a few days. After leaving the hospital the patient went to a convalescent home. She was seen a month later, and appeared to be in perfect health, but the bruit still persisted.

Remarks.—Cases of ulcerative endocarditis treated with serum have been recorded in THE LANCET by Dr. Harrington Sainsbury,[1] Dr. A. E. W. Fox,[2] and Dr. Margaret Pearse.[3] The above case appears to be more definite in its nature and in the result of the treatment than any of these cases. The patient came under observation a few days after the commencement of the illness. During the first seven weeks she suffered from an ill-defined septicæmia without any local manifestation of disease, and there was at no time distinct evidence of the site of entrance of the contagion. Up to the time when the serum was first injected she was progressively losing ground; and a few days before the commencement of the injection, the pulmonary valve became affected. The result of the treatment was most striking and I am quite satisfied that it saved the patient's life. The pyrexia ceased after the first fortnight of treatment, and the general condition very quickly improved. At the end of five weeks the patient seemed so well that the injections were given every other day instead of daily. As a result of this alteration the temperature began to rise, but again subsided when the injections were given daily. During the last fortnight of the treatment the quantity of serum injected daily was gradually diminished, and after the final omission of the injections no further rise of temperature occurred. The patient with the exception of pulmonary regurgitation, was perfectly well on leaving the hospital and was seeking a situation a month later. The large amount of serum used is worthy of record. The treatment lasted nine weeks, during which time 1030 c.c. serum were injected in fifty-nine doses. The only ill-effect was a transient rash. Throughout the case the cardiac symptoms remained in the background, the infective process being the most prominent feature. Such a case as this is the most favourable for serum treatment. In so many cases of ulcerative endocarditis the infective process is engrafted upon old cardiac trouble, and even if the serum controls the septicæmia, the patient has still to contend against cardiac inefficiency. The antistreptococcic serum was used because it was thought that the case was most probably one of streptococcic infection, although we possessed no bacteriological evidence of the presence of streptococci in the blood.

Cavendish-place, W.

[1] THE LANCET, Oct. 17th, 1896, p. 1079.
[2] THE LANCET, Feb. 20th, 1897, p. 520.
[3] THE LANCET, July 10th, 1897, p. 92.

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PARTIAL AND COMPLETE DISLOCATION OF THE SEMILUNAR CARTILAGE OF THE KNEE; OPERATION ON SIX CASES.

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THE mechanism of the knee-joint has always appeared to me to be one of the most interesting problems in anatomy, but one at the same time far from being satisfactorily explained. To call the knee simply a hinge-joint is quite an inadequate description, though true up to a certain point. It is a hinge undoubtedly, but a hinge with far more complex movements and limitations of movement than are suggested in the name. The difficulties in explaining the details of movement in the joint will probably never be entirely cleared up by anatomical studies on the dead body. So many changes take place after death in the tone of the muscles and in the tension of the ligaments when the capsule has been more or less completely removed that the normal movements within the joint are probably rarely or ever seen post mortem. But in the living subject the case is otherwise, and it is possible to examine many points which after death would probably be considerably altered.

Having operated on the knee-joint very fully in a great number of cases its internal anatomy *in vivo* is very familiar to me. And having lately opened it on six different occasions for the study and treatment of the very distressing condition due to displacement of a semilunar cartilage, I should like to place on record exactly what has been found as a small contribution to the anatomy of the joint as well as its pathology. The subject deserves a much wider study than would be possible in a paper such as the present.

The clinical history of these cases is the first factor in throwing light upon the mode of production of the injury and the movements of the semilunar cartilage. In the first place, in all the many cases which I have seen, besides those I have operated on, the displacement has been progressive—that is, it has been very slight at first and has gradually increased until complete. In the next it has, I believe, invariably been the internal meniscus which has been displaced. Out of many dozens of these cases which I have seen I cannot recall a single one in which the external cartilage was dislocated. And in all those I have operated on it was clearly seen that the internal was the part out of place. Again, by far the largest number of cases have been among males in my experience, and I have never yet been called upon to operate on a female. The condition has been usually seen among young and vigorous men, my oldest patient being forty-four years of age. This was the only case in which a severe injury appeared to have been the commencement of the lesion. Here (Case 2) the patient had severely twisted his knee by a fall out of a truck. But the ultimate dislocation probably did not take place upon this occasion, but the injury only prepared the way. In every case the history of the initial lesion was almost always identically the same. The patients were either walking quietly on the level, or, if we include cases not operated on, were slowly sauntering upstairs, getting out of a bath, mounting or dismounting from a bicycle or horse, and a slight catch was felt on the inner side of the joint. In all, the displacement occurred while the knee was very slightly flexed, and usually while there was very little muscular effort being put out. In one case, it is true, the patient was playing football when his knee "gave." Then there was a history in all cases of recurrent attacks like the first at ever-shortening intervals and each time with more severe symptoms. In some cases where the descriptions were particularly accurate the patients noted the "slipping out" to have occurred while the limb was not only slightly flexed, but at the same time the leg was rotated outwards on the thigh. This I believe to be the rule. In the less marked cases the first and second attacks left but little ill effects behind and extension was as good as before, but usually much swelling due to synovitis followed subsequent attacks and ultimately remained for a long time. In the severe cases verified later by operation there was a history of a very sharp attack after the first two or three milder ones, and after this there was inability to extend the knee fully, and usually permanent effusion. In none could any foreign body be felt in the knee, and any *palpable* evidence of the absence of the meniscus from its usual place was not discoverable by the finger. In the examination of the knee and remedy of the displacement the same operation was performed in every case.

With the limb extended a curved incision reaching from the inner border of the ligamentum patellæ to the anterior edge of the lateral ligament was first made. The ends of this incision in all cases corresponded to a line a little above the level of the upper rim of the tibia; the convexity of the flap reached down for about one inch on the head of the latter. The periosteum was raised with the flap, which also, of course, contained the capsule besides, but the fibres of the latter were left intact in their relation to the periosteum. This I believe to be most important for the subsequent strength of the joint. When this flap was raised the cartilaginous rim of the articular facet was in every case seen to be divested of its covering semilunar cartilage, and except in Cases 1 and 4 the latter could not be seen at all with the limb in the extended position. In these two cases the meniscus was seen to be detached only in the outer part of its periphery from the capsule, and to have slipped in more or less between the bones. But in neither case had it disappeared from view. But in the other four cases when the joint was opened as above no semilunar cartilage was to be seen at all with the knee extended. The flap turned up showed where it had been detached, but the meniscus itself had disappeared. But when the joint was flexed to about a right angle it became possible to see the loosened mass lying in the inter-condyloid notch against the crucial ligaments. In three out of the four in which it was found in this condition of complete inward dislocation it was only held by its extreme ends; in the last case there was still a trace of its capsular union anteriorly. In all these cases of entire dislocation inwards the reduction was effected by a pull forwards with a sharp hook, the knee being strongly flexed. And it was remarkable how strong the traction required to be in order to restore the meniscus to its proper position. It always came out with a slip suddenly, and the knee could then be fully extended. But quite as remarkable as the need of strong traction to bring it out was the tendency it had to return to the inter-condyloid notch when the knee was slightly flexed. It appeared to be dragged in suddenly during flexion, and if the hook were left loose it would carry it with it. This was so remarkable that I demonstrated it over and over again in more than one case to those present. It was easy to see in all these movements of the knee that in those cases in which the meniscus was rolled up in the middle of the joint nothing short of traction with a hook could have brought it into the normal position; but in Cases 1 and 4, where only part of the peripheral attachment had given way, replacement in slight flexion was quite easy.

From a study of these cases I have satisfied myself, therefore, that where I have been successful in reducing a semilunar cartilage by manipulation without opening the joint the dislocation must have been incomplete, and, indeed, comparatively trifling, only a part of the capsular attachment having been torn, or, perhaps, only stretched. The other cases (2, 3, 5, and 6) all showed that no manipulation or movement of the joint could ever have restored the meniscus to its original position. These six cases operated on showed the derangement of the joint in every stage when taken in the following order—1, 4, 6, 3, 5, and 2. Case 1 showed detachment of part of the periphery and very moderate displacement. Case 4 showed a wider separation of the meniscus from the capsule and greater displacement; the other cases all showed complete dislocation into the inter-condyloid notch. In Case 6 there was still, however, a trace of the capsular attachment left anteriorly, but in the rest the latter had quite given way and the cartilages were only held by their ends. But in Case 2, not only was this the case, but the meniscus, from long dislocation, had altered materially in shape and appeared corrugated so as to accommodate itself to its new position. I find, too, in the notes that it appeared to have contracted adhesion in its new position; and perhaps this was the case, but I suspect that the difficulty in drawing it out and in keeping it fixed during suture of its edge was more due to its being crumpled and perhaps shrunken somewhat. This fact of crumpling and shrinkage probably explains, too, the longer time taken by this patient to recover the free use of his knee than in any of the others. It will also doubtless explain the great amount

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of effusion into the joint which took place in this case after operation, and which required aspiration of the synovium two or three times within the first few weeks. And even now, though the man is running about quite well at his work, and very cheerful about his leg, there is still some slight stiffness in moving the joint. Of course, this was the oldest patient of the series, and the dislocation was of longer standing than in the other cases, except Case 5, factors which no doubt told on convalescence and completeness of recovery. In the other cases of younger men in whom the condition had not, with the exception of Case 5, lasted so long, the recovery was more perfect, and the reaction in the joint after operation practically *nil*. In Case 5 there was considerable reaction and slow recovery of power. It happens that within the last few weeks I have heard from several sources of Case 1. This young officer is now in India and taking part in all the exercises of his profession and in athletics as if his knee had never been injured. Case 3 has been lost sight of, but the last note in the hospital record was, "Joint looks quite normal." Case 4 I have seen and heard of several times since operation. He is rejoicing in complete restoration of the joint. Case 5 is that of a young naval officer who is back at his work and able for it. There was a considerable swelling on the inner side of the joint when I last saw him nine months after operation and still some stiffness. He was then still nervous about using the limb to its fullest extent, but unnecessarily so.[1] In this case there was great displacement, and the condition had lasted for a considerable time, three years probably, as in Case 2. The consequence was much alteration in the meniscus while displaced. Case 6 is still under observation. His convalescence has been absolutely uneventful; there was no reaction at all in the joint after operation, and he is beginning free movement. In this case, though there was complete dislocation, I expect a more than usually good result for the operation was performed within three days of that attack which resulted in dislocation.[2]

It was very interesting to note in all these instances that the patients' statements that in many cases the joint "went out" during slight flexion and eversion were confirmed by observation of the movements of the semilunar cartilage during flexion and extension *in vivo*. On looking into the joint after reducing the meniscus the latter was always seen to move inwards during flexion. This was not merely a simple slipping inwards, but a dragging inwards, which could be felt when a hook was inserted in the meniscus itself; and in the cases in which the detachment was marked the cartilage was plainly dragged into the middle of the joint with the hook and with considerable force. Slight flexion began the movement, which seemed to increase the more the knee was bent, until finally the meniscus slipped over the convexity of the femur and got between the condyles and remained there.

Through the kindness of my colleague, Professor Thane, I have been able more than once lately to examine a number of variously dissected knee-joints, and in these, too, the movement of the cartilage backwards and inwards during flexion can be seen to a certain extent, but far less marked than in the living knee. But the mechanism of the movement is far from clear either in the dead or living joint. What *appears* to take place is this. In the first place during flexion the point of contact between the femur and tibia appears to shift backwards a little. This in itself would relieve the pressure on the anterior curve of the meniscus and push the posterior curve backwards. But in addition it would incline the internal lateral ligament somewhat backwards, and in this way drag the semilunar cartilage back through its attachment to the lateral ligament. Apparently one at least of the functions of the posterior crucial ligament is to prevent the femur from slipping too far backwards, for it is rendered tense in flexion. Whether this explanation of the causes of the displacement of the meniscus be correct or no the fact remains that during flexion in the living joint it can be seen to slip backwards. The actual dislocation, of course, is due to the nipping of its edge when the limb is extending, which fixes it between the two bones and prevents it travelling forwards, while the capsule, being rendered tense by extension, is torn away from it more and more until there is nothing to prevent it slipping into the middle of the joint. Whether when it has once been completely dislocated thus it ever returns to its normal position is, I think, doubtful. I imagine that in those cases in which it has been supposed to do so the dislocation has not been completely into the centre of the joint, but has been a partial nipping. The appearance of the meniscus in those cases in which I have seen it lying against the crucial ligaments was certainly such that its return without considerable traction appeared an impossibility. It was puckered, thickened, and apparently shrunken.

From all this it would appear that given a knee-joint in which this derangement has taken place incontestably and has been repeated an operation ought to be performed without delay so as to prevent the complete dislocation from taking place. If the latter has occurred there is the more reason for immediate interference before the semilunar cartilage becomes altered in shape and texture. In such cases the manipulations during operation must be more severe and the reaction thereafter more decided, while a complete *restitutio ad integrum* is much less likely owing to the changes in the cartilage and other structures of the joint. If the operation is not performed reasonably early there is a danger of the displaced cartilage being so seriously altered in texture and shape that it cannot be restored to position, and nothing remains but to excise it completely and leave the joint without an internal meniscus.

The following six consecutive cases form an interesting group.

CASE 1.—The patient, aged twenty-four years, while playing rackets in April, 1895, slipped, "and felt something go in his right knee." He had sharp pain, and the joint swelled up and he could not bend it. This swelling lasted a month, when he thought the cartilage must have gone back into position, for the swelling suddenly went down; but soon after he had a return of symptoms. He was then put in splints. Recovery again took place, but three weeks later the same "slip" occurred. He was then invalided. Since then he had put the knee out five times, and on each occasion swelling has followed. The operation was performed on Oct. 3rd, 1895, in the same manner as in the other cases. The cartilage was only partially separated from the capsule and was drawn out with a hook and stitched to the posterior surface of the flap raised. Three silk stitches were used, which at first tended to cut out of the cartilage. The wound was closed in the way described and dressed with salicylic wool. There was no drainage. Primary union took place with very slight synovitis.

CASE 2.—A man, aged forty-four years, had been always healthy and with a good family history. He strained his left knee a year previously in a fall from a truck. Three months later, while walking, he felt pain in the same knee, but after a few seconds he was able to put it straight again. Similar attacks had occurred every two or three weeks since. In October, 1895, he had a bad attack and was unable to straighten the limb for about three weeks, the joint at the same time being very much swollen. He was unable to walk for six weeks and three days; after he began to go about the knee locked as before and he was off work for five weeks. The patient was a robust and finely developed man; there was no enlargement of the joint and nothing otherwise abnormal about the knee to be felt. He was able to walk except when the cartilage was displaced. The operation was performed on Feb. 20th, 1896, in the same manner as the other cases. When the joint was opened the semilunar cartilage was found to be torn away from the capsule all round and to be curled up against the crucial ligaments in the intercondyloid notch, where it had contracted adhesions. When it was drawn into its normal position by means of a blunt hook with the knee slightly flexed it could be retained there by full extension of the joint, but upon the slightest flexion it slipped back into the old position, dragging the hook with it with some force. Six fine silk sutures were inserted through its outer border, and it was stitched to the flap of the capsule and periosteum as in the other cases. This flap was then sutured *in situ*, and the wound was closed without drainage. There was a good deal of pain in the joint next day, but this soon passed off. The first dressing was on the sixth day, when all the wound but its two ends was found united *per primam*. There was a good deal of fluid in the joint. On the tenth day the wound was perfectly healed and the fluid, consisting of yellow serum, was aspirated. Four days later the joint was again aspirated, as the fluid had re-accumulated to the extent of three ounces. About this time there was mild lymphangitis with tenderness up the thigh and in the groin. The wound, however, remained perfectly quiet. There was throughout retention of urine requiring

[1] Since this was written I have heard by letter from this patient from the Red Sea. He is now quite well.

[2] Since writing the above I have seen this patient. His joint is perfectly normal in every way, and he is able for every kind of exercise.

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the catheter. Either owing to the lymphangitis, or perhaps the retention, the temperature was raised for fifteen days, on one occasion to 102·2° F. It then fell, and convalescence was uninterrupted further. Under massage the swelling of the joint improved much before the patient was discharged on April 4th. I have since seen him several times. He is now at work and with a good knee. There is slight limitation of extreme flexion and a trace of swelling. Otherwise nothing is to be noticed, and he expresses much satisfaction with the result.

CASE 3.—A man, aged thirty-eight years, had always been healthy and had a good family history except that his father died from "consumption." In January, 1896, he felt the left knee "give" while walking quietly. After this the joint swelled and he used a liniment. At the end of a fortnight he could get about without any abnormal sensation in the joint except the "slipping of something" occasionally, but the swelling remained with pain and throbbing and an occasional crack for a time. When seen there was no pain, but the joint was somewhat enlarged with fluid. Flexion produced no pain. The operation was performed on May 1st, 1896, in the same manner as in the other cases. Here, too, the semilunar cartilage was found to have completely slipped into the inter-condyloid notch, from which it could only be drawn out into position by means of a hook and retained by full extension of the joint. When the latter was slightly flexed it at once suddenly slipped back to the crucial ligaments. It was fixed by four silk sutures *in situ*, and the wound was closed without drainage. There was much pain during the following night and little sleep. This lasted for a day or two, being most marked at night. On the sixth day the first dressing was changed and union *per primam* was found, the joint looking quite normal. Collodion and wool were applied. The skin stitches were removed on the ninth day, and the knee was massaged daily. He left the hospital on June 6th quite well. The temperature on the first and second days rose to 100·2° F., and then fell to practically normal. Convalescence was uninterrupted. I have not seen or heard of the patient since his discharge.

CASE 4.—A man, aged forty years, had always been healthy and very active. While playing football four months previously he felt his left knee give way under him while he was kicking the ball with his right foot. At the same moment he felt something slip in the joint, which was followed by great pain. He was compelled to rest for a month, and was then able to use the leg as before, but it was weak. A fortnight later he felt the same twist while bowling at cricket, but less severely than the first. Notwithstanding, in spite of keeping his bed for fourteen days, recovery was not so rapid and complete as before. A week before admission to University College Hospital, on June 23rd, 1896, exactly the same accident happened to his knee while leaning forward on a prop fixed in the ground. Since then he had kept his bed. On admission the knee was kept slightly flexed with a slight degree of rotation outwards. Flexion produced no pain. There was slight wasting of the thigh. The operation took place on July 2nd, 1896. The semilunar cartilage was only separated from the capsule at its posterior and inner aspect, and only slightly displaced inwards. Similar sutures and dressing to those in the other cases were used, and there was no drainage. The temperature rose gradually day by day to 101·2° F. on the seventh day, and then gradually fell to normal. Healing took place *per primam* except at one point, where one of the deep silk ligatures projected a little. The patient went home on July 31st. He returned to show himself some weeks later. He was walking well and was very cheerful about himself. One of the deep ligatures was seen projecting from a moist spot in the scar. This I removed. I have seen the patient since quite well and with a perfectly sound knee.

CASE 5.—A young naval officer had the usual history of several more or of less severe attacks in the right knee which had commenced three years before. The knee was slightly flexed and could not be extended fully, but there was not much pain and only trifling thickening round the joint. Nothing abnormal could be felt on the borders of the joint. On April 16th, 1896, I operated as before described and found the massive semilunar cartilage lying, bent and twisted, between the condyles. When drawn out with a hook it showed the greatest tendency to recoil to its old vicious position, and, in fact, did so when the hook was left to itself. This was so remarkable that I asked my friend, Dr. Dudley Buxton, who was giving chloroform, and who had seen my other cases, to come round from the patient's head and look at it. The meniscus was stitched in position, as in the other cases, and the wound closed without drainage. The wound healed *per primam*, but there was some effusion into the joint which absorbed slowly. When seen last Christmas there was still slight stiffness, but relief was otherwise complete. He is now abroad and quite well.

CASE 6.—A healthy young man, aged twenty-one years, first noticed a sharp click in his right knee while vaulting over a bar three years ago. There was pain at the same time, but this soon passed off. He experienced the same sensation shortly after. Finally, on May 2nd, 1897, two days before admission, while playing in a field and starting to run, his knee suddenly gave out, and he found he could not extend it easily or walk with any comfort. He was obliged to keep it somewhat flexed. On admission he complained of inability to extend the right knee, which was kept in a state of flexion, but could be moved in greater flexion without pain. There was no swelling of the joint, and nothing abnormal could be felt. On May 4th I operated precisely as in the other cases, and found the meniscus curled up in the inter-condyloid notch torn from its capsular attachments, except just at its anterior curve. It was reduced in flexion with a hook, and the rest of the operation was soon finished. There was absolutely no reaction in the joint, and when the superficial sutures were removed on the twelfth day primary union was complete.

Harley-street, W.

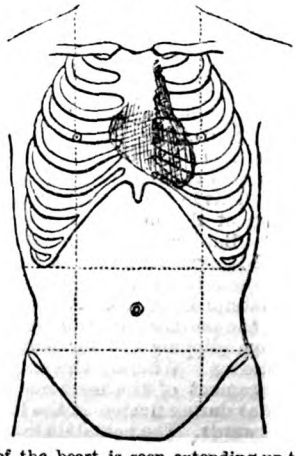
THE ROENTGEN RAYS IN MEDICAL DIAGNOSIS.

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THE following cases are of some interest in showing the value of the Roentgen rays in medical diagnosis. In all of them the fluorescent screen was used, as it is more certain and far less tedious than photography for making examinations of the chest. The diagrams show the appearances of the cases as seen upon the screen; the ribs and sternum, which in reality appear dark, have been left clear in the diagrams in order to avoid confusion.

CASE 1.—A man, aged forty-nine years, was admitted into the Middlesex Hospital complaining of paroxysmal attacks of pain in the chest which had occurred on and off for the past five years. On admission the physical signs were as follow: the apex beat of the heart was in the fifth interspace, but displaced a little outwards, so that it was in the vertical line of the nipple. The first sound was weak, but the second sound at the aortic base was loud and ringing in quality and was accompanied by a systolic murmur. The percussion note over the manubrium sterni was impaired, and some slight pulsation could also be felt over this area. The voice was rather hoarse occasionally, but a laryngeal examination showed that both the cords moved freely. Over the

FIG. 1.



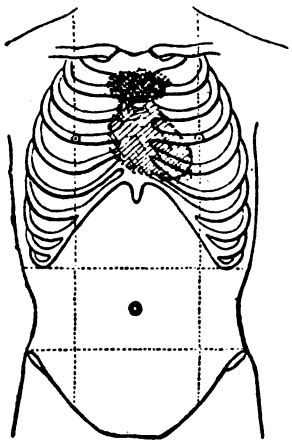
The shadow of the heart is seen extending up the left side of the sternum up to the first rib.

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upper part of the chest the veins were rather large. Dr. Coupland, under whose care the patient was, suspected the possibility of an aneurysm, and the patient was then examined by the Roentgen rays and a fluorescent screen. The result showed clearly that there was some enlargement of the first part of the aorta, and from the shape it seemed to indicate that the enlargement was fusiform rather than saccular. The appearance is seen in Fig. 1, which shows that the shadow of the heart, instead of terminating at its base in the usual way, has its left border prolonged upwards along the left side of the sternum.

CASE 2.—This case was kindly brought to me by Sir Richard Douglas-Powell. The patient complained of pain in the chest with paroxysmal attacks of coughing and dyspnœa. Physical examination showed that there was a dull area over the upper part of the sternum. Examination by the Roentgen rays showed a shadow corresponding to this area of dulness (Fig. 2). The shadow was not very well marked and its

FIG. 2.

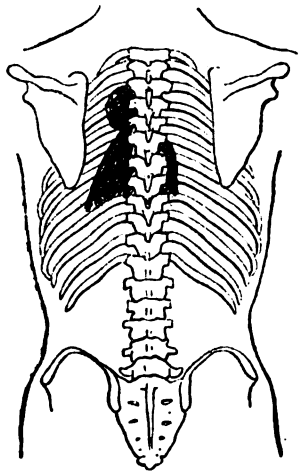


Showing the somewhat indefinite shadow at the level of the second ribs.

outlines were irregular, but it was quite distinct. From its appearance and the various symptoms it was thought that there might be a mediastinal abscess, but subsequent events have made it probable that it is an aneurysm.

CASE 3.—This was a case of aneurysm which I saw on three different occasions with Dr. Bezly Thorne. The patient, a man, aged forty-two years, had signs and symptoms of an aneurysm situated probably in the third part of the arch of

FIG. 3.

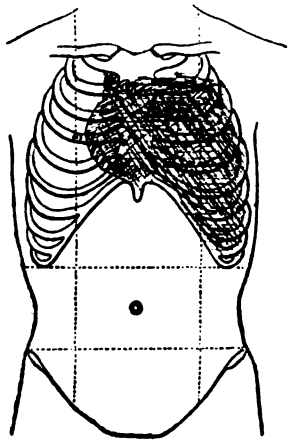


The shadow of the aneurysm is seen above the heart on the left side extending from the third to the fifth dorsal vertebra.

the aorta. The principal symptoms were pain, pulsation to the left of the heart in front, and paralysis of one vocal cord. On examination by the rays the posterior view showed the aneurysm very plainly. The shadow was very definite, situated above the shadow of the heart, and its outer border was sharply defined by a well-marked convex border. When viewed from the anterior the appearances were not so plain, but an ill-defined shadow could be seen which was continuous with that formed by the heart. The appearances of the aneurysm are shown in Fig. 3. This case was shown by Dr. Bezly Thorne at the Clinical Society on Feb. 26th, 1897.[1]

CASE 4.—This case, which was kindly brought to me by Dr. Biss, shows the appearance of a new growth in the chest which had displaced the heart. The patient had been under Dr. Biss's observation for a long time, and the symptoms and physical signs made it probable that the condition was that of a new growth complicated by some pleural effusion, though at one time the possibilities of an aneurysm had also been considered. The patient's chest had been tapped twice; the first time some fluid was drawn off, but at the second operation, which was performed a few days before she was examined by the rays, no fluid was obtained. On examining the patient with the rays and a fluorescent screen the left side of the chest was seen to be quite dark as high up as the second rib. Above this level there was a lighter area, but not so light as normally should be, evidently corresponding to the apex of the left lung. The heart was very much displaced; its convex right border was well marked and at one spot reached almost to the nipple line. The origin of the aorta, displaced a good deal to the right of the sternum, was also well seen, and its pulsations were distinctly visible (Fig. 4).

FIG. 4.



Showing the dark shadow of the left side of the chest with displacement of heart and aorta to the right.

I also saw several cases with Dr. Chapman of which I have unfortunately not preserved diagrams. Of course, in all such cases a positive result is of greater value than a negative one, as it may always be said that the aneurysm is either too small or situated in such a position that it did not show, but at the same time when a patient complains of thoracic symptoms and physical signs prove nothing it is in many cases a useful corroboration to know that the Roentgen rays show nothing also, and such a result has in several cases further strengthened the diagnosis.

Queen Anne-street, W.

LACERATIONS OF THE OS UTERI, VAGINA, AND PERINEUM IN SYPHILITIC WOMEN.

BY JOHN A. SHAW-MACKENZIE, M.D. LOND.

MRS. BOYD'S letter in THE LANCET of March 27th, while emphasising the fact that pneumonia is not unfrequently met with in syphilitics, introduces a point which has attracted my attention. I refer to the fact that in women obviously syphilitic, or whose husbands have suffered from syphilis previously to marriage, lacerations of the os, vagina, and perineum are not unfrequent. Such accidents, including uterine rupture, are probably more than coincidences, and

[1] Vide THE LANCET, March 6th, 1897.

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syphilis may possibly account for such when the accoucheur is in no way to blame. The following cases I have noted.

CASE 1.—A woman, aged thirty-nine years, complained of pelvic pain and backache. She had suffered from discharge for twelve months. She had had eight children; five had died, and there had been three still births and one abortion. She was suffering from prolapsed uterus; the perineum was absent, and she stated that forceps were used in one of her confinements. The pharynx was ulcerated.

CASE 2.—This patient three years ago had a bad confinement and the perineum was torn. She made a tedious recovery, the lochia lasting five weeks. During her pregnancy the hair fell out and she had suffered from ulcerated throat since. The uterus was prolapsed.

CASE 3.—This patient, aged thirty years, suffered from falling womb and discharge since the birth of a child ten years ago. There had been two live births and two abortions. She is subject to sore-throats and the pharynx is ulcerated. The vaginal mucous membrane shows a hyperæmic, patchy, measly condition. The lips of the urethra are in a purple, swollen condition. The perineum shows the cicatrix of previous repair, but is thin and papery, and the uterus is prolapsed.

CASE 4.—This patient, aged forty-five years, had been married twenty-six years. Her husband died from hemiplegia some years ago. One child was born twenty-five years ago, but died in infancy. The patient is now out of health, is suffering from menorrhagia, erosion of the os, profuse leucorrhœa, excoriation of the vagina, prolapse of the uterus, and ulcerated tags of previous rupture of the perineum.

CASE 5.—This patient had been married twice. Her first husband died from cerebral trouble. By him she had four children and one abortion. In three months from the second marriage abortion occurred, followed by eruption on the skin attributed to fish diet. The pharynx and tonsils are now excoriated and the voice is hoarse, while there is scattered acne on the back. Perineorrhaphy was performed after her first confinement.

CASE 6.—This patient complained of agony in intercourse. She has superficial sores of the internal labia, vaginitis, and endometritis. The pharynx is ulcerated and the glands are enlarged in the groin. The cicatrix of a repaired perineum is exquisitely tender to the touch.

CASE 7.—This patient, aged twenty-eight years, complained of pain in the back and groin. She had been married nine years. There had been four live births and one abortion. She had suffered from discharge for eight years. She was regular, but lost a great deal. Her hair fell out during the last conception, which ended in abortion. She had sore-throats at the same time, and the pharynx is now ulcerated. She has always lost a great deal of blood at her confinements. The cervix is split and everted.

CASE 8.—This patient was a woman, aged fifty years. Two girls were born in the first two years after marriage. Then the husband was very ill with "rheumatic fever." An abortion followed, then a live birth, then an abortion, and then two live births. The confinements have always been bad, with six weeks of lochia. After the second girl was born bleeding continued for three months. She now complains of abdominal and rectal pain. On vaginal examination the os uteri was found to be split and tethered to the vagina by bands in every direction, and the rectum is drawn in.

I would point out in connexion with such cases that labour is often protracted from uterine inertia, often necessitating forceps. The post-partum hæmorrhage is profuse and the lochia are prolonged. It is not very uncommon to meet with adhesions of the os uteri to the vagina, of increasing obstructive dysmenorrhœa, and sterility after one conception in parous women. The fibrous adhesions and fibroid condition met with in dilating the cervical canal are well known. Syphilitic stricture of the cervical canal or os uteri is apparently analogous to syphilitic stricture of the urethra in the male, and all the above-mentioned conditions may well illustrate some of the less ostensible symptoms of syphilis in parous women.

A further question follows. Why do plastic operations in women, undertaken with so much care and skill, often fail? The value of mercury in so many cases of pelvic disease in parous women not only testifies to a syphilitic basis, but probably makes it essential that mercurial treatment in many cases should go hand in hand with operative procedure.

Grosvenor-street, W.

A CASE OF ANKYLOSIS OF ALL THE JOINTS WITH COMPLETE CLOSURE OF THE JAWS, IN WHICH THE POWER OF MASTICATION WAS RESTORED BY DIVISION OF THE NECKS OF THE LOWER JAW:

WITH SOME REMARKS ON THE OPERATIVE TREATMENT OF CASES OF ANKYLOSIS OF THE TEMPORO-MAXILLARY JOINT.[1]

BY CHARLES A. MORTON, F.R.C.S. ENG.,

SURGEON TO THE BRISTOL GENERAL HOSPITAL AND PROFESSOR OF SURGERY IN UNIVERSITY COLLEGE, BRISTOL.

A MAN, aged fifty-seven years, was sent to me at the Bristol General Hospital by Mr. W. F. Carter, of Bristol, in October, 1896. In all the joints movement was limited, and in most there was complete fixation. The spine and head were perfectly rigid. Deformity was marked both in the large joints and in those of the hands and feet. In some joints where slight movement was possible there was coarse grating, and around a few joints distinct osteophytic outgrowths were present. Muscular wasting was extreme; the skin of some of the fingers was glossy, and some of the nails were of extraordinary thickness. The thickening of the nails was not present in all the fingers. The joint troubles began fourteen years previously in the knees, and the fingers were affected after the larger joints. He was able to walk with sticks until nine years ago. For the last six years he had been confined to bed and unable to feed himself, and for four years he had been unable to open his jaws and therefore unable to take solid food, and had simply sucked fluids between his teeth. He had had no joint trouble in early life, nor was there any family history of such disease. The following is a description of the condition of all the joints. Both knees were absolutely fixed at a right angle. The bony outline was very prominent from the wasting of the muscles, but no osteophytic growths were discovered. The tendons in the popliteal space did not feel contracted. No movement was detected in either hip-joint. There was limited movement in the left ankle, but the right ankle was almost completely fixed. All the toes of the left foot except the great toe were hyper-extended (some to a right angle with the dorsum), and the heads of the metatarsal bones from which they were displaced could be felt from the sole. The middle three toes of the right foot were in the position of hammer-toes. The nails on several toes were of extraordinary length and thickness. The left wrist was flexed almost to a right angle with the forearm and quite ankylosed. The fingers of the left hand were all flexed at the metacarpo-phalangeal joints, and there was marked deviation to the ulnar side. Movement in the finger joints was much limited. There was marked osteophytic outgrowth about the heads of the metacarpal bones. The nails on some of the fingers were almost normal, on others they formed a horny mass half an inch in thickness, and the skin of the fingers was glossy. There was no grating in any of the joints. The left thumb was also flexed at the metacarpo-phalangeal joint, but was hyper-extended at the terminal one, and movement in its joints was as limited as in the fingers. The right wrist was slightly flexed and very little movement was possible in it. All the fingers of the right hand were hyper-extended at the metacarpo-phalangeal joint, flexed at the middle phalangeal joint, and hyper-extended again at the terminal joint. There was hardly any movement possible in any of the joints, and osteophytic outgrowths were present on the dorsal aspect of the digital extremities of the first phalanges forming the middle phalangeal joint. The position of the right thumb was the same as the left. There was slight grating in its metacarpo-phalangeal joint. The left elbow was quite ankylosed and was much more flexed than a right angle with the upper arm. In the right elbow there was slight movement which was painful, and there were some sharp osteophytic outgrowths from the inner

[1] A paper read before the Bath and Bristol Branch of the British Medical Association.

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condyle. In the left shoulder rotation was possible to a slight extent, but was accompanied by coarse grating. In the right arm the movement at the shoulder was wholly scapular. There was no movement in any part of the spine, but no excessive bony growth could be detected. The chest only moved slightly on deep inspiration; in quiet breathing the abdominal wall alone moved. There was no evidence of rotation of the atlas on the axis, and it was doubtful whether there was any movement between the atlas and the occipital bone.

There is so much confusion between the terms chronic rheumatism, rheumatic arthritis, and rheumatoid arthritis that it would not perhaps be profitable to discuss at length the nature of the joint lesions, but taking the definite disease which is perhaps most clearly distinguished by the term osteo-arthritis we may inquire whether it was of this nature. The deformity, the coarse grating in the joints, the osteophytic outgrowth, and the glossy skin all point to the disease being a form of osteo-arthritis. On the other hand, true ankylosis, that is, ankylosis which is not merely the result of locking of osteophytic outgrowths, is rare in osteo-arthritis. In this case the fixation of the joints was clearly not due to osteophytic outgrowths, for they were only present around a few joints and were absent in many which were absolutely fixed. I cannot find the record of any case of ankylosis of the temporo-maxillary joints in osteo-arthritis, though they have become ankylosed from traumatism and suppurative arthritis in several cases. The first time the condyle was excised was for osteo-arthritis. There was no ankylosis, but great enlargement of the condyle, producing marked deformity of the jaw. This was Professor Humphry's case, and was published in the *Medical Association Journal* in 1856.[2] In another case (one of Mr. Heath's)[3] there was also enlargement of the condyle, and a bony mass united it to the malar bone. In one recorded case of ankylosis of this joint, to which reference will be again made, the patient had had rheumatic fever and suffered from recurrent sub-acute attacks.[4]

In my own case there was no evidence of enlargement of the condyles, but there was complete fixation of the joint, so that the jaws could not be opened. It was, of course, impossible to tell whether the ankylosis affected one or both joints. To remedy such a condition either the adhesion in the joint must be broken down, or the joint excised, or a new joint formed. It was impossible in this case to lever open the jaws, as the teeth could not be separated at all, and hence no wedge or screw-gag could be introduced; and, moreover, Mr. Paul Swain has shown, from the collected records of cases, that all such attempts fail.[5] A new joint has usually been formed by removal of a wedge of bone just in front of the angle of the jaw—Esmarch's operation. The respective advantages and disadvantages of the two operations I will consider presently. I decided on excision of the condyle or condyles, and the operation I am about to describe was performed in exactly the same way on both sides, as the ankylosis was found to be bilateral. It was done on Oct. 27th, 1896. An incision was made about one inch in length parallel with, and a quarter of an inch below, the lower border of the zygoma, commencing just in front of the ear and extending forwards, therefore beginning over the temporal artery, but not deep enough at that spot to wound it. A portion of the parotid gland, superficial fascia, and fat were divided, and several small vessels were tied. The masseter was then exposed and was divided, and I came down on the zygoma, with the neck of the jaw fixed to it as if it were one bone. There was no sign of any joint, nor could any movement be made out on attempting to open the jaw. I then inserted a curved narrow copper spatula under the neck from behind, so as to separate it from the internal maxillary and other vessels, and divided the neck with an Adam's saw and a few chisel cuts. When I found the joint was completely obliterated I gave up the idea of excising the condyle. I saw no branches of the facial nerve on the right side; on the left, when retracting the fascia over the masseter, the orbicularis palpebrarum and oris both twitched. When separating the divided portions of the neck on the left side with a periosteal elevator some rather free bleeding occurred from a vessel behind the neck—probably a torn venous branch—and I had to leave a pair of pressure forceps on, as it was impossible to tie it. These were removed next day, and the wounds healed without suppuration. After divisions of both necks I was able to lever the jaw open, so that there was a space of a quarter of an inch between the teeth, and a few days after the operation he could open it one-eighth of an inch more and could eat all kinds of solid food. Nearly a month after the operation I opened the jaw with a screw gag under chloroform so that there was nearly an inch space between the teeth. I heard in February of this year that he was still able to eat solid food easily.[6] There was a little paresis of the left orbicularis palpebrarum after the operation, but with the application of the faradaic current this soon passed off.

After excision of the condyle or division of the neck of the jaw the difficulty in forcing open the jaw lies in the contracted condition of the muscles, especially the temporal muscle. After dividing the neck on both sides in this case I found the movement at the point of section free, but the contracted temporal and masseter muscles kept the jaws from separating to any extent, and I had to gradually lever them open in order to obtain a satisfactory result, a process which was repeated some weeks after the operation. I believe that it is best to make only a horizontal incision below the zygoma, and not a vertical one at all, as division of branches of the facial nerve is more likely to occur with the latter, however short, and I believe it would not give a distinctly greater access to the joint than a fairly long horizontal incision.

The respective advantages and disadvantages of excision of the condyle and Esmarch's operation of removal of a wedge-shaped piece of bone from just in front of the angle of the jaw remain to be considered. It seems to me that if we can liberate the joint so that it will not again become fixed it would be much better to do so than to perform Esmarch's operation. After a double Esmarch's operation the body would be quite cut off from the ascending rami, so that the masseters, temporals, and pterygoids could not act on the movable portion, and the ability to close the jaw would be lost; nor could any antero-posterior or lateral masticatory movements be performed. It seems possible that in time the buccinator might partially take on the action of the masseter and be able partly to close the jaw. That the power of closure does return is shown by the records of cases in which the operation has been performed, but it does not become possible for lateral masticatory movements to be carried on. If the wedge in Esmarch's operation is taken out so far back as to include the angle, as has been done in a few cases, then the attachment of the masseter would not necessarily be wholly separated from the movable portion, and closure could be feebly effected by the portion left attached. On the other hand, some surgeons have brought forward this very severance of the movable portion of the jaw from the masseter and other muscles which close the jaw as a great advantage of Esmarch's operation, for it, of course, tends to prevent the divided portions of jaw being forcibly drawn together and so reunited. The most serious objection to operation on the joint is the unfortunate tendency there is for it to become again fixed after operation; and no doubt the temporo-maxillary joint is in a somewhat dangerous locality for operative interference, with the internal maxillary artery so close to it beneath and the branches of the facial nerve lying over it in the way of the necessary incision. Temporary paralysis of some of the branches of the nerve is not uncommon after the operation, and in one case the external carotid artery was wounded.[7] The facial artery might be wounded in Esmarch's operation, but could probably be pushed out of the way, or if divided could be easily secured, whereas the internal maxillary artery if wounded might be very difficult to secure, as it lies behind the junction of the neck and ascending ramus. The inferior dental artery is divided in Esmarch's operation, but does not bleed when sawn through, nor does division of the inferior dental nerve give rise to any trouble. If Esmarch's operation is performed for fixation of the jaw due to a unilateral cause, then the muscles of the side on which the operation has not been performed will, of course, close the jaw, but antero-posterior and lateral masticatory movements would necessarily be very imperfect from the inability of the external pterygoid, masseter, and temporal muscles to act on the side from which the wedge had been removed. We should, indeed, expect the body of the jaw to be somewhat pushed over to the side operated on by the external pterygoid of the

[2] Page 61.
[3] Brit. Med. Jour., vol. ii., 1884.
[4] Bennett: Transactions of the Clinical Society, vol. xxii.
[5] THE LANCET, July 28th, 1894, p. 187.

[6] A later report (July 15th, 1897) said that he could eat solid food, but could not open the jaw as widely as in February.
[7] Allingham: Brit. Med. Jour., vol. i., 1890, p. 129.

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other side. It has sometimes happened after Esmarch's operation on both sides that the power of swallowing has been interfered with from loss of a fixed point for action of the elevators of the hyoid bone when the body of the jaw has been detached from the rami. A case under Mr. Bennett's care[8] so well illustrates the advantages and disadvantages of Esmarch's operation and excision of the condyle that I will give a short abstract of it. The patient suffered from complete fixation of the jaw. Mr. Howse, at Guy's Hospital, exposed both temporo maxillary joints, finding very firm ankylosis, and excised both condyles. The joint again became fixed, and Mr. Howse then removed a portion of one ascending ramus, but this subsequently united. Mr. Bennett then performed Esmarch's operation on both sides with a week's interval. The jaw opened after the second operation, but the patient was quite unable to close it, and as the elevator muscles of the hyoid bone had no longer a fixed point of attachment he became unable to swallow and had to be fed by a tube passed through the nose and down the pharynx for two days. The jaw was then fixed in position by an elastic bandage and the power of swallowing returned. The power to close the jaw also ultimately returned. Mr. Paul Swain reports[9] a case of bilateral ankylosis in which he removed a triangular piece of bone from both angles of the jaw at one operation with very satisfactory results. There was no interference with swallowing, and no mention is made of inability to close the jaw. Doubtless some anterior fibres of the muscles were attached to the lower jaw in front of the section of the bone, and enabled the patient to close the jaw, and thus give the hyoid muscles their fixed point for action. There are, of course, many cases in which we have no choice between an operation on the joint and Esmarch's operation—cases in which the jaw is fixed by a dense cicatrix such as may follow cancrum oris or injury to the cheek or jaws. In such cases we must make a false joint in front of the cicatrix, but they are almost always unilateral.

Mr. Paul Swain has collected[10] the records of twenty cases of operation for closure of the jaws the result of injury or disease of the temporo-maxillary articulation. He found that out of this number seven resulted from the after effects of scarlet fever, three from measles and subsequent otorrhœa, three from rheumatism, two from affections of the teeth, and five from injury. In eleven cases the condyle or a portion of the neck was excised, and in five Esmarch's operation was performed. To the cases collected by Mr. Paul Swain must be added four recently published by Mr. Arbuthnot Lane.[11]

CASE 1.—Bony ankylosis after fracture of the zygoma. The upper and posterior angle of the jaw with a portion of the temporal bone to which it was fused was excised with good result.

CASE 2.—Bony ankylosis from old suppurative arthritis, with very imperfect development of the jaw. The same operation was performed, and the body of the jaw was divided as well to overcome the deformity. The result was good.

CASE 3 —Bony ankylosis after scarlet fever. Same operation and result.

CASE 4.—Bony ankylosis after abscess in the neighbourhood of the jaw. Same operation and result.

All these patients were children. Mr. Lane has operated once in an adult and obtained a very good result for a time, but relapse took place and he had to remove more bone. He lays stress on the difficulty of thoroughly free removal of bone in these cases, as all trace of the joint has disappeared and the neck is ill developed, but believes that it must be freely removed to ensure a successful result.[12]

Clifton, Bristol.

[8] Transactions of the Clinical Society, vol. xxii.
[9] THE LANCET, July 28th, 1894, p. 189.
[10] THE LANCET, July 28th, 1894, p. 187
[11] Transactions of the Clinical Society, 1896, p. 1.
[12] Since sending this paper for publication a very valuable contribution from Dr. Cabot, of Boston, on the Surgical Treatment of Ankylosis of the Temporo-maxillary Articulation has been published in THE LANCET of Aug. 7th, p. 304, and I am interested to see that Dr. Cabot advocates division of the condyle in preference to Esmarch's method, and records seven cases in which he performed this operation.

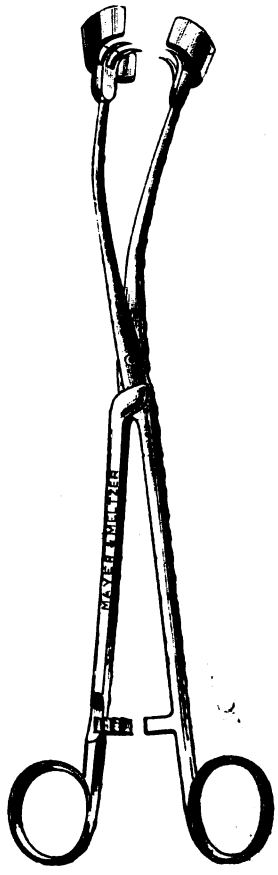
DR. GRANVILLE BANTOCK has been elected an Honorary Fellow of the Obstetrical Society of Edinburgh.

NOTES ON A CASE OF PAN-HYSTERECTOMY.

BY M. U. O'SULLIVAN, L.R.C.P. EDIN.

I AM sure that every surgeon of experience in the operation of abdominal pan-hysterectomy will admit at once that the chief difficulties are encountered in dealing with the floor of the pelvis and roof of the vagina. It has long appeared to me that a suitable vaginal guide would not only materially facilitate operative technique at this juncture, but would obviate the danger of encroaching too much on the roof of the vagina. In my first six cases of complete extirpation I resorted to the abdomino-vaginal method, commencing the operation as in the first stage of vaginal hysterectomy; but this method is open to the objection that upon opening the peritoneal cavity some special indication may be found against completing the operation on the lines originally intended, leaving the patient with a vaginal wound to still further hamper her recovery. Mr. Bowreman Jessett, in this operation, used a Ferguson speculum, pushed up by an assistant as a guide; but the difficulty—or, rather, I should say, the hopelessness — of keeping the vaginal cervix in the vast majority of "fibroids" within the lumen of a speculum is at once obvious. Other surgeons have used the finger of an assistant pushed up into the vagina as a guide to cut down upon, but this is a procedure not likely to recommend itself to the precise and careful operator. The vaginal forceps (Fig. 1) and director, of which illustrations appear, has been used in four cases with much advantage to the patient and with the greatest satisfaction to myself. It was made after my direction by Messrs. Mayer and Meltzer. I give the notes of one case.

FIG. 1.

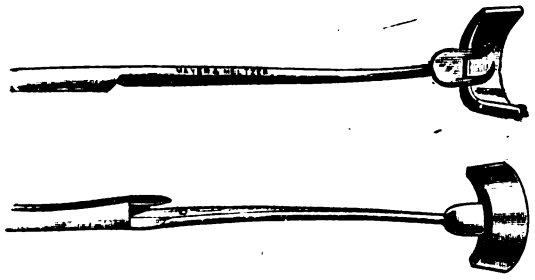


A woman, aged forty years, single, was admitted to the Women's Hospital, Melbourne, on July 8th, 1896. The catamenia first appeared at the age of twelve years; she was regular up to two years ago, but the menses had been irregular, profuse, and painful during the past two years. During the past three months she had complained of severe pain in the right iliac fossa and sacral region, frequency and pain in micturition, bearing down, &c. On examination, a rounded median tumour of hard consistence could be felt filling the pelvis and extending above the umbilicus. The cervix uteri was pushed far back in the hollow of the sacrum. The patient was prepared as for cœliotomy and vaginal hysterectomy and was placed in the lithotomy position, the lower limbs being separated by assistants. A Sims speculum was passed, and the vagina thoroughly scrubbed with a 1 in 500 perchloride solution. The cervix was now grasped with the combined vaginal forceps and director, the blades of which were firmly locked and the patient returned to the supine position. The abdomen was opened by a free incision extending from above the umbilicus to within a short distance of the pubes, and the tumour "delivered"—this being very materially facilitated by an assistant steadily pushing the tumour and uterus towards the abdominal cavity, on the forceps and director, within the

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cup-shaped end of which the cervix sits, firmly held. (And here) I would claim that there is a decided advantage in being able to dispense with, in many cases, the ponderous prehension forceps generally used for elevating uterine fibroids through the abdominal wound during operation, and

FIG. 2.



Forceps with blades unlocked.

so preventing the annoying hæmorrhage which sometimes takes place from forceps punctures of such tumours.) The broad ligaments were divided between two rows of ligatures, and the usual peritoneal flaps dissected down off the anterior and posterior surfaces of the uterus with blunt scissors and finger. The uterine arteries were now easily picked up on an aneurysm needle and secured outside the reflected peritoneum. The vagina was opened by running a knife around the cervix, within the hollow of the vaginal director, which was still steadied by an assistant and easily felt. Now, instead of suturing the peritoneal flaps as I have done in previous cases, I passed about half a dozen long silk sutures through the edges of the peritoneal flaps and drew them into the vagina, thus completely closing the peritoneal floor. With a Sims speculum the vagina was now well packed with iodoform gauze, firm traction being kept on the flap sutures during the packing. The abdominal wound was closed with deep silkworm gut and superficial horsehair sutures. The vaginal packing was removed on the fourth day after operation, and the sutures on the eighth day. The patient made a perfect recovery and left the hospital on Aug. 27th, 1896.

Melbourne.

A CASE OF HEMICHOREA WITH APHASIA.

BY S. J. ROSS, M.B., CH.B. VICT.,
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A GIRL, aged fourteen years, at the age of eight years had had an attack of acute rheumatism which left traces behind in the form of well-marked mitral regurgitation. A week before being seen she was thrown from a cart, and on the day following the accident her mother noticed that her right arm and leg were constantly in motion and she was restless and never answered questions put to her. Thinking "she was merely shaken" she was put to bed, her parents hoping that by taking rest she would soon be well again. However, as she did not improve I was asked to see her seven days after her fall from the cart. Her condition at this time was as follows. She was in a condition of marked cerebral instability, now laughing and the next minute in tears. Her pupils were dilated. There were marked choreiform movements in the right arm and leg. The tongue was protruded with a jerk and as suddenly withdrawn. The knee-jerk on the right side was exaggerated; on the left side it was normal. Sensation was normal. There were marked cardiac irregularity and a mitral systolic murmur conducted to the back, with accentuation of the pulmonary second sound. On being asked questions the patient simply nodded assent or dissent. The movements ceased during sleep.

The treatment adopted was absolute rest, milk only, arsenical solution in increasing doses—as diet at one time she was taking ten minims three times a day—and occasional purgatives. In six weeks she was on full diet and had perfectly regained her power of speech.

Remarks.—A case such as this points clearly to the cerebral origin of the lesion. The emotion and cessation of movements during sleep, the exaggerated right knee-jerk and aphasia, point clearly to a lesion on the left side of the brain, not permanent, but functional, or at any rate capable of complete resolution. What the exact pathological change may be is not known, and, indeed, we must be left in doubt as chorea is a disease so amenable to treatment. Gowers suggests a lowered resistance on the part of the cerebral cells. If this be true it is curious that in cases such as this of true hemichorea this lowered resistance should be limited to the cells on one side of the brain. Others have suggested a rheumatic inflammation of the cerebral neuroglia—a neurogliosis—these nodules corresponding to the periosteal nodes so frequently found along bones such as the tibia. Whatever the exact pathological change may be it is certainly curious that arsenic should have absolute control over it—a control which no other drug possesses, except, perhaps, in those cases of convulsive or epileptiform varieties of chorea when a combination of chloral hydrate and bromide of potassium is the most successful treatment, at any rate at first, arsenic frequently being resorted to after the convulsive stage has passed. In offering these remarks of course I do not include that form of nervous disturbance which is often called post-hemiplegic chorea, but which ought rather to be called post-hemiplegic mobile spasm, as suggested by Gowers.

A CASE OF OBSTRUCTIVE SUPPRESSION OF URINE.

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A LITTLE girl, aged eleven years, was brought to the Brompton Hospital for Consumption and Diseases of the Chest in a state of collapse, the mother stating that almost incessant vomiting had occurred for a week; the bowels had been confined during that period. The aspect was suggestively abdominal, and the case appeared to be one of intestinal obstruction. The patient was at once admitted under Dr. Green, who has most kindly allowed me to write this account. The more complete examination then possible failed to detect any abdominal tumour or evidence of peritonitis. The child, although drowsy, was quite conscious; the temperature in the axilla was 96° F.; the pulse 120 per minute, small and thready; and the respirations were 25 per minute and shallow. On auscultation an apical systolic bruit and moist râles, with friction sounds at the posterior bases of both lungs, were heard. There was no œdema. Spasms of the levatores palpebrarum and internal recti occurred every few minutes, but no other muscular twitchings were noted. The tongue was very foul and the breath was urinous. Further inquiry elicited the fact that three years previously an operation—details of which I have been unable to ascertain—was performed for an abscess of the right kidney. Two years previously there had been a severe illness, lasting several days, the prominent feature of which was agonising pain in the loin. For the last ten days or so there had been much headache, and for a week frequent vomiting. For at least five days prior to admission no urine had been passed, and for several months previously the child had passed urine only at comparatively long intervals (twenty-four hours or more), and then with pain. During the night after admission seven and a half ounces of turbid urine were passed. The urine was acid, of specific gravity 1020, gave a heavy precipitate with picric acid solution, and contained many pus cells, but was without either casts or blood. No more urine was passed during life, and after death the bladder was found to be empty. Vomiting occurred four or five times during the following day, and the spasms of the ocular muscles happened as frequently as before. The pupils were equal and slightly dilated. The child rallied slightly on the whole; the pulse improved, and the rectal temperature rose to 98°, and subsequently to 100°. Towards night the respirations, which had been tranquil, became hissing in character, and the rate rose to 30 or 35 per minute. The drowsiness increased at the same time. By the early morning these symptoms had passed off, but only to recur with greater severity for an hour or two before death, which took place rather suddenly

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forty-eight hours after admission. Vomiting had taken place about a dozen times in the two days. The child was conscious, and answered questions two hours before death. The only symptom that developed under observation was the hissing character of the respirations.

At the necropsy, which was made by Dr. Habershon, there was found general acute pleurisy, with a deposit of thick yellow lymph over the lower lobe of each lung. The heart weighed four and three-quarter ounces, and the wall of the left ventricle was thickened without any obvious valvular lesion. In the place of the right kidney there was found a mass of fat and fibrous tissue which on section displayed a smooth cavity three inches in length, connected with which were one or two much smaller cavities. These cavities, which obviously represented the pelvis and calices of the kidney, held a few drachms of brownish fluid. A few islets of renal tissue were found scattered in the fat and fibrous tissue. The right ureter (four and a half inches in length) was moderately dilated, and its opening into what had been the pelvis of the kidney was completely blocked. The wall of the bladder was three-quarters of an inch in thickness, and the whole organ was hypertrophied without any obvious dilatation. The mucous membrane of the bladder was deeply congested and much pigmented. The left kidney was enlarged, four inches in length, and the pelvis and calices were much dilated. The pyramids were flattened to a thin layer, and the cortex, which was not congested, was slightly fatty and about three-eighths of an inch in thickness. The capsule was not unduly adherent. The first two inches of the left ureter below the pelvis of the kidney were dilated, admitting the little finger with ease. The pelvis and calices of the kidney and this portion of the ureter were distended with clear, urinous fluid. At two inches from its point of origin the ureter was narrowed and the mucous membrane for half an inch vertically was much puckered as if by cicatrisation. A horizontal fold of mucous membrane here formed a valvular, but complete, obstruction which could only have been overcome by dilatation of the narrowed portion of the ureter. Below the point of complete obstruction the ureter was again dilated and tortuous, its total length being six and a half inches. The ureter below the obstruction contained no fluid. Probably when the pressure of urine accumulated above the valve reached a certain degree the narrowed portion of the ureter yielded, allowing urine to escape through the valve. The fatal issue must have been due to the fact that finally the obstruction could not be thus overcome, and the pressure of urine accumulated above it had reached the point at which (according to the general view of the pathology of suppression in these cases) further secretion of urine was no longer possible.

The readiest explanation of the anatomical facts seemed to be that the stenosis and puckering were the result of a cicatrix following injury to the ureteric wall from the passage of a calculus, presumably at the time of the illness two years previously. To the obstruction, which must necessarily have been intermittent only until the last week of life, was due the dilatation of the kidney and first part of the ureter. The dilatation of the lower part of the left ureter may have been due to the obstruction afforded by the hypertrophied wall of the bladder. There was no anatomical evidence that regurgitation of urine from the bladder into the ureter had occurred. I have been unable to ascertain whether or no the "abscess" of the right kidney was due to stone. Probably it was. The hypertrophy of the bladder may have resulted (as in diabetes) from the increased quantities of urine it had been called on to discharge from time to time; but the chronic cystitis suggested a more likely cause—namely, that a stone had been retained in the bladder, setting up intermittent obstruction at the neck. The parents could give no information on this as on several other points, beyond stating that the urine had frequently smelt foul and that its passage had given rise to pain.

Although the interpretation of the case in several respects is uncertain, there can, I think, be very little doubt that death was due to obstructive suppression of urine. Clinically, there were two points of difference from the description usually given of such cases—(1) it was the urinous smell that first suggested the correct diagnosis; and (2) the vomiting was so severe as to suggest intestinal obstruction. In another case that I have seen (in which simultaneous plugging of the ureters by calculi had occurred), vomiting was so grave a symptom as to lead to the diagnosis of intestinal obstruction. Sir William Roberts states that an urinous smell is hardly ever, and persistent vomiting seldom, a symptom of obstructive suppression of urine. It is not easy to see why the symptoms of this form of suppression of urine should differ so widely from those of non-obstructive suppression, or why life should be, in the one group of cases, prolonged for such relatively long periods after secretion of urine has ceased without coma supervening. It is generally recognised now that the kidney has other than purely excretory functions, and it is perhaps possible that in obstructive suppression it is the excretory function only or chiefly that is in abeyance, while in non-obstructive suppression all renal functions are suspended. There is experimental evidence which goes some way towards proving that urine ceases to be excreted when the pressure of urine in the pelvis counterpoises the pressure in the renal arterioles. If this be the mechanism of suppression in the obstructive cases, it is quite possible that under such conditions the kidney cells might continue their metabolic (internal secretory) functions. But when such organic disturbance of the renal cells occurs as must be the case in acute nephritis leading to suppression of urine, it is hard to see how any renal functions whatever can be efficiently performed. If this view be in any degree valid we have perhaps some explanation of the difference in symptoms between the two classes of cases of suppression of urine.

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INFLUENZA.

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THE recent extensive acquaintance with epidemics of this disease in a virulent form, not only in this country, but throughout the world, is perhaps one of the most instructive and important experiences of the last few years. True it is that, looked at from one aspect, influenza may be classed as a minor scourge. It is well that this is so, because science seems as yet almost completely powerless in arresting its spread. As a rule, when properly managed and skilfully treated from the outset, patients do not succumb. Unless dangerous complications are present at first or arise in the course of the complaint the percentage of deaths is only small. Nevertheless, as is well known, very large numbers of people have been affected and rendered incapable. Not only is it the case that whole communities are liable to be stricken down, but it is also a fact that the victims are prostrated with marked nervous, febrile, and catarrhal symptoms, and are afterwards liable to be attacked with distressing and debilitating sequelæ.

One of the most important points is that symptoms pointing to implication of the nervous system are produced, although it has been in past times held that influenza is essentially manifested by a specific kind of inflammation of the respiratory and alimentary tracts almost exclusively, affecting sometimes in chief part either the one or the other of these, or at other times both either coincidently or consecutively. Now we know from repeated practical experience that we must include the nervous system as liable to be attacked quite as readily as either the respiratory or the digestive system. In fact, we must really look upon it as a general infection of the whole system, the blood no doubt being the medium of the distribution of the poison to all parts. However, it often appears to be the case that the one or the other of these two systems may be the primary seat of manifestation. In reality, then, we are considering a specific fever with well-known symptoms, now practically very familiar. As for the temperature, it may be high, and as a rule in all severe cases the mental collapse is so extreme that to the sufferer it may well seem that even death would be preferable to such misery as is experienced. Yet, although not only its origin from infection, but also its pathology, are extremely simple, the disease may well be termed a protean malady, since so many degrees of severity and so many apparently distinct forms does it assume. It is not, however, difficult to understand why this malady should affect in divers ways different people and the same person under dissimilar conditions. As a matter of fact, all diseases are liable to variations of type, as is well known; but this is more strikingly shown in the case of influenza, partly, perhaps, on account of its very wide and almost

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universal distribution, and principally, perhaps, because there is scarcely a part of the system which is not vulnerable to its virus.

The rashes of influenza cases are confusing and apt to mislead; and I have seen a girl with a rash like that of typhus fever where there was probably nothing but a very bad attack of influenza. However, no importance can be attached to one such rash. On the other hand, cases repeatedly arise where we have little more serious to deal with than the simple coryza which undoubtedly may arise from a chill or benign cold. Probably such mild influenzas might, after all, be caused by an attenuated virus, for no doubt such germs are practically omnipresent in the air to a greater or less extent—at any rate, during epidemics. Similarly one may mention the two kinds of chancres, benign and malignant, the two kinds of psoriasis, the two kinds of diphtheritic throats, perhaps similarly related.

Horses, and probably most other animals, including cats, which probably often serve as channels of infection, are liable to attack. It seems to be without doubt carried through the air, and probably by the prevailing winds for long distances. Its progress is irresistible, and there is no known method of escaping from the infection. That the malady can be wafted over seas, oceans, and lakes seems at least probable, for many cases are known of sailors far away from land being affected. Unless the period of incubation be a very long one—a supposition we do not like to admit without very good proofs—we have no other very likely explanation of such examples, except, indeed, the possibility of clothes carrying the germs of the disease, and then a chill or exposure to cold rendering the object of attack vulnerable To this we prefer the air-borne theory of transmission. We all recollect how, although we were well prepared by the newspapers for its expected appearance amongst us, many of us did not at first recognise the early indications of its presence in our midst. Very soon, however, as case followed case, it was very clear that we had to deal with a specific disease more important than the perennial epidemics of ordinary colds. This fever which was ravaging the whole country manifestly presented some peculiar and hitherto unfamiliar features. A very large number of cases presenting all degrees of severity came under the treatment of every practitioner, and we soon learned to recognise the cases at once, and their correct management and treatment was simple enough, the only difficulty being that the medical man himself was sure to be affected sooner or later, and it is no exaggeration to say that most of us were nearly worked to death, and not a few actually died in consequence of carrying on work when incapacitated.

It has often passed current as true that a low state of the general health made one more liable to attack. This is a statement which, however probable it may appear to be as an *a priori* assumption, is not consistent with facts. It is in short an inference for which there is no foundation. Indeed, the healthier one may be the more likely he will be, if exposed to a sufficient degree of infection, to fall down a victim. The strongest and most robust agricultural labourers living a healthy and regular life were readily affected, especially, perhaps, in cold and wet weather. One attack, so far from conferring immunity, seems to render an individual more prone to subsequent infection, provided a short interval has elapsed. In other words, any immunity which there may be is of the most transient nature. There are very few people who have not suffered from influenza, and even many of these may have really had it in a mild form without its true nature being recognised, or, if not, they may look upon it as a probable treat in store. Most persons have had it more than once, whilst many have repeatedly been afflicted, some, like myself, so frequently that they have lost count of the exact number of times. All those who are liable to be brought into relation with patients suffering from this malady should exercise the greatest care, not only to prevent themselves getting the disease, but also to carry out such measures as would be likely to destroy the germs before they really gained a hold over the system, and thus cut short the infection. One of the very worst attacks I have personally had arose as a result of a professional visit to a very bad case. At this time, having recently returned from a short holiday and being in very good health (so that it seemed almost impossible to catch cold), the only precaution I took was washing carefully and smoking. These measures were not sufficient. It has been held that the period of incubation varies from a few hours to even as long as three weeks. In all probability it is usually only a few hours, and seldom or never more than a day or two. Any evidence of a more prolonged period is vitiated by the fact that it is impossible in nearly all cases to exclude the idea of another source of infection.

It is also said that the invasion may either be gradual or sudden; but in most cases influenza is rather abrupt both in its onset and in its subsidence. A not uncommon first sign of attack appears to be an itchiness and smarting of the eyes and eyelids. The patient feels inclined, in consequence of this uneasiness, to rub the eyes. This itching is apparently caused by a catarrh of the conjunctivæ and is soon accompanied by a copious watering of the eyes. The catarrh very quickly extends to the nose and spreads rapidly downwards, the nasal cavities feel hot and dry, and soon a watery, acrid discharge flows profusely, causing repeated sneezing, and frequently a very uneasy feeling of stoppage and obstruction in the nasal cavities (coryza). Then there are chills or rigors and great misery, lassitude, and prostration, and not uncommonly a feeling of impending death. There is, as a rule, an intense and most painful headache, generally frontal, and perhaps due in part, but not entirely, to congestion of the membrane lining the frontal sinuses. The aching is not always confined to the frontal region. Any part, or, indeed, the whole head, may ache. There is nearly always a feeling of nausea, often actual vomiting, which may be most violent and uncontrollable (comparable even to the violent vomiting which may usher in an attack of small-pox or other specific fever). Pains in the body and limbs may supervene, either very shortly or perhaps the next day. The patient often complains of aching all over, and so great is his misery that he may even long for death to end his sufferings. As for the temperature, it may be normal or only elevated a little, perhaps about one degree or a little more, or it may rise more or less rapidly as high as 104° or 105° F. The skin may either be hot and dry or it may be moist and bedewed with a sour perspiration. The urine may be, after standing, cloudy with deposit of urates, and frequently it is very bad indeed in this respect, being like very muddy water; the sneezing may soon cease or may continue for a day; the power of smell and of taste is impaired; there is a sense of severe dejection, and very likely a very profuse discharge from the nostrils, which may be so copious as at times almost to occlude the nares, and no doubt this excretion augments the headache. Soon sore-throat (mouth, tongue, pharynx, and trachea) and hoarseness come on. At first the throat may be dry, but soon there is expectoration, which extends until bronchitis supervenes. Looking at the back of the mouth one is struck with the intense redness, due to engorgement of the small blood-vessels. This colour is generally demarcated rather sharply just in front of the pillars of the fauces, and forms a striking contrast to the appearance of the tongue, which may be whitish or yellowish white or of a nasty virulent yellowish hue, generally with thick, sticky, moist fur, not like that of ordinary torpidity of the liver, but something almost characteristic and to some extent even diagnostic. Sometimes the tongue is more like that of scarlet fever, being dotted with numerous white spots. Again, in other cases the tongue may be quite clear. This appearance is coupled with a feeling as if the throat had been powerfully scarified with a blunt and rusty knife or old saw. This feeling, though imperceptible in its growth, is worst at an early time of the disease, during the engorging of the blood-vessels and before the redness is best shown. In other words, when the congestion has really occurred the feeling is not so bad. There may be pain along the Eustachian tube, coupled with some deafness. About the lips there is often a herpetic eruption, and a rash often appears on the cheeks, neck, and chest. As a rule the patient is thirsty and has no appetite for food. There is nearly always great prostration and helplessness. At first there may even be inability to get into bed, or at least difficulty in doing so, and, in addition, severe physical discomfort may be experienced. One feels inclined to lie down in sheer exhaustion after the restlessness of the febrile stage has passed, and, as above said, even death may seem to be imminent and desirable to the sufferer. There may or may not be a feeling of oppression across the chest, and severe aching and shooting pains in the head, neck, chest, back, limbs, and abdomen are not unusual. Coupled with the epigastric pain and tenderness (from which the title "la grippe" derived its applicability) there may be nausea and vomiting, and perhaps diarrhœa or constipation. Giddiness and restlessness may be present. It

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is not an uncommon occurrence in severe cases for the sufferer to be suddenly struck down helpless, thus presenting a great similarity to the effects of an apoplectic stroke. A case of pure influenza, very much like one of cerebral apoplexy, was that of a woman of mature age, who was attacked with the disease whilst walking in the street homewards. She had been taken into an inn, and was lying quite helpless on the sofa when I arrived, and was almost unconscious and not able to satisfactorily reply to questions. After partially coming to this patient had to be sent home in a cab. This was really nothing more than a sharp seizure of the disease under consideration, yet there was in all probability meningitis and cerebral congestion in this as in several similar cases. It was not only in persons of mature age, nor in the weak, infirm, and unhealthy, nor was it in the intellectual classes that these marked nervous phenomena generally occurred. Another instance was a strong young man who, when I arrived, was similarly prostrate, dazed, and helpless, with the tongue very markedly furred with a nasty yellow covering. He had to be practically carried upstairs to bed, as he had lost nearly all power of movement. Delirium, stupor, and convulsions may occur, and stupor is often shown. In one case, or I may say in two, though I have some doubts as to the exact causation in one of these, continued drowsiness, and, indeed, actual sleep, occurred for the best part of three and a half days. There was in the case which I am clear was one of influenza no danger whatever; but this sleep was uncontrollable, and, indeed, seemed necessary for recovery. These were both young girls. The one about whom I am certain is now married, and I saw her a short time ago and referred to this influenza-sleep which occurred some few years ago. It was a peculiar case, and the sleeping was perfectly genuine. With regard to the pulse, it is as a rule frequent, full, and bounding, but it generally soon becomes soft, weak, and slower.

With regard to prognosis, very early or advanced age, or chronic pulmonary or cardiac disease, and especially, perhaps, nervous complications, render the disease grave. It is very questionable if it is scientific or even wise to make a classification of varieties; but, speaking quite generally and from ordinary practical experience, we may mention four chief types: (1) pulmonic; (2) abdominal; (3) neurotic; and (4) rheumatic. The only or chief merit of this classification is its usefulness. Often a case is met with which does not belong to any of these classes in particular, but presents symptoms of all four types. There is also a malignant form of influenza which may be called typhoid, and, indeed, it is sometimes very difficult indeed to distinguish it from true typhoid fever, especially if the latter begin, as it often does, with a pneumonia. Sometimes, in order to be on the safe side, it seems best to treat such doubtful cases as if they were really typhoid fever in regard to the wisdom of abstention from solids. So puzzling in practice are some of the cases that the question may arise: Is it just possible that there may be some connexion between typhoid fever and typhoid influenza, that the germs of the one disease may be a modified variety of the other? On the whole, it is perhaps wisest to recognise the diseases as distinct.

Perhaps the most characteristic feature of influenza is the intense nervous prostration and feeling of utter helplessness and misery it causes. In most cases presenting any serious symptoms it is quite unnecessary to tell the patients to go to bed, for frequently they can not only not stand, but not even sit down with comfort. In some the prostration is excessive, as it was in a woman under my care who remained in bed for about ten days with an average temperature of 102·5° F., scarcely able to take anything except effervescent or lemon drink and barley water, unable to sleep without the aid of sulphonal or bromides or other sedatives, vomiting and purging persistently whenever any food was taken, and constantly racked with headache and pains in the limbs.

In regard to the important matter of treatment, it may be said to be unwise to adhere to any fixed line. Some authorities condemn the system of treating symptoms; but in reference to influenza special regard must be paid to them. It is above all things necessary to watch the case well and alter the remedies used directly there is need for so doing. On constant watchfulness and care depend our hope of best success. The presence of uric acid in the system should be combated with alkalies. The bowels must be opened daily and diarrhœa checked; vomiting also should be arrested. Where there are lung symptoms, poulticing the chest should be judiciously carried out, and when there is much abdominal pain this is also a very useful measure. Hot flannels with turpentine or some special embrocation, or warm anodyne fomentations, may be substituted. The dieting and general hygienic management are of importance, and at first all solid food should be rigidly prohibited. Antifebrin, phenacetin, citrate of caffein, and gelsemium in small doses are invaluable, when properly used, to arrest the headache. Salicylates, coupled with salts of ammonium and bicarbonates of the alkalies, mingled when necessary with the best cough mixtures, in order to allay the soreness of the throat and the distressing cough, may be advised, with due regard to all the circumstances of the particular case under consideration. Stimulants, such as brandy, whisky, port wine, &c., may be prescribed with care, especially to the old or feeble. Quinine cannot be recommended until the stage of convalescence is reached. The air in the room should be kept pure, if necessary by opening the windows, taking care to avoid draughts. It is also well to have disinfectants about, and it may even be advisable to burn a little sulphur or disengage some sulphur dioxide by other means. The patient may inhale a little iodine from time to time or ammonia from a bottle containing either of these substances. Creosote or eucalyptus or carbolic steam may be preferred, or steam with ether, chloroform, or conium. The patient should keep to bed so long as there be any serious symptoms. With absolute rest in the recumbent posture and fluid diet recovery will be quicker. In adults a dose of calomel is often advisable. The food at first should consist of beef-tea and milk with cold, or iced, or effervescent fluids. Soon the diet may be extended; should capillary bronchitis or symptoms of pneumonia appear decoctions of bark and chloric ether with camphor and ipecacuanha, and some of the usual syrups, as well as stimulants, may be useful. If the pains are severe in the limbs, a larger dose of bicarbonate of potassium may be coupled with some opium, and also with iodide of potassium and salicylate of sodium, or a mixture of bromides may be serviceable. If the temperature be high, sponging with cold or tepid water is very valuable or with a solution of permanganate of potassium. If the headache be severe, cold applications or vinegar cloths may be placed on the painful part, and in some cases two or three leeches are very effectual; indeed, sometimes even one leech acts like a magic charm. During convalescence tonics—e.g., gentian, iron, or quinine, or syrup of the hypophosphites with good food and wine—are advisable. Should there be much debility left after recovery it is wise to order a complete change, if it be possible.

Most patients, however, make a very good recovery, and it is generally only those who have not been properly attended to, taking perhaps no medicine at all, or only such household remedies as are in general use, or perhaps other equally inefficacious nostrums, who are troubled with those interminable complaints which are often traced to the time "when I had the influenza."

New Clee, Great Grimsby.

WE have received a copy of the second and revised edition of "The Blazon of Episcopacy," by the Rev. W. K Riland Bedford. This book, which is published by Henry Frowde, at the Oxford University Press, contains an account of the arms borne by or attributed to the archbishops and bishops of England, including Wales, and will interest those of our readers who are of an archæological turn of mind. Students of heraldry are familiar with the fact that many arms are based on puns, and Mr. Bedford's book furnishes some excellent examples—for instance, the arms of Archbishop Herring (Canterbury), show three herrings; of Archbishop Moore (Canterbury), three negroes' heads; of Bishop Horsley (St. Asaph), three horses' heads; of Bishop Harewell (Bath and Wells), three hares; of Bishop Bull (St. David's), three bulls' heads; of Bishop Alcock (Ely), three cocks' heads; of Bishop Cox (Ely), three cocks; of Bishop De Wingham (London), two wings; of Bishop Salmon (Norwich), three salmon; of Bishop Hinds (Norwich), three hinds; of Bishop Sheepshanks (Norwich), a lamb; of Bishop Dove (Peterborough), four doves; of Bishop Towers (Peterborough), a tower; of Bishop Fisher (Rochester), a dolphin; of Bishop Spratt (Rochester), three sprats; of Bishop Cotton (Salisbury), three hanks of cotton; of Bishop Horne (Winchester), three horns; of Bishop Maydenstun (Worcester), a maiden's head; of Bishop Bell (Carlisle), three bells; of Bishop Kite (Carlisle), three kites' heads; and of Bishop Man (Sodor and Man), five human heads.

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ON A SIMPLE METHOD OF MEASURING THE ALKALINITY OF THE BLOOD.

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PRELIMINARY CONSIDERATIONS.

BEFORE embarking upon the description of the method of measuring the alkalinity of the blood which is to be dealt with in this paper it will be profitable briefly to discuss the following series of questions:—

1. *What is the meaning of the term "alkalinity"?*—It is not by any means sufficiently realised that the term alkalinity is an eminently ambiguous term. It is a term which may at one moment be employed to denote the quality of consisting of, or containing in solution, a free base, while at another moment it is employed to denote quite a different thing—to wit, the quality of consisting of, or containing in solution, bases which are only very loosely combined with acids.

2. *In what sense is the blood an alkaline fluid?*—The blood is an alkaline fluid not in the first, but only in the second sense of the term. It is, in other words, an alkaline fluid only in the sense of being a fluid which contains bases which are conjugated with very weak acids.

3. *What is our criterion of the alkalinity of a fluid which does not contain free bases?*—It will be obvious to consideration that the only possible criterion of alkalinity which is applicable in the case of a fluid which does not contain free bases is the capacity of such a fluid for yielding up bases to weak acids. This capacity of yielding up bases to weak acids is precisely the quality which is tested by indicators.[1] It follows therefore that our criterion of the alkalinity of the blood is the reaction of blood to an indicator.

4. *What is our measure of the alkalinity of the fluid which does not contain free salts?*—It is a corollary from what has been said above that we can obtain a measure of the alkalinity of such a fluid as the blood by determining what amount of acid addition will tie up all its bases in combinations from which indicators (or, as we may more properly call them, "indicator-acids") will be unable to withdraw them.

The theoretical groundwork of all hæmalkimetrical methods is contained in the answers to these questions. Taking our stand upon this we may pass on to consider what is the most suitable variety of indicator, and what is the most suitable variety of tritrating acid to employ in our hæmalkimetrical observations.

Selection of a suitable variety of indicator.—Indicator-acids, like other acids, differ amongst themselves in their *avidity* for bases. Some indicators, and litmus is a good example of such an indicator, are able to withdraw bases, not only from the normal salts of weak acids (e.g., from Na_2CO_3 and Na_3PO_4), but also from certain chemically acid salts (e.g., from $NaHCO_3$ and Na_2HPO_4). Other indicators, such, for instance, as phenolphthalein, are indeed able to withdraw bases from the normal salts of weak acids, but they are quite unable to withdraw bases from any chemically acid salts. It will be manifest on consideration of these facts that when we are testing a fluid which, like the blood, contains chemically acid salts in solution, it will not be a matter of indifference to our results whether we employ litmus or phenolphthalein as our indicator. On the contrary, the results which we obtain with the one variety of indicator will differ, not only quantitatively, but also qualitatively, from those which we obtain with the other variety of indicator. We shall find, for instance, that normal blood is always definitely alkaline to litmus, whereas it is almost always neutral or acid to phenolphthalein. We shall find, in other words, that litmus is always able to withdraw bases from normal blood, whereas phenolphthalein is generally unable to do so. In the light of this fact it will be manifest that when we propose to ourselves to measure the alkalinity of the blood we are in point of fact proposing to ourselves to measure the capacity of the blood for yielding up bases to one particular variety of indicator—to wit, to free (i.e., red) litmus. Our question as to what is the most suitable variety of indicator to employ for hæmalkimetrical purposes is thus in some measure resolved. The most suitable indicator will be a red or neutral tinted litmus paper.[2] We have still to consider the question of the sensitiveness of our indicator.

Selection of a sufficiently sensitive sample of red litmus paper.—It will be obvious to reflection that inasmuch as red litmus is prepared by liberating the litmus acid from its salts by an excess of added acid, ordinary red litmus paper will contain traces of free acid which will seriously interfere with its sensitiveness to the presence of bases. In view of this fact, every litmus paper which is employed in hæmalkimetrical observations ought previously to be tested as to its sensitiveness. A good sample of red or neutral tinted litmus paper ought to show a distinct and immediate colour change when it is dipped into a forty-fold diluted normal human serum.

Selection of a suitable variety of tritrating acid.—It has been customary to employ solutions of organic acids (solutions, for instance, of oxalic, citric, or tartaric acids) for hæmalkimetrical purposes. The employment of these acids presents an undoubted advantage from the point of view of convenience of preparation. For standardised solutions of these acids can in each case be prepared by merely dissolving a weighed quantity of the particular acid in a measured quantity of water. On the other hand, the employment of these solutions of organic acids is open to serious objection, inasmuch as solutions of these organic acids become gradually weaker owing to the breaking down of these acids under the influence either of bacteria or of light and oxygen. We shall avoid this great source of fallacy in our measurements if we employ standardised solutions of sulphuric acid as our tritrating acid. These questions relative to the most suitable indicator and tritrating acid having been satisfactorily resolved we may pass on to consider the methods of dealing with practical difficulties which are associated *first*, with the presence of blood corpuscles in the blood the alkalinity of which we desire to elicit, and, *secondly*, with the necessity of operating with minimal quantities of blood.

Methods of dealing with the difficulties which are associated with the presence of red blood corpuscles in the blood.—Various methods of dealing with these difficulties have been proposed. Liebreich proposed to deal with these difficulties by impregnating slabs of alabaster or porous clay with litmus. The upper surface of these slabs was intended to hold back the red blood corpuscles while the plasma infiltrated into the substance of the slab. It was proposed to bring the colour change which occurred in the litmus into view by washing off the layer of red blood corpuscles which had deposited itself on the surface of the slab. Schäfer proposed to deal with the difficulty in a somewhat similar way. He coated over his litmus paper with a glaze which was designed to hold back all the red blood corpuscles while it remained perfectly permeable to the plasma. Lastly, Landois, Drouin, and others have dealt with the difficulty by diluting the blood with various salts solutions, and by allowing this diluted plasma which was thus obtained to purge itself of its red blood corpuscles by creeping up by capillarity into a strip of test-paper which was hung into the containing vessel. None of these three methods appears to be well adapted to the *quantitative* determination of the alkalinity of the blood, for by none of these methods can we effect that complete separation of the red blood corpuscles from the blood fluid which is absolutely essential to the accurate determination of the neutral point. In addition to being open to objection in this respect, the method which is employed by Landois and Drouin is open to the serious objection that the more the blood is diluted the more difficult does it become to determine the neutral point with accuracy.

Selection of a variety of blood fluid which shall be suitable for hæmalkimetrical observations.—When we take the defects of the above-mentioned methods into consideration we begin to ask ourselves whether it is not permissible to dispense

[1] Consideration will show that these indicators are in reality acid substances which differ from other acid substances only in possessing the property of combining with bases to form distinctively coloured salts.

[2] Blue litmus paper might also be employed as an indicator inasmuch as it would indicate to us the point at which a surplus of tritrating acid has been added to the blood. But the use of blue litmus would be associated with a double disadvantage. In the first place, when blue litmus is employed it is always a matter of some difficulty to distinguish the red colouration which is indicative of a surplus of added acid from the red colouration which is referable to the presence of red blood corpuscles. In the second place, when blue litmus is employed it is difficult to distinguish the fugitive red colouration which is produced by the carbonic acid which is evolved from the blood under the influence of the tritrating acid from the red colouration which is indicative of the presence of an excess of this tritrating acid. It is obvious that both these sources of fallacy are avoided by the employment of a red or neutral tinted litmus.

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with the immediate separation of the corpuscles from the blood-fluid, and to employ a blood-fluid from which the corpuscles have been separated by more effectual and more leisurely processes. We begin to ask ourselves, in fact, whether we may not employ for alkalimetrical purposes, either the perfectly corpuscle-free plasma, which may be obtained by allowing a decalcified blood to sediment in a capillary tube, or the perfectly corpuscle-free serum, which can be obtained by allowing the serum to exude from an ordinary blood-clot. As a matter of fact, an objection can be raised against the employment of either of these blood fluids. This objection is based upon the fact that the blood undergoes a gradual diminution in alkalinity after it has left the blood-vessels. It might, therefore, be urged that the alkalinity of the sedimented plasma or exuded serum would not be a correct measure of the alkalinity of the circulating blood. But consideration will show that this would not be a fatal objection to the utilisation of serum or sedimented plasma if it could be shown, first, that the serum and plasma ultimately come to a condition of stable equilibrium in the matter of alkalinity, and secondly, that the definitive alkalinity of these blood fluids is a faithful index, or even a tolerably faithful index, of the alkalinity of the intravascular blood. Now it is practically certain that these conditions are actually realised. In the first place observations of Zuntz, Peiper, and Winternitz on the serum, and similar observations of my own on the plasma, have shown that the serum and plasma arrive at a condition of stable equilibrium, within at any rate a few hours, after the blood has been withdrawn from the vessels. And, in the second place, observations of Dronin, which again have been supplemented by a considerable number of observations of my own, have shown that changes in the alkalinity of the circulating blood invariably manifest themselves in charges in the alkalinity of the serum. In view of these facts, and of the fact that it is difficult, if not impossible, to determine with any degree of precision the neutral point of a blood-fluid which contains any red blood corpuscles, it will be obvious that we shall be able to obtain more trustworthy data with reference to the variations in the alkalinity of the blood if we employ, in lieu of the fresh plasma which is contaminated with red blood corpuscles, either the corpuscle-free serum which exudes from a clot or the corpuscle-free plasma which can be obtained by the sedimentation of decalcified blood. Our simplest course—and in these matters the simplest course is always the best course—would appear to be to employ for all hæmalkimetrical purposes the serum which separates out from an ordinary blood clot.

Methods of dealing with the difficulties which are associated with the necessity of operating with minimal quantities of blood-fluid.—The difficulties which are associated with the necessity of operating with minimal quantities of blood-fluid are generally got over by measuring off a series of very small samples of blood fluid into a series of accurately measured, and progressively increasing, quantities of the titrating acid. The principles of this method cannot be improved upon. On the other hand, the procedure which is usually adopted may be improved upon in two particulars. In the first place, it is well, instead of measuring off the blood or blood fluid into many times its volume of the acid solution, to mix the blood fluid with not more than an equal quantity of the acid solution, and so to avoid unduly diluting it. In the second place, it is well in measuring out the required quantities of acid and blood fluid to employ thin-walled capillary pipettes[3] (such as can be made by drawing out a piece of ordinary glass tubing in the flame) instead of the thick-walled capillary pipettes which are made out of thermometer tubing. The advantages which we gain by employing such thin-walled capillary pipettes are the following: (1) we can readily fill in these capillary pipettes by capillary attraction alone; (2) we do not lose any of our fluid by diffusion over the external surface of the pipette[4]; and (3) we can at any moment and without any trouble make and calibrate such pipettes for ourselves instead of having to purchase them from a glass-blower. We have now sufficiently broken the ground, and may, therefore, pass on without further prologue to the description of the practical details of the method which has been foreshadowed above.

PRACTICAL DETAILS OF THE METHOD OF MEASURING THE ALKALINITY OF THE BLOOD.

Preparation of the necessary apparatus.—The necessary apparatus is of the simplest kind. It consists of a couple of glass capsules for receiving the blood which is drawn off from the finger, of one or more capillary pipettes for measuring and mixing the serum with the titrating acid, and of half-a-dozen watch-glasses. The blood capsules and the capillary pipettes[5] are made out by drawing out pieces of ordinary glass tubing (of, say, five-sixteenths of an inch diameter) after heating them in a flame.[6]

Preparation of the necessary reagents.—The necessary reagents consist (*a*) of a supply of a sufficiently sensitive red litmus paper; and (*b*) of a series of dilutions of a standardised sulphuric acid. The preparation of a sufficiently sensitive red litmus paper presents no difficulty if we have at our disposal a satisfactory sample of blue litmus paper, such, for instance, as may be obtained from Grübler and Co., of Leipzig. This blue litmus paper is first to be steeped in a very weak—e.g., in a 1 in 20.000—solution of hydrochloric acid until it assumes a reddish colour. It is then to be carefully washed in distilled water until all traces of fresh acid are removed. Finally, it is to be dried in a hot-air chamber. A litmus paper which is thus prepared will be sensitive enough to respond with an immediate colour change when it is dipped into a twenty- to forty-fold dilution of normal human serum. The weak solutions of standard acids which we require for purposes of titration can be conveniently made by making a series of progressive dilutions of normal sulphuric acid. Five such solutions—to wit, a twenty-, thirty-, forty-, fifty-, and sixty-fold dilution—of normal sulphuric acid will suffice for all ordinary purposes. From these, as will be presently explained, any further dilutions which may be necessary may very easily be prepared.

Method of obtaining blood and serum for hæmalkimetrical purposes.—A sufficient supply of blood can be obtained from a prick in the finger-tip. The most convenient implement to employ for drawing blood is a sharp-pointed steel nib one of whose points has been broken off. Blood in ample quantities can be obtained by twisting a handkerchief round the finger and making pressure from above downwards. The blood which is obtained in this manner is filled into one or two blood capsules. It may either be aspirated into the capsule, or—and this is the easier plan—the blood capsule may be held at a lower level than the drop of blood, and the blood may then be allowed to run in by gravity, aided by capillary attraction. In any case the capsule ought to be filled in in such a manner that one of its ends may remain perfectly free from blood. When the capsule has been filled in, one or both of its ends may be sealed up in the flame. The blood is then to be allowed to clot undisturbed. As soon as the clot has sufficiently retracted and the serum has attained its definitive alkalinity—i.e., after a period of from three to twenty-four hours—both ends of the capsule are broken off and the colourless serum[7] is drawn off by inserting the end of the capillary pipette into the capsule.

Method of performing the titration.—Having obtained our serum, it will be convenient to draw off from the capsule at first only the quantity which will be needed for our first titration. It will be well not to employ for this first titration more than about a sixth of the whole available quantity.

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[3] The method of making and calibrating these pipettes will be described below.

[4] It will be obvious that this consideration is not of any great importance when, as, for instance, in the case of blood corpuscle estimations, we are measuring off a small quantity of blood into a much larger quantity of diluting fluid. On the other hand, wherever, as here, we are concerned to mix a small quantity of blood with an equally small quantity of a diluting fluid, it is essential to accuracy that we should not lose any of our fluid by its diffusion over the surface of the pipette.

[5] A *blood capsule* consists of a piece of glass tubing which has been heated in two places about half an inch to an inch apart, and which has been drawn out at these places into a capillary tube. A *capillary pipette* consists of a piece of glass tubing which has been heated in one place, and which has been drawn out there into a capillary tube. It is convenient, but it is not essential, to form a mixing chamber upon the capillary pipette by heating and drawing out the tube again at the point where the wide tube begins to tail off into the capillary stem.

[6] If an ordinary blow-pipe flame or a Bunsen flame is not available the glass tubing can, in conformity with a suggestion which was made by Surgeon-Major Semple and myself, be satisfactorily drawn out in the extemporised blow-pipe flame which can be obtained by applying a lighted match to a finely divided spray of methylated spirits.

[7] The serum which is obtained in this manner will, in the large majority of cases, be perfectly free from blood-corpuscles. If, however, it happens to be contaminated with these, it may very easily be freed from them by a simple process of sedimentation. To accomplish this it will only be necessary to seal up the capillary pipette which contains the bloody serum and to set it up on end for a few minutes in a test-tube rack.

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If the total quantity which is available is a very small quantity we shall therefore employ an extremely fine capillary pipette. If, on the other hand, we have a relatively considerable quantity of serum available we shall employ a capillary pipette of correspondingly larger bore. In any case, we shall do well to arrange matters so that the quantity of serum which we have at disposal for our first tritration shall occupy not less than 1–2 cm. of the stem of our capillary pipette. We may assume for the sake of fixing our ideas that it occupies a length of exactly 2 cm. In such a case we make a mark with a red wax pencil upon the stem of the pipette at a point about 2½ cm. above the end of the pipette. Having done this, we turn up the point of the pipette and allow the serum to run down the stem of the pipette up to the point which is indicated by the red pencil mark. The object of this manœuvre is to take an air-bubble index into the point of the pipette. Having done this, we proceed to dip the end of the capillary pipette into a drop of our twenty-fold dilution of normal sulphuric acid, and we allow the acid to run up into the stem of the pipette until the upper margin of the air-bubble which separates the serum from the acid just reaches the red mark upon the stem of our pipette. It is obvious that when the air-bubble index reaches this point the quantity of acid solution which has been run up into the stem of the pipette will be exactly equivalent to the amount of serum which was drawn off into the pipette. Having thus obtained exactly equal quantities of our serum and our tritrating acid, our next step will be to mix the contents of our capillary pipette. We can do this either by drawing up the contents of our capillary tubes two or three times through our mixing chamber, or, if our tube is unprovided with a mixing chamber, by blowing out the contents of our capillary pipette into a clean watch-glass and then re-aspirating them, after complete mixture has been effected, into our pipette. Mixture of the contents of our pipette, having been accomplished, we have only to blow out the mixture of serum and tritrating acid in a series of separate drops on to the surface of a strip of our red litmus paper. In the case of the particular mixture we are considering—i.e., in the case of a mixture consisting of equal volumes of serum and a twenty-fold diluted normal sulphuric acid—we should almost certainly find that we had in our mixture an excess of acid. We should then proceed in a precisely similar manner to tritrate with each other equal volumes of serum and a thirty-fold diluted normal acid. If we were dealing with normal blood this mixture might or might not have a slightly acid reaction. If this mixture proved to be still acid we should of course proceed to test equal volumes of serum and a forty-fold diluted normal acid. This mixture would, in the case of normal blood, almost to a certainty be alkaline. Supposing that it was alkaline, and that the reaction of the mixture of equal volumes of serum and thirty-fold diluted acid had proved to be acid, we should then proceed to mix in a clean watch-glass equal volumes of a thirty- and a forty-fold diluted normal acid. We should tritrate our serum again with this thirty-five-fold diluted normal acid. If we found that this quantity of acid just sufficed to neutralise the acidity of our sample of serum, it is obvious that the alkalinity of our serum would be most simply expressed by the fraction $\frac{N}{35}$. For a serum which is exactly neutralised by an equal volume of a thirty-five-fold diluted normal acid would obviously correspond in alkalinity to a thirty-five-fold diluted normal solution of alkali.

In a future communication I hope to draw attention to some results of therapeutic and diagnostic importance which have been obtained by the exploitation of this method of measuring the alkalinity of the blood. For the present it will suffice to put on record for the guidance of others who may be disposed to employ this method of measuring the alkalinity of the blood that the maximum value which has been found by this method for the alkalinity of the normal serum has been $\frac{N}{25}$. This result has been obtained only once. In the case of thirteen other normal persons the serum has been found to possess an alkalinity which has always varied between the values of $\frac{N}{30}$ and $\frac{N}{45}$. On the average the alkalinity of the serum has been equivalent to about $\frac{N}{35}$.

Netley.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ROYAL FREE HOSPITAL.

A CASE OF DILATATION OF THE STOMACH ASSOCIATED WITH PERIPHERAL NEURITIS.

(Under the care of Dr. WALTER CARR.)

A MAN, aged twenty-eight years, was admitted into the Royal Free Hospital on Nov. 20th, 1896. He said that since he was about sixteen years old he had been subject to occasional attacks of abdominal pain, lasting about twelve hours and not specially related to food. For some years these attacks were not attended by sickness, and the symptoms from which he suffered do nct suggest that he had a gastric ulcer; neither had he ever swallowed any corrosive fluid. Since 1890 the attacks of pain had recurred about every two months, had been more severe, and had been terminated by copious vomiting. Since about Christmas, 1895, they had become much more frequent, sometimes occurring two or three times a week, with very severe pain; exertion seemed to increase their frequency. The patient said that before the attacks his stomach felt very uncomfortable and he could feel it "working" (evidently the peristaltic movements). After the sickness he was much relieved for a time. In June, 1896, his legs had begun to get weak, with much pain in the calf muscles, numbness and tingling in the legs and slightly in the hands; since August he had been unable to walk and had wasted rapidly. No history was obtained of any acute illness except influenza five years ago. He entirely denied any alcoholic excess, saying that he had rarely taken more than one or two glasses of beer a day. On admission the patient was seen to be a well-built man, about 5 ft. 11 in. in height, but greatly emaciated; his weight was 9 st. 7 lb. He had not been sick for a week, but the day after admission he brought up 7½ pints, and vomited from 1 pint to 2½ pints nearly every day for the next week; he also brought up much flatus. The vomit contained abundant sarcinæ, but no blood. The tongue was clean, the appetite fairly good, and the bowels acted nearly every day. On examination of the abdomen peristalsis was frequently visible, starting in the left hypochondrium and passing across the umbilical region to the right. On palpation no tumour, thickening, or resistance could be detected in the neighbourhood of the pylorus or elsewhere. The stomach was distended by giving bicarbonate of potassium and citric acid, and was found to be greatly dilated, reaching well below the umbilicus, though the exact limits could not be defined. The liver dulness was normal. In regard to the nervous system there was no complete paralysis of any limb, but his legs were very weak, especially the left, and he was unable to extend the left toes. He could only walk very feebly, requiring a great deal of support. He could just stand alone, but not when the eyes were shut. No other evidence of ataxy was detected. All the muscles of the legs were much wasted. In the upper limbs wasting was especially marked in the supra- and infra-spinati and the interossei. In the muscles below the knees no reaction was obtained to faradaism, but all the muscles reacted to the galvanic current. He complained of tingling and numbness in the legs, and the calf muscles were very tender. There was very slight impairment of sensibility below the knees, chiefly about the feet. No girdle sensation was present. The knee-jerks and plantar reflexes were absent. There was no loss of sexual power or of control over the sphincters. His pupils were normal and no ophthalmoscopic changes were found. His chest was healthy. The temperature was normal throughout his stay in the hospital. The urine contained no albumin or sugar.

The patient was kept in bed and carefully dieted; he was given hot water to drink before each meal, little or no fluid being allowed with the food; strychnine

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was given by the mouth. From Nov. 28th the stomach was washed out every morning, at first with simple warm water and afterwards with a solution of bicarbonate of sodium (two grains to the ounce), which seemed to act rather more beneficially. At first a large quantity of very offensive sour-smelling mucus and grumous material was brought away, but this rapidly diminished, and after a few weeks the washings each day returned quite clear. The effect of the treatment was immediate, the vomiting ceased after the first washing, only recurring occasionally afterwards, chiefly when the patient began to get up, movement seeming at first to excite it. The appetite improved, the flatulence diminished, and he began to gain weight. The nervous symptoms also steadily improved, the legs got stronger, so that the patient began to walk alone, sensation became normal, and the tenderness of the calf muscles slowly subsided. He was discharged on March 7, 1897, greatly improved in every respect and having gained 18 lb. in weight. He was seldom sick, and his appetite was good; there was still some flatulence, but much less than before. He could walk well and all the nervous symptoms had disappeared, except that there was still some weakness of the extensors of the left toes and the knee-jerks had not returned. He had learned to wash out his stomach himself without any difficulty and was directed to do so every morning before breakfast. He was seen on May 3rd and had then not been sick for six weeks; he was feeling well and much stronger; he could move all the toes quite freely; the knee-jerks were still absent; his weight was 11 st. 4 lb., a further gain of 7 lb. since leaving the hospital.

Remarks by Dr. WALTER CARR.—The above case presents several features of interest. The diagnosis of dilated stomach was obvious from the quantity and characters of the vomit as well as from the examination of the abdomen. Its causation, however, is obscure. The marked visible peristalsis, indicating hypertrophy of the muscular coat, points doubtless to the existence of definite obstruction at the pylorus, and hence mere chronic catarrh as a possible cause of the dilatation is probably excluded, even were it at all likely to lead to such great enlargement in a young and previously very robust man leading an outdoor life. All the ordinary causes of pyloric obstruction can also with reasonable confidence be excluded; there is nothing to suggest that there has ever been any peritonitis leading to displacement or narrowing of the pylorus; malignant disease is, of course, out of the question; a gastric ulcer near the pylorus might no doubt have led in healing to narrowing of the orifice, but the patient's early gastric symptoms, so far as he remembers them, were not suggestive of ulceration, which is, moreover, exceedingly improbable in an otherwise healthy lad of sixteen, at or before which age abdominal pain, without any vomiting, was first complained of. It is well known that when gastric dilatation occurs in comparatively early life the cause is often obscure, and I think that in this, as in some other similar recorded cases, a congenital obstruction or kink at the pylorus may possibly be present. The narrowing is probably but slight, and consequently symptoms only arose slowly, some hypertrophy of the muscular coat being sufficient for a long while to overcome the obstruction; but as soon as food began to be retained for a considerable time fermentation would occur, and the gases evolved, by distending the stomach, would lead to more rapid increase in the dilatation and so to the development of the characteristic symptoms. Some such theory as this best explains, I think, the commencement of gastric symptoms in early life, the gradual but steady increase in their severity, and the very great dilatation ultimately attained. There is no need to emphasize the excellent results of the treatment by lavage; improvement began after the first washing, and all kinds of medicinal and dietetic treatment had been tried previously without the slightest benefit. If there be permanent pyloric obstruction the washing out will doubtless have to be continued for an indefinite time, but this is not a serious matter, as the patient seems rather to enjoy it than otherwise.

As to the nervous symptoms, the partial but symmetrical affection of both motion and sensation, the tenderness of the muscles, the loss of the knee-jerks, together with the absence of girdle pain or of any affection of the sphincters or pupils, presented a sufficiently characteristic picture of peripheral neuritis, a diagnosis confirmed by the complete recovery. The chief interest of the case, however, centres in the causation of this neuritis; undoubtedly, the symptoms strongly suggest the alcoholic variety, but the patient's appearance and his behaviour whilst in hospital certainly did not point to any alcoholic excess, and I see no reason for doubting his statement that he rarely took more than a glass or two of beer a day. In this opinion his regular medical attendant (Mr. Greeves, of Willesden), under whose care he had been for a long time, entirely coincides. The patient had not suffered from any of the acute specific fevers, nor had he been exposed to any other probable cause of multiple neuritis so far as could be ascertained; and from the way in which the nervous symptoms developed as the gastric troubles increased, and began to improve as soon as the stomach was washed out, I am disposed to attribute the neuritis to absorption of the products of bacterial fermentation from the greatly dilated stomach. There seems nothing improbable in this view, although I am not aware of any previous cases having been recorded. For a long period, probably some years, large quantities of toxic substances must have been formed in the stomach, and some would doubtless be absorbed; and there seems no reason why they should not exercise a special action on the nervous system similar to that of the many poisons, organic and inorganic, which are recognised as possible causes of multiple neuritis. Of course, it may be argued that if the neuritis arose from this cause other similar cases ought by this time to have been recorded; but be it remembered, in the first place, that excessive dilatation of the stomach, persisting for any considerable time, is by no means a common condition (the most frequent cause of great dilatation is probably pyloric cancer, and this is necessarily fatal in a comparatively short period); and secondly, that alcohol and the toxins of the acute specific fevers (except diphtheria) cause multiple neuritis in only a very small minority of the cases in which they are present, and that similarly the poisons generated in a dilated stomach may only attack the nerves in an extremely small percentage of cases. Dr. Henry Waldo, of Bristol, has recorded [1] a case of peripheral neuritis in a girl, aged twenty-one years, following upon symptoms of poisoning after eating tinned salmon. He attributed the neuritis to the salmon and not to any metal. If this conclusion be correct, there seems no reason to suppose that if the products of decomposition of food outside the body can lead to neuritis, those formed as a result of its retention in the stomach should not at times exercise a similar action.

MELBOURNE HOSPITAL.

A CASE OF RUPTURE OF THE LIVER; OPERATION; RECOVERY.

(Under the care of Dr. W. MOORE.)

IN the less severe ruptures of the liver, which are not accompanied by such an amount of hæmorrhage as to prove rapidly fatal, collections of blood and bile tend to form, and should the laceration of the organ have been on its upper surface, adhesions between the liver and the anterior abdominal wall may so shut in the effused fluids that the general peritoneal cavity escapes. The implication of the right pleural cavity is by no means unusual in the partial ruptures of the upper surface of the liver. A case in many respects similar to the one recorded below was brought before the West London Medico-Chirurgical Society [2] by Mr. W. H. Battle in 1894.

A boy, aged eleven years, was admitted into the Melbourne Hospital under the care of Dr. W. Moore on May 31st, 1897. The patient had been kicked by a horse on the right side—the lower part of the (lateral) thorax—two days prior to admission. He was seen soon after the accident by a medical man, who found him completely collapsed and complaining of great pain in the right side; the diagnosis made was rupture of the liver. In four or five hours after the accident the abdomen had become distended, and this condition lasted about five days, but during these five days there were no other marked symptoms; the bowels acted after enemata. Four days prior to admission vomiting set in and had since continued. It was on account of this condition that he was sent to the hospital, as the medical attendant thought that the vomiting was due to

[1] Brit. Med. Jour., vol. i., 1889, p. 589.
[2] THE LANCET, May 19th, 1894, p. 1252.

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pressure on the duodenum or pyloric end of the stomach, and that an operation might be required. The vomited matter was always fluid and of a greenish colour, with specks of blood in it. The bowels had not acted for four days in spite of the administration of enemata and of purgatives. The patient suffered from pain at times, which appeared to come on in spasms. There was no pain at the time of admission. On examination the patient was found to be a pale, thin boy. His temperature was 98 6° F. and the pulse was 110, of small volume, and easily compressible. He lay on his back with his knees drawn up. There was no abdominal distension, but there was some fulness in the hepatic region, and the liver dulness was increased. On percussion there was marked tenderness over the liver. He was kept in bed, and hot fomentations were applied over the upper part of the abdomen. For some days the boy presented no symptoms of importance. The vomiting ceased, his bowels acted, and the temperature was normal. But on June 6th it was noticed that his respirations were much quickened, and on examination it was found that there was a large rounded swelling below the ribs and just to the right of the mid-line; the liver dulness was greatly increased, and there was dulness over the right side almost up to the clavicle; the abdomen was somewhat distended and tympanitic. Two days later these conditions were slightly more marked, but it was noticed that the liver dulness was little increased downwards in the mid-axillary line. The temperature was slightly raised. On the 8th the chest was aspirated in the sixth right interspace, and twenty-four ounces of yellowish green (bile-stained) fluid were drawn off. This fluid was subsequently found to contain bile. The chest at once became resonant on the front and in the axilla. The prominence in the epigastrium became slightly less. During the next two days there was no improvement in the patient's condition; his pulse was quick, feeble, and irregular; he was very pale, and in the epigastrium, a little to the right of the mid-line, the rounded swelling had become very prominent and distinct. The margin of the liver could be felt about two inches above the umbilicus. His abdomen became greatly distended all over and tympanitic except in the epigastric and right hypochondriac regions. At this time he generally lay with his knees drawn up. On the 10th, under chloroform, Dr. Moore made a three-inch vertical incision through the rectus muscle a little to the right of the mid-line, commencing just below the ribs. The parietal peritoneum appeared to be much thickened, and on opening it a cavity containing a large quantity of dark fluid, in which clotted blood and bile could be easily distinguished, was entered. This cavity was very large, at least six inches deep, and it extended upwards towards the diaphragm. The upper convex surface of the liver could be felt forming its lower boundary, and it was shut off from the general peritoneum by adhesion of the liver to the anterior abdominal wall. The cavity was washed out with warm boracic acid lotion and drained with strips of iodoform gauze. Four horsehair sutures were used to close the ends of the incision. The wound was dressed with dry antiseptic dressings. Even after this the boy's condition was not satisfactory. The discharge from the wound quickly diminished, and in a few days almost ceased. The temperature was slightly raised, there was no increase of dulness in the front of the chest or in the axillary region, but the epigastric fulness was well marked, and now it appeared to fluctuate distinctly. On the 16th a hypodermic needle was introduced through the wound and a little thin, dark, bile-like fluid was drawn off. Just before he was taken to the operating room on the following day he was seized with vomiting and his temperature rose to 103 6°. He was anæsthetised, and a trocar and cannula were introduced through the wound into the fluctuating swelling in the epigastrium, and dark fluid bile flowed through the cannula. The cannula was removed and a forceps was introduced, opened, and withdrawn to enlarge the opening; in this way a very large quantity, probably several pints, of fluid was evacuated. A large rubber drain-tube was introduced and left in. From this time the patient rapidly improved; he became less pale, his breathing was easier, and the fulness in the epigastrium disappeared. The discharge of bile was very profuse for about a week; the tube was removed on the 22nd; on the 27th the discharge was much less and he was allowed to be up. By July 5th the discharge had ceased altogether and the boy left the hospital.

Remarks by Dr. MOORE.—In this case it is evident that the kick caused a rupture of the liver on to its upper (diaphragmatic) surface; through this rupture bile and blood were slowly effused, but they were shut off from the peritoneum by adhesions, which developed rapidly before the effusion had become great in amount. The wound on the surface of the liver healed, but a cavity was left in the substance of the organ into which the torn bile-ducts poured their contents. Some of the bile that had escaped through the tear in the surface of the liver found its way through the diaphragm into the right pleura and gave rise to a pleurisy with effusion. There were thus three separate collections of fluid—viz., in the right pleura, in a space formed between the diaphragm, the convex surface of the liver, and the anterior abdominal wall; this commenced to form immediately after the accident, and probably did not increase in amount after the first twenty-four hours; and, lastly, in a cavity within the liver; this last collection no doubt went on slowly increasing until it was evacuated. In the *Australian Medical Journal* for 1891 a somewhat similar case is briefly recorded by the writer. "A man, aged thirty-three years, was admitted into hospital on April 30th, 1891, having been crushed between two lorries. He complained of abdominal pain and tenderness, particularly over the liver. There was an abrasion of the abdomen between the ribs and the ilium on the right side and another just below the angle of the scapula on the left side. The pain was not very severe; his pulse was not quickened; flatus passed by the bowel during the next three days. On May 3rd he was attacked with vomiting, his skin became sallow, not jaundiced, and the liver dulness was found to extend to the crest of the ilium. His bowels were open after enemata, but the character of the motions was not noted. The following day his temperature was 99 8°, this being its first rise. On May 7th his temperature was 101°, and the pain was much more severe. From this time the dulness below the liver gradually diminished, whilst dulness began to extend gradually upwards over the chest on the right side until it reached the clavicle. For some days the patient refused to have anything done. On May 20th I aspirated in the mid-axillary line between the fifth and sixth ribs, and drew off forty ounces of dark-coloured bile. On May 23rd twenty-eight ounces of similar fluid were withdrawn. The breathing gradually improved and the dulness diminished. The patient was discharged on June 22nd with some impairment of mobility of the right side of the chest. Here there must have been a partial rupture of the liver; the torn bile-ducts poured their contents into the cavity thus formed; this cavity gradually increased in size and finally burst, probably by a very small opening through the diaphragm."

Reviews and Notices of Books.

The History of Intellectual Development on the Lines of Modern Evolution. By JOHN BEATTIE CROZIER. Vol. I. London: Longmans, Green, and Co. 1897.

DR. BEATTIE CROZIER, whose previous treatise, "Civilisation and Progress," met with a reception some few years ago that is but rarely accorded to works of philosophy, has now given to the public in his new book an expansion of one side of this great theme. In "Civilisation and Progress" he contented himself with setting out in a general way the parts played in the complex movement of civilisation by the cardinal factors of religion, government, science, and material and social conditions, and to pointing out the laws which regulate the interplay of these factors—a fairly large programme, but students of philosophy well remember how thoroughly and yet how simply it was carried out. In the volume now before us, and in those volumes projected by the author to follow it, he proposes to apply the general principles he has already laid down in "Civilisation and Progress" to the detailed consideration of one great feature in that civilisation—namely, intellectual development. Under this term he includes religion, science, and philosophy, and the purport of his work is to show that the human history of these three departments of intellectual development can be shown to

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follow scientific laws. In other words, Dr. Beattie Crozier will attempt to prove, and is convinced while so doing of the possibility of proving, that the views held by, for example, Plato, Aristotle, Buddha, and St. Paul could have been anticipated; that their teachings on the great problems of human life were not only such as they were likely to hold, having regard to their environment rather than their individuality, but were such as in accordance with definite though still undiscovered laws they must have held.

To the execution of his heavy task the author brings certain important qualities likely to ensure success. He has learning, eloquence, and humour, so that he is able to instruct us by his comprehensive surveys of the history of the supreme intellectual movements of the world, and at the same time to hold our attention for long spells—a most important thing in a book of reasoning—and to drive home his teaching by some apt allusion or homely simile which stays by us, and epitomises for us many pages of solid argument or exhaustive reference. Here, for instance, is a happy allusion to the philosophy of Hegel, who may be said to have held with Kant that an assertion can be at the same time true and false, and that the opponent who was contradicting him might be equally in possession of truth with himself. Of this vague and illusory philosophy Dr. Crozier says: "Although his [Hegel's] law was in my judgment the true law of the movements of intelligence in the abstract, it was, nevertheless, like a hat too big for the head, altogether too wide and general to be of any scientific value for determining the line of evolution of the lesser divisions of intellectual development, except, perhaps, in relation to German metaphysics, from which, indeed, the law was derived, and to which it is specially applicable; in the same way as the general law of evolution, although, doubtless, true in itself, is much too wide to be offered as a serious explanation of the special phenomena of the Stock Exchange." Nor do the qualities we have mentioned alone recommend Dr. Crozier's work to our notice. In addition, he has employed a very sound and modest plan. In his materials he has gone direct to the original authorities living at or about the time of the events recorded, and then, with the object of "repairing the gaps and oversights inevitable in the view taken of any large and complex subject by a single mind," has had recourse to those great modern authorities who themselves drew from the original fountain heads, in particular to the works of those who have devoted themselves to the elucidation of some single historic period or school of thought and to the authentic lives of men who have made epochs in the story of civilisation. This is the model way to present obscure and difficult themes, particularly themes the consideration of which will necessarily occupy much time. Seeing the whole subject through the author's eyes the reader obtains a comprehensive grasp of it, benefiting by the uniformity of treatment which one mind, if logical, would necessarily use in dealing with similar historical events, whatever their date, origin, or issue. The good of specialism is in this way retained and the ill rejected. At the same time the authorities quoted by the author in his support or criticised by him in defence of any departures from their teachings, can be examined by the reader for himself. He is not asked to follow any lead blindly. Such and such are the deductions made by the author. Are they correct in view of what more special workers have to say? If they are not, have the authorities blundered or has the author misinterpreted them?

The present instalment of Dr. Crozier's work covers a consideration of the evolution of Greek and Hindoo thought, of Judaism, and of the evolution of Christianity. He treats all four sections dispassionately, and gives to each impartially what he considers to be its proper importance in the scheme of intellectual development. The story of the evolution of Christianity is in length equal to the stories of the other three put together, although we are only taken as far as the end of the second century; but this is intelligible if only because much of the work that still lies ahead of the author is necessarily a continuous narrative of the Christian religion, while the influences of the Greek, the Hindoo, and the Jew are for all practical purposes over and done with. To what extent Dr. Crozier has performed the task that he has set himself—viz., the complete application of the theories of evolution to the intellectual development of the human race—we leave to the judgment of our readers. We have said plainly what we think of his qualities for the due performance of the work and of the spirit in which he has approached it, but it is to the minds of individual readers that he appeals. To some he will appear more convincing than to others, while many may desire to reserve their opinion until the author has written of Mediæval Catholicism, the Renaissance of Learning, the Reformation and the Doctrines of Modern Science, to mention some of the sections which remain to be dealt with. And this last is our own position. Until these important landmarks in the survey of the world's progressive wisdom have been considered by Dr. Crozier, their importance estimated, and their results traced, it is not possible to say how far he has accomplished his intention—that is to say, how far he has been able to show the existence of a law comparable to a scientific law governing the thoughts of men and dictating creeds and their schisms, philosophies and their accompanying facts and fallacies. Criticism at this stage would hardly be fair, as the author may be intending by something he has yet to say to repair what now might seem to be oversights in the presentment of his large and complex labour. An obvious inconsistency may, for example, be found in this volume which will probably be accounted for later, being doubtless an inconsistency in phraseology and not in thought. The author, while designing, as we understand him, to explain or account for the progress of intellectual development in accordance with more or less logical rules—while, that is, applying the general principles by which civilisation has progressed to the detailed evolution of one great factor of that civilisation—imports into his philosophy a coördinating power of unknown force and incomprehensible energy "which is not ourselves and which makes steadily for moral ends," and which directs by "its overarching supernaturalism everywhere enfolding and pervading the world and its affairs" every step that is taken by poor belated man. That we are under such direction is the happy belief of all the devout whatever their creed and of most who lead lives of thought and introspection; but it would almost seem that Dr. Crozier, by admitting the presence of this mysterious force into his calculations, has made it impossible for himself to explain the very problems to unravel which his book has been written. For if he allows himself to be helped in his explanations by falling back upon a First Cause of which he knows nothing, however implicit may be his private trust in its unlimited power, we can always ask him to tell us exactly which episodes in his story are consequential one to the other—the inevitable result of cause and effect working according to definite law—and which must be set down to the caprice of the supreme and unknown X.

Dr. Crozier has written an excellent book. He deals with his great subject lucidly and modestly, with no priggishness or unnecessary display of erudition, and with no slipshod uncertainty of expression. All can read him, and it is not his fault if all cannot understand every word he has written. He has our hearty congratulations on his work as far as it has gone.

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Twentieth Century Practice: an International Encyclopædia of Modern Medical Science by Leading Authorities of Europe and America. Edited by THOMAS L. STEDMAN, M.D. Volume VIII., *Diseases of the Digestive Organs.* 1897. London: Sampson, Low, Marston, and Co. Pp. 667.

THIS vast publication has now reached the eighth volume; and twelve more are yet to come, and if all the volumes are as complete in their respective subjects as the one now under consideration the work will be a library in itself.

The first article is under the joint names of Dr. Johann Mikulicz, Professor of Surgery at the University of Breslau, and Dr. Werner Kümmel, also of the same university. The subject is Diseases of the Mouth. After a short introduction, containing the anatomy of that region, good accounts are given of the "general symptomatology" and "special pathology" of affections of the mouth. We then find a description of some of the injuries to which the mouth is liable, including burns. The various diseases of the mouth are then considered, chiefly under the headings of Latin names, such as stomatitis simplex, ulcerosa, and aphthosa. Rare conditions are also described, such as scleroderma and actinomycosis.

Diseases of the Œsophagus are described by Dr. Reginald H. Fitz, of Boston. With the exception of tumours of the œsophagus this is a difficult subject to write upon, but Dr. Fitz has produced an interesting and instructive article.

Dr. Einhorn, Instructor in Clinical Medicine at the New York Post-Graduate Medical School, contributes a long article on Diseases of the Stomach, occupying 250 pages; it really forms a valuable monograph on the subject. Here, again, we notice Græco-Latin terminology freely employed; some of the names will, we think, be new to English readers, such as "hyperchlorhydria" (hyperacidity), "gastrosuccorrhœa continua periodica," and "gastrosuccorrhœa continua chronica." By the first term is understood "an affection which is characterised by a constant secretion of gastric juice giving rise to spells of vomiting and severe pains," and by the second term a condition in which there is a constant secretion of gastric juice even when there is no food whatever in the stomach. A diagnosis of either complaint can only be made with certainty by a repeated examination of the stomach in the fasting condition by means of the tube. Another condition described is "achylia gastrica" or "atrophy of the stomach," a condition in which there is a persistent absence of gastric secretion. Again, in order to diagnose this condition the patients have frequently to undergo the unpleasant operations of the passage of the stomach tube. Next we are confronted with the term "ischochymia," or "a condition in which the stomach is never found empty between meals, but always contains some food, even in the fasting condition." Here, again, "this condition is best recognised by the examination of the stomach by means of the tube when fasting." In our opinion an unnecessary burden would be thrown on the physicians in the out-patient rooms of our hospitals if diagnosis had always to be made by means of the stomach tube. As it is, we prefer to ask our patients certain questions as to the relation between pain and food as regards to time, and the presence or absence of vomiting, &c., and then, according to their replies, we write our diagnosis. This may not be so scientific, but it is certainly more practical, and as regards treatment the patient is just as well off. In reading through Dr. Einhorn's paper we stumble across such terms as "acoria," sometimes spelt with a "c" and sometimes with a "k," "polyphagia," "parorexia," "vomitus nervosus," "pneumatosis," "hypanakinesis ventriculi," "hyperanakinesis ventriculi," "tormina ventriculi nervosa," &c. Dr. Einhorn's paper, in addition to being a most elaborate disquisition on the diseases of which it treats, is also a remarkable study in medical nomenclature. Elaborate directions are given for the examination of the stomach by means of various forms of apparatus, especially Einhorn's "gastrodiaphane," "stomach bucket set," and "gastrograph." Truly, the physician of the future will have his pockets full if he carries about all his modern apparatus. Reviewing this article as a whole, we must give all due praise to the thorough manner in which each gastric disorder is described. It contains a large amount of original work and terminates with a copious bibliography.

The article on Diseases of the Pancreas is by Dr. Hans Levi, Professor of Internal Medicine at the University of Bonn. In his introduction the author points out that our knowledge of diseases of the pancreas is of recent date owing to the comparative rarity of these diseases, to the hidden situation of the organ, and to the fact that we have hitherto had a not very exact knowledge of the functions of the gland. The methods employed for the diagnosis of pancreatic disease are well described, and a fair summary is given of the diseases of the organ so far as we are acquainted with them.

Diseases of the Peritoneum are described by Dr. Farquhar Curtis, Professor of Clinical Surgery, New York Post-graduate School. The embryology, anatomy, and physiology are all considered at length, and then the diseases are taken in the following order: peritonitis, appendicitis, perforation of the stomach and intestine, peritonitis originating from the female generative organs, subphrenic abscess, tuberculous peritonitis, ascites, and tumours. Especially good is the section on appendicitis, the anatomy of the appendix being very complete. Dr. Curtis has produced a most useful paper, which adds considerable value to the publication as a whole.

The article on Animal Parasites and the Diseases Caused by Them is written by Dr. D. J. C. Huber, of Memmingen, Bavaria. Dr. Huber's writings on this subject are well known, and a better author for this subject could not have been chosen. The descriptions of the parasites are lucid and the illustrations well executed.

Treatment of the Diseases Caused by Animal Parasites is from the pen of Dr. James M. French, Lecturer on Morbid Anatomy and Demonstrator of Pathology at the Medical College of Ohio, and contains much useful information.

LIBRARY TABLE.

Dangerous Infectious Diseases. By FRANCIS VACHER, Medical Officer of Health of Cheshire. Reprinted from the *Sanitary Record.* (London: The Sanitary Publishing Company, Limited. Price 1*s.* 6*d.*)—This little book is a reprint of a series of articles originally intended for the use of newly appointed medical officers of health, and also, we should say, from the simple style of its matter, to aid heads of households in the early recognition of an infectious fever so that they may call in medical assistance as soon as possible. The grouping of the different fevers is, as the author admits, quite unscientific, they being classed according to the generally recognised length of the incubation period. It will easily be seen, however, that this method of classification may in many cases be very useful. The question of treatment other than preventive does not come within the scope of this book, but the directions as to disinfection and the probable sources of infection of diphtheria and enteric fever are clearly set out. We would suggest one slight amendment, and that to mention that the papules in small-pox appear on the backs of the wrists quite as soon as, if not sooner than, on the face (vide p. 6).

The Blight of Respectability. London: The University Press, Limited. Price 2*s.* 6*d.*—This book is a rather amusing if not very well written diatribe against things as they are.

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The author's great *bête noir* is what he calls "respectability," i.e., what the majority of people do and think, and as an instance he quotes the case of the woman mortally wounded in a railway accident who with her dying breath asked the surgeon to put her bonnet straight. Vanity of this sort is nothing new, however, for we all remember Pope's Narcissa, who wished to be rouged when dying. There are grains of wheat among the chaff. Witness the following: "There was a time when trade meant a handicraft; now it is a term for gambling with articles made by ill-rewarded workers." This, we fear, is in many cases true, and due to the craze for cheapness.

JOURNALS AND REVIEWS.

The Journal of State Medicine. London: Baillière, Tindall, and Cox.—The official organ of the Royal Institute of Public Health for September opens with the third of Dr. G. Sims Woodhead's Harben Lectures. A paper read at the Congress of the British Institute of Public Health in Glasgow by Mr. William Mitchell, vice-chairman of the School Board of Glasgow, in which he enters a plea for improved dwellings and improved social conditions for poor children, will be read with interest. To a want of proper housing for children and the nature of their environment the author attributes the unsatisfactory results of School Board work, which is "not at all commensurate with its scope and intention and with the expense and labour and care that are lavished upon it." Finally, the author commends the preamble set forth by our forefathers more than 300 years ago in the education scheme of 1560: "Of necessitie it is that your honours be most cairful for the virtuous education and godlie upbringing of the youth of this realm."

The Quarterly Journal of Microscopical Science. Vol. XL Part 2. August, 1897. Edited by Professor E. RAY LANKESTER, Professor ADAM SEDGWICK, and Professor W. WELDON. London: J. & A. Churchill. Price 10*s.*—This part contains six articles:—1. The Adhesive Tentacles of Nautilus, with some notes on its Pericardium and Spermatophores, by Arthur Willey, D.Sc., with a plate. The cylindriform tentacles are shown to form firm adhesions by their surfaces, not by their tips. The spermatophore sac is at the base of the buccal cone. The author gives a tribute of praise to the precision of the late Professor Huxley's description of the pericardial region. 2. On Some Modifications of Structure subservient to Respiration in Decapod Crustacea which burrow in Sand, with Some Remarks on the Utility of Specific Characters in the Genus Calappa and the Description of a New Species of Albunea, by Walter Garstang, M.A., Oxford, with three very beautifully executed plates. 3. Note on the Anatomy of Sternaspis, by Edwin S. Goodrich, B.A., of Oxford, with two plates. The text gives an account of various internal organs of this Polychæte worm, which are illustrated by numerous figures. 4. On the Relation of the Arthropod head to the Annelid Prostomium, by Edwin S. Goodrich, B.A. This is an article that will prove of great service to those who are working at the morphology of the Invertebrata. There are many illustrations. 5. On the Development of the Californian Hagfish, Bdellostoma Stouti, Lockington, by Bashford Dean, Ph.D, Columbia College, New York, with a plate. In this article it is shown that the Myxinoid differs widely from all other chordates in its developmental type. He claims for it, on developmental grounds, a high antiquity. 6. On the Diplochorda, by A. T. Masterman, B.A., B.Sc., St. Andrews, N.B., with nine plates. An account is here given of the structure of Actinotrocha and of Cephalodiscus.

Liverpool Medico-Chirurgical Journal.—The number for the current half year contains the Transactions of the Liverpool Medical Institution from Jan. 28th to April 22nd, many reviews of books, and nine original articles. Dr. J. Wiglesworth, superintendent of the Lancashire County Asylum at Rainhill, describes two cases of Porencephaly. Both patients were male epileptics. In the first, who was thirty years old at the time of death, the right cerebral hemisphere was congested but otherwise normal; in the left hemisphere there was a considerable loss of substance in the region occupying the upper part of the ascending limb of the Sylvian fissure. The other patient was an idiot of a very low type, and died from phthisis in his twenty-first year; the cerebral substance had almost disappeared over the posterior two-thirds of the brain. Mr. F. T. Paul publishes a successful case of Gastrostomy by Frank's method. In the result the patient, who was a woman, forty-two years of age, suffering from stricture of the œsophagus, looked forward to her meals and her cup of tea with as much relish as the other patients, or even more.

Scottish Medical and Surgical Journal.—Dr. William Stewart, surgeon to Leith Hospital, describes a case of Epileptiform Convulsions and Hemianopsia due to unilateral hydrocephalus and treated by drainage of the lateral ventricle. The patient was a man twenty years of age. He first complained of defective vision in 1888 and had his first epileptic fit in April, 1894. The operation was performed on Oct. 1st, 1896. On incising the cerebral tissue a large cavity was opened, from which much fluid, having all the appearances of cerebro-spinal fluid, escaped. A small indiarubber drainage-tube was introduced and retained till the eleventh day. The wound being soundly healed, and the patient having had no fits, he was discharged on Nov. 24th, seven weeks after the operation. The fits having recurred on April 7th, six months after the operation, the old flap was reflected on April 22nd, a drainage tube introduced, and retained till June 13th; on June 16th the wound was firmly healed. Dr. William Russell, the editor, writes on Migraine and Allied Epileptoid Conditions. Dr. Norman Walker contributes a clinical lecture on the Common Fungus Diseases of the Skin.

Edinburgh Medical Journal.—Dr. T. Myles, surgeon to the Richmond Hospital, Dublin, publishes several cases of Nephrectomy and Nephro-lithotomy, together with an account of Experiments with the Roentgen Rays in the diagnosis of renal calculus and a careful exposition of the difficulties and dangers of the operation of needling the kidney through the abdominal wall. Mr. H. J. Waring (London) describes the treatment of Gangrenous Hernia by resection and immediate union of the intestine, with an account of two cases. Dr. J. C. Webster, McGill University, Montreal, criticises recent views regarding Lateral Deviation and Rotation of the Uterus. Dr. Charles Steele records a case of Retinal Hyperæsthesia in which recovery followed seven weeks' confinement to an absolutely dark room. There are three other original articles.

Dublin Journal of Medical Science.—The opening article is one on the Use of Ergot in Obstetrics. The author, Dr. T. More Madden, is in favour of employing it freely, in full doses, under certain conditions which are carefully described.

Archives of the Roentgen Ray. London: The Rebman Publishing Co., Limited, 11, Adam-street, Strand. July, 1897. Price 4*s.*—This useful publication has now become a quarterly record of the proceedings of the recently formed Roentgen Society, and in its columns it is intended to publish original communications, notes, and correspondence bearing upon the new radiations, chiefly, of course, in their application to medical diagnosis. The present title adopted is obviously better chosen than the old one, which was "Archives of Skiagraphy." The first number thus issued under the auspices of the new society contains original papers on "The Nature of Roentgen's Rays," by Professor Silvanus P. Thompson; on "Roentgen Rays: a Survey, Present and Retrospective," by W. S. Hedley, M.D. Edin., the latter contribution being an excellent *résumé* of the

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evolution and history of the x rays. These papers are followed by short descriptions of several cases, which are illustrated in some excellently reproduced skiagrams in a series of plates at the end of the number. The new journal is edited by Dr. W. S. Hedley, and Mr. Sidney Rowland, the editorial committee consisting of Dr. Mackenzie Davidson, Dr. John Macintyre, Mr. Thomas Moore, F.R.C.S. Eng., Dr. Morton, Mr. Campbell Swinton, Mr. Lynn Thomas, F.R.C.S. Eng., Dr. Norris Wolfenden, Professor Silvanus Thompson, and Dr. W. White.

Analytical Records
FROM
THE LANCET LABORATORY.

ÆSCULAP.

(THE ÆSCULAP BITTER WATER CO., LIMITED, 51, FARRINGDON-STREET, E.C.)

ÆSCULAP bitter water presents a composition analogous to most of its kind that are found in Budapest. It contains, according to our analysis, the sulphates of magnesium and sodium in nearly equal proportion. The analysis which we recently made is as follows, the results being expressed in grammes per litre: magnesium sulphate, 17·70; sodium sulphate, 16·77; calcium sulphate, 1·26; common salt, 2·50; and carbonate of soda, 0·56. Thus, whilst containing the purgative salts in approved proportion and relation to each other, it is also distinctly alkaline owing to the presence of carbonate of sodium, and in addition it contains a not unimportant quantity of ordinary salt. It is probable that it is the presence, though in small amount, of these latter ingredients which makes the administration of saline purgatives in a natural water more satisfactory than when the chemically pure sulphates are employed. The water acts mildly yet with good effect as an aperient.

BOVRIL STAMNOIDS.

(BOVRIL, LIMITED, 30, FARRINGDON-STREET, E.C.)

Bovril stamnoids are a very useful dietetic introduction Each stamnoid weighs a little over ten grains and, as the following analysis will show, presents the composition of a real nutrient. Our analysis was as follows: organic matters 78·70 per cent., moisture 6·20 per cent., and mineral matter 15·10 per cent. The total nitrogen amounted to 10·84 per cent., which is distributed over 35·60 parts beef powder, 31·10 parts meat extractives (creatin, &c.), and 12·00 parts albuminous matter and peptone. The stamnoid slowly disappears in the mouth and leaves no unpleasant after-flavour. Indeed the stamnoids possess an attractive beef-like taste. They should prove extremely serviceable as offering a palatable and reliable source of nutrient in an easily portable form. To athletes, cyclists, and travellers who have recourse to temporary nourishment, and to those who are in the habit of taking a light form of nourishment between meals, they should prove invaluable since they sustain as well as stimulate.

PURE CONCENTRATED COCOA.

(J. S. FRY AND SONS, BRISTOL.)

This cocoa is characterised by its extreme miscibility with hot water so that its valuable food constituents probably occur in a condition easy of assimilation and digestion. Analysis showed it to contain 30 per cent. of cocoa fat, which means that a reduction has been effected in the amount of the indigestible fat in the cocoa bean by about one half. The mineral matter amounted to 6·05 per cent. and its alkalinity, reckoned as potash, to 2 per cent. Since the normal alkalinity of the ash of cocoa with half its fat extracted amounts to 5 per cent. it is highly probable that a small proportion of a salt which on ignition exhibits an alkaline reaction has been added, the cocoa itself not giving the slightest evidence of free alkali. This accounts for the high degree of the so-called solubility which this cocoa exhibits. The peculiar method of manufacture adopted undoubtedly increases its dietetic value.

PURE COCOA ESSENCE (CAMEL BRAND).

(PEEK BROTHERS AND WINCH, LIMITED, 20, EASTCHEAP, E.C.)

This essence possesses an admirable flavour and develops an attractive aroma in the cup. It is thoroughly miscible with hot water, and contains practically no coarse ingredients. This is clear from the fact that on mixing the cocoa with hot water the liquid remains practically without sediment for some time. Analysis gave the following results: fat, 30 per cent.; mineral matter, 4·21 per cent., exhibiting an alkalinity equal to 1·04 per cent. potash. The cocoa contains no free alkali, but by its method of preparation the mineral matter obtained on incineration is increased and, *pari passu*, its degree of alkalinity. From these results the general excellence of this cocoa must be admitted.

QUAKER OATS.

(THE AMERICAN CEREAL COMPANY, CHICAGO.)

Rolled oats or whole oats flattened into wafers are, as is well illustrated in "Quaker Oats," a distinct improvement on the ordinary preparations, since while the rolling process secures a more complete extraction of the valuable food ingredients in the making of porridge, on account of the increased extracting surface exposed, the fat at the same time does not appear to undergo any objectionable change. It is well known that, owing to the fat becoming rancid, the flavour of ordinary oatmeal deteriorates. In "Quaker Oats" this flavour would appear to be preserved for an indefinite time. That the oats selected for the rolling process are of a superior quality is evident from the following analysis which we recently made: starch, &c., 65·77; albuminoids, 15·43; fat, 8·00; mineral matter, 1·35 per cent.; moisture, 9·45 per cent. Thus "Quaker Oats" contain a maximum proportion of each of the food constituents which places the oat above other cereals in regard to nourishing and sustaining value. A glance at the above analysis will serve to show at once that this preparation represents a complete food, and by its peculiar mode of preparation its nutritive qualities are made more available.

ANTI-DIABETIC WHISKY.

(JOHN DEWAR AND SONS, PERTH, AND 48, LIME-STREET, E.C.)

The ground upon which this spirit is claimed to be suitable for use by the diabetic patient will be easily understood from the following results of analysis: extractive matters, 0·035 per cent.; mineral matter, *nil*; acidity calculated as acetic acid, 0·0096 per cent.; alcohol, by weight 40·30 per cent., by volume 47·67 per cent., equal to proof spirit 83·54 per cent. The whisky, as might be expected, is pale in colour, but possesses the smooth and mellow flavour of a matured spirit. It is practically without extractives and acidity. The peculiar aroma and flavour of ordinary whisky is almost absent. In the present state of our knowledge in regard to diabetes, it is held essential that the patient should, if he drink whisky at all, only drink that which is of the purest kind and free from extractives and acidity. The spirit under analysis complies with these requirements, but its flavour necessarily suffers.

COMALTANA WINE.

(THE COMALTANA WINE CO., MARKET-STREET, HECKMONDWIKE, YORKS.)

The genuineness of this wine was abundantly established by the fact that it showed digestive action upon starch, which was more marked when the alcohol was removed by slow evaporation at a low temperature. Again, cocaine was easily isolated and identified. The wine is, in fact, a combination of

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extract of malt and extract of coca leaf with port wine. Its alcoholic strength is somewhat below that of ordinary port, as will be seen from the following results, in which are included other items: alcohol, by weight 15·00, by volume 18·48, equal to proof spirit 32·38; extractives and sugar, 16·75 per cent.; mineral matter, 0·35 per cent. The wine possesses a strong malty flavour. It may be regarded as presenting the invigorating qualities of port wine added to the stimulating properties of the coca leaf and the nutritive as well as digestive qualities of an active malt extract.

EUCHININ.

(WIDENMANN, BROICHER, AND CO., 33, LIME-STREET, E.C.)

Euchinin is obtained by the action of chloro-carbonic ethyl-ether on quinine. With acids, in which it is freely soluble, it yields a solution exhibiting the fluorescent appearance of quinine in sulphuric acid. It is said to secure the therapeutic effects of quinine without introducing its unpleasant properties. Euchinin is stated not to disturb the appetite or to produce nausea. This new quinine combination is regarded as offering a satisfactory means of introducing quinine into the system when ordinary quinine leads to objectionable effects.

KRYOFINE.

(AGENCY: D. MISELL, 65 AND 66, BASINGHALL-STREET, E.C.)

To the already long list of new antipyretics must be added "Kryofine." Like phenacetin, it is a para-phenetidin derivative, and is, in fact, the condensation product derived from heating para-phenetidin with methoxyacetic acid. Phenacetin is aceto-para-phenetidin. "Kryofine" is said to effect a very decided reduction in temperature in febrile conditions, and is stated to be more certain than either antipyrin or phenacetin, and yet to have no unpleasant sequelæ.

NEW PHARMACEUTICAL PREPARATIONS (WARNER AND CO., PHILADELPHIA).

(AGENTS: F. NEWBERY AND SONS, 1 AND 3, KING EDWARD-STREET, NEWGATE-STREET, E.C.)

Some excellent formulæ are comprised in the following preparations:—Cascara Elixir, from which the inert and griping principles have been removed; Elixir Salicylic Comp., a sweet-tasting preparation containing pure salicylates for administration in acute rheumatism; and Tono Sumbul, a bitter cordial with quinine-like taste, containing chiefly the extractives of sumbul root combined with calisaya, iron, and phosphoric acid. The latter preparation is said to be a useful stimulant and tonic to the nervous system, as in hysteria, delirium, and asthma, and is to be taken in tablespoonful doses before meals; Sumbul, or musk root, is also combined with asafœtida, sulphate of iron, and arsenic, in the convenient form of elegantly-coated pills, and to the pill list also may be added the chalybeate pill of the composition of Blaud's pill—that is, containing protosulphate of iron and carbonate of potassium in molecular proportion. We found that on dissolving a pill in water interaction speedily took place, pure protocarbonate of iron resulting. The chalybeate pill is also prepared containing extract of nux vomica ½ grain; this latter is an excellent combination as a ferruginous tonic. Another useful formula in the form of a pill is that which contains sulphite of soda 1 grain, salicylic acid 1 grain, and nux vomica ¼ grain, which has been prescribed with good results in hyperacidity and disturbed digestive function. Lastly should be mentioned the granular effervescent preparation of hydrobromate of caffeine, which has been found valuable in the relief of nervous or sick headache. All these preparations are admirable specimens of the advances in pharmaceutical preparations.

New Inventions.

NEW HERNIA CORSET.

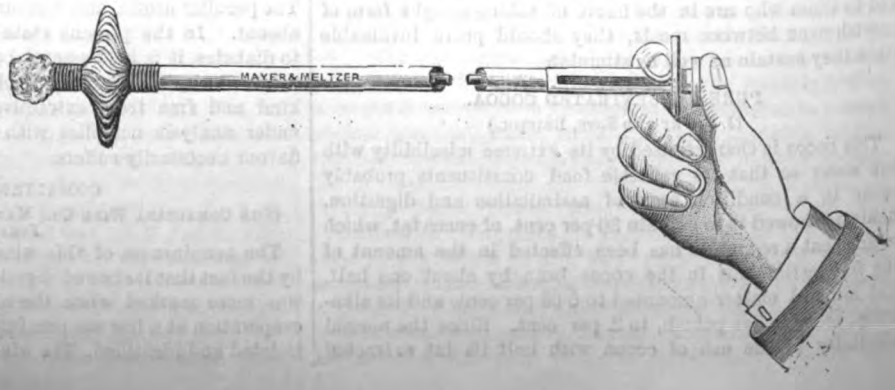
THE use of the truss or belt commonly employed at present in cases of umbilical hernia is attended with inconveniences which it is the object of this appliance to avoid. The instrument which I have designed for the purpose has the further advantage that it acts also as an abdominal bandage or support. It may be easily and readily applied and worn without discomfort. It is employed in combination with a corset, and consists of a spring, preferably constructed of a band or strip of sheet steel, and curved. The centre of the spring is attached to the lower end of one of the corset busks or to the lower end of an auxiliary busk or support such as is sometimes worn with corsets, with the concavity of the curvature outside. To the outer ends of the spring there are attached studs, buckles, buttons, or the like, to which straps may be secured. The straps which are used each have one end attached to the corset at a point about midway between the front and the back, or nearer to the front or back, and near the lower edge. At about the point of attachment of the spring to the busk a pad is secured so as to come upon the umbilical region when in use. This pad may resemble the pads used with umbilical trusses and will vary in construction to suit the particular hernia for which it is intended. In use, after the corset is in place, with the pad over the hernia, the straps from each side of the corset are connected with the ends of the springs and are adjusted until the proper degree of pressure is produced by the consequent flattening of the curvature of the spring. In removing the corset it will be necessary to detach only one of the straps from the spring. Gussets of elastic web may be inserted in the lower edge of the corset, and the straps, or a portion of them, may be made of elastic web or of coiled springs or the like. It can be obtained from Messrs. Arnold and Sons, London.



Blackpool. F. W. A. STOTT, M.A., M.B. Oxon.

AN IMPROVED ŒSOPHAGEAL PROBANG.

THE following modification of the umbrella probang has been devised with the object of obviating the well-known difficulties experienced in the use of the ordinary pattern—viz., the premature opening during insertion, and of opening and withdrawing, which necessitates the use of both hands. The probang is constructed in the usual way so far as the



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bristles, catheter, &c., are concerned, but the end which is held by the operator is so arranged that the whalebone does not protrude, but terminates about an inch from the end of the catheter, and is fixed to a disc by a pin which passes through lateral slits in the catheter. When inserting the probang it is held by the end beyond the disc and so prevented from opening; it is then opened and withdrawn by pressing on the end with the thumb, as shown in the illustration. By this means one hand is free to steady the patient's head or to hold a tongue spatula or gag. Messrs. Mayer and Meltzer, of Great Portland-street, are the makers.

King's College Hospital, London. C. J. MAYHAW.

THE BATTLE OF THE CLUBS.

THE ACTION OF THE PROFESSION AT GREAT YARMOUTH.

AT a recent meeting of the Great Yarmouth District Committee of the Incorporated Medical Practitioners' Association it was decided to send a memorial to every licensing body in the United Kingdom calling attention to the evils and abuses at present existing in connexion with the administration of many clubs and medical aid societies, and if possible to procure an expression of opinion from the licensing bodies, on the conduct of those of their graduates or diplomates who, by holding appointments under such clubs or societies, aid, abet, and perpetuate the abuses and evils which exist in connexion therewith.

We publish this memorial below, thus bringing the matter prominently before the profession and to the cognisance of other local societies of medical practitioners, which may thus be led to coöperation and possibly to adoption of similar measures calculated to bring forcibly to the notice of the licensing and governing bodies the abuses now obtaining in connexion with medical aid societies, clubs, and hospitals.

TO THE { SENATE / COUNCIL } OF THE.....

We, the undersigned—being, with one exception, all the registered medical men engaged in private practice in Great Yarmouth—beg leave to bring the following facts under the notice of your { Senate / Council } as the governing body of one of the corporations entitled under the Medical Acts to grant { degrees / diplomas } qualifying their holders to practise medicine, surgery, and midwifery in the United Kingdom:—

1. In Great Yarmouth, as in other districts of the United Kingdom, certain grave abuses have grown up of late years in connexion with the systems of "Medical Aid" for the working classes organised by the friendly societies and by certain industrial life assurance companies, and other lay associations.

The principal abuses referred to are:—

(*a*) The admission of persons not needing such assistance to medical benefits intended primarily for the relief of the poorer classes.

(*b*) The admission of women and children to these benefits at entirely inadequate rates of payment for the medical officer.

(*c*) Specially in the case of industrial assurance and similar societies a system of indiscriminate canvassing whereby the private patients of other medical men are solicited—directly for the company, indirectly for its medical officer.

(*d*) The conduct of medical practice by lay organisations purely as a commercial speculation, this being most flagrant where, as in some cases, the medical officer receives a fixed salary; and beyond this amount the fees accruing from his work are appropriated as the profits of his non-medical employers.

2. For the purpose of checking these and similar abuses all but one of the medical practitioners residing in Great Yarmouth combined, and as one result of their association a joint request was made to the friendly societies for a conference with a view to an amicable adjustment of the matters in question, but with few exceptions the friendly societies absolutely refused this request, dismissed their medical officers, and proceeded to form a medical institute in the constitution of which all the above abuses are maintained and even increased.

3. The posts of medical officers to this institute were advertised in the lay press, and as a result, notwithstanding the condemnation of such methods of practice by the medical journals and by the general voice of the profession, and in spite also of the fact that those accepting these appointments must knowingly, wilfully, and openly assume the position of assisting a certain section of the public to defeat the local medical men in a matter involving the vital interests of the profession, qualified medical men were, we regret to say, found willing to take these posts.

4. One of our members had previously acted as the medical officer of an industrial assurance company offering "medical aid" as an attraction to its insurers, paying its medical officer a fixed salary, and canvassing for patients from door to door. This office he has resigned, but in the absence of any declaration as to these appointments by the General Medical Council, or by the universities and colleges granting medical qualifications, the company has, we believe, easily found a substitute.

5. Such facts as we have recited can be quite paralleled in the experience of other towns and districts of the United Kingdom, and appear to us to call for the careful attention of the various governing bodies entrusted with the granting of medical qualifications and with the control of those qualified.

The dignity and independence which are essential to the adequate discharge by medical men of their duties to the public are gravely imperilled by these abuses. In particular (*a*) canvassing by lay bodies on behalf of medical men employed by them is plainly contrary to the first principles underlying proper professional relations, and appointments depending on such canvassing ought not to be permitted to be held by registered medical practitioners; (*b*) it is impossible for a medical man, acting under the control and direction, and entirely subservient to the pecuniary interests of a purely trading company which traffics in medical attendance, to satisfactorily perform the duties of a medical practitioner; whilst (*c*) the unchecked extension of the club system to all classes of society threatens a general conversion of medical practice from the basis of private relation to that of public contract, a conversion which we think the medical profession should resist with all its strength not more in its own interest than in that of the public.

We therefore beg leave to submit the following questions to the consideration of your { Senate / Council }:—

(*a*) Is the holding of appointments such as are herein described compatible with the conditions under which your { degree / diploma } is granted and held?

(*b*) If the holding of such appointments by your { graduates / diplomates } does not contravene the existing regulations, does not your { Senate / Council } consider that, in the interests of the medical profession and of the public, by-laws forbidding such practice should be adopted?

(*c*) Is not your { Senate / Council } of opinion that for a medical man to hold such appointments should be declared by the General Medical Council to be conduct infamous in a professional respect, and if so, will your { Senate / Council } instruct its representative on the General Medical Council to support such a declaration?

(Signed)

HENRY BLAKE, M.B. Lond.
THOMAS LETTIS, M.R.C.S. Eng., L.S.A.
A. C. MAYO, M.R.C.S. Eng. and L.S.A.
A. H. MEADOWS, M.R.C.S. Eng., L.R.C.P. Lond.
THOS. HY. MOXON, M.R.C.S. Eng., L.S.A.
ALBAN H. MOXON, M.R.C.S. Eng., L.S.A.
CHARLES O'FARRELL, L.R.C.P., L.R.C.S. Edin.
JAMES RYLEY, M.D. Lond., M.R.C.S. Eng.
RAYMOND H. SHAW, M.S., M.B. Durh.
JOHN BENJ. NICHOLSON VICKERS, L.R.C.P. Lond., M.R.C.S. Eng.
J. SMITH WHITAKER, M.R.C.S. Eng., L.R.C.P. Lond.
R. WRIGLEY, M.R.C.S. Eng., L.S.A.
W. E. WYLLYS, L.R.C.P., L.R.C.S. Edin.
WM. WYLLYS, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A.
LEONARD YOUATT, M.B., Ch.B., D.P.H. Vict.

COVENTRY PROVIDENT DISPENSARY AND ITS MEDICAL STAFF.

The medical staff of this old—perhaps the oldest—provident dispensary have addressed a memorial to the committee asking for several alterations in the rules. One was for the fixing of a wage limit; another was to have a rule cancelled which requires the appointment of a new medical officer when the aggregate salaries of the staff equal an average of £350 each; another to allow all the members of the staff to sit on the committee instead of only two; and a fourth to raise the subscription for children where a concession for large families is now allowed. These are all most reasonable propositions; certainly the first and the last two. Yet the committee have declined to agree to them, except to a slight rise in children's subscriptions. The memorial has been twice presented, and the requests have been twice refused. The staff owe it to themselves and the profession to be firm in demanding compliance with such just claims. In doing so they should have the support of the profession of the town and neighbourhood. Without this they could scarcely be expected to be firm. According to the *Birmingham Mail* the committee are not in a conciliatory frame of mind, and are prepared to engage a medical staff exclusively for the dispensary, as is being done at Yarmouth and other towns. Such high-handed disregard of the just claims of the profession would not be possible if the profession were true to itself. Of this the staff must judge for themselves. They are not called on to play into the hands of those who are ever ready to accept offices vacated by others and to reap what they have not sown.

FOREIGN UNIVERSITY INTELLIGENCE.—*Lemberg:* Dr. H. Schramm has been recognised as *privat-docent* of Surgery.—*Prague* (*Bohemian University*): Dr. V. Slavik has been recognised as *privat-docent* of Forensic Medicine.—*Utrecht:* Dr. Zwaardenmarker has been appointed to the chair of Physiology in succession to Professor William Engelmann, who goes to Berlin.

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THE LANCET.

LONDON: SATURDAY, SEPTEMBER 18, 1897.

THE duty imposed on the profession by the resignation of Dr. RENTOUL is one of the gravest kind. The functions of the General Medical Council are far-reaching and likely to become more so. It has the power to very largely determine the course and character of medical education and even to affect the nature of the preliminary education of the country. It has the power, with an almost absolute discretion, of defining infamous behaviour in a professional respect, and of removing any registered practitioner who has been guilty of it from the Medical Register. It is asked from time to time to favour the Privy Council or the Government with its opinions on questions of legislation affecting the profession or the health of the public. These are the great functions of the General Medical Council, and Parliament in its wisdom has determined that the registered practitioners of the country shall elect a sixth part of the General Medical Council. Some highly conservative members of the profession think that this recognition of the claims of the registered practitioners to a voice in the General Medical Council is all a mistake—a sort of interference with the divine right of the universities and the medical corporations to rule the profession and to be the sole exponents of what is needed for the education and discipline of medical men. Others think that Parliament was right in making provision, in 1886, for having the judgment of the practitioners of the country as such on the work of the General Medical Council, and that the principle of direct representation needs a little more extension. They are of opinion that the duties of the General Medical Council would be discharged a little more expeditiously and effectively by a larger importation of men familiar with the details of medical practice and the defects of medical education. This last opinion is held by a large number of practitioners, probably the majority of those on the Medical Register. But it must be admitted that the evidence is not decisive on this point. The doubt arises from the fact that the profession has never put forth its strength, or even three-fourths of its strength, on the occasion of the election of direct representatives, and that at the last election there was a great defection of voters and a great discord of opinion among those who did vote. Out of 22,577 voting papers sent out only 11,990 were returned validly signed and filled up. It will be difficult to convince statesmen that the profession cares about direct representation if nearly half the voters on the Medical Register abstain from voting.

There is a duty on the profession as urgent as voting, and prior in point of time to voting—that is, the duty of selecting candidates. The misfortune of the past elections, and especially of the last one, was that the interest of the profession was so divided over a number of candidates that no individual candidate could boast that he had been returned by even a third of the profession. There were ten candidates for three vacancies. The first on the poll had 6646 votes; the last had 143. The profession cannot expect its direct representatives to do much on such terms as these. Neither the General Medical Council nor the public can take direct representation seriously if the profession is to drift in the matter of selection and at the end to be hopelessly divided among ten candidates. The first and most urgent duty then of the profession is the selection of a candidate. Is it beyond hope that the profession and its associations should for this purpose of selection of a fit and proper candidate to represent over 22,000 registered medical men comport itself as if it were one man. That is the only way to make direct representation respected. There is no lack of men either in the Provinces or in London whose experience and character and standing in the profession would add to the weight and efficiency of the Council. If one such were selected by a representative group of men in the profession he would come forward with such advantages and recommendation that his election would be certain, and his influence thereafter in the Council would be considerable.

The occasion is really a serious one. We have said nothing about the untimely vacancy, which for the future will put the profession and the Council to the expense of a double election. The gentleman to be elected will be elected for five years, and his term of office will expire a year after that of his two English colleagues; and such an anomalous and inconvenient state of matters will last till an absurd defect in the law is remedied. Dr. RENTOUL has, no doubt, reasons which are satisfactory to his mind for the perplexing step he has taken before he has been a year in the Council and just when he would have had his opportunity of expounding to the Council the views which he has pressed so incessantly on the profession. We may hope that these reasons will satisfy the electors who returned him in December last. We have no wish to spend our time or space in devising excuses or explanation of an act which none can explain but Dr. RENTOUL himself. Be this as it may, the vacancy is a fact, and has to be promptly filled up; and what we impress on our readers is that the whole circumstances of direct representation are such now as to make this election one of peculiar importance. The members of the profession who care least for direct representation cannot wish to see it brought into discredit by want of interest or want of method in those who constitute the great bulk of the profession. Neither the dignity of the profession nor the interest of candidates can be served by a general apathy—by nobody doing what is supposed to be everybody's business. The institutions of the profession recognised by law are of no use for this purpose. They are over-represented already. The only organisations that can intervene here are its voluntary associations. The strength of them will be judged by their action at this moment. If all that has been said lately in high quarters about the powerlessness of one great organisation is not to receive a striking confirmation that body will have to show more power of initiative, and courage of selection and of preference than it showed last year. We have only two words to say in conclusion. One is that the vacancy arises by the resignation of a member living in the provinces, and

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that it is natural that the provinces should think themselves entitled to the seat if they can agree upon one suitable candidate. The other is that no time is to be lost. We give in another column the legal steps of the procedure of election for the guidance of candidates and their friends, from which it will be seen that in less than a month the election will be over.

WHY should medical practitioners be appealed to only in cases of pronounced disease? Why should they not be asked for a professional opinion even by those who to outward appearance are in good health? Just as the wise administrator or manager overhauls his books from time to time to make sure that no item has crept in or been omitted which may eventually disturb the balance, so the "intelligent custodian of his own health" will have his condition professionally examined at intervals more or less frequent so as to satisfy himself that the complex machine he calls his "system" is in good working order. This is one of many practical corollaries to be gathered from Dr. ANGELO MOSSO'S latest book—the work of a biologist, a physician, an athlete, and, we may add, a poet—which, dealing with one great and increasing province of human activity, appears opportunely to allay misapprehensions and to give sound advice or even warning for the benefit of all whom that province attracts. "La fisiologia dell' Uomo sulle Alpi" (the Physiology of Man on the Alps) is its title, and it should be read after a judicious perusal of the writer's attractive treatises on "Fear," "Fatigue," and "Brain Temperatures," supplementing these, as it does, in many important directions and concentrating the *ensemble* of their findings and conclusions on corporeal exertion in general and mountaineering in particular. Himself a "peak-stormer" with a distinguished record, Professor MOSSO approaches the subject with an authority which only the life-long worker in physiology and experimental hygiene can command, and he uses his knowledge so genially, and illustrates it from such a fund of experience as to inspire sympathy and gain a hearing in quarters impervious to mere didactic exposition, however well accredited. For the observations on which the present book is based he had at his service ten soldiers of the Alpine regiment under the command of an army surgeon; he had also a working laboratory fitted up in a cabin 4500 mètres above sea level; he could subdivide the ascent (of the Monte Rosa) into diverse stages with encampments and other shelters, so as to overtake these said stages at different rates of rapidity, with the soldiers divided into two companies; he had, in short, an array of "means to ends" never before enjoyed by investigators in the same province; and if special circumstances obliged him to limit his sojourn on the peak of Monte Rosa to ten days, he could with advantage recall the words of his able precursor, Signor G. ZUMSTEIN, who, reporting to the Turinese "Accademia delle Scienze" the results of his first ascent of the same mountain, observed: "Il faut s'estimer heureux si l'on peut faire la moitié des observations aux quelles on s'est préparé." From a book which has few pages not pregnant with acute remark or practical comment it is difficult to make representative excerpts, those selected seeming a moment afterwards to be surpassed by others in freshness and value. But omitting Professor MOSSO'S corrections of previous investigators from SAUSSURE downwards as to "respiration on the mountains," as to the phenomena of the circulation, as to the "Mal di Montagna," and such like, we may cal attention to the paragraphs on "Automatism" and its effects on the mountaineer, always marked, and not seldom disastrous. "Let the Alpine climber never forget," he says, "that he may become an automaton through fatigue when it is no longer the brain that gives him the impulse to walk, but a blind, unconscious force." In these circumstances he becomes dead to danger, because all his sense-perceptions and his mental alertness are blunted. What seems daring in this condition is simply the indifference of insensibility. It is not "the offspring of courage; it is the expression of a pathological fact due to the nervous exhaustion which annuls the consciousness of peril." Temporary impairment of memory is, he points out, a constant effect of fatigue incurred in mountain ascents; it is part of the general diminution of sensibility caused under the same conditions. The muscular sense similarly undergoes a change for the worse. "Look," he says, "at the gait of those who are approaching the end of a long march; their semi-collapsed attitude, their listlessness, depend in great part on this—they feel the ground less well beneath them." This is a dangerous condition to fall into in an Alpine ascent, an error in footing not being corrected with that promptitude on which safety so often depends. The acuteness of the eyesight frequently diminishes—even the sensation of light. This phenomenon Professor MOSSO illustrates from his own experience, and then he proceeds to consider the effects of exhaustion on so-called "nervous persons"—a difficult subject, because, as he says, we do not know how much real energy they have at command, while they often start on an ascent without estimating "quid valeant humeri, quid ferre recusent." Again, they have no idea of what outlay of force the exertion may cost them. "It is not to be wondered at," he remarks, "that grave incidents overtake them even on short expeditions." They fall into what he terms "un errore fatale di contabilita fisiologica." As a first effect, fatigue produces an excitement which engenders the mistaken belief that they are really stronger. This he illustrates by a series of effective examples drawn from experience. "The excitement produced in the system," he continues, "by the 'scorie delia fatica' (the débris of metabolism) prevents their realising how much potential force they still retain. ..... Those individuals who most nearly approach systematic bankruptcy are unfortunately the very individuals who most enjoy the nervous excitation produced by fatigue. They court it with the craving of the morphinomaniac, who avails himself of morphine not to sleep, but to excite himself. Everyone referring to his acquaintanceships must recall some slightly-built, especially nervous and hysterical subjects, who boast they have never known what fatigue was. ..... Physician and patient alike are often drawn into error by this physiological paradox; the patient is recommended to court movement as a means of working off exuberant force, while the ratio of physical exercise is already excessive and ought instead to enjoin repose. FÉRÉ has just shown that nervous fatigue and profound emotion render us more

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vulnerable to poisons. The fatigue of the muscles is indeed a poison. Strange and much to be dreaded is this condition of the weakly. Their body resembles a 'going concern' or a commercial house in which the cashier (the nervous system, in that case) does not let the principal know either what sums he has in the till or what outlays the house is continually incurring. Matters go on without the possibility of ever striking a balance. Light-heartedness and waste increase fatally the nearer the approach to bankruptcy.' How true this is in everyday life, how disastrously true in the world of bicyclists, amateur athletes, and, above all, Alpine climbers, is known to none better than to the medical practitioner.

AT the third general meeting of the Twelfth International Medical Congress recently held at Moscow Professor LEYDEN, of Berlin, read a paper on a subject which has many times been brought before the notice of medical men, not only during the last few years, but upwards of 200 years ago—namely, the contemporary methods of treating tuberculous patients, and the need of Government control over them. The terms "200 years ago" and "contemporary" may seem contradictions, but at the former period in Italy medical men came to the conclusion that "consumption" was contagious, and most stringent measures were adopted to attempt to control it by notification, isolation, and disinfection, but apparently without effect. Within the last decade renewed efforts have been made in the same direction. CORNET'S[1] experiments have done much to accentuate the need for the proper disposal of the sputa of phthisical patients, and the authorities of the Brompton Hospital for Diseases of the Chest have adopted measures in this direction. It has several times been suggested that pulmonary tuberculosis should be made a notifiable disease—that is to say, in the words of Professor LEYDEN'S paper, that there is "need of Government control over them" (the patients). Although at first sight this would seem to be the correct way to deal with an infectious disease, there are numerous difficulties to be overcome. In the first place such a proposal presumes that the contact of tuberculous patients with healthy individuals is a source of danger to the latter. That this is not so in the same way as in the case of other infectious maladies is evident from everyday experience. Another difficulty is that in the majority of instances the disease has existed for some considerable time before it has been recognised, and the clinical and post-mortem records of our general hospitals would seem to indicate that many patients have suffered from pulmonary tuberculosis without ever having been aware of it, so that a satisfactory notification would be impossible; but on the other hand it behoves every practitioner who is attending a patient suffering from pulmonary tuberculosis to give careful directions as to the disposal of the sputa and the disinfection of linen (especially handkerchiefs) likely to be soiled with the expectoration.

[1] Zeitschrift für Hygiene, 1889, v. vi.

The principal points in treatment were fully referred to by Professor LEYDEN. Like most other physicians who have had a large experience in treating the disease now under consideration, he is reluctantly compelled to admit that up to the present time we have discovered no means of actually attacking the bacillus itself when it has succeeded in invading the lung, and we have therefore to strengthen and reinforce the powers of the individual so as to enable him to withstand the influence of the microbe. He pointed out that the principal points in this mode of treatment are:—(1) Choice of a suitable climate; (2) a good air, free from dust; (3) good nourishment; (4) exercise; (5) methodical treatment of the patient in special institutions; and (6) medicinal treatment as auxiliary to the general treatment. Cold fresh air was of the greatest importance; and a suitable amount of exercise should also be permitted. All the various points, Professor LEYDEN maintained, in a successful scheme of treatment were only attainable in a properly conducted sanatorium. With this statement we can only partially agree. It is, no doubt, to a great extent true, but not as regards all classes of patients, and for this reason, patients must be divided in accordance with their financial means. Patients who cannot afford climatic treatment—that is to say, those who cannot afford to live in a climate suitable to the condition of their lungs—would of course do better to avail themselves of such institutions, but others, we believe, would do wisely to provide themselves with a suitable home, temporary or permanent, under medical direction, apart from the constant society of patients afflicted similarly to themselves. Our large chest hospitals are to a great extent such institutions as Professor LEYDEN suggests, with the exception of climate, which could certainly be improved upon; and the Brompton Hospital is at the present time making an endeavour to establish a branch in the country, where more salubrious climatic conditions prevail. But at the same time the statistics of our chest hospitals are satisfactory as showing what the other conditions—good food, cleanliness, and rest—can do.

Climate is of course one of the most important points in connexion with tuberculous disease; but it is not everything, and it is possible to be too hasty in advising patients to "go abroad." Other things must be considered apart from the stage of the disease and other medical points; the domestic and monetary circumstances may actually render it impossible for the patient to leave England. It is in such cases that the formation of such institutions as Professor LEYDEN suggests would prove of the greatest service. Our south coast offers a fairly favourable climate for cases of pulmonary tuberculosis. What is known as the "open air treatment" has proved very successful, and this has already been adopted at Bournemouth, if not at other places. The Royal National Hospital at Ventnor is an excellent institution, but the number of beds is limited and the authorities quite rightly are most strict in the selection of cases, and there are consequently large numbers of patients in the more advanced stages of the disease seeking admission to whom increased accommodation would be the greatest boon, as they are otherwise entirely unable to take advantage of the climate which our south coast offers.

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Annotations.

"Ne quid nimis."

THE CHURCH AND SANITATION.

WE have received a reprint of the annual sermon of the Church Sanitary Association, delivered in All Saint's Church, Tufnell Park, by the vicar, the Rev. W. J. Hocking, on Aug. 1st. It is an eminently practical discourse and full of plain speaking, as witness the following: "Science is making it clearer and clearer every day that not only diseases, but a very large proportion of the deaths of the country are attributable to causes which have been evolved out of things for which men are directly or indirectly responsible. It is, therefore, not only foolish piffle, but insulting ignorance, to say that the good God wills these things, and that we must resign ourselves to them." There is a mediæval simplicity and homeliness about these remarks which go far to excuse the lapse into slang terms. We are in full accord with Mr. Hocking when he contends that dirt and disease are not part of the divine order of things, and also that it is the duty of the Church to care for the bodies of men as well as their souls. Formerly she always did; the first hospital in London was a monastic establishment; it was the Church that drained fens, brought waste lands into cultivation, and taught people the advantages of living a healthy, regular life by rule. Even as late as the seventeenth century it was the Orthodox church of the East which provided for the care and isolation of lepers, and every parish priest going in and out among his flock ought to impress upon its members the paramount necessity of cleanliness, and, as Mr. Hocking says, not be afraid to tell landlords when their property is in an insanitary condition. The simple laws of health and sanitation ought to form a part of the examination of every candidate for ordination. Doubtless many will say it is not the business of the clergy to concern themselves with such matters, but we contend that it is, for amid unhealthy and filthy surroundings a healthy and moral mind is all but impossible.

ANTI-TUBERCLE SERUM.

AT a meeting of the American Medical Association held at Philadelphia last June Dr. Paul Paquin, of St. Louis, Mobile, gave an account of a considerable number of cases which had been treated with anti-tubercle serum, the results being in his opinion extremely favourable. The substance of Dr. Paquin's paper has been published in the *Journal of the American Medical Association* of July 17th last. It seems that a tubercle antitoxin has been prepared in St. Louis under his direction ever since the year 1894, and in January, 1895, he presented to the St. Louis Medical Society a report of the results obtained in 22 St. Louis City Hospital patients who had been treated exclusively with serum for three months. Most of these patients were eventually lost sight of, but it is known that three of them are still alive, following their occupation and apparently well in health. A second report of entirely new cases was made to the St. Louis Medical Society in March, 1896, and included the recovery of 16 cases of pulmonary tuberculosis, 2 of which were acute and 14 chronic. In this report Dr. Paquin stated that "of 100 cases treated in a period of eighteen months the following results obtained: In the first and second stage, as understood in general practice, 14 recovered; in the second stage, improved or checked or still improving at the time, 26; among these 26, 12 seemed to have really recovered, although the time had not been long enough to warrant positive assurance; there had disappeared from observation in all stages, 35; died during treatment, begun at the third and fourth stages, including 10 moribunds who insisted on trying the treatment, 25." In September, 1896, he presented a report to the Virginia State Medical Society of a total of 226 cases of tuberculosis exhibiting the following symptoms: Destructive broncho-pneumonia with cavities, 37; destructive broncho-pneumonia without recognisable cavities, 66; diffuse febrile pneumonia, with or without a destructive process, 19; diffuse non-febrile broncho-pneumonia, with or without destructive cavities, 19; circumscribed febrile broncho-pneumonia, 35; circumscribed apyretic broncho-pneumonia, 13; not described with sufficient accuracy for classification, 32; and extra-pulmonary tuberculosis, 5. The results of serum treatment were as follows: Recoveries that seemed complete and permanent, 40; apparent recoveries, with cavities *in statu quo*, 3; improved, capable of performing usual duties, 41; improved to a lesser degree, 69; number of deaths reported, 32; and disappeared from observation or under various treatments, 41. It was further stated that the patients' weight was increased in 125 cases, unchanged in 15, decreased in 27, not recorded in 59. At the meeting last June Dr. Paquin presented a report of 67 cases treated last year and not included in the foregoing statistics. The results of treatment were as follows: Recoveries that seem complete at present, 17; improvements to a considerable degree, 35; improvements to a lesser degree, 11; deaths, 4. This report does not include the numerous cases in which serum was tried for moribund patients, or in more favourable cases for too short a time, neither does it include a number of cases improved in the last few months by using serum by rectal injection.

THE VESTRY AND THE REPORT OF THE MEDICAL OFFICER.

THE following resolution was recently passed by the Vestry of St. George the Martyr, Southwark, with reference to Dr. Waldo's report:—

"That in the opinion of this Committee [Public Health and Sewers] the appendix to the medical officer of health's report contains a large quantity of unnecessary matter, and that the vestry clerk communicate with the Local Government Board, directing that reports, papers, and regulations which have not previously been submitted to the authority or issued for the first time during the year be excluded from future reports."

The Local Government Board was accordingly communicated with, and their reply was read at the meeting of the vest y held on Sept. 8th. It ran as follows:—

"Local Government Board, Whitehall, S.W.
"4th August, 1897.

"SIR,—I am directed by the Local Government Board to advert to your letter of the 13th ultimo enclosing a copy of a resolution passed by the Vestry of the Parish of St. George the Martyr, Southwark, expressing their opinion that the appendix to the Annual Report for 1896 of the Medical Officer of Health for the Parish contains a large quantity of unnecessary matter. I am to state that it rests with the Vestry to decide what documents shall be reprinted as an appendix to the annual report of the medical officer of health, but I am to observe that in the present case there are matters contained in the appendix which, in the opinion of the Board, are of more importance in connexion with the report, and some of which might properly have been included in the report itself.

"I am, Sir, your obedient servant,
(Signed) "H. C. MOWAN, Assistant Secretary.
"J. A. Johnson, Esq., Clerk to the Vestry of the
"Parish of St. George the Martyr, Southwark."

It will be seen that "honours were easy" in this important dispute as far as the result of the appeal to the Local Government Board goes. On the one hand, the vestry is told that it rests with them to decide what documents shall be reprinted as an appendix to the annual report of the medical officer of health, which, we presume, is not exactly Dr. Waldo's contention; but, on the other hand, the Board points out that the vestry have not the necessary knowledge to exercise the discretion which they appear to possess, as the matter which it was desired to exclude appears to the Board to be of particular importance to the report. Our own opinion on this matter has been already very definitely stated. The

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action of the vestry of St. George, Southwark, has been misguided and, though possibly honest in intention and devoid of private ill-feeling, has given the public a right to withhold confidence from them.

"STONES IN THE HEAD."

THERE are some curious pictures in the Dutch museums which would suggest that at one time the removal of "stones in the head" was a common operation. Thus in the picture of Pierre Brueghel le Vieux in the engraving room of the Amsterdam Museum, and of Van Bosch in the same collection, and also in the picture by Jan Steen, in Boijmans Museum, Rotterdam, all of which are of the sixteenth century, there are unmistakable indications of a patient undergoing an operation for the removal, not of one stone, but of quite a pile of stones. In an interesting paper by Dr. A. Cartaz in *La Nature*,[1] he applies himself to the question as to what was the operation which the painter intended to ridicule. It is probable that the pictures related to operations which were for the most part purely factitious and addressed to subjects of disordered minds. In other words, it was an opportunity which quacks even at that time did not fail to seize. In the picture by Brueghel le Vieux may be seen, hidden under a stool, a confederate with a basket full of stones, ready to be passed at the proper moment, as the ball is passed to the juggler. In Jan Steen's picture the operation is evidently being conducted at home, but here the operator is not without skilful accomplices—the matron, his habitual assistant, with her cunning expression, and the urchin who laughs at the humbug of the thing, as he passes the pebbles which the crafty charlatan causes to roll over the neck of the suffering patient.

SANITARY REFORM IN ALGERIA.

ACCORDING to the French journal *Le Radical* medical and sanitary reform has at length begun to make some progress amongst the native population of Algeria. A few years ago attention was directed to the subject by Dr. G. Martin, a French medical man, who published letters wherein he bewailed the supposed fact that English females had long pervaded the whole of Kabylia under the guise of tourists, whereas in reality they were zealous propagandists who could not be said to inculcate love of France during their ministration. It behoved the French Government to exercise a strict surveillance over these so-called missionaries, but at the same time some encouragement ought to be afforded to national enterprise so that the duty now usurped by foreigners might be carried out under the control of self-sacrificing patriots. This wearer of tinted spectacles then went on to announce the welcome news that at last a step in the right direction had been taken, Madame Chellier, a distinguished graduate of the Paris Faculty, having organised an expedition under the auspices of the governor of the province, M. Cambon. At that very moment this lady was actively engaged in disseminating the truths of medicine and hygiene amidst the benighted female inhabitants of the mountainous district of Aurès, and a commencement having been made with so much energy and success it was confidently to be expected that the movement would speedily attain to the dimensions it so richly merited. Madame Chellier has now sent in two reports, for 1895 and 1896 respectively, but although she has accomplished much *Le Radical* is still discontented. "How far, alas! we still are from what the English are doing in India," exclaims the writer in a burst of candour, "the Governor of Algeria ought not only to persevere in the course he has adopted, but also to do more—very much more!" It was in the beginning of 1895 that Madame Chellier, quitting Batna, first penetrated the Aurès highlands, travelling on horseback by well-nigh impracticable paths, sleeping for the most part in a little tent, and affording medical aid to nearly seven hundred patients in the villages and hovels of this rude region during a period of five weeks. "When we read the account of the barbarous practices resorted to by the matrons attending on the women who are about to become mothers"—continues *Le Radical*—"we cannot but be seized with sadness and pity at the thought that innumerable victims must inevitably succumb owing to the ignorance of these creatures, and that in a country which has been French for half a century." In 1896 it was not five weeks but five months which the courageous Madame Chellier passed in the Aurès, and also in part of Kabylia. In the course of this journey she vaccinated 1400 Arabs of both sexes in places that were periodically decimated by small-pox. She likewise treated 1200 sick people, and all the time she lost no opportunity of teaching the matrons how to perform their duty properly. The work accomplished by Madame Chellier has been unquestionably most valuable, but no one is better aware than she is of its insufficiency. In her opinion the Algerians are ripe for sanitary reform, and all that is required is direction and instruction. The first thing to be done is to establish accouchement schools for female pupils, of whom it will be easy to obtain a sufficient supply. "If the Governor-General of Algeria will only take to heart the work done by the English in India he will render the greatest possible service to France," but in order to arrive at this result access to the native interiors is essential, and female practitioners alone can make their way to where the women live.

[1] A translation of this paper appears in the August number of Appleton's Popular Science Monthly.

A NEW FIRE EXTINGUISHER.

ACCORDING to a statement published in the July number of the New York *Insurance Times* the hose and hydrant have found a formidable rival in their work of fire extinction. The new comer is a powder which is said to be so light as to be easily carried by a draught of air in any direction. It does not injure furniture or other objects with which it may come in contact, it cannot freeze, nor does it lose in efficiency by age or climate. It requires no machinery for its application. Its powers were recently demonstrated by a test experiment carried out under the direction of the New York Fire Department. A wooden building furnished with a flue thirty-eight feet long was set on fire, and when well alight was treated with the new extinguisher. Two tubes were used, and in seventeen seconds the fire was subdued, the entire inner surface of the flue having been charred in the meantime. We are not informed as to the composition of this powder. If it be as safe as it appears to be efficacious, it should prove a useful addition to the safeguards against fire already employed in the household. Its lightness ought certainly to enhance its value in dealing with that occasionally dangerous bugbear—fire in the chimney.

"DEATH BY LIGHTNING."

WITH reference to an annotation bearing the above heading in THE LANCET of Sept. 4th we have received a letter from a medical correspondent pointing out that there were certain inaccuracies in our account of the details of the sad case, and kindly supplying us with the following interesting particulars which, we think, should not go unrecorded. Our correspondent saw the deceased about four hours after death, by which time the body had been undressed and washed. The hair was singed in front of and above the right ear, and there was a little blood in the meatus. The skin of the front of the neck was dark-red and stiffened, so that it did not pinch up so easily or in so thin a fold as the healthy skin. This change extended to about

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the posterior edge of the sterno-mastoids, and faded gradually. Down the chest and abdomen were two well-defined, sharp-edged, irregular, ribbon-shaped bands in which the skin was dark-red, uniformly depressed, and hard. Quite at the lower part of the abdomen these ceased, and here again there was singeing of the hair. The thighs were quite untouched, except for a few (six or eight) small oval spots of this reddened, depressed skin scattered over the upper part of the right thigh (front). On the front of the left leg, from knee to ankle, were several irregular streaks of the same nature as the bands on the chest, some of them from two to three inches long and about a quarter of an inch broad, and there was a similar condition on the back of the right leg, from knee to ankle. On the under surface of the right heel was a transverse laceration an inch long with healthy edges. Nothing corresponding existed on the left side. No bones were broken, no skin was torn off, nor was the right leg torn or blackened.

HABITUAL DISLOCATION OF THE SHOULDER.

HABITUAL dislocation of the shoulder, though rare, has occurred often enough to have attracted some attention. An important article on the subject by Dr. H. L. Burrell and Dr. R. W. Lovett appeared in the *American Journal of Medical Sciences* for August, 1897. The name "habitual dislocation" refers only to those cases where dislocation occurs from causes too slight to displace the normal joint. Pathological conditions which are very variable have been found—depressions on the head of the humerus, or loose bodies in the joint; rents in, or laxity of the capsule; and rupture of muscles or tendons. Fractures or chronic non-suppurative inflammation are probable causes of some of the changes in the joint. Immobilisation of a joint for too short a period after a dislocation may prevent union of a rent in the capsule. A curious and unexplained fact is that a large proportion of the patients were epileptics. The writers have observed certain signs not heretofore recorded in patients subject to dislocation. There were drooping of the shoulder and notable atrophy of certain muscles—the coraco-brachialis, the triceps, the deltoid (especially the posterior part), the supraspinatus, the infraspinatus, the rhomboids, the levator anguli scapulæ, and the latissimus dorsi. The other muscles were not notably diminished. Examination by the fluorescope showed that the cathode rays penetrated the affected shoulder with more difficulty than the other, and that the head of the humerus was farther from the acromion, but it could be replaced by raising the elbow. Limitation of movement was present in all cases to a slight extent. In the absence of treatment the prognosis is bad, as the dislocations tend to become more frequent. The treatment consists of fixation combined with massage and exercise. If this fails after ten weeks' trial an operation is advisable. The arm is fixed by supporting it with a sling and holding it to the side with a swathe. After some weeks motion should be progressively allowed, together with massage and exercises for the muscles ordinarily affected. The treatment should be continued for at least three months. Faradaisation of the atrophied muscles is also a help. The writers recommend the following operation which has been perfectly successful in the two cases in which they performed it. An incision was made downwards and outwards from the coracoid process, following the line of the cephalic vein, to below the upper border of the insertion of the pectoralis major. The cephalic vein was drawn outwards, and the pectoralis major separated from the deltoid. The upper three-fourths of the insertion of the pectoralis major was divided, and the head and neck of the humerus came into view. A portion of the insertion of the subscapularis was divided. The arm was raised to a horizontal plane and the head pressed backwards to relax the capsule. The latter, which was apparently lengthened, was grasped with vulsellum forceps. Three sutures were inserted; a fold three-quarters of an inch in length and three-eighths of an inch in width was excised; the sutures were tied, and the wound was closed. No attempt was made to unite the partially divided tendons. Excision of the head of the humerus had been performed several times with good results; but it was only to be recommended when the joint presented such abnormalities as to demand it.

THE PECULIAR PEOPLE.

IT is a primary and self-evident proposition that the duty of the parents of a child who is ill is to procure medical advice for their offspring. The law looks on the neglect of this duty as tantamount to manslaughter. Unfortunately, in the case of the "Peculiar People" this line of conduct is negatived by the literal acceptance of a single text of the Bible, which is clearly meant to be read in connexion with the whole of Scripture, which abundantly recognises that they who are sick need a physician. Law is a legitimate means of correcting such absurd errors. The latest instance is that of a man, who allowed his child when suffering from lobular pneumonia to go from bad to worse, and finally to die. Mr. R. J. Carey, of Barking-road, made the post-mortem examination, and expressed the opinion that the child might have been saved by proper medical attention. The jury returned a verdict of "Manslaughter," and the father was committed to take his trial.

THE SANITARY CONDITION OF HIGH WYCOMBE AND WYCOMBE MARSH.

THE search-light of a Local Government Board inquiry was a few years since thrown upon the sanitary condition of High Wycombe, and, more recently, the village of Wycombe Marsh has been subjected to a similar investigation. As a result of all this, the conditions obtaining at both these places has become matter for public comment, and a portion of the lay press has recently uttered some strictures on the methods, or perhaps want of methods, of those who have been entrusted with the sanitary administration of High Wycombe. The two places referred to are situated in a Buckinghamshire valley draining into the Thames, High Wycombe being rather further removed from the Thames than is Wycombe Marsh. The sewage of the borough is conveyed by means of a main sewer, which is far from water-tight, to a sewage farm which is situated but a short distance from Wycombe Marsh. It was the intention in the first instance to chemically treat the sewage, but the volume of subsoil water finding its way into the sewers is so great that the sewage farm is altogether incapable of dealing with the diluted sewage arriving thereupon. As a consequence, the insufficiently treated sewage passes on to join the subsoil water beyond the sewage farm. This is, however, but half the story. It appears that neither the people of High Wycombe nor of Wycombe Marsh are provided with a proper water-supply, and this fact is particularly unfortunate for the people of the latter place, who draw their water from shallow wells sunk in the porous gravel of the district, into which much of the effluent from the High Wycombe farm escapes. Hence it happens that when enteric fever prevails in the borough, there is risk of the Wycombe Marsh wells becoming polluted; indeed, Dr. Buchanan, who recently investigated an outbreak of enteric fever at Wycombe Marsh, concludes that the evidence obtainable points to the contamination of the subsoil water as the cause of the outbreak. It is to be regretted that the extent of the prevalence of enteric fever in High Wycombe cannot be definitely arrived at, inasmuch as

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the Wycombe councillors have but recently taken advantage of the facilities offered by the Infectious Diseases Notification Act; but certainly suspicion attaches itself to all authorities who are unwilling to make themselves cognisant of the dangers in their midst, and perhaps enteric fever may be found to be more or less endemic in High Wycombe. The town council is said to be at last bestirring itself in the matter of stopping the leaks in the sewers; but the amount voted for the purpose is not regarded by all as adequate, and it has yet to be proved that the sewage can be so treated as to afford any guarantee that pathogenic organisms arriving on the farm may not retain their virulence until they reach the subsoil water of Wycombe Marsh. The town councillors are naturally angry at their affairs being discussed in public, but it is their obvious duty at once to set their house in order; and it appears from the reports which we have read that a pure water-supply for the whole of High Wycombe and for Wycombe Marsh is not the least pressing question for the urban and rural district councillors to grapple with.

UNIVERSAL HYPERTRICHOSIS AND PREMATURE MENSTRUATION IN A CHILD.

THE following case, published by Lesser, appears in the July number of the *Revue des Sciences Médicales*. A girl, aged six years, who was not abnormal at birth, showed for the past two years a remarkable development of hair. The body, especially in the lower limbs, was covered with hairs more abundantly than in a very hairy man. The pubic hairs were more developed than in many adult females. There were whiskers on the face. The hair of the head was normal. Menstruation began at the age of three; it lasted six or seven days, and was profuse. In the following eighteen months it reappeared eight or nine times at almost regular intervals, and then ceased. The intelligence was advanced in a corresponding degree. The child's parents and elder brothers and sisters had normal development of hair, but two brothers, aged sixteen and twelve years, and next in age, had precocious beards. We may direct attention to one point. The case shows something more than precocious sexual development in the case of the hair. There is also production of male characteristics. Now, curiously, in the adult female this event is also associated with abnormal conditions of the genital organs.

THE SPAS OF SPAIN.

SPAIN possesses many mineral springs, but very few of them are at all well known in other countries. Amongst the few exceptions may be reckoned some aperient waters, the sulphurous springs of Panticosa in the Pyrenees near the French frontier, and also the alkaline waters of Vidago, termed the "Spanish Vichy." From the official statistics published by the Spanish Government[1] it appears that the total number of establishments is 169, and that they are scattered over forty-three different provinces. The total number of springs is 443, and those of Alhama (Zaragoza), Alhama Nuevo (Granada), and Fitero Nuevo (Navarra) yield the most copious supply of water. Amongst the hottest springs are those of Caldas de Montbuy in Barcelona (122° to 158° F.) and Archena in Murcia (131° F.). The spa of Panticosa in Huesca has the loftiest position, being about 5600 English feet above sea-level and nearly rivalling St. Moritz in altitude. Amongst strong sulphated waters the Spanish sources of Rubinat, Carabana, and Villacabras are tolerably well-known in other parts of Europe, especially in France; the aperient water of La Margarita, Loeches (Province of Madrid) is widely known in Spain, and is sold in bottles everywhere. The annual number of visitors is nearly 2500 at Caldas-de-Oviedo and at Montemayor (Caceres); some other spas, as Archena, attract considerably more. The greater proportion of the springs can be classed in either the common salt, simple thermal, or sulphurous groups.

[1] La Gaceta de Madrid, May 8th, 1897.

THE SPECIAL CANADIAN SUPPLEMENT TO THE LANCET.

SOME copies of the Special Canadian Supplement to THE LANCET produced, printed, and published in Montreal on Sept. 3rd on the occasion of the meeting of the British Medical Association in Canada have reached us by the last mail. Such a publication is, we venture to think, a new departure in medical journalism. The supplement appears as a journal of forty-eight pages and contains the addresses of Dr. Roddick, Dr. Osler, and Mr. Mitchell Banks, a leading article, and editorial notes and comments upon the proceedings of the meeting, together with a (necessarily brief) report of the proceedings in the different sections.

THE CLOSURE OF WELLS LIABLE TO POLLUTION.

THE interpretation which the law usually places upon the provisions of Section 70 of the Public Health Act is far from satisfactory to the medical officers of health, who, in spite of a well being in a most dangerous environment, may be unable to effect its closure unless the water from it can be demonstrated by analysis to be polluted. That liability to pollution is a far more important point than the result of chemical or bacteriological examination is admitted by every epidemiologist, but, as a matter of practice, a given case must, as a rule, stand or fall according to the finding of the chemist at any given time. The decisions of the law have, however, a way of being modified in a remarkable manner, and when a legal position is obviously opposed to what may be called the common sense view the law tends to place an interpretation upon words and sentences in keeping with the spirit of the moment. This point was illustrated in an interesting fashion by a decision arrived at recently at the St. Albans divisional sessions, when the St. Albans rural district council sought closure orders against twenty-three owners of wells in the Bowling-alley, Harpenden. The contention of the council was that the whole of the area in which the wells in question were situated was pervaded by the enteric fever bacillus owing to the fact that the subsoil was permeated with infected excreta; furthermore, it was shown by chemical analysis that the water from the wells presented different degrees of organic pollution, although the wells were all supplied from the same source. It was urged, too, that the variations in the analyses during dry and wet weather showed the wells to be liable to intermittent pollution. For the defence it was argued that no chemical analyses had been produced, and that it must be proved before the Court that a well was actually polluted, and not that it was liable to pollution. The Bench, however, after much deliberation, decided to issue orders for closure, as they considered that the wells might prove dangerous in the event of a fresh outbreak of enteric fever taking place. Whatever may be the merits of this decision from a strictly legal standpoint, no epidemiologist is likely to quarrel with it. A locality where the excrement is placed in one pervious hole, and the drinking water taken from another but a short distance away, cannot be other than a dangerous one, and if the law does not enable wells which are thus situated to be closed the sooner an alteration is effected the better. Dr. Frank Dobbin, the deputy medical officer of health of St. Albans, is to be congratulated upon the manner in which he supplied the evidence in this case, and

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although perhaps bacteriology will not altogether support some of the points taken up, there can be no doubt as to the general soundness of the position.

THE SANITARY INSTITUTE.

THE twenty-fourth London course of lectures and demonstrations arranged by the Sanitary Institute for the instruction of sanitary officers and students will commence on Sept. 27th and will conclude on Nov. 27th. The various subjects will be dealt with in a course of eighteen lectures, given by well-known authorities, and will be illustrated by diagrams, drawings, models, and lantern slides. The lectures will include the subjects scheduled for the examinations of the institute. In connexion with the lectures there will be inspections and demonstrations, which will include visits to disinfecting stations, dairy premises, municipal depôts, artisans' dwellings, waterworks, common lodging houses, sanitary works in progress, and refuse and sewage disposal works. Practical demonstrations of meat inspection and diseased meat will also be given. The fee for the course is two guineas; a student who enters his name for one of the examinations of the institute at the time of taking his ticket for the lectures can have one guinea carried forward towards his fee for examination. The museum of sanitary appliances and the library will be open free during September, October, and November to students attending the course. The introductory lecture on the Outcome of Sanitation, will be delivered by Dr. Louis Parkes, medical officer of health of Chelsea, on Monday, Sept. 27th at 8 P.M., and the remainder of the series will be given by other lecturers on subsequent Mondays and Thursdays at the same hour. Application should be made to Mr. E. White Wallis, secretary of the institute, Parkes' Museum, Margaret-street, Regent-street, W.

NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

THIS school, which is exclusively for legally qualified practitioners, undergraduates not being admitted on any conditions, was last year attended by 513 matriculates. The Post-Graduate Hospital is now one of the largest in New York City, having 183 beds. During the past winter the average number of beds occupied at one time was 150. The accommodation is such that practitioners may witness several important operations each day without leaving the building and may also see a large number of patients in the dispensary. The teaching of the school is entirely clinical or demonstrative. In some departments—diseases of the eye and ear, nose and throat, and diseases of women—arrangements are made by which the class may attend the service at other hospitals, as well as the clinics in the Post-Graduate School itself. The hospital is open during the entire year. The school year is divided into two distinct but continuous terms. The autumn and winter courses begin on Sept. 20th and end on June 1st, during which period the fees are $150 for a term of twelve weeks, and $100 for a term of six weeks. During the summer session, the fee for the general course is $30 a month, or $95 for the whole term, from June 1st to Sept. 20th. The school and hospital are in the same building, situated at the corner of Second Avenue and Twentieth-street, New York. They are not private institutions, but are a chartered medical college and hospital forming a part of the university system of the State. A monthly journal, called *The Post-Graduate*, is published by the directors of the school and hospital.

HER MAJESTY THE QUEEN has decided that a public exhibition of the gifts and addresses presented in commemoration of her sixty years' reign shall be held in the Imperial Institute, probably about the middle of October. Half the proceeds is to go to the Prince of Wales's Hospital Fund.

WE learn, just as we are going to press, that Mr. Victor Horsley has consented to be nominated for the vacant seat as a Direct Representative on the General Medical Council.

DR. A. E. SANSOM, President of the Medical Society of London, has been elected an honorary member of the Therapeutical Society of Moscow.

Pharmacology and Therapeutics.

CELANDINE IN CANCER OF THE FACE.

DR. KRAINSKI, writing in the *Russian Ophthalmic Review*, records four cases of malignant disease of the eyelids and face in which he employed the celandine treatment. In two of the cases the neoplasms completely disappeared. In the other two there was distinct improvement, but the cases could not be followed up and so the ultimate result cannot be stated. The time required for the destruction of the tumour was not more than a fortnight. Several injections were made in the sound tissue bordering upon the neoplasm. They were composed of equal parts of extract of chelidonium, sterilised water, and glycerine, four to eight minims of the mixture being introduced at a time. In addition to these a 50 per cent. solution of the extract in glycerine was applied externally twice a day and a dressing put on. The celandine did not affect the healthy tissues and was well tolerated by the conjunctiva. There was some pain for a few hours, and in two cases pyrexia. There was, too, a good deal of swelling around the tumour, and in one case suppuration at the situation of the punctures. Dr. Krainski has also given celandine internally in cases of cancer of internal organs where operation was impossible. A further paper is promised on this subject.

SALICYLATE OF METHYL IN JOINT TROUBLES OCCURRING IN THE COURSE OF FEVERS.

According to Dr. Roger, professor *agrégé* of Paris, the joint pains which sometimes give a good deal of trouble in the course of scarlet and other eruptive fevers may be very successfully treated by the application of about half a teaspoonful of salicylate of methyl to the affected joint which is then bound round with a compress and a piece of waterproof tissue. This is repeated night and morning, and usually has a rapidly beneficial effect.

WHEN IRON IS USEFUL IN ANÆMIA.

It is well known that iron, though strongly indicated, is often not well borne by anæmic and chlorotic patients. According to some recent observations by Dr. Buzdygan the success of iron in these cases depends upon the amount of acid in the contents of the stomach. He found that when there was hyperacidity the administration of three grains of reduced iron, subcarbonate or iodide of iron, only increased the amount of acid and aggravated the troubles usually present in these cases—pyrosis, feeling of weight in the stomach, nausea, and vomiting. When, on the other hand, the contents of the stomach were alkaline or less acid than usual the administration of iron was always well borne, and, indeed, induced a more abundant secretion of hydrochloric acid. In the former class of case, then, the proper line of treatment is evidently first of all to correct the hyperacidity and then to prescribe the ferruginous preparation decided upon.

NAPHTHALAN.

A series of observations has been made in Professor Finger's out-patient department by Dr. Pezzoli on a new preparation named naphthalan which appears to combine the therapeutical properties of tar with those of naphtha. It is a dark-brown unctuous substance with scarcely any smell and a melting point of about 70° C. When used as an ointment it leaves no stain on the patient's linen after it has been washed. It is very useful in various forms of eczema, sycosis, and common psoriasis, as well as in parasitic affections such as ringworm and scabies. It should be used with a certain

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degree of caution, as if rubbed in too energetically it is liable to produce some folliculitis of the same nature as tar-acne. It was tried in 42 cases of eczema and appeared to be of value in all stages, which renders it a very convenient preparation for general or out-patient practice. Excellent results were obtained in all the 15 cases of impetigo contagiosa in which it was prescribed. In scabies three applications were found to be sufficient.

EFFECT OF THYREOIDIN ON THE ASSIMILATION OF FAT.

Dr. Tikanadze, of St. Petersburg, has made a series of careful investigations as to the exact effect of Merck's thyreoidin on the assimilation of fat in healthy subjects, comparing the action of this with that of fresh calves' thyroids. The quantity of thyreoidin given was 0·24 gramme, and that of the fresh gland 2·12 grammes, per diem. He found that the quantity of fat assimilated diminished to the extent of from 1·33 per cent. to 4·43 per cent., the thyreoidin producing a more marked fall than the fresh gland. In all cases the quantity of urine excreted was increased. The body weight fell one or two kilogrammes during the six days which were devoted to the experiment, which he believed to be due to the lessened assimilation of fat and the increased excretion of urine and nitrogenous metamorphosis.

ORTHOFORM, A NEW LOCAL ANALGESIC.

It has been found by Dr. Einhorn and Dr. Heintz, of Munich, that the compound methylic ether of amidoxybenzoic acid is possessed of remarkable anæsthetic, or rather analgesic, properties when locally applied. To this substance the name of "orthoform" has been given. It is a white crystalline powder without taste or smell and it dissolves slowly in water. Unlike cocaine it is non-poisonous, and though its analgesic action is somewhat tardy in showing itself it is very much more persistent than that of the older drug. This prolonged effect is very valuable in the case of painful sores or wounds, more especially in burns and in fissures of the lips or nipples. It may be applied to mucous membranes in powder or as an ointment. Orthoform diminishes the secretions and is antiseptic. Its local action may be taken advantage of for internal administration in painful ulcers of the stomach, whether these are or are not of a malignant nature. The hydrochlorate, which is very soluble, is too acid for use as a hypodermic injection or for applying to the eye, but may be employed for internal administration or for urethral injections. In a case of gleet a 10 per cent. solution was well borne and gave relief from pain for many hours, but it provoked severe reaction in a case of acute gonorrhœa—here, however, the discharge ceased completely in four days. As to the dose, a saturated solution of orthoform in water at ordinary temperatures is suitable for local application, and seven and a half grains of the hydrochlorate, or even more, may be given internally several times a day without any inconvenience. It appears therefore that this substance and its salt may be considered entirely non-poisonous. Indeed, in a case of carcinoma of the face more than 700 grains were locally applied during the course of a week without any injurious effect, great relief being obtained.

REPORTS OF LUNATIC ASYLUMS FOR 1896-97.

Joint Counties Lunatic Asylum, Caermarthen (1896).—During the year there were 137 cases admitted, 29 recoveries, and 50 deaths. The number of post-mortem examinations made was 48; from a pathological point of view this is a very satisfactory record. It is abundantly evident that in the majority of the lunatic asylums throughout the country increased attention is now being paid to pathological work, and in many institutions facilities are provided for the prosecution of original research. In this way much important information of scientific value must accumulate—information too valuable to be buried away in case-books and records and thereafter lost sight of. It is a moot point whether the pages of asylum reports are utilised to the best advantage, and if some space were allotted to the publication of any interesting pathological data garnered during the year the value of these reports would undoubtedly be materially enhanced. In its clinical aspect Dr. Goodall's report is decidedly above the average, and he alludes to several topics which have recently attracted attention. His remarks on the influence of heredity in the causation of insanity, and his powerful advocacy of a systematic examination for the detection of stigmata amongst the insane and also among criminals are deserving of more than passing notice. He suggests the erection of a separate institution for the idiot and imbecile class in the principality, and emphasises the benefits that accrue from the early medical treatment of insanity.

Dorset County Lunatic Asylum (1896-97).—Dr. Macdonald's reports always afford fresh and invigorating reading, and his account of the past year's work forms no exception to the rule. A feature in the management of this asylum is the open-door system. With the exception of the door which divides the two sexes no door on either side is locked, and the patients on each side have free liberty of movement to other wards and to the grounds. The admissions numbered 213, the recoveries 46, and the deaths 42. Dr. Macdonald calls attention to the large number of first admissions amongst the county cases, and states that each year there is a greater number of cases which may be termed instances of early mental confusion and instability. For this condition of things he is inclined to think that the educational code is not altogether free from blame. In many districts no special provision exists for the education of children who are below the average in intelligence, consequently a percentage of boys and girls are forced and crammed beyond their natural abilities, with the result that permanent harm ensues. Regarding the causation of insanity the influence of hereditary predisposition is specially noted, and some trenchant remarks are made concerning the evil consequences of matrimonial contracts among the mentally weak and tainted members of the community. The Commissioners in Lunacy report very favourably on the management and condition of the asylum, which is now lighted by electricity and warmed throughout by artificial heat.

St Andrew's Hospital for Mental Diseases, Northampton (1896).—Structural alterations to a considerable extent have been in progress. The history of the institution has been uneventful during the year and the working of the hospital has been satisfactory in every respect. The Commissioners in Lunacy express their satisfaction with the state and surroundings of the patients, and speak with approval concerning the large number of inmates who are induced to work. The percentage of recoveries to the total number of admissions was 46 90; the death-rate was exceptionally low, being 3·59 per cent. of the average daily number resident.

Isle of Wight County Asylum (1897).—First Annual Report).—This asylum, which is situated near the town of Newport, was opened for the reception of patients in July, 1896. The present accommodation provides for 260 patients, and in addition a detached block for 50 private patients has been constructed. The water-supply is from a deep well, and it has been reported on in favourable terms. The lighting is electrical, worked by dynamos on the spot. The wards and passages are heated by hot-water pipes. The Lunacy Commissioners were favourably impressed with the condition of the asylum, and they view encouragingly the practice of affording parties of patients extended exercise beyond the asylum grounds, believing it to be of great importance in the treatment of the insane. The anxious and onerous duty of opening the new asylum was accomplished in a manner which reflects great credit on the administrative skill of Dr. Shaw, the medical superintendent.

Surrey County Lunatic Asylum, Brookwood (1897).—Overcrowding with its attendant evils has brought this institution into a somewhat unsatisfactory condition. The asylum provides accommodation for 1050 patients, but for the past three years the number of inmates has averaged 1077, and on several occasions the population has for a short time been over 1100. The situation demands the immediate attention of the asylum committee and the county authorities. There is imperative and immediate need for the enlargement of the existing institution, or for the building of a new asylum. The difficulties of the management are great and numerous, and it is not surprising that Mr. James E. Barton, the medical superintendent, reports the general health as only fairly good. He states that the over-pressure has been especially felt on the female side, where, in addition to a large number of old and feeble patients, there are many cases requiring special supervision and also many turbulent and violent women. During the year there were 288 admissions, 91 recoveries, and 109 deaths. The death-rate amounted to

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10·06 per cent. of the daily average number resident. The services of an additional assistant medical officer are obviously required.

Hereford County and City Lunatic Asylum (1897).—Owing to lack of accommodation it was found necessary to make a conditional closing order, restricting the number of admissions. Before having recourse to this stringent measure, inquiries were made as to the feasibility of boarding out a number of imbeciles and harmless dements with relatives and others. Many of the friends, however, appeared disinclined to receive their insane relatives, and the accommodation offered by those who were willing was generally found to be unsuitable. Owing to these and other causes the project had to be abandoned. During the year 70 patients were admitted, 40 recovered, and 23 died. Nearly one-sixth of the male admissions suffered from general paralysis, a proportion much above the average. The general health of the patients was good. Influenza, which has been more or less endemic since 1890, was the main cause of ill-health. In connexion with this disease Mr. C. S. Morrison records a rather curious fact. He states that the influenza poison had the effect in many instances of bringing the deluded and chronic maniac into a more introspective frame of mind, and from being wild and troublesome the patient subsided into a more orderly, if somewhat moody, individual. It would be interesting to know whether the mental change so produced was permanent or only temporary in character, and further information on the point would be welcome. It is well known that all acute bodily diseases have the effect of more or less modifying the symptoms of mental derangement, but it is generally understood that in the majority of cases the sensory disorder resumes its sway as the physical symptoms subside.

Newcastle-upon Tyne City Lunatic Asylum (1896).—The average daily number resident during the year was 467. The admissions numbered 137, the recoveries 49, and the deaths 54. Amongst the admissions there were 26 cases of general paralysis, 4 epileptics, 8 congenital imbeciles, and 11 cases of senile insanity—all incurable cases. In 40 instances the causation of insanity was attributed to moral factors—viz., domestic trouble, adverse circumstances, and mental anxiety; intemperance in drink caused mental disorder in 50 instances; hereditary predisposition was ascertained in 29 cases. The death-rate was high, but this is hardly to be wondered at, considering that twenty patients died from general paralysis, and nine from phthisis. The report of the Commissioners in Lunacy indicates that Dr. Callcott manages his asylum with care and ability. They state that they found all parts of the asylum in excellent order, the day-rooms bright and cheerful, and facilities for the amusement of the patients plentiful.

Kirklands Asylum (1897).—The work of the asylum has been carried on in a quiet and uneventful manner. The health of the patients has been on the whole excellent. There were 22 entries in the Register of Restraint and Seclusion referring to the restraint of 6 patients at various times and for various reasons. Dr. Skeen thinks that restraint is sometimes beneficial, and bases his opinion on the following grounds. It ensures rest and warmth at night; it obviates the necessity for the employment of sedative drugs, which are often injurious and can only be used with extreme caution in those old and debilitated persons who constituted the class of patients to whom restraint at night was applied; further, the judicious use of restraint also relieves the nursing staff, especially at night, of a vast deal of anxiety without in any way reducing the responsibility, and therefore without inducing a tendency to carelessness and inattention towards the patients under their care. In these progressive days such opinions may appear somewhat heterodox, but there can be no doubt that there is something to be said in favour of Dr. Skeen's views. The admissions were 63; 30 patients recovered, and 18 died. The Lunacy Commissioners (Scotland) comment favourably on the general management of the asylum.

Barony Parochial Asylum, Lenzie (1896).—In a short report Dr. Blair states that of 313 patients admitted, the causation of insanity in 70, or 22 3 per cent., was ascribed to organic changes in the cerebro-spinal system, and of these nearly 11 per cent. were general paralytics and 6 per cent. epileptics. Alcoholic excess was ascertained to be the cause in 17·6 per cent., which is about 5 per cent. more than the records of late years. The extension and improvements which have been effected within recent years make this asylum one of the best equipped institutions for the insane in Scotland.

THE VACANCY IN THE GENERAL MEDICAL COUNCIL.

FOR the information of those who may intend to seek the suffrages of the profession for the seat on the General Medical Council as a Direct Representative, rendered vacant by the resignation of Dr. Rentoul, we would point out that procedure is regulated strictly by the Act of Parliament. The first step has already been taken by the President, who has notified the vacancy, and the rest follow as a matter of course. They are:—

Notice of election to be published	Sept. 10th.
Precept to be issued by returning officer	Sept. 25th.
Final day for receipt of nomination papers ...	Sept. 27th.
Meeting of the English Branch Council to receive precept	Sept. 28th.
Issue of voting papers	Oct. 2nd.
Last day for return of voting papers...	Oct. 9th.
Counting of votes	Oct. 11th.
Meeting of Branch Council to certify result of election	Oct. 15th.
Declaration of poll by the returning officer	Oct. 15th or 16th.

We have received the following addresses from candidates:—

TO THE REGISTERED MEDICAL PRACTITIONERS OF ENGLAND AND WALES.

GENTLEMEN,—By the resignation of Dr. Rentoul a seat in the Medical Council has quickly become vacant, and is to be filled as the will of the electorate may determine. I beg leave, therefore, to represent to you my readiness to stand as a candidate for the honour of your suffrages, and to state that the principles I ventured to lay before you previous to the last election are those which I would now submit as mine. They are detailed in THE LANCET of Oct. 31st last year on page 1253; and as bearing upon the whole of the paragraphs there written I would say that the Direct Representatives should act with the other members of the Council in full confidence that all are engaged in seeking the welfare of the profession; but at the same time he should realise the special business which belongs to him as the representative of the general practitioner, and be ready to act according to the dictates of common sense, as the opportunities for his intervention may occur.

The number of gentlemen who availed themselves at the last election of their privilege as voters was unusually small; and this fact gave opportunity to those who are not friendly to the representation of the general practitioner upon the Medical Council to comment adversely to our interests in this particular. It will be a pity if these comments should appear justified on the present occasion, for while the whole profession of medicine has greatly advanced as a science and an art, to the benefit of the individual, so now it is surely moving, by the force of its intrinsic national importance, towards that dignified position in the State which farseeing men have in the past predicated for it; and who are they that should show interest in this movement of our common profession if the bulk of us who practise it do not? The answer should be given in a good poll next month.

The gentlemen who stood so well by me last November may see fit again to support my candidature. To them, therefore, as well as to those others who will do me the like honour, I would submit that anything approaching an active candidature otherwise than through the medical press is entirely beyond my power. Hence I would respectfully ask them to acquit me of any discourtesy in not communicating with them directly, and to generously use their influence for securing votes in favour of the principles I have enunciated. Because if each voter will in his goodness consider himself a centre for influencing others, success is to that extent rendered, if not absolutely certain, at all events more likely.

In conclusion, I beg to state that if I be elected your representative the tone of my influence at the Council Board will be the tone of this address. But if I be not elected, in whatever place my name may appear, I shall be ready to believe that the choice of the electorate had fallen upon a man whose sentiments are not less worthy than those which I myself hold. In this assumed case, however, I should add that his capacity and his willingness to serve your interests would probably be in no way greater than my own.

I am, Gentlemen, your faithful servant,
E. DIVER, M.D. St. And., M.R.C.S. Eng.

TO THE REGISTERED MEDICAL PRACTITIONERS OF ENGLAND AND WALES.

Sept. 14th, 1897.

LADIES AND GENTLEMEN,—I beg to offer myself as a candidate for the present vacancy amongst the Direct Representatives on the General Medical Council. I am encouraged to take this step by the fact that at the election last November I polled 4082 votes, and was therefore at the head of the unsuccessful candidates, and that I have now received the assurance of the support of the Incorporated Medical Practitioners Association and of other medical bodies. It is my duty once more briefly to state my views on the crucial questions of the day in their relations to the General Medical Council.

I venture to traverse the opinion which has been influentially expressed that the Midwives Bill does not concern the Council. To my mind, the fact that the Government have sought the opinion of the Council on the matter proves that the question is one of vital importance to the medical profession, and therefore deserves the most careful attention of its governing body. From this it follows that the opinions

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of the great body of the profession which is strongly opposed to midwives legislation shall be represented on the General Medical Council.

If elected I should also advocate:—

1. Reform of the Medical Acts so that the Council should be, at any rate, in a larger proportion than at present, elected by, and representative of, the profession generally.

2. The assimilation of the Acts governing the profession more nearly to those which govern the legal profession. By this means more power would be given to the General Medical Council to protect the public against quacks and unqualified practitioners.

3. The raising of the standard of entrance examination and the establishment of one conjoint compulsory examination for each division of the United Kingdom.

Finally, if you do me the honour to elect me as one of your Direct Representatives, I would devote my whole energies to fulfil the trust reposed in me. I have the honour to be, ladies and gentlemen,

Your obedient servant,

GEO. JACKSON, F.R.C.S. Eng.,

Vice-President and Ex-President of the Incorporated Medical Practitioners Association; Vice-President and Ex-President of the Devon and Cornwall Branch of the Incorporated Medical Practitioners Association.

OUR FRONTIER TROUBLES IN INDIA.

THE Government of India has been subjected to much adverse criticism for its want of promptitude in not advancing up the Khyber and at once recovering the positions captured by the Afridis. No doubt a decrease of British prestige attended our loss of Lundi Kotal and Ali Musjid, although these were held by native levies only. But there are other points to be considered besides promptitude of action; possible failure has to be guarded against, and means have to be taken to ensure that the force is strong enough and sufficiently provisioned to hold the posts when captured as long as required. It is comparatively easy under the present system of military organisation and administration in India to mobilise and concentrate a force on any given point of the Indian frontier, but for mountain warfare against the Afridis and other tribes a large amount of animal transport is needed, as well as an abundance of food and stores to maintain an army in the field until we can ensure sufficient security for future peace before the forces are withdrawn. Moreover, the season has hitherto been bad as regards the health of the troops of any expeditionary force. Up to the middle of September the heat in the valleys is very great, but a month later there is a great change in this respect: the valleys are much cooler and the mountains are very cold, and the climate is much more favourable for our operations. The strength of the forces under the respective commands of General Blood and General Elles should make it pretty certain that the rising of the Momands will soon be overcome, and the punitive expedition to Tirah, the centre of the Afridi territory, will deal with and crush the power of the Afridis. We do not at all believe that a combined and simultaneous action among *all* the tribes on the north-west frontier can take place, but the extent and general character of the rising on this occasion indicate that there must be some common cause in operation for the widespread feeling that undoubtedly exists. This is attributed at Peshawar to the strong resentment that is felt amongst the tribes against our occupation of the Swat Valley, which is being interpreted as annexation by the mullahs. Be this as it may, the time has now come for the rising to be forcibly put down with as little delay as practicable. It already looks as if there were a combination of the Oraksai and Afridi tribes—a combination which is new in border history. There has of late been a good deal of sharp fighting in various directions, and the hostile tribes have made several resolute attacks on our forces. Anyone looking at a map of this mountainous and nearly sterile country will easily appreciate its obstacles and difficulties as a scene for military operations and can form some idea of the amount of animal transport required for the conveyance of ammunition and warlike stores and commissariat supplies. The supply of water for the troops during the hot season will also prove a difficulty. The expense attending this frontier warfare is very great, and in the present embarrassed state of Indian finance this is greatly to be deplored. We are glad to learn that the wounded are doing well and that the health of the troops engaged is good, that the pluck and endurance of the native and European troops are admirable, and that the great mass of the population in India is well affected to British rule. That there will be a successful ending to the present state of affairs may be regarded as certain, but it is also certain that it will cost a great deal of money and necessarily much loss of life to bring this about.

The extent of the rising and the nature of the country will probably require a large force divided into different columns operating in different directions, with, of course, a common object in view, and it may possibly take a longer time to achieve complete success than many people imagine. The diseases to which the troops will be liable will be various forms of fever—mainly of a malarious type—and dysentery. Cases of enteric fever among the British troops will also occur, but it is scarcely likely that this fever will prevail to any extent during the cold season. Among the native troops and the native followers malarious fever, dysenteric-diarrhœa, and pulmonary diseases are almost sure to prevail; but as regards the latter much may be done to prevent their occurrence by an adequate supply of clothing and blankets, the avoidance of overcrowding, and the provision of plenty of food. During the last Afghan wars there was an enormous amount of sickness and mortality among the camels and baggage animals. Mules and ponies are hardier and much superior to camels as transport animals for expeditions of this kind.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the Sanitary Condition of Swanage, by Dr. S. W. WHEATON.—Swanage is one of a by no means small number of watering-places which profess to attract to themselves persons who are seeking health as well as pleasure, but which persistently maintain conditions that are not only a constant risk to health but which actually amount to obvious nuisance. The inspection dealt with in the report now before us is the third which the Local Government Board have found it necessary to make at Swanage within a comparatively brief period. In 1886 inspection became necessary by reason of a severe epidemic of enteric fever; in 1893 Swanage was one of the suspicious places in England which were especially selected for a visit when the country was exposed to the European prevalence of cholera; and now, again, in 1897 we have another visit and report by reason of the frequent complaints which are made as to the nuisances prevalent in the place and as to the maladministration of the urban district council. The main grievance arises in this way. The town borrowed £6000 in 1893 to provide sewers converging to an outfall sewer discharging into the sea below low-water mark north of the southern headland bounding Swanage Bay. But, having performed one part of their undertaking, the urban council seemed to think they had done enough. The consequence is that the new sewers have been turned into an old culvert discharging on the foreshore, that the old sewers have not been removed, that many dwellings have not been connected with the new system, that in places the old and new sewers run side by side, the old one receiving sewage and the new one none, and that, to quote Dr. Wheaton, "the £4500 spent have so far been of very doubtful benefit" The bathing places, to which visitors of both sexes are attracted, are also stated to lie "between two points of discharge for sewage." But these are not all the insanitary features of Swanage. Vault privies still seem fairly general notwithstanding the money spent on sewers, and they are so constructed that there is always more or less escape of their contents into the surrounding soil. The cleansing of these structures and the renewal of ashpits is left to occupiers, unless they apply to the urban council, who then make a charge for the work. This we believe to be absolutely illegal. The Public Health Act of 1875 only recognises two methods—one in which the work is undertaken by, and at the cost of, the occupiers; and the other in which it is undertaken by the sanitary authority at the cost of the ratepayers. But further, the Swanage Urban Council will not even learn by experience. In 1886 the outbreak of typhoid fever was due to milk, and they were urged by the Local Government Board

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to draw up regulations to control their cowsheds and dairies; but they have done nothing of the sort, and "the condition of the majority" of the cowsheds "is filthy." There are other matters to which we might advert; but we have said enough to indicate the imperative need for some further visit to, and report on, Swanage early next spring; so that those who seek health and wish to avoid nuisance and risk of danger to health may be advised where to seek it in the autumn. If the inhabitants of a district profess to cater for the public health—and Dr. Wheaton says the majority are here engaged in supplying the wants of visitors—they have a duty towards the public; and it is of the utmost importance that this should be understood.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Birkenhead Urban District.—Dr. Sydney Marsden advocates that the City of Birkenhead shall, under the provisions of the Shop Hours Act, 1892, reduce the hours of barmaids to seventy-four per week. He states that in some hotels more than a hundred hours per week are exacted from these persons. The low standard taken up by the Somerset House authorities as regards milk is matter for Dr. Marsden's comment; he thinks that the excuse so often urged that the poor quality of the milk is due to the fact that the cow is out of condition should not be allowed the weight so often attached to it. Even if the excuse be true, the cow's milk should, Dr. Marsden urges, not be sold, and the cow should be withdrawn from use until its health be improved. Under the heading of "Death-rates of insanitary areas" the following table, which speaks for itself, is given:—

Average for 1886–93.

—	Population.	Death-rate per 1000.	Zymotic death-rate.
Whole Borough...	99,688	19·8	3·1
Area No. 1	106	72·6	13·2
,, ,, 2	80	42·5	10·0
,, ,, 3	112	63·3	15·0

The population of the area is obviously a small one, and it would be interesting to know the age-distribution. From an analysis of the figures and of the causes of death Dr. Marsden thinks that the effect of living in these insanitary areas is more especially to lower the general system of the individual. It is certainly necessary to be very cautious in drawing conclusions from the death-rates of insanitary areas, as it is to such areas that the helpless and old, and the poor with large families, are drawn by the force of circumstances, the death-rates often being rather an expression of social conditions than the direct effect of an insanitary area.

Nottingham Urban District.—Enteric fever is unduly prevalent in Nottingham, and Dr. Philip Boobbyer is by no means content that it should be so. Nottingham is clean, well-sewered, and is provided with a supply of pure water. Why, then, should it have had its enteric fever death-rate during 1896 exceeded by only three of the other great towns—i.e., Sunderland, Bolton, and Wolverhampton. Upon this subject of excessive prevalence of enteric fever Dr. Boobbyer is preparing a special report, but in the meantime he furnishes certain figures in his current annual report which are instructive and, by virtue of the number of years to which they have reference, valuable. For each year from 1887 to 1896 inclusive there has been an altogether exceptional incidence of enteric fever upon houses furnished with privies as compared with those furnished with pail closets and water-closets, the rate on the pail houses being much higher than that on the houses with water-closets. The same remarkable incidence has obtained in each year during the period referred to, and the total figures for the ten years are thus summed up: (*a*) pail-closet houses, one case of enteric fever in 120 houses; (*b*) midden-privy houses, one case of enteric fever in 37 houses; and (*c*) water-closet houses, one case of enteric fever in 558 houses. These interesting and, as has been observed, constant results are not to be explained away by the criticism that enteric fever may be expected to be exerting its greatest influence on the poorer property provided with midden-privies and with pail-closets. The privies seem to be very scattered and not confined to any one part of the borough, some of them being attached to a good class of houses. Similarly water-closet houses are not confined to the better parts of the town. It seems, too, that there is a marked tendency on the part of enteric fever to spread in houses provided with such closets as retain the excrement on the premises. The pails used in Nottingham are constructed of wood, and Dr. Boobbyer is of opinion that their influence for evil in the matter of enteric fever is due to the absorbent character of the wood; steel drums should, he thinks, be used in the absence of a water-carriage system.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6795 births and 4089 deaths were registered during the week ending Sept. 11th. The annual rate of mortality in these towns, which had declined in the four preceding weeks from 29·5 to 20·7 per 1000, further fell last week to 19·4. In London the rate was 16·3 per 1000, while it averaged 21·5 in the thirty-two provincial towns. The lowest death-rates in these towns were 8·2 in Halifax, 9·5 in Croydon, 11·3 in Cardiff, and 11·4 in Swansea; the highest rates were 26·9 in Liverpool, 28·5 in Hull, 31·1 in Wolverhampton, and 35·3 in Preston. The 4089 deaths included 945 which were referred to the principal zymotic diseases, against 1783 and 1272 in the two preceding weeks; of these, 671 resulted from diarrhœa, 78 from whooping-cough, 65 from measles, 52 from "fever" (principally enteric), 48 from diphtheria, and 31 from scarlet fever. The lowest death-rates from these diseases were recorded in Swansea, Halifax, Cardiff, and Derby; and the highest rates in Sheffield, Leicester, Salford, Hull, and Preston. The greatest mortality from measles occurred in West Ham, Manchester, Oldham, and Preston; from scarlet fever in Bolton; from whooping-cough in Liverpool and Oldham; from "fever" in Sunderland; and from diarrhœa in Leicester, Salford, Preston, Leeds, Hull, and Newcastle-upon-Tyne. The 48 deaths from diphtheria recorded last weeks in the thirty-three towns included 25 in London, 4 in Birmingham, 4 in Leicester, and 3 in Liverpool. No death from small-pox was registered during the week under notice in any of the thirty-three towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital which had been 3400, 3448, and 3528 at the end of the three preceding weeks, had further increased to 3579 on Saturday last, the 11th inst.; 376 new cases were admitted during the week, against 340, 356, and 371 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 102 and 116 in the two preceding weeks, were again 116 last week, and were 37 below the corrected average. The causes of 48, or 1·2 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Nottingham, Bradford, Leeds, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Leicester, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·6 and 18·1 per 1000 in the two preceding weeks, rose again to 18·3 during the week ending Sept. 11th, but was 1·1 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·3 in Paisley and 15·3 in Perth, to 19·9 in Edinburgh and 22·0 in Greenock. The 545 deaths in these towns included 63 which were referred to diarrhœa, 15 to whooping-cough, 7 to diphtheria, 5 to scarlet fever, 5 to "fever," 2 to measles, and 1 to small-pox. In all, 98 deaths resulted from these principal zymotic diseases, against 137 and 127 in the two preceding weeks. These 98 deaths were equal to an annual rate of 3·3 per 1000, which was 1·2 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had declined from 147 to 84 in the three preceding weeks, further fell to 63 last week, of which 29 occurred in Glasgow, 14 in

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Edinburgh, and 7 in Dundee. The 15 deaths from whooping-cough also showed a further decline from the numbers recorded in recent weeks, and included 9 in Glasgow and 2 in Edinburgh. The fatal cases of diphtheria, which had been 1 and 4 in the two preceding weeks, further increased to 7 last week, of which 3 occurred in Glasgow, 2 in Edinburgh and 2 in Aberdeen. The deaths from scarlet fever, which had risen from 5 to 10 in the three preceding weeks, declined again to 5 last week, of which 2 were recorded in Glasgow and 2 in Edinburgh. The 5 deaths referred to different forms of "fever" included 3 in Glasgow, where the fatal case of small-pox also occurred. The deaths from diseases of the respiratory organs in these towns, which had been 78 and 69 in the two preceding weeks, rose again to 78 last week, and slightly exceeded the number in the corresponding week of last year. The causes of 30, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·0 and 23·1 per 1000 in the two preceding weeks, declined again to 22 4 during the week ending Sept. 11th. During the past ten weeks of the current quarter the death-rate in the city has averaged 23·4 per 1000, the rate during the same period being 20·5 in London and 18·2 in Edinburgh. The 150 deaths registered in Dublin during the week under notice showed a decline of 5 from the number in the preceding week, and included 28 which were referred to the principal zymotic diseases, against 39 and 33 in the two preceding weeks; of these 16 resulted from diarrhœa, 4 from "fever," 3 from diphtheria, 3 from whooping-cough, and 2 from scarlet fever. These 28 deaths were equal to an annual rate of 4·2 per 1000, the zymotic death-rate during the same period being 2·6 in London and 3·7 in Edinburgh. The fatal cases of diarrhœa, which had been 32 and 25 in the two preceding weeks, further declined to 16 last week. The 4 deaths referred to different forms of "fever" exceeded the number recorded in any recent week. The fatal cases of diphtheria, which had been 2 and 4 in the two preceding weeks, declined again to 3 last week. The 3 deaths from whooping-cough corresponded with the number recorded in the preceding week. The 150 deaths in Dublin last week included 42 of infants under one year of age and 18 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from those recorded in the preceding week. One inquest case and 2 deaths from violence were registered; and 50, or one-third, of the deaths occurred in public institutions. The causes of 13, or nearly 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN WRIGHT embarks shortly for Malta. Surgeon-Major Beevor is held in readiness for service in India. Brigade-Surgeon-Lieutenant-Colonel J. Macnamara is ordered to embark for Malta in the transport *Avoca*. Surgeon-Captain Tate is ordered to join at Woolwich for duty. Surgeon-Major Smythe and Surgeon-Captain Tatham embark at the Royal Albert Dock on board the transport *Avoca*.

Surgeon-Lieutenant-Colonel Aylmer E. Hayes, D.S.O., retires on retired pay. Surgeon-Major Robert C. Gunning to be Surgeon-Lieutenant-Colonel.

Royal Horse Guards: Surgeon-Captain Horatio R. O. Cross, from 1st Life Guards, to be Surgeon-Major, vice H. Mitchell, retired.

Grenadier Guards: Surgeon-Major Charles R. Kilkelly, M.B., from Army Medical Staff, to be Surgeon-Major, vice W. C. Beevor, M.B., who exchanges.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of the under-mentioned officers are replaced at the disposal of the Military Department: — Surgeon-Captain Brogden, A.M.S., Surgeon-Captain Bray, A.M.S., Surgeon-Captain Clark, A.M.S., Surgeon-Captain Boyle, A.M.S., Surgeon-Lieutenant Evens, A.M.S., Surgeon-Lieutenant Milner, A.M.S., and Surgeon-Lieutenant Rainier (Bengal). The services of Surgeon-Captain Dyson and Surgeon-Major Nariman have respectively delivered over and received charge of the office of the Deputy Sanitary Commissioner, Gujerat Registration District. Surgeon-Major W. K. Hatch to be Principal, Grant Medical College, Bombay, vice Brigade-Surgeon-Lieutenant-Colonel G. A. Maconachie, retired; Surgeon-Captain Herbert to be Professor of Ophthalmic Medicine and Surgery, and Professor of Comparative Anatomy and Zoology, Grant Medical College.

NAVAL MEDICAL SERVICE.

Fleet-Surgeon Richard Samuel Parnell Griffiths has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets, in Her Majesty's Fleet. Surgeon Frederick William Collingwood has been placed on the Retired List of his rank.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major John J. A. Raye resigns his commission. The under-mentioned officers having resigned their Volunteer appointments, cease to belong to the Army Medical Reserve of Officers:—Surgeon-Lieutenant H. W. Joyce and Surgeon-Lieutenant W. A. Wetwan.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Lieutenant Luigi Walter Alfred Keiffenheim-Trubridge, M.D., from the 3rd Kent Volunteer Artillery, to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Royal Engineers: 2nd Cheshire (Railway): Surgeon-Lieutenant T. C. Bailey to be Surgeon-Captain.

THE REVOLT OF THE BORDER TRIBES.

Those medical officers who took part in the last Afghan campaigns, of whom there must be many in this country and abroad on foreign service, will follow the news with great interest from India regarding the rising of the tribes occupying the large extent of territory intervening between India and Afghanistan. The brilliant relief of the forts on the Samana Range by General Yeatman Biggs's force is most satisfactory. The most unsatisfactory item in the latest intelligence is, perhaps, that regarding the block or breakdown in the railway arrangements for the conveyance of the animal transport to the frontier. It is largely a repetition of the old difficulty, that which so hampered the movements of every branch of the service on the occasion of the last Afghan campaigns. It is needless to say that armies cannot move without transport, and in the mountainous belt of territory occupied by the independent tribes animal transport, being the only practicable one, is essentially necessary. The delay which will be caused by the block on the Indian railway of the North-West is a most unfortunate occurrence at the present moment, because an immediate advance is now of vital importance, with the view of striking a heavy blow against the opposing tribes and so preventing any further spread of the rebellion. Medical officers will recall the difficulties they experienced in "the rush" to the front, and those which afterwards followed in the movement of the field hospitals and hospital stores, and in the transport of the sick and wounded, on the occasion of the Afghan campaigns, although there was no such block on the railways as is reported to exist now. The unexpected is that which happens, and it is only fair to add that this great rising of the frontier tribes was a perfectly unexpected occurrence; still, it might have been imagined that the first thing to be done would have been the dispatch of officers to see that adequate railway arrangements, or the best that could be made under the circumstances, were made for the enormous increase of traffic to Peshawar and the North-West frontier. The difficulties to be overcome in the way of medical organisation and hospital administration for the different columns in the field will impose a great strain on the medical services. The military department of the Government of India have now had some weeks at their disposal in which to make their arrangements. They have a very large and splendid force at their command, and we can only confidently hope that the necessary transport will speedily be made available where it is so urgently wanted.

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THE SOUDAN CAMPAIGN.

What with the widespread revolt of the border tribes on our Indian north-west frontier, South African affairs, the Soudan expedition, the Greco-Turkish war conference, and the condition of Crete, the Government has its hands full of difficult and anxious problems at the present time. Now that the Sirdar (Sir H. Kitchener) is on his way to the front we may soon expect to hear of some important movement of the Soudan expedition; meanwhile, Berber has been taken and occupied. The present position of affairs seems to be that garrisons have been established along the Nile at Dongola, Debbeh, Korti, Merawi, Abu Hamed, and Berber. There are five gunboats above Abu Hamed. A series of posts, held by friendlies, has been established extending across the Bayuda desert and completely covering the river. The whole of the tribes in the Desert are reported to be friendly. One hundred and sixty-five miles of railway have been completed. The Dervishes are in strong force at Metemmeh; those of them who retreated from Derber were attacked by General Hunter's gunboats and force, and fled into the Desert abandoning their stores. Osman D'gna is reported to be on the banks of the Atbara River. The Egyptian forces are in good health and spirits. The hospital and medical arrangements are working well, and arrangements generally are being completed during the present lull for any future movement that may take place. The Khalifa's forces at Khartoum are said to number 60,000 men. With the railway and Nile transport available Sir H. Kitchener can bring up his supplies for his force, but whether he will soon start for Metemmeh and then for Khartoum o not still remains to be seen.

MEDICAL EXAMINATION OF ARMY CANDIDATES.

A correspondent writing to the *Times* of Sept. 1st under the designation of "Suum Cuique" hits the mark in his remarks upon the late rejection of a successful candidate when he says that the War Office authorities have expressly warned parents and guardians that candidates for army commissions should be medically examined before commencing a special course of study for the competitive examination; and he inquires whether this was done in the case referred to. He adds that while, thanks to the present regulations, the physique of our young officers is excellent, the eyesight of too many of them is not so good as it ought to be. Candidates are now passed as fit with only one-sixth of normal vision. With such a degree of defective sight an officer might easily be placed under circumstances where he could not efficiently fulfil the military requirements of the occasion, and in night attacks, when the light is very little, a man with only one-sixth of normal vision would be practically blind. This is a matter which apparently requires to be looked into.

MEDICAL ARRANGEMENTS FOR THE FRONTIER.

The *Army and Navy Gazette* says: "The medical arrangements for the different brigades, divisions, and columns operating on the various lines of the frontier has necessitated much work and thought on the part of the Principal Medical Officer of Her Majesty's Forces in India, Surgeon-Major-General Gore. Some 23 British and native field hospitals have had to be mobilised in the proportion of about 7 British and 16 native hospitals. Further, 2 British and 2 native general hospitals have been established with field medical store depôts. The number of Army Medical Staff officers employed is approximated at 31, while some 65 Indian Medical Service officers have also been detailed."

THE SICKNESS IN BOMBAY.

As we have previously stated, the city of Bombay is still very unhealthy spite of the cessation of the plague. The prevailing epidemics of cholera, fever, and dysentery are, according to the *Times of India* of the 27th ult., continuing in evidence and in unabated severity. The death-rate is as high as 59·75 per 1000. The chief cause of the increase has been cholera, which has existed in Bombay in a more or less epidemic form for the last six weeks, but is now beginning to show a sensible decline. The fever mortality and that from dysentery continue to be high. The late plague and the results of famine, in addition to the presence of insanitary conditions, have no doubt lowered the health of the population and their power of resistance to disease-causes generally.

THE PLAGUE AT POONA.

The number of cases of plague in the special hospital is somewhat increasing. There were fifty-eight cases in hospital towards the end of last month, and some deaths from plague had occurred among the native troops in the Poona cantonment. In the Kirkee cantonment also several fresh cases of the disease had been admitted to hospital and many deaths had taken place.

Correspondence.

"Audi alteram partem."

THE ELECTION OF A DIRECT REPRESENTATIVE ON THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—Having been asked to allow myself to be nominated for the seat just vacated by Dr. Robert Rentoul as direct representative upon the General Medical Council, after careful consideration, I have decided not to do so on this occasion. The vacancy should, in my opinion, be filled by a northern representative, and should Dr. Samuel Woodcock, J.P., again come forward as a candidate I trust that all those members of the profession who accorded to me their votes at the last election will bestow them upon him at the present time. Dr. Woodcock is too well known by his works to require any introduction to the medical profession, and he would make an admirable representative; the fact that he is President of the Lancashire and Cheshire Branch of the British Medical Association should secure him the suffrages of at least the members of the Association and ensure his election. On another occasion arising, however, I shall, I hope, find myself in a position to accept the invitation to nomination should it be offered to me.

I am, Sirs, your obedient servant,

Hatfield, Sept. 15th, 1897. LOVELL DRAGE.

P.S.—Since writing the above I hear that Dr. Woodcock has refused nomination, but, at the same time, I understand that, as we have both refused, Mr. Victor Horsley has consented to come forward as a candidate. I believe that this consent of Mr. Horsley will be more than welcome to those who have the interests of reform in our profession at heart.

To the Editors of THE LANCET.

SIRS,—There can be little doubt, even in the minds of those who are as heartily in favour of the principle of Direct Representation as THE LANCET has shown itself to be, that recent occurrences have tended somewhat to discredit the principle as applied to the General Medical Council, and it therefore appears to be of the utmost importance that the profession, in choosing a successor to Dr. Rentoul, should assure itself as far as possible that there will be no likelihood of a repetition of the mistakes which have lately occurred, but that whoever may be chosen he should be one who is prepared to assist in carrying on the business of the Council as imposed upon it by the several Acts of Parliament under which it is constituted. One principal object, however, of having Direct Representatives on the Council at all appears to be that they may from time to time, as opportunity occurs, place before it in a temperate manner the views of their constituents on the various questions of professional interest which come before it—on such questions, for example, as the Midwives Bill, the increase of Direct Representatives, and the medical aid associations, to take but a few of the many important questions dealt with during the ten years that our representatives—Sir Walter Foster, Dr. Glover, and Mr. Wheelhouse—served us and the Council so well. The time is short before nomination closes to ascertain the opinions of any new candidates on these questions, and I would therefore suggest that if the Council of the British Medical Association could obtain the consent of Sir Walter Foster, whose actions on these subjects speak for themselves, to his nomination as a candidate, it would be very desirable that he should be sent back to the General Medical Council with the weight of practically the whole profession in England and Wales behind him.

I am, Sirs, yours faithfully,

Dulwich, Sept. 14th, 1897. H. NELSON HARDY.

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"FORCIBLE REDUCTION OF POTT'S CURVATURE."

To the Editors of THE LANCET.

SIRS,—With reference to an annotation upon this subject in THE LANCET of Sept. 11th, it is to be hoped that those interested in the subject will observe the proportion of deaths recorded. Three deaths in thirteen cases, all within a week of the operation, is a large mortality, far exceeding that which occurs in treatment by careful fixation of the spine with general remedies. Forced extension without an anæsthetic carefully limited to the patient's powers of endurance is a far safer plan of treatment. It is one which I have been trying cautiously in a certain number of cases, and so far with good effects. For lateral curvature the forced reduction of the deformity promises, I think, excellent results. The patient should be placed upon a prone couch, the flat part of which should be long enough to support the whole length of the trunk. Then the surgeon standing over the patient is able to exert great power upon the projecting curves. It is of course necessary to keep up for a time, by mechanical means, the improvement made by manual force.

I am taking photographs of some cases treated in this manner in their different stages, so that I shall have some definite illustrations to prove the results of the treatment, notes of which I hope, with your permission, to publish in THE LANCET at some future date.

I am, Sirs, yours faithfully,

NOBLE SMITH.

Queen Anne-street, W., Sept. 13th, 1897.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Sept. 11th, at page 673, attention is drawn to the treatment of Pott's curvature by forcible reduction which has been recommended to the profession by Professor T. Jonnesco, of Bucharest. The annotation makes no mention of English writers in connexion with this treatment, which is described as "one of the most striking of the recent advances of surgery," although to them above all others is due the credit of the method; unfortunately, however, a long time has elapsed since the method was practised in England. The practice came to be abused, many patients dying under the forcible reduction. This abuse produced a pamphlet from Pott, which he dedicated to Dr. John Lewis Petit, one of the physicians to St. Bartholomew's Hospital. The brilliant successes attained by rest in spinal caries and the many fatalities by the old method in advanced cases stopped the practice. After Pott's death Sir James Earle put forward a plea for the resumption of forcible extension of the spine and pressure on the projecting knob in suitable cases; but he was as one crying in the wilderness. Pott's pathology of the disease had been approved by John Hunter, and succeeding generations swallowed both pathology, theory, and therapeutics without question until Lewis Sayre, of New York, re-introduced Earle's suspension head gear and a modernised form of his jacket. There were, however, in England surgeons at all times who possessed sufficient courage to think for themselves, and although Pott's great and just influence stayed the progress of spinal surgery it did not wholly arrest it, for we read in Abernethy's lectures on local diseases, for the publication of which we are indebted to the courage and enterprise of the Founder of THE LANCET, that in certain cases he recommended cutting down on the projecting spine. Abernethy thus describes the incident in his professional experience: "And it was proposed as a question, Could anything be done in this case? I said, 'I cannot tell you, except taking out the rings of the vertebræ.' But that was considered so hard an operation that it was not at all contemplated. ..... Yet such a thing has been done, and done in London, and at the very time this accident happened."

I am, Sirs, yours truly,

Dublin, Sept. 14th, 1897. GEORGE FOY.

THE LATE DR. BRAXTON HICKS.

To the Editors of THE LANCET.

SIRS,—A very important omission occurs in your notice of the late Dr. Braxton Hicks in the matter of his discovery of the rhythmical movements of the uterus in pregnancy. I am writing away from all books of reference, but I think I am correct in saying that he discovered and established the point completely in his own work. The discovery lay for years neglected till I pointed out that it is by far the most trustworthy of all the signs of pregnancy. Even now it does not receive the prominence from writers of text-books which its value deserves.

I am, Sirs, yours faithfully,

Llandudno, Sept. 11th, 1897. LAWSON TAIT.

INFANT INCUBATORS.

To the Editors of THE LANCET.

SIRS,—In the interests of the general public we desire to call your attention to the fact that the success of our Infant Incubator Institution at the Victorian Era Exhibition at Earl's Court has attracted the notice of unscrupulous imitators. We are informed, for example, that various persons are calling upon, and writing to, members of the medical profession, hospitals, infirmaries, &c., asking for their support, and falsely representing that they are opening branch institutions in connexion with us, and asking for the loan of children to experiment with.

We consider, under these circumstances, that it is our duty to warn members of the medical profession, also nurses, parents, and all public institutions, not to entrust their children to any applicants whatsoever without first taking every precaution to assure themselves that they will not be made the victims of showmen, as well as of inexperienced and irresponsible persons who seek to trade upon the established reputation of an invention that has been recognised by both the medical and the lay press.

The institution at Earl's Court is the first of its kind in England, and we have not made any arrangements, nor have we given anyone authority to further exhibit, at any exhibition or place of public resort in the United Kingdom, so that all persons, no matter what their credentials may seem to be, making application for space and intimating that they have the power to exhibit Mr. Paul Altmann's invention should be classed as impostors.

We are, Sirs, yours obediently,

SAMUEL SCHENKEIN,

Earl's-court, S.W., Sept. 8th, 1897. MARTIN CONEY.

"IS 'MEDICAL DEFENCE' DEROGATORY TO THE DIGNITY OF MEDICAL MEN?"

To the Editors of THE LANCET.

SIRS,—It is to be hoped that the thoughtful and temperate letter of "Registered Practitioner" in THE LANCET of Sept. 4th has attracted the attention of the profession. There is no doubt that our governing bodies, from the General Medical Council downwards, do consider that the defence of the practitioner is derogatory to their dignity. The reason for this is plainly owing to the composition of these bodies and to their non-representative character. If it could be brought home to the eminent men who direct the policy of our councils and corporations that by a more liberal course of action they could do much to ameliorate the lot of thousands of their less fortunate *confrères*, I feel sure that they would not consider such action derogatory. Your exhaustive series of articles on the "Battle of the Clubs" give an idea of the pecuniary loss which the profession is suffering all over the country owing to abuses which are perfectly remediable if our governing bodies were willing to take them in hand. It is to be hoped that those suffering from these abuses will lose no opportunity of pressing them on the attention of the powers that be until their extent is fully realised. Doubtless the promotion of the scientific progress of our profession is all important, but surely the protection of the material interest of those who practise it is at least equally so.

I remain, Sirs, yours faithfully,

Sept. 13th, 1897. W. G. D.

WE have received from the Volunteer Ambulance School the syllabus of courses of instruction of the classes for the training of stretcher bearers, to be held at the headquarters of the London Rifle Brigade, 130, Bunhill-row, E.C., commencing at 7.30 p.m., on Monday, Oct. 4th, 1897. Surgeon-Major H. F. Stokes, of the London Rifle Brigade, the Senior Medical Officer Instructor, appears to have taken every precaution to make the course a thorough one.

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HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

XII.—BIRMINGHAM (*continued*).[1]

Origin of the Hospital Saturday Fund.—The Opposition to Weekly Subscription.—Workmen Pay Half the Expenses of the Hospitals.—Dangers of the Situation.—Dependence of the Hospitals on Working-class Financial Support.

THE Hospital Saturday Fund was established in 1874 on lines not only different from, but absolutely opposed to, those which are now followed. To-day its success depends on the careful organisation of a system of weekly contributions. The late Mr. Sampson Gamgee helped to convert the working men's fund for the extension of the Queen's Hospital into the Hospital Saturday movement. The first collection brought in £4705. After that there was a depression in trade; the collections were not so good, and sank in 1878 to £3134, which is the lowest figure on record. In 1882, after the tenth collection, which for the first time exceeded the inaugural collection, and amounted to £4888, Mr. Gamgee said: "The complete success of Hospital Saturday depends in no small measure upon the method of collecting the money, and this is a matter attended with no little difficulty. Acting on the experience gained with the working men's fund for the extension of the Queen's Hospital, our committee abstained most scrupulously from recommending any set method of collection. The recent incident which resulted in a workman recovering in a court of justice money said to have been stopped at a penny a week for Hospital Saturday is only recalled to point to a possible danger attending the system. The projectors of Hospital Saturday did not aspire to make it a success on the mere mechanical principle of 'many a little makes a muckle.' The penny-a-week system in factories and workshops is vastly older than Hospital Saturday, in instituting which it was hoped to sanctify a labour day by the sacrifices and loving thoughts of those yet blessed with strength to work on behalf of fellow-toilers laid low by injury or disease." Mr. Gamgee, so his fellow-committeemen said, in a public declaration on the subject, was "wedded to the idea of Hospital Saturday being a day of labour-sacrifice, and this was the foundation of the movement which he established. He strongly advised against our abandoning this as a method of collecting, and substituting for it the weekly method of contributing."

These quotations show that, if Mr. Gamgee did not foresee in full the complications that are now arising, he had in any case a very acute intuitive sense of the dangers ahead. If the object be to maintain hospitals on their present basis—that is, private initiative supported by voluntary contributions—then Mr. Gamgee's opposition to weekly collections was well founded. If, on the contrary, the object be to so reduce the contributions of the wealthy classes while so increasing the controlling influence of the working classes, as to render the demand for the municipalisation of the hospitals almost irresistable, then the present policy is right and the objections raised by Mr. Gamgee were wrong. In any case, the policy of collecting weekly contributions was ultimately adopted and has given the most brilliant financial results. This, of course, has not been attained merely by the line of policy followed. The success is due in a large measure to admirable organisation and to the energetic impulse given to the movement by the able and eloquent leadership of Mr. Smedley. This gentleman who is one of the leading accountants of Birmingham, unites to the wealth and exceptional business abilities which he possesses, a deep faith in the capacities of the working class. He further is able to impart to his speeches a humanitarian and democratic tone which goes to the heart of the working man. As a result, he has built up in a few years what seems to be one of the strongest and best organised working-class movements in the country. It is true that I do not believe he in the least understands the potentialities of the movement he has so skilfully organised; nor do I imagine Mr. Smedley fully appreciates the socialist conclusions which are the logical outcome of some of his speeches. Nevertheless, he has taught the working men of Birmingham socialist ethics, and this not in a theoretical, but in a most practical manner. Here are a few specimens of Mr. Smedley's eloquent teaching. I quote them from his speech delivered to the fourth annual *réunion* of old patients from the convalescent homes of Tynycoed and Marle, and delivered in the Birmingham town hall in November, 1895: "Still, our chief cause for pride lies in the convalescent homes which you [the workmen of Birmingham] have established." ..... "These homes are yours, as much yours as those to which you will return to-night. Not less yours because others share their advantages with you. It is only the selfish man—there are plenty of them living among us—who values what he has because others are without. There are men who derive pleasure from the thought that their possessions are greater than those of others. You value, I know, these homes in a far better manner because you rejoice that they are shared with you by others." Mr. Smedley then went on to show that, though these homes were managed exclusively by working men, they were well and economically managed, and this without vexatious rules and regulations, and further that they were conducted under the ruling principle that "if you want to be happy try to make those around you happy." "Make this the object of your lives," he exclaimed, "during the next twelve months, and I guarrantee it shall be the happiest you have ever spent. The only hope for the regeneration of the community rests with the working classes. I assure you of the well-to-do classes there are few who can spare time to bring about a great change. They are too much occupied with making and keeping their wealth, with the luxuries and pleasures they are able to obtain in spending it." ..... "If the objects of these societies (the Hospital Saturday Funds) are pressed forward with determination, there is no reason why the whole condition of the poorer classes should not be altered for the better and, in time, pauperism become practically extinct. We are under obligations to those amongst whom we live and move. Whether we recognise them or not we cannot get rid of them. I beg you, by the common interest we have in these homes, by the glimpses of happiness which we have obtained there—interest and happiness which have resulted from others recognising their obligations to you—to resolve that during the forthcoming year you will fulfil your obligations to others. I envy that man who, when the time has come for him to fall into that long last sleep which all must sleep—I envy that man who shall have the satisfaction of dozing off with pleasant recollections of the happiness he has been the means of bringing to others during his life. I care not what may be in store for you after that sleep; if your life has been spent in seeking happiness by giving happiness to others the dim and distant future can have no terrors for you, for you will carry with you the satisfaction of having brought that day nearer when misery and destitution shall be swept from our midst."

It is by steady, hard, plodding work, brightened and stimulated by such words as these, that, up to the date when they were pronounced, the working-class of Birmingham had raised for the medical charities of that town the princely sum of £156,459 10*s.* 6*d.* From 1873 to 1882 the collection fell a little under £5000 annually. In 1885 it exceeded £6000, it 1888 it amounted to £7689. In 1891 it was not far short of £11,000, and in 1895 it exceeded £13,000. For the last seven years the Hospital Saturday Fund, apart from maintaining its convalescent homes, its district nursing societies, and other institutions, has made a free annual gift to the medical institutions of Birmingham of £10,000. But it must not be forgotten that to obtain these enormous sums in pennies from the working classes it has been necessary to create an organisation by the side of which the trades unions, for instance, of Birmingham are feeble and impotent. Of course, Mr. Smedley will at once exclaim that his motives were of the purest, that pacific reform on humanitarian lines is his sole object; and I have not the slightest reason to doubt the truth of such an allegation. But Mr. Smedley will not always be there to guide and inspire the movements of the giant he has

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *concluded*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *concluded*) Dec. 12th, 1896, Liverpool; (5) Jan. 2nd, 1897, Manchester; (5 *continued*) Jan. 9th, 1897, Manchester; (5 *concluded*) Jan. 23rd, 1897, Manchester; (6) Feb. 6th, 1897, Leeds; (6 *concluded*) Feb. 13th, 1897, Leeds; (7) April 17th, 1897, Coventry; (8) May 1st, 1897, The Royal London Ophthalmic Hospital; (9) May 8th, 1897, France, United Action and Legislative Action; (10) May 15th, 1897, Leicester; (11) June 5th, 1897, Nottingham; (12) July 31st, 1897, Birmingham; (12 *continued*) Aug. 14th, 1897, Birmingham; and (12 *continued*) Sept. 4th, 1897, Birmingham.

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created. He has done what the trades unions have failed to accomplish. He has united as financial members of one organisation democratically governed, that is to say, capable of throwing Mr. Smedley himself out of office, 75 per cent. of the working-men of Birmingham, and it is Mr. Smedley who is my authority for this statement. Again, I repeat all this is based on the best of motives; but good intentions are said sometimes to lead to undesirable places.

The working classes of Birmingham, now united and organised as they have never been united before, and collecting among themselves an income of at least £15,000 a year, constitute a power that may some day be utilised for many other purposes besides that of building convalescent homes and subsidising hospitals. Indeed, it has already been resolved to limit the subsidising of hospitals. However large the amount collected by the Hospital Saturday Fund, it has been decided that not more than £10,000 shall be given as a free gift to the hospitals. Whatever is done with the rest will mean a new departure, a revolution, in the administration of medical charities. Indeed, is this not already the case with regard to the convalescent homes? Formerly such homes were built by wealthy and benevolent people and managed by them with the aid perhaps of some of the medical staff. Now they are the exclusive property of the working men, who themselves decide who shall, and who shall not, go there. Undoubtedly these homes, and Mr. Smedley in the speech quoted above emphasises the fact, afford the working men far more satisfaction than the hospitals to which they nevertheless contribute a much larger sum of their money. Thus, according to the last published account I was able to obtain from headquarters, the receipts of the Saturday Hospital Fund for 1895 amounted to a total of £13,497, and out of this, the convalescent homes cost £2250; the committee £150; the District Nursing Society, for services of nurses to Hospital Saturday subscribers, received £100; a balance of £997 was carried over; and £10,000 were given to the hospitals. Thus we find that already twenty-three and a half per cent. of the money spent for medical relief by the Hospital Saturday Fund is employed in accordance with the principles of a provident society. Further, in January, 1892, the Fund was incorporated under the Companies Act of 1862 as an association not for profit. Thus, I take it, the money could be spent as the committee think fit and therefore, if need be, wholly devoted to provident purposes. But if means of medical relief were organised independently of the hospitals in a satisfactory manner—and this has already been done in regard to the providing of trained nurses and the convalescent homes—the hospitals might lose a great deal more than the £10,000. The workmen not only subscribe to the Hospital Saturday Fund but they send subscriptions direct to the various hospitals so as to obtain the tickets they may require for their own use. Thus, for instance, taking an example haphazard, I find that the Birmingham Carriage and Wagon Co., contributed £75 1*s.* 5*d.* to the Hospital Saturday Fund; but they also sent £10 10*s.* direct to the General Hospital, and probably subscribed for tickets from other hospitals. Now, if the workmen were to organise their own medical relief all these sources of income might be withdrawn from the public charities. Though they are not in the least likely to do so, if judged by their present disposition, still it is necessary to reckon with distant, and, as yet, vague possibilities. We must think not only of the policy of an institution such as it is to-day, but also what it may become to-morrow.

With regard to the policy of to-day there are in reality two policies, the practical and the theoretical. The latter, like most theories is quite ideal. The workmen make a free gift every year of £10,000 to the medical charities. Great emphasis is laid on the word "free." They expect nothing in exchange; the £10,000 are bestowed in pure charity. Alderman Cook, chairman of the Hospital Saturday Fund, was interviewed by the *Birmingham Daily Gazette*, and our contemporary, on May 5th last, wrote: "The position of the subscriber to the fund in regard to the medical charities, was some time ago defined in the plainest language in the official organ of the movement, and Alderman Cook, in conversation with our representative, firmly supported the view in regard to this particular matter there set forth—'a subscription to the fund, whether it be weekly or yearly, gives no right whatever. If a man or woman presents himself or herself at a hospital and demands treatment as a right bought by a subscription to the Hospital Saturday Fund, he or she takes up an absolutely unjustifiable position. The subscription carries with it no right; the princely gift of so many thousands per annum carries with it no equivalent. It is a free gift to the free work of the medical charities of the town.'" In a word, the workman gave his pennies, like the rich man gives his pennies, simply and solely for the sake of aiding and succouring the suffering and the afflicted. This is very beautiful, but does it work out exactly on the lines in practice? Every medical man to whom I have spoken testifies, on the contrary, that workmen are constantly expressing their conviction that because they subscribe to the Hospital Saturday Fund therefore they have a right to be treated at the hospitals; and on this ground some have even claimed exemption from the payment of registration fees where these fees are imposed. Then again, now that the workmen are imbued with so high a sense of their social duties that they liberally subscribe to the hospitals, it was only natural to expect that the well-to-do classes, stimulated by this example, would largely increase the amount of their subscriptions. The very reverse is the case. While an immense majority of the working classes subscribe to the hospitals it is only a very small minority of the wealthy classes that contribute. Throughout the country there is a cry that, in face of workmen's subscriptions, the wealthy classes subscribe less. If this statement is not borne out literally by figures it is quite correct if we judge the figures proportionately to the wealth and numbers of the respective classes.

Mr. Smedley pointed out to me that, as a general axiom, we might take it that the subscription list of a hospital only lasts seven years, and therefore the number of new subscribers added to the list every year must be in the proportion of one-seventh to the total. But he complained that when the workmen began to subscribe, the committees of the hospitals became neglectful. Not only have the hospitals been negligent in respect to the wealthy classes, but they have been competing with the Hospital Saturday Fund by urging the workmen to subscribe directly to the hospitals instead of sending their money to the Hospital Saturday Fund, and offering to supply them with tickets as an inducement. On the other hand, one of the leading hospital surgeons complained to me that the Hospital Saturday Fund had reduced the direct subscriptions from the factories to the hospitals. They tried to get the money paid into the general Hospital Saturday Fund, under the promise that the managers of the Fund would see that the men got all the attention they required. The free gift of £10,000 was not altogether a free gift. The Hospital Saturday Fund issued letters of their own recommending patients, and no hospital could, under the circumstances, venture to slight such a recommendation. It was his opinion that the Hospital Saturday Fund fostered the idea that the hospitals were provident clubs. This the medical staff would never tolerate and he thought that, in the long run, the workman would withdraw their subscriptions and utilise them exclusively for their own purposes. As tending somewhat to confirm the opinions thus expressed, I may quote a passage from the organ of the Hospital Saturday Fund published in the issue of February 1895: "To a greater or less degree we believe every one of the Birmingham Medical Charities has recognised the provident principle. Bodies of workpeople—or in fact anyone—may subscribe a guinea to the General Hospital and receive six letters of recommendation. Once subscribers, they may purchase additional tickets at the rate of three shillings and sixpence each. A subscription of one guinea a year to the General Dispensary purchases eight tickets, and the minor ticket hospitals all sell the right of admission or treatment on similar terms. The working classes have been shrewd enough to avail themselves largely of the advantages thus afforded to them. The machinery of the Hospital Saturday weekly collection has afforded them facilities for the collection of their subscriptions by weekly instalments. The result is that nearly £6000 of direct subscriptions of the institutions is derived from this source annually, for which the fund gets no credit."

If to these £6000, direct subscriptions, be added the registration fees, and the £10,000 free gift, it is estimated that the working classes of Birmingham pay at least half the total annual cost, some £45,000, of the hospitals. Since 1873, when the Hospital Saturday Fund was first established, the wealth of the city is stated to have doubled, and it is absolutely certain that the subscriptions of the wealthy classes have shown no proportionate increase. In comparison they have, on the contrary, decreased, and it

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is the subscriptions of the working men that have more than filled up the gap. But will the working men be content to continue to fill up the gap which the indifference of the wealthy creates. This is highly improbable. Why should the poorest sections of society show themselves more charitable than the wealthy? It may be said that hospitals are for the benefit of the working classes; but they exist, also, and equally, for the benefit of the wealthy classes. It is not only the duty of the rich to subscribe, but, in their own interests, they should do all they can to develop the highest possible skill among medical men. But for the hospitals this knowledge and skill would soon fall to such a low level that the wealthy classes would have to send abroad for surgeons and physicians, and this would cost far more than what they actually subscribe to the hospitals. The workmen are not going to provide with their pence schools of medicine for the benefit of the rich. Mr. Smedley, who as a middle-class man might take a more moderate view of the situation, wrote and circulated among the subscribers to the Hospital Saturday Fund the following threatening words, and this so far back as 1893:—

"Let us regard the position of the classes for whose sole benefit the hospitals are supposed to exist from one other point of view. Assume that they established a vast hospital and dispensary of their own and applied the sum of upwards of £20,000, which they now annually pay over to the charities, to its maintenance. Without much trouble they could increase this sum to £30,000 per annum, an amount nearly equal to the expenditure of the General, the Queen's, and the Dispensary. Assume that they had a stipendary medical staff, and refused the admission of students to their institution. The result would be disastrous to the present medical charities. No longer would the rising men in the medical profession compete for the honorary offices, for the experience which is to make their reputation, and consequently their fortunes, could no longer be obtained there. Hospitals without patients, or with only a few patients, would have no attractions for clever young medicos. The fact is that a large number of patients are essential to a successful hospital. The hospital managers and staffs cater for the multitude, so that their institutions may take high rank and their honorary officers and students may gain the widest experience possible."

This, of course, is but a threat. There is at present no proposal, no desire, to carry out such a scheme. But a big step in this direction is advocated. Again this is Mr. Smedley's suggestion. This gentleman, contrary to the opinion of the majority of the medical profession, does not recognise that there is any serious abuse of the hospitals in the sense of their being frequented by numerous patients who could well afford to pay private practitioners. On the other hand, and in harmony with the unanimous opinion of the profession, he does appreciate the very great abuse due to the overcrowding of the out-patient departments by trivial cases. He therefore proposes as a remedy the creation of provident dispensaries in connexion with the hospitals, and, where possible, on the same premises. These dispensaries should be open from 9 A.M. to 9 P.M., which would be an enormous boon to all patients. They should be in charge of well paid and thoroughly capable and experienced medical men. All recommendations, tickets, &c., to the hospitals, should admit, in the first instance, only to the dispensaries, and give a right to three weeks' treatment. The out-patient departments of the hospitals would be restricted solely to patients coming from the dispensaries for a second opinion. The dispensaries would serve as filters so that the hospitals would have to deal solely with cases where superior skill was necessary. These, I take it, would be treated on the basis of charity, whereas payment would be exacted for all, or nearly all, the dispensary patients. Each ticket to the dispensaries would represent a payment made either by the patient or those who gave him the ticket. For those who could not obtain tickets through the factories having a Hospital Saturday Fund the provident societies, mothers' meetings, &c., could get them from the permanent relief committees, which might give them gratuitously after due inquiry. This, I take it, would mean that all subscribers to the Hospital Saturday Fund would consider that they had paid, and paid to the full, for any medical treatment they might receive at the dispensaries, and would only become objects of charity if their case was so serious as to necessitate their transference from the dispensary to a hospital. But in this scheme I can find no indication as to what is to prevent the abuse of the dispensaries by the well-to-do. It seems to be forgotten that the trivial cases are not only an abuse because they crowd the out-patient departments, but, above all, they are an abuse because, being trivial cases, the patients could in most instances afford to consult a general practitioner. So far as the question of hospital abuse is concerned this scheme only attempts to meet a part of the difficulty. Nor does it give a satisfactory answer to the working men when they ask why they should subscribe so much to the hospitals while the wealthy classes subscribe so little.

Then there is the very important and threatening fact that the workmen's subscription is not a voluntary subscription. According to the letter of the law it is a voluntary subscription, but, as a matter of fact, the pressure exercised is so strong that it is well-nigh impossible to avoid making these payments. If it be true that seventy-five per cent. of the working and poorer classes contribute, they will never rest satisfied till they have by persuasive or coercive means compelled the remainder also to subscribe. Then if all the poorer classes pay, what argument can possibly be adduced for excepting the well-to-do classes from payment; yet at present, the majority of the wealthy classes do not give at all to the hospitals. As there is no machinery, such as that organised by the Hospital Saturday Fund, to coerce, by social pressure, persons in a good position and make them all subscribe, the workmen will surely, sooner or later, demand that a hospital tax be imposed by law. Thus it is that the Hospital Saturday Fund may ultimately prove to be the foundation of a movement that will lead to the municipalisation of the hospitals. It would be foolish to ignore so obvious a deduction. Of course it will be said that this is socialism, and so it is. But when Mr. Smedley, in the speech quoted above, taught each individual working-man that the convalescent homes were none the less his property because others shared them with him, and that only the selfish man valued what he had—namely, his private property—because others could not enjoy it, was he not teaching, both in practice and in theory, the doctrine of collectivism. What is there surprising, therefore, that such teaching and such organisation should lead to the socialistic solution of the problem—namely, the municipalisation or nationalisation of the hospitals? Under such circumstances, and considering the immense influence which Mr. Smedley exercises, and the fact that the hospitals are at the mercy of the Hospital Saturday Fund which he in a great measure governs, it seemed to me indispensable to describe the situation. This I have attempted to do historically and impartially. While expressing my opinion on some minor matters of fact, I have not sought or intended to express any views of my own on the fundamental principles at issue, nor have I attempted or desired to advocate any particular cause other than the necessity of forming a medical union, so that the members of the profession may be in a position to deal with these grave problems.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Faculty of Physicians and Surgeons, Glasgow.

THE following gentlemen, having passed the necessary examinations and having been elected by ballot, have been admitted to the Fellowship of the Faculty: George Henry Edington, M.D. Glasg; William Robert Jack, M.D., B.Sc. Glasg.; and Thomas Spence Meighan, M.D. Glasg.

Western Infirmary, Glasgow.

It is understood that Dr. Gavin P. Tennent, in consequence of the pressure of other professional duties, has requested the directors to relieve him of his responsibilities as one of the physicians to the infirmary. No official intimation of the vacancy has yet appeared, and unless rumour is strangely at fault there may possibly be such a rearrangement of the allotment of the wards as to obviate the necessity for the appointment of another physician.

Glasgow Corporation.

The sewage disposal committee of the Town Council have decided to give formal notice of the intention of the Council to promote a Bill in Parliament authorising them to deal with the sewage on the south side of the river. This is

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another step towards the attainment of that long-desired end—the purification of the Clyde.

Dundee Infirmary.

The directors of the Dundee Infirmary have reduced the list of applicants for the position of medical superintendent to a short list of five, and a definite appointment may be shortly expected. The retiring superintendent, Dr. Nathan Raw, has been elected to a corresponding position in the Mill-road Infirmary, Liverpool. His work at Dundee has secured the warm recognition of the hospital authorities.

Sept. 15th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Beri-beri at the Richmond Asylum.

AT the last fortnightly meeting of the governors of the Richmond Lunatic Asylum the medical superintendent, Mr. Conolly Norman, stated that the beri-beri disease seemed to be declining in violence. His report, however, showed that since the last meeting of the board there had been five fresh cases, while two deaths had occurred, the disease having been complicated in one instance with dysentery and in the other with tuberculosis. The total number of patients attacked since June is 199—namely, 149 females and 44 males, with 4 nurses and 2 attendants. It is satisfactory to note that 172 of the former inmates of the Richmond Asylum have been removed to Portrane, and that it is hoped that 100 more may be accommodated there before the date of the next board meeting. Grangegorman female prison is, moreover, being altered and furnished for the reception of a further number of non-infected patients.

The Sanitation of Clontarf Township.

At the last meeting of the Clontarf Township Commissioners Lord Ardilaun, who occupied the chair, made some interesting observations in reference to the drainage and sanitation of that rising suburban district. The Dublin main drainage is now almost completed as regards the north banks of the River Liffey and the northern portion of the city. This is certain to improve the sanitary condition of Clontarf, the sewers from which now discharge into the northern main drain of Dublin. Lord Ardilaun stated that the Commissioners were at last in a position to borrow money with the object of further improving the drainage of their township and with a view to the ultimate reclamation of the slob lands at Fairview, which were of such injury not so much to the health as to the appearance of the district.

Lunacy in Ireland.

From the forty-sixth report of the Inspectors of Lunatics in Ireland, just issued, I find that although the population of this country is decreasing the number of lunatics is becoming greater, as on Jan. 1st there were 18,966 insane in Ireland, being an increase of 609 as compared with 1896. This increase has been steadily growing and is put down since 1880 at 5984. The average annual admissions for the years 1881 to 1890 amounted to 2792, and for the six years 1891 to 1896 to 3195. This increase in the number of admissions to public asylums has occurred throughout the country without distinction of district, in the prosperous city of Belfast equally with the impoverished localities, and is apparently still going on, for at the last meeting of the Londonderry Asylums Board, on Sept. 9th, the medical superintendent reported an increase of 25 inmates as compared with the same month last year, and he was granted an increase in the number of attendants. It surely demands some explanation. What is the cause of the increase of lunacy in Ireland?

Death of Mr. Hugh McHarry, L.R.C.P. & S. Edin.

I regret to announce the death of a well-known practitioner in Belfast, Mr. Hugh McHarry, which took place at his residence, Grosvenor Lodge, on Sept. 11th. Mr. McHarry had been for some time in failing health, but his end was hastened by an attack of influenza a few months ago. He had been in practice for about twenty-six years, and for a time was a dispensary medical officer. He was medical officer to the Royal Irish Constabulary at Anderstown. He was most popular with his patients.

The Royal Victoria Hospital, Belfast.

As previously announced in THE LANCET, the Belfast Corporation have signified their intention of granting six acres of the asylum grounds in Grosvenor-street, with an additional grant of four acres if all the patients are removed from the asylum, as a site for the Victoria Hospital. The ground, which will form an excellent site, is the exclusive property of the corporation, but in order to make the grant valid it is necessary to have the consent of the board of governors of the asylum. Accordingly, on Sept. 13th, at the usual monthly meeting of the Asylums Committee, a deputation from the supporters of the new Belfast Hospital appeared before them asking them to consent to the arrangement made by the City Council. After hearing the deputation a resolution was unanimously passed granting the request expressed by this deputation and furthering the object as far as possible. Previously to the motion being passed the Roman Catholic Bishop (a governor of the Asylums Board) said before he consented he would request the Corporation to provide a free site for the hospital (the Mater Infirmorum) which he was engaged building. He thought distributive justice demanded that the Belfast Council should treat their people (the Roman Catholics) in the same way as they had treated the Victoria Hospital. The chairman (Professor Cuming) said he thought there would be a great difficulty in giving a free site to the Mater Infirmorum Hospital, because it was obvious that it was in a great measure built, and could not be transferred to another site. Before the site can be acquired by the Victoria Hospital Committee it will be necessary to have a special Bill passed in Parliament authorising the City Corporation to grant the ground. This cannot be done before next session.

Sept. 15th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Etiology of Drinkers' Cirrhosis.

M. LANCEREAUX, who has made for himself a great reputation by his researches upon alcoholism, recently laid before the Academy of Medicine some important observations with regard to the true cause of the cirrhosis which affects drinkers. From a total of 210 personal observations he has come to the conclusion that in Paris the principal cause of cirrhosis is wine. That in general use is the red wine. Those addicted to the use of spirits (*l'alcool*) simply are rarely affected with cirrhosis; therefore alcohol cannot be assigned as the cause of cirrhosis in wine-drinkers. M. Lancereaux considers the potassium salts to be in fault, and has made certain experiments upon animals in this direction. He found that on administering potassium salts to animals they died after about from fifteen to eighteen months, and in a large proportion of them he found a cirrhosis "bi-veineuse." Another set of experiments proved that the abuse of alcohol brings on a fatty degeneration of the hepatic cells followed by a fatty cirrhosis. M. Lancereaux accordingly has come to the following conclusion—that wine, and especially plastered wine, is the cause of atrophic cirrhosis, and it would therefore be as well to prohibit the plastering and sulphating of wines.

Intestinal Lavage in Digestive Intoxications.

At the same meeting of the Academy of Medicine M. Clozier, of Beauvais, read a number of observations showing the efficacy of intestinal lavage with a quantity of fluid which is allowed to escape immediately afterwards. The fluid employed is water which has been boiled, used pure or somewhat saline, or containing salol. The injection must reach as high as possible so as to affect the more microbes. By this method the intestinal intoxication is weakened from day to day, the temperature becomes regular, and the general condition improves. M. Clozier has observed various typhoid conditions improve greatly under this treatment, and even eclampsia undergoes a favourable modification under the influence of lavage by simple boiled water.

Incontinence of Urine in Relation to Infantile Hysteria.

At the recent Congress of Neurologists M. Cullere, of Roche sur Yon, presented the following thesis: that urinary incontinence is a sign of a disturbed mental balance. In his eyes it is a manifestation of hysteria, and always develops in a soil duly prepared by heredity. Among the parents of children who suffer from incontinence

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are found diverse manifestations of hysteria, incontinence itself, alcoholism, various forms of neuropathy, and, to a less degree, sundry psychoses. Infantile or young hysterics are frequently descended from parents of unstable mental equilibrium or those who are degenerate, and those affected with urinary incontinence are notably like the hysterical in their mental instability and their extreme "suggestibility." Among occasional causes of incontinence M. Cullere reckons, as in hysteria, vivid emotional disturbances, traumatism, and infectious diseases, especially measles. Finally, the diagnosis of hysteria in incontinent children is justified by the existence in a number of cases of other symptoms of this neurosis.

Pathogenic Microbes in Vegetables and Market Garden Produce.

M. Brandeis, of Bayonne, has just called the attention of hygienists to the dangers which accrue to public health from the practice of using human manure for watering market garden produce which is so frequently eaten raw. M. G. Roux has laid before the Society of Medicine of Lyons a communication on the same subject, wherein he draws attention to the resisting powers of certain microbes deposited on vegetables and the extreme difficulty of removing them by repeated washings. M. Guiraud, of Toulouse, has also recounted his experiences as to the produce of the market gardens around Toulouse, where human manure is used. An outbreak of typhoid fever occurred some months ago at Toulouse, and M. Guiraud set himself to search for the bacillus of Eberth and the bacterium coli commune, but, less fortunate than M. Brandeis, M. Guiraud has not been able to isolate the bacillus typhosus. He frequently found "para typhoid bacilli"—i.e., bacilli closely resembling that of typhoid fever, which cause lactose to ferment feebly and redden litmus only after many days; others would not coagulate milk and grew very sparingly upon potato; but he never came across colonies presenting the undeniable characters of Eberth's bacillus. On the other hand, in sixteen samples gathered haphazard, such as materials for salads, strawberries, and the like, in nine he was able to establish the presence of large quantities of the bacterium coli with all its characteristic reactions. With three of these cultivations M. Guiraud made intra-peritoneal injections of 2 c.c. respectively into three guinea-pigs. All were very ill, and one died forty-eight hours after the injection. A post-mortem examination showed a sero-fibrinous exudation on the peritoneum, obvious peritonitis, and acute congestion of the intestines, the lungs, and the kidneys.

Army Medical Reserve.

An important decree has been issued relative to the medical officers of the reserve and of the territorial army. Medical officers of the reserve must be either retired military surgeons who seek appointments in the reserve, or civilian medical men who have graduated as M.D. at a French faculty, and who are available for duty with the army on active service. Retired military and naval surgeons may be appointed to the reserve with the rank which they held when on active service. Civilian medical men can on their first joining the reserve only hold the rank of assistant-surgeon-major (*médecin aide-major*) of the second-class. Their fitness for this position is ascertained by a special examination the subjects of which are prescribed by a Ministerial regulation; they are admitted to this examination as students when they have completed the class attendance required by the Minister of War. The regulations with respect to promotion are as follows: Civilian medical men appointed to the reserve cannot in time of peace rise to a higher rank than surgeon-major (*médecin-major*) of the second-class, and that only after having passed a special examination the subjects of which are sanctioned by the Minister of War and are such as to test the officer's knowledge of administrative work and of the military aspect of his duties. Ex-military surgeons can rise by promotion in the reserve to the rank of surgeon-major of the first-class. The minimum period of service necessary for rising from any rank to the step immediately above it is fixed at four years in the case of assistant-surgeon-majors of the second-class, and at six years in the case of assistant surgeon-majors of the first-class or surgeon-majors of the second-class. At the same time, the length of service required for promotion to the rank of assistant surgeon-major of the first-class is reduced to two years in the case of officers of the reserve who are filling, or who have filled, the position of professor or assistant professor in the faculties of medicine; of hospital physician, surgeon, or obstetric physician in the cities where these appointments are awarded by competition; of *chef de clinique* or prosector appointed by competition in the faculties or schools of medicine; or of resident medical officer of a hospital appointed by competition in cities which possess a faculty of medicine or a combined faculty of medicine and pharmacy.

Sept. 14th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Marcello Malpighi.

ENGLAND should certainly have been represented at the unveiling of the monument to the great Italian physician and biologist on Wednesday, Sept. 8th, for it was from England that he won recognition and honour when in his native Italy he had to go into hiding to escape imprisonment or worse. If, however, she had no representative on the occasion, amends were made to her for the omission by nearly every orator who spoke—by none more than by Professor Todaro, who holds the Chair of Anatomy in our medical school, and whose brilliant discourse was almost as much an eulogium of the Royal Society of London as of the mighty nature-student it sought to commemorate. But I am anticipating. For many years a movement has been on foot to erect to Marcello Malpighi a monument at his native Crevalcore, the little Emilian town which but for him would only be remembered as the scene of the encounter between Marc Antony and the Consul Pansa. On Wednesday, the 8th inst., that movement issued in a conspicuous success, the monument itself being a *chef d'œuvre* of the sculptor, Enrico Barberi, and the ceremony of its unveiling having attracted as distinguished an assemblage of Italian "leaders and luminaries" in medicine and biology as the kingdom is at this season capable of mustering. The day was all that could be desired, and as the veil fell from the grand impressive figure—represented sitting, book in hand, in profound meditation—the glorious sunshine seemed to exult in lighting up the features of the "sworn enemy of obscurantism," and in reminding the spectators of the darkness through which that figure had led the way towards "the ampler ether, the diviner air" in which modern science lives and moves. Born of farmer parents on March 10th, 1628, young Malpighi, early left an orphan, matriculated at Bologna, and soon distinguished himself in literature, philosophy, and finally in the medical school. The controversy between the moribund Aristotelianism and the Galilean induction had not yet resulted in the decisive defeat of the former, which had still strength enough to make its sting felt by young aspirants like Malpighi to university preferment. In fact, after graduating in 1653, he had to flee from his Alma Mater and take refuge at Pisa in the Chair of the Theory of Medicine created for him by the Tuscan Grand Duke Ferdinand II., where, once left with a free hand to experiment and a free voice to teach, he made his influence felt for good far beyond the limits of his subject and the precincts of his school. From 1656 to 1659 he fought the battle of inductive research, converting his colleagues from "Galenism" and maturing those studies which were afterwards to fructify in nearly every walk of medicine. So assiduous and laborious was his life that, combined with the local malaria, it impaired his strength for a season, and he had to return as a private individual to his Bolognese Alma Mater. He had by this time, however, shown what he was capable of, and after, when, in 1660, making the first application of the microscope to anatomy, he became, as Virchow has shown him to be, the founder of modern histology and the virtual anticipator of Schleiden and Schwann in referring the fundamental tissue of every living organism to the parent "cellula." Not only so, but (in Virchow's own words) "by discovering the capillary current through which the blood passes from the arteries to the veins he succeeded in filling up the chasm (no small one) left in the physiology of Harvey, his illustrious predecessor, and in convincing the world of science that the 'circulation of the blood' was an irrefragable fact. He thereby laid the secure lines on which his successors have reared the edifice of modern physiology and pathology; nay, more, his acute intellect penetrated so far as to discover the elements on which rests the theory of the composition of the blood." This testimony of the great Berlin pathologist was supplemented, at the ceremony of Wednesday

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last, by that of Kölliker, of Wurzburg, who called him "the founder of embryology"; while Haeckel was also quoted to the effect that "in Malpighi we can trace the predecessor of Darwin in the theory of natural selection." Work the significance of which it has taken two centuries to appraise had even then brought him recognition in his native Italy, and we find him in 1662 Professor of Anatomy and Medicine in the University of Messina. But the Sicilian seat of learning was too obscurantist for so professed a votary of Hippocrates and nature study, and his life there was clouded and saddened by priestly and even academic persecution, denouncing him for his vivisection and his post-mortem examinations, and finally assuming so menacing an attitude that he had (as already stated) to go into hiding at Corticella. Still, even in enforced concealment he worshipped Nature, as the early Christians worshipped God in the Catacombs, and to this period we owe his researches on nearly every organ in the human frame, to say nothing of "comparative" work in the anatomy of the eagle, of the sword-fish, of the thunny, of the torpedo, of the glow-worm, and of intestinal worms in man and brute alike. In 1666 came forth his classic work, "De Viscerum Structurâ," whereupon the Royal Society of London begged him to give it a compendium of his findings. He sent it by way of answer his magnificent "Epistola de Glandulis Conglobatis." From this date more than friendly relations subsisted between him and the great English association. It placed his bust side by side with that of Newton in its great hall, and at its instance he was induced to publish his masterpiece, "De Bombyce" (on the silkworm). Of this treatise it will suffice to say that two centuries have only enhanced the admiration that hailed its first appearance, and that not only experts in the subject such as Reaumier, Cornalia, and Maillot accept it still as a classic, but that in 1878, during the French International Exposition in Paris, when the International Congress held its sittings, the Government of the Republic reprinted the treatise at its own expense and presented a copy to each member of the congress then present. Once more from London came the earliest and most cordial appreciation of his work "De Anatome Plantarum" which so fascinated Cuvier more than a century later for its demonstration of the respiratory function in vegetable organisms. English attestation of his signal merits had now a contagious effect on his compatriots and we find the enlightened Pope Innocent XII. rebuking the superstition of his order and appointing Malpighi his body-physician and "archiatro" (chief consultant) at the Pontifical Court. Here the much-tried nature student found rest at last, pursuing his researches under every facility papal munificence could provide and rectifying the frontiers of science in every direction till, after four years' tranquil activity, he succumbed to a stroke of apoplexy in 1694. His own pupil, whom Italians delight to rank with Sydenham as the "Hippocrates of Italy" — that great practitioner being honoured as the "Hippocrates of England"—tended him to the last, and by special request made a post-mortem examination of his body—a service quite in keeping with the spirit of the master whose researches on malaria prompted him to those further investigations so honourable to Baglivi. So lived, so died Marcello Malpighi, and if he has had to wait for due recognition, even for a monument in his native town, till the close of the nineteenth century, that only attests his genius and its triumphs the more, as proving how far he outsoared his contemporaries, and how truly it was said of him on Wednesday last that "being dead he yet speaketh." As to the ceremony solemnised on that day I have no space to dwell on its merely picturesque or purely rhetorical incidents. Be it enough to say that sculptor, speakers, and audience were all worthy of the occasion, and that with due official honour Italy received another accession to her "silent population of marble"—"silent," yes, but whose presence is eloquent of her mighty past and fraught with lessons she will do well to re-learn.

Sept. 11th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Insanity in Prisons due to Idleness.

THE labour unions have so influenced legislation that the industries hitherto carried on in the prisons have been greatly curtailed. The result has proved most disastrous to the health of the inmates. Insanity is the predominant disease, and so frequent has that become in some prisons that the prisoners have been set to work at tasks devised for the purpose, and with marked relief. In New York the prisoners have been allowed to make articles for use in the charitable institutions of the State, but no prison-manufactured article can be sold in the markets. This policy has diminished the former prison industries, but there is still enough to do to partially employ the prisoners.

Medical Inspection of Public Schools.

I have noticed the inauguration of medical inspection of the children of the schools by the Board of Health. The quarterly report of the work done has been published which shows the different kinds of diseases which may affect children who are mingling with healthy children. Parasitic diseases lead in the list, being 2627 in number. Of contagious diseases of the eye there were over 700 cases; of skin diseases there were 175; of diphtheria, 91; of measles, 51; of scarlet fever, 20; of mumps, 117; of chicken-pox, 93. Though the propriety of the inspections were at first regarded as very doubtful, yet the results prove its great importance. In Chicago a similar inspection has been in progress for a year with the following results: 744 reports of individual cases led to the discovery of 2617 cases in their homes; 231 cases of scarlet fever discovered 745 cases at home; 46 school cases of measles revealed the epidemic prevalence of this disease in several parts of the city. In October impetigo contagiosa became prevalent in seven schools, but was arrested after excluding 107 cases and employing suitable preventive measures.

The Treatment of Sunstroke.

Sunstroke is the most prominent disease of this city during the season of extreme heat. The mortality has generally been excessive. A recent study has been made of the 805 cases treated in the various hospitals in 1896, which gives some interesting results. The ten days, Aug. 4th to Aug. 14th, include the period of the greatest intensity of the conditions causing sunstroke. There was excessive and prolonged high temperature with high humidity. Clinically the cases were divided as follows: (1) heat prostration; (2) the asphyxial form; and (3) the hyperpyrexial form. There were 247 of the first class; the temperature did not exceed 105° F.; all recovered. Of the second form there were 38 cases; they lost consciousness, but the temperature did not exceed 105°; all recovered. Of the third form there were 520 cases with 132 deaths; each one had a temperature of 105° or upward, and but few retained consciousness. The difference between the three classes was one of degree and not of kind. The majority of sunstrokes occurred between 2 and 5 P.M., and between 7 and 10 P.M. The fatal complications were meningitis, pneumonia, and exacerbation of chronic kidney disease. The cause of death in most cases was failure of the respiratory and cardiac centres. In fifteen cases the changes in the nervous system were examined microscopically. All showed more or less changes in the chromophilic plaques of the ganglion cells. These plaques in some cells were changed in shape and were fewer in number; in some they appeared to be broken up or to have entirely disappeared. In three cases referred to there was universal exhibition of acute parenchymatous degeneration of the neurons of the whole neural axis. In the brain cortex and in the cerebellum the cells showed the same stages of degeneration. The spinal-cord cells were apparently not so extensively involved. These facts prove that there is a toxic cytolysis in isolation, or cell resolution of the neurons, which depended upon the condition of the body forces, the eliminative capacity of the body, and the duration of the poison. The treatment of the first class of cases was the same in the different hospitals—namely, rest in bed, cool sponge bath, an ice cap, and phenacetine for the headache. In the second class, or asphyxial cases, tub baths were given at 60° F., or sponge baths, or if coma and nervous symptoms required it the patients were put for a few minutes into the ice bath. In the third, or hyperpyrexial cases, hydrotherapy was employed in some form in all cases. It differed in application and in the temperature of the water. The records of mortality in the different hospitals furnish a fair estimate of the efficacy of the methods employed. The mortality among the patients treated with ice baths, and the bath continued until the temperature had fallen to about 103° or 102° F., varied in the different hospitals from 18 to 27·5 per cent. When in some cases the ice pack was used instead of the ice bath the mortality was 25·5 per cent. When the ice

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bath was given for ten minutes, irrespectively of the point to which the temperature fell so long as it remained above a safe limit, the mortality was 40 per cent. Among patients treated with the bath at from 50° to 75° F. the mortality was one-third. When the baths were given at 90° to 110° F., and reduced in about fifteen or twenty minutes to 72° F., the results did not seem so favourable as with the cold baths. Among the patients treated with a needle spray from a hose attached to the cold water faucet the mortality was 11·5 per cent. Cold packs followed by hot packs in 197 pyrexial cases gave a death-rate of only 5 per cent., or, counting 8 patients who died a week later, the mortality was but 9·13 per cent. The death-rate of sunstroke, as given in Quain's Dictionary of Medicine, is from 41 to 50 per cent. In the entire number of cases of hyperpyrexia as recorded in the paper under consideration (540) the death-rate was 25·38 per cent. Therefore the treatment employed in the various city hospitals has given very satisfactory results. Briefly, the best treatment seemed to be a needle spray, or ice bath, or cold pack, till the temperature fell to 103° or 104° F., followed immediately by a hot pack, with stimulants and sedatives as the physician's judgment might deem necessary.

Aug. 19th.

Obituary.

JAMES MUTER TURNBULL, M.D. EDIN., F.R.C.P. LOND.

DR. TURNBULL graduated in 1839 and went to Liverpool shortly afterwards, when the town was extending rapidly north, south, and east, while the population was increasing enormously. He was elected physician to the Northern Hospital shortly after its erection, and to the Royal Infirmary some years later. He was also physician to H.M. Customs, to the Queen's, the Scottish Widows', and other life assurance societies. He had for many years a considerable consulting practice, being shrewd, observant, and very painstaking, having beneath a somewhat caustic manner a really kind heart. In 1876 he was elected President of the Liverpool Medical Institution, and on resigning his office as physician to the Royal Infirmary he was elected honorary consulting physician, which office he held at the time of his death. Dr. Turnbull retired from practice fifteen years ago, being a martyr to chronic rheumatism. He went to reside in Tunbridge Wells, where he died at the Spa on the 7th inst. in his eightieth year. In 1870 he married Miss Maxwell, daughter of a late well-known and highly respected Liverpool merchant. His funeral took place on the 9th inst. at Rusthall Churchyard, Tunbridge Wells.

A PROJECTED PUBLIC HOT WATER SUPPLY.—An interesting demonstration was held at the Crystal Palace last Wednesday of a new and ingenious process of obtaining hot water. The apparatus is so designed as to place within the reach of everybody a gallon of hot water for one halfpenny. The source of heat is the ordinary street gas lamp. Over the flame, at a distance to prevent interference with complete combustion, is placed a coil in which steam is generated. By its own tension this steam is driven under some pressure to the foot of the lamp in which is contained a reservoir of water connected with the main in the ordinary way. By a mechanical contrivance so familiar to everybody now, the hot water may be drawn off by placing a halfpenny in a slot. There is little doubt, we think, of a great future for this invention, as it obviously presents an important bearing upon domestic, dietetic, and hygienic questions. It is a curious fact that no one has hitherto thought of utilising the enormous quantity of heat that is dissipated from the street gas lamps. Some estimate of this quantity may be derived from the fact that over a quarter of a million sterling annually is spent upon street lighting. The light, however, is utilised, but the heat in the majority of cases is wasted. This novel enterprise is being undertaken by the "Pluto Hot Water Syndicate, Limited," 52, Queen Victoria-street, E.C. The departure has so many interesting features in relation to domestic economy and comfort, chiefly in connexion with its application to the rapid and economical preparation of hot food and beverages, as of beef-tea or cocoa, that we propose to return to the subject at greater length in a future number.

THE BRITISH MEDICAL ASSOCIATION.

MEETING AT MONTREAL.

THE sixty-fifth annual meeting of the British Medical Association was opened at Montreal on Tuesday, August 31st, under the presidency of Dr. T. G. Roddick, Professor of Surgery in McGill University.

The occasion was an interesting one, as this was the first time that a meeting of the Association had ever been held outside the British Islands. The choice of Montreal for the departure was considered on all sides to be a very happy one. As the chief city in the senior colony of the Empire Montreal had paramount claims upon the consideration of the British Medical Association, while the beautiful and beautifully situated city has always been famous for its kindness and hospitality to visitors. Montreal also possesses spacious public buildings and all other facilities for the accommodation of a large crowd, while the noble hospitals well repay the thorough investigation that a medical congress was sure to bestow upon them.

The dinner given by Dr. Roddick at St. James's Club on Monday evening to the officers of the Association and a large number of guests formed a pleasant prelude to the hospitalities of the week. Amongst the company were the Earl of Aberdeen, the Governor-General of Canada, Sir Adolphe Chapleau, the Lieutenant-Governor of the Province of Quebec, Lord Strathcona and Mount Royal (to give the sonorous title under which Sir Donald Smith, the eminent colonial politician, is now concealed), Sir William Hingston, Sir William Van Horne, and the Mayor of Montreal, Mr. Wilson Smith. The proceedings were of a thoroughly enthusiastic order; in particular, the toast of the health of Lord Strathcona met with a great reception; for Montreal, mindful of Sir Donald Smith's munificence to the city, has warmly welcomed his elevation to the British House of Lords.

The programme of the proceedings was definitely commenced on August 31st at noon, when the Bishop of Niagara gave an address at the opening service, which was held in the English cathedral. The Bishop of Niagara is better known to Canadians as Dr. Dumoulin, and occupied the pulpit at St. James's Cathedral, Toronto, for many years, where he earned for himself the reputation of being one of the most eloquent preachers in the Dominion, a reputation which those who heard him on this occasion can well understand to have been merited.

On Tuesday afternoon the first or adjourned general meeting was held, at which Dr. Roddick delivered his presidential address to a large and appreciative audience.

On the evening of the same day the Earl of Aberdeen held a reception at Laval University, when the guests had the privilege of hearing an address by Professor Charles Richet, the official delegate of the French Government, and Professor of Physiology in the University of Paris. The subject of Professor Richet's address was the Work of Pasteur and the Modern Conception of Medicine, and his address was designed to show that the union of medicine and science is indisputable, although absolute scientific methods may be out of place by the bedside, and can at any rate never take the place of observation, sympathy, and tact. "If I were ill," concluded Professor Richet, "I would not seek the aid of a chemist or of a physiologist, and medicine is not to be learned from the books of Claude Bernard or of

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Pasteur. Clinical instruction is necessary, such as long observation of patients alone can furnish. Prophylaxis diagnosis, prognosis, therapeutics, are not to be learned in scientific books. Something else is necessary—observation, long, patient observation, the old Hippocratic observation, without which there can be no good physician. Young students must be guided in the examination of patients by experienced practitioners, and no one, I presume, would be guilty of the folly of proposing to replace the clinical ward by the laboratory. But without laboratories the clinical department must remain incapable of scientific advance, and this condition of stasis is assuredly undesirable. For in spite of all the progress which has been made, much yet remains to be done. Are not tuberculosis and cancer, for example, the disgrace of medicine? I appeal to all medical men here present. Is there any one of you, gentlemen, who in the presence of such painful modes of death does not feel himself humiliated to the bottom of his soul by his powerlessness?"

On Tuesday evening, also, at the Windsor Hotel, a banquet was given to Lord Lister by the members of the Montreal Medico-Chirurgical Society, the President of the society, Dr. George Williams, occupying the chair. After dinner an address was presented to Lord Lister congratulating him "on having been selected by the best Sovereign that ever graced a throne for the high distinction of a peerage." The address concluded with the following testimony to the estimate in which Lord Lister is held in Canada: "In advancing scientific and practical surgery you have advanced every branch of the healing art, and by investigations which have led you to the detection of the causes of disease you have brought us to a knowledge of the hindrances to the healing process. Henceforth present and future generations may point to your lordship with pride as the man who brought relief from suffering into every quarter of the globe. May your years be many, and may they be filled to repletion with the happiness which is born of having done nobly and well."

On Wednesday morning the work began in the various sections by the delivery of the addresses of the presidents of the sections. In the afternoon the second general meeting was held, after which the interesting function was witnessed of the presentation of the honorary LL.D. degree of McGill University to ten distinguished members of the Association and to one delegate. The delegate was Professor Richet, concerning whom the Dean of the Medical Faculty, Dr. Craik, made the following amiable little speech in presenting him to the Chancellor of the University, Lord Strathcona:—

"M. Charles Richet, Professor of Physiology in the University of Paris, official delegate to this meeting from the Government of the French Republic and from the University of Paris; a man who has made his mark in very many domains; as the pure physiologist in connexion with the working of the heart and of the nervous system; as a pathologist and bacteriologist by his studies along with Hericourt into the subject of serum therapeutics, in which line he was the first to make those studies which nowadays are so widely known in connexion with the treatment of diphtheria and other diseases; in scientific journalism as the editor of one of the greatest French scientific journals, and as a student of psychology, in which, with Crookes, Sidgwick, and other eminent scientists, he has soared into transcendental realms."

Dr. Henry O. Marcy, whose interesting paper on the Advantages of the Absorbable Suture was read to the Surgical Section of the Congress, enjoys the memorable distinction of being Lord Lister's first American pupil, and on his return to America in 1870 he established a laboratory for the study of wound infection, and opened a hospital in order to demonstrate the practical value of antiseptic surgery. In the field of antiseptic surgery in America he was the pioneer, subjected at first to much criticism, but long since recognised as an authority. Surgery is indebted to him, not only for the introduction of buried animal sutures, but for quite a number of special operations, notably the radical cure of hernia in the male by the restoration of the obliquity of the inguinal canal, first rendered possible by the use of buried animal sutures, and published by him in 1871. He opened the discussion upon antiseptic surgery at the International Medical Congress held in London in 1881. Dr. Marcy's paper will be found reported in the proceedings of the Surgical Section.

On Wednesday afternoon a garden-party was held in the grounds of the Royal Victoria Hospital, a noble edifice erected and presented to the city by the two Canadian peers, Lord Mount-Stephen and Lord Strathcona. On the evening of the same day Lord Strathcona held an at home in his splendid house in Dorchester-street, the rooms of which were crowded. The guests were received by Mrs. Howard, in the absence of Lady Strathcona.

On Thursday afternoon Lord Lister laid the foundation-stone of the Jubilee Nurses' Home in connexion with the Montreal General Hospital in the presence of a large assembly. On the same afternoon a large party of the Association were entertained at a luncheon upon "The Mountain" by the Lord Mayor and Aldermen of Montreal. The day was all that could be desired, a fresh breeze tempering the heat of the sun, and the clearness of the atmosphere permitting the visitors to have the full benefit of the famous view.

Among the numerous pleasant hospitalities of the week must be mentioned an afternoon tea and reception at the Art Gallery given by Miss Roddick; garden parties given by Mrs. George Hague, Mrs. J. Ross, and Mrs. S. Greenshields; and a five o'clock tea at which Mrs. S. Finley was the hostess. On Thursday a golf match was played on the links of the Royal Montreal Golf Club at Dixie between Canadian and English medical men, and on Friday a special exhibition game of lacrosse was arranged, the contestants being the Montreal Lacrosse Club, which has many times held the championship of the Dominion, and a team from the Indians of St. Regis. The Royal Montreal Golf Club and the McGill University Cricket and Lawn Tennis Clubs all kindly extended to the members and guests of the Association the privileges of full membership.

The trade exhibits in the Annual Museum were well housed at the Victoria Skating Rink, and if there were not as many representatives of English firms as could have been desired, yet this in a measure was compensated for by the presence of many firms whose wares are not usually seen in this annually recurring exhibition.

A feature of the meeting which was much appreciated by the members was the issue by the Association of a daily journal giving reports of the proceedings of the general meetings and sections. With considerable enterprise the editorial staff of the daily journal published, not only a programme of future events and a *précis* of past ones, but the full text of the various addresses and summaries of the debates which ensued.

The official proceedings of the Congress were brought to a close at the fourth general meeting, which was held on Friday afternoon, when Dr. Hermann M. Biggs, the eminent bacteriologist to the New York City Health Department, delivered the Address in Public Medicine. A long abstract of this address, which was listened to with keen interest, will be found in our report of the meeting. The social proceedings terminated on the evening of the same day with a conversazione held in the grounds of McGill University.

The Montreal meeting of the British Medical Association will be remembered by those who took part in it as one of

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the most brilliantly successful of the annual gatherings of the Association. The fact that this is the first occasion during its sixty-five years of existence that a meeting has been held outside the limits of the United Kingdom marks its exceptional character, and the lavish hospitality bestowed upon the British members and American guests by the warm-hearted Canadians will long be remembered.

THE GENERAL MEETINGS.

THE FIRST (ADJOURNED) GENERAL MEETING.

The first general meeting of the Association was held, or rather completed, in the Windsor Hall, Dominion-square, Montreal, on Tuesday, Aug. 31st, at 2.30 P.M., having been adjourned from London, where, it may be remembered, the first part of the meeting took place on Tuesday, July 27th, at Exeter Hall. Among those present on the platform were the Earl of Aberdeen, Lord Lister, and Lord Strathcona.

The chair was in the first instance taken by Dr. ROBERT SAUNDBY, President of the Council of the Association, who had occupied that position at Exeter Hall in the absence of Dr. Roddick, the new President. Dr. Saundby having retired, Dr. Roddick took the chair, and began by introducing to the meeting the Mayor of Montreal, who welcomed the members to the city in an eloquent speech the purport of which was to show that it was right and fitting that the first meeting of the British Medical Association ever held outside the British Isles should be held in the metropolitan city of the Dominion of Canada. His honour concluded by begging "the guests of Montreal, after visiting the country, to tell it abroad that Canada had a vast territory; that its people were loyal to the core; that they lacked population, and wanted people to be sent out to their country—some of the teeming millions which the Association had left at home."

Sir ADOLPHE CHAPLEAU, the Lieutenant-Governor of the Province of Quebec, and the Earl of ABERDEEN having also spoken words of welcome, Dr. J. G. ADAMI, the honorary local secretary of the Association, read the roll of delegates of foreign countries and medical societies, and of the representatives of the various branches of the Association. Certain of these who were present were then formally presented to the Earl of Aberdeen and Dr. Roddick, among them being Professor Charles Richet, the representative of the Faculty of Medicine of Paris, and Dr. O'Donnell, the delegate of the Province of Manitoba. Dr. O'DONNELL being asked by the PRESIDENT to address the meeting gave an invitation to the Association in the name of the Premier of Manitoba to hold an early meeting at Winnipeg, an invitation which will be referred to a meeting of the Council in London.

Dr. RODDICK then delivered his Presidential Address upon Canada in its Medical Aspects, which will be found in THE LANCET of Sept. 4th.

THE SECOND GENERAL MEETING.

The second general meeting was held in the Windsor Hall on Wednesday, Sept. 1st, at 2.30 P.M, the President being in the chair.

Dr. OSLER delivered the Address in Medicine upon British Medicine in Greater Britain, which will be found in full in THE LANCET of Sept. 4th, and upon the proposal of Dr. STEPHEN MACKENZIE, seconded by Dr. JACOBI, a cordial vote of thanks was accorded to him for his eloquent and learned essay.

The meeting was then converted into a Convocation of McGill University for conferring degrees on certain distinguished members of the medical profession, the gentlemen selected for honour being Lord Lister, Professor Richet, Sir William Turner, Professor Michael Foster, Professor Alexander Macalister, Sir Walter Foster, Mr. Christopher Heath, Mr. C. G. Wheelhouse, Dr. W. H. Gaskell, Dr. R. Saundby, the President of the Council of the Association, and Dr. Henry Barnes, the retiring President. These gentlemen were introduced to Lord Strathcona, the Chancellor of McGill University, by Dr. Craik, the Dean of the Medical Faculty of McGill University, in well-chosen terms, and received the degree of LL.D. Lord Lister, Professor Richet, and Professor Michael Foster having spoken briefly in acknowledgment of the great honour done to them, the proceedings closed with the Benediction.

THE THIRD GENERAL MEETING.

The third general meeting was held in the Windsor Hall on Thursday, Sept. 2nd, at 2.30 P.M., when the Address in Surgery upon the Surgeon of Old in War was delivered by Mr. MITCHELL BANKS. An abstract of this address was published in THE LANCET of Sept. 4th.

THE FOURTH (CONCLUDING) GENERAL MEETING.

The fourth general meeting was held in the Windsor Hall on Friday, Sept. 3rd, at 2.30 P.M., when the Address in Public Medicine was delivered by Dr. HERMANN M. BIGGS, Pathologist and Director of the Bacteriological Laboratories, the New York City Health Department. The following is a long abstract of the address, which was entitled:

Preventive Medicine in the City of New York.

After a graceful acknowledgment of the honour he had received by being requested to deliver the address in Public Medicine Dr. Biggs referred to the high position of sanitary science in England, emphasising the fact that she, during the past fifty years, had gone far ahead of every other country in the science of preventive medicine. He referred to the fact that conditions were very different in the United States, for there they had no national Board of Health, and every State did what seemed right to itself; wherefore it followed that there was a great lack of uniformity in regulations, methods, and efficiency. "Instead, therefore," he continued, "of attempting the consideration of the broader subject of public medicine in the United States, I shall confine myself to a discussion of the conditions and methods of sanitary work in New York, as these serve as a type of the best of those found in the greater American cities. The Health Department of New York City is organised under a special Act of the Legislature of New York State and is an entirely independent sanitary organisation, not being subject even to the jurisdiction of the State Board of Health. The Board of Health of the Health Department is composed of four members—namely, the President, who is the chief executive officer; the Commissioner of Health, who must be a physician (these two being appointed by the Mayor of New York City), and two *ex-officio* members—the health officer of the Port of New York (who is a State officer nominated by the Governor), and the President of the Board of Police Commissioners of New York City (the latter being added to bring the Police Department and the Health Department in closer relation to one another). The Commissioner of Health of the Health Board of New York City is *ex-officio* a member of the State Board of Health, as is also the health officer of the Port of New York; so that two of the members of the Municipal Board are also members of the State Board of Health; but the State Board has no jurisdiction in New York City, and the action of the Municipal Board is absolutely independent. The Board of Health of New York City has jurisdiction over the whole of New York City, as it now exists, with its about 2,000,000 of population, and with the beginning of 1898 a similar Board, increased to five members, will have complete jurisdiction over greater New York, with a population of about 3,250,000. All of the administrative and executive work of the department is concentrated at the main offices, and is carried on under the immediate direction of the chiefs of the various divisions into which the department is divided. The Act of the Legislature of New York State creating the department gives to the Board most ample powers, executive, judicial, and legislative in character. The funds for the support of the department are supplied from the general funds of New York City. Before proceeding to a discussion of the management of infectious diseases in New York, I desire to call especial attention to the fact that all matters connected with the scientific investigation, diagnosis, care or sanitary supervision, in every way, of the infectious diseases are regarded by the Board of Health as properly coming within its province. In the development of the methods now in use the proposition expressed has furnished the governing principle. I need hardly point out the great difference between this conception of the functions of a sanitary board and that usually held. The duties of sanitary authorities relating to the infectious diseases are generally regarded as limited to the inspection of reported cases of only a few of the infectious diseases, their removal to hospitals when required, and the subsequent proper disinfection of the premises. In times

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of emergency, as in the presence of serious epidemics, more comprehensive and stringent measures are considered justifiable; but it has not generally been regarded as necessary or desirable that municipal sanitary authorities should furnish opportunities for, or assistance in, the diagnosis of infectious diseases, should conduct experimental investigations into their causes, should assist in the treatment in any way of cases outside the hospitals, or otherwise concern themselves with these matters. It has seemed to us in New York City, however, that everything connected with the infectious diseases in every form came properly within the scope of the department's work." Dr. Biggs then went on to describe the founding of the municipal bacteriological laboratory in 1892, an institution originally started to investigate cholera, but which very soon took up the questions of diphtheria and tuberculosis. In 1894 the laboratory began the manufacture of diphtheria antitoxin aided by an annual municipal grant of $30,500, and the laboratory now supplies (1) free supplies of antitoxin to all public institutions in New York City; (2) free supplies to private physicians for the use of persons too poor to pay for the remedy, on condition that a report of the cases treated be forwarded to the Health Department on the completion of the case; and (3) free administration of antitoxin to any resident in the city by a special staff of medical inspectors at the request of the attending physician. Besides this work the laboratory also investigates other infectious diseases, such as glanders, in addition to providing for a supply of glycerinated vaccine lymph. The Health Department also provides for disinfection in the case of any infectious disease, the general procedure being as follows: Every case of contagious disease reported to the department is regularly inspected by the medical inspector assigned to the district in which it occurs. When consent can be obtained such cases are removed to the department hospital, and when necessary the removal to the hospitals is enforced. A comparatively small proportion of the total cases, however, are actually treated in the hospitals for contagious diseases. After completion of the illness, or transfer of the patients, thorough disinfection is performed in the apartment, and all infected materials are removed to the disinfection station for destruction or for disinfection by steam. After treatment they are returned to the owner, no charge being made for the services. Disinfection is compulsory in every case.

Dr. Biggs then proceeded to describe more in detail the methods employed in cases of diphtheria and tuberculosis. With regard to the first he said: "Knowledge of the existence of cases of diphtheria reaches the department, either by a direct report of the case by the attending physician or through the forwarding of a culture to the laboratory for bacteriological examination when the case is of doubtful character. If on examination of the culture the Löffler bacilli are found the case is reported to the Division of Contagious Diseases from the laboratories, at the same time that a report is forwarded to the attending physician. In both instances the cases are immediately referred to the medical inspector connected with the Division of Contagious Diseases assigned to the district in which the case occurred. If the person lives in a tenement house, lodging-house, boarding-house, or hotel, and a culture has not been previously made by the attending physician, the inspector makes in each instance a culture to confirm the diagnosis. The subsequent action of the department depends upon the result of this culture. If diphtheria bacilli are found the case is treated as one of diphtheria; if they are absent the subsequent treatment depends on the special conditions existing. In every instance in which the case is proved to be diphtheria, at the end of ten days a secondary culture is made by the attending physician or the district medical inspector to determine whether the diphtheria bacilli are still present in the throat, and subsequent cultures are made at short intervals until the examinations show that the organisms are no longer present. The case is then referred for disinfection, a detailed statement being left at the house by the medical inspector in charge to guide the disinfectors as to the course which shall be followed. Every case of diphtheria which comes to the knowledge of the department is recorded in a card index according to the number of the house and the street in which it occurs, envelopes being used in place of cards. In each envelope, representing always one case, are placed all of the data relating to the first and subsequent cultures and results; and as each case is recorded it is at the same time plotted on a sectional map of New York City drawn to scale, showing every house lot in the city. This plotting is done by conventional signs, so that it is possible at a glance to determine the grouping and distribution of cases in different parts of the city, the number of cases occurring in any given house in the city during the last four years since this method has been in use, and the date when reported. It is also possible in a moment, by reference to the yearly card index, to find all the information in relation to each case which the department possesses. A special corps of inspectors is assigned to the administration of diphtheria antitoxin, and, on request, one of these inspectors will visit a person suffering from diphtheria in any part of the city, day or night, and administer diphtheria antitoxin under the supervision of the attending physician. When the patients are too poor to have an attending physician the inspectors will supervise their removal to the hospitals. These inspectors are also prepared, at the request of the attending physician, to perform intubation in laryngeal diphtheria. It is the usual course, when antitoxin is administered by an inspector, to immunise all members of the family who have been exposed to the disease. Diphtheria antitoxin has also been largely employed for the immunisation of the inmates of public institutions, especially children, when diphtheria has appeared. This is the ordinary routine, and in every instance during the last two and a half years it has been possible to quickly stamp out diphtheria in institutions by this process of immunisation."

With regard to tuberculosis and the methods adopted by the Health Department for its prevention Dr. Biggs referred to the enormous importance of the subject, how it is universally admitted that tuberculosis is both infectious and communicable, and how neglectful sanitary authorities had been hitherto with regard to it. He continued: "The Health Board of New York City first began an educational campaign in relation to the causation and prevention of pulmonary tuberculosis in 1889. In that year a communication on this subject presented by the writer and the associated consulting pathologists of the department was widely published, and leaflets based on it, giving the essential facts as to the nature of this disease, were freely distributed. No further action was taken at that time, as investigation showed that the medical profession and the public were not then prepared for more extended measures. In December, 1893, the attention of the department was again called to the subject by the writer, and it was determined to at once institute more comprehensive measures for the prevention of this disease. The measures then adopted required the notification of all cases of pulmonary tuberculosis occurring in public institutions, and requested reports of cases occurring in the practice of private physicians. They also included arrangements for the bacteriological examination of sputum, to assist in the early diagnosis of this disease, the inspection of all reported cases in tenement houses, lodging-houses, hotels, and boarding-houses, and the instruction of the patients and their families as to the nature of the disease and the means to be taken for its prevention; the inspection of the premises in all instances where deaths were reported as due to tuberculosis, and the issuing of orders, when it was deemed necessary, upon the owners of apartments which had been occupied by consumptives and vacated by death or removal, requiring that such apartments be thoroughly renovated, by cleansing and by painting, papering or kalsomining, before they were again occupied by other persons; and, finally, the education of the public by wider and more comprehensive methods as to the nature of this disease. Placards were attached to the doors to prevent the re-occupation of apartments which had been vacated by death or removal before the orders requiring renovation had been complied with. Under the resolutions by virtue of which these measures were enforced 4166 cases of tuberculosis were reported in 1894, 5818 in 1895, and 8334 in 1896. So far as was possible, all of these cases, except those in private houses, were visited or the premises where they had lived were inspected, and, in addition, the premises occupied by persons dying from tuberculosis (numbering each yearly 6000) were inspected, and such action taken as was considered possible and desirable. Altogether the premises and cases thus coming under observation during these three years numbered more than 35,000. These facts convey some idea of the enormous sanitary importance of the subject. It is conservatively estimated that there are at least 20,000 cases of well-developed and recognised pulmonary tuberculosis now in New York City, and

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an additional large number of obscure and incipient forms of disease. A very large proportion of the former cases constitute more or less dangerous centres of infection, the degree of danger depending in each instance upon the intelligence and care which is exercised in the destruction of the expectoration. All the suffering and death consequent upon the prevalence of this disease, in view of modern scientific knowledge, is largely preventable by the careful observation of simple, well-understood, and easily applied measures of cleanliness, disinfection, and isolation."

In 1897 the Health Board adopted some recommendations made jointly by Dr. Mitchell Prudden and Dr. Biggs to the effect that pulmonary tuberculosis should be notified in the same way as typhoid fever and diphtheria. Besides this, all public institutions are required to report every case of tuberculosis within one week of its coming under observation and the discharge or transfer of such patient. Dr. Biggs passed on to consider the measures taken for the inspection of milk and meat with reference to the question of tuberculosis, and described how even among the poorer classes the instructions given by the Health Board had resulted in greater care being taken to disinfect sputa, and as far as possible keeping the clothing of the patient apart from that of others. Referring to the medical inspection of school children Dr. Biggs continued: "Early in 1897, under the authority of a special resolution of the Board of Estimate, 150 medical school inspectors were appointed by the Health Board after Civil Service examination. The duties of these inspectors consist in the examination daily, at the opening of the primary and grammar departments of each of the public schools and of the parochial and industrial schools, of all the children who are set apart by the respective class-room teachers as not appearing to be entirely well. These children are examined in each school by the inspector detailed to the school, and are either excluded from the school or returned to the class-room, depending on the result of the examination. Every pupil found to be suffering from any form of general contagious disease, or any contagious disease of the eye or parasitic disease of the skin, is sent home with a written statement to the parents of the cause for the action, and in the case of the eruptive diseases and diphtheria reports are immediately forwarded to the chief inspector of contagious diseases, and by him referred to the various district medical inspectors for inspection and supervision."

Dr. Biggs then gave an account of the educational work of the Board by means of leaflets relating to the prevention of tuberculosis, the care and feeding of infants, the transmission of contagious diseases, and the like. These are written in simple language and distributed among the population, and have proved of the greatest value in bringing about a better state of things especially among the poorer residents. Dr. Biggs then gave some statistical details as to the health of New York City for the past four or five ten-yearly periods, figures showing a steady decline in both mortality and morbidity. As to diphtheria, the mortality had decreased by nearly 40 per cent. since the introduction of antitoxin in 1894. "Finally," said Dr. Biggs, "I believe it may be truly said that there is no great city in the world to-day which, in the broad sense, is cleaner and healthier than New York. By clean is meant the purity of the atmosphere, the cleanliness of the streets, the abundance and purity of the water-supply, and the efficiency of the sewerage system. I wish that so much could be said as to the character of the habitations of the poor, the public baths and public convenience stations, the breadth of its parks and public commons, and the type of its charitable and penal institutions. In many of these respects New York is deficient; but great and rapid advances have been made and are being made in these matters. When it is said that no city is healthier than New York, this statement is made with a consideration of all the sanitary factors in the situation, such as the size and density of the population, the varied nationality of the inhabitants, the character of climate, &c. Nowhere can there be found a fuller recognition than in the United States of England's high standard of excellence in public medicine or a more sincere appreciation of her vast contributions to the progress of sanitary science. But she must look well to her laurels if her cities are to be kept cleaner than the great cities of the United States, and her urban population made healthier and happier than the same class on this side the Atlantic. In the United States we are prepared to adopt, without hesitation, the best that England produces or that the world affords in public medicine, as well as in science, art, and commerce; and, notwithstanding the persistent and determined efforts of our sensational press, the sentiments of the medical profession and of the people at large towards Great Britain are those of sincere respect for her institutions, profound admiration for her great achievements, and warm affection for her people. If I have appeared in this address to have dwelt too long upon and described too fully some of the sanitary methods followed in New York I would urge in extenuation that it has been from a desire that you should know our institutions and methods as well as we know yours, and that through the medium of this great medical association—the largest and most influential in the world—the two great English-speaking nations might in this respect be brought into somewhat closer and more intelligent relations with each other, and thus greater good redound to preventive medicine. Then the people of both nations will live healthier, and therefore happier and longer, lives."

A vote of thanks was heartily accorded to Dr. Biggs for his excellent address.

A letter was received from the American Public Health Association, cordially inviting the members of the British Medical Association to be present at its twenty-fifth anniversary meeting, to be held in Philadelphia in October next.

After one or two formal resolutions the business terminated.

THE SECTIONS.

THE work in the various sections commenced at 9.30 A.M. on Wednesday, Sept. 1st, and in most sections the first proceeding was the delivery of the Presidential Address.

MEDICINE.

The President of the Section, Dr. STEPHEN MACKENZIE, delivered his Presidential Address on Wednesday morning, Sept. 1st, taking for his subject:

The Influences that have Determinsd the Progress of Medicine during the preceding Two and a Half Centuries.

"On this very interesting and, indeed, unique occasion," he said, "when the British Medical Association meets for the first time on Canadian soil, the mind is irresistibly led to compare the condition of medicine at the present day with that which existed when Europeans first settled in Canada and to trace the paths by which progress has been made. When Maisonneuve and his companions landed in what is now the Custom House-square in Montreal in 1642, and when, shortly after, the first hospital was established by the missionary priests, medicine was in a very rudimentary stage. Though anatomy had been prosecuted for some centuries, chiefly on the European continent, it formed no part of ordinary mental education; physiology in the scientific sense was unborn, and organic chemistry not yet created. The medical teaching of that day consisted mainly of the ancient doctrines of the four elements and their corresponding temperaments; of the separate functions of the vegetative, sentient, and rational souls; of the agency of the natural, vital, and animal spirits, that had continued to be taught with very little variation from the time of Galen. It was an age of aphorisms, definitions, systems, and nosologies. Medical opinions were so dominated by theories and burdened by the weight of authority that the phenomena of disease for the most part passed unnoticed and their teachings were neglected. Such knowledge of medicine as the enterprising members of the medical profession who accompanied the early expedition to Canada possessed must have been of the most elementary character, gained by apprenticeship under teachers whose knowledge consisted in the doctrines of Hippocrates and Galen and such crude experience as they themselves had obtained. Without doubt they were as zealous and earnest in their professional duties as we as a profession are to-day, and their treatment was as certainly unfettered and unrestrained by any scepticism as to the theories they had been taught or doubt as to the efficacy of their remedies for disease. But this period was the dawn of a new era in science and medicine. Harvey's great work 'On the Movements of the Heart and Blood' and Bacon's 'Novum Organon,' had recently been given to the world, and the seventeenth century was a time of the greatest activity and discovery in geography and in science. What a gulf separates that medicine of 250 years ago from that of to-day! In tracing

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how it has been bridged it is right that we should justly apportion the influence that various spheres of activity have exercised in reaching our present position." Dr. Mackenzie then referred to the gradual advance in the study of anatomy. Before the seventeenth century Vesalius and Sylvius, Fallopius and Fabricius had already advanced our knowledge in a great degree. The seventeenth and eighteenth centuries were marked by the researches of Haller, Hunter, Spallanzani, Hewson, and Morgagni, the last-named paying special attention to morbid anatomy. With the beginning of the nineteenth century came Bichat and Malpighi, who, by the aid of the microscope, were enabled to prosecute researches in minute anatomy hitherto beyond the reach of any observer. After referring to the various instruments which nowadays aid in diagnosis, such as the ophthalmoscope, the laryngoscope, the clinical thermometer, and the various applications of electricity, Dr. Mackenzie mentioned the stethoscope and the enormous stride forward taken by Laennec in conjunction with Auenbrugger, who had introduced percussion. "But," continued Dr. Mackenzie, "during the period that bridges the time since Canada first became populated by Europeans to the present day probably no discovery has exercised a greater influence in medical science or conferred more lasting benefits on mankind than the introduction of vaccination by Jenner. It is not necessary in such a meeting to trace how Jenner was led to his discovery. Protective inoculation from small-pox by the introduction of the small-pox matter had long been known in the East and had been introduced into England by Lady Mary Wortley Montagu, but Jenner's rare merit consisted in testing the statement made to him by Gloucestershire rustics by scientific methods and experiments and by waiting for years until the value of the protection, the 'variolæ vaccinæ' introduced by inoculation into the human subject, had been tested by exposure to contagion from small-pox, and until time had elapsed to demonstrate that this protection was no ephemeral influence, but of more or less permanent duration as much as that of an attack of small-pox itself. 'I never expected it would do more, and it will not, I believe, do less,' are Jenner's words. It was not until many years after he had satisfied himself as to the protective influence of the vaccine virus that Jenner in 1796 published his observations. It is needless to trace the effects this discovery has had in saving human lives and in averting the disfigurements with which those who escaped death from the disease were almost invariably afflicted. It is probable that the full significance of his discovery was not revealed to Jenner himself, and, on the other hand, it is possible that he exercised self-restraint in not speculating as to the possible result that might accrue from his remarkable inquiries. Certain it is that the indirect results that have followed from Jenner's discovery that an attenuated virus was protective against contagion from the disease from which the virus was originally obtained have only recently been fully utilised. Probably several causes have been concerned in the want of continuity of progress in this direction, the most important of which has been the difficulty in isolating and handling the virus in many contagious diseases. The investigations into the full extent of the value of inoculation with attenuated virus and derivatives of bacteria have only been commenced in the last few decades since bacteriology has been cultivated by Pasteur, Lister, Koch, Klein, Gaffky, Martin, and others, and the whole subject, with the aid of organic chemistry, made a branch of exact science. Bacteria are now classified by their morphological qualities, by their reactions to staining reagents, by their modes of growth in various media; the temperature at which they grow and at which they are destroyed is determined, their need of oxygen ascertained, the parts of the body they make their habitat studied, the effects of their invasion in the tissues, and the protective powers of the organism observed. The chemical products to which they give rise are isolated, their nature ascertained, and their effects observed on the living body independently of that of the organisms by which they are formed. Finally, the knowledge thus obtained is turned against the bacteria. The virus is attenuated by various methods, often by passing through the body of an animal immune to the disease, and its exact strength is ascertained. It is then used for protective inoculations or for antidotal purposes in those already attacked by the disease from which the virus was originally obtained. Jenner's and the recent researches are equally scientific—observation, induction, experiment; but the differences in carrying out the inquiry on small-pox by Jenner and that of any specific disease due to an organised virus at the present time illustrate my theme of how the progress of medical science has been effected. Great as it has been, and precise, as a rule, as are our methods of research, it is remarkable that up to the present time in two diseases in which protective and curative inoculations have been most conspicuously successful—namely, small-pox, in which we had, thanks to Jenner, the first vaccine; and in hydrophobia, in which Pasteur succeeded in attenuating the virus and using it as an antidote—we have not succeeded in finding the micro-organism that is the true virus, unless, indeed, Monckton Copeman has at length done so in the case of small-pox and vaccinia. As a matter of fact, this organised virus has yet to be discovered in many of the most common specific communicable diseases; but the knowledge gained by the study of some members of this class in animals, and of some—for example, diphtheria—in the human subject, has afforded a basis of knowledge applicable to the whole group. There is one other branch of medical science which has been incidentally alluded to in the previous remarks, but which requires fuller recognition in the survey of the influences that have governed our progress. I allude to experimental investigations in animals. In the seventeenth century in the hands of Harvey and others, but more especially in the eighteenth by the labours of Hunter and others, and in the nineteenth century, this method of observation has been the basis of normal physiology and, later, of abnormal physiology or pathology and therapeutics. These investigations have enabled us to reach a degree of knowledge not obtainable in other ways, not only of value to man, but also to the lower creation." Dr. Mackenzie then passed on to consider the progress of therapeutics, including especially preventive medicine. With regard to clinical medicine he referred to the separation of enteric from typhus fever, a result brought about by the labours of Jenner, Stewart, Murchison, Liebermeister, and the American observer Smart. Relapsing fever had been allotted its proper place owing to the labours of Barker, Cheyne, Graves, Stokes, and Obermeier, who described the specific spirillum in 1873, while another fever parasite—namely, the plasmodium malariæ—had been isolated and proved to be the cause of malarial fever by Laveran, Osler, and others. As to diseases of the kidneys, Cotugno, in 1770, discovered albumin in the urine, but it was owing to the work of Richard Bright that the recognition of diseases of the kidneys was put upon a firm basis. Diseases of the nervous system had been mainly cleared up by physiological and anatomical labours though clinical medicine had lent valuable aid. Dr. Mackenzie then referred to the recognition of Addison's disease and the connexion between myxœdema, cretinism, and the thyroid gland. Owing to the great and undoubted advances in medicine human life had been prolonged and the mortality of most diseases sensibly diminished, although there was an increase of mortality from cancer and some other complaints. In conclusion he said: "The gains have been greater than the losses, and this is not the occasion to discuss why we have failed in this direction. But, whilst the review we have taken of the progress of the science and art of medicine is encouraging, we must remember there will always be a limit to our powers of curing disease. When any part of the higher tissues is destroyed it can never be replaced by the recuperative powers of Nature or improvements in medical science. Sclerosis and destruction of the nervous elements means that they are almost irremediably lost. If the lung is destroyed by tubercle or other disease it can never be replaced. Nothing can make good disintegration of the kidneys or liver. Nor shall we be ever able to retard the effects of time. 'To die is as natural as to be born,' it has been truly said, and the silver cord that chains us to this world must sooner or later give way. Great as have been the improvements in the treatment of disease, our greatest triumphs, in the future as in the past, will consist in the prevention of disease. One of the most important features in modern medicine has been the remarkable development of medical societies and associations, and the fact that they are yearly increasing is strong evidence that the profession finds them useful in its work. They enable us to submit our observations and inquiries, our theories and our practice, to the criticism of those most competent to discuss them, and thus to separate the wheat from the chaff. The meetings of the British Medical Association, amongst others, have been most useful in this respect. Let me conclude by expressing a hope that the work done at this meeting at Montreal, and especially this

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Section of Medicine, will aid in the search after truth, will stimulate and ennoble the aims and energies of those taking part in its proceedings for the advancement of knowledge and the good of mankind."

Arthritis Deformans.

Dr. JAMES STEWART (Montreal) opened a discussion upon Arthritis Deformans with special reference to its relation to Rheumatism, Nervous Disease, and Tuberculosis. He gave an analysis of forty cases occurring in his practice, and came to the following conclusions. 1. Arthritis deformans is a disease prone to occur in people of a rheumatic tendency who have suffered from subacute rheumatic attacks. The presence of infectious disease of any kind tends to increase this tendency and so do depressing conditions. 2. There is no sharp dividing line between certain cases of chronic rheumatism and the earlier stages of rheumatic arthritis. 3. There is not sufficient evidence to support the views commonly held as to the nervous origin of arthritis deformans. 4. There is no direct relationship between tuberculosis and arthritis deformans. 5. The polyarticular forms of arthritis deformans have clinically the features of an infectious disease. Treatment generally was unsatisfactory. He had found considerable benefit from superheated hot-air baths.

Dr. SHINGLETON SMITH (Bristol) did not believe in the connexion between arthritis deformans and rheumatism. He was inclined to regard the disease as essentially a polyarthritis.

Dr. LINDSAY (Belfast) complimented Dr. Stewart on his lucid and practical paper. He thought the connexion of arthritis deformans and tuberculosis was purely accidental. He had been much struck with the nervous symptoms in arthritis deformans, especially the atrophy of the muscles, and was inclined to regard them as due to peripheral neuritis, perhaps the result of toxic influence. He believed in the connexion between arthritis deformans and chronic articular rheumatism, and had often been at a loss to differentiate between the two conditions.

Dr. OSLER (Baltimore) had been impressed by the nervous symptoms in arthritis deformans. Some of the cases of the disease observed by him had simulated amyotrophic lateral sclerosis.

Professor JACOBI (New York) thought the whole subject was in a very unsatisfactory state, and that we had no real knowledge of any rheumatic condition except acute rheumatism. He was inclined to side with Dr. Osler's views, and to think that arsenic was the best remedy. He complained that no attempt had been made to define arthritis deformans.

The PRESIDENT of the Section thought it probable that several different states were included under the term arthritis deformans. He referred to the opinion of the late Dr. Sutton, who held that arthritis deformans was essentially a disease of debility.

Dr. STEWART having briefly replied, the discussion came to a conclusion.

Dr. TYSON (Philadelphia) read a Note on the proper use of Terms to denote Myocardial Changes.—Dr. FUSSELL (Philadelphia) read a paper on Two cases of Hæmophilia.—Dr. J. B. MCCONNELL (Montreal) read a paper on Pyopericardium following Pleuro-pneumonia; Pericardiotomy; Recovery.

SURGERY.

In the Section of Surgery the President, Mr. CHRISTOPHER HEATH, delivered an address upon—

The Teaching and Progress of Surgery.

After a brief introduction he referred to the two subjects which were to be discussed at this meeting—viz., (1) Appendicitis and its Surgical Treatment; and (2) the Treatment of Cancer of the Rectum, with special reference to the high operation, and then continued: "Nothing, I venture to think, is more remarkable than the recent progress of abdominal surgery. Twelve years ago I was engaged in editing a 'Dictionary of Practical Surgery,' and neither appendicitis nor the operation for removal of the rectum, with which Kraske's name is connected, was mentioned in it, although I had the assistance of the leading London hospital surgeons. Kraske's original paper, I may mention, was published in 1885, and is referred to in Ball's work on the rectum, published in 1887, and in most surgical works since that date. The subject of appendicitis, so far as British surgery goes, dates from a paper read before the Royal Medical and Chirurgical Society in February, 1888, by Mr. Frederick Treves, though the title of it was 'Relapsing Typhlitis treated by Operation.' In August of the same year Mr. Treves opened a discussion on 'Surgical Treatment of Typhlitis' at the meeting of the British Medical Association at Leeds, and subsequently published his address with additions and alterations in the form of a monograph entitled 'The Surgical Treatment of Perityphlitis.' But it is not merely in these two departments that progress has been made. The surgery of the kidney and of the liver has advanced *pari passu* with that of the hollow viscera, and the labours of Morris and Robson in England, and of Keen and others on this side of the Atlantic, have done much for the relief of suffering and the prolongation of life. Looking back over forty years of professional life nothing surprises me more than the change which has come over the treatment of calculus. In my student days to see Fergusson cut for stone by the lateral method was to witness an operation as near perfection as was conceivable, and the dexterity and rapidity with which the calculus was extracted were marred only by the frequency with which death from septic causes spoiled the skill of the surgeon. To have one's first lithotomy was an event in the life of the young surgeon, and every now and then a reputation was spoiled by some *contretemps* in the public performance of the operation. Later, I was the frequent witness of my colleague, Henry Thompson's skill in using the lithotrite to break up the calculus in a series of 'sittings.' Then came 'litholapaxy,' or rapid lithotrity, which we owe to Bigelow, the great American surgeon; and, lastly, that recurrence to the old high or suprapubic operation which was due to the Scandinavian surgeon Petersen. Hence the student of to-day rarely, if ever, sees a perineal lithotomy, and as a consequence his interest in the anatomy of the parts concerned in the operation has greatly diminished. Possibly the surgeons of the last generation laid too much stress upon anatomical details, but it is somewhat remarkable to find how little anatomy seems to serve for practice in the present day. I am told by those who are teaching anatomy now that it is difficult to get the student to take the trouble to make a neat dissection because he can find in the various museums, and notably at the Royal College of Surgeons of England, such beautiful preparations in spirit that he prefers to study from them or from pictures rather than labour to get out the details for himself. If this is so I can only regret that the present race of students is so short-sighted, for without a working knowledge of human anatomy I can conceive of no progress in surgery. But I regret to find that, in Great Britain at least, the teaching of anatomy is gradually getting more and more into the hands of professors who are anatomists, but not surgeons, and that their tendency is to lay stress upon transcendental details rather than surgical relations. But are we not overdoing the scientific teaching of the man who has, after all, to get his living as a practitioner of medicine, surgery, and midwifery? When the medical curriculum was lengthened by a year it was hoped that the additional time would be devoted to clinical work, but I fear that it is by no means always the case, for it is not uncommon for the student to take three years in passing his primary examinations, with the result that but two remain for the study of medicine and surgery. When I became a student of medicine I took to heart the advice of my teacher of physiology, William Bowman, and never allowed a day to pass without visiting the hospital, and though as a lad of sixteen I failed of course to appreciate the importance of all that I saw, yet I saw it, and I can carry my mind back now to cases seen and lessons learned in the early fifties which are of service to me at the present time. But the student is practically forbidden to enter the wards now until he has satisfied the examiners in anatomy and physiology, which he may or may not do in two years, and then there are but three years left for him to study *totam rem medicam*. Far be it from me to decry the modern methods of teaching medicine in the wards of our hospitals. I believe that the care taken to induct every student into the mysteries of auscultation and percussion is beyond praise, and if with some teachers treatment is regarded as of secondary importance, at least the student has the opportunity of studying the *vis medicatrix naturæ* untrammelled under one teacher, and of watching the effects of every new drug upon the human system under another. But all this takes time, and so also the elaborate manipulations of the gynæcological department, the researches of the

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pathological professor, and all the other teachings of the third and fourth years. And where, then, does surgery come in? Why, I consider myself fortunate if I can secure the regular attendance of candidates for a surgical diploma for the last three months, when their names are put on my list, and I subject them to rigid surgical cross-examination. But if I venture to refer to an illustrative case of last year I find that no one present saw it or even heard of it, though at the time the whole surgical staff may have been in consultation upon it. How, I ask, is it possible for the student to see the serious surgical ailments which are not very common, such as aneurysm, tumours of bone, tetanus, &c., if his attendance in the surgical wards is limited to a few months? And yet there has never been a time of greater activity in operative surgery, not only among hospital surgeons, but among general practitioners, who, thanks to anæsthetics and antiseptics, undertake operations of a magnitude which the hospital surgeon of the last generation would have hardly attempted. Without a knowledge of anatomy, of pathology, and histology progress in surgery is impossible, and it is for those who hold the important positions of teachers in our great medical schools to insist upon a foundation of scientific and practical training being given to our students if they are to become the successful practitioners of the future. The growing tendency of the non-medical teachers of collateral science to regard their particular subject as the one most essential for the medical student must be restrained, and the preliminary period of medical study must be cleared of many obstructions if the student is to have the necessary time to devote to the thorough study of those strictly medical subjects which will fit him to be a sound, practical, and at the same time scientific physician and surgeon."

Appendicitis.

A discussion on Appendicitis then followed, the opening remarks being made by Dr. G. E ARMSTRONG, of Montreal. Dr. Armstrong read a report upon 517 cases seen in the leading Montreal hospitals. This report showed the condition to be most common between the ages of twenty and thirty, and to occur twice as often in males as in females. Discussing the etiology Dr. Armstrong thought that anything that could remove the epithelial lining from the mucous membrane of the appendix might be the starting-point of the mischief. In the total number of cases reported the average mortality was 12 8 per cent.; but from 1853 to 1890, before operation was done—that is, in pre-operative days—the mortality was 23 8 per cent. Of the 517 cases, 389 were operated on and 128 treated without operation. In this latter list the mortality was 3 12. Of 319, 81 were interval cases, in which there was not one death. Of 305 operated on in the acute stage 63 died. The great point in treatment was, Dr. Armstrong considered, to anticipate the severer forms resulting in septic peritonitis by early surgical interference. His rule was to advise operation at the end of twenty-four or thirty-six hours if the patient was not improving.

After some remarks from Dr. WARD COUSINS who credited American teaching and example with having stimulated English surgeons to earlier recourse to operative treatment, Mr. JORDAN LLOYD said that real appendicitis, strictly speaking, was a disease confined to the appendix, and when this was the case there were two sorts: First, those simple cases which got well; and second, those in which the appendix slowly distended with irritating fluid charged with organisms, which fluid made its way through into the peritoneal cavity and gave rise to other forms of the disease with complications. In such cases the physicians and surgeons should see the case together. Early diagnosis was very important, and too much stress, he thought, had been laid on McBurney's point, the localised point of tenderness on deep pressure that is supposed to be diagnostic of appendicitis.

Dr. VANDER VEER (Albany, N.Y.) said he thought that possibly the British surgeons might think the American surgeons were rather too eager to operate.

Dr. W. H. HINCKSON (Montreal) deprecated the too great reliance upon statistics.

Papers were then read upon Ventral and Umbilical Hernia in the same Patient, by Dr. A. E. GARROW (Montreal); upon Traumatic Aneurysm of the Internal Maxillary Artery treated by Ligature of the Common Carotid, by Mr. H. LANGLEY BROWNE (West Bromwich); upon Intussusception of the Vermiform Appendix and Cæcum, by Dr. T. A. MCGRAW (Detroit, Mich.); and upon Lateral Curvature of the Spine treated by Posture and Exercise, by Mr. BERNARD ROTH (Brighton).

The Suturing of Wounds.

A paper was then read upon this subject by Dr. HENRY O. MARCY.

Dr. Marcy stated that, notwithstanding the revolution in surgical procedures, in a large minority of operation wounds made in healthy structures suppurative processes were still to be met with to some extent. The surgical technique was complete for the making of a wound aseptic, but the difficulty was in maintaining it in this condition. He asserted that the cause of this was definite—viz., an open wound. The remedy was to be stated with equal emphasis—hermetically close the wound and seal at the time of operation without drainage. He discussed at length the drainage-tube, its purposes, danger, and in aseptic wounds its worse than uselessness, and referred to the micrococcus pyogenes albus as being in his opinion the most common cause of wounds under abundant antiseptic protective dressings taking on infection when drainage was used, and as being also the cause of stitch abscesses, and the most usual source of infection coming from the surgeon's own hands. Careful disinfection of the hands was of much greater value to the patient than a marble hall for an operation amphitheatre. Dr. Marcy discussed the varieties of suture material and made the deduction that all aseptic wounds should be closed by absorbable sutures under the most careful aseptic conditions. He recommended that sub-cuticular sutures should be used for the coaptation of the skin. The wound should then be dried and sealed with iodoform collodion reinforced by a few fibres of absorbent cotton. He condemned catgut, not so much for the difficulty of sterilisation, as for its inherent defects, a large share of its strength resulting from being twisted and kept dry. When wet, as it must continue to be in the tissues, it was elastic, unreliable in knotting, and untrustworthy. Before twisting and drying it was a very thin, flat band of connective tissue, the fibres of which crossed obliquely for the physiological purpose of accommodating the intestinal contents, and was not unlike a very delicate silk fabric cut diagonally. The advantages to be obtained from the use of connective tissue as a suture material were apparent, not alone because it was absorbable, but because, as Dr. Marcy demonstrated by repeated experimental studies upon animals, it was first surrounded by leucocytes which, little by little, invaded the suture. As the process of absorption went on, these cells were changed into connective tissue corpuscles, and, as a consequence, the suture material was more or less completely replaced by a living band of connective tissue, this of course in many instances proving to be an advantage of the first importance. At first he used the tendons from the buffalo, moose, and caribou, the advantages of which he emphasised in a paper read at the International Medical Congress in London, in 1881. Such tendons had been used from time immemorial by the North American Indians, for the sewing of robes. The following year, Dr. Marcy, as the result of systematic and extended observations, ascertained that the tendons taken from the tail of the kangaroo were greatly to be preferred, since they were smooth, even in any variety of size, had never been subjected to decomposition, and were much less difficult of sterilisation, while in strength they exceeded in equal weight that even of silver wire. When properly chromicised they held in the tissues for about three months. They were now so generally used and well known that only reference to them was required. Coaptation and fixation at rest, with as little force as possible, of like structures was the object sought. Suture material more than required to secure this purpose was detrimental. It must be applied with a minimum of devitalization of the tissues. The interrupted suture was faulty in that it held at only the single joints of insertion, and in order to coaptate the structures in large wounds undue compression, often to devitalization of the part constricted, had to be used. Each stitch required a knot, which was slow of absorption. Like structures, as far as possible, should be joined, fascia to fascia, muscle to muscle, &c. When coaptation had been accurate there were no pockets left for the undue retention of fluids, and as a consequence no drainage-tube was required. Dr. Marcy much preferred the full-curved Hagedorn needles, since they penetrated the tissues with ease and accuracy and might generally be used without the intervention of forceps. The continuous suture required but a single knot, and undue constriction was less liable, since a

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compensation occurred equalising the force applied to the entire suture. As a rule fatty structures should not be sutured, since necrosis is not seldom a resultant. The over and over (glover's) stitch was faulty in that it constricted the tissues unduly. Dr. Marcy applied the suture deeply from side to side, the needle being introduced parallel to the long axis of the wound, and he therefore called it the "parallel suture." The needle was inserted exactly opposite the emergence of the preceding stitch and, when drawn upon, it would be noted that the surfaces were evenly coaptated, and that the suture was deeply implanted in healthy tissues, crossing the wounded edges at right angles. The sub-cuticular suture was effected in precisely the same manner and the wound sealed. An aseptic wound thus closed with buried aseptic tendon sutures would remain aseptic, and in well vitalised structures was followed by primary union. No expensive and troublesome dressings were required. The subsequent nursing and care were very greatly diminished. The anxious foreboding of the surgeon lest "something should go wrong with the wound" was avoided. No stitches were to be removed, reducing greatly the dread and anxiety of many patients. Safety was greatly enhanced and the period of convalescence shortened. When the work had been done with care the resultant cicatrix was often scarcely visible—a matter of much importance in some parts of the body. Some operations hitherto impossible had been rendered feasible by the use of the buried absorbable suture—e.g., the restoration of the obliquity of the inguinal canal in the male upon which was dependent the cure of hernia. Indeed, it was for the cure of hernia that Dr. Marcy first used buried animal sutures in 1870. He recently reported to the American Medical Association that he was in his four hundredth series of hernia operations, with over 90 per cent. of resultant cures. In laparotomy the closure of the abdominal wound was greatly strengthened by the use of aseptic absorbable sutures. It was estimated that 10 per cent. of laparotomies, where the wound was closed by a single line of deep interrupted sutures, were followed by hernia. Dr. Marcy reported more than 500 cases of aseptic laparotomies in his practice with but a single resultant hernia. In concluding he urgently recommended that every surgeon should familiarise himself with the method of wound closure by means of buried absorbable sutures, preferably tendon, predicting that these would soon be generally adopted, and that they would hold the first place in the technique of modern treatment of wounds.

PUBLIC MEDICINE.

The Presidential Address was delivered by Dr. E P. LACHAPELLE, President of the Board of Health of the Province of Quebec, his subject being

The Progress of Sanitation in Canada.

After some words of welcome to his audience, Dr. Lachapelle gave a brief review of the hygienic measures introduced under the French *régime* (1603-1763). In 1667 Louis XIV. of France established for the Civil State a system of registration which is still in force in the Province of Quebec, the registers of baptisms, marriages, and burials being kept by the clergy, who furnish the civil authorities with copies. The British domination commenced in 1763, but under it there was no permanent health legislation up to 1867—that is, until the period of Confederation. Dr. Lachapelle continued: "With the advent of Confederation we enter a period of positive systematisation. The British North America Act defines the respective rights and powers of the Federal Government, as well as those of the Provincial Governments, and we will now review in a detailed abstract the laws successively enacted at Ottawa and in the different provinces. All matters relating to foreign countries and to commerce are of federal jurisdiction, and accordingly, ere the first year of the Confederation (1868) the Federal Government enacted an Immigration Act destined to be completed later (1871) by the Quarantine Act, and rendered most effective by the laws of 1893. Actually, our ports are protected by eight well-organised quarantine stations: Grosse Isle (Quebec), Halifax (Nova Scotia), St. John (New Brunswick), Sydney (Cape Breton), Hawkesbury (Nova Scotia), Chatham (New Brunswick), Charlottetown (Prince Edward Island), and William Head (British Columbia). The quarantine organisation is under Ottawa's exclusive control, but on other questions (vital statistics, contagious diseases in animals, food adulteration) the provinces have a concomitant jurisdiction. In most of the provinces of the Dominion of Canada the local legislature has, by a statutory law, delegated its powers to a Provincial Board, charged with enforcing sanitary measures, and in whom, consequently, lies the authority. The law, however, varies on this matter in different provinces. Ontario and Quebec are, perhaps, the best-managed provinces; in any case, they are the ones in which the organisation is the oldest. We will examine them conjointly. The Provincial Board of Ontario was founded in 1882, that of Quebec in 1886. It is those two boards that have enabled public hygiene to make the greatest progress in Canada. In Ontario compulsory vaccination of all children over four months of age has been provided for by the statute, and school teachers may require a certificate of vaccination from intended pupils. The Provincial Government has the entire control of vital statistics (1896), the compiling being done directly by the secretary-treasurer of each municipality. Finally, the Food Act, very explicit in regard to cities, renders more definite the federal laws on food adulteration and specifies their bearing. In the Province of Quebec vaccination is obligatory by statute in four cities, but any other municipality may render it compulsory. The keeping of the registers of the Civil State is still, as in the days of Louis XIV, confided to the care of the clergy of whatsoever denomination, and it is from those gentlemen that each month the Provincial Board of Health receives the certificates establishing the causes of death and those reporting the marriages and births. From these reports the Board compiles its statistics. Regarding the adulteration of foods, the Provincial Board has power to make regulations to supplement, in a certain measure, the federal laws. In relation to the prevention of contagious diseases, hygiene in factories, sanitation in general, and the suppression of nuisances, the Quebec Provincial Board has issued permanent and very precise regulations, and has formulated in them a standard of effectiveness that must be attained by the municipal boards. In both Ontario and Quebec the Provincial Boards may exercise the powers conferred upon the local boards, if such local boards neglect or refuse to perform their duties. New Brunswick (1887) and Nova Scotia (1893) possesses somewhat identical organisations, the Lieutenant-Governor in Council having the right to legislate on sanitary matters. The municipal boards in both these provinces enjoy similar powers; only in Nova Scotia the Lieutenant-Governor can put his veto. The sanitary laws of New Brunswick (1887-88-89) very much resembled those of the province of Quebec, as they confer on the Provincial Board the power to make regulations respecting the prevention of contagion, the inspection of food, and of insalubrious industries, drainage, and the repression of nuisances. The Registration Law (1887) provides for the publication of vital statistics. In Nova Scotia the authority of the provincial board with regard to contagious disease is simply advisory; it may, however, during an epidemic, substitute itself to inefficient municipal boards. Manitoba (1893) admits of a special organisation which seems to suit the needs of a country whose population is dispersed over a vast extent of territory. Its Provincial Board is composed of five members—a veterinary surgeon and four physicians. For the needs of local administration the four physicians are titled "inspectors," and the province is divided into four districts. In each of these districts the authority of the inspector is supreme: he may, if he believes it necessary, set aside all orders and by-laws enacted by local authorities. British Columbia has (1895) a Provincial Board which, according to the statute, seems to be only advisory, but which, nevertheless, has established very complete and very effective regulations. We will even point out a measure that surpasses those of any other provinces: it is the prohibition of discharging sewage into any river. Prince Edward Island has no provincial board. It has a good law respecting vaccination, and by its Health Act local boards are appointed in two cities, and the Lieutenant-Governor in Council is empowered to appoint a Board of Health in each county. In the North-west Territories a law relating to hygiene was passed in 1882. Its objects are only preventive. The Lieutenant-Governor can hinder any person within the Territories from leaving a locality in which there exists a contagious disease. He can also delay at the frontiers any suspicious outsider. He can divide up the Territories into sanitary districts and appoint medical health officers if he judge such measures expedient. Canada, with regard to hygienic matters, is therefore advancing rapidly in the path of progress."

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Mandatory Measures in dealing with Measles, Whooping-cough, Tuberculosis, and Leprosy.

Several papers were read on this subject, among the authors being Dr. P. H. BRYCE, Secretary of the Provincial Board of Health, Ontario; Dr. C. O. PROBST, Secretary State Board of Health, Ohio; and Dr. H. HANDFORD, of Nottingham, England.

Dr. BRYCE'S paper was a lengthy one. He discussed measles, scarlet fever, whooping-cough, and tuberculosis. After citing statistics he advocated the closing of schools when scarlet fever and measles were prevalent in epidemic form. The use of notification cards and isolation were dwelt on at length. He was in favour of compulsory measures and the early removal to hospital in cases of measles and scarlet fever. He spoke of leprosy in the United States of America as having caused sixteen deaths. In Canada it did not seem to have any significance. He knew of, and referred to, the Leper Asylum at Tracadie, and said that if the disease was contagious segregation was necessary. With regard to isolation in tuberculosis, the danger was from the bacilli; they might live for a year Houses which had been occupied by consumptives should be disinfected. Tuberculosis was a contagious disease and great care was necessary. The sputum should be disinfected.

Dr. PROBST went over much of the same ground. For men in the American Navy he recommended early recognition of the disease and special hospitals. Any plan for the prevention of tuberculosis must consider the liability of animals to infection and the question of infected milk. Regarding the care of herds of cows, the healthy animals should be separated from the unhealthy. Calves born of unhealthy cows should be separated and fed on healthy milk. The bad ventilation of stables was responsible for much of the disease among cattle.

Dr. HANDFORD, in his opening remarks said that there was no want of legislation in England regarding such matters, but they did want a Minister of Public Health. Many advances must be made in hygiene and public health. Regarding mandatory measures in England compulsion had completely failed. The people must be educated, their confidence must be gained. The education of the wealthy in such matters was as necessary as the education of the poor. In Nottingham no case of scarlet fever had ever been removed to a public hospital on a magistrate's order. As a result of eight or ten years' observation 90 per cent. of the cases of scarlet fever were now voluntarily sent to the hospitals in his district.

Dr. OLDRIGHT (Toronto), Dr. WOLFRED NELSON (New York), and Sir JAMES GRANT (Ottawa) also spoke.

OBSTETRICS AND GYNÆCOLOGY.

The Presidential Address in this section was delivered on Thursday, Sept. 2nd, by Dr. W. JAPP SINCLAIR, Professor of Obstetrics and Gynæcology, the Owens College and Victoria University, Manchester, who selected as his subject

The Injuries of Parturition: the Old and the New.

Dr. Japp Sinclair began his address by telling the sad story of two healthy primiparæ who in the course of normal labour had received serious injuries from the use of forceps. He then compared this sort of haste with the helplessness of ancient obstetric practice which allowed women to die in prolonged labour without making an attempt to save them. He then proceeded to divide the century and a half which has elapsed since the introduction of the forceps to the present time into three periods: first, from the introduction of the forceps to the discovery of anæsthetics, about a century; secondly, from the discovery of anæsthetics to the introduction of antiseptics, a quarter of a century; and, thirdly, from the general introduction of antiseptics in midwifery practice to the present time, very nearly a quarter of a century. "Now," continued Dr. Sinclair, "if we consider our present position, we have much to congratulate ourselves upon, and yet we may fairly ask if there is not much room for improvement in the use which we make of our resources. Is not one of the most remarkable things in the history of medical science during the last quarter of a century the extraordinary development of gynæcology in its surgical aspect? Gynæcology flourishes and has become largely surgical—so largely surgical that Sir W. O. Priestley, my predecessor of two years ago in the position which I occupy to-day, addressed to the Obstetrical Section a warning and a remonstrance on the too free application of surgical methods to gynæcology. Midwifery has during the same period become also largely surgical—too surgical—and a thesis which I shall endeavour to maintain to-day is that gynæcology has become so largely surgical as the direct result of surgical interference in midwifery practice; the accoucheurs are the providers of material for the gynæcologists. I fully appreciate the admirable work done during that time by gynæcological surgeons in dealing with the new growths of the sexual organs, and I do not decry it; but for the material of his ordinary daily labour the gynæcologist has to look to the accoucheur. Last year Dr. Cullingworth did a good service to the medical profession by addressing the Obstetrical Society of London on the subject of the undiminished childbed mortality in England in spite of our advantages and improved methods of practice. But in addition to the avoidable childbed mortality, there is the very serious question of childbed morbidity, which I maintain and repeat is largely owing to the prevalence of surgical methods in the practice of midwifery. The term 'surgical' is employed here with almost exclusive reference to the use of midwifery forceps. It was said by Baudelocque that the midwifery forceps was the most useful surgical instrument ever invented, and with that strong and unqualified opinion we are all more or less in agreement. But, like all our powerful remedies, the forceps must be used with circumspection, else disastrous consequences must ensue." Dr. Sinclair then gave an interesting *résumé* of the practice of Smellie and Robert Collins, and continued: "The typical injury of parturition during the first period—i.e., before the discovery of anæsthetics—was vesico-vaginal fistula, but there can be no doubt that the not infrequent use of perforating instruments and the crotchet produced bruises and lacerations which, in pre-antiseptic days, must have conduced considerably to the maternal mortality. The mistaken practice also of 'stretching the birth,' which I am afraid is by no means a thing of the past, was so prevalent that it must have done infinite injury. By causing minute necroses or lowering the vitality of the tissues it must have opened up the way to bacterial invasion with all its consequences. Laceration of the perineum must have been occasionally inevitable in former generations as in our time. But special attention appears to have been given to its prevention. Denman, indeed, refers to its prevention as 'the principal object of our attention in natural labours.'" The second period, commencing with the discovery of anæsthetics and ending with the general introduction of antiseptics, Dr. Sinclair dismissed somewhat more briefly. "The introduction of anæsthesia did not," he considered, "lead to any great improvement in the practice of obstetrics. The medical practitioner could now relieve the patient from the worst pangs of parturition, and therefore could well afford to wait in normal labour for completion by the natural process. But it was soon found that the production of anæsthesia was not all gain. It was found that the prolonged administration of chloroform brought on inertia of the uterus, tedious labour, and post-partum hæmorrhage. The tediousness of the labour made the 'gossips uneasy,' and the most conservative of practitioners was too often driven to the application of the forceps. In fact, the consciousness that the final pangs of labour and the acute suffering which would otherwise be produced by the application of the forceps could be entirely relieved by the administration of an anæsthetic had for its practical effect a great extension of operative midwifery. Lacerations of the perineum became much more frequent than under the old practice of delay, and as it was quite unusual to suture these lacerations, as is now the universal practice, incontinence of urine owing to vaginal sloughing was replaced by incontinence of fæces resulting from complete laceration of the perineum. The lacerations of the cervix and vagina and their relation to parametritis were either unobserved or not understood until Emmet taught the medical world their importance. Just as the practice of the first period made material for the special beneficent work of Marion Sims, the abuses of the second period provided the opportunities which Emmet had the genius to recognise and to use. The advent of the third period—that of anæsthetics combined with antiseptics—dates from 1870 to 1873, or somewhat later. About that time began those triumphs of abdominal and pelvic surgery applied to the diseases of women, of which men of our special branches of medicine are so justly proud. The

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operations in general surgery also took on a new phase, and our students, accustomed to witness in the hospital the audacity with which the modern surgeon, depending upon anæsthetics and antiseptics, could deal with new growths and surgical injuries, were influenced, perhaps almost unconsciously by what they had seen of operative surgery, into applying its methods to midwifery practice. There has been little of precept and example to counteract this tendency. Our students in the medical schools are not taught obstetrics and gynæcology in a reasonably practical way; while, on the other hand, they apply themselves to surgery, theory and practice, from the time they pass the entrance examination until they graduate. They learn surgery which they will never practise, and they will practise midwifery which they have never learned." Dr. Sinclair then gave the following picture of the young practitioner. "The young practitioner sees a woman suffering under the pangs of labour; he can relieve these by anæsthetics: normal labour is a process which requires time; the practitioner does not like waiting, and he has appliances by which he can abridge the process of normal labour: he knows that he may produce injuries, but these are in his eyes trifling compared with the injuries which he has been accustomed to see treated successfully by the surgeon with the aid of antiseptic appliances, and a laceration can always be sutured if it appears to be of sufficient importance. Why, therefore, should he permit suffering to his patient and waste his own time? He does not know enough of gynæcological practice to be impressed with the importance of a laceration of the cervix or vagina or a dislocation of the uterus—that is to say, of the remoter consequences of his well-meant interference. More than that, although he may have attended the statutory number of labours required by his college or university, he has enjoyed few advantages of direct practical instruction and example; he may be unable to diagnose the presentation, so he must trust to force alone; he has seen little or nothing of the puerperal state, so he is hardly in a position to appreciate the risk to his patient or to recognise some of even the immediate effects of operative midwifery." The next step in Dr. Sinclair's argument was to allow that before passing judgment on this kind of practice as to whether it is reasonable, or unavoidable, or praiseworthy, or the reverse of all that, we must find a criterion of good practice. To which end he read to the section the figures showing the details of two years of the practice of the Manchester Maternity Hospital. From these figures it was evident that the forceps deliveries among in-patients were in a comparatively high proportion, but the hospital beds are understood to be retained for cases of difficulty and danger; hence a large proportion of the women admitted have a history of difficult or operative labour in the past. The proportion of forceps deliveries among these in-patients was almost exactly 9 per cent., and no woman died after the use of the forceps. The proportion of forceps deliveries among the home patients in the charge of the midwives might be considered the normal requirements of the community. "Now, in 2049 home-patient deliveries," said Dr. Sinclair, "the forceps had to be applied by the obstetric physicians twenty-nine times; that is as nearly as possible 1·4 per cent. I have already called your attention to the fact that within the same area of population, but among the class of people who can afford to pay for private medical attendance, the proportion of forceps deliveries is 25 to 30 per cent. Such a striking contrast surely supplies food for reflection and calls for explanation." Dr. Sinclair concluded by quoting many continental figures in support of his proposition that delivery by forceps is nowadays far too common.

The Vomiting of Pregnancy.

On the previous day, Wednesday, Sept. 1st, a discussion took place on this subject, introduced by Dr. J. A. TEMPLE, (Toronto), in which Dr. W. GARDNER and Dr. J. C. CAMERON (Montreal), Dr. R. B. MAURY (Memphis), Dr. SKENE and Dr. C. JEWETT (Brooklyn), and Dr. H. T. HANKS (New York) joined.

Dr. GILES showed for Dr. ROBERT BARNES (London) a Drawing to illustrate Barnes's Boundary Line in Placenta Prævia, and Dr. BERRY HART (Edinburgh) and Dr. WRIGHT (Toronto) discussed the matter. — Dr. JOHN CAMPBELL (Belfast) read a paper on Labour Complicated by Abnormalities of the Cervix Uteri and Vagina, and the subject was continued by Dr. MURRAY (New York), Dr. HOWARD KELLY (Baltimore), and Dr. JEWETT (Brooklyn).—Dr. W. C. LUSK (New York) gave a Contribution to the Study of the First Stage of Labour from a Frozen Section, illustrated by drawings, photographs, and plaster casts. — Dr. BERRY HART complimented Dr. Lusk on his excellent piece of work. — Dr. W. GARDNER showed a specimen of Vesical Calculi removed from the Bladder in a case of Procidentia.

PHARMACOLOGY AND THERAPEUTICS.

The Presidential Address in this section was delivered by Dr. D. J. LEECH, Professor of Materia Medica and Therapeutics at the Owens College, Victoria University, Manchester, who took as his subject:

Past and Present Views as to the Actions of Medicines.

Dr. Leech opened his address with a summary of the views held during the last sixty years as to the action of medicines, quoting Pereira, Headland, Brodie, and others. He then gave a sketch of the progress of pharmacology during the same period, continuing as follows: "The knowledge of the method in which drugs remove the cause of disease and counteract its results did, indeed, greatly increase; so, too, did our power of lessening suffering; but something more was required. We could not combat the evils produced by disease at all essential points of attack, and our power to stay its progress was therefore very limited. And no way was made in the discovery of substances capable of generally antagonising the functional changes and pathological conditions characteristic of special forms of disease. No drugs were found acting as mercury does in syphilis, and the method of action of this and also of some of the best known of our remedies has remained undetermined. But in very recent times, owing to the investigations of pathologists and physiologists, light has come. The discoveries made concerning the curative influence of certain animal substances such as thyroid gland and concerning toxins and antitoxins, mark a new departure in therapeutics. How do they affect existing views concerning the action and uses of drugs? Strong views have recently been expressed on this point. Dr. Saundby, for example, considers that though the recent discoveries with regard to pathogenetic organisms and their products open up to us an altogether new prospect in therapeutics, the system of pharmacology is about to pass into the limbo of the forgotten, and Professor Behring, of Marburg, thinks that in the light of serum treatment all our older views must vanish. Cellular pathology, he says, has become unfruitful for therapeutics; it is vain to treat the organs which are affected. Serum treatment, if we may judge from the *résumé* of his paper which was read at the recent 'Congress für Innere Medicin' at Berlin, is alone efficient. If Behring's view as to its nature is correct its study is almost outside the boundaries of pharmacology, for he holds that antitoxin is not a definite chemical compound, but a quality, inherent in certain albuminous substances as magnetism is in the magnetic oxide of iron. If antitoxins are powers, not substances, we are almost carried into a new world in which pharmacology, as at present understood, has no place. There seems little probability that the view of the enthusiastic supporter of serum treatment has any real foundation, and as I do not know the reasoning which has led to its adoption I shall not attempt to controvert it. The toxins disturb the functions of the various organs like other pharmacological agents. They have a definite physiological action, and there is no reason for believing that they act on tissues in a manner fundamentally different from other medical agents. They have, indeed, a more marked power than most drugs in producing immunity. It is impossible to say whether in this respect they act like ordinary drugs, but it can hardly be doubted that they produce their effects in a similar, if not in the same way. Another property which toxins have has not been shown to be common to the medical agents hitherto employed. They lead to the production of antitoxins, but how we know not. Protoplasm has the power of altering substances which come in contact with it, and it is possible to imagine that by some subtle chemical influence the toxin is converted into a substance directly antagonistic to it in physiological properties. But it seems far more probable that antitoxins are produced by the protoplasm itself under the influence which the toxin exerts upon it. It is shown that the serum of blood does contain a bactericidal substance, and many years ago Hankin pointed out that the blood of certain animals normally contains what he calls a 'defensive proteid,' to which Buchner subsequently gave the name of 'Alexin,' and which practically is an antitoxin. If cell protoplasm has the property of thus

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normally producing such defensive material it is not difficult to imagine that under the influence of certain toxins it may produce special antitoxins Although we have no proof, so far as I am aware, that any of the older used drugs lead to the production of antitoxins, there is reason to believe that certain vegetable albuminoids are capable of doing so. Ehrlich states that the toxalbumins, ricin and abrin, derived respectively from castor-oil and jequirity seeds, not only cause immunity, but the formation of an antitoxin in the blood which protects from the poisonous influence of these two substances. The methods in which antitoxins act are as yet shrouded in obscurity. They may be to a certain extent destructive to the organisms giving rise to disease, as quinine probably is in ague, but they seem to produce their special effects by antagonising the toxins these organisms produce, and they differ from the older drugs in exercising a wider and more rapid influence. They seem to antagonise the toxins at once at all essential points instead of counteracting their effects at one or two points only. There is good reason for believing that they do not neutralise each other as an acid neutralises an alkali. At least Calmette has shown that neutralisation does not obtain in the venins and antivenins the action of which very closely resembles the toxins and antitoxins, for he finds that if a mixture of venin and antivenin, which is non-toxic because of the antagonistic influence of the two substances, be exposed to a temperature of 68° F. the power of the antivenin is destroyed, but not that of the venin, which now can exert its toxic influence. It seems probable that the antitoxin acts on the molecules of the protoplasm in some way and prevents the toxin exerting its ordinary influences. It is the combination of pharmacology with therapeutics which gives the value to the work of this section, and we shall have several important discussions which will probably illustrate this. That on the treatment of syphilis will show the difficulties we labour under from defective knowledge of disease and drug action, but it will show, too, how patient observation, long continued, may to some extent make up for such defective knowledge. For nearly 300 years the use of mercury in syphilis has been debated, but because the nature of syphilis and the action of mercury were quite unknown the utmost divergence of opinion existed in earlier times as to its use. On both points some knowledge has been gained, and differences in view are not now so wide as heretofore, yet we shall probably find that on some points observations have led to very different results. The discussion of the treatment of insomnia will illustrate our indebtedness to the combination of pharmacological and chemical knowledge, since for most of our new hypnotics we are indebted to this joint working. The third subject for discussion—diuretics—has in recent years been illumined by pharmacological investigations, which though they may not have cast fresh light on the effects and importance of increasing kidney secretion, in certain forms of disease have nevertheless made more clear the manner in which diuresis may be brought about."

The Treatment of Insomnia.

Dr. C. K. CLARKE (Kingston, Ontario) opened a discussion on this subject. He first treated of the physiology of sleep. Cerebral anæmia, vascular dilatation of the skin, and lessened blood pressure might be considered as common conditions in sleep. Sée's classification of sleeplessness was cerebral, spinal, and psychic. Want of sleep killed more quickly than starvation. In treatment let drugs remain to the last. Try the warm bath, 104° F., and cold to the head. Patients often fall asleep in the bath. Hot milk and the sun bath were good, also hot ale at night. In the insomnia of neurasthenics, strychnine and digitalis were often effective. In sleeplessness from pain he considered morphia almost unavoidable.

Dr. R. W. WILCOX (New York), Dr. A. MCPHEDRAN (Toronto), and Dr. E. T. EDES (Jamaica Plains) continued the discussion.

Professor RICHET (Paris) discoursed on hypnotics in general and chloralose in particular. He made use of the blackboard to impress some of his points. He considered that changed blood pressure was not the basis of sleep production. In the study of chloralose he had found that this body did not produce collapse, but rather a strychninisation of the cord; the brain might be congested. The drug might be used in heart cases up to six grains. Slight convulsive jerks might occur, but there was no danger. In one case a patient, a woman, wilfully took sixty grains, there was deep sleep and starting like a strychnine case. In thirty-six hours there was complete recovery. Professor Richet used chloralose by preference.

Dr. DONALD MACALISTER (Cambridge) related his experience among students. The causes here were principally overwork and anxiety about examinations. He eschewed hypnotics, and succeeded in most cases. He first advised a cold bath for either sex, then walking about the bedroom naked till quite cold, or failing in this, next night put on a wet nightshirt, and over it the "blazer." He also suggested reclining in a hammock, thus exposing to the air the lower half of the reclining body. In the case of overworked students too tired to sleep strychnine might be tried, hot coffee also. Magnesium sulphate was an ancient but trusted ally in therapy. As a *dernier ressort* he recommended chloralamide, but it should be given without the patient knowing what he is taking.

Dr. ROBERT SAUNDBY (Birmingham) believed chloral to be the most certain pure hypnotic. The dangers had been exaggerated. Sulphonal had been used to an enormous extent in England, and yet hæmatoporphyrinuria was almost unknown.

Dr. J. Y. A. CAMPBELL (Carlisle) spoke of insomnia in the sane and in the insane. From long asylum experience he found chloral the surest sleep producer. He thought well of paraldehyde. The great thing was to secure sufficient outdoor exercise and suitable diet. In the sane the great desiderata were change of air and change of scene. He was doubtful of the great danger of chloral, as he had seen 8 drachms used at one time without evil effect, and had given as much as 4 drachms.

Dr. W. WHITLA (Belfast) approved of leaving drugs to the last. Millions of doses of sulphonal had been administered with very few accidents. Chloral he considered to be dangerous and the addition of digitalis useless. He was favourable to alcohol. From two to two and a half ounces of proof-spirit with hot water at night was enough. So small a matter as an uncomfortable pillow might cause a bad night.

Dr. EDWIN RAYNER (Stockport) said that there were idiosyncrasies and therefore no general rules. He liked small doses, as 10 grains of chloral, or 10 grains of sulphonal combined with 5 grains of phenacetine.

The PRESIDENT of the section summed up the discussion of the first day's session, noting that there was a unanimity of opinion that every case must be thoroughly studied for the discovery of abnormal conditions, the presence of which must be known before a reasonable therapy could be applied.

Dr. C. R. MARSHALL (Ferndale) had a fine display of Indian hemp and its principles on the table for inspection.

PATHOLOGY AND BACTERIOLOGY.

The Presidential Address in the Section of Pathology was delivered by Mr. W. WATSON CHEYNE, Professor of Surgery in King's College, London, who took as his subject

The Progress and Results of Pathological Work.

"On such an occasion as this," said Mr. Watson Cheyne, "one is naturally tempted to look back on the history of pathology during the last sixty years, but I hope that you will not expect me to follow the fashion in this respect. To trace the history of pathology during the last sixty years would be to follow the science practically from its commencement and to go back to a state of matters which it is almost impossible for us now to realise. To-day it is the etiological side of pathology, so to speak, which occupies our attention, and deservedly so, for, so far as practical results in the treatment of disease are concerned, the knowledge of the changes produced is of comparatively minor importance as compared with that of the reason why they are set up and how they take place. The more accurately we can trace the etiological factors in disease and the subsequent course of events the more likely are we to arrive at a rational method of treatment. The most striking and important advance has been the growth of the great science of bacteriology, a science which has not only led to most important practical results, but has also thrown a flood of light on the processes which go on in the body as a whole and has stimulated research in other directions not immediately associated with it. It is difficult for those who have only taken up the subject of bacteriology comparatively recently to realise the absolute blank which it presented even twenty years ago. When I

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became house-surgeon to Lord Lister in 1876 objections of all kinds were urged against the theory on which Listerism was based; some denying the existence of bacteria at all, others maintaining the theory of spontaneous generation; some asserting that organisms were always present in the healthy tissues, others denying that they had anything to do with disease, or that the success of the antiseptic principle depended in any way on the exclusion of micro-organisms from wounds. A great advance which followed soon afterwards was the remarkable research by Lord Lister on the bacterium lactis, in which he devised a method of separating bacteria by fractional cultivation, which resulted in the separation of the bacterium which causes lactic fermentation from other organisms. Then came Koch's work on infective diseases of wounds and Metchnikoff's work on phagocytosis, a theory which is not only very fascinating in itself, but which has proved a most suggestive working hypothesis leading to many of the researches which have given bacteriology its present position. In spite, however, of all that has been done many problems still remain unsolved. In the case of tuberculosis, why is it that in one part of the body we have a slow growing lupus disease and in another part, perhaps, of the same body a rapidly developing tuberculosis? The same problem is apparently presented with regard to the bacilli of diphtheria, in that we may have in one case a true diphtheria, in another a membranous rhinitis, while in a third, although the bacilli are present in the throat, the individual may be apparently healthy. Another very remarkable problem is presented by the results which follow free incisions into tuberculous tissue. An incision is made into the abdominal cavity, masses of tuberculous tissue and tubercle are found scattered over the peritoneum, nothing whatever is done, the wound is stitched up, and yet in many cases the patient, who up to that time has been going steadily down hill, begins to pick up, and the disease may come entirely to a standstill. In connexion with the pyogenic organisms also we have many problems. How is it, for example, that after an abscess is opened antiseptically suppuration at once ceases? If instead of opening the abscess antiseptically a poultice be applied, suppuration goes on and may be very profuse. But if it be opened at a time when there is free fluctuation and when it is beginning to point, and if the necessary antiseptic precautions be taken and proper drainage provided, no more pus forms, and yet when the abscess is opened it is found to contain living pyogenic organisms. We can easily understand that the subsidence of the fever and general disturbance is due to diminished absorption of toxic products. But why do not these living pyogenic organisms keep up the suppuration? And why is it that after two or three days one may fail to obtain any cultivations from the serum which escapes from the wound?" Mr. Watson Cheyne here discussed the pathology of inflammation, arguing that inflammation and healing are two different, and, indeed, to some extent antagonistic, processes, and that although in every wound the tissues in resenting the injury show the early stage of inflammation, yet if no organisms be admitted the inflammatory phenomena soon pass off, and where there is destruction of tissue a second process—namely, that of repair—begins. He continued: "A very remarkable thing in connexion with these advances, especially in experimental pathology, is the enormous direct practical benefit which has already resulted to the human race; and it is sufficient answer to the antivivisectionists who oppose the use of intelligence and observation and experiment to point to the saving of human life and the relief of suffering which has taken place in the last few years. Since Pasteur's experiments on spontaneous generation were published, only thirty-six years have elapsed, and during that time remarkable results have been attained in treatment as the result of experimental pathology. The practical results already obtained affect diagnosis, prophylaxis, and treatment. The diagnosis of many parasitic diseases has now been rendered certain and easy by searching for the causal organism, and I need only instance such diseases as diphtheria, tuberculosis, malaria, anthrax, gonorrhœa, &c. The greatest of all the advances, because so wide-reaching, has been in the prophylaxis of disease, especially in the prevention of septic disease after operations, as brought about by the discoveries of Lord Lister. By these discoveries the occurrence of sepsis in wounds made through unbroken skin is prevented, and the chances of general sepsis in septic wounds are much diminished, and numerous lives are saved, not only in this way, but also by the fact that the Listerian treatment permits the performance of many life-saving operations which could not otherwise be attempted. In other cases, also, prophylaxis is of great value, as in diphtheria and in Pasteur's treatment of rabies, which may properly be grouped as a prophylactic rather than a curative treatment. Lastly, I may refer to advances in the cure of disease. In the case of diphtheria there can be no question that the antitoxin is a most potent curative agent, and that, used in the early stages, it is almost certain to cut short the disease. As regards tetanus, the evidence in the case of animals is absolutely convincing, but in patients suffering from the disease the effect is not certain, probably because we have to do with an acute illness which runs its course before the serum has had time to act. The same may also be the case with the antistreptococcic serum, although I have great doubts of its value as a curative agent. In other instances, such as plague and snake-bite, we may apparently look forward to a cure; while researches are being carried on with regard to pneumonia which may lead to valuable results; nor must I forget to mention Pasteur's system of inoculating cattle against anthrax. What are we to say about the new tuberculin? We all know how careful an observer Koch is, and the fact that he looks on it as a valuable remedy is to my mind sufficient to make it necessary to give it a careful and hopeful trial. I must say that I have always been favourably inclined to the old tuberculin, and have regarded it in relation to phthisis like iodide of potassium in relation to syphilis, and, had I been a physician, I do not think I should have abandoned it in the hurried manner in which it was thrown aside. I might enumerate many other instances of direct benefit from pathological research, such as the advances in the treatment of tuberculous diseases of bones and joints as the result of better knowledge of the nature and distribution of the disease, the treatment of appendicitis, and the investigations on peritonitis and diseases of the appendix, the more complete operations for cancer following fuller study of the mode of spread of the disease, and so on; but I have said enough to show the great importance and value of pathological research. Such results must encourage us to go on working with all our might and without ceasing, bearing in mind that many are suffering and dying every day who might be saved if only we had just a little more knowledge of the workings of the body and the processes of disease."

Dr. ALEXIS THOMSON (Edinburgh) then read a paper, illustrated by a series of slides, upon Epithelioma of the Penis.—The PRESIDENT of the section read three papers—one for Professor GOLDMAN upon Early Infection of Blood-vessels in Carcinoma and Sarcoma, one for Dr. KANTHACK on Cancer of the Testicle, and one for Dr. STILES on the Evolution of Cancer Bodies.—Professor BRYCE read a paper for Dr. PATRICK MANSON on a New Species of Filaria Sanguinis Hominis Nocturna.—Dr. IRA VAN GIESON then read an important paper on

Hæmatomyelopore.

This he described as a condition of the spinal cord following on trauma, which had to be distinguished clinically as well as pathologically from syringomyelia. Three such cases were recorded—one spontaneous, the others from trauma. The condition, which he regarded as a newly defined one, was characterised by sharp-cut canalisation of the spinal cord, usually in the posterior horns. The amount of degeneration and cavitation was out of proportion to the traces of blood effused. His experiments in injecting fluids into the cord proved that the separation of fibres always took place in a vertical direction, and usually in the grey matter. Such conditions, he thought, might be differentiated clinically from syringomyelia by the history of trauma and the rapid onset of symptoms, usually with a rapidly fatal result.

PSYCHOLOGY.

The Presidential Address in this section was delivered by Dr. R. M. BUCKE, medical superintendent of the Insane Asylum, London, Ontario, Canada, the subject being:

Mental Evolution in Man.

"Psychology," he said, "ought to be the most interesting of all the sciences, and as a matter of fact it is so, though it has been greatly discredited by the imperfection of the method by which it has until very lately been studied. That imperfection is so great that it would

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hardly be an exaggeration to assert that nearly all the study and thought expended upon it down to the beginning of our own age has been fruitless and as good as wasted, except inasmuch as it has at last made clear the impassability of the route men have sought to follow—the route, namely, of introspection. As man's bodily life rests upon and grows from that of countless prehuman ancestors; as man includes in his structure the heart of the reptile, the gills of the fish, as well as the forms in outline of innumerable still lower races, so is his so-called human mind rooted in the senses and instincts of all his ancestral species; and not only so, but these senses and instincts still live in him, making up, indeed, far the larger part of his current every-day life; while his higher psychical life is merely the outgrowth and flower of them. In the growth of mind, whether that of the race or of an individual, we recognise two distinct processes: first, the very gradual evolution to, or toward, perfection of faculties that have already come into existence; and, secondly, the springing into existence (as new branches start from a growing tree) of faculties which had previously no existence. For it is clear to the least thoughtful student that no faculty (as no organ) came into mature and perfect life at once. Hearing and sight, we are told, developed by slow degrees from the sense of touch; and in the region of the intellect conceptual life was born from ages of receptual, and that from millenniums of perceptual. Let us now suppose mind growing for millions of years in the way set forth. It begins, we will say, as mere excitability; to that after a long time is added what may be called discrimination, or choice and rejection of, for instance, different kinds of food. After another long interval of almost infinitely slow advance sensation appears, and with it the capacity of pleasure and of pain; then, still later, memory; by-and-by recognition of offspring; and successively thereafter arise reason, recognition of individuals, and communication of ideas. Concurrently with these intellectual faculties certain moral functions, such as fear, surprise, jealousy, anger, affection, play, sympathy, emulation, pride, resentment, grief, hate, revenge, shame, remorse, and a sense of the ludicrous have also arisen in the nascent mind. We have reached now the mental plane of the higher animals, which is equally that of the human being at about two years of age. Then occurs in the child the mental expansion which separates man from the higher mammals—for something like a year the child mind steadily grows from the status of the latter to the status of the human mind. This year in the individual, during which it walks erect, but possesses a receptual intelligence only not having yet the power of forming either concepts or true words, represents in the race the age of *alalus homo*, the period of perhaps a hundred thousand years, during which our ancestors walked erect, but not having self-consciousness had no true language. At the average age of three years in the individual self-consciousness is born, and the infant, from the point of view of psychology, has become a human being. But we all know that after the attainment of the distinctively human faculty, self-consciousness, the child has still much to acquire both in the way of expansion of already possessed faculties and in the acquisition of new ones before it is mentally a mature man. Of the numerous faculties it still has to acquire I shall only mention here the colour sense, the sense of fragrance, the human moral nature, and the musical sense. A consideration of these four and of self-consciousness will occupy the short time allotted me to-day. Simple consciousness makes its appearance in the human infant at the age of a few days; it is absolutely universal in the human race; it dates back certainly to the earliest mammals, and probably much earlier; it is only lost in deep sleep and coma; it is present in all dreams. Shame is said to be born in the human infant at the age of fifteen months; it is a pre-human faculty, being found in the dog and in apes, and undoubtedly existed in our pre-human ancestry; it is almost universal in the race, being only absent in the lowest idiots; it is very common in dreams. Self-consciousness makes its appearance in the child at the average age of three years; it is not present in any species but the human; it is, in fact, that faculty the possession of which by an individual constitutes him a man. It is not universal in our race, being absent in all true idiots; that is, it is permanently absent in about one in each thousand human beings born into the world. In our ancestry it dates back to the first true man; a race, we are told, unclothed, walking erect, gregarious, without a true language, to a limited extent tool-using, destitute of marriage, government, or of any institution, animal, but in virtue of its highly developed receptual intelligence, king of animals, which developed self-consciousness, and by that fact became man. It is impossible to say how long ago it was when this event occurred, but it could not have been less than several hundred thousand years. This faculty is lost much more easily and frequently than is simple consciousness. We lose it in coma and also often in the delirium of fever; in certain forms of insanity, as in mania, it is often lost for weeks, even months at a time; and, lastly, it is never present in dreams. The faculty of colour sense appears in the individual at the average age of about five years. It is absent in one adult human being out of every forty-seven; it appeared in our ancestors, as Geiger has shown from linguistic palæontology, in the Aryan period, probably less than thirty thousand years ago. It is seldom present in dreams; and when it does occur, that is, when any colour is seen in a dream, it is generally that colour which for good reasons was first perceived by man—namely, red. It is thought that the sense of fragrance was acquired by the race later than the colour sense; it is also acquired later by the individual. The human moral nature belongs to a much later stage of evolution than any of the faculties so far considered. It does not make its appearance in the individual before the average age of fifteen years. It is congenitally and permanently absent in at least forty human beings out of every thousand. It would seem clear, as stated already, from a consideration of our historic ancestors, from the fact that this faculty rapidly fades out as we ascend into the past, that it cannot have existed in the race more than 10,000 years at the most. It is far more unstable in the individual than the older faculties, such as self-consciousness. It is never present in dreams. Finally, the musical sense (a faculty which is now in act of being born into the race) does not appear in the individual before the average age of about twenty years. It does not exist in more than half the members of the race. It has existed less, perhaps considerably less, than 5000 years in the race. It is never, or almost never, present in dreams, even in the case of professional musicians." Dr. Bucke here discussed the scheme of mental evolution and the atavistic theory of idiocy and insanity. He continued: "Evolution, as far as we can see, has always gone on, is going on to-day, and will always go on. Our old mental faculties are some of them fading out, others advancing toward greater perfection, and alongside of them new ones are springing up, some of which will, without doubt, be of overshadowing importance in the future. So-called telepathy and clairvoyance seem to be specimens of such nascent faculties. I place in the same class the phenomena of what is often named spiritualism. The labours of the Society for Psychical Research have made it to me plain that these phenomena, as notably in the case of W. Stainton Moses, really exist. To me these are not cases in which outside agents are acting on or through a human being, but are cases in which a given human being has faculties which are not commonly possessed. But of infinitely more importance than telepathy and so-called spiritualism, no matter what explanation we give of these, or what their future is destined to be, is the final fact to be here touched upon. This is that superimposed upon self-consciousness, as is that faculty upon simple consciousness, a third and higher form of consciousness is at present making its appearance in our race. This higher form of consciousness when it appears occurs, as it must, at the full maturity of the individual, at about the age of thirty-five, but almost always between the ages of thirty and forty. There have been occasional cases of it for the last 2000 years, and it is becoming more and more common. In fact, in all respects, as far as observed, it obeys the laws to which every nascent faculty is subject. Many more or less perfect examples of this new faculty exist in the world to-day, and it has been my privilege to know personally, and to have had the opportunity of studying, several men and women who have possessed it. In the course of a few more millenniums there should be born from the present human race a higher type of man possessing this higher consciousness. This new race, as it may well be called, would occupy, as toward us, a position such as that occupied by us toward the simple conscious *alalus homo*. The advent of this higher, better, and happier race would amply justify the long agony of its birth through the countless ages of our past. And it is the first article of my belief,

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some of the grounds of which I have endeavoured to lay before you, that a race is in course of evolution."

Dr. G. H. ROHÉ (Sykesville) introduced for discussion the subject of the Etiological Relation of Pelvic Disease to Insanity, upon which many members spoke, among others Dr. R. DEWEY, Dr. D. CLARKE, Dr. J. W. BURGESS, Dr. E. N. BRUSH, Dr. URQUHART, Dr. ALEXANDER, Dr. MEEK, and Dr. SPITZKA.

OPHTHALMOLOGY.

The President of the section, Mr. EDWARD NETTLESHIP, in opening the meeting stated that owing to the large amount of work to be got through his remarks would be very brief. He felt it a great honour to have been chosen to fill the presidential chair of so important a section as that of ophthalmology. The only regret he felt in connexion with the matter was that none of his colleagues from the British Isles had been able to be present.

Antiseptics in Eye Surgery.

Dr. H. NOYES (New York) introduced the subject of antisepsis in eye surgery, and related his experience and his methods in connexion therewith. He stated that all were agreed that antisepsis was essential and he described his method as to preparation for operations as follows:—1. A patient in hospital practice was given a bath, his clothes were cleaned, his head, eyebrows, and eyelashes treated with soap and hot water and then with bichloride. The conjunctival sac was inundated with a solution of boric acid, which he considered was all that was necessary to wash away the mucous coagula. In some cases an occlusive bandage was used for twenty-four hours previously to operation. 2. Instruments were boiled for from five to ten minutes in 4 per cent. carbolic solution and covered with an antiseptic cloth. In using jointed instruments extra care was required. In practice outside the hospital the instruments are boiled before going to the patient and then immersed in alcohol immediately before using. 3. The hands of the operator were cleansed by scrubbing with soap and hot water and powdered borax, particular care being taken as to the nails, after which the hands were immersed in bichloride. 4. Dressings were sterilised by steam and kept in a tight glass jar, and the wound dressed with a bichloride solution, 1 in 3000, for twenty-four hours. He had given up washing out the anterior chamber with iodide of mercury, and questioned if the normal salt solution was not the best. Asepsis was probably better than antisepsis in these cases. In private houses he had sometimes had suppuration take place owing to defective plumbing.

Dr. RANDOLPH (Baltimore) agreed that a neutral solution was the best for the conjunctival sac, as there was much danger from the use of bichloride. He thought that plain boiled water was as good as boric acid. He did not boil the cutting instruments, but immersed them in alcohol and then in sterilised water.

Dr. BULLER (Montreal) stated that he strictly observed antisepsis. In dressing he used the dry boric acid on a moist skin. He did not wash out the anterior chamber as it caused irritation. In cases with chronic eczema he had not had suppuration since using antisepsis.

Dr. JACKSON (Philadelphia) said that bandaging of the eye immediately before operation was bad practice, and that in lacrymal obstructions the trouble could usually be located in the nose. He believed in washing out the anterior chamber.

Dr. FRYER (Kansas City) used a 1 in 6000 sublimate solution in the conjunctival sac. He did not put any dependence upon boric acid.

Dr. MITTENDORF (New York) agreed with Dr. Noyes in nearly every respect, and made an appeal for the much-abused boric acid.

Dr. RYERSON (Toronto) used boric acid and thought that the anterior chamber should not be washed out as a rule, but that some cases demanded it.

Dr. WURDEMANN (Milwaukee) allowed no one but himself or his associate to prepare the solutions and would not operate in a private house unless he had skilled attendance. He had found great results from a new anæsthetic, "holocain," which was antiseptic and had no bad effect on the cornea.

The PRESIDENT of the section gave a short account of the views of his colleagues of the British Isles, and seemed to think that the majority were in favour of asepsis.

LARYNGOLOGY AND OTOLOGY.

The President, Dr. GREVILLE MACDONALD, after a word of welcome, introduced a discussion on

Turbinotomy.

He commented on the increasing frequency of the removal of mucous membrane and portions of the turbinated bones, and in order to give room for subsequent discussion dealt with the following questions:—1. Are these operations done unnecessarily? 2. Are the symptoms relieved or cured? 3. Is harm done to the patient? The operation has been applied for relief of obstruction to respiration from hypertrophies, for the larger of which he prefers the cold snare and for the smaller the cautery. He emphasises the importance of dealing with concealed growths and cavities formed by overhanging hypertrophy of inferior turbinated bones due to structural malformation. With regard to treatment, the most satisfactory he found was paring off to provide a free passage for air and mucus by scissors or snare, and he was not in favour of extensive removals of the secreting gland of the nose, as he designated the inferior turbinated bone, which, by experiments which he cited, was proved to be the moistener of the respired air. In concluding he urged conservative treatment, and was doubtful if the removal of the least bit more than necessary was ever justifiable.

There being several papers on the subject announced to be read they were asked for before the general discussion, and Dr. PERMEWAN read for Mr. CARMALT JONES a paper on Some After-effects of Turbinotomy. This condition was reported to have been relieved in 60 per cent. of the cases, and the deafness to have been much relieved when the tinnitus stopped. Unhealthy posterior parts of turbinated bones kept up naso-pharyngeal and Eustachian catarrh, and surgical treatment offered the additional advantage of easy Eustachian treatment. Many conditions usually due to nasal obstruction or its effects on adjacent organs were reported as much relieved. No deaths or subsequent bad effects had been observed.

Dr. R. P. LINCOLN (New York), in a short paper, gave some of his own experience in turbinotomy, mentioning preliminary antiseptic preparation and the use of cocaine on cotton plugs. His treatment he divided into chemical and surgical, the former for mild grades of hypertrophy, the latter for the removal of erectile and osseous tissue by means of ignipuncture, cold wire snare, scissors, and bone-cutting forceps.

In the discussion Dr. BRYSON DELAVAN (New York) spoke on the benefits of septal treatment, and gave as his principle the gaining of a maximum of relief with a minimum of injury. He spoke against the name "spokeshave," and condemned the removal of turbinals in children, and spoke of the uncommonness of posterior enlargement of the bones.

Dr. JOHN N. MACKENZIE (Baltimore) stated that the removal of the bone or portions of it was rarely if ever done by him except for the removal of growths, and never done in children.

Mr. LENNOX BROWNE did not agree with turbinectomy and thought it was surgery in a hurry. Turbinectomy in a child he considered quite inadvisable. If there was a large turbinated bone he looked for adenoids, and in a reasonable time got improvement after proper treatment. He spoke of an association of asthma and trouble in the middle turbinated bone. He corroborated Bosworth's statement that there was no hypertrophic rhinitis without a spur, having found this to be the case in 80 per cent. of 1000 cases. He defended the name, "spokeshave," saying that we have already our chisels, mallets, saws, &c., borrowed from the carpenter's shop. He found anæmia closely associated with nasal obstruction, and agreed with the President in that he had seen many cases of dry throat following turbinectomy, and mentioned the President's careful work on the physiology of nasal moisture.

Dr. PERMEWAN, Dr. W. H. DALY, Dr. WARDEN, Dr. J. E. ROE, and Dr. R. C. MYLES also spoke.

In summing up the discussion the PRESIDENT stated that the opinion of those present seemed to be averse to Mr. Jones's radical operation for the removal of the inferior turbinated bone. He summarized the opinions expressed as

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follows: 1. Complete resection of turbinated bones is almost never called for. 2. Partial removal is only occasionally required, and then of the anterior portion of the inferior turbinated.

Dr. J. H. BRYAN (Washington) then read a paper entitled the Anatomy of the Fronto-Ethmoidal and Fronto-Maxillary region, in which he dealt with the anatomy of these regions with relation to pathological conditions, based on the examination of normal and pathological frozen sections. He quoted two cases in which sinus disease of long standing was not relieved until the remote seat of the trouble in the ethmoidal cells was attacked, the sinus trouble being kept up by constant re-infection.

Dr. E. FLETCHER INGALLS (Chicago) read a paper on the Relation of Nasal Disease to Pulmonary Tuberculosis. This embraced a study of 14,953 cases studied in connexion with diseases of the nose, throat, and chest. Of these, 830 were phthisical cases in which complete examinations of the nasal organs were made. The conclusions arrived at were that nasal catarrh was much more prevalent than pulmonary tuberculosis, and that it was much less frequent in a given number of tuberculous patients than in the same number of healthy persons, demonstrating that instead of predisposing to the pulmonary tuberculosis, nasal catarrh, if it has any effect at all, appeared to prevent it.

Dr. J. N. MACKENZIE, Dr. SHURLEY, and Mr. LENNOX BROWNE also spoke.

ANATOMY AND PHYSIOLOGY.

In this Section the proceedings commenced by a discussion upon—

The Teaching of Anatomy.

The discussion was opened by Professor ALEXANDER MACALISTER (Cambridge), who remarked that the first thing to be remembered in teaching anatomy was that one was training practitioners of medicine, not professional anatomists. The difficulty in reform lay in the fact that teaching was really controlled by examiners. He then passed on to consider (1) the method of teaching, and (2) the amount to be taught. As regards the method, he emphasised the importance of dissecting and thought that every student should dissect the whole body twice, a preliminary knowledge of osteology being insisted upon. He advocated the working of students in couples and the more general use of the lens as an aid in minute dissections. The demonstrator should not dissect for the student, but should conduct catechism classes on the parts which the students were dissecting. Prepared dissections and models should be used with caution lest a diagrammatic view of the body be acquired. Lectures he regarded as the least important method of teaching anatomy, and in lecturing he preferred the practical plan rather than the morphological, although the latter was the more interesting method. He thought it regrettable that anatomical nomenclature had not been brought into line with that of biology. As regards amount, he thought that teaching must be limited, or mental dyspepsia would result. The range of knowledge was increasing, the time devoted to practical anatomy was decreasing. Teaching by schedule would not do. The most practical parts must be given most prominence. For example, a knowledge of minute muscular attachments, bony facets, &c., were of very little practical use. Two branches were underestimated: (1) the anatomy of the lymphatic glands; and (2) minute nervous connexions. Finally, he thought that an understanding was wanting between teachers and examiners in the subject as to the parts to be omitted in order that time might be best utilised.

Dr. SHEPHERD (Montreal) thought that the order of importance of the branches of anatomy was: (1) Osteology; (2) nervous system; and (3) viscera (for physicians). He also emphasised the drawbacks of teaching by specialists and the necessity for practical work. Lectures formed a skeleton and harmonised with practical work. The use of a "subject" at lectures was not of much help. Dissections could be so "good" that things looked abnormal. The application of facts to practice should be pointed out. Students were apt to remember the useless and have no sense of proportion. In his opinion histology should not be a special branch but attached to anatomy or physiology.

Dr. PRIMROSE (Toronto) condemned the practice of demonstrating minute dissections to large classes, and gave a lantern exhibition of a method of showing frozen sections to a class.

Professor MCMURRICH (Ann Arbor) advocated the use of the card system of recording students' knowledge and the result of their work. In lectures morphology should be used as explaining the "why" of things. The method of question and answer should be given prominence.

Professor WISHART (Toronto) emphasised the value of knowing anatomy "in pieces"—i.e., in order to be able to recognise parts of structures. He disapproved of the use of systematic books in the dissecting-room. Dissecting guides should be employed.

Dr. ELDER (Montreal) drew attention to the value of supplementing teaching in surface anatomy on the living subject.

Professor MICHAEL FOSTER (Cambridge) said he had not the honour to be a teacher of anatomy, and therefore spoke with hesitation, but as regards the relation of anatomy to physiology he thought one could try to teach too much of the latter, but not of the former. A medical man ought to be able to visualise the whole human frame. He thought that the teaching of anatomy should be progressive throughout a medical course. In this way it would not interfere with other subjects.

The discussion was continued by Professor MILLS (Montreal) and Dr. A. D. WALLER (London), the President of the Section.

Professor MCMURRICH presented a note on the Ganglionic Enlargement on the Posterior Interosseous Nerve of the Arm, and suggested that the nerve orginally extended to the digits. He drew attention to the presence of sensory nerve-endings in the ganglion.—Professor HUBER (Ann Arbor) described his Methods of Staining and Preparation in the Study of the Sympathetic Ganglion, and described the character of the cells and fibres and the mode of ending of the latter. He described the variations found in different animals. He said that the sympathetic neuron was always the terminal neuron in a neuronic chain.—Dr. PRIMROSE demonstrated a specimen of Uterus Masculinus, and made remarks on previous cases and its relationship to hermaphroditism.—Professor W. H. THOMPSON (Belfast) read a paper on the Degenerations resulting from Destruction of Sensory Areas of the Cortex, and showed lantern slides.—A beautiful demonstration illustrating the Histology of the Parathyroid Gland was given by Dr. WELSH (Edinburgh).

DERMATOLOGY.

The Presidential Address was delivered by Mr. MALCOLM MORRIS, surgeon to the Skin Department, St. Mary's Hospital, London, on

The Rise and Progress of Dermatology.

"A review of the progress that has been made in the knowledge of skin diseases is," said Mr. Morris, "appropriate at the present time, since what I take leave to call the centenary of the birth of scientific dermatology is not long past. In 1790 the Medical Society of London awarded the Fothergillian gold medal to Robert Willan, who had some time before submitted to it the outline of his plan for the arrangement and description of cutaneous diseases. Willan may justly be called the creator of dermatology, but he was not the first who wrote on skin disease. As our terminology bears witness, the Greeks gave a good deal of attention to the subject. Hippocrates, Celsus, Galen, Paul of Ægina, and after them the Arabians, described various affections of the integument. The first treatise professedly devoted to diseases of the skin was that of Hieronymus Mercurialis of Venice, which was published in 1572 under the title, *De Morbis Cutaneis et de Omnibus Corporis Excrementis*; the author had, however, nothing to teach beyond what he found in the ancient writers. At the beginning of the nineteenth century it could be said with perfect truth that little improvement had been made in the subject at large since the days of Avicenna. In 1808 there appeared the first volume of Willan's treatise on Cutaneous Diseases, a great work which its author did not live to complete. Ten years before he had given to the world a slender volume dealing with a particular class of lesions of the skin. It is not, however, Willans'

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classification that constitutes his chief title to be regarded as the founder of dermatology. His judicious selection and accurate definition of terms, his astonishingly faithful word-pictures of the appearances of disease drawn directly from Nature, and made more vivid but scarcely more graphic by the coloured engravings with which he supplemented his descriptions, and his rational methods of treatment, were all his own. It was his teachings that transformed a confused jumble of folklore as to 'tetters,' wet and dry, and of figments of the medical imagination embodied in words of learned sound but little meaning into a science, rudimentary, indeed, but grounded on a solid foundation of observed fact. Willan's work is, therefore, rightly looked upon as the true starting point in the history of dermatology. Willan died before he could complete his work; but, fortunately, he left behind a disciple worthy to wear his mantle. This was Thomas Bateman, who had been in constant intercourse with him for many years, and who was thoroughly acquainted, not only with the teaching, but with the spirit of his 'learned preceptor.' Bateman completed Willan's unfinished 'Delineations of Cutaneous Diseases,' and published a 'Practical Synopsis of Cutaneous Diseases,' which did far more to make his master's work known than Willan's own unwieldy and incomplete book. It is hardly too much to say that without Bateman Willan might have been forgotten. Bateman, however, was not a mere expositor; he was a man of truly scientific mind, and would doubtless have added largely to knowledge had not he, too, been cut off prematurely." Mr. Morris here described the dermatological work of Anthony Todd Thomson, Erasmus Wilson, and referred to Jonathan Hutchinson. He continued: "In France a school of dermatology arose independently in the early years of the century. In 1808 Alibert published his 'Description des Maladies de la Peau observées à l'Hôpital Saint Louis,' which he followed up two years later by a 'Traité Théorique et Pratique des Maladies de la Peau,' and several other works. The most valuable part of his publications was the illustrations; his writings only added to the darkness in which the whole subject of diseases of the skin was then enshrouded. His terminology was to the last degree confusing, his classification arbitrary, his descriptions often fanciful. Yet he contributed to the advance of knowledge by directing the attention of more scientifically-minded workers to the subject. Among these was Biett, who adopted Willan's classification with some modifications, and introduced it into France. Among the leaders of the French school who followed Biett were Cazenave, Gilbert, Devergie, and Bazin, all of whom did something to advance the knowledge of skin diseases, though they were apt to let themselves be misled by a tendency to erect systems on unsound foundations. In recent years the yoke of the diatheses has been shaken off, and the labours of Hardy, Vidal, Besnier, and Brocq have placed the French school in the forefront of scientific dermatology—a position which, with such men as Darier, Thibierge, and Wickham to take the place of their seniors when they have to fall out of the ranks, it is in no danger of losing. The year 1844 marked the beginning of a new era in the study of diseases of the skin, for it witnessed the first appearance before the scientific world of Ferdinand Hebra. That remarkable man breathed a new life into the dry bones of dermatology, and set it on a path of progress which has already led to great results. Hebra applied to the investigation of skin diseases the pathological teaching of Rokitansky. His work has been carried on by Auspitz, Kaposi, and Neumann in Vienna, by Pick in Prague, Schwimmer in Budapesth, Lewin and Lassar in Berlin, Neisser in Breslau, and many others. If Willan was the creator, Hebra must be acknowledged as the greatest among the reformers of dermatology. This glory must be his in spite of the fact that his classification in its leading features had been anticipated by Rayer. Hebra, however, worked it out so fully as to make it his own; and his classification can never be superseded till an arrangement based on etiology becomes possible. The history of dermatology in America has been written by Professor J. C. White, of Harvard, and by Professor Louis A. Duhring, of Philadelphia, from whom all that can here be said on the subject is taken. Bateman's 'Synopsis' was republished at Philadelphia in 1818, a second edition being issued in 1824, and a translation of the work of Cazenave and Schedel appeared in the same city in 1829, a second edition being published in 1832. In 1845 appeared the first American work on dermatology; it was entitled 'A Synopsis of the Symptoms, Diagnosis, and Treatment of the more Common and Important Diseases of the Skin,' and its author was N. Worcester, Professor of Physical Diagnosis and General Pathology in the Medical School of Cleveland. The book is described by Duhring as being little more than a compilation from the works of the French and English dermatologists of the day. Meanwhile other signs of a growing interest in the subject were not wanting. In 1836 an Infirmary for Diseases of the Skin was opened in New York, being the first institution of the kind established in the United States, and lectures on skin diseases were delivered there and afterwards in some of the medical schools of New York between the years 1837 and 1854, by Dr. H. D. Bulkley, father of Dr. L. D. Bulkley, whose name is well known to all dermatologists. As early as 1859 Hebra's teaching was made known in America by Professor James C. White, who, two years later, gave the first course of lectures on diseases of the skin at Harvard. After the Civil War clinical lectureships on the subject were established in several important schools. In 1870 the foundation of the *American Journal of Syphilography and Dermatology* did something to promote the advancement of the knowledge of skin diseases in America, and the establishment of the American Dermatological Association in 1877 gave a powerful impulse in the same direction, which was further aided by the creation of the *Archives of Dermatology*. Yet in 1871 Professor James C. White complained that as yet America had contributed little to dermatology, and that this branch of medicine had hardly then found a place among his countrymen as an acknowledged speciality. Now this reproach has been wiped away, and American dermatology, represented by Duhring, J. C. White, Bulkley, and others, is recognised as being in the van of progress. Each of the three great schools which helped to lay the foundations of modern dermatology had certain marked characteristics. The English was essentially clinical, using classification only as a practical help in diagnosis; it observed. The French systematised, striding somewhat impatiently over facts to get at general formulas, which, though plausible on paper, too often broke down in application. The German was pathological, giving attention mainly to mechanism, and occasionally taking too little heed of the causes setting it in motion. Each school had thus the defects of its qualities, but each played an important part in the development of dermatology, and much of what was good in each still survives in the cutaneous medicine of the present day. Now, dermatology is truly international, the different schools which were formerly as separate states having become fused into one scientific commonwealth."

Mr. Morris here stated that modern research has shown that many conditions which used to be looked upon as distinct affections are really different stages in the evolution of one and the same disease. Syphilis and tuberculosis are found to produce many skin diseases formerly referred to other causes. He continued:

"Another direction in which the etiology of skin diseases has made decided progress is the recognition of the action of parasites. The idea that scabies is due to the irritation set up in the tissues by an animalcule, and ringworm by the growth on the surface of the skin of a vegetable mould, is so familiar to us that it is not easy to realise how recently the truth of these doctrines has been definitely established, and with what incredulity the discoveries were for a long time received. The sarcoptes scabiei had been seen by Avenzoar in the twelfth century, and later by Guy de Chauliac, Ambroise Paré, and others; and in the seventeenth century it was distinctly indicated as being the cause of itch by Bonomo and Cestoni."

It was here remarked that Dr. A. T. Thomson in 1850 denied that the sarcoptes scabiei was the cause of itch, and that he, Cazenave, and Chausit asserted that favus and ringworm were not due to mycoderms. Mr. Morris continued:

"Gibert, who had long been an obstinate recusant, gave in his adhesion to the parasitic doctrine in 1866, but Cazenave never recanted his heresy, and Erasmus Wilson, who, after Cazenave had passed away, stood alone in his refusal to accept the teachings of modern science on the subject, also died an unbeliever. The brilliant researches of M. Sabouraud have recently proved that the disease hitherto known as ringworm includes two, and possibly more, distinct conditions caused by different species of fungi. It has also been shown that the disease may be transmitted from animals—

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particularly the horse—to human beings, a fact obviously of the greatest practical importance. During the last few years our ideas as to the action of parasites have undergone expansion. The influence of the great revolution in pathology brought about by the discoveries of Pasteur, Koch, and their disciples has been felt in the sphere of dermatology as in other departments of medicine, and we have learnt to look for the causes of many diseases in the world of the infinitely little which bacteriology has revealed to us. Already lupus, leprosy, carbuncle, glanders, sycosis, furuncle, impetigo contagiosa have been proved to be the result of the mischievous activity of specific micro-organisms. It is practically certain that syphilis has a like origin, although the microbe is not yet discovered, and similar causation is assigned to eczema, psoriasis, alopecia areata, acne, and certain forms of erythema. Quite recently Sabouraud has brought forward evidence which he thinks sufficient to prove that seborrhœa and common baldness are of the bacterial family of diseases. The administration of remedies by hypodermic injection may be mentioned as one of the most promising improvements in constitutional therapeusis; the use of mercury in this way in syphilis is becoming more and more common. The serum treatment has not yet established itself in dermatological practice, but good results from it have been reported in a few cases of syphilis, lupus, leprosy, and one or two other affections. Tuberculin as first prepared by Koch has in my own hands and in those of some other observers proved of distinct use as a preliminary to surgical treatment in lupus. The newer tuberculin gives promise of much greater usefulness, but it is too soon yet to pronounce a definite judgment as to its real efficacy. Thyroid extract has a powerful immediate effect on the integument, but my own experience does not lead me to attach much value to it as a remedy in skin disease, and that opinion is confirmed by the experience of several other dermatologists. The application of the parasitic doctrine to skin diseases has led to the introduction of a large and constantly increasing use of parasiticides; in carbolic acid, boric acid, salicylic acid, resorcin, creolin, thymol, salol, dermatol, ichthyol, chrysarobin, to mention only a few, we have powerful agents that the mid-century dermatologists knew not of. It will be long before a complete classification of diseases of the skin is possible, but this is of no great practical importance. A real stumbling-block, however, is the confusion of terminology that still exists. It would be a very real help to progress if a nomenclature at once simple, precise, and yet descriptive and international could be devised."

Dr. J. T. JACKSON (New York) reported a case of Multiple Idiopathic Pigmented Sarcoma (Kaposi). The patient was a middle-aged male from Nova Scotia, and had the lesions widely distributed over the body. They had undergone involution and much amelioration under treatment by arsenic. A histological examination had been made by Dr. Elliott, who reported that the lesions were of the type of a pigmented angio-sarcoma.

Dr. NEVINS HYDE (Chicago) spoke of a similar case at present under his care in which similar improvement had occurred under arsenical medication. He stated that the clinical course of these cases removed them from the category of sarcoma and necessitated a different description.

Dr. JAMES GALLOWAY (London) remarked on a case which he had observed for nine or ten years under the care of Dr. Stephen Mackenzie. He quite agreed with Dr. Hyde that these cases should be placed in a category distinct from sarcoma. The histological features did not correspond with those of ordinary sarcoma. The cells were degenerate in character, and more closely resembled the cells produced by chronic irritation of connective tissue.

Dr. L. D. BUCKLEY (New York) read a paper on the Non-surgical Treatment of Boils, Carbuncles, and Felons. The speaker treated the subjects under different headings, but advocated the treatment of all the minor forms of these lesions by non-operative methods. For years he had been in the habit of treating such cases by internal medication consisting mainly of sulphate of magnesia and iron, and large doses of freshly prepared sulphide of calcium, and external application of carbolic acid and ergot in the form of ointment. He recommended the renewed careful trial of treatment on these lines, being convinced that more favourable results would be obtained by this means than by the use of the knife.

(To be continued.)

Medical News.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—At the College of Medicine, Newcastle-upon-Tyne, in the first examination for the degree of Bachelor of Medicine, the following candidates have satisfied the examiners:—

OLD REGULATIONS.

Chemistry with Chemical Physics.—Leslie Herbert Walsh, M.R.C.S., L.R.C.P., L.S.A., King's College Hospital.

NEW REGULATIONS.

1. *Elementary Anatomy and Biology, Chemistry, and Physics.—First Class Honours:* Robert Simpson Hindmarch, College of Medicine, Newcastle-upon-Tyne. *Second Class Honours:* Thomas Seymour Coates, Alfred Parkin, Alfred Henry Proctor, and William Robert Davidson Daglish, College of Medicine, Newcastle-upon-Tyne.—*Pass List:* Curtis Crispin Adeniyi-Jones, Mary Evelyn De Rusett, James Herries Graham, George Mack, William Athol Murray, Henry Reah, Hermann Heinrich Ruffmann, and Frederick Riddle Scott, College of Medicine, Newcastle-upon-Tyne; and Thomas Young Simpson, Cooke's School of Anatomy.
2. *Chemistry and Physics:* Arthur Hugh Bunting, College of Medicine, Newcastle-upon-Tyne; Arthur John Spiller Brandon, St. Thomas's Hospital; William Sayce Batten, Lætitia Nora Ede, and James Farrage, College of Medicine, Newcastle-upon-Tyne; Chella Mary Hankin, London School of Medicine for Women; Marshall Hare, College of Medicine, Newcastle-upon-Tyne; Guy Hannah Kirby, Mason College, Birmingham; Ernest John Lambert Kendle, B.A., Ernest Edward Norman, College of Medicine, Newcastle-upon-Tyne; Michael Joseph Quirke, Mason College, Birmingham; Monica Lucie Mary Robertson, London School of Medicine for Women; Frank Rowland, Mason College, Birmingham; and Frank Wheler Sime, Guy's Hospital.
3. *Elementary Anatomy and Biology.*—Annie Tombleson Brunyate, London School of Medicine for Women; Henry Wallace Furnival, University College Hospital, London; James Alfred Giles and Albert Ernest Hodge, College of Medicine, Newcastle-upon-Tyne; Evan Llewellyn Jenkins, Cooke's School of Anatomy; and Archibald Cameron Ney, William Waters Stainthorpe, and Frederick George Wilson, College of Medicine, Newcastle-upon-Tyne.

LITERARY INTELLIGENCE.—The following works will soon be issued by Messrs. J. & A. Churchill: A second edition, much enlarged, of "Psilosis or 'Sprue,' its Nature and Treatment," by George Thin, M.D. St. And.; "The Means by which the Temperature of the Body is Maintained in Health and Disease," being the Croonian Lectures for 1897, by W. Hale White, M.D., F.R.C.P. Lond. (reprinted from THE LANCET); and "Economics, Anæsthetics, and Antiseptics in the Practice of Midwifery," by Haydn Brown, L.R.C.P. Edin.

THE NICHOLAS SENN PRIZE MEDAL.—The Nicholas Senn Prize Medal is a gold medal awarded to the member of the American Medical Association who presents the best essay upon some surgical subject. The competition is confined to those who at the time of entering the competition, as well as at the time of conferring the medal, are members of the association; it will be closed three months before the next annual meeting of the association, and no essays will be received after March 1st, 1898. Competitors must address their essays to Dr. J. McFadden Gaston, Atlanta, Georgia, U.S.A.

PRESENTATIONS TO MEDICAL MEN.—On the 7th inst. the members of the St. Helens Medical Society entertained to dinner, in the committee-room of the town hall, Mr. John Robertson, M.D. Edin., of St. Helens, in recognition of his appointment to the medical officership of health of Sheffield. Mr. A. Handyside, of Earlestown, president of the society, occupied the chair. The company comprised officials of the corporation, legal gentlemen, magistrates, and others. The chairman, on behalf of the society, presented Dr. Robertson with a pair of beautiful silver candlesticks and a silver bowl, remarking at the same time on Dr. Robertson's well-known work in St. Helens, as testified by standing monuments of increased sanitary efficiency and hospital improvements.—On the distribution, on the 5th inst., at the Bristol Railway Station, of certificates and medallions to the members of the Great Western Railway Class of the St. John Ambulance Association, Mr. Kisling-bury (district superintendent), in addressing the class, said the success of the previous classes would no doubt be greatly added to now that the Great Western Railway Company was formed into a centre of its own with H.R.H. Princess Christian as president. This occasion was taken advantage of by the members of the classes and some friends to present Mr. Harry F. Devis, L.R.C.P. Lond., M.R.C.S. Eng., of Bristol, with a gold watch, suitably inscribed, as a mark of appreciation of his instructive lectures on First Aid.

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INTERNATIONAL VEGETARIAN CONGRESS.—During the week a congress has been held under the auspices of the Vegetarian Federal Union, at the Memorial Hall, Farringdon-street. The exhibition in the library, of the same building, of representative products of the vegetable kingdom was opened on the 13th inst. by Lady Gwendolen Herbert and has attracted many visitors. To-day (Saturday) members of the congress will visit Messrs. Carter's trial seed grounds at Mortlake and attend the Harvest Festival at, and inspection of, the Oriolet (Vegetarian) Hospital, Loughton, Essex.

WIGAN MEDICAL SOCIETY.—A meeting of this society was held in the Mining and Technical School, Wigan, on Sept. 9th, Mr. C. T. Street, President, being in the chair. Mr. W. J. Orsman, F.C.S., analyst for the county borough of Wigan, gave a lecture on, and a demonstration of, Roentgen Rays. The lecture and demonstration were highly appreciated, and a cordial vote of thanks was passed to Mr. Orsman. A paper on Empyema and its Treatment was read by Dr. W. Cunningham Milroy. A discussion followed, in which the President, Mr. Monks, Mr. Brady, Dr. White, and Mr. France took part. Dr. Milroy replied.

WE have received a circular from the Society for the Protection of Birds, of which the secretary is Mrs. F. E. Lemon, Hillcrest, Redhill, Surrey, commenting upon the wicked and wasteful destruction of birds to gratify the vanity of women. Ostrich feathers are excepted from the ban. In a letter accompanying the circular is quoted an advertisement beginning, "Sea swallows, kittiwakes; wanted, some thousands of these birds ....." This we call deplorable; traffic in birds' feathers for the purpose of ministering to the requirements of "fashion" ought to be placed under some restrictions.

DIPHTHERIA IN LONDON.—The amount of fatal diphtheria in London during the summer holiday season, when school children were free from the close association with their fellows, has varied to a certain extent. The mortality was certainly smaller during the week preceding the re-opening of the schools of the School Board for London. In the week ended July 17th, just prior to the vacation, the deaths numbered 36, or one below the decennial and corrected average for the particular week of the period 1887–96. In the next week, during which the schools broke up, but during which the pupils were under the influences of inter-association, the deaths were 42, being 6 in excess of the corrected decennial average. In the last seven days of July they numbered 41, and were just 1 in excess of the average. The first week of August yielded a total of 42, or exactly the corrected average for the corresponding week of the preceding ten years. The second week of August saw a fall to 38 deaths, a number 3 below the average; and in the succeeding and concluding week of the Board school holidays there was a further fall to 29, as compared with a corrected average of 40 deaths. In the first week of the schools reassembling, ended Aug. 28th, the fall continued, 28 deaths being registered, and the decennial average being 36. In the next and second week of return to school duties, the deaths showed a rise to 35, the corrected average being 34; but last week there was a marked fall to 25, this number being 9 below the corrected average. In the outer ring the deaths registered from diphtheria in the two weeks prior to the summer holidays were 8 and 21 respectively, the Edmonton district claiming 10 of the 29 deaths; in the four holiday weeks, they numbered 15, 10, 12 and 17; and in the three weeks since completed were 4, 4, and last week, 13, Edmonton district claiming 6 of the 21 during the period.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B., ET FILS, Paris.
Traité de Chirurgie Clinique et Opératoire. Par A. le Dentu et P. Delbet. Tome Cinquième. 1897.

BAILLIÈRE, TINDALL AND COX, King William-street, Strand, London.
Lawson's Tait's Perineal Operations, and an Essay on Curettage of the Uterus. By W. J. S. McKay, M.B., M.Ch., B.Sc. 1897. Price 3s. 6d.
Hand Atlas Series: Anatomical Atlas of Obstetric Diagnosis and Treatment. By O. Schaeffer, M.D. Illustrated. Vol. III. 1897. Price 12s. 6d.—Atlas and Essentials of Gynæcology. By O. Schaeffer, M.D. Illustrated Vol IV. 1897. Price 15s.—Atlas and Essentials of Bacteriology. By Professor K. B. Lehmann and Dr. Rudolf Neumann. Illustrated. Vol. V. Price 12s. 6d.

CHAPMAN AND HALL, London.
English Epigrams and Epitaphs. Selected by Aubrey Stewart. Illustrated. 1897. Price 2s.

CHURCHILL, J. & A., Great Marlborough-street, London.
The Means by which the Temperature of the Body is maintained in Health and Disease, being the Croonian Lectures, June, 1897. By W. Hale White, M.D., F.R.C.P. Reprinted from THE LANCET.
Economics, Anæsthetics, and Antiseptics in the Practice of Midwifery. By Haydn Brown, L.R.C.P., L.R.C.S. Edin.. 1897. Price 2s. 6d.

FANNIN AND CO., Grafton-street, Dublin.
Notes on the Special Hygiene (Physical and Mental) of Childhood and Youth. By Thos. M. Madden, M.D., F.R.C.S.E. 1897.

LEWIN, THOS. AND CO., Castle-street, Berners-street, London, W.
International Clinics. Edited by J. Daland, M.D., Philadelphia, and Others. Seventh Series. 1897-98. Vol. I., 1897. Price 12s. 6d. net.

LEHMANN, J. F., München.
Atlas und Grundriss der Chirurgischen Operationslehre. Von Dr. Otto Zuckerkandl. Band 16. 1897.
Atlas der Gerichtlichen Medizin. Von Professor E. Ritter von Hofmann. Band 17. 1898.

LONGMANS, GREEN AND CO., Paternoster-row, London.
Practical Domestic Hygiene. By J. L. Notter, M.A., M.D., and R. H. Firth, F.R.C.S. 1897. Price 2s. 6d.

NISBET, JAMES AND CO., Berners-street, London, W.
Health in Africa: A Medical Handbook for European Travellers and Residents, embracing a study of malarial fever as it is found in British Central Africa. By D. K. Cross. M.B., C.M., F.R.G.S. With an Introduction by Sir H. Johnston, K.C.B. Illustrated. 1897. Price 3s. 6d.

SCOTT, WALTER, Paternoster-square, London.
The New Psychology. By E. W. Scripture, Ph.D. (Leipzig). Illustrated. 1897. Price 6s.

THE F. A. DAVIS COMPANY, Philadelphia.
Annual of the Universal Medical Sciences and Analytical Index. Edited by C. E. Sajous, M.D. Paris, and others. Illustrated. Vols. I., II., III., IV., and V. 1896.

THE REBMAN PUBLISHING COMPANY, Adam-street, Strand, London.
A Pictorial Atlas of Skin Diseases and Syphilitic Affections in the Museum of the St. Louis Hospital, Paris. Parts 10 and 11. 1897. Price 10s. 6d. each.
Archives of the Roentgen Ray (formerly Archives of Skiagraphy). Edited by W. S. Hedley, M.D., and S. Rowland, M.A., M.R.C.S. Vol. II. No. 1. July, 1897. Price 4s. net.

THE SCIENTIFIC PRESS, Southampton-street, Strand, London.
The Mystery and Romance of Alchemy and Pharmacy. By C. J. S. Thompson. 1897. Price 5s.
Dr. Mendini's Hygienic Guide to Rome. Translated, with an additional chapter on Rome as a Health Resort, by John J. Eyre. 1897. Price 2s. 6d. net.
Elementary Physiology for Nurses. By C. F. Marshall, M.D., B.Sc., F.R.C.S. 1897. Price 2s.
The Midwives' Pocket Book. By Honnor Morten. 1897. Price 1s.

UNWIN, T. FISHER, Paternoster-square, London.
Mother, Baby, and Nursery: A Manual for Mothers. By Genevieve Tucker, M.D. 1897. Price 3s. 6d.

VOSS, LEOPOLD, Hamburg and Leipzig.
Atlas der Syphilis. Von Dr. Martin Chotzen. Heft. 1 and 2. 1897.
Uber die Augenerkrankungen in der Frühperiode der Syphilis. Von Dr. H. Wilbrand und Dr. A. Staelin. 1897.
Praxis der Harnanalyse. Von Dr. Lassar-Cohn. 1897.

University College, Bristol: Calendar for the Session 1897-98 (J. W. Arrowsmith, Bristol, 1897); price 1s.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANGUS, CHAS., M.B., C.M. Aberd., has been appointed Medical Superintendent to the Aberdeen Royal Infirmary, vice Lumsden, resigned.

BAILEY, JOHN GEORGE, M.B., C.M. Edin., has been appointed Senior Assistant House Surgeon to the Huddersfield Infirmary, vice T. Hill Jamieson, resigned.

DAVIES, J. E. H., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer by the Wrexham Rural District Council.

DUNDON, JOHN, M.D., B.Ch., has been appointed Extern Surgeon to Cork Mercy Hospital.

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GILCHRIST, THOS., L.R.C.S., L.R.C.P. Irel., has been appointed Assistant Medical Officer to Sligo District Lunatic Asylum, vice G. R. Lawless.

GILES, OSWALD, L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Sleaford Rural District Council.

GORNALL, JOHN GUEST, M.A., M.B. Cantab., L.R.C.P., M.R.C.S., has been appointed Visiting Medical Officer to Winwick Asylum for Idiots under Lancashire County Asylums Board.

HARVEY, WM., F.R.C.S., has been re-appointed Medical Officer of Health by the Newton Urban District Council.

HAWTHORN, F., M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the No. 4 Sanitary District of the Newcastle Union, and Public Vaccinator for the Central District.

HEATH, A., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed a House Physician to St. Bartholomew's Hospital, London.

HUGHES, Wm., M.R.C.S., has been appointed a Medical Officer for the Waenfawr Sanitary District by Carnarvon Board of Guardians.

KERSWILL, H., L.R.C.P. Lond., M.R.C.S., has been appointed a House Surgeon to the Devonshire Hospital, Buxton.

LAWLESS, G. R., F.R.C.S., L.R.C.P. Irel., has been appointed Medical Superintendent of the Armagh Lunatic Asylum.

LLOYD, EDWARD J., M.D., C.M. Aberd., M.R.C.S., has been appointed Medical Officer to the training ship *Clio*, stationed off Bangor, N. Wales.

MOBERLY, S. C. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 2 Sanitary District of the Winslow Union, vice H. N. Pelly, resigned.

O'CONNOR, DANIEL J., M.B., B.Ch. Irel., has been appointed Extern Physician to Cork Mercy Hospital.

PETRIE, R. O., M.B., C.M. Edin., has been appointed Medical Officer to the St. Andrew's (Fife) Post Office.

ROBERTS, T., M.B., C.M. Edin., has been appointed a Medical Officer for the No. 2 Sanitary District of Carnarvon.

SLOANE, J. S., B.Sc. Lond., M.B., F.R.C.S., has been appointed an Assistant Surgeon to the Metropolitan Hospital.

SMART, W. P., L.R.C.P. Lond., M.R.C.S., has been re-appointed a Medical Officer by the Hoxne Rural District Council.

STACK, E. H. B., M.B. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed a House Physician to the Bristol Infirmary.

STEELE, R. S., M.B., Ch.M. Glasg., has been appointed Medical Officer of Health by the Gnosall Rural District Council.

TEMPLETON, P., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the parish of Pirbright.

TRACY, JAMES J., M.B., B.Ch. Irel., has been appointed Intern Physician to Cork Mercy Hospital, vice M. J. Murphy, deceased.

TWIGG, F. G., L.S.A., has been re-appointed Medical Officer for the Mexborough Sanitary District of the Doncaster Union.

WADDELOW, J. J., F.R.C.S. Eng., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Whittlesey Rural District Council.

WARING, H. J., B.Sc. Lond., M.B., F.R.C.S., has been appointed Surgeon to the Metropolitan Hospital, and also Surgeon to the Department for Diseases of the Throat at that Hospital.

WRIGHT, W. H., L.R.C.P. Irel., M.R.C.S., has been re-appointed Medical Officer by the Alvaston District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ABERDEEN CITY HOSPITAL.—Resident Physician at the City (Infectious Diseases) Hospital. Salary £50 per annum, with board and residence at the hospital. Applications to the Town Clerk, Town House, Aberdeen.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary £150 per annum (with an allowance of £30 per annum for cab hire), and furnished rooms, fire, lights, and attendance.

GENERAL HOSPITAL, Nottingham.—Assistant House Surgeon for twelve months. Salary £50, with board, lodging, and washing in the hospital. Also Assistant House Physician for twelve months. Salary £50, with board, lodging, and washing in the hospital.

GENERAL INFIRMARY, Northampton.—Resident Dresser for six months. Board, lodging, and washing provided.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six months. Board, lodging, and washing in the hospital provided.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Medical Officer, unmarried. Salary £200 per annum, with board and residence. Also Resident House Physicians.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House Surgeon, unmarried. Salary £140, increasing by £10 per annum to £170, with rooms in the infirmary and attendance.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer for six months. Residence, washing, and board provided, and an honorarium given at the termination of the appointment.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Junior House Physician for six months. Salary £15 for that period, with board and residence.

OLDHAM INFIRMARY.—Junior House Surgeon. Salary £50 per annum, with board and residence.

ROYAL CORNWALL INFIRMARY, Truro.—House Surgeon, unmarried. Salary, first year, £120, increasing by £10 a year to £150, with furnished apartments, fire, lights, and attendance.

ROYAL SOUTHERN HOSPITAL, Liverpool.—Junior House Surgeon. Salary 60 guineas per annum, with board, &c.

STOCKTON AND THORNABY HOSPITAL.—House Surgeon, non-resident. Salary £200 per annum.

SWANSEA GENERAL HOSPITAL.—House Physician for one year. Salary £50 per annum, with board, apartments, laundress, and attendance.

WEST HAM HOSPITAL, Stratford, E.—Junior House Surgeon for one year. Salary £35 per annum, with board, residence, &c.

Births, Marriages, and Deaths.

BIRTHS.

McDOWALL.—On Sept. 12th, at Menston, near Leeds, the wife of J. G. McDowall, M.D., of a daughter.

REID.—On Sept. 6th, at Oakley, Kirkcudbright, the wife of W. S. S. Reid, M.B., of a son.

MARRIAGES.

BARNES—HOLLIST.—On Aug. 26th, at St. Peter's Church, Lodsworth, by Rev. C. S. Chilver, Vicar of the Parish, assisted by Rev. L. Brooke-Barnett, Curate of Compton, Herbert Cooper Barnes, M.R.C.S., L.R.C.P. Lond., of Petworth, Sussex, youngest son of James Barnes, Esq., of Tiverton, N. Devon, to Lilian Capron, younger daughter of Lieutenant-Colonel E. O. Hollist, of Lodsworth House.

BEDFORD—FOORD.—On Sept. 8th, at SS. Philip and James, Cheltenham, Surgeon-Major W. J. Guthrie Bedford, second son of the late E. S. P. Bedford, F.R.C.S., to Mabel Stanley, fourth daughter of Edward Bromley Foord, M.C.S. (retired).

BELL—MACKAY.—On Sept. 8th, at Elgin, William Bruce Bell, M.B. Edin., Higher Broughton, Manchester, to Helen Louise, youngest daughter of H. M. S. Mackay, banker, Elgin.

BLACKLER—ADAMS.—On Sept. 8th, at St. Mary the Virgin, Primrose-hill, Henry John Blackler, M.B., of Redhill, to Sybil Mary, daughter of W. Bridges Adams, M.R.C.S., &c., of Belsize-park.

DOBBYN—TAUNTON.—On Sept. 9th, at Holy Trinity Church, Birchfield, Michael Gilbert Dobbyn, L.R.C.P., L.R.C.S. Irel., of Bishopston, Bristol, to Frances Elizabeth, younger daughter of Mr. R. H. Taunton, of Brook Vale, Witton, Birmingham.

GOODCHILD—BRITTAIN.—On Sept. 8th, at St. Barnabas's Church, Bartholomew-road, N., John Goodchild, M.R.C.S., L.R.C.P., of 9, Highgate-road, N., to Alice Emma (Dollie), second daughter of John Brittain, of Hilldrop-road, Camden-road, N.

HAYDON—CHRISTIE.—On Sept. 9th, at St. Stephen's, Avenue-road, London, Thomas Horatio Haydon, B.A., M.B., of Marlborough, to Minnie, second daughter of the late John Christie, Park-crescent, Stirling, N.B.

MAW—MCNAMEE.—On Sept. 15th, at the Parish Church, Kensington, Henry Trentham Maw, M.D., second son of Charles Maw, of Nutfield, Surrey, to Elizabeth, youngest daughter of the late Peter McNamee, Sherwood Foresters, of Dundalk, Ireland.

STEPHENS—BUTLER.—On Sept. 9th, at St. Stephen's Church, Kirkstall, Leeds, Cecil Edward Stephens, M.B. Edin., younger son of the late Dr. Stephens, of Doddington, to Enid Rose Harding, eldest daughter of A. Edmund Butler, J.P., of Kepstorn, Kirkstall.

SYDENHAM—TURNER.—On Sept. 3rd, at Holy Trinity, Cheltenham, by the Rev. Percy Waller, Fredk. W. Sydenham, M.B., C.M. Edin., D.S.Sc. Vict., of Walsall, to Nellie King Turner, of Cheltenham.

THORPE—RODHAM.—On Sept 10th, at Yateley, Hants, by the Rev. R. Oscar T. Thorpe, M.A., Rector of Anstey, Herts, father of the bridegroom, assisted by the Rev. C. D. Stooks, M.A., Vicar of the Parish, Surgeon V. Gunson Thorpe, R.N., M.R.C.S., to Maude, daughter of the late Fleet-paymaster C. R. Rodham, R.N.

DEATHS.

RYE.—On Sept. 1st, at his residence, Westbury, Caterham Valley, Surrey, Arthur Brisley Rye, F.R.C.S., aged 85.

STEPHENS.—On Sept. 11th, in consequence of a bicycle accident at Preston, Richard John Stephens, M.R.C.S. Eng., L.S.A. Lond., Assistant Medical Officer, County Asylum, Whittingham, Lancashire, in his 34th year.

TANNER.—On Sept. 14th, in London, Mark Batt Tanner, M.D., formerly of Brighton, in his 65th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Sept. 16th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo	Maximum Temp. in Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Sept. 10	30·23	N.E.	...	103	65	45	49	52	Fine
,, 11	30·39	N.E.	...	101	62	48	51	54	Fine
,, 12	30·43	S.W.	...	100	65	50	53	58	Hazy
,, 13	30·46	N.W.	...	105	68	49	49	51	Hazy
,, 14	30·46	N.E.	...	109	60	55	55	57	Cloudy
,, 15	30·33	S.W.	...	101	69	53	54	57	Foggy
,, 16	30·09	N.W.	...	84	64	56	58	59	Hazy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which was completed with the issue of June 26th, was given in THE LANCET of July 3rd. It is intended, in future, to include the Index and Title-page for each past half-yearly volume in the first number of the succeeding volume, as in the present case, instead of in the last number of the volume itself, as heretofore.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18s., carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2s., by post 2s. 3d.

To be obtained on application to the Manager, accompanied by remittance.

A QUESTION OF ETIQUETTE.

WE have had a statement submitted to us from one of the interested parties concerning the seeing of a patient, B, under the care of one practitioner, C, by another practitioner, D, in C's absence, at the request of B and her husband, A. So far as we can judge from the statement—a one-sided one, in that it emanates from one of the practitioners only—D acted with absolute courtesy and professional rectitude, and is in no way to blame.

Notifications.—We regret to be quite unable to give a definite answer at so short a notice and on such scanty information. If a detailed account of the matters in dispute is sent to us, with full names and dates (of course, in confidence), we will endeavour to assist our correspondent who, in the meantime, is advised not to go to law without being sure of his ground and backed by a solicitor's opinion.

TREATMENT OF EPISTAXIS.

DR. HAGKDORN, writing in a recent number of the *Zeitschrift für Praktische Aerzte* on epistaxis, assures his readers that if the patient is merely made to hold his head up high so that the alæ nasi are pressed against the septum 90 per cent. of the cases which are due to hæmorrhage from the anterior cartilaginous portion of the septum will cease. A speculum should then be very cautiously introduced and an examination made in order to find out whether any ulcer or varicose vein exists. If so it should be touched with the galvano-cautery or trichloracetic acid after cocaine has been applied. The eschar which this produces must not be disturbed, great care being taken in this respect whenever the nose is blown; it will fall off in eight or ten days. If the hæmorrhage comes from the inferior or middle turbinated bone plugging must be resorted to, which is best effected through the speculum by means of small tufts of aseptic wool, care being taken to see that no blood is escaping by the pharynx. After the plug has remained twelve hours it should be removed, and the spot from which the bleeding proceeded cauterised as in the other class of cases. Where the hæmorrhage comes from the posterior parts of the nostrils the naso-pharyngeal space must also be plugged, and this is best accomplished by the introduction of tampons of aseptic wool by means of well-curved polypus or laryngeal forceps, guided, of course, by the finger. This plug must on no account be allowed to remain more than about twelve hours for fear of erysipelas, gangrene, septicæmia, or purulent otitis supervening; if necessary a fresh plug may be introduced. Perchloride of iron wool is, in Dr. Hagedorn's opinion, distinctly dangerous. The most troublesome cases of all are those in which there is general parenchymatous oozing in subjects of hæmorrhagic diathesis; here repeated plugging, absolute rest, and hydrastis Canadensis should be employed. Sprays are not to be recommended.

M.B., C.M. Glasgow.—An M.D. need not qualify his degree by adding his University, but we always advise him to do so. For the rest, we do not quite understand what it is our correspondent complains of.

EXAMINATION GEMS.

DR. W. D. HAMAKER, a member of the State Board of Medical Examiners, has communicated to the current number of *The Pennsylvania Medical Journal* an amusing little note on the blunders that have been made by students who have appeared before him in the course of his official duties. Some of the medical errors which he chronicles are decidedly astounding as well as amusing, for it is difficult to understand how a candidate capable of giving such answers as those that now follow could ever have conceived that he had commenced to study his subject:—

> "'Hydrogen gass is degenerated from the urea'; 'Cantharides is derived from the root of the plant'; 'Pix liquida is from the Pinus Sommferous group'; 'Cantharides is derived from the destructive distillation of the Spanish fly'; 'The malar bone articulates with the occipital bone'; 'Picrotoxin is an alkaloid of senna and rhubarb'; and 'Spartein and eserine are alkaloids of somnis papaverum.' One hopeful candidate said that 'Spartein was derived from Sparta,' and another that it 'was derived from Spartus.' Another said 'that vinegar was an antidote for mineral acid poisons,' and another stated that 'An infusion of Spanish fly was one of the official preparations.' Another gave us the information that 'the uriniferous tubules secrete the seminal fluid.' Another said that 'belladonna locks up all of the secretions except the urine and feces.' Another stated, without additional matter of any kind, that 'the differential diagnosis between epilepsy and hysteria is that in epilepsy they fall on the stove and burn themselves and in hysteria they don't.' Turning to obstetrics we found one man who, in rigid os, 'would decapitate or perform craniotomy or would put on the forceps and deliver at once.' Another in performing version 'would put his finger in the child's mouth and bring the chin under the os pubis and hold his hand over the mouth to prevent the liquor amnia from choking it.' Another stated 'that the endoxardium is a mucous membrane which weighs 2oz., and is separated from the pleura by the pericardium.' Another stated 'that the function of the optic nerve is to contract the pupil and move the eyeball.' A new diagnostic symptom was offered by the gentleman who stated in a written paper that 'in cerebral hæmorrhage the patient may vomit the cerebro-spinal fluid.'"

Dr. Hamaker also gives examples of instances of want of common education, advancing them as arguments that a higher level of preliminary education should clearly be required from the American medical student.

> One applicant spelled tongue, "tong"; another spelled salts, "saults"; another spelled broom, "brougham"; another spelled fly, "fley," and flies, "flyes"; one young lady spelled sugar, "shugar"; another applicant spelled Spain, "Spane"; fir-tree was spelled "fur-tree"; another spelled pulse, "pultz"; and sore was spelled "soar"; and another spelled pus "puss."

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QUEERNESS IN A TALE.

A "QUEER STORY" in *Truth* is not to be taken seriously, but even in ephemeral literature there are limits beyond which queerness should not be pushed, and in the *Truth* feuilleton of Sept. 2nd that limit was exceeded. Mr. Hall Caine's specimen of the nursing sisterhood has a few redeeming points, but *Truth's* specimen, Nurse Denison—although Dr. Pillington describes her as "the most attentive nurse in London ..... and one of the few whom I can really trust in very critical cases"—can only be pronounced a hopelessly weak-minded, vicious simpleton, without any redeeming points whatever. "Dr. Pillington had a very 'smart' practice indeed. It was an almost exclusively society practice, only touching here and there one who was outside the sacred pale. He was eminently qualified for this class of work, being distinguished by exceptional polish and refinement, and having the air of a thoroughly well-bred man, which, indeed, he was." But, unfortunately, this paragon was also a confirmed gambler, and had been "mad enough to forge another man's signature to a promissory note." One Scaasi, "a blood-sucking usurer," finds this out, and in the ordinary course of his business puts the screw on Dr. Pillington "to make some intentional mistake in his treatment" of a certain Duke, whose spendthrift son and heir in consideration of an immediate advance of £20,000, had executed a post-obit bond for £100,000 in favour of the said blood-sucker. So far the lines of the humble penny dreadful have not been notably departed from, but *noblesse oblige* and queerness has been dragged in *coûte que coûte*. The paragon recoils with horror from the dastardly scheme. He is far too well-bred to commit such a base crime himself, so lets Nurse Denison know that he would like her to carry out the usurer's order. Nurse Denison, who has been winning the Duke's gratitude by attending on him "with a skill, a gentleness, a consideration that were beyond all praise," has not the slightest objection to oblige, and his Grace incontinently receives "a double dose of his sedative medicine," which, *mirabile dictu*, at once proves fatal. The poisoner, it should be noted, was not actuated by any "sordid or selfish motive." Far from it. "She was madly in love with Dr. Pillington, and she did what she did solely for his sake."

L.F.P. & S. will find in our Students' Number (published this year on Aug. 21st, but as a rule published in the first week in September) full information on the subject. All the fees for the different courses at the different London hospitals are there given in detail.

Vienna.—We have inquired.

STERNUTATORIES AS A SUBSTITUTE FOR THE FORCEPS IN LABOUR.

To the Editors of THE LANCET.

SIRS,—On reading Dr. Lauder Brunton's interesting book ("Lectures on the Action of Medicines") I was surprised, and not a little astonished, to see the statement that "sternutatories are sometimes employed in country practice as substitutes for the forceps in labour." Now I do not for a moment suppose that anything in the way of a sneer was meant in this opinion, or that the forceps are not as intelligently used by the country practitioner as by his *confrère* in town. I have certainly heard of sternutatories used as an aid to labour, but mostly, I think, by old women, and in the form of snuff, but certainly not by country medical men, specially as a substitute (or in the way of saving labour) for the forceps. However pleasant sneezing may be, and no doubt a good sneeze is not to be despised, yet very few intelligent accoucheurs, either in town or country practice, would risk allowing the fœtus to be expelled in this perfunctory and, let me add, unscientific manner, and thus running the untold risks of perineal rupture and death from hæmorrhage to both mother and child. So far from trusting to such unsatisfactory substitutes, and in this category I do not exclude ergot, the country practitioner has been blamed with using instruments too freely, and I am sure very few men, especially those with anything like a wide experience, would for a moment compare these more or less unreliable remedies to the scientific adaptability of a good pair of forceps. No; with the forceps we can guide, control, and complete the labour when we choose, and thus perhaps, not only save a child's life, but the patient a certain amount of prolonged and unnecessary suffering. A practitioner who knows anything about forceps delivery will not for one moment consider the trouble of applying the instrument, but, like every other scientific operator, rather take a positive pleasure in the assured and apparent efficiency of his art. It is not always given to the country practitioner to step forward on the platform of recognised merit, but I think in matters obstetric he was not born yesterday (if I may be allowed the vulgarism) nor necessarily in the country.

I am, Sirs, yours faithfully,

Rothwell, Northamptonshire. JAMES MORE.

Inquisitive should consult his medical attendant. The case is one in which special assistance might be necessary, and his medical attendant could tell him whom to consult. We do not give medical advice.

MORE QUACKERY.

A CORRESPONDENT sends us the following handbill, which we reproduce *verbatim et literatim*. In our opinion the Christian young men of Walsall might find some better use for their private rooms than to lend them to ignoramuses of this kind. At what date was Sir Andrew Clark ever "Sir Morrell McKenzie"? Some day possibly some patients, "after having been fit with an appliance," will discover that they have been swindled, but until this sort of thing is made illegal it will always flourish. We observe that "spinal weakness" is "a speciality." Personally we should have thought the weakness existed in another part of the organism, but pigeons for plucking will always be found by those who look for them.

A WORD TO SUFFERING WOMEN.

NURSE SLATER

will visit WALSALL for four weeks, commencing Wednesday next. Hours 2.30 to 6 p.m.

ADVICE FREE

At the Private Rooms of the Y.M.C.A., Freer St., WALSALL.

Mrs. Slater's experience in all Inward Complaints of Women is unequalled. Her

PROLAPSUS UTERI BELT

is Specially Adapted for the Prevention and Cure of the Falling of the Womb, without wearing any Inward Instrument whatever.

Sir Andrew Clark, late Sir Morrell McKenzie, Dr. Stephen McKenzie, &c., &c., can with confidence recommend her Appliances to the suffering.

TUESDAYS ONLY.

Many who have suffered from this painful complaint and have tried instruments of every kind and derived no benefit, have proved the Belt a great blessing.

Those who have only been able to do their work in pain and suffering have soon found relief, and thousands who had given up hope of ever being well again are now going about as well as ever they were in their lives.

Rings, Cradles, and every description of Inward Instruments are now almost universally condemned by the medical profession—because such things are the source of tumours to an alarming extent.

A poor woman from Wolverhampton, who earned her living at the washtub, and who had worn a Belt for 2 years, wrote: "Before wearing your appliance I never had a day's comfort. The bearing down Pains, and pains in my back, were so bad that I scarcely knew what to do. Now I am like another woman. I can do my work, and it is a pleasure to do it."

It is of great importance that any wishing to see her should do so at once as she cannot stay but a few weeks, and she always prefers to see each patient after they have been fit with an appliance in order to judge how they are progressing.

The great difficulty is to persuade sufferers that they have nothing to be afraid of. One who came said, "Why, Mrs. Slater, I was afraid of coming, but had I known who I was coming to, I shouldn't have had any need. It's more like seeing a friend than anyone else."

THE COMPRESS BELT

For Stoutness, is invaluable to all stout people. It not only reduces the measurement, but it causes them to breath much easier and freer, and also causes walking to be a pleasure. ALL ADVICE FREE.

SPINAL WEAKNESS a Speciality. Don't delay your visit.

TUESDAYS ONLY.

Mr. Slater will attend for Men at the same Address

FROM 5 0 P.M. TO 6.0 P.M.

If you are ruptured, see him. If he cannot hold your rupture he will tell you so. No person need suffer from an ill-adapted or bad-fitting Truss. All children may be cured permanently if brought in time. Come soon. No charge for advice. Note address and hours of attendance—

Private Rooms of the Y.M.C.A., Freer-street, Walsall.
Hours 5 to 6.

Adipose Tissue.—A medical man writing under this pseudonym would feel much obliged to anyone who could give him full particulars of Mr. Banting's system of dieting for obesity, or of any other system which would have a similar effect.

A Correspondent in Whitehaven.—"A Code of Medical Ethics," by Jukes de Styrap, M.K.Q.C.P., &c. H. K. Lewis, Gower-street, London, W

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"THE DISPOSAL OF IMPORTED BAD EGGS."

DR. COLLINGBRIDGE (the medical officer of health of the Port of London), in reference to the annotation in THE LANCET of Sept. 11th under the above heading, refers us to an article in the *City Press*, which says that the cargo of eggs was not condemned at Greenwich and by the Port Sanitary Authorities, and that this fact relieved them of the responsibility of disposing of the offensive cargo in an efficient manner. If the eggs had been condemned by the Port Sanitary Authorities they would have been disposed of in a more approved way. But we still do not see why the eggs were not condemned at Gravesend, in which case we do not doubt they would have been so disposed of as at any rate not to have led to a nuisance and offence to the neighbourhood, as was the case when they were destroyed at Limehouse.

Lungo.—What our correspondent proposes to do is always open to the accusation of unprofessional conduct. He must be a law to himself, for he alone knows how far his negotiations with a brother practitioner have given him an insight into matters which would otherwise have remained private for him.

J. R. T.—If our correspondent's friend did not raise the point in his agreement and has received his salary weekly we think he must accept a week's notice.

"FONETIK AND RASHONAL MEDIKAL FRAZEOLOGY."

A FREQUENT correspondent sends us the following *résumé* of a paper read by Dr. George M. Gould, of Philadelphia, the author of the magnificent medical dictionary, in which the cause of a "simpler" spelling of medical terms is amusingly urged:—

"Specifically, the microscopic modifications I urge are," says Dr. Gould:—

"1. Abolish in English words archaic, unnecessary, bothersome 'æ' and 'œ,' supplanting them by 'e.'

"2. Cease adding tautologic 'al' to adjectives having already one adjectival suffix 'ic'—already done in thousands of words; finish the job. As, prosaic for prosaical.

"3. Drop the useless hyphen in words whose parts are derived from classic languages. In ten thousand words you have already done so; finish with the rest. Retain the hyphen in such compound terms as express a single idea by two semi-fused English words, especially when both are nouns; as, antitoxin (not anti-toxin), culdesac, postmortem, ventrofixation, &c. Keep the hyphen, because necessary to avoid confusion and doubt, in curette-spoon, heart-murmur, skin-disease, sleeping-sickness, &c.

"4. Drop useless 'te' from curette, brunette, fourchette, etiquette, cigarette, &c. You have already lopped it off from cutlet, doublet, quartet, quintet, sextet, septet, racket, minuet, fillet, corset, stylet, tourniquet, bouquet, &c.; finish the job. Cut off useless 'me' from many words, writing program, gram, centigram, &c., just as already we do telegram, anagram, diagram, epigram; let us make an end of it.

"5. Use figures instead of spelling out numbers, at least above ten.

'6. Anglicise foreign terms when a goodly proportion of your readers will not understand them in the originals. Use italics as little as possible; use as few foreign words and terms as possible, because the vast majority of your audience cannot understand them (even if you do); and because there is a deal of silly conceit in airing exotics of speech.

"7. As to chemic terms, accept recommendations of the American Association for Advancement of Science, which, after years of dispassionate investigation, advised dropping final 'e' in bromide, iodide, bromine, iodine, atropine, quinine, &c. Say phenol for carbolic acid, glycerol instead of glycerine, &c.

"8. Abolish diæreses and accents. They cannot teach pronunciation: they are useless luggage. Let us write oophorectomy, cooperation, ptomain, leukomain, &c, without the diæresis. When a foreign word is Anglicised let us do it completely, and not drag into our domain exotics of foreign habit, leaving it, e.g., neither English nor French. To poets leave the acute, grave, and circumflex accents, foreign to the spirit of our tongue.

"Finally, consider the source and secret reasons for opposition to the foregoing. Ignorance—colossal, imperturbable, impertinent ignorance characterises much of it. ..... Not only can there be no valid objection to such simplified spelling, but there are many good reasons for its use. We must get out of this thraldom of foolish, difficult, and heterogeneous spelling."

Busy Practitioner will find no convenient books embracing both subjects. The names of the books answering his purpose will be found on p. 442 of the Student's Number of THE LANCET, Aug. 21st, 1897.

PROPOSED CASTRATION OF IMBECILES AND CRIMINALS.

THE *Philadelphia Medical and Surgical Reporter* states that a Bill has been introduced into the Michigan Legislature providing for the castration of all inmates of the Home of the Feeble-minded and Epileptic before their discharge, of all persons convicted of felony for the third time, and of those convicted of rape.

SOFT RUBBER SCREW DRAINAGE TUBE.

To the Editors of THE LANCET.

SIRS,—Cases occasionally occur where deeply-seated abscesses have to be drained through a sinuous track through which it is impossible to pass an ordinary drainage tube and dangerous to use long sinus forceps or tube introducers. In such cases as small localised empyemata, localised peritonitis, drainage after ruptured extra-uterine gestation, abscess situated amongst the bowels with a sinuous sinus, I have found the following device invaluable. An ordinary drainage tube is neatly cut with sharp scissors into the form of a right-handed screw at the end. It is put into the sinus, and when its course is arrested it is turned round to the right. The end easily finds its way in the right direction and the rest of the tube follows without any damage to the surrounding parts, and with a facility which is often surprising.

I am, Sirs, yours faithfully,

THOS. CARWARDINE.

*** The device is new to us, and strikes us as very ingenious.—ED. L.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (22nd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (23rd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (25th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Luton Reporter, South Wales Daily News, Derby Daily Telegraph, Manchester Guardian, Bradford Daily Telegraph, North-Eastern Daily Gazette, Edinburgh Evening News, Newcastle Chronicle, Dundee Advertiser, North British Daily Mail, Times of India, Pioneer Mail, Walsall Advertiser, Builder, Sheffield Independent, Rangoon Gazette, Bombay Champion, Western Morning News, Herald of Wales, Architect, Liverpool Daily Post, North Wales Chronicle, Ayrshire Post, Worcestershire Chronicle, Huddersfield Chronicle, Bury Guardian, Somerset Gazette, Hereford Journal, Leek Times, Yorkshire Post, Bournemouth Directory, Sussex Daily News, Scotsman, Citizen, Eastbourne Gazette, Reading Observer, Cheltenham Mercury, Bridgwater Independent, St. Andrew's Citizen, Hastings Independent, Norwich Mercury, Birmingham Post, Bromsgrove Messenger, Bristol Mercury, Chester Chronicle, Cambrian, Leicester Post, Gloucestershire Chronicle, Bedford Times, Keene's Bath Journal, Portsmouth Times, Leeds Mercury, Kidderminster Shuttle, Elgin Courant, Norfolk Chronicle, Cape Times, Le Temps, Sanitary Record, Brighton Gazette, Hertfordshire Mercury, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, Mining Journal, City Press, Reading Mercury, Surrey Advertiser, Public Health, Engineer, Guy's Hospital Gazette, Local Government Journal, Le Courier de la Presse, North British Agriculturist, Gazette (Montreal), West Middlesex Herald, Prescot Reporter, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Messrs. Allen and Hanburys, Lond.; Æsculapius, Lond.; Alpha, Lond.; Mr. J. M. Atkinson, Hong Kong.

B.—Mr. H. Burden, Lond.; Gebrüder Borntraeger, Berlin; Messrs. Burgoyne, Burbidges, and Co., Lond.; Messrs. Brady and Martin, Newcastle-on-Tyne; Dr. H. A. Ballance, Norwich; Messrs. Burroughs, Wellcome, and Co., Lond.; Mr. Alfred Bishop, Lond.; Dr. Bell, Hong Kong.

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G.—Mr. L. M. Griffiths, Bristol; General Prisons Board, Dublin, Chairman of; Dr. L. Grant, Oban, N.B.; Dr. W. Herbert Gregory, Beverley; G. S., Lond.

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T.—Mr. J. Thin, Edinburgh; Terrōl, Ltd., Lond.; The Thompson Laboratory Co., Washington, U.S.A.

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V.—Vegetarian Federal Union, Lond., Secretary of; Veitch, Lond.

W.—Dr. F. P. Weber, Lond.; Messrs. J. S. Wood and Co., Manchester; W. S. B., Lond.; Dr. J. K. Watson, Wandsworth; Dr. C. T. Williams, Lond.; Messrs. J. Wright and Co., Bristol; Mr. F. Wilson, Lond.; Messrs. W. M. Wills and Co., Lond.; Messrs. Wright, Dain, and Co., Lond.; Professor A. E. Wright, Netley; Mr. E. White Wallis, Leeds; Dr. D. Walsh, Lond., Women's Coöperative Guild, Kirkby Lonsdale, Secretary of.

Y.—York Retreat, Secretary of.

Letters, each with enclosure, are also acknowledged from—

A.—Arithmos, Lond.; Ajax, Lond.; Messrs. Armour and Co., Lond.; Arfon, Liverpool; Dr. Aitchison, Blackburn; A. T. I., Lond.; A., Lond.; Abstainer, Lond.; Anthrax, Lond.

B.—Dr. Breach, Yattendon; Surgeon R. F. Bate, H.M.S. *Widgeon*, Cape West Coast Station; Messrs. Brown, Gould, and Co., Lond.; B. and B., Godalming; Messrs. Battle and Co., Paris; Mr. J. P. Balbirnie, Staveley; Brighton, Lond.; Benin, Lond.; Mr. W. G. Benge, Tiverton; Dr. G. H. Barker, Arcachon, France; Mr. H. C. Barnes, Petworth; B. P., Lond.

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X.—X. Y. Z., Lond.; X., Lond.; Xiphoid, Lond.

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Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to Mr. CHARLES GOOD, Manager, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

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Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

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A Clinical Lecture

ON

HYSTERICAL MUTISM AND OTHER FUNCTIONAL SPEECH DEFECTS.

Delivered at University College Hospital on July 12th, 1897,

BY H. CHARLTON BASTIAN, M.D.,
F.R.C.P. LOND., F.R.S.,
PHYSICIAN TO THE HOSPITAL AND TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

GENTLEMEN,—In my recently delivered Lumleian Lectures I dealt mainly with defects of speech referable to lesions in one or other of the four cortical word-centres, but the limited time at my disposal compelled me to omit one important section of this subject—namely, the consideration of the defects due to functional disabilities in the glosso-kinæsthetic word-centre. This portion of the subject, therefore, I propose to consider to-day.

Aphasia occurs not unfrequently in association with various sets of conditions as a temporary disability, and sometimes with a marked tendency to recurrence, where the brief duration and the complete recovery make it improbable that it can have been due to any gross lesion.

What the proximate causative conditions have been in these different sets of cases it is often impossible definitely to say. Instead of softenings of brain tissue or hæmorrhages, abscesses, new growths, or traumatisms of the brain as causes of loss of speech, we can only, in order to account for the defects of which we are now about to speak, appeal to ischæmia (from irritative congestion, temporary thromboses, minute embolisms, or spasms of vessels) affecting the posterior part of the left third or of the second and third frontal convolutions; to "inhibition" variously brought about; or to other little-understood causes leading to degradation of function in the same parts. Whatever the precise cause of the disability happens to be, this may—as with functional paralysis of limbs—persist for variable periods (hours, days, weeks, months, or even two or more years), and yet permit ultimately of a perfect restoration of function more or less rapidly brought about.

In these cases we have to suppose that from one or other of the causes above referred to the molecular mobility of the glosso-kinæsthetic centre is so reduced that it is unable to send down to the bulbar speech-centres incitations strong enough to call them into activity.

The principal causative or associated conditions may now be referred to in succession.

(*a*) *Irritative congestion or thrombosis following upon excessive literary work or worry, or as a result of exposure to cold.*—Trousseau recorded several interesting cases of this type,[1] and many others have since been published by subsequent writers. The case of his colleague, Professor Rostan, which Trousseau quotes, may be here reproduced as a typical instance of the kind of defect with which we are now concerned.

CASE 1.—"Rostan had been confined to his bed for a few days in the country in consequence of an injury to one of his legs, and, being alone there, he read all day and thus fatigued his brain. He was engaged one day reading Lamartine's 'Literary Conversations,' when he suddenly noticed that he did not clearly understand what he was reading. He paused for a short time, but on beginning again he made the same remark. Alarmed by this, he tried to call for help, but to his extreme surprise he was unable to utter a word. Believing himself to be struck with apoplexy, he then executed various complex movements with both his hands and with his uninjured leg, and thus found that he was not paralysed. He then rang the bell, and when a servant came into the room Rostan could not speak a single word, and yet he could move his tongue in every possible direction, and was perfectly aware of this singular discrepancy between the facility with which his vocal organs were moved and his inability to express his thoughts in words. He made signs that he wished to write, but on pen and ink being brought to him he was as incapable of expressing his thoughts in writing as in speaking. On a medical man arriving two or three hours afterwards Rostan pulled up his shirt-sleeve, and, pointing to the bend of his arm, clearly intimated that he wished to be bled. No sooner was the bleeding over than he was able to say a few words, although incoherently and imperfectly. Still some of these words clearly expressed an idea, whilst others seemed to have no relation to the principal idea. By degrees the veil was removed, he had a greater command of words to express his ideas, which also became more numerous, and at the end of twelve hours recovery was complete."

Long before anything definite was known about aphasia a very similar case was recorded by Scoresby Jackson[2] of Pennsylvania. The case is quoted by Bateman,[3] from whose work I take it.

CASE 2.—"The Rev. Mr. ——, aged forty-eight years, endowed with intellectual powers of a high order, of a sanguine temperament, with latterly a strong tendency to obesity, having exposed himself to the influence of the night air, received a check to the cutaneous perspiration. The next morning he awoke with a headache, and when a friend went into his room to inquire after his health he was surprised to find Mr. —— could not answer his questions.

"Dr. Jackson having been summoned, found the patient in full possession of his senses, but incapable of uttering a word; the tongue was not paralysed, but could be moved in every direction; all questions were perfectly comprehended and answered by signs, and it could be plainly seen by the smile on his countenance, after many ineffectual attempts to express his ideas, that he was himself surprised and somewhat amused at his peculiar situation. The face was flushed, the pulse full and somewhat slow, and to the inquiries if he felt pain in the head he pointed to his forehead as its seat. When furnished with pen and paper he attempted to convey his meaning, but he could not recall words, and only wrote an unintelligible phrase, 'Didoes doe the doe.' Forty ounces of blood were drawn from the arm, and before the operation was completed speech was restored, though a difficulty continued as to the names of things, which could not be recalled. The loss of speech appearing to recur in fifteen minutes, ten ounces more blood were abstracted, and sinapisms applied to the arms and thighs alternately. These means were speedily effectual, and no further return of the affection took place."

In each of these cases we see that the aphasia was associated with agraphia; and that the functional disability was not limited to the third frontal gyrus seems further shown by the fact that during recovery these patients also showed some degree of verbal amnesia or paraphasia.

(*b*) *Minute embolisms.*—Nothnagel[4] has called attention to cases of this kind in which patients suffering from valvular heart disease were suddenly attacked with aphasia, unattended by other symptoms, the loss of speech disappearing in the course of one or two days. Hammond[5] also mentions the case of a woman who, after repeated attacks of acute rheumatism, with marked aortic insufficiency, was seized with headache and vertigo whilst conversing with a friend, and whose speech was abruptly cut short. She was rendered completely aphasic, but recovered within forty-eight hours.

(*c*) *Spasm of vessels.*—Sometimes the temporary ischæmia which leads to aphasia is due neither to irritative congestion, temporary thrombosis, nor minute embolism, but seems to be occasioned rather by spasms of vessels. A good instance of this supposed mechanism leading to "recurring attacks of transient aphasia and right hemiplegia" has been recorded by E. O. Daly,[6] of which the following is an abstract:—

CASE 3.—A man, aged sixty-eight years, was suddenly seized, on March 11th, at 6 A.M., with aphasia and right hemiplegia. The attack lasted about five minutes and passed off as rapidly as it came on. He had suffered occasionally for years from gout, most frequently affecting his bladder. The first sound of his heart was found to be feeble; his arteries were thickened, and his urine was pale, with a well-marked trace of albumin, and a specific gravity of 1010. His temperature was normal and his pulse 80 per minute.

On March 13th he had two attacks of a precisely similar kind to the first, each lasting about half an hour.

On March 14th there were ten attacks, the shortest lasting about ten minutes, the longest almost an hour.

On March 15th there was one attack of ten minutes' duration, and three in succession with about a ten minutes' interval between, each extending over three hours.

After March 15th he remained quite free from an attack of any kind. The treatment consisted of perfect rest, a few grains of calomel, and a mixture containing small doses of iodide of potassium and citrate of lithia.

Dr. Daly says: "I saw this gentleman during several of these attacks. They came on perfectly suddenly without any premonitory symptoms, and passed off as rapidly. He would suddenly say, 'I am all right again.' There was never any kind of convulsion. ..... When asked to put out his tongue he did so at once, and also closed his eyes and performed intelligently all actions asked of him. The aphasia was not complete, but the words he had at his command were limited and frequently misapplied; and in some of the attacks he was quite unintelligible. The hemiplegia was also partial, more marked in the arm than in the leg. He could move the right hand to a limited extent, and was able to grasp my hand feebly. There was also slight anæsthesia of the right side. ..... The attacks in every instance ended abruptly, the speech becoming instantaneously perfect. The power in his right side returned almost as rapidly, but after the long attacks a few minutes elapsed after the return of speech before he could use his arm and leg perfectly."

This is certainly a remarkable case, and it seems more explicable on the supposition that the recurring attacks were

[1] Lectures (translation by Bazire), 1867, p. 219.

[2] American Journal of Medical Sciences, 1829, p. 272.

[3] On Aphasia, Second Edition, p. 83.

[4] Ziemssen's Cyclopædia (Translation), vol. xii., p. 673.

[5] Diseases of the Nervous System, p. 129.

[6] Brain, July, 1887, p. 233.

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due to recurring spasms of vessels, perhaps under the influence of gouty and uræmic poisons in the blood than in any other way. Brissaud refers to another case of recurrent aphasia with right hemiplegia which showed itself in a woman suffering from grave heart failure.[7] At each return of the cardiac asystole there was a corresponding return of the paralytic phenomena in the right limbs with transitory aphasia.

(*d*) *Narcotic and other poisons introduced from without.*—Many cases are on record in which poisoning by stramonium, belladonna, cannabis indica, tobacco, and opium have, among other symptoms, given rise to temporary aphasia, and sometimes to amnesia verbalis. References to cases of this kind, and also as to the effects of snake poison, will be found in Bateman's work.[8] Concerning the latter he says: "M. Ruftz stated at a meeting of the Paris Anthropological Society that he had seen a certain number of persons who had completely lost their speech in consequence of a bite from a serpent (Fer de lance); sometimes aphasia was produced instantly, and at other times some hours only after the bite; but, what was most remarkable, those who survived the poisoning remained permanently aphasic. Van der Kolk quotes the case of a gunner in the Dutch Indies who was bitten by a serpent called by the natives 'oeloer'; in a few minutes he became giddy and lost the power of swallowing, there was total loss of speech, but consciousness was unimpaired; death occurred four hours and a half after receipt of the injury." Wm. Ogle has also written an interesting paper[9] on this subject, showing that loss of speech often precedes loss of consciousness, and that in cases of recovery it may persist for weeks after other symptoms have disappeared. These facts seem to show that snake poison exercises a specially deleterious action upon the speech centres of the brain.

In addition to vegetable and animal poisons, however, it has been found that one mineral poison at least—namely, lead—may also produce aphasia. Thus, cases have been recorded by Heymann[10] and others showing that among the various nervous symptoms producible in different persons by lead poisoning aphasia is to be included.

(*e*) *Poisons engendered within the system.*—Under this head we have to include a very miscellaneous group of cases in which aphasia occurs as a temporary symptom in the course of certain specific fevers, in the puerperal state, in diabetes, Bright's disease, gout, &c.

The specific fevers in association with which aphasia is apt to manifest itself as a temporary symptom are typhoid fever more especially, and more rarely in typhus fever, small-pox, measles, and yellow fever. Numerous instances of this kind have been recorded.[11] It has also been met with in association with intermittent fever.[12]

Transitory aphasia may likewise occur in association with the puerperal state, and more frequently after than before delivery. It is then, in all probability, mostly due to minute thromboses. Instead of being transitory, however, it may be permanent and associated with thrombosis of the middle cerebral artery, a good instance of which, as it appears to me, has been recorded by Bateman.[13]

In diabetes, in Bright's disease, and in gout we also have poisonous or other products accumulating within the body, and in each of these conditions nervous symptoms of various kinds are apt to show themselves in different individuals, among which a transitory aphasia is to be included.[14]

In these different cases of poisoning (whether of extrinsic or of intrinsic origin) the precise mode of production of the aphasia probably varies a good deal. In some cases (1) the altered quality of the blood may favour the occurrence of small or temporary thromboses in the vessels of the cortical centres at fault; in others (2) the poisons circulating in the blood may lead to contractions of the small arterioles, thus temporarily cutting off more or less completely the blood supply of these same cortical centres; while in other cases it may be due (3) to the direct action of the various poisons upon the nerve elements of the cortical centres affected.

1. That the first mode of production of the transitory aphasia in these cases is a frequent one there can be little doubt. But such minute thromboses would, strictly speaking, belong to the category of organic causes, and the cases in which they occur are only liable to be confounded or classed with cases of functional disease by reason of the brief duration of the trouble to which they give rise, this brief duration being dependent upon one or other of two conditions; either (*a*) that the thromboses occur only in small vessels, so that the functional effects thus caused can soon be minimised by the opening up of collateral anastomoses; or else (*b*) by the fact that the small thrombosis is temporary, soon becoming resolved. These cases in which the thromboses are minute are connected, however, by insensible gradations with others where larger vessels are occluded and remain permanently blocked, so that the disabilities thus caused not only persist, but are of a much graver kind. And in all the previously enumerated causes of blood poisoning of intrinsic origin it is well known that thrombosis of larger cerebral vessels is apt to occur. In this way aphasia may be associated with hemiplegia, or hemiplegia may occur alone, and they may both persist long after convalescence from the original malady has been established.

2. Cases of transitory aphasia due to spasm of the arterioles would have a more distinct right to come into the category of functional cases, but with what frequency this mode of production occurs we are quite unable to say. Uric acid in the blood is said by Haig[15] to have a tendency to contract the small arterioles, so that this mode of pathogenesis may obtain in some of the cases of transitory aphasia occurring in gouty subjects—the case of frequently recurring aphasia recorded by Daly, and previously quoted, being perhaps a notable example.

3. Instances of transitory aphasia due to the direct action of poisons upon the nervous centres would have an equal right to be placed in the category of functional cases. We may suppose that the poison for the time being annuls or badly hampers the functional activity of one or more of the cortical speech centres, though what determines the noxious influence of the poisons upon these particular sets of nerve elements rather than upon others must remain as obscure in this as in other cases where general causes produce particular local effects.

In other classes of temporary aphasia about to be referred to the actual mode of pathogenesis would seem to be no less obscure, though in some of them it would be commonly said to be due to "exhaustion" of nerve elements following upon epileptiform discharges; or else, in still other cases, to an even more mysterious process known as "inhibition," to which some are very prone to appeal where explanation is difficult.

(*f*) *Before or after epileptiform convulsions.*—It is now a familiar fact that in cases of epileptiform convulsions of the Jacksonian type, whenever the convulsion begins with twitchings about the right side of the mouth (in right-handed persons), or with sensations and twitchings in the tongue, that aphasia may precede and follow for a more or less brief period the occurrence of each of such fits.[16]

Delasiauve[17] has recorded the case of an epileptic woman in which aphasia alternated with epilepsy. She would be aphasic for a week, when on the occurrence of a fit of epilepsy the power of speech would return, paralysis of the bladder, however, ensuing. After a time she would again lose her speech, and the same sequence of symptoms would recur.

Sometimes slight temporary loss of speech has been known to recur two or three times as early events in a chain of symptoms which have subsequently developed into those of general paralysis of the insane. I have recently met with two such cases, and subjoin a few details concerning one of them.

CASE 4.—A merchant, aged thirty-one years, had experienced a great shock and prolonged anxiety in connexion with his business affairs four years previously. This was followed by insomnia, which had become much worse during the last eighteen months.

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[7] Le Progrès Médical, Dec. 30th, 1893.
[8] On Aphasia, second edition, p. 273.
[9] St. George's Hospital Reports, 1868, p. 167.
[10] Berliner Klinische Wochenschrift, Band ii., 1865, pp. 195, 208, and 223.
[11] See A. Clarus, Jahrbuch für Kinderheilkunde, 1874, p. 369; R. Kühn, Deutsches Archiv für Klinische Medicin, 1884, p. 56; and J. R. Longuet, L'Union Médicale 1884, p. 717.
[12] M. E. Boisseau, Gazette Hebdomadaire de Médecine, 1871, p. 717.
[13] Loc. cit., p. 131. See also Poupon, Gazette des Hôpitaux, March 8th, 1866, for an analysis of twelve cases of puerperal aphasia.
[14] See Bernard and Féré, Archives de Neurologie, 1882, p. 370, and Dunoyer, Gazette Médicale de Paris, 1884, tome i., p. 461.
[15] THE LANCET, March 7th, 1896.
[16] Occasionally after an epileptic fit an abiding aphasia, without hemiplegia, may be produced, an instance of which has been recorded by Gairdner (Glasgow Medical Journal, May, 1866); whilst in another case recorded by Llewellyn Thomas (Brit. Med. Jour., Sept. 18th, 1875) a child of three and a half years became dumb, and also absolutely deaf, after an attack of convulsions.
[17] Quoted by Bateman, loc. cit., p. 269.

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I saw this patient first on Feb. 14th. 1894, and was informed that one month previously there had been, without any apparent cause, loss of speech for a time. During this attack he could not get any words out, only making abortive attempts to do so. After about two hours this difficulty ceased rather suddenly, and afterwards he felt even better than he had been before.

Again, five days before he came to me he had another slight attack of the same kind, which lasted for about half an hour. No cause could be assigned for this attack, except that the previous night had been an extra bad one.

On Feb. 24th, after a little extra work in his office, he had another attack of loss of speech (though the loss was less absolute than before) which lasted about one hour. Up to this date there was no paresis of the limbs and no mental symptoms, though there was very slight thickness of speech during the intervals between the attacks.

This patient improved greatly for a time in all ways; but early in April he began to have difficulty in writing letters—omitting words or repeating and spelling them wrongly. By the end of April he became more restless, over-exerting himself, and would not be controlled in this respect. By the middle of May he began to develop delusions of grandeur, which rapidly increased; and on May 26th he was sent to an asylum in a very excited state and full of delusions of all kinds.

It should be borne in mind, likewise, that a temporary aphasia may occur in the course of general paralysis of the insane, as an immediate sequence of one of the so-called "congestive attacks" to which these patients are liable.

In other cases, as will be seen presently, a different form of speechlessness—namely, "hysterical mutism"—is found to follow some attacks of convulsion of an hysterical type.[18]

(g) In association with insanity, catalepsy, and ecstasy.—A condition of mutism of more or less duration is not at all uncommon in patients suffering from chronic dementia or from melancholia. It is often a lack of will to speak which leads to taciturnity extending over long periods, though various other forms of speech defect are also met with among the insane.[19]

Not unfrequently this persistent mutism is the result of some hallucination or delusion. Speaking of this class of cases Séglas says:[20] "Often it is a special hallucination which is the origin of the patient's mutism. He hears, for example, an imperative voice which forbids him to speak; and in spite of all entreaties he keeps silence. In other cases the mutism is the consequence of a delusional idea, which, moreover, may vary in character. Sometimes it is an idea of unworthiness, of humility; the patient believes himself fallen from his position as a man and unworthy to communicate by speech with his fellow creatures. Sometimes it is an idea of expiation; he keeps silence to expiate the imaginary sins that he reproaches himself with. In other cases it is the fear of hurting some one—of compromising, by speaking, some one that he loves—that makes him keep silence. A patient under the care of M. Falret, who had shut himself up in absolute mutism, avowed at intervals that it was for fear of compromising his son by speaking. Sometimes this mutism has its source in an idea of a hypochondriacal nature; if the patient does not speak any more it is because he has the idea that he has no longer a tongue or that his larynx is destroyed."

Many years since an instance came under my own observation in which a semi-demented man had not uttered a single word for several years; he then had a slight attack of pleurisy, and, while suffering from the pain of this affection, he talked pretty freely for several days, answering all questions addressed to him. On another occasion, while suffering from the pain of toothache, he spoke and answered questions for a time, but after the extraction of the tooth at once relapsed into his usual silent and stolid condition. Bateman says that Brierre de Boismont has recorded "the clinical history of a lunatic who had not spoken for thirty years, and who, when perseveringly interrogated, gave a kind of grunt and ran away. About fifteen days before his death he regained the use of speech, and answered perfectly well all the questions put to him."

No mention is made as to the ability to write possessed by the patients above referred to, but in a case cited by Clouston this additional detail is given. This example is instructive also because it illustrates the difficulty of discovering the reason for the silence that exists in many of these cases of what we may call *pseudo-mutism*. Clouston says[21]: "I have a man in the asylum, D. T. K., who for ten years has never spoken a word, but who, I may say, in all other respects behaves sanely, showing no symptom of morbid pride or suspicion. He is about the best joiner we have. We know he has a delusion which prevents him speaking, but what it is we can't find out. If he wants instruction about his work he writes, but nothing will induce him to write why he won't speak."

In reference to catalepsy and ecstacy it is only necessary to say that during the continuance of either of these states the patient remains completely mute, probably from the mere suspension of the will to speak. These cases, in fact, as well as those previously referred to, where the speechlessness is attributable to a lack of will to speak owing to the existence of some determining hallucination or delusion, may well constitute a category apart under the name of "pseudo-mutism."

(h) From fright and other powerful emotions.—Many cases both of temporary aphasia and of mutism have been recorded as resulting from these causes. One cited by Kussmaul[22] is as follows:—

CASE 5.—A girl, aged thirteen years, was run over by a wagon. Although she escaped with some slight scratches she became speechless, and remained so for thirteen months. After various methods of treatment had been tried without success Dr. Wertner at last gave her bromide of potassium. One day, immediately after taking the medicine, she threw herself into her mother's arms and whispered, "Mother, I will speak again." After a few weeks she had entirely regained the use of language.

It should always be borne in mind that in the case of an accident the importance of the mental shock and its consequences often far transcends, as in this instance, the mere physical injury.

Another case of this type has been recorded by Popham[23] which is worth reproducing here.

CASE 6.—A boy, aged fifteen years, received a kick from a cow between the nose and the forehead which stunned him, but left apparently at the time no other injury than a few scratches and slight epistaxis, so that he walked after it some miles to a fair. On the fourth day he was seized whilst at work with vertigo and loss of speech, his hearing, taste, and sight, as well as deglutition, remaining unaffected. A variety of remedies, amongst others mesmerism, were tried, but without any benefit. He continued for twelve months as servant to a medical man, although totally mute, when he got extensive inflammation of the anterior part of the scalp, followed by suppuration, and regained his speech as suddenly as he had lost it eighteen or nineteen months before.

But mere emotion—apart altogether from traumatism—may produce very similar results. Thus Todd[24] refers to the case of a man, aged about fifty-five years, of an irritable temperament, who in a very animated conversation became excited to such a degree that his power of speech was completely lost. There was no paralysis, and the mental faculties were unaffected. He continued in this condition for about one week, but soon afterwards the power of speech had completely returned.

(i) Reflex irritation from neuralgia, intestinal worms, &c.—The pathology of these cases is very obscure, but that such associations are at times met with cannot be denied.

Bateman[25] refers to three cases in which temporary loss of speech occurred in association with facial neuralgia, and also to three other cases where the presence of worms in the intestine was associated with loss of speech which disappeared more or less quickly after their expulsion.

Where a temporary aphasia has been associated with a faecal accumulation in the large intestine, which has disappeared with its expulsion, instances of which have been recorded by R. Jones[26] and by M. Mattei,[27] the cause cannot in all probability be ascribed to mere intestinal irritation. Such cases are rather to be explained as belonging to group (*e*)—"Poisons engendered within the system." They may be supposed to result from the effects of auto-intoxication upon the brain, due to the absorption of alkaloidal poisons from and formed in the overloaded intestinal canal.

(j) By hypnotic suggestion.—Charcot and others have been able to produce typical "hysterical mutism" in some hysterical patients who are capable of being hypnotised. Referring to this subject Charcot[28] says: "I ought to tell you how the phenomena of mutism may be artificially produced. The patient being plunged into the somnambulic stage of hypnotism, you comence by conversing with her for a few minutes, then gradually you approach closer and closer to her, and finally pretend neither to hear nor to understand her. She makes further efforts to speak louder, but you

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[18] Megrim is another functional periodical affection which is occasionally associated with temporary speech defects, though for the most part they are of an amnesic rather than of an aphasic type.

[19] See Séglas: Les Troubles du Language chez les Aliénées, Paris, 1892.

[20] Loc. cit., p. 29.

[21] Clinical Lectures on Mental Diseases, 1883, p. 260.

[22] Loc. cit., p. 799.

[23] Quoted by Bateman, loc. cit., p. 258.

[24] Clinical Lectures on Diseases of the Brain, p. 278.

[25] Loc. cit., p. 270.

[26] Edinburgh Medical Journal, 1809, p. 281.

[27] Gazette des Hôpitaux, June 15th, 1865.

[28] Diseases of the Nervous System (Sydenham Society), vol. iii., p. 372.

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continue to practise the same ruse, and appear not to understand any better than before. Then it happens that the voice of the subject becomes progressively lower, and in the last stage aphonia becomes complete, and there is an impossibility of articulation. Artificial mutism obtained during the somnambulic period persists as you see in the waking state. I dare not allow this experiment to be prolonged too much, for I have remarked on many occasions that hysterical symptoms artificially produced during hypnotism are more difficult to be made to disappear in a waking state in proportion as they are allowed to persist for a longer time."

(*k*) *Hysteria.*—The cases of temporary speechlessness that occur in hysteria belong almost solely to the type which I have previously referred to as "*hysterical mutism.*" These cases are now commonly known by that name, though they were formerly included, with others, under the more general head of "functional aphasia."

The name "hysterical mutism" was first given to such cases by Revilliod, of Geneva, in an important memoir[29] dealing with this subject, though both the condition and the name were subsequently made more widely known by Charcot[30] in his lectures, as well as by a collection of twenty cases published by his assistant, M. Cartez.[31] Subsequently another series of cases was recorded by Bock,[32] of Berlin, and a still more important collection of eighty cases by Natier,[33] of Bordeaux.

The subject has also been recently considered by Wyllie,[34] who has thrown further light thereupon, and has lent his support to a view first advanced, I believe, by Liouville and Debove,[35] to the effect that hysterical mutism is only a rarer and more aggravated form of a condition which is familiar enough as hysterical aphonia. This doctrine was also adopted by Charcot. As Wyllie[36] says, Charcot shows "that there are many features shared in common by hysterical aphonia and hysterical mutism. They occur in the same type of patients, are produced by similar exciting causes, and are not unfrequently found to alternate with each other in the same patient, the aphonia in some cases passing into mutism, and the mutism in others passing into aphonia. Obviously the mutism is the more severe condition of the two. It implies absence even of the power of whispering, as well as that of speaking aloud."

Some of the leading peculiarities of hysterical mutism are these. Its onset is generally sudden, and often after a fright or some strong emotional disturbance. Sometimes it follows an hysterical seizure, either with or without paralysis of limbs. At other times it occurs without assignable cause, or it may be induced, as already stated, in some hypnotised persons by suggestion. The subjects of this disability are completely mute—presenting in this latter respect a notable contrast to ordinary aphasics, who so frequently make use of recurring utterances or articulate sounds of some kind. The intellect seems unimpaired, and they are able freely to express their thoughts by writing.[37] Though the common movements of the lips, tongue, and palate are preserved, these parts (constituting the oral mechanism) are unable to act in the particular combinations needful for speech movements, in association with the other combinations of muscular action pertaining to the vocal mechanism. Some of the muscles of the larynx, however, are often found to be more or less paralysed, though the particular muscles involved have varied in different cases. Sometimes it has been the crico-thyroids alone, or these with the thyro-arytenoids; in others the arytenoids, or even one only of the adductors has been at fault; and Cartez adds[38] that in certain cases "one may see variations of the laryngeal troubles supervene in the course of the malady without any modification in the mutism."[39] There is also often more or less complete anæsthesia of the larynx and of the pharynx.

Sometimes hysterical mutism occurs in association with many hysterical stigmata; at other times it may be almost the sole manifestation of this neurosis.

Recovery may occur suddenly, perhaps after a fit or a recurrence of some strong emotion; or it may be more gradual, under treatment; and in some of the latter cases there may be a sort of stammering articulation for days, or even weeks, before speech is completely restored.

In illustration of the condition generally, and of the very important fact of the alternation of aphonia and mutism that exists in some patients—which of itself helps to show that the two conditions, if not different degrees of the same affection, are at least very intimately related—the two following cases may be quoted from Cartez,[40] the first of them having been recorded by Thermes,[41] and the second by Liouville and Debove.[42]

CASE 7.—A woman, aged twenty-one years, on Feb. 15th, 1876, after exposure to damp cold—at least, according to the patient's account—was taken with a fit of coughing, and soon after the voice became modified both in quality and intensity. Laryngoscopic examination (by Isambert) did not reveal any organic lesion or inflammatory condition, and the diagnosis was "paralysis of the vocal cords from defective innervation of the muscles of the larynx, and particularly of the crico-thyroids." Consequently, the induced current was advised and applied by Isambert himself. But instead of the usual amelioration, as expected, the aphonia rapidly developed into a mutism. Many varied medicaments were employed, but without effect.

During treatment at the thermo-resinous baths we had the opportunity of examining the patient, and certain objective and subjective symptoms caused us to suspect the case to be one of mutism grafted on to hysteria of a non-convulsive form; or rather, a case of hysteria the manifestation of which had invaded the laryngeal region and particularly the tensor muscles of the vocal cords.

The laryngoscopic examination then made (February, 1877) by Krishaber revealed that the left vocal cord was immobile, and that the free border occupied the median line and divided the glottic space like the perpendicular in an isosceles triangle. The corresponding arytenoid did not perform movements of rotation on its axis. The left vocal cord seemed shorter than the other, because of its laxity and because it was hidden by the arytenoid. The pharynx was slightly hyperæmic.

Hydrotherapy was prescribed. At the first application there was a cry of surprise; the mutism was changed into incomplete aphonia. After a dozen local and general douches, the aphonia gradually disappeared, and a fortnight after the first douche the voice resumed its normal character and intensity.

Under the influence of a fall a convulsive attack occurred, on coming out of which the voice was again lost and the mutism again became complete. This happened in 1877.

In February, 1878, the mutism was still complete. Hydrotherapy, as on the first occasion, produced the same result. The patient cried out and instantly regained her voice, but only for a moment. However, incomplete aphonia succeeded the mutism. She was able to whisper, the words being weak and low, but she could be well understood. Amelioration progressed to cure, and the patient at the time the case was published had not relapsed for ten months.

This is a particularly interesting case, not only because of the transitions that were shown between aphonia and mutism, but because of the varying condition of the larynx and the relapse after a convulsive attack. The next case is also an interesting and important one.

CASE 8.—The patient was a girl, aged eighteen years, hysterical, but generally of good health. Her mother had attacks of hysteria major. A sister, thirteen years old, had frequent attacks, and for two months she had been affected with trembling, which several medical men had regarded as hysterical chorea. The father was very nervous.

Until the last few years the hysteria had only been manifested by incomplete attacks. For eighteen months the patient had been painfully impressed by the quarrels and violent scenes between her father and mother, and it was to this cause that she—probably with reason—attributed her symptoms. About this time, in fact, she became aphonic, not being able to speak above a whisper, and in the course of two months the aphonia grew into mutism. In the house where she lived they named her "the mute." She communicated with those around her by means of a slate, which she habitually carried. The patient came several times into hospital. All those who examined her were agreed in the diagnosis of hysterical paralysis of the vocal cords. Different methods of treatment were adopted without success.

On Nov. 10th, 1875, she was taken to the Hôtel Dieu. She had no globus hystericus, no hemianæsthesia, and no affection of the organs of special sense. The ovaries, especially the left, were tender on pressure; but, briefly, apart from the laryngeal troubles and the ovarian pain, the patient presented nothing abnormal.

The laryngeal paralysis was not simply a paralysis of movement, it was also a paralysis of sensation. There was not the least pharyngeal reflex. Laryngoscopic examination by Dr. Moura revealed a paralysis of the vocal cords; these made an almost imperceptible movement when the patient tried to emit a sound.

Pressure over the ovary brought on attacks of dry cough and a few stifled cries. The patient was able to articulate these words in an almost imperceptible voice, "You hurt me." The following day the compression was continued (from five to ten minutes each time), and intonation became more and more distinct; she first ceased to be aphonic, then to be mute. She became able to speak, though in a low voice, hissing out her words.

Two cases may also with advantage be quoted here which

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[29] Revue de la Suisse Romande, 1883.
[30] Progrès Médical, 1883.
[31] This paper, as well as Charcot's lecture, is most accessible to English readers in the latter's Clinical Lectures on Diseases of the Nervous System, vol. iii. (Sydenham Society), 1889. See also Charcot's "Leçons du Mardi," 1888–89, p. 247.
[32] Deutsche Medicinische Zeitung, December, 1886.
[33] Revue de Laryngologie, d'Otologie, et de Rhinologie, Nos. 4, 5, 8, and 9, 1888.
[34] The Disorders of Speech, 1895, p. 41.
[35] Progrès Médical, Feb. 28th, 1876.
[36] Loc. cit., p. 45.
[37] Taken alone these latter two characters are by no means such important diagnostic features as was supposed by Charcot and Cartez (loc. cit., p. 431), since they are met with also in complete aphemia due to a subcortical lesion.
[38] Loc. cit., p. 431. [39] This was so in Case 7 quoted below.
[40] Loc. cit., pp. 422 and 423.
[41] La France Médicale, 1879, p. 290.
[42] Le Progrès Médical, Feb. 28th, 1876.

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were recorded by the late Dr. Ernest Jacob.[43] They will serve amongst other things, as instances of the affection occurring in males, as well of its ready cure under the influence of ether.

CASE 9.—"A man, aged about fifty years, applied for relief at the out-patient department of the Leeds Infirmary, bringing a paper on which was written: 'I have pain in my shoulder; I can hear, but not speak.' The history, obtained subsequently, showed that he had had fits in infancy, but enjoyed good health till he was thirty-four years of age, when after monetary losses he began to show signs of mental instability, violent temper, &c., and when agitated was unable to speak. He gradually became perfectly dumb, though he retained for some years the power of saying 'yes' and 'no.' For the last five years he had not spoken, communicating with his wife by means of signs and writing, but understanding perfectly what she said. He seemed quite intelligent, could cough and blow out a candle. He resisted laryngoscopic examination, but I was able to ascertain that the cords could be approximated, and occasionally a hoarse sound uttered. There was no attempt at articulation, though he willingly made attempts when urged to do so.

"The pain in the shoulder was found to be due to dislocation. No account could be given of this, except that six days before he had wakened in the night and found his arm in pain. (In all probability he had had an epileptic fit and fallen out of bed.) Thinking to investigate the aphasic symptoms later, I asked my surgical colleague, Mr. W. H. Brown, to reduce the luxation. To facilitate this ether was administered, and on recovery from the narcotism he began to speak clearly and volubly, evidently much pleased at recovering his power of speech, and determined to make up for lost time.

"Some weeks after, when I saw him again, he was speaking well. I wish to point out here that there was no wilful dumbness, such as is not uncommon in cases of insanity. The man was greatly pleased at recovering his power of speech; nor was there the entire loss of phonation which obtains in functional aphonia, though there was great want of tension of the vocal cords. The patient was not morose or melancholic, though occasionally giving way to passion."

This case is remarkable on account of the rapid and complete recovery of speech, although the dumbness had existed for five years; that is, there was none of the stammering or hissing articulation that sometimes exists for a time when hysterical mutes first begin to regain their speech. In the next case the mutism had been of very brief duration.

CASE 10.—"A healthy-looking miner, aged thirty-four years, applied on Jan. 13th, 1890, suffering from slight hoarseness, and his cords were injected. He gave a history of having had some epileptic fits eight years ago (six in all), and at one time he had been intemperate. Some zinc chloride was applied to his larynx and a pine-oil inhalation prescribed. A week later he appeared with a paper on which was written: 'Five days ago I lost my voice. I feel as well as ever I did, but I have not been able to talk, and I cough.'

"Inquiry showed that he had been quietly talking with some friends on no very exciting topic, feeling rather hoarse, when he was suddenly seized with dumbness. His larynx was now rather difficult to examine, but the cords could be approximated without tension and an occasional hoarse grunt elicited. After a few trials he managed to utter one or two vowel sounds. Remembering the effect of the anæsthetic on the former case I had ether administered. After he had taken one or two breaths the inhaler was removed and he articulated 'Yes' in answer to a question, and after recovery from narcotism could talk freely. He remained an out-patient for a few weeks, but there was no return of the dumbness."

Here the mutism was not absolute, and being only of brief duration the principal interest of the case lies in the prompt restoration of speech after the inhalation of ether.

In the instances cited examples have been given of the recurrence of mutism on two or three occasions. At times, however, the attacks recur again and again, and the duration of each attack is then often very brief. Thus Delasiauve[44] has related the case of a woman who for three years was at each menstrual period affected with mutism and partial paraplegia, being at these times only able to make herself understood by signs. Bateman[45] records an interesting case of his own occurring in a young man who in the course of six months had nine attacks of mutism, most of which lasted only a few days, though one of them remained for over six weeks. Each attack began with sudden pain in the occiput and nape of the neck of an extremely severe character, and the pain was associated with contraction of the muscles at the back of the neck. A still more remarkable case has been recorded by Hun,[46] in which frequently recurring attacks of mutism were generally associated with deafness or blindness, one or both, these disabilities often ceasing after an attack of hysterical convulsions.

During the present year I have also had under my care a patient who had suffered from an extraordinary number of attacks of mutism extending over a period of more than eighteen months. They occurred in a sailor who had not hitherto suffered from nervous symptoms and had previously led an active life in all parts of the world. He was sent to me by Dr. Allan Mahood of Appledore, North Devon, and the following is an abstract of notes received from him and of others taken whilst the patient was under my care at the National Hospital for the Paralysed and Epileptic.

CASE 11.—The patient, aged thirty-one years, had for a time been out of work, worried, and been having insufficient food, when, on July 13th, 1895, he had in the evening a sudden attack of "shaking," characterised by small, rapidly repeated contractions of the muscles of the face, body, and limbs, lasting some hours, but without loss of consciousness. Under treatment and with rest in bed he improved much during the next week, but on July 20th a political procession went past his house, cheering wildly, after an election. This awoke him and gave him a great fright, resulting in complete loss of speech for one hour, together with much twitching of the muscles on the right side of the face.

During the next month he had very many brief attacks of complete mutism. He was rarely many days without one, and sometimes had two or three on the same day.

On Aug. 13th irregular spasmodic contractions of the limbs occurred without loss of consciousness, lasting off and on for nine hours.

On Sept. 4th there were violent convulsive movements of the shoulders, arms, and upper half of the trunk for one and a half hours.

During the next six months he had similar attacks lasting from ten to fifteen minutes, several times daily. The "shaking" was mostly on the right side of the body. He generally lost his speech during the attacks—though on several occasions the mutism lasted for a week at a time, when he communicated with others only by writing and signs. Sometimes he has lost his speech without having an attack of "shaking"—especially under the influence of excitement from any cause. He had a good deal of worry during this time.

On May 8th, 1896, he seemed quite well. There had been no return of the old symptoms during the last month. He went, therefore, for a month's drill with a corps to which he was attached, and after that was about to resume his sea-life, when suddenly his old symptoms returned, and he continued to have "shaking" fits and frequently recurring attacks of mutism up to the date of his entry, under my care, into the National Hospital for the Paralysed and Epileptic on Jan. 13th, 1897. In the early days of this latter month he had the most violent attack of all. He had to be restrained for four hours. He did not hurt himself, but bit his brother severely in the face. Three days before admission he lost his speech entirely on being told he was coming to the hospital, and did not regain it till twenty-four hours after admission.

On admission he was found to be completely mute, though he made a few inarticulate noises on attempting to speak. He was perfectly sensible in all respects—could understand everything said to him quite readily and write his answers on a slate, as well as understand quite well what was written by others. There was no motor or sensory paralysis. His gait was normal. There was some facial overaction on attempting to speak. The eye movements, pupils, and optic discs were normal. There was no contraction of the visual fields.

During the first six weeks of his stay in the hospital he was treated with tonics and tepid needle baths; then with sulphur baths together with bromides and other drugs internally. In this period he had only one slight "shaking" attack two days after admission, and nothing notably wrong apart from some slight tremors about the hands and face at times was noticed, except that he continued to have frequent attacks of mutism lasting for some hours or even a day or two.

I then left instructions that during the next attack he should be put under the influence of ether, and on March 2nd I received a report from the resident medical officer (Dr. W. J. Harris) announcing that on the previous afternoon the patient, after some slight difference with another patient, had again suddenly lost his speech. When seen about half an hour afterwards he could not make any sound, not even "Ah." His larynx was examined again and found to be, as before, very hesitating in adduction, with never complete closure of the rima glottidis. The administration of ether was then commenced. "He took it quietly for about three minutes, until just beginning to feel its effects, when he suddenly bounded off the bed, upset everything around, fought wildly, and was with difficulty subdued—uttering no sound, however. He then lay quiet till let go, when he suddenly attacked us again, and when again subdued he began to talk quite well, declaring he could not help it, &c."

Though he remained in the hospital subsequently for over five weeks he had no further attack of mutism and only one threatening, after some slight annoyance. On April 11th he discharged himself, against advice, on the plea that another patient was noisy at night.

We must now look a little more closely into the pathogenesis of mutism.

From the point of view of the physiology of the two conditions aphonia and mutism, Charcot attempted to draw too sharp a distinction. He adopted the doctrine that has been taught by Marey and other physiologists, that whispered speech is the product of the oral division of that mechanism alone, and that the larynx takes no part in its production. According to Charcot, therefore, aphonia (in which the power of whispering is preserved) is a result of a partial paralysis of the adductor muscles of the larynx; while as to hysterical mutism, he writes. "If the individual suffering from the affection is unable to whisper, it is not because he is aphonic, or rather because his larynx does not vibrate; it is not because he has lost the common movements of tongue and lips—you have seen that this patient was perfectly able to blow and to whistle; it is because he lacks the ability to execute the proper specialised movements necessary for the articulation of words. In other terms he is deprived of the motor representations necessary for the calling into play of articulate speech."

Wyllie, however, contends (and he is supported by the opinion of Michael Foster) that the larynx does take part in whispering, and that there can be no speech without the

[43] Brit. Med. Jour., Sept. 13th, 1890.
[44] Journal de Médecine Mentale, 1865.
[45] Loc cit., p. 136.
[46] The Quarterly Journal of Psychological Medicine, January, 1868, p. 119.

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coöperation of both the oral and the laryngeal mechanisms. He consequently holds that "the disablement of either the one mechanism or the other may produce mutism." In opposition to Charcot and Natier, therefore, who believe the oral division of the speech mechanism only to be at fault in hysterical mutism, Wyllie maintains that whilst this may be so in some cases, in a second group it is the laryngeal division of the speech mechanism which is at fault; and in a third set of cases both oral and laryngeal mechanisms are simultaneously disabled.[47] He refers[48] to various cases in Natier's list in support of his opinion.

I formerly thought that these cases of mutism were instances of complete aphemia, dependent upon a functional defect in the outgoing fibres just below the left third frontal gyrus,[49] because cases of sub-cortical defect, where there was no damage to either of the word centres, at that time seemed to me alone capable of producing the particular combination of symptoms met with in hysterical mutism. And, as in hysteria the afferent fibres in the "internal capsule" appear to be so frequently affected in the production of hemianæsthesia, there seemed no valid reason why the same kind of disability (whatever its nature) might not at times affect some of the bundles of fibres proceeding from, rather than going to, the cortex. Though this was the hypothesis formerly advanced by me, I always recognised that it would have been more satisfactory if one could have supposed that in hysterical mutism portions of the cortex itself were at fault. The bar to this explanation, however, was the undiminished ability to write which these patients displayed and the supposition that an affection of the glosso-kinæsthetic centre would cause some mental impairment of which there was no trace in hysterical mutism.

An examination of the records of actual cases of sub-cortical lesions, and the finding that in some of them where there was destruction of the first part of the geniculate fasciculus and also of the commissure connecting the left with the right third frontal convolution, a mutism was produced almost exactly similar to that met with in the hysterical cases, seemed to be a further justification of my previous view.

On the other hand, a remarkable case recorded by Guido Banti has since convinced me that the symptoms may not be different even when an organic lesion exists in the posterior part of the left third frontal convolution itself, so long as it is absolutely limited thereto, and leaves the cheiro-kinæsthetic centre uninjured. This very important case, which I have previously quoted,[50] shows that in some individuals (besides the preservation of ability to write) the destruction of Broca's region alone may not interfere with the general intelligence any more than does a lesion in the bulbar speech centres or in the internuncial fibres between them and the third frontal gyrus. But if such may be the case with regard to organic lesions in Broca's region we may all the more readily admit that a similar absence of agraphia, and a similar preservation of intelligence may result from a functional disability affecting Broca's region. We have seen, in fact, that the existence of such a disability was Charcot's explanation of the condition. He considered hysterical mutism to be an instance of pure "motor aphasia," resulting from a functional trouble in Broca's region.

This, however, is by no means an adequate explanation of the condition. As we have seen, Charcot too sharply distinguishes hysterical mutism from aphonia, and believes mutism to depend only upon a disorder involving the cortical centre for the oral division of the speech mechanism. The probabilities, however, are against this view, as Wyllie has shown. Aphonia and mutism are most intimately related, differing in degree only; and the oral and vocal speech mechanisms are probably concerned in all speech, whether it be sonorous or whispered. Still we must suppose that the cortical speech centre in Broca's region, which I name the glosso kinæsthetic, is, in reality, composed of two parts most intimately related, both functionally and structually—one of them being the centre for the oral mechanism, and the other the centre for the vocal speech mechanism.

At first it was thought, from the experiments of Semon and Horsley[51] upon monkeys, that the adductors of the larynx were alone represented in the cortex, and that in the anterior part of the foot of the ascending frontal; but Risien Russell[52] has since ascertained that the abductors are also represented in a region slightly removed therefrom. In answer to a query of mine Russell writes:—"In the dog and cat the abductor centre is situated in front of, and a little above, the level of the adductor focus, so that probably the same holds good for man; but I do not wish to commit myself on this point till I have had more opportunities of ascertaining the relative position of these two centres in monkeys." He, however, confirms the statement of Semon and Horsley that there is a complete bilateral representation of the laryngeal movements in the cortex, so that destruction of the centre on one side will not produce paralysis of the muscles of the opposite side of the larynx, seeing that they can still be called into activity by the uninjured centre in the opposite hemisphere.

If a similar bilateral representation of the laryngeal movements concerned with speech exists in man[53] it would follow that to account for hysterical aphonia, characterised by paresis of the laryngeal adductors, we must suppose that the corresponding centres of both hemispheres have been simultaneously affected, and somewhat degraded in functional activity.

As I have already pointed out, however, it has been shown that hysterical mutism is intimately related to aphonia; and therefore mutism might be supposed, even for this reason alone, to be also due to a bilateral affection of the cortex. But we shall now see that there is another reason pointing in the same direction. Charcot's explanation of hysterical mutism does not account in any way for the fundamental difference that exists between it and ordinary simple aphasia. The subject of the former affection is, as we have seen, absolutely mute, and has no "recurring utterances" of any kind. It is commonly supposed that in ordinary aphasia, due to a lesion in Broca's convolution, the recurring utterances are brought about through the instrumentality of the right hemisphere. The same thing would, therefore, doubtless occur in the functional affection if the left third frontal convolution were alone involved, but as instead there is absolute dumbness, we are, I think, on this account bound to assume that in this disorder, as in aphonia, there must be a simultaneous affection of the posterior part of the right as well as of the left third frontal convolution.

Charcot does not attempt to explain the above-mentioned important difference between the two affections. As I have already indicated, he regards hysterical mutism as due to a functional defect in a part of Broca's centre in the left hemisphere—namely, the part having to do with the oral mechanism for speech. The only additional remark that he makes on this subject occurs towards the close of his lecture, where he says: "It is in the grey cortex of the cerebral hemisphere that we must seek for the dynamic lesion whence emanate the symptoms in question, and the mechanism that is to be invoked in such conditions is none other than that which acts in the production of psychical or, if you like it better, mental paralysis." This is rather vague, and introduces no further explanation of the pathogenesis of the condition. Will, except in regard to speech, does not seem to be defective or hindered in its manifestation, and we have evidence also that in these patients the other word-centres—namely, the auditory, the visual, and the cheiro-kinæsthetic, are in a condition of unimpaired activity.

Thus the clinical differences between simple aphasia and hysterical mutism force us to the same kind of conclusion as to the pathogenesis of the latter affection, as that to which we are also led by a consideration of the intimate relations existing between it and hysterical aphonia. It impels us to believe in the existence of a bilateral cortical disability in Broca's region in each of these affections, though varying in intensity in the two cases. This explanation, I believe, has not hitherto been adduced for either of these affections.

It will be observed that hitherto I have neither adopted nor definitely referred to the hypothesis of Wyllie as to the existence of certain subdivisions of what he calls Broca's convolution. I say "what he calls Broca's convolution," because instead of limiting this region, as is

[47] His views as to the cortical localisation of these mechanisms will be subsequently considered.
[48] Loc. cit., p. 467.
[49] See Brit. Med. Jour., Nov. 5th, 1887.
[50] THE LANCET, April 9th, 1897.
[51] Philosophical Translations, vol. clxxxi., 1830, p. 187.
[52] Proceedings of the Royal Society, vol. lviii., 1895, p. 237.
[53] This cannot, however, with certainty be considered to follow from the fact that experiments upon lower animals show that common movements of the larynx are bilaterally represented.

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customary, to the foot of the third frontal convolution, Wyllie seeks to include under it also the foot of the ascending frontal and the foot of the ascending parietal convolutions.[54] He suggests that in these two latter sites the "executive cortical motor mechanisms" concerned with speech are to be found—comprising a "centre for phonation" and a "centre for the oral articulative mechanism"; while in the foot of the third frontal are stored up the "guiding psycho-motor images for spoken speech," or, in other words, what I have termed "glosso-kinæsthetic impressions." These views have been accepted and still further elaborated by Elder,[55] who also reports one case which he thinks "goes a long way to support the hypothesis of Wyllie."

Now in regard to the impressions registered in the foot of the third frontal convolution it would appear, as I have said, that Wyllie's "guiding psycho-motor images" correspond with what I term kinæsthetic impressions, and further that these impressions resulting from speech movements must partly correspond with impressions from the oral and partly from the vocal subdivision of the speech mechanisms. These, according to my view, are the guiding sense impressions which (in conjunction with auditory word-images) act directly upon, and are capable of evoking the proper activity of, the bulbar motor centres. I therefore do not believe even in the existence of the "cortical executive motor mechanisms" for speech which Wyllie and Elder assume to exist at the bases of the ascending frontal and ascending parietal convolutions; and further I consider that the reasoning which induced Wyllie to suppose that such centres might be thus situated is of itself open to very grave objections.

He seems to have been guided altogether too much by the results obtained by experimental physiologists (Ferrier, Semon, Horsley, and others) upon monkeys and dogs, and not to have kept distinctly in mind that the movements of the larynx resulting from stimulation of the cortex in these dumb animals could not have been such movements as were concerned with speech, though they might have been the reproductions of much less specialised movements of the vocal cords (adduction and abduction) associated with respiratory acts; and, again, that the movements of the lips, and tongue similarly induced in these dumb animals could not afford any evidence as to the site of the "oral articulative mechanism," although they would serve to determine the seat of registration in such animals of the impressions resulting from the common movements of these parts concerned with biting, mastication, &c.

The very fact, however, that such common movements are registered in these sites (if it may be considered to hold good for the human subject) would of itself lead us to look elsewhere for the registration in man of the multitudinous impressions derived from the highly specialised movements concerned in speech—for instance they might be found in the contiguous foot of the third frontal convolution. And, as Wyllie himself admits[56] (though in a rather hesitating way), the clinical evidence points to the importance of the foot of the third frontal convolution, and not to the bases of the ascending frontal and parietal convolutions, as the region most concerned with the production of speech. It ought to be almost superfluous to enforce the point that it is upon clinical evidence alone that we must rely for the localisation of speech centres, and not upon the "conclusions of the experimental physiologists" drawn from experiments upon dumb animals.

An attentive study of the case above referred to that has been recorded by Elder, seems to me to show that the lesion was an essentially sub-cortical one, and that all the defects in articulation met with could have been produced by damage to some of the pyramidal fibres proceeding from the foot of the third frontal convolution, even though the lesion also destroyed portions of the bases of the ascending frontal and parietal convolutions.

No real evidence is therefore forthcoming in favour of the hypothesis of Wyllie; and that the distinction which I have dwelt upon between the common movements of the lips, tongue, and palate, and the common movements of the vocal cords, as contrasted with the highly specialised combinations of movements of these parts concerned in speech, is a perfectly valid and important one is shown by the fact that in hysterical mutism though the latter movements are impossible the common movements of the lips, tongue, and palate are quite unaffected—just as in aphonia the vocal cords can be perfectly approximated during the act of coughing, though they cannot be brought together as a component of the movements necessary for speech.

[54] The Disorders of Speech, Edinburgh, 1894, pp. 300-302, and 309.
[55] Aphasia and the Cerebral Speech Mechanism, London, 1897, p. 31.
[56] Loc. cit. p. 321.

CONGENITAL ABSENCE OR DELAYED DEVELOPMENT OF THE PATELLA.

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AN annotation appeared in THE LANCET of Jan. 23rd, 1897, in which a paper on this subject by Dr. Bristow, of Philadelphia, was summarised.[1] Dr. Phocas and Dr. Potel, of Lisle, have also dealt with it recently.[2] Dr. Bristow described a case of his own and referred to five others which are not, I find, included in the list of twenty-five cases published by Dr. Phocas and Dr. Potel. I have had three cases under my care and have collected records of ten others observed by various writers, making, with an unpublished case of Mr. Adams, which I had an opportunity of examining, forty-two cases in all. In addition to these I have, by the kindness of Mr. William Sedgwick, a note of a family, in four generations of which eighteen persons had no patellæ and no thumb-nails; the majority of these were females. This deformity is generally associated with hyper-extension of the leg upon the thigh and with limited flexion of the knee. The amount of hyper-extension varies from a few degrees or slight subluxation to complete anterior dislocation, as in Hilton's case. In some cases the knees have been so stiff that the condition might be described as one of ankylosis. Talipes and especially varus is frequently present. Thus varus was noted in sixteen cases. Other forms of talipes were noted in five cases. Osseous defects such as deficiency of the fibula, spina bifida, and malformation of the hip-joint, and congenital dislocation of the hip have been noticed in several cases. In two cases quoted by Dr. Phocas and Dr. Potel the whole diaphysis of the femur was wanting. I have not included these two cases in my table. The condition was said to be hereditary in four cases, three of which have come under my personal notice, besides the eighteen persons of Mr. W. Sedgwick's note, already mentioned. In nine cases the knee-cap appeared at ages varying from six months to six years. In four it was wanting until the end of the period of growth, and in the remaining twenty-nine cases it had not appeared at the time of the last examination. In some cases the patella has been wanting on one side, and rudimentary on the other. It is interesting to note that the adult cases had no severe accompanying deformities, while in some of the cases of severe talipes, &c., the patella ultimately appeared. Only one necropsy is recorded as far as I have been able to learn. In this case (quoted by Dr. Phocas and Dr. Potel from Carl Müller) the flattened tendon of the quadriceps lost itself in the capsule of the joint and the aponeurosis of the leg. Contraction of (or traction on?) this muscle was without action on the movements of the leg. The subject was a stillborn infant. The following are short notes of my three cases (Nos. 40, 41, and 42 in the table).

CASE 1 (see Table, No. 40).—A female child, aged three months, was brought to the National Orthopædic Hospital in September, 1887, on account of severe double congenital talipes equino-varus. She was the first child. The father was operated on for clubfoot, and he and a brother, who died in infancy, are said to have had knees similarly deformed to those of this patient. The father's father was said to have had some deformity of the foot. The family history on the mother's side was negative as far as could be ascertained. The present patient's knees were found to be hyperextended, so that the leg formed an obtuse angle with the thigh anteriorly. With slight force the limb could be brought into the straight line, but flexion beyond this was impossible. The deformity of the feet was corrected, and the knee gradually bent by means of a splint, with thigh and leg plates applied to the front of the limb with a rack movement opposite the knee-joint. In May, 1889, the child could stand alone with the knees hyper extended, although no trace of either patella could be found. A walking instrument which

[1] Medical News, Philadelphia, Jan. 2nd, 1897.
[2] Revue d'Orthopédie, Paris, September, 1896.

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TABLE OF FORTY-TWO REPORTED CASES OF CONGENITAL ABSENCE OF PATELLÆ.

No.	Reported by	Reference.	Age in years.	Sex.	Side affected	Remarks.
1	Chamelain.	1820, Neuville, France; quoted by Bristow.	†	—	L.	—
2	*—	London Medical Gazette, Jan. 19th, 1833.	Adult	M.	R. & L.	Walked many miles. Father and grandfather similarly affected.
3	*Wutzer.	Müller's Archiv, 1835.	1/2	M.	R. & L.	Limited movement of knee; slight hyper-extension.
4	Hilton.	Lectures on Rest and Pain, THE LANCET, Nov. 8th, 1862, p. 497.	3½	F.	R. & L.	Dislocation forwards of legs. Patellæ size of peas at four years.
5	*Duval.	Traité du Pied-bot, p. 94.	1 1/2	—	R. & L.	Double varus. Knees only flexible to a right angle.
6	*Von Ammon.	Angeborene Chirurgische Krankheiten des Menschen, iii.	1½	—	R. & L.	Knee very loose. Muscles atrophied.
7	Bard.	Boston, 1835; quoted by Bristow.	—	—	One.	Side not stated. Patella appeared at three years.
8	*Brodhurst.	"Club Foot," 1856, p. 32.	1/2	—	R. & L.	Double talipes. Powerful retraction of quadriceps. Valgus of left foot, varus of right.
9	*De Moor.	Langenbeck's Archiv.	†	—	L.	Dislocation forwards of leg, easily reduced. Family history negative.
10	*Lane.	THE LANCET, Jan. 16th, 1858, p. 63.	8	M.	R.	Talipes equino-valgus. Knee apparently well formed.
11	Caswell.	Medical News, Philadelphia, Jan. 2nd, 1897.	—	—	L.	Malformed lower limbs (quoted by Bristow).
12	*Maas.	Archiv Klin. Chir., 1874, p. 92.	3	M.	R. & L.	Right leg dislocated forwards. Muscles of extremities normal.
13	*Körte.	Deutsche Zeitschrift für Chirurgie, 1876, Band vii.	2½	F.	R. & L	Talipes equinus of both feet. Knee stiff. Could not stand or walk.
14	*Körte.	Ditto.	†	M.	R. & L	Equino-varus of both feet. Knee stiff. Quadriceps atrophied.
15	*Jolicœur.	Bulletin de la Société Médicale de Reims, 1873.	3	—	L.	Right patella rudimentary. Hyper-extension to 45°. Could not walk alone.
16	*L'Abbé.	Bulletin de la Société Chirurgicale de Paris, 1874.	15 days	M.	R. & L.	Double talipes. Rotation outwards of legs.
17	Adams, W.	"Club Foot," 1873, p. 221.	1/2	—	R. & L.	Peculiar double varus. Knees and other joints stiff. Club hands.
18	Adams, W.	Ditto.	1/2	M.	R. & L.	Double varus. Severe knock-knee. Subluxation of legs forwards. Club hands, &c.
19	*Barwell.	THE LANCET, March 17th, 1877, p. 389.	6 weeks	M.	R.	Left patella rudimentary. Dislocation of both knees. Rudimentary right patella appeared after six months.
20	*Kroenlein.	Lehre von den Luxationen.	2 days	—	L.	Ankylosis of knees in hyper-extension.
21	*Kroenlein.	Ditto.	—	—	R. & L.	Dislocation of knee and hip. Patella present six months later.
22	Railton.	Brit. Med. Jour., vol. i., 1892, p. 969.	—	—	R. & L.	Tendency to varus. Left hip and knee very loose indeed.
23	Hartigan.	THE LANCET, May 8th, 1880, p. 733.	—	—	L.	Hyper-extension of knee. Toes lay in the groin (quoted by Bristow).
24	Guérin, J.	"Œuvres," livre iv., Paris, 1882, p. 606.	7½	M.	R.	Double varus. Left patella rudimentary. Adherent scars over sacrum. Stiff elbows, &c.
25	*Heinecke.	Krankheiten des Knies, Müller, vol. xxii.	3½	—	R. & L.	Double equino-varus.
26	Dukhowsky.	London Medical Record, 1885, p. 299, quoted from Odessa Medical Society.	22	M	R.	Left was rudimentary. Flat feet. Atrophy of leg muscles. Gait tabetic. Soldier.
27	Bernstein.	Ditto.	Adult	M.	One.	The other patella rudimentary. Gait tottering. A young officer.
28	*Müller, C.	Arbeit aus der Chirurgischen Clinik, Leipzig, 1868.	†	F.	L.	Stillborn. Subluxation of knee.
29	*Müller, C.	Ditto.	5 weeks	F.	L.	Equino-varus. Knee dislocated forwards.
30	*Stahl, J.	Berliner Klinische Wochenschrift, p. 42, 1889.	†	—	R.	Dislocation of knee forwards. Patella developed at one year.
31	*Pello.	Archiv di Ortopedia, vol. xi., p. 1.	½	—	L.	Arrest of development of all limbs and multiple ankylosis.
32	*Salaghi.	Archiv di Ortopedia, 1894, 222.	2	F.	R. & L	Hyper-extension. Genu valgum.
33	*Redard.	Gazette des Hôpitaux, Paris, 1888.	1 1/2	—	R.	Quadriceps atrophied, and its lower part transformed into fibrous substance.
34	*Sayre, L.	Quoted by Phocas and Potel.	†	F.	L.	Varus. Hyper-extension. Toes touched the abdomen easily. Rudiment of right patella at nineteen months.
35	*Brunner.	Virchow's Archiv, 1891.	20	M.	R. & L.	Varus. Walked well and far. Slight tottering. No other bone deformity.
36	*Phocas and Potel.	Revue d'Orthopédie, Paris, No. 5, 1896.	3	F.	R. & L.	Double talipes. Knees only flexible to 120° and 110° respectively.
37	Bristow.	Medical News, Philadelphia, Jan. 2nd, 1897.	—	—	R. & L	Double varus.
38	Julius Wolff.	Hoffa's Orthopädische Chirurgie, 1891, p. 580.	9	F.	L.	Right varus. Triangular fold of skin contracting left knee. Syndactylism, &c.
39	Little, E. M.	Mr. Adams's case.	—	M.	R. & L.	Double varus. Hereditary on father's side.
40	Ditto.	Case 1 above.	3 mths.	F.	R. & L	Double varus. Hereditary hyper-extension. Patellæ found at three and a half years. Limited flexion of knee.
41	Ditto.	Case 2 above.	7 mths.	F.	R. & L.	Double varus. Hereditary hyper-extension. Patellæ found at three years. Limited flexion of knee.
42	Ditto.	Case 3 above.	6 mths.	M.	R.	Scars on buttocks. Limited flexion of knee. Rotation outwards of left limb. Patella found at two and a half years.

* Included in the list of cases published by Dr. Phocas and Dr. Potel.
† In the age column indicates new-born child.

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prevented extension of the knees beyond the straight line was applied. In March, 1891, the age of the patient being three and three-quarter years, the right knee-cap was distinctly felt, but there was some doubt as to the left one. The knees were very lax. By October, 1896, both knee-caps were fairly well developed. In February, 1897, the child, who was then aged nine years and eight months, could

FIG. 1.



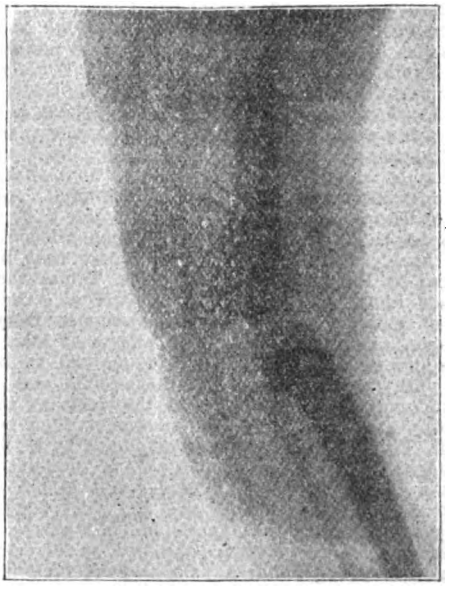
CASE 1.—Delayed development of patella, from a photograph showing the hyper-extension of the knee-joints.

run about and dance vigorously without difficulty. Her knees were capable of slight hyper-extension, as shown in Fig. 1 (from a photograph), but when standing or walking ordinarily did not pass the straight line. The patellæ were small and the front of each knee looked flat. On examination by the x rays a definite dark shadow was seen on the fluorescent screen in the situation of the patella.

CASE 2 (see Table, No. 41).—This patient, a sister of the foregoing, was brought to the National Orthopædic Hospital in November, 1892. She was the third child. Her condition was almost exactly similar to that of Case 1 (No. 40), except that the knees were flexible to about a right angle. She had double talipes equino-varus, which had been treated already by tenotomy and plaster-of-Paris bandages. The mother thought that the weight of these latter caused the knees to bend. The knee-joints, which were stiff at birth, were loose, and allowed excessive lateral and rotary movements. No trace of a knee-cap could be found on either side. The feet were treated and instruments ordered to restrain the extension of the knees. In August, 1895, she was admitted as an in-patient and Phelps's operation was performed on the right foot on account of relapse. The registrar's notes state that the knees were then almost flail-like and the ligaments were very lax; the tibiæ could be rotated on their long axes through an arc much greater than normal. The right patella was very small; the left could scarcely be felt. In February the child, being then five years and ten months old, could run about actively. The front of each knee appeared flatter than normal. The patellæ were obvious, but small and scale-like. A skiagraph, however, disclosed no trace of them, showing that ossification had not begun, although the tendon of the quadriceps threw a faint shadow, as seen on the concave anterior aspect of the knee in Fig. 2. The knee-joints were loose and allowed more lateral and rotary movement than normal. The knees were not generally hyper-extended, but the application of slight force brought them into the position shown in Fig. 3 (from a photograph in the supine position). In flexing the knees a jar was felt as of a subluxation occurring, or a cartilaginous ridge being passed or a tendon or ligament slipping from one position to another. The knees can be flexed through about 135°, or 45° beyond a right angle.

CASE 3 (see Table, No. 42).—A male child, aged six weeks, was brought to me in October, 1891. He was born by foot or breech presentation. The left patella was normal. The right patella could not be found. The left knee could be hyper-extended, but was flexible to the normal extent. The right knee was hyper-extended and stiff. The left thigh was rotated outwards. There were several deep scars over the buttocks and sacrum. The right testicle was not in the scrotum. There was no paralysis. The family history was

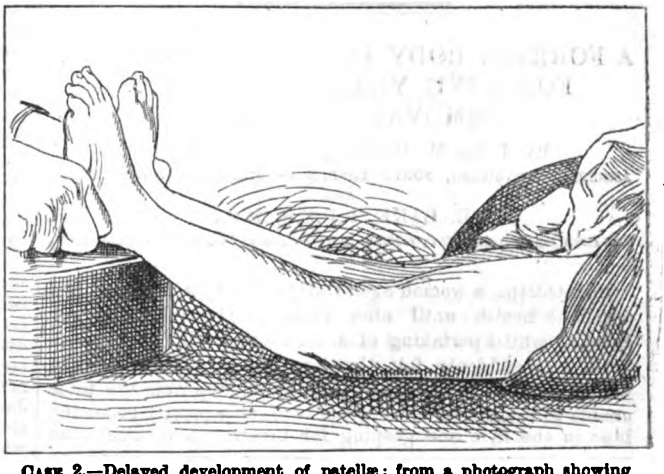
FIG. 2.



CASE 2.—Reduced from a skiagraph by the author. The patella is cartilaginous.

negative. Manipulations were ordered to the hip, knees, and feet, which latter were slightly inverted, but easily flexed and everted. In February, 1892, a splint was ordered for the right knee. In June, 1893, there was some doubt as to the existence of a rudimentary right patella, but in January, 1894, when the child was aged two and a half years, there was no doubt of its presence. In February, 1897, at the age of five years and four months, the child walked well, but the feet were rather flat. The left knee was normal. The patella measured transversely through the

FIG. 3.



CASE 2.—Delayed development of patellæ; from a photograph showing how the application of a slight force would cause hyper-extension.

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skin one and a half inches. The right knee was flexible to eight degrees beyond the right angle. The patella measured one and a quarter inches across. The movements of the knee (other than flexion) were normal. There was no hyper-extension. The right hip could not be fully flexed, although it could be brought to an angle of 45° with the axis of the trunk. The great trochanters were situated in Nélaton's line.

Remarks.—Dr. Phocas and Dr. Potel attribute the deformity to paralysis of the quadriceps, but it is difficult to understand how such a condition could cause hyper-extension, although the arrested development of the muscle would doubtless affect the growth of its tendon, and contained sesamoid bone. In none of the cases that I have seen has there been any evidence of paralysis, nor does it appear to have been marked in any of the recorded cases. Other writers have sought to explain this and its accompanying deformities by deficiency of liquor amnii and pressure of the uterus preventing flexion at the knees. As Dr. Phocas and Dr. Potel point out, however, the cartilage of the knee-cap begins to appear in the second or third month of fœtal life, before active movements occur. Exactly similar deformities of the knee amounting, as in Mr. Godlee's [3] case, to dislocation may exist although the patella be present. In fact, the presence or absence of the knee-cap is of small practical importance. The accompanying hyper-extension, luxation or subluxation and malformation of bones are the important factors in making a prognosis. As long as the quadriceps tendon is inserted into the tibia the knee seems to be capable of good function without a sesamoid bone. So much is this the case that in a case reported by Bernstein (No. 27 in the Table) the patient did not know of his defect. Beyond a certain shakiness of gait he suffered no inconvenience from it. In my cases, as in others, the good effects of manipulations and appropriate splints have been marked in improving the mobility and stability of the knee-joints, and the effect of the application of weight to the feet, as in Case 2 (No. 41), suggests a mode of treatment that may prove useful. Forced flexion has been employed by L. Sayre and by Salaghi,[4] who ruptured the capsule of the joint and produced a hæmarthrosis. The final result is not recorded. Dr. Bristow and Dr. Phocas and Dr. Potel employed the x rays as a means of diagnosis in their cases, but it is evident that negative evidence obtained by this means is of no value in young children. Cartilage is particularly pervious to these rays, and as the patella does not begin to ossify until the third year we are not likely to find evidence of a bony patella before that age. In Gray's Anatomy, moreover, it is stated that the author examined the patellæ of two children of six years of age without finding any trace of ossification. I have examined the normal knees of several children by means of x rays, and have only succeeded in getting a shadow of the patella in a child aged seven years. In Case 2, where the patella was of fair size, the skiagraph showed no clear evidence of its existence at the age of nearly six years; no doubt ossification was delayed in this case, but more information is apparently needed as to the time of ossification in the normal subject.

Seymour-street, W.

A FOREIGN BODY IN THE AIR PASSAGES FOR NINE YEARS; OPERATION; REMOVAL; RECOVERY.

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AND
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THE patient, a woman aged thirty-eight years, had enjoyed excellent health until nine years previously, when one evening, whilst partaking of some broth made from sheep's head, she suddenly felt that she had swallowed a bone, which "stuck in her throat"; she sprang up from the table unable to breathe for a second or two, subsequently becoming blue in the face and gasping for breath. A medical man was hurriedly sent for. In the meantime the patient coughe a great deal, but expectorated nothing as far as she could remember, but experienced a sensation as though her throat was torn, the breathing remaining very embarrassed for about ten minutes, and she could not speak for fully an hour on account of the cough it excited. A raw egg was administered by a friend with the intention of "making the bone go down." The medical attendant, on examination of the throat, said that he saw nothing, and supposed that the bone had passed into the stomach. During that night the throat felt very sore and the patient coughed somewhat, but she felt well except that she suffered from the effect of the great fright she had received. The next day the patient was very prostrate and weak, and the throat felt very sore, especially on swallowing. The breathing as far as she remembered was quite normal. The practitioner said that she had an ulcerated throat and must keep in bed, which she did for about ten or eleven days. During this time the patient could eat nothing solid on account of the pain caused by deglutition, but the soreness of the throat gradually passed off. The throat continued to be slightly sore for about a month, at the end of which time the patient felt herself again. The patient remained in good health till three or four months afterwards (the beginning of the winter), when a hard, dry cough commenced, which lasted nearly the whole of the winter. This repeated itself every winter, each time getting worse, and soon was accompanied by a pain in her back at the base of her right lung; this she thought was due to the excessive coughing. Last year (1896) the cough became worse than ever before. Since the accident this had been the only trouble that the patient had complained of, but the cough and pain were so bad at times that she had to give up work for a day or two, but on none of these occasions did she seek medical advice. On July 24th, 1896, the patient went from Bristol to Clevedon (eighteen miles), had some fish for dinner, and on going out some half hour afterwards a violent fit of coughing came on. She went back to Bristol, coughing violently all the way, and at the same time bringing up a good deal of blood. Speaking was very painful and her voice was husky. That night, though she was somewhat better, she slept little and coughed somewhat, but did not bring up any more blood. The next day she complained of pain in the back of her head and neck, and the throat again was very sore, especially on swallowing. She went to a medical man, who prescribed for her, and advised her to go to bed. The cough soon ceased, but the throat remained very sore for a week, and the patient felt unwell in herself. The pain in the head and neck lasted about four days. She soon felt quite well again, but noticed that her breathing was becoming difficult and short, especially on exertion; this became progressively worse. In October the breathing was at its worst, and the patient attended the Western General Dispensary; there she saw the house surgeon, who, after examining her throat, asked her if she had ever swallowed anything, the patient replying that she never had; she was treated for the pain in the side. In November she attended at the North London Hospital for Consumption as an out-patient under Dr. Bunch, who prescribed a mixture of iodide of potassium for the tracheal trouble, considering it to be probably specific. She attended for six weeks. During this period she was exhibited at one of the laryngological societies as a case of tracheal stenosis of specific origin. She was admitted as an in-patient, and then complained of cough, thick dark expectoration, and great difficulty of breathing. She was put on one drachm of iodide of potassium daily, the case being still regarded as one of syphilitic tracheal stenosis. One drachm of mercury ointment was ordered to be rubbed into the neck three times a week. On Dec 4th the patient felt better and the breathing was easier. On the 14th there was a slight paroxysm of dyspnœa in the night; her colour was good. On the 18th there was another paroxysm of dyspnœa. On Dec. 18th she was examined by Mr. Lake, who diagnosed a foreign body lying obliquely across the trachea from the right forwards and to the left (Fig. 1)—probably a pin or needle, the ends of which were embedded in an inflammatory swelling, ulcerated at the points of insertion of the body, and causing considerable narrowing of the trachea. On Jan. 22nd, 1897, in the absence of Dr. Bunch, a consultation was held with Dr. Pidcock and Dr. A. MacGregor, when, as there was now most distinct evidence of increased tracheal stenosis, and the patient's respiration was becoming seriously embarrassed, it was decided to ask the opinion of

[3] Transactions of the Clinical Society, vol. x.
[4] Archiv di Ortopedia, 1894, p 222.

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Mr. Watson Cheyne, the consulting surgeon to the hospital. Accordingly the patient saw Mr. Cheyne on the same day, and he agreed that a foreign body was present and that immediate operation was necessary, which he performed on the 25th. The patient was anæsthetised with $CHCl_3$, but, as expected, she took the anæsthetic very badly, the stridor becoming very marked and cyanosis coming on rapidly. An incision, about four inches in length, was made over the trachea, division of the isthmus of the thyroid being necessary. The patient ceased breathing just as the trachea was reached; it was therefore immediately opened, respiration being promptly re-established. The tracheal wound being enlarged a little upwards part of the foreign body was seen, and it was then extracted, and found to be a piece of bone (Fig. 2) with sharply bevelled edges. A long tracheal tube was pushed down to make sure that there was no further obstruction and some granulation tissue on the right side of the trachea was

FIG. 1.

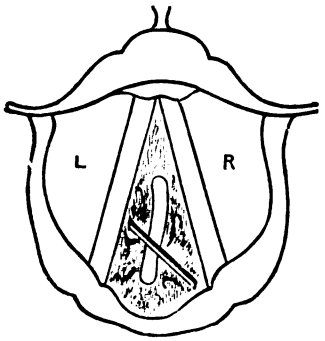


Diagram of foreign body *in situ*; it is drawn too thin and the shadow is on the wrong side.

FIG. 2.



Foreign body (actual size), the right upper side being that seen in Fig. 1.

lightly scraped. A Parker's tube was inserted and two stitches were used to the superficial wound. There was much coughing immediately after the operation, necessitating the withdrawal of the tube, when a large piece of granulation tissue detached by the tube was ejected. On the 26th the temperature was 97·6° F. in the morning. The patient coughed a great deal all day. On the 27th the temperature was 99·2° at 10 A.M., and the pulse was 98. The throat was still painful on swallowing. At 6 P.M. the temperature had risen to 100·4° and the pulse to 104. At 10 P.M. the temperature fell to 98·8° and the pulse to 102; the respirations were 30. The patient was very restless and the cough had become more troublesome. On the 28th the temperature at 7 A.M. was 98·6°. Nourishment was taken fairly; swallowing was rather less painful; the pulse was 96 and the respirations were 28. The patient did not feel so well; she complained of shivering about 11 A.M. The temperature at 2 P.M. was 103·2°, the pulse was 127, and the respirations were 42. The patient coughed a good deal and there was expectoration of glairy mucus. The tube was removed for a quarter of an hour. On examination of the chest behind a patchy dulness was noticed at both bases, but mostly on the right side. Patches of bronchial, almost tubular, breathing were heard, also râles, but this was most marked on the right side. She had had some pain in the right side. On the 29th the patient was much better. The temperature was 99·2° at 7 A.M., rising to 100·8° at 2 P.M. The physical signs had improved; the râles were less in number and less consonating; the breathing was not so tubular. The patient still coughed up a good deal. Counter irritation was applied to the left base. She had a fairly good night and on the whole was much better. The temperature rose to 98·4° at 7 P.M. By Feb. 1st all the physical signs in the chest had disappeared. There was slight cough, but no expectoration. The tube was removed. On the 17th it was noted: "Has been out to-day. Wound quite closed. Normal temperature. Cough better." On the 27th the cough was all right. On laryngoscopic examination a little button of granulation tissue was seen at the upper end of the tracheal wound, and the scar in the trachea was visible. The patient stated that she had not felt so well since she swallowed the bone nearly nine years previously.

Remarks.—We are indebted to Mr. Cheyne for his kind permission to publish this case, and have to thank Dr. MacGregor (under whose care the patient was owing to the temporary absence of one of us) and Mr. C. S. Read (the resident medical officer) for aiding us in preparing these notes. The case is one of extreme interest if, as we imagine, this bone was impacted in the right bronchus for over eight years, and then shifted its position in August, 1896, causing the tracheal stenosis. Its size was 0·82 by 0·60 of an inch, but it was thin, only consisting of the inner table of the sheep's skull. The extreme denseness of the bone was, no doubt, the reason it was able to remain so long unaltered in the body, and its peculiar shape and sharp edges prevented it moving about, and, when viewed from above *in situ*, it gave the impression of a bar.

Table of Recorded Cases in which a Foreign Body was in the Lower Air Passages for One Year or over, and in which Recovery followed after Removal by Operation or Spontaneous Expulsion.

Time.	Sex.	Reporter.	Size.	Remarks and source.
Years.				
3	(?)	Raznmowski.	—	Tracheal cannula.
2	M.	Desanes.	—	Cherry-stone; lodged in the ventricle of larynx.
1 6/12	—	Liscure.	—	Bone; died eighteen months later. (Gross: System of Surgery.)
11	—	Walkupf.	—	—
1	—	Lewis.	—	Cherry-stone.
3	—	Terry.	—	Gun-cap.
2½	—	Schäfer.	—	Bone. (Therapeutische Monatsschrift, Band iii., 1891.)
1 7/12	—	Schmidt.	—	Moritz. (Schmidt, p. 560.)
10	—	Dupuytren.	—	Coin. (Leçons Orales, vol. iii., Paris, 1833.)
4	—	Day.	—	Fish-bone. (London Medical Gazette, 1833.)
5	—	Provost.	—	Collar-button. (Pacific Medical Journal, vol. xxviii.)
1	—	Petit.	—	Second lower molar (Union Med., vol. xxxv., 1886—Signs of Phthisis.)
1 1/12	—	Wharton.	—	Steel pin lodged in left bronchus. (Philadelphia Medical News, February, 1887.)
1	—	Traverg, Jun.	—	Cowdare shell. (Transactions of the Royal Medical and Chirurgical Society, 1812, vol. xxiii., p. 1.)
1 1/12	—	Cragie.	—	Screw nail. (Craigie's Pathological Anatomy, 1848, p. 590.)
1 5/12	—	Henry.	—	Water melon seed. (Gross: Foreign Bodies.)
1 10/12	—	Duncan.	—	Head of grass. (Do.)
2	—	Booth.	—	Shot. (Do.)
2	—	Herrick.	—	Fishbone. (Do.)
3	—	Fluit.	—	Trunk nail. (Do.)
4	—	Duncan.	—	Piece of bone. (Do.)
6	—	Grindley.	—	Lead pencil. (Do.)
7	—	Walther.	—	Claw of crayfish. (Do.)
60	—	Bartlett.	—	Bone; pains in right side. (Do.)
6	—	Collard.	—	Mutton bone; died from other causes. (Do.)
2 to 3	—	Collard.	—	Nail.
1 2/12	—	Daly.	—	Bone. (Omaha Clinics, April, 1889.)
2	—	Hayes.	—	Memphis Journal of Medical Science, November, 1890.
5½	—	—	—	Coin. (Brit. Med. Jour., February, 1896.)
3	—	Caport.	1 c.m. by 2 c.m.	Bone; left bronchus.
9	F.	Bunch and Lake.	0·82 by 0·6 of an inch.	Mutton bone; pain in side, bronchitis, and eventually dyspnœa.

The number of cases recorded of a foreign body being retained in the trachea or bronchus with recovery after removal or expulsion is thirty-one. The cases in which the

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foreign body was retained longer than that forming the basis of this paper are three in number. As an example of another class of case—i.e., that in which the foreign body was retained and the patient died from other causes—may be quoted that by J. Mitchell,[1] in which a half sovereign was found at the bifurcation of the trachea many years after it was inhaled.

This table includes every recorded case during the present century that we have been able to find in which the foreign body was present for twelve months or longer, and in which recovery followed either operation or spontaneous ejection. In those cases which do not survive the cause of death is almost invariably tuberculosis. It is but speculation to try to arrive at the factors which conduce to the harmless retention of any foreign body in the lower air passages. Naturally there is the important but vague personal factor, with any tendency to the spontaneous development of tubercle, and probably the environment of the patient; next no doubt comes the position occupied by the foreign body, the most favourable probably being those in which there is absolute immobility, with the minimum of obstruction to the air stream. By the table it will be seen that with two exceptions the foreign body was not capable of absorbing moisture, and so swelling and becoming fœtid.

As to symptoms, they are very vague, the most usual one being pain referred to one side if the foreign body is lodged in a bronchus, but even this is by no means constant, the remainder are much what one would expect, both objective and subjective.

SOME REMARKS ON LAVAGE OF THE STOMACH IN CONNEXION WITH A FATAL CASE OF VOMITING WHILE UNDER AN ANÆSTHETIC.

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A MAN, aged thirty-seven years, was admitted into University College Hospital with profuse stercoraceous vomiting due to an old femoral hernia which had become strangulated four days previously while the patient was suffering from a slight attack of delirium tremens. The general condition was under these circumstances very unfavourable; vomiting occurred two or three times hourly, the pulse-rate was 144 to the minute, and the man had evidently been a heavy drinker, although there were then no signs of delirium tremens, and no organic disease of the heart or other organs could be detected. He took the anæsthetic—gas and ether given in the larger Clover inhaler—well, except for some struggling. When just passing into the stage of complete anæsthesia some vomit came up into the mouth without any visible muscular straining, the operation not having commenced. Respiration ceased entirely from that moment in spite of the immediate and long-continued application of artificial respiration, sponging out of the pharynx, laryngotomy followed by suction of some vomited matter out of the trachea, and other means of stimulation. Cardiac action certainly continued for a short time after respiration ceased, but the exact moment of its cessation was not ascertained as it seemed inadvisable to stop artificial respiration in order to allow of auscultation of the heart. Altogether about three-quarters of an ounce of the ether had been used. The necropsy showed the loop of gut in the hernial sac to be deeply congested, but not gangrenous. The other organs were healthy to the naked eye, except the lungs, which were œdematous and contained fæculent matter in the smaller tubes.

Remarks.—Death in this case was evidently not due to any toxic effect from the ether and should come under the head of death *under* the anæsthetic, not *from* the anæsthetic. The factor introduced by the etherisation was the abolition of the protective closure of the larynx, so as to allow the inhalation of some of the stercoral vomit due to the obstruction; the flooding of the bronchial tubes with the fluid matter producing immediate asphyxia. Similar accidents during anæsthesia in cases of intestinal obstruction are not uncommon and several are recorded in the Report of THE LANCET Commission appointed to Investigate the Subject of the Administration of Chloroform and Other Anæsthetics from a Clinical Standpoint. They may occur either with ether or chloroform and are more common when the patient is recovering from the anæsthetic than when he is passing under. It seems to be undecided which is the best anæsthetic for these cases, some preferring ether, others chloroform; but in this patient both the strong alcoholic history and the rapid pulse seemed to point to ether, apart from the abdominal condition. For the prevention of vomiting under the anæsthetic which in this class of case frequently occurs unnoticed, being caused by a quiet pumping action of the diaphragm and not by any strong contraction of the external muscles, it is usually recommended to put the patient under as rapidly as possible without allowing any sudden increase in strength of the vapour breathed, and also to keep the head somewhat inclined to one side. Both these precautions were taken, but probably it would have been still better to have administered the anæsthetic with the patient lying on the side, so as to minimise the risk of the inhalation of any vomited matter.

An accident such as this raises the important question of the advisability of washing out the stomach before giving the anæsthetic in any case of intestinal obstruction. It was laid down by such a high authority as the late Mr. Greig Smith, in a paper read before the Royal Medical and Chirurgical Society,[1] that, in any case of intestinal obstruction with a distended stomach either the stomach should be washed out before giving the anæsthetic or a local anæsthetic only should be used; and this opinion seems to have been endorsed by several of the well-known surgeons who took part in the discussion. This advice, however, seems to be by no means generally followed, and a preliminary lavage of the stomach in these cases is not considered by either Dr. Buxton or Dr. Hewitt in their books on anæsthetics. The advantages gained by this means are (1): the removal of a large quantity of poisonous material from the stomach, which if left is in part absorbed, and often causes severe toxic symptoms and sometimes death some hours or days after the obstruction has been relieved by operation; (2) the prevention of vomiting and the inhalation of fluid stercoral matter into the lungs either at the commencement or end of the anæsthesia. Death from this cause may even occur within an hour or so of recovery from the anæsthetic. Thus a case occurred in the University College Hospital in which a typhlitic abscess causing very severe intestinal vomiting was opened and drained; half an hour after the operation was over, when the patient was back in bed, profuse vomiting occurred and death took place immediately. Immediate death from asphyxia is not the only danger from inhalation of fæcal vomit, as if only a small quantity passes through the larynx there is great danger of it setting up severe or fatal septic pneumonia. The advantages of the avoidance of two such very grave dangers are so obvious that lavage would probably be universally employed as a preliminary in these cases if it were not for one serious objection. This is that the necessary manipulation performed on a conscious person often causes so much retching and straining that severe collapse may easily occur, especially as the patient is usually already in a critical condition, so that he is put in a worse position to stand the operation and anæsthetic. This collapse is by no means unknown when lavage is performed on a comparatively healthy person. To obtain the advantages of the lavage and to avoid the danger of collapse the patient may be first put under the anæsthetic and the stomach then washed out, as may be then easily and quickly done without producing bad symptoms. Our intention was to do this in the present case, but the fatal vomiting occurred before he was sufficiently under. It is the method which has been used with very good results in most cases of intestinal obstruction in which I have administered the anæsthetic. The only objection to it is that, as in this case, vomiting may occur while the patient is passing under the anæsthetic. However, vomiting at the commencement is not nearly so common and is more preventable than that occurring after the anæsthesia, at which period nearly all the fatal cases seem to have occurred.

Thus there seem to be three methods of dealing with these cases of intestinal obstruction or other forms of distended stomach in which an operation is required, each

[1] Brit. Med. Jour., June 13th, 1896.

[1] THE LANCET, March 12th, 1892, p. 582.

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method having its own disadvantages. 1. Not to use lavage, thus running the risk of vomiting producing asphyxia or septic pneumonia, and also of after toxic symptoms due to absorption from the stomach. 2. To perform lavage before giving the anæsthetic, running the risk of the production of collapse, thus increasing the danger of shock from the subsequent operation. 3. To perform lavage as soon as the patient is fully under, taking precautions to minimise as far as possible the danger from vomiting occurring before the stomach is emptied. Although the latter method is useless in a case such as the present, yet it seems to be the one with the fewest disadvantages, and apparently offers the best general way of treating these unsatisfactory cases.

ON THE INCREASE OF THE EOSINOPHILIC CELLS IN THE CIRCULATING BLOOD IN TRICHINOSIS.[1]

BY WILLIAM SYDNEY THAYER, M.D.,
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IN the April number of the *Bulletin* of the Johns Hopkins Hospital, Dr. Brown reports some interesting observations upon trichinosis based chiefly upon studies of the blood and muscle of a case which occurred in the medical clinic under our observation. In this communication the remarkable fact was pointed out that the blood showed an enormous percentage of eosinophilic cells, the proportion reaching at one time as high a point as 68·2 per cent. of the entire number of leucocytes. Dr. Brown remarks justly that "the presence of such quantities of eosinophiles suggests their possible diagnostic value in trichinosis." The occurrence of a second case with similar manifestations would appear to justify our suspicions as to the great diagnostic importance of this increase in eosinophilic cells, and it has seemed to me advisable to present here a brief summary of these two instances. The careful studies of Dr. Brown will appear at length in an early number of the *Journal of Experimental Medicine*.

CASE 1.—An Englishman by birth, aged twenty-eight years, was admitted to the Johns Hopkins Hospital on March 3rd, 1896, complaining of general muscular pains and weakness. The patient, who was a reporter by occupation, had been leading the life of a tramp for some time before entry, sleeping at times out-of-doors and often deprived of sufficient nourishment. His family and previous history had no relation to his complaint at that time. For six weeks he had complained of "irregular indefinite pains," as he expressed it, in his joints, bones, and muscles, and for two weeks before entry these pains had been so severe that he had had great difficulty in moving about. There was a feeling of fulness in the head and great muscular tenderness and weakness, so much so that he had to be assisted in putting on his clothes. He was unaware of having had fever. There had been no œdema. Physical examination showed the patient to be a well-nourished man of medium size, with tongue thickly coated, and slight pallor of the lips and mucous membranes. The temperature on admission was 102° F., the pulse was 104, and the respiration was 24. The thyroid gland was rather large, particularly the left lobe. Examination of the thorax and abdomen proved negative; the lungs were clear on auscultation and percussion; the cardiac area was normal. There was a soft systolic murmur over the heart, most marked in the pulmonary area, heard a short distance outwards into the axilla. The spleen was not palpable; there were no rose spots. There was great muscular tenderness and lameness. Light touches upon the skin and pinching of the skin caused no distress, while deeper pressure was followed by considerable pain, especially in the muscles of the arms, thighs, legs, and gluteal regions. There was no tenderness in the course of the long bones. The muscular tenderness was general. The patient lay quietly in bed, any voluntary motion being accompanied by considerable pain. The temperature remained continually elevated, for the first five days ranging between 100° and 104·3°. After March 8th the temperature began to fall gradually, reaching a point under 100° upon the 18th, after which it remained nearly normal. The urine was slightly reduced in quantity; there was a well-marked diazo reaction; the sediment contained a few granular casts. The blood, examined on March 6th, showed red blood corpuscles, 4,232,000; and leucocytes, 16,500. A differential count of the leucocytes[2] gave the following results: small mononuclear leucocytes, 5 per cent.; large mononuclear and transitional forms, 7 per cent.; polymorphonuclear neutrophiles, 50 per cent.; and eosinophiles, 38 per cent. Though the continued high temperature and general pains at first suggested typhoid fever, the absence of any abdominal symptoms, the leucocytosis, and the extraordinary increase in the eosinophilic cells rendered the diagnosis improbable. On the other hand, the extreme muscular tenderness on movements or on pressure pointed directly to a myositis, and a diagnosis of trichinosis was made. This was confirmed by the removal of a small piece of muscle from the right biceps on March 12th and the demonstration of active living trichinæ and others just beginning to be encapsulated. After March 18th the patient improved steadily and was discharged on May 13th well. About April 10th the patient first left his bed, and for some days afterwards there was slight œdema of the ankles, the only œdema which had at any time been noted during his illness. An examination of the blood was made daily by Dr. Brown during the patient's stay in the hospital, and the elaborate charts which he has prepared will appear shortly in his detailed studies upon the case. The total number of leucocytes per cubic millimetre ranged between about 13,000 on May 16th to over 35,000 on April 18th, being for the greater part of the time above 15,000 in number. The percentage of eosinophilic cells, which was 37 per cent. on the day of entry, fell to a little over 8 per cent. on March 22nd, and then rose gradually, reaching the extraordinary level of 68·2 per cent. on April 23rd. The small and large mononuclear elements remained throughout at a percentage slightly higher than one would have expected with the degree of leucocytosis existing—that is, at about their normal percentage or a little below this, while the number of polymorphonuclear neutrophiles was in directly inverse proportion to that of the eosinophiles. Thus on April 23rd, with a leucocytosis of 17,700, the differential count of the leucocytes was as follows: Small mononuclear leucocytes, 19·6 per cent.; large mononuclear and transitional forms, 5·2 per cent.; polymorphonuclear neutrophiles, 6·6 per cent.; and eosinophiles, 68·2 per cent.

CASE 2.—A German by birth, aged twenty-nine years, was admitted to the Johns Hopkins Hospital on April 15th, 1897, complaining of chills and fever, muscular pains, and weakness. The patient was a sailor, having recently arrived upon a steamer from Cuba. Several of his shipmates had during the trip developed intermittent malarial fever of the æstivo-autumnal type. Both his family history and personal history were negative. For about ten days or two weeks the patient had noticed a loss of appetite and general muscular weakness. Six days before admission he began to complain of continuous frontal headache, and for four days there had been considerable pain in the calves of the legs and in the back. For five days there had been slight general abdominal pain. On the morning of his admission to hospital the patient had two fluid stools. Five days before the patient had noticed a sudden œdema of the eyes and face. This was so marked that the eyes were opened with difficulty, the movements of the lids being accompanied by some pain. For several days he had had slight pain on mastication and on deep inspiration. There had been shaking chills and considerable fever. Physical examination showed the patient to be a well-nourished man. The lips and mucous membranes were of good colour; there was slight fulness of the eyelids, which, however, was not very marked, and the tongue had a pasty white coat. The lungs were clear throughout. With regard to the heart, the position and area of dulness were normal, and the sounds were clear and of normal relative intensity. The abdomen was natural in appearance. There was slight tenderness on pressure in the right iliac fossa. The spleen was just palpable. The border of the liver was to be felt on deep inspiration. There was no general glandular enlargement. There were a few small pinkish papules on the trunk suggestive of a typhoid roseola. The urine was reduced in

[1] Remarks made in the Section for Internal Medicine of the Twelfth International Medical Congress.

[2] Stained, according to Ehrlich's method, with the triple stain of acid fuchsin, methylene green, and orange green.

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quantity, of a normal colour, and of specific gravity 1018; there was a slight trace of albumin; diazo reaction was not present, the sediment was slight, and there were no casts. As to the blood, the red corpuscles were 5,000,000 and the colourless corpuscles 13,000. A differential count of the leucocytes gave the following results: Small mononuclear forms, 11 per cent.; large mononuclear and transitional forms, 5 per cent.; polymorphonuclear neutrophiles, 37 per cent.; and eosinophiles, 44 per cent. Examination of the stools, which were fluid and of a deep brown colour, showed no mucus or blood, and there was no evidence of parasites or ova. The temperature pursued a remarkable course, daily elevations occurring at about noon, rising to a point as high as 105° F., and falling during the morning hours to a subnormal point. The paroxysms very closely resembled those of æstivo-autumnal malarial fever. Repeated examinations of the blood were made without showing the presence of parasites or pigment, and on April 18th I aspirated the spleen in order to exclude absolutely the presence of malarial infection. No pigment or parasites whatever were to be found in the splenic juice. Regular examinations of the blood were made by Dr. Brown with the following result. The number of leucocytes varied between 6000 on April 23rd and 13,000 on the 15th and May 3rd, while the percentage of eosinophiles varied between 14 per cent. on April 29th and 42·8 per cent. on the 15th. In this case, as in the former, the same inverse proportion existed between the number of neutrophilic and the eosinophilic leucocytes. Thus, on April 29th, with a leucocytosis of 12,000, there were only 14 per cent. of eosinophilic cells and 67 per cent. of polymorphonuclear neutrophiles, while on the 15th, with 42·8 per cent. of eosinophiles, there were 43·1 per cent. only of polymorphonuclear neutrophiles. It is extremely interesting that here the mononuclear forms represented almost exactly that percentage of the total number of leucocytes which might have been expected under ordinary circumstances, with a leucocytosis of the existing degree. The results, then, of blood examination were practically the same as those obtained in the above described case of trichinosis. The enormous percentage of eosinophilic cells present in the blood in connexion with our former experience led us to suspect the possibility of the existence of trichinosis in this instance, and consequently a small piece of muscle was removed from the calf of the right leg. Pieces of this muscle were examined in fresh salt solution without the discovery of trichinæ. The remaining bit of muscle was hardened in alcohol, embedded in paraffin, and cut. In the specimens stained in hæmatoxylin and eosin the characteristic degenerative processes described by Dr. Brown in the former case of trichinosis were discovered, and also in one portion of the muscle a characteristic young trichina embryo, not as yet encapsulated, which had evidently just entered into the muscle fibre. The patient made a good recovery, and left the hospital feeling perfectly well on May 18th, since which time he has escaped our observation.

Thus, in two instances of acute trichinosis we have discovered the remarkable fact that the blood contained a larger percentage of eosinophilic cells than has ever heretofore been noted. This increase in eosinophilic cells, so striking in the first instance, led us to suspect the existence of trichinosis in the second milder case in which the clinical symptoms would scarcely have justified a diagnosis. This observation we are inclined to believe may possess considerable diagnostic importance. It is important and interesting to note that this increase in eosinophilic cells occurred always in association with a leucocytosis, and that the increase in eosinophiles was invariably associated with a corresponding decrease in the polymorphonuclear neutrophilic elements. The small mononuclear elements and the large mononuclear and transitional forms preserved always either their normal proportion or a somewhat reduced percentage, as might have been suspected in connexion with a leucocytosis of the extent present; the percentage of the polynuclear and eosinophilic cells together form nearly or quite the proportion commonly represented by neutrophiles alone. These cells were always present in inverse proportion one to the other, an increase in the one variety being invariably associated with a decrease in the other. This remarkable fact points certainly to a close relationship between the origin of these two varieties of cells, and forms suggestive evidence in favour of the view held by some observers that the eosinophilic cells arise by some direct transformation from the ordinary polymorphonuclear neutrophilic elements. Dr. Brown suggests in an interesting manner that some such change may, in these instances, have taken place in the areas of degenerated muscle. Here he was able to demonstrate an enormous percentage of eosinophilic elements among the wandering cells, a percentage distinctly greater than that present in the circulating blood upon the same date or in the interfascicular vessels of the affected region. Dr. Brown also believes that he has demonstrated in the affected areas of the muscles transitional forms between the two varieties of cells—namely, polymorphonuclear elements possessing a granulation showing every stage between the small granules indefinitely staining with eosin—the ordinary neutrophilic granulation—to the well-marked, round or ovoid, refractive, deeply staining eosinophilic granules.

Conclusions.—1. In two instances of trichinosis the circulating blood has been found to contain a larger percentage of eosinophilic cells than has ever previously been demonstrated. 2. This increase in eosinophiles, occurring in connexion with a moderate or well-marked leucocytosis, always occurs at the expense of the polymorphonuclear neutrophilic elements, which are correspondingly diminished in number, the small and large mononuclear and transitional forms being present in normal proportions or in a percentage slightly below normal, not far from what one might expect with a leucocytosis of the existing degree. 3. Whether these changes in the blood are characteristic of trichinosis or whether they are also to be found in extensive myositis from other causes remains to be shown. 4. The remarkable inverse proportion between the eosinophiles and the neutrophiles in these instances, as well as the changes observed by Dr. Brown in the histological study of the muscle, form suggestive evidence in favour of the view that the increase in eosinophiles in these cases occurred by a direct transition from the polymorphonuclear neutrophilic elements.

Baltimore.

STRANGULATED HERNIA I NINFANCY WITH A REPORT OF A CASE OF INGUINAL HERNIA SUCCESSFULLY OPERATED UPON IN A CHILD AGED TWENTY-TWO DAYS.

BY BERKELEY G. A. MOYNIHAN, M.S. LOND., F.R.C.S. ENG.,
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STRANGULATED hernia requiring operation during infancy is a very unusual occurrence. The most recent contributions to the literature of the subject have been published by Carl Stern[1] and by Tariel[2] of Paris. The extreme rarity of the condition is forcibly insisted upon by both writers. Stern, in order to determine its frequency, consulted the records of the children's hospitals of Basle, Prague, Breslau, Vienna, Krakow, Frankfort, Amsterdam, Berne, and Göttingen. In these hospitals for four consecutive years 139,000 children were treated, but there is no record of any case of herniotomy for strangulation. Of 1900 cases operated upon for strangulated hernia in various hospitals 13 occurred in children. The proportion of cases in adults as compared with children is calculated by Stern to be in the ratio approximately of 108 to 1. Tariel, after remarking that several noted surgeons, among whom are Holmes, Gosselin, St. Germain, and Lannelongue, have never met with acute cases requiring herniotomy, tabulates the records that he has been able to collect. They number in all 128. König states that throughout his long surgical career he has only met with two cases requiring operation in the "early years" of childhood. Nussbaum operated upon two cases among a total number of 54,000 children under his care. Broca found strangulation in 9 cases out of 200 requiring radical cure in infancy. The first collection of records of operations of this kind was made by Ravoth, who tabulated 30 well authenticated cases. Féré, who followed him, investigated the records of 52 operations in 56 cases. Howard Marsh,[3] in 1874, collected 47 cases. Knobloch,

[1] C. Stern: Centralblatt für Chirurgie, 1894.
[2] Tariel: Revue mensuelle des Maladies de l'Enfance, Paris, May, 1894. See also Prior: Archives of Pediatrics, Philadelphia, 1894.
[3] Howard Marsh: St. Bartholomew's Hospital Reports, 1874.

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whose investigations preceded those of Stern, compiled notes of 87 herniotomies for inguinal, 11 for umbilical, and 1 for femoral hernia. To this already comprehensive list Stern added 51 later cases of inguinal and 3 of umbilical hernia.

On a perusal of these researches two facts stand prominenently out from the point of view of interest. The first is that operations are more frequently called for during the earlier months of childhood than during the later. The greatest number occur in the first, second, and third months of the first year. The proportion after this period diminishes very rapidly as is shown by comparing in a tabular form the cases operated upon in each of the first twelve months.

During the	1st	month	16	cases	occurred.
,,	2nd	,,	15	,,	,,
,,	3rd	,,	14	,,	,,
,,	4th	,,	9	,,	,,
,,	5th	,,	4	,,	,,
,,	6th	,,	7	,,	,,
,,	7th	,,	3	,,	,,
,,	8th	,,	6	,,	,,
,,	9th	,,	9	,,	,,
,,	10th	,,	3	,,	,,
,,	11th	,,	3	,,	,,
,,	12th	,,	4	,,	,,

During the third and fourth years only 4 cases are noted. The second point is this—that the symptom most commonly observed in children, or perhaps one should call it an associated condition rather than a symptom proper, is retention of urine.

With regard to the cause of strangulation Howard Marsh states that, in 32 cases which he investigated, in 20 it was in the neck of the sac, in 7 at the external ring, in 3 at the internal ring, in 1 at both rings, and at the conjoined tendon in 1. Tariel found that the neck of the sac caused the constriction in 58 cases out of a total of 81 examined. The contents are most frequently portions of the small intestine, but in a proportion not inconsiderable the cæcum and the appendix have been found within the sac. In one case the Fallopian tube and ovary were present.

The treatment of strangulated hernia in infancy does not differ from the similar condition found in adults. A radical cure should always be performed if the condition of the patient permits it. Both Stern and Tariel compute the mortality of the operation, but as the cases they investigated extended over a period of nearly thirty years no great reliance can be placed on the percentage of deaths. One fact, however, seems quite clear—that the mortality during the first four years of life is quite appreciably less than the average mortality of later years. The last short series of cases deserving of mention are those of Coley,[4] of New York. He operated upon five cases in infants under one year. Death occurred in a child practically moribund at the beginning of the operation. In two cases the cæcum and appendix were found in the sac. A radical cure was performed in all cases. Up to the present none have relapsed.

The following case has recently come under my care. The patient was a male, aged twenty-two days. Since birth a rupture had been noticed on the right side. About twenty-four hours before I saw him the rupture came down when the child was crying. The mother, on examining it, found that the size of the swelling was larger than she had previously noticed it, and her attempts at reduction failed. Within an hour the child had vomited and had continued to do so at intervals which were becoming gradually curtailed. For about twelve hours no urine had passed. On examination I found a tense inguinal hernia on the right side, of approximately the size of a billiard ball. Attempts were made to reduce the hernia without, and with, anæsthesia from chloroform, but were unsuccessful. I at once proceeded to operate. The sac of what I saw to be a congenital hernia contained a little fluid, and about ten or twelve inches of distended and discoloured small intestine. The point of strangulation was at the neck of the sac. I stretched the rings with my finger and returned the gut; completing the operation by performing a radical cure by Ball's method and by fashioning a tunica vaginalis from the lower part of the sac. A dressing of collodion and gauze was applied. During the operation the child passed urine. The after history was uneventful and recovery was speedy. Up to the present the hernia has not returned; no truss is worn.

Leeds.

[4] Coley: Dennis's System of Surgery.

THE NON-CONTAGIOUSNESS OF ANÆSTHETIC LEPROSY.

By S. P. IMPEY,

LATE MEDICAL SUPERINTENDENT, ROBBEN ISLAND, CAPE COLONY.

I THINK all medical men who have paid attention to the study of leprosy are agreed that the disease is due to the presence in the system of the bacillus lepræ, the true nature of which was discovered by Dr. Amauer Hansen of Bergen. This bacillus is a difficult one to study, for it has not only not been discovered in any other tissues but that of the human body, but it has defied all attempts at cultivating it in artificial media, and all inoculation experiments with it on the lower animals have failed, so that its life-history is not well known; but, nevertheless, we have during the last few years added much to our knowledge concerning the disease of which it is the cause. If the bacillus is the cause of leprosy, and it is found only in the human body, it follows that the human body must be the source of infection of all fresh cases of leprosy, and it also follows that in order to stamp out the disease or to check its spread the diseased must be separated from the healthy.

I had, whilst on Robben Island, a large number of lepers under my charge, who afforded me a good opportunity of becoming well acquainted with the disease and its treatment, and I spent much time and devoted much attention to the study of the prophylactic treatment of the disease. The more I studied the subject, and the more I became acquainted with the true nature of leprosy, the more I became convinced that the systems of segregation adopted in this and other countries were wrong—wrong in principle, wrong in practice, and wholly unscientific. I found that the laws dealing with the lepers, which were made at a time when the disease was not understood, were not only inadequate, but, by their very severity, were retarding the work for which they were framed. I became convinced that if leprosy was to be stamped out effectually a simpler and less harsh system of segregation should be adopted—a system based upon the solid foundation of knowledge, and one that was scientifically correct. I am a firm believer in the efficacy of segregation, for I think that the only way in which we can hope to check the spread of leprosy is by isolating those cases which are a danger to the public, but I also believe that it is unnecessary to isolate all lepers, for though some lepers are undoubtedly highly dangerous to the public, others are, in my opinion, harmless. I think the dangerous cases should be very strictly segregated, but the harmless lepers should be allowed their liberty. My object in writing this paper is to endeavour to show that all cases of anæsthetic leprosy are harmless, and that it is not only unnecessary but wrong to force them to live in leper asylums.

Patients suffering from leprosy may, for all practical purposes, be divided into two classes, those in whom nodules or tubercles occur and those in whom there are no tubercles. The former class includes all tuberculous and mixed cases, the latter all cases of anæsthetic or nerve leprosy. In tuberculous and mixed leprosy bacilli are found in many tissues of the body, in anæsthetic leprosy they are confined to the nerves. I am aware that some authorities are of opinion that the bacilli are found in the cutis in the anæsthetic patches, especially during the erythematous stage of the disease, but this I think is a mistake. Professor Unna, of Hamburg, and others are of opinion that in anæsthetic leprosy all the tissues of the body except the nerves are immune against the bacilli; with this opinion I entirely agree, for if it were not so nodules would form in all cases and bacilli would be found in some other of the tissues, but I have never been able to find the bacilli in the body of an anæsthetic leper except in the nerves. We must, therefore, conclude that the cutis and other parts in anæsthetic leprosy are protected in some way against the leper bacillus, and that the bacilli cannot exist elsewhere than in the nerves. I am of opinion that those who have reported the finding of bacilli in the cutis of anæsthetic leprosy have made an error of diagnosis and have mistaken mixed or tuberculous leprosy for the anæsthetic form of the disease. During the erythematous stage of leprosy the two forms are very much alike, so that unless the greatest care is taken an error of diagnosis may be very easily made

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even by one well acquainted with the disease. All things go to show that there is very little doubt that in anæsthetic leprosy the bacilli are confined to the nerves. All the nerves of the body are not attacked by the bacilli, nor are the affected nerves diseased in the whole of their extent; the bacilli are found only in certain nerves and in certain parts of those nerves. They are found in the nerves of the extremities, in some of the cutaneous nerves of the trunk, and in some of the nerves supplying the facial muscles. The bacilli are thus limited in their distribution, but, what is of perhaps greater importance, they are limited as to the time of their stay in the body. The bacilli enter the nerves and there set up a violent form of neuritis which soon destroys the nerve fibres; in the general destruction the bacilli are themselves killed. All the fibres in a nerve may be destroyed or some of them only, and the amount of tissue destruction is wholly dependent upon the amount of nerve destruction. The parts which are deprived of their nerve power are lowered in vitality, and thus become the seat of much tissue destruction. It may be readily seen that the more central the lesion in the nerves is, the greater is the resulting tissue destruction, and the more peripheral the seat of lesion in the nerve the less will the tissues be destroyed. This is only what we might expect from the nature of the pathology of anæsthetic leprosy, but these circumstances or results play an important part in determining whether anæsthetic lepropsy is contagious or not. If only the terminal twigs of a nerve are diseased there is little harm done; there is some anæsthesia of the parts and there may be some atrophy of the tissues, but there is no ulceration. The anæsthetic patches on the body of a leper are instances of this form of lesion; they never become ulcerated. If the nerves are diseased in the neighbourhood of the wrist-joint there is generally only a slight numbness of the fingers, with, perhaps, a slight contraction of the digits, but there is no ulceration. If the nerve lesion is in the neighbourhood of the elbow-joint—the most usual site—and all the fibres of the nerves are affected, then we find ulceration and destruction of the fingers with loss often of the metacarpal bones. If the lesion is still more central we may have destruction or absorption of the bones of the forearm up to within a short distance of the elbow-joint; this, however, is an exceedingly rare occurrence. In an anæsthetic patch the bacilli are confined to the nerves and there is no broken surface, so that it is highly improbable, and I may say almost impossible, that the bacilli can escape from one of the patches. The bacilli also are found in these patches only during the erythematous stage of the disease, which is of comparatively short duration, for coincident with the subsidence of the congestion is the disappearance of the bacilli from the part, so that all that remains of a colony of bacilli in an old anæsthetic patch is a mass of granules, composed of disintegrated micro-organisms, embedded in the fibrous band which is all that remains of the diseased nerve. In consideration of these facts I think it may therefore be conceded that the leper bacilli do not escape from the anæsthetic patches. With regard, however, to the more serious changes which take place in the extremities, there are certainly many wounds, but nevertheless the bacilli cannot leave the body by them. If the nerve is diseased in the neighbourhood of the wrist joint no wounds are found, so that the bacilli cannot escape. If the nerve is diseased at the elbow joint there are wounds on the fingers or in the hand, but here the bacilli are far removed from the broken surface, and therefore they are not likely to escape by it, nor, in fact, do they escape by these wounds. I have never yet detected a bacillus in the discharges from wounds of an anæsthetic leper, nor have I met a leprologist who has done so, so that though there are many wounds in an anæsthetic leper's body, yet it must be acknowledged that the bacilli do not leave the body by these wounds.

Now we know that in anæsthetic leprosy the bacilli are, and must be, confined to the nerves, for, as I have before mentioned, all the other tissues of the body are immune against the bacilli, therefore they cannot attack the internal organs or exist in the lymphatic and other glands of the body. The bacilli are confined to the nerves, and I have shown why they cannot escape from the nerves, therefore I think all must acknowledge that though leprosy is theoretically a contagious disease, yet the anæsthetic form of it is practically non-contagious, and therefore perfectly harmless. But there is yet another reason why most anæsthetic lepers are harmless. Some years ago I expressed the opinion that some cases of anæsthetic leprosy became self-cured, meaning thereby that in these cases the bacilli had ceased to exist in the nerves, that this fortunate condition was due to natural causes and not to medical treatment, that, in fact, the disease had run its course and had thus cured itself. I further stated that it was only in the earlier stages of anæsthetic leprosy that it was possible to find the bacilli in the nerves, and that in the later stages all traces of the bacilli were lost. These opinions are now recognised as correct by, I think, all those who have studied the subject. Nearly all diseases caused by bacilli have a definite course to run, after which the tissues become immunised and the bacilli die, and leprosy is no exception to the rule, only, unfortunately, the disease is such a severe one that few patients live long enough to tell the tale.

It is difficult to fix the exact date when the bacilli cease to exist in the body of an anæsthetic leper; I did think it was at about the tenth year, but I have reason now to believe that the disease is of much shorter duration, and that four years is much nearer the mark. The duration of anæsthetic leprosy is generally put down as from five to forty years, or even more, but this is wrong, and the mistake is due to the fact that the results of the disease are taken for the disease itself. We might just as well say that the duration of small-pox is from three weeks to ninety years, for many people who die at this ripe old age are pitted by the disease. If leprosy is due to the bacilli, which no one now denies, then surely when the bacilli cease to live in the body the disease itself must cease to exist, and the patient after that suffers from the effects of the disease and not from the disease itself. That the bacillus lepræ does cease to exist in the body which it has more or less destroyed is proved by the fact that no bacilli can be found in the body of a chronic case. Such patients are cured, and we have no more reason to call them lepers or to say that they are suffering from the disease than we have to say that because a man is marked by small-pox he is suffering from variola. I think it is not only unnecessary to isolate these cured cases, but I think it is wrong to force them to herd with those who are a constant and distinct danger to those about them.

It has been stated that in advanced cases of anæsthetic leprosy—cases in which the disease has been apparently dormant for years—there have been fresh outbreaks of the disease, and that in some of these cases nodules develop. I do not deny this statement, for I have seen similar cases, but I do not agree as to the assigned cause of the fresh outbreak. I cannot believe that the bacillus remains dormant for so many years and then without rhyme or reason starts to work again; but I do believe that these fresh outbreaks are due to re-infection. It is an unusual occurrence to have a fresh outbreak, but when it does occur after many years it most invariably takes on the nodular form of the disease, which goes to prove, I think, that it is a case of re-infection and not of recrudescence.

In an anæsthetic leper most of the tissues are protected against the bacillus, but we know that immunity seldom is of very long duration, so that we can readily conceive that when the bacillus ceases to exist in the body its antitoxin effects would pass off, leaving the tissues unprotected against a second attack of the disease. Many of the cured cases, though free from bacilli, have many wounds, and being thus forced to live in close and constant contact with the nodular cases, from whose bodies there is a plentiful supply of bacilli constantly escaping, it is not to be wondered at that there are cases of re-infection; the wonder it that any of them escape.

The question of the non-contagiousness of anæsthetic leprosy is not only a most interesting one, but one that deserves the earnest attention of the medical profession, for upon the correctness or not of my opinion depends in a great measure the future treatment of the leprosy question. One of the greatest medical problems of the day is—How best to deal with the lepers in order to check the spread of a disease which has of late years made vast strides and rapid progress in almost every part of the world. The whole question resolves itself into a matter of "£ *s. d.*" Many countries have not attempted segregation on account of the expense, for in many cases the number of lepers is so great that the finances of the country cannot stand the cost of providing hospital accommodation for them all. Other countries for the same reason have adopted a system of partial segregation with most unsatisfactory results; in no country is complete segregation insisted upon. In South Africa half the lepers

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are at the present time at large because there is no room for all in the asylums. In warm countries there are twice as many anæsthetic lepers as there are nodular ones, so that if it is found unnecessary to segregate the anæsthetic cases the number of lepers to be dealt with is at once enormously reduced, and the cost of stamping out the disease will be reduced to the extent of two-thirds of what is at present required.

I am of opinion that in the Cape Colony, with half the present accommodation at my disposal, I could find room for every leper who is a danger to the public. At the present time the asylum wards are crowded with patients, many of whom are cured anæsthetic cases, and who are therefore harmless, to the exclusion of a large number of nodular cases, who are a distinct danger to the healthy public, and who, being at large, are daily spreading the disease. We are, by thus dealing with all lepers indiscriminately, not only inflicting an unnecessary hardship upon many whose sufferings are already almost beyond endurance, but we are actually retarding the work on account of which we are making the innocent suffer. I think all anæsthetic lepers should at once be removed from the leper asylums, and if they cannot support themselves they should be treated as ordinary paupers. By allowing the present system of indiscriminate segregation to continue the legislators are forcing the unfortunate anæsthetic cases to expose themselves to the danger of re-infection and of contracting a disease which it is our endeavour to stamp out.

Cape Town.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

TOXIC SWEAT AND ITS VICARIOUS ELIMINATION.

BY DAVID WALSH, M.D. EDIN.,
PHYSICIAN TO THE WESTERN SKIN HOSPITAL.

THE toxic nature of the ordinary sweat of man appears to be well established by the researches of M. Arloing recently published in translated form in the columns of THE LANCET.[1] If confirmed, his observation is likely to throw light upon a number of more or less obscure problems both of etiology and of pathology. If it be true that the skin habitually excretes a toxic substance or substances, then it follows that if the sweat be checked—e.g., by a chill—the toxic material will accumulate in the blood, and the stress of its excretion will be thrown upon other organs. This toxic sudorific material, assuming it to exist, does not appear to damage the skin in normal perspiration, but when the action of the skin is suddenly excited, as by a Turkish bath, there sometimes results an immediate and very definite papular rash which has a strong analogy with the "prickly heat" of the tropics. Perhaps the explanation of this interesting phenomenon may be found in the increased amount of irritant toxic material brought to the skin. That effect might obviously be intensified by the presence of other irritants existing in the blood, such as certain drugs or specific poisons, which are, as it were, superadded to the ordinary toxic principles of sweat.

The general relationship of skin rashes to inflammation of other eliminating organs I have discussed elsewhere.[2] Briefly put, this theory of excretory irritation suggests that a large class of skin rashes are the direct result of the excretion of some irritant from the blood. The irritant may be in the form either of a drug (as arsenic), of a specific micro-organism or its products (exanthems or antitoxin), or of other poisons introduced from without or elaborated within the body (ptomaine poisoning or gout). All, or nearly all, internal agents that cause a dermatitis are capable of inflaming other channels of exit of waste from the body, as the lungs, kidneys, or bowel. In this way arsenic may set up dermatitis, gastro-enteritis, and nephritis, and scarlet fever (presumably due to specific microbes) may give rise to a similar train of evils. In other words, a blood borne irritant agent that is capable of inflaming the skin may also attack vicarious routes of excretion. The time-worn illustration of a knot of persons exposed to some common injurious condition of environment, but who suffer therefrom in different ways, is familiar enough to medical readers. Four men, say, are immersed in a stream; as a result one develops coryza, a second pneumonia, a third nephritis, and a fourth rheumatism. Let it now be supposed that four men suffer in those various ways after exposure to a draught of cool air while sweating freely. Let it also be assumed that sweat normally contains, as M. Arloing asserts,[3] "some energetically poisonous substances, occasioning more or less derangement to all parts of the organism, disturbing the intimate phenomena of nutrition, modifying the composition of the blood, substances the properties of which possess a strong analogy to certain microbic toxins." The sudden suppression of the sweat is likely to force these "normal" toxic materials back upon the blood, and the stress of their elimination must then necessarily fall upon other eliminatory organs, with such possible or probable results as nephritis, pneumonia, and other excretory inflammations. But there is more than this. In rheumatism the blood in the first instance is probably always more or less at fault, and there is no evidence to show that in the rheumatic condition the toxic principle of the sweat is not much more complex in composition and variable in effect. If such were the case the result of damming its skin exit, and thus inviting vicarious elimination, would be *pari passu* a much more serious matter—that is to say, there would be infinitely more risk in checking a pathological than a normal sweat. It will be most interesting to learn if M. Arloing has extended his experiments to the relative toxicity of normal and pathological sweats, the latter to include the skin excretions of various fevers, rheumatism, gout, septicæmia, and so on. From the constant association of "chills" and arrested sweating with rheumatism one is tempted to hope that the brilliant researches of M. Arloing may give some clue to the etiology of a disease in which so much remains to be discovered. One is the more hopeful of such an issue upon recalling the striking analogy between the signs and symptoms of many of the septic poisonings and those of rheumatism.

Endless problems are suggested by even a superficial consideration of this captivating theory of the toxicity of sweat. Why, for instance, is exposure to cold so extremely dangerous when a patient has developed the rash of scarlet fever? It is known from clinical experience that the sudden disappearance of the rash is usually a sign of grave import, and that chill spells nephritis. May it not be that the action of the skin is checked while actively engaged in excreting toxic irritant substances, the elimination of which is then thrown upon the kidneys and other organs? That is to say, the excretory irritation is shifted from the skin to the kidneys. Moreover, it appears not altogether unlikely that a checked skin elimination might be the cause of the subacute rheumatism that often follows scarlet fever. It seems curious in these days of accumulated knowledge that there should be no established scientific explanation of the cause and relations of so everyday a phenomenon as the rash of scarlet fever.

Pump-court, Temple, E.C.

[1] THE LANCET, Sept. 4th and 11th, 1897.
[2] Excretory Irritation (London: Baillière, Tindall, and Cox, 1897).

TWO CASES OF PUERPERAL SEPTICÆMIA TREATED BY ANTI-STREPTOCOCCIC SERUM; RECOVERY.

BY RICHARD RICHMOND, M.D. EDIN.

THE results obtained by the serum treatment in the two following cases have led me to think that the few notes taken during their progress may be of some interest to the profession.

CASE 1.—This patient was delivered naturally and easily of her third child on May 24th, 1897, and remained well until the 26th, when she had a "shivering fit." On the 27th her temperature was 102·2° F., her pulse was 115, and she was in great discomfort, with headache and a hot, dry skin. Her tongue was covered with a thick yellowish fur; the lochial discharge was very scanty, pale, and somewhat fetid, but not particularly offensive, and

[3] THE LANCET, Sept. 11th, 1897, p. 677.

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there was considerable tenderness on pressure over the uterus. She was given three grains of calomel at bedtime and five grains of sulphate of quinine every four hours. On the 28th the temperature was 101° and the pulse 106. The patient's bowels acted freely and she expressed herself as feeling better; but the tenderness over the uterus was very marked, the lochia were scanty, and the secretion of milk was almost *nil*. The quinine was continued, and the calomel was repeated at bedtime. On the 29th the temperature was 100° and the pulse 100. The patient was still very ill, her tongue was thickly coated, and she was unable to take food; there was no change in the lochia. On the 30th the temperature was 101·6° and the pulse 110. There was no improvement in the symptoms, and 10 c.c. of anti-streptococcic serum were injected under the skin of the abdomen, the quinine being also stopped. On the 31st the temperature was 98·4°, the pulse was 72, and the change in the patient was remarkable. She expressed herself as being well. She slept eight and a half hours during the night, her skin was moist and cool, and her tongue commenced to clean; the lochial discharge was somewhat increased in amount; 5 c.c. of serum were injected. On June 1st the temperature was 98·2° and the pulse 74. The patient was much better, and she asked to be allowed to sit up in bed; 5 c.c. of serum were injected. On the 2nd the temperature was 98·2°, and the pulse 66; the tenderness over the uterus was quite gone, the lochia were natural in amount, and milk was freely secreted. The further progress of the case was perfectly satisfactory.

CASE 2.—This patient was a primipara who was attacked by puerperal septicæmia followed by pelvic cellulitis. At her confinement, which occurred on May 29th, 1897 the presented; the delivery of the head was difficult, the breech perineum was lacerated, and there was somewhat severe post-partum hæmorrhage. The patient had been confined to bed with rheumatism for two months previous to delivery. During the first few days after delivery her temperature remained normal, though her pulse-rate varied from 100 to 110. On June 3rd she had a slight rigor; her temperature rose to 101·8° and her pulse to 140. The lochial discharges were plentiful, but pale in colour and very offensive. The vagina was douched with perchloride of mercury (1 in 2000), and four grains of quinine sulphate were given every four hours. On the 4th the temperature was 101·2° and the pulse 130; there was some tenderness over the uterus and the secretion of milk was in abeyance; 8 c.c. of anti-streptococcic serum were injected into the abdominal wall. On the 5th the temperature was 99·4° and the pulse was 120. There was distinct improvement in the lochia and milk was secreted in small amount; the vaginal douches were continued; the perineal laceration looked healthy, but was not healed; 5 c.c. of serum were injected. On the 6th the temperature was 99·4° and the pulse 122; serum was injected in the same quantity as the day before. On the 7th the temperature was 98·2° and the pulse 120. The patient's general condition was satisfactory, but she was anæmic and weak; she, however, took her food well; the lochia were apparently natural, and no serum was used. On the 8th the temperature was 98·4° and the pulse 120; during the night there was profuse lochial discharge of a ruddy colour. On the 9th the temperature rose to 104° and the pulse to 140, the lochia became offensive, and there was great tenderness over the lower part of the abdomen. The uterus was douched with perchloride of mercury solution (1 in 4000), 10 c.c. of serum were injected, and hot fomentations were applied over the abdomen. On the 10th the temperature was 100° and the pulse 125; 5 c.c. of serum were injected. On the 11th the temperature was 100·4° and the pulse 124; the uterus was douched. On the 12th I left home for a holiday and Mr. W. F. Blewitt, my locum tenens, took charge of the case. According to his notes there was a rise of temperature on that day to 102° and then for the next ten days it remained about 100°. On my advice he continued small injections of serum daily for a week. Further progress was slow but uneventful. Mr. Blewitt noticed considerable exudation to the left of the uterus on June 18th.

Remarks.—In the first case the rapid and complete recovery which followed the first injection of serum need not be dwelt upon; no other treatment whatever was used after the serum was injected. In the second case the temperature did not become normal until after the third injection. Had the injections of serum been continued instead of being stopped on June 7th I believe the trouble which followed might have been avoided. The first patient became infected by the nurse, who, I afterwards discovered, had an offensive vaginal discharge. It is not so easy to account for the infection of the second case. If I was the means of conveying infection from Case 1 it was not due to want of care on my part, as I took great pains to render my hands (and person as far as possible) aseptic. The serum was supplied by the British Institute of Preventive Medicine.

Great Bardfield.

CASE OF ATTEMPTED POISONING BY TINCTURE OF OPIUM AND ANTIPYRIN; RECOVERY.

BY W. HERBERT GREGORY, M.D. EDIN.

ON July 18th last I was hurriedly summoned to attend a woman who had, while in a depressed state, taken overdoses of laudanum and antipyrin. On arriving at 5 A.M. I found her in an excited state, but she answered all my queries readily and distinctly. The temperature was 99° F., the pulse was 100, and the pupils were perfectly normal and contracted to light. By the patient's own statements, the evidence of her husband, and the bottles which contained the drug (now in my possession), I found that at 9.30 A.M. the day before (July 17th) she had taken eighteen drachms of tincture of opium, and at 10.30 P.M. on the same day from 60 to 70 grains of antipyrin. These drugs had been procured for toothache from several different druggists. Shortly before I arrived she had been slightly sick, but the vomit had been thrown away. I washed out the stomach and found that what came away smelled most strongly of laudanum. The recovery was perfect except for a slight amount of dyspepsia for a few days afterwards.

Into the cause which induced the attempt at suicide it is unnecessary to enter here. The important point is that there never had been any opium habit, and there is also no doubt whatever that both drugs were taken in the amounts stated. The curious point about the case is the long retention of the laudanum in the stomach without any marked symptoms. The only noticeable symptom was a slight unsteadiness of gait in walking across the floor on the afternoon of the 17th. This, the patient assured her husband, was due to her being "bilious." From 9.30 A.M. on the 17th to 5 A.M. on the 18th is nineteen and a half hours, and this, combined with the circumstance that antipyrin in a 60- or 70-grain dose (a dose highly depressant to the heart) was also taken without effect, makes the case almost an unique one. Cases are on record where opium has been retained in the stomach for nine, ten, and even eighteen hours, and in THE LANCET of July 15th, 1857, Dr. Gibbs published a case where 12 drachms of laudanum had been rejected spontaneously from the stomach after a lapse of nine hours without giving rise to any marked symptoms.

I am not aware that antipyrin is in any way an antidote to opium—at least, I have not seen it mentioned in the books; but, even allowing that it were, there was an interval of thirteen hours between the times of taking the two drugs. The case appears to me to be of interest, and I cite it to show that opium may be retained for hours in the stomach without giving rise to any noticeable symptoms.

Beverley.

THE EXTENSION OF THE BRISTOL BOUNDARIES.—On Nov. 1st, when the Bristol Boundaries Extension Act comes into operation, the population of Bristol, it is estimated, will be 317,833 and the acreage 11,397. The effect of the Act will cause a consolidation of authority, which means one council, one school board, and one board of guardians, instead of eighteen different authorities which existed before the passing of the Act.

EXPENDITURE AT THE CARDIFF INFIRMARY.—For some time past reports have gone abroad that the Cardiff Infirmary was managed upon very extravagant principles. We are glad to find, however, that from inquiries which have been made it appears that the average cost per bed on total expenditure is at Cardiff £50 1*s.* 4½*d.*, while at thirty-four similar institutions throughout the country it is £64 12*s.* 2½*d.* Thus there is a balance in favour of Cardiff of £14 10*s.* 10½*d.* Unfortunately, up to the present date donations have fallen off by £600 and the revenue from outdoor nursing has also decreased.

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A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

A CASE OF STRANGULATED PARTIAL ENTEROCELE OF THE CÆCUM WITHOUT SYMPTOMS; FÆCAL FISTULA; RESECTION OF PART OF THE CÆCUM; RECOVERY.

(Under the care of Mr. ANTHONY BOWLBY.)

THE presence or absence of symptoms in constricted partial enteroceles seems to depend chiefly on the proportion of the circumference of the bowel which is included within the constriction. In the following case the portion of the bowel wall which entered the crural canal seems to have been only a small part of the circumference of the cæcum, so that its constriction had no influence on the functional activity of the intestine. The case was one eminently suitable for the treatment adopted, as the operation did not necessitate any interference with the continuity of the bowel. The perfectly aseptic course of the case shows how thoroughly a septic fæcal fistula can be disinfected.

A married woman, aged forty-six years, was admitted to Stanley Ward, St. Bartholomew's Hospital, on Nov. 7th, 1896, with a fæcal fistula in the right groin. For two years she had noticed a swelling of the size of a walnut in the right femoral region. The swelling was always more or less tender, and sometimes caused her considerable pain. She thought that it was always present, never disappearing, even at night time. Three months prior to her admission to the hospital the swelling suddenly increased in size, becoming about four inches long and two inches broad. It lay with its long axis parallel to Poupart's ligament, and was oval in shape. The skin over it became red and extremely tender. She noticed no unusual constipation at this time, but she was once sick. The application of hot flannels was the only treatment adopted. Three or four days later the swelling burst spontaneously, and discharged a stinking watery fluid of a yellowish colour. The patient felt much relieved by the bursting of the swelling. The discharge from the wound continued, and one month before admission she for the first time noticed a fæcal smell and some fæcal matter in the discharge. This was immediately preceded by some blood-stained discharge. During the three weeks which preceded her admission to the hospital she remained in fairly good health, and passed on an average three motions a week by the wound. The bowels were all this time regularly opened in the usual manner. She stated that she had always been a healthy woman and had never had any serious illness, with the exception of scarlet fever during her childhood. She had never had typhoid fever. She had suffered all her life from "wind" and constipation. On admission to the hospital she presented a fairly healthy appearance. In the right groin there was a sinus discharging thick fæces and a little pus. The opening of the sinus was one inch external to and below the pubic spine. The abdominal wall was extremely lax, and the moving coils of intestine could be readily seen. The urine was normal. On Nov. 20th the sinus was explored under an anæsthetic. The external opening was enlarged. A probe was passed upwards and to the right, and seemed to go straight into the lumen of the intestine. The sinus obviously traversed the crural canal. The walls of the sinus were well scraped and the cavity packed with iodoform gauze. This treatment produced practically no change in the condition of the fistula, which still discharged fæcal matter at irregular intervals. The bowels were opened per rectum by means of aperients and enemata. On one occasion the injection of a large enema was thought to produce an immediate increase of fæcal discharge from the fistula. On Dec. 4th the patient was shown at the weekly surgical consultations. It was suggested that the solid character of the fæces discharged from the fistula pointed to the large intestine being the part involved, and the opinion was expressed that as the discharge was certainly passing out through the crural canal, it was probably a case of strangulated hernia. As no improvement had resulted from laying open the sinus and packing its walls an operation through the peritoneal cavity was advised, and it was suggested that either an ulcerated aperture might be sutured, or that, if the cæcum showed evidence of tuberculous disease, it might be excised. The opinions of all those who saw the patient were unanimous in favour of the proposed course. On the 11th an anæsthetic was administered. The skin of the abdomen having been thoroughly cleaned the abdomen was opened by a vertical incision over the cæcum, its lower end being about three-quarters of an inch above the opening of the fistula. The small intestines having been pushed aside with a flat sponge, and the peritoneal cavity being protected by other sponges, the cæcum was drawn into the wound, and it was then seen that the fistula led into its lowest part, at a point just external to the base of the vermiform appendix. This part of the cæcum had been dragged down so as to form a pouch, and the latter was now carefully dissected away from its attachments in the crural ring and cut away from the cæcum, an opening being thus made in the cæcum about one and a half inches in length. The vermiform appendix seemed perfectly normal, but owing to the proximity of its base to the line of suture it was thought advisable to remove it. The opening in the cæcum was then closed by a continuous suture of its mucous membrane, and two rows of interrupted Lembert's sutures. The track through the crural canal previously occupied by the hernial pouch was thoroughly cleaned with perchloride lotion and the small piece of adherent intestine was dissected away. The mouth of the fistula in the groin was swabbed finally with pure carbolic acid. The peritoneal cavity was closed with silk sutures, two gauze drains being inserted, one in the lower angle of the incision, and one through the crural canal. The muscular walls and skin were sutured separately with silk-worm gut. The patient was afterwards a little sick during the first few hours, but stood the operation well. On the 12th the gauze drain was removed from the upper wound. Both wounds looked perfectly dry and healthy. There was no redness of the skin. The temperature had never been higher than 99·2° F. The patient seemed perfectly comfortable and complained of no pain. On the 17th the second gauze drain was removed. The bowels were opened for the first time since the operation with an enema. On the 24th all the stitches were removed. The upper wound was entirely healed. There was a shallow granulating ulcer in the situation of the lower wound. On Jan. 25th, 1897, the bowels were opened for the second time with an enema. On Feb. 13th the patient left the hospital, wearing an abdominal belt, with both wounds soundly healed. The feeding of the patient during the first four days was entirely by rectal enemata with the exception of very small quantities of water by the mouth. For the next week very little food was taken by the stomach, and such as was taken was calculated to leave but little residue in the intestine.

Remarks by Mr. BOWLBY.—Cases of strangulation of the cæcum alone without the involvement of any small intestine are rare, but in such cases as have come to my knowledge it seems that the symptoms of strangulation were well marked. In the present case there was but little of the cæcum strangulated, and there does not appear to have been any material colic or sickness in spite of the constriction of the whole thickness of the wall of the bowel where it was completely covered by peritoneum. There is but little to say of the operation itself, but it may be pointed out that the risk of resection of bowel and enterorrhaphy in such a case is mainly due to the presence of a septic sinus which at the time of operation has necessarily to be opened so as to communicate with the peritoneal cavity. It was by the resection of all the infected tissue, the disinfection of the sinus opening, and the subsequent packing with iodoform gauze that the peritoneum was efficiently protected. I am much indebted to my friend Mr. Lockwood for his kind assistance at the operation, and to my house surgeon, Dr. Meakin, for the notes of the case.

NORTH STAFFORDSHIRE INFIRMARY.

A CASE OF RUPTURE OF THE TRACHEA; NECROPSY.

(Under the care of Mr. J. ALCOCK.)

THE comparative immunity from injury enjoyed by the trachea is probably to be attributed in part to the great elasticity conferred on it by the presence of the cartilaginous

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arches in its wall and in part to its mobility. As there was in the following case from the injury itself great probability of a septic infection of the tissues surrounding the trachea, an external opening would have added but little to the danger, yet the great amount of separation of the ends of the trachea must have rendered extremely difficult any attempt to suture them. The diagnosis, though extremely doubtful on account of the subcutaneous emphysema, was to some extent possible, as the very presence of air in the tissues showed that the air passages had been wounded. A laryngoscopic examination might have afforded some information. For the notes of the case we are indebted to Mr. A. S. Barling, late house surgeon at the North Staffordshire Infirmary, and now surgeon to the Royal Lancaster Infirmary.

The patient, a man aged twenty-four years, was admitted to the infirmary, under the care of Mr. Alcock, on April 20th, 1892, suffering from an injury to the chest and neck. About two hours before admission he was engaged in lowering heavy balks of timber by means of a crane, when one of the iron supports gave way. The man saw the beam of the crane falling on him, and threw his head back to avoid it, Just at this moment—i.e., when the neck was fully extended and the trachea stretched tight—the beam struck him over the top of the sternum and knocked him down. He was not rendered unconscious, but seemed to be short of breath, and could only speak in a whisper. The patient was a strong, well-developed man. On admission he was slightly cyanosed, his breathing being laboured and occasionally stridulous. He was spitting up large quantities of blood, frequently in clots. On examination of the seat of injury a bruise was seen about six inches in diameter, the centre of which was over the upper border of the manubrium, and at this point the skin was scraped off. Round this bruise, covering the front of the neck and extending laterally to the coracoid processes and downwards to a point on a level with the fourth rib was a soft, diffuse swelling, which on palpation gave the characteristic crackling of surgical emphysema. It completely obliterated all the landmarks of the surface affected. No fracture could be made out, the clavicles, the ribs, and the sternum being apparently intact. It was quite impossible to feel the larynx or any part of the trachea owing to the emphysema. Ice was applied to the parts, and with a view to preventing, if possible, the supervention of septic pneumonia antiseptic inhalations were given. The bleeding soon ceased, but, despite all precautions, the temperature gradually rose, and on the third day reached 104° F. Signs of consolidation then appeared at the base of the right lung. The expectoration was blood-stained and amounted to a pint in the twenty-four hours. There was still marked tenderness over the episternal notch, but no sense of fluctuation could be felt, and there was no redness of the skin. In the course of the next few days the signs in the lung almost disappeared, the emphysema decreased, and the temperature fell to a daily maximum of 99°. The patient continued to improve and seemed to be nearly out of danger when, on the morning of May 1st, eleven days after the accident, he suddenly cried out, two or three pints of blood gushed from his mouth, and in less than two minutes he was dead.

Necropsy.—At the post-mortem examination a complete rupture of the trachea was found between the ninth and tenth rings. The ends were separated by about two inches, the upper end of the lower fragment being one and a half inches below the top of the sternum. An abscess cavity surrounded the injured portions capable of containing an ounce; it was filled with blood-clot. None of the large arteries were wounded, and it seems probable that the blood came from ulceration of a large vein, possibly the left innominate.

Remarks by Mr. BARLING.—Rupture of the trachea is certainly a rare accident, and on this account the above example seems to be worthy of record. Besides the cases mentioned in Holmes's "System of Surgery" there is one in the Sydenham Society's *Review* and a case is reported by Berger in the *Medical Times and Gazette* for 1856; this was caused by the kick of a horse and ended fatally in one and a half hours. Of the rest, only one—the Liverpool case—recovered. This was treated by incision. Looking back in the light of our present knowledge it seems as though the patient might have had a better chance of recovery if he had been operated upon. The propriety of cutting down upon the trachea and then proceeding as the conditions demanded was discussed, but the state of the man seemed so satisfactory that it was decided to wait. When the unfortunate rupture which caused his death took place the patient was certainly improving. His temperature had fallen to the normal and the expectorated pus had much decreased in quantity. If an incision had been made it would have given a more free vent to the discharge but anything in the nature of suturing the trachea would have been, I think, impossible, owing to the retraction into the thorax of the divided lower portion. In reporting this case, at Mr. Alcock's wish, I am trying to carry out the advice that our old master, Sir Richard Wiseman, so rightly gives. Speaking to a young surgeon in difficulties with an obstinate case he says: "He will then wish that all other practitioners had done what I have in this treatise—viz., recommended their observations both *successful* and *unsuccessful*, thereby encreasing knowledge in our profession and leaving sea-marks for the discovery of such rocks as they themselves have split upon before."

Reviews and Notices of Books.

System of Diseases of the Eye. By American, British, Dutch, French, German, and Spanish authors. Edited by W. F. NORRIS, A.M., M.D., and CHARLES A. OLIVER, A.M., M.D., of Philadelphia, Pennsylvania, U.S.A. Vol. II. With Thirteen Plates and 214 text Illustrations. London and Philadelphia: J. B. Lippincott Co. 1897. Pp. 556. Price $20.00, subscription for four volumes.

THE second volume of this important work is devoted to the Examination of the Eye, School Hygiene, the Statistics of Blindness, and Antisepsis. These several subjects are again sub-divided and discussed under various headings which we shall proceed to consider. The first is on the Methods of Determining the Acuity of Vision, by Hermann Snellen, of Utrecht, which has been translated by Dr. Berry, of Edinburgh. He explains the reasons which have caused the five minute angle to be selected as a standard, showing that an object subtending that angle fairly represents the average of normal visual acuity, with moderate illumination in middle life. It is, however, by no means the maximum since careful experiment has shown that the limit of visual acuity for lines does not exceed about fifty seconds, which corresponds to a retinal image having a diameter of 0·004 millimetre. Professor Snellen dwells upon the unsatisfactory nature of any statement made in regard to the vision of a patient when, instead of the equation $v = \frac{d}{D}$ where the numerator gives the precise distance at which the test type should be seen whilst the denominator gives the number and consequently the size of the type actually seen, the surgeon reduces the fraction to decimals, a method that fails to give either of the particulars required—giving, that is, neither the distance nor the number of the letters employed. He explains, however, that this notation is practised in Germany because the calculation of the amount of compensation for eye accidents has been based on this principle. Professor Snellen states that as a rule the visual acuity remains unaltered up to the age of twenty-five years. After that it slowly and regularly diminishes, so that in advanced life the measure of acuity is reduced to half of its original. The subject of mydriatics and myotics is also from the pen of Professor Snellen. He gives a useful caution against the employment of solutions of atropine which are too strong or too persistently used, or which have been kept too long. Solutions freshly made of from one to two grains per ounce fulfil all the indications, dilating the pupil fully and paralysing the accommodation. He himself uses atropine in solution of one-half per cent. with the addition of boric acid, and has never observed the condition known as atropism to follow its use. The relative power of the several and now

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very numerous remedies acting on the iris and on the ciliary muscle is very fully given.

The next article is on Lateral Illumination, by L. Laqueur, M.D., of Strassburg, translated by Harry Friedenwald, M.D., of Baltimore. The author describes the method of employment of this means of examination of the eye, its advantages and limitations both in health and disease. It is, of course, chiefly serviceable in affections of the cornea, iris, and more particularly in the demonstration of fragments of capsule occupying the area of the pupil after cataract operations and the presence of foreign bodies in the anterior chamber or on the surface of the lens.

The subject of the Ophthalmoscope has been committed to the competent hands of Dr. George M. Gould, of Philadelphia, who has compressed all that is required into a very moderate compass. He gives an historical account of the development of the instrument, and considers the most perfect form hitherto devised to be that of Dr. Morton, of London.

Dr. Edward Jackson, of Philadelphia, is the author of the article on Skiascopy. He is well known as having paid great attention to the phenomena of the reflection of light from the fundus of the eye, and he gives, as might be anticipated, a very clear and intelligible explanation of the various appearances seen in myopia, hypermetropia, and in astigmatism.

The sixth chapter is by M. Adolphe Javal, junior, of Paris, on Ophthalmometry and its Clinical Applications. It contains, of course, a full description of the ophthalmometer of Javal and Schiotz, an instrument that has proved of great service in enabling the practitioner to determine rapidly and, what is of still greater importance, accurately the degree of corneal astigmatism that may be present in the eye examined. The number of those who suffer from astigmatism is very considerable. Of a total of 226 children 69 were demonstrated by this instrument to have astigmatism of at least one dioptre in each eye—that is, of a grade so high that it ought to have been reported to the parents with a warning as to the necessity of calling in the aid of an ophthalmic surgeon. The use of a Placido's disk is given, and various drawings exhibit the reflections seen in normal and diseased eyes.

The next chapter is on Prisms and Prismometry, by W. S. Dennett, M.D., of New York, an original and well-written essay on a subject that is very briefly and imperfectly treated in most of the modern works on ophthalmology. A section on the principles of, and the methods for, the estimation of the balance of the extra-ocular muscles has been undertaken by Dr. George T. Stevens, of New York, and in this the reader will find an explanation of the various terms that are making their way from America into ophthalmic terminology, such as orthophoria, heterophoria, heterotropia, and anotropia or katotropia. Dr. Stevens has himself devised an instrument, to which he has applied the name of phorometer, which he describes and illustrates, as well as the prism of Maddox and the stenopœic lens of Stevens. The author of this chapter takes the standard of abduction to be a prism of 8° the effect of which can be overcome—that is to say, the two images of which can be fused.

Dr. Herman Wilbrand takes up Perimetry and contributes a long and valuable article, in which the modes of obtaining the field of vision are described and some remarkable conditions mentioned. The author has devised an ingenious modification of the ordinary instrument, which resembles a reading desk, and which he terms a bed perimeter. It is adapted for taking the field of a patient in bed. The clinical value of perimetry is judiciously but strongly insisted on. The article is illustrated by a chromolithograph showing the most important combinations of the visual paths, as described by Henschen.

The next article, one of the *pièces de résistance* of the volume, is by Dr. Wm. Thomson, of Philadelphia, assisted by Dr. Carl Weiland, of the same city, and is devoted to the detection of colour blindness. The authors consider that with regard to congenital colour blindness, the fault lies in the photo-chemical substances in the retina, or at least that it is located in front of the chiasma, since cases of monocular colour blindness are on record. On the contrary, acquired colour blindness, they believe, is more apt to be due to lesion of the optic nerve or of the cerebral centres. It is stated that even yet in America, as in England, although nearly a million of men are employed on railways, amongst whom there must be at least 30,000 who are colour blind, no adequate provision is made for testing the colour vision, notwithstanding the manifest danger to the public from misapprehension of signals.

Dr. S. D. Risley, of Philadelphia, gives a good account of School Hygiene, a subject far too much neglected in this country. Speaking of the effects of education in the etiology of myopia Dr. Risley states that from careful observation, continued over long periods of time, of many cases of myopia, all those he has followed out, without exception, passed from hypermetropia into near sight; through the turnstile of astigmatism. In all of them the observed changes in refraction were attended with pain and symptoms of external irritation, such as blepharitis, conjunctival congestion, lacrymation, undue sensitiveness to light, whilst the ophthalmoscope revealed the advancing pathological changes in the choroid. In no instance did the eyes become at any period emmetropic. Dr. Risley gives the results of an investigation undertaken by competent observers, to each of whom was assigned a definite part in the examination of every pupil, of the eyes of the children in the various grades of the Philadelphia public schools. The results which are given, in part in the form of tables, are highly interesting and instructive, and demonstrate that all children who complain of their vision should be examined periodically, and measure both in the way of glasses and of amount and kind of work instituted for their relief. The subject of blindness has been placed under the care of Dr. J. Ninnis Hays, of Philadelphia. The statistics of the blind in various countries are fully given, though some error must have crept into the statement that the population of the whole world is below 210 000,000. The population of Russia, England, France, and Germany alone would more than cover that number. The statement is copied (correctly) from Cohn, who takes it from Mayr. It is of importance, since deductions are drawn from it which also work out incorrectly. The number of blind in England and Wales has considerably diminished during the last forty years, which we may hope is due to better teaching given and knowledge obtained in our hospitals. Dr. Joseph A. Andrews, of New York, takes up the subject of Antiseptics, and the volume concludes with an article written conjointly by Dr. Joseph McFarland, of Philadelphia, and Dr. Samuel S. Kneass, of Philadelphia, both articles dealing with germs and their varieties, and with the modes of preventing their injurious influence. There is an excellent index.

Atlas der Gerichtlichen Medizin. (*Atlas of Forensic Medicine.*) Von Hofrat Professor Dr. E. RITTER VON HOFMANN, Director des Gerichtlich-Medizin. Instituts in Wien. München: J. F. Lehmann. 1898. Fifty-six coloured and 193 plain Illustrations. Price 15 marks.

LECTURES at our English Medical Schools on Medical Jurisprudence are as a rule not very satisfactory, owing to the want of practical experience on the part of the lecturers. At some of the London schools there are notable exceptions, but in most instances the lecturer has to draw the materials for his course from books alone. The student has to rely almost entirely on the lectures and books, for it is an uncommon occurrence for a case of real medical legal interest

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to be taken to the hospital, and even if an injured person be admitted to the wards of a hospital the case is presented to the students from a surgical rather than from a forensic point of view. The illustrations in our English text-books are poor compared to some of the foreign productions. The work now under consideration is one of the excellent "hand atlases" published by J. F. Lehmann, of München. Like its predecessors, reviews of which have from time to time appeared in our columns, the whole book is most excellently produced. The main feature is the illustrations, and of these we cannot speak too highly. That some of them are ghastly goes without saying, but they admirably serve the purpose for which they are intended—namely, to act as a companion to one of the ordinary text-books. Professor von Hofmann states in his preface that the "atlas" is not intended to take the place of a text-book and therefore no systematic discussion of the subject is attempted. Typical examples of the various problems which present themselves to the medical jurist are taken, and an illustration in colour or in black and white accompanies the text.

We trust that an English translation will speedily be prepared, and feel sure that students and practitioners will gain much information by a study of its pages.

LIBRARY TABLE.

The Analysis of Food and Drugs. Part I., Milk and Milk Products. By T. H. PEARMAIN and C. G. MOOR, M.A. London: Baillière, Tindall, and Cox. 1897. Price 5*s.*—This work promises to be an admirable work of reference on all that pertains to the analysis of food and drugs. The number before us is only the first part of the work, which, when complete, will be divided into five parts. Apparently, the object of issuing the parts separately in this way as they are written is to keep each portion as far as possible up-to-date. Whether or not this object will be gained will depend, of course, upon the time the authors mean to take to complete their task, as it may be that when the final sections are finished the earlier sections may require adding to, especially if the improvements in analytical methods go on at the present rate. The work is very clearly written and bears strong evidence of the authors practical acquaintance with the "up-to-date" methods they describe. We look forward to the issue of the succeeding sections, which Part I. leads us to hope will be equally ably treated. Mr. Pearmain and Mr. Moor have begun their task well, and when they have finished it a valuable addition to analytical literature will, if we mistake not, have been made.

Artificial Anæsthesia: A Manual of Anæsthetic Agents and their Employment in the Treatment of Disease. By LAURENCE TURNBULL, M.D., Ph.G. Fourth edition. Philadelphia: P. Blakiston. 1896. Illustrated. Pp. 550.—This book contains a large amount or information about anæsthetics and many other things. It is not always easy to find the kind of information required, as the arrangement is not good. Dr. Turnbull prefers to quote the writings of many writers, with a result which is wearying to the reader, who often would prefer to get the underlying fact without the superimposed mass of words. The author is well abreast of the time, and gives the views of the Hyderabad Commission on Chloroform. Although he questions their truth, he describes the use of oxygen with nitrous oxide, and the very latest local anæsthetic. Therapeutics occupy a prominent place in the book. The employment of ether in gout, spasm of the stomach, tapeworm, and other ailments is fully set forth. A good chapter on the medico-legal aspect of the uses of anæsthetics is added. We venture to think that Dr. Turnbull would be well advised if he cut out many of the so-called experiments in future editions and condensed and verified most of the quotations. The undoubted value of Dr. Turnbull's work is also somewhat marred by insufficient care in verifying names. The present is, in spite of these drawbacks, a distinctly better book than the preceding edition.

The Induction Coil in Practical Work, including X Rays. By LEWIS WRIGHT. London: Macmillan and Co. 1897.—All workers with the x rays should be in possession of a copy of this little volume. In it is contained a plain and intelligent exposition of that mysterious entity electricity, and the properties of the electric discharge in low and high vacua, leading, of course, to a consideration of the phenomena of the x rays which emanate from the highly exhausted Crookes's tube. It is essentially a practical book, in which the eccentricities of the induction coil are dealt with and the way to correct them, so that the experimenter may know perfectly well what he is doing in using the x rays for diagnostic work.

Practical Domestic Hygiene. By J. LANE NOTTER, M.A., M.D. Dub., and R. H. FIRTH, F.R.C.S. Eng. London: Longmans, Green, and Co. 1897. Price 2*s.* 6*d.*—Hygiene is a wide subject, and the fact that they have dealt with it intelligibly in the space of the admirable little work before us is an accomplishment upon which the authors are to be congratulated. The subject is treated in three parts—Part I. relating to Elementary Human Anatomy and Physiology; Part II. to Elementary Hygiene (water, air, ventilation, food, diet, sewage, personal hygiene, parasitic and infective diseases); and Part III. to Domestic Economy (the care and management of the sick, and "first aid" in emergencies and accidents). As might be expected, Part II. is the largest section. The descriptions are perfectly accurate, clear, and in accordance with modern developments. Particularly will this be noticed in regard to the accounts of the methods now in vogue of ventilation and of the disposal of sewage and of house refuse and excreta. The work is primarily intended for those who wish to acquire a knowledge of elementary hygiene but who possess the merest smattering or no knowledge at all of physiology. The previous portions of the work are therefore devoted to a short and simple account of elementary anatomy and physiology, but there is no similar chapter on chemistry. We are inclined to think that this in an elementary work is a serious omission, since, of course, the reader is subsequently brought to consider the subject of diet, and without an elementary knowledge of chemistry his appreciation of the subject as well as of other related subjects will somewhat suffer. The whole subject, however, in its broader aspects is presented in a way which cannot fail to be instructive to the reader possessing ordinary intelligence. We could wish that such a course of instruction were insisted upon in all elementary schools; the present book would serve as an admirable companion to such a course.

A New Dairy Industry. By JAMES FRED. SARG. Norfolk, U.S.A.: W. T. Barron and Co. 1896. Pp. 162.—It is well known that the principal difference from a dietetic point of view between human milk and cow's milk is that the latter contains about four times as much casein as the former, and that most methods of preparing cow's milk for infants' use consist in reducing the proportion of casein and increasing that of sugar. Furthermore, cow's milk is liable to be contaminated with impurities of various kinds, and sometimes contains pathogenic bacteria. This little book, the sub-title of which is "Preparation and Sale of Artificial Mothers' Milk, Normal Infants' Milk," describes the methods followed in Mr. Sarg's dairy at Black Forest Farm, Kempsville, Virginia, and supplies much varied information, useful alike to consumers and purveyors of milk. In this establishment the excess of casein is reduced by dividing the milk into two parts, one of them consisting of mixed milk and cream and

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the other of skim milk, which latter is coagulated and the resulting whey added to the other portion; the mixture is then bottled and sterilised by steam heat.

The Story of Vaccination. By ANNABELLA MARIA BROWNE. London: Gardner, Darton, and Co. 1896. Pp. 12. Price 1*s.*—The author of this booklet has described the benefits of vaccination with much clearness and force, as well as with commendable brevity, and in a style which can be easily followed by all classes of readers. She is president of the Gloucester and Bristol Branch of the Girls' Friendly Society, which she says has had among its members several descendents of the family of Sarah Nelmes, the dairymaid from whose hand Jenner took the lymph for his first vaccination in 1796. Writing in the centenary year after this event, and not long subsequently to the Gloucester epidemic of small-pox, she is able to contrast the ravages of the disease in former times with the comparative immunity which we now enjoy. "The Story of Vaccination" deserves to be widely known, and will recommend itself to those who are desirous of influencing public opinion in favour of vaccination.

Calendar of the Faculty of Medicine, McGill University, Montreal. Montreal. 1897. Pp. 148.—The educational work of McGill University is carried on principally in McGill College, Montreal; there are, however, six affiliated colleges—namely, four theological colleges in Montreal, Morrin College, Quebec, and St. Francis College, Richmond. At McGill College there are five faculties, in each of which various degrees are granted—namely, arts, applied science, medicine, law, and comparative medicine, together with veterinary science. The complete course of study in medicine extends over four sessions of about nine months each, and leads to the degrees of M.D., C.M. The total fees for the whole medical course, including clinics, laboratory work, dissecting material and reagents, are $400, payable in four annual instalments of $100 each. Last session there were 388 students in the medical faculty, and 76 passed the examinations for the degrees of M.D., C.M. The sixty-fifth session of the medical faculty was opened on Sept. 21st, and will be continued until May 27th, 1898.

Instruments Used in Surgery and Medicine. Compiled by N. H. MARTIN and C. E. STUART, B.Sc. Newcastle-on-Tyne: Brady and Martin. 1897. Pp. 548.—In this book, which is the latest catalogue issued by Messrs. Brady and Martin, there will be found illustrations of a large and varied collection of instruments and appliances adapted for use in every department of medicine and surgery, whether for operative procedures or for diagnosis. There are also illustrations of galvanic apparatus, Roentgen ray apparatus, meteorological instruments, apparatus for the analysis of air, milk, and water, and a variety of miscellaneous articles which may be summarised as sick-room appliances. The book has a handsome appearance and will be found useful as a work of reference.

JOURNALS AND REVIEWS.

The Journal of Physiology. Edited by MICHAEL FOSTER, F.R.S., and J. N. LANGLEY, F.R.S. Vol. XXI., No. 6, and Vol. XXII., Nos. 1 and 2. July and September, 1897. London: C. J. Clay and Sons. No. 6, Vol. XXI., price 4*s.* Nos. 1 and 2, Vol. XXII., price 10*s.*—The last number of the twenty-first volume of this journal contains two articles. 1. John Fawcett and W. Hale White on the Influence of Artificial Respiration and of β-Tetrahydronaphthylamine on the body temperature. These experiments show that this drug has a remarkable pyretic action, 3 c.c. of a 3 per cent. solution when subcutaneously injected raising the temperature of rabbits from 1·6° C. to as much as 5·5° C. 2. H. M. Vernon on the Relation of the Respiratory Exchange of Cold-blooded Animals to Temperature, Part 2, with 14 figures in the text. Amongst other conclusions the author draws from his experiment is the following, that in cold-blooded animals the carbonic acid discharge does not increase and decrease uniformly with increase and decrease of temperature. The following articles are contained in Nos. 1 and 2 of Vol. XXII. 1. C. R. Marshall on the Antagonistic Action of Digitalis and the Members of the Nitrite Group, with nine figures in the text. 2. C. R. Marshall and H. Ll. Heath on the Pharmacology of the Chlorhydrins: a contribution to the study of the relation between chemical constitution and physiological action, with eight figures in the text. The authors show that the introduction of chlorine atoms into a compound of the fatty series increases its narcotic powers. 3. Purves Stewart, on Experimental Observations on the Crossed Adductor Jerk. It is shown that the adductor jerk of the opposite side to that on which the ordinary knee-jerk is evoked is a true reflex. The appearance of the the crossed adductor jerk is about 0·126 second after the tapping of the opposite patellar tendon. 4. J. C. Dunlop, D. Noel Paton, R. Stockman, and Ivison Maccadam, Massage, on the Metabolism. Amongst other results on the Influence of Muscular Exercise, Sweating, and the like, their experiments show that with excessive muscular efforts there is increased katabolism of proteid shown by increased excretions of nitrogen and of sulphur in the urine. The proteid consumed is muscle proteid. They show also that training is of much importance. 5. A. B. Macallum, of Toronto, on a New Method of Distinguishing between Organic and Inorganic Compounds of Iron. 6. C. B. Davenport, of Harvard University, and Helen Perkins, student in Radcliffe College, a Contribution to the Study of Geolaxis in the Higher Animals. 7. Swale Vincent, on the General Physiological Effects of Extracts of the Suprarenal Capsules. 8. D. Noel Paton, on a Further Study of Hepatic Glycogenesis. 9. W. H. R. Rivers, on the Photometry of Coloured Paper. 10. William J. Smith Jerome, on the Formation of Uric Acid in Man and the Influence of Diet on its Daily Output.

The Practitioner.—The first of the original papers in the September number is the continuation of Dr. Herman Weber's paper upon Health Resorts and Waters for the Anæmic. Anæmia being a condition which arises from a great variety of causes must be treated in a correspondingly varying manner, and Dr. Weber's paper will be found very valuable as a guide to the choice of the right water for the special class of anæmia under consideration. Mr. Mayo Robson, in a short but interesting communication pleads earnestly for an early performance of gastrostomy instead of waiting until the patient is reduced by pain or starvation to a state in which the operation is practically useless. He gives details of the plan he prefers—a modification of the Ssabanejews-Franks method. Surgeon-Captain B. H. F. Lewmann publishes a case of Plague Simulating Enteric Fever, the temperature at death reaching 106·2° F. Dr. F. E. Hare, in his paper on Ten Years' Experience of the Cold Bath Treatment of Typhoid Fever at the Brisbane Hospital, quotes figures showing a reduction in the mortality of practically 50 per cent. since the use of the bath began. Dr. F. C. Coley has a practical paper on the Medical Treatment of Toothache. Mr. Hawkins-Ambler contributes a paper upon How to Help the Hospitals, his chief idea being that there should be a series of central bureaux at which applicants for hospital relief should apply in the first instance. The hero of medicine for the month is that extraordinary mixture of science and charlatanry—Paracelsus.

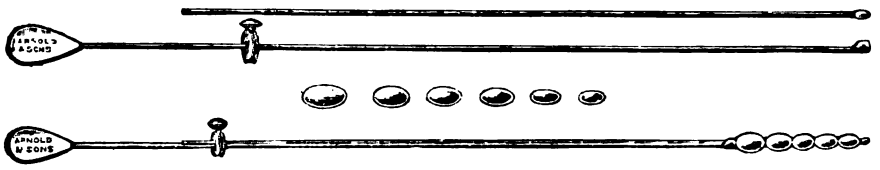
THE WATER-SUPPLY OF TAUNTON.—At the meeting of the Taunton Town Council held on Sept. 14th the Water Committee stated that they had instructed the town clerk to give the necessary notice prior to application being made for the sanction of the Local Government Board to the borrowing of £35,100 for the extension of the waterworks.

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New Inventions.

NEW STRICTURE DILATOR.

MESSRS. ARNOLD AND SONS (of West Smithfield, London) have constructed for me an instrument which I hope will be appreciated by the profession. The troublesome and painful system of passing catheters and bougies for strictures ought certainly to be superseded by some procedure less irritating to the patient and more convenient to the practitioner.



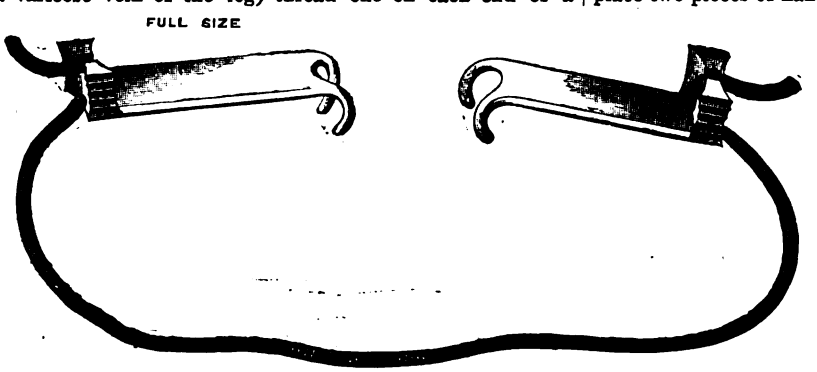
The instrument illustrated here consists of a director, a propeller, and twelve beads. The director is a flexible metal stem terminating in a bulb, the stem being marked at every half inch. The propeller, which is used to push the beads along the director, has a terminal bulb (perforated), a handle, and a metal ring with hole to receive director and screw to clamp it. The beads are made of metal and represent the different catheter gauges. The director is passed first, then one or more beads are threaded on it and pushed home. The instrument may then be fixed and withdrawn. Possibly in resilient and other strictures the act of drawing the instrument back and forwards would have a good effect. The exact position of the stricture can be ascertained by passing a bead as far as the stricture and then clamping the ring at the orifice of the urethra.

THOMAS JACKSON, L.R.C.S.Edin.
Colwyn Bay.

AUTOMATIC WOUND RETRACTORS.

THE accompanying illustration represents a pair of wound retractors threaded on a rubber cord, and designed to obtain traction on the edges of a wound in operations on the neck, limbs, &c. Each retractor consists of a flat piece of steel, one end of which is fashioned into a pair of hooks, blunt or sharp. The other end is bent upwards, is perforated at the angle by a hole through which the rubber cord passes, and the latter is then clipped into a vertical slot after the manner of fixing the ends of a field tourniquet. The instrument may be held or altered in position by grasping the grooved side of the "handle" portion. To use the retractors (say, for excision of a varicose vein of the leg) thread one on each end of a long length of rubber cord or thick tubing and lay its centre beneath the limb; after the skin incision hook a retractor into the wound edges on either side, making the tension sufficient by drawing the cord through the base of either hook and fastening off. Equal or unequal gaping of the wound may be secured by altering the tension on both sides or on one only. The retractors are made of varying sizes and lengths, and with blunt or sharp hooks as desired, but for retracting the abdominal parietes the proximal end is fashioned like a flat pothook but without prongs. For tracheotomy and operations on the middle line of the neck, operations on blood-vessels of the limbs, abdominal sections, and in any situation where bilateral traction can be employed, these retractors will be found useful, especially where one is short-handed as regards assistants.

FULL SIZE



Some of the advantages possessed by these hooks are:—Less handling of the wound is required; more room is obtained in which to work, and less assistance is necessary; it is, therefore, more easy to maintain asepsis. I am indebted to Professor Jordan Lloyd, of Birmingham, for permission to modify his well-known retractors, and to Messrs. Down Bros., of St. Thomas's-street, London, S.E., for the care and patience they have displayed in carrying out my wishes.

REGINALD H. LUCY, M.B. Edin., F.R.C.S. Eng.,
Assistant Surgeon, South Devon Hospital, Plymouth.

NEW ANÆSTHETIC MASK.

THE annexed illustrations represent a chloroform or A.C.E. mask devised by me and made by Messrs. Mayer and Meltzer, of Great Portland-street. The mask consists of a metal frame, with upper and lower rims, the latter being channeled so as to prevent condensation-moisture or anæsthetic fluid reaching the patient's face. A and B (Fig. 1) represent the open position of two rings which, when closed as in the illustration, keep in place two pieces of flannel. At C there is an airway the lumen of which is quite double that of the adult trachea. At D (Fig. 2) there is an opening for the tube of a Junker which can be attached to a vulcanite plug filling the opening. This tube is supplied with the mask. Also, to the flannel at E a sponge can be affixed if it be desired to give ether, in which case a single piece of flannel large enough to cover the mask from E to F should be used. The advantages of the mask are:—1. It allows a free intake of air at all times during anæsthetisation, so that with ordinary care coughing and swallowing, struggling, asphyxia, &c., are noticeably absent. 2. The position and dimension of the airway, which, while permitting absolutely unimpeded respiration, is so placed that with each inspiration the vapour is inhaled in amounts varying with the quantities of anæsthetic used. 3. The ease with which the anæsthetic can be dropped on the mask without risk of touching the patient's face. 4. Its cleanliness. The covers for the upper

Fig. 2.

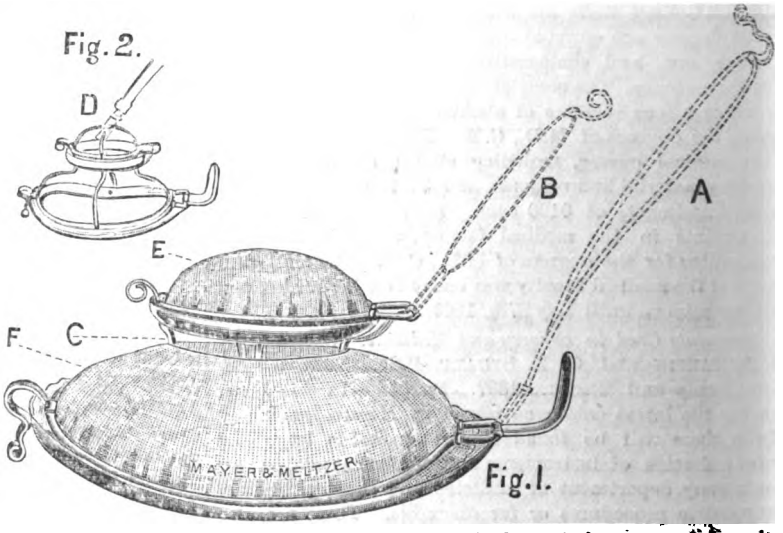


Fig. 1.

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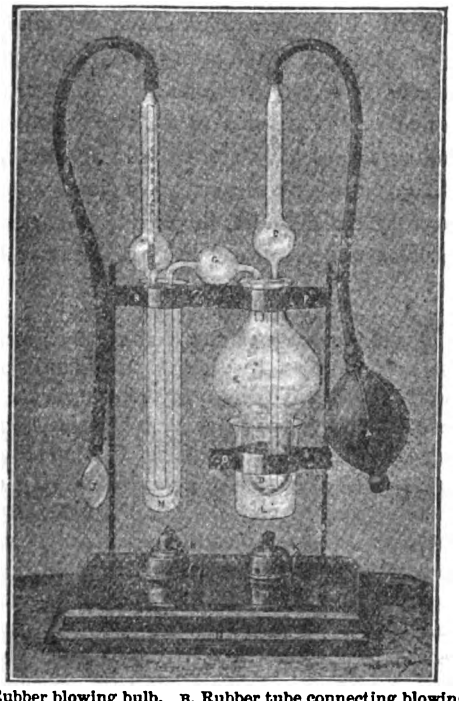
and lower parts consist of flannel (sterilised when necessary) cut to shape; these can be put on or removed in a few seconds; the frame, being all of metal, can obviously be completely sterilised—matters of considerable importance in the case of operations on the head, neck, thorax, &c. 5. A chloroform administration can, if desirable, be commenced by using with this mask a drop bottle, such as Thomas's, &c., until the patient is well into the second stage, when the remainder of the anæsthetisation can be continued with a Junker (attached to the mask in the first instance). The anæsthetist who knows the difficulty of getting a nervous or alcoholic patient comfortably under within a short period possesses in this apparatus the means of accomplishing that end with safety and satisfaction. The patient also hears nothing of the bellows and the bubbling of the Junker. This latter consideration is by no means unimportant when one bears in mind how desirable it is to avoid adding to the natural fears of a child or neurotic patient.

WILLIAM E. BURTON, L.R.C.S.Irel., Lic. Med. T.C.D.

THE PNEUMATIC MEDICATOR AND INJECTOR.

MEDICATED AIR has been in use in America for some years for the treatment of catarrh of the head, ears, nose, throat, and lungs with marked success, and especially for the cure of catarrhal deafness. It has lately been introduced into Great Britain and has been equally successful. But it appeared to me that better results would be obtained in many cases—such as bronchitis and phthisis—if the temperature of the medicated air could be raised or lowered, made dry or moist, as the conditions of the case required,

Instrument for Producing Hot or Cold, Dry or Moist, Medicated Air.



A, Rubber blowing bulb. B, Rubber tube connecting blowing bulb with straight glass tube. C, Straight glass tube. D, Reservoir for holding medicine. E, Air chamber for medicated air. F, Rubber cork for holding glass tubes. G, Long bent glass tube containing thermometer. H, Thermometer in long bent glass tube. I, Rubber tube connecting long bent glass tube with mouth- or nose-piece. J, Glass nose- or mouth-piece. K, Spirit lamp for heating water baths. L, Water bath for heating medicine in reservoir or for cooling medicine by filling with ice. M, Water bath for heating medicated air in long bent glass tube which passes through it. N, Stand containing spirit lamp. O, Holder for supporting water bath. P, Holder for supporting air chamber and reservoir. R, Holder for supporting long water bath.

as up to the present the medicated air has only been used in a dry state at the temperature of the room in which the patient used the instrument. To meet these requirements where better results would be obtained by raising or lowering the temperature and making the heated medicated air dry or moist, I have constructed an instrument with which the patient can either use the medicated air at the temperature of the room in which the instrument is used or the temperature can be raised or lowered, and the heated medicated air can also be made dry or moist as may be required by the nature of the case.

D. JOHNSTON, L.R.C.P. Edin., &c.

NINETEENTH REPORT OF THE GENERAL PRISONS BOARD, IRELAND.

IN his work on "Penological and Preventive Principles" the secretary of the Howard Association has referred in complimentary terms to the successful methods employed in the management of the Irish prisons. That the same policy is still being pursued is apparent from a perusal of the present report, which contains evidence that the Irish Prison Commissioners are concerned in maintaining a high standard of efficiency in the administration of the establishments under their charge. It is more than probable that the satisfactory state of affairs revealed in the report is in a measure due to the fact that one of the members of the Irish Board is a representative of the medical profession. In this respect both the English and Scottish Boards labour under a distinct disadvantage, for there can be no doubt that the question of the treatment of the criminal is gradually but surely assuming a more scientific aspect. His physical and psychological peculiarities are being extensively and exhaustively studied, and the relations of insanity and crime are constantly attracting attention. The health of prisoners, mental as well as bodily, their dietary, and their sanitary surroundings are matters of weighty importance, deserving special recognition and requiring skilled supervision. The report now under consideration is the record of a year's quiet and uneventful work. The course recently adopted in England of amalgamating the statistics of the local and convict prisons has been followed here. There has been a slight increase in the number of criminal prisoners committed to local prisons. The behaviour has been good, and it is gratifying to note a gradual diminution in the number of prison punishments during the past few years. The death-rate was remarkably low—viz., 2 56 per 1000. One suicide is reported. Three cases of typhoid fever occurred, but it is mentioned that the disease was incubating when the prisoners were admitted. Sixty-two prisoners were released on medical grounds; they included the cases of twenty-three women far advanced in pregnancy. There were 103 cases of insanity, being 28 in excess of the number in the previous year. Eighty were found to be insane on reception, and the remainder whilst undergoing sentence. Particulars of the individual cases are given in Table XIV. As it stands, this table is not of much practical value. With further detailed analysis and subdivision it would undoubtedly prove useful, both from a psychical and medico-legal point of view. The average daily population of the local prisons was 2335; that of the convict prisons was only 429. The conduct of the long-sentence prisoners seems to have been exemplary, and in no instance was corporal punishment resorted to. One convict died, ten were released on medical grounds, and six became insane and were transferred to the Central Criminal Asylum at Dundrum. The number of juveniles convicted and sent to prison is annually becoming less. Special rules have been adopted for their treatment; the operation of these rules ought to prove beneficial. The whole report affords evidence that the duties of the Board are being discharged in a creditable manner.

CLINICAL DEMONSTRATIONS TO PRACTITIONERS.—At the request of the Glasgow Town Council the visiting physician to the city fever hospital at Belvidere has agreed to give a series of clinical demonstrations on the cases of small-pox under treatment in the hospital. The demonstrations are free to all practitioners who conform to the conditions as to re-vaccination and such other precautions as are very properly demanded. There can be no doubt that this arrangement will be welcomed by the profession, and all the more so that—fortunately from a public point of view—opportunities for seeing small-pox are now so rare in the city.

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THE LANCET.

LONDON: SATURDAY, SEPTEMBER 25, 1897.

THERE is one sentiment in regard to the vacancy in the Direct Representation (for notwithstanding Dr. RENTOUL'S withdrawal of his resignation the vacancy remains) which seems to prevail in all quarters—namely, that the position of Direct Representation is a critical one, and that unless the profession can contrive to show more interest in it and to return with some approach to unanimity a man of power and one who can coöperate amicably with the General Medical Council, even as at present constituted, the prospects of any early extension of the principle in legislation may be abandoned. Wherever two men meet and discuss this subject it is with a feeling that Direct Representation is not working satisfactorily or in a way to induce practical statesmen to multiply the number of elected members of the General Medical Council. We do not look upon this as a permanent feeling. It will pass away with a larger experience in the profession of its own members and a greater familiarity with the questions of medical education and medical conduct with which the General Medical Council has to deal. It is unreasonable to expect that registered general practitioners, busily occupied in their own particular duties, should all at once realise the functions of the General Medical Council, or estimate the kind of representative whom they should send to the Council. The painful want of readiness in the profession to meet and deal with an emergency such as has arisen from the unexpected resignation of one of its Direct Representatives is emphasised by one circumstance. The vacancy occurs when everybody is supposed to be taking holiday. But this only brings into clearer light what was manifest enough before—that there is a want of organisation in the profession. Efficient organisations and associations do not take holidays. They should be always in evidence.

For the purpose of the imminent election to the General Medical Council we are 22,000 separate units, and the enthusiasm of the profession for Direct Representation has never yet been demonstrated, as far as we know, by a meeting of a hundred persons. We see no immediate sign of any efficient organisation for this purpose. And yet the occasion is an urgent one. The Medical Acts are in need of amendment; the public is duped with quackery; the profession is overcrowded beyond all public necessity or advantage; its members, after the most exacting and exhausting processes of education and examination, are unprivileged and unprotected from the grossest forms of competition; and loose systems of registration permit the public to remain ignorant of the fact that numbers die without receiving any proper medical attention. A wise and efficient Direct Representative can certainly advance the remedy of these evils. It only remains for the members of the profession individually to recognise their own responsibility. We repeat that in our opinion the doubt and apathy about Direct Representation are transient and will pass with time and a larger experience of the duties which such a system imposes. The very men who have most abstained from using their votes should now determine to use them and urge all their friends to do likewise. They are numerous enough to decide the election and to return such a member as will be a credit to the principle of Direct Representation. The list of candidates is not, perhaps, yet complete, but it must soon be so, and it will not be without the names of one or two candidates who would justify the concentration of the votes of the profession. What we plead for now is this concentration—that there be no repetition of the indications of indecision and division and abstention which were so apparent at the last election. The present vacancy is a huge inconvenience and expense to the Council. But it will not be an unmixed evil if it results in the restoration of the comparative unity of the profession and in the return of a Direct Representative who is in sympathy with the practitioners of the country and who is prepared to use the present Medical Acts, in so far as they are efficient, for the good of the public and the profession, while he is determined, wherever they are defective, to promote their amendment in a spirit of moderation and medical statesmanship.

THE annual Congress of the Sanitary Institute, which has just been held at Leeds, has done some good and useful work. During the course of the debates the remark was made that in regard to sanitary reform it was more necessary to educate than to legislate. It is an old and true axiom that peoples have the governments they deserve. Even under the most absolute despotism it is the people who make the government and not the government the people. So in respect to the laws for the protection of public health, such laws only are effective which the public thoroughly appreciate and approve. Therefore the first step is to educate the people, and in this respect we are not only pleased to note the holding of such congresses as those organised by the Sanitary Institute, but also that the proceedings at these meetings are very fully and ably reported by the local press. Further, great good is done during the Congress week by the holding of public meetings where men of science attending the Congress deliver, in simple and popular language, addresses on public health questions. While, however, we thus fully acknowledge the paramount importance of educating the people in matters appertaining to the preservation of health, it would be a great mistake to conclude that the ignorance or

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indifference of the masses is the only obstacle in the way of sanitary reform. During the course of the debates a good deal was said concerning the disposal of sewage and the pollution of water-courses. This is a question which more particularly affects the great manufacturing towns and districts of Lancashire and Yorkshire. No one can deny that, for instance, the Manchester canal is a national scandal. This magnificent engineering achievement is polluted by the drainage of seventy sanitary districts; and what should be a noble water-course is nothing better than an open and foul sewer. Yet it would be manifestly unfair to blame the people for the disgraceful condition of the Manchester canal. The cause of the evil may be roughly described as twofold—namely, the supineness of the local authorities and the greed or selfishness of the local land-owners. The members of the local boards can scarcely plead ignorance as their excuse. The real fact is that these authorities are composed, in the main, of manufacturers who are themselves the principal polluters of the four watersheds that feed the Manchester canal. The people have no objection to the purification of the waste waters from factories and mills; it is the mill-owners who wish to avoid the necessary expense. On the other hand, when, reluctantly yielding to pressure from the Local Government Board and to the outcry of public opinion, these local authorities have made some attempt to deal with their sewage, the land-owners have either refused to sell the land required for such treatment or have demanded a prohibitive price. A good excuse for doing nothing at all was thus supplied to those authorities, who were too often only too pleased to avail themselves of any pretext for shelving the whole question. In a series of special articles which we published in October and November, 1893, this condition of affairs was set forth in full detail. Consequently we are compelled to conclude that if the people want educating as to the facts and principles of sanitation, the local authorities, the governing and privileged classes generally, are in equal need of education as to their duties in helping to apply the theories taught to the humbler members of the community.

Nor was it necessary for the Congress to go beyond the confines of the town of Leeds to find an example of this necessity. Leeds is essentially a town of back-to-back houses, and even at this late hour the town authorities do not seem to be fully convinced as to the evils of this system. Though Ireland can scarcely be considered as a country which has taken the lead in the practical application of sanitary principles, it devolved on Dr. MUNTZ, of Belfast, when speaking on this subject at the Congress, to congratulate the Local Government Board on having refused to permit the Corporation of Leeds to erect back-to-back houses in the place of those to be demolished. We are glad to note that these words were greeted with loud applause by the Congress. Nevertheless, Councillor WOMERSLEY attempted to make a sort of apology for back-to-back houses, and this, too, before an audience composed exclusively of sanitary reformers. To make matters worse, Councillor WOMERSLEY said that there was no comparison between the older specimens of back-to-back houses and those recently erected. Surely the fact that such houses have been recently erected is the worst of all sins against the principles of sanitary science. We can forgive what was done before the unhealthiness of back-to-back houses was realised, demonstrated, and understood. Now, however, that the unsuitable nature of such dwellings is all but universally acknowledged what possible excuse can there be for having recently erected such buildings? Yet there are numerous streets—and good streets, not mere slums—in Leeds where modern houses stand back to back and can have no through ventilation. Evidently education in sanitation must be extended to other classes than those which are usually considered to compose what is called "the people." If, however, the Corporation of Leeds has exposed itself to severe criticism with regard to its lax opinions on the subject of back-to-back houses, it deserves encouragement in its efforts to grapple with the very difficult problem of the housing of the poor. As Councillor WOMERSLEY rightly observed, it is no easy matter to deal with seventy-two acres in the centre of a great city like Leeds, and to house and re-house 15,000 people.

A good deal was said at the Congress as to the teaching of hygiene in elementary schools and as to the educational influence in such respects which might be exercised by the clergy as well as by women in general. There is no doubt that much more could be done in this direction than is at present attempted. Still we have seen notable beginnings in various directions, and it may confidently be asserted that knowledge of the elementary principles of hygiene is more widespread among British people than among the peoples of most Continental countries. In one important respect the poorer classes in England are much behind similar classes on the Continent. The poorer classes in England know more about public and less about personal hygiene than similar classes in most of the Continental countries. The poor of England have a better knowledge of the measures that should be taken to prevent the spread of infectious diseases and of the importance of good drainage and ventilation; but they are inferior to similar populations on the Continent in respect to the care of their persons, their clothes, and their food. The popular lecture delivered at the Albert Hall, Leeds, by Dr. P. BOOBBYER, medical officer of health of Nottingham, was therefore most appropriate. He spoke of the sterilisation of milk, the amount of meals that should be taken, and how a steak should be cooked. It is homely advice of this sort that is much needed in this country. Anyone who is familiar, not only with the slums of the great English centres, but also with those of Continental cities, will have realised that whereas on the Continent the sanitation or drainage is infinitely worse than in England, the furniture, especially the bedding, is cleaner, the people are more tidily dressed, and in spite of their poverty their cooking is immeasurably superior. In such respects the standard of life is higher and the refinement is greater. These are questions which sanitary reformers might with advantage take in hand. It is on our weak points that we need the most enlightenment.

THAT many of our medical terms are a standing testimony to etymological ingenuity and philological inventiveness will be readily admitted, and the uncouth cumbrousness which expresses so little at so great length makes all but the very learned ready to listen to any reasonable plan of reducing to simplicity the polysyllabic acrostics without which science

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and art seem unable to advance. Unsupplied with an up-to-date medical dictionary it is impossible for any who have not kept in close touch with all the developments of our art to read intelligently the literary productions which describe them. Words to try the articulation as well as confound the understanding have been devised, and it is not easy to see who derives benefit therefrom. The medical student, indeed, dearly loves a long, high-sounding word; it is a precious thing to be stored in the recesses of his mind ready for the first examiner who gives him an opportunity to exhibit it. As ROBERT LOUIS STEVENSON'S funniest creation, Mr. PINKERTON, seized on the "boss word hebdomadary," and said to it, "I'll have you in type as long as yourself," so the student grabs at such words as "choledocho-duodenostomy," and says, "Wait till I find an examiner to hurl you at." The simplification of nomenclature would lessen the temptation the student has to attach himself to a treble-barrelled verbal curiosity rather than to gain an insight into the thing itself, and this alone would make for good. But seriously, the time spent in learning the meaning of medical terms is labour which ought to be reduced to a minimum. Each science has its own phraseology—a phraseology which its votaries must acquire and understand; but this ought at least to be made as easy and simple as possible. Consequently, although the dreams of the spelling reformer are usually Utopian, we cannot but sympathise with the efforts of those who draw periodical attention to the muddles in the spelling of the medical vocabulary.

One of the latest to direct attention to the subject is Dr. GOULD, of Philadelphia, the author of an excellent medical dictionary, and therefore an authority on the subject. We printed Dr. GOULD'S suggestions last week (p. 773) and may now briefly consider his proposals in detail. He makes eight suggestions, it will be seen, in support of what he terms "microscopic modifications." His advice to Anglicise foreign terms which a good proportion of readers will not understand is sound, and we agree to the use of figures rather than spelling when the number to be indicated is more than ten, for space is thus saved, though a source of error is introduced requiring watchfulness. He wishes to abolish the diæresis and all accents. "When a foreign word is Anglicised let us do it completely," he pleads, "and not drag into our domain exotics of foreign habit, leaving it, e.g., neither English nor French." This suggestion we do not consider a good one. It is well that words should have the hall-mark of their origin for some time. When the hall-mark has become unnecessary it will not be imprinted. He also desires to abolish diphthongs with one sweep. Custom has largely brought about the realisation of the suggestion. Examples of abolition of the diphthongs "æ" and "œ" in words where they can be supplanted by "e" are numerous. "Ether" has taken the place of "æther," "perineum" is, though with some difficulty, displacing "perinæum," "empyema" is now never written "empyæma," and though "pyæmia" and "septicæmia" are still in the field, there are signs that in them, as well as in a number of other words, the diphthong may disappear before the single vowel with us, as it has already done in America. The disappearance of the hyphen in compound words must also be left to the working of that powerful force by which changes are silently, almost imperceptibly, effected. In such words as anti-toxin, post-mortem, ventro-fixation, and that series of complicated terms used to designate operations upon the abdominal viscera, the hyphen will probably disappear as we begin to realise that the long words express only a single process or procedure. Antitoxin is already spelt universally without its hyphen. It is in the infancy of new procedures, before the mind has become familiar with their several stages and has instinctively blended them into one compact whole, that hyphens between the parts are so necessary. The separation of the several parts of the word helps the mind to a more ready comprehension of the thing indicated. The hyphen will disappear as our conception of the thing meant becomes easy and complete. Until then the hyphen is far from "useless," as Dr. GOULD terms it, and will remain.

In our opinion Dr. GOULD'S suggestions can all be left with safety to the ordinary evolution of language. By a stroke of the pen it is impossible, as it is, in our opinion, quite inadvisable, to order the dropping of the final "te" in words like curette, fourchette, and brunette, although in tourniquet, minuet, and other words it is missing. Nor will the fiat of any group of reformers suffice to suppress the silent "me" of gramme, centigramme, and the words in which it persists, in spite of its absence from telegram, diagram, anagram, and others. And not even the authority of the American Association for the Advancement of Science will effect the disappearance of the final "e" from bromide, iodide, bromine, iodine, atropine, and other words in which they recommend the change, unless the unconscious impulse of the English-speaking race tends in that direction; and if it does the association is as powerless to prevent as to promote the change. Neither language nor spelling is rigid and unalterable. But suggestions such as those of Dr. GOULD serve a purpose by drawing attention to the need for clearness of nomenclature and simplicity of diction in those who feel themselves compelled to coin new words for us, and for that reason he has done well to throw them on the waters of public opinion. But if any of the suggestions ever come back to him as tangible philological results, it will be not till the lapse of many, perhaps very many, days.

Annotations.

"Ne quid nimis."

THE POWERS OF A CORONER.

AN inquest held some little time ago shows very well the ignorance that exists even among people who might be supposed to know as to the powers and status of a coroner. Shortly, the facts were as follows. An old man found in a dying condition in the road, was seen by one medical practitioner, who forthwith ordered his removal to the infirmary, where he died. Notice of the death being forwarded to the coroner that gentleman ordered the medical man first called in to attend at the infirmary and make a post-mortem examination. The master of the workhouse refused to allow the practitioner in question to obey the coroner's order, although told by the practitioner that he had authority from the coroner. The medical officer of the workhouse also seems to have

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been under the impression that he should make the examination. At the adjourned inquest the coroner spoke very plainly to both the master and the medical officer, pointing out that they had rendered themselves liable to various penalties for obstructing him through his agent in the performance of their duty. It cannot be too strongly impressed upon every one that a coroner is a judge, and that any obstruction to, or defiance of, his orders is contempt of court. We observe that in the discussion on the matter before the board of guardians one member, Mr. Luck, who distinguished himself the other day in a vaccination controversy, "was of opinion that the inquest was uncalled-for. It was all a question of £ *s. d.*" So, at least, says the report in the *Eastbourne Gazette*.

MIDWIVES.

WHATEVER views may be entertained on the question of a Midwives Bill one thing is becoming clearer every day—that midwives, without any necessary acquaintance with the dangers of childbirth or the most elementary principles on which they should be met, cannot be allowed to continue their work unchecked. Women of the poorer classes must somehow be protected from such an obvious risk to life. A very painful case has been the subject of an inquest at Oldbury—that of a woman, aged forty-two years, who was attended by two persons apparently calling themselves midwives. The deceased had a great objection to the attendance of a medical man and would not consent to have one fetched till she was so collapsed as to be beyond any hope of recovery. Dr. Donovan, who was called in, was of opinion that her life might have been saved if she had been properly attended. The women did all they could, but "their ignorance prevented them rendering the deceased any aid." The coroner thought the case showed the necessity for passing a Midwives Bill. The jury wished to express their unqualified disapproval of the practice of persons calling themselves midwives attending at confinements. Something must evidently be done. The incompetent midwife is a source of grave danger to lying-in women.

A PROJECTED PUBLIC HOT-WATER SUPPLY.

WE alluded last week to an ingenious system of bringing a hot-water service supply within the reach of the public at the cost for a gallon of boiling water of one halfpenny. The proposal is one which demands careful attention, since if adopted it would present many points of interest from a domestic, economic, and hygienic point of view. The method consists briefly in utilising the waste heat of the street gas lamp. We will assume that this is satisfactory from the engineering point of view and free from danger. The heat is absorbed from the flames by means of a coil in which steam is generated and driven into a reservoir of water contained in a chamber at the bottom of the lamp. The hot water may be drawn off by placing a halfpenny in a slot and turning a valve. The source of heat, which is otherwise lost is thus cheap, but street lamps, of course, are not alight between sunrise and sunset in broad daylight, and during that interval the gas would have to be paid for, for heating purposes only. Gas, as is well known, is not an economic fuel for raising water to the boiling point. We take it that to ensure a continuous supply of hot water—and any failure to do so would, we imagine, be disastrous to the enterprise—those street lamps fitted with the hot-water apparatus would never be extinguished. Then occurs the question as to what the promoters intend to do where the public gas lighting is afforded by burners of a different type to the ordinary "fish-tail." For example, many of our streets are lighted with the incandescent gas burner, which, as is well known, consumes only one-half the quantity of gas consumed in a burner of plain type. The output, therefore, of heating power would be proportionally less. Again, with the regenerative burner of the Wenham type it is essential that the gas on its way to the burner should be heated automatically—that, is by the heat of the products of its own combustion. Since burners of the kind just described are largely in use for public lighting it would be interesting to know what the promoters propose to do in such cases. It cannot be doubted that the supply of hot water, especially in the poorer parts of London, would confer an inestimable boon upon the "masses." Consider, for instance, the advantage to the toiler for daily bread who has to rise in the small hours of the morning. For the comparatively small outlay of a halfpenny he could procure a gallon of hot water sufficient for the preparation of his coffee, cocoa, or tea, as well as for ablutionary and other purposes. It is proposed to extend the scheme a step further. Thus by means of automatic machines placed close to the "hot-water lamp post" the man in the street may provide himself with a cup of tea, coffee, cocoa, or even beef extract. This proposal raises a question of sanitary import. To the lamp posts are to be chained tin mugs which, supposing the movement becomes popular, will serve as a food utensil for a great number of more or less healthy people. But obviously the risk of infection could be easily lessened by each customer washing the cup out with boiling water. There is another important point which this proposal brings to mind. Assuming that the heating process is safe it is just possible that the apparatus would be liable to abuse by senseless people, in which case grave issues might ensue. The lamp post is commonly represented as a source of refuge and support to the intoxicated person; and in his endeavours to catch hold of a friendly projection, perhaps at the same time with some muddled idea that by placing a coin in the slot there was prospect of another tipple, the consequences might be serious. We hope, however, that time will prove that the apparatus is reliable and safe and of real practical value, because we believe, as we have said, that the cheap supply of boiling water will confer an inestimable advantage, especially upon the poorer classes of the community.

TOBACCO-SMOKING AND GENIUS.

IN his work entitled, *Introduction à la Médecine de l'Esprit* M. Maurice de Fleury devotes a chapter to tobacco-smoking from the point of view of men of letters. The following are the opinions in epitome of three amongst the most eminent writers of the century. In the first place Balzac: "The architect of that cyclopean monument which bears the name *La Comédie Humaine* professed a fanatical aversion to tobacco in all its forms, and was constantly employed in an endeavour to purge the *Régie*. In his books he invariably covers with contempt the characters whom he portrays as smokers, and an entire chapter in his 'Treatise on Modern Stimulants' consist exclusively of fulminations against the weed and its worshippers. His, in fine, is the motto under which the devoted members of the *Société contre l'Abus du Tabac* wage an unceasing war—'Tobacco destroys the body, attacks the intellect, and besots the nations.'" Next, Victor Hugo: "The author of *Les Misérables* was likewise no smoker. As Théodore de Banville once said, 'In the house of Victor Hugo, Peer of France, no one has ever even attempted to smoke.' In this connexion an anecdote suggests itself. One evening in the master's home one of the guests, Villiers de l'Isle-Adam, I think, was vaunting the beneficent effects of a cigarette on a creative imagination. The great poet at once rose in revolt. 'Believe me,' said he, 'tobacco is more hurtful to you than beneficial; *it changes thought into reverie.*'" Finally, M. Émile Zola: "I have no definite opinion on the question. Personally, I gave up smoking ten or twelve years ago on the advice of my medical attendant,

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at a time when I believed myself to be affected with heart disease. But to suppose that tobacco exercises an influence on French literature raises a question of such magnitude that the most rigid scientific proof alone could dispose of it. I have known great writers who smoked without stint, but their intellects were not one whit less acute. If genius be a neurosis, then why seek to cure it? Perfection is such a very tiresome thing that I very often regret having broken myself of the tobacco habit. And as I know nothing more about the question I do not dare to enlarge upon it."

THE VIRTUE OF AN "IF."

IT is reported in the daily press that the Lambeth Vestry have received a letter from a firm of solicitors who state that a client of theirs, who desires to remain anonymous, is willing to contribute the sum of £10,000 towards the cost of founding a general hospital in South London provided that certain stated conditions are adhered to. The donor also makes sundry suggestions as to administration. The offer is a generous one; but £10,000, though a large sum, will not go very far towards founding a hospital; and we must confess to a desire to know a little more about the "conditions" and the "suggestions." They may be sensible—hospital management as it stands is not perfect any more than anything else in the world—or they may be of such a character as to be absolutely unworkable; that is to say, of such a kind that no medical man would, or could, serve the office of physician or surgeon while adhering to them. Anonymity in charity is to be respected; but the conditions under which the gift is offered should be published.

THE MANUFACTURE OF KOCH'S "TR" TUBERCULIN.

IN the *Medical News* (New York) of Aug. 28th is a paper by Dr. E. L. Trudeau and Dr. E. R. Baldwin, of Taranac Lake (N.Y.), on "The Need of an Improved Technic in the Manufacture of Koch's 'TR' Tuberculin." The writers state that some experience of the use of this substance has been gained by them which shows evident imperfections in its present mode of manufacture, and indicates the possibility of serious objections to its use in human beings until these shall have been overcome. Disclaiming any intention of criticising the value of the original and all-important facts bearing on the production of artificial immunity set forth in Koch's recent paper, the writers confine their present notes to that part of their experience which relates to the character of the product as at present manufactured and sold; and briefly present evidence thus far obtained which bear on the nature and defects of the preparation itself. Two facts present themselves: (1) the extreme difficulty of preventing accidental contaminations of the substance in the somewhat complicated process of manufacture without the use of heat or antiseptics; and (2) the evident uncertainty of separating by centrifugation alone the uncrushed and still living tubercle bacilli from the fluid in which they are suspended. The experience of the writers would indicate that neither of these difficulties appears to have been as yet entirely overcome by the present manufacturers; and as the first requirement of an injective fluid intended to produce immunity is that it should be entirely free from danger, they have felt it their duty to make known such of their observations as relate to this point. They have examined seventy-six vials of the new tuberculin (designated "TR"), and give a table embodying the results of their investigations. Twenty-eight of the vials were cork-stoppered, and on culture and microscopic tests all showed various yeast-like growths, but no attempts were made to identify them. Forty-eight vials were glass-stoppered, and of these, thirty-six were sterile and the others contaminated with moulds. Observations on guinea-pigs indicated that these contaminating organs were non-pathogenic, that the immunising properties of the fluid might be impaired by their growth in it, and that with a little care in the selection of sterile bottles, with the application of the culture test to each, the use of the preparation in the human subject was perfectly permissible. The possibility that the fluid contained tubercle bacilli was a much more serious matter. Repeated microscopic examinations of the various specimens received at different times were made with negative results, but on centrifugating the contents of one or two bottles at a time and examining the sediment six or eight well-stained tubercle bacilli were found in each cover-glass with little difficulty. The writers then inoculated five animals with the tuberculin; four of these remained in perfect health, but one developed tuberculosis. Experiments were then made with centrifugating the fluid at a very high speed (4000 revolutions a minute) for an hour, and even then they were not quite certain that the fluid was absolutely free from bacilli. In our issue of Sept. 18th is a paper by Mr. Frederic Eve detailing cases of surgical tuberculosis treated by Koch's new tuberculin, and he is of opinion that some slight although no markedly favourable influence may be exerted in cases of early tuberculosis of joints or in those in which no evidence of softening of caseous material exists. But the effect where caseous material has broken down, especially if the disease has become septic, is negative. Reports on the therapeutical action of this remedy differ, and not sufficient time has elapsed since its introduction to enable any definite judgment to be passed upon it.

THE SALMON CLAUSE AND APPRENTICES' INDENTURES.

ONE by one old traditions are being upset by the modern process of inquiry. The fierce light which beats upon a throne is as nothing to that which beats upon the manners and customs, whether traditional or not, of our ancestors. The last to be overturned is one that perhaps we were acquainted with from our earliest childhood, since it is referred to in that delightful book "The Water Babies," and it is this, that formerly salmon was so plentiful throughout Great Britain that it was a common practice for the indentures of apprentices and agreements with servants to contain a clause that they should not be required to partake of that fish for dinner more than a certain number of times weekly. Dr. T. N. Brushfield is the unkind person who has robbed us in the most scientific and convincing manner of this cherished delusion. We have received a reprint of a paper read before the Chester Archæological Society in which he recounted his researches into the question and brought forward evidence from various county histories, *Notes and Queries*, sundry antiquarian works and other documents to prove how widespread the belief is. He also hunted high and low for an indenture containing the said clause, but he never got nearer than the following letter from a medical man in the north of England: "In 1852 I was apprenticed to my uncle ..... and when signing the indenture the solicitor remarked to my uncle, 'This is almost a *verbatim* copy of your own indentures, with the exception of one clause which I have omitted, thinking it unnecessary at the present day—viz., he is not to have salmon more than two days a week.' My uncle was apprenticed to a surgeon in the East-end of London, and supposing him to have been bound at the age of seventeen the indenture would have been drawn up in the year 1825." Dr. Brushfield then quotes evidence to show that salmon was never very cheap at any time, and quotes an opinion of Frank Buckland that

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the origin of the clause, if it ever existed, was that apprentices used to be fed upon spent fish which were both nasty and unwholesome. Dr. Brushfield thinks that the custom might have originated from a dread of leprosy; but, on the whole, he is at present unable to regard "the asserted salmon clause in the indentures of apprentices in any other light than as a myth."

TYPHOID FEVER AT KLONDYKE.

WHEN masses of people suddenly and unexpectedly congregate together in places where no adequate preparation for living has been made an outbreak of disease in some form or other is usually the result. It is not very surprising, therefore, to hear that a report from Dawson City announces that there has been an outbreak of typhoid fever in the district. If this report is correct it is to be feared that a disease of this nature will bear hardly on a population the majority of the members of which are already weakened by hardship and want of food. It is said that the medical men are well occupied and getting £40 a visit, a sum which at first sight may fairly take away the breath of some of the hard-worked and badly paid members of the profession at home. A man's wealth, however, has to be reckoned by his expenditure, and even if the magnitude of the fees be true the glamour is somewhat dulled when, on reading a little further, we find that eggs are selling for 4*s.* each, from which it may be fairly inferred that all the necessities of life, to say nothing of its luxuries, are proportionately dear.

SULPHUR BACTERIA.

PROFESSOR MANABU MIYOSHI, of whose observations on iron-containing bacteria we published an abstract in THE LANCET of Sept. 11th (p. 611), has contributed to the *Journal* of the Imperial University at Tokio, Japan, a long paper in German on Sulphur Bacteria. In 1895 he was led to examine some sulphur-encrusted organic growths (*Schwefelrasen*) found in the reservoirs and conduits of the hot springs of Yumoto, at Nikko. The water is rich in sulphuretted hydrogen, and these "growths" are formed by the sulphur of the gas separating and being deposited on a gelatinous substance of bacterial origin, which may perhaps be identical with the *barégine* of some European sulphuretted waters. Two conditions are necessary for the formation of the "growths"—(1) that the water should be constantly flowing, and (2) that it should be very shallow. The temperature of the water in which these objects had their habitat varied from about 51° to 70° C. In the rapidly-flowing water their colour varied from pale yellowish-white to almost pure white, but in the slower currents they were always yellow, the explanation being that in the latter case the sulphur was in the form of handsome, tolerably large crystals, mostly either rhombic octohedra or monoclinic prisms, whilst in the former case it was in minute amorphous particles mixed with imperfect prisms. In the slow currents the length of the *Schwefelrasen* varied from 0·5 cm. to 2 cm. (from ¼ in. to ¾ in), but in the rapid currents they might be as long as 20 cm. (8 in.). The average length was from 3 to 5 cm. (from 1¼ in. to 2 in.). The gelatinous substance is tough and slippery, and gives all the characteristic colour reactions of mucus; it contained principally cylindrical sickle-shaped colourless cells, varying in length from 6μ to 28μ, the average dimensions being 23μ in length and 1·4μ in breadth. It was very difficult to find any of the gelatinous substance free from visible sulphur deposit; even the purest sample which could be obtained showed granules of sulphur under the microscope, its comparative freedom from deposit being due to the fact that it happened to be protected from the air, whereby the oxidation of the sulphuretted hydrogen was hindered. Professor Miyoshi's experiments showed that this substance has an exceptional power of inducing a precipitation of sulphur from sulphuretted water. Samples of it placed in currents flowing from the spring, exposed to the air and having temperatures of 59° and 69° C., were covered with a layer of sulphur in a quarter of an hour or half an hour, and after the lapse of an hour the deposit was so thick that the whole was indistinguishable from the ordinary *Schwefelrasen*. Control experiments made with strips of paper and bundles of thread, as well as with bundles of thread smeared with starch paste, partially coagulated albumin, and concentrated gelatin solution or thick glue, showed that these objects when suspended in the water received a slight coating of sulphur, not in any way comparable to the thick deposit formed on the bacterial growth Up to the present time five colourless and eight coloured sulphur bacteria have been found at Yumoto. The former are *Thiothrix nivea* (Rabenhorst), *Thiothrix nivea* (Rabenhorst), new var. *verticellata*, *Thiothrix tenuis* (Winogradsky), *Beggiatoa alba* (Vauch.), and *Beggiatoa minima* (Winogradsky). The coloured sulphur bacteria may produce either a peach-red or a violet effect, the former including *Chromatium Weissii*, *Chromatium minus* (Winogradsky), *Chromatium vinosum* (Cohn), *Chromatium minutissimum* (Winogradsky), *Thioderma roseum* (new genus and species), and *Thioderma rubrum* (new species); the violet bacteria are *Thiosphaerion violaceum* (new genus and species), and *Thiosphaera gelatinosa* (new genus and species). Professor Miyoshi found that under the influence of certain solutions *Chromatium Weissii* presented the phenomenon of chemotaxis in a marked degree, the cells moving either away from or towards these solutions according to the substance which they happened to contain. For the purposes of the experiments Pfeffer's capillary tubes were used, about 1 cm. in length and 0·05 mm. in diameter at the orifice. The cells were strongly attracted by weak solutions of sulphuretted hydrogen, and by weak (from 0·3 to 0·5 per cent.) solutions of ammonium tartrate, potassium nitrate, ammonium phosphate, &c.; but, on the other hand, they retreated from a solution of malic acid, withdrawing altogether from the space represented by a sharply defined "repulsion sphere," having a diameter about forty-three times that of the capillary tube. The description of these various organisms is illustrated by a number of lithographed drawings, some of which are coloured. In the opening address in the Section of Botany at the recent meeting of the British Association at Toronto Professor H. Marshall Ward referred more than once to Professor Miyoshi's investigations on chemotaxis and allied phenomena.

THE ABUSE OF DISPENSARIES.

WE quote the following from the *Globe* of last Monday "The exceedingly mean people who, without the excuse of poverty make use of free elementary schools and free hospitals equally victimise, it appears, charitable dispensaries. While never contributing a farthing towards the maintenance of these excellent institutions they feel no shame in resorting to them for medical advice and medicine. A correspondence on this scandal which has lately been running in a Warwickshire paper reveals some cases of the sort which appear almost incredible. In one instance, the owner of a whole row of houses boasted that he always could and did obtain gratis treatment at the dispensary; all he had to do was to wear his oldest clothes. Of a similar sort was the well-to-do woman who, whenever any ailment troubled her, doffed the fine raiment she usually wore and clad herself in the most ragged garments her wardrobe contained. Letters of recommendation have to be obtained, it is true, but that can be easily managed by making pretence that the introduction is required for some poor person. Not only does this gross system of imposture help to exhaust dispensary funds, which are never too affluent, but it tells terribly against struggling medical men. When one of these declined to attend the family of a

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thriving tradesman for the beggarly remuneration of 3s. 6d. a week, the answer was, 'I do not see the fun of paying half-a-crown a visit when I can get advice and medicine for nothing at the dispensary.' It appears to be quite a common practice to coerce medical men into giving their services for next to nothing by threats of a similar character, and in many cases the attempt succeeds only too well. Subscribers to the institutions should therefore exercise all possible care in complying with requests for recommendatory letters; too often they are given without the slightest inquiry."

We heartily endorse every syllable of the *Globe's* "leaderette"—a horrible word to apply to a sensible expression of editorial opinion. If subscribers to these and other medical charities would insist upon proper precaution being taken against abuse the persons for whom the benefits were designed would obtain them, perhaps as important a consummation in the eyes of the layman as that justice would then be done to medical service.

HIGHWAYMEN AND REVOLVERS

THERE would seem to be at present a wave of criminal violence passing over the country. Gangs of young ruffians perambulate the streets, and sticks, belts, to say nothing of revolvers, are freely used. The punishment for this sort of offence is not half heavy enough. Only the other day a lad who had "accidentally" wounded another was let off with two days' imprisonment—a perfectly useless sentence. There is another phase of the revolver question which deserves consideration. Many instances have occurred lately of bicyclists, especially women, being attacked and robbed or maltreated by tramps. At an inquest recently held upon a youth, aged eighteen years, who was accidentally shot by a boy, aged fifteen years, evidence was given of the enormous sale of cheap revolvers to cyclists as a means of defence. The scoundrels who attack cyclists are hardly ever arrested, and when they are the punishment for assault is ridiculously inadequate; but, all the same, the general use of revolvers must be put a stop to. The defunct Pistols Bill must be re-introduced into Parliament and passed, and the lash should be made part of the punishment for brutal assaults on the highway, whether accompanied by robbery or not.

THE ETIOLOGY OF INFECTIVE ENDOCARDITIS.

IN the *Edinburgh Medical Journal* of July, 1897, Dr. A. A. Kanthack and Dr. H. M. Tickell have published a valuable article on this subject, based on an analysis of all the fatal cases which were observed in St. Bartholomew's Hospital from January, 1890, to March, 1897, and subjected to a necropsy. These amounted to eighty-four. The writers very properly insist that the term "infective" should be used and not "malignant" or "ulcerative." The question always is, Are the vegetations due to bacteria or not? Micro-organisms may cause acute endocarditis without ulceration, and, conversely, ulceration may be found in their absence. In all but ten cases either old cardiac disease or an inflammatory infective lesion accompanied the endocarditis. Of these ten cases malignant disease existed in 4, and a possible pneumonia in 1, so that only 5 cases can be considered as uncomplicated. Old cardiac disease was present in 54 cases (64 per cent.), 16 of which were accompanied by a recognised infective process—viz., pneumonia in 7 cases, pyogenetic process in 4, empyema in 1, vaginal and uterine disease in 2, bronchiectasis in 1, and influenza in 1. Of the remaining 30 cases in which old cardiac disease was absent an infective process was discovered in 20, which either preceded or accompanied the endocarditis—viz., pneumonia in 5, pyogenetic process in 6, empyema in 1, vaginal and uterine disease in 2, otitis in 3, tubercle in 2, and typhoid fever in 1. Of all acute diseases pneumonia is most frequently complicated with endocarditis. The writers found an antecedent pneumonia in 14 per cent. of all the cases. Where the pneumonia is croupous the pneumococcus is the cause of the endocarditis, and seems to be attracted and arrested by a pre-existing cardiac lesion. Endocarditis is by no means common in typhoid fever. When it occurs, either streptococci and other pyococci or typhoid bacilli have been found in the heart's blood. Similarly, in those rare cases of infective endocarditis occurring in diphtheria or gonorrhœa, the Klebs-Löffler bacillus or Neisser's coccus may be present, or streptococci and other pyococci. In one case there was a tuberculous endocarditis. Mixed infections are common in all these cases. Therefore, when an endocarditis complicates an infective fever it may be (1) homologous, (2) heterologous, or (3) mixed infection of the endocardium.

IS OLIVE OIL A FOOD OR A DRUG?

THE Islington Vestry has lately been foiled by a decision of Mr. d'Eyncourt at the North London Police-court in a case of some importance. A young woman employed by the vestry under the Sale of Food and Drugs Act asked in a grocer's shop for a bottle of olive oil at 5½d. On being analysed it turned out to be, not olive oil, but cotton seed oil. The defence was that it was marked "Sublime salad oil," and that salad oil included cotton seed, olive, and other oils; that it was not a drug, not a medicine for internal or external use, and they were summoned for selling it as a drug. The contention of Mr. Harris, the medical officer of the vestry, was that olive oil is a drug used internally and externally. The magistrate, in deciding against the vestry, said the vestry had pinned its faith to the view that the oil was a drug, and held that it was a food and not a drug, especially considering that it was bought at a grocer's shop. If a medical man wanted to make up a prescription it is to be hoped, his worship said, he would go to a druggist and not purchase a 5d. bottle at a grocer's shop. The summons was dismissed with a guinea costs. It is a pity the vestry did not in its summons recognise that olive oil is a food as well as a drug. It is certainly a medicine, used not only externally, but in large doses internally by itself, besides entering into the composition of seventeen or eighteen preparations in the Pharmacopœia.

DIPHTHERIA AND SCHOOL ATTENDANCE.

THE report of Dr. F. J. Allan, medical officer of health for the Strand, for the eight weeks ending Sept. 11th, 1897, contained a passage of interest, bearing upon the relation of the spread of diphtheria to attendance at board schools. Dr. Allan has noticed this year, as in past years, that as soon as the school holidays begin the number of cases of diphtheria "show a decline which continues until the schools resume work, when the notifications rapidly increase." He continues as follows:—

"In this connexion I have to report the receipt of a memorandum, prepared in the Medical Department of the Local Government Board, on the circumstances under which the closing of Public Elementary Schools or the exclusion therefrom of particular children may be required in order to prevent the spread of the disease. You will probably refer it to your Health Committee with a view to taking any action thereon which they may think desirable. Statements have been freely circulated in the press lately that diphtheria has been increasing at an alarming rate during the last few weeks. I find in this district that only 4 cases have been notified so far this quarter, and on examining the returns for the whole of London for the first nine weeks of the quarter I find that the average number of cases notified per week has been 259, while in the corresponding period of last year the average was 284. I do not wish to appear as taking a light view of the amount of diphtheria which has occurred, but I would point out that so far this year there have been fewer cases notified than in 1896. Apparently, public attention has been strongly drawn in this direction by the inability of the M.A.B. to

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find hospital accommodation for all cases applying for admission. It was not until the end of the year 1888 that diphtheria cases were admitted to the M. A. B. hospitals, and it is only recently that the public have begun to demand admission for this class of patient, prompted to do so doubtless by the improved results obtained in the hospitals since the antitoxin treatment was introduced. The Asylums Board has not accommodation for the patients who seek admission in increasing proportion, and from this cause apparently have arisen the statements in the papers that there was an increasing epidemic of disease at present. It is within the two months from now that diphtheria reaches its maximum in each year, and from present appearances I think it is probable that there will not be so many cases this year as last."

A DINNER TO SIR SAMUEL WILKS.

ANY old friends or pupils of Sir Samuel Wilks, Bart., who wish to be present at the dinner at the Hôtel Métropole on Wednesday, Oct. 6th, at which it is proposed to entertain him, are requested, if they have not already done so, to apply at once to the Secretary, Dr. G. Newton Pitt, 15, Portland-place, W., at the same time enclosing 22*s*., the price of a dinner ticket (including wine).

ANEURYSM OF THE INTERNAL CAROTID ARTERY FOLLOWING SCARLET FEVER.

IN scarlet fever cellulitis of the neck sometimes affects the great vessels, exposing them or causing perforation; but we know of no case like the following, in which an aneurysm of the carotid artery formed. It has been published by M. Lyot and M. Retit, and is abstracted in the July number of the *Revue des Sciences Médicales*. A girl, aged nineteen years, was attacked by scarlet fever, with severe inflammation of the throat. A month after the onset there appeared in the left sterno-mastoid region, immediately below the mastoid, a swelling the size of a walnut, reducible, pulsating energetically, and with a systolic murmur. On examining the throat the left tonsil was found pushed towards the middle line, and digital examination showed a swelling also pulsating with expansile movements. On exploratory puncture with a Pravaz syringe blood was obtained. Acute dilatation of the left internal carotid artery following acute arteritis was diagnosed. No treatment was employed. Gradual improvement took place, and the patient spontaneously recovered in three months.

A CURIOUS FOOTBALL ACCIDENT.

A REMARKABLE accident was reported in recent issues of our lay contemporaries. During a match at Hull, said the report in more than one place, one of the forwards wrenched himself and fractured a lower rib. He was carried off the field, "but resumed play afterwards, the serious nature of the injury not being realised at first. At the Manchester Infirmary it was found that the fractured rib had penetrated the kidneys, causing internal hæmorrhage." The story struck us as a very strange one. A fractured rib is not always easy to diagnose, especially in a muscular subject, and the presumption was that the laceration of the kidney occurred as a result of resuming play. The report went on to say that there was no hope of recovery. The true facts are as follows, and we think that they should be known, as the widely disseminated story reflects rather seriously upon all the unfortunate lad's comrades. To allow a person considered to have a fractured rib to go on playing, and then for no apparent reason to let him go all the way from Hull to Manchester for medical advice, would have been inhuman. The player in question was charged in the left flank by another player. He did not resume play, and his injuries were attended to by a local practitioner who advised his removal to the Hull Infirmary. The injured player, however, insisted on being taken to Manchester, where he was admitted to the infirmary after midnight. No [diagnosis was made] of fractured rib, but he was then found to be suffering from shock and extreme tenderness between the last rib and the crest of the ilium on the left side. There were also increased resistance in this site and a large quantity of blood in the urine. These symptoms, which seemed to indicate a ruptured kidney, disappeared after forty-eight hours, and hopes are now entertained of the patient's recovery.

DUCHENNE.

UNDER the editorship of Dr. Geo. Gautier there have just been published[1] the orations delivered at the inauguration of the monument recently erected at the Salpêtrière to the memory of Duchenne of Boulogne. The ceremony took place on Sunday, June 27th, under the presidency of the Minister of the Interior. It was claimed for Duchenne that in the domain of neuro-muscular pathology, of the physiology of movement, and of the therapeutic applications of electricity he had literally evolved order out of chaos. To him we owe the axiom that the nutrition of the muscle depends on the cells, or on certain cells, of the anterior cornua of the cord. His classic investigations on the nature of "the atrophic paralysis of infancy," of atrophic spinal paralysis in the adult, of progressive muscular atrophy, and of locomotor ataxy were eloquently referred to. His life had been that of a modest man of science; he had known neither honours nor rewards; he was not a member of the Institute or of the Academy of Medicine. The presence of delegates from these learned bodies on that day seemed like an expression of regret that they could not claim him as one of them. That monument and that day's celebration were not only an act of justice, but also an act of reparation.

IT is reported that medical students in Germany will not in future be allowed to visit the clinics of the German Universities unless they have passed the preliminary medical examination. Foreigners will have to pass an equivalent examination.

THE medical officer of health of Maidstone reported on Wednesday last to his sanitary authority that 306 cases of typhoid fever had been recently notified in the borough.

A MEETING of the English Branch Council of the General Medical Council will be held on Tuesday, the 28th inst., to receive the precept of the returning officer for the election of a Direct Representative in the room of Dr. R. R. Rentoul, resigned.

THE International Congress of Neurology, Psychiatry, Medical Electricity, and Hypnology, which has been held at Brussels, came to an end on Saturday, Sept. 18th, 1897.

DR. CORFIELD, who has been suffering from ptomaine poisoning during the past week, has now quite recovered.

[1] Imprimerie Brevetée, Michels et Fils.

FATAL ACCIDENT TO A MEDICAL MAN.—On Sept. 16th Dr. Strethill H. Wright, of Manor House, Ganarew, near Monmouth, was thrown from his horse whilst riding near the village of Whitchurch. He was found in an unconscious state and conveyed to the Monmouth Hospital, where he shortly afterwards died, the cause of death being a fractured skull. The deceased was educated at Edinburgh University and graduated M.B. and C.M. in 1867, obtaining the M.D. four years later and the M.R.C.P. Edin. in 1872. Dr. Wright was well known and highly respected in the neighbourhood, and leaves a widow and family for whom much sympathy is felt.

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THE VACANCY IN THE GENERAL MEDICAL COUNCIL.

THE number of candidates has been increased from two to five during the week, the new names before the profession being Mr. Victor Horsley, F.R.S., Dr. T. M. Dolan, and Dr. J. A. Rigby. We publish the addresses of the first and last, but Dr. Dolan's address has not reached us, and we are uncertain from the wording of his letter (see page 813) whether his intention to stand is definite.

Dr. J. A. Rigby has received the support of an emergency meeting of the Preston Medico-Ethical Society, sixteen members out of a total membership of fifty-five having decided, we are informed by the honorary secretary, that he is "a fit and proper person to be elected as a Direct Representative."

Mr. George Jackson's candidature is being supported by the Central Council of the Incorporated Medical Practitioners' Association.

Dr. Rentoul has sent to us the following copy of a letter which he has forwarded to the President of the General Medical Council:—

"Hartington-road, Liverpool, Sept. 17th, 1897.

"DEAR SIR,—I beg to withdraw the resignation of my seat upon the General Medical Council. I have been impressed with the strong feeling that I, working almost alone, can do very little indeed to aid in carrying into effect those Medico-Political and Medico-Ethical questions which I have had at heart for a good number of years—and more especially so, as Practitioners appear to be so very slow to back up those who are working on their behalf.

"Since the announcement of my resignation I have, however, received pressing requests to remain upon the Council, and I now agree to do so for the present. Moreover, it has been pointed out by THE LANCET that my resigning now may not only deal a severe blow to a question which I have repeatedly brought up since 1890—I refer to the question of Increased Direct Representation of Practitioners upon the Council—but that it would cause the Council to spend some hundreds of pounds upon a new election.

"I sincerely hope that in the immediate future Practitioners will see it to be their plain duty to take a deeper and truer interest in Medico-Political and Medico-Ethical questions, and that those few who have tried to fight their battles and to improve our position generally will receive, not only greater sympathy, but more practical help.

"I am, Sir, yours truly,

"ROBERT R. RENTOUL."

We learn, as we expected, that it is not within Dr. Rentoul's power to withdraw his resignation. His letter does not represent accurately what THE LANCET has said.

MR. VICTOR HORSLEY'S ADDRESS.

TO THE REGISTERED MEDICAL PRACTITIONERS OF ENGLAND AND WALES.

LADIES AND GENTLEMEN,—Having agreed to present myself as a candidate for election to the General Medical Council, I feel it is perhaps necessary to explain why, having declined to be nominated at the election in November last, I have now reconsidered the position. I believed then that it was desirable that the three seats of Direct Representatives should be occupied by general practitioners, but since that date I have, in the light of full knowledge of the unfortunate result of that election, and especially of its adverse influence on the important question of increased direct representation, been driven to the conclusion that the prospect of advancing medical reform depends more upon the previous training of the representatives than upon the fact of their belonging to one particular section of the profession.

Further, a careful study of the situation shows that the Medical Acts have conferred so much power upon the General Medical Council as to render it certain that the most expeditious method of obtaining reform is to influence the Government through the Council; but to accomplish this it is obvious that an intimate personal acquaintance with the methods, laws, and procedures of the Council should be combined with a knowledge of the many pressing needs of the profession and the increasing encroachments on the legal rights, liberties, and, indeed, income of the practitioner.

I may say, I think, without exaggeration, that my work of the last four and a half years as President of the Medical Defence Union has furnished me with a training of the kind required.

Thus, as regards the official, and especially the legal, work of the General Medical Council, the conduct of the numerous and important cases placed by the Union before the Council has brought to my notice many points in medical legislation and in the procedure of the Council amendment of which is urgently necessary. Having a detailed experience of these hindrances and deficiencies I believe I could be of service to the profession in securing the removal of some of these obstructions to immediate progress.

As regards a requisite knowledge of the needs and exigencies of general practice, my official work in the Union has brought me into daily contact with applications from all branches of the profession in different parts of the country, made under the most varied circumstances, thus rendering me intimately acquainted with the difficulties and perplexities of my colleagues.

Of the questions immediately affecting the medical profession I consider the following to be the most pressing, and to require, not only consideration, but decisive treatment by the Council:—

1. The amendment of the Medical Acts, specially including—
   (*a*) The representative constitution of the Council.
   (*b*) The securing of a one-portal system of admission to the profession.
   (*c*) The suppression of irregular practice by confining practice for gain to registered persons.
2. The regulation of medical aid societies.
3. The registration of obstetric nurses.

As regards the two latter questions, the Council has reopened both by the appointment of committees to report thereon, but definite conclusions must be arrived at as soon as possible, and it would be my aim to secure prohibition in the former case of the holding of Medical Aid and like appointments as being a contravention of Section 29 of the Medical Act, 1858, and in the latter to prevent any legislative measures receiving approval unless containing ample safeguards both for the profession and the public.

In conclusion, I wish to state that had either of my friends, Dr. Woodcock and Dr. Lovell Drage, consented to be nominated I would have done all in my power to further his election. As, however, for various reasons they have both declined to come forward, I have decided to do so myself, in the hope of being able to continue and extend that work in which I have always felt the deepest interest, and which I believe I could more efficiently help forward if elected to the membership of the General Medical Council.

25, Cavendish-square, Sept. 18th, 1897. VICTOR HORSLEY.

DR. RIGBY'S ADDRESS.

TO THE REGISTERED MEDICAL PRACTITIONERS OF ENGLAND AND WALES.

LADIES AND GENTLEMEN,—At the request of a number of my fellow medical practitioners I have decided to become a candidate for the seat on the Council rendered vacant by the resignation of Dr. Rentoul.

My medical experience extends over a period of thirty-one years; at the outset I was for three years a pupil in a large club, union, and general practice, followed by the usual hospital course, and subsequently I have been engaged in general practice, for the last ten years with a hospital appointment. I can thus fairly claim to have had exceptional opportunities for becoming acquainted with the needs and wants of a general practitioner. Vast changes have occurred during that time—the old apprenticeship system, with all its faults and advantages, has been practically extinguished; the old-fashioned consulting physician is rapidly becoming a thing of the past and is being superseded by the modern specialist. The Ambulance Association has sprung up into vigorous existence—nobody can predict where it will lead to in the future; our newspapers are being flooded with medical advertisements of all sorts, many of them of a most subtle nature, appealing to the fears and hopes of the people, abounding in the most delusive statements, supported by apparently unimpeachable testimony.

I am fully aware that what I am about to say will be subject to severe criticism, but my position as an applicant for your suffrages compels me to touch on what I consider as the most pressing medical questions of the day, one of the chief of which is the advent, advance, and abuse of specialism. A medical practitioner with no special qualifications, merely in consequence of a more or less temporary or permanent connexion with a special hospital, or a special department in a hospital, becomes in his own eyes and that of the public a specialist, and thus frequently at once becomes elevated into a practitioner on quite another plane, commands enormous fees, takes away from the general practitioner cases he is or ought to be quite competent to treat, and thus by a continuation and amplification of this evil is gradually reducing the general practitioner to the position of one who has perforce to attend only on the most ordinary and every-day and unremunerative class of cases, or those whom want of means prevents from visiting these so-called specialists. An illustration will prove my meaning. A family practitioner was called to a child the other day which broke its thigh. A consulting surgeon was called in to set the fracture. While laid up in bed scarlet fever developed itself and a specialist in fevers was sent for. As one sequela of the scarlet fever suppuration of the middle ear occurred, and an aural surgeon was requested to visit the child. The child's parents were by no means well off, and the cost was a serious drain on their resources. My contention is that a well-educated practitioner should have been quite competent to attend the child in each and all of the above complaints.

If we have to have specialists the present slipshod method of attaining the distinction is absolutely indefensible and unfair. Instead of having to tout for, and hustle and push oneself into, some special hospital or other appointment, let there be a system of fair, yet stringent, tests, open to every qualified medical practitioner alike, who feels the desire, capacity, and opportunity for a certain special line of practice, which tests shall confer the right to use a certain distinctive appellation, such as ophthalmic or aural surgeon, or diplomate in obstetrics or gynæcology, much as now one can get the F.R.C.S. in surgery, the dental diploma, or the diploma in public health. If some such alternative be not adopted, and the use of the term specialist by unqualified persons be not suppressed, dire mischief is bound to result to the best interests of the medical profession, for a certain section of the outside public, ever on the alert, and unscrupulous in their methods of making money, have now seized on the term specialist, which is not interdicted and not illegal, and are now, as you all know, extensively advertising themselves as specialists in the eye, ear, hernia specialists for the cure of rupture without operation,

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masseurs, masseuses, medical and other electricians, specialists in fits, in diseases of women, and, more or less, for every disease under the sun. These are all more or less parasites, originated and fostered by ourselves. Another thing that has struck me most forcibly is the reckless way in which of recent years we have taken to giving free instruction in what is called first aid in surgery, with the granting of different graded certificates to candidates after examination. This movement originated, I believe, in a class of persons quite outside of the profession—the scheme was never seriously thought out by the profession at large, was chiefly engineered by a number of the youngest and most inexperienced practitioners; and, as a result, we are now faced with the fact that a body of men has sprung into existence, certificated, uniformed, drilled, decorated (for there are a number of coveted distinctions distributed amongst them), and of a quasi-medical quasi-military status, which, I fear, in the future will become a prolific breeding ground for irregular practitioners. This would not matter much, but I find that now, in the case of any emergency arising, that the service of a medical man is not immediately sought, but one of these nondescript individuals is sent for, who uses his own judgment as to the primary treatment of the case, and decides whether he feels fully competent to tackle it or not, failing which he at last condescends to send for a qualified doctor, usually, I may say, one who so kindly gratuitously instructed him in the aforesaid duties. Truly our foes have been chiefly of our own household. Another grievance of the ordinary practitioners is the introduction of many what are denominated elegant pharmaceutical preparations, by means of which a person, instead of consulting his usual medical attendant, calls in at the chemist's and gets supplied with one of the multitudinous drugs or combinations of drugs (many of which are suggested by the best prescriptions of our best physicians) mentioned, and so counter prescribing becomes rife, and again the qualified practitioner is defrauded of his legitimate patients.

Medical men again, I find, are increasingly prone on all occasions, by a sort of vicarious almsgiving, to give their technical advice and services to charitable and often semi-charitable institutions without any adequate remuneration; this is much to be deprecated, and should as far as possible be discouraged. With regard to the question of qualified midwives my views are briefly as follows. We must approach this question from a common-sense and humanitarian point of view, and not altogether from the standpoint of what is or what is not the best for the medical profession. The great bulk of confinements are attended by women; in the army, in the workhouses all the ordinary confinements are, I believe, attended by midwives, the medical officers only being called upon in difficult cases, and the term midwife is used in the army to denote those women who attend the confinements. The term midwife is an ancient one; it is descriptive and accurate; it is firmly embedded in the minds of the people, and in my opinion it is quite futile to attempt to supercede it by the term midwifery nurse, which is inaccurate, complex, meaningless, and modern. It is quite as inaccurate as it would be to call a surgical operator a surgical nurse. On these grounds then I object to the term and would retain the old-fashioned and well-established term of midwife. Labour often comes on suddenly and unexpectedly, and from sheer force of circumstances some woman with a better nerve than common, combined with a little knowledge, is forced to act as midwife. Thus these women become known as being able to act in an emergency and are gradually forced into the position of midwives, for which ultimately they demand and receive remuneration. No amount of legislation will ever in my opinion do away with this class of midwives, it is made by process of natural selection; then if that be so, surely there can be no objection to the instruction and differentiation, if I may so speak, of a rather better and higher class of midwives, who would be calculated to supersede, or at any rate supplement, the first-mentioned class. Of course, a fully qualified medical man is essential for all cases of difficult and instrumental labour.

I may say, generally, that I am bitterly opposed to any society, whatever its name may be, that trades upon the services of medical men, using them as salaried servants and making profits out of their earnings.

To summarise, I shall, if elected, and as far as I am empowered to do by the constitution and regulations of the General Medical Council, which powers I hope to see extended:—

1. Try and suppress all mischievous, lying, suggestive, and filthy advertisements, which disfigure what should be a respectable press.
2. Try and bring the subject of specialism into a rational, fair, and equitable system, open to all qualified medical practitioners alike, and eliminated as far as possible from all taint of advertising.
3. As I consider it absolutely necessary that not a few only, but everybody, should have a knowledge of what to do in a surgical emergency, I would supersede the Ambulance Association by the enforced teaching in all schools of elementary rules to be observed in emergencies for arrest of hæmorrhage, the resuscitation of the apparently drowned, the first aid of severe injuries, and such cognate subjects.
4. I should rigorously repress and discountenance all forms of unqualified practice.
5. I should, as far as consistently could be done, reprehend the practice of gratuitous attendance upon institutions, and in lieu thereof encourage direct money benefactions to worthy institutions.
6. I would establish, as far as practicable and duly safeguarded, an Order of Midwives, who should be instructed and examined by an appropriate body of medical men, but restricted to the practice of midwifery alone, and to call in a qualified practitioner in all cases of difficult or operative labour.
7. I object to the principle of Medical Aid Societies.

Finally, I am an efficient Volunteer and an Officer in the Army Medical Reserve, all questions connected with the services would receive my most careful and impartial attention. I have no wish to dictate to the general practitioners of this country on whom devolves the election of a suitable candidate, but I do feel that if they depart from their own ranks in their search for an eligible representative they will deliver the most crushing argument against themselves that can possibly be imagined if they now, or at any future time, seek to augment their number of representatives on the General Medical Council. The fact that this is my only chance of communicating my views to my fellow practitioners must be my apology for this very lengthy and, I fear, discursive address.

If elected, I can safely say that all matters pertaining to the welfare of the medical profession shall have my earnest and unbiased attention.

I am, your obedient servant,

JAMES A. RIGBY, M.D. Lond.,
Surgeon-Captain 5th L.V.A., and Army Medical Reserve.

15, Winckley-square, Preston, Sept. 18th, 1897.

MR. VICTOR HORSLEY'S CANDIDATURE.

A meeting was held at the Memorial Hall, Manchester, under the presidency of Mr. Walter Whitehead, on Tuesday evening, Sept. 22nd, to promote the candidature of Mr. Victor Horsley for a seat on the General Medical Council.

After a few words from Dr. J. Brassey Brierley, the secretary of Mr. Horsley's Manchester committee, stating the pleasure with which Mr. Horsley's candidature had been received in Manchester, the Chairman introduced Mr. Horsley to the meeting as a man not only well known to all for his surgery, but fitted by character, disposition, and particular knowledge to represent the medical profession upon the General Medical Council.

Mr. Horsley then spoke to the meeting, taking as his text the election address which we have published above. With reference to the necessity for reform in the Medical Acts he pointed out that the preamble of the Act of 1858 was clear. It defined the position of the profession as contrasted with those of uneducated persons professing to have a knowledge of medicine. In the construction of the Act the Register was the only qualification to practice, the qualified practitioner being defined by Section 34 to be a person registered under the Act. Unfortunately, the Council had not put the law into effect in controlling the practice of medicine by (*a*) unqualified persons; and (*b*) persons who had been struck off the Register for infamous conduct, or because they had been convicted in a court of law. Mr. Horsley then dealt with Clauses 31, 32, 34, and 40 of the Acts, which confer certain privileges on registered practitioners, and pointed out that those clauses had been allowed to fall entirely into abeyance, whereas if they had been properly acted upon all unregistered persons would have been brought under the Act. Of those protecting clauses Clause 40 was the most important, but the law courts, ever since the passing of the Act, had delivered the most contrary judgments on one and the same clause. A striking instance of that they found in the cases of the persons Ferdinand and Bridgwater. In the former case the Medical Defence Union successfully prosecuted under Clause 40. The defendant alleged that he possessed a M.D., U.S.A., and subsequently was convicted of forgery. However, when the Union proceeded against a person who possessed a similar degree named Bridgwater the magistrate refused to convict, and on the case being carried to a higher court Mr. Justice Grantham took a similar view. Mr. Horsley then dealt in detail with Clause 40,[1] and pointed out that the two fundamental errors in it were, first, that it dealt with title only, and not practice, and, further, that it referred only to an individual person, whereas a good deal of quackery now was contributed by companies who could not be reached either under the Companies' Act or practically under the Medical Act. The Act must be amended to enable the Council to prosecute these people, whether individuals or companies. Mr. Horsley then referred to the question of the employment of unqualified assistants and the action of medical aid societies—matters which he considered of vital importance to the profession at large, and which he promised should have his earnest attention were he elected to the Council. He then dealt with procedure within the Council, saying it was quite clear that there must be a very substantial reform in its legal procedure. The Medical Defence Union had many documents in its office which showed that the legal advisers of the Council were not sufficiently instructed in the terms of the Medical Act as they required to be for the good of the medical profession. Having regard to the fact that the legal profession itself was so extremely well protected, it seemed to him that the reason that they had been so badly served

[1] Any person who shall wilfully and falsely pretend to be or take or use the name or title of a Physician, Doctor of Medicine, Licentiate in Medicine and Surgery, Bachelor of Medicine, Surgeon, General Practitioner, or Apothecary, or any Name, Title, Addition, or Description implying that he is registered under this Act, or that he is recognised by law as a Physician or Surgeon, or Licentiate in Medicine and Surgery, or a Practitioner in Medicine, or an Apothecary, shall upon a summary conviction for any such Offence pay a sum not exceeding Twenty Pounds.

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in the past was primarily that for some reason the legal profession was not in sympathy with the medical profession and its just aspirations for the protection of honest work. He was quite conscious that there were members of the Council who were anxious for reform, but they were entirely overweighted by the legal advisers of the Council. A radical cure for the state of things which at present existed was an alteration in the constitution of the Council. It was rather interesting to observe that a reform of the constitution of the Council —that is to say, the making it a more directly representative body—was inextricably bound up with the corporation question, because it was clear that the members who represent corporate bodies could not divest themselves of the idea that they were the representatives of that body. In pointing to the means for carrying out reform in this matter Mr. Horsley said they were entitled to twice the number of direct representatives on the Council. That would give them a very considerable addition to their voting strength, and would perhaps enable them to get in the thin end of the wedge for the one-portal system.

At the close of his address Mr. Horsley answered a number of questions. He admitted that he had stated that there were sufficient consultants on the General Medical Council and that there should be more representation of the general practitioner, but, as he had stated in his address, his reason for standing was that he had special knowledge of the reforms required in the work of the Council. He expressed himself in favour of the proposition that every woman who was confined should be visited within twenty-four hours by a medical man, while he did not believe in any scheme which would entitle registered nurses to practise midwifery other than under medical supervision.

On the motion of Dr. S. Woodcock, seconded by Dr. Dreschfeld, a resolution was then adopted, with one dissentient:—

"That this meeting has heard with much pleasure the speech of the candidate, Mr. Victor Horsley, expresses its complete confidence in him, and pledges itself to do its utmost to secure his success at the election."

THE RISING OF THE FRONTIER TRIBES IN INDIA.

THE unfortunate reverse, although of a temporary kind only, sustained by one of the brigades under the command of General Jeffreys, happened at a bad time, and may possibly spread the flame of insurrection, which it is compulsory on the Government of India to extinguish with as little delay as practicable. The nation has to grieve for the loss of many brave officers and men, and the Queen has lost no time in expressing her sorrow, and her admiration at the conduct of the troops. The behaviour of the native troops—especially of the Sikhs, Goorkhas, and the corps of Guides—has been beyond all praise during the present campaign. The perusal of the numerous acts of devotion and bravery on the part of these fine fellows, some of the bravest of whom have sacrificed their lives in our behalf, arouses a glow of enthusiastic admiration. Lord Wolseley, who, to do him justice, has never been wanting in sympathy with gallantry wherever he has met with it, has been greatly impressed by the official reports of the conduct and deeds performed at Tochi by many of the native officers and non-commissioned officers and soldiers, and he is understood to be doing his best to have the Victoria Cross conferred upon some of the survivors. The intelligence that has since been received from the scene of the rising on the frontier will strengthen the Commander-in-Chief's efforts in this direction. We are confident that public opinion will recognise it as a bare act of justice to the native army and a source of pride to their British comrades that the conspicuous valour shown by soldiers of the native army should be recognised and rewarded. To return, however, to the subject of the rising of the tribesmen. We can only repeat what we have already expressed—namely, that while we have no fear about the recurrence of an Indian Mutiny or wholesale disaffection on the part of the native population, the Government of that country has nevertheless to face a difficult and most expensive undertaking, and that we are still far from nearing the end of it. Not only is the rising on a very extensive scale, but the country is full of obstacles owing to its rugged and mountainous nature, the comparative absence of roads, the difficulty or impossibility of finding water-supplies for the troops composing the various columns operating in different directions, the climatic heat at this season, the treacherous, fanatical character of the opposing tribes, and of course their intimate acquaintance with all the topographical intricacies of the mountains and valleys they inhabit. It is not until the winter begins and snow descends that the tribes swarm down into the valleys in search of pasturage for their flocks and cattle and in order to escape the rigours of the climate on the mountain plateaux, and it is consequently at that season that they can best be got at and attacked. The slight and temporary reverse that overtook General Jeffreys' brigade not only gave rise to some loss of life, but probably served, as we have said, to fan the flame of insurrection by influencing the waverers. It was, however, only what must be occasionally expected in such warfare, for it is most difficult, if not impossible, altogether to guard against such occurrences as mistaking a mountain path in the dusk, and the sudden and unexpected appearance of hordes of native tribesmen. The effect of the check, however, was of a very temporary nature and was soon neutralised by the successful action of the general and his brigade that almost immediately followed it. The night attacks on our posts and camps, too, are peculiarly harassing. Nothing is more remarkable than the stealthy, cat-like way in which the tribesmen make, and conceal, their approach preceding their sudden "rushes." Transport, stores, ammunition, field hospitals, and, in short, all the arrangements for a serious expedition on a big scale are being made and by now are approaching completion. Sir William Lockhart, whose experience of like warfare on the north-west is very great, will soon be ready to assume the supreme command. It is necessary to deal with Asiatics with the utmost promptitude, but it is still more essential in Asiatic warfare to sustain no reverse, and every arrangement must be completed before advancing in full strength for following up blow by blow upon the enemy.

People in this country have but little idea of the enormous number of native followers and of the very large amount of animal transport, for none of a vehicular kind is practicable, that are required for an Indian expedition of this kind. The strain on the medical service must be great at head-quarters in Simla at the present time and the duties of the medical officers in the field of a very arduous character. The organisation of a field hospital system and of medical matters generally has, however, been placed on a much simpler and better footing than it was at the commencement of the last Afghan wars. So far as we can learn the health of the troops is good, and nothing could be better than their spirit and bearing. It was reported that cholera had broken out in the Hyderabad contingent on its way to the front and that the contingent had been halted at Aligarh, but this is, of course, a very great distance from the scene of the frontier operations, and the occurrence is consequently without any significance as regards the expedition. It must always be borne in mind that this Indian frontier revolt is, after all, but an acute exacerbation on a bigger scale of a chronic and local trouble which the Indian Government can assuredly, and will, bring to a successful end. The latest intelligence—for the current of events is now moving rapidly—shows that the blows inflicted on the Mahmunds by General Jeffreys' brigade are compelling their submission. The two converging lines of the British advance under Generals Elles and Blood have already joined hands, and promise to settle the opposition north of the Khyber Pass. The intended expedition against the Afridis and Orakzais which is soon to follow under Sir William Lockhart will, we have every reason to hope and believe, inflict a severe lesson on those strong and turbulent tribes. It seems to be quite likely that the ultimate result of this campaign may be to bring about a far more satisfactory and peaceful state of things on the frontier than has hitherto been the case.

THE DEVON AND EXETER HOSPITAL.—The Hon. Mark Rolle has recently offered £500 to the Devon and Exeter Hospital on condition that a sufficient sum be raised to clear the debt of £2000. This offer is only open to Oct. 1st, and it is to be hoped that the amount required will be raised.

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VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6615 births and 3909 deaths were registered during the week ending Sept. 18th. The annual rate of mortality in these towns, which had declined in the five preceding weeks from 29·5 to 19·4 per 1000, further fell last week to 18·5. In London the rate was 16·1 per 1000, while it averaged 20·2 in the thirty-two provincial towns. The lowest rates in these towns were 10·7 in Cardiff, 10·9 in Swansea, 12·0 in Croydon, and 13·1 in Halifax; the highest rates were 25·8 in Preston, 26·1 in Sunderland, 28·4 in Norwich, and 29·8 in Salford. The 3909 deaths included 721 which were referred to the principal zymotic diseases, against 1272 and 945 in the two preceding weeks; of these, 454 resulted from diarrhœa, 64 from whooping-cough, 54 from "fever" (principally enteric), 53 from measles, 49 from diphtheria, and 47 from scarlet fever. The lowest death-rates from these diseases were recorded in Plymouth, Swansea, Halifax, and Bristol; and the highest rates in Salford, Hull, Wolverhampton, and Preston. The greatest mortality from measles occurred in Wolverhampton and in Preston; from "fever" in Norwich; and from diarrhœa in Wolverhampton, Salford, Preston, Hull, Sunderland, and Gateshead. The mortality from scarlet fever and from whooping-cough showed no marked excess in any of the large towns. The 49 deaths from diphtheria included 35 in London, 2 in West Ham, 2 in Wolverhampton, and 2 in Liverpool. No fatal case of small-pox was registered during the week either in London or in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of last week was 3653, against 3448, 3528, and 3579 on the three preceding Saturdays; 376 new cases were admitted during the week, against 356, 371, and 376 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 116 in each of the two preceding weeks, were 113 last week, and were 47 below the corrected average. The causes of 49, or 1·2 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Manchester, Bradford, Hull, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in Nottingham, Liverpool Salford, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·1 and 18·3 per 1000 in the two preceding weeks, further rose to 19·4 during the week ending Sept. 18th, and was 0·9 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·3 in Perth and 18·1 in Aberdeen to 21·7 in Paisley and 22·8 in Greenock. The 579 deaths in these towns included 58 which were referred to diarrhœa, 17 to whooping-cough, 9 to "fever," 8 to diphtheria, 5 to measles, 2 to scarlet fever, and 2 to small-pox. In all, 101 deaths resulted from these principal zymotic diseases, against 127 and 98 in the two preceding weeks. These 101 deaths were equal to an annual rate of 3·4 per 1000, which corresponded with the mean rate last week from the same diseases in the thirty-three large English towns. The 58 fatal cases of diarrhœa showed a slight further decline from the numbers recorded in recent weeks, and included 22 in Glasgow, 12 in Edinburgh, and 7 in Dundee. The deaths from whooping-cough, which had declined from 23 to 15 in the three preceding weeks, rose again to 17 last week, of which 7 occurred in Glasgow, 5 in Dundee and 3 in Greenock. The deaths referred to different forms of "fever," which had been 4 and 5 in the two preceding weeks, further rose to 9 last week, of which 8 were registered in Glasgow. The 8 fatal cases of diphtheria also showed a further increase upon those recorded in recent weeks, and included 3 in Edinburgh, 2 in Glasgow, and 2 in Dundee. The 2 deaths from small-pox were registered in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 69 and 78 in the two preceding weeks, further rose to 96 last week, and exceeded by 41 the number in the corresponding week of last year. The causes of 26, or more than 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·1 and 22·4 per 1000 in the two preceding weeks, rose again to 23·9 during the week ending Sept. 18th. During the past eleven weeks of the current quarter the death-rate in the city has averaged 23·4 per 1000, the rate during the same period being 20·1 in London and 18·3 in Edinburgh. The 160 deaths registered in Dublin during the week under notice showed an increase of 10 upon the number in the preceding week, and included 28 which were referred to the principal zymotic diseases, against 33 and 28 in the two preceding weeks; of these 13 resulted from diarrhœa, 6 from "fever," 5 from whooping-cough, 3 from diphtheria, and 1 from scarlet fever. These 28 deaths were equal to an annual rate of 4·2 per 1000, the zymotic death-rate during the same period being 2·3 in London and 3·0 in Edinburgh. The 13 fatal cases of diarrhœa, showed a further decline from the numbers in recent weeks, but the 6 deaths referred to different forms of "fever" exceeded the number recorded in any week since February last. The 5 fatal cases of whooping-cough also showed an increase upon those registered in recent weeks. The fatal cases of diphtheria, which had been 4 and 3 in the two preceding weeks, were again 3 last week. The 160 deaths in Dublin last week included 35 of infants under one year of age and 38 of persons aged upwards of sixty years; the deaths of infants showed a further decline, while those of elderly persons exceeded the number recorded in any recent week. Ten inquest cases and 8 deaths from violence were registered; and 60, or more than a third, of the deaths occurred in public institutions. The causes of 15, or more than 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN WHITLEY B. STOKES, half-pay, resigns his commission. Brigade-Surgeon-Lieutenant-Colonel Holmes is appointed to the Medical Charge of the 31st Regimental District. Brigade-Surgeon-Lieutenant-Colonel Fawcett embarks for Bombay in the *Simla*, taking out the 1st Grenadier Guards to Gibraltar. He will be assisted by Surgeon-Major Kilkelly, senior medical officer of the battalion. Surgeon-Captain Wright embarks for Malta. Surgeon-Colonel T. O'Farrell resumes the post of Principal Medical Officer of the Home District.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain H. Bennett has delivered over Medical Charge of the Ahmedabad Central Prison and Surgeon-Captain Faichnie, A.M.S., has received Medical Charge of that institution. The following officiating appointments have been made:—2nd Bombay Lancers: Surgeon-Lieutenant Strange to the Officiating Medical Charge, vice Surgeon-Captain Jackson, transferred. 3rd Bombay Light Cavalry: Surgeon-Lieutenant King to the Officiating Medical Charge, vice Surgeon-Captain Cleveland. 7th Bombay Infantry: Surgeon-Captain Donovan to the Officiating Medical Charge, vice Surgeon-Major Jervis. 9th Bombay Infantry: Surgeon-Captain Gabbett to the Officiating Medical Charge, vice Surgeon-Major Willis. The under-mentioned medical officers have been detailed for duty with the Field Hospitals proceeding to Rawalpindi with the 2nd and the 3rd Malakand Reserve Brigade:—23rd British Field Hospital: Army Medical Staff—Surgeon-Major Addison, Captain Slayer, Captain Read, and Captain Lewis. 24th British Field Hospital: Army Medical Staff—Surgeon-Major Yourdi, Major Berryman, Captain Austin, and Captain Marder. No. 62 Native Field Hospital: Surgeon-Major Willis, 9th Bombay Infantry; Surgeon-Captain Hudson, 2nd Bombay Grenadiers; Surgeon-Captain H. Bennett, I.M.S., 4th Bombay Rifles; and Surgeon-Lieutenant R. H. Price, Poona District. No. 63 Native Field Hospital: Surgeon-Lieutenant-Colonel Barren, Bombay Sappers and Miners; Surgeon-Captain V. B. Bennett, 13th Bombay Infantry; Surgeon-Lieutenant A.

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Hooton, Poona District; and Surgeon-Lieutenant H. A. Knapton, officiating 23rd Bombay Rifles. No. 46 Bombay Native Field Hospital: Surgeon-Captain Cleveland, 3rd Bombay Light Cavalry. Surgeon-Captains Vickers and Wright have been posted to the Poona District.

NAVAL MEDICAL SERVICE.

The following appointments have been notified:—Staff-Surgeons: Arthur S. Nance to the *Pearl;* John J. Dinnis to the *Collingwood;* and John Moore to the *Mohawk*. Fleet-Surgeon Charles E. Gedding to the *Haulbowline*. Surgeons: Francis J. Barter to the *Heron;* Oswald Rees to the *Jackdaw*.

VOLUNTEER CORPS.

Rifle: 2nd (Angus) Volunteer Battalion the Black Watch (Royal Highlanders): Surgeon-Lieutenant R. Grant, to be Surgeon-Captain. 1st Volunteer Battalion the King's Own (Yorkshire Light Infantry): Surgeon-Lieutenant William Henry Hender Bennett, M.B., resigns his commission, and is appointed Second Lieutenant; Samuel Lee Potter, gent., to be Surgeon-Lieutenant. 24th Middlesex: Surgeon-Lieutenant A. Eddowes, M.D., to be Surgeon-Captain.

ERYTHREAN SICK AND WOUNDED AT NAPLES.

A recent number of the *Giornale Medico del Regio Esercito* contains an interesting report by Dr. J. Alvaro, Lieutenant-Colonel in the Italian army, on the sick and wounded soldiers belonging to the forces employed in Africa who were admitted to the military hospital at Naples during the period from the beginning of March to the end of August, 1896. The total number of patients treated was 1647, their disabilities being classified as follows: medical, 826; surgical, 590; ophthalmic, 47; venereal, 171; under observation, 13. Of these, 988 cases were discharged cured and 146 were sent to their homes on leave, the remainder being disposed of in the following manner: invalided, 66; transferred to other hospitals, 313; died, 38; remaining under treatment on Sept. 1st, 96. The wounded, who numbered 419 in all, were arranged in the following order: visceral contusions and "commotions," 13; wounds from sharp weapons, 67; contused wounds, 14; gunshot wounds, 306; dislocations, 11; fractures, 8. Amongst the wounds inflicted by sharp weapons there were 28 cases of injury to the organs of generation, the parts having been completely excised close up to the pubes in no fewer than 24 instances. The chief difficulty in treating these unfortunate victims of savagery lay in maintaining a patent urethra. V-shaped incisions round the retracted orifices gave the best results, but in all cases sounds have to be worn more or less permanently. The number of men injured by "cold steel" strikes the author as exceptionally high in proportion to the total, seeing that of recent years wounds thus sustained have exhibited a constant tendency towards diminution. With regard to what may, perhaps, be styled civilised warfare this statement is no doubt correct, but where savages are concerned spears, swords, and assegais are still favourite weapons, and punctured or incised wounds must always be expected. Some of the cases related in detail by Dr. Alvaro are noteworthy. A man who had received a gunshot wound of his thigh on a level with the great trochanter remained lame and a sufferer from excessive pain extending down to the knee. It was thought that the external cutaneous nerve had become implicated in the cicatrix, which was accordingly laid open and carefully re-united by interrupted sutures. Cure was complete. A soldier sustained a gunshot wound of his forearm in the posterior aspect of the middle third, and directed from above downwards and from behind forwards. There was no aperture of exit, and neither at Massowah nor Naples could the locality of the projectile be determined. The wound had healed rapidly, but pronation and supination were both greatly interfered with. Under these circumstances recourse was had to the Roentgen rays, when at once the situation of the foreign body was made manifest. An operation promptly followed with the best results, the long-sought missile being found lying on the interosseous ligament. In another case the victim must have been endowed with an exceptional amount of recuperative vitality. A bullet entered his side about one and a quarter inches below the ribs, and, having traversed the ilium, made its exit in the upper part of the sacral region. There was a stercoral fistula at the aperture of entrance, and on examination through that of exit it was found that the subjacent bone was extensively shattered. In addition to this formidable injury the unfortunate patient had also sustained incised wounds of the nick the nose, the temporal and occipital regions, the knee, and the forearm. An operation for the fistula was projected, but the usual antiseptic treatment having meanwhile been adopted the wound of entrance closed of its own accord and the man was invalided.

SOME MILITARY APPOINTMENTS.

The appointment is officially announced of General Sir William Lockhart as Commander-in-Chief in India, in succession to General Sir George White, who, as soon as his services can be spared in India, will return to this country and take up the post of Quartermaster-General. Sir William Lockhart, who belongs to the Indian Army, in addition to his distinguished services and military reputation, is regarded as a very able, straightforward officer, and is deservedly popular with all branches of the military services. Sir George White, V.C., succeeds Sir Evelyn Wood, V.C., as Quartermaster-General, and as, *ex-officio*, President of the Army Sanitary Committee is brought into connexion with questions affecting the sanitary medical requirements of the army.

THE RECALL OF INDIAN MEDICAL OFFICERS.

All leave in the Medical Service in India is closed, and the officers at present in this country are being, if they have not already been, recalled.

The *Broad Arrow* says: "In the combined examinations for first commissions in the Army Medical Staff and Indian Medical Service, the successful candidates will, without the necessity of previously recording their names for either establishment, be allowed in future to exercise their choice as to which Service they prefer in the order of precedence that they may have obtained upon the list. Their selection will, however, in the case of the Army Medical Staff, be subject to the special regulations already applicable to entry for that service."

The Queen has conferred the Jubilee Commemoration Medal upon Surgeon-Captains V. Matthews, T. H. Openshaw, and H. D. Buss, and Surgeon-Lieutenant J. R. Whalt, officers of the Volunteer Medical Staff Corps.

A revised edition of the Regulations for the Army Medical Service has been published.

Correspondence.

"Audi alteram partem."

"THE ELECTION OF A DIRECT REPRESENTATIVE ON THE GENERAL MEDICAL COUNCIL."

To the Editors of THE LANCET.

SIRS,—It may be for your convenience and that of the profession generally that I should inform you at the earliest opportunity that the President of this Council having referred to its legal advisers a communication he received from Dr. Rentoul on the 18th instant, the opinion has been definitely given that the withdrawal of his resignation therein intimated is inoperative, and that there must be an election as already arranged.

I am, Sirs, yours faithfully,
H. E. ALLEN, Registrar.

General Medical Council Office, 299, Oxford-street, London, W., Sept. 22nd, 1897.

To the Editors of THE LANCET.

SIRS,—The auspicious advent of Mr. Victor Horsley, F.R.S., M.B., M.S. Lond., and F.R.C.S. Eng., as a candidate to fill the vacancy caused by the retirement of Dr. R. R. Rentoul from the General Medical Council should be the subject of much satisfaction to the whole profession, and it offers an opportunity of retrieving in some measure the result of last year's election. In Mr. Victor Horsley we have a star of the proper magnitude, a young, brilliant, and eminent surgeon of high social position and of means, which guarantee the quality of "stay" so desirable in one who aspires to the responsible office he has expressed his willingness to fill.

I trust the other candidates already in the field will at

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once, though, of course, at much personal sacrifice of their laudable ambition, magnanimously withdraw in his favour, and thereby prove in the most convincing manner the sincerity of their expressed regard for the honour and dignity of the profession. I would venture, moreover, to deprecate any renewed attempt to confuse or endanger the issue of the election by dragging in the name of either of the deeply respected and lately retired members who have deservedly been rewarded by the presentation of the gold medal of the British Medical Association and the LL.D.-ship of the leading university of Canada. Let them now rest in kindly peace. In Mr. Victor Horsley surely we have the right man for the present occasion, and now is the hour to secure his triumphant election.

I am, Sirs, your obedient servant,

JOHN INCE, M.D. ST. AND.,
H.M.'s Indian Medical Service (retired).

Swanley, Kent, Sept. 20th, 1897.

To the Editors of THE LANCET.

SIRS,—In view of the forthcoming election for the vacant seat on the General Medical Council I would recall to mind the old views of Mr. Nelson Hardy, as printed in a letter in the *Provincial Medical Journal*, Aug. 2nd, 1886. I do not bring it forward to emphasise his change of view, but because he has so well expressed the general feeling of general practitioners and my own views. He then said: "I trust no one will suppose that I wish to dictate to others if I express my belief that it will be unfortunate indeed if the general practitioners of England cannot find men of their own class to represent them in the Council, men of sterling honesty and straightforwardness, men not to be moved from their purpose by the presence at the same Council table of those who while in regard to practice they are fully regarded as leaders in medicine and surgery in matters of medical politics have too generally constituted to make the Medical Council the failure which it has been in the past."

I would also recall to mind the words of the late Sir Andrew Clark, who wrote in the same year as follows: "Now that the interests of consultants and of teachers, of corporations and of universities, of the Crown and of the people are already more than adequately represented on the General Medical Council, and that the right of direct representation therein has been conceded to the repeatedly renewed claims of the general practitioner, it seems both natural and proper that they should themselves exercise the suffrage in their own behalf, that they should select as their own representative genuine working members of their own body. If this principle of election is disregarded, and if the representatives are chosen from outside the body of general practitioners, it will seem, at least to me, that the fight has been fought and the battle won in vain." Nothing that has occurred justifies, in my opinion, any change in our representation. There are 14,000 general practitioners in England and Wales, and surely they ought to be able to find one suitable candidate amongst them. I have been nominated, as you will see by the enclosed paper, by nearly all the medical men in Wigan, and I have received letters from influential men in different parts of the country all promising me votes and active support. I have been asked to retire in favour of Mr. Victor Horsley by a few of his friends. I do not desire a contest. I am quite willing to withdraw in favour of a suitable candidate who is a general practitioner if we can agree upon one, but I certainly must decline in any way to favour the candidature of Mr. Horsley for the reasons mentioned. I think most consulting surgeons will recognise the equity of my contention.

I am, Sirs, yours very truly,

THOMAS M. DOLAN, M.D. Durh., J.P.,
Member of Council, B.M.A.; President Elect, Yorkshire Branch, B.M.A.

Halifax, Sept. 20th, 1897.

*** Dr. Dolan encloses with his letter a copy of his nomination paper signed by sixteen of the thirty-six practitioners whose names are given in the Medical Directory as resident in Wigan.—ED. L.

To the Editors of THE LANCET.

SIRS,—All other things being equal, I think there is no doubt we should give the preference to a general practitioner as our representative on the General Medical Council. The candidature, however, of Mr. Victor Horsley must not be considered by the profession from a consultant's point of view. Although it is well known to many practitioners, yet it is hardly universal knowledge that the good work done during the past few years by the Medical Defence Union has been mainly due to the zeal and application of its president, Mr. Horsley. To those who are not fully acquainted with the routine work of the Union I would explain that its officers are brought into close contact with all sections of the profession throughout the United Kingdom. They become intimately acquainted with the various difficulties and dangers of a general practitioner's life; they possess full knowledge of the ever-recurring disputes that arise between the profession and public bodies; they become conversant with the various forms of quackery; and, moreover, they know the difficulties of suppressing it. Bearing all this in mind, I for one unhesitatingly assert that there is no general practitioner in the country who possesses a fuller knowledge of, or has a greater sympathy with, the lot of the family medical man than the present President of the Medical Defence Union. That Mr. Horsley has studied the Medical Acts and that he has kept himself *au courant* with the proceedings of the General Medical Council is common knowledge. That he has by his persistency succeeded in getting the Council to take up certain cases of "infamous conduct" is, however, not so well known.

I am, Sirs, your obedient servant,

T. GARRETT HORDER.

Windsor-place, Cardiff, Sept. 17th, 1897.

To the Editors of THE LANCET.

SIRS,—The morning paper announces that Dr. Rentoul has withdrawn his resignation of membership of the General Medical Council. Surely, if it is true it is too late to have any effect now that the President has issued notices for a new election. May I ask my medical brethren seriously to consider the present position of affairs before promising their votes. The election of Dr. Rentoul showed clearly that there is a spirit of dissatisfaction in the profession at the little power the General Medical Council possess to remedy the numerous grievances of the local practitioners. Dr. Rentoul has shown in many ways, and especially by his uncertainty of mind, that he is not the man to obtain for the profession that attention to their wishes from the General Medical Council or the Government which they expected. As there are two metropolitan members already on the Council for England, it would naturally seem right to have a provincial practitioner to fill the vacancy, and if Sir W. Foster or Mr. Wheelhouse could be induced to stand, either of them would have influence to make the wants of the profession listened to and considered. If not, I would suggest Mr. Victor Horsley as a gentleman who has proved by his management of the Medical Defence Union that he is a good business man, and having experience of the trials and difficulties of the medical practitioners would admirably represent us on the Council. His connexion with the Medical Defence Union would have to be severed, but it seems to me, as I have watched his control of that Union, that he would prove a living power on the General Medical Council by his moderation and sound common sense.

I am, Sirs, yours faithfully,

A PRACTITIONER OF FORTY YEARS' STANDING.

Sept. 20th, 1897.

THE TWELFTH INTERNATIONAL MEDICAL CONGRESS.

To the Editors of THE LANCET.

SIRS,—Many of the British members desire to send letters of thanks (through the British ambassador) to H.I.M. the Czar for the very gracious hospitality shown to them by His Majesty, and to the president and committees for their great kindness. Any member wishing to have his signature added is requested to forward his name to Dr. R. Caton or to myself.

I am, Sirs, yours faithfully,

4, Gloucester-place, Portman-square, W. JOHN LOWE.

"HONOUR TO WHOM HONOUR IS DUE."

To the Editors of THE LANCET.

SIRS,—In the admirable historical dermatological address by Mr. M. Morris at Montreal on the occasion of the

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British Medical Association meeting I notice he has omitted to mention a name which some of the old practitioners of the present Victorian era will, I am sure, remember with respect—viz., that of the elder Startin, who was the first who taught and lectured on dermatology, and whose forty lectures are published in the *Medical Times* of London of 1845-46, and which lectures, I believe, were attended by the late Sir Erasmus Wilson, Dr. Tilbury Fox, and Mr. Jonathan Hutchinson, Mr Waren Tay, and other eminent dermatologists and practitioners at the time.

I am, Sirs, yours faithfully,

Harley-street, W., Sept. 22nd, 1897. JAMES STARTIN.

"AN IMPROVED ŒSOPHAGEAL PROBANG."

To the Editors of THE LANCET.

SIRS,—I understand that in THE LANCET of Sept. 18th, is a notice of an improved œsophageal probang, with illustrations. May I remind you, in fairness to myself and Messrs. Arnold, that on Jan. 9th this year you kindly published a notice and illustration of an improved œsophageal probang designed by me, and carried out by Messrs. Arnold, which embodied the improvements claimed by this later one; that is, that it is capable of being passed down the gullet without opening the bristly umbrella, and that when it has gone sufficiently far finger and thumb (of the same hand which passed it) release the catch, push down the catheter, and pull out the whole apparatus, now expanded.

I am, Sirs, yours faithfully,

E. MANSEL SYMPSON, M.D CANTAB., M.R.C.S. ENG.

James-street, Lincoln, Sept. 21st, 1897.

A QUESTION IN ORTHOGRAPHY.

To the Editors of THE LANCET.

SIRS,—In your last issue (THE LANCET, Sept. 18th, 1897) Dr. A. E. Wright communicated a paper on "A Simple Method of Measuring the Alkalinity of the Blood" which depends upon that system of chemical analysis known as "Alkalimetry." The application of this method to blood Dr. Wright calls "hæmalkimetry"; that is, he drops two fundamental letters, "al," between the "k" and "i." But whence does Dr. Wright derive "tritrate," a word I am confident has not been seen in print before? He cannot mean "triturate," it is certain. Gay-Lussac, the great French chemist, was the founder of volumetric analysis, alkalimetry, &c., and he called it "titrimetry," doubtless from the French word "titre," a standard or measure. The German verb to titrate is similarly "titriren."

I am, Sirs, yours faithfully,

CHEMICUS.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Annual Inspection of Corporation Hospitals.

THE members of the Hospitals Committee of the City Council made their annual inspection of the city hospitals on the 10th inst., under the guidance of Dr. Clarke, the chairman of the committee. The Port Sanitary Offices at the Pier Head were first visited. Here the new mortuary is situated, the erection of which was due to the persistent representations of Mr. F. W. Lowndes to the local authorities. Mr. Lowndes left no stone unturned until the disgraceful condition of things under which post-mortem examinations were formerly made were finally done away with; the latter are now made with comfort and decency, and the building is in every way creditable to the health authorities. The City Hospital South, which has been considerably improved, was next visited. The committee were shown round the building, special attention being directed to the provision for convalescent patients. Park Hill Hospital, where small-pox patients are received, afforded the visitors much delight, the charming aspect of the site enhancing the comfort of the general arrangements, which are in every way admirable. Luncheon was served at this institution. Mill-lane Hospital, Old Swan, which since its erection by the Old West Derby and Wavertree local boards has been considerably enlarged, was also visited. The last to be inspected were the Priory-road and Netherfield-road Hospitals, the latter of which is the most complete of the City Hospitals. The arrangements everywhere were acknowledged by the visitors to be highly satisfactory and afforded them much gratification and instruction.

Hospital Saturday in Bootle.

The result of the Hospital Saturday collections in Bootle and district in aid of the Bootle Borough Hospital show a falling off as compared with last year. The total receipts amounted to £257 16*s.* 2*d.*, or £22 less than last year. The falling off was altogether due to the inclement weather prevailing at the time of the collection.

Liverpool and the Manchester "Effluent."

It is not at all probable that the Bill which it is the intention of the Manchester Corporation to promote in Parliament relating to the discharge of Manchester sewage into the Mersey will proceed unchallenged. The two corporations in Liverpool concerned in the matter are the Dock Board and the City Council, the first of which deals with the navigation of the river and the latter with the sanitary condition of the port. Now it is not at all certain, even if the Manchester sewage be chemically treated, that it would not still be charged with deleterious matter. Besides, if a high standard of purification were fixed, its enforcement, in spite of heavy penalties, would always be a matter attended with difficulties. As far as the Dock Board is concerned, it is also open to doubt whether the Manchester effluent would not sooner or later affect the navigation of the Mersey. Altogether the subject bristles with difficulties and appears to excite much unfavourable comment in the local press.

Presentations to Dr. John Robertson and Dr. J. H. Chapman.

Dr. John Robertson, late medical officer of health of St. Helens, has been the recipient of a specially made table and writing-case subscribed for by the officials of St. Helens Corporation with all of whom he was deservedly popular. The many friends of Dr. J. H. Chapman, who recently resigned the medical superintendence of the Mill-road Infirmary owing to ill-health, have presented him with a testimonial and a cheque for £250 prior to his departure for South Africa as a mark of esteem for his many good qualities.

Liverpool Medical Institution.

The President (Dr. Caton) will deliver the inaugural address at the opening of the fifty-eighth session on Oct. 7th, after which he will entertain at the institution the members and associates to supper which will be followed by a smoking concert. The annual dinner of the society will take place at the Exchange Hotel on Saturday evening, Nov. 6th; the chair will be taken by Dr. Caton.

Sept. 22nd.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The late Mr. Gilbert Ward, F.R.C.S. Eng.

THE Thomas Knight Memorial Hospital at Blyth was last week the scene of a very interesting ceremony, when a bust of the late Mr. Gilbert Ward, of Blyth, was unveiled by the Right Honorable Sir M. White Ridley, M.P. The bust was executed at Venice, by Antonio Frilei, and is an excellent likeness. Mr. Ward took a great interest in the Knight Hospital, as indeed he did in all the Blyth institutions, and it was mainly owing to his exertions that the hospital was built. Mr. Ward was one of the best known and respected of the inhabitants of Blyth—he lived in the town, and practised as a medical man for sixty years, and died a few years ago, aged ninety years.

The Extra Arts Examination at Durham.

The lamentations over the result of this examination just concluded at Durham are both loud and deep. Forty-seven candidates entered their names, of whom four failed to put in an appearance, fourteen passed, and twenty-nine were rejected. The rejections at this examination are always very heavy, but it is a long time since such a result as this—only fourteen candidates succeeding in satisfying the examiners out of forty-three examined. If the Durham Extra Arts Examination be a correct criterion, school education would seem to be in a most unsatisfactory condition. It

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would be interesting to hear what schoolmasters have to say about this students' bugbear the Extra Arts Examination at Durham.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Cork-street Fever Hospital, Dublin.

THE committee of management of this old-established hospital have recently presented their ninety-third annual report to the governors and subscribers. They had hoped, as stated, that on the cessation of the small-pox epidemics of the previous years, and after the crowded state of the wards during the last four years, they would have been able to report a period of comparative rest, but the contrary has been the case, and the time under review has witnessed a greater number of admissions than in any previous year, no fewer than 2632 patients having been treated. The increase of cases, it is noted, was caused by a considerable epidemic of scarlet fever, joined with smaller epidemics of measles, while there has been a most unusual recurrence of typhus fever, once so formidable in Dublin. The new convalescent home in connexion with the hospital, and situated at Glasnevin, has at present accommodation for only thirty patients. The house can, however, be enlarged, and the site, which occupies twenty acres, is quite suitable for the erection of additional buildings. It is at present the only convalescent home in Ireland for infectious cases.

Hospital Vacancies.

Mr. W. G. Mackenzie has resigned the surgeoncy to the Belfast Hospital for Sick Children. As a result Dr. Kirk will be promoted to the visiting staff, and for his post of assistant surgeon there are already several candidates in the field. The appointment of assistant gynæcologist to the Royal Hospital has become vacant through Dr. Woods' resignation on his leaving Belfast. His successor will be chosen by competitive examination on Oct. 9th.

Sept. 21st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Dangers in Operations for Exophthalmic Goitre.

M. PONCET, of Lyons, has reopened this important question before the Academy of Medicine. Hitherto very contrary opinions have been given on the matter and those, too, from observers most competent to decide the question, such as M. Pean, M. Doyen, and M. Jaboulay. M. Pean considers that it is in nowise an exaggeration to maintain that no surgeon should operate on the thyroid gland in a case of exophthalmic goitre without having very seriously considered the advisability of interfering. Professor Tilleaux considers that only spurious cases of exophthalmic goitre should be operated on—that is to say, those benign tumours of the thyroid gland which cause secondary troubles of Graves's disease sooner or later by compression of the cervical sympathetic. Such cases ought to be considered as ordinary goitres and treated as such. M. Poncet is of opinion that such a degree of caution is exaggerated in cases of simple exophthalmic goitre where the classical triad of symptoms is present from the first. Like M. Pean, or perhaps even more so, he considers that medical treatment should be relied upon for as long as possible—that is to say, until suffocation is imminent; and even then, before interfering with the thyroid body itself, an attempt should be made to give relief by a simple incision through the soft parts in front of the tumour. In all cases of Graves's disease medicinal treatment should be tried first, and continued even though amelioration be slow, in patients who are in a position to undergo the restrictions imposed by the treatment. In those patients who cannot do this, or who become rapidly cachectic or relapse after a temporary improvement, operation should be advised before the general health becomes too much impaired; but both the patient and his friends should be told that there are risks to be run. If the tumour is of medium size either complete enucleation should be performed or a partial thyroidectomy; if the growth is very large and vascular exothyropexy should be performed, despite the chance of failure. Excision can always be resorted to as a secondary measure when a partial thrombosis of the vessels has been set up by exposure to the air, thus diminishing the operative difficulties and the danger of intoxication. As regards the class of thick, fleshy tumours or cases of Graves's disease without a goitre or only a very small one and where the vaso-motor troubles are very marked, or, finally, where the patient, after having been warned of the danger of operative interference with the thyroid body, has refused to undergo the risk, the question of section of the sympathetic should be raised. The operation of ligature of the thyroid arteries which has been advised by many surgeons of the first class, such as Kocher and Rydigier, M. Poncet refused to discuss, as he said he had not enough experience of the operation to enable him to form any opinion as to its value.

Filtered Water for the Army.

M. de la Perriere read a paper before the Academy of Medicine upon the Rapid Purification of Water for Troops on Active Service. His method is to treat the water with a mixture of permanganate of potash, alum, and lime, and then filter it through wool impregnated with oxide of manganese. The whole process can be carried out by a filter which he has invented and which is no larger than the *bougie* of an ordinary filter; it sterilises and filters the water at the same time whatever be the degree of impurity.

Hygiene for Barbers.

At the request of the Hygienic Council for the Department of the Seine the Prefect of Police has just issued an order to all the haircutters of Paris containing instructions as to the measures to be taken for guarding against those diseases which are likely to be spread by the exercise of their trade. First of all, all metal instruments are to be plunged directly after use into a vessel of soapy water which has been boiling for at least ten minutes. All combs of tortoiseshell, ivory, celluloid, or buffalo-horn are to be replaced as far as possible by metal ones, so that they may the more easily be cleansed and disinfected: scissors, razors, clippers, and brushes are to be kept in a stove heated to 100° C. or in a closed receptacle in the lower part of which is a solution containing formaldehyde and sodium chloride in the proportion of 50 grammes of the former to 200 grammes of the latter. Before use, shaving-brushes must be dipped into boiling water, and instead of powder-puffs, blowers (*pulverisateurs à sec*) are to be used. Finally all hair-dressers must wash their hands before passing from one customer to another, and after anyone has had his hair cut, damp sand is to be sprinkled on the floor so that the hair may be swept up and burnt at the end of the day. The hair-dressers have protested against this order, which they declare to be quite inapplicable to their trade.

The Bacteriological Laboratory.

The total number of cases sent in to the bacteriological laboratory of the department of the Seine during the month of August for diagnosis was 147. Of these 94 were cases of doubtful sore throat, but in only 16 was the bacillus of Löffler discovered—that is to say that 17 per cent. of the cases examined during the month were considered diphtheritic. The figure is notably lower than that of July, 1897, when it was 19·6. In 1896 the number of deaths in Paris from diphtheria during August was 29, but in 1897 for the same month the number was only 12. Of the other 50 cases sent in for diagnosis 36 were cases of suspected tubercle, and in 15 of them the bacillus of Koch was found.

The Fight against Tuberculosis and other Diseases Affecting Meat as Food.

A certain number of departmental boards of works have sent in requests to the Government to take measures against the spread of tuberculosis. For instance, the board of works of the Côte d'Or says:—"Seeing the urgency of staying the spread of tuberculosis among live stock as much in the interest of the consumer as of the producer, this board considers that the authorities should seriously consider means towards the same, notably the employment of tuberculin to ascertain when beasts are affected; that a law should be passed making the use of tuberculin obligatory in the case of all beasts destined for the butcher or for the supply of milk; and that this law should at the same time order all such sanitary measures to be taken as are necessary for the complete extinction of this disease." The board of works of the Gironde

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has adopted a resolution as follows: "That the law should define those diseases, whether contagious or not, which render meat unfit for food; that it should set out the penalties which may be exacted from those who prepare such meat with a view to its use as food; that it should order every commune to organise in all public or private slaughter-houses or knackers' yards a service for thorough surveillance which may seize and destroy all meat unfit for food; that in the draft Bill now submitted to Parliament as to abattoirs, &c., veterinary inspection of such establishments should be made obligatory; that such inspection should be a charge on the rates of the various communes, and that they should also be able to impose a *taxe de visite;* and, finally, that there should be an effective State control over the various local inspecting bodies, both administrative and technical, by means of special sanitary officers."

Malignant Pustule.

M. Le Roy des Barres has recently met with two cases of malignant pustule occurring in persons engaged in working with hair which had come partly from the Côtes du Nord, a district where no case of anthrax has been reported for several months, and partly from Buenos Ayres; four other cases were met with in patients who had been working among hides brought from Turkey and Kazan. The local use of the thermo cautery, injections containing 10 per cent. of iodine, together with the internal administration of oxygenated water and iodised water, were fortunately successful in saving the patients' lives. One of the patients who suffered from very marked general œdema of the whole of the upper part of the body, was in great danger for a long time, and it was necessary to inject pure tincture of iodine into the eyelid where the pustule had formed and where the bacteria were localised. In his communication to the Academy of Medicine M. Le Roy des Barres stated that in the course of some years he had observed seventy-two cases of malignant pustule, among which there were sixty-two recoveries. Fifty-seven of these patients were leather-dressers and fifteen were workers among hair. Anthrax is invariably conveyed by hides, skins, wool, and hair coming from abroad, and it is obvious that the importation of these products cannot be prohibited, and it is almost impossible to sterilise or disinfect them. At the same time cases of the disease are comparatively rare, treatment is said to be generally successful, and much may be done in the way of reducing the number of attacks by the adoption of hygienic precautions.

Sept. 20th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

"Pull Devil, Pull Baker."

WHILE a brilliant essayist has been amusing himself—if not his readers—on the subject, "Che Cosa Mangeranno I Posteri?" (What will our descendants eat?), and discussing the thesis of Berthelot that in the not remote future our "aliments will be manufactured with carbon taken from carbonic acid, with hydrogen and oxygen taken from water, with azote taken from the atmosphere," and so on, the dearness of bread has been agitating nearly every commune, from the Alps to Etna, bringing the proletariat and the poor into sharp collision with the bakers, throwing the bakers themselves "upon strike," and sending deputations from both interests—the consumers and producers—to magistrates, members of Parliament, and even the Prime Minister, the Marquess Di Rudini himself, without, however, as far as one can see, eliciting any hope of a way out of the imbroglio. Local circumstances intervened to modify the situation, which may roughly be described as this: the poor cannot afford to pay 40 centimes (4*d.*) for the "pagnotta" (loaf), and the bakers cannot afford to sell it at less unless the flour is supplied them at a figure below that at which the "dazio consumo" or octroi duty maintains it. What is occurring here occurs, *plus* "local colour," all throughout the kingdom. The Syndic invites the "Associazione dei Negozianti Fornai" (Association of Shop-keeping, as distinguished from "lavorants," journeyman bakers) to offer bread for sale at 40 centimes for the better quality and 38 or 35 centimes for the inferior. The "Associazione" replies, with flour at its present price, "Non possumus." A threat on the part of the Communal Administration to impose "prezzi coercitivi" (compulsory prices) on the bakers is met with a defiant "You had better try." At Venice the journeyman bakers go out on strike, and the "Municipio" (town council) orders two hundred "quintali" (hundredweight) of bread from Milan to keep the "Queen of the Adriatic" from starving; but the strikers have the grim satisfaction of seeing the said municipality constrained to sell it at 30 centimes the kilogramme, a significant commentary on the threat of "prezzi coercitivi." Meanwhile the lack of bread is bringing other aliments to the front, and the potato—in Italy a rather slighted esculent—is having its turn of popularity. Edibles of even humbler sustaining power are also invoked, with the result that "fungi" of more than suspected quality are multiplying the cases, already all too frequent, of "mushroom poisoning." Leaving the fiscal or economic aspects of the situation out of account, the crisis through which Italy is now passing is very grave. "Pazienza" has limits, even among her long-suffering population, and having seen herself deprived of "Circenses" (the gratuitous entertainments provided by the Bourbon) she may draw the line at deprivation of "Panem" as well! Malnutrition is one of the many curses of her labouring poor, infecting the life-blood of the rising generation, prolific of stunted stature, impaired muscular power, and generally of the diseased developments fraught with evil augury for her future. Vainly do her medical philanthropists, like Dr. Angelo Celli, Professor of Hygiene in our medical school, tax their ingenuity to invent a more nutritive dough than that employed by the baking interest. The crushing "dazio consumo" lays its paralysing finger on all such efforts, and forces men like Professor Celli and forty more of the same profession to court a seat in Parliament in order to cut at the root of the evil by fiscal amelioration and financial reform. Some twenty of these medical candidates were returned for as many constituencies at the general election in March last, and nearly all of them sit on the Extreme Left. And *quid mirum?* They are medical philanthropists first and political legislators afterwards; and their first thought is to raise the submerged masses from the slough of insanitation, with its attendant following of disease, crime, and anarchic conspiracy, and place them on the footing promised them when "Italy, one and independent," was substituted for "Italy, a geographical expression." A few figures will show what fearful abuses philanthropists like Dr. Celli and Dr. Colajanni are labouring to remove and agitating the public and Parliament to consider. In Naples alone malnutrition in 1873 caused 131 deaths "con vizi di conformazione congeniti" (congenitally abnormal conformation); and in 1896 the number had risen to 240. In the same city, in 1873, there were 1216 deaths from tuberculosis in its various forms, and in 1896 they rose to 1812. Increase of population does not explain this evil increment, which, as Dr. Colajanni remarks, is "graduale, costante." The Di Rudini Government will soon have to face a reassembled Parliament; and one of its first duties will be to consider the ill-nourished, badly housed, hygienically neglected poor—to leave the "Dark Continent" to take care of itself and to brighten that still darker region around it—the true "Italia Irredenta"—which seethes, suffers, and succumbs.

Sept. 19th.

THE PLAGUE AT POONA AND KIRKEE.—The plague still continues to prevail at Poona, Lanowli, and Kirkee. The bazaar at Kirkee is closed. According to the *Times of India* of Sept. 3rd, twenty-eight cases and twenty-three deaths from plague were reported in one of the latest returns. M. Haffkine is carrying on inoculations at Kirkee, and fresh cases, many of them fatal, were occurring in the cantonment. Surgeon-Major J. P. Barry's trenchant report on Poona city has, as it certainly deserves to do, attracted a good deal of attention. It discloses a dreadful state of things, and although the municipality in their reply traverse many of the allegations their answer cannot be regarded as very successful. Moreover, the report of the municipality was only signed by seven of its members, while two recorded their general approval of Surgeon-Major Barry's report. Lord Ripon's schemes for the introduction of municipal government into India have proved a failure, and, as regards the progress of sanitation in that country, their effect has been anything but good.

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Obituary.

ARTHUR BRISLEY RYE, F.R.C.S. ENG., L.S.A.

ANOTHER old practitioner of a past generation has joined the great majority; the subject of this notice passed away painlessly at his residence, Westbury, in the pretty valley of Caterham, on the evening of Sept. 1st, at the advanced age of eighty-five years, and in the full possession of all his faculties. Mr. Rye came of a medical family, and was born in Rochester in 1812, where his father practised as a surgeon. Mr. Arthur Rye qualified in 1836, when he obtained the L.S.A. Lond., and in the following year became M.R.C.S. Eng., and was made a Fellow of the College in 1852. He commenced practice as an assistant to Mr. Harrison, of Greenwich, with whom he remained some time, and then went into private practice at Banbury, in Oxfordshire, where he practised successfully for over thirty years, and won the esteem and confidence of his brother practitioners. Mr. Rye was an enthusiast in his profession, and although he had retired for many years he was never happier than when he could assist a medical friend by giving him a holiday and taking charge of his practice. Mr. Rye had one of those happy, genial dispositions which are always cheerful and humorous, and for his skill and kindness he was much esteemed by his patients. For some years after his retirement Mr. Rye resided at Leckhampton and took great interest in the building and opening of the Delancey Fever Hospital of which he acted as the hon. superintendent for some time. Those who knew him loved him; not a few were the happier for his life; and many a general practitioner will mourn his death and sympathise deeply with Mrs. Rye and family in their loss. Mr. Rye was twice married and leaves one son and one daughter.

ADAM FLETCHER, M.D. EDIN., M.R.C.S. ENG., J.P., &c.

BURY has to mourn the loss of her oldest medical practitioner in the person of Dr. Adam Fletcher, who passed away at his residence, Belgrave-place, Manchester-road, on Aug. 28th. Dr. Fletcher had been in practice in Bury for nearly fifty years. He commenced his medical education under the late Dr. Thomas Wardleworth, and proceeded to Edinburgh University. In all local matters he took a warm interest, was one of the consulting medical officers to the Bury Dispensary Hospital, a churchwarden of the parish church, President of the Bury Ragged Schools, and a member of the Borough and County Benches of Magistrates. For some twenty years also he was a member of the board of management of the Bury Savings Bank. The funeral took place on Wednesday, Sept. 1st, and was very largely attended by relatives and friends, besides representatives of the various public bodies with which the deceased had been connected. At the first meeting of the Borough and County Benches of Magistrates the chairman made sympathetic references to the loss sustained by the death of a colleague for whom they had all such deep respect and affection.

R. J. STEPHENS, M.R.C.S. ENG., L.S.A.

ANOTHER death must be added to the tale of those caused by bicycle accidents, by which a promising career has been sacrificed. On Sept. 11th Mr. R. J. Stephens, of Whittingham, Lancashire, was riding down a gentle slope with his feet up on the rest when his machine was suddenly seen to swerve, and Mr. Stephens fell off, striking his head with great force against the road. He was picked up by his companions, also medical men, and conveyed in an ambulance to Preston Infirmary, where he died the same night. Death was due to a large hæmorrhagic effusion in the brain. The deceased never recovered consciousness after he fell. Richard John Stephens was the son of the late Richard John Stephens, of Kent, and has a brother, also a medical man, in practice at Brighton, as well as a stepbrother, A. C. Dickson, now studying medicine at Cambridge. He was educated at King's College School and passed the matriculation examination at London University; he was also an Associate of King's College. He received his medical education at King's College Hospital, where he held the appointments of assistant demonstrator of physiology and resident accoucheur. He had also been resident medical officer to St. Luke's Hospital, house surgeon to the Blackburn and East Lancashire Infirmary, and assistant medical officer to the Wilts County Asylum, while at the time of his death he was assistant medical officer to the County Asylum, Whittingham. The body was moved on Sept. 15th from the Preston Infirmary to the residence of the deceased's mother, at Blackheath, and interred the following day in the grave in which rests his father's body. During his residence in Lancashire Mr. Stephens made a very large number of friends, by whom their loss will be most keenly felt. His honourable character, and his kindness, sympathy, and consideration for others, which never allowed him to turn a deaf ear to a friend in trouble, endeared him to all who knew him. Mr. Stephens was only thirty-four years of age at the time of his death.

MARK BATT TANNER, M.D. R.U.I. AND ST. AND., M.R.C.S. ENG., L.R.C.P. LOND. AND EDIN.

DR. TANNER, whose death in London on the 14th inst. was announced in our columns last week, at one time practised in Brighton and Hove, where his services were highly esteemed by an extensive circle of patients. He was, however, best known to the public as a prominent Freemason and an effective platform-speaker. Dr. Tanner was formerly one of the principal masonic officers in the province of Sussex, being Past M.W. Sovereign and Recorder of the Eureka Chapter, a member of the 31st degree, and a Past Master of the Yarborough Lodge. Although it is now about fifteen years since he left Brighton, he is still remembered in political circles there on account of the valuable support which he gave to Mr. James Ashbury, at one time the member for the borough. Dr. Tanner was sixty-five years of age at the time of his death. He graduated as M.D. in 1861, both at the Royal University of Ireland and at St. Andrews University. The funeral took place in Hove Cemetery, on Sept. 18th.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men have been announced:—Dr. Welcker, who was for a great number of years Professor of Anatomy in the University of Halle, died last month at Winterstein. He was born in 1822 in Giessen, and studied in that university and in Bonn, taking his degree in 1851. It was not long before he began to give evidence of his ability by writing important papers on physical and physiological subjects, many of which were connected with optics. Subsequently he made some valuable researches on the blood, the anatomy of the ventricles of the brain, and the development of the skeleton. He did not entirely confine himself to medical science, for he found time to publish a work on German poetical dialects. His first chair was in Giessen, where he taught anatomy both as *privat-docent* and then as professor. In 1859 he accepted an invitation to teach anatomy in Halle, from which chair he only retired in 1894. In 1876 he was appointed to succeed Professor Volckmann as Director of the Halle Anatomical Institute.—Dr. R. Berlin, Professor of Ophthalmology in the University of Rostock.—Dr. Surmay, Corresponding Member of the Paris Academy of Medicine.

MILK ADULTERATION.—At the Bristol Police-court, on Sept. 9th, a tradesman was summoned for adulteration of milk. The case had been adjourned in order that a third sample of the milk might be submitted to Somerset House for analysis. The city analyst certified that one sample contained not less than 7 per cent. of added water and another not less than 5 per cent. The analysis from Somerset House showed that the sample had not less than 4 per cent. of added water. Another analyst stated that he had examined two samples submitted by the defendant, and found they contained 5 and 6 per cent. of added water; he had analysed milk taken direct from the cow in his presence and found that it contained 5 per cent. of "added" water according to the present standard. The magistrates said they thought the justice of the case would be met by the payment of costs, and they made an order accordingly.

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THE BRITISH MEDICAL ASSOCIATION.

MEETING AT MONTREAL.

THE SECTIONS.

MEDICINE.

THURSDAY, SEPT. 2ND.

The Dietetic Treatment of Diabetes.

DR. ROBERT SAUNDBY (Birmingham) opened a discussion on this subject. When the diagnosis of diabetes mellitus has been established, he said, sometimes when only the presence of sugar in the urine has been detected, it is the very general practice to place the patient upon a so-called "diabetic diet"—that is to say, he is furnished with a list of permitted and forbidden articles of food and drink arranged upon the principle that all carbohydrates are injurious, and he is told that he must keep to this diet until the sugar has disappeared from his urine. But carbohydrate food is not the only source of sugar. In severe diabetes glycosuria continues, although much reduced in amount, when the patient is placed on a flesh diet, and this is explained by the discovery that a carbohydrate molecule is formed in the process of converting albumin into urea, in the proportion of forty-five parts per cent. This fact, duly appreciated, must convince every one of the futility of persisting in withholding carbohydrates in the hope of removing the glycosuria. If it is conceded that the disputed data of physiologists do not afford a sound basis for our treatment of diabetes, but that we must look to clinical results before we say that a means is good or bad, then the old routine method is doomed. Instead of ordering a stereotyped diet in every case we must try experimentally in each individual how much carbohydrate, or, rather, what combination of proteid, fat, and carbohydrate gives the best result. This was the method which the speaker would advocate, and it had been adopted solely upon the basis of clinical experience. The method, he said, does not involve a great sacrifice of time on the part of the medical man; in fact, all the most important observations can be made and a register kept by the patient himself. The only thing he cannot do is the analysis of the urine. The patient should once weekly get weighed, and collect and measure the whole of his urine for twenty-four hours; a specimen of the urine should be sent to the medical man, who should determine the total amount of sugar. Of these observations, the body weight is the most important, for if it continues to be stationary or tending upward we have the best proof that the diet is properly regulated, even though the sugar shows a moderate increase. In order to determine the diet most suitable to each patient we must proceed experimentally, and this is better done by gradually increasing the amounts of saccharine and starchy food. Many patients suffer from polyuria and great thirst, and these symptoms can best be checked by strict diet for a limited time, combined, if necessary, with the administration of a grain or two of extract of opium every night. Further, the result of strict diet affords valuable information for prognosis, as it is only in the milder cases that the sugar disappears under its influence. The patient should, if possible, make one meal—for example, breakfast—of fat bacon or eggs and bacon, with which he may eat cabbage and starchless, not gluten, bread or biscuits. He is, of course, allowed other green vegetables, any animal food, tea or coffee with cream, and, if he desires it, two or three ounces of sugar-free alcohol, with mineral water. When after a week of this diet the sugar is found to have disappeared entirely, or almost entirely, six ounces of baked potatoes and one and a half pints of milk, containing between them the equivalent of about 1100 grains of sugar, may be added. If this causes no glycosuria four and a half ounces of dry toast, of which about 800 grains are starch, may be given, as also a bottle of light wine containing very little sugar, such as ordinary Bordeaux or Moselle, or in some cases a pint of bitter Burton ale. If such a diet causes no return of symptoms the medical man may be satisfied and the patient is generally contented, and if sugar continues to be absent the quantity of toast or bread may be gradually increased to double the amount. Such cases are, however, exceptional. As a rule the sugar, though diminished, persists. In such a case we may give first the milk and then the potatoes, and if there is no return of distressing symptoms we should not retrace our steps because there is some moderate increase of sugar, but watch the body weight. If that shows no loss we may keep the patient on this diet for many weeks before venturing to make a trial of ordinary bread, and often the patient has to be content to do altogether without it. Dr. Saundby preferred to increase the potatoes, for he was of the belief that the starch of cereals is for some reason more productive of glycosuria than that of potatoes.

In the discussion which followed DR. COUPLAND said that each individual case should be dieted as the condition of the patient indicated, but that diet would often not have the desired effect.—DR. SHINGLETON SMITH (Bristol) urged that greater indulgence might be permitted in the use of carbohydrates.—DR. TYSON (Philadelphia) divided cases of diabetes into mild and severe, and considered that in mild cases the sugar could be eliminated by diet alone, while in the severe cases no diet seemed to be of use. Pure proteid diet he believed to be harmful because of its transformation into toxic substances, while, when the sugar could be kept under 2 per cent. by a limited use of carbohydrates it was advisable to do so, estimating the amount excreted every month.—Professor JACOBI (New York) and DR. STEPHEN MACKENZIE, the President of the Section, and others took part in the discussion, the general conclusion being that in the diet of the diabetic patient too strict a routine had been hitherto followed.

FRIDAY, SEPT. 3RD.

Cholelithiasis.

A discussion was opened by DR. WILLIAM HUNTER (London) on Cholelithiasis, its Causation, Symptomatology, Diagnosis, and Treatment. He said that the disease in question was eminently suitable for discussion, inasmuch as it was of frequent occurrence, obscure in its course, entailed much suffering and often death, was variable in its symptoms, and the diagnosis was frequently difficult and doubtful. He would deal especially with the chemical problems involved, and with the causation of the disease. Until lately there had been little advance upon the subject for 150 years, when Dr. Coe summarised the state of existing knowledge, attributing the disease chiefly to stagnation of bile, the result in many cases of tight-lacing or pregnancy. The disease was five times more frequent in women than in men. In the speaker's opinion it was a local disease of the bile-passages and gall-bladder, rather than a general constitutional disease. The pressure under which the secretion of bile took place was very low, hence its course was very dependent on extraneous conditions, such as the movements of the diaphragm. The flow of the bile was also dependent upon the walls of the hepatic duct and of the gall-bladder. Gall-stones consisted chiefly of cholesterin and of bile pigments associated with lime salts. Cholesterin was widely distributed throughout the tissues. It was found in the nerves, ovaries, blood, testis, yelk of egg, &c. There was no evidence that cholesterin was secreted by the hepatic cells; rather was it the product of degenerated cells. It was especially abundant in the secretions of mucous membranes. It was more abundant in the sputum of bronchitis and phthisis and in pus than it was in bile. The inflamed mucous membranes of the bile passages were the probable seat of the formation of the cholesterin in gall-stones. Bilirubin and calcium did not combine in the bile, but if egg albumen be added they were thrown down in combination. Hence free albumin was probably present in the bile passages as the result of catarrh. The conditions favouring the formation of gall-stones were essentially local, the result of catarrh. The causes of this catarrh were stagnation of bile, the result of sluggish habits, pregnancy, tight-lacing, &c. Stagnation of bile alone was not sufficient to cause cholelithiasis, inasmuch as it was not excited by the mere stagnation of bile, normal bile being quite aseptic; but stagnation of bile gave rise to infective processes, and the presence of the bacillus coli communis and the bacillus typhosus. These organisms were derived from the intestine. A second cause of gall-stones was inflammatory catarrh of the inter-hepatic bile ducts set up by irritant products in the bile the result of dietetic errors. Treatment should be directed to flushing the bile passages with water as much as possible. Carlsbad and Vichy salts were very useful, and salicylate of soda was known to

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promote the flow of bile. No drug acted as a solvent of gall-stones when once formed.

Dr. GRAHAM (Toronto) continued the discussion. Biliary colic occurred in less than one-half of the cases of gall-stones. The seat of the pain was usually in the region of the gall-bladder, but might be in the shoulder or in the right inguinal region. The severity of the pain was not due so much to the size as to the shape of the gall-stone. Death had been known to occur during an attack of biliary colic. Biliary colic without jaundice might give rise to great difficulties in diagnosis. Elevation of temperature occurred and rigors, which were toxic in origin and did not indicate suppuration. Jaundice was absent in one-half of the cases of biliary colic. It might follow the attack of colic at a long interval. Bile pigment might be found in the urine, and its presence there might assist the diagnosis. Distension of the gall-bladder might take place from atony of its walls, when there was little or no obstruction. Calculi were often the cause of carcinoma. The duodenal end of the common duct was a frequent seat of carcinoma. Cholelithiasis was often associated with diabetes. Gall-stones might be a cause of intestinal obstruction.

Professor OSLER (Baltimore) thought that the association of typhoid fever and gall-stones was much more frequent than was usually supposed. There were four varieties of fever associated with gall-stones: 1. The fever associated with the chill. 2. The fever associated with cholecystitis. 3. "Hepatic intermittent fever." In these cases attacks resembling miliary intermittent fever occurred through weeks, months, or years. They were usually followed by slight jaundice. There was no fever in the intervals, the patient felt well, and the jaundice diminished. 4. Fever associated with suppurative processes.

Dr. HANDFORD (Nottingham) had not seen any clinical evidence to warrant the theory of a relation between typhoid fever and gall-stones. Gall-stones were not so very rare in the young.

Dr. MULLIN (Hamilton, Ontario) did not believe in the association of gall-stones and typhoid fever.

Dr. BAUMGARTEN (St. Louis) thought that in cases of associated gall-stones and carcinoma the latter was primary.

Dr. MACKINNON (Guelph) had lately seen two cases of gall-stones following typhoid fever.

Dr. PASTEUR (London) gave the history of a case illustrating the occasionally extreme difficulty of diagnosis in these cases.

Dr. ROGER (Denver) and Dr. ACHESON (Galt, Ontario) continued the discussion.

The PRESIDENT of the section summed up. He thought that now attention had been drawn to the subject the association of typhoid fever and gall-stones would be found more frequent than had been supposed. He agreed with Dr. Osler that he who knew the subject only from the medical side knew but half. He was inclined to think that obstruction was always at the bottom of biliary colic and that spasm would not account for it.

Dr. HUNTER having replied, the discussion came to a conclusion.

The proceedings terminated with a vote of thanks to the President of the section.

SURGERY.

THURSDAY, SEPT. 2ND.

The Operative Treatment of High Cancer of the Rectum.

A discussion took place upon this subject, which was opened by Dr. JAMES BELL (Montreal). After remarking on the frequency of the disease in this situation, and quoting Mr. Bland Sutton as authority for the statement that of every hundred cases of carcinoma of the intestine seventy-five occurred in the rectum he referred to the difficulty of early diagnosis owing to the indefinite nature of the early symptoms. Even when loss of blood occurred with irregularity of the bowels and flatulence the disease was often not suspected. It was only when symptoms of auto-intoxication, with sanious or mucous discharges from the bowel, occurred, that an examination of the rectum revealed the true condition of affairs. Operable cases were: (1) those in which there is a chance of removing the whole mass with permanent cure; and (2) those in which, though the mass is removable, the probability of recurrence is strong. In still another class, in which there is no hope of removal, inguinal colotomy should be done. The first grave symptom might be a general peritonitis due to rupture and escape of contents into the peritoneal cavity. After discussing various methods he recommended Kraske's operation by the sacral route. He preferred to make a preliminary inguinal colotomy to define the upper limit of the growth and to estimate the amount of glandular involvement, while free evacuation and cleansing of the bowel were thus made possible, and, should a permanent artificial opening become necessary, the inguinal opening was much better than the sacral one. The essentials to successful resection were a clean field of operation, free descent of the proximal end of the bowel without tension, and careful suturing. He thought that there was quite an unnecessary dread of bringing down the upper segment of the bowel for fear of sloughing. The danger was rather of pulling and stretching and otherwise depressing the blood supply. He thought it was unavoidable to open the peritoneum in high operations on the rectum, but said that this was not to be feared if the opening was afterwards closed with sutures and the site of the wound was properly dressed and drained. The operation was not without considerable danger, but the average rate of mortality after the operation was not greater than 20 per cent., and 10 or 12 per cent. of the patients remained well and without recurrence for four years.

Professor C. B. BALL, Regius Professor of Surgery in the University of Dublin, gave a lantern demonstration illustrating Trans-sacral Resection of the Rectum. He said that he did not perform an osteoplastic operation, but removed the lower segment of the sacrum entirely. He believed that the perineal route should be discarded, except, of course, in those cases in which the anus was involved. The best recoveries in these cases were those in which the tumours were freely moveable. As preliminary to the operation he usually gave purgatives for several days, together with rectal enemata, to insure thorough cleansing of the bowel. Then he used a 2 per cent. solution of creolin to wash out the bowel, and gave opium to prevent peristalsis. One danger that had been mentioned was that of sloughing. This could be avoided largely by care in manipulation. The parts should not be too tense and should not be pressed upon. He reported seventeen cases with sixteen recoveries from the preliminary operation. He thought that we should operate for present relief, even when the cancer was high up and the glands were involved. He preferred this operation to colotomy.

Dr. W. W. KEEN (Philadelphia) said that there was no doubt that Kraske's operation was of great importance and offered relief to many sufferers. Even when the glands were considerably involved he had found that patients improved very much. He did not think the osteoplastic method was at all necessary. It was his custom to remove the coccyx and the adjoining portion of the sacrum, but he differed from Professor Ball and agreed with Dr. Bell as to the advisability of doing a preliminary inguinal colotomy, whether temporary or permanent. But the two operations should never be done at one sitting, it being better to wait two or three weeks for the subsequent operation. Kraske's view was that a preliminary colotomy was to be done only in case the obstruction was so complete that this cleansing could not be effected without it, but Dr. Keen thought that the operation was necessary to unload and cleanse the bowel. He reported twenty-five cases. Of these, fifteen were sacral operations, and there were twelve recoveries, four of which had passed the four-year limit, which he considered to mark the chances of recurrence.

Dr. ASHHURST (Philadelphia) said he was never very enthusiastic about operation for the removal of cancer of the rectum, although his views had become somewhat modified since visiting Montreal. He thought that if the disease had gone on to obstruction it was better to make an artificial anus. He was in favour of doing the preliminary colotomy as a safeguard, for in some cases if resection was done without this preliminary step there occurred a low form of peritonitis, accompanied by vomiting, so that it was difficult to nourish the patient; whereas if there was an opening in the colon this could be used for the introduction of food and saline or other injections without interfering with the rectum itself. He mentioned a procedure of a palliative character which he had found very useful; that was a small longitudinal section of the rectum through the mass of disease in the median line posteriorly.

Gunshot Wound of the Spinal Cord.

Dr. GEORGE A. PETERS (Toronto) followed with a paper

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on this subject. He stated that the causes of death in such cases were shock, hæmorrhage, and septic processes, while the factor which most largely determined the rate of mortality was the proximity of the cord lesion to the brain. Cases of this nature in civil practice were very infrequent. Although there had been cases in which, after complete transverse lesion of the cord at various levels, the individuals had survived for periods varying from one to twenty-six years, yet it might be stated as a rule to which the exceptions were few that patients with such lesions died within a year of the injury. The determining causes of death were inflammation of the bladder and its sequelæ, bed-sores and other trophic lesions, pyæmia, amyloid disease, and exhaustion. He recommended medium cystotomy as a routine practice in cases of this injury in male subjects, so as to imitate the short and straight urethra of the female, as the latter seemed to suffer less from bladder symptoms. Dr. Peters then referred to the difference between the deep or tendon reflexes which were permanently lost in complete transverse lesions of the cord, and the superficial or skin reflexes which, as in a case narrated by him, might not only return, but might even become exaggerated. He believed that in the case of the skin reflexes the reflex arc remained intact and the exaggeration was accounted for by the overflow of sensation into the motor regions in the cord, which were relieved of the natural inhibitory influence of the higher centres by the lesion; while in the case of the tendon reflex an influence was normally transmitted to the muscles to maintain their tone which was also interrupted by the lesion—hence the permanent loss.

FRIDAY, SEPT. 3RD.

A Case of Abdominal Tumour.

Dr. F. J. SHEPHERD (Montreal) opened the proceedings of the day by reading a paper on a Case of Abdominal Tumour, in which nearly 8 ft. of small intestine had been resected. He said that these cases were not uncommon, but the present case ranked second in the amount of intestine removed, the first being that of a Roman physician, who had removed about 11 ft. of intestine. The present case was that of a young man with an abdominal tumour filling up the whole cavity of the abdomen and adherent to about 3 ft. of the small intestine. A very long, vertical incision was made in the median line and the tumour was then found to be of the mesentery. The tumour, with the bowel to which it was attached, was then removed, and from the destruction of mesenteric vessels it was found necessary to make a still larger resection of small intestine. In all 8 ft. were removed, this bowel consisting of ileum. During the operation, which lasted one and a half hours, the patient became very weak, necessitating an intravenous saline injection. Nutritive enemata were given after operation for some days. On the sixth day the patient had a stool, and after this there was some tendency to diarrhœa. One month after operation the patient was well enough to go out driving, and five weeks after operation left the hospital cured, and has gained very much in weight since. Dr. Shepherd then read the results of resections in dogs by Dr. Senn. The tumour was examined microscopically by Dr. Wyatt Johnston and proved to be a fibro-myxoma. The tumour and the adherent bowel were exhibited, and the members had the pleasure of seeing the living patient, who was in apparently excellent health.

The Diagnosis and Treatment of Penetrating Wounds of the Abdominal Cavity.

Dr. TOBIAS NUNEZ (Mexico) then read a paper on this subject. Stress was laid by the speaker on the great difficulty in diagnosis in deep wounds. He touched upon the method of diagnosis by the use of hydrogen gas. Wounds caused by firearms were alluded to. The diagnosis could only be made by one of the complications—viz., hæmorrhage and septic peritonitis—when operative measures failed very frequently because of rapid progress of these complications. In treatment no food whatever was to be taken by the mouth; pounded ice might be taken from time to time. Opium, in his opinion, was the best drug to be used in these cases. Laparotomy he did not perform until diagnosis was sure.

The Surgery of the Gall-bladder and Bile-ducts.

Dr. ALEXANDER FERGUSON (Chicago) then read a paper embodying his personal observations on this subject. He based his remarks on the observation of 46 cases. The therapeutist, he said, was at sea, and the surgeon alone could deal with these cases. The more chronic the affection the more difficult was the means of affording relief, hence the advantage of early operative interference. He reported 3 cases of flexion of the gall-bladder relieved by operation and 4 cases of dropsy of the gall-bladder, one of which reached as far down as the brim of the pelvis, and one of which was operated upon under cocaine anæsthesia. It was interesting to note that it was only necessary to cocainise the skin and peritoneum. Cholecystotomy was performed in 37 cases with but 2 deaths. The perpendicular incision about the tenth rib was preferred. The bladder was opened, and if bile was present it was washed out, the bladder first being stitched to the peritoneal wall and upper angle of the wound. Patency of the common duct was proved by passing a small probe, and if this was impossible by the forced injection of sterile water. Dr. Ferguson had opened the common duct five times.

Stone in the Ureter and its Treatment.

Mr. JORDAN LLOYD (Birmingham) read a paper on this subject. Many operations, he said, were performed for stone in the kidney with failure to find the stone, the patient presenting the symptoms of renal calculus. These cases he thought were probably due to the stone being located in the ureter. He laid stress on the absence in renal calculus of severe tenderness on pressure in the loin over the kidney. The symptoms of ureteral calculus were like those of renal calculus, but there was less local pain. Situations of the stone were: between the pelvic brim and the bladder, at or near the wall of the bladder, and between the pelvic brim and pelvis of the kidney. The results of ureteral occlusion were: (1) atrophy of the kidney; (2) dilatation of the ureter; and (3) pyelitis. These inflammatory conditions generally preceded the passing of an instrument. The stone might be present in the ureter for many years. The hæmaturia was greater in ureteral than in renal calculus. The symptoms of water-logging of the kidney, which Mr. Lloyd grouped as urine toxæmia, were accompanied by extreme distress, little pyrexia, and always by abdominal distension. These toxins weakened the heart and increased the rapidity of the pulse. The distension of the bowels was probably due to some paretic effect due to the toxins. Stress was laid on digital rectal examination, which could detect a stone even high up in the ureter. Treatment depended on its position. If near the bladder the best method was by suprapubic cystotomy; if higher by abdominal section, pushing up the peritoneum and opening the ureter posteriorly and extra-peritoneally. In this operation the ureter was not sutured, as no urine was found to come through the wound. The operation was similar to that for ligature of the common iliac artery. If the stone was situated higher the lumbar operation could be done. A drainage-tube was used in the last two. Two specimens of ureteral calculi were exhibited which Mr. Lloyd had removed.

Dr. KEEN (Philadelphia) cited a case where he had mistaken a case of ureteral calculus for appendicitis. The cause of trouble was not found at the operation, but only some months later, when the patient was operated on and a calculus removed from the bladder. His views coincided with those of Mr. Lloyd. He recommended washing out the bladder with Bigelow's catheter after every attack of renal colic. Dr. Keen also emphasised the value of thorough digital rectal examination.

Dr. SHEPHERD asked why Mr. Lloyd had used the drainage tube if no urine escaped through the wound and what was the reason of there being no escape.

The President of the section, Mr. CHRISTOPHER HEATH, cited a case which was mistaken for an ovarian disease. It was better, he thought, to open the bladder and proceed from this in the operation.

Mr. LLOYD, in reply to Dr. Shepherd's question, said that the reason for the non-escape of urine was probably due to the blood, &c., acting as a seal to the wound, and the passage through the ureter being free for urine to escape into the bladder. The tube, he said, was only placed about an inch from the ureteral opening and was used in case there should be any escape of urine.

Papers were also read in this section by Dr. LAPTHORN SMITH (Montreal) on Appendicitis, and Dr. A. B. ATHERTON (Frederickton) on a Case of Intestinal Obstruction.

The proceedings terminated with a vote of thanks to the President of the section.

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PUBLIC MEDICINE.

THURSDAY, SEPT. 2ND.

Small-pox in Montreal.

The business of the section commenced by a warning of the President, Dr. E. P. LACHAPELLE, against attaching unnecessary importance to the newspaper reports of an outbreak of small-pox in the city. In Montreal since the outbreak on July 2nd there had been 13 cases. 5 of which had died, leaving 8 patients sick. They were all in the small-pox hospital, and there was not a single case known in the city outside the hospital. In Westmount, a town adjacent to Montreal, there were only 5 cases, all in the same family except one, an official, who caught the disease while having the house disinfected. There were now in Westmount 4 patients and 8 in Montreal, making 12 in all. There was 1 other case in St. Cunegonde, another suburb of Montreal.

The Utility of Quarantine.

An important discussion on this subject was opened by Dr. F. MONTIZAMBERT (Quebec), general superintendent of the Canadian Quarantine Service. He reviewed the Canadian system, and pointed out that owing to the different conditions prevailing it differed from the British system in several respects. Canada, for example, accepted fully the conclusions of the Dresden Sanitary Convention without the reservation made by Great Britain that healthy persons landing from infected ships should not be detained. In Canada, also, disinfection of the mails was occasionally considered advisable, especially when arriving from China.

Dr. WYMAN, supervising surgeon-general of the United States Quarantine Service, described the system in force in the United States.

Dr. J. A. DUNCAN, secretary of the Provincial Board of Health of British Columbia, read a paper on the Value of Quarantine on the Pacific Coast, in which he recommended that Chinese emigrants and their baggage should be disinfected and kept in quarantine one fortnight before coming on board any ship at any Chinese port.

Dr. MONCKTON COPEMAN, of the Local Government Board, London, described the survey of the English coast made by the Board some three or four years ago when quarantine was abandoned in England.

On the Duration of the Period of Infectiousness in Scarlet Fever.

Dr. JAMES T. NEECH (Atherton), physician to the Leigh Joint Fever Hospital, then read a paper upon the Infectiousness of Scarlet Fever. "The period," he said, "when a convalescent from scarlet fever ceases to be infective and becomes safe for discharge must at times be a source of anxiety to every physician who has charge of a fever hospital, and it appears to me that this uncertainty is likely to continue more or less until the specific microbe of the disease has been definitely isolated, its life-history studied, and the extreme limit of its retention within the human body experimentally proved; not till then and not till we have at our disposal reliable methods for detecting the microbe shall we be enabled to pronounce with certainty that a given patient is free from infection and incapable of conveying the disease. Until we arrive at exact methods we must be guided in dismissing patients from hospital by the result of close observation, accurate records, and carefully prepared statistics in connexion with the cases while in hospital, and the relation which their discharge therefrom bears to the occurrence of fresh cases in the district to which they belong. By this means it would be possible in time, I think, to acquire fairly accurate information with regard to the probable period during which a case of scarlet fever continues to be infectious. That the period of infectiousness varies in different cases is true, and doubtless the severer the fever the longer is the case likely to continue infectious. Hitherto the generally recognised period during which isolation should be maintained in mild and ordinary cases is six weeks provided desquamation is complete. In my opinion that period is too short even in the milder cases, and although I admit that the desquamating cuticle is infectious I am not certain that the completion of desquamation is a safe and reliable guide as to when a given patient ceases to be infective even in cases where no complication arises. That a purulent discharge from the nose, ear, or running sore, the usual sequelæ and complications which necessitate a prolonged period of isolation, is infectious has been proved beyond a doubt. But what is the source of the specific poison in these discharges? Do these discharging surfaces afford conditions in which the specific microbe can increase and multiply? The discharge itself comes from the blood-vessels, and if the blood has been rendered immune to the disease, are not these discharges in consequence inimical to the growth of the microbe? In my opinion the source of the specific poison is not the mucous membrane of the nose, or ear, or the surface of the sore, but the blood-stream, that the mere existence of such discharging surfaces are not in themselves capable of prolonging the period of infectiousness, and that they only serve as exits by means of which a portion of the virus finds its way out of the circulation and the body. It has not yet been shown that the cessation of the period of infectiousness and the healing of a discharging surface are coincident, and I do not think that such is always the case. Sometimes possibly the healing precedes, while at others I feel sure that infection ceases before healing takes place. A discharge sometimes continues through a very protracted period, but it is obvious that infective material cannot be retained within the body indefinitely, and although the period of infectivity may vary in different cases, is there not a time limit to the retention of the virus in the body beyond which no complication whatever can prolong the period of infectiousness? In cases of infectious disease where the fluids of the body are more or less laden with specific poison a certain time must elapse, under the most favourable circumstances, before the poison can be completely eliminated, and in scarlet fever it appears that conditions exist in certain cases which considerably prolong the period of complete elimination. In this respect scarlet fever seems to differ somewhat from other fevers, consequently the idea suggested itself that a storing up of infective material takes place somewhere in the body, and this, perhaps, in the condition of spores. I have noticed in scarlet fever that not only the glands of the neck, but also the lymphatic glands in the axilla, groin, and other parts become enlarged during the earlier stages of the disease, and that this enlargement is more marked and general in the severer forms of the disease. Therefore I incline to the opinion that the poison accumulates in these glands, causing irritation and enlargement. As the irritation ceases and the enlargement becomes absorbed the virus passes again into the blood-stream, and is eliminated during convalescence by the different emunctory organs. In typhoid fever great care is bestowed upon the disinfection of the discharges from the bowels and kidneys, and especially the former, but in scarlet fever little attention is usually paid to these excretions. When the fluids of the body contain a specific poison, is it not capable of being discharged therefrom by every organ the function of which it is to separate effete materials from the blood-stream? I think the desquamating cuticle, especially in the later stages, owes its infectiousness very much to the excretion of the glands of the skin. With a view of obtaining information as to the usual length of hospital isolation in this disease I issued a circular to a number of fever hospitals situated in different parts of England asking for the minimum, maximum, and average period of isolation that obtained in each place during the two previous years, and also the number of return cases which occurred within seven days of the discharge from hospital. From the replies received I find the minimum period varied between four and eight weeks, while the maximum in some cases extended to six months. The average period, the most useful for the purpose of comparison, varied between thirty-nine and sixty-five days. In many hospitals information regarding the number of return cases did not appear to be available, but I have been enabled to secure pretty accurate records of some 15,000 cases, and find that where the average period of isolation was forty-nine days and under the return cases averaged 1·86 per cent., where the average period of isolation varied between fifty and fifty-six days the average percentage of return cases was 1·12, and where isolation extended to between fifty-seven and sixty-five days the average percentage was 1·0. Although I would not like to lay too much stress upon these figures, yet they seem to point to the conclusion that the average period of retention in hospital bears a relation to the number of return cases of the disease. The question of return cases of scarlet fever is an important and very difficult one. Of course, a patient might become infected in the ordinary way, or might contract the disease from some source with which we are ill acquainted, and in each case this might be coincident with the return from hospital. The stowing

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away of infected articles belonging to a patient has been shown to be a cause of return cases, but with improved apparatus and more perfect and thorough methods of disinfection this probably does not play so important a part in the matter as formerly. Allowing that a certain number of return cases contract the disease from other sources, yet there is little doubt but that discharged patients are the direct vehicles of infection in a certain percentage of cases. Several eminent authorities are of opinion that patients through breathing the actively infected air of a hospital during convalescence store up infective material in the cavities of the nose and lungs, and by that means convey the poison outside the institution. This may possibly occur; but were it the chief cause, would not the number of return cases be even greater than it is? Moreover, it appears to me in that case the percentage would not be affected by prolonged hospital isolation in the way the figures quoted seem to show. The lymphatic glands I think store up infective material. This has been previously referred to, and should any enlargement be found when a patient is examined for discharge it is now my practice to prolong the stay in hospital in consequence thereof. Systematic disinfection of the nasal cavities before discharge has been advocated, which no doubt is a useful and necessary procedure, also a convalescent ward in which patients may be prepared for a week before dismissal. I think there should be two such wards in connexion with large hospitals so that they can be used a week each alternately, and disinfected when not in use. This would ensure for the patient a purer atmosphere, which would greatly aid in freeing him from infection. In view of the facts referred to it is doubtful whether a minimum period of retention in hospital of less than eight weeks is sufficient, as I think it safer to increase and maintain the average rather by extending the minimum than by prolonging the maximum period of isolation. With regard to the maximum period I find that several authorities consider thirteen weeks' hospital isolation sufficient even in cases where complications supervene, and irrespective of the healing of discharging surfaces. I incline to agree with this, and think that a minimum of eight with a maximum of thirteen weeks may be considered safe until the contrary be shown, by the result of accurate records based upon careful observation, or they be proved to be incorrect or inadequate by exact bacteriological methods."

The proceedings terminated with a vote of thanks to the President of the section.

OBSTETRICS AND GYNÆCOLOGY.

FRIDAY, SEPT. 3RD.

Two Cases in which Porro's Operation was Performed.

Mr. MAYO ROBSON (Leeds), President of the British Gynæcological Society, read a paper on Two Cases in which he had performed Porro's Operation for Impacted Pelvic Tumours preventing Delivery. In both cases the mother and child were saved and are now well. The first case was one of pregnancy at term, with the pelvis completely blocked by a suppurating ovarian cyst, complicated with a large septic abscess bounded by uterus, ovarian cyst, and intestines. The second case was for pregnancy at term associated with myoma of the posterior and inferior segment of the uterus completely blocking the pelvis. The case had been recently seen, and the remains of the pelvic tumour had completely disappeared. In relating the cases in detail Mr. Robson remarked that where from any cause delivery cannot take place naturally, there are no less than six operations which may be performed to save both mother and child: (1) symphysiotomy, (2) ischio-pubiotomy, (3) complete hysterectomy, (4) laparo-elytrotomy, (5) Cæsarean section, and (6) Porro's operation. In the cases related, where the pelvis was completely blocked by tumours, the two former methods were inapplicable. Total hysterectomy during advanced pregnancy would probably only be resorted to in case of cancer of the uterus on account of the longer time occupied in the technique. Laparo-elytrotomy would have been unsuitable in either, as in one the lower segment of the uterus was involved in the tumour, and in the other the tumour could not have been dealt with had that operation been done. The only methods available, therefore, were Cæsarean section and Porro's operation. Cæsarean section is the operation *par excellence* for obstructed labour depending on pelvic deformity, but in these cases it was out of the question, as in the first instance the tumour so completely blocked the pelvis that drainage of the uterine cavity could not have been effected, and in the second, had the uterus been left, septic trouble must have followed, as the posterior wall of the womb was actually forming the anterior boundary of the abscess sac, and was itself thoroughly involved in the septic process. Porro's operation was, therefore, the only procedure left, and it answered so well that had he other similar cases he would not hesitate to employ it. Moreover, he remarked, it must be borne in mind that Porro's operation can be very rapidly performed and requires only a small armamentarium—important factors in cases of urgency and in emergencies at a distance from a surgical centre.

Spurious Abortion.

Dr. T. W. EDEN (London) then read (by proxy) a paper in which he gave an account of Three Cases of Spurious Abortion. It was an account of a class of cases in which a mimicry of early pregnancy and of abortion occurred, quite different in its characters from the condition known as spurious pregnancy. They were not associated with hysteria and the usual functional disturbances of pregnancy were not exaggerated. They differed from pseudocyesis in the existence of definite changes in the uterus and from pregnancy, either topic or ectopic, in the essential point of the absence of an ovum, either within or without the uterus. They mimicked abortion in the occurrence of a period of amenorrhœa with enlargement of the uterus, and the formation within it of a body, the detachment and expulsion of which was followed by a return to menstrual regularity and the former condition of general health. The body expelled was not an ovum, but was formed entirely from maternal structures. He would describe its exact nature later. A case of this kind had come under Dr. Eden's notice and was communicated to the Obstetrical Society of London. Two other cases had been recorded in the Transactions of the same society, making three in all; but a careful search had failed to show that any such cases had been recorded elsewhere. By the kindness of the reporters of the first two cases (Dr. Griffiths and Dr. Dakin) he had been allowed to re-examine their specimens. A short account was then given of each of these specimens and of Dr. Eden's. In each case there was the same clinical picture of amenorrhœa and morning sickness, terminating after eleven weeks in hæmorrhage and the discharge from the uterus of a fleshy mass, which was at first sight regarded by an experienced obstetric physician as an abortion. Dr. Eden then described the microscopic appearance of the casts, which presented certain points of resemblance to the decidua of pregnancy, with certain well-marked points of difference; in all of them the microscope alone did not suffice to distinguish these casts from those often met with in extra-uterine pregnancy. He would formulate the definition of the condition for which the term "spurious abortion" was suggested as follows: It was "the development within the uterus, in the absence of uterine or extra-uterine gestation, of a membrane having the essential characters of the decidua of pregnancy and accompanied by the signs of early pregnancy; and its separation and expulsion from the uterus with hæmorrhage, thus simulating abortion." Diagnosis was impossible until after the discharge of the cast; it then consisted of two distinct steps—(1) the exclusion of uterine pregnancy by careful microscopic examination of the cast, which demonstrated the absence of chorionic tissues; and (2) the exclusion of extra-uterine pregnancy. In two of the three cases this was possible by direct inspection of the tubes and ovaries, as in each case abdominal section was performed under the impression that the case was one of extra-uterine gestation. Two explanations of the condition were possible: (1) that an ovum was actually fertilised, but perished at a very early period without leaving traces of its presence, while the "genetic reaction" in the uterus and in the general organism progressed as in pregnancy; and (2) that some stimulus other than the presence of a fertilised ovum in the genital tract might lead to the formation within the uterus of a complete decidua, and might hold the menstrual functions in abeyance. Provisionally he adopted the first explanation.

The proceedings terminated with a vote of thanks to the President of the Section.

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PHARMACOLOGY AND THERAPEUTICS.

THURSDAY, SEPT. 2ND.

The Treatment of Syphilis.

This section met jointly with the section of Dermatology to discuss the subject of the Treatment of Syphilis. The subject was introduced by Dr. WHITLA (Belfast), who said that two drugs alone need be considered—mercury and the iodides. He regarded it as proved that mercury had a specific or curative effect on syphilis, and thought it best to limit his attention to the following points: (1) how mercury and the iodides were supposed to act; (2) when should mercurial treatment be started; especially should it be given in the primary stage; (3) the various methods for its routine administration, its dosage, and the length of time necessary for mercurial treatment; and (4) the treatment of tertiary symptoms and congenital syphilis. The pharmacology of mercury—the mode of absorption, especially when administered by inunction, elimination, &c.—was considered. Mercury he regarded as a vital antidote to the syphilitic poison, and so long as the virus of syphilis remained in the organism mercury, he believed, would expend its force upon it without injury to the patient. This, he thought, gave a working hypothesis as regards dosage. The question of the bactericidal power of iodides in connexion with Binz's view was dealt with, and their inutility in the first and early second stages emphasised. The continuous and interrupted methods of administering mercury were treated at length, although it was stated that these could not be rigidly separated. The continuous method was favoured by the speaker. He prescribed small doses as early as possible. Routine treatment was deprecated. As a guide determining the effect of the mercury the weight-chart was strongly recommended. Of the various modes of administration the method of inunction was most generally useful, although this posessed many disadvantages. Under ordinary circumstances small doses of mercurous iodides, Plummer's pill, &c., were sufficient. In the tertiary stage Dr. Whitla advised pushing the iodides until the symptoms abated.

Dr. NEVINS HYDE (Chicago) laid particular stress on the constitution of the individual. He believed that there were mild cases needing little or no treatment, and severe cases (mainly inherited) which seemed insusceptible to all treatment. Between these was the mass of cases giving the most satisfactory results. The best effects were obtained where iodides were not used; they were the remedies for the complications.

Mr. MALCOLM MORRIS (London) divided syphilitics into those who took alcohol and those who did not. He had not seen good results from intra-muscular injections. The mercurial air bath in certain conditions (extensive ulcerations) was strongly to be recommended, and to this treatment inunction and warm baths, especially those of a stimulating character, were useful adjuncts. The combination of ammonia and sarsaparilla with iodides was beneficial.

Dr. HERVIEUX (Montreal) spoke of the necessity of definite pathology, a view not shared by some subsequent speakers.—Intra-muscular injections of soluble mercurial preparations were praised by Dr. ALLAN (New York), who also spoke of the virulence of secondary symptoms following extra-genital chancres.

Dr. BULKLEY (New York) thought large doses of iodides unnecessary in the third stage if these drugs were combined with a small amount of mercury.—The President (Dr. LEECH) then closed the discussion by referring to the inutility of other drugs than mercury and iodine, and he agreed with Dr. Whitla in believing it often necessary to push iodides in the third stage of this disease. Combination of the iodides with ammonia was useful.—Dr. WHITLA, in reply, said that the whole secret of success in the treatment of syphilis was to get as much mercury into the system as possible without producing ill-effects. He had not seen one case of harm resulting from the use of mercury in syphilis in his own practice. He criticised Dr. Allan's theory of the virulence of secondary symptoms in cases of extra-genital chancre (the absence of lymph glands in the neighbourhood), and the discussion closed.

FRIDAY, SEPT. 3RD.

The Action of Diuretics.

Dr. JAMES BARR (Liverpool) opened the discussion on this subject. In practice we seek to increase the output of water, hoping that the salines would thus be eliminated also. The theories of renal excretion were considered. The late Sir B. W. Richardson has shown that even enormous pressure is alone insufficient to obtain the water from muscle cells. On the addition of sodium chloride, however, the dry muscle is easily obtained. Dr. Barr considered the question of (1) pressure; (2) volume of fluid; and (3) saline matter in fluid as factors in diuresis. In practice he thought an increase of the quantity of water drunk the chief benefit of watering-places.

Dr. C. R. MARSHALL (Ferndale) went over the theories of renal secretion, using charts to illustrate his remarks. He considered that with physical principles we must also allow the kidney metabolic action. It is as yet unknown how micro-organisms get through a healthy kidney. Secretory nerves, though probable, are not demonstrable in the kidney. In the investigation of diuretics the mistake is often made of assuming an increased flow by reason of a temporary hastening of micturition without increasing the total urine of twenty-four hours. A German writer calls the agents thus acting tachydiuretics. In the classification of diuretics the digitalis group is the only centrally acting one.

Dr. SHINGLETON SMITH (Bristol) said we must take a broader view of dropsies and seek out the numerous factors in the case. Digitalis is the only diuretic all would agree upon. He thought well of apocynum cannabinum.

Dr. D. J. LEECH pointed out the fact that spontaneous diuresis frequently occurred—a fact which helped to give a reputation to many popular remedies.

Dr. A. A. WOODHALL (Denver) read a note on the action of apocynum cannabinum, a milk-weed growing wild in Canada and the States. The tough, fibrous bark is the part used. Its old reputation in dropsies led to name vegetable trocar. He (Dr. Woodhall) was satisfied that it was an efficacious direct renal stimulant and would advise a trial of it.

Dr. A. D. BLACKADER (Montreal) had had experience of the drug in ethereal tincture, and would publish the cases from the Royal Victoria Hospital. Apocynin and apocynein had different actions. The former is an excellent succedaneum of digitalis, the other is an irritant.

Diphtheria Antitoxin.

Dr. H. A. MACCALLUM (London, Ontario) presented a paper relating the results of the use of Behring's serum in cases not diphtheritic. Cases of tuberculosis, sciatica, sarcoma, lupus, and Hodgkin's disease were treated daily for several weeks. The serum he considered as a lymphagogue. Some benefit was claimed in the tuberculous cases, and marked benefit in lupus. In typhoid fever the temperature is first raised, and then lowered. The principal efficacy of serum is that it procures sleep.

Dr. A. T. BAZIN (Montreal) read a paper on the Preparation and Application of Diphtheria Antitoxin, relating his experience in the Montreal Infectious Diseases Hospital. The persons who have been in the vicinity of a case of disease may be immunised by injections, and thus protected by a sort of vaccination.

Dr. J. B. FRASER (Toronto) gave statistics of fatal diphtheria in Toronto: 1894, 9·6 per cent.; 1895, 15 per cent.; 1896, 14 per cent.; 976 cases, average 13 per cent. The feeling was against serum.

Dr. D. J. LEECH had known of collapse after serum, Turbidity of serum is not necessarily decomposition; a little water makes it cloudy.

Dr. BAZIN said that the fluorescent appearance of serum might be mistaken for turbidity; tricresol is the usual preservative for serum.

Dr. M. CHISHOLM (Halifax) read a paper on the Opposite Action of Drugs in Large and Small Doses.

The proceedings terminated with a vote of thanks to the President of the Section.

PATHOLOGY AND BACTERIOLOGY.

THURSDAY, SEPT. 2ND.

Serum Diagnosis and the Agglutinating Action of the Serums.

Professor ADAMI (Montreal) introduced a discussion upon this subject. He referred to the work done by Wyatt Johnston, Welch, Gruber, and Widal, and pointed out that Metchnikoff had experimented on the subject earlier, but

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that to Widal was due our knowledge of the clinical value of the phenomenon.

Professor MUSSER related his clinical experience of the test, and said that the reaction had been obtained on the seventh day; blood from a case occurring ten years previously had given the reaction; cold baths had not influenced the test.

Professor BOYCE (Liverpool) stated that in Liverpool the distinction between typhus fever and typhoid fever had been made by the serum method. He preferred using fluid serum rather than dried blood.

Professor THOMPSON (New York) summarised clinical experience in five of the largest New York hospitals. He stated that the reaction had been seen on the fourth day of typhoid fever. Attempts to distinguish between typhus fever and typhoid fever by this method had failed; of cases of typhoid fever 75 per cent. were readily diagnosed without this test, 23 per cent. of cases could not be certainly diagnosed by serum methods, and misleading results had been obtained; he therefore claimed that at present this test, like the diazo reaction, was not of great clinical value.

Dr. WYATT JOHNSTON (Montreal), Dr. A. S. GRÜNBAUM (Liverpool), Dr. CABOT (Boston), Professor WESTBROOK (Minneapolis), and others took part in the discussion, which was equally keen on the technique of the method and on its clinical importance.

FRIDAY, SEPT. 3RD.

Infective Swine Diseases.

Dr. V. A. MOORE (Ithaca) made some remarks upon the Nature and Differentiation of the Infective Swine Diseases in the United States. He referred principally to hog cholera and swine plague. There was great difficulty in the nomenclature, but the term "Schweinseuche" seemed to relate to what he understood as "hog cholera." In typical cases there could be no difficulty in differentiating between hog cholera and swine plague. In the United States, where hog cholera was frequently observed, swine plague was rare. He also pointed out the differences in the bacilli of the two affections.

Professor WELCH observed that there was no class of diseases in which there was so much confusion. Metchnikoff's bacillus was not the bacillus of hog cholera, which belonged to the colon-typhoid group, while the bacillus of swine plague belonged to the hæmorrhagic septicæmia type. The American "hog cholera" was identical with the English "swine fever." He concurred in the view that the German "Schweinseuche" is probably the same as swine plague, and pointed out that while the Germans have epizootics of this disease in the United States it is rarer.

Professor ADAMI confessed to having felt some confusion with regard to this subject as he had found in hog cholera bacterial forms with only few flagella, thus differing somewhat from true bacillus of hog cholera. But in view of the statement that animals rendered immune to hog cholera were still susceptible to swine plague he thought that he must regard them as two distinct diseases.

Professor ADAMI then read a paper on

Pictou Cattle Disease.

This was a disease, he said, which had been known for a great number of years and which was found only in a small locality in the neighbourhood of Pictou, Nova Scotia. This disease was characterised by some swelling of the abdomen, slowness in eating or rumination, followed by a paretic condition of the hind legs. The cattle soon lay down and death followed in a few hours. It was noticed to exist only in certain farms and spread to adjacent holdings very slowly. Those regions where the carcases had been buried seemed to be the most likely to contain the contagion. Locally the farmers considered the disease to be due to the cattle eating a plant which was very common in the district and known vulgarly as "stinking willie." There were abundant facts to prove that this was not the case, but he thought that as the stems were very hard the injury to the intestine might result from eating them and so the animal be predisposed to the infection. Post mortem the disease was characterised by very slight alteration of the intestine, with hyperplasia of the abdominal lymph glands, and a cirrhotic condition of the liver. The abdomen regularly contained from two to three pints of clear serum. These conditions had been present in twenty cases which he had studied, with the exception of one doubtful one. All of his cases were advanced, but Dr. W. Johnston had obtained cases at an earlier period, and then there was distinct enlargement of the livers. Dr. Adami had been enabled to isolate the bacillus, which was very small and grew on all media. In inoculation experiments he had been unable quite to reproduce the picture of the cattle disease as the animals died in the early stage before the typical cirrhosis had had time to appear.

Dr. D. MCEACHRAN (Montreal) said that the disease had been known for forty years. The virulence of the infective agency was difficult to estimate, but the disease did not spread rapidly out of the district. Where cattle had been removed from the infected districts and isolated only 1 in 200 was found to develop the disease.

Professor BOYCE asked if the organism was related to the colon group.

Professor ADAMI, in reply, said that it resembled the colon group, but presented minor differences. It fermented glucose, but not other fermentable substances. It was smaller than the bacillus of swine plague and was not vacuolated.

Dr. W. T. CONNELL (Toronto) showed for Dr. KANTHACK and himself specimens of the Tetanus Bacillus stained by the nitrate of silver method to show the flagella. In the early stage the bacillus presented from twenty to thirty very fine and tortuous flagella. In a later stage large thick flagella were developed which might be secondary. Later a single flagellum only remained of a corkscrew shape. When spores began to form the flagella became detached. In the terminal drumstick form they had been enabled to detect in the capsule the remains of the original flagella.

Dr. A. S. GRÜNBAUM showed some Micro-photographs of a case of Pseudo-hypertrophic Muscular Paralysis, in which there was a degeneration of the peripheral nerves in addition to changes in the muscle fibres themselves and thickening of the vascular walls.

Dr. HAMILTON K. WRIGHT (Montreal) read a pape entitled: On the Topography of the Posterior Columns. He reported in detail the anatomical lesions which were found in a very interesting case of tabes dorsalis, with some indications of a terminal acute myelitis.

Tubercle Bacillus in Milk.

Dr. R. BOYCE, Holt Professor of Pathology in University College, Liverpool, then read a paper on the Tubercle Bacillus in Milk, introducing a discussion on the communicability of tuberculosis from lower animals to man. He had, he said, examined 111 samples of dairy milk as supplied to Liverpool. He had found, like others, that the first milk from the cow contained most of the micro-organisms. In only from 5 to 6 per cent. of cases had the colon bacillus been found, and this in small quantity. He had found tubercle bacilli in only four cases out of his 111. Could organisms which had gained an entrance into an animal pass through the mammary gland and appear in the milk without affecting the udder?

Dr. ERNST (Boston) emphasised the necessity of a careful microscopical examination of the udder for tuberculosis, for in one case diagnosed as interstitial mastitis miliary tubercles had been found. A complete examination, however, was by no means easy.

Dr. ABBOTT (Philadelphia) stated that in his inoculations of cattle with diphtheria bacillus he had not been able to find them in the milk, his results being in direct antagonism to those of Professor Klein in England.

Dr. D. MCEACHRAN stated that in every case where the udder was tuberculous the milk was infective.

Professor WELCH stated that one observer who had made a very careful and complete microscopical examination of udders found that in nearly all cases where the bacilli were found in the milk there was miliary tuberculosis in the udders. He also stated that in human milk he had constantly found the staphylococcus pyogenes aureus, or, perhaps better, the staphylococcus epidermidis albus as he preferred to call it, and regarded it as a normal inhabitant of the larger milk ducts in the nipple. So that observations of bacteria being excreted through the milk should be regarded with great care when this coccus was present. He considered it a very peculiar circumstance that when so many acid-forming germs were constantly present in the ducts the milk in the nipple did not coagulate.

Dr. PARK (New York) had found in sucklings a few hours old the staphylococcus albus in pure cultures taken from the oral mucous membrane.

Dr. W. T. CONNELL (Kingston, Ontario), the secretary of the section, also spoke.

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Professor WELCH (Baltimore) then read a paper on

The Distribution and Pathogenic Effects of the Bacillus Aerogenes Capsulatus.

He described the original case in which Nuttall and himself had found this bacillus at a necropsy on a case of aortic aneurysm. It was found in pure culture, and there existed emphysema of the subcutaneous structures. The blood-vessels and the heart contained abundant gas-bubbles. There was also gas in the pericardium and the peritoneum. The organs all presented the appearance called by the Germans "Schaumorgane." Smear preparations revealed a single species of bacillus, and under anaerobic conditions he got numerous colonies of the same bacillus. It was non-motile, about the size of the anthrax bacillus, anaerobic, positive to Gram, and produced gas on fermentable material. Capsules could be demonstrated. It had first been thought that it was non-sporogenic, but Dunham, of New York, had recently found spores in cultures on blood serum. The pigeon was the most susceptible animal, and inoculations produced extensive necrosis and bloody œdema of the part. By comparing his cultures with those of E. Fraenkel of a bacillus found in gaseous phlegmons the identity of the bacillus aerogenes with the bacillus œdematis phlegmonosæ of Fraenkel had been established. Since then he had studied 41 cases—11 gaseous phlegmon, 1 pneumo-peritonitis, 4 puerperal, 4 gas-cysts, 2 invasion from lung, and 10 others probably cadaveric in origin.

Dr. A. G. NICHOLLS (Montreal) stated that he thought the subject had not attracted the attention in Europe that it had deserved. He stated that he had seen in Vienna cultivations of the bacillus aerogenes which had been found in so-called cases of *gangrène foudroyante*. He thought that many cases of gaseous phlegmon, physometra, and similar conditions should be referred to the action of this bacillus. Some observers had thought that the condition of "Schaumorgane" might be caused by the colon bacillus, but he thought that the etiological relationship of Welch and Nuttall's bacillus to the condition was established beyond a doubt. In the cases he had examined the bacillus coli had been conspicuous by its absence. In view of recent investigations by Chvostek and Morisani we should receive such cases with some reserve until further investigations should be made. He also touched on the subject of mixed infections in these cases

Contagious Pleuro-pneumonia in Cattle.

A discussion on this subject was then opened by Professor ADAMI. In this disease he said the danger lay in the insidious nature of its onset. The course, too, might last from 14 days to several months and the convalescence was often tardy. He referred to the long dispute which had taken place between the veterinary authorities of Great Britain and those of Canada. The Canadians were positive that not one case of true pleuro-pneumonia existed in Canada, but in spite of their representations and protests the Canadian cattle had been scheduled entailing a great loss on the country. On the other hand, it was proved that England had been a centre of infection to the colonies, and the arbitrary action of the Board of Agriculture was not calculated to advance those sentiments of brotherhood and union which so recently formed the basis of many eloquent speeches. It was absurd to doubt the veracity of the Canadian blue-books, for were they falsified the first effects would have been felt in Canada and not in England, and the matter could not have been kept secret.

Professor WELCH agreed with Professor Adami that contagious pleuro-pneumonia did not exist either in Canada or the United States. The gross anatomical appearances of the lungs of typical cases were striking. On the interlobular exudata comparatively few cells are to be seen. Outside this is a zone of disorganized chromatin; outside this, again, granulation tissue. These appearances are seen wherever there are connective tissue and lymphatics.

Dr. MCEACHRAN stated that in Canada to every locality whence the cattle condemned in England had been taken Canadian experts had been sent and failed to find even suspicious cases. He had the authority of the Minister of Agriculture to say that the offer of the Canadian Government to pay the expenses of three experts chosen by England to investigate the subject properly still held good.

The business of the Section was brought to a close by a unanimous vote of thanks to the President.

PSYCHOLOGY.

FRIDAY, SEPT. 3RD.

This section began its work on Friday morning with a thoughtful paper by Dr. T. D. CROTHERS (Hartford, Conn.), on

Some New Phases of Inebriety in Clinical Studies.

He pointed out that from 60 to 70 per cent. of all inebriates were of hereditary origin, their ancestors having been usually of the neurotic type. The abuse of alcohol was often only a symptom of degeneration, so that by removing the spirits we did not always remove the cause of the inebriety.

Dr. BUCKE emphasised the fact that the drink habit in incipient paresis was symptomatic rather than causative.

Insanity in its Relation to the State.

Dr. J. RUSSELL (Hamilton, Ontario) then read a paper on this subject. He held the view that insanity was increasing in the lower classes of society, but not in the wealthier, and that the mass of the lunatics of to-day come from the uneducated class. They were being driven to the wall in the modern struggle for wealth and position.

Dr. DANIEL CLARKE, of the Asylum, Toronto, held that general paralysis came from the better classes, and that syphilis was only one of the causes of it. In his opinion, we should have to come to surgery to stay the present rate of degeneration.

Dr. EDWARD BRUSH (Baltimore) said there could not be a general distribution of wealth that would last, unless there were a general distribution of ability. He denied that the poor man was trodden down in these days. In every way his environment was better than a century ago.

Dr. URQUHART (Perth) stated that epilepsy was uncommon in Scotland, and mentioned the tradition, without asserting that it was true, that in days bygone castration had been performed on this class of cases.

Locomotor Ataxy as a form of Chronic Parenchymatous Degeneration of the Paraneural System.

Dr. VANGIESEN (New York) read an instructive paper illustrated by black-board drawings on this subject. He showed that the growth of our knowledge of the cell, with modern methods of staining, was doing much to unravel the intricacies of mental diseases. He said he thought the alienist in an asylum had a poor opportunity to study the beginnings of disease, as patients go to hospital after insanity has developed. Both the brain and insanity had hitherto been studied too much apart. It is necessary to see how the nervous system is involved in other diseases such as are found in general hospitals.

After a short discussion the meeting closed with a vote of thanks to the President (Dr. R. M. Bucke).

OPHTHALMOLOGY.

THURSDAY, SEPT. 2ND.

The Etiology of Trachoma.

Dr. G. T. STEVENS (New York) read a paper propounding a theory of the causation of trachoma. Relying for his theory upon the fact that trachoma is stated to be more prevalent in certain races presenting a special cranial conformation he conceived it possible that this structural difference might involve a tendency to imperfect equilibrium of the ocular muscles, and in this way the imperfectly protected eye would be rendered more susceptible to infection.

The discussion which ensued did not lend much support to this suggestion, the speakers who followed being more disposed to attach importance to the infective agent itself.

FRIDAY, SEPT. 3RD.

The Hypodermic Use of Pilocarpine in Eye Diseases.

A discussion was opened on this subject by a paper read by Dr. G. H. BURNHAM (Toronto), who described satisfactory results obtained in his practice by the use of the drug.

Dr. FRYOR (Kansas City) said that he had employed pilocarpine in hæmorrhages into the retina and in sympathetic ophthalmia, but that he never gave it in syphilis. He generally prescribed it with an alcoholic stimulant on account of the tendency to heart failure.

Dr. ALT (St. Louis) said that he had had some disagreeable experiences with pilocarpine, and Dr. C. H. WILLIAMS (Boston) advised that a fresh sterilized solution should

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always be employed, as he had known abscesses to follow injections.

Dr. BURNHAM, in reply, said that he had never given alcohol when using pilocarpine. He guarded against heart failure by keeping the patient well covered up and in bed. He considered women more susceptible to pilocarpine than men.

The Importance to be Attached to Colour-blindness in the Marine and Railway Services.

Dr. W. H. SMITH (Winnipeg) introduced a discussion upon this subject by reading a paper upon it written by Mr. T. H. BICKERTON, Ophthalmic Surgeon to the Liverpool Royal Infirmary.

Dr. C. H. WILLIAMS (Boston) said that two things were necessary upon which Mr. Bickerton laid no stress—the test of colours with wools and the test with transmitted light through small openings.

Dr. MITTENDORF (New York) had control of the New York Central System. His method was to use Holmgren's test, and also to test with signals like those that the employé would have to recognise in his work. He thought that examinations should be held at frequent intervals, and not once and for all.

Dr. ALT said that he had not been able to impress the importance of the question on the management of the Missouri Pacific Railroad.

Dr. RIVERS (Boston) asked if a case of colour-blindness of one eye had been observed, to which the President of the Section, Mr. NETTLESHIP, replied that undoubtedly there were a few cases of monocular colour-blindness, though the condition was a rare one.

Dr. C. H. WILLIAMS said that all men coming into a company should be rigidly examined, and a company which did not do so would eventually be loaded with rejected men from other companies.

Dr. PRUME (Montreal) said that the question would probably be a Parliamentary one at the next meeting of the Dominion Legislature.

Dr. WURDEMANN (Milwaukee) read a paper on Skiascopy in Relation to other Methods of Estimating Ocular Refraction. He showed his apparatus, which was greatly commended by the members.—Dr. C. H. WILLIAMS read an interesting paper on Simulated Monocular Blindness.—Dr. FOUCHER (Montreal) contributed a paper, read by Dr. PRUME, on the Etiology of Dacryocystitis.—Mr. NETTLESHIP showed an instrument devised by Dr. E. P. JONES for irrigation of the lacrymal duct.—Dr. A. PROUDFOOT (Montreal) read a paper on the Value of Weak Lenses in Certain Cases.

The proceedings terminated with a vote of thanks to the President of the Section.

LARYNGOLOGY AND OTOLOGY.

THURSDAY, SEPT. 2ND.

The Significance of Laryngeal Paralysis.

A discussion upon this subject was opened by Dr. W. H. DALY (Pittsburg).

Dr. E. L. SHURLY (Detroit) spoke chiefly in regard to prognosis, specially insisting that structural lesions would be found more frequently in cases of hysterical paralysis if looked for.

Mr. LENNOX BROWNE (London) observed that the term hysterical aphonia was used owing to indolence. He held that aphonia from singing was attributable more to improper use of the voice than to its over-exercise.

Dr. D. B. DELAVAN (New York) insisted on the need of more investigations into right-sided laryngeal paralysis, and referred to two unusually persistent cases of diphtherial paralysis, one of which had lasted for three years and the other for sixteen years, with no return of the vocal powers.

Dr. W. PERMEWAN (Liverpool) referred to certain observations that he had made upon the condition of the larynx in general paralysis of the insane. In this disease abductor paralysis was very common, and he held that a very constant diagnostic sign of hysterical paralysis was the absence of all abductor paralysis. He concluded by relating a case of bilateral abductor paralysis due to pressure upon both recurrent nerves by an aneurysm.

A Case of Foreign Body removed from the Larynx by Partial Thyrotomy.

Dr. CHARLES H. KNIGHT (New York) read an interesting note on a case where a metal shoe hook had been removed successfully from the larynx. The patient was a boy, seven years old. The inspiration of the foreign body was followed by a violent attack of coughing and dyspnœa, which subsided in a few moments. Aphonia and very slight laryngeal stridor persisted. In about ten days after the accident the body was discovered by means of a laryngeal mirror lying in the right ventricle of the larynx, close to the anterior commissure. Numerous attempts at removal with forceps and by means of Kirstein's autoscope both with and without an anæsthetic failed. The external operation was done six weeks after the accident. The incision included the first two rings of the trachea and the lower half of the thyroid cartilage. The operation offered no unusual difficulties and convalescence was prompt. The voice was suddenly restored ten weeks later. Attention is drawn to the absence of serious subjective symptoms and to the importance of making an incomplete section of the thyroid cartilage, in order to ensure accurate re-adjustment of the parts and consequent preservation of vocal function.

Dr. J. N. MACKENZIE (Baltimore) read a paper upon the Physiological and Pathological relation between the Nose and the Sexual Apparatus, implying a connexion that we should be sorry to find many practitioners to consider to exist, though Dr. Fliess, of Vienna, has demonstrated what he terms the "genital places of the nose."—Dr. J. O. ROE (Rochester, N.Y.) read a paper upon the Correction of Nasal Deformities by subcutaneous operations.

FRIDAY, SEPT. 3RD.

An Artificial Larynx.

Dr. ANDERSON STUART, Professor of Physiology in the University of Sydney, Australia, gave a demonstration of an Artificial Larynx which he had designed.[1] In planning his instrument he found that a glottis permitting good respiration was too large for good phonation, and *vice-versâ*. This he avoided by having reeds attached to his instrument to be used only as required for phonation. To ensure comfort he avoided having a complete metal tube, but made a framework of soft rubber, consisting of a soft rubber flat piece to be tied about the neck into which a rubber tracheal tube was inserted and the metallic portion containing the reed fitted snugly into this. Its advantages he claimed to be flexibility, ease of insertion and removal, cleanliness, and comfort. As ordinarily used the respiratory glottis gave very free entrance of air, and if the patient desired to phonate by occluding with his finger the respiratory glottis the air now directed through the reed passed by a specially devised tube upwards into the throat where the resonance chambers could be utilised as in natural phonation. The pharyngeal tube started from the upper part of the tracheal tube, and was devised from a coil of piano wire—being incompressible laterally and longitudinally, but quite flexible—covered with strips of thin rubber, and capped by a small valve of glove leather preventing the return of fluids into the tube. With this instrument a patient was able to converse quite freely.

The Ultimate Results of Operations on the Mastoid Process in Suppurative Ear-Disease.

A discussion on this subject was opened by Dr. F. BULLER (Montreal). He considered only that form of mastoid disease seated in bony structures and spoke of two varieties. First, and most common in adults, was the simple form with no caries or necrosis, in which there were granular cell contents or diffuse inflammation in bone or abscess in bone of the non-fœtid type with thick mucoid pus. Secondly, and most frequent in children, there was a purulent fœtid or ichorous discharge with either caries or necrosis. In the first class he had operated on many and found that after relief recovery had been complete and satisfactory and as a rule hearing had returned to the normal standard. In dealing with the second class he traced out to its utmost limits all inflamed and diseased products and removed them as far as possible; he mentioned his fear of wounding the facial nerve in the tympanum. The prognosis was not as good as in the simple form and hearing was more frequently left impaired. In extension to the cerebral cavity he had seen no good from treatment of pachymeningitis, but mentioned a successful operation for temporo-sphenoidal abscess.—Dr. Arthur H. BUCK (New York) spoke of acute and

[1] A full description of the instrument will be found in THE LANCET of April 17th, 1897.

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chronic mastoid disease, the former due to invasion by micro-organisms, leading to occlusion of air cells and pent up suppuration. In removing bone he considered that not only should all softened bone be condemned but also that any highly congested purplish bone, even though bleeding, should be removed. He spoke of inflammation in the tip of the mastoid which was occasionally overlooked, but he thought the region above and behind the antrum was most to be feared. The chronic form he considered was due to less pathogenic bacteria.

Dr. CLARENCE J. BLAKE (Boston) then read a paper on the Ultimate Treatment of Mastoid Disease. This was based on a study of seventy-one cases with thirty-seven operations. He divided his cases into three classes: (1) inflammation of the contents of the mastoid; (2) inflammation of the contents and wall; and (3) suppuration in the walls with extension to the neighbouring organs. He spoke of Macewen's statement that American surgeons were afraid of the lateral sinus; he considered this still to be the case, and stated that it should cause less fear than the danger of wounding the facial nerve. Of his operations he divided them as follows: (1) simple cases healed by first intention, filling wound with blood clot, and wound closed; (2) more severe, but wall intact healed by granulation; (3) diseased wall, dura mater exposed; (4) extra-dural abscess; and (5) brain abscess. Dr. Blake closed with a full bacteriological report of all his cases, and showed some curettes which he used.

Dr. H. LEE MORSE (Boston) read a paper entitled "Remarks on the Anatomy of the Mastoid Portion of the Temporal Bone which have a practical bearing on the Operation for Opening the Mastoid," in which he demonstrated by four large diagrams and many photographs the Schwartze and Stacke operations and the relations of the field of operation to the surrounding structures in each case. He also showed eight carefully mounted and coloured bone specimens demonstrating all the different relations mentioned in the paper. He spoke of the necessity of using smaller curettes in operating on children on account of the limited space and softness of the bone.

Dr. A. H. BUCK then read a paper on the Non-operative Treatment of Chronic Suppurative Disease of the Antrum and Vault of the Tympanum.—Dr. F. BULLER followed with the report of a case of mastoid disease with thrombosis of the sigmoid sinus and internal jugular vein.—In the discussion on the subject of treatment of mastoid disease Dr. GORHAM BAKER mentioned twenty cases of brain complications following mastoid disease with fifteen recoveries under surgical treatment. He also spoke of the necessity for a wide opening on the surface of the mastoid for thorough exploration.

Chronic Inter-arytenoid Laryngitis.

Dr. PRICE BROWN (Toronto) reported four cases of this condition, in two of which lactic acid and in the other two nitrate of silver did good. He questioned whether they should be classed as pachydermia laryngis or simple inter-arytenoid laryngitis.—In discussing this paper the PRESIDENT referred to his experience in London, and thought these cases not uncommon. He found alkaline sprays of more service than astringents.—Dr. TROW (Toronto) mentioned similar cases, and Dr. PERMEWAN considered these to be pachydermia laryngis and preferred lactic acid in the treatment.—The PRESIDENT reported having made a microscopic examination and found it simply epithelial.—Dr. DELAVAN showed an electrolytic needle for use in the treatment of such cases.

Dr. H. V. WÜRDEMANN (Milwaukee) read a paper on Phosphoric Necrosis of the Temporal Bone which presented many points of peculiar interest.

The business of the Section then being completed, the PRESIDENT (Dr. Greville Macdonald), in a few well-chosen words, stated that he considered this a record year in the Section of Laryngology, both from the character of the papers and from the number of illustrious participants.

A vote of thanks was accorded to the President.

ANATOMY AND PHYSIOLOGY.

THURSDAY, SEPT. 2ND.

The Relative Efficacy of Chloroform and Ether as Nerve Anæsthetics.

The chief business of the section was the discussion on Anæsthetics, opened before a large attendance by Dr. A. D. WALLER (London), the President of the section. Dr. Waller's remarks were illustrated by experiments and lantern slides. After premising that an isolated nerve, regularly stimulated, gave regular electrical responses, and was thereby a most suitable tissue upon which to examine the modifying action of various drugs, Dr. Waller proceeded to show the comparative action of ether and of chloroform upon the excitability or "electro-mobility" of nerve. The first effect of ether and of chloroform was an augmentation of excitability, the nerve being rendered more "electro-mobile." The full effect of ether and of chloroform was an abolition of excitability, the nerve being immobilised and not responding to stimulation. Under ordinary conditions of experiment the "immobilisation" by ether was complete and temporary, being followed by recovery up to, and beyond, the normal; whereas the "immobilisation" by chloroform was complete and final, there being no recovery. The nerve had been anæsthetised by ether but killed by chloroform.

The gist of the paper was that chloroform acted upon nerve much more powerfully than ether, the inference being that chloroform was not a safe anæsthetic. For the convenience of members wishing to take part in the debate an illustrated summary of Dr. Waller's paper was published in the first issue (Wednesday, Sept. 1st) of the daily journal of the Association.—The paper was discussed by Professor RICHET (Paris), who was strongly of opinion that deaths under chloroform were due to cardiac, and not to respiratory, failure, and that therefore the heart was the thing to watch.—Surgeon-Colonel LAWRIE (Hyderabad, Deccan) followed, and stated his well-known views as to the inferences to be drawn from the experiments at Hyderabad, arguing that over-dosage was alone to be feared and that such over-dosage commonly resulted from irregular and gasping respiration.—Dr. L. E. SHORE (Cambridge) then described the results of experiments by himself and Dr. Gaskell which went to show that chloroform had a direct and primary depressing influence upon the heart.—Dr. GASKELL corroborated the views of Dr. Shore and an animated discussion arose between Surgeon-Colonel Lawrie and Dr. Shore.—Dr. WALLER then replied on the whole discussion and said that the views of the majority concurred with the conclusions he had drawn from his experiments.

FRIDAY, SEPT. 3RD.

The Physiology of the Heart's Beat.

Dr. W. H. GASKELL (Cambridge), in opening a discussion on this subject, said that he had no new facts to bring forward and had seen no reason to alter the views he expressed fourteen years ago—viz., that all parts of the heart were endowed with the power of rhythmical contraction quite independently of the presence of ganglion cells, but varying in degree in different parts. What, then, was the relation of the ganglion cells to the contraction? In his view simply an accidental relation, the heart being regarded as a modified longitudinal bloodvessel, and the ganglion cells remaining in their old situation in the least modified parts of the tube. These results had been entirely confirmed by the recent experiments of Englemann. (The objections to these views raised by Kaiser and others were briefly considered and refuted.) Other workers had confirmed the truth of these opinions as regarded the mammalian heart also. The ganglion cells did not possess any functions other than those which pertained to sympathetic cells elsewhere. They were, in fact, trophic for the post ganglionic nerve fibres, especially of the vagus nerve. Developmentally the cells were also of exactly similar origin as the other efferent ganglionic cells.

Professor PORTER (Boston) said that the crucial point was, Can any part of the heart which is quite devoid of ganglionic cells continue to contract rhythmically for any time? It might be that in the experiments which seemed to give an affirmative answer to this question the heart was really beating rhythmically to some abnormal and constant artificial stimulus. He described experiments he had made which went to show that the above question could be answered in the affirmative and that the objection indicated could be discounted.

Professor HOWELL (Baltimore) said that he had become more and more convinced of the truth of the views expressed by Dr. Gaskell. There were two hypotheses possible: (1) that the heart contracts in response to a stimulus developed by its own metabolism; of this no proof had been offered; and (2) that the stimulus is in the blood itself—i.e., from outside. He had made experiments to try to determine what the substance

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in the blood might be which acts as a stimulus and considered that it was probably of an inorganic nature and not unlikely a calcium salt.

Professor MILLS (Montreal) criticised many of the statements of the previous speakers. He thought that the heart beat must be attributed to various factors, which vary quantitatively in different animals.

Dr. MELTZER (New York), Dr. MACCALLUM (Toronto), and Professor CARL HUBER (Ann Arbor) having spoken,

Dr. GASKELL briefly replied.

The Section closed with a vote of thanks to the President.

DERMATOLOGY.

FRIDAY, SEPT. 3RD.

Melanotic Conditions of the Skin.

On Thursday the section combined with the section of Pharmacology and Therapeutics. On Friday the proceedings commenced with a paper from Dr. COLEY (New York), who described his experiences in the treatment of several cases of melanotic conditions which had passed on to a malignant stage. He first considered shortly their anatomical and histological peculiarities in their relations to the prognosis of individual cases, and confirmed the general impression as to the extremely irritating effect of pigment occurring in wrong places. He mentioned then his experience of the treatment of these cases, and said that he had found that the antitoxic serums which had been found useful in other cases of sarcoma, especially of the spindle-cell variety, had produced no effect in the melanotic forms of the disease. He advocated the removal of any pigmented tissue in which the slightest sign of activity was becoming manifest.

Dr. J. GALLOWAY (London) followed with a paper describing a rare form of pigmentation of the skin in some respects resembling the melanotic whitlow described by Mr. Jonathan Hutchinson. In this case, however, the pigmentation had commenced on the sole of the foot apart from the nail of the toes, and the first lesion which had been noticed by the patient five years previous to his seeking advice was the occurrence of the repeated blisters on walking; ulceration finally made its appearance. The particular case mentioned had been operated upon; complete removal of the diseased structure had been carried out, and so far no recurrence had occurred. Taking this case as the basis of his remarks Dr. Galloway discussed the significance of pigmentary deposits in the skin in relation to their preceding malignant growths.

The PRESIDENT (Mr. Malcolm Morris) then continued the discussion and entered a strong protest against continual interference with moles or melanotic deposits, and said that when their removal was finally decided on the operation should be conducted with the greatest freedom, and that particular care should be taken to avoid all irritation of the pigmented area either by incision or by subsequent suppuration.

The Plurality of the Fungi causing Ringworm.

Dr. GALLOWAY demonstrated for Dr. COLCOTT FOX (London) a number of beautiful preparations showing the distinctive microscopic and cultural characteristics by means of which it is possible to distinguish different species of the fungi causing ordinary ringworm. Dr. Fox classified these fungi as follows: (1) the species now well known as the microsporon Audouini; (2) the endothrix fungus as mentioned by Sabouraud as one of the species of his division, the trichophyta; (3) the ectothrix fungus as described by Sabouraud; and (4) the faviform fungi. Dr. Fox criticised the descriptions which the French observer had given of the organs of fructification as distinguishing between various species of these fungi, and remarked that he did not consider that the differences observed were sufficiently characteristic or of sufficiently vital importance to help in the formation of new species.

The Section closed with a vote of thanks to the President.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen, having passed the necessary examinations, have been admitted Diplomates in Public Health by the two Royal Colleges:—

Brind, Harry Hanslow, L.R.C.P. Lond., M.R.C.S. Eng.
Edwards, Henry James, L.R.C.P. and S. Edin.
Erskine, Robert, M.D., M.Ch., R.U.I.
Grandy, William Edward, M.B. Trin. Col. Dub., L.R.C.S. Irel.
Hardy, Henry Louis Preston, L.R.C.P. Lond., M.R.C.S. Eng., M.D. Brux.
Hoare, Edwin Stanley, L.R.C.P. Lond., M.R.C.S. Eng.
Home, George, M.D., M.B., C.M. Edin.
Horrocks, Herbert, L.R.C.P. Lond., M.R.C.S. Eng., M.B. Vict., M.D. Lond.
Lawrence, Sidney Cameron, L.R.C.P. Lond., M.R.C.S. Eng.
McCormack, Charles Vincent, L.R.C.P. Lond., M.R.C.S. Eng.
Martyn, Gilbert John King, M.A., M.B., B.C. Camb.
Salter, Alfred, L.R.C.P. Lond., M.R.C.S. Eng., M.D. and B.S. Lond.
Savage, William George, L.R.C.P. Lond., M.R.C.S. Eng., B.Sc., M.B. Lond.
Stanley, Arthur, L.R.C.P. Lond., M.R.C.S. Eng., M.D., B.S. Lond.
Thomas, Daniel Lewis, L.R.C.P. Lond., M.R.C.S. Eng., and L.S.A. Lond.

Six gentlemen were referred to their studies for six months.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the subjects indicated:—

Surgery.—J. B. Cautley (Section II.), St. Bartholomew's Hospital; F. M. Cooper (Section II.), Royal Free Hospital; J. F. Fox, Cork and Westminster Hospital; F. R. Greenwood, St. Bartholomew's Hospital; and H. Munro, Guy's Hospital.
Medicine.—E. C. Bailey, King's College Hospital; F. M. Cooper (Section II.), Royal Free Hospital; R. H. Hill, New York and Middlesex Hospital; and A. H. Turner, London Hospital.
Forensic Medicine.—E. C. Bailey, King's College Hospital; and R. H. Hill, New York and Middlesex Hospital.
Midwifery.—E. C. Bailey, King's College Hospital; F. M. Cooper, Royal Free Hospital; C. G. L. Dähne, St. Bartholomew's Hospital; A. J. Hayes, Middlesex Hospital; R. H. Hill, New York and Middlesex Hospital; A. H. Turner, London Hospital; and R. L. G. Worsley, St. George's Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery:—Messrs. E. C. Bailey, C. G. L. Dähne, J. F. Fox, and A. J. Hayes, and Miss F. M. Cooper.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—At the College of Medicine, Newcastle-upon-Tyne, in the second examination for the degree of Bachelor of Medicine, the following candidates have satisfied the examiners:—

Anatomy, Physiology, and Materia Medica.—First Class Honours: Richard Henry Dix, College of Medicine, Newcastle-upon-Tyne.—*Second Class Honours:* Reginald Alderson, College of Medicine, Newcastle-upon-Tyne; Philip Meyler Perkins, St. Bartholomew's Hospital; Duncan Matheson Johnston, College of Medicine, Newcastle-upon-Tyne; Ralph Tennyson Jupp, Mason College, Birmingham; Frederic William Lambelle, College of Medicine, Newcastle-upon-Tyne; Gerald Burton-Brown, L.S.A., Guy's Hospital; James Robert Burn, College of Medicine, Newcastle-upon-Tyne; and Ernest Frederick Wharton Bywater, Mason College, Birmingham. *Pass List.*—Henry Braund, Guy's Hospital; Bernard Edward Granville Bailey, St. Bartholomew's Hospital; Robert Tilbury Brown, M.R.C.S., L.R.C.P., Guy's Hospital; Richard Henderson Garbutt, Arthur Hines, John MacFadyen, Robert Peart, Thomas Smirk Percival Parkinson, and George Woodyatt Procter, College of Medicine, Newcastle-upon-Tyne; Reginald Percy Richardson, Westminster Hospital; Eleanor Shepheard, London School of Medicine for Women; Leonard Satchwell Smith, Mason College, Birmingham; John Ernest Sidgwick, College of Medicine, Newcastle-upon-Tyne; Alfred Messer Thomas, Guy's Hospital; John Henry Tripe, London Hospital; Richard Thorne-Thorne, St. Bartholomew's Hospital; Thomas John Augustus Tulk-Hart, M.R.C.S., L.R.C.P., Guy's Hospital; Percy Edward Turner, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; and John Charles Velenski, College of Medicine, Newcastle-upon-Tyne.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berne:* Dr. Max Stooss has been appointed Extraordinary Professor of Children's Diseases.—*Breslau:* Dr. Kader and Dr. Kühnan have been recognised as *privat-docenten* of Surgery and Medicine respectively.—*Greifswald:* Dr. Tilmann has been appointed to succeed Professor Heidenhein as Extraordinary Professor of Surgery.—*Marburg:* Dr. A. Schirmer, of Basle, has declined the invitation to the Professorship of Odontology.—*St. Petersburg (Military Medical Academy):* Dr. Rulbin has qualified as *privat-docent* in Medicine.—*Turin:* Dr. Sacerdoti, Dr. Penzo, and Dr. Ferria have been recognised as *privat-docenten* of General Pathology, Surgical Pathology, and Bacteriology respectively.—*Vienna:* Dr. Hugo Wintersteiner has been recognised as *privat-docent* of Ophthalmology.—*Zurich:* Dr. J. Ruge, of Amsterdam, has been

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appointed Professor of Anatomy in succession to Dr. P. Stöhr.

VACCINATION GRANT.—Mr. F. W. Lewis, M.R.C.S. Eng., L.S.A. Lond., Public Vaccinator of the No. 1 District of the Llandovery Union, has for the tenth time in succession since his appointment obtained the Government grant for successful vaccinations performed.

THE INFECTIOUS DISEASES NOTIFICATION ACT AT ABERDARE.—After a struggle of nearly six years the Infectious Diseases Notification Act was on Sept. 10th adopted at the meeting of the Aberdare District Council by 9 votes to 3. The Act is to come into force on Dec. 1st next.

THE BAKERS' AND CONFECTIONERS' EXHIBITION.—This exhibition, which is to-day (Friday) brought to a close at the Agricultural Hall, Islington, is the fifth of its kind. One of the features of the Exhibition is the model bakery which has been erected at a cost of about £1600. Here the operations of dough-making and dough-dividing by machinery, bread-making, and the manufacture of pastry and confectionery are shown with the object of proving that the underground bakeries of the Metropolis are totally unnecessary.

PRESENTATION TO A MEDICAL MAN.—Mr. Robert I. Stevens, M.R.C.S. Eng., who has practised in Hoddesdon and district for upwards of forty years, on his retiring from practice, has been presented with a testimonial, the subscriptions for which amounted to about £260, contributed by nearly 300 residents. Out of this sum an annuity of £30 per annum was purchased, and on the 10th inst. he was the recipient of a deed conveying the annuity to him and a cheek for the balance, with an album in which the names of the contributors are inscribed.

THE SEWAGE DIFFICULTY AT MANCHESTER.—At the last meeting of the City Council the culvert scheme was passed by a vote of 49 to 9. But Mr. Norbury Williams, one of the elective auditors of the city, put in a protest against this decision, as 49 was not a majority of the whole council, 53 being required, since according to the Borough Funds Act no costs for promoting any Bill in Parliament can be charged on the city funds unless incurred under a resolution of an absolute majority of the council, to be confirmed by a ratepayers' meeting. The matter will, therefore, be brought up again at a meeting of the council to be held probably on Oct. 6th.

THE NEW MEDICAL DEFENCE ASSOCIATION, LIMITED.—At a meeting of the directors of this association held on Sept. 17th it was resolved to assist a member in an action brought against him, the cause of action arising from the fact that he had certified an infant's death as due to "hereditary syphilis." Dr. Leslie Phillips reported that the books were in the hands of the auditors, and that the accounts and report for the past year would be issued in the course of a few weeks. The accounts would again show a substantial increase to credit, and the cash position of the association, he believed, would allow the reduction of future annual subscriptions to 5*s*. instead of 10*s*. as at present.

DIPHTHERIA IN LONDON.—There were registered last week in the county of London 35 deaths from diphtheria, a number 10 in excess of the total of the week preceding, and identical with that of the week ended Sept. 4th. It was, however, 6 below the corrected decennial average for the corresponding weeks of the years 1887-96. Camberwell is credited with 5 of the deaths, and Battersea and Wandsworth sanitary areas each with 3 deaths, the northern and western groups of districts registering 18, and the central, eastern, and southern groups 17 deaths. Nineteen of the deaths were of children under 5 years of age, including 2 of infants, and only 2 were of persons aged over twenty years. The admissions to hospital in the week were 156, against 121, 131, and 140 in preceding weeks, and on Saturday last there were just 1000 patients under isolation and treatment for the disease. In the outer ring as many as 19 deaths from diphtheria were registered, of which 5 were registered in West Ham district, and 3 occurred in Edmonton district. Thus there were 54 deaths registered from the disease in "Greater London," with upwards of six millions of people, as compared with 12 in the other five millions of people in the remaining thirty great towns of the Registrar-General.

THE HEALTH OF BOMBAY.—We are glad to be able to report that the general mortality at Bombay is declining, although it still remains in excess of the normal amount. The deaths are mainly attributable to fever, dysentery, and cholera, although the last-named disease seems to have been decreasing during the past four weeks.

THE WOMEN'S HOSPITAL AT REDRUTH.—Mr. Passmore Edwards has promised to erect a new wing to the Women's Hospital at Redruth for the accommodation of sick children. This will be much appreciated by the industrial classes of West Cornwall. Details of the suggested addition will shortly be laid before the subscribers.

SANITARY MATTERS IN GLAMORGANSHIRE.—At a meeting of the Glamorganshire County Sanitary Committee held on Sept. 10th the sub-committee appointed to consider the question of establishing a laboratory for the department of public health reported in favour of such an institution. At this laboratory chemical and bacteriological examinations of water, sewage contamination, diseased tissues, &c., will be made. The advantages that will arise from such an establishment are obvious. The sub-committee of the Glamorganshire County Sanitary Committee have recommended that the salary of their medical officer of health should be increased to £800 per annum.

BABY FARMING AT STRETFORD.—A man and his wife were charged the other week at the Manchester county police-court with an offence under the Infant Life Protection Act at Stretford. Two infants were taken in to nurse, and one died at seven weeks old, having been in the charge of the defendants for three weeks. According to the Act all houses where more children than one were taken care of for more than twenty-four hours at a time should be registered. The defendants had not done this. There was no suggestion of ill-treatment. Five shillings weekly were paid with each child. The magistrates imposed a penalty of 5*s*. and costs, which came nearly to 30*s*. The male defendant said he would have no more children at his house.

THE LIFE SAVING SOCIETY'S HANDBOOK OF INSTRUCTION.—This useful little book has been specially prepared for teaching those able to swim how best to rescue persons in danger of drowning; if clutched, how to effect a release; and how to resuscitate the apparently dead. It deals with the theory of circulation, respiration, and resuscitation, and explains fully all the methods of rescue, &c., as set forth by the society. The book is interesting and is of great use to the swimmer. It is pleasing to be able to state that as a result of the many classes of instruction that have been held in all parts of the United Kingdom many cases of rescue by members have been reported this season.

LITERARY INTELLIGENCE.—Messrs. Baillière, Tindall, and Cox will publish next week a work on "Heart Disease," by Sir Wm. Broadbent, Bart., M.D., F.R.S. The publication has been delayed on account of the many calls on the author's time. They will also publish a new work on "The Roentgen Rays in Medicine and Surgery," by Dr. Walsh and Mr. Greenhill; a work with coloured plates on the "Essentials of Bacteriology," by Professors Lehmann and Neumann, with English translation; a handbook on "Air, Food, and Exercises," by Dr. Rabagliati; one on "Diagnosis," by Mr. Parkinson; and a new edition of Mr. Symons Eccles' work on "Massage."—"A Manual of Hygiene for Students and Nurses," by John Glaister, M.D., D.Ph. Camb., Professor of Forensic Medicine and Public Health, St. Mungo's College, Glasgow, will shortly be issued by the Scientific Press, Limited.—Messrs. J. & A. Churchill announce that they will publish on Oct. 1st a third edition of "Elements of Human Physiology," with several new illustrations, by Ernest H. Starling, M.D., F.R.C.P. Lond., Joint Lecturer on Physiology at Guy's Hospital; and an eleventh edition of "A Manual of Minor Surgery and Bandaging," by Christopher Heath, F.R.C.S. They also have in the press a work on "Maternal Syphilis, including the Presence and Recognition of Syphilitic Diseases in Women," with illustrations, by John A. Shaw-Mackenzie, M.D. Lond.

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Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANDERSON, J. LINDSAY, M.B., C.M. Glasg., has been appointed Dispensary Assistant Surgeon to the Royal Hospital for Sick Children, Glasgow.

BETHELL, A., M.R.C.S., has been re-appointed Medical Officer of Health by the Bridgnorth Rural District Council.

BURNETT, L. B., M.B., B.S. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed a House Surgeon to the Royal South Hants Infirmary.

CHITTENDEN, T. HILLIER, M.D., M.R.C.P., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

COATES, B. O., M.D., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

COUNIHAN, RANDAL, Dr., has been appointed Medical Officer of the Kilrush Union Hospital, vice J. E. Foley, resigned.

DAVIES, J. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Northern Sanitary Division by the Wrexham Rural District Council.

FRASER, H. E., M.A., M.B. Edin., has been appointed Medical Superintendent to the Dundee Royal Infirmary, vice Nathan Raw, resigned.

GALLOWAY, A. F., M.B., C.M. Glasg., has been appointed House Surgeon to the Royal Hospital for Sick Children, Glasgow.

GRAHAM, W., M.D. Irel., L.R.C.S. Edin., has been appointed Resident Medical Superintendent for the District Lunatic Asylum, Belfast, vice A. S. Merrick.

GRAVELY, W. H., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Cowfold Sanitary District of the Horsham Union.

HART, A. E., M.B., B.Ch. Camb., has been appointed Medical Officer for the Drypool Sanitary District of the Soulcoates Union.

HARTLEY, REGINALD, M.D., F.R.C.S., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

HITCHINS, FREDERIC C., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the Royal Hants County Hospital, Winchester.

HOFFMEISTER, WILLIAM, M.D. Heidelberg, L.R.C.P. Lond., M.R.C.S., has been re-appointed Port Medical Officer of Cowes by the Cowes Port Sanitary Authority.

HOSEGOOD, S., M.R.C.S., has been re-appointed Medical Officer of Health by the Swinton and Pendlebury District Council.

O'CONNOR, J. E., M.B., B.Ch. Irel., has been appointed Medical Officer of Health for the Port of Lowestoft.

O'DRISCOLL, Dr., has been appointed House Surgeon to the Cork Mercy Hospital.

RUSHTON, J. L., M.D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health by the Macclesfield Rural District Council.

SUMPTER, EUSTACE WYATT, M.B., B.S. Durh., has been appointed House Surgeon to the West Norfolk and Lynn Hospital, King's Lynn.

TEAGUE, D. G., M.B., C.M. Edin., has been appointed Fourth Resident Medical Officer to the Sussex County Hospital, Brighton, vice F. H. Sturdie, resigned.

THOMAS, D. L., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer by the Limehouse District Board of Works.

TORRENS, J., M.D., M.S., L.R.C.S. Irel., has been appointed Medical Officer for the Tynsall Sanitary District of the Seisdon Union.

WICKHAM, H. T., M.D. Edin., has been appointed Medical Officer for the No. 10 Sanitary District of Newport Pagnell.

WIGHAM, W. H., M.B. Durh., M.R.C.S., has been appointed Medical Officer for the Tenth Sanitary District of the Barnstaple Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary £150 per annum (with an allowance of £30 per annum for cab hire), and furnished rooms, fire, lights, and attendance.

BRISTOL DISPENSARY. — Two Surgeons to the districts of this Institution. Applications to Mr. H. M. Stock, Small-street-court, Bristol.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Out-patient Physician. Also Clinical Assistant.

CHICHESTER INFIRMARY, Chichester.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

COUNTY ASYLUM, Whittingham, Lancashire.—Assistant Medical Officer, unmarried. Salary £100 per annum, with prospect of increase, together with furnished apartments, board, attendance, and washing.

GENERAL HOSPITAL, Nottingham.—Assistant House Surgeon for twelve months. Salary £50, with board, lodging, and washing in the hospital. Also Assistant House Physician for twelve months. Salary £50, with board, lodging, and washing in the hospital.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians. Also Resident Medical Officer and Assistant Resident Medical Officer. Salary £200 and £50 per annum respectively, both with board and residence.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer for six months. Residence, washing, and board provided, and an honorarium given at the termination of the appointment.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Junior House Physician for six months. Salary £16 for that period, with board and residence.

PADDINGTON-GREEN CHILDREN'S HOSPITAL, London, W.—House Physician and House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.

PARISH OF ST. MARY, ISLINGTON. — Resident Second Assistant Medical Officer, who is also to act as Dispenser if required, at the Workhouse and Infirmary, St. John's-road, Upper Holloway. Salary £80 per annum, subject to statutory deductions, and rations, apartments, and washing. Applications to the Clerk, 131, St. John's-road, Upper Holloway, N.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—House Physician for six months. Salary at the rate of £40 per annum, with board, lodging, and washing. Also Resident Medical Officer for six months. Salary at the rate of £100 per annum, with furnished apartments, board, and washing.

ROYAL VICTORIA HOSPITAL, Bournemouth.—Ophthalmic Surgeon.

SCHOOL BOARD FOR LONDON, Offices, Victoria Embankment, W.C.—Medical Officer for the Gordon House Girl's Home, Richmond-road, Isleworth. Salary £40 per annum. Applications to the Clerk to the Managers, Offices, Victoria Embankment, W.C.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford. — Assistant House Surgeon. Salary £30 per annum, with board, lodging, and washing.

STOCKTON AND THORNABY HOSPITAL.—House Surgeon, non-resident. Salary £200 per annum.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant House Surgeon, unmarried. Salary £30 per annum, with board, washing, and residence in the hospital.

SWANSEA GENERAL HOSPITAL.—House Physician for one year. Salary £50 per annum, with board, apartments, laundress, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

BARCLAY-SMITH.—On Sept. 16th, at Bateman-street, Cambridge, the wife of E. Barclay-Smith, M.D., of a son.

EVANS—On Sept. 10th, at Seaton, the wife of Geo. E. A. Evans, M.R.C.S., L.R.C.P. Lond., of a son.

HALL.—On Sept. 18th, at Seacombe, Adelaide-road, Surbiton, the wife of Edgar A. Hall, M.B., C.M. Edin., of a son.

HOSSACK.—On Sept. 20th, at The Pentlands, Woodbridge-road, Ipswich, the wife of James Hossack, F.R.C.S. Edin., of a daughter.

MORGAN.—On Sept. 18th, at Hurdis House, Seaford, Sussex, the wife of W. Pringle Morgan, M.B., of a daughter.

MOULD.—On Sept. 19th, at Grafton House, Sandgate, the wife of Surgeon-Captain W. T. Mould, A.M.S., of a son.

MARRIAGES.

BROWN—EVANS.—On Sept. 16th, at St. Margaret's, Westminster, F. L. Brown, M.D. Edin., son of the Rev. George Brown, of Pau, France, to Rosalie, daughter of the late Manlius G. Evans, of Philadelphia, U.S.A.

EDWARDS—MCCALLUM.—On Sept. 15th, at Holy Trinity Church, Bedford, John Hammerton Edwards, M.D., M.A. Camb., of Aadneven, Bedford, to Grace Alice McCallum, widow of James Braddon McCallum, M.A., C.E., of Blackburn.

IRVINE—THOMAS.—On Sept. 15th, at the Oratory, Brompton, Gilbert Marshall Irvine, B.A., M.B., fourth son of Joseph James Irvine, The Hollow, Mountmorris, co. Armagh, to Mary, only daughter of the late John Thomas, of Cork.

DEATHS.

CARNELLEY.—On Sept. 18th, in his 41st year, at Fallowfield, Matthew Carnelley, M.R.C.S., L.R.C.P., of Ruddington, Nottinghamshire, the dearly loved son of William Carnelley, of Fallowfield, Manchester.

HARRAL.—On Sept. 14th, suddenly, at Thames Ditton, Surrey, Francis Blagdon Harral, M.D., aged 93 years.

WRIGHT.—On Sept. 17th, Strethill Harry Wright, M.D. Edin., of Ganarew Manor, near Monmouth, aged 51 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (29th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (30th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (2nd).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

WEDNESDAY (29th).—CITY ORTHOPÆDIC HOSPITAL (Board Room, Hatton-garden, E.C.).—5 P.M. Mr. Noble Smith: Some Typical Forms of Curvature of the Spine.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which was completed with the issue of June 26th, was given in THE LANCET of July 3rd. It is intended, in future, to include the Index and Title-page for each past half-yearly volume in the first number of the succeeding volume, as in the present case, instead of in the last number of the volume itself, as heretofore.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

ATTACK OF WITCH DOCTORS ON MEDICAL MISSIONARIES IN RHODESIA.—THE *Edinburgh Evening Despatch* of the 17th inst. gives an account of the attack of native witch doctors on Dr. and Mrs. Owen, of Zimunya, Rhodesia, where they had established themselves for medical missionary purposes. Zimunya is a lonely station, consisting of three huts and a tent on the summit of a high mountain in Mashonaland, about twenty-five miles from Umtali. Staying with them was a friend, the Rev. L. M. Caulfield, of Umtali, who fortunately had brought with him his collie dog. About four in the morning they were all roused by the barking of the dog, only to find the witch doctors making a fierce attack on the mission-house. Dr. Owen fired at the miscreants, but they made a hasty retreat, and unfortunately escaped. It was then found that the dog had been killed by the blow of an assegai. The Rev. Mr. Caulfield attributes the attack to the jealousy of the native witch doctors, who for many generations have attended the sick, and, it would seem, have been well paid for their services—sometimes, it is said, to the equivalent of £4 or £5 a case. They found their occupation gone and their reputation eclipsed by the enlightened treatment of Dr. Owen, for which no charge was made. It is inevitable that in Africa, as elsewhere, the witch doctor must be superseded by the educated physician, and we congratulate Dr. and Mrs. Owen on the happy ending of what might have been a serious disaster. We are not entirely without sympathy with the superseded local practitioners. They upheld the dignity of the art in one respect—they charged for their services, and it is open to them to say that their successful competitor owed his success rather to the fact that his advice was gratuitous while theirs was not. The missionary uses of medicine are most legitimate and beneficent, and in the case of the poor they must be applied without money and without price, but the more free from pauperising abuse it is the better. If the natives can pay, as apparently was the case with many of the people there, they should be required to do so. In introducing the virtues of religion into barbarous countries we must try not to introduce its vices.

Lungs.—We do not know of any book. Our correspondent should make inquiry locally.

WANTED A HOME.

To the Editors of THE LANCET.

SIRS,—I shall feel much obliged if any of your readers can inform me of an institute where a patient of mine can be placed as a permanent voluntary boarder. He is about sixty-five years of age, but mentally weak, not troublesome in any way, but nervous and despondent. His means are small, about 30*s.* per week.

I am, Sirs, yours faithfully,

Sept. 16th, 1897. H. N. W.

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A RAILROAD HOSPITAL CAR.

A NEW hospital car has been built for the Long Island Railway Company, U.S.A., under the supervision of Dr. Valentine, chief surgeon to the company. In exterior appearance it resembles an ordinary Pullman car, but the internal arrangements are adapted to the needs of those who may be the victims of a railway accident. The car is fitted with seventeen cots, while in emergency hammocks can be swung from the ceiling; there is also a fully equipped operating room. The car is to be kept always in readiness for despatch to the scene of any accident that may unfortunately occur.

Mr. S. Gross.—"Text-book of Chemical Physiology and Pathology," by W. D. Halliburton, M.D., B.Sc. Lond. London: Longmans, Green, and Co.

"A CASE OF HEMICHOREA WITH APHASIA."

To the Editors of THE LANCET.

SIRS,—Dr. S. J. Ross, in THE LANCET of Sept. 18th, reports upon a case under the above heading. The clinical history is most interesting and raises anew a vast and much-trodden subject for discussion. Following the history come Dr. Ross's remarks upon the pathology and treatment, Gowers's theory of "lowered resistance on the part of the cerebral cells," and the "neurogliosis" theory of other authorities being submitted as the possibly true pathological cause; and, for treatment, *arsenic* is exalted by Dr. Ross as an absolute control power over course and symptoms—"a control which no other drug possesses." In justice to Dr. Ross I must add that he makes exceptions, and names chloral hydrate and bromide of potassium in the early stage treatment of convulsive or epileptiform varieties of chorea. The patient, a girl aged fourteen years, with a *rheumatic history* and a *well-marked mitral regurgitation*, is thrown from a cart. A few days later appear the following symptoms: "Marked cerebral instability ..... Dilated pupils ..... marked choreiform movements of the right arm and leg. Right knee-jerk exaggerated, left being normal. Sensation normal. Cardiac irregularity, mitral systolic murmur, and accentuated pulmonary second sound. Aphasia." These symptoms were successfully treated by arsenic and rest, and in six weeks the girl had recovered her speech power. Now, I submit, is "lowered cell resistance," or even "neurogliosis," a satisfactory or sufficiently clear an explanation of these symptoms? Or, again, is the statement that arsenic possesses over these symptoms "a control which no other drug possesses" to pass unchallenged? Without undue partisanship might one not point to this case as favouring Dr. Kirke and Dr. Hughlings Jackson's theory—"embolism"? Here we distinctly have cause and effect: (*a*) valvular incompetence, with, in all probability, old endocarditic vegetations; and (*b*) shock, displacement of vegetation and embolism, followed by definite cerebral symptoms. Now comes our "lowered cell resistance"—our "neurogliosis," which, passing through a definite six weeks' stage, ends in convalescence. Your space will not permit me to combat or quote the many hypotheses on this subject; but Dr. Ross's case seems so confirmatory of the "embolic" theory that I venture the above criticism. Of the value of arsenic in these cases there can be no dispute. It possesses undoubted powers over chronic "rheumatism," of "malarial" origin especially. But what about the salicylates? In chorea with endocarditis I have rarely failed to obtain definitely successful results with salicylates of soda; but, as I remarked in THE LANCET some years ago (July 9th, 1892), my experience was in the chorea of children and not in adults; and, finally, after all our arguments in favour of rheumatic, i.e., endocardial, embolism, "lowered cell resistance," "neurogliosis," &c., of what pathological significance have those cases of induced chorea—if I may so term them—where from the mere presence of one case in a children's ward others will arise, *de novo*, among the neighbouring children? I am well aware of the anatomical difficulty in supporting the "embolic" theory, and, also, having had in other days the immense advantage of Dr. Howship Dickinson's teaching, am aware that my much respected master held his own theory, "the widely spread hyperæmia of the nervous centres ..... induced by the 'rheumatic' condition," independently of any mechanical mischance. These (Dickinson) vascular changes and induced sclerosis accounting for the wasting, rigidity, and permanent paralysis. In view of all these theories, facts supported by clinical observation, such as in Dr. Ross's case, are of much value in elucidating the truth of this interesting pathological problem.—I am, Sirs, yours faithfully,

HUGHES REID DAVIES, M.R.C.S. Eng., L.R.C.P. Lond.
Bow, E., Sept. 20th, 1897.

Dr. Leopold Mayer is thanked for his offer, of which we are unable to avail ourselves.

QUINE'S PATENT SANITARY ASHBIN.

WE have had brought to our notice this useful backyard sanitary appliance, which was exhibited at the Sanitary Conference at Leeds, where it met with deserved approval. It is designed to obviate uncleanliness in and around the spaces where the ashbin is commonly kept. It consists simply of a scuttle let into a wall, which on releasing a bolt will tilt and discharge its contents outside into a barrow or cart for removal. The bin may thus be emptied without the dustman entering the yard at all and is closed to the outside until it is so tilted. The method is admirable, as it prevents the distribution of dust and garbage during the act of removal in the open spaces around the house, and the inconvenience of the scavenger coming into the house or yard is done away with. Objectionable smells arising from the accumulation of house refuse in this manner are avoided. The appliance is made by the Pendleton Sanitary Engineering Company, 1, Leaf-square, Pendleton, Manchester.

THE STERILISING OF DENTAL APPARATUS.

To the Editors of THE LANCET.

SIRS,—I had recently occasion to take a child, aged eleven years, to a dentist for the removal of a tooth. Gas was administered, and the child returned home apparently all right. The next morning the mother called on me and stated that the child had passed a rather restless night, and had some slight difficulty in swallowing, but did not seem feverish. I made a visit in the evening and examined the child's mouth. The wound in the gum was healthy, but there was a small, yellowish patch on the left tonsil which I had no hesitation in pronouncing to be diphtheria. On inquiry I elicited that the patient had felt her throat a little "sore" on the night previous to her having the tooth out. I called on the dentist and warned him of the case. Had this patient diphtheria at the time of her visit to the dentist? If so, then one can see what a potent source of infection the forceps, mask, tumbler, &c., can become, more especially in the case of children, unless they are thoroughly sterilised after each operation, and it is with the intention of putting dentists on their guard that I send notes of the case.

I am, Sirs, yours faithfully,
Sept. 21st, 1897. MARCUS GLANVILLE.

P.S.—I have just heard that the child has died in hospital from paralysis.

THE X RAYS AND THEIR APPLICATION IN DENTISTRY.

DR. W. J. MORTON recently read an interesting paper on this subject and exhibited a number of skiagraphs before the Odontological Society of New York. He believes that the x rays will be found of great value in diagnosis and open up a wondrous field for investigation and study. He says: "Each errant fang is distinctly placed, however deeply embedded within its alveolar socket; teeth before their eruption stand forth in plain view; an unsuspected exostosis is revealed; a pocket of necrosis, of suppuration, or of tuberculosis is revealed in its exact outlines; the extent and area and location of metallic fillings are sharply delineated, whether above or below the alveolar line. Most interesting is the fact that the pulp-chamber is beautifully outlined, and that erosions and enlargements may be readily detected." Many of these points are clearly shown in the reproductions of the skiagraphs in the *Cosmos*. We can readily believe in the utility of the x rays in dental surgery; thus in the case of a fang of a tooth having been forced into the antrum during an effort at extraction, it is often with the greatest difficulty that it is localised by means of the probe.

A NEW DEPARTURE IN JOURNALISM.

SUBSCRIBERS to *Le Temps* living in Paris are privileged to take part in the x-ray conferences with experiment which are held periodically in the offices of that journal. It is, of course, well known that, thanks to Professor Roentgen's discovery, many opaque things are rendered transparent, so any doubter who has been unfortunate enough to pass under the surgeon's hands for fracture can now satisfy himself that his case has been treated properly. On a late occasion M. A. Rémond, the engineer who is in scientific charge of the x-ray machine for the proprietors of *Le Temps*, presided at what may be called a surgical-control *séance*, when several individuals whose limbs had been broken and duly "set" *secundum artem* by qualified men came forward in order to have their fears either confirmed or allayed. There was, of course, no need to loosen bandages or remove splints; the searching rays pierced through these flimsy appliances with the utmost ease, and apparently all was found to be in order, for the record says nothing to the contrary.

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A GYNÆCOLOGIST'S LOCUM TENENS.

MEDICAL men returning home from a holiday are fortunate if they do not find that something has gone wrong with their practice during their absence. It is to be hoped, however, that none of our readers—many of whom are doubtless just now returning from abroad or from the country—may hear of such a very unpleasant fraud as that which has been perpetrated on Dr. Tauffer, professor of gynæcology in the University of Budapest, and his patients. During the professor's absence a country farmer brought his wife for advice. In the ante-chamber they saw a very solemn-looking gentleman of aristocratic mien, who, on their inquiries for the professor, informed them that he was the professor himself. He then listened to what they had to say and examined the patient, informing her that there was nothing very serious wrong. His fee, he said, was 10 gulden, which was paid. The next day the worthy couple bethought them that 10 gulden was a good deal for a single consultation and that they might as well have another for their money. On arriving at the professor's house whom should they see but the great man himself, who had so impressed them the day before, chatting familiarly with a cabman on his box. He did not, however, await them outside, but discreetly betook himself indoors. On coming up to the cabman the farmer remarked that he did not know the eminent professor could be so familiar. His surprise may be imagined when the cabman gave him a contemptuous look and said, "That isn't the professor; that's his butler." Of course, after this there was no more thought of a consultation—of a medical character, at least. The farmer wanted his 10 gulden back and sped to the police station, the result of his visit being that the butler was safely lodged in prison. It was then discovered that during his master's absence the butler had seen, examined, and taken fees from quite a number of patients, chiefly, of course, gynæcological cases. What the Hungarian law courts will have to say to such a proceeding remains to be seen. What the patients think of the matter may be imagined rather than described.

CONNAUGHT AS A HEALTH RESORT.

To the Editors of THE LANCET.

SIRS,—Now that winter is approaching a great deal is being written in THE LANCET and elsewhere about sanatoria and health resorts. The worst of these health resorts is that they are too far away, and are practically useless for the vast majority of invalids residing in Great Britain; besides, I am not aware that these so-called health resorts have ever been tested by a registrar-general. Health resorts and sanatoria to be of any use must be near at hand and easy of approach. It must have struck readers of THE LANCET who have perused the report of the Registrar-General of Ireland for 1896, lately issued, that the Green Isle is a salubrious place, especially the province of Connaught, the mortality of that large district of country being only 12·3. Now, I think there are few health resorts the wide world over that can show so favourable a bill of mortality as this. Connaught, it will be remembered, signifies the country possessed by the children or posterity of Con. Con—commonly called Con of the Hundred Battles—was monarch of Ireland in the second century of this era. The more ancient name of Connaught, however, was Olnegmacht, so-called from Olnegmacht, an ancient Queen of the Firbolgs. The country is noted for its varied and beautiful scenery, its numerous relics of long past ages, and for the important events which have occurred there. Old annalists tell us that the first colony that settled in Connaught was the Parthalanians, from Parthalon, their leader. Then followed the Firbolgs; after these the Inatha De Danaans, and subsequently the Milesians under the three Princes—the three brothers, Heber, Heremon, and Ir. The Milesians soon dominated Connaught as well as all Ireland. All these colonies were Scythians or Celts and spoke the same Celtic language, as did also the ancient Gauls and Britons. The Milesians invaded Ireland about a thousand years before the Christian era. The Inatha De Danaans, the predecessors of the Milesians, were a highly civilised people, skilled in arts and sciences, and possessing some knowledge of the healing art. O'Brien considers that the Round Towers were built by them for pagan worship and astronomical purposes. The Danaans gave the name of Inis Fail to Ireland, signifying the Island of Destiny, from a remarkable stone brought with them into Ireland called Lia Fail, or Stone of Destiny. For upwards of sixteen centuries the Kings of Ireland, sitting on this stone, were crowned at Tara, but in the sixth century the Lia Fail was lent by the Irish monarch for the coronation of his kinsman, Fergus, King of Scotland. The stone was never returned to Ireland, but was kept at the Abbey of Scone until it was brought to England by Edward I. and placed in the coronation chair in Westminster Abbey, where it now rests.—I am, Sirs, yours faithfully,

WILLIAM O'NEILL, M.D. Aberd., M.R.C.P. Lond., &c.

Lincoln, Sept. 13th, 1897.

A WANDERING NEEDLE.

A CORRESPONDENT has submitted to our notice the following interesting case: "The patient," he writes, "a woman, aged about thirty-five years, came into the surgery on the morning of Sept. 7th saying she thought she had a needle in her *left* arm. On examination I had not the slightest difficulty in ascertaining that such was the case, for I could feel the needle distinctly. It was lying in an oblique position in the forearm, near the wrist; the one end of it could be felt anteriorly and the other posteriorly. Consequently I had not much difficulty in extracting it. It proved to be a fairly stout needle with the eye end of it broken off, and measured just over one and a half inches in length. She gave the following history. Twelve months ago she trod upon a needle with her *right* foot, but it was not extracted. Her foot gave her little or no pain until about three months ago, when she thought she felt the needle there. She went to the General Hospital, Birmingham, and a skiagraph of her leg was taken, but nothing could be found, which can now be easily explained by the fact that by that time it must have left the leg. The extraordinary feature of the case is that the needle should pass from the right foot to the left forearm without causing the patient more inconvenience than it did." We agree with our correspondent that the case is an extraordinary one. The travelling proclivities of needles have often been manifested, but never in quite so striking a manner. How does our correspondent know that he extracted the same needle as previously entered the patient's leg?

Mr. G. Careles.—Our correspondent will probably find that Squire's "Companion to the British Pharmacopœia" will help him. There are also some very useful hints in Martindale's "Extra Pharmacopœia." "Selecta e Prescriptis" did not, so far as we remember, contain information on dispensing, except as to terminology, but chiefly formulæ.

ERRATUM.—Dr. A. E. Wright informs us that the sentence, "What is our measure of the alkalinity of *the* fluid which does not contain free *salts*" (col. 1, line 27, page 719), should read: "What is our measure of the alkalinity of *a* fluid which does not contain free *bases*."

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Sept. 23rd, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Sept. 17	29·75	W.	0·48	104	65	49	52	55	Cloudy
,, 18	29·57	N.W.	0·03	97	57	49	48	50	Cloudy
,, 19	29·75	N.	0·07	99	59	42	45	48	Fine
,, 20	29·83	N.	0·03	100	63	47	51	53	Cloudy
,, 21	29·71	W.	...	97	68	52	54	55	Cloudy
,, 22	29·91	W.	...	98	60	50	49	52	Overcast
,, 23	29·79	W.	...	106	67	51	54	56	Fine

During the week marked copies of the following newspapers have been received:—*Burnley Express, Cumberland Advertiser, Bournemouth Directory, Dundee Courier, North British Daily Mail, Cambridge Chronicle, Carlisle Journal, Newcastle Leader, Times of India, Pioneer Mail, Western Morning News, East London Advertiser, Manchester Guardian, Royal Cornwall Gazette, Middlesborough Evening Telegraph, Norfolk Chronicle, Leeds Mercury, Architect, Kentish Observer, Keighley News, Liverpool Daily Post, Westmeath Examiner, Eastern Morning News, Sheffield Independent, Builder, Luton Reporter, Bristol Mercury, North Wilts Herald, Leighton Buzzard Reporter, Ampthill News, Yorkshire Post, Ripley Advertiser, Dunstable Advertiser, Lowestoft Standard, Kidderminster Shuttle, Staffordshire Chronicle, Scotsman, Wolverhampton Chronicle, Birmingham Mail, Oldbury Weekly News, Hampshire Independent, Wallsall Advertiser, Sussex Daily News, Leicester Post, Salisbury Journal, Bridgewater Independent, Herald of Wales, Heckmondwike Reporter, Local Government Chronicle, Mining Journal, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Yorkshire Evening Post, Family Herald and Weekly Star, Montreal Sanitary Record, Reading Mercury, City Press, Public Health Engineer, Local Government Journal, Surrey Advertiser Gazette, Montreal Logos Echo, West Africa Lagos Standard, Birmingham Post, Bedford Standard, Mid-Sussex Times, Devizes and Wiltshire Gazette, Watford Observer, Nuneaton Chronicle, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Dr. F. J. Allen, Leeds; Messrs. Allman and Son, Lond.; Messrs. Arthur and Co., Lond.; Messrs. Allen and Hanburys, Lond.; Dr. F. H. Alderson, Lond.; Association for the Supply of Pure Vaccine Lymph, Lond.; Æsculap Bitter Water Co., Lond., General Manager of; Messrs. Armour and Co., Lond.; Messrs. J. and R. Archibald, Tillicoultry; A. D. L., Lond.

B.—Mr. W. H. Brown, Leeds; Messrs. Burgoyne, Burbidges, and Co., Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs. J. Bramley. Moore, and Co., Liverpool; Bovril Ltd., Lond.; Brin's Oxygen Co., Lond., Secretary of; Messrs. Brady and Martin, Newcastle-on-Tyne; Dr. Paul Bartholomew, Philadelphia; Sir J. Crichton Browne, Lond.; Mr. R. C. Brown, Lond.; Mr. W. H. Best, Ilford; Messrs. Baillière, Tindall, and Cox, Lond.; T. B. Browne, Ltd., Lond.

C.—Dr. W. Carter, Liverpool; Mr. C. G. Campbell, Saddleworth; County Asylum, Whittingham, Secretary of; College of Preceptors, Lond., Secretary of; Chichester Infirmary, Secretary of; Dr. J. J. Clarke, Lond.; Chester Free Library, Librarian of; Messrs. Crossley, Moir, and Co., Lond.; Cicero, Lond.; Chelsea Hospital for Women, Secretary of; Mr. T. Cooke, Lond.; Messrs. F. Comar et Fils, Paris; Mr. R. J. Colenso, Lond.; Mr. J. E. Cornish, Manchester.

D.—Mr. W. F. Dale, Welling; Dr. C. R. Drysdale, Lond.; Delta, Bristol; Dr. F. C. Doremus, Green Village, N.J., U.S.A; Messrs. H. C. Devon and Co., Lond.

E.—Mr. C. W. Edwards,

F.—Mr. C. Fleming, Worksop; Messrs. Fuller's, Ltd., Lond.; Messrs. J. S. Fry and Sons, Bristol; Dr. J. A. Fordyce, New York.

G.—Mr. A. W. German, Preston; Mr. W. F. Gardener, Lond.; Mr. G. Gresswell, Grimby; Dr. G. A. Gibson, Edinburgh; Messrs. A. Gallenkamp and Co., Lond.; Mr. M. Glanville, Lond.; Glasgow Royal Infirmary, Superintendent of; Grocer, Lond.

H.—Dr. G. B. Hunt, Lond.; Mr. W. L. Hubbard, Rugeley; Messrs. C. J. Hewlett and Son, Lond.; Herren Haasenstein and Vogler, Köln; Dr. T. W. Hime, Bradford; Mr. T. Holland, Lond.; Mr. D. P. Heatley, Edinburgh; Dr. D. W. C. Hood, Lond.; Mr. Otto Holst, Eastbourne; Mr. E. Huxley, Lond.

I.—Messrs. J. G. Ingram and Son, Lond.; Messrs. Ingram and Royle, Lond.

J.—Jarvis, Canada, Assistant Postmaster of; Messrs. Jones Bros., Clifton.

K.—Messrs. R. A. Knight and Co., Lond.; Mr. C. W. Krohne, Lond.

L.—Dr. J. A. Lindsay, New York; Mr. E. M. Little, Lond.; Messrs. Lee and Martin, Birmingham; Mr. R. Lake, Lond.; Mr. H. K. Lewis, Lond.

M.—Mr. G. J. T. Merry, Lond.; Mr. J. Mackenzie, Kirkby-in-Ashfield; Mr. C. J. Mayhew, Minster; Mr. D. Misell, Lond.; Messrs. C. Mitchell & Co., Lond.; Mr. B. G. A. Moynihan, Leeds; Mrs. R. C. Michell, Marazion; Dr. T. J. Monaghan, Accrington; Medical Society of Victoria, Melbourne, Secretary of; Messrs. Matthews Bros., Lond.

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THE ACTION AND USES OF SOME NEW SYNTHETIC REMEDIES.

LORETIN.

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The search for antiseptics has been conducted along various lines of investigation, and many substances differing greatly in chemical composition have been accredited with antiseptic properties at different times. Many of these have had an extended sphere of usefulness since Lister first began his epoch-making researches at the Glasgow Royal Infirmary. It will be remembered that in the early days, Phenol was the antiseptic almost exclusively employed in surgical work, but the irritation caused by its poisonous properties frequently set up the very conditions which it was desired to avoid. It has been found that Carbolic Acid is liable to become absorbed and thus to have a deleterious effect on the tissues of the body. At the same time that it kills the bacteria which produce the pathological conditions, it destroys the albuminous structures, thus neutralising its good effects in other directions.

The suitability of any substance as an antiseptic depends as much on its effect upon the tissues and its poisonous action if absorbed as upon its bactericidal properties. An antiseptic of the highest degree of excellence should be sparingly soluble, free from markedly irritant action, and not powerfully toxic. The toxic disadvantages of Carbolic Acid have induced many eminent surgeons and chemists to endeavour to discover a disinfectant that would combine all the advantages with none of the disadvantages of Carbolic Acid. The combinations of Iodine with coal-tar groups have been closely investigated because of the powerful antiseptic properties of Iodine. Iodoform was a useful offshoot from these researches. As an antiseptic it is not so powerful as Carbolic Acid, and in many cases it has proved quite as dangerous. Many surgeons now use it diluted very considerably with Boric Acid, and so endeavour to obtain its antiseptic effects without its toxic results. Iodoform has the great advantage over liquid antiseptics that, owing to its application as a powder, its action is maintained for a length of time without the intervention of any dressing. It falls short of the ideal antiseptic in two particulars, however. Its unpleasant smell is a great drawback to its use, and when it is absorbed, as it readily is, free Iodine is liberated, and symptoms of Iodism and gastric disturbances accompanied by nervous symptoms, such as loss of memory, sleeplessness, and headache, are liable to be produced. Its effect on bacteria, however, is not powerful unless it is employed in rather large quantities.

Several other preparations of a similar character have been tried to overcome these disadvantages, but the objection to all of them has been that they are either too weak in their antiseptic, or too strong in their toxic, properties. When two phenol groups have been combined it has been found that while the substances so formed have retained their antiseptic power, their toxicity has been lessened. The sulphonic compounds are special examples of this, but, with the exception of Loretin, they all have their attendant disadvantages.

Loretin is a Sulphonic Acid preparation of Iodine in combination with Quinoline, yellowish in colour, odourless, and soluble in water to the extent of only a little over 2 p/m. Its power of absorption into the system when applied to wounds is thus very limited, and consequently it has no toxic action. It is perfectly bland in its action on the skin, and instead of producing any eczematous or erythematous condition, has been found, when used as a dusting powder, a very suitable antiseptic application for the relief of these disorders. Its purity can be relied upon and it does not decompose except in the presence of chlorine, bromine, and certain decomposing organic substances. Symptoms of Iodism have never been observed during or after its use. *It is absolutely free from odour of any kind*, although it acts as a deodorant in a very effective manner.

Its antiseptic action has been demonstrated on various forms of pathogenic microbes. Thus the 2 p/m aqueous solution prevents the growth of the bacillus anthracis, bacterium coli commune, staphylococcus pyogenes aureus, and streptococcus erysipelatis. It can be applied undiluted or mixed with suitable vehicles. With collodion it forms a splendid combination and it blends readily and uniformly with Lanoline, or other ointment bases.

Loretin is a perfectly bland, unirritating, and efficient antiseptic agent. It produces salts when combined with sodium, potassium, or calcium, and these may be used for the preparation of Loretin gauze, which can be employed for dressing wounds. It is perhaps one of the best agents that can be employed for treating septic wounds such as those of compound fractures or suppurating sores. For use in solution it may very conveniently be employed by placing a quantity at the bottom of a large bottle and adding water. Occasional agitation will ensure the formation of a saturated solution of a strength of ·2%, a solution of very general utility in every variety of antiseptic surgical practice. The undissolved powder sinks to the bottom and is dissolved by subsequent additions of water. Loretin possesses properties of quite an exceptional character, and can be employed wherever the action of an effective, safe, and reliable antiseptic is required. Its manifest advantages of freedom from odour and absence of toxic effects ensure its very wide use as a substitute for Iodoform.

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An Address
ON
ETHICS AND INDIVIDUALISM IN MEDICINE.

Delivered at the Opening of the Winter Session of the Queen's Faculty of Medicine, at Mason College, Birmingham, on Oct. 1st, 1897,

BY SIR JAMES CRICHTON-BROWNE, M.D. EDIN., LL.D., F.R.S.,
LORD CHANCELLOR'S VISITOR IN LUNACY.

GENTLEMEN,—This is a day of salutations. We are met here, as are many other groups of men with pursuits or interests like our own in London and the provinces, to greet a new medical year, to welcome those who have come to join our ranks, and to exchange words of encouragement with one another. On such a ceremonial occasion it would not be appropriate, I think, for him who is made a mouth-piece of the hour to indulge in any disquisition on the special professional topics that engage his attention and with which he is no doubt most competent to deal, and least of all would such a course be justifiable when, as happens this evening, the speaker is interested in a very special specialty, recondite in its subject, complicated in its relations, and highly technical in its terms. I shall not, therefore, take advantage of the opportunity to inflict upon you a discourse on mental perturbations, or on the molecular commotions of the brain; nor shall I attempt to elucidate any point in nervous mechanism. I shall merely submit to you a few general observations suggested by my visit to Birmingham, and by the circumstances of this vigorous and flourishing medical school, a new session of which opens to-day. And in the first place, gentlemen, as a disinterested observer having some knowledge of many medical schools and not being personally connected with any one, I would congratulate you who are beginning or continuing your studies here, on the very favourable conditions under which these studies will be carried on. The history of your school is an instructive illustration of the rapid evolution of a useful and necessary institution. The germ of it, as your Calendar says, was planted just seventy-two years ago in a private house, where some classes were conducted by Mr. Sands Cox, but in three years that germ had sprouted into a medical school; in twenty-eight years it had grown so luxuriantly as to be deemed worthy of being fenced about by Royal Charter; and in sixty-seven years, that is to say in 1892, having meanwhile branched out in various directions, it blossomed into its present comeliness, as the Queen's Faculty of Medicine of Mason College. In little more than the allotted term of a man's life, an insignificant private enterprise has developed into a great and prosperous public seminary for medical education, fully organised and thoroughly well equipped in every department. So complete is your school, so adequate is the education it offers, that its students are entitled to ask that facilities should be given to them for the acquirement of degrees, and success must therefore be wished to the project which is now on foot to obtain the authorisation of a Midland University.

The advantages which your school derives from its union with Mason College are so patent and well known to you that I need not even name them; and the advantages which Mason College derives from its union with your school will, I am sure, be generously acknowledged by the representatives of its other faculties. At this very moment every medical student I am addressing must, I believe, experience a stimulus as well as a sense of pride in the knowledge that an alumnus of this college has attained to the distinguished position of Senior Wrangler at Cambridge; while the students in the faculties of arts and science cannot, I am sure, but regard with some sympathetic interest the admirable work in myology and teratology that being done in the anatomical department by Professor Windle, your accomplished and energetic Dean; the valuable researches into the functions of the suprarenal bodies that have been undertaken by Dr. Vincent; the original pathological observations that we owe to Professors Saundby and Barling; the ophthalmic studies of Mr. Priestley Smith; and the surgical achievements of Mr. Jordan Lloyd. It would be trite to discuss the actions and reactions of Mason College and the Queen's Faculty of Medicine upon each other, but I may perhaps be permitted to say a word as to the influence which seems to have been exerted on both by their surroundings. Institutions, colleges, schools, societies, have their distinctive characters, just as have individual men and women; and the distinctive character of Mason College and the Queen's Faculty of Medicine is, I should say, practical and utilitarian. The active, searching, contriving, empirical spirit of Birmingham has called both of them into being to meet urgent public wants, and has impressed its stamp upon them. The Founder of Mason College was undoubtedly moved to establish it by recollections of the difficulties he himself experienced in preparing for an industrial career, and by a desire to promote the manufactures of the town and district, and the original deed provided for scientific instruction only, with the addition of modern languages, which of course have a commercial value. The founders of the medical school, on the other hand, aimed at the education not of professors or devotees of science, but of expert surgeons and medical men qualified to practise their art. Both the college and the school have in recent years greatly enlarged the scope of their teaching, letters on the one hand and science on the other now taking a much more prominent place than they once did, but both are still dominated by a regard for the immediate economical requirements of the place and period.

The practical and utilitarian intent which I have ascribed to this college and school will no doubt be regarded by some as an opprobrium. We have it often dinned into us that it is knowledge "for its own sake" which we should pursue, without any concern as to its applications, but while not disputing this authoritative dictum I would suggest that there is room for all kinds of knowledge in this world, and that while knowledge for its own sake is good and may unquestionably lead to unforeseen results of the utmost value, knowledge for bread-and butter's sake is not bad, and must always have a primary claim in beings who have the pangs of hunger to appease. Pure science, erudite learning, and proud philosophy find, perhaps, their fittest homes in colleges and schools to some extent sequestered and remote from the busy haunts of men, while technics and science bearing on industry and the business of life will be most suitably located in great centres of population like Birmingham. Carlyle called Naseby field the navel of England, and Birmingham might perhaps be described as the medulla oblongata of the industrial world, made up as it is of a collocation of centres that are essential to the maintenance of crafts and manufactures in all quarters of the globe. Without the weapons, the implements, the machines, the fabrics that it pours forth, human activities would be paralysed in many regions, and any interruption of its functions would certainly have an asphyxiating effect upon the whole of this country. The atmosphere of Birmingham is keenly practical, and it is but natural that the institutions of Birmingham should have a practical complexion.

As regards the medical school here, the practical turn given to its teaching in harmony with the *genius loci* is worthy of all commendation. Its main purpose is not to fit out original investigators, but to arm and discipline those who are to contend with the forces of disease; and in order to do that it has, as science progresses, to insist more and more on laboratory, dissecting room, and clinical work. It is steadily increasing its laboratory accommodation, and you do not require to be urged to avail yourselves of the opportunities thus opened out to you. Nay, it occurs to me that a word of warning of an opposite kind may be useful, and that you should be recommended, in your addiction to laboratory work, not to under-estimate the utility of the systematic teachings of your professors. Lectures do not certainly play the prominent part in medical education that they did in my student days. In the University of Edinburgh thirty years ago we had to listen to lectures five hours a day five days a week. But while admitting that lectures were formerly overdone, while practical, experimental, and tutorial work was neglected, I cannot agree with those who would discard them altogether from our curriculum as mere slipshod versions of what is to be found in the text-books, or who depreciate their teaching power. The spoken word has a vitalising influence that is all its own, and oral instruction has physiological claims to the academic precedence which has been at all times accorded to it. In this bookish age a very large proportion

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of our acquired knowledge comes to us through the eye, whereas in bygone centuries the ear was the main, nay, the almost exclusive, channel for the importation of learning; and there can be no question that the invention of printing has to some extent modified the structure of the brain by diminishing the functional demands on its auditory paths and rendezvous. The increased use of one sensory centre and the diminished use of another, in connexion with cerebral activities of wide range and potency, must, during the development of the cortex and brain generally, have led to changes and deviations in the associative paths and internal convolutions linking and lying between the sensory and the motor centres. And thus traffic of a certain class having been diverted from the ear to the eye there must have been a broadening and multiplication of the high-roads and bye-ways leading from the visual centre in the occipital lobe to the central or distributive and the efferent or expressive centres, and a corresponding narrowing or abandonment of the routes connecting the aural centre in the superior temporo-sphenoidal convolution with them. Vision has become more and more the dominant sense in education. But although vision is the dominant sense, we must not rely upon it too exclusively, for even our simplest ideas are built up by contributions from all the senses, and those mental stores are most useful and available that can be readily approached by several different alleys. Entire dependence on a single avenue of sense may give very precise reactions graded in accordance with the intensity of one kind of stimulus, but the full and free growth of intelligence requires the well-balanced activity of all the organs of sense by which materials for distinction and comparison are supplied. All the secondary sensations that fringe our mental images enhance their working value and enable us to lay hold of them more readily, and the most perfect response is obtained from those cerebral centres that are invaded by sensory impulses of several different sorts. Clearness of conception, quickness of apprehension, and breadth of thought belong to the brain that has been thoroughly opened up, both in its auditory and visual tracts and their connexions, and hence the high significance of ear-teaching in education. There is sagacity in the Prayer-book exhortation to god-parents, that they are to call upon those for whom they are sureties "to hear sermons," and I am inclined to believe that the dialectic and polemical ability of my countrymen in Scotland is to be attributed in some measure to the voluminous pulpit utterances to which they had to listen in their boyhood.

I am not suggesting, however, gentlemen, that there will be anything of the nature of the sermon in the lectures that you will have to listen to in this college, and that will, as auditory impulses, after passing through masses of nerve fibres and throngs of cells, enter and illuminate your consciousness. Sound these lectures will be I have no doubt, cogent in argument, elevating in tone, but they will not be homiletical in character, but will necessarily deal with those direct observations and material problems and experiments that form the foundations of medical science and that have taken the place of the dogmas and speculations upon which it once mainly rested. All recent progress in medicine has depended on research and discovery carried on by physical and chemical methods. The mechanical principles that were first applied in anatomy, the mother science of medicine, to the explanation of the construction and movements of bones and muscles have been carried by the physiologist into every organ of the body and into the arcana of the tissues, and have been shown to be essential to the understanding of the changes that take place in them during the performance of their functions. And at the same time the aid of chemistry and electricity has been invoked to drive back step by step, and if possible to banish altogether, that vitalism which was at one time all but supreme in the domain of animal physiology. And now, not content with his corporeal conquests, the physiologist is pushing his mechanical methods into the realm of psychology, and is seeking by means of them to investigate the data of consciousness. Having by electrical stimulation and other experimental procedures localised sensory and motor centres in the brain, having shown that there is a definite order of development in the nerve tracts, and having disentangled to a large extent the paths of nervous impulses of various kinds, their halting points and goals in nerve cells, he is now eager to catch ideas on the wing and to examine them in the usual manner. Helmholtz, in his great works on vision and hearing, was the first to show how physics mount into physiology and psychology, and after him Weber, Fechner, Lotze, and Wundt have step by step pushed forward the parallels of the material accompaniments of thoughts and feelings. And quite recently a movement has sprung up in Germany to advance still further mechanical explanation of the facts of mental life, and to bring psychology, which has always been scientific in as far as it has observed and classified and analysed phenomena, into line with the exact sciences of external nature. Experimental psychology has been inaugurated, and research laboratories, in which the physical and vital changes that are associated with mental processes are to be measured and tested, have been established. Originating in Leipzig, experimental psychology has taken root in several other centres on the continent, has spread to America, where it has been eagerly adopted, and has at last made its way into England. The University of Cambridge has voted a sum of money to be devoted to investigations in connexion with it, and a few months ago a meeting was held in London to promote the establishment of a laboratory for its study in University College. The names of those who attended that meeting are a sufficient guarantee that the project which it approved will be successfully carried out. I have little doubt that suitable arrangements will be made for instruction in the new methods of psycho-physical research in University College, and that in course of time other schools and colleges—Mason College amongst them—will follow its example and afford facilities for studies in anthropometeric psychology. I have little doubt, too, that such studies will be fruitful of useful results, by widening the scientific basis of psychology and supplying us with standards by which to gauge the speed and duration of certain neural operations, the variations in these in different individuals, and the depth of certain mental defects. But at the same time I am disposed to think that exaggerated notions are entertained as to what experimental psychology can actually accomplish. Its field is, after all, a narrow one. It can never supplant self-observation and introspection as means of mental analysis, and must indeed always to a large extent lean on these. It is practically restricted to the measurement of sensations and movements and the gaps between them, or the simplest mental processes; and hitherto it has, it must be admitted, been somewhat ambiguous and indefinite in its declarations. For my own part I look with more sanguine expectations of light on the obscure problems of mind to comparative, ethnical, developmental, and pathological psychology—which may all, of course, be investigated by experimental methods—than to the new experimental psychology strictly so-called.

We all gratefully acknowledge the immense debt we owe to experimental physiology with its exact mechanical methods. It has dispelled myths and errors, supplied us with a body of precise and well-organised knowledge, and revolutionised our treatment of disease; and it promises in the future not only to augment our healing power, but to afford trustworthy guidance in education and in the regulation of some social relations. As it stands to-day physiology, it seems to me, offers a liberal culture to all who study it. An independent science itself, but in touch with all other sciences, it brings into exercise observation, judgment, and memory, while it passes in review questions of surpassing interest to every human being, and thus confers an admirable intellectual discipline while storing the mind with information that must prove useful in the conduct of life. I would be disposed to say that physiology might henceforth with excellent results enter much more largely than it has hitherto done into a general liberal education; that is to say, into the education of those who do not intend to follow medicine as a profession; and I would even suggest that the young men of Birmingham who are destined to carry on its staple trades might be worse employed than in attending a course of physiology in this college. I read the other day that the late Sir Isaac Holden attributed his invention of the square-motion wool-combing machine, which made his fortune and brought about a complete transformation in our woollen industries, to the fact that he tried to imitate as closely as possibly the movements of the hand of the hand-comber. On this physiological basis he laboured consistently, and on it he achieved success where many others had failed. And the human body, you may depend upon it, is a rich storehouse of practical hints of this kind—a storehouse of which physiology holds the key. It is an epitome of mechanics, and in its exquisite machinery the engineer, the artificer, and the

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inventor may still find, perchance, some vein of new inspiration. But apart from any such possible treasure trove, the study of physiology is well deserving of the attention of those who are to engage in arts and manufactures like those of Birmingham, for they will derive from it habits of thought, special insight, broad views and sympathies which cannot fail to be useful to them as producers themselves, or the superintendents of those who produce. But, whatever outsiders may think of it, there does not seem much danger that the study of physiology will be too lightly regarded by the medical student in these days. Its definiteness and lucidity appeal with special force to him, and its mechanical methods take possession of his mind at a very plastic age; and, indeed, the risk would seem to be that physiology, in conjunction with anatomy and pathology, may materialise his conceptions, bind him down to a purely mechanical interpretation of the universe, and so cause him to lose sight of truths which are not less valuable than physiological principles to the medical man. It is expedient that from time to time the medical student should be induced to raise his eyes from the test-tube, the microscope, or the galvanometer, and to fix them on a wider horizon; and, mindful of this expediency, I would ask you to allow me in what I have further to say this evening to point out to you that man, after all, stands above physiology, and that there is that in his nature which mechanical methods can never enable us to reach or appraise.

The revelations of comparative anatomy and the brilliant discoveries that we owe to experiments on animals have assuredly inclined us to take an animal view of human nature. Every tissue that enters into the composition of man's body has its analogue in the bodies of creatures far beneath him in the scale of being. Every organ with which he is endowed is seen in greater or less elaboration and completeness in the beasts that perish. Every function he exhibits is displayed in a rudimentary or fully evolved state by inferior organisms. And yet, notwithstanding all homologies and resemblances, there is a great gulf fixed between human and animal nature. Man, the breviary of all bygone evolution, stands pre-eminent in form, structure, intelligence, and, above all, in the possession of a moral sense. In his power of assuming the erect attitude and of extending and fixing the hip- and knee-joint when standing, in the development of his hands into instruments of prehension, and in the freedom of movement of his upper limbs, in the perfect poise of his head on the summit of the spinal column, in the high degree of sentiency conferred on him by his exposed integument, in the modelling and mobility of his face as an instrument of expression, man presents characteristics that are entirely his own. And in a still higher degree is he differentiated from any animal by the mass and structure of his brain, which (although exceeded in absolute weight by the comparatively simple brains of the elephant and whale, whose huge body mass demands large sensory and motor centres) is, in his civilised state, more than three times the weight of brain of the highest anthropoid ape—the animal that most closely approximates to him—from which again it is even more widely separated by the proportional development of its parts, by the complexity of its cortical structure, and by its richness in association centres. But it is by what are incorrectly spoken of as the functions of the brain, by his mental faculties, his reason and intelligence, that man is distinguished from animals far more than by visible cerebral differences. I say these are incorrectly spoken of as the functions of the brain, for they certainly cannot hold the same relation to that organ that movement does to the muscles or bile to the liver. The brain is a sensori-motor machine, concerned with the storage and liberation of energy, and it is contrary to the principle of the conservation of energy that will, or emotion, or ideas, which are immaterial agencies, should interfere with movements in nervous arrangements and disturb the balance between work done and the diminution of the intrinsic energy of the body and its contents. Nothing can be derived from motion but another motion, nothing from mental process but another mental process; and thus the facts of consciousness can never be explained by molecular changes in the brain, and all that we can do is to fall back on an hypothesis of psychophysical parallelism which assumes concomitant variations in brain and mind. There is a physical universe of which only a fragment is known to us. There is a psychical universe in a corner of which we live, and move, and have our being. We may picture these to ourselves as circles which impinge on each other at the first moment of conscious existence, which intersect more and more as life goes on, their largest intersection (including but a small segment of each) being reached when life is at its full, and which then withdraw from each other as old age sets in, and part company at death. But whatever image we may adopt, we must hold fast to the truth that mind and matter are distinct essences, irreconcilable in their nature, though mysteriously accordant in their operations; that only in the elementary processes of mind made up of sensory and motor elements has correspondence with physical changes in the brain been traced out; and that we are still without any cerebral explanation of those higher powers of mind which exalt man above the animal creation.

Without attempting even to sketch the intellectual and emotional characteristics which place human nature on a pedestal above all other nature, I would direct your attention specially to that moral sense to which I have already referred as a peculiarly human attribute, and which, as Professor Huxley has insisted, is not derived from the struggle for existence, but implies a reversal of the action that avails in that struggle. In his capacity as an animal man has achieved his success in the world by his superiority in certain qualities which he shares with the tiger and the ape; by his cunning, his power of imitation, his greed, his rapacity, cruelty, and self-assertion; but in his capacity as a social animal he has advanced from savagery to civilisation by the suppression of these qualities and the substitution for them of others of a very different kind—qualities such as sympathy, self-restraint, justice, and benevolence, of which we have no hint in any level lower than his own. In his advance into manhood he has created for himself an artificial, a social, an ethical atmosphere which he alone of living beings breathes. In his progress in civilised polity he has prepared for his species an ethical environment which powerfully modifies its characteristics and tendencies, and is in turn modified by it. In that environment what we call goodness or virtue is the potent force, and the survival of the fittest becomes the survival of the best—the survival, that is to say, of those best adapted not to material but to moral conditions of existence. A new standard has been set up. Better and worse mean no longer more or less adaptation to geographical surroundings for the time being, but more or less conformity to laws, rules, precepts, and sentiments of artificial origin and of everlasting obligation. Now, if we allow that certain rudimentary virtues, such as temperance or moderation in the indulgence of appetite and industry, may be of advantage to the individual and the race in the competition for life, it must still be maintained that morality proper only emerges when altruism, sympathy, or a desire for the happiness of others appears on the scene, and that in morality proper an entirely new principle is involved. Even if we allow that the moral sentiments, like other natural phenomena, have been reached by a process of evolution, we must still bear in mind that the immoral sentiments must have had the same origin, and that our preference for the one over the other can be found only in human intuition and experience. Moral sanction has not grown out of environment or outer relations or circumstances, but out of an element in human nature, the accumulated influences of individual men, and the initiative of certain great men who have from time to emerged from the mass of mankind and become active agents in differentiating the ethical environment around them and in all time coming. Everywhere in human history we discern not only the slow accretion of morality by the impalpable additions made to it by submerged millions, but its sudden upheaval from time to time by the workings of the spontaneous impulses of great men whose names stand for ever prominent.

This immensely energetic quality, greatness, genius, or heroism, to which so important a part is assigned, is a peculiarity, a departure from common form, and we must carefully distinguish between the causes which produce it and the causes which tend to preserve it. It is not an adaptive modification. It may be fostered, pinched, or blighted by environment, it is not produced by it. Its origin is to be sought in those internal molecular changes which give rise to variations. It is a divergence from the parent type due to influences operating upon the ovum and the embryo, and is independent of external conditions, physical or social. Neither in descent nor in personal vicissitudes is any adequate explanation of it to be discovered. The motherly theory of greatness, which only removes the difficulty one

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generation, does not bear examination in detail, for it can be shown that some great men had inferior mothers, and that those of them who had superior mothers differed from them just in those properties that made up their greatness; and the climatic theory is equally untenable, for greatness has not been tied down to any special meteorological conditions, but has appeared in all parts of the planet suitable for the habitation of the best human breeds. It is a sport, a new departure, what we call a spontaneous because an inexplicable variation—inexplicable at least by the biological causes which lie nearest at hand and which we commonly invoke. In every series of living beings that we contemplate, we are accustomed to look for the transition from term to term, by minute and insensible differences, or continuous variation; but we must not shut our eyes to the truth that in such series there are to be noted breaks, or gaps, filled by no transitional forms, but leapt, as it were, by discontinuous variation. Breaches of continuity undoubtedly occur in the evolution of living beings and of particular organs and instincts, and the recognition of such breaches and abrupt or transilient variations, as Mr. Galton has called them, removes a stumbling-block in the way of the acceptance of the evolutionary theory. There are in the animal kingdom many mechanisms and devices useful to their possessors in a state of perfection which while only partially developed must have been not only useless but disadvantageous encumbrances. Now it is clear that with reference to such structures natural selection could have afforded no protection during their imperfect and preparatory stages while they were advancing by minimal steps, and that we can only account for them by supposing that they appeared at once, fully formed by a volt of discontinuous variation. Environment is continuous and varies merely in degree, but species and organs are discontinuous and differ in kind; and it is difficult to understand how the former can be the cause of the latter. In studying discontinuity, realising that the missing links are infinitely more numerous than the existing ones, we begin to suspect that the chain of being may resolve itself into a series of rings disconnected but still somehow related, as evidenced by their form, size, proportion, substance and arrangement.

In plant life we have many illustrations of variation due to environment which disappear when the environment is changed, as, for instance, in the alterations which present themselves in marsh plants grown on dry land, and in lowland plants grown on chalk downs or mountains, and of spontaneous variations due to a deeper cause and unaffected by changes in environment, as, for instance, in the copper beech, an unaccountable sport from a green beech in a German forest which retains its coppery hue in the most widely different soils and climates, and the weeping habit in the elm and ash, a novel trait without environmental justification which is perpetuated under diverse circumstances. What in environment or in immediate ancestral conditions have we to thank for the double rose or Williams pear or Japanese chrysanthemum? It is all very well hypothetically to ascribe such variations to over-nutrition or under-nutrition or to say that variations group themselves in the probability curve, but the facts remain that certain individuals have stepped out of the parental type while innumerable other individuals also over- or under-nourished have proved true to it, that variable plants never cease to vary, that similar variations occur under dissimilar conditions, and that dissimilar variations arise under conditions nearly uniform.

In the animal kingdom variations of all kinds are abundant and multiform, some of them obviously due to surrounding conditions and some, as far as can be ascertained, not so; some built up by gradual, almost impalpable, increments, and some presenting all at once a large degree of originality. Our canine friends are a highly varied group, probably descended from several wild species, and amongst them we observe slight modifications due to habitat and selection of variations which can be traced up in diminishing proportion through a line of ancestry. With such variations we are familiar, but the sudden appearance of an Albino in a dark-haired family is a somewhat startling phenomenon, which apprises us, as Huxley said, that "nature is often brusque and makes leaps and bounds." Of this sort of advance examples are afforded by the hairy moor-hen, in which the feathers are, for no conceivable reason, destitute of barbules; by the Angoras amongst domestic animals—the goat, the cat, and the rabbit—in which the hair is long and silky; and by the "rhinoceros mice" found at Taplow, which were entirely naked and without hair except a few dark coloured whiskers. These variations were certainly not due to selection or environment any more than are those which we see daily in the human families of our acquaintance, in which a number of children born of the same parents and reared in practically identical conditions differ from each other in a remarkable manner in size, build, colour and mental capacity—in which, perhaps, an idiot and a monster (and we must remember that, as St. Hilaire taught, there is order in abnormality) are growing up side by side with a genius and a beauty.

As regards vegetable and animal variations alike—and among the latter we must include the great man—there are, it must be admitted, a large number for which no exciting cause can be discovered, and which must therefore be classified, provisionally at any rate, as spontaneous or accidental. Discontinuity in variation, of which species may be a standing monument, is not certainly in the environment; so we are bound to look for it in the living thing. And in this connexion it is well to remember Darwin's remark, that as regards variation the nature of the organism is far more important than the nature of the conditions. Those variations referable to the living being Darwin in the first instance described as due to chance, an incorrect statement, as he allowed, merely intended to cover ignorance; and to-day we are still obliged to speak of them as fortuitous. Taking the universe in its entirety, regarding all as "parts of one stupendous whole," such variations are included in the unity of the cosmos. But the cosmos is a wide word, and there is no inconsistency in holding that variations, although summed up in the nature of things, are not interpreted in the organic nature by which they are immediately surrounded. No doubt in a strict sense the great man is the product of his antecedents, but these antecedents in the absence of the great man himself could not have afforded any clue to his personality. Causes become apparent in their effects; and the great man being not a simple mechanical phenomenon, but a complicated problem of conscious life, is not to be explained by a reference to elements of a different order containing no trace of his characteristics. The combination of these elements in such a manner as to produce this particular result has to be explained, and that can only be done by taking into account the result itself. All ultimate explanation must look to the end and read back the nature of the particular result into the remotest antecedent. It must concern itself with the whole evolution, and rest on proof that there is an organic unity binding the whole process into one and making it intelligible; that there is evolution and not merely gratuitous metamorphosis. But of remote causes of this description science in its still purblind state does not take cognisance, and we need not, therefore, be surprised to find the most recent authority in this department, Mr. Bateson, whose compendious researches are a rich dower to science, dismissing the subject in these words: "Inquiry into the causes of variation is as yet in my judgment premature."

It is clear that variations, the cause of which are as yet inscrutable and beyond investigation, may still be conveniently spoken of as spontaneous, and the great bulk of variations fall under this description, while as regards these variations which, it is alleged, can be traced to diversified external conditions, to food supply, climate, use and disuse, pressure, &c., there still remains to be taken into account, when allowance has been made for all these, the power to vary, and to vary in such a manner that the symmetry and general balance of the organism are maintained. We are obliged to fall back upon a law of reproduction, involving, not only resemblance to parents, but individual difference from them; upon covert causes infinitely remote, setting up a tendency to vary as well as to repeat; upon a duplicity of the original vital impulse, whensoever derived, operating upon the totality of living beings from the commencement. And if we accept this view, and regard spontaneous variation as one of the fountains from which have sprung those beneficial differences which natural selection has adopted and accumulated, and if we connect it with established facts as to the order in which animal forms, and more especially vertebrates, have appeared in the long history of the fossiliferous crust of the globe in definite sequence, beginning with the lowest and culminating in man, we come to see something of "an increasing purpose" running through the ages. We may come even to acknowledge that evolution is a continuous revelation and variation a perpetual miracle. "The flowers," said Carlyle,

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"are eyes looking out upon us from an inner sea of beauty." May not the great man be a flash of illumination from an unsearchable firmament of wisdom?

But whatever his origin, the great man is an indisputable fact recurring with greater or less frequency. A wonderful complex of higher faculties not attributable to inheritance from either parent, or from any more remote ancestor, or to the play of investing forces or events, he comes with peculiarities which distinguish him from the average man and enable him to re-model the average man more or less extensively and powerfully. Selected by his environment, and moulded and biased by it in some degree in his plastic youth, he does not owe to it his essential qualities.

How little the genesis of the great man depends on his personal environment may almost, I think, be inferred from the histology of the brain. At the sixth month of fœtal life the cortical substance of the cerebrum contains neuroblasts equal in number to the cells present in it in its most mature state, that number being computed at 1200 millions. True, an enormous elaboration of structure subsequently takes place. The neuroblasts grow in size and change in shape, become nucleated and nucleolated nerve cells in which pigment is deposited. The cytoplasm of these nerve cells changes in chemical constitution, as shown by its reactions to staining agents. The cells undergo polarisation, and the neurons and then the dendrons are sent out. The medullation of different nerve fibres at different rates takes place, and there is a multiplication of tangential nerve fibres. The brain goes on expanding and becomes more complicated up till adult life, but whenever the number of its cells is determined its groundwork may be said to have been laid down and its ultimate plan to have been outlined. Now genius or greatness is unquestionably involved in the ground plan and elevation of the brain, and when it appears, therefore, it must have been potentially present at the sixth month of existence, when the muster of neuroblasts is complete; but up to the sixth month of existence the environment is uterine and of a singularly uniform description, affording no conditions equal to the differentiation of the genius from the average man.

In primitive times a great man born into any tribe or clan must have been to it just what a new and advantageous structural variation is to an animal. His greatness, courage, ingenuity, insight, and energy must have helped it in its tribal conflicts and conduced to its survival. And although, taking the tribe as a vital unit, the greatness of the great man could not be perpetuated as advantageous structural modifications are, yet might it be very far-reaching and, indeed, permanent in its effects. The example of the great man would be imitated by members of the tribe who were not great, a process which we see in operation to some extent amongst animals of gregarious habits, and his greatness would live in the traditions of the tribe and, in a manner exclusively human, influence the conduct of unborn generations, and thus determine at many critical epochs their tribal development. And in times not primitive the influence of the great man becomes more and more apparent. History is indeed a record of its interactions with the existing temperament, prejudices, and ideals of a people in certain physical conditions. In every individual life there are decisive moments when a choice has to be exercised that determines the whole future course of its current, and in every nation's life there have arisen decisive men who, by precipitating war or revolution or reform, or by their inventions, discoveries, or ideas, have irrevocably changed its career, have become factors in its environment, and deflected its advance. Would the United States of America have been what they are to-day had Columbus and Washington never lived? Would Europe be mapped out exactly as it is had Napoleon never aspired? Does not Italy owe its unity to Cavour and Garibaldi, and Germany its empire to Bismarck and Moltke? Can we believe that our insular position would have given us the sea power we possess had men like Drake, Hawkins, Frobisher, Blake, and Nelson never grown up on our shores? Have not men like Frederick the Great and Cromwell determined great changes in national life? Have we not seen nations stagnating for want of great men and bursting into vigorous efflorescence when a group of them appeared? Is it possible to believe that the differences between one nation and another, whether in intellect commerce, arts, or morals, depend simply and solely upon physical circumstances or geographical position? Can we credit it that, had the original stock of our English people been planted in the malarious forests of Benin, their descendants would have been to-day black, bloodthirsty, and treacherous savages, rejoicing in Ju-Ju, and that the late subjects of King Drunami, had their progenitors been located here, would have been now a wealthy, humane, and prosperous white people? Surely we must keep in mind the vastly preponderating influence of racial constitution and the manner in which this is differentiated from within as well as from without. We see nations stimulated and biased in every direction by their own offspring, and bearing indelible traces of the great men who have sprung up within their borders, and who have often exerted an influence far beyond national barriers. There is no Englishman to-day who does not in his thoughts or conversation bear the impress of him who sleeps at Stratford-on-Avon, who came like a meteor, but has stayed like a sun, the only genius who ever made universality a success. Scotland still stiffens with the fierce rigidity of Knox, and melts into tenderness at the songs of Burns. To say nothing of the founders of religions, men like Luther and Loyola have swayed mankind under the most diverse geographical conditions. Mr. Herbert Spencer is himself a conspicuous refutation of his own theory, for the influence of his truly original intellect, the making of which is not to be recognised either in the long story of the race or in the social state into which he was born, has proved a leaven in science, has permeated into the general thought of the time, and permanently affected social relations. So, too, Darwin has brought about an unexpected and radical change in intellectual government and created a critical epoch in science—a period of rapid evolution after an interval of quiescence. Would it not be correct to say that Arnold by his religious idealism has transmogrified the higher education in England? Hours might be spent in enumerating and defining the specific influences that great men have exerted on national evolution—men like Julius Cæsar and Marcus Aurelius, Charlemagne and Hildebrand, Raphael and Michael Angelo, Milton and Goethe, Voltaire and Rousseau, Gibbon and Hume, Bacon and Newton, Comte and Mill, Davy and Faraday, Ruskin and Carlyle, Watt and Stephenson. I shall content myself with one illustration near home, and I am sure I shall not transgress the rule laid down by the founder of this College, and worthy of all acceptation, that politics are not to be referred to in its precincts, if I say that we could all name a great name, a living statesman, an unmistakable product of Birmingham, who has transcended his antecedents, and by virtue of his individual endowments has improved the environment for all who live in his native city, has quickened our national life, and, setting at nought geographical restrictions, done something to consolidate a world-wide empire.

In the history of medicine every chapter might have as its heading the name of a great surgeon or physician. In the biographies of Linacre, Sydenham, Harvey, and Jenner distinctive steps in advance may be measured and connected with personal initiative; and in every branch of medicine and surgery as they are to-day, excellent though the work accomplished by the rank and file may have been, a few great pioneers have determined and guided progress. In my own department, neurology, it is certain that progress has hinged on the genius and labours of a few great men—Charles Bell, Marshall Hall, Claude Bernard, Brown-Séquard, and Hughlings Jackson; and I cannot conceive that it would have been in the forward position in which it is had anyone of these been missed out. Neither can I conceive that had any one of them failed to appear, some understudy or *alter ego* would have been supplied by the geographical and social conditions of the period to fill his place. At this hour we have amongst us in the circle of our profession a brilliant example of the great man who changes for ever the environment in which he finds himself. It will not be gainsaid that Lord Lister has once for all and profoundly influenced the practice of surgery and medicine. Without a forerunner except Pasteur, by methods strikingly novel, in the strength of a fresh variety of intellectual power, he has reached discoveries which have already given check to the cosmic process in certain directions, and which must ultimately benefit the whole human race.

We have spoken of the influence of greatness in the creation of environment, but we must not overlook the less conspicuous but more widely diffused influence of men who are not great but still possess individual initiative. Every man may be a great man in a small way, and leave his social environment better or worse than he found it. The arc-light, like genius, lifted aloft, scatters its radiance afar, and, like genius, is apt to flicker and splutter in doing so; but the

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glow-lamp, like the patient drudge, in its lower and narrower sphere, emits a useful and a steadier light, one glow-lamp differing from another in glory. And so each average man may not only fill his average place, but, by virtue of his little individual talent, do something to increase or diminish the momentum of the social movements that are going on around him and bring about, no matter on how small a scale, a re-casting of social relations. For each man is a variation, even if only in an infinitesimal degree, from all the men who have preceded him The zoological man in him is a settled affair, but the human constituent is still in a state of flux, and it is for the new combinations that it effects that we are constantly watching with such intense interest. Variations are, as we know, more frequent under domestication than in a state of nature, and have a far wider range in the civilised than in barbarous races of mankind. In the faces of our own country people we see far greater anatomical differences, a far richer play of expression, than is to be observed amongst negroes; and as regards some of the lower types of our species, it would almost take a shepherd with his eye trained in ovine physiognomy to distinguish one man from another. But the face is a screen on which are projected the dioramic—I might say the cinematographic—changes of the brain within, and it is the brain that is the great theatre of human variations in these days. Without referring to its intimate structure we can see in the fissuration of its surface that it has in every individual a personal identity of its own, while in the products which accompany its functional activity we find idiosyncratic differences, in every case. Sensations, ideas, emotions, active tendencies are the flora and fauna of the brain, and these, while subject in the main as regards their general character, their form, order, and associations, to the influence of heredity and environment, are yet constantly exhibiting new growths and features, random and discontinuous variations. We have amongst them many familiar types, but we have also startling novelties, hideous monstrosities, and beautiful and useful developments. And in this flora and fauna of the brain selection is ceaselessly at work—environmental selection—the climate for them is made up of emanations from other brains and what may be termed artificial or deliberative selections, which I wish to emphasize as the basis of that mental discipline which is so essential to all ethical life. We can within limits regulate our own brain crop. We can weed it and fertilise it, and we can do this by an exercise of that voluntary power which is our proudest attribute. Thousands of ideas shoot up in the mind for one that survives and becomes operative, and the one that survives does so because it is selected by the will. The real force of ideas, said Fichte, is not in the ideas, but in the will of the person who selects them as his.

I do not forget, of course, that the very existence of this will, for which I am claiming such autocratic power, is more and more ingeniously disputed as mechanical physiology advances; and you will, I am sure, be relieved when I tell you that I do not here propose to embark on another Arctic expedition or balloon voyage into the murky polar regions of determinism and free will. But as a practical physician I would just say that I look upon free will as as much a need of the individual and of the race as is fresh air, and that I should regard as a pestilential calamity any widespread abandonment of a belief in it. A sporadic case here and there does not much matter, but anything like a general lapse into downright predestinarianism must mean the extinction of ethics and a reversion to that cosmic process out of which we have with so much pain and effort worked our way. This argument—the argument *in terrorem* founded on the supposed consequences of a doctrine—is no doubt open to objection, but it is more so in relation to secondary and derivative beliefs than to those that are primary and fundamental. Mr. Balfour has made effective use of it in relation to Naturalism, and an appalling picture might be drawn of the results of universal determinism. The illustrations which we possess of its partial ascendancy in Mohammedan races—I say partial, for fatalism is never thoroughgoing—are sufficiently forbidding; and it may perhaps be a sufficient condemnation of it on the present occasion if I point out that its complete triumph would involve the disappearance of medicine as an art. It will be well for you during your curriculum to be on your guard against insidious suggestions of wholesale automatism, for there can be little doubt that the study of reflex action, investigated as it almost invariably is from below upwards, and not from above downwards, predisposes to that faith—an enervating faith—which reduces man to a mere pith-ball in the jet of the fountain of events, helplessly tossed aloft, heedlessly falling, ceaselessly moving, as if animated, and yet the mere plaything of external forces. Apart from all the mystifications of logic and clarifications of science we have just as good evidence for the freedom of the will as we have for our own existence. You will feel and know, when you come to think of it, that you are not, as Münsterburg would have you believe, a mere sequence of ideas, but have the choice amongst these, and that you are bound to exercise that choice in such a manner as to make your calling and election sure—utilising your gifts, recognising your responsibilities, taking advantage of your variations, and being responsive to your environment, thus fitting the place in which you find yourselves. Hold fast to the importance of the individual. Do not worry yourselves about the insignificance and evanescence of man.

You are here in an animal world and an ethical society; you are variations (each of you is a variation), the outcome either of ancestral conditions or of an inherent vital impulse; and you have been selected, you have not been found unfit for survival and condemned to perish. You have escaped the perils of the embryo, of gestation, and parturition; you have fought your way through the legions of pathogenic bacteria that lie in wait for infancy and childhood; you have survived the breakneck hazards of boyhood, and even football has not put an end to you; you have not as yet been devoured by the examination beast of prey; you have proved yourselves adapted to the climatic conditions in which you find yourselves, and have been able to provide yourselves with ample nourishment; you have struggled up into existence so far, and have shown that with individual traits in every case you are all more or less adapted to your environment. And now, selected, vaccinated, educated, you are about to enter upon an entirely new environment as students of medicine, an environment which will again select and sort you, and perhaps in a few instances—I trust a very few—reject you altogether; and which will at the same time remodel those of you whom it selects, and prepare you for still another and more trying environment which you will enter when you go forth from this College as practitioners of medicine. And in that environment by which you are now encompassed, and still more in that larger environment that looms before you, you will, I predict, discover that harmony with your surroundings and happiness for yourselves are promoted by keeping constantly in view the ethical nature of man, on which I have this evening insisted. For you the era of the "ape and the tiger," of tooth and claw, is past and gone. The instincts and promptings that were uppermost in that epoch, its selfishness, cruelty, ferocity, and destructiveness, are still to be seen at work in the human struggle for existence on every hand, and still assert themselves with greater or less vehemence from time to time in every human breast; but in civilised beings they are dominated and held in check, as we have seen, by a new principle that has intruded into human life, the ethical principle creating a sense of duty and enjoining goodness and virtue. And this ethical principle or categorical imperative of duty, as Kant called it, or conscience once awakened in a man can never slumber again, but if neglected or violated becomes itself the source of pangs worse than those which are attendant on the natural order of things. For your own advancement and happiness in life you cannot too soon cease to make an idol of the natural man, for the profession you have chosen is the outcome of quite another cult. It is the highest expression of the humanising process, as opposed to the cosmic process, and its great aim is to assuage the sufferings and heal the wounds of those who have been worsted and trodden down in the struggle for existence, and to mitigate the asperity of that struggle. In the cosmic process pure and simple the medical man is a troublesome meddler, promoting the survival of the unfittest, and protracting the miseries of the condemned. At a recent meeting of the Medico-Legal Society of New York, it was gravely argued that suicide is, under certain circumstances, to be professionally recommended, and that in cases of incurable, fatal and agonising disease the physician should be empowered to terminate life by what is designated "homicidal euthanasia." If you would justify your professional existence to yourselves, you must early put aside such extravagances and attune your ears to those ethical harmonies which mingle with the fierce discords of

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the fight, and which happily grow more and more audible as time rolls on.

I admit that it is not always easy to pay due allegiance to ethics. It takes some courage in those who have contracted the material tenets and tendencies which elementary studies in medicine are apt to engender, to admit, even in the company of Huxley, that the cosmic process has broken down and that we must go back to ante-evolutionary principles. It requires ethical strength to be ethical. Revolt has always had a charm for the young. Agnosticism has almost come to be regarded as a sign of intellectual virility, reverence as weakness of the knees. But ethical facts, which even agnosticism cannot relegate to the category of superstitions, stare us in the face, and an early recognition of their significance will help us to accommodate ourselves to our situation. Renunciation, self-discipline and respect for the rights of others and of the community not only save us from blank despair, but ensure the easiest adjustment to the existing state of things. To the medical man in actual practice a perpetual remembrance of man's ethical nature, of that in him which transcends the animal and makes for righteousness, of the union in him of *l'esprit divin* with *la bête humaine*, is of paramount importance. He has to minister to more or less ethical beings who will not be content to be treated as bits of mechanism, and the highest diagnostic skill and therapeutic precision will not save him from failure if he lacks sympathy with human suffering and frailty, and is unable to understand the emotional as well as the muscular heart. In his professional work, too, he hourly requires the support of ethical principles in himself, and of an ethical outlook to guide him amongst the subtle moral problems that are submitted to him and to support him in his resistance to the appeals of the natural man who is still the slave of his animal instincts and destitute of spiritual ideals.

Unhappily, the loose talk of the period and the literature of the day too often pander to the natural man, and extol the wisdom of following nature. It is fashionable not to be straitlaced, and great writers have not hesitated to tell us that it is the libertine who has grasped the true philosophy of life and that it is foolish to plague ourselves with remorse for acts dictated by desires of natural origin. One of our most powerful novelists, Mr. Hardy, has frequently shown a tendency to assimilate the moral to the natural, and, as Professor Seth, the present highly-gifted incumbent of the Chair of Logic and Metaphysics in the University of Edinburgh, points out, has in a conspicuous instance in his "Tess of the D'Urbervilles," sought not only to extenuate vice, but to transmute it into virtue by quoting for it a feral sanction and ensample. Tess, fallen from her innocence, is wandering in the woods, a prey to her own reflections, "terrified without reason" by "a cloud of moral hobgoblins." "Walking amongst the sleeping birds in the hedges," writes Mr. Hardy, "watching the skipping rabbits on a moonlit warren, or standing under a pheasant-laden bough, she looked upon herself as a figure of guilt intruding into the haunts of innocence. But all the while she was making a distinction where there was no difference. Feeling herself in antagonism, she was quite in accord. She had been made to break an accepted social law, but no law known to the environment in which she fancied herself such an anomaly." Now the meaning of this plainly is that the social or moral law is a mere convention, and that the true code of conduct is to be found in the woods and fields, a code in which, as I need scarcely indicate, the depths of iniquity may be legitimatised. A convention, no doubt, the moral law may be said to be, framed as it has been out of the tacit or verbal agreements of assemblages of human beings (and in the same sense some so-called animal instincts are conventions), but it is the convention that holds society together and prevents universal anarchy, and, therefore, it is lamentable to find it seriously impugned even by men of science. M. Letourneau, for instance, secretary to the Anthropological Society of Paris, contemplates with complacency the slow disintegration of the marriage tie, as evidenced by the gradually increasing number of divorces and illegitimate births in all civilised countries, and predicts that while monogamic marriage may continue to subsist, because the balance of the sexes makes it almost a necessity, it will be largely emancipated from legal restraints and become a free union, freely contracted, and, if need be, as freely dissolved. As a corollary of this freedom of marriage M. Letourneau tells us that the family tie must also disintegrate. This final collective unit of society—the family—must be broken up, and a larger collective unit—the State, the district, or the commune—must assume the *rôle* of guardian and educator of children.

I do not introduce to you such mischievous nonsense for the purpose of refuting it—that seems superfluous—but to illustrate the inevitable and pernicious consequences of including man in the strictly natural order of things and ignoring his moral obligations and to enforce my thesis that medical men are now more than ever in need of sound and definite ethical standards. I shall not be wrong in saying that, as the result of the wide dissemination of teachings and opinions such as I have quoted, the medical man is now frequently confronted by singularly confused and distorted moral views, the consequence of a kind of ethical astigmatism that is abroad. He is invited to give a professional prescription for incontinence or infidelity or a scientific indulgence to bow down in the temple of the great goddess Lubricity. He is even calmly approached in the hope of securing his assistance in a breach of the criminal law. It is not for him to be extreme to mark what is done amiss, for he comprehends better than others the infirmities of the flesh, and his pity shelters what his judgment condemns. It is not for him to scruple to adopt measures to prevent the spread of disease because, perchance, these measures might confer impunity on vice. It is not for him to censure or reproach those who seek his aid, however obviously their maladies may have arisen out of their own transgressions—that they are suffering is a sufficient passport to his skill. But it is for him when occasion arises to uphold the moral law, which is a bulwark of health as well as the chief corner-stone of felicity, and neither by connivance nor silence to countenance any infringement of purity of life. It is for him to inculcate, when the season serves, the injunction that closes the pathetic epitaph written by a wayward son of genius for himself:

> "Know, prudent cautious self-control
> Is wisdom's root."

Well, gentlemen, it only remains for me, on behalf of the seniors of the profession you have adopted, again to greet you on passing its portals, and in doing so we have nothing but words of good cheer to speak to you. We shall not, assuming the routine attitude of veterans toward beginners, tell you that

> "We, nearer to the wayside inn
> Where toil shall cease and rest begin,
> Are weary thinking of your road."

Rather we would assure you that we regard with envy the pilgrimage before you—a pilgrimage in which weariness is forgotten in the absorbing interest of the route—and that we would gladly share with you your toils, in order to be partakers in the enlightenment that is in store for you. We seem to be on the eve of great discoveries. The universe is not played out. The globe is not yet ripe for its fall. The film of organic matter that mantles on a portion of its surface is not an exhausted ferment. The possibilities of the future are infinite, and amidst the possibilities of the near future are rapid advances in our knowledge of disease and in our power of preventing it. And even if the discoveries we anticipate do not come in your time, you are still to be envied, for the career you have chosen is a beneficent and a happy one It may not bring you the rewards most coveted in these days of exorbitant luxury—piles of jaundiced metal for yourselves and bits of glistening carbon for your wives—but it will yield you an honest competency and the satisfaction of knowing that you have earned your wages. It may not raise you to social distinction, but it will reveal to you in time that there is one thing more precious than fame, and that is obscurity with work well done. Even the sad circumstances under which you must pursue your calling will not rob it of its charms. You will move daily amidst the dolorous shades of disease and will become familiar with the pallid visage of death; you will see more of sorrow and anguish than other men, and yet you will not abandon faith in life, nor will the springs of hope be frozen within you. In your incessant conflicts with the powers of darkness you will lose the dread consciousness of their stupendous power. In your practical efforts to do good, you will come to perceive "a soul of good in things evil." By the very fatigues and hardships of your lot a keener zest will be added to existence, for that bread is sweetest that is eaten in the sweat of the face. "The sovereign source of melancholy," says a brilliant Transatlantic philosopher, Professor James, "is repletion." "Need and struggle are what incite and inspire us; our hour of

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triumph is what brings the void. Not the Jews of the captivity, but those of the days of Solomon's glory, are those from whom the pessimistic utterances of the Bible come." It is idle men or men of studious and reflective habits that *tædium vitæ* chiefly visits, not those who have to wrestle with strenuous responsibilities. No doubt men of melancholy temperament, constitutionally insusceptible of happiness, enter the medical profession now and then; no doubt weakly members of it break down here and there under the trials and disappointments that are incidental to it, and become a prey to misanthropical gloom; but, taken as a whole, I maintain that the medical profession is, of all professions, the most cheerful and contented. Meetings of medical men are, in my experience, all but invariably characterised by geniality and good humour, notwithstanding acute differences of opinion. The doctor's home is for the most part bright with domestic sunshine. The doctor's heart is never soured, but overflows to the last with "the milk of human kindness." I could draw a contrast, but I refrain. Let me congratulate you, gentlemen, on your adhesion to what is an anxious and laborious, but an ennobling and satisfying profession. "The claims of the future," said Lord Beaconsfield, "are represented by suffering millions, and the youth of a nation are the trustees of posterity." The future is yours. The suffering millions cry aloud for help. In the faithful execution of the trust confided to you, you will reap "an exceeding great reward."

An Introductory Address

ON

THE NECESSITY FOR SPECIAL EDUCATION IN TROPICAL MEDICINE.

Delivered at St. George's Hospital at the Opening of the Winter Session, Oct. 1st, 1897,

BY PATRICK MANSON, LL.D, M.D. ABERD., F.R.C.P. LOND.,

LECTURER ON TROPICAL DISEASES AT THE HOSPITAL.

GENTLEMEN,—I have been asked by the authorities of this school to speak a word of welcome to those of you who to-day commence your systematic medical studies. I congratulate you on two things—one, your choice of medicine for your profession; the other, your choice of St. George's for a school. Though the medical profession is by no means a bed of roses, perhaps more than any other it is one which to him who follows it in the proper spirit is full of good things. It is intensely interesting; it is a recreation as well as a study; its influence on society is rapidly increasing; it is a fairly satisfactory means of getting a livelihood; and, above all, it is full of boundless opportunities for doing good. What reasonable man could wish for more? As regards your school, apart from its associations with the past—associations such as few can boast—I can confidently claim that of all the metropolitan medical schools none have shown of late years more energy, greater determination to keep with the times, or more far-sighted enterprise. Nor have the students been unworthy of their school, for St. George's men are known all over the English-speaking world as accomplished physicians and surgeons. More than this, and in a greater measure owing to the high tone of the school and of its social life, which has been carefully cherished by the teachers, they are known as good citizens, brave soldiers, loyal and devoted public servants, and, even better than that, as gentlemen. You come therefore to an *alma mater* of honourable repute; it must be your care to maintain and, if possible, to add to this reputation. In congratulating you on your choice of a school I do so on the strength of what, since I had the honour of being connected in a humble way with St. George's, I have observed here for myself. I have been especially struck with the energy I have already referred to and that foresight in the management. In every department I find these. Naturally the institution of a lectureship on tropical medicine has appealed to me more especially; but this is, I see, only one evidence of the spirit that runs through the entire management. Laboratories, museum, teaching appliances, and teaching are all of the best and most advanced description; and I am especially pleased to remark that the students, so far as my opportunities have enabled me to judge, are not slow to avail themselves of their exceptional opportunities. The mere fact of my being asked to address you on this occasion, I believe, is but another evidence of the desire of the authorities to advance, to extend, and to improve the training they offer. They seem to be impressed with the desirability of something being done for one of the neglected departments of medical education, for tropical medicine, and as they know the interest I take in this subject I have an idea that this is the reason why I have been asked to come here to-day. I fancy I am expected to ventilate the matter. This being so, the first remark I would make is, that the systematic teaching of tropical medicine, ere many years are over, will be universal in our medical schools. Those who can read the signs of the times and who are best able to judge regard this as inevitable. Why? Because our country is the centre of a great and growing tropical empire; and, second, because tropical disease in many respects is widely different from the diseases of temperate climates, which, practically, are the only diseases about which at present the student receives instruction. There are dozens of diseases more or less special to the tropics—diseases which demand special knowledge for their diagnosis and successful treatment. Rather over a fifth part of the medical graduates of Great Britain and Ireland practise in warm climates or, being in the army or navy, may be called upon at any time to do so. Surely if tropical practice is so different from practice here it is highly desirable that this vast army of medical men should be properly equipped for their special work. It may be said, and has been said, that as the principles of pathology and therapeutics are the same the world over they apply in India as well as in England. Quite true. But we have not to do merely with the principles of pathology and therapeutics. As a practical profession we are more concerned with their application which is quite another matter. Similar objections might be, and formerly often were, raised about giving special instructions in such branches as eye disease, skin disease, and so forth, but the advance of our art and the requirements of the public have long ago swept aside these objections. So it is now with the teachings of tropical medicine as a special subject, and so in the near future it will be. A principal reason why hitherto there has been so little done in this matter is this. Candidates for medical degrees know very well that they will not be asked any questions about tropical disease by their examiners, and so they have not demanded instruction on this subject. And the reason why questions are rarely put on tropical medicine is that the leaders of the profession, those who man our hospitals, who fill the teaching chairs, who examine for degrees, who grant licences to practise, who make the regulations for the education of the youth of the profession, are, in almost every instance, men who have never practised in warm countries, and who themselves have never felt the necessity for a wider and more practical knowledge of the diseases peculiar to these climates. Not having themselves felt the want, they have been slow to acknowledge that such a want exists, and slower still to apply the remedy. But ask those who are best qualified to express an opinion on this subject. Ask the medical men who have themselves felt the responsibilities of practice in the tropics, and more especially those of them who have endeavoured to follow recent developments in tropical pathology. Ask them if they do not think that the medical man who goes out to battle with tropical disease should have some special instruction and training for the very special and responsible work he has before him, and if they do not think that the medical authorities should take care that the men who do so go out to practise should be properly qualified so far as teaching can qualify. I am sure of their answer. Unfortunately, most of the men of tropical experience live and practise away from the great medical centres. They are hardly represented on the medical teaching, graduating, or legislating bodies, and so it comes that their opinions do not make themselves felt, and that a much-needed reform is delayed. It is more especially of recent years, partly in consequence of the enormous expansion of our empire and partly in consequence of the advances in tropical pathology which have signalised the last two decades, that the claims of tropical medicine have

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become urgent. Formerly the little that was known about tropical disease could be carried in a waistcoat pocket. But of late years so great has been the advance that nowadays the subject is quite as extensive and quite as special, so to speak, as ophthalmology, dermatology, gynæcology, or as any of those departments of medicine which claim and receive special teaching. More so. When the practitioner in this country is puzzled about a case it is an easy matter for him to call in someone known to be familiar with the class of case he is in trouble about. But in the wilds of Africa, in the islands of the Pacific, in lonely stations in India or China there is no consultant to fall back upon. The practitioner there has himself alone to depend upon. And woe to his patient and, if he has a conscience, to his future peace of mind if he is not up to date in his knowledge.

The course of instruction in general medicine usually received in this country is utterly inadequate to qualify for tropical practice. I say so emphatically, basing my assertion on my own experience, my own mistakes, and what I have seen and still daily see of the mistakes of others. Let me illustrate this by a few examples. Take that great scourge of mankind, greater, perhaps, than tubercle itself—namely, malaria. This is eminently a tropical disease. Every day the tropical practitioner is fighting it. Yet what does the student and future tropical practitioner actually know about malaria when he is stamped as qualified to practise his profession even in the haunts of this disease? He may possibly recognise a tertian or a quartan ague, and he may know that quinine will cure them. Ten chances to one his malarial patients know all that quite as well as he does himself. But could he, any more than his patients, tell a malarial remittent from an enteric fever; could he diagnose a pernicious malarial attack from cholera, it may be, from thermic fever, from apoplexy? He has heard of the malaria germ, but has he seen it; could he recognise it; has he been taught to find it for himself; to make use of the fact of its presence or absence in the circulation as an infallible means of diagnosis? What would an examiner nowadays do with a student who could not recognise and demonstrate the tubercle bacillus? He would pluck him. At all events, were I an examiner I would pluck him. And if I were an examiner and found that a student, intending by-and-by to practise in the tropics, could not recognise and demonstrate the malaria parasite I would do the same. For I know that the malaria parasite is just as important to him and his prospective patients as the tubercle bacillus is, and that the ability to recognise and demonstrate it is just as necessary for the tropical practitioner. In those terrible sudden forms of malaria which now and again will be sprung on him perhaps the only reliable means of diagnosis lies in ability to recognise the malaria parasite. Life hangs on it. Dr. Andrew Davidson, whose experience in tropical medicine has been very great, and whose judgment and knowledge are on a par with his experience, on my telling him I was to speak about these things to-day, and sympathising with my views, at my request sent me some memoranda on the subject. He relates a case which well exemplifies the necessity for knowing something about malarial disease before attempting to treat it. He writes: "I had not landed many weeks in Madagascar when I was called upon to see a patient who, I was told, had been suddenly seized with what was looked upon as an apoplectic fit. This was in the afternoon, and when I saw him about an hour afterwards he was lying unconscious, the body in a state of complete resolution. The skin was cool, the pulse and respiration were slow, and there was no stertor. His condition suggested cerebral hæmorrhage or thrombosis. It was, indeed, in a certain sense a case of thrombosis, for, as it turned out, the patient was suffering from the apoplectic form of pernicious malarial seizure, in which, as we now know, certain capillary areas in the brain are permanently or temporarily blocked by malarial parasites and pigment. The disease is by no means a rare one in malarious countries. It had long before been described by Torti. I had read in Graves's Lectures of the soporose or comatose seizure, in which fever is a prominent symptom. Here there was no fever, and the possibility that it was a malarial attack never entered my mind. What the precise brain lesion might be I could not decide. But something had to be done, and I saw nothing better than to place a drop of croton oil on the tongue, apply a blister to the nape of the neck, and warn the relations to prepare for the worst. I was gratified to hear next morning that, after remaining ten hours insensible, the patient had recovered consciousness; but what surprised me most was that there was no paralysis. The patient's chief complaint, in fact, was the blister. In the afternoon of the same day the patient was seized with shivering, fever, and sweating. There could now be no difficulty either as to diagnosis or treatment. The patient probably owed his life to the fact that the apoplectic seizure did not recur and prove fatal, as it often does when treated on the lines I had followed. What I conclude from this is that grave mistakes would often be obviated by special instruction in tropical medicine." Dr. Davidson remarks: "Experience, no doubt, is a good teacher, only the fees are very heavy." The microscope would probably have diagnosed this case correctly, but then one must be taught how to apply it.

I could relate from my own experience many similar stories illustrative of the danger to life with which a working experience in malaria has been bought. As with malaria, so with many less important, though nevertheless very important, tropical diseases. What, I would ask, does the student learn of practical value about beri-beri, a disease which, if he is to practise in the tropics, he is almost sure to encounter often enough, although he may not recognise it when he does come across it? Beri-beri is a very important malady. Occurring both endemically and epidemically it annually kills its thousands and tens of thousands. It makes the settlement of many fertile lands almost impossible. It kills off the planters' coolies like flies and makes his plantations unprofitable. It fills the hospitals and is a downright scourge in some of the fairest lands of the earth. But it is a disease which can to a great extent be prevented; and it is a disease which can by proper management be robbed of much of its danger. Its recognition, therefore, is of the first importance. Many times, in beri-beri perhaps more than in most diseases, early and correct diagnosis means the saving of life. When I first went to the east all I knew about beri-beri was its name. This I had sometimes seen in books. I had wondered at its quaintness; perhaps, medical student-like, I had waxed facetious about it and had punned upon it. So little did I know about beri-beri that I believed some medical writers who said that it was a kind of anæmia. Examiners, I was told, were not likely to ask any troublesome questions about the symptoms, pathology, or treatment, so I skipped the chapter on beri-beri in "Aitken's Practice of Medicine" as being for my immediate purpose useless. Students then, as I suppose students now, worked to pass their examinations as their primary object; to learn their profession was altogether a secondary affair. Little wonder, therefore, I failed to recognise the disease when I first came across it. I well recollect my first case, and the horror and the shame with which it filled me, and still fills me. I was then in practice in Formosa. One day I was called to see a Chinese clerk employed in a European firm. I had known him well as an active, obliging young fellow. I found the patient sitting propped up in a chair, short of breath, dropsical from head to foot, with a cardiac bruit, irregular, tumbling action of the heart, and complaining of a feeling of distress in his chest. As there was no albumin in the urine, and as there was a loud bruit with manifest disturbance of the heart, I felt convinced it was a case of heart disease, and from other circumstances in the case one which treatment would benefit. I prescribed and gave directions, and went away feeling, and probably expressing by my manner, that we Europeans knew a great deal more about disease than the old Chinese doctor who hitherto, with the assistance of the village idol, had been treating the patient. Next day I went to see the lad expecting to find an improvement. I thought as I passed the door that there was a strange hush about the house. I entered what was my patient's room. On the bed, covered with a blanket, there was something long and rounded and still, which explained the hush I had noticed; and so I left the house sadder, wiser, and, I trust, humbler than I did the day before. Some years later, being then in general practice at Amoy and in charge of a large native hospital, I used to see a number of Chinese soldiers who came to hospital suffering from what appeared to me, in my ignorance, to be locomotor ataxia. Some could hardly walk, others could just stagger into the out-patient room, and some had to be carried in. The significance of the knee-jerk symptom in spinal disease was then a new discovery, and in those days was regarded as a sure sign of locomotor ataxia. In all of these soldiers the knee-jerk was absent, and all of them exhibited what I took to be ataxic symptoms. If you would criticise

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my diagnostic acumen please bear in mind that in those days peripheral neuritis had not been invented. However that may be, I diagnosed these cases as locomotor ataxia, prognosticated that they would never recover, declared that there was no immediate danger to life, put them to bed, and prescribed strychnine in various forms. But by-and-by, in utter disregard of my prognosis and of my reputation, in the course of a month or two some of those soldiers whom I had regarded and pronounced as hopeless cripples were walking about; some had even returned to their military duties. This is the pleasant, not to say the funny, side of my mistake. There is another side, however—one not quite so funny. A good many of these patients died—died suddenly, just as my dropsical Formosa patient had done. I was mortified as well as puzzled. What was the nature of these cases? My books did not help me. I noticed that whereas some of these paretic patients were wasted to shadows, others were swollen and œdematous. I also noticed that in most of them the muscles, especially the calf muscles, were tender. Occurring as this disease did as an epidemic, and confined to a very limited area (for most of the cases came from a damp, ill-constructed fort, the casemates of which served as a barrack), and knowing that the Chinese are very fond of pork, I thought that the muscle tenderness and the œdema might be symptomatic of trichinosis. I thought I might be dealing with an epidemic of trichinosis. Indeed, I went the length of searching the muscle for trichinæ. If they can help it the Chinese will not allow their dead to be dissected. I always entertained a great respect for what we in our civilised pride call "native prejudices"; but in this instance, in view of the importance of correct diagnosis, I thought I would run the risk of offending these for once. So with the aid of an old and seasoned native porter I smuggled one of the dead bodies into a piece of waste ground near the hospital, and there behind a wall excised a piece of muscle. Needless to say I found no trichinæ. In this way I groped about for a long time in search of a diagnosis. It was not till months had elapsed and not a few deaths had occurred that I recognised that I had to deal with an epidemic of beri-beri, and it was only then that it began to dawn on me that the poor dropsical fellow who had died in Formosa some years before had really died from beri-beri and not from heart disease after all.

For exactly the same reason—lack of proper teaching—the history of my education in the matter of beri-beri is that of most of the medical men of my generation who, in lonely places in the tropics, essayed to practise their profession. And I am grieved to say that in this matter even at the present day it is just as it was thirty years ago. My education in beri-beri was got by experience; the young medical man of the present day has to learn in exactly the same costly way as I did and in the same stern school of experience. As Dr. Andrew Davidson says in his letter to me, "The fees are heavy." Only the other day I got to know that there had been no improvement on the teaching of beri-beri in all these thirty years. This is how I came to realise the ugly fact. Beri-beri is very common, you may be astonished to hear, in the port of London, especially among the lascars and seedy boys who in many instances form the bulk of the crews of the large steamers trading to the east. The cases are often brought to the Seamen's Hospital. They come on written medical recommendation and are sent as cases of heart disease, kidney disease, almost anything but beri-beri. They are very rarely correctly diagnosed. Now the ship-surgeons who make out the certificates are usually men fresh from the schools and from their examinations, and therefore, presumably, well up in all that is newest in medicine. Here is a verbatim enumeration of some of their diagnoses: anasarca, rheumatism, pericarditis and fits, dyspnœa, cardiac disease, debility, asthma and anasarca, Bright's disease, locomotor ataxia, myelitis, tachycardia, apoplexy, paraplegia, progressive muscular atrophy, and, of course, hysteria. I transcribe these diagnoses from the admission registers. Not once in a dozen instances is the diagnosis correct. Now it does not matter so much whether the cases are correctly diagnosed or not provided they are sent to hospital. But there is every reason to believe that many of the cases of ship beri-beri are not sent to hospital, but are treated on board their ships, and that many die in consequence. When we admit a case of beri-beri from a ship we ask if there are any more cases of the disease on board and if there have been any deaths. We are generally told that there are no more cases on board, but that there have been deaths from heart disease, asthma, or some such name, which from experience we know under the circumstances stands for beri-beri. Sailors, we may be sure, are not shipped with active heart disease or with asthma such as would be likely to have a speedily fatal issue. I heard of one instance of a lascar who had been shipped in India as an effective seaman. Within a few weeks he died on board ship, and the cause of his death was officially logged as locomotor ataxia; as if locomotor ataxia ever ran its course in four or five weeks. The man died from undiagnosed beri-beri as many others have done. All this represents a very serious, not to say disgraceful, state of matters. Most of these deaths are avoidable. No beri-beric should be allowed to remain in the place, whether house or ship, in which his disease was contracted; to allow this is like treating a case of alcoholic neuritis with brandy. To treat alcoholic neuritis properly you must first diagnose it, and similarly to be able to treat beri-beri properly you must also first diagnose it correctly. But without special instruction or without an experience bought with human life there is as little chance of being able to diagnose the one as there is to diagnose the other.

Filariasis is another tropical disease which is often overlooked, and about which there are many absurd and even dangerous misconceptions. In most tropical countries in which the subject has been investigated it has been found that about one man in every ten is affected with blood worms. In some places the proportion is as high as one in three, in others one in two, and I know of at least two places where nearly every inhabitant is victimised in this way. Surely, therefore, it is of importance, seeing that these parasites give rise in many instances to grave disease, that the medical practitioner should know something about them, be able to diagnose their presence, and recognise their effects. But ten chances to one if one asks a student, or even a medical practitioner, to set about examining a patient for filariæ he will prepare a very fine film of blood, such as would be suitable for the demonstration of bacteria, and that he would set to work to examine it with a twelfth of an inch immersion lens and an Abbe condenser. Now, although there may be tens of millions of filariæ in the patient's blood the chances are they will not be discovered by such means. Most people think that when they have to make a microscopic examination the more microscope they have the better. As a rule, the reverse is the truth. Filariæ should be sought for with an inch objective, otherwise they will be missed. Though the individual filariæ are large as compared to bacteria they are relatively few in the blood. You require, therefore, to include a large field with your microscope to have a reasonable chance of finding them. If a sailor could command with his eye only the narrow horizon visible from a small boat he is not likely to see many whales in the sea, so he ascends into the crow's-nest at the mast-head, and, commanding there a wide view, he can see any whale that spouts for miles around. So it is in searching the blood for filaria—a large field is indispensable. But this is a self-evident fact hardly ever grasped by the student unless he has it actually demonstrated to him. He seldom arrives at it spontaneously. Now, exactly the opposite is the case for the malaria parasite. All this needs teaching, needs demonstration. The malaria parasite I tried to find for nearly ten years before, through accident, I finally succeeded. A Chinaman found my first filaria for me. I mention these things to show how necessary it is, if we would save time and make the best of our opportunities, to have someone to teach us even simple technique.

In connexion with filariasis and blunders in diagnosis from want of elementary instruction in tropical disease I may refer to a case which I came across. The patient was a handsome young fellow, who some years before had joined a regiment of horse artillery then in India. He got on very well for a year, liked his work, and was on the high road to promotion. One day he got a smart fever, and with the fever a pain in his left groin, which he now and for the first time noticed to be swollen. In due course the fever subsided; not so the swelling, which grew and grew until it became the size of a fist. It interfered with his riding, and so he consulted the regimental surgeon. The swelling was soft and to a certain extent reducible. Accordingly rupture was diagnosed and a truss applied. But the truss caused so much pain that it could not be worn. It irritated the swelling, and brought on attacks of inflammation and fever. Getting no better he went to one of the Presidency towns to consult a surgeon of experience in tropical disease. This surgeon recognised at once the true nature of

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the swelling, diagnosed the case as one of varicose groin glands, confirmed his diagnosis by an examination of the blood, which he found to be full of filariæ, and very properly advised the patient to throw away his truss and to give up soldiering. Now a very little instruction in tropical disease given to the regimental surgeon would have put him on the right track, would have spared this patient much suffering, time, and expense, and have reduced to some extent the military burdens of our over-taxed Indian empire.

One more illustration of my contention. In 1895 and again in 1896, Mr. Galgey, colonial assistant surgeon, St. Lucia, West Indies, sent certain valuable reports to the Government, part of which were subsequently published in one of the leading medical journals, pointing out that ankylostomiasis is very prevalent in St. Lucia and probably all over the West Indies, and narrating his experience of the wonderful efficiency of thymol as an anthelmintic. As many of you are doubtless aware, there is a form of pernicious anæmia common among negroes and the natives of hot countries generally. The patient, without obvious reason, becomes breathless, weak, anæmic, dropsical, and very likely, after a long and distressing illness, dies. Many years ago Griesinger showed that the Egyptian form of this disease was associated with—in fact, caused by—a blood-sucking intestinal parasite—the ankylostomum duodenale. In 1880, in consequence of the publicity given to this discovery by the epidemic of ankylostomum anæmia among the workmen in the St. Gothard tunnel, this fact of the relation of the ankylostomum to a form of pernicious anæmia was thoroughly established. In the same year Bozzolo introduced thymol as an anthelmintic in this helminthiasis. Experience in Jamaica, Ceylon, Java, Brazil, the Straits Settlements, and elsewhere confirmed Griesinger's discovery of the cause of this anæmia and also Bozzolo's discovery of its curability by thymol. But although these things were well known in Italy and in many parts of the tropics their importance was missed by the teachers of medicine in England, and as a consequence the medical men who went out even subsequently to 1880 to the West Indies went out imperfectly informed in a matter of the highest importance to a considerable section of the people committed to their charge. Thus our fellow subjects, the poor negroes, did not have the benefit of an important advance in medical science and in practical therapeutics until Mr. Galgey found, fifteen years after it was known in Europe, that ankylostomiasis was the cause of the anæmia of the negro, and that thymol could cure it. Who can estimate the number of lives that might have been saved if tropical medicine had been taught to our West Indian colonial surgeons and if they had gone out thoroughly informed on the subject of ankylostomiasis? Mr. Galgey writes that in the six years 1890–95 there were 72 deaths in the hospital of Castries, St. Lucia. In the year 1896—that is to say, since he diagnosed the nature of these cases and treated them efficiently—he informs us that there was not a single fatal case of this disease. From this we are entitled to infer that the seventy-two deaths from pernicious anæmia occurring in the preceding six years were from ankylostomiasis, and that these seventy-two lives might have been saved. That is to say, an average of twelve lives a year. Or, assuming that this mortality had been going on ever since 1880, the date of the discovery of the anthelmintic properties of thymol, we must conclude that in the hospital of Castries alone 180 people died whose lives might easily have been saved. But this is not all. There are four or five hospitals and dispensaries in St. Lucia, and as there is no reason to suppose that ankylostomiasis is confined to the Castries district of the island we are forced to conclude that in these fifteen years about 900 have died unnecessarily in St. Lucia. St. Lucia is one of the smaller West India islands. Although I know that thymol has been in use for some time in British Guiana, I do not know that, except in the hospital in Kingston, Jamaica, it has been generally employed in the neighbouring archipelago. I also know that the existence of the ankylostomum has not been recognised, at all events until very recently in many of the islands. The avoidable mortality from ankylostomiasis therefore for the whole of the West Indies during these fifteen years must run into tens of thousands. This is a serious indictment against our present system of medical education, and the worst of it is that what holds good for ankylostomiasis holds good for a dozen other tropical diseases, some of them perhaps not so serious as ankylostomiasis, but some of them even more serious.

I fear that, as so often happens in medical lectures, I have spent so much of my hour in describing the symptoms and pathology of this disease of the body medical that I have little time left in which to speak of that very practical matter, the treatment. I hope, however, I have convinced you that we are speaking of a very grave disease in our educational system, and that there can be no question about the diagnosis and the indications for active and prompt treatment. I have my own ideas about the latter, but as the responsibility in the case is serious I have called in a specialist of experience to prescribe. I need hardly say I fully endorse his prescription. Dr. Andrew Davidson writes: "I do not think that attendance on a course of lectures on tropical medicine should be made a part of the ordinary curriculum. It seems to me, however, urgently necessary (1) that a course of lectures on the hygiene and diseases of warm climates should be instituted in each medical school; (2) that a certificate of qualification in these subjects be granted by the licensing bodies after examination to those who have attended this course of lectures; and (3) that the Government should encourage the study of tropical pathology by giving a preference to those possessed of this certificate if equally proficient in other subjects, and that appointments made from home of medical officers for tropical and sub-tropical colonies should be restricted to men holding this qualification." If these suggestions are acted on, not only would vast benefits accrue to the natives of warm climates and to those Europeans who have to reside among them, but an enormous impetus would be given to tropical pathology and therapeutics, and, doubtless, indirectly to medical science in general. By instituting a lectureship on tropical medicine St. George's Hospital has done its share in encouraging this necessary reform in medical teaching. Other schools are following our lead; but be the schools ever so willing to second each other without the coöperation of the General Medical Council they can do but little. As Dr. Davidson suggests—and it is the General Medical Council that can alone give effect to the suggestion—there should be a special examination and some kind of diploma for tropical medicine, and Government should countenance and encourage it. If this reform be carried out of one thing I am sure, and that is that those of you who in the future may go abroad to practise your profession will bless the General Medical Council for forcing you to qualify yourself for your work.

Abstracts
OF
INTRODUCTORY ADDRESSES, ETC.,
DELIVERED AT THE
LONDON AND PROVINCIAL MEDICAL SCHOOLS
AT THE
Opening of the Session 1897-98.

UNIVERSITY COLLEGE, SHEFFIELD.

INTRODUCTORY ADDRESS BY DR. PYE-SMITH, F.R.S.

AFTER congratulating Sheffield on the union of Firth College and the Medical School to form the new University College, and on its approaching admission as a constituent of the Victoria University, Dr. Pye-Smith referred to the history of university education in England. The mediæval universities of Bologna and Padua, Salamanca, Paris, Oxford, Leipzig, and Wittenberg were succeeded at the revival of learning by the foundation of many new ones on the continent of Europe. The four national universities of Scotland were founded during the same period between the end of the fifteenth and the beginning of the seventeenth centuries. In the sixteenth century also were founded many of the colleges at Oxford and Cambridge and the University of Dublin. But it was strange that in the six centuries of national development which extended from the time of Magna

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Charta in 1215 to the time of Waterloo in 1815 no university was founded in England. These northern counties were comparatively poor and barbarous until modern times, but it was remarkable that there had been no University of York, of Norwich, Bristol, Exeter, or Canterbury. The two great secular professions of law and medicine had their own history and their separate development, and neither Pope nor King gave a third university to England. During the long and prosperous reign of our revered sovereign much had been done to make up arrears. University and King's Colleges and the University of London, Owens College at Manchester, Mason College at Birmingham, and the University Colleges of Bristol, Leeds, Liverpool, Nottingham, Newcastle, and now of Sheffield have successively arisen; and within the memory of all present the Victoria University (of which all present formed members) and the more recent University of Wales have been founded by Royal Charter. Enough probably had been done for the present in constructing the framework for higher education in England. Accumulated endowments were still needful and the working out of the federal type of university. If he might offer advice drawn from the chequered and still uncertain fortunes in London he would say—trust to local wealth and public spirit and avoid Government grants as much as possible. Beware of the utilitarian spirit; let adequate provision, personal and material, be made first for literary and scientific research, secondly for education, and thirdly for technical instruction. The reversed order was the easier, but in the long run he ventured to think the less fruitful. While the moderating influence of statesmen and men of business and the interest and support of past students and graduates would find a valuable place in the constitution, let the chief responsibility rest upon those actually engaged in teaching and research. And in settling provisions of charters, respective powers of colleges and terms of graduation, everything should be done to decide these questions for themselves or by independent visitors, royal commissioners, or arbitrators chosen by the Crown from men of experience in university matters, and not by the inscrutable counsels of ministers and the meddling of individual Members of Parliament. Dr. Pye-Smith then went on to speak of the two senses of the word knowledge, both of them the objects of attainment by students of a university. The desire for knowledge how to do something is historically the earlier and is shared to some extent by the lower animals. Its end was subjectively the partly physical, partly intellectual pleasure of exercising the muscles and brain, objectively the attainment of some useful object. Such knowledge was called skill or art, and the man who attained it was a skilled workman, an artisan, an artist, a master of his craft. The continuity of this kind of knowledge depended on tradition, and its improvement was by invention. Its acquirement was called technical education; its results were seen in the products of agriculture which feed us, in the ships and railroads which carry us round the globe, in the triumphs of steam and electricity, of preventive medicine and antiseptic surgery, in the matchless steel, the wondrous armour-plates, and all the vast output of the skilful industry of Sheffield. But there was another kind of knowledge—the desire for which came later in human history—the knowledge of what things mean, of how they consist, of why one event follows another. This knowledge was not active, but contemp ative, not practical, but theoretical, not technical, but scientific. Its end was purely intellectual; subjectively, the pleasure of exerting the mental powers by which the Creator had enabled us to understand a portion of His ways; objectively, the truth about things. We call this knowledge science; that is, not only acquaintance with the objects around us, or natural history (descriptive botany, zoology, mineralogy, geology, astronomy, and anatomy), but also some insight into their constitution and growth, into the laws of their origin, their actions, their decay and metamorphoses. This was called natural philosophy. Its improvement depended, not on invention of tools and methods, but on discovery of facts and their relations. It was only indirectly useful, and the pleasure it gave was in proportion to the intelligence of the man who felt it: "*Felix qui potuit rerum cognoscere causas.*" The abstract sciences seem to have arisen out of the needs of useful arts—geometry out of measuring the rising of the Nile, arithmetic out of counting the hosts of a Persian despot or the gains of an Indian money-lender, trigonometry out of setting landmarks, chemistry out of the alchemist's search after gold, botany out of materia medica, and anatomy out of surgery. Amply has the debt been repaid. At the present time all the progress in useful arts was called "scientific," and rightly so, for all depended upon natural science. Agriculture rested on the basis of organic chemistry, geology, and botany, navigation on astronomy, the working of metals on physics and chemistry, engineering on mathematics, medicine on physiology, and if ever the art of governing mankind was to be more than empirical it would rest on profound knowledge of paleontology and neurophysiology. What, let us ask more particularly, are the objects and what the limits of natural philosophy? We must give up as beyond human powers all knowledge of real existence, of the true nature of things, of an essential "substance" underlying all phenomenal accidents. On this quest the ancient philosophers went astray "and found no end, in wandering mazes lost." In the same labyrinth the nominalists and realists, and the acute mediæval schoolmen argued and deduced and syllogised. Their labour was not wholly lost, it sharpened men's wits and it set up a warning sign-post inscribed "No thoroughfare." If, however, it was determined to believe nothing but what your senses tell you, the first lesson of physiology was to distrust the perceptions derived from the eyes, ears, and fingers. Our senses do not bring us directly in contact with matter, they only offer us "signs," which by experience we learn to combine and interpret as connoting material objects. And suppose you have forced all phenomena, even those of thought, into a material formula, what evidence have we that matter exists except states of consciousness? So that extreme materialism and extreme idealism meet in an insoluble contradiction, like that between fate and freewill. No science is absolute, not even mathematics, for this does not deal with real objects, but with lines without breadth, with rods which never bend, and cords which never stretch. The only knowledge attainable by man was not abstract but concrete, knowledge, not of existence, but of phenomena. It depended not on deduction from axioms and postulates, but on generalisation from observed facts, not on syllogisms, but on experiments. The results of science were approximate, tentative, constantly liable to correction, expansion or limitation by fresh evidence; and they were not absolute, but only probable. Its method was first accurate, repeated, accumulated observation of facts, under the same and under varied conditions, next some generalised statement, then more intentional, varied conditions or experiments designed to verify or disprove the statement. Gradually the results of observation and experiment become of more and more general application, and at last some rule was found to be so constant and far-reaching that it was called a law. But this, again, was a word to beware of. It was a law only until it was broken. The constancy of species was such a law, and it was quite right for Cuvier and the best naturalists of the former half of this century to hold to it against the speculations of Oken and Lamarck and Erasmus Darwin and Geoffroi St. Hilaire, against the followers of the Naturphilosophie and the evolutionists before the greater Darwin arose. Lyell and Hooker, who disputed the doctrines of their eminent friend until he brought fresh and fresh evidence which inclined the scales of probability, were right up to that point to resist, after that point to accept, the origin of species by natural selection; for the duty of a philosopher was not to make a number of clever guesses, like the wise men of Greece, in the hope that one or other may hereafter turn out right, but to follow evidence to its most probable conclusion. Dr. Pye-Smith then referred to a certain kind of judgment which might be regarded as approximately true and certain, although it could not be proved as a scientific result. It related to matters of morals and of taste which have the consensus of varied and competent opinion. For instance, it might surely be said of the Œdipus Coloneus that it was admired by the highly competent fellow countrymen of the author at the time; that it had been admired by every generation since and in every country, and in proportion to the prevailing study of poetry in general; and that it was most admired by those who were themselves poets as well as critics. The same applies to all classical works of art, to Grecian sculpture, and to Italian painting. Surely we may say that it was as certain as any scientific fact that Sophocles was a great poet, Phidias a great sculptor, and Titian a great painter; that as long as human beings call roses sweet and the starlit heavens glorious, so long will the names, the renown, and the praise of these mighty makers endure.

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The proof of scientific statements was that they came true. The farmer within limits can count on the result of manuring his land and crossing his breeds of cattle. The engineer can, also within limits, rely on the strength of the bridges which he has constructed by aid of mathematical calculations. The physician can, again within limits, foretell the result of a certain morbid process and of a certain preventive or remedial agent. In conclusion Dr. Pye-Smith cautioned against excessive deference to authority, against the intrusion of metaphysics, metaphor, and rhetoric into scientific discussions, and against facile explanation instead of rigorous investigation. He dwelt on the importance of actual contact with materials and apparatus, and the direct study of the original statements of authors. He urged the value of putting all the energy and effort possible into every bodily or mental exercise. "In speaking, in writing, in reading, choose always the best, and in working or playing always do your best. Find the true happiness of energetic exercise of your powers. We know how in mountain-climbing, in rowing, or in any continued exercise the breath fails and the muscles are tired after a time; the temptation to cease effort seems irresistible; but we know also that if we go slowly and doggedly on, the second wind will come, the heart beats steadily again, and we find our powers renewed. So mental efforts have their dull and irksome periods, but if we go on *doucement mais toujours* difficulties yield and perseverance conquers. We have each of us his own appointed limits. If you train you will be able to leap many inches higher than you could at first, but the rapid progress of the first week or two becomes gradually slower, and at length no further practice, no effort of the will, suffices to increase the height you can jump. So it is with mental work; by effort and by practice we can each increase our powers and improve our results. But we shall find our quickness and accuracy of observation, our sureness of judgment, our insight and power of reasoning have their limits. I promise you therefore no impossible results. Each in his own order. You will still look up to the heights attained by Newton and Faraday, by Pascal and Lavoisier, by Helmholtz and Ludwig, with increased, not diminished, admiration, because you have climbed a little higher. But the prize is not in the result—*Labor ipse voluptas*. The strenuous exertion of the powers you possess, the faithful use of the one or the many talents entrusted to each of us,—this is the immortal garland to be won, not without dust and sweat. Each of us has his own powers and they are equal to the duties of each. We may not, we dare not, decline the contest or drop out of the race. For we are set like sentinels, who watch through starless nights and wait the appointed hour, and we can never enjoy the full happiness of active exertion of body and of mind, the pleasure of work and the pleasure of rest, the tranquil heart, the sunshine of the breast, unless we do our daily work

"'As ever in the Great Taskmaster's eye.'"

ROYAL VETERINARY COLLEGE.

INTRODUCTORY ADDRESS BY MR. D'ARCY POWER.

Mr. Power began his address by extending a cordial welcome to the veterinary students who were now commencing their work at the College. They had chosen their profession wisely, for veterinary science was advancing more rapidly than any other branch of the healing art. It was daily obtaining a higher place in the eyes of the State and of private individuals as one of the most useful professions both to the wealth of the country and the welfare of the community. He then continued: "Charles Sainbel, the founder of the Veterinary College, taught human anatomy a lesson and at the same time established his own reputation in England when he published his essay on the proportions of Eclipse (the great racehorse belonging to Mr. O'Kelly), who was never beaten, and who died on Feb. 27th, 1789. The essay is still in advance of the time, for it shows how animal mechanics can be expressed in geometrical terms, and it would be interesting to apply Sainbel's methods to the record-breakers who are now so numerous in the world of athletics. The observations of veterinary anatomists, too, explain many obscure points in connexion with the development and anatomy of man, especially in those aberrant conditions which are found to a greater or less degree in every body which is carefully dissected. The debt of human physiology to veterinary physiology is well recognised. In modern times and in this country it dates from the day in 1727, when Archdeacon Hales introduced a long tube into the femoral artery of a horse, and noted the height to which the blood rose in it. The importance of breeding has led veterinary surgeons to make a most careful examination of the generative functions in animals, and has enriched physiology with many facts of prime importance. It has demonstrated the possibility of artificial impregnation; it has settled the vexed question of superfecundation, and the recent work on epizootic abortion has set us thinking whether a similar condition may not occur sometimes in the human species. In like manner histology owes much to the study of animal tissues, for until recently nearly all the human tissues have been examined either in a diseased or badly preserved state. In botany veterinary science has long placed medicine under a debt of gratitude. All practical men, whether physicians or veterinary surgeons, have had occasion to study the effects of poisonous plants, and the results obtained from observations on animals have often been of signal service to the medical profession. Veterinary science has done more than this, for it has compelled botanists to study the most difficult but important natural order of the grasses, not only from a classificatory standpoint, but in such a manner as to indicate the economic value of the constituent genera. Veterinary medicine sometimes gives valuable hints to the human physician about the use of drugs and the cause of treatment of various diseases, which, though they are common to men and animals, are more common in animals. Until quite recently, however, the importance of veterinary science to physicians has never been better shown than in connexion with the life-history of the more common entozoa, some of whom use our bodies as an intermediate host in the cycle of their existence which they renew in cattle, dogs, or rodents. The surgeon has learnt somewhat less from the veterinarian than any of his brethren who practise upon the human body, yet even he has learnt a few principles from the veterinary surgeon which have stood him in good stead in the advancement of his art. The operations of the sow-gelder stimulated the early ovariotomists to practice a similar operation upon women, and encouraged them to persevere, in spite of the most disastrous results, until the operation was brought from a position of complete disrepute to the high place which it now occupies in the estimation of surgeons. Indeed, it has always been in principle rather than in detail that medicine has been indebted to veterinary science. Nowhere is this better seen than in pathology. Every first-rate pathologist is necessarily a man of science, a comparative pathologist with a wide knowledge of animals as well as of men. It is this fact that has made pathology the grandly progressive science which it has lately become. John Hunter was interested alike in men and cattle, but his successors for many years were mere morbid anatomists concerned with the details of morbid processes, not with their principles. It is only recently that we have outgrown this stage and have become pathologists in the true sense as disciples of Hunter, who must always remain our great master. In pathology human medicine has learnt from veterinarians the great lesson, long since known to the Preacher, but long since forgotten—"For that which befalleth the sons of man befalleth beasts, even one thing befalleth them; as the one dieth, so dieth the other; yea, they have all one breath; so that a man hath no pre-eminence above a beast." The better and wider knowledge of pathology possessed by the best veterinary surgeons often helps them to settle very obscure points in connexion with disease occurring in the human being. It is no wonder, therefore, that comparative pathology daily rises higher in the estimation of the medical profession, for to the thoughtful physician its problems appear to be identical with the most difficult which he is called upon to solve. Daily, too, we see that prophylaxis is the most important part of medicine, and it is exactly in prophylaxis that comparative pathology excels, though it has done good service in pointing out the part played by animals in sharing diseases which affect man. In doing so it has shown that animals may act as transmitters of disease, so that cats and pigeons in diphtheria, horses in influenza, and rats in the plague, must be considered as probable rather than as possible carriers of infection. Prophylaxis is of as much importance to a large stock-owner as it is to the head-master of a public school; and a thorough knowledge of preventive measures is even more valuable to a veterinary surgeon than it is to a physician. Only in exceptional cases will an owner consent to pay for the treatment of a prolonged illness in his stock, whereas a human being must be attended

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throughout his sickness, for he cannot be summarily slaughtered. But all preventive measures on a large scale require special knowledge and concerted measures. Special knowledge only accumulates slowly; concerted measures require the intervention of the State. After many years the Government in this country was made to feel the necessity of enforcing the application of sanitary measures and medical officers of health came into existence. In a tentative manner and very incompletely some attempts have been made to form a veterinary sanitary service. But too much is left to the initiative of local bodies, and what has hitherto been done in detail now requires to be established upon a broad groundwork. Such a service properly conducted would be of undoubted use to the community, whilst it would be advantageous to the veterinary profession. The whole of animal hygiene should be placed under the care of a veterinary sanitary service, and as no one can be much in advance of his time such a service for the present should be carried out along the lines which have been found most useful in the medical sanitary service, care being taken to eliminate or, if they cannot be altogether eliminated, to strengthen those points which have seemed to be the weakest in the working of the Public Health Acts. Such a veterinary sanitary service would not be hard to organise. Its existence is already foreshadowed, for the state has recognised that a medical officer of health cannot be omniscient. The Infectious Disease (Prevention) Act of 1890 allows the medical officer of health to be accompanied by a veterinary inspector or some other properly qualified veterinary surgeon to inspect the animals supplying milk to a suspected dairy. Such officers should be much more carefully trained to enable them to perform their duties efficiently, and after a proper course of training, being duly qualified veterinary surgeons, they should be able to obtain a diploma in veterinary hygiene. A specially qualified body of men being thus provided, places would have to be found for them throughout the country. At first, no doubt, this would be difficult on account of the expense, but the stock-owners form so large and important a body of men that as soon as they had satisfied themselves by actual proof that such a system saved them from loss they would readily assist in its extension. The districts over which the veterinary sanitary officers would have to preside should be large enough to occupy their whole time, whilst the remuneration should be sufficient to tempt the most promising of the young men to apply for appointment. There should also be provision for a reasonable security of tenure. Only the very best men should be advised to enter the veterinary sanitary service at first, for they will have to create the service. They will have to fight and to overcome many difficulties both of fact and prejudice. Not only will the public be opposed to them, but as some of their duties must necessarily overlap those of the medical officers of health there is certain to be some jealousy between the less competent and more narrow-minded members of the two services. The more highly educated and the more far-seeing members of the medical profession, knowing the disadvantages of dual control, will readily yield to the veterinary service those duties which seem especially to belong to it, and they will welcome a release from comparatively alien subjects, as it will allow them more time for the effectual performance of their own work, which is already sufficiently arduous. The duties of the veterinary sanitary officers would be to carry out the provisions of the Animals Contagious Diseases Acts and of the Dairies, Cowsheds, and Milkshops Orders of 1885 and 1886. They would also inspect piggeries, the slaughter-houses and butchers' shops, and they should be given effectual control over all meat exposed for sale. By a careful system, too, of notification, followed by immediate inspection, they would be able to control many contagious diseases, whilst a better system of registration and the destruction of ownerless dogs throughout the country would soon render hydrophobia as rare in England as is leprosy. The veterinary sanitary officers having to control large districts would necessarily require assistance, which would be provided by recruits from the class who now furnish the veterinary sub-inspectors—reliable men who have held positions of trust in the district, and who are therefore well acquainted with the local inhabitants and their customs. Even these men, however, should receive some course of training before they enter upon their duties. The veterinary inspectors would remain, for they have done good and useful work; but as vacancies occurred their successors would be selected from the most energetic and tactful of the veterinary sanitary officers, who would be tempted by the prospects of better pay and wider duties. The veterinary inspectors would form a more select body of men, specially qualified to sift evidence and fitted by the highest scientific training to cope with the more formidable outbreaks of epizootic disease. They would be responsible to the Department of Agriculture whilst the veterinary sanitary officers would be under the control of the County Councils. Both classes of officials should be wholly occupied in their duties and should be prohibited from private practice lest there should be even a suspicion that their interests as individuals might clash with the efficient performance of their public duties. The surest way to ruin the service would be to make a series of small appointments; but if a service of well-trained men devoted their whole energies to the study of veterinary hygiene we might soon obtain a great school of general or comparative pathology serviceable alike to the state, the community, and the individual. Many preventable diseases would be abolished, stock-owners would become more prosperous, and the average life of man would be still further prolonged."

LONDON SCHOOL OF MEDICINE FOR WOMEN.

INTRODUCTORY ADDRESS BY MR. J. GROSVENOR MACKINLAY, F.R.C.S. EDIN.,
SENIOR OPHTHALMIC SURGEON, ROYAL FREE HOSPITAL.

Mr. J. Grosvenor Mackinlay, in delivering the inaugural address at the opening of the winter session of the London School of Medicine for Women, disclaimed any intention of giving a formal lecture on the advance made in surgery, medicine, and therapeutics during the last few years. He merely wished to make some practical remarks based on his own experience. In speaking of the origin of the medical movement amongst women Mr. Mackinlay traced its growth and accumulative strength through the troublous times of its initial stages, to the recent rebuff met with at Cambridge, and the refusal of the Royal College of Surgeons of England to grant diplomas to the sex. He characterised such policy as short-sighted, and the fees were in consequence being diverted into the more liberal spirited academies and colleges of Scotland and Ireland, Belgium and Sweden, or Paris. His hearers should show the authorities what they can do without their help and by the aid of Newnham and Girton. In alluding to women's medical work in Her Majesty's vast dominions particular stress was laid by Mr. Mackinlay on that carried on in our Indian provinces, the paramount requisite for pursuing this being good health. He felt that he might speak with some authority on the great need for female practitioners in the East, since both his father and an uncle had spent several years in the Indian Medical Service; and here he characterised as derogatory to the profession those women who obtain but a few months' training at a hospital or dispensary and return to the East with scanty qualifications, small knowledge, a Bible, and a few instruments, posing as "lady doctors," but in reality merely taking the bread out of the mouths of the more competent and properly qualified women. Woman has now released herself from the old bonds, especially by her entrance into the medical profession, with all its attendant responsibilities. Many of the studies have to be carried out under objectionable, but unavoidable, circumstances; none the less, woman's advance in the profession has been sure if slow. Recalling the meeting at Nottingham, at which qualified ladies were elected members of the British Medical Association, Mr. Mackinlay paid a tribute to the lifelong work of Mrs. Garrett Anderson and Mrs. Scharlieb, mentioning also that past gynæcological authority, Madame Boivin. The late Albert Smith called medical students "an interesting race," although in his time no women medical students existed; his advice to them was, "Forget the deeper studies, and forget the red globules of the blood in billiard balls." Ladies could substitute cycling, tennis, or other exercises for the billiards. Considering the many eminent men connected with the Royal Free Hospital, the names of Mr. Wakley, Mr. Gant, and Mr. Rose immediately presented themselves. The speaker also dwelt upon the many changes in the building and in the *personnel* of the institution in the Gray's Inn-road, and alluded to the Hospital for Women and to the alterations now proceeding at the school in Handel-street. Of his own speciality—ophthalmology—Mr. Mackinlay treated very briefly, touching upon the far-reaching responsibility of the mode

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of procedure in eye diseases and of the terrible deprivation which loss of sight meant to the uneducated poor. In this branch of the medical art, nerve, cheerfulness, and kindness were the essential weapons for the fighting of the hard battle against optical derangements. Amongst the advice tendered by the speaker to the students present was that of being just to their colleagues and to brother or sister practitioners, of the necessity for truthfulness and lucidity in dealing with patients and their relatives, and the positive need of dogged perseverance in the work. Despatch and method were the soul of the profession, and the smallest detail of deportment, whether of voice or of expression, required to be studied. The demonstration of sympathy should never be repressed, and none having a heart should simulate indifference, this latter being the perfection of selfishness. In conclusion, the lecturer spoke in warm terms of appreciation of Lord Lister, and as a corollary suggested that Her Majesty might institute some order of distinction for the women members of the medical faculty. Verily did they merit it since many of them had to go through not only serious trials but often through imminent danger, possibly unrecorded and sometimes unrecognised, and for these there had, so far, been no especial reward. Many women had died at their posts from cholera, diphtheria, fever, and other forms of contagious disease. They could only hope that the day was not far distant when a "Red Badge of Courage" would be instituted for medical women, as well as for women nurses, and that the Queen would see her way to further ennobling them. At any rate, even if all could not attain to the dignity of a great doctor at least duty might be fearlessly and thoroughly performed which would ensure contentment. With Hazlitt all might then say when their time was over "Well, I have had a happy life."

SPORADIC CRETINISM.[1]

BY A. GORDON PATERSON, M.A., M.D. EDIN.

IT is now an accepted fact, I think, that sporadic cretinism is a disease, probably congenital, occurring in infants and children, analogous to, if not identical with, the disease of adult life termed myxœdema. In both the essential feature is either the absence or the deficient action of the thyroid gland. Curling was the first who, in 1850, drew attention to the fact that in cretins the gland was either absent or diseased. Hilton Fagge later stated what he considered would be the condition of an adult in whom the thyroid gland ceased to perform its functions—that is, he drew a correct clinical picture of myxœdema. If we allow for the fact that in infants and children the whole system, and especially the brain and bones, is undergoing rapid development and that in adults these processes have come to an end we shall find that we have to deal with a disease which is identical in both. In each disease the cerebral, motor, and trophic nervous systems are profoundly affected. In the infantile form the disease is probably due to some intra-uterine condition of either absence or mal-development of the thyroid gland. There are two theories propounded in regard to the reason why an absent or deficient thyroid gland should give rise to these abnormal conditions. The first is that the gland secretes some substance which is essential to the healthy and harmonious working of the central and peripheral nervous systems. By the want of this substance the nervous mechanism is deprived of a something which regulates the formation and deposition of mucin products, so essential a feature of both diseases, the mucin being thus deposited in the superficial and finer meshes of the corium, impairing motility and impeding nervous impulses, afferent as well as efferent. The second theory is that the thyroid gland excretes from the blood some materials formed in the body metabolism which by their retention cause a form of toxæmia, affecting principally the cerebral centres and the nervous mechanism concerned in mucin metabolism. Whichever theory may prove correct, the result is the same—viz., the production of some substance which counteracts the abnormal constituents of the blood. This is clearly shown by the rapidity with which the œdema disappears under treatment, and shows that the substance has a solvent action on mucin when deposited, and therefore in health acts on the mucin constituents, which, if left to pass freely through the body, become deposited as mucin. The thyroid gland being ductless rather points to a secretion than an excretion. Otherwise, how are we to account for the fact that implanting thyroid gland in the body causes an improvement? There cannot in such cases be an excretion, but rather a secretion of some substance neutralising the toxic materials in the blood and system. When the disease occurs in early childhood it is probably due to the gradual failure of an imperfectly formed thyroid gland. When the disease occurs in adults the cause is usually some abnormal condition of the gland which, though acting imperfectly, finally ceases to perform its functions. That the secretion of the thyroid gland exercises a powerful effect on the animal economy is evident if the results are noted when the extract of the gland is administered in myxœdema and in cases of obesity. The marked thinning that occurs by the removal of the œdema is palpable to the most casual observer. What the causes are which lead to the mal-development of the gland is not known. It has been suggested that cretinism might be due to what has been termed alcoholic conception. From the history of this case and of another which unfortunately died before treatment could be commenced the alcoholic factor must certainly be left out of account. Before I pass on to detail the case of the child I would like to say that it is interesting from three points of view. Firstly, the early age at which the disease commenced, the immediate and remarkable effects of the thyroid treatment, and the steady improvement which has been maintained to the present time—a period of treatment lasting for five years. Secondly, the fact that the mother gave birth in December, 1893, to a second (female) child, which was an exaggerated counterpart of the first and which only survived its birth twenty minutes. Thirdly, the very interesting fact that the mother in her third pregnancy was treated by thyroid extract from the beginning of the third month and gave birth in October, 1896, to a fine healthy female child. I shall now pass on to the case.

Infant treated with thyroid extract from the nineteenth month to the sixth year.—A male child was first brought to me, when eleven months old, the mother stating that from the seventh month it was noticed that he was backward and suffered from obstinate constipation, which did not yield to the ordinary simple remedies. As, however, the child had been bottle-fed from the seventh month it was thought possible that the constipation might be due to some error in the food. It was also further noticed that the fontanelles were very open and that the child was always cold. The mother said that the labour was the first, with no previous miscarriages, and was easy but slow, lasting twenty-three hours, there being no liquor amnii. The family history did not disclose any facts which in the least offered a clue to the disease. There was no consanguinity between the parents, nor was there any trace of disease associated with thyroid fault or syphilis. The mother was a healthy young woman, twenty-eight years of age, active and sober. The father was a tolerably healthy young man, twenty-nine years of age, of a pale complexion and black hair. He suffered occasionally from headaches and bilousness, which he attributed to want of exercise. He suffered from cold hands and feet. He was sober. When thirteen years old he had a diseased hip, but was treated for a broken leg till it was found out and put right. The only sign of the diseased hip is a slight shortening of the left leg. I was unable when I first saw the case to get photographs of the child. Those here reproduced were taken at the age of nineteen months, when the condition was practically the same as at eleven months. (See Figs. 1, 2, 3, and 4.) In the interval between the eleventh and nineteenth months the treatment was directed in trying to overcome the obstinate constipation, but without success. The illustrations bring out very well most of the details which I shall now describe. There were no signs of teething, he had never had diarrhœa, febrile attacks, or convulsions. His height was twenty-five inches; the head was large and dolichocephalic (Fig. 3); the anterior fontanelle was very open and the frontal suture distinct, the occipito-parietal junctions were widely separated, and on the right side there was a triangular space devoid of bone. The hair, which was brown with a reddish tint here and there, was scanty, fine, and short, the scalp was covered with a branny scurf, the face was of a dirty-yellow colour, but there was no

[1] A paper read before the Reading Pathological Society on April 15th, 1897.

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blush either on the cheeks or nose. There was occasionally ciliary blepharitis. The nose was a short pug, very flat and broad at the root, and the cheeks were thick and pale. The mouth was widely open (Fig. 1) and the tongue, which was very large — too large, in fact, for the mouth,—always protruding. The ears were moderate in size, but waxy. The neck was thick and short, but the sterno-thyroids were very distinct. No trace of a thyroid gland could be made out, but there was a slight swelling

FIG. 1.



Infant, aged nineteen months, showing protruding tongue.

over the right clavicle. There were no lipomata anywhere else. The abdomen was barrel-shaped and very tense (Fig. 2), and the superficial veins were very distinct. The whole body was bluish and mottled. There was a small umbilical hernia the size of a hazel nut. The limbs were hard, swollen, and lumpy, very cold, and purple. The mottling was most distinct from the elbows to the finger tips and from the knees to the toes. The hands were remarkably thick and hard from the solid œdema, which did not pit at all. There was a slight anterior curvature of the spine, but no signs indicative of rickets were present. There were no fatty or hairy growths between the scapulæ (Fig. 4). The skin was always dry and harsh, but there were no moles, warts, nævi, eczema, or ichthyosis. The secretion of sweat was almost entirely absent, saliva was abundant, but the nasal secretion was wanting. The muscular development was apparently extremely limited, as shown by the complete immobility of the limbs, but this was evidently due to the solid œdema preventing free action, for it rapidly disappeared on the removal of the œdema under treatment. The reflexes were normal as far as I could judge, the skin sensibility was fair, and sight and hearing were normal. The left testicle had descended into the scrotum, but the right one was still in the inguinal canal. This fact seems to negative the theory that the condition is primarily due to non-development of the sexual organs. The rectal temperature was 97·2° F. The child was extremely susceptible to cold and liked to be always near the fire The voice was harsh and blanketty. As regards mental development spontaneity was entirely absent, this being also probably greatly due to the œdema of the limbs. Intelligence was *nil*. Sleep was variable. There was great anæmia, but the appetite was good. The bowels, as already stated, were very constipated and the actions were putty-like. The liver and spleen were apparently not enlarged. The urine was clear, straw-coloured, and normal. The heart was normal, but the pulse was very feeble. The respiration was regular, but noisy, owing to the size of the tongue. There were no enlarged glands anywhere. Such were the typical signs of the disease at the age of eleven months. The only differences noted at nineteen months, when the photographs were taken—a period of seven months, during which no thyroid extract was given—were as follows. The anterior fontanelle was still very open, but the left parieto-occipital junction had closed up, and in the right a Wormian bone could be felt; all the sutures were closing up. There were still no signs of teething, and the hair was more abundant. The redness and veins of the eyelids had disappeared, as had also most of the veins of the abdomen. The abdominal mottling and tenseness were less—results due, I believe, to the fact that the child's circulation was better, owing to warm clothing and precautions against cold. The umbilical hernia was smaller, muscular action was better, but he could not sit up at all even with help and could only just move his limbs. He could still only drink while lying down, as owing to the size of the tongue the fluid escaped if he was placed in a sitting posture. The rectal temperature was 96°, and that in the groin was 95 8°. It will thus be seen that during seven months his condition had remained practically *in statu quo*. The thyroid extract was now commenced and consisted in the administration of seven drops of the glycerine extract prepared by Messrs. Brady and Martin, of Newcastle-on-Tyne. After the third dose the face appeared to be smaller, the tongue was perceptibly more in the mouth, and the hands were softer and showed fine creasing and wrinkles due to the removal of the œdema. Spontaneous action was greater, as shown by his rubbing his eyes and trying to grasp objects held up to him, this increased motility being undoubtedly due to the softening of the limbs. After the fourth dose he developed a coryza, and the extract was stopped, but, symptoms of bronchitis threatening, the extract

FIG. 2.



The same, showing umbilical hernia.

was again resumed, with the remarkable result that next day all the coryza and febrile symptoms had disappeared. After the sixth dose the tongue, though still very large, was wholly within the mouth and the pharynx could be seen; this had previously been quite impossible. The next remarkable point is that the bowels now became quite regular and the actions normal in appearance. The urine was not in any

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way affected. The most marked feature, however, with the exception of the diminution in the size of the tongue, was that the child had lost the feeling of coldness and no longer became cold when left alone in his crib; in fact, his

FIG. 3.



The same, showing shape of head.

temperature was always from this time practically normal. At the end of a week his limbs had become quite soft and pliable, and he could even sit up in his perambulator with a little help, and when put on the floor made attempts at crawling. At the end of a month's treatment he showed

FIG. 4.



The same, showing position in sitting.

signs of eight teeth and his colour had become natural. This rapid improvement during the first month or so of treatment has also been noticed in most of the published cases. The patient's condition at the end of five months' treatment

FIG. 5.



Showing condition after five months' treatment.

is well shown in Fig. 5. The anterior fontanelle was still unclosed. At the end of eight months' treatment, during which time he had continued steadily to improve, he had cut sixteen teeth, and his general appearance is shown in Fig. 6. The extract was now omitted and the child was fed on fresh

FIG. 6.



Showing condition after eight months' treatment.

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sheep's thyroid, half a gland being given once a day; this he continued to take till the end of 1895, when, owing to his not showing signs of talking, I returned once more to thyroid extract, this time in the form of tabloids (five grains), prepared by Messrs. Burroughs, Wellcome, and Co., one a day being given. Very soon he showed more progress in trying to make himself understood by words, and he could always, if he wished, repeat words said to him, but he did not seem to have the power of saying spontaneously any but the most simple words, and these chiefly connected with eating or playthings. He has always had a most acute ear for music and constantly asks his father to play the accordion. One word he had always said spontaneously was "doctor." From the commencement of this year his mental development has increased greatly, and he is now able to repeat consecutively part of his ABC and can name the various objects in his picture-books, but he cannot yet speak a connected sentence. His height is now 40½ in., his weight 44 lb. This weight for height corresponds to the average in the tables. His appearance is well shown in Fig. 7, taken on March 25th of this year. It will be seen that he presents

FIG. 7.

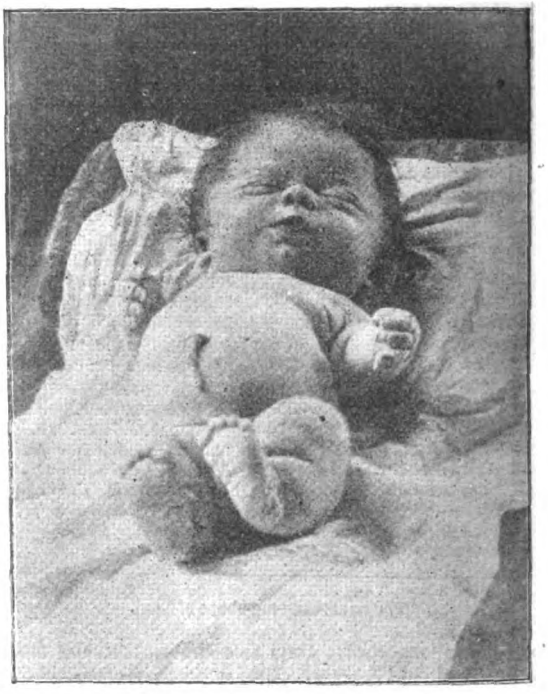


Showing condition at the age of five years and nine months.

little appearance or traces of his former cretinoid condition. It will be interesting to watch to what point of mental development he will attain.

Infant, also a cretin; died twenty minutes after birth.—The next point of interest is that in December, 1893, the mother of the patient in Case 1 gave birth to a female child, who only survived her birth twenty minutes and who was an exaggerated counterpart of the first. The appearance of the child is shown in Fig. 8, taken the day after birth. The labour was easy and the amount of liquor amnii was enormous. The presentation was a breech, somewhat puzzling from the fact that the feet seemed to spring from the hips, owing to the extreme shortness and thickness of the legs (Fig. 8). The body was very large and solid from œdema, which did not pit anywhere. The weight was 10 lb. 14 oz. The placenta was very small, and the membranes were tough and gelatinous. The frontal protuberances were very prominent, the bones of the head were soft and widely separated, and the left parieto-occipital junction was deficient in bone to a large extent. The circumference of the head was sixteen inches. The hair was very thick, long, and fine, and reached to the eyebrows as a thick down; it was also very thick and dark over the spine scapulæ, thighs, and buttocks. The colour of the skin was a dirty-yellow, the abdomen was barrel-shaped, the limbs were very short, hard and brawny with deeply marked sulci in the fingers and limbs (see Fig. 8). The

FIG. 8.



Second child, survived only twenty minutes.

length of the arm from the acromion process to the tip of the middle finger was 6½ in., the length of leg from the hip to the sole of the foot was 7 in., and the height from the vertex to the sole of the foot was 16 in. The circumference of the thorax was 11½ in., and of the abdomen at the umbilicus 14 in. I was, unfortunately, unable to make a post-mortem examination.

Mother treated with thyroid extract from the third month of pregnancy; birth of healthy child.—I now come to the most interesting part of the case—viz., the treatment of the mother in her third pregnancy, from the beginning of the third month, by thyroid extract in the form of tabloids, prepared by Messrs. Burroughs, Wellcome, and Co. The fact of the mother having given birth to two cretins in successive pregnancies offered a strong presumption that she would, unless treated, give birth to a third. I therefore pointed out to her, that, while I could not promise success, I felt confident that if she persevered in taking the tabloids regularly during the whole time of her pregnancy, she would in due course give birth to a healthy child. As she was agreeable to this proposition, I advised her to take one tabloid every day during the remaining seven months of the pregnancy. This she did. At no time did she suffer from any discomfort, but on the contrary was much better throughout than she had been in the previous pregnancies. The only effect the tabloids seemed to have was that of fining her down and making her somewhat thinner. Labour came on naturally at full term and was easy. The liquor amnii was not unusual in quantity or appearance. The placenta and membranes were quite natural. The child was a fine healthy female, indistinguishable from any other infant in appearance. The height was 22 in. and the weight 8½ lb. Unfortunately the photograph I took at the time was destroyed, and I have, therefore, only two

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photographs in my possession to show the child at the age of five months. From one of these (Fig. 9), I think it will be admitted that the infant is a remarkably fine and intelligent little creature. She is very bright and intelligent and can sit up firmly, shows signs of teething, and can say "da-da." She has so far had no ailment of any sort. Her height is now 26 in. and her weight 19 lb. 6 oz. I am satisfied that treatment of the mother was the cause of the child being born healthy. At the same time,

FIG. 9.



Infant, aged five months, born after administration of thyroid extract to the mother during pregnancy.

I am aware of the possible objection that it is a case of "Post hoc ergo propter hoc." Seeing, however, that the mother has resided here all the time, the statement that a mother who has borne cretinoid children may bear a healthy one by residing during her pregnancy in another place will not hold as an objection in this case, and we must fall back on the alternative that the birth of the healthy child was altogether due to the administration of the thyroid extract. I am not aware of any records of thyroid treatment continued for the same length of time, regularly, in the same child, or of the treatment of a pregnant woman who had borne two previous cretin children giving rise to a healthy child being produced. I therefore think that the case will prove interesting to the medical profession.

P.S.—The boy continues to show a marked improvement in his mental development, and displays a considerable amount of spontaneity in his conversation. He is now six years and three months old. The infant (Fig. 9) is, to all outward appearance, in every way a thoroughly healthy baby and well advanced for her age. She is able to stand and to say several words. She is now eleven months old.

Ascot.

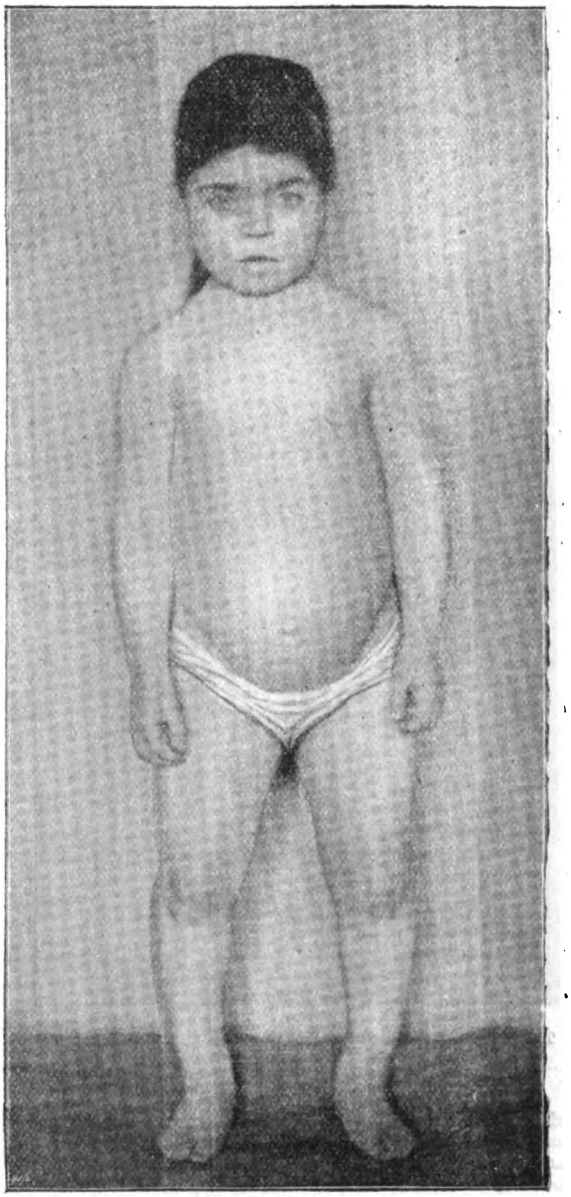
THE BRITISH ASSOCIATION.—The local committee who are making the necessary arrangements for the visit of the British Association to Bristol next year held a meeting on Sept. 21st. Professor Lloyd Morgan stated that he had conveyed the invitation of Bristol to the Canadians and to members of the American Association. The committee recommended Sept. 7th and following days as the most convenient date for the meeting to be held. This date will be finally determined at the meeting of the General Committee of the association to take place in London on Nov. 5th, when the president for the coming year will be elected.

TENDENCY TO BENDING OF THE BONES IN CRETINS UNDER THYROID TREATMENT.

BY T. TELFORD-SMITH, M.A., M.D. DUB.,
MEDICAL SUPERINTENDENT, ROYAL ALBERT ASYLUM, LANCASTER.

ONE of the most marked among the many other signs of development produced in cretins during the administration of thyroid preparations is the rapid increase of growth in stature which takes place—an effect which is all the more striking when we remember that in these cases growth is almost at a standstill previously to treatment. The boy, notes of whose case I published in 1894,[1] grew four and a quarter inches in ten months under thyroid treatment, and his

FIG. 1.



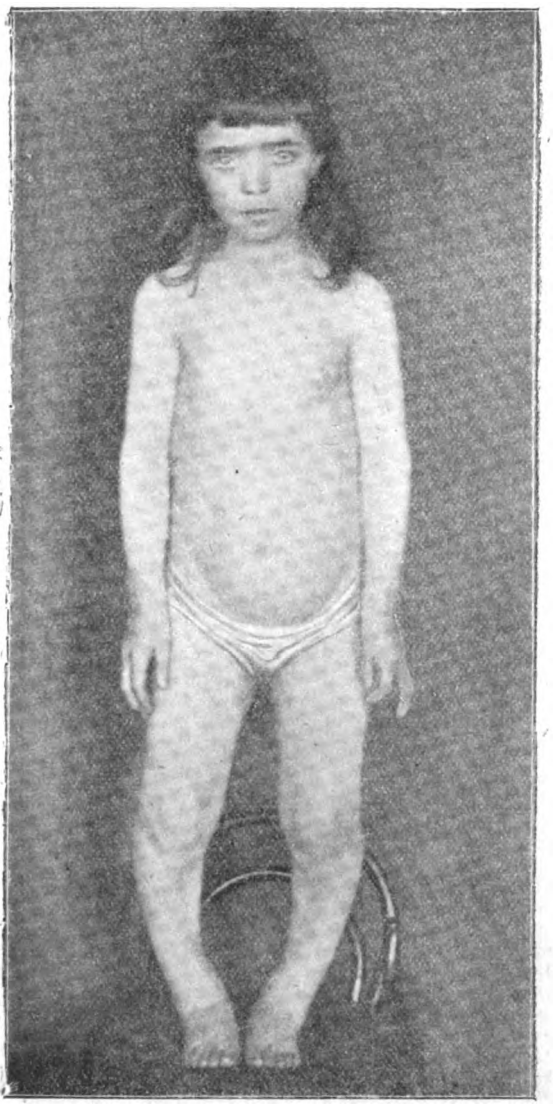
The patient at the age of fifteen and a half years (before treatment). Height, 3 ft. 6 in.; weight, 4 st. 2 lb.

[1] Case of Sporadic Cretinism Treated with Thyroid Gland, Brit. Med. Jour., June 2nd, 1894.

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brother grew four inches in less than a year under similar treatment, as recorded by Dr. T. C. Railton.[2] As a point in the practical treatment of these cases I have found that during thyroid treatment this rapid growth of the skeleton leads to a softened condition of the bones, resulting in a yielding and bending of those which have to bear weight; and as cretins under treatment become much more active and inclined to run about this tendency to bending has to be guarded against. The girl, aged seventeen and three-quarter years, of whom photographs are reproduced, shows this increased bending of the legs very well. She has now been continuously under thyroid treatment for two and a quarter years, taking one five-grain tabloid (B. and W.) daily with her dinner, and

FIG. 2.



The patient at the age of seventeen years and nine months (after two and a quarter years' thyroid treatment). Height, 4 ft. 1½ in.; weight, 4 st. 10½ lb. Showing increased bowing of legs and enlargement of knees and ankles.

during that period she has grown seven and a half inches (from 3 ft. 6 in. to 4 ft. 1½ in.). During the period of two years previous to treatment she had only grown an inch[3] (from 3 ft. 5 in. to 3 ft. 6 in.). (Fig. 1.) For the last few months she has been kept as far as possible at rest, so as to prevent, to some degree, this bending of the legs. The second photograph shows that the bending takes place most markedly in the tibia and fibula, the increased size of the ends of these bones at the ankle and knee being very noticeable. Several of the photographs of cretins before and after thyroid treatment exhibited by Dr. W. R. Parker, of Kendal, and Dr. John Thomson, of Edinburgh, at the meeting of the British Medical Association at Carlisle, showed this increased bending of the legs very clearly, and the condition was remarked upon and discussed. Mr. Victor Horsley showing in this connexion slides to illustrate rickets produced in rabbits by Hoffmeister, and in sheep and goats by von Eisenburg, by removal of the thyroid gland.

While in rickets, however produced, there is perverted and delayed ossification resulting in softening and bending of the bones, under thyroid treatment in cretinism there is rapid resumption of growth in the skeleton, leading to softening, which is most marked in the long bones and at the epiphyses. Cretins under thyroid treatment should, therefore, be watched for any commencing bending of the bones of the legs, and if such appears the child should for a time be hindered from walking or the legs supported by light splints. As an additional means of assisting the rapid bone and other growth the diet should be generous and the child should get plenty of sunlight and open air. The administration of cod-liver oil and Parrish's food would probably prove beneficial at the same time.

Lancaster.

[2] Sporadic Cretinism Treated by Administration of the Thyroid Gland, Brit. Med. Jour., June 2nd, 1894.

[3] Cases of Sporadic Cretinism Treated by Thyroid Extract, by Dr. T. Telford-Smith, Journal of Mental Science, April, 1896.

A CASE OF ADVANCED CRETINISM TREATED BY THYROID EXTRACT.

BY H. E. DRAKE-BROCKMAN, F.R.C.S. EDIN.,
SURGEON-CAPTAIN, INDIAN MEDICAL SERVICE.

AT the present time, when the treatment of certain diseases by the administration of thyroid extract is more or less *sub judice*, the following case of a marked cretin which came under my care and was subjected to this treatment may prove of interest to the profession.

A boy, caste Dhobi, was one day brought to me by his father for examination suspected of being an idiot. A cursory inspection of the youth was sufficient to reveal his true condition—viz., that of a marked cretin. It appeared on inquiry from his parents that the disease first showed itself in the lad about six years before in the shape of deafness, followed by dulness of intellect, slowness in perception of things said to him, dilatoriness in movement, coupled with a want of coördination, which ultimately developed into the usual waddling gait. At the first inspection he presented more or less all the typical symptoms of a cretin, in that he had the usual heavy, dull expression of countenance, the mouth half open, with saliva dribbling over the chin, the tongue protruding between the teeth, the eyelids puffy, with a very platyrrhine nose and brachycephalic head; his figure was squatty, but not much deformed. There was slight tendency to exophthalmos, the thyroid was distinctly enlarged, and the superficial skin covered with distended veins, more so to the right side, where the tumour was markedly tense and somewhat elastic to the touch, rather suggestive of the presence of cystic growth. Over the point of most prominence on auscultation there was a marked bruit, slightly musical in character. Measurement of the neck round the tumour accurately taken showed the circumference to be 14⅜ in. The heart sounds were normal, and so were those of the lungs, with the exception of slight stridor noticeable over the enlarged thyroid, owing probably to pressure of the growth on the trachea. The urine was also analysed and was found to be of specific gravity 1025, reaction acid, and contained neither albumin nor sugar. Towards the end of November last the thyroid treatment was begun by administration of three grains of the dry extract by the mouth daily. After the lapse of one month the boy was again thoroughly examined and the following note was made by me at the time: "The boy's whole appearance has improved most markedly, his sense of hearing and perception of things said to and around him is much acuter, the eyelids are much less puffy, and his gait has also lost some of its waddling character; he has

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been able to walk four miles daily for the last week. The thyroid enlargement also was carefully measured by me to-day in the exact spot as before and was found to be 12⅜ in.; the tumour itself has become much softer, and the bruit mentioned above has very nearly disappeared." It will be seen from the note taken that the thyroid enlargement had diminished fully 2 in. since the commencement of the treatment—that is, in the space of one month the gland had markedly atrophied—and the general condition of the lad, both physically and mentally, has shown marked improvement. Seeing that the treatment had acted so beneficially I decided to increase the dose to five grains daily, which was accordingly done. A whole month was allowed to elapse from this date, the lad being under daily observation as before and the medicine daily administered. At the end of the month—that is, two from the date of the commencement of the treatment—a thorough examination of the boy was again made, and the following note was registered: "The bodily condition of the patient has again showed steady improvement, his hearing and intellect are much improved, the boy can run now, and has hardly anything left of the waddling gait. The measurement of the tumour was again taken to-day and found to be only 12 in. and the neck of the patient has assumed a more or less normal aspect; there is no bruit audible at all in the spot previously noticed. The marked and steady improvement registered in the last note still continues." The treatment, as above indicated, was continued without stopping daily for another month, at the end of which a still further improvement was noted in every respect, the boy could at once interpret what was said to him and reply to it in an audible voice, and with clearness too. At this examination I noticed a marked absence of patellar reflex, this being a prominent symptom in tabes dorsalis, in which it had been stated by the late Professor Brown-Séquard that orchitic fluid had worked wonders. I decided to try the effect of it in this case, and so administered to him five grains of didymin daily as well as the thyroid extract. After the lapse of a fortnight there were signs of the reflex returning, he certainly became much stronger on his legs, and could run if desired; he latterly used to walk about eight miles daily to come to see me, when, to my regret, having to leave the district on transfer to another station, I have in consequence lost sight of the lad, and thus a most interesting inquiry has been unavoidably and abruptly terminated. I took the opportunity of obtaining a sample of the water usually consumed by the patient and his family and sent it for analysis to the chemical examiner, who found that the water contained 44·8 grains per gallon of total solids, the greater portion of which was lime salts. There is not much information to be gained by the family history of the patient, which is briefly as follows. The father is alive and free from any disease, as I have had ample opportunities of verifying for myself. The mother died years ago, and used to suffer from what is described as epilepsy. There is no history of syphilis; there are two children, both males, the elder a youth of about nineteen years of age, and perfectly healthy, whom I have also seen for myself; the younger son (this patient) a lad of about sixteen years old, who is a marked cretin. It is interesting to note that the boy's home is at the foot of the hills in a kind of country in which cretins are usually expected to be found, and I hear, on inquiry, though I have not been able to verify it, that there are a few in the neighbourhood.

Since the above case I have come across one somewhat similar, treated and reported by Dr. Rushton Parker, of Kendal, quite independently of and unknown to me, which I have read with great interest, though the two cases differed somewhat materially in many little ways, as will be seen on reference to them; both cases, however, improved so wonderfully under this treatment that it gives one great hopes that something more than temporary relief may be ensured by it. The case above narrated has a great many points of interest attached to it, in that it was an advanced one, not only in years, but in severity of its symptoms, the rapid diminution, which I presume was simple atrophy of the thyroid tumour after the administration of the drug, also the rapid and marked improvement which took place in both the patient's mental and physical condition, notwithstanding the comparatively short time that he was subjected to the thyroid treatment. Though I am fully aware that the case is more or less incomplete, still the benefits derived by the patient at my hands under this treatment in so short a period afford me sufficient excuse for bringing this case to the notice of the profession, in the hope that others who have greater facilities than myself for treating the disease may be induced to give it a fair trial and record their experiences.[1]

Bengal.

NOTES ON A CASE OF CRETINISM SUCCESSFULLY TREATED WITH THYROIDIN.

BY C. MORTON ANDERSON, M.R.C.S. ENG.

IN the early part of 1893 I had read with much interest the accounts published in the English medical journals of several cases of cretinism which had been successfully treated by the administration of the thyroid gland of the sheep or of some of the many preparations which were being made from that gland. In the latter part of that year I had an opportunity through the kindness of Dr. Ord and others of seeing many of those patients whom I had previously been reading about, as well as several others, and of judging of the results for myself. I was very much impressed with what I saw, the change for the better in many of the patients being marvellous; but I do not remember seeing one, especially in so old a child, in which the result of treatment was more striking than in the case related in the following notes. The accompanying illustrations from photographs, though very imperfect (being my first attempt at photography), will perhaps show better than words the physical condition of the patient before and after treatment.

The patient, a girl aged eleven years, first showed symptoms of cretinism when about three years of age. She had been under professional treatment in various ways previously, but with no good result. Early in 1893 I had put her on a strict dietary for nearly three months but with very little benefit, and on Jan. 1st, 1894, she weighed 4 st. 7 lb. in her ordinary clothes, and measured 3 ft. 4½ in. in height, a gain of three-quarters of an inch having been made during the previous year. This gain, though small, had been the greatest she had made for some years. On Jan. 16th, 1894, her features were thick and blunted and she was excessively corpulent. There were large supra-clavicular folds of fat and there was a large hump of the same substance over the lower cervical and upper dorsal vertebræ. She felt like a dead weight when lifted, and the skin, which was cold to the touch, felt harsh and dry. Her hair was long and thick; her appetite was poor, but the bowels were fairly regular and she slept well. The child's intelligence was decidedly dulled and slow, and there was great want of animation; she drawled her words and spoke slowly and in a deep, peculiar voice. She had been at school for a year and a half but could only spell a few monosyllables or add up three or four figures. The circumference of the chest was 24½ in. and of the abdomen 27½ in. (See Fig. 1, which was taken at this time.) The pulse was 60. I ordered 2½ gr. of thyroidin to be given every second day, which I increased to 5 gr. on Jan. 23rd. On Feb. 2nd the temperature was 98·6° F., and the pulse 78. She was much brighter and more animated. The clavicular folds and the cervical hump were decidedly softer and rather smaller. The digestive functions were not in the least disturbed and the appetite had improved. I ordered one 5-gr. tablet daily. On Feb. 23rd the patient weighed 4st. 11lb. The temperature was normal, the pulse 100, and the skin moist and supple. She was very much sharper and more animated and cheerful, becoming quite hilarious and playful. The abdomen was not nearly so large and the clavicular folds were fast disappearing, but the cervical hump looked quite as prominent. I ordered a 5-gr. tablet to be given each morning and half a tablet each afternoon. On March 14th the patient's height was 3 ft. 5 in. and her weight 3 st. 12½ lb., being a gain of half an inch in height and a loss of 8½ lb. in weight in two months. The child sometimes seemed rather pale and weak. She was ordered to take only one tablet daily. On the 21st the patient seemed better and was ordered to resume taking one and a half tablets daily. On April 20th her height was 3 ft. 6 in.

[1] We regret that the photographs sent by Surgeon-Captain Drake-Brockman to illustrate the good progress of this case were not suitable for reproduction, but the notes tell the story perfectly clearly without them.—ED. L.

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and her weight barely 3 st. 10 lb. The clavicular folds had quite disappeared, the cervical hump was almost gone, and the spines of the vertebræ could easily be felt through it The abdomen was nearly normal in shape. The patient was quite bright, animated, and natural, but inclined to be thin. One tablet every second day was now ordered. On Aug. 11th her height was 3 ft. 7½ in., her weight being 3 st. 13 lb.—a

FIG. 1.

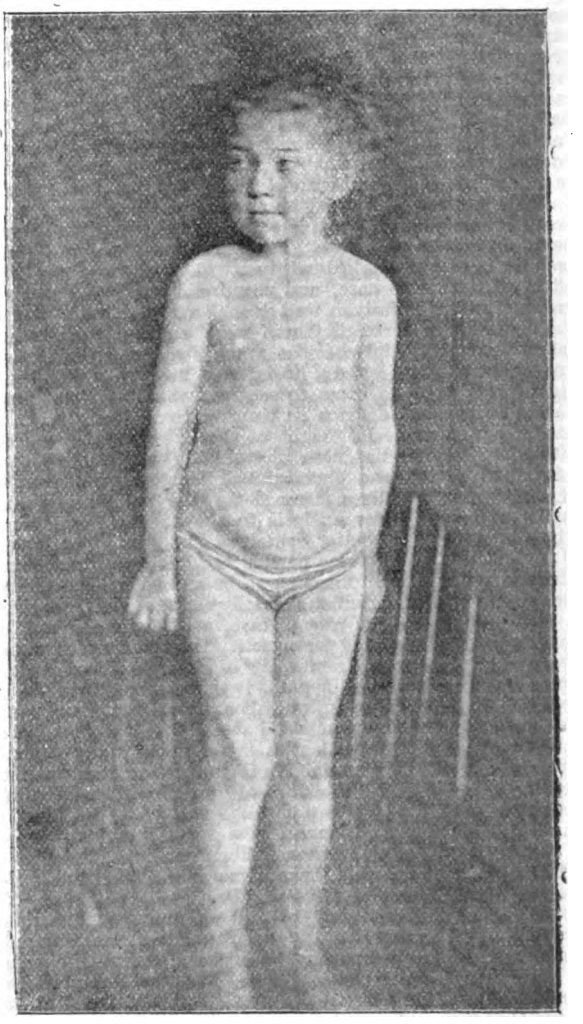


Before treatment.

gain of 3 in. in height and a loss of 8 lb. in weight in a little less than seven months. The temperature and pulse were normal, the skin was fresh and healthy, the appetite very good, and the bowels regular. She never had bilious attacks now, though she was formerly very subject to them. On Nov. 15th the patient's general health was good and the skin and complexion were quite natural. The cervical hump had quite disappeared, the back in that region being like that of an ordinary child. She had grown 1½ in. in the last three months and had lost ½ lb. in weight. For the last three weeks she had only been taking half a tablet daily. The dose was now reduced to one-third of a tablet. On March 1st, 1895, the patient was in perfect health and in good spirits and quite as sharp and intelligent as any child of her age and education should be. Although I considered her cured I advised her to continue to take one-third of a tablet daily, so as to guard against the possibility of a relapse. She had gained about 3 lb. in weight since November, and her height was 3 ft. 10½ in. It will be noticed that in the thirteen and a half months that had elapsed since the commencement of treatment (Jan. 16th, 1894) the child had grown exactly six inches in height, besides which all symptoms of cretinism had completely disappeared (see Fig. 2. which was taken at this time). On Aug. 24th her height was 3 ft. 11¾ in., and her weight 4 st. 8½ lb. She was still taking one-third of a tablet daily and was in perfect health, attending school regularly. Her schoolmistress had sent home a most excellent report for the term both as to the child's progress and as to her ability for learning. Up to January, 1896, the improvement had been permanent, though the rate of growth had dropped to about ¼ in. per month, which I consider ample. She was taking a quarter of a tablet daily now and often missed a dose.

There was no history of any symptoms like cretinism to be obtained in either her father's or her mother's families, nor could I get any history of goitre. Her mother had a cervical hump like the patient, though not so large in proportion, and there were no clavicular folds. She was not at all inclined to be stout till after her first three children were born, but afterwards she had developed an enormous amount of adipose tissue, more especially from her waist downwards. I tried dieting her carefully for some months, and afterwards I treated her with thyroidin for four months, but the result was *nil* so far as the obesity was concerned, and I found that the drug had a rather depressing effect. I should mention also that both parents are particularly sharp, bright, and intelligent. There are five other children in the

FIG 2



After treatment.

family, one older and four younger than the patient. All are bright, intelligent, and well-grown for their ages, but all are inclined to be rather stout as young children, though not so when they grow older.

Christchurch, New Zealand.

DEVIZES COTTAGE HOSPITAL. — The annual meeting of the subscribers to the Devizes Cottage Hospital was held on Sept. 23rd under the presidency of the Mayor. The report showed an increase in expenditure and a decrease in revenue. The medical staff were re-elected.

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THE USE OF DECALCIFIED BONES IN THE TREATMENT OF WOUNDS.

BY F. W. ROBINSON, M.D. ABERD., M.R.C.S. ENG.,
HONORARY SURGEON TO THE HUDDERSFIELD INFIRMARY.

THE use of an animal dressing in the treatment of wounds was suggested in the method of "sponge-grafting," adopted, for a time by many surgeons. In principle this promised much success, but in practice it failed to realise what was anticipated from it. Professor Hamilton, who first introduced sponge-grafting to the profession, claimed for it the following advantages: (1) that, being porous, it imitated the interspaces of blood coagula and fibrinous lymph; (2) that, being an animal texture, it would be slowly absorbed; and (3) that, being pliable, it would easily adapt itself to the surface of wounds. In cases quoted by him and others granulation tissue was shown to grow into the pores of the sponge and osteoclasts were demonstrated as lying against the trabeculæ, which, however, were only very slowly absorbed. Sponge-grafts included in the peritoneal cavity became adherent to the intestine and showed the same tendency towards organisation, vascular granulation tissue growing into the grafts. These experiments are useful as showing that a dressing of animal tissue exerts a healthy influence upon wounds by stimulating, directing, and supporting the growth of their granulations; and there is no doubt that if sponge were more absorbable it would be a valuable dressing and would secure more general adoption. The absence of this quality is, however, fatal to its usefulness, and completely antagonises the many useful and necessary qualities it otherwise possesses. In order to be effective when applied to a wound an animal dressing ought to approach as nearly as possible to the conditions present in the physiological repair continually taking place in the living body. These latter differ from the processes occurring in a granulating wound inasmuch as absorption and repair are intimately correlated, and this natural affinity between the two should guide us in the selection of any dressing. In the ordinary mode of healing by granulations it is found that absorption is in a large measure lost; therefore the addition of an absorbable dressing of animal texture would seem, *par excellence*, to be the one thing necessary to fulfil the conditions required. The above considerations led me to try the effect of decalcified bones in the treatment of granulating wounds. For this purpose I used the most cancellous portions of the bones of an ox thoroughly depriving them of their fat, decalcifying and preserving them in a 1 in 20 solution of carbolic acid. Properly prepared the bone should be as soft as sponge, porous, and pliable. I have used the dressing in many cases and feel fully justified in recommending it. The impressions left upon my mind by the use of "decalcified bone dressing" may be summed up as follows: (*a*) it may be used for any kind of granulating wound and has been very successful in obstinate fistulæ and callous ulcers; (*b*) in no case has it caused the slightest irritation; on the contrary, any existing irritation has subsided on the use of the dressing and the temperature has fallen—this applies even to fistulæ which have been left five days without re-dressing; (*c*) it brings about a healthy state of the granulations, and the discharges from the wound diminish; and (*d*) the dressing is gradually absorbed, melting down at the base and sides. The rate of the absorption varies, but the healthier the granulations the more gradual the absorption, so that in the treatment of a wound the dressing requires to be re-applied less often in the later stages. Where the wound is unhealthy and the secretion of pus free the dressing is rapidly absorbed and may require changing daily, but in a more favourable condition it may be left for four or five days. I use the dressing in the following ways. For open ulcers I shape a piece to fit the cavity as nearly as possible, and pack up any deficiencies with small pieces. For superficial ulcers I shave off fine grafts until the surface is covered. For fistulæ I tear off small portions and pass them down until they are filled. In packing fistulæ I use a probe with a flat button-like end, as the ordinary probe is liable to pass through the material.

It would be impossible to give descriptions in detail of cases treated by this method, therefore I will only briefly allude to the following cases, which were very marked in their results. 1. Two abdominal fistulæ following laparotomy for pyo-salpinx had existed for fifteen weeks before the application of the dressing, the length of the fistulæ when they were first dressed being one and a half inches and two and a half inches respectively. They healed in a fortnight, one being dressed three times and the other four times. 2. An abdominal fistula following oöphorectomy had been present for one month. The fistula when first dressed was one and a half inches long, and it healed in seven days, being dressed twice. 3. A tuberculous fistula of the neck following removal of glands, about an inch long, healed in five days with only one dressing. 4. A callous ulcer over the right tibia in a patient suffering from Bright's disease was under treatment for two months without any effect. I then excised the edges of the ulcer and applied the dressing for the first time. A fortnight after the operation the ulcer had almost completely healed. Lastly, I would allude to the influence of the dressing on superficial ulcers when applied in the form of grafts. It acts in the same way as an epithelial graft, and in some instances the effect has been remarkable. In one case the whole surface was mapped out by fine blue lines of young epithelium after a first application.

I know that it is still too early to pronounce definitely upon the value of the dressing, as this can only be proved by the practice and experience of many.

Huddersfield.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

A CASE OF DIPHTHERITIC CONJUNCTIVITIS.

(Under the care of Mr. PERCY FLEMMING.)

AN ill-nourished child, aged four months, was brought to the University College Hospital on Aug. 4th, 1897. No very clear history could be obtained. The child was said to have had "weak eyes" since birth, and on the day before he was brought to the hospital it was noticed that the right eye had become swollen. On examination it was seen that there was much swelling of the eyelids on the right side. On attempting to separate them they were found to be to some extent united by a tenacious and distinctly fibrinous exudation. On everting the lids they were felt to be very indurated and stiff, and their conjunctival surfaces were seen to be covered completely with a firm greyish membrane, marked here and there with small ecchymoses. This membrane could not be stripped off readily, but fragments could be removed without causing any bleeding. There was a small amount of discharge not purulent in character. The cornea was hazy, but not ulcerated. The left eye showed some conjunctivitis, but no membrane was present, the appearance of the eye suggesting a late stage of a purulent ophthalmia. There was a thick discharge from the nose. The general condition of the child was bad, vomiting and diarrhœa being present, and much albumin was found in the urine. The case was regarded as one of true diphtheritic conjunctivitis, and the patient was immediately admitted to the hospital. The eyes were ordered to be bathed frequently with quinine lotion (four grains to the ounce), and a solution of atropine was dropped in at intervals. The same local treatment was continued on the 5th, and on the afternoon of that day 4000 units of diphtheria antitoxin were injected. On the 6th it was obvious that the membrane on the conjunctiva was much less marked; the discharge was thin and serous, and the appearance of the cornea was unchanged, but the general condition of the child was certainly worse; the diarrhœa and vomiting were more frequent and severe. The same evening the discharge from the right eye was distinctly purulent. On

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the 7th the local condition was markedly improved, as scarcely any membrane was left on the lids; where the membrane had separated the conjunctival surface had a worm-eaten appearance; the cornea was still hazy. At 5.30 P.M. on the 7th the child died rather suddenly, the vomiting having persisted and the diarrhœa having become worse, in spite of treatment. At the time of admission (Aug. 4th) cover-glass preparations were made and numerous diplococci were found, but no bacilli diphtheriæ. Some cultures taken immediately after admission showed typical diphtheria bacilli in abundance. A culture taken subsequently to the free use of the quinine lotion, but before the injection of the antitoxin, gave negative results, as did all later attempts at cultivation.

Remarks by Mr. FLEMMING.—There is, and has been, a good deal of difference of opinion with regard to membranous conjunctivitis. Most authorities, following von Graefe's original description,[1] divide the cases of membranous conjunctivitis into two groups, the first including cases of true diphtheritic inflammation, characterised clinically by (*a*) extensive brawniness of the lids; (*b*) the presence of a membrane which infiltrates the substance of the lids, subsequently separating by suppuration, leaving a raw granulating surface; and (*c*) running a severe course with constitutional symptoms. The second group contains cases of simple membranous conjunctivitis, characterised by the presence of a pellicular membrane, easily detached from the underlying red but not necessarily raw surface; these cases run a mild course. Other authorities—for example, Nettleship[2]—have argued that all cases of conjunctivitis with false membrane are diphtheritic, and that cases occur showing all intermediate stages between the two varieties above mentioned. At the present time the presence of Löffler's bacillus diphtheriæ is supposed to be the true criterion of the diphtheritic nature of an inflammation. I am not aware of any systematic examination of a series of cases of membranous conjunctivitis with a view to determine the presence of the bacillus. Cases have been recorded which clinically were to be regarded as "diphtheritic" (in the sense used by von Graefe) in which the bacillus was not found; and, on the other hand, the bacillus has been present in cases which would have been regarded as cases of simple membranous conjunctivitis. From a clinical and therapeutic point of view the value of the bacillus in diagnosis is somewhat diminished by the fact that it varies much in virulence, and these variations are unaccompanied by any morphological difference. My experience of this and other cases leads me to the conclusion that the clinical picture of diphtheritic conjunctivitis is quite definite, and that all cases of membranous conjunctivitis can be divided for the purpose of prognosis and treatment into the true "diphtheritic" and the simple membranous, and this is all that is really needed. This case is also of interest from the point of view of treatment. Quinine lotion has been especially advocated by Mr. J. Tweedy[3] on theoretical and clinical grounds; and as in this case no bacilli could be demonstrated after its employment additional evidence in its favour is furnished from the purely pathological standpoint, though doubtless the negative result later is partly to be attributed to the antitoxin injection. Local antiseptic treatment is clearly indicated in these cases, in addition to antitoxin injections, as other pathogenic organisms are almost invariably present. I am indebted for the bacteriological examinations to Mr. H. J. Curtis, assistant to the Professor of Pathology in University College.

BRITISH HOSPITAL, BUENOS AYRES.

THREE CASES OF ABSCESS OF THE LIVER.

(Under the care of Dr. J. O'CONOR.)

THE first of these is a good example of an ordinary case of abscess of the liver, the signs and symptoms were distinctive, and the operation of evacuating the contents of the abscess was rendered extremely simple by the complete adhesions which had occurred between the liver and the abdominal wall over the abscess. The two other cases are in striking contrast to this. In the second case the co-existence of an abscess in the liver with an empyema naturally suggested that the latter was the result of the abscess, especially as all the symptoms were greatly relieved for three weeks after operation. Though a second abscess of the liver was suspected, it was not found even after repeated searches with an aspirating needle, a sufficient proof of the untrustworthiness of this method of looking for small abscesses in this organ. The circuitous route taken by the pus to reach the right pleural cavity is very remarkable. In the third case the difficulties of diagnosis were great, especially in a country where enteric fever is endemic.

CASE 1. *Abscess of the liver; hepatotomy; recovery.*—A man, aged thirty-eight years, was admitted into the British Hospital, Buenos Ayres, on Oct. 15th, 1892. For the previous six weeks he had suffered from nocturnal fever, occasional shivering fits, loss of flesh, sweats, and a constant pain in the right sub-costal region, with an occasional stabbing pain near the inferior angle of the scapula. On examination a slight fulness was visible below the right costal margin; on palpation there was marked tenderness, with fluctuation and downward movement on inspiration, and on percussion there was absolute dulness. The temperature in the evening on the day of admission was 102·6° F. The tongue was furred; there was much thirst, and he had profuse perspiration. On the following morning chloroform was administered and a two-inch incision made over the swelling. On incising the peritoneum, as the liver was found to be adherent, a director was pushed into the liver substance; at a depth of a quarter of an inch an abscess was struck and pus escaped along the groove in the instrument; the opening was further enlarged by Hilton's method, and two pints of grumous pus were evacuated, a large drainage-tube was then inserted, and the cavity was irrigated with warm Condy's fluid. By the third evening constitutional symptoms had disappeared, and he was discharged recovered on the forty-first day. He has frequently reported himself during the past four years, and remains in normal health. He suffered from enteric fever and dysentery in 1891. There was no history of malaria.

CASE 2. *Abscess of the liver; empyema; trans-thoracic hepatotomy; death; necropsy.*—A man, aged twenty-one years, was admitted into hospital on Aug. 10th, 1893, complaining of cough, dyspnœa, and severe pain on the right side of the thorax. The patient's past history was excellent, with the exception that he had suffered from an attack of enteric fever in 1892. Three weeks before admission he had to stop work owing to pain, rigors, sweats, and fever. A week later he developed a most incessant cough, with much offensive sputum. On examination after admission the patient was seen to have a very anxious look; he was bathed in perspiration; the tongue was furred and dry; the temperature was 103·4° F.; the pulse was 120; and the respirations were 40. He had a constant cough, with most fœtid expectoration. He lay on his right side, and the least movement caused alarming dyspnœa. The right side of the thorax did not expand on inspiration, and intercostal fulness was visible from the third rib downwards. There was absolute dulness extending anteriorly from the third costal cartilage to the umbilicus, and in the axillary line almost to the level of the iliac crest. On auscultation there was absence of breath sounds below the third space. Bronchophony and pectoriloquy were well marked. The patient complained very much of tenderness on percussion, and there was absence of tactile fremitus. The liver was felt enlarged down to the level of the iliac crest, but no fluctuation could be detected below the ribs. The temperature on the evening of admission was 105·4°, and during the following twenty-four hours he had several rigors. On the 12th an aspirating needle was inserted into the right pleural cavity, and a few drachms of chocolate-coloured pus were drawn off. Chloroform was immediately given; three and a half inches of the sixth rib were excised in the axillary line, and about four pints of most fœtid pus were evacuated from the pleural cavity. The diaphragm was found to be pushed upwards by a tense fluctuating swelling; a careful search was made for an opening in it, but none was found. The diaphragmatic pleura and diaphragm were next incised, and as the liver was found to be adherent, a large curved trocar was inserted, and six pints of grumous pus were removed. A large drainage tube was placed in the abscess cavity, and no sutures were introduced into the external wound. On the first evening after the operation the temperature was 101·2°, the breathing was greatly relieved, and the cough was considerably diminished.

[1] London Medical Record, 1880, vol. i., p. 200.
[2] St. Thomas's Hospital Reports, 1880.
[3] THE LANCET, Jan. 24th, 1880, p. 125, and Feb. 21st, p. 282.

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After this the abscess cavity was irrigated twice daily, and by the tenth day all symptoms of septic poisoning had vanished, the temperature remained normal, no pus came from the cavity in the liver, and there was only a slight serous discharge from the pleura; cough and expectoration had ceased. There was nothing to record for the following twenty days; the patient ate well, rapidly gained weight and strength, and was allowed to be out of bed. On Sept. 10th the temperature suddenly rose to 102·5°. A large leaden probe was immediately passed into the liver sinus, which was found to be patent, contained no pus, and had contracted considerably. The probe was then moved freely about in the pleural cavity, some adhesions were broken down, but nothing was found to account for the temperature. During the night the patient had a rigor, and on the following morning as the temperature was 100° the same searching process was repeated. An aspirating needle was inserted into the liver at five different spots, but no pus was struck. On the 12th about a teaspoonful of pus was noticed in the dressings. The pleural cavity was again examined and the aspirating needle again made use of, but all in vain. Constitutional symptoms gradually returned. A few drachms of pus were noticed at each dressing. Search for the cause was frequently made, but in vain, and the patient died on Oct. 20th.

Necropsy.—At the post-mortem examination a healthy granulating sinus was found passing obliquely downwards from the upper border to the centre of the liver substance; this was all that remained of the large cavity out of which six pints of pus had been evacuated. Three inches internal to this sinus a small abscess was found containing two ounces of pus, this was quite superficially located in the upper border of liver, beneath the sixth chondro-sternal articulation, from this a small sinus passed through the diaphragm and opened into the anterior mediastinum, where a localised collection of some three ounces of pus was found, and this in turn communicated by a small opening of about the diameter of a cedar pencil, with the right pleural cavity, and around this aperture a few drops of pus were seen. There was no trace of any communication between the small abscess cavity and the healthy granulating sinus.

CASE 3. *Abscess of the liver; trans-thoracic hepatotomy; recovery.*—A sailor, aged thirty-seven years, was admitted to hospital on June 2nd, 1893, complaining of pain in the abdomen, diarrhœa and fever. Ten days before admission he stated that he was suddenly seized with cramps and diarrhœa unaccompanied by rigors or sweats. There was a history of dysentery ten years before; he had never had malaria or enteric fever. On admission the temperature was 100·6°F., the tongue was furred in the centre; he complained of headache, and pains in the back and legs, there were marked gurgling and tenderness all over the abdomen, no rose spots and no enlargement of liver or spleen were observed; the other organs were normal. With these symptoms and the history of onset, enteric fever was diagnosed, he was placed on the usual milk diet, and a quinine mixture was ordered. During the following four weeks, nothing occurred to alter the diagnosis. The temperature ranged from 100° in the morning to 103° at night; there were no sweats or rigors; the diarrhœa, which he had for some days after admission, ceased and was succeeded by constipation. The liver and spleen were percussed and palpated twice weekly, but no enlargement or particular tenderness was noticed. On July 1st the night nurse reported that the patient had perspired profusely during the night, and as the nocturnal temperature did not show any tendency to diminish, tuberculous ulceration of the intestines was suspected. The night sweats continued during the month of July, the lungs were frequently examined, but nothing abnormal was found. On the 28th for the first time, he complained of a dull pain in the right scapular region, and as the pain was increased on deep inspiration, pleurisy (tuberculous) was suspected, but on examination no evidence of it could be elicited, and no appreciable enlargement of the liver could be detected. On Aug. 14th the patient was extremely despondent, very emaciated, and was sweating continuously; a short hacking cough had been noticed for a few days; and on examination on this date marked tenderness was for the first time noticed in the right ninth intercostal space, a little in front of the axillary line. At last it was decided to explore the liver; a long hypodermic needle was inserted at the tender spot, it soon entered a cavity, and a few drops of grumous pus were withdrawn. The needle was left *in situ*, and a straight sharp-pointed bistoury was entered beside the needle, into the abscess cavity, the needle was withdrawn, and a closed sinus forceps was pushed in along the blade of the knife; when the end of the forceps was felt free in the cavity the knife was withdrawn, the blades of the forceps were forcibly separated, and eight ounces of pus were evacuated. A medium-sized drainage-tube was then passed into the abscess cavity, and the latter irrigated with warm Condy's solution until the fluid returned clear. A rapid convalescence ensued, and he was discharged cured on Sept. 26th. A month later he reported himself fit to resume his work as boatswain.

Remarks by Dr. O'CONOR.—The manner in which the abscess was opened in Case 3 may appear to be somewhat rash, but the patient was in such a low state that it was questionable if he would survive an anæsthetic.

GOVERNMENT CIVIL HOSPITAL, HONG KONG.

A CASE OF DELIRIUM TREMENS; SUDDEN HYPERPYREXIA; NECROPSY.

(Under the care of Mr. J. BELL.)

HYPERPYREXIA is decidedly of rare occurrence in delirium tremens, and when it does appear the prognosis is exceedingly unfavourable, but recovery may result in some of these cases. Dr. A. V. M. Anderson[1] has reported a case of alcoholic delirium in which an axillary temperature of 108·4° F. was noted, yet by the persevering use of ice-packs the temperature was brought down to normal and recovery ensued.

A Danish captain, aged forty-seven years, was admitted to the hospital at noon on Aug. 10th suffering from the effects of "a jolly good bust," as he described it. His temperature was normal and he was very cheerful, being still slightly under the influence of liquor. Vomiting being his chief complaint he was given effervescing mixture with fifteen minims of tincture of opium every three hours. A mustard plaster was applied to the epigastrium and he was ordered a low diet. In the evening he was better, the vomiting had ceased, and he had been able to take some milk and chicken broth. His tongue and breath were still very foul. He was given four grains of calomel and a draught containing half a drachm of bromide of potassium, and twenty minims of liquor morphinæ were given later as he could not sleep. On the 11th he was better, but he had not slept nor had his bowels acted. He was ordered ten grains of compound colocynth pill at once, to be followed by two ounces of Hunyadi water. The effervescing mixture was continued. His temperature was normal, and he was taking his food well. In the evening he had forty minims of liquor morphinæ. He was now quite sensible and quiet, and expressed himself as feeling much better. On Aug. 12th Mr. Bell was sent for at 9 A.M. and found him dressed and in a great hurry to be off to see his Consul. His temperature was normal, and the bowels had acted freely, but he had not slept. He thought the crew were outside trying to get at him, and he had the usual restless movements and talking of a patient suffering from delirium tremens, though he was quite easily managed and reasoned with. After a consultation with Dr. Atkinson he was at 10 A.M. removed to the lunatic asylum, walking there himself—a distance of 300 yards. At 12.30 P.M. he had "a fit," became unconscious, and his temperature was found to be 105°. He was at once placed in an ice-sheet, with an ice-bag to his head, and bromide of potassium and antipyrin were ordered every three hours. The temperature, however, rose rapidly to 109·8° at 2 P.M., when he died. The usual injections of ether and strychnia were given as soon as signs of heart failure began.

Necropsy.—The brain and meninges were much congested, but no hæmorrhage could be found. The heart was fatty and the liver was enlarged with commencing cirrhosis. No other lesions could be found.

Remarks by Mr. BELL.—I have ventured to report the case, as this complication is, fortunately, a rare one in cases of delirium tremens, and it is remarkable for the sudden and rapid onset of the hyperpyrexia, which was quite uncontrollable by the usual methods.

[1] THE LANCET, Nov. 24th, 1894, p. 1252.

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Reviews and Notices of Books.

Twentieth Century Practice. An International Encyclopædia of Modern Medical Science by leading authorities of Europe and America. Edited by THOMAS L. STEDMAN, M.D. Volume IX. London: Sampson Low, Marston, and Co. 1897.

THIS volume continues the subject of Diseases of the Digestive Organs. The first article is by Dr. Johann Mikulicz and Dr. Werner Kümmel, of Breslau, on Local Diseases of the Mouth; these include diseases of the tongue, of the floor of the mouth, of the gums, of the lips and cheeks, and also tumours affecting the mouth. The sections describing the various forms of tumours met with in this region are particularly interesting and are illustrated by several well-executed drawings.

The reader will find one of the most interesting papers to be the one on Diseases of the Intestines (excluding infectious diseases, parasites, and hernia), by Dr. C. A. Ewald, of Berlin. The article is remarkable for the amount of originality displayed throughout. In speaking of general dietetic measures he sounds a warning note against so-called "diet cards," which have become more and more the fashion during late years, which are supposed to aid the physician and save him the trouble of writing directions for patients, but they are practically made useless by the individual peculiarities of the patient. Dr. Ewald, in the section on Appendicitis, adopts the old classification, Typhlitis and Perityphlitis, and states that he cannot agree with Mr. Treves that "this classification has long since been shown to be unsound," and the reasons for coming to this conclusion are fully given. "The surgeon rarely sees a case of typhlitis, because the large majority rapidly go on to recovery; the cases seen by him are those of perityphlitis or of appendicitis, the symptoms of which are the same as those of typhlitis, and which can be differentiated from uncomplicated inflammation of the cæcum only by the fact that it is not readily recovered from, and for that reason comes under the notice of the surgeon." Equally interesting are the remarks on Intestinal Obstruction.

In a treatise on medicine it is extremely difficult to deal satisfactorily with those subjects which lie in the borderland between medicine and surgery. The surgical treatment of any condition should not be excluded entirely, or the presentation of the subject will be utterly one-sided and incomplete, and, on the other hand, to describe fully the surgical procedures which may be necessary would unduly increase the size of the work. In this volume this difficulty has been solved, on the whole, satisfactorily by Dr. V. P. Gibney and Dr. J. B. Walker, of New York, the authors of the article on Hernia. The descriptions are good, clear, and complete, and the treatment deals to quite a sufficient extent with the surgical portion of the subject. There are, however, a few points in the article which we consider of enough importance to notice in detail. In the account of "partial enterocele" "Littré's hernia" is given as a synonym, but the form of hernia described by Littré was, as has been pointed out by Sir William MacCormac, a hernia containing a Meckel's diverticulum, and to this form should the name of Littré's hernia be limited. The true partial enterocele has been named a "Richter's hernia" from the name of the surgeon who first described it fully; the two forms are entirely different in their origin and should be carefully kept distinct. The definition of a strangulated hernia given by the authors on page 334 is as follows: "A hernia is strangulated ..... when its neck has become so compressed that it can no longer be reduced into the abdominal cavity, and when at the same time there occurs an arrest of the circulation in the bowel and in its wall." The irreducibility of the hernia is in itself of comparatively little importance and should not be put forward as the chief characteristic of a strangulated hernia, for it may occur without any strangulation; the essential feature of a strangulated hernia is the interference with the circulation in the vessels of the wall of the bowel; even the interference with the flow of the intestinal contents is of less vital and immediate importance. The authors correctly say that the veins are first obstructed and later the arteries, but this persistence for a time of the blood flow in the arteries is not due to "the arterial walls being more elastic," but to the blood pressure in the arteries being so much greater than the pressure in the veins. The extent to which "taxis" should be employed in the treatment of strangulated hernia has always been a difficulty to the inexperienced. An extensive use of the method was justifiable when herniotomy was frequently followed by a fatal result, but nowadays taxis should be used only in recent cases, and only once; should taxis fail immediate recourse should be had to operation. This is now so generally recognised that we are surprised to find the authors advising that taxis "should be continued for not more than five to ten minutes at a time, and then repeated after an interval of thirty to forty minutes up to five or six hours after the onset of strangulation." Such treatment may be successful in relieving a case here and there, but the risk is very great, especially when the facility and safety of herniotomy are considered.

Dr. Alfred Hengel writes on Diseases of the Spleen, but although the various morbid conditions are fairly well described the paper is scarcely equal in general merit to those already noticed.

The next article is on "Diseases of the Liver," by Dr. Mariano Semmola and Dr. Carlo Gioffredi, of Naples. These authors have succeeded in producing one of the best essays on these diseases that we have met with in any publication. We have not sufficient space to review the article with the fulness which it merits, but we would especially draw attention to the section on the General Pathology of the Liver. Peculiarities of the Hepatic Circulation and their Importance in the Pathology of the Liver are first noticed, and then follows a most complete consideration of the relations of the liver and the intestine, pointing out that in the diagnosis of functional gastro-enteric disturbances of obstinate and rebellious character the physician ought never to forget to look for diagnostic points which may reveal the insidious and as yet concealed disturbances of hepatic function as the true cause of the digestive disturbances. Equally interesting are the remarks on the Relation of the Liver to Auto-intoxication. The authors point out that the protective action of the liver is shown most markedly in intestinal intoxication, and that a diminished functional activity of the liver gives rise to auto-intoxication, whilst, on the other hand, should this condition arise from other causes, functional or pathological changes are produced in the liver. The relation of the liver to infections is also discussed, especially with regard to malaria, typhoid fever, small-pox, cholera, and septicæmia. The relations of the liver and the blood, kidneys, heart, and nervous system are also duly considered. The General Symptomatology of the Liver is most interesting reading and contains a large amount of information. The classification adopted for the varieties of cirrhosis of the liver is a sound one, being based upon its pathology. Dr. John B. Murphy writes on Diseases of the Gall-Bladder, and his contribution will well repay perusal.

The volume ends with an article on Movable Kidney, by Dr. Kendal Franks, of Johannesburg, South Africa. With regard to the frequency of this condition the author summarises thus: (1) mobility of the kidney is more frequent than is generally supposed (from 3 per cent. to

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10 per cent. of adult women); (2) it is found more frequently in women than in men (about six to one); and (3) it is more common in the right than in the left side (about eleven to one); and ascribes the infrequency with which mobility of the kidney is discovered after death to "the more or less post-mortem fixation which takes place." The symptoms of movable kidney are concisely described and the treatment is judiciously considered. Nephrorraphy is only recommended when the symptoms are very severe and no relief is obtained by any external support.

LIBRARY TABLE.

Die Diagnostik Innerer Krankheiten Mittels Röntgenstrahlen. Zugleich Anleitung zum Gebrauch von Röntgen-Apparaten. Von Dr. Med. GEORG ROSENFELD. (*The Diagnosis of Internal Diseases by Means of the Roentgen Rays, together with an Introduction to the Use of the Roentgen Ray Apparatus.* By Dr. GEORG ROSENFELD.) Wiesbaden: Verlag von J. F. Bergmann. 1897. Pp. 98. Price Marks 2.80.—One of the earliest of the utilitarian applications of Professor Roentgen's discovery was its employment for the tracing of needles, bullets, &c., in the tissues of the living body, as well as for the inspection of fractures and dislocations occurring in the extremities, and soon after the adoption of the new method as a recognised means of surgical diagnosis it was found to be capable of rendering much assistance in the more difficult problems connected with the investigation of the contents of the thorax and abdomen. The present volume, by Dr. Rosenfeld, of Breslau, is an important contribution to our knowledge of this part of the subject, giving within moderate compass a very large amount of practical instruction in the methods of examining patients, interpreting the appearances, and managing the apparatus. The opening chapters are devoted to the head, face, and neck, the chief points of interest being the discovery of bullets in the head, of various foreign bodies in the eye, orbit, air-passages, or œsophagus, and of fluid in the maxillary antrum. Most metallic objects are, of course, easily seen; fish bones, however, are only visible under exceptional circumstances. With regard to the thorax Dr. Rosenfeld asserts that the pictures thrown on the fluorescent screen by the Roentgen rays not only give almost as much information regarding the dimensions and relative position of the viscera as can be obtained from a post-mortem examination, but have the further great advantage that the vital movements are distinctly visible. After a minute description of the contour lines of the heart, together with an account of the diversities of its appearance in different individuals as displayed on the screen, he proceeds to show how by means of photography and the fluorescent screen the observer may arrive at measurements of the living heart which are, he says, far more accurate and satisfactory than any results of auscultation and percussion. The method adopted was the placing of metallic sounds on the chest in positions ascertained by viewing the respective images on the screen, and the various positions being marked on the skin the included area was subsequently measured off. Several precautions are mentioned which must be attended to in order to avoid errors. In a considerable proportion of cases it is possible to define even the inferior outline of the heart, and emphysema, which sometimes makes percussion uncertain, does not in the least interfere with inspection by the Roentgen rays. Hypertrophy of the left ventricle and dilatation of the right side of the heart can be immediately recognised; the great vessels are usually difficult to see on account of the shadow cast by the sternum, but aneurysms and dilatations of the aorta come into view as soon as they extend beyond the margin of the bone. Something may be learned regarding the physiology of respiration by observing the motions of the diaphragm. It will be seen, for instance, that during inspiration the heart does not descend with the central tendon of the diaphragm and the phenomena of hiccough present a curious spectacle. The healthy lungs are almost transparent to the rays, but infiltrations are readily perceived, especially those due to pneumonia, gangrene, and tumours; in phthisis the appearances are much less distinct than might have been expected, and considerable practice is necessary for drawing correct inferences in these cases. Passing over some thirty pages which relate principally to the examination of the abdominal viscera we come to a short chapter on the Injurious Effects of the Rays. Dr. Rosenfeld considers that the dermatitis which is sometimes observed is due, not to the rays themselves, but to the brush discharge of high-tension currents. The continuous inhalation of ozone by the experimenters is, however, a more serious matter. When this gas forms a minute proportion of the atmosphere it is believed to be wholesome; but von Binz and von Schulz have proved that when inhaled in quantity it is a poison, producing hæmorrhages into the mucous membranes and pathological changes in the blood-vessels, and it is noticeable that two workers in this field—Professor Oppenheim and Professor Bucka—although habitually in excellent health, both died suddenly. The volume is illustrated with four full-page photo-prints, showing respectively a gangrenous patch in the lung, enlarged mediastinal glands, the thorax and abdomen of a girl, and a young child from the knees to the lower part of the face.

The Yew Trees of Great Britain and Ireland. By JOHN LOWE, M.D. Edin., F.L.S. London: Macmillan and Co. New York: The Macmillan Company. 1897.—If England owes any part of her greatness and supremacy of the seas to the brave old oak which supplied her with ships she ought certainly to venerate the yew, which supplied her with the bows and arrows that helped her to win some of her earliest victories. Yet while the oak has always inspired feelings of reverence and awe the yew has ever been associated with all that is sombre and gloomy. The story of the yew, however, forms one of the most fascinating chapters in our English folk-lore, and the embodiment of Dr. Lowe's investigations in book form will be heartily acceptable to all lovers of the romance of trees. Beginning with a chapter on the etymology of the name and the varieties of the yew the author goes on to deal with its distribution and growth. He discusses the vexed question why the tree is to be found planted in so many places in churchyards, and quotes the various statutes relating to the tree. The hard, tough, close-grained, and durable nature of the wood has caused it to be used for many purposes besides the manufacture of bows and arrows. Formerly it was much used in the manufacture of Tunbridge ware, posts to be fixed in the ground, cogs for mills, and "everlasting axle-trees," as Evelyn has it. The wood was also employed in the making of bedsteads, having gained the reputation of keeping away bugs. Drinking tankards were manufactured from it, and, referring to Pliny's assertion with regard to the ill repute of vessels made from this wood, the author believes that it is possible that wine, if allowed to stand for some time in a new vessel, might extract sufficient poison to be injurious. Taxin, the active principle of the yew, however, seems to be insoluble in water, and at the present day yew is the favourite material for making cups in the Pyrenees. The poisonous nature of the tree has been referred to from early times by Dioscorides, Nicander, Galen, and others, and we have it on the authority of Suetonius that the Emperor Claudian caused an edict to be published to the effect that this tree had the power of curing the bite of vipers. Virgil alludes to the flowers as communicating poisonous properties to Corsican honey, but the author remarks that if the tree existed in Corsica in Virgil's time it must have been for some reason or other eradicated, for he has not met with a

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single tree of this species in any part of the island. The question of the poisonous nature of the yew has never yet, so far as we are aware, been definitely settled, and the statement by Dr. Lowe that "every part of the plant is more or ess poisonous with the exception of the red mucilage surrounding the ripe seeds" is an important one. A writer in Knight's English Encyclopædia says that the fruit of the yew may be eaten with impunity, and the statements with regard to the poisonous nature of the plant are most conflicting. It has been said that small doses of the leaves of the plant have an effect similar to that of digitalis in reducing the circulation. The author's experiment made upon himself with taxin would show "that it is a cardiac tonic of no mean value. The heart's action is decreased in frequency by small doses such as 1-20th to 1-8th of a grain at the same time that the cardiac pressure is distinctly increased. These effects I have found to be durable. In larger doses it generally depresses the heart's action. On the whole, it contrasts favourably with digitalis and convallaria and is worthy of more extended observation." That the yew is poisonous to animals is well known, but experiment has proved that the leaves when mixed with two or three times their quantity of oats can be taken by horses with impunity. The volume is well printed and well illustrated, and contains a bibliography.

The A B C of the X Rays. By WILLIAM H. MEADOWCROFT. London: Simpkin, Marshall, Hamilton, Kent, and Co.—This book is written essentially for the tyro, and contains simple directions which are calculated to ensure success in obtaining simple x ray results. We do not agree with the author—at any rate, we have not found it so in our experience—that tungstate of calcium exhibits as much fluorescence as the platino-cyanides. Necessarily there are no directions given bearing on the application of the x rays to the exploration of the cavities of the body.

JOURNALS AND REVIEWS.

The first volume of *The Phonographic Medical Library*, projected by the Society of Medical Phonographers, consists of a shorthand edition of four lectures on the Diagnosis of the Nature of Organic Brain Disease, by Sir William R. Gowers. The fourth lecture is a reprint from Sir W. R. Gowers' standard work on the Diagnosis of Brain Disease; the first and second comprise the opening lecture in the same work, amplified and brought up to date; whilst the fourth, on Acute Meningitis, is new. The style of shorthand adopted is the "easy reporting," and the lithography is clear and well done. Medical shorthand writers ought to consider themselves fortunate to be able to possess for the small sum of 1*s.* 6*d.* an authoritative work, which not only affords excellent practice in reading shorthand, but will be helpful in their daily work, characterised as it is by the clearness of diction and lucidity of thought of Sir W. R. Gowers. The publishers are Sir Isaac Pitman and Sons.

Appleton's Popular Science Monthly (New York, Appleton and Co.).—The number for August contains several papers of medical interest embracing subjects which we do not consider at all desirable for public reading or for treatment in a popular journal. Thus, Dr. T. D. Crothers raises some interesting points on New Questions in Medical Jurisprudence. It is a sound and temperate view of the attitude that should be taken in regard to criminals who have committed a crime under the influence of drink. Of course, alcohol predisposes to criminality by lowering and paralysing those brain centres which preside over consciousness of right and wrong. "The claim," he says, "that alcohol is used for the purpose of committing crime should be a question open for evidence, and one to be considered doubtful until proved by facts that can have no other meaning." "Crime committed when under the influence of spirits will be found, as a rule, to follow uniform lines and be very much alike in methods of execution." Dr. Pearce Bailey contributes a paper, illustrated with cases (!!), on the Thyroid Gland in Medicine, which gives a plain and intelligible statement of the new organo-therapy. Lastly appears a very interesting paper on Stones in the Head which we dealt with in our issue of Sept. 18th. We must repeat that it is not compatible with professional dignity that papers of so strongly and strictly a medical character should be published in a "popular monthly." It is a matter to be deplored that even in America this is countenanced.

Analytical Records
FROM
THE LANCET LABORATORY.

UNSWEETENED SWISS CONDENSED MILK.

(THE BERNESE ALPS MILK CO. AGENCY, EDWIN FISCHEL AND CO., 11, ROOD-LANE, E.C.)

THE convenience of sterilised milk in a concentrated form is obvious. The preparation before us exhibited an excellent composition and very little deterioration in regard to flavour. Analysis gave the following results: total solids, 37·75 per cent.; fat, 10 per cent.; mineral matter, 1·92 per cent.; and water, 62·25 per cent. On diluting the concentrated milk by adding to every one part by weight two parts of water, milk of the following excellent composition was obtained: total solids, 12·58 per cent.; fat, 3·33 per cent.; and mineral matter, 0·65 per cent. The concentrated milk contained no antiseptics, and was perfectly sweet and sound to the taste. It is a food product of considerable merit

PURE CONFECTIONERY.

(TUCKER AND SONS, 73 AND 75, HIGH-STREET, TOTNES, DEVON.)

Materials are much too cheap nowadays to make it profitable to employ objectionable adulterants in the preparation of sweatmeats. At one time, of course, as THE LANCET Analytical Commission in 1854[1] showed, confectionery was fraudulently as well as injuriously adulterated. The specimens before us, however, are not even made from common materials, but in some cases with cream and honey. The taste certainly indicates the selection of the best materials, while analytical examination proved the absence of objectionable ingredients. It is satisfactory to find that a high standard of purity and perfection is aimed at by the selection of choice ingredients. The samples submitted to us included butterscotch, cream and honey tablets, Devon cream toffee, and honey and mint toffee, the latter containing a definite proportion of, it is said, Mitcham mint. Not the least distinct advantage of toffee and its preparations is the practical impossibility of employing aniline dyes for colouring purposes.

CACAO DE LUXE.

(A. SHORT AND SON, 1, STANLEY-STREET, GLASGOW.)

The following results were obtained on examination of this cocoa: fat, 31·20 per cent.; mineral matter, 6·20 per cent., the alkalinity of which was equal to 2·43 per cent. reckoned as potash. The cocoa is distinctly alkaline in reaction, a feature which distinguishes it from Dutch cocoas. The Dutch method does not consist of the addition of an alkali to the cocoa, but of a small proportion of a neutral salt which, on ignition, is converted into free alkali. The cocoa employed is evidently of a superior kind and the bulk of

[1] The Analytical Sanitary Commission on Poisonous Coloured Confectionery, THE LANCET, March 18th, 1854, p. 316

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the indigestible fat of the original bean is reduced. With regard to miscibility with water, however, there is margin for improvement.

NESTOR FLUID.

(THE NESTOR SANITARY FLUID CO., 16, CREECHURCH-LANE, E.C.)

Tar acids, mainly cresol and not phenol, and tar oils combined with alkali are the basis of this preparation. With water it yields a milky fluid, and in this finely divided condition the powerful antiseptic oils are most favourably presented. The preparation is strongly alkaline, mixes in all proportions with water, and owing to the particular method of combination it gives a mixture of uniform composition and antiseptic strength. It is practically free from carbolic acid, and on this account is regarded as non-corrosive and non-poisonous. This, however, as experience has shown, is not absolutely correct. It would be better to describe it as much less poisonous than preparations of carbolic acid. "Nestor Fluid" is a powerful antiseptic and disinfectant preparation, more than equalling carbolic acid in this respect, and in many ways preferable for ordinary disinfecting purposes.

KOLLOX WINE.

(THE KOLLOX WINE CO., 69 AND 70, MARK-LANE, E.C.)

On analysis this wine yielded the following results: alcohol, by weight 17·25 per cent., by volume 21·19 per cent., equal to proof spirit 37·13 per cent.; extractives, 7·27 per cent.; mineral matters, 0·19 per cent. It is stated that the wine is prepared from selected port to which a specially prepared fluid beef has been added, and a definite proportion of the principles of the kola nut. We were able to confirm this statement in part since the alkaloid occurring in the kola nut, caffeine, was successfully isolated and identified, but if fluid beef has been added the proportion contained in the finished wine must be very small and of little value. We found only ·0246 gramme of nitrogen in 100 c.c. of the wine. By adopting the factor 6·25 as multiplicator this at most represents only ·16 per cent. of meat derivatives. This fact detracts not a little from its claim as "a food tonic." The wine is excellent to the taste and evidently prepared from a good and sound port.

THROAT PASTILLES (MENTHOL CO.).

(GLAISYER AND KEMP, 11 AND 12, NORTH-STREET, BRIGHTON).

These pastilles consist of a kind of jujube, each containing menthol, $\frac{1}{5}\frac{1}{5}$ grain; cocaine, $\frac{1}{2}\frac{1}{5}$ grain; and red gum. They dissolve slowly in the mouth and are not disagreeable to the palate, a slight but quite distinct anæsthetic effect being experienced in the throat soon after the pastille is dissolved. We had no difficulty in isolating and recognising the constituents indicated. These pastilles will afford a useful form of application in certain affections of the throat.

GREEK BRANDY.

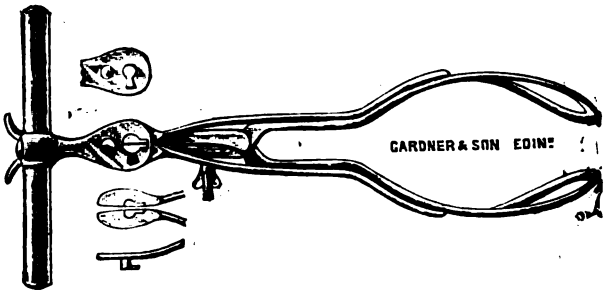
(ACHAIA, DEUTSCHE ACTIENGESELLSCHAFT FÜR WEIN PRODUCTION, PATRAS, GREECE.)

The attention of the profession may be well directed to the fact that since the failure in the Cognac district some years ago excellent grape spirit is being sent to this country from other fields, notably Greece and Spain and the colonies. Though these spirits are not produced in the famous Cognac district, they should claim a decided preference over spirit that is derived from maize and other cereals. The sample of Greek brandy submitted to us possessed the distinctive fragrance of wine brandy, and was smooth and mellow to the taste. With still longer keeping it would doubtless further improve in these particulars. Our analysis furnished the following results: alcohol, by weight 40·80 per cent., by volume 48·21 per cent., equal to proof spirit 84·49 per cent.; extractives, 0·41 per cent.; mineral matter, 0·02 per cent.; acidity, reckoned as acetic acid, 0·08 It is obviously a genuine grape-derived spirit, and it offers, therefore, distinct advantages, especially for medicinal use. Though somewhat dark in colour it does not contain an excessive amount of extractive matters, while its alcoholic strength is satisfactory.

New Inventions.

AXIS-TRACTION FORCEPS.

IN the following illustration is shown a simple device for fixing the traction handle to the rods in the Simpson Axis-traction forceps and at the same time locking the traction rods. The figures (which explain themselves) show, in place of the usual stud on each rod, half a stud on each rod, set upon the adjacent edges in such a way that when approximated they form one stud, which with the hole and slot in the traction plate forms a joint on the well-known Péan principle.

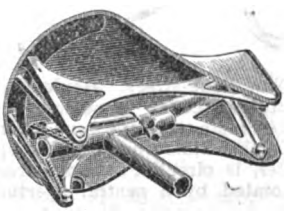


The advantages claimed are:—1. Simplicity of mechanism, giving (*a*) cleanliness and (*b*) a saving of time. 2. Rigidity, the traction apparatus forming a triangle with force applied at the apex instead of a polygon with force down two opposite sides. 3. Uniform ease of adjustment for all sizes of head and all grips, good and bad. The pair from which the illustration is taken was made at my suggestion by Messrs. Gardner and Son, of Edinburgh, and I find that it works very satisfactorily, whilst I can apply and remove the traction handle in half the time required for other methods. It costs no more than others.

Auckland, New Zealand. F. M. PURCHAS.

THE ESMOND SADDLE.

NOTWITHSTANDING the padded and pneumatic saddles which have been placed upon the market many riders still prefer the ordinary leather peaked saddle, and, perhaps, if properly moulded and adjusted, there is little to be said against it. The Esmond saddle so far as the "seating" accommodation goes is similar to the common form of peaked saddle, but is original in the manner in which the seat is attached to its supporting framework. The construction is such that the seat swings longitudinally, and at the same time there is a slight lateral movement. Both these movements are of importance—the first in preventing shock when the wheels meet with any obstacle, and the second in preventing friction between the saddle and the thighs of the rider. Another advantage is that as the rider practically becomes one with the saddle, the latter moving with him, there is no danger of bruising the perineum by jolting on to the peak of the saddle. Vibration is also greatly reduced, and there is a sense of ease and comfort in riding which does not pertain to the ordinary saddle. The address of the Esmond Cycle Saddle Company is Botolph House, Eastcheap, E.C.



"THE ALFORMANT."

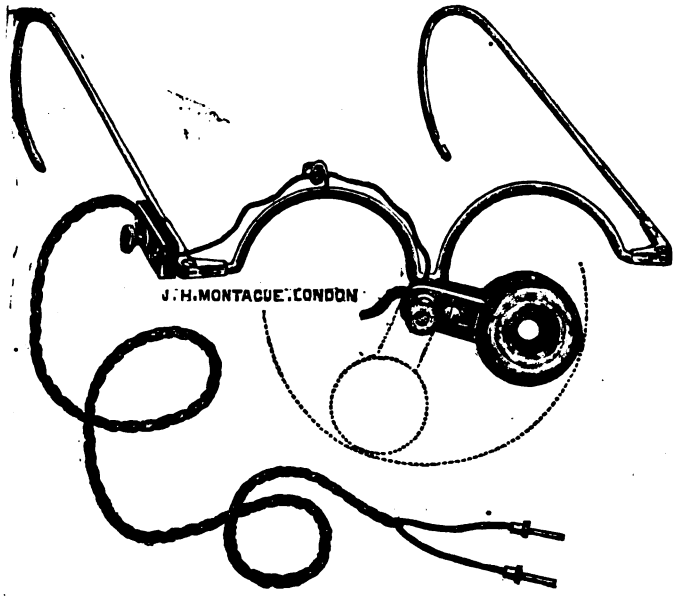
THIS is an apparatus specially adapted for the easy production of formaldehyde gas for the disinfection of the air of apartments. It consists simply of a spirit lamp provided

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with a glass chimney, over which is placed a cup-shaped metal receiver, in which a tablet yielding formaldehyde is dropped. The tablet itself is a condensation product of formaldehyde—that is, paraformaldehyde,—which is a solid at ordinary temperatures. On heating this substance formaldehyde gas is disengaged, which, from a single tablet, is sufficient, it is stated, to render 1000 cubic feet of air sterile. The powerful disinfectant, antiseptic, and deodorising properties of formaldehyde have now been fairly established, and a simpler way of applying disinfection to rooms, articles of clothing, &c., can scarcely be suggested. A very important advantage gained in employing formaldehyde for this purpose is that it is without destructive action upon articles of furniture, brass fittings, or domestic fabrics. The gas is very irritating to the mucous membrane, suggesting at one moment sulphurous acid and at another bromine. The introduction of formaldehyde in the form of paraformaldehyde tablets, which yield on heating two and a half times their weight of gas, renders disinfection, and especially aerial disinfection, a much more satisfactory and convenient operation than was possible hitherto. We should imagine, also, that it would be a very convenient and effectual means of ridding dwelling-rooms of mosquitoes, midges, and other pests. The apparatus, with the paraform tablets, is supplied by the Formalin Hygienic Co., Limited, 9 and 10, St. Mary-at-Hill, E.C.

A NEW SURGICAL LAMP.

THE illustration given below represents a new form of electric lamp made at my suggestion some time ago by



Mr. J. H. Montague, of 101, New Bond-street. Having had frequent opportunities of practically testing its usefulness I have found it very convenient in more than one application, though originally designed for ophthalmic work. The lamp, which is one inch in diameter, is circular, flattened from before backwards, and perforated by a central aperture about a quarter of an inch in diameter; the filament completely encircles this aperture. The back of the lamp is silvered and blackened round the central hole behind, and to avoid any unpleasant radiation of heat to the eye the back is further protected with non-conducting asbestos material A small transformer is required for use with the alternating current, the lamp working best at about twenty-three volts. At present this lamp has been tried in two forms—(1) attached to a handle provided with a switch, and (2) fitted to a laryngoscopic frame (as illustrated) in which it is hinged to the bridge so as to be readily adjustable for either eye; a switch is fixed to the right side of the frame, which can be turned on or off by the slight movement of a small milled head. The advantages of this lamp consist in its lightness as compared with a laryngoscope mirror, of which it takes the place, and more especially in its rendering the usual bracket lamp unnecessary, thus obviating the frequent adjustment of this and of the mirror which is generally required, for the lamp once fixed satisfactorily in the line of vision needs no further alteration whatever the movements of the observer or patient. The uses to which this lamp can be put are many; the most important are for indirect ophthalmoscopic examination (here the laryngoscope frame is very convenient, for it leaves the hands free), for laryngoscopy, and for examination of the ear and nose. It is also applicable to the urethroscope.

Harley-street, W. H. R. BELCHER HICKMAN, M.B.Oxon.

THE "MATTO" CHAIN.

THE essential part of the Matto Chain consists of a stout wire frame, three inches wide by twenty-five inches long, which carries twelve rows of wooden balls, which are free to rotate, each row containing two balls. The diameter of the balls is about one and a quarter inches and the axes are two inches apart. At each end of the frame is provided a suitable handle. The appliance consists, in reality, of a chain of squares, each square carrying at the anterior and posterior ends two revolving balls. Each square has independent movement, so that the chain adapts itself to the shape of the body. Though we cannot regard it as a means of obtaining the complete action of the massage process, yet it distinctly imitates the manual kneading of the muscles of that process, and in this way may establish circulation and induce an invigorating reaction. As each ball rolls over the muscular tissue it is alternately depressed and relaxed, to be depressed and relaxed again as succeeding balls pass over its surface. The effect, however, obviously depends upon the amount of pressure applied when the chain is in motion over the parts it is required to stimulate. To apply any considerable pressure so as to gain distinct effect requires a decided expenditure of energy, and there are many patients who would be benefited by massage, yet who would not have the strength and endurance to satisfactorily manipulate the chain for themselves. It affords, however, for this very reason a very healthful muscular exercise to those who are not too weak to apply it, and its value in this respect is enhanced since at the same time it induces circulation and stimulates the muscles over which the balls travel. Another point to be noticed is that on applying the chain to the body the balls at first impart a feeling of cold, but this discomfort could obviously be avoided by slightly warming the apparatus just previously to use. The Matto Chain is supplied by "Matto, Limited," 32 and 34, Clerkenwell-road, London, E.C.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—The next examination for the certificate in nursing and attending on the insane will be held on Nov. 1st, 1897, as already announced in our advertisement columns. Candidates should obtain from the Registrar (Dr. Spence, Burntwood Asylum, near Lichfield) a schedule, to be filled up, signed, and returned to him at least four weeks before the date of the examination. Oct. 4th will be the last day upon which, according to the rules, candidates can enter for the November examination.

INFECTIOUS DISEASES AT CARDIFF.—During the thirteen weeks ended July 3rd, 101 patients were admitted into the infectious diseases hospitals at Cardiff, compared with 151 in the preceding three months. Of these 71 were suffering from scarlet fever, 22 from diphtheria, and 8 from typhoid fever. The expenditure for these amounted to £641 3*s.* 6*d.*, or, after deducting £17 7*s.* 7*d.* received from the guardians and others for the maintenance of patients, an average cost of £6 3*s.* 5*d.* for each patient admitted.

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THE LANCET.

LONDON: SATURDAY, OCTOBER 2, 1897.

THERE seems to be fair hope of redeeming the cause of Direct Representation in some degree from the discredit which has fallen on it in consequence of the extraordinary action of Dr. RENTOUL. As we anticipated last week, the list of candidates—which we may now regard as complete—contains one or two names which will justify the concentration of the votes of the profession for the purpose of securing the best candidate. We must again repeat that in our opinion the discredit to Direct Representation is at present very great. Dr. RENTOUL has disturbed the profession with proposals or almost promises of a medical millennium—the number of Direct Representatives was to be largely increased; midwives were to be abolished, and the cases they attended were to be handed over by force of law to general practitioners, who were to receive from public sources two guineas per case; friendly societies were to be limited in their powers from a medical point of view; and all gratuitous work on the part of members of the General Medical Council and its committees was to cease. And just as the time draws nigh for Dr. RENTOUL to do his work and demonstrate the practicability of his proposals he retires from his post, throwing the blame on the profession for not supporting him and on the members of the General Medical Council, among whom he stood "almost alone" in desiring "to carry into effect those medico-political and medico-ethical questions which I have had at heart for a good number of years." We do not think that in the history of medical politics there is such another instance of want of courage in the person of a reformer who felt he was almost the only advocate of truth and right. We need not labour these points. They are admitted even by those who supported Dr. RENTOUL. We only refer to them to impress on the profession that no mistake should be made in the rapidly approaching election. A candidate must be chosen who knows his own mind, who can take a sober view of the duties of the General Medical Council, and who can give the members of the Council credit for what they do and for a little common sense and some disposition to act for the advancement of the best interests of the profession—which are certainly consistent with the best interests of the public.

There are now five candidates before the electors, Mr. JACKSON having with some magnanimity retired in favour of Sir WALTER FOSTER. We shall neither surprise nor offend other candidates if we assume that for the purposes of this election the choice of the profession will lie between Mr. VICTOR HORSLEY and Sir WALTER FOSTER. On less serious occasions questions may properly be raised in favour of a general practitioner as such, but this is not the time. A strong well-known candidate must be elected, and so long as he is in sympathy with the body of the profession and its wants, and is a man of stability and ability and discrimination, we need not too narrowly inquire what branch of practice he follows. We may consider the claims of Mr. HORSLEY and Sir W. FOSTER in the order in which they entered into the contest. They are both men of ability and eminence, and the election of either of them would tend to restore the somewhat damaged reputation of Direct Representation. The time is not one for bandying compliments, and we shall try in a few sentences to indicate, not only the merits of these gentlemen, but, with all due deference to themselves, their defects.

Mr. VICTOR HORSLEY is one of the most brilliant men in the profession, with the great advantage of youth. He has so distinguished himself in science as to have been elected in early life a Fellow of the Royal Society, and in surgery as to be one of its most original and enlightened leaders. Nevertheless, he has always manifested the utmost sympathy with the general practitioner and he has displayed for years the most keen interest in defending medical men from all unfair conditions and unjust laws. He has, as President of the Medical Defence Union, acquired an almost unrivalled knowledge of the weak spots in the Medical Acts and the deepest sense of what is required for the honour of medical practice. He speaks with great clearness and force. He is, in short, a very strong candidate. Has he no faults? He has the very faults of his virtues. He is impulsive. Sometimes he is prejudiced and occasionally rather too aggressive. He is apt to be borne along with the very impetuosity of his perceptions and convictions. On one or two occasions he has allowed himself to make unwarranted charges against the President of the General Medical Council, which offended not only the President but the Council. But these are faults that responsibility will correct. He remains an excellent candidate, whose election would add immensely to the interest of the Council's discussions and to its reputation.

Sir WALTER FOSTER is, we are all aware, an able consultant and a prominent Member of Parliament. He is a good speaker who knows what he wants to say and how to make his points. He is good-tempered in debate and was always listened to with respect by the Council. His Parliamentary position has some advantage when it does not interfere with his attendance at the Council. He has always shown an interest in needed amendments of the Medical Acts, and was the chairman of a select committee to consider defects in the Registration Acts. The profession, too, has had in him, both in Parliament and as a member of the General Medical Council, an effective and sympathetic exponent of its grievances and complaints. His faults are due to a certain variability of mind. In November, 1889, he proposed a resolution in the Council urging on the Government the importance of passing into law some measure for the education and registration of midwives. In later years he has been the exponent of Dr. RENTOUL'S views and is now strongly supported by him. With a little more firmness of mind he would doubtless have retained his well-earned seat at the last election, but with a doubt either in his own intentions or as to the confidence of the profession he retired. However, when all is said there remain two excellent candidates. It is somewhat hard on the profession that it should have to choose between them.

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Either of them would confer a great obligation on the profession by giving place to the other and so enabling it to return a suitable candidate with practical unanimity. Mr. HORSLEY, however, was first in the field, and in view of the facts that at the last election he stood aside in favour of candidates who were actually general practitioners, and that on the present occasion he was quite ignorant that Sir WALTER FOSTER would again offer himself for election, his candidature will claim much sympathy. Moreover, his address and his speech at Manchester show how lucidly he comprehends the work to be done in the Council. If elected he would of course have to cease to be a member of the Medical Defence Union; but it is not too much to say that he would take with him an amount of knowledge of the conditions of medical practice and of the defects in medical legislation and in medical education which would add greatly to the usefulness of the General Medical Council.

THE history of therapeutics is full of remedies which have been tried and vaunted for various diseases, but which further experience has shown to be perfectly useless. Every year are added to this list substances of unknown composition and uncertain action. Within recent years, however, certain bodies have been administered which have given rise to a practically new branch of therapeutics—namely, the animal extracts—and this in turn has caused renewed attention to be applied to the properties of "internal secretions." One of the most remarkable of recent remedies which has already withstood the test of time and has not, like so many others, fallen into disuse, is thyroid extract. Experiments have not yet clearly demonstrated the functions of the thyroid gland; but one point is clear, as Dr. ROSE BRADFORD shows in his article on the "General Pathology of Secretion" in Dr. CLIFFORD ALLBUTT'S System of Medicine—namely, that whatever other functions the thyroid gland may possess it supplies at any rate a substance necessary for normal tissue metabolism. At first introduced for the treatment of myxœdema by Dr. GEORGE R. MURRAY and others, feeding with thyroid gland or its extract has been employed in numerous conditions with varying success, but by far the most satisfactory results have been obtained in myxœdema and cretinism.

Four original articles in our present issue bear testimony to this. Especially interesting is one bearing the title "Sporadic Cretinism," by Dr. A. GORDON PATHESON. He describes the case of a child affected with cretinism who was brought to him at the age of eleven months. The effects of the thyroid treatment were immediate and remarkable, and steady improvement had been maintained for a period of five years. The mother gave birth to a second child which was an exaggerated counterpart of the first, and which only lived for twenty minutes; and then follows the most interesting part of the paper. The fact of the mother having given birth to two cretins in successive pregnancies offered a strong presumption that she would, unless treated, give birth to a third, consequently when the woman again became pregnant she was treated from the beginning of the third month by thyroid extract in the form of tabloids. Labour came on naturally and at full term and was easy. The child was a fine healthy female, indistinguishable from any other infant in appearance. Another article by Dr. T. TELFORD-SMITH draws attention to the fact that one of the most marked among the many other signs of development produced in cretins during the administration of thyroid preparations is the rapid increase in stature, and he finds that this rapid growth of the skeleton leads to a softened condition of the bones, resulting in a yielding and tendency to bend in the case of those which have to bear the weight. Surgeon-Captain DRAKE-BROCKMAN records a case of advanced cretinism treated by thyroid extract which showed marked improvement under the influence of the extract. The boy was a native of India, and the case was an advanced one, not only in years, but in severity of symptoms. The fourth case comes from another part of the world—New Zealand—and is reported by Mr. CHARLES MORTON ANDERSON. The patient in this instance was a girl, aged eleven years, who had first shown symptoms of cretinism at the age of three years, so that the condition was far advanced; nevertheless, immense improvement was produced by the use of thyroid extract, both physically and mentally.

Regarding these cases as types of the numerous ones constantly being recorded, it is difficult to find a more marked example of uniformly successful medication. Perhaps the two forms of treatment with most nearly similar histories which present themselves in modern times are those by the salicylates in acute rheumatism and by iodide of potassium in syphilis. Although, as stated above, the exact action of thyroid feeding is not as yet fully understood, yet it has proved by the test of number of cases and by the lapse of time since it was first introduced to be one of our most reliable remedies, and this in a class of case which up to a few years ago had been looked upon as almost hopeless. The condition of the cretins especially was most deplorable, not only as regards their physical but also their mental powers. Now, however, the prognosis of such cases under this treatment is most hopeful, and the use of the thyroid gland or its extract may be regarded as one of the most successful therapeutic discoveries of the century.

THE total number of persons of unsound mind in England and Wales under the supervision of the Lunacy Commissioners on Jan. 1st, 1897, was 99,365. This represents an increase of 2919 for the year 1896. There has been an increase of 2857 pauper patients, 53 private patients, and 9 criminal lunatics. The returns for Scotland and Ireland also show that the asylum population is increasing. At first sight it would appear that insanity in its more active phases is making rapid strides among the populace, but the official view does not confirm this, and the authorities of the various countries are strong in the conviction that the increase is more apparent than real, and is mainly due to accumulation. This assertion is decidedly reassuring, but perhaps it is capable of further proof. An argument in favour of the Commissioners' views is furnished this year by the fact that the death-rate of the English asylums shows a considerable diminution. The effect of a recorded decrease of 0·96 in the death percentage of 1896, as compared with that of 1895, was to leave alive at the end of 1896 722 patients who would have been removed by death if the

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rate of mortality had been the same as that of the previous year. On the other hand, a slight advance of 0·35 in the recovery rate brought about the discharge of 66 more patients than would have been left if the rate of 1895 had prevailed, and this number must be deducted from the 722, leaving 656 cases as the result of the diminished discharge rate. This is an explanation as far as it goes, but it leaves a very large margin to be accounted for. What is the composition of this residue? Is it due to recent, recurrent, or chronic insanity? This is the point to determine, and in this respect the statistical information afforded by the Commissioners is very defective. No statistics are available for estimating the number of persons *with first attacks* in which the onset of insanity took place *within three months of admission*. A table conveying this information is inserted in every asylum report, and it is therefore safe to assume that the sum total for the whole country could easily be ascertained. For purposes of comparison such a table would prove invaluable, and it is the only method of obtaining anything like reliable information regarding the incidence of freshly occurring insanity; further, it would tend in great measure to solve the difficult question whether there is, or is not, an increased liability to insanity amongst the population. In the Red Book of the Asylums Committee of the London County Council the proportion of such cases appears to be 37 per cent. of the admissions. It would be interesting to know the ratio for the whole country.

While the number of pauper lunatics shows a marked increase from year to year, the case is otherwise with private patients. In the latter class there has been a continuous decrease, from 2·82 per 10,000 of the whole population in 1891, to 2·68 in the present year. During the same period the ratio of pauper lunatics has increased from 26·78 to 29·07 per 10,000 of population. As to the general proportion of insanity, it appears that in 1859 the proportion of officially known lunatics to the population was 1 to 536. Since then things have materially altered for the worse, for the ratio at the present time is 1 to 313. The statistical tables in this year's report have been supplemented by the inclusion of a table giving the number of patients admitted in each month of the year 1895 suffering from the principal forms of mental disorder, and also showing the daily average of those admissions for each month. It is somewhat singular that the admissions under all heads were most numerous in the month of May, next in April, and thirdly in June. The daily averages of admissions for each of the five months March to July exceeded the daily average for the whole year; again, the daily average of admissions of cases of mania was highest in April—viz., 32·3 per cent.; and that of cases of melancholia highest in June—19·3 per cent. The lowest daily average in both cases was in February—viz., cases of mania, 24·3 per cent., and of melancholia, 13·3 per cent. This is a valuable and instructive table which, it is to be hoped, will be continued in future reports; in the form of a chart it would prove still more useful. The conclusion drawn is that insanity requiring early and active treatment away from home, develops more frequently in the spring and summer months than in autumn or winter.

The actual number of recoveries during the year was 7178, an increase of 105 on the previous year. The proportion of recoveries to the total number of admissions comes to 38·53 per cent., as compared with 38·18 per cent. in 1895 The total number of deaths was 6806, being 9·05 per cent. of the daily average number resident. In respect to the assigned causes of insanity, the Commissioners are of opinion that very great reliance cannot be placed on the returns, but apparently hereditary influence continues to be the most fruitful cause, previous attacks coming next, and intemperance in drink taking the third place. The proportion of old age as a cause continues to advance in the pauper class. The cases of relapse also show a tendency to increase in the same class. It is stated that this may be accounted for by the anxiety to discharge patients "not perfectly cured" owing to the crowded state of so many asylums. The Commissioners, having recognised the fact that there is a tendency to premature discharge, ought to consider the feasibility of endeavouring to check it as far as possible, for there can be no doubt that, in addition to frequency of relapse, it is responsible for other evils — viz., an increased production of hereditary insanity, and a larger proportion of insane criminals.

With the opening of the new asylum in the Isle of Wight the total number of county and borough asylums now amounts to 70. The admissions into these institutions during the year 1896 numbered 18,448, and it is noteworthy that the number of new cases admitted was no less than 2513 in excess of the average of the ten preceding years. The percentage of post-mortem examinations made was 79·9, the same as last year. The suicides amounted to 22, but in 6 of the cases the act which resulted in death was committed prior to admission, and in 2 instances the suicide occurred whilst the patients were absent on trial or on leave. 5 deaths were due to misadventure or accident; 2 patients were suffocated during epileptic fits. Many of the county and borough asylums are overcrowded, and in some instances the overcrowding is aggravated by insanitary conditions. The Commissioners express their regret that they are unable to report any material decrease in the number of those asylums where the sanitary conditions are defective, and in which preventable disease occurred. 16 deaths appear to have been due to typhoid fever in 9 asylums, 93 to colitis and enteritis in 31 asylums, 49 to diarrhœa of specific character in 20 asylums, and 6 to erysipelas in 5 asylums.

Attention is drawn to the state of the law respecting idiots, which requires amendment. More adequate provision is needed for the proper care and treatment of lunatics in workhouses. The number of registered hospitals remains the same, and their general condition continues to be quite satisfactory. The same holds good with respect to licensed houses, with a few exceptions. The entries made by the Commissioners on their visits to the county and borough asylums are appended. It is evident that those concerned in the management of these institutions display much vigilance in the care and treatment of the insane. The whole report affords continued assurance that there is no falling off in the efficiency and energy with which the duties of the Lunacy Board are discharged.

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Annotations.

"Ne quid nimis."

THE SCIENTIFIC CONSTABLE: A NEW DEPARTURE.

WE have already with us the prescribing chemist, the herbalist, the bone-setter, the "electro-cure" humbug, and a host of advertising quacks, but now it seems that we are to go a step further and to be introduced to the policeman who, having attended a course of ambulance lectures, gives evidence instead of the surgeon, thereby saving the latter's fee and at the same time glorifying himself. In reading the account of an inquest held at Halton, near Lancaster, we notice that after a police constable had given evidence as to the finding of the body a serjeant was put into the box, not to corroborate his colleague, but to describe the injuries and to give an opinion as to the manner in which one of them had been caused. He said: "When we got it out I found that the neck was dislocated, and a large wound on the left side of the neck, through the mouth, and out at the right cheek. The carotid artery was severed, the left arm was fractured and four of the left ribs, whilst the bottom lip was torn away ..... The carotid artery appeared to have been pierced by a piece of timber, the wound being contused." What are we to think of this? In the first place, how is this man competent to say that the neck was dislocated (a very rare accident, we may remark)? Again, not being an anatomist, how can he decide that the carotid artery was wounded, and, above all, how in the name of all that is wonderful can he swear that four ribs were broken? It is a notorious fact that fracture of a rib may be most difficult of diagnosis; but here, where experts often hesitate, we have a policeman glibly dogmatising. But even worse follows. Not being content with speaking to facts, he proceeds out of the fulness of his experience to give the opinion that the wound of the artery was caused by a piece of timber because the wound was contused. It really would be laughable if it were not such a serious matter. Would a blacksmith or a road-mender be allowed to give evidence upon an abstruse problem in engineering? We think not. And yet this is a fairly parallel case.

HOSPITALS AND PUBLIC RESPECT.

AT a time when those who have the interest of hospitals at heart are trying to check the abuse to which they more than all other charitable institutions are subjected, it is to be regretted that anything should occur which might tend to lower the respect in which hospitals should be held by the general public. Last week at Wood-green a carnival was held in aid of a local hospital. This took the form of a long line of tradesmen's carts, decorated, and accompanied by a motor car, a fire-engine, and a procession of cyclists in fancy dress, while tableaux were also introduced into the programme. Most of the vehicles were tastefully adorned, and a similar complimentary remark can be made with justice concerning the masquerade attire of some of the cyclists, but there praise must cease. We have on more than one occasion deprecated street processions in aid of hospital charities altogether, but what we have now to say is new. We have never before observed an element of indecorum on the part of those joining in these processions, but this element was present at Wood-green, and did not tend to heighten the respect of the sightseers for the institution with which it was associated in their minds. For any of the carnivalists to appear "in that long white formless robe that makes all woman one" displayed perhaps a want of taste, but when some of the masqueraders proceeded to act in a suggestive manner—and that certain of them did so admits of no doubt whatever—the want of taste touched the confines of the indecent. The grotesque tableau which bore some resemblance to Mr. Luke Fildes's picture of "The Doctor" did not reflect any credit on its designers, nor was it calculated to make the public particularly ready to support a medical charity, or, indeed, to do anything but smile at a solemn death-bed, while a person in the garb of a hospital nurse was as great a libel as Miss Glory Quayle. It is quite natural that secretaries of hospitals should take advantage of every means in their power to fill the coffers of the institutions to which they are attached, and in certain neighbourhoods it may be found that this method of promenading the streets forms a good means to that end, but it is highly advisable that such shows, if they must be held, should be conducted decently and in order.

THE "MASSAGE-KIDNEY."

"WE have allowed the quacks to get the start of us in the application of electricity to therapeutics," said Dr. Anstie on a memorable occasion, and the same, we fear, must, with equal truth, be said of massage. An excellent resource when medically prescribed and scientifically applied, massage is not only hazardous but positively hurtful when, on the "every man his own doctor" principle, the prescription originates with the patient who puts himself in the hands of one or other of the "masseurs" whose knowledge of anatomy, physiology, and organic lesion is on a par with that of the bonesetter or herbalist of disastrous notoriety. For what happens when the unscientific "massage" in question is practised on the "patient" who most commonly invokes its aid? He is as a rule gouty. In this state the kidney, which in such patients every sound practitioner watches with peculiar vigilance, is seldom or never quite equal to its functions. The unqualified "masseur," however, commences operations, and in his ignorance of anatomy and physiological function goes ploughing away at muscles infiltrated with the uric acid poison, creating as much histolytic waste as a brisk six-miles walk, and calling on the kidney for an excretory effort quite beyond its powers. Prolonged from day to day and unmodified by circumstances, till the "course" (often for weeks) is completed, this practice is simply destructive to the already damaged kidney and the patient finds he has got rid of a certain amount of pain or acquired a comparative ease of movement at the expense of chronic renal incompetence and eventual uræmia. That such is a too common history is familiar to nearly all consultants, particularly if their *clientèle* is on the Continent, where massage is practised with more zeal than knowledge. So generally has that history come to be recognised that the "massage-kidney" is taking its place in pathological classification, while its production is a complication for which sound diagnosis and treatment are making due allowance. The moral of it all is that none but the regularly qualified practitioner should prescribe massage, and none but the regularly qualified masseur should practise it. Indeed, more than one "Bade-Arzt," rather than sanction the manipulations of self-styled "masseurs" on his patients, has gone to the headquarters of the art at Stockholm and there taken lessons in it so as, *faute de mieux*, to apply the said manipulations himself. To such a course, however, he only resorts when the duly qualified masseur, armed with the diploma of the Stockholm school, is not to be had. This is becoming an ever rarer contingency and at nearly all the better balneary establishments or "Kurörter" the Swedish

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"diplomé," one or more in number and of both sexes, is attached to the institution. To this position the said "diplomé" has entitled himself by a systematic course of study not less than three years in duration—a course which comprises some anatomy and physiology and so much pathology as enables him to coöperate intelligently with the prescribing physician. To their credit be it recorded, the Swedes have created a school of massage on a sound basis and have reaped the reward in seeing their diplomés take rank with the "auxiliary forces" of the great army of medicine. In time, of course, their example will find effective imitation at other schools, with the result, peradventure, that "the pupil will excel the master." Meanwhile, the self-respecting practitioner at the great balneary centres abroad has come to be satisfied with none but such properly certificated "masseurs" and "masseuses." At home, when Parliament has put down "massage shops," the unwritten law of the profession will, we hope, make it soon impossible for any but scientifically-trained and medically-prescribed massage to find favour with the public.

A CHILD KILLED BY A MOTOR CAR.

THE motor car has taken its first toll of human life in London, a child, aged nine years, having lost his life through the agency of one in Hackney on Sept. 22nd. From the evidence given at the inquest it was perfectly apparent that the accident was in no way due to either recklessness on the part of the driver or to any defect in the machinery of the car. Deceased was one of a lot of schoolboys who ran after the car and amused themselves by getting on and off at the back. He was sitting next the driving chain and edged nearer to it to make room for a comrade. While so doing he was caught in the chain, twisted round and entangled in the wheel, sustaining fatal injuries. The foreman of the jury suggested that a network might be put over the chain, but the driver of the car was of opinion that "that would not last a week with the class of boys in the neighbourhood." We are inclined to agree with him; the London boy is perfectly reckless and daily escapes death by a miracle, witness the way in which he will board an omnibus when the conductor is engaged in collecting fares, and will jump off under the noses of the horses attached to the next vehicle without ever looking or thinking of the possibility of being run over. All we can hope is that this accident, lamentable as it was, will not prejudice the public against what promises to be a very useful method of locomotion, for it is evident that neither the driver nor the car was in fault.

HUNTINGTON'S CHOREA.

THIS curious disease, characterised by its appearance in adult life and by its tendency to affect several members of a family, to be inherited, and to end in insanity, is sufficiently uncommon to lend considerable importance to a paper in a recent number of *Brain* in which Dr. Michell Clarke describes some cases one of which ended fatally. He also describes the post-mortem condition of the nervous system found in this one. The first case was that of a painter, aged fifty-four years, a scheme of whose family history is given. From this it is seen that the patient's grandfather was twice married and had two children by his first wife and four by his second. Of these six children no less than four died insane, and one is known to have had chorea as well. Of the other two, one is living, aged eighty years, and suffers from chorea; the other died sane at the age of sixty years, but was prematurely aged-looking. The patient whose case is related is one of a family of three, the father being the fourth child who himself died insane and suffered from chorea. Of the other two one died in Fishponds Asylum. Of two cousins one died in an asylum, and the other is at present an inmate of Bath Asylum suffering from chorea and insanity. Of the next generation none seem to suffer as yet. There was nothing unusual in the patient's mode of life. The first symptom noticed was involuntary stamping of the right foot, followed by general twitchings. On his admission to hospital constant choreic movements were present in all the muscles of the trunk and limbs, the knee-jerks were active, and sensation, general and special, was normal. His memory was defective and inaccurate, but he had no delusions or hallucinations. The younger brother of this patient is Dr. Michell Clarke's second case. He was in Bristol Lunatic Asylum and had suffered from choreic movements for several years. He was demented and had delusions, but his memory and intelligence were fair. There was nothing noteworthy in the state of his bodily organs. The movements ceased entirely during sleep, although they affected the muscles of the face, trunk, and limbs. He died from pneumonia after a few days' illness. There was no very obvious naked-eye change in the nervous system, but careful microscopic examination of prepared sections showed widespread but partial degeneration of the cells of the cerebral cortex, especially those of the second and third layers, most marked in the frontal and motor convolutions, and an increase in the amount of interstitial tissue and of neuroglia cells. Dr. Michell Clarke also briefly relates another case of the same disease under his care in 1893. The family tendency to insanity in the case of this patient was not so marked, but his father had suffered from choreiform movements, and two sisters had been similarly affected. The illness began with loss of power in the legs, and when he came under observation all the muscles were agitated by constant spasms which ceased during sleep. Dr. Michell Clarke is of opinion that the cerebral cortex, especially the motor convolutions, is the seat of the disease, and that the change is a degeneration of cells with a concomitant increase in neuroglia. Similar changes have been observed in cases of ordinary chorea, and the identical nature of the spasms in the two conditions would seem to indicate a similar affection of the same parts of the nervous system in both cases. But from the greater severity and longer duration of the symptoms in Huntington's chorea the changes would naturally be expected to be more obvious in that disease. Dr. Michell Clarke's paper is illustrated by exceedingly good photo-micrographs of sections.

A ROYAL PHLEBOTOMIST.

A SHORT time before his death the Duc d'Aumale, who was one of the immortal forty, read a paper at a meeting of the French Academy entitled "Le Roi Louis Philippe et le Droit de Grâce." To a certain extent a dissertation on Royalism, this essay was likewise largely biographical, and by way of motto it bore the following words taken from Victor Hugo's "Les Misérables": "The first monarch who spilt blood to preserve life." The incident to which the poet makes allusion is thus described by the Duc d'Aumale: "On the 27th of October, 1833, my father, accompanied by the whole of his family, went to meet his son-in-law, the King of the Belgians, who was on his way to Paris to pay him a visit. I was one of the children who were packed together in the front of the *char-à-bancs*. The Brussels travellers were late, and accordingly, greatly to our satisfaction, we took the mail coach at Bourget. A luggage courier named Vernet, who was accompanying us, happened to get jammed by a cart, and was thrown from his horse under the wheels of the Royal carriage. They carried him to the edge of the road, where he was quickly surrounded by a crowd of people. The King at once made his way to the spot, and having examined the injured man and asked a few questions he exclaimed, 'Why, he must be

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bled; is there anybody here who knows how to draw blood?' To this inquiry there was no answer, so my father took from his pocket a lancet which had not quitted his possession ever since the time when he used to act as a dresser at the Hôtel-Dieu, and of which he had made use during his American voyages, directed the attendants to tear up some handkerchiefs, set out his bandages, arranged his appliances, performed the bleeding, and applied the ligatures. The operation was a success. Vernet, who was no longer a young man, for he used to accompany the Emperor, was still running the mail ten years later."

MORALS AND THE STAGE.

SIR HENRY IRVING is much exercised by the remark of a speaker at the recent Sanitary Congress at Leeds that many crimes of violence were promoted by posters representing crimes as portrayed on the stage. At a complimentary banquet at Cardiff Sir Henry Irving asked how many wives had owed a violent death to the pernicious example of Shakespeare in *Othello*. We should doubt ourselves whether crime was ever prompted by either a poster or a stage representation. Indeed, to judge from the behaviour of the audience at Drury Lane Theatre, who greet Mr. Henry Neville with howls of execration, crime as represented on the stage exercises a most wholesome influence. The reading of "penny bloods" is no doubt deleterious, but at present we think the stage may be held innocent.

THE SANITARY STATE OF POONA.

Apropos of the late trenchant report of Surgeon-Major J. P. Barry on the breakdown of local self-government in India, as illustrated by the disgraceful state of Poona, owing to the neglect of the municipal authorities, the *Times* of Sept. 24th had some very wise and pertinent questions to ask. Poona is a place in which highly intellectual and educated Brahmins exercise a decisive influence, but where they have failed to discharge the most elementary duties that fell to their charge. As we all know, the educated classes in India are always asserting their claims to take part in the Government of that country, but their education has for the most part been such as to qualify them for theoretical and paper work rather than for really useful practical work. The native intellect and character are peculiar. The natives of Bengal have prodigious memories and good receptive faculties. The possession of these fits them for passing examinations upon subjects which they do not really understand and of which they have no practical "grip." They are children with subtle, casuistical minds; they will commit to memory examination text-books from cover to cover and write about subjects to any extent, but as to really knowing them objectively and usefully, or applying their knowledge with a practical end in view, that is quite a different matter; in fact, the education of the average Bengali youth is often only "shoddy" and veneer. Of course, there are very many exceptions. We are only speaking of the many—the average—who are puffed up with book-knowledge which they have not really assimilated, and this unfits them for any really useful work requiring earnest thought and genuine labour. It is doubtful whether the progress of sanitation in India has been really advanced by introducing a system of native self-government or local municipal authority. Money measures men in India as elsewhere; the native population is very poor and very averse to change of any kind or to the expenditure of rupees; and under such circumstances material progress is extremely difficult. Sanitation in India must advance slowly, for it presupposes education, and we cannot legislate much ahead of the feelings of the people without incurring grave unpopularity and risk of another kind. Lord Ripon's policy regarding local self-government in India has not by any means been so successful as philanthropic people anticipated. As an intelligent native once remarked: "Sahib, we pay you well to govern us and to do all these things for us, and now you want us to do it all for ourselves and govern ourselves." Be the cause what it may, the local municipal Governments of Poona, Calcutta, and Bombay have not proved satisfactory. Local bodies have no initiative; they will meet and talk and devise schemes on paper, and there it ends; they do not see that their schemes are practically applied, and vote the necessary funds for carrying them out. Epidemic diseases come in time, give rise to panic, an exodus of the native population, a Government inquiry, and expensive reforms. So it comes about that, as in the case of the city of Bombay, a large scheme of sanitary reformation has to be devised, and the work of carrying it out has to be entrusted by the Government to a nominated body which is independent of the corporation. In time it may be otherwise; that will be when intelligent and rich natives will put their hands to the work directly in front of them, for the good of everybody and to the great relief of an overworked Government.

"YOU MUSTN'T TOUCH."

A VERY old and very persistent superstition has again dictated the action, or rather the inaction, displayed by the persons who were the first to dicover the body of a recent suicide. A poor fellow, named Henry Scott, recently committed suicide in a Suffolk village by hanging himself to a tree. It was stated at the inquest that an hour before he was cut down a man saw him suspended from a branch, but that instead of ascertaining whether life was extinct he went for the police, being under the impression that a body must not be touched save in the presence of the police. Some children also saw the unfortunate man and ran to tell their elders. But their elders did nothing, being under the same curious impression. It cannot be too widely known that the prejudice against touching a body save in the presence of the police is founded upon nonsense, and nonsense to which before now lives may have been sacrificed. The fault probably lies at the door of the police who, in cases where a body has been moved and a verdict has been subsequently returned against some persons unknown, have been known to hint that if things had not been disturbed they could have obtained a clue—the sort of clue, we suppose, the absence of which accounts for the unsuccessful inquiries into the death of Miss Camp. The duty of a person who finds a body is first to ascertain that it is a body and not a fellow creature. If life remains a medical man should be sent for and afterwards the police. If it is necessary to remove the body to ascertain that it is a body—this would always be the case when dealing with death by hanging—it will of course be well to take accurate notes of the position in which it was found for the information of justice.

CROSSED ADDUCTOR JERK.

IN a recent number of the *Journal of Physiology* Dr. Purves Stewart has a short paper dealing with this subject. The peculiarity of a crossed jerk is one which is not unfrequently observed, and essentially consists in movement of the opposite leg when an attempt is made in the ordinary way to elicit the knee-jerk on one side. In Dr. Stewart's case if the right patellar tendon was tapped two jerks occurred, one of the right quadriceps extensor, the other of the left adductor muscles, and conversely of the right adductor muscles and the left quadriceps extensor when the left patellar tendon was tapped. The jerks of the two legs appeared to occur simultaneously, but an apparatus was devised to show (1) the moment at which the patellar tendon was tapped;

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(2) the moment at which the knee-jerk occurred; and (3) the moment at which the crossed adductor jerk took place. The instrument is described in the paper, and three photographs are also reproduced of successful tracings taken during the experiments. These show clearly that the crossed adductor jerk occurs at an interval distinctly later than the knee-jerk, the average delay between the occurrence of the knee-jerk and the crossed adductor jerk in the three experiments being 0·057 of a second. This interval is considerably shorter than Dr. Glynn found in a case of crossed vastus internus jerk. Dr. Stewart mentions that different opinions have been held as to the nature of the crossed jerk, some observers considering that it is a true reflex, others that it is a direct muscular jerk produced by a sudden stretching of the adductor muscles resulting from the "jar" to the pelvis caused by the tap on the patellar tendon; others also hold that the adductor jerk is due to a sudden mechanical shock to the spinal cord. Dr. Stewart is induced, by a consideration of the results of his experiments, to conclude that the crossed adductor jerk is not the result of direct stretching of the adductor muscles by a shock communicated from the pelvis or due to a shock transmitted mechanically to the spinal cord, but is a true reflex occurring at a period distinctly later than the ordinary knee-jerk. The considerations which have chiefly led him to reject the two former views are that a tap on any of the bones near the knee, although equally likely to "jar" the pelvis, did not produce the jerk, and that only one adductor jerk was produced, and not one on the same side as well. He finds that the average time necessary for the appearance of the crossed adductor jerk is about 0·126 of a second from the time at which the opposite patellar tendon is tapped.

FOOD AT PUBLIC SCHOOLS.

AN animated correspondence under the above heading is being carried on in the *Morning Post*, and, as is usual in a newspaper discussion, the views of correspondents put forward two entirely opposite opinions. On the one side we have the delightful letter of "Quiz," who has two boys at Eton, and "upon my mentioning to one that people had been writing saying that boys were not sufficiently fed he remarked, 'Oh, golly, what a lie!'" Here we have one side of the shield. The other is exemplified by the horrifying letter of "A Mother of Four Sons," who sent "one of my boys a large package of mulberry leaves for his silkworms, and he told me afterwards that he had been glad to eat most of the leaves himself, for he got no vegetables, and the craving for green food was intense." Now we do not doubt in the least that the boy said this, but we very much doubt the craving for green food, for the average boy resembles the gentleman quoted by, we fancy, Surtees, in one of the Jorrocks' books, who upon being offered watercresses replied: "Do you take me for a rabbit?" As to the *menu* at public schools nowadays we cannot speak with certainty, but some twenty-five years ago we can say from personal experience of one school that though the food as a whole was good, and there was plenty of it, it was served out at the wrong time. Before going into early school in the winter coffee and bread were provided; breakfast, at 8.30, unless supplemented by the boys' own resources, consisted of tea or coffee and two under-baked rolls. Nothing more was provided till 2 P.M., when dinner was served, both plentiful and good. Tea, at 6 P.M., was a *résumé* of breakfast, and at nine there was supper if anyone liked to have it, consisting of meat, salad, or other "green food," bread, butter, cheese, and beer. As a whole, then, the quantity of food supplied in twelve hours was ample, but it would have been much better to have supplied the meat with breakfast and not at supper. For a boy to fill his stomach with meat and beer just before going to bed is most harmful, and it is almost equally harmful to expect a growing boy to work his mind and body in various forms of mental and physical exercise from 7 or 7.30 A.M. until 2 P.M. upon nothing but coffee and bread-and-butter. We should imagine that, as "Quiz" also points out, sanitary matters and ventilation are in more need of reform than food.

RESPONSIBILITY FOR INSANITARY CONDITION OF HOUSES.

A RECENT decision given by the Recorder of Belfast (as reported by our correspondent) shows the peculiarities of the law. According to this authority, and he gave judgment accordingly, if a citizen takes an unfurnished house he does so with his eyes open; if it is not in a sanitary condition he must examine it, and if it is defective from a sanitary point of view he must, at his own expense, make it right. Neither the landlord nor the agent was bound to do so. On the other hand, the Belfast Recorder laid down the law that if the house was furnished that fact implied that it was fit for habitation, and those letting the premises under such conditions were bound to make them sanitary in all respects. Notwithstanding this decision, we think that no person should take a house, whether furnished or not, unless those letting the premises are willing, if required, to allow an examination of the house as to its sanitary condition to be made by an independent authority. If the house is found to be defective it should be made right by the landlord, who should pay the sanitary engineer for his examination. On the other hand, if the premises are in a correct sanitary state the tenant should pay for the examination.

THROMBOSIS OF THE JUGULAR VEINS.

THROMBOSIS of the large veins of the neck is a condition of great rarity if we can judge by the recorded cases, which number only twenty. In the *Journal of the American Medical Association* for August, 1897, Dr. Helen Baldwin describes the following case. The patient was a girl, aged nineteen years. Five weeks before admission to hospital she noticed swelling of the feet, which gradually increased, and a few days previous an aching pain developed in the left axilla and in the left side of the neck. There was also swelling in the neck, which at first would disappear when she sat up and reappear when she lay down. The patient had suffered from rheumatic fever in childhood, and was troubled with tachycardia whenever she exerted herself. For several years she had not been strong. On admission she appeared very weak, and cyanosis and dyspnœa were present. The lips were livid and the veins of the nose dilated. The pulse was small, rapid, and compressible. There were double mitral and aortic murmurs and the heart was much enlarged. On the left side of the neck was a hard, tender swelling formed by the lower part of the external jugular vein. There was a hard lump in the left axilla extending down the arm for about five inches. The arm was œdematous and pale, not cyanosed. On the next day the left external jugular vein could be felt as a cord running up the neck, which was fuller on this side. The patient died from heart failure on the seventh day. A necropsy showed thickening of the aortic valves, thickening and adhesion of the mitral valves, and congestion and pneumonic changes in the lungs. The left innominate, subclavian, external and internal jugular veins were thrombosed. In the subclavian vein there was endophlebitis, which evidently, in conjunction with the feeble circulation, caused the thrombosis. An analysis of the cases of thrombosis of the jugular veins reveals the following facts in regard to the etiology. In nearly a fourth of the cases there was pressure on the vein often from a malignant growth. In nearly half there was a

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grave blood dyscrasia—malignant disease, tuberculosis, syphilis, pyæmia or acute rheumatism. In five there was endophlebitis—rheumatic, syphilitic, or traumatic. In a third the condition was secondary to middle-ear disease. The prognosis is bad; the condition is seldom found except in the last stages of fatal diseases.

GUN ACCIDENTS.

THE bicycle and the gun seem to be at present vying with one another as to which shall kill or injure the greater number of people, but with this important difference, that whereas the one who injures himself or loses his life in a bicycle accident has, as a rule, only himself to blame, the death or injury of anyone from a gun is almost invariably due to the idiocy of someone else. From a list of various gun accidents reported in the daily press we select the following as an example. At Puckeridge, Herts, a medical man went out shooting with a friend, and on arriving home the friend left his gun in the carriage. A page boy took it out, and while carrying it across his arm it went off and shot a servant, inflicting fatal injuries. As to whether blame or not is to be attached to the boy we cannot say—this will never be known, for the only possible witness is dead—but it was certainly an act of the very greatest carelessness to leave a loaded gun in the carriage, and we cannot help rejoicing that it was not the medical man who acted thus. To carry the loaded gun whilst driving was courting death. Another sad death due to someone's carelessness occurred at Manea recently, when a child, aged four years, was shot by his brother with an old rusty gun found by the lad in the washhouse. The boy did not know that the gun was loaded, and we are not told whether he levelled it at the deceased or not; but it went off and killed the child. The responsibility for this death lies primarily at the door of the person who left the loaded gun where it was accessible to the children.

THE WORSHIPFUL COMPANY OF PLUMBERS AND THE CITY AND GUILDS OF LONDON TECHNICAL INSTITUTE.

JUDGING from the recent correspondence in the *Pall Mall Gazette* there is a sad absence of unity between the company and the institute, which is the more remarkable in that both bodies are professedly working with one object—viz., to increase the proficiency of the artisan. As is well known, the Bill promoted by the company for the registration of plumbers met with a good deal of organised opposition last session in the House of Commons and was unfortunately lost. An anonymous letter in the *Pall Mall Gazette* accuses the Institute, in which Sir Philip Magnus holds the post of superintendent of technological examinations, of organising this opposition to the Bill, because the company refuse to grant their diploma to individuals passed by the examiners of the institute, the company's objection being that the candidates of the institute are not submitted to any practical tests. If the statements circulated by our contemporary are correct, the action taken by the institute in connexion with the Plumbers' Registration Bill is much to be regretted by all interested in sound sanitation. The term "paper plumber," of which a good deal has been heard lately in connexion with examinations embracing theory only, has by no means an assuring sound. The public would be interested in hearing that there is no truth in these damaging statements. Unfortunately, Sir Philip Magnus does not see his way to do more in reply than to refute the matter in general terms. He is more concerned about some side issue as to the reputation of the Plumbers Company, for which anxiety, however, the company by their letter do not seem to be particularly grateful. If a public body like the institute undertake to grant a diploma to plumbers the public have a right to expect that such diploma is a guarantee, not of theoretical knowledge only, but of practical work also, without which latter the former is useless.

LONDON POST-GRADUATE COURSE.

ON Monday next (Oct. 4th) a daily course in practical bacteriology will commence at King's College, and will continue for six days. The winter session will commence on Oct. 11th, and will last for eight weeks. Classes will be held at the following hospitals and institutions—viz., in skin diseases at Blackfriars Hospital; diseases of the mind at Bethlem Hospital; diseases of the throat, nose, and ear at the London Throat Hospital; practical bacteriology at King's College; general medicine and surgery at the Central London Sick Asylum; hygiene and public health at the Parkes Museum; and in urine testing at the Institute of Preventive Medicine. Practitioners can attend all the classes during the term or can take out any class they select. They can enter for one or more weeks or all the courses as suits their convenience. All information can be obtained from the secretary, Dr. Fletcher Little, 32, Harley-street, W.

ANKYLOSTOMIASIS IN ASSAM.

A CORRESPONDENT who has been long resident in Assam, and is familiar with the conditions under which the coolies live in the tea gardens there, informs us that assuming all the deaths entered as due to dropsy and anæmia to be caused by ankylostomiasis, there were only 731 fatal cases coming under this head among a total of 5656 deaths occurring in 143 gardens recognised as being unhealthy. There is, however, another side to this question. Ankylostomiasis is not only not necessarily fatal, it is not even actually injurious to a man in otherwise fair health and living under normal conditions, but if a person infested by the parasite is brought to the malarious climate of Assam, and there contracts fever or dysentery, he collapses at once, rarely recovers his strength, and drags on a miserable existence for the rest of his life. Our correspondent goes on to quote from the Annual Report of the Sanitary Commissioner with the Government of India for 1892, in which Surgeon-Major E. Dobson, civil surgeon of Dhubri, stated that among 547 of the healthiest-looking of the coolies who arrived at Dhubri with the intention of executing labour contracts in Assam, ankylostoma were present in 454, or 83 per cent.; he found the parasite in persons newly arrived from Bengal, Behar, Orissa, Chota Nagpore, the Central Provinces, the North Western Provinces, the Punjab, Madras, and Nepal. Both sexes, at all ages, Hindu and Mohammedan alike, harboured the parasite without apparent ill effect. The sanitary commissioner also remarked: "From the reports furnished by a number of medical officers of the tea gardens, it appears that the chain of symptoms described as ankylostomiasis does not usually develop until some months after arrival in Assam." He, moreover, adds that the following conclusions seem justified: "1. The presence of the ankylostomum in the intestines does not necessarily give rise to serious symptoms unless other circumstances favour this result. 2. The presence of the ankylostomum in the intestines may be a serious complication, but is not the cause of Ká'á ázár. 3. The so-called beri-beri of Ceylon and Assam has no connexion with the disease known by this name (the signs and symptoms of which are chiefly due to the effects of peripheral neuritis) which occurs in the Dutch East Indies, Hong-Kong, the Straits, and occasionally in Burmah; it is probable that this disease rarely, if ever, occurs in Assam." Dr. Shand, the medical officer of the Jorehat Tea Company, has also found that patients who were in a very bad state

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improved rapidly as soon as they were freed from the ankylostoma by the thymol treatment and placed on tonics and good diet.

"FINEST IRISH HAMS."

ON Sept. 27th sundry fraudulent tradesmen received at Richmond Police-court, we will not say their deserts, but an inadequate punishment for deceiving customers. Their names were Messrs. Coppin Brothers and two assistants, Messrs. Meslin and Wheeler; Mr. Dunkin, the manager of Messrs. Williamson and Co., and an assistant, Mr. Simpson; Mr. James and his assistant, Mr. Lewis; Mr. Batchelor and his assistant, Mr. Lampsard. Inspector Moore asked for a Scotch ham and was supplied with one which was entered on the invoice as Scotch. On Mr. Moore mentioning who he was Mr. Meslin promptly admitted that the ham was American. Mr. Coppin was fined £5 and the assistants 10*s.* each. Messrs. Williamson sold an American ham as a Bath ham, and the assistant averred without contradiction that he had been told to say they were Bath hams. Mr. Dunkin, the manager, was fined £5 and the assistant 10*s.* Mr. James's case was specially flagrant. He exhibited a large placard with the words, "Finest Irish Hams, 9*d.* per pound," but Inspector Ward having bought one he was refused permission to see the invoice, and Mr. James admitted that the ham was American. He was fined £10 and his assistant 10*s.* In Mr. Batchelor's case the fine was £5 and in the case of the assistant 10*s.* In the report of the Select Committee on Food Products Adulteration it was suggested that offenders should be required to publish at their own expense a notice of their conviction in the public journals of the locality in which their places of business were situated or in any other such way as might be thought desirable to give due publicity to the conviction. This excellent method of punishment would be admirably fitted for such instances of fraud as those just described and would no doubt put an end to this deceitful practice. But the public are much to be blamed in this matter. They place implicit trust in the tradesman, and believe that he can supply them with a superior article at a very low figure, or at any rate at a price at which it must be well known the superior article cannot possibly be supplied. It is this blindness on the part of the public which encourages tradesmen to palm off various articles under a fraudulent description.

A GENERAL meeting of the Medical Society of London will be held at 11, Chandos-street, Cavendish-square, W., at 8 P.M., on Oct. 11th, to receive the treasurer's report and balance-sheet as passed by the auditors. The President having vacated the chair, the new officers will commence their duties, and an ordinary meeting of the society will be held at 8.30 P.M., when the incoming President, Dr. A. Ernest Sansom, F.R.C.P. Lond., will deliver the opening address on "The Investigation of Some of the Nervous Disturbances of the Heart." After this a paper will be read by Mr. William Anderson, F.R.C.S. Eng., on "John Arderne, the Father of English Surgery, and his Time.

THE ROYAL VICTORIA HOME, BRISTOL.—This Institution, founded through the efforts of some charitable people about a year ago, is doing useful work. Its objects are to provide a home for poor inebriate and other women and for deserving female offenders. Such of these as are unmarried are trained for domestic service and all are instructed in housewifery generally. The home is licensed both under the Inebriates Act and by the Home Secretary. It is well known that the atmosphere of a prison is not conducive to reformation, and an institution of this kind is often the means of setting those who have yielded to temptation in the right way again.

THE VACANCY IN THE GENERAL MEDICAL COUNCIL.

SINCE our last issue the position has somewhat changed, inasmuch as Sir Walter Foster, M.P., has entered the lists. We publish Sir Walter Foster's address to the profession below, and also an account of a meeting held on Wednesday afternoon last in support of his candidature.

Mr. George Jackson asks us to announce that he has retired from his candidature as a Direct Representative on the General Medical Council in favour of Sir Walter Foster, whom he considers to be "a candidate who is well worthy of our support. He will oppose any attempt to create an inferior order of practitioners by throwing the ægis of registration over the midwives, and, I believe, is the strongest candidate all round that we can have at the present time." Mr. Jackson also wishes to thank all those who had promised to support him.

Dr. R. R. Rentoul also sends us a letter for publication, in which he asks "all practitioners to record their vote in favour of Sir Walter Foster."

We have received a great number of letters urging the merits of the different candidates, a large proportion of which have not hesitated to point out also their demerits. We need hardly say that in the latter case we have given preference to those which are temperately written and signed in full. From these letters we think it is imperative that Sir Walter Foster should make a clear and full explanation to the profession of the circumstances under which the unfortunate and unfortunately-worded interview in the *Young Man* came to be published.

A communication signed by Dr. J. Rees Gabe and Mr. R. B. Anderson (London), Mr. George Jackson (Plymouth), Mr. Joseph Smith (Chiswick), and Mr. W. G. Dickinson (Putney) has also been sent to us. It contained a copy of a letter which has been addressed by these five gentlemen to all the candidates, enclosed in which is a series of questions upon which the candidates are invited to express their opinions. Before publishing these questions we prefer to wait until we have received from the writers of the letter information as to the replies they have received.

Dr. Hugh Woods, President of the Incorporated Medical Practitioners' Association, asks us to publish in THE LANCET the following resolution which was unanimously passed at a meeting of the Council of the Association held on Tuesday last:—

"The Central Council appreciates the motive of Mr. George Jackson's withdrawal as a candidate at the present election of a Direct Representative on the General Medical Council. Having heard Sir Walter Foster's letter to the Chairman of this Council, and having regard to the invaluable services rendered to the medical profession by Sir Walter Foster in his ten years' tenure of office as a Direct Representative, and to the fact that he supports the programme of this association, the Central Council strongly recommend that the active support of the members of this association should be given at this election to Sir Walter Foster."

At a meeting of the Medico-Ethical Association of North-East London, to be held to-night (Friday, Oct. 1st) at 9 P.M., at 184, Mare-street, Hackney, Mr. Victor Horsley will read a paper on Medical Reforms.

On the afternoon of the same day at 5 P.M. a meeting will be held in support of Mr. Victor Horsley's candidature at the Medical Society's rooms, 11, Chandos-street. On the following day (Saturday, Oct. 2nd) there will be a meeting at Norwich at 4.15 P.M. in the library of the Norfolk and Norwich Medico-Chirurgical Society, Guildhall-hill, Norwich, with a similar object.

SIR WALTER FOSTER'S ADDRESS.

TO THE REGISTERED MEDICAL PRACTITIONERS OF ENGLAND AND WALES.

LADIES AND GENTLEMEN,—On my return from Canada to-day I found many letters from valued friends urging me to become a candidate for

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the vacancy on the General Medical Council caused by the regrettable resignation of Dr. Rentoul. Others whom I have consulted strongly press upon me the same course, and I have therefore decided that in the present crisis of Direct Representation it is my duty once again to offer my services to my professional brethren.

My experience of the struggles during recent sessions of Parliament in connexion with the Public Health (Scotland) Act and the Midwives Registration Bill has also influenced me, as I am convinced that the most watchful care must be exercised by someone authorised to speak for the profession in order to prevent legislation alike hurtful to the public and hostile to the profession.

The ten years' service which I gave to the Council is the best guarantee of the spirit in which I should, if honoured by your confidence, again take up the work.

As in the past, I am prepared to advocate:—

1. The increase of the representative element on the Council.
2. The maintenance of a high standard of professional education, an increase of the requirements of the preliminary examination, and the establishment of one uniform qualifying examination for each division of the kingdom.
3. The more vigorous exercise of the existing powers of the Council for the suppression of improper and irregular modes of practice and for protecting the public from unqualified persons and quacks.
4. The amendment of the Medical Acts in such a way as to strengthen the powers of the Council and more effectively protect the interests of the general practitioner.

While anxious to improve the education and training of midwifery nurses, I am resolutely opposed to any legislation which would register women as midwives and enable them to practise midwifery without the superintendence of a registered medical practitioner. I have fought this battle in the interests of the poor and in support of the general practitioners now for some years, and I hope it may be my privilege as your representative to carry the struggle to a successful issue.

I am, your obedient servant,

Birmingham, Sept. 23rd. B. WALTER FOSTER.

SIR WALTER FOSTER'S CANDIDATURE.

The room in which the Medical Society holds its meetings at 11, Chandos-street, Cavendish-square, was very full on Wednesday afternoon last when Sir Walter Foster, M.P., made a statement with respect to his policy as a candidate for the General Medical Council.

The CHAIRMAN (Dr. Leonard W. Sedgwick), in calling upon Sir Walter Foster, quoted from Mr. Victor Horsley's election address the opinion that "the prospect of advancing medical reform depends more upon the previous training of the representatives than upon the fact of their belonging to one particular section of the profession," and said that Sir Walter Foster had both the training and an accurate knowledge of the Medical Acts.

Sir WALTER FOSTER thanked those present for coming to the meeting. It was, he thought, the largest gathering that had ever been held in any part of the United Kingdom for the purpose of listening to the address of a candidate for the General Medical Council as a direct representative. He had come forward at the present time because he believed there was an exceptionally grave crisis in the history of direct representation. Since his resignation the expressions of regret from the profession that he had severed his connexion with the General Medical Council had been so frequent that he felt these expressions were almost reproaches. On his return from Canada he found many telegrams and letters awaiting him, urging him to become a candidate for the present vacancy. Under the circumstances, being comparatively still a young man and remembering what he owed to the medical profession, he thought it would be wrong of him if he did not come forward and do what he could in the interests of the profession. His present policy was very much the same policy as that which had guided him when he last had the honour of representing the profession on the Council. He referred to his stand for the profession as against the Corporations, his efforts for the suppression of covering, and his desire for increased direct representation. He was also anxious to get back to the General Medical Council because he felt that the state of the general body of the profession was most serious. Never had he known it so overcrowded or put to such shifts on account of irregular practice, hospital abuse, and medical aid associations. The general practitioner had a much harder lot than he had thirty years ago. While the expense of training was greater in the actual battle of life competition was most severe. He wanted to improve that state of things. In one respect these evils would be overcome by raising the standard of the preliminary examination. A little more care and scrutiny on the part of the Council might do something practical for the other evils. With regard to the midwifery question, he said he had never been opposed to the proper education of women who attend midwifery cases as nurses, but he was absolutely opposed to any legislation which would register women as midwives and enable them to practise without the superintendence of a registered medical practitioner. He would not be a party to the sanctioning of any Bill which would enable them to attend the so-called cases of natural labour which were never natural till they were safe, and which no man could define till they were over. He would oppose such legislation on two grounds—first, its contravention of the Medical Acts, and, secondly, on the ground of its injury to the poor and the profession. He concluded by referring to the action he had taken in endeavouring to strengthen the hands of the Council in dealing with penal cases, and expressed his willingness to serve the profession in the future as he had done in the past ten years on the Council if the profession would give him their confidence.

In answer to questions by Dr. HUGH WOODS, Dr. ALDERSON, Dr. BATEMAN, Mr. CREASY, Mr. STANLEY BOYD, and others,

Sir WALTER FOSTER said the Universities elected their own representatives on the General Medical Council, and he did not think it was within the powers of the Council to say how those elections should be made, but he would be prepared to raise the question whether such representatives were properly elected. No one had called his attention to the fact that the Bill of 1886 had taken from medical men holding British qualifications the right of practising in any part of the British dominions, but in other ways he had amended the Bill for the professional good. He did not practise in London, and though he lived there part of his time had no name on his door-plate. He had assisted to increase the curriculum to five years and he was in favour of re-establishing the system of apprenticeship. He concluded by giving the reasons for his previous resignation and by remarking that every man who was required to give a certificate by the Legislature should be paid for the same.

Dr. CLEVELAND moved: "That this meeting, having heard Sir Walter Foster's statement, expresses its confidence in him, and promises to use its best efforts to secure his return as one of the Direct Representatives on the General Medical Council."

Dr. WALLACE seconded the motion.

Dr. BATEMAN, apologising for introducing the matter, and remarking that members of the General Medical Council should be beyond suspicion, directed attention to an interview with Sir Walter Foster particulars of which had appeared in the October issue of the *Young Man*. This he characterised as a professional advertisement. He moved the previous question.

Dr. RISIEN RUSSELL seconded.

Sir WALTER FOSTER, in explaining the matter, said he in some respects had the misfortune to be a public man as well as a doctor, and a public man was occasionally interviewed. He went on to explain how the published interview had arisen from a conversation which he had had in a railway-train with a gentleman, and he had only given permission for the publication of the interview under the belief that it was solely for political purposes. He was sorry that any reference should have been made to his profession in the printed interview, but the article was published while he was away in Canada, and on his return he had seen the editor of the magazine and requested him either to withdraw the paper from circulation or to delete the objectionable matter. With regard to the photograph of his consulting room and the representation of the sphygmograph Sir Walter Foster said that it was not supplied for the purposes of the article, but was one that had been taken some years ago for illustrating a series of articles on the magistrates of Warwickshire.

The motion for the previous question being lost the resolution was carried by 54 votes to 10.

Many of those present abstained from voting.

THE INDIAN RISING.

THERE are many people who, drawing their conclusions from the latest items of intelligence, seem to think that the neck of the tribal insurrection on the North-West frontier has been broken and that the rising promises to come to a speedy and premature collapse. So far as the Mohmands are concerned this is probably the case, for they are as a rule a faint-hearted tribe as far as fighting goes; but the Afridis and Orakzais have still to be dealt

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with, and the expedition against them is only just beginning. These tribes are a sturdier race—they are a more courageous, treacherous, and wily enemy. Although we entertain no doubt as to what will be the result of Sir William Lockhart's expedition against them it will involve a good deal of expense and difficulty, as well as probably a good deal of hardship and fighting on the part of our troops before the campaign is brought to a successful termination and a durable peace is obtained. The plan of the Tirah expedition has now been settled. Major-General Blood's force, with its three brigades, will remain in the Mohmand country in order to protect General Lockhart's flank from attack and to cut off, at the same time, the Afridis from the tribes in the north, leaving General Lockhart's force free to march to Tirah and promptly deal with the Afridis. The General's force for this purpose will be composed of regiments collected on the frontier in and about Kohat, and the expedition will start about Oct. 9th. The Mohmands seem to have fought sharply and well against General Jeffreys' brigade, and to have succeeded in inflicting some loss and a very brief temporary check to its successful progress; but the general result of the fighting that has taken place up to the present time has been success—and brilliant success—to the British forces. The devotion and gallantry of the natives have been conspicuous features. The health and spirits of the troops are reported to be good, and the sickness has not been at all great. The wounded are progressing favourably. As the season advances the conditions will become more and more favourable to the expeditionary force advancing against the tribesmen. No adequate explanation has yet been given of the reason for this general rising. It is probable that there was no single cause but that many factors were at work. The "forward policy" in Chitral could hardly have been the sole cause, for the tribes there have remained quiet. There has been an extended outbreak of fanaticism excited by the Mullahs, and it is probable that the recent successes of Turkey have not been without some influence as regards the rising at this time.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On Diphtheria in the Holywell Parishes, by Dr. F. ST. GEORGE MIVART.—The area about the Dee estuary has, by reason of disease and faulty administration, received an exceptional amount of attention from the Local Government Board; indeed, since 1871 there have been no less than ten visits of medical inspectors, the one preceding Dr. Mivart's inspection being recorded in the exhaustive report by Dr. Bruce Low on sewage pollution of the Dee. But diphtheria in the Holywell urban and rural parishes was the immediate cause of the present report, and Dr. Mivart at the beginning recalls the fact that a fatal cynanche, which was doubtless the same disease, can be traced back at least as far as 1794. In the urban parish much of the water-supply is exposed to pollution; the drainage arrangements are the same faulty ones that have been described by previous inspectors; and as to the disposal of excreta and refuse, matters are stated to be as bad, if not worse, than they were twenty years ago. The dwellings are also often thoroughly bad, decay and unfitness for habitation being their prominent features. In the rural parish of Holywell the dwelling accommodation is also most faulty, natural decay being at times the only cause that leads tenants to vacate the cottages. Many are built back-to-earth or back-to-back; conditions which, when associated with overcrowding, are typical of those which conduce to the maintenance and spread of a disease such as diphtheria. In one cottage access to the bedroom above was obtained by climbing up an inverted table; in "two rows of hovels," each of one room only, there was no back ventilation, and three feet from them in front was an excavated hill. Added to such conditions we read also of the surrounding land being in places water-logged and sewage-logged. There has, however, been improvement in the water-supply, notably in Bagillt; and the rural council have spent money in drainage works, some of which have unfortunately turned out badly. This is the more to be regretted because it may postpone the abolition of conditions to which the strongest adjectives descriptive of revolting filth are properly applied. The diphtheria in the urban parish was somewhat restricted; it was associated in its spread with a board school, and with the failure to check it by such methods as disinfection and isolation, and it spread a good deal in families. In the rural parish 183 cases had been notified in the eleven months ending November, 1896, and 22 cases had terminated fatally, besides which it seems clear that a number of minor attacks had escaped notice. Certain schools were closed, and both bedding and clothing were destroyed; but apart from a few such measures no energetic action was taken by the local authorities, who have, notwithstanding previous warnings, remained without any proper means for isolating or controlling infectious disease. Districts like this are the black spots on our country's record of improved sanitary administration; and until the inhabitants of such localities learn the value of human life and of health, and give proof of it by sending to their urban and rural councils those who will make public health a first consideration, it seems well-nigh useless to offer them advice and to make recommendations for their adoption.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Sheffield Urban District.—Dr. Harvey Littlejohn, who has recently relinquished his post as medical officer of health of Sheffield, reports that the estimated population of the city at the middle of 1896 was 347,278. The general death-rate for 1896 was 19·3 per 1000, the rate having only on one prior occasion—i.e., 1894—fallen below 20 per 1000. Infantile mortality was also small for Sheffield, being 171 per 1000 births, the average for the last ten years being 178 per 1000 births. Good results seem to have accrued as regards control of measles by the coöperation of the School Board authorities with those of the sanitary department, a notification being sent to the medical officer of health of such children as were suspected of being absent from school owing to measles, and similarly the sanitary authority furnished the school-master with a certificate when the invaded house was free from infection. Plumbism caused but three deaths, all of which were of file-cutters, in Sheffield in 1896, as against 5 in 1895 and 9 in 1894. Dr. Littlejohn thinks, however, that only a small proportion of the deaths primarily attributed to lead poisoning are certified as such in the death certificate, the intercurrent affection which kills the patient masking the primary cause. Dr. Littlejohn bases this opinion upon the extensive prevalence of lead poisoning among workers in the trade. There are but 200 beds provided in Sheffield for the isolation of infectious disease, a number which, as Dr. Littlejohn points out, is quite inadequate for a population of some 350,000. While taking care to provide adequate accommodation for the poorer classes the corporation should, it is urged, consider the question of providing suitable accommodation for the wealthier classes, who could easily afford to pay for it. Although there is perhaps from a public health standpoint less necessity for the isolation in hospital of cases occurring in houses where some sort of home isolation is possible, there can be no question as to the enormous boon which hospital accommodation is to the wealthier classes. In London, for instance, this class has the accommodation of the London Fever Hospital and of the Mary Wardell Convalescent Home, and anyone who has suffered from a prolonged attack of scarlet fever may have learnt to value these institutions. Dr. Littlejohn has for the last five years endeavoured to persuade the Sheffield sanitary authority to provide a public abattoir, but unfortunately on his leaving Sheffield this desirable addition is still *in nubibus*. In years to come we shall look back with astonishment upon the fact that Sheffield, and, for the matter of that, other large towns, did not in the year 1896 possess this most elementary provision against the sale of diseased and unwholesome meat. Among the advantages to be derived from public slaughter-houses Dr. Littlejohn mentions the prevention of unnecessary cruelty, and the detrimental moral effect which the sight of animals being slaughtered has upon the young. It is certainly most desirable to prevent this, and we have ourselves seen crowded around the windows of a slaughter-house during the hours of slaughter groups of children anxious to witness the killing process.

Essex County District.—Infantile mortality will, Dr. Thresh thinks, remain practically undiminished until the

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simple laws of the preservation of health and of the necessities of infant life are taught, especially to girls, in the higher standards of our elementary schools. A certain amount of false delicacy is, we suspect, a formidable obstacle in the carrying-out of this suggestion. In the matter of infectious disease Dr. Thresh records the decreased prevalence of diphtheria throughout the county, and this fact is the more interesting inasmuch as Essex has figured very prominently in the past for its excessive diphtheria death-rate. We note in Maldon Urban District that a case of diphtheria was associated with the unloading of offensive London manure, while another case was thought to have derived infection from a cat. Unfortunately from a view-point of scientific interest the pharynx and larynx of the cat were not sent to Dr. Thresh for bacteriological examination. Where there is a county medical officer competent to make bacteriological examination it is well for the district medical officers of health to be alive to the opportunities thus afforded them. Typhus fever was hardly to be expected in the present day in the rural districts of Essex, but two patients were diagnosed as suffering from this disease in the Dunmow Rural District. No attempt has been made to put Part III. of the Housing of the Working Classes Act into operation in Essex, and Dr. Thresh thinks that until some arrangement is come to for providing money from a county or imperial fund labourers' cottages will not be erected. The systematic inspection of districts does not appear to have received as much attention as it should do. Without such systematic inspection there cannot be that seeking out of nuisances which is so much insisted upon by the Local Government Board. In Southend, where a house-to-house inspection is in progress, 73 per cent. of the drains in one street were found to be defective.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6176 births and 3600 deaths were registered during the week ending Sept. 25th. The annual rate of mortality in these towns, which had declined in the six preceding weeks from 29·5 to 18·5 per 1000, further fell last week to 17·1. In London the rate was 15·7 per 1000, while it averaged 16·0 in the thirty-two provincial towns. The lowest rates in these towns were 10·3 in Birkenhead, 10·4 in Swansea, 11·2 in Plymouth, and 13·7 in Brighton; the highest rates were 21·3 in Sunderland, 22·3 in Manchester, 22·4 in Sheffield, and 22·5 in Liverpool. The 3600 deaths included 607 which were referred to the principal zymotic diseases, against 945 and 721 in the two preceding weeks; of these, 327 resulted from diarrhœa, 75 from diphtheria, 57 from "fever" (principally enteric), 54 from measles, 51 from whooping-cough, and 43 from scarlet fever. No death from any of these diseases was recorded last week in Croydon or in Plymouth; in the other towns they caused the lowest death-rates in Birkenhead, Swansea, and Halifax; and the highest rates in Wolverhampton, Hull, Burnley, and Preston. The greatest mortality from measles occurred in Preston and Burnley; from scarlet fever in Leicester and Gateshead; from "fever" in Derby, Hull, and Bolton; and from diarrhœa in Liverpool, Hull, Preston, and Wolverhampton. The mortality frrom whooping-cough showed no marked excess in any of the large towns. The 75 deaths from diphtheria included 45 in London, 4 in Birmingham, 3 in West Ham, and 3 in Leicester. No fatal case of small-pox was registered during the week under notice either in London or in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital, which had been 3528, 3579, and 3653 at the end of the three preceding weeks, had further risen to 3697 on Saturday last, the 25th ult.; 358 new cases were admitted during the week, against 376 in each of the two preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 116 and 113 in the two preceding weeks, rose again last week to 165, but were 11 below the corrected average. The causes of 30, or 0·8 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Cardiff, Manchester, Bradford, and in sixteen other smaller towns; the largest proportions of uncertified deaths were registered in Leicester, Nottingham, Liverpool, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks from 18·1 to 19·4 per 1000, declined last week to 17·8, but exceeded by 0·7 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·0 in Paisley and 15·1 in Aberdeen to 18·7 in Edinburgh and 22·0 in Greenock. The 532 deaths in these towns included 35 which were referred to diarrhœa, 20 to whooping-cough, 9 to "fever," 6 to scarlet fever, 5 to measles, and 3 to diphtheria. In all, 78 deaths resulted from these principal zymotic diseases, against 98 and 101 in the two preceding weeks. These 78 deaths were equal to an annual rate of 2·6 per 1000, which was 0·3 below the mean rate last week from the same diseases in the thirty-three large English towns. The 35 fatal cases of diarrhœa showed a further decline from those recorded in recent weeks, and included 11 in Glasgow, and 6 in Edinburgh. The deaths from whooping-cough, which had been 15 and 17 in the two preceding weeks, further rose to 20 last week, of which 13 occurred in Glasgow and 4 in Dundee. The 9 deaths referred to different forms of "fever," corresponded with the number recorded in the preceding week, and included 5 in Glasgow and 2 in Edinburgh. The fatal cases of scarlet fever, which had declined in the three preceding weeks from 10 to 2, rose again to 6 last week, of which 5 occurred in Edinburgh. The 3 deaths from diphtheria were below those recorded in any recent week, and included 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in these eight towns, which had been 78 and 96 in the two preceding weeks, were again 96 last week, and exceeded by 40 the number in the corresponding week of last year. The causes of 25, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·4 and 23·9 per 1000 in the two preceding weeks, further rose to 28·3 during the week ending Sept. 25th. During the past twelve weeks of the current quarter the death-rate in the city has averaged 23·8 per 1000, the rate during the same period being 19·7 in London and 18·4 in Edinburgh. The 190 deaths registered in Dublin during the week under notice showed an increase of 30 upon the number in the preceding week, and included 29 which were referred to the principal zymotic diseases, against 28 in each of the two preceding weeks; of these 21 resulted from diarrhœa, 9 from "fever," 4 from scarlet fever, 4 from whooping-cough, 1 from diphtheria, and not one either from small-pox or measles. These 39 deaths were equal to an annual rate of 5·8 per 1000, the zymotic death-rate during the same period being 2·1 in London and 3·0 in Edinburgh. The fatal cases of diarrhœa, which had declined in the four preceding weeks from 32 to 13, rose again to 21 last week. The deaths referred to different forms of "fever" which had been 4 and 6 in the two preceding weeks, further rose to 9 last week. The 4 fatal cases of scarlet fever also exceeded the numbers recorded in recent weeks, while the mortality from diphtheria and from whooping-cough showed a decline. The 190 deaths in Dublin last week included 48 of infants under one year of age and 34 of persons aged upwards of sixty years; the deaths of infants exceeded the number recorded in any recent week, while those of elderly persons showed a decline. Eight inquest cases and 10 deaths from violence were registered; and 58, or nearly a third, of the deaths occurred in public institutions. The causes of 12, or more than 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR A. P. O'CONNOR has arrived in Dublin for duty. Surgeon-Captain C. W. Reilly has embarked on board the P. and O. s.s. *Canton*. Surgeon-Captain T. C. McCulloch has embarked for India. Surgeon-Lieutenants

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J. Grech and J. A. Murison are warned to be ready to embark for India in the transport *Simla* at Southampton. Surgeon-Major R. H. S. Sawyer has embarked for Egypt.

The promotion to the rank of Brigade-Surgeon-Lieutenant-Colonel of Surgeon-Lieutenant-Colonel C. H. Swayne is antedated to July 24th, 1897, vice R. Harman, M.B., deceased. Surgeon-Captain William J. Smyth, M.D., resigns his commission.

NAVAL MEDICAL SERVICE.

The following appointments are announced: — Fleet-Surgeon C. C. Godding to the *Haulbowline*. Staff-Surgeons: William R. M. Young to the *Briton*, and Percy E. Maitland to the *Volage*. Surgeons: Ernest A. Shaw to the *Trafalgar*; Hugh P. Turnbull to the *Victory*; Walter B. Maurice, Walter H. O. Garde, Charles R. Sheward (for disposal), Eustace Arkwright, Edward D. J. O'Malley, and Walter R. Hopkins, all to the *Victory*; Frederick C. Stern and Henry Hunt, both to the *Pembroke*; Sidney Roach, Algernon C. Bean, and Robert H. Mornement, to the *Wildfire*; Moyle Breton, Richard F. Clark, Harold E. Fryer, Samuel Connor, and Edwin Folliott, all to the *Vivid*; Francis J. Barter to the *Heron*; Oswald Rees to the *Jackdaw*; and E. S. Reid to the *Seaflower*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Robert Ebenezer Beveridge, M.B., 3rd Volunteer Battalion the Durham Light Infantry, to be Surgeon-Captain.

YEOMANRY CAVALRY.

Dorset (Queen's Own): George Herbert Staines Daniell, M.B., to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: 2nd East Riding of Yorkshire (Western Division, Royal Artillery): Surgeon-Major J. Sherburn, M.B., to be Surgeon-Lieutenant-Colonel. *Rifle:* 4th Volunteer Battalion the South Wales Borderers: Surgeon-Captain S. B. Mason to be Surgeon-Major. 2nd Volunteer Battalion the Royal Sussex Regiment: Brigade-Surgeon-Lieutenant-Colonel C. F. Lewis is retired under the provisions of paragraph 111 of the Volunteer Regulations, 1896, with permission to retain his rank and to continue to wear the uniform of the battalion on his retirement, vacating at the same time his appointment in the Sussex Volunteer Infantry Brigade. 1st Volunteer Battalion the Durham Light Infantry: The under-mentioned Surgeon-Captains to be Surgeon-Majors:—J. W. Blandford and G. Middlemiss.

THE ARMY MEDICAL STAFF.

There are various rumours afloat regarding the anticipated action of the authorities with the view of overcoming their difficulties in the way of getting candidates for the Army Medical Service. It is said that a new warrant is to be issued introducing a modified regimental system. A great many points have been conceded with the object of removing the grievances of which officers of the Army Medical Staff have complained, but nothing has been done to give effect to the recommendations of different committees and the strong desire of the medical officers themselves—viz., the formation of their service into a Royal corps, thus placing them on the same footing as the Royal Engineers and Royal Artillery. We do not understand why this should not be done, unless it be that the conferring of purely military titles upon medical officers has proved a stumbling-block in the way of the military officials.

We understand that the Quartermaster-General, the Director-General of the Army Medical Department, and the members of the Army Sanitary Committee visited the Portsdown Hills last week to select a site for a new military hospital for the troops in the Portsmouth garrison.

DRUGS ABOVE THE PROPER STRENGTH.—At a meeting of the Glamorganshire Local Government Committee held on Sept. 16th the report of the county analyst was presented. It stated that in one case a grocer had sold liquor nucis vomicæ eight times the usual strength; and in three instances spirit of camphor had been sold which was too strong, the excess being 8 per cent. in one case, 13 per cent. in another, and 16 per cent. in the third; 5 samples of tincture of benzoin were reported to be below the proper strength.

Correspondence.

"Audi alteram partem."

"THE ELECTION OF A DIRECT REPRESENTATIVE ON THE GENERAL MEDICAL COUNCIL."

To the Editors of THE LANCET.

SIRS,—On my return from Canada at the close of last week I was greeted with the unexpected news that Dr. Rentoul had resigned the chair in the General Medical Council to which he had been so recently elected by the voice of the profession. I found many letters urging me to re-consider my action in leaving the Council and to permit myself to be nominated for re-election, with assurances of earnest support if I would do so. I am profoundly grateful to my many friends for these proofs of confidence and appreciation; but, seeing that the causes which originally led to my resignation are all operative still, some with increased influence, I find it impossible to accede to the request.

But I am beyond measure pleased to see that my younger colleague, Sir Walter Foster, is again a candidate, and I most heartily wish him success. That his reappearance in the Council would be acceptable to that body is, I think, beyond question. His experience of its work and his parliamentary position alike point him out as a most eligible representative, and the profession is, in my opinion, to be congratulated on the opportunity afforded to it of again securing his services. Will the profession, for once, rise in its strength, and, putting aside the deadly apathy which has hitherto marred all the efforts of its representatives, unite to record its vote in favour of one who has already proved himself a worthy representative? Sir Walter is too well known to leave any room for doubt as to his capability, and his world-wide reputation marks him as a candidate whose claim cannot be surpassed.

I am, Sirs, your obedient servant,
C. G. WHEELHOUSE.

To the Editors of THE LANCET.

SIRS,—The impending election of a Direct Representative upon the General Medical Council is one of vital importance to the medical profession. It is so because the principle involved is that of reform. In Mr. Victor Horsley we have the undoubted champion of that cause. No other person knows more of the details connected with the questions of larger and those of lesser importance to the medical profession. No one is therefore more alive to the paramount necessity of reform. In casting their votes, then, it is to be hoped that the members of our profession will do so with the full knowledge that in voting against Mr. Horsley they are voting, not so much against him personally, but against the reform of the various anomalies connected with the constitution and government of the profession which exist at the present time. I am, Sirs, yours faithfully,

Hatfield, Herts, Sept. 28th, 1897. LOVELL DRAGE.

To the Editors of THE LANCET.

SIRS,—The profession must again appeal to your valuable assistance in the selection of a suitable candidate to fill the vacancy of Direct Representative on the General Medical Council. The latest development is remarkable. Sir Walter Foster is suddenly sprung upon the constituents, supported by a combination of strangely opposed elements. First he takes the place of the nominee of the Incorporated Medical Practitioners' Association, the council of which authority decreed that none but a general practitioner should have its support, nor any candidate who did not oppose uncompromisingly all legislation for the control of midwives. He is immediately taken in hand by the President of Council of the British Medical Association, and, lastly, has accepted the help of Dr. Rentoul. Surely the Council of the British Medical Association will have something to say to Dr. Saundby for assuming the responsibility of furthering the interests of any candidate without consulting the Association or his own Council. It may be argued that whatever official position a man may have, he has a perfect right to an individual opinion and to express it. Quite true, but there are some exceptional

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circumstances in this connexion. At the annual meeting of the British Medical Association, when the conduct of the official organ was under consideration, there was a strong and almost unanimous feeling that the Association should take a foremost part in the selection of candidates as direct representatives on the General Medical Council, and that they should sit in that chamber supported by the influence of that large association, and the indifference of Dr. Saundby to the wishes of its members is wholly unjustifiable.

A committee was formed in Manchester immediately on hearing of the vacancy for the purpose of selecting a suitable, candidate and a telegram was sent by the officials to the Association, asking what action, if any, it was intending to take in the matter. This with a view to come to some general agreement as to the candidate to be selected. The reply was that they were "awaiting the instructions of the President of Council." This was on Sept. 14th. On the 16th a similar message was sent to Dr. Saundby's private address, and the reply received was that he was not expected home from Canada until the following Sunday. It is right, Sirs, that you should know this, and I sincerely trust you will unhesitatingly indicate in your Saturday's issue whom you deem to be the best candidate; and doubtless the profession will show its disapprobation of the conduct of the President of Council in its vote against Sir Walter Foster.

Accompanying Sir Walter Foster's address is a letter of recommendation of his fitness for the appointment, and it is signed by Robert Saundby, chairman, and C. G. Wheelhouse, and R. R. Rentoul, vice-chairmen. I will refer simply to two statements in this certificate of merit. These gentleman refer to Sir Walter Foster as a "tried and experienced medical reformer." A review of the minutes of the General Medical Council while he sat there will traverse this statement. Again, he is called a provincial practitioner! A word to the general practitioner. Sir Walter Foster backed one of the first Midwives Bills introduced into Parliament, and the worst Bill ever framed by the Midwives Institute and other unauthorised bodies. By this measure a poor man was not allowed to take proceedings against a midwife whatever injury she may have done to his wife during her confinement through either carelessness or ignorance, unless he first obtained the consent of the Attorney-General (see Clause 16). She was under no control and unless she thought fit was not required to send for a medical man, but was made the sole judge as to what was or what was not "natural labour." She had power to claim fees in court for operations. Is it likely any practitioner would lend his support to a candidate for a seat on our education board who had made proposals so dangerous to the public and so contrary to the honour, the dignity, and the welfare of our profession?

I am, Sirs, yours truly,

Old Trafford, Sept. 28th, 1897. JAMES BRASSEY BRIERLEY.

To the Editors of THE LANCET.

SIRS,—Everyone will admit that in Sir Walter Foster, M.P., and Professor Victor Horsley, F.R.S., we have two excellent candidates, and must regret to see them opposing each other. It is quite evident that nineteen-twentieths of their programme is identical and that the remaining one-twentieth is the midwives question. Essential as this difference is, I will not for the moment dwell upon it. Sir Walter Foster has faithfully served the profession for ten years on the General Medical Council, a mark of appreciation of which the British Medical Association recently presented him with its gold medal at the London meeting. For many years previously he had been identified with medical progress, having been qualified in 1860. On the other hand, Mr. Horsley has been President of the Medical Defence Union for four and a half years, and was qualified in 1881. There is thus a great difference between the experience of the two men in medical politics. There is evidently plenty of time before Mr. Horsley, without endeavouring to oust Sir Walter Foster just now; and as the former has had his four and a half years' experience in the Medical Defence Union, and the latter ten years on the General Medical Council, it will strike everyone as the wisest course for the benefit of the profession for each to go on with the work for which he is so eminently "fitted by his previous training" that Mr. Horsley so aptly quotes. We must also bear in mind that Mr. Horsley could not retain the above Presidency if he were elected on the General Medical Council. This would be a distinct loss to the profession and to the Medical Defence Union. I have no doubt that the strongest candidate to elect and the wisest course to take at the present juncture and best calculated to promote our interests is Sir Walter Foster, and thus enable Professor Horsley to continue as the President of the Medical Defence Union.

I am, Sirs, your faithfully,

G. H. BROADBENT.

Ardwick-green, Manchester, Sept. 28th, 1897.

To the Editors of THE LANCET.

SIRS,—Though other candidates may receive local support we may without offence assume that our choice for the vacant seat on the General Medical Council lies between Mr. Horsley and Sir Walter Foster. We are entitled, I think, to ask why Sir Walter Foster, who insisted last year on being relieved of the responsibilities of office, now seeks re-election, and why, having the reputation of a reformer, he comes forward backed by Sir Samuel Wilks, the reactionary members of the Council of the British Medical Association, and by Dr. Rentoul. The former represent the present spirit of *laissez faire* and *non possumus* (Sir Samuel Wilks even having publicly derided the notion that the general practitioner has any right to a reform of the grievances that press so heavily upon him), and the latter gentleman represents now—we scarcely know what.

Sir Walter Foster doubtless would describe himself politically as being a reformer, but as far as our profession goes it is difficult to see wherein his claim to be considered one lies. His position in the House of Commons, his place on the General Medical Council, and on the Council of the British Medical Association gave him large political power, and should have given him a wider political influence than any medical man has ever enjoyed, but nowhere and at no time has he ever originated any suggested professional reform, or himself formulated any such measure, either in the House of Commons or in the General Medical Council. The Medical Defence Union has received from him no support, but, on the contrary, direct hostility in the matters brought by them before the General Medical Council. A careful study of the Minutes of the Council will show, too, that Sir Walter Foster (with the exception of last year) hardly ever stayed long at any meeting—that he just put in an appearance and left, presumably for Westminster, where his presence was needed. It is a doubtful advantage to have a solitary Member of Parliament on the Council. His influence in the House is usually overrated, and any influence exerted by the General Medical Council at all is more effectually employed in the Privy Council Office and in the lobby of the House than in the House itself, while to divide the attentions of an official member between the House and the General Medical Council must inevitably result in the neglect of the work of the latter body.

If medical men wish for any reform in the legislation and grievances of our profession they must return a reformer and not a candidate who is put forward by the most reactionary influences. In Mr. Horsley we have a candidate sincerely interested in reform, of high scientific status, and, as he has proved by the position of the Defence Union, a capable man of affairs, honest and industrious.

I am, Sirs, yours faithfully,

Westerham, Sept. 27th, 1897. A. MAUDE.

To the Editors of THE LANCET.

SIRS,—The resignation of Mr. Jackson is quite as surprising as the resignation of Dr. Rentoul, and especially as he retires in favour of Sir Walter Foster. In order not to complicate the election I wrote to Mr. Jackson telling him that I would vote for him, and I would retire as I did not wish to have two general practitioners in the field. In a triangular fight Mr. Jackson would have had a good chance. Had I known that Mr. Jackson intended to retire I should certainly not have withdrawn. I should have liked to have seen this election tested on two points pure and simple: (1) the midwifery question, and (2) general practitioner *v.* consultant

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as representatives. This would have simplified matters in future if decisively settled this time.

I am, Sirs, yours faithfully,

Halifax, Sept. 29th, 1897. TH. M. DOLAN, M.D.

To the Editors of THE LANCET.

SIRS,—I enclose a copy of a letter I have just written to Sir Walter Foster regarding what I call the unscrupulous and unfair tactics adopted by him or his committee, or both, in the conduct of the present contest for a general practitioner's representative on the General Medical Council, which I will thank you to publish in your next Saturday's issue. I will not comment on the fact that the lay press has been induced to scatter broadcast a false and misleading statement in order to buttress Sir Walter's position, which after the ten years' faithful services he so modestly alludes to surely ought to have been able to speak for themselves. In bare justice to myself I ask you to insert these two letters.

I am, Sirs, yours faithfully,

Winckley-square, Preston, Sept. 29th, 1897. JAMES A. RIGBY.

[COPY.]

15, Winckley-square, Preston, Sept. 29th, 1897.

Sir Walter Foster, M.D., Birmingham.

SIR,—I have just received a circular letter of your address enclosing a preliminary list of your alleged nominators and supporters. I notice with extreme regret that this list is headed with the following extract from the *Birmingham Daily Post*:—

"General Medical Council Election.—Mr. George Jackson, F.R.C.S., of Plymouth, who was the candidate of the Incorporated Medical Practitioners' Association, has retired in favour of Sir Walter Foster. Mr. Jackson's retirement means a great accession of strength to Sir Walter Foster, who is now practically the only provincial candidate."

I presume this letter and the enclosure were issued with your knowledge and sanction, and as the statement that you are "now practically the only provincial candidate" is both false and misleading I call upon you to withdraw it immediately in the same public and effective manner in which you have circulated it—that is by circular. You must be aware that I am as well as yourself a provincial candidate, nominated and accepted, and that my address was issued before your own. I remain, Sir, your obedient servant,

JAMES A. RIGBY, M.D.

To the Editors of THE LANCET.

SIRS,—It is with great pleasure that I see the address of Mr. Victor Horsley, announcing himself as a candidate at this election, and I trust that we shall seize this opportunity of securing for ourselves a real representative. Anyone familiar with the affairs of the last few years knows that there is not in the profession a man with a wider knowledge of the difficulties, or a broader sympathy with the trials, of the general practitioner than those Mr. Horsley has manifested. It is no exaggeration to say that our requirements and aspirations are as familiar to Mr. Horsley as they are to any of ourselves, and it is quite certain that he knows better than many of us how the improvement we desire can most hopefully be attempted.

If we consider what are the qualities most necessary to a representative who shall do us justice, we must perceive that it is in the first place requisite that the representative should have a full, accurate, and minute knowledge of our case and position. It is next desirable that he should honestly intend to apply his knowledge wholly and solely in our interest. Then it is needful that he should possess the intellectual qualities, the experience and knowledge of affairs which are essential to carry out his intentions and to give him due weight at the General Medical Council. Some of the correspondents who have expressed their views on this subject appear to look for qualifications other than these. Some seem to regard the kind of practice done by the candidate a matter more important than the kind of representation we are likely to obtain. What we want is a man to represent general practitioners, not a general practitioner to represent us. This should be obvious to everyone. The fact that a candidate has or has not any particular degree or diploma, or that he sees chiefly any particular branch of practice, is totally insignificant. We want a man, not a description, and we want him badly. Other correspondents seem to attach importance to geographical distinctions, though it is hard to imagine wherein lies the virtue or the disadvantage of any particular locality. Others have their vision so obscured by some special object as to be totally blinded to every other consideration. We have had representatives who have worked hard for us and others who have not done what their opportunities led us to expect of them. Now that we have got a splendid candidate who, as we well know already, will grudge us neither time, nor labour, nor brains, we can surely unite to secure a representative possessing in an eminent degree all the qualities that we require. If we cannot avail ourselves of our opportunity we are indeed unable to help ourselves, undeserving of the aid of others.

I am, Sirs, yours faithfully,

HAMILTON HALL L R.C.P. Lond., M.R.C.S. Eng.

Frant, Sussex, Sept. 28th, 1897.

To the Editors of THE LANCET.

SIRS,—I have, doubtless in common with the rest of the profession, received a copy of Sir Walter Foster's address as a candidate for the vacant seat on the General Medical Council. Sir Walter Foster's qualifications for the position are good, but in my eyes he is injured by those who prominently support him.

The question of the abuse existent in the out-patient departments of hospitals is a very acute one—one which concerns the general practitioner very deeply. It should certainly somehow—and soon—be brought within the range of the work of the General Medical Council. Is a candidate whose chairman of committee is Dr. Saundby likely to share this view? The corporations are decidedly over-represented on the Council. Is a candidate who is supported by the Presidents of the Royal College of Physicians of London and the Royal College of Surgeons of England certain to share *this* view? Lastly, a really good representative should know not only what are the real troubles of the profession, but what is the most practical way of relieving them. Will Dr. Rentoul's good word, which I observe Sir Walter Foster to possess, in any way guarantee to the profession that Sir Walter Foster is the owner of a definite policy?

I am, Sirs, yours faithfully,

Earl's-court, Sept. 29th, 1897. FRANK G. WALLACE, M.B.

*** We have received a great many letters on the importance of the impending election and the merits of the rival candidates for which we have been unable to find room. Some of the communications, moreover, lost their force by being signed only with a pseudonym.—ED. L.

"REFORM IN THE SPELLING OF THE MEDICAL VOCABULARY."

To the Editors of THE LANCET.

SIRS,—Which is best? To follow Dr. Gould's advice[1] in search of a "simpler spelling of medical terms" or to adhere to the old classical model? Who can follow or reconcile the barbarous discordances of English "as she is spoke" by cockneys, provincials, Americans, and other slaves of accidental training? It is more difficult to trace and understand these than it is to appeal to the classical standard of Greek etymology. Etymology speaks to all nations alike. It is the only constant and intelligible authority. In the evolution of science the need for a new word to express a new idea is continually arising. The scientist naturally turns to the Greek Lexicon for what he wants. Here the classical student finds at once a fair expression intelligible to those whom he addresses, no matter what their mother tongue may be. Greek is the mother tongue, indeed, the grandmother tongue, of the scientific student of every land. It is the common tongue which binds them together in the fraternity of knowledge.

If it be urged, as those who accept the cacophonic rule of Dr. Gould must do, that words adopted in the English language must be trimmed in accordance with the accidental current habits of pronunciation we are landed in endless confusion. As pronunciation changes spelling must change, and so the meaning of the word is an ever-shifting enigma. If it be urged that it is easier to understand English than Greek the obvious answer is that Greek is a fundamental factor in medical education. Hence scientific words drawn from the Greek convey at once a definite meaning. And there is the obvious danger of losing this meaning if we alter the spelling in senseless deference to the disciples of cacophony. Etymology speaks to all alike. It is the only constant, intelligent, and trustworthy guide.

I am, Sirs, yours faithfully,

Lyss, Sept. 27th, 1897. ROBERT BARNES.

To the Editors of THE LANCET.

SIRS,—In the interesting leading article in THE LANCET of Sept. 25th on "Reform in the Spelling of the Medical Vocabulary" the writer is guilty of one slip. He says: "'Empyema' is now never written 'empyæma.'" It never

[1] THE LANCET, Sept. 18th, 1897.

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was so written. More than 400 years before Christ Hippocrates repeatedly wrote *ἐμπύημα, a gathering or suppuration*,[1] or *an abscess*, especially *an internal abscess*.[2] Nay, more, the Father of Medicine gives us the derivation of *ἐμπύημα*, for in "Prognostics," page 43, he uses the verb *ἐμπυέω*, which means *to have abscesses in the lungs*. This verb is, of course, in its turn derived from *πύον*, *discharge from a sore matter* (Latin *pus*).[3]

This very word empyema may serve to illustrate my opposition to Dr. George M. Gould's proposed reformation of English spelling. If his suggestions are adopted it will be next to impossible to trace the history of words and to recognise their hidden meaning. Changes in spelling have, of course, taken place in the past—one has only to read Trench's "English Past and Present" to become aware of this—nay, more, changes are taking place and will in the future take place. But this is being effected by what the writer in THE LANCET aptly calls "the ordinary evolution of language," when "the unconscious impulse of the English-speaking race tends in that direction."

I am, Sirs, yours faithfully,
JOHN WM. MOORE, M.D. Dub.,
Ex-Scholar, Trinity College, Dublin.

Fitzwilliam-square West, Dublin, Sept. 25th, 1897.

"AN IMPROVED ŒSOPHAGEAL PROBANG."

To the Editors of THE LANCET.

SIRS,—Looking over back numbers of THE LANCET I find an illustration in the issue of Sept. 18th of "an improved œsophageal probang," by Mr. C. J. Mayhew, and a letter from Dr. Sympson in THE LANCET of Sept. 25th claiming priority on the ground of publication of a similar instrument in January of the present year. But the second edition of my book, "The Throat and its Diseases," published so far back as June, 1887, contains an illustration, Fig. 101, page 142, of an instrument constructed to overcome both the difficulties it has occurred to these gentlemen to correct—viz., that of premature expansion of the ramoneur on insertion and the employment of but one hand; and both—as I venture to think—by a better mechanism. Moreover, my instrument is made in jointed form, so as to occupy less space in the pocket or instrument case, while the end, instead of being of sponge, is replaced by an aseptic metal point, which has the additional advantage of detecting any hard foreign body on percussion.

I am, Sirs, yours faithfully,
Mansfield-street, W., Sept. 27th, 1897. LENNOX BROWNE.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Sept. 25th a correspondent asks leave "in fairness" to remind you that you published a notice of an œsophageal probang designed by him, which, he says, embodied the improvements claimed for mine. Does your correspondent consider it unfair of you to publish a notice of a probang which is entirely different, and which I consider simpler, in construction to his? I am unable to understand how the probang illustrated in THE LANCET of Jan. 9th this year is more easily opened and withdrawn with one hand than the old form of instrument.

Messrs. Mayer and Meltzer have informed me that some years ago they made for Mr. Lennox Browne a probang with catch which prevented opening during insertion, but it required the use of both hands to manipulate it.

I am, Sirs, yours faithfully,
King's College Hospital, London. C. J. MAYHEW.

*** Each inventor has aimed at obviating the same difficulty, but the mechanisms employed are entirely different.—ED. L.

THE BATTLE OF THE CLUBS: THE COVENTRY PROVIDENT DISPENSARY.

To the Editors of THE LANCET.

SIRS,—As secretary of the Coventry public medical service I have been requested to forward you a copy of a letter, dated Sept. 5th, 1897, to the medical staff of the Coventry Provident Dispensary, also a copy of the *Coventry Herald* for Sept. 4th, 1897. My committee feel that the reply of the Coventry Dispensary committee to the memorial of their medical staff was insulting, not only to that staff, but to the whole profession of medicine. In intimating to its medical staff "that if they were not satisfied with their position the dispensary would be quite prepared to get a medical staff exclusively for the institution," the committee were taking a low estimate of professional men in the town and elsewhere, and considering that the Coventry public medical service is open to the dispensary staff upon their resignation, and that ultimately their financial position will not be impaired, there seems to be no reason why they should not stand to the terms of their memorial. With a view of assisting them in such a course the following letter was addressed to them on Sept. 5th, and on the 25th last the enclosed reply was received.

I am, Sirs, yours faithfully,
EDWARD PHILLIPS.

Much Park-street, Coventry, Sept. 28th, 1897.

[COPY.]

20, Much Park-street, Coventry, Sept. 5th, 1897.

TO THE CHAIRMAN OF THE COVENTRY DISPENSARY MEDICAL STAFF.

DEAR SIR,—As secretary of the Public Medical Service I have been instructed to write to you to express the regret of my committee that you have failed in your efforts with the dispensary committee to carry out any of the reforms asked for in your memorial to them. If the report in the *Coventry Herald* of Sept. 3rd be a correct one my committee much regret that any body of professional men should be exposed to such an insult as the following paragraph would imply: "The present arrangement with regard to salaries the committee consider fair both in the interests of the patients and the medical staff, and they are not disposed to disturb it. The general feeling of the committee on the whole question is that if the medical staff are not satisfied with their position the dispensary would be quite prepared to get a medical staff exclusively for the institution, as is being done in some other towns, notably at Yarmouth."

Taking into consideration the verdicts already pronounced on your dispensary system by THE LANCET, the *British Medical Journal*, and the Ethical Committee of the British Medical Association, we are of opinion that there is nothing open to you but the resignation of your appointments. Supposing such a view were accepted by yourselves, and you were at once willing to resign your positions as members of the staff, it is our intention to cordially ask you to join the public medical service, and become members of a professional body which is able to control all contract work undertaken by its members.

We are anxious to assist you by this offer in resenting an insult which has been offered through you to the whole profession of medicine.

I am, dear Sir, yours faithfully,
(Signed) EDWARD PHILLIPS.

[COPY.]

24, Bishop-street, Coventry, Sept. 25th, 1897.

DEAR SIR,—I beg to acknowledge the receipt of your letter of Sept. 6th. As negotiations are still pending between the staff and the committee of the dispensary I am instructed to say that we are unable to adopt your suggestions.

I am, dear Sir, yours faithfully,
(Signed) W. J. PICKUP,
Sec. Medical Staff of Coventry Provident Dispensary.

To Dr. Phillips.

"CONGENITAL ABSENCE OR DELAYED DEVELOPMENT OF THE PATELLA."

To the Editors of THE LANCET.

SIRS,—In connexion with Mr. Little's original article on Congenital Absence or Delayed Development of the Patella, published in THE LANCET of Sept. 25th, the following case, at present in the wards of the Manchester Children's Hospital, under the care of Mr. Wright, may possibly be of interest as illustrating the usual association of the above condition with other extensive congenital deformities. A girl, aged six years, was admitted to hospital on Aug. 7th; she was rather a delicate-looking child and of small build for her age. Both knees were in a position of hyper-extension of about 20°; both admitted of very slight flexion only—the right until the leg and thigh were in a straight line, the left to a further extent of 10°. The left also permitted a slight degree of lateral movement. The left joint line was perfectly horizontal, but owing to the abnormally large size of the inner condyle of the right femur the right joint line was somewhat oblique from within upwards and outwards, causing a slight appearance of genu valgum. On the right side no trace whatever of any patella could be found, and on the left all that apparently represented it was a fibro-cartilaginous nodule about the size of a pea situated in the quadriceps tendon one inch above the joint line. There was also very marked congenital dislocation of both hips, the femora being abnormally moveable on the pelvis, it

[1] Prognostics, page 41. [2] Epidemics, III., page 1059.
[3] The references are to the pages of the edition of Foesius, published at Frankfort in 1624. It lies before me as I write.

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being possible to push the rudimentary femoral head to within half an inch of the anterior superior iliac spine. The right foot was in a position of marked talipes equino-varus, the left in that of severe calcaneo-valgus.

All these deformities were congenital, and yet in spite of their extent the child could walk about without assistance and had done so ever since the age of two years. The body-weight was transmitted to the ground through the outer border of the cuboid and anterior part of the os calcis in the right foot and the projecting head of the astragalus on the inner side of the left foot. The knees were held perfectly stiff, and the pelvis sank on the femora at each step, the characteristic waddle of congenital dislocation of the hip being extremely well marked; the abdomen was held prominently forward, and the shoulders thrown well back. On Aug. 17th the deformity of the feet was corrected by operation, Mr. Wright performing double astragalectomy. While the patient was under the anæsthetic forcible attempts were made to further flex the knees, but without avail.

I am, Sirs, yours faithfully,

ARTHUR H. BURGESS, M.Sc., M.B. Vict., M.R.C.S. Eng.,
House Surgeon, Manchester Children's Hospital, Pendlebury.
Sept. 27th, 1897.

INFECTION AND THE NOTIFICATION ACT.

To the Editors of THE LANCET.

SIRS,—Your annotation on "Infection and Parental Responsibility" in THE LANCET of Sept. 11th induces me to make a few remarks on a subject I have frequently ventilated and which has direct bearing on the above. Why do parents ignore the responsibility the above Act places on them? From many years' experience I have no hesitation in saying that it is not from ignorance, carelessness, or from a desire in all cases to even avoid the medical man's bill that they do not call in medical aid; but it is to avoid the loss of the wage-earning factors of the home that accompanies the consequence of notification.

The avoidance of the medical man's bill in mild cases is undoubtedly an inducement, but not in all, since a large number of juveniles of the artisan and other classes belong to clubs, and there would be no reason for not claiming the services of the medical officer which they were entitled to, particularly when in my experience a child aged six years drew 6*s*. a week when under the medical officer's care. The fact is that in most families of this class the elder children bring in several shillings a week by doing odd jobs out of school hours—boot-cleaning, butcher's errand boys; and, in fact, in many cases are employed to take out the medical officer's medicines. The mother, too, goes charing or takes in washing, and all these sources of income are cut off the moment the medical officer appears and notifies. Further, the husband, perhaps a baker or a milkman, must either give up work or leave his house for some weeks in cases of some diseases. If these restrictions were not enforced the Act would be useless. I confess I have ever found parents willing to carry out advice and instructions, but they have clearly stated the grievance they considered they had. And I must say, on looking over a record of some years, I find that since the Act was adopted in the majority of scarlet fever cases I was only called in to the more serious at the commencement, and in most when some sequelæ of the disease were manifest, the usual being nephritis and dropsy. Then all came out, with such remarks as, "Yes, the child did complain of sore-throat, was sick, and the neighbour's children are ill, but I never saw any rash, and did not think it could be scarlet fever. I have seen no peeling," &c. In some cases even when pointing out that the latter symptom was present in addition to the nephritis which had alarmed them they would not believe the child had the fever. I believe this experience will be found to be not uncommon. But I have constantly, realising the hardship to the poor in such cases, asked if it could not be remedied.

Section 9 of the Notification Act says: "Any expense incurred by a local authority in the execution of this Act shall be paid as part of the expenses of such authority in the execution of the Acts relating to Public Health, and in the case of rural authorities shall be general expenses." The Infectious Diseases (Prevention) Act, Section 20, provides for any expense incurred, including reasonable remuneration of any veterinary surgeon employed under Section 4, and as "part of the expenses of such authority," &c. (same as above), and Section 6 provides for the free disinfection of bedding, &c., at the expense of the authorities, as also for *compensation* to the *owner* when *damage* (loss) is sustained.

Now, Sirs, why should not the poor be compensated for in many cases the serious loss they suffer in carrying out the necessary isolation of the whole family? I feel sure that the only way to reap the full benefit of these Acts is to do so, and I have no hesitation in saying that if it were done parents would be as willing to help medical men, instead of as now thwarting them, in stamping out these infectious diseases as we are ourselves. Moreover, penalties for infringement of the Act could be rigidly inflicted, as all sentimental grounds for leniency would be removed by knowing that the parent suffered no loss from carrying out the Act. Under the head of "general expenses" and "as part of the expenses of such authority in the execution of the Acts relating to public health" I submit that local authorities have the requisite power to make good the few shillings' loss sustained by the enforced idleness of the mother and healthy children. "The execution of the Acts" surely means the *efficient* execution, and if, as I assert, the efficient working of the Act can only be obtained by removing all cause for concealing facts on the part of the public by making good the loss, it is a rightful and legal charge as the "general expenses."

I am, Sirs, yours faithfully,

ELLIOT DAUNT, M.R.C.S. Eng., L.R.C.P. Lond., D.P.H.
Sept. 20th, 1897.

"IMMORALITY AMONG SCHOOL BOYS."

To the Editors of THE LANCET.

SIRS,—Dr. Hime's article in THE LANCET of Sept. 4th is necessarily helpful. The question of immorality amongst boys is one which requires bold yet careful handling. It is a matter, as he points out, that must be attacked alike by the medical man, the parent, and the schoolmaster. Dr. Hime, I take it, is thinking simply of masturbation. Everything that he advocates for the suppression of the evil is excellent, nothing, perhaps, that he says being of such importance as the insistance of all boys entering thoroughly into the school games and sports. He says nothing about diet. The principal meals should be breakfast and midday dinner. Eggs and so forth may also be allowed for tea, but supper should be quite a light meal, a glass of milk or cocoa with bread and butter or biscuits being quite sufficient. No healthy boy requires alcohol, but when it is allowed it should be consumed only at the midday meal. Masturbation is looked upon as "a solitary vice." It is not always so; the worst examples of it are those where boys openly masturbate themselves before their fellows, or even stimulate the passions of others by, so to speak, masturbating their comrades. Undoubtedly these are the boys that do the greatest amount of harm, and who deserve the severest form of punishment for their misdeeds. Perhaps I am trespassing too much upon the schoolmaster's domain when I suggest that even these boys should not be expelled offhand. They would undoubtedly deserve a sound thrashing, and the reasons for which they have been punished should be known throughout the school. Any head-master would, I am sure, follow the punishment with kind but severely applied advice.

I have had, of course, to talk to boys upon this subject, and I never fail to try to impress them with the "beastliness" of the habit. I tell them that we kick a dog if we catch him doing the same thing—kick him and call him a dirty brute. Solitary masturbation needs a more kindly way of treatment. Here, at least, the boy has some conscience; he is ashamed of what he is doing and does it on the sly, and very frequently is quite unaware of the harm that he is doing to himself. That this particular form of the vice requires kind as well as firm treatment is evidenced by such facts as these—that I have spoken with schoolmasters and athletes of large repute, who have owned to me that in their younger days they had yielded to the temptation. Warned in time, however, they gave up the habit. It should ever be borne in mind when dealing out punishment for this offence that, after all, the offenders are only gratifying one of the strongest impulses of nature at an age when natural desire powerfully asserts itself. Boys, we must also remember, are not the only offenders; girls, men, and women are by no means always saints in this respect. Yet, remembering all this, and weighing well the strength of passion and the weakness of poor humanity, the offence has to be controlled, nay, has to be prevented. *A repetition* of open beastliness after due punishment and warning can only be further dealt with

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in the case of the schoolboy by immediate expulsion. The medical man should make a most careful local examination in every case—I mean that he should carefully examine for any local cause that might be a predisposing reason for the commencement of the habit. Many local causes of irritation at once suggest themselves.

In my opinion, a carefully written pamphlet should be put into the hands of every public school boy. The bad moral effects of the habit, and its absolutely "beastly" nature, should be carefully pointed out. Such an attempt has already been made, but I think the statement of the facts should be even more plainly put down, and how to avoid temptation should be set forth with no mincing words. The great objection brought forward to such a scheme is that by its means every boy will be told of the existence of the evil when he might have altogether missed such pernicious knowledge. That is nonsense; every boy will know something about it sooner or later, and to be forewarned is to be armed for resistance. I am drawing up the draft of such a pamphlet, and shall submit it to the criticism of both headmasters and medical men, and if I am sufficiently supported shall publish it for the purpose of being distributed in the public schools.—I am, Sirs, your obedient servant,

"THE MEDICAL OFFICER TO A PUBLIC SCHOOL."

Sept. 20th.

THE COMPARATIVELY STATIONARY DEATH-RATE IN PRIVATE OBSTETRIC PRACTICE.

To the Editors of THE LANCET.

SIRS,—I have been much amused by an incident which has just occurred to me in the ordinary run of practice, but I venture to think that the amusement is so blended with instruction that it is not impossible that you may consider an account of it worthy of a place in the columns of THE LANCET. There could be no more forcible example of the ignorant empiricism which obtains even in the metropolis of the world, and of the fatally irreparable consequences which necessarily follow upon medical practice which is subservient to it. Some time ago I enjoyed the pleasure and privilege of a prolonged residence in the Rotunda Hospital, the practice of which I do not hesitate to say constitutes both the most carefully carried out example and the most brilliant result of the principles of asepsis which has yet been shown anywhere. Upon taking up my residence there, whilst admiring the training involved in the perfect attention to details, my mental attitude towards the practical good gained was inclined to a little benevolent scepticism. However, the practical results constantly brought under one's notice during the brilliant mastership of Dr. Smyly, and which now continue under Dr. Purefoy, were, and are, so striking as to convert the most unbelieving; and I never knew anyone during my term of residence there who did not enthusiastically admit this. Those who have been in actual practice since the pre-asepsis period, and who are conversant only with the well-known fact that the rate of mortality in private obstetric practice has not decreased in anything like the same ratio as that of the great maternity hospitals, cannot do better than consult the table given in Dr. Jellett's "Short Practice of Midwifery" of the cases treated at the Rotunda Hospital during the seven years of Dr. Smyly's mastership, which in the last year reached the astonishing minimum of 0·06 per cent. In producing this result few things were more important than the precautions taken in making, and the reduction in the number allowed of, vaginal examinations; and by way of impressing this in his clinical teaching Dr. Smyly had a well-known saying that "he hoped to live to see the day when a vaginal examination would be looked upon in much the same light as turning—a serious operation in midwifery." One does not require much experience of the exigencies of general practice before recognising that literally this is impracticable in every-day work; but for my own part I try to keep it before me as the (unattainable) ideal. Last month I attended a primipara who had a moderately long, but in every way satisfactory, labour. She had as "acting nurse" an individual who seemed to be a kind of general charwoman, and whose previous attendances at labour cases had been, according to her own account, very limited indeed, and whose general demeanour corroborated this. I was called to the case in the middle of the day, but there was then no sign of dilatation of the os. I called again during the early part of the afternoon, but found no progress. About six o'clock in the evening I received an urgent message from the "nurse" to say that the expected event was coming off immediately, and the terms of the message were so imperative that I rose from my half-finished dinner and went immediately through a heavy shower of rain. Upon my arrival I found the patient in practically the same state as when I had last seen her and labour not a bit further advanced, but in order to satisfy her I stayed for about an hour. I then went to fulfil some other engagements, and got back to see her again about eleven o'clock, at which time I found matters at a standstill. I again stayed for about a couple of hours, but seeing that it was the usual prolonged first stage of a primipara I administered two drachms of syrup of chloral and went home to get some sleep, leaving instructions with the "nurse" that I was to be sent for if required. I did not receive any message, so I went to see her again after breakfast and found her in much the same state as on the previous evening. I called again about two o'clock with the same result. Finally, I was sent for about four o'clock, and finding that at last labour was progressing I remained with the patient in the usual way and the infant was born about half-past six in the evening. Everything terminated satisfactorily, and I thought no more about the case after the end of the usual period of visiting, and the patient and her friends were apparently very well satisfied. Yesterday, however, I called to see a medical friend who practises in the same neighbourhood, and he told me the story which is the gist of this communication. He said that a week or two ago he was attending a confinement when the same individual was again acting as nurse in the same *dilettante* kind of way to another friend of her own. This Betsy Prig inveighed mightily against me, and her two weighty reasons for asserting that I "knew nothing about midwifery, and probably had never seen a case before," were (1) that I was too particular and over fastidious about scrubbing and washing my hands before making an examination; and (2) that I did not make a sufficient number of examinations and "help" the patient (oh! shade of Dr. Smyly! I made at least two vaginal examinations *during each visit* which I have related).

My friend tells me that this good woman is emphatic in her declamations that never again shall I be permitted to attend any woman she can influence. Circumstances, however, make this threat of hers quite inoperative, but if I had been permanently in the neighbourhood it might have been quite a serious matter for my reputation to have this criticism of incompetence spread about. As it is, I think it is worth while recording as an example of the never-ceasing risks attending the conscientious practice of the profession. Few things are from their nature more pathetic than death in child-bed, and anyone who has ever seen such devoutly hopes he may never see another, and with this object will spare no pains to diminish the inevitable risk. Still, if a man stands to lose his reputation because by scrubbing his hands he seems fastidious about being brought into contact with the patient, or by reason of abstaining from unnecessary vaginal examinations he is accused of not sufficiently "helping" the patient, what course can he be expected to adopt? With so-called "nurses," and by more than parity of reasoning their patients on such friendly terms with the streptococci, can the notorious fact to which I have referred, the comparatively unaltered death-rate in private obstetric practice, be at all a matter of surprise? In fact, it is inevitable.

I am, Sirs, yours faithfully,

London, Sept. 22nd, 1897. M.D.

THE GUILD OF ST. LUKE.—The Medical Service held last year at St. Paul's Cathedral under the auspices of the Guild of St. Luke was so much appreciated that it has been decided to hold a similar one this year on Oct. 19th at 7.30 P.M., when the Archbishop of York will preach the sermon. On account of the large attendance last year it has been found necessary to limit the number of tickets. Invitations will be issued to all practitioners of medicine resident in London and those who are graduates are asked to wear academical costume—that is to say, the gown and hood of their degree, whether medical or otherwise. Practitioners residing in the provinces who wish to attend can obtain tickets on application to either of the honorary secretaries, Dr. S. Russell Wells, 24, Somerset-street, Portman-square, W., or Mr. C. Devereux Marshall, 10, Devonshire-street, Portland-place, W.

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THE EPIDEMIC OF TYPHOID FEVER AT MAIDSTONE.

(BY OUR SPECIAL SANITARY COMMISSIONER.)

THE serious and startling character of the typhoid fever epidemic at Maidstone involves so many issues and problems that it is yet too early to express a definite opinion or formulate accusations. One thing only can be said with the conviction that future investigations will not disprove the assertion. The water-supply has undoubtedly been the spark which has ignited the powder. It would, however, be imprudent at this early stage to conclude that the water-supply constitutes at once both the spark and the powder which has produced the explosion. Considering that in this small town, with only some 33,000 inhabitants, there have already been more than 900 cases, it seems certain that other causes besides the water-supply must have contributed to bring about this dire result. Under the present circumstances it will be fortunate, indeed, if ultimately the number of cases does not exceed 1000 and reach 3 per cent. of the population. With such figures before us it is difficult to believe that the water is alone to blame. There must have been predisposing causes of a very active character, and therefore it is only right to insist, and this at once, that other reforms besides an improved water-supply are needed. Nor is it necessary for the moment to say much in support of this opinion: it will suffice to observe that in Maidstone many closets, though draining into sewers, have no flushing apparatus, but depend for their cleanliness solely on the water that may be brought to them in buckets by the inhabitants. What this is likely to mean in actual practice anyone with a little experience in such matters will fully appreciate. Having said this much and made these reservations with a view to future criticisms and elaboration of details we must for the moment content ourselves with giving a short history of the epidemic and some account of the much-abused water-supply.

THE HISTORY AND PROGRESS OF THE EPIDEMIC.

During the course of the month of August the medical officer of health, Mr. Adams, became aware that there was an unusual prevalence of diarrhœa in the borough. Though an increase of this disease is to be expected at that time of the year, he was startled on preparing his monthly report to find that during the four weeks ending Sept. 4th there had been 19 deaths from diarrhœa. The local board meeting was to take place on Sept. 15th, and on the 12th six cases of typhoid fever were notified to the medical officer of health. Another case was notified on the 13th, three on the 14th, and one more on the 15th, when the board met. The medical officer at once drew up a handbill setting forth the precautions that were to be taken to prevent diarrhœa and enteric fever, urging the necessity of boiling the milk, drinking water, &c., of reporting any case of faulty drainage, and of abating all nuisances. With commendable promptitude these instructions were printed and circulated broadcast within a few hours of their approval by the board. In the interval the medical officer of health had naturally suspected the milk-supply and had undertaken an investigation on the subject. This was no easy matter, for though the general sources from which the milk-supply is derived were known, still they varied in detail. Many purveyors obtain their milk from large dairies, and the milk does not always come from exactly the same place, so that it took some time to unravel this matter. The medical officer did not yet suspect the water-supply, but he feared that it might become contaminated in consequence of the number of cases of typhoid fever in the neighbourhood. It was therefore more for the purpose of protecting than of denouncing the water that he went up immediately to London to submit samples to Dr. Washbourn for bacteriological examination. But when, on Sept. 16th, no less than 27 new cases of typhoid fever were notified he began to suspect that the water was the real cause. By the 16th there had been in all 38 cases of typhoid fever in the borough. This number was already sufficient to begin to localise the disease and to observe that certain quarters of the town were more affected than others. But as on the morrow, Sept. 17th, 26 other cases were notified, and on the 18th 66 more cases were reported, not only was the gravity of the epidemic self-evident, but the map on which these cases were dotted down clearly showed that the epidemic was connected with what is known as the Farleigh water-supply and not with the other sources of supply. This was all the more evident as the Farleigh water is delivered, not to one district, but to three districts which are widely separated from each other. It was in the north-east, in the south-east, and the western quarters of the town that the epidemic prevailed. A case in the central quarter of the town which separates these districts one from the other only served to confirm this theory. The case was that of a servant who was employed in King-street—a thoroughfare which is situated in the central district. Though she had typhoid fever no other inhabitant of the house in King-street suffered from that disease. But it was ascertained that this servant had previously been home to her parents from Saturday to Sunday, where she had drunk some water. Her parents live in Gladstone-road, which is situated in the north-easterly district, and which receives the Farleigh water-supply. By Sept. 18th the evidence was sufficiently emphatic to enable the medical officer of health to approach the water company and insist on a full investigation. This was commenced on 19th, and on that day no less than 76 more cases of typhoid fever were notified, while on the next day, the 20th, there was a further and most alarming increase of 129 new cases. Such figures show only too well the utter impossibility of attempting to overtake the evil when once it has been allowed to occur. In such cases prevention is the only safeguard.

BAD WATER: THE TUTSHAMS AND THE HOPPERS.

The Farleigh water-supply is collected from three separate gathering grounds and springs. The farthest of these gathering grounds is near Ewell House and some four and a half miles from Maidstone. Nothing has yet been ascertained concerning this supply beyond the all-important fact that a junction is effected between the pipe that brings the water from the Ewell district and that which brings the water from the second or Tutsham gathering grounds. This latter ground is divided into two districts, Tutsham-in-Fields and Tutsham-in-Orchard. In the former district the water is collected by means of draining-pipes which are sunk in the subsoil. This soil is composed of the rag or lower greensand formation. The pipes were laid some thirty years ago, and who shall say how or where? Some are supposed to be twenty feet down in the soil, others are known to be only seven feet below the surface, and perhaps some pipes are still nearer to the surface. Apertures are, of course, contrived so that the pipes shall receive and convey away the water that is in the soil above them, and this earth is planted with hops. Of course the hops have to be manured, and much has been said concerning the obnoxious character of this manure. Fish, rape dust from oil mills, and shoddy are employed. But all this is placed on the soil in the month of January, and if the manure had been the cause the epidemic should have broken out earlier. When we examine the position of the collecting tank into which the water from these pipes is delivered we find a more likely explanation. This tank or catch-pit is covered over with two large slabs of Yorkshire flagstone and a little earth. This is not a sufficient impediment to prevent a direct percolation into the tank. There is but a small yield of water in this tank and it is very turbid. But the situation of the tank itself is far more suggestive. It is close to a long hedge. On either side of the tank there is a vacant space which is utilised as a camping ground. Here gipsy vans and other vans are stationed at certain periods of the year. On the other side of the hedge there was a great accumulation of fæcal matter, this being a convenient retreat for the hop-pickers and others who work in the neighbourhood. From the collecting tank which is so dangerously close to this foul hedge a pipe conveys the water in front of a row of eight cottages that are close at hand. These are known as the Mill Cottages. They derive their water-supply from this pipe. It is brought behind the cottages by a branch pipe and there affixed to a pump. The inhabitants of the Mill Cottages are therefore not only the first to drink the water from the Tutsham gathering tanks, but they drink this water undiluted by mixture with water from other gathering grounds. The medical officer of health therefore made a careful inquiry as to the health of all the inhabitants of these cottages. The inhabitant of the first cottage keeps a small huckster's

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shop, and she declared that the whole of her family and herself had been very ill with diarrhœa; but, what was more remarkable, it appeared that the hop- and fruit-pickers who worked in the neighbourhood had also suffered extensively, for they constantly came to her shop to buy a diarrhœa mixture. Further, this woman had heard that a child had died from fever and diarrhœa in one of the hop-picker's huts. In the next cottage the whole family had suffered more or less from diarrhœa, and confirmed the story of the death of the child. At the third cottage both mother and son suffered from attacks of diarrhœa about three weeks or a month previous to Sept. 19th, when the epidemic at Maidstone had assumed such serious proportions. In the next cottage a man had been on his club and suffered from diarrhœa in the months of July and August. In another cottage a woman remarked that the hop-pickers came on Aug. 20th, and her baby was very ill on the 24th. In two other cottages the inhabitants had also been very ill with diarrhœa, and the baby belonging to a friend who had paid them a visit suffered in the same manner.

A second gathering tank or catch-pit at Tutsham is known as Tutsham-in-Orchard. It has an overflow pipe which feeds a watercress bed. On the other side there is a blacksmith's shop where there is a privy, which might also be the cause of mischief, and there is the general consideration that the whole district is overrun with hop- and fruit-pickers.

THE FARLEIGH MAIN.—THE DISUSED FILTER-BEDS.

Thus we have seen that the Farleigh water-supply is derived first from the catch-pits in the Ewell district. The pipe from this district is joined just below the mill cottages by a pipe from the Tutsham-in-Fields and Tutsham-in-Orchard district. The pipe, or main as it may be called, now approaches the River Medway and passes underneath it by means of a syphon. It then runs along the side of the South-Eastern Railway line; and on the other side of this line there is another gathering ground known as the Barming sources. The water is here derived from ragstone beds at their juncture with the Atherfield clay. The catch-pits are placed on a parallel with the railway line on the north side between the railway embankment and a hedge. The gathering grounds are beyond the hedge and are covered with orchards. The water is brought to the catch-pits by iron pipes, loosely jointed so that the water may enter between the joints. The catch-pits are made of concrete and bricks set in cement. The manholes are well protected with cement and keyed down. That such precaution is necessary is shown by the fact that a few years ago platelayers and other labourers employed on the railway line used to unlock and lift up the covers so as to take water out of the catch-pits. The pipes that gather the water have not been touched for something like thirty years, but as they are situated at least a quarter of a mile from any houses or barns they can only be contaminated by the manure in the orchards or by the fruit-pickers and others who work on the spot. Then it has still to be shown whether such contamination would not be nitrified before it reached the level of the pipes. From the catch-pits iron pipes pass under the railway line at a depth of about seven feet and join the delivery main which has brought from the other side of the river the waters from the Ewell and Tutsham districts. This main, which has now united and so mixed together the three sources of supply, continues between the railway line and the river till the Farleigh station collecting tanks are reached. There is no evidence as yet that the last of the three gathering fields has yielded polluted water. The eastern catch-pits do not receive much water. In the opposite direction those known as the Church springs have a good yield; they are supplied by pipes that have been laid more recently, about fifteen years ago. They are considered more satisfactory, and the water comes from a steep bank of ragstone. But some of the catch-pits near the railway line and the orchards have a few cracks in the cement and might be polluted by water soiled with excremental matter due to the occasional presence of fruit-pickers. This is not considered probable, but it is possible. On the other hand, it is not thought possible that the Medway, even at flood-tide, could have any effect on the water. However this may be, the water, as already described, is mixed in the main with that which comes from Tutsham-in-Fields, and there can be but little doubt as to the pollution of the latter.

Close to the large collecting tanks, where the water from the three gathering grounds is brought by the delivery main, there are two filter-beds, consisting of two feet of sand and one of pea gravel. These filter-beds should have saved the town, but it appears that they were not in use. One of the filter-beds is of recent structure and the other is dry. When they were used they were frequently cleaned, but the cleansing has nothing to do with the present epidemic, for of late the filters have not been used at all. It was thought that the pipes connecting the filter-beds and the pumping station were liable to pollution from the river, and the culvert was supposed to be in an unsafe condition. Therefore the water was brought from the collecting tanks by a pipe placed outside the filtering beds straight to the pumping stations. From here the water is pumped along a rising main to what is known as the Barming Reservoir. From this point the water can be supplied by gravitation to the greater part of the town. When the Barming Reservoir is full a valve is shut and the water by another pipe reaches the Asylum Reservoir, which is situated at a still greater altitude and supplies the highest parts of the town. The reservoirs were cleaned out fifteen months ago. The delivery service is under pressure and through a 12-in. iron main. From these two reservoirs the north-east, the south-east, and western districts of the town have been daily provided with unfiltered water composed in part of the water gathered at Tutsham-in-Fields, which some three to four weeks before the outbreak of the epidemic caused all the inhabitants of the Mill Cottages at Tutsham to suffer from diarrhœa.

THERE IS GOOD WATER ALSO.

The central portion of the town most fortunately enjoys a totally different supply. In fact, there are three different supplies for the centre of Maidstone. The first is called the Broadley springs. They are reached by a heading into the chalk some three miles from the town and to the village of Boxley. The second supply comes from the Cassington springs and consists of chalk waters gathered in the Cassington woods. The springs are at some distance from the town and at the foot of the North Downs. The third is termed the Conduit supply, and comes from high grounds within the town. It is not connected with the Maidstone Waterworks Company. About twelve months ago the medical officer of health found by chemical analysis that this water was accidentally polluted. The source of pollution was subsequently discovered and stopped, so that there is now no special reason to believe that this water has had any evil influence on the present epidemic.

All these facts, though very significant, are not so conclusive as the distribution of the disease itself. Taking the figures as they stood on Tuesday evening 319 cases of typhoid fever had been notified from the north-eastern part of the town which receives the Farleigh water-supply. From the south-eastern district, where the same water is drunk, there were 111 cases. Finally, in the western district, which is also dependent on the Farleigh water, there were 392 cases of fever. On the other hand, in the centre of the town, where the Boxley, Cassington, and Conduit waters are distributed, there were only 24 cases. This contrast is all the more remarkable as the population is much more dense in the central than in the other districts of Maidstone.

THE FIGHT AGAINST THE EPIDEMIC.

Considering the rapidity with which the epidemic has spread and the trouble and sudden strain upon the authorities there has not been much time for investigating the causes. The most urgent matter at present is to deal with the evil itself, and for this purpose the hospital accommodation has proved altogether insufficient. Maidstone boasts of being a pioneer town in the creating of an infectious diseases hospital, and one wing of the fever hospital was at once set aside for the typhoid cases. This contains twelve beds. On Sept. 21st a system of district nursing was organised, and a number of trained nurses brought down from London. There were then thirty-six nurses in Maidstone, but so many more have come since then that the medical officer frankly confessed he had lost the record. In the streets nurses are seen hurrying to and fro in all directions, and seem as numerous as the soldiers in a German town. On Sept. 24th an emergency hospital was opened near the Chatham and Dover Railway Station which contains thirty beds. The hall of the Salvation Army is now being hastily fitted up with forty beds and will soon be available. But so widespread is the epidemic that all this is still insufficient. Special care has

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been taken to flush the sewers, and the sanitary authorities have themselves flushed all the house drains where there are cases of typhoid fever; but there will have to be a big fight by-and-by between the authorities and the householders to compel the latter to put their drains in order.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Mason College.

THE winter session of Mason College is to be opened on Oct. 1st, on which occasion an address will be delivered by Sir J. Crichton-Browne. It is expected that a large audience will avail themselves of the opportunity of being present. The conversazione of the evening allows the meeting of old friends and students, the seeing and hearing of new things, in addition to other Athenian attributes. Hitherto similar occasions have always been most successful. The Faculties of Arts and Sciences hold their inaugural meeting on Sept. 30th.

Knowledge is Power.

Happening to be passing through the surgical casualty room of a large hospital in the town the house surgeon pointed out to me a case of somewhat trivial injury he had just attended. The patient on entering the room displayed prominently his badge of the Ambulance Cross, and in answer to inquiry as to what was the matter said it was an accident—"I have met with an abrasion of the epidermis." No wonder the house surgeon was taken aback and that the patients around looked with awe upon the latest comer, who could state his own case in such profound terms.

A Large Order.

At a recent inquest the city coroner, Mr. I. Bradley, commenting upon the insanitary condition of certain courts, remarked that one-fourth of Birmingham ought to be demolished. No doubt the state of certain areas is as bad as can be, and that they are highly unsuitable as dwellings for human beings no intelligent person would deny. But are we worse than other large towns? And if these dilapidated tenements are pulled down, will not the poor and the vicious flock to other quarters and continue the same habits?

The Meeting at Montreal.

Birmingham was well represented at the meeting of the British Medical Association at Montreal. Honours were distributed sparingly to those of the administrative body, an honorary D.C.L. falling to Dr. Saundby as president of the council. Those who have returned safely express different opinions as to the effect of so long a journey. "Never again," is the remark of a veteran practitioner, while others who have braved the perils of the sea without its accompanying sickness express their appreciation of the hospitality and friendliness of their reception.

Sept. 28th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Chat Moss.

THIS estate of 2600 acres was purchased by the Manchester City Council in August, 1895, at a cost, including legal expenses, of £139,350. At that time almost the whole of it was held by various persons on leases which only expired last February, so that the Health Committee, for whose requirements it was bought, can only be said to have had possession for about six months. The original ninety years leaseholders drained a large part of the moss, and 1900 acres are already under cultivation; 400 acres, really outside the moss, have long been in agricultural use, and there are only about 200 acres of wild moss still left in their natural condition. Some portions have been planted and form good pheasant cover. Manchester was fortunate in being able to obtain this large area of land for the disposal of its many thousands of tons of garbage and night-soil. Carrington Moss of 1100 acres is still available for about twenty tons per acre annually, but from a return prepared in 1893 more than 315,000 tons have to be dealt with, so that enough is left for Chat Moss, which it is calculated can take thirty tons per acre for a long time to come. The extent of the latter moss can perhaps be more easily realised by stating that it is 3½ miles long by 2¼ broad than by merely giving the number of acres. Its eastern boundary is 5½ miles from the Manchester Exchange. The carriage and distribution of heavy and cumbrous material such as night-soil are serious considerations, but fortunately the Ship Canal is easily available for the purpose, and barges or steamers can be sent direct from the corporation yard in Manchester to the wharf near the edge of the moss. From this point a light railway will be constructed to the moss, and branches will run to different points as required. It is said that the entire outlay on the 2600 acres will scarcely reach £208,000. Manure will be laid down practically at the field gates at a cost to the farmer of about 1*s.* 3*d.* a ton. The carriage will cost about 1*s.*, so that the city will receive 3*d.* a ton for ridding itself of a nuisance which at Chat Moss is a valuable manure. These changes are eagerly looked forward to by the smaller farmers, who already produce immense quantities of vegetable produce of all kinds. When the light railway is completed 50,000 tons may be put on the land every year. The spongy, shifting moss has a depth in places of more than 30 feet, but in some parts, where it is shallower, cottages—or rather shanties of wood planked together—have been built. The sinking of the moss has curiously twisted them; here and there the floors have disappeared, and in some instances the conditions as to sanitation are deplorable. New houses and cottages are being built. Creasoted baulks of timber are laid transversely on the face of the moss as a foundation. Above these a stout beam of oak is laid lengthwise and on this the brickwork is raised. Pipes connected with the Manchester water-supply have been laid, so that the use of the bog water is no longer a necessity. It is believed with good reason that the purchase of Chat Moss will be a pecuniary and sanitary success which will contrast favourably with the culvert scheme.

Evening Continuation Schools.

A resolution was passed at the last meeting of the Manchester School Board appointing a sub-committee to consider the question of special instruction for the large number of dull and defective children to be found in Manchester. In the course of the discussion an important matter was brought up, the attendance of day scholars at night schools. In a recent speech the deputy-chairman, Mr. E. J. Broadfield, stated that "another more recent concession was the permission for pupils in the higher grades of the day-schools to earn more grants in the night-schools." This idea that the children are to be used as grant-earning machines for the schools will not appeal to our sense of the purposes of education. The Rev. Canon Nunn said that last year the number of day scholars on the books of the evening schools was 3731. They attended school three times a day, which, he contended, was bad for them. Beyond the injury to the children themselves there was the over-pressure to the teachers. He knew of one case where a child was attacked with epilepsy, and was told such cases were on the increase. In a letter to the papers he corrected this statement, the case being one of chorea, not epilepsy. Dr. Woodcock contended that there was no evidence of any injury to the children. In a letter to the *Courier* endorsing the Rev. Canon Nunn's views Mr. T. Gavan Duffy gives one instance of which he had personal knowledge, in which a bright boy attended a board school where, "in addition to the essentials of elementary education, they crammed him with algebra, mensuration, French and German, the theory of sound, light, and heat, and magnetism and electricity. After school hours he was compelled to spend an hour and a half every evening practising on a piano, and at night he attended (in the winter) a shorthand class in connexion with the evening continuation schools." This brilliant boy, he says, "is now at the age of fifteen an imbecile," and no great wonder. It is probable that when we consider the ill-developed physique and want of stamina of the major part of the population of our crowded manufacturing towns most of us will agree that day scholars will get more harm than good from attendance at night schools.

Juvenile Street Hawking.

All will agree with a resolution that the question of juvenile hawking should be brought to the notice of the Parliamentary Committee of the City Council, which was

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proposed by Dr. Woodcock, seconded by the Rev. Canon Nunn, and carried unanimously.

The Owens College.

Dr. Arthur Harden, one or the Senior Demonstrators in Chemistry at the Owens College, has been appointed Lecturer in Chemistry at the British Institute of Preventive Medicine, London.

Meeting of Ratepayers on the Culvert Scheme.

Since writing of the meeting of the City Council, when the culvert scheme was adopted by a large majority of those present, but, however, not a majority of the whole council, a meeting of ratepayers has rejected the scheme by a large vote. In consequence of this the Lord Mayor, as chairman, formally demanded a poll of the citizens, which will take place towards the end of October. It is not certain, therefore, that the matter will be brought up again, as was intended, at the meeting of the council to be held to-morrow.

Sept. 28th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Unrestricted Sale of Opium by Druggists.

AT an inquest held in Dublin on the 27th ult. the city coroner made some strong remarks as to the present state of the law in reference to the sale of poisons such as laudanum. He considered, as he stated, that the practice of selling opium to any person without a physician's or surgeon's prescription was an exceedingly objectionable one and ought to be discontinued. It was stated at the inquest that the deceased, an old man, had asked at a druggist's shop for fourpennyworth of laudanum. He was supplied with five drachms of the drug, which he swallowed with fatal result. The coroner of Belfast had occasion some months ago to express similar strong strictures on the same subject in the case of a man who purchased sixpennyworth of laudanum at a druggist's and who was found dead in a carriage of the Belfast and Northern Counties Railway. In the instance of a man who was recently indicted in Dublin for having attempted to commit suicide, it appeared that the accused had bought an ounce of laudanum and was about to swallow it when he was forcibly prevented. Mr. M. J. O'Connell, pharmaceutical chemist, deposed that the full contents of the bottle if swallowed would probably have proved fatal. Mr. Justice O'Brien inquired whether there was no restraint on the sale of this kind of deadly poison, but was told that "it was not exactly a deadly poison." The information seemed to rather surprise the learned judge, who probably thought that laudanum had a sufficiently deadly reputation to fully justify his epithet.

New Regulations for Examination by the Apothecaries' Hall, Ireland.

The examinations in medicine, surgery, midwifery, and pharmacy under the new regulations have been announced to commence on Oct. 12th at the Apothecaries' Hall, Mary-street, Dublin.

The Royal Victoria Hospital, Belfast.

At a special meeting of the life governors and board of management of the Royal Hospital, held on Sept. 16th, the following resolution, as suggested by the "Relations Committee" of the new Royal Victoria Hospital, was passed by a majority: "That the board of management of the new Royal Victoria Hospital shall consist of the president, secretary, treasurer, and five members of the medical and surgical staff to be annually elected by the visiting staff; fifteen life governors, of whom three shall, if possible, be ladies; and fifteen governors, as hereinbefore defined, of whom three shall, if possible, be ladies; and that the said fifteen life governors and fifteen governors shall be elected on the said board by the said general committee." In order to render this resolution operative it is necessary to obtain the consent of each of the life governors (all of whom are *ipso facto* members of the board of management of the Royal Hospital), and a circular has just been issued to each of the life governors enclosing a form of assent for signature. The reasons which led the meeting to adopt this resolution are as follows: the number of life governors of the Royal Hospital is about 250, while at the same rate of qualification (viz., a minimum donation of £50) the number of subscribers to the Royal Victoria Hospital who will be entitled to become life governors will be about 400. When the two institutions become fused and incorporated under a new charter the total number of life governors will be about 600. Under the charter of the Royal Hospital all the life governors are *ex-officio* members of the board of management and entitled to attend its meetings and to vote, while under the charter of the Royal Victoria Hospital this privilege will not be conferred on the new life governors. It is clear that the attendance of 600 persons would be destructive of the possibility of performing such work as is required for the practical administration of the affairs of the corporation, and therefore the right granted by the old charter to the life governors of the Royal Hospital is to be withheld from persons qualifying as life governors of the Royal Victoria Hospital. But as it is equally clear that the creation of two different classes of life governors of the Royal Victoria Hospital, one being *ex-officio* members of the board of management, and the other not, would be highly objectionable, it has been decided to ask the life governors to voluntarily renounce this privilege. This board of management is to be elected for three years (one-third to retire annually). In the first and second year those to retire shall be selected by the board of management by ballot. In subsequent years those longest in office shall retire. Retiring members shall be eligible for re-election. The medical and surgical staff will be elected by this board of management. This will to a large extent do away with the great evil of canvassing for medical appointments, which at present is unavoidable.

Liability for Payment of Rent in Insanitary Houses.

A curious case came before the Belfast Recorder on Sept. 25th, when an occupier of a house was sued for three quarters' rent of the premises under an agreement for five years. A child of the occupier, it was alleged, died from the unsatisfactory state of the drainage, whereupon that person left the premises and returned the key, which the agent refused. It was for the rent of the period between this date and the end of the term of agreement that the process in law was brought. Two sanitary engineers who examined the house proved it was unfitted for human habitation, and a medical man said the child of the occupier died after four days' illness from a severe type of scarlet fever, the virulence of which was intensified by the presence of sewer gas. All the members of the household (except the occupier himself) had been affected with sore-throat, a condition often produced by sewer gas. The Recorder said it was plain from the evidence that the premises were not in a sanitary condition, but if a person took premises he took them as they stood. This was not like the case of a furnished house. If it was a furnished house that would be an implied covenant that they were fit for habitation and fit for the purpose for which they were let; but if a person took a house he did so with his eyes open, and if it was not in a sanitary condition it was for those who took the house to examine it. The occupier became bound to put the house if defective in a sanitary condition at his own expense. Neither the landlord nor agent was legally bound to put the house into a sanitary condition.

Hospital Saturday in Cork.

The annual collection in aid of the Cork hospitals took place last Saturday. There were several prophets of evil who foretold that it would be useless to hold it this year as such a large sum had been recently subscribed for the hospitals in connexion with the record reign celebration. However, it is gratifying to learn that the street collections were entirely successful and fell short by only a few shillings of what was realised last year. The sums collected in several large business concerns have not yet been handed in, but it is believed that the total amount will reflect credit on all concerned.

Appointment of Professor of Practice of Medicine in the Queen's College, Cork.

Dr. William Edward Ashley Cummins has been appointed by Royal warrant Professor of the Practice of Medicine in the Queen's College, Cork, in succession to the late Professor Edward Townsend. Dr. Cummins was a distinguished *alumnus* of the Cork College, and is a gold medalist of the Queen's University, where he graduated in the year 1879 with honours. He has been a member of the staff of the Cork Women and Children's Hospital for a number of years, and is also one of the physicians of the Cork Union Hospital.

Sept. 28th.

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PARIS.

(FROM OUR OWN CORRESPONDENT.)

Charge Against a Medical Man.

A RECENT incident connected with a medical man is causing great excitement in Paris at the present moment. A young practitioner, by name Laporte, thirty-three years of age, who had been living for a short time in a working-class quarter of Paris, entered his name with the police commissary as a *médecin de nuit*. Some days ago he was called at 3 A.M. by a policeman to attend a woman in labour, as the midwife in attendance was unable to deliver her and had consequently applied at the police station for a *médecin de nuit*. Dr. Laporte found himself confronted with a difficult case. The woman had had five previous confinements, and upon each occasion there was some complication, so that forceps or version had been employed. Dr. Laporte put on forceps, but could not deliver the head, which was very large. He then informed the husband that craniotomy would be necessary to save the mother's life. Having obtained his consent, he sent for some chloroform and put the patient under its influence with the aid of the midwife, but being without the necessary instruments he broke up the head with such as he had at hand—namely, a chisel and a hammer. The patient was safely delivered, and when day broke the midwife took her to the hospital, where two days afterwards she died. The hospital medical officer refused permission for the burial and this brought about the intervention of the police commissary, and the husband made a complaint to the authorities, accusing Dr. Laporte of having caused his wife's death. The judge cross-examined the practitioner, who gave a simple recital of the facts and declared that in view of the urgency of the case he had used such simple instruments as he found ready to his hand, quoting as authorities the example of Pajot and other accoucheurs of the old school. The judge upon this caused him to be arrested and imprisoned. This caused a great sensation among the medical men of Paris, for an accusation of homicide by imprudence never carries with it the right of arrest. A post-mortem examination was made of the body of the woman, and there were found sundry perforations into the rectum and the uterus. For two days the daily press was full of articles declaiming against the greediness of medical men and their negligence in not providing themselves with the necessary instruments. Afterwards, however, upon the inquiry being resumed it was discovered that the unfortunate Laporte was absolutely penniless, that he had entered into practice four years before as auxiliary surgeon to a shipping company, that he then tried to practise in a rich neighbourhood without, however, having any patients, then he moved into a more modest quarter and, still meeting with no success, when his money came to an end he moved into the working-class district of the Charonne, where he had been for fifteen days. On the evening of his arrest he had had no dinner, and there were only 75 centimes in his pocket. On the police searching his house there was found a file of a private journal, which was handed over to the journalists in accordance with the usual custom, and it was then found that the unfortunate man had fought for two years against poverty and, utterly broken down by the misfortunes so common at the present day among members of the medical profession, such as medical aid societies, bad debts, and having to give medicine for nothing, he entered his name at the police-station so as to get the 10 francs which are guaranteed for every visit made at the demand of the police by a *médecin du nuit*. Called out at the request of the midwife, he had done his best, and he had even proposed to the husband to remove the woman at once to the hospital, which offer, however, was refused; besides the head was already at the vulva, and moving her would not have been without danger. Public opinion then veered completely round, and all the papers began to pity the unfortunate medical man, while letters from various accoucheurs were published, declaring that considering the high price of the instruments necessary for craniotomy it was impossible for a medical man in such a poor quarter to possess them. The Association of Medical Men of the Seine appeared as a deputation before the judge, but without result, and the judge even used the strange argument that he considered that, as Dr. Laporte had no means, the best thing to do was to send him to prison. A committee offered to give bail for him, but the judge refused. So the affair stands, and it is the one topic of conversation, not only among the medical men of France, but among the Paris public, who have already commenced to side with the unfortunate medical man as against the judge.

Gunshot Wounds of the Abdomen.

M. Chauvel read a paper at the Academy of Medicine, following on some observations made by M. Caillet, a military surgeon, in which he contended that the surgeon, when confronted with gunshot wounds penetrating the abdomen ought immediately to perform laparotomy and look out for the various perforations of the viscera and see if he can close them, without waiting till peritonitis arises to force his hand. It is now known that projectiles of very small calibre cut holes in the muscular tissues so small that very often they cannot be traced, so that frequently a probe does not reveal their presence. This method of diagnosis, while it is of great value when it gives a positive result, has not, when it fails to do this, an equal importance. Despite various statistics which are opposed to hasty intervention, M. Chauvel declares that in penetrating wounds of the abdomen made by knife or sword, as well as by revolver bullets, immediate laparotomy is generally indicated.

The Pathogeny of Erratic Eruption of Wisdom Teeth.

M. Moty read a communication before the Academy of Medicine stating that in wisdom teeth extracted on account of erratic eruption there was always found at the level of their fangs a soft material, composed of epithelial cells, which could be washed out by a stream of water. M. Moty concludes that the various accidents in the eruption of the wisdom teeth are due to the inclusion of aberrant epithelial masses which represent rudimentary wisdom teeth. The term, "vicious evolution," which is habitually applied to this class of accidents is erroneous, and ought to be replaced by that of "supplementary dermoid of the wisdom teeth."

Intestinal Parasites in China.

At the same meeting of the Academy, M. Laveran read a paper upon a communication by M. Matignon, dealing with intestinal parasites. Oxyurides are very common in Pekin, as many as 95 per cent. of the children being affected by them, and ascarides are no less frequent in adults. Out of thirty patients who were treated with santonin, twenty-eight were found to harbour ascarides. These latter parasites arise from drinking water and from the use of vegetables which are frequently consumed raw, and which grow in fields where the Chinese practise sewage irrigation. On the other hand, among the Europeans who live in Pekin ascarides are very rare, because foreign residents mostly drink pure water and almost always cook the vegetables which they consume. M. Matignon reported two cases of suffocation in children owing to the presence of ascarides in the pharynx. Tapeworm was found in 20 per cent. of the Europeans who live in Pekin; among the Chinese it is very rare. Of twenty-five Chinamen taken at random and treated with "pelletierine" not one was found to suffer from tænia.

Sept. 29th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Fate of Dr. Maurizio Sacchi.

THE new issue of the "Bollettino della Società Geografica Italiana" has a deep, not to say dramatic, interest for the narrative it gives of the Bottego expedition and the light it throws on the fate of Dr. Maurizio Sacchi. There is now no doubt that the able and accomplished young medical explorer came by his death in the manner already described in THE LANCET.[1] It is a satisfaction to know that nothing was left untried to get authentic news of him and, if this gave reasonable hope of his still being alive, to rescue and bring him to a place of safety. The Italian Geographical Society in concert with the Government spared no effort to track him, and the instant it became known that he had parted company with the main body in October, 1896, the

[1] THE LANCET, Sept. 4th, p. 625.

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Italian Ambassador in London and Italian Consul at Zanzibar made it their business to interest the British Government and the English resident at Zanzibar in pushing inquiries as to his movements through the medium of couriers and of the caravans traversing those regions. All this, and more, was done by the representatives of the two powers; and the upshot of the quest makes it clear that Dr. Sacchi, after the date mentioned, found his escort of twenty-five Ascars reduced by disease and death to five, and that the men of the Amhara tribe set upon the little band and killed the doctor, appropriating the ivory and other more precious material he had himself accumulated for his scientific report. The loss of this latter is to be deplored, not merely for its own sake, but for the evidence it would have afforded the contemporary world of how brave an explorer and how bright a nature-student has perished in young Maurizio Sacchi.

Honours to British Science.

Our "Accademia dei Lincei" (literally "Academy of the Lynx-eyed," the Italian equivalent to the London Royal Society), at its sitting on the 17th inst. elected a number of Fellows in the department of physical, mathematical, and natural science. Among these was the Cambridge Professor of Astronomy, Mr. G. H. Darwin, F.R.S., of Trinity. Again, in the moral, historical, and philological department there were two Fellows of English nationality elected: Dr. Thomas Hodgkin, D.C.L., author of "Italy and Her Invaders"; and the Right Hon. G. J. Goschen, M.P., First Lord of the Admiralty.

The Foundling Hospital Scandals: Official Report.

"The incredible scandals" given to the light in connexion with the Neapolitan Brefotrofio dell' Annunziata and with some at least of the foundling hospitals in the Venetian province, led, as THE LANCET announced, to an inquiry on the part of the Government into these institutions. The first of the reports issued under this mandate has just appeared, and it deals with the Brefotrofio of Padua. Its author is Dr. Natali, provincial medical officer. The document is a harrowing one, and I can well understand the "vivissima impressione" which, according to the *Veneto*, its publication has produced. The "accommodation" of the Paduan hospital Dr. Natali found to be worse than defective in every requirement of hygiene—"assolutamente inadatta allo scopo," and calling loudly for "pronti ed energici provvedimenti." One most reprehensible rule has hitherto, it seems, been rigorously enforced in the institution: "the nurses are never allowed to go beyond its walls, except in cases of urgent necessity and after special 'leave of absence' is obtained." Even under this latter regulation they must always be accompanied by a "custode." They are not even permitted to have an outing or an airing in the garden or shrubbery belonging to the Brefotrofio! The effect of this imprisonment on their health and on that of the wretched "esposti" (foundlings) to whom, three or four in number per diem, they give the breast, may be imagined. Nor does the artificial "allattamento" (milk-feeding) escape Dr. Natali's severest censure. Its results, he says, are "disastrosi." In the quinquennium 1892-96 there were 341 infants in the Paduan Brefotrofio "nourished" artificially, and of these there died 325—in other words, 94·20 per cent. As for the medical surveillance of the Brefotrofio it was "discharged" by one physician only, at a salary of 600 lire (£24) a year! For this "stipendio"—less than 10*s.* a week paid in depreciated Italian paper!—he had also on his hands the "servizio del carcere giudiziario" (the prison-service attached to the law-courts). Dr. Natali's revelations, startling though they be, are reckoned but an "antepasto" (whet) to the "banquet of horrors" shortly to be spread before the world by the report on the Neapolitan Brefotrofio dell' Annunziata.

Typhoid Fever in Milan—"A Conspiracy of Silence."

On the 14th inst. there died in Milan the eminent naval engineer, the Cavaliere Giuseppe Melisurgo, member of a noble Neapolitan family which has given more than one distinguished engineer, civil and military, to the public service. His funeral was an imposing one, attended by the *élite* of Milan, socially and scientifically, and made memorable by *oraisons funèbres* of exceptional power. All this is learned from the Milanese journals; but what they carefully leave unnoticed is the fact that the Cavaliere Melisurgo was one of many victims to the epidemic of typhoid fever that has for weeks past been raging in the Lombard capital; that he was (for purposes of isolation, I presume) an inmate of the Ospedale Maggiore, already full to repletion of similar cases; and that after treatment there he died. Since the warning given by THE LANCET (Sept. 4th, p. 625) against sojourning in Milan, owing to the severity of the epidemic of typhoid fever long prevalent, the Milanese journals have religiously kept silence as to the visitation in question, and for anything that the *Corriere della Sera* or the *Secolo*, for example, have to say of it, the city might have an absolutely clean bill of health. Now this, I submit, is dealing unfairly with the travelling world, for which Milan is a great *entrepôt*. I remember, shortly after one of the severe cholera epidemics which have of late years visited Naples, that, at a meeting of its Municipio, the then Syndic was thanked by his brother councillors for having kept dark the presence of the disease and so retained the usual number of foreign visitors who, if made cognisant of the situation, would have stayed away! Such unworthy tactics are hardly to be expected in a city so enlightened, so enterprising, so wealthy, so eminently representative of all that is most estimable in the young Italian kingdom as the Lombard capital. Imagine the *Times* in London, or the *Temps* in Paris, or the *Nord-Deutsche Allgemeine Zeitung* in Berlin, suppressing their reports of the daily progress of an epidemic so as not to scare the outside world away. Meanwhile it is a duty which THE LANCET owes to its readers to emphasise the fact that Milan is still the haunt of typhoid fever; that her water-supply, as to purity and quantity, has still to be placed under sound hygienic regulation; and that other cities along the well-known Brindisi route are quite unsafe for even the temporary sojourner owing to their want of insanitation and the inevitable results. Bologna, for example, is by no means exempt from the visitation so severely felt in Milan—indeed, the Bolognese province is at present suffering from typhoid fever in an aggravated form. "Molti e gravi casi di tifo" are reported from Minerbio, a local commune, and a medical commissioner is now on the spot inquiring into the origin of the outbreak and suggesting measures for arresting its diffusion.

Sept. 25th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Yellow Fever in New Orleans.

YELLOW FEVER, which has been very prevalent during the summer in some of the cities of the Central American States as well as in Havana, Cuba, has finally made its appearance at Ocean Springs, a watering-place on Mississippi Sound. It is believed to have reached this locality by the way of Ship Island, a station in the Gulf to which vessels resort for disinfection. Fever was at first attributed to dengue, and upwards of one hundred cases had appeared before the real cause was suspected. Several cases went from Ocean Springs to other localities, and thus spread the fever. One case in New Orleans was followed by several others. The coöperation of the local boards of health is now supplemented and greatly aided by the Marine Hospital Service. It is believed that the fever will be controlled by the combined influences of these sanitary authorities.

The Leper Island of Molokai.

Recent reports from the leper colony on the Island of Molokai furnish some interesting facts. It is the fifth in size of the Sandwich Island group, and was set apart by the Government of Hawaii for the isolation of lepers found among the population. The island contains 200,000 acres. Its surface is variegated by valleys and hills, the latter rising sometimes to the height of 2500 feet. The lepers do not occupy all the island, but only a grassy plain, ten miles in length, and varying from one to two miles in width on the north side of the island, and yet separated wholly from the rest of the island and its population by a precipice fully a thousand feet high, which can be scaled at only one point, and this is securely guarded. Despite their freedom from taxation and rent, their ample supplies of food and clothing, their abundant herds of cattle and horses, and their fertile fields which require so little labour, the lepers are virtually life prisoners, shut in by the ocean on one side and by the impassable mountain on the other. Most of the lepers are natives, but some foreigners are found among the colonists, and all who once come to this part of

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Molokai, save to bring supplies or to inspect as the board of health twice each year, do so with the expectation of never returning. At a cost of some $10,000 per month the Hawaiian Government maintains this open-air leper hospital in order to perfectly quarantine, and thus finally stamp out, leprosy among the Sandwich Islanders. Vigilance is used to separate anyone who is suspected until it is definitely known whether or not he is a victim of the disease, and if so he is promptly exiled to the island. Children who are born of parents who are lepers, after passing a given age without showing any signs of the disease, are removed from Molokai and kept in confinement for a certain number of years so that they may neither contract the disease nor be the means of spreading it; then if found "clean" by the board of health they are permitted to go anywhere. Such children are educated at the expense of the Government. Thus, after thirty years the Government has the satisfaction of believing that effectual means have been devised for the care of unfortunate lepers in the most humane manner, while attempting to suppress the disease which was so threatening to the population and fair name of the Hawaiian Islands.

Immigration Figures for 1897.

The Immigration League publishes the following facts. The total immigration for the year 1897 was 230,832, being a decrease in 1897 of 112,435 as compared with 1896. The total number of illiterate in 1897 was 44,580, by far the largest percentage being from Austria, Hungary, Italy, Germany, and Scandinavia. The fact that immigration, which was 1·3 larger in 1895, has fallen in 1897 below that of 1895 is another illustration of the law that the number of immigrants depends upon the degree of industrial activity in this country. And this leads to two important conclusions: first, that immigration will increase again rapidly as business activity increases; and, second, that the present is the time when the immigration laws can be amended with the least hardship to immigrants and the least disturbance to the immigration service. In regard to European immigration in 1897 it may be noted that while the proportion of the total immigration from south-eastern Europe has not diminished, the proportion from north-western Europe, which was 52 per cent. in 1895 and 39 per cent. in 1896, is only 38 per cent. this year—a steady decline. Of immigrants from particular countries the Swiss, Scotch, and Portuguese have this year fallen below the number of 2000, while the Poles have increased again above that number. The proportion debarred and returned is steadily diminishing, having been 1 per cent. in 1896, and being 0·8 per cent. this year.

Establishing a Standard for Cream.

The official journal of the milk trade states that during 1896 there were received in New York city nine million quarts of cream—a daily average of nearly 25,000 quarts—and 320,000,000 quarts of milk. Cream comes to the city either in forty-quart tin cans or in glass bottles. According to its method of manufacture it is divided into two classes: gravity, or hand-skimmed, and machine or separator cream. The proportion of machine cream to the gravity is about ten to one. About one-half of the cream supply of New York is sold to families, the other half is sold to ice-cream factories, bakers, and confectioners. The gravity cream is largely taken by the ice-cream maker, restaurants, and hotels. Its fat contents varies, although the great bulk of it ranges from 12 to 16 per cent. The machine cream is separated from the milk by the use of some one of the several centrifugal separators. Nearly all the cream served to families is separator cream, and though brought to the city in forty-quart cans it is put into pint, half-pint, and quart bottles before delivery. The bottling process is now under the regulations of the Health Department, and must be done in such manner as to prevent contamination from dust or by other impurities. Most cream delivered in New York is at least seventy-two hours old before it reaches the city. Though the fat in the cream varies greatly there is no standard test as yet applied. The exact composition of the cream or creams is usually unknown both to the dealer or the purchaser. Every dealer knows practically how good a cream must be in appearance for his customers and secures from a wholesale dealer cream having about that appearance. Whatever the character of that cream the retail price at the milk stores is nearly the same, being about five times as much as milk. The sale of cream is absolutely without control or supervision. Anything passes as cream which the consumer is willing to accept, whether it contains 10, 15, 20, or 25 per cent. of fat. It is now proposed to establish a standard by which to determine the different qualities of cream based on the fat contents, and to pass an ordinance regulating the sale of cream accordingly.

Cruelty to Convicts.

It has been a practice in the State of Georgia of leasing convicts to private parties. The charge of great cruelty has frequently been made against those employing convicts. It has been found that the rate of mortality in private camps is double that in public camps. A recent investigation confirms these reports. In one camp thirty negroes and one white convict slept chained together in a room 15 ft. by 17 ft. with the window nailed up. In another camp forty-six negroes and fifteen whites slept in a room 19 ft. square and less than 8 ft. high. The Governor of the State contemplates pardoning all the convicts in private camps as the only way in which he can rescue them before the expiration of their terms.

Sept. 18th.

Obituary.

EDWARD MEACHAM, M.R.C.S. ENG., L.S.A.

MR. EDWARD MEACHAM, a medical man well-known and respected in Manchester, died at his house in Red Bank on the 18th inst. His career was rather remarkable. He was born in London in 1824 and went to Manchester in 1846, where he was appointed labour master for the Chorlton Union. For many years he was occupied in missionary and philanthropic work in the poorest and most squalid districts of Manchester, and resolved to study medicine in order to augment his means of usefulness to the poor. He threw himself into this new task with characteristic earnestness and zeal, undeterred by the fact that the days of early manhood were passed. He became a Member of the Royal College of Surgeons of England in 1857 and Licentiate of the Society of Apothecaries in 1862, and for thirty years was Poor-law medical officer of the St. George's district. Nearly thirty years ago he established the Manchester Medical Mission, of which he was superintendent. Living among the poor and for the poor, his life may be said to have been spent in their service. He was not a strong man, but he showed much energy in, and great devotion to, his work. Of comparatively humble origin, traces of which he retained, and with few personal wants, a very moderate income sufficed him, and he worked for others, not seeking publicity. He was a "total abstainer," and no doubt found his efforts in aid of temperance in a district like Red Bank and Angel Meadow more impressive from his own example. He was a member of the Manchester Medical Society and the Manchester Medico-Ethical Association, and was formerly for a short time surgeon of the General Hospital for Sick Children. He was sincerely respected by his medical brethren. A pathetic addition to the story is that his wife, who had always sympathised with him in his work, died four days after her husband.

H. H. J. STERLING, M.R.C.S. ENG., L.S.A., R.N.

MR. STERLING was educated at the Royal Naval School, New Cross, and afterwards became a pupil of the late Dr. Jones, a physician to the Metropolitan Free Hospital. Mr. Sterling matriculated at the London University with honours and studied medicine at University College. After passing College and Hall he entered the Royal Navy in 1860 as assistant surgeon. He served on H.M.S. *Adventure* and *Hibernia*. A few years after he was invalided from the service and retired on a pension. Mr. Sterling's state of health prevented him from undertaking the arduous duties of active private practice, and he lived a quiet, retired, and studious life. He died on Sept. 11th, aged sixty years.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men have been announced:—Dr. Rudolf Berlin, Professor of Ophthalmology in Rostock and Rector of the University, died at Linthal, in Switzerland, on Sept. 12th, at the age of

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sixty-four years. He was in early life assistant to Arnold Pagenstecher and for a time also in the surgical clinic in Tübingen. He was afterwards appointed Professor of Comparative Ophthalmology at the Veterinary School in Stuttgart. In 1890 he was appointed to the chair in Rostock in succession to Professor von Zehender. Numerous papers on ophthalmological subjects have appeared from his pen.—Dr. J. Brasseur, formerly connected with the *Gazette Médicale* of Liége, and President of the Liége Medical Union.

Medical News.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—At the College of Medicine, Newcastle-upon-Tyne, in the third examination for the degree of Bachelor of Medicine, the following candidates have satisfied the examiners:—

Second-class Honours.—Claudia Anita Prout Rowse, London School of Medicine for Women, and Francis Pope, Mason College, Birmingham.

Pass List.—Wilfred Frank Burn, Henry Coxon Coxon, and Leopold Stanley Davison, College of Medicine, Newcastle-upon-Tyne; Selina Fitzherbert Fox, London School of Medicine for Women; Edward Gofton, William John Harrison, James Andrew Hartigan, and Lawrence Fielder Hemmans, College of Medicine, Newcastle-upon-Tyne; Herbert George Harris, St. Bartholomew's Hospital; John Tyrer Johnson, College of Medicine, Newcastle-upon-Tyne; Margaret Joyce, London School of Medicine for Women; Ralph Albert Rogers Lankester, University College, London; Robert Fletcher Moorshead, University College, Bristol; Robert Atkinson Morland, Guy Broughan Picton, and Norcliffe Roberts, College of Medicine, Newcastle-upon-Tyne; Harold Robert Dacre Spitta, St. George's Hospital, and Carl Wahlgren von Bergen, College of Medicine, Newcastle-upon-Tyne.

FOREIGN UNIVERSITY INTELLIGENCE.—*Jena:* Dr. Ferdinand Gumprecht has been appointed Extraordinary Professor of Forensic Medicine.—*Giessen:* The University Medical Museum has received a valuable collection of skulls from Dr. von Hölder, of Stuttgart.—*Tübingen:* Dr. Winternitz, *privat-docent* of Midwifery and Gynæcology, has been granted the title of Professor.—*Vienna:* Dr. Haberda has for the present taken charge of the Forensic Medicine Institute, in place of the late Professor E. von Hofmann.

FOOTBALL CASUALTIES.—On Saturday last the following accidents occurred. In a match, Ardsley Parish against Barnsley Reserve, the Barnsley goal-keeper fractured his leg.—A young man, aged twenty-five years, while playing at Bolling Hall, Bradford, fractured his ankle.—At Farnham during a match a player of the Farnham club fractured his left ankle.—At Warwick a young man, playing for Warwick Victoria's Reserves against Coventry St. George's, broke his leg, and a player (right wing of the Warwick United) fractured his humerus.—In the course of a match played on Durdham Down, Clifton, between Redland Grove College and Westbury Park, a member of the former team, aged fifteen years, was struck on the side of the head with the ball. He continued for a short time to take part in the game, when he complained of illness and retired. Death occurred some few hours later. At the inquest held on Sept. 27th the medical attendant stated that he was of opinion that an artery of the brain had been partially ruptured.

LITERARY INTELLIGENCE.—The October list of the Religious Tract Society contains the names of several books of unusual interest. "Pictures of Southern China," from the pen of the Rev. James Macgowan, of Amoy, sketches the prominent features of daily life in Shanghai, Foochow, Kushan, Amoy, Swatow, Hong Kong, and Canton. "Old Samoa; or, Flotsam and Jetsam from the Pacific Ocean," is a book possessing considerable ethnological value. It is written by the Rev. J. B. Stair, who spent the years 1838-1845 in Samoa. "Philip Melanchthon," by the late Rev. George Wilson, M.A., is a sketch of the life and character and influence of the great Reformation theologian. Its appearance this year is a timely recognition of the fact that four centuries have passed away since the birth of the great friend of Luther. On Oct. 18th the society will publish a work from the pen of the Bishop of London. It is entitled "The Story of Some English Shires," and consists of seventeen chapters, each dealing with a separate county. The bishop's aim has been to produce not merely a series of historical sketches, but he has attempted to show that "places have characters of their own as much as men."

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—At a meeting of the council of this College, held at Cardiff on Sept. 24th, Mr. H. Spencer Harrison was appointed Demonstrator and Assistant Lecturer in Biology for a period of three years.

MEDICAL MAGISTRATES.—Mr. R. Smith, L.R.C.P., L.R.C.S., F.R.C.S. Edin., and Mr. Caleb Joyce, M.B. Melb., have been appointed Justices of the Peace for the districts of Carnarvon and Beaconsfield, Tasmania, respectively.

MEASLES AT ST. ASAPH.—The National and Roman Catholic schools at St. Asaph were closed on Sept. 20th owing to an epidemic of measles. The schools at Bagillt and Greenfield have also been closed through the same cause. A conference of local authorities is to be held at Flint to consider the subject of providing an isolation hospital for the northern part of the county.

PAUPERS' JAM AT BEDWELLTY.—At the last meeting of the Bedwellty board of guardians attention was drawn to an entry made in the report-book by the medical officer that the jam supplied to the inmates of the workhouse was very inferior. The chairman remarked that this was not to be wondered at considering that "the mixture" cost only 2½*d.* per pound. The question was eventually referred to a committee.

PRESENTATIONS TO MEDICAL MEN.—Mr. J. M. Jones, L.R.C.P. Edin., L.F.P.S. Glasg., medical officer to the Chirk Castle Lodge of Oddfellows, has been the recipient of a handsome mahogany bookcase from the members of the club as a testimony of appreciation of his services.—Mr. John F. Wilkinson, M.B., Ch.B. Melb., Australia, on his leaving Bright, Victoria, after a residence of ten years, was entertained at a social meeting and presented with a purse of sovereigns by the residents of the district.

VACCINATION FEES.—At the meeting of the St. Thomas's (Exeter) board of guardians, held on Sept. 24th, a letter was read from Mr. J. D Shapland, M.R.C.S. Eng., L.S.A., public vaccinator for Exmouth, in reference to vaccination fees claimed by him. The clerk to the guardians said that the fees were for work done by Mr. Shapland's son, who was not authorised to act as deputy; the guardians could not, therefore, he added, legally pay the money, but the Local Government Board had, however, agreed to sanction the payment. After some discussion it was decided that the amount should be paid, subject to the sanction of the Local Government Board.

MEMORIAL TO A MEDICAL MAN.—On the 24th ult., at the Children's Hospital, Western Bank, Sheffield, Mrs. Cleaver formally presented to the institution a portrait of her late husband, Dr. Cleaver, who in his lifetime took great interest in the work of the hospital. In October last year the Lady Mayoress opened the new wing, part of the cost of the erection of which was defrayed by the Cleaver Memorial Fund—a fund formed to place in the hospital some permanent token of the late Dr. Cleaver's work. The amount realised was nearly £700. It will be an interesting connecting link between the early days of the institution and the future.

POISONING BY MORPHIA.—On Sept. 21st an inquest was held in Bristol upon the body of a sailor, aged twenty-nine years, who had died from the effects of morphia-poisoning. The evidence showed that on Sept. 18th the deceased was intoxicated, and his brother, who was on affectionate terms with him, wishing to quiet him, gave him nine grains of morphia in some beer, being under the impression that by administering the morphia with the beer "its strength would be diluted." The deceased appeared to have taken the morphia about 10 P.M., and about midnight a medical man was sent for, but in spite of every effort being used death occurred at 7 A.M. on Sept. 19th. The deceased's brother had taken the morphia from the surgery of a veterinary surgeon where he was employed as a servant. The jury returned a verdict of manslaughter.

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NATIONAL REGISTRATION OF PLUMBERS.—At the Annual Congress of the Scottish Councils held at Perth on Sept. 24th Dr. Farquharson, M.P., was the chief speaker. He contended that the Plumbers' Registration Bill, so far from creating a monopoly, would tend to raise the status of plumbers. Professor Hay, medical officer of health, Aberdeen, likewise spoke in favour of the measure.

THE CINEMATOGRAPH PRIZE FIGHT AT THE AQUARIUM.—Those who believe that in America alone are to be found the more brutal pastimes of undegenerate England in the period conveniently covered by the Greville Memoirs cannot do better than visit the latest exhibition of the cinematograph at the Westminster Aquarium. On a series of films two miles in length is unrolled the great fight between Fitzsimmons and Corbett. As a performance which had the added glamour of illegality the contest is distinctly disappointing. To the uninitiated prize-fighting seems, if not so safe a pastime as cricket, far less dangerous than football, and the most neurotic journalist could describe it without a quiver of his pen. Messrs. Fitzsimmons and Corbett are not the bruisers of caricature and tradition, and their figures suggest the Apollo Belvidere rather than the Farnese Hercules, while the etiquette of the ring is as stringent as at a *partie* of piquet. As it is the shadow and not the substance we are asked to visit we can only admit that the Aquarium has secured one of the most wonderful feats of which the new entrancing toy is capable. The illusion of movement is far more perfect than it appeared a few months ago; quick action no longer jerks. Success has not been achieved in getting rid of the unpleasant noise of the instrument or in steadying the whole image, so the spectator has the feeling of witnessing the scene from a jolting railway carriage. The improvement, however, is none the less marked, and to the Aquarium belongs the credit of proving that cinematography is no longer in its infancy.

VITAL STATISTICS OF SOUTH AUSTRALIA.—The annual report of the Registrar-General of births, deaths, and marriages in South Australia for the year 1896 shows that on Dec. 31st, 1896, the estimated population of the province, exclusive of the inhabitants of the Northern Territory and of aborigines, was 355,286—viz., 182,185 males and 173 101 females. The births registered in 1896 numbered 10,012, being fewer by 525 than those recorded in the previous year. Of the total births registered 5085 were male births and 4927 female, the proportion of the former to 100 of the latter being 103·21. The birth-rate per 1000 of the mean population was 28·46, against 30·23 in 1895. The births entered in 1896 as illegitimate numbered 346 (173 males and 173 females), against 330 in the previous year. The percentage of illegitimate births to the total births registered during the year was 3·46, which compares with 3·13 in 1895, and is the highest rate since 1881. The deaths registered in 1896 numbered 4038, being more by 117 than those of the previous year. The deaths of males were 2121 and of females 1917, the proportion of the former to 100 of the latter being 110·64. The death-rate per 1000 of the mean population was 11·48, against 11·25 in the previous year; in every one of the twelve years 1885–96 the death-rate was low. The deaths assigned to "miasmatic diseases" numbered 195, as follows: Scarlet fever, 4; influenza, 59; whooping-cough, 17; diphtheria, 21; simple or ill-defined fever, 1; and enteric fever, 93. "Diarrhœal diseases" included 10 deaths from simple cholera and 244 from "diarrhœa, dysentery." Under "septic diseases" there were entered 29 deaths from erysipelas, 22 from "pyæmia, septicæmia," and 48 from puerperal fever. There was no death from small-pox or intermittent fever. Arranged in order of fatality the causes of death in persons above five years of age stand as follows, the first being the highest: old age, 317; phthisis, 304; diseases of the circulatory system (chiefly of the heart) not separately classed, 248; cancer, malignant disease, 185; pneumonia, 147; and apoplexy, 103. Of those who succumbed to "old age" none were under sixty years and 14 were ninety-five years and upwards. The marriages registered in 1896 numbered 2182, being more by 135 than those of the previous year, and being the highest number recorded in any year since 1891. The marriage-rate (that is, the rate of marriages, not of persons married) per 1000 of the mean population was 6·20, against 5 88 in 1895. The estimated population of the Northern Territory (exclusive of aborigines) consisted on Dec. 31st, 1896, of 4514 males and 420 females, among whom during the year 1896 there were 43 deaths of males, 2 deaths of females, 36 births, and 1 marriage.

BOOKS, ETC., RECEIVED.

BIGGS AND CO., Salisbury-court, Fleet-street, London.
First Principles of Electricity and Magnetism. By C. H. W. Biggs. Illustrated. Price 3s. 6d.

BLACK, A. AND C., Soho-square, London.
The Nurses' Handbook of Cookery. By E. M. Worsnop, assisted by M. C. Blair. 1897. Price 1s. 6d.

CHURCHILL, J. AND A., Great Marlborough-street, London, W.
Psilosis or "Sprue": its Nature and Treatment. By Geo. Thin, M.D. Second Edition. 1897.
Elements of Human Physiology. By Ernest H. Starling, M.D. Lond., F.R.C.P. Third Edition. 1897. Price 7s. 6d.

HEADLEY BROTHERS, Bishopsgate Without, London, E.C.
The Transactions of the Hunterian Society, 1896-97. Seventy-eighth Session. 1897.

JOHNSTON, W. AND A. K., Edinburgh.
Manual of Gynæcology. By D. Berry Hart, M.D., F.R.C.P., F.R.S.E., and A. H. F. Barbour, M.A., B.Sc., M.D., F.R.C.P., F.R.S.E. Fifth Edition. Illustrated. 1897.

KARGER, S., Berlin, und H. BAUERMEISTER, Glasgow.
Die Geschwülste des Nervensystems. Von Dr. L. Bruns. 1897. Price 12s.
Die Anatomie und Behandlung der Geburtsstörungen, nach Antefixirung des Uterus. Von Dr. W. Rühl. 1897. Price 2s. 3d.
Ueber die Tabes. Von Dr. P. J. Mobus. 1897. Price 3s. 6d.

KEGAN PAUL, TRENCH, TRUBNER AND CO., London.
Memory and its Cultivation. By F. W. Edridge-Green, M.D., F.R.C.S. 1897.

KORNFELD, H., Berlin, N.W.
Die Krankheiten des Ohres. Von Dr. A. Hartmann. 6. Auflage. 1897.

LEWIS, H. K., Gower-street, London, W.C.
Ringworm and Alopecia Areata: Their Pathology, Diagnosis, and Treatment. By H. Alderamith, M.B. Lond., F.R.C.S. Fourth Edition. Illustrated. 1897. Price 10s. 6d.
A Manual of Obstetric Practice. By Professor A. Duhrssen, M.D. Translated and edited from the Sixth Amended and Enlarged Edition. By J. W. Taylor, F.R.C.S., and Fred. Edge, M.D., F.R.C.S. Illustrated. 1897. Price 6s.
Hygiene and Public Health. By L. C. Parkes, M.D. Fifth Edition. Illustrated. 1897. Price 10s. 6d.
The Sanitary Inspector's Handbook. By A. Taylor. Second Edition. Illustrated. 1897. Price 5s.

LONGMANS, GREEN, AND CO., Paternoster-row, London.
Surgical Pathology and Principles. By J. Jackson Clarke, M.B. Lond., F.R.C.S. Illustrated. 1897. Price 10s. 6d.
Lectures on Physiology. First Series. On Animal Electricity. By Augustus D. Waller, M.D., F.R.S. 1897. Price 5s. net.

METHUEN AND CO., Essex-street, Strand, London.
The Benin Massacre. By Captain Alan Boisragon, one of the two survivors. 1897. Price 3s 6d.

NEWNES, GEO., Southampton-street, Strand, London.
The Story of Germ Life, Bacteria. By H. W. Conn. Illustrated. 1897. Price 1s.

UNWIN, T. F., Paternoster-square, London, E.C.
Liza of Lambeth. By W. S. Maugham. 1897. Price 2s. 6d.

SIMPKIN, MARSHALL, HAMILTON, AND KENT, Stationers' Hall-court, London, E.C.
Food Frauds and Foods that Feed. By Chas. Hyatt Woolf. Price 1s.

SOCIÉTÉ D'ÉDITIONS SCIENTIFIQUES, Paris.
Gynécologie Clinique et Opératoire. Par Dr. Schmeltz, Nice. 1897.

SMITH, ELDER, AND CO., Waterloo-place, London, S.W.
Dictionary of National Biography. Edited by Sidney Lee. Vol. LII. Shearman—Smirke. 1897.

SWAN SONNENSCHEIN AND CO., London.
The Mathematical Psychology of Gratry and Boole. By Mary E. Boole. 1897.

WILSON, E., Royal Exchange, London.
The Law of District and Parish Councils, being the Local Government Act, 1894. By J. Lithiby, LL.B. Lond. Second Edition. 1897. Price 15s.

E. Merck's Index, 1897 (E. Merck, Darmstadt).—The Oxygen Treatment for Wounds, Ulcers, Burns, Scalds, Lupus, and Diseases of the Nose, Eye, and Ear, by Geo. Stoker, M.R.C.P., L.R.C.S. Irel., M.R.C.S. (Baillière, Tindall, and Cox, King William-street, Strand, London), 1897; price 2s.—The Insurance Blue Book and Guide for 1897, 1898; twenty-fifth year and publication; prices 2s. and 4s. (Champness and Co., Imperial-buildings, Ludgate-circus, London, E.C.).—Recurrent Gall-stones, Angioma of Spleen, Excision of Cæcum, by John Homans, M.D., Boston, Mass.—Magazines, &c., for October: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Sunday Hours, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, English Illustrated Magazine, Knowledge, and Humanitarian.

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Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAM, B. J., M.B., Ch.M. has been appointed Officer of Health for the North and and West Ridings of Ripon Shire, Victoria, Australia' vice J. Johnston.

COOK, P. R., M.B., Ch.B. Univ. New Zealand, has been appointed a Public Vaccinator for the district of Pelorus, New Zealand.

DAVIES, John Edwd. H., M.R.C.S.Eng., L.R.C.P. L.S.A. Lond., has been appointed Honorary Surgeon to Wrexham Infirmary; also Medical Officer of Health, Northern Division, Wrexham Rural District Council; also Medical Officer to Wrexham Fever Hospital, and Certifying Factory Surgeon, Wrexham District.

DUNCAN, J., M.B., Ch.M. Aberd., has been appointed a Public Vaccinator at Bairnsdale, Victoria, Australia, vice J. C. Morgan.

FISHER, H. H., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer for the No. 2 Sanitary District of the Milton Union.

FISHER, R. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Workhouse, and for the first sanitary district of the Westbury-on-Severn Union.

GOLDIE-SCOT, T., M.B. Edin., has been appointed Assistant Medical Officer to the Warneford Asylum, Oxford.

GOODE, A., M.B., B.S. Adel., has been appointed a Public Vaccinator for the Urban and Suburban District of Norseman, and for the Rural District of Dundas, Western Australia.

HANNIGAN, M. H., M.D., M.Ch. Irel., has been appointed Medical Officer for the seventh and eighth Sanitary Districts of the Stow Union.

HARGREAVES, W. H., L.R.C.P. Lond., M.R.C.S., has been appointed a Public Vaccinator for the district of Akaroa, New Zealand.

HARRIS, L. H. L., M.B., Ch.M. Syd., has been appointed Senior Medical Officer to the Sydney Hospital, New South Wales, vice W. C. McClelland.

HAWKES, J. A., M.B. Melb., has been appointed Officer of Health for Kara Kara Shire, Victoria, Australia, vice J. D. Collier, resigned.

HERRIOT, S., L.R.C.P., L.R.C.S. Edin., has been appointed Health Officer for Bulong, West Australia.

HITCHINGS, R., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Workhouse of the Headington Union.

JOHNSTON, J. C., M.B., Ch.M. Edin., has been appointed Health Officer and Superintendent of the Quarantine Station, Point Nepean, Victoria, Australia.

LAING, J. A., M.B., M.S. Edin., has been appointed a Public Vaccinator for the district of Gisborne, New Zealand.

LANCASTER, L. B., M.B. Syd., has been re-appointed Resident Medical Officer to the Sydney Hospital, New South Wales.

LANE, H. A., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Assistant Medical Officer for the Workhouse of the Chorlton Union.

LONG, WM. J., M.B., Ch.B. Melb., has been appointed an Honorary Medical Officer to the Hospital at Bendigo, Victoria, Australia.

MACDONALD, A., M.D., C. Penn., U.S.A., has been appointed Officer of Health for the Denison and Rosedale Ridings of Rosedale Shire, Victoria, Australia, vice V. E. Browne, resigned.

MARMION, E. J., M.B. Dubl., L.F.P.S. Glasg., has been appointed Medical Officer for the Workhouse of the Milton Union.

MORTON, W. A., M.B., Ch.B. Melb., has been appointed a Public Vaccinator at Outtrim and Jumbunna, Victoria, Australia, vice W. W. Hearne, resigned.

NEAVE, EDWARD F. M., M.B., Ch.B. Edin., has been appointed a Resident Medical Assistant to the Dundee Royal Infirmary.

PEEDLES, F. M., M.B. Melb., has been appointed an Honorary Medical Officer to the Hospital at Bendigo, Victoria, Australia.

PENFOLD, O., M.R.C.S., L.S.A. Lond., has been appointed President of the Local School of Mines, Bendigo, Victoria, Australia, and an Honorary Medical Officer to the Hospital at Bendigo, Victoria.

RENNIE, G. E., M.D. Lond., M.R.C.S., has been appointed Deputy-Coroner for the City of Sydney, New South Wales.

SEYLER, C. A., B.Sc., F.I.C., F.C.S., has been appointed a Public Analyst by the Glamorgan County Council, vice Morgan, deceased.

SHIELDS, A., M.D. Edin., has been appointed a Medical Examiner of Patients in the Metropolitan Lunatic Asylum, Kew, Victoria, Australia.

SIMONS, C. N., L.R.C.S. Irel., L.S.A. Lond., has been appointed Acting Officer of Health for Bright Shire, Victoria, Australia, vice J. F. Wilkinson, resigned.

STEWART, WM., M.D. Edin., has been appointed Medical Officer for the Bacup No. 2 Sanitary District of the Haslingden Union.

THOMPSON, L. G., M.D., Ch.M. Aberd., L.R.C.P., L.R.C.S. Edin., has been appointed a Member of the Hospital Board of Management, Launceston, Tasmania, vice Dr. Hallowes, resigned.

VANCE, N. C. A., M.B., Ch.B. Melb., has been appointed Officer of Health for the East Riding of Melton Shire, Victoria, Australia, vice A. A. Johnston, resigned.

WYNNE, J. G., L.R.C.P., L.R.C.S. Edin., has been appointed an Honorary Medical Officer to the Hospital, Colac, Victoria, Australia.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN.—Out-patient Surgeon. Applications to the Honorary Secretary, Beechenhurst, Selly-hill, Birmingham.

CHELTENHAM GENERAL HOSPITAL.—Resident Surgeon for the Branch Dispensary, unmarried, or if married without family. Salary £180 per annum, with partly furnished house, coal, and gas.

COUNTY ASYLUM, Whittingham, Lancashire.—Assistant Medical Officer, unmarried. Salary £100 per annum, with prospect of increase, together with furnished apartments, board, attendance, and washing.

DUNDEE ROYAL LUNATIC ASYLUM.—Medical Assistant. Salary £100 per annum, with board, lodging, and washing.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians. Also Resident Medical Officer and Assistant Resident Medical Officer. Salary £200 and £50 per annum respectively, both with board and residence.

LONDON THROAT HOSPITAL, Great Portland-street.—House Surgeon, non-resident. Honorarium, £25 per annum.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician and House Surgeon for six months. The House Physician and House Surgeon will each receive a salary at the rate of £40 a year.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, Soho-square, London.—Resident Medical Officer, for six months. Board, residence, laundry, and an honorarium of ten guineas.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Junior House Physician for six months. Salary £15 for that period, with board and residence.

PADDINGTON-GREEN CHILDREN'S HOSPITAL, London, W.—House Physician and House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-road, London, S.E.—Resident Medical Officer, for one year. Salary £70 per annum, with board and residence in the hospital.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—Resident Medical Officer for six months. Salary at the rate of £100 per annum, with furnished apartments, board, and washing.

SUSSEX COUNTY HOSPITAL, Brighton.—Fourth Resident Medical Officer, unmarried. Salary £30 per annum, with board, washing, and residence in the hospital.

THE RETREAT, York.—Junior Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea.—House Physician, for eight months. Honorarium at the rate of £50 per annum, with board and lodging in the hospital. Also House Surgeon for twelve months. Honorarium £50, with board, and lodging in the hospital.

Births, Marriages, and Deaths.

BIRTHS.

CLARK.—On Sept. 25th, at Norton-road, Hove, the wife of A. Desborough Clark, L.R.C.P., &c., Edin., of a daughter.

COATES.—On Sept. 24th, at Ingleside, Whalley Range, Manchester, the wife of William Coates, M.R.C.S., of a son.

HARRIS.—On Sept. 21st, at Holy Innocent's-road, Hornsey, N., the wife of E. Bernard Harris, M.R.C.S., L.R.C.P. Lond., L.S.A., of a son.

POWELL.—On Sept. 22nd, at Glenarm House, Upper Clapton, N.E., the wife of Herbert B. Powell, M.R.C.S., of a son.

ROWELL.—On Sept. 24th, at East Rudham, Norfolk, the wife of Herbert Ellis Rowell, L.R.C.P. Lond., M.R.C.S., of a daughter.

SPILSBURY.—On Sept. 24th, at Hogsthorpe, Lincolnshire, the wife of F. J. Spilsbury, L.R.C.P., of a daughter.

MARRIAGES.

BAKER—BODY.—On Sept. 22nd, at Emmanuel Church, Plymouth, by the Rev. George B. Berry, Herbert Stainer Baker, M.R.C.S., L.R.C.P. Lond., of Rushden, Northampton, younger son of the late George Philip Baker, of Portsmouth, to Minnie, daughter of John Bond and Marina Body, of Plymouth.

CANNOCK—BEER.—On Sept. 22nd, at St. Mary's Church, Balham, Charles Watkyn Cannock, L.F.P.S. Glasg., of Counser Villa, Balham, to Helen (Nellie), younger and only surviving daughter of William Beer, of Bitterne, Balham.

FEATHERSTONE—WILLS.—On Sept. 22nd, at the Parish Church, Chapel-en-le-Frith, Derbyshire, by the Rev. J. P Cort, Vicar of St. Anne's, assisted by the Vicar, the Rev. Dr. Given, and the Rev. W. H. Austwick, of St. Mary's, Higher Crumpsall, George W. Beaumont Featherstone, M.R.C.S. Eng., L.R.C P. Lond., of Chorlton-cum-Hardy, Manchester, eldest son of the late B. Featherstone, Esq., of Wandsworth Common, London, to Mary M. (May) Wills, eldest daughter of Charles J. Wills, Esq., of Bank Hall, Chapel-en-le-Frith.

PERRAM—MACLAINE.—On Sept. 23rd, at St. Mark's Church, Dundela, Belfast, Edward Arthur Perram, M.D., third son of the Rev. George J. Perram, M.A., Holmwood Lodge, Highgate, London, to Violet Frances, younger daughter of George Langtry MacLaine, Wandsworth House, Strandtown, Belfast.

WHEATLEY—THOMPSON.—On Sept. 29th, at All Saints', Upper Norwood, by the Rev. P. B. Power, M.A., formerly Vicar of Worthing, assisted by the Rev. J. Oakley Coles, Vicar of All Saints'; James Wheatley, M.D., son of Charles Wheatley, of Edgerton, Huddersfield, to Mary Elizabeth, only daughter of Charles H. Thompson, of Oaklands, Beulah-hill.

DEATHS.

BROGDEN.—At Lagos, West Coast of Africa, Marie Victoria Brogden formerly of St. Bartholomew's Hospital.

REID.—On Sept. 26th, at Migvie, Bournemouth, Duncan Reid, M.A., M.B., formerly of Aberdeenshire, aged 31 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Sept. 30th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Sept. 24	29 89	S.W.	0·02	101	68	55	56	60	Fine
,, 25	30 18	W.	0·03	104	70	55	53	56	Fine
,, 26	30 24	S.W.	...	98	70	53	60	62	Fine
,, 27	30 27	W.	...	70	64	50	50	51	Foggy
,, 28	30 10	E.	0·06	76	64	50	57	59	Dull
,, 29	29 97	S.E.	1·24	91	71	56	58	58	Foggy
,, 30	29·78	W.	...	72	59	52	52	53	Overcast

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

WARTY NIPPLES.

To the Editors of THE LANCET.

SIRS,—I beg the favour of a small space in THE LANCET to ventilate the above subject, and to ask advice as to the treatment or non-treatment of the condition. I have a patient, a primipara expecting her confinement at the end of October, and the other day she asked me to look at her nipples. I did so, and found the centre of each nipple occupied by a large wart. The top of the wart had died, and I easily pushed it off with my thumb, leaving a cup-shaped ulcer out of which hung long tendrils. A very small part round the edge of each nipple seemed healthy. The patient says that this growth and death of the warts has been going on for a year or two. Like an infant's cord after birth, the growths become black, then a dirty white, and then fall off. Now as my patient is within a month of her confinement, should anything be done in the way of cauterising or otherwise? Again, should the patient be allowed to try to suckle the child? I should welcome any advice on those two points. Though in practice for over twenty years I have come across only one other case of the kind. It occurred in the practice of the late Professor Leishman, of Glasgow, whom some years ago I had the privilege of occasionally assisting. The whole of the left nipple was represented by a huge wart, but as the other nipple was quite healthy, it was decided to do nothing in the matter before the birth.

My patient is very anxious to be able to suckle, so I ask advice as to how her nipples may be put right by the end of October.

I am, Sirs, yours truly,

W. J. COLLYER ADAM, M.B., C.M. Glasg.

Acre Lane, Brixton West, Sept. 22nd, 1897.

Constant Reader (Southsea) has omitted to enclose his name and address.

Mr. F. W. Phipp.—A trace of permanganate of potassium.

ADVERTISING EXTRAORDINARY.

A CORRESPONDENT has sent us from Wolverhampton a very remarkable little pamphlet, one which we should refuse to believe had emanated from a member of the medical profession had it been possible to doubt it. It is entitled "Application to the Officers and Members for the Appointment of Medical Officer to the Great Western Railway Provident Society," and runs as follows:—

GENTLEMEN,—

It is with regret I hear of the resignation of DR. ELLIOT, your present medical officer. Since his successor will doubtless be elected after competition, I have allowed myself to be nominated as a candidate for the post; and in applying tender various reasons why my appointment would be of advantage to the Society.

The position of my surgery is central and near the Low Level Station. My practice is of a private nature, and not overburdened with ordinary club appointments: and being assisted by DR. H. CARTER MACTIER, who is highly qualified, being Bachelor of Medicine, Bachelor in Surgery, Bachelor in Midwifery, and Bachelor of Arts of the University of Dublin, and who has had excellent experience as House Surgeon in a large Dublin Hospital, and until lately was Resident House Surgeon to the Wolverhampton Eye Infirmary. I have appreciated his help in a department which is of great importance to railway employees—sight failure—which for want of skilled advice often leads to loss of position in your Company.

My personal experience before coming to Wolverhampton has been exceptionally and unusually practical and prominent. Successful as a student in obtaining various Honours, Medals, and Prizes, I was elected to the honorary post of House Physician in the Edinburgh Royal Infirmary, a most exclusive and enviable appointment; thereafter going abroad and spending some years in studying under the greatest Professors of the day in the Capitals of Austria, Germany, and in other foreign towns.

Your have on a previous occasion honoured my predecessor DR. BLANCH, with marked evidences of your esteem; and now I hope my efforts as a private practitioner will deserve even greater support. I only regret my knowledge of the election was rather delayed, thus debarring me the honour of addressing you, but I hope that that circumstance will not minimise the number of my supporters.

In the event of my election a branch surgery if required will be placed in a district selected by a majority of the members, also the Telephone may be available; and I promise to further the interests of your society in every possible way.

Vote gentlemen for **ability, efficiency,** and **experience.**

WILLIAM POLSON.

Bachelor of Medicine and Master in Surgery, University of Edinburgh.

Late House Physician, Royal Infirmary, Edinburgh.
Medallist in Medicine, Edinburgh.
First Prizeman in Public Health, Edinburgh.
Prizeman in Medical Jurisprudence, Edinburgh.
Honours in Midwifery.
Honours in Diseases of Women and Children.
Honours in Surgery.
Medical Referee for the Prudential Assurance Co.
,, ,, ,, Pearl ,, ,,
,, ,, ,, Mutual Reserve Fund Assurance Co.
,, ,, ,, Royal Liver ,, ,,
,, ,, ,, Royal London ,, ,,
,, ,, ,, British Workman ,, ,,
,, ,, ,, Pioneer ,, ,,
,, ,, ,, Edinburgh.
Medical Officer to Oddfellows, Caledonian Corks, and Brotherly Societies.

This letter, which was swollen into pamphlet shape by the addition of a photograph of Dr. William Polson in evening dress, cap, gown, and hood, and a cover on which that gentleman's name was printed in large capitals, is really a very extraordinary document to be published by a graduate in medicine, however keen his anxiety to secure an appointment. To our minds it is distinctly degrading for a practitioner to assure a lay audience that he is offering them *ability, efficiency,* and *experience.* Such statements when forming part of the advertisements of tradesmen are taken at their proper value, but it is an innovation for a medical man to employ trade methods with such frankness in the desire to get on, and we do not desire to compliment Dr. Polson on the departure. We recommend him, on the other hand, to beware of assuming publicly the attributes of ability and efficiency, however large his experience.

Dr. William Donovan, of Erdington, asks us to state that he is not the Dr. Donovan mentioned in our annotation last week entitled "Midwives."

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THE MEDICAL STUDENT IN PARIS.

IN our recent Students' Number we published an article on the Cost of Medical Education which attracted the notice of the French press, many papers on the other side of the channel doing us the compliment of commenting upon the information contained in it. Naturally they compared the life of the student in London with that of the Paris student, and pointed out the absence in London of everything which could remotely resemble the famous "quartier Latin." In London there is no Sorbonne and no central college around which the universities and schools with their special *personnel* can cluster. Consequently the students scattered in groups round hospitals situated in widely separated areas are unable to leave their imprint upon any particular district, to hall-mark its cafés, to dictate to its music-halls, or, indeed, to impress themselves at all upon the community. *L'Autorité* concluded by stating that in Paris the life of a student is more costly than in London, while the prospect of early practice in Paris is even less to be envied. For "si des médecins anglais font des visites à un shilling, combien de jeunes docteurs français attendent leurs premiers clients pendant des mois et parfois des années!"

Sentiment.—From our correspondent's account it would seem that the second medical man who saw the child should have surrendered the case to him. But from the same account it is clear that this gentleman was more than usually awkwardly placed. We strongly advise our correspondent not to allow the matter to break his professional friendship with his brother practitioner.

"PEGAMOID."

WE have had brought to our notice a process which claims to render wall-papers, fabrics, &c., waterproof, germ-proof, dust-proof, and stain-proof. The process, which is called pegamoid, and gives its name to the articles thus treated, has been in use for some time, but it does not seem to be generally known, at any rate in England. As it may prove of importance from a sanitary point of view it may be well to direct the attention of our readers to the process. It consists in applying in a liquid form a composition which, after impregnating the fibres or pores of the material treated, solidifies. Ceiling- and wall-papers, as well as imitation leathers—which latter in some cases it is difficult to distinguish from the real article without minute examination—treated by this process can be washed with water and disinfected with strong disinfectants without in any way injuring the surface of the article treated. Even caustic soda seems to have little effect upon it except by boiling, and the only thing which has a deteriorating effect is alcohol. Wine and ordinary spirits, however, may be spilt upon pegamoid, but if washed off within a reasonable time prove unharmful. For upholstering purposes the process may have distinct advantages, and in the case of wall-papers it should prove of great importance, inasmuch as dirt and even ink-stains can be washed off with a wet mop. Wood, iron, and stone work can also be treated by this process in the form of paint. A silver paint which we have tried is washable and untarnishable. The address of the company is 144, Queen Victoria-street, E.C.

R. H.—A pamphlet written jointly by Mr. William Barnard, LL.B., and Mr. G. B. Stocker deals with the transfer of medical practices and allied questions. It is published by Stevens and Sons, 117, Chancery-lane. Mr. Percival Turner also treats of the subject of the purchase and sale of practices in his Guide to the Medical and Dental Professions, published by Baillière, Tindall, and Cox, King William-street, Strand.

Plumbism.—A [Departmental Committee was appointed by the Home Secretary in the spring of 1893 to inquire into the subject of "Industrial Lead Poisoning," and its report was presented to the House of Commons in December. A copy of the report could doubtless be procured from Messrs. Eyre [and Spottiswoode, East Harding-street, Fleet-street, E.C.

"AN URGENT APPEAL."

To the Editors of THE LANCET.

SIRS,—I have received the following subscriptions in addition to the sum already acknowledged in THE LANCET, bringing the total up to £10 19s. 6d.:—J. C., £1 1s.; A. P., 5s. The widow and eight children of the late Mr. Campe desire me to express their sincere gratitude to the members of the profession who have so generously helped them in their trouble, and may I thank you also for so kindly allowing the appeal to be made in THE LANCET.—I am, Sirs, yours faithfully,

WM. ASTLEY COOPER.

36, New-road, Rotherhithe, S.E., Sept. 22nd, 1897.

THE Diplôme d' Honneur has been awarded to "Vinolia" soap at the International Exhibition at Brussels.

THE INFLUENCE OF HEREDITY.

WE take the following passage from an interesting paper, headed "The Transformation of Heredity," which appeared from the pen of Dr. James G. Kiernan in a monthly magazine entitled *Medicine* published at Detroit, U.S.A. Zola would not have dared to imagine such things:—

"To illustrate how much may be gained by careful examination in this particular I shall cite some researches of my own pursued in regard to one family during more than two decades. The family originated in the Eastern States, but has branches south and westward. A farmer lived twenty miles distant from his nearest neighbour, whose only child he married. The daughter had led a lonely life till her courtship at the age of twenty-eight by the farmer, then three years younger. The farmer married her for $200 after having impregnated her. He then found lead on his farm and went to a city. A stock company bought his farm and launched him into the stock market, where he made money, more as cunning tool than adventurer. He became a high-liver, gouty and dyspeptic, and died from gouty kidney at the age of seventy. The couple had five children. The eldest, a son, became a 'Napoleon of Finance,' inherited his father's cunning, and died wealthy within the pale of the law. He married a society woman, the last scion of an old family. The second child, a daughter, was club-footed and early suffered from gouty tophi. She married a society man of old family who had cleft palate. The third child, a daughter, had congenital strabismus. She married a man who was suffering from irregular migraine. The fourth child, a daughter, was normal. She married a thirty-year-old active business man in whom ataxia developed a year after marriage. The fifth child, a son, was ataxic at eighteen. The scions of the 'Napoleon of Finance' and the society woman were an imbecile son, a hysteriac, a female epileptic who had a double uterus, a nymphomaniac, and a society man who wrote verses. The cleft-palated society man and club-footed woman had triplets born dead, and a strabismic migrainous son who, left penniless by his father, married his cousin, the nymphomaniac daughter of the 'Napoleon of Finance,' after being detected in an intrigue with her. The migrainous man and strabismic daughter of the farmer stock-broker had a sexual invert masculine daughter, a daughter subject to periodical epistaxis irrespective of menstruation as well as chorea during childhood, a normal daughter, a deaf-mute phthisical son, a cloacal daughter, an amelisc son, a cyclopic daughter born dead, and a normal son. The sexual invert married the versifier son of the 'Napoleon of Finance.' The progeny of the normal daughter of the farmer stock-broker and the ataxic man were a dead born sarcomatous son, a gouty son with early tophi, twin boys paralysed in infancy, twin girls (normal), a normal son, and a son ataxic at fourteen. The progeny of the nymphomaniac and her strabismic migrainous cousin were a ne'er-do-well, a periodical lunatic, a dipsomaniac daughter (who died of gastric cancer), deformed triplets who died at birth, an epileptic imbecile son, a hermaphrodite, a prostitute, a double monster born dead, a normal daughter, and a paranoiac son. The ne'er-do-well married his epistaxic cousin. The gouty son of the farmer's normal daughter married the hysteric daughter of the 'Napoleon of Finance.' They had a son born with unilateral asymmetry, a prostitute, dead triplets, a male sexual invert, a colour-blind daughter, and a normal son. The colour-blind daughter married a paranoiac grandson of the 'Napoleon of Finance.' The progeny of the sexual invert and the versifier (who were soon divorced) were a periodical nymphomaniac who had some artistic and literary talent, and a son who died of gastric cancer. The scions of the ne'er-do-well and the epistaxic woman were a moral imbecile, a 'bleeder,' a stammering daughter who had uvula deformity, a deaf-mute cryptorchid, dead-born triplets, an infantile paralytic son, and dead-born quadruplets. The progeny of the paranoiac and his colour-blind cousin were an exophthalmic daughter, an epileptic cryptorchid, a cleft-palated imbecile with a cloaca, dead-born quadruplets, an idiot boy, and a 'bleeder.'"

"A CASE OF HEMICHOREA WITH APHASIA."

To the Editors of THE LANCET.

SIRS,—With regard to the treatment of chorea I have seen many drugs used—choral, hyoscyamus, zinc sulphate and salicylate, and veratrine. I myself have never seen arsenic fail, although I have seen these other drugs fail to arrest the movements. We have at present a case of chorea in which salicylates were used for a fortnight without benefit. Recourse to arsenic is having a marked beneficial effect. With regard to the pathology of the disease I can only quote theories, as we are, and are likely to remain, in darkness, and our pathology is merely a suggestive pathology. Certainly the clinical features of the case seem to support embolic origin. Might we ask the question, What is the origin of chorea in cases in which no valvular lesion is present? Mimicry in childhood is a very strongly developed faculty, and why should a child not mimic the movements of chorea? They naturally excite interest, or shall I say curiosity, on the part of the child and might be compared to "habit spasms." Removal of a child to another ward will, we know, check these choreiform movements. I am, Sirs, yours faithfully,

Sept. 27th, 1897. S. J. ROSS.

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THE SANITARY CONDITION OF HIGH WYCOMBE AND WYCOMBE MARSH.

WE have received a communication from the secretary of the High Wycombe Water Company, Limited, in reference to an annotation in THE LANCET of Sept. 18th on the above subject. The secretary, imagining that we were unaware of the existence of the company in question, furnishes us with some particulars in regard to it. The facts, however, related by Dr. Wheaton in his report to the Local Government Board on typhoid fever at High Wycombe were fresh in our minds when we remarked on the necessity for a pure water-supply to the *whole* of High Wycombe. We were aware that Dr. Wheaton had reported that the water-supply was derived "principally from wells," but that the company in question supplied a certain number of houses in the district. Concerning this company's supply, Dr. Wheaton says in his report, dated Aug. 20th, 1895: "A very small number of houses in Wycombe are supplied from this source; and even where the company's water is laid on it has frequently not been made to supply the closet." The secretary states that about 900 houses are now supplied by the company, so that even if no additional houses have been built since the last census there must, apparently, still be some 1800 houses supplied from the "extremely unsatisfactory" sources to which Dr. Wheaton referred.

Mr. G. Careles.—The following books may be found of use in addition to those we recommended last week: "The Art of Dispensing," published by the *Chemist and Druggist*; "Practical Dispensing for Students," by C. J. S. Thompson; "A Laboratory Course of Pharmacy and Materia Medica," by W. Elborne; "Lessons on Prescriptions and Prescribing," by W. H. Griffiths; and "Notes on Dispensing," by George Stirling.

Assistant.—It is a case for legal advice and probably legal interference. Assuming the facts to be as our correspondent states them he has our sympathies, while we do not see how his late principal can attempt to defend his behaviour.

Mr. E. Lyddon.—Our correspondent's remedy would seem to us to be to take legal proceedings against his traducer. Of course he would not do that without proper legal advice.

MEDICAL AID SOCIETIES.

To the Editors of THE LANCET.

SIRS,—In the town in which I live and carry on my professional work there exists a medical aid society registered under the Friendly Societies Acts. This medical aid society issues handbills from door to door informing the public that they can have medical and surgical aid on payment of 1*d.* per week for adults and ½*d.* per week for children. The medical officer is paid a fixed salary and is debarred from private practice, and he is to all intents and purposes a servant of the committee who carry on the business at a profit. If the medical officer left the service of the committee and decided to carry on medical aid work on his own account and issued handbills and placards as the committee now do, it is very probable that the Colleges whose diplomas he has or the General Medical Council would judge him to be guilty of infamous conduct in a professional respect. Is it fair or proper that a medical man cannot do on his own account work which a lay committee is allowed to do? If a medical man becomes the servant of a layman to do medical work his diploma will be cancelled by the General Medical Council; but if five or six laymen form themselves into a committee they are permitted with impunity to engage a qualified man's services and to enter into an agreement debarring him from private practice and from practising within a fixed radius after leaving their service. The whole thing appears to me to be such an anomaly and so grossly unjust that I believe the members of any other profession or calling would not submit to it for a single month. Can the General Medical Council or the Colleges find no remedy for this evil, which is rapidly growing, and which is driving many members of the profession into serfdom?

I am, Sirs, yours faithfully,

Sept, 27th, 1897. A LANCASHIRE SURGEON.

Mr. H. R. Tebboth.—The Roentgen rays have not yet been discovered sufficiently long for us to answer with any certainty. The depilatory effects of the rays have been stoutly denied by some observers and circumstantially affirmed by others, both in our columns and elsewhere. We recommend our correspondent to consult some of the writers.

M.B., C.M.—We refer our correspondent to an excellent article on the subject in the "Dictionary of Applied Chemistry," by Professor T. E. Thorpe, F.R.S., vol. ii., p. 177. Impurities in coal gas are dealt with under the Gasworks Clauses Act, 10 and 11 Vict., c. 15.

Mr. V. B. Clark.—The persons named in our correspondent's letter are not qualified English practitioners. We strongly recommend him not to consult them.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (6th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (7th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (9th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (6th).—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. F. J. McCann and others. Paper:—Mr. Alban Doran: On the Management of True and False Capsules in Ovariotomy.

FRIDAY (8th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.)—Dr. W. P. Herringham: Sudden Death in Rheumatic Fever due to Myocarditis.—Dr. W. H. White and Mr. J. Langton: Stricture of the Pylorus: Loretta's Operation.—Dr. A. G. Phear: A Case of Cerebral Sinus Thrombosis.—Mr. G. H. Makins: A Case of Œsophagotomy for the Extraction of a Tooth Plate, in which Cellular Emphysema developed in the Neck without Injury to the Pleura.

WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.15 P.M. Annual Meeting. Election of Officers for 1897 98. Dr. G. H. Savage: The Insanities of Evolution and Dissolution. (Purvis Oration.)

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

TUESDAY (5th).—GRESHAM COLLEGE (Basinghall-street, E.C.).—6 P.M. Dr. M. Symes Thompson: Preventive Medicine in the Victorian Era. (Gresham Lecture).

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Sir W. R. Gowers: The Neuron and Disease.

WEDNESDAY (6th).—GRESHAM COLLEGE (Basinghall-street, E.C.).—6 P.M. Dr. M. Symes Thompson: Preventive Medicine in the Victorian Era. (Gresham Lecture).

THURSDAY (7th).—GRESHAM COLLEGE (Basinghall-street, E.C.).—6 P.M. Dr. M. Symes Thompson: Preventive Medicine in the Victorian Era. (Gresham Lecture).

FRIDAY (8th).—GRESHAM COLLEGE (Basinghall-street, E.C.).—6 P.M. Dr. M. Symes Thompson: Preventive Medicine in the Victorian Era. (Gresham Lecture).

During the week marked copies of the following newspapers have been received:—*Bridlington Telegraph, Wolverhampton Chronicle, Sussex Daily News, Cambria Daily Leader, Glasgow Herald, Pioneer Mail, Times of India, Manchester Courier, Sheffield Evening Telegraph, East Anglian Daily Times, Liverpool Daily Post, Scotsman, Retford News, Devon Weekly Times, Builder, North Wilts Herald, Leeds Mercury, Birmingham Gazette, Western Morning News, Architect, Berkshire Chronicle, Dundee Advertiser, Isle of Wight Observer, Newcastle Chronicle, Westminster Gazette, Bristol Mercury, Edinburgh Evening News, North Wales Chronicle, Keene's Bath Journal, Midland Times, Yorkshire Post, Worcester Herald, Maryport News, Derbyshire Advertiser, Huddersfield Chronicle, Leicester Post, Sheffield Telegraph, Grantham Journal, Lincoln Gazette, Preston Guardian, Bury Times, East Devon Advertiser, Rugby Advertiser, Wilts County Mirror, North British Daily Mail, Hampshire Telegraph, Bedford Times, Brighton Gazette, Northampton Daily Chronicle, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, Gazette (Montreal), Mining Journal, Hertfordshire Mercury, City Press, Local Government Journal, Public Health, Engineer, Surrey Advertiser, Guy's Hospital Gazette, Yorkshire Herald, Hong-Kong Weekly Press, Australasian Medical Gazette, Englishman (Calcutta), West Sussex County Times, Coventry Herald, West Middlesex Herald, Stowmarket Courier, Penarth Chronicle, &c., &c.*

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An Address
ON
AUTHORITY IN AND OF MEDICINE.

Delivered in the Anatomical Theatre of the Medical School at Charing-cross Hospital on Oct. 4th, 1897,

BY WILLIAM CARTER, M.D., F.R.C.P. LOND., LL.B.,
PROFESSOR OF MATERIA MEDICA IN UNIVERSITY COLLEGE, LIVERPOOL.

GENTLEMEN,—Medicine, using that term in its broadest sense as including all that relates to the maintenance or restoration of health, owes much of the attraction which it exercises on those who study and practise it to its ever-increasing expansiveness. Looking back through the years that have passed since, as a student, I sat on the benches of this college I cannot but be struck with the marvellousness of the change which it has undergone during that period; and if we were endowed with the power of accurate anticipation as we are with that of retrospection, we should no doubt be as much astonished at the development which it will undergo during the coming thirty or forty years of its history as we now are with that which it has undergone during those just ending. Antiseptic surgery, with all its vast and splendid consequences to humanity; preventive medicine as a distinct and most fruitful branch of our profession; the proved relation of micro-organisms to some of the most virulent forms of infectious or contagious disease, with the subsequent discovery of methods of destroying these organisms without destroying the person in whose body they were multiplying, or of so modifying the character of the person's blood as to render him immune to their attacks; the determination of the influence of the internal secretions of some of the glands upon metabolic processes and the application of this fact to practice; the use of serum tests and serum therapy in the early recognition and cure of disease; the proved antagonism between the poison of acute rheumatism and salicin and its allies; these and many other achievements must rise instantly before the mind of every one of us.

Yet if all this had been foretold a century ago the prophet who proclaimed it would have been treated in the spirit in which true prophets always have been treated. He would not have been burned, because, happily, burning as a method of teaching truth or repressing error had long before gone out of fashion; but all that contemptuous sneers or cold indifference or open antagonism could do to break his heart or drown his voice would have been done, notwithstanding the supposed general enlightenment that characterised that, as it is thought to characterise this, age. In justification of this statement I will read to you a few words from a very remarkable prophecy, published just 103 years ago, which has earned for its distinguished author, even at the hands of biographers generally favourable to him, such appellations as "dreamer," "visionary," "benevolent enthusiast," "well-meaning mystic," &c., but never once that of a far-seeing, enlightened, philosophic seer. Condorcet—for he was the prophet—was being hunted to his death by the merciless agents of the Convention, yet undismayed by the terrors in the midst of which he was living he employed the last few weeks of his life, not in bemoaning his fate or vainly quarrelling with his times, but in looking forward with the clear and undimmed vision of a scientific prophet to a happier era which was even then he believed showing signs of dawning for humanity, and in his "Esquisse d'une tableau historique des progrès de l'esprit humain," wrote down what he saw. I will quote one passage, which runs as follows: "The organic perfectibility or deterioration of the classes of the vegetable or species of the animal kingdom may be regarded as one of the general laws of nature. This law extends itself to the human race; and it cannot be doubted that the progress of the sanative art; that the use of more wholesome food, and more comfortable habitations; that a mode of life which shall develop the physical powers by exercise, without at the same time impairing them by excess; in fine, that the destruction of the two most active causes of deterioration, penury and wretchedness on the one hand, and enormous wealth on the other, must necessarily tend to prolong the common duration of man's existence, and secure him a more constant health and a more robust constitution. It is manifest that the improvement of the practice of medicine, become more efficacious in consequence of the progress of reason and the social order, must in the end put a period to transmissible or contagious disorders, as well as to those general maladies resulting from climate, aliments, and the nature of certain occupations. Nor would it be difficult to prove that this hope might be extended to almost every other malady of which it is probable we shall hereafter discover the most remote causes. Would it even be absurd to suppose this quality of melioration in the human species as susceptible of an indefinite advancement; to suppose that a period must one day arrive when death will be nothing more than the effect either of extraordinary accidents, or of the slow and gradual decay of the vital powers; and that the duration of the middle space, of the interval between the birth of man and this decay, will itself have no assignable limit? Certainly, man will not become immortal; but may not the distance between the moment in which he draws his first breath and the common term when, in the course of nature, without malady, without accident, he finds it impossible any longer to exist, be necessarily protracted?"

That we are far, very far, yet from the realisation of this magnificent vision of future happiness of man upon earth is, alas, too true, yet it is a significant fact that every step taken since it was proclaimed has been distinctly in the direction of its fulfilment and has been taken, moreover, under the direct inspiration and guidance of our professions and we have but to remember that only a very few years before it was uttered Louis XV. of France had died of malignant small-pox, as annually died many thousands of his and our fellow countrymen; that Jenner's great discovery had not been proclaimed and adopted; that Voltaire is said to have characterised medical men, from whom Condorcet hoped so much, as those who put medicines of which they knew little into stomachs of which they knew less; and that not one of those great recently discovered scientific truths, the application of which has been so fruitful of good to mankind, had been so much as thought of, in order to be struck with the boldness of the prevision and encouraged to hope for, and aid in, its progressive fulfilment.

Look but for a moment at a small part of what has been achieved in this country under one only of the heads enumerated by him—viz., the sanative art—since in 1844 the "Health of Towns Commission" clearly revealed the extent to which preventable diseases prevailed and the means best calculated to check them, and especially since the Public Health Acts of 1872 and 1875 mapped out the entire kingdom into workable subdivisions and placed each under the supervision of an educated medical man; think of what is implied by a fall in the death-rate, which then for the first time in our national history began, from 22·5 to 18·7 per 1000; think of cholera having been as effectually banished from our shores as plague has been; think of the fact that typhus fever, which not long ago caused many thousands of deaths annually, and an outbreak of which when I was a student of this hospital almost decimated some of its wards, being now so little known that probably not one out of ten young medical men has ever had an opportunity of seeing a case; think how Adulteration Acts have insured to the poor that wholesome food and clothing which unprincipled manufacturers in their greed of gain would have denied them; how insanitary houses are everywhere being condemned and destroyed and healthy habitations for the poor replacing them; how injurious trades and manufactures are being supervised and modified in such a way as to promote and not to destroy the health of those employed in them; how open spaces are provided for healthy and rational exercise; how at last something of the care and consideration long given to the production and maintenance of a perfect machinery is being legally enforced for preserving the lives and health of those who work it; and how that in every large city in this and every other civilised country great numbers of earnest, thoughtful, scientific members of our profession are devoting time, energy, and talent to an investigation of those remote causes of disease and the means of destroying them to which Condorcet referred, and you will be filled with hope and encouragement and with a determination that the legitimate influence which medical opinion and

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practice ought to exercise on the affairs of the world shall never be diminished by anything that you will do. It requires but a very slight glance at modern society to see how enormous that influence is, and it should be (and if we are true to ourselves it must be) as much for the advantage of mankind as for that of our profession that it shall be maintained and extended. But what can we do? may be asked. The reply will entirely depend upon ourselves. Individually we may think ourselves small enough, but, as the old Latin proverb has it, small things massed together are no longer small "Nihil est aliud magnum quam multa minuta." But in that very limited sphere in which we move as individuals, as well as in the larger and national one occupied by our profession, the effect which we shall be able to produce will depend entirely on the respect which we can gain for our opinions among the thinking portion of mankind, who alone constitute its true rulers. It is to the subject of authority in and of medicine, then—in this sense of power controlling opinion owing to recognition of its supposed truth and justice—that I wish to direct your attention, for, happily for ourselves as a profession, we are but little restrained by the fetters of external authority. So large, indeed, is the measure of freedom granted to us that extraordinary individual whims and extravagances are not unfrequently manifested within our ranks, which, however, by being wisely let alone or, at any rate, controlled only by the general body of wholesome opinion that prevails amongst us and is reflected with great clearness and strength in the medical press, are seldom, if ever, developed into extensively organised systems. Such whims seem to be one of the necessary inconveniences of liberty and part of the price that has everywhere to be paid for it. Yet if we contrast our comparative unanimity of sentiment without the restraint of external authority with the schisms that rend and disturb the peace of our sister profession—the Church—in spite of rigid creeds and formularies, we shall recognise the wisdom of the principle of trust reposed in us. Trust on the one side begets an honourable obligation on the other which should be stronger than the strength of any law in its effect upon conduct.

But there is another kind of authority much more dangerous to the independence of generous minds than that of any external law whether mandatory or prohibitive. It is that which attaches to great names and to the profound and often just reverence in which the opinion of those who own them are held. When a man distinguished by a long and honourable course of public and private professional life enunciates a dogma, especially if it be with regard to a subject of which he is admittedly a master and if he has advanced the boundaries of medicine and cleared away some of its obscurities, it is apt to be considered as conclusive, not only for the time in which it is uttered, but for all time, and thus the human mind may be trammelled and its advance retarded by appeals to one of its most attractive qualities. Yet the probability is very great, and more and more so in proportion to the appearance of finality that seems to attach to the dogma, that it will turn out to be untrue as time advances. Medicine may not be, and probably never will be, in the strict sense of the term an exact science, yet it so appropriates and makes part of itself the discoveries of many sciences that it must constantly be advancing with them. Under such circumstances dogma is out of place, the seemingly settled truth of to-day not infrequently requiring modification to-morrow in the light shed by some new research. Stokes was such a man as I have pictured, and in 1854 he wrote: "The treatment of fever is reduced to a formula. We cannot cure fever. No man ever cured fever—it will cure itself. If you keep the patient alive till the 14th, the 18th, or the 21st day he will recover." Commenting on these words in an inaugural address, given as President of the Liverpool Medical Institution in 1889, I remarked that "two of these sentences are commonly quoted to-day as axiomatic and as determining the question for all time. 'No man ever cured fever.' Probably not. Certainly not if you like, but no man ever knew what fever was, and until he does know he cannot be expected to be able to apply a rational cure. This knowledge will however be certainly attained, and when it is attained the cure will not remain long unknown." So much for the comment written in 1889. Stokes's statement, which certainly seemed justified by all the facts known at the time when it was made and which would have seemed almost equally so by the knowledge of 1889, is as certainly not justified now, owing to important facts discovered within the past few years. Yet it was frequently brought forward within those years in order to prove that these later supposed facts could not be facts. To-day the knowledge has been obtained. Some kinds of fever are being cured, and in most men's minds there is a confident expectation that before long the remainder will be proved to to be curable.

And that the spirit which would impose strict limitations, beyond which advance shall not be made, is still alive and active we have many proofs. Thus it was but a few months ago that there appeared in the *Gazette Hebdomadaire* a brilliantly written article proving the great danger, if not the impossibility of attempting to cure Pott's curvature of the spine by the method of sudden reduction. The hand of the writer was evidently that of a master. The illustrations were well drawn, and one saw with horror the huge gaping space between the contiguous vertebræ after they had been experimentally fractured in the anatomical laboratory and asked, with the author, by what known reparative process such a space could be filled up. There was so strong an antecedent probability in his proposition, and it was enforced by so much that read like sound reasoning, that, justified by these considerations and by a recollection of the surgical principles early inculcated into my mind by one of the acknowledged masters of this branch of his art—a gentleman whose name I rejoice to see is still on the consulting staff—and fortified by the confidence that always arises from a mere theoretical acquaintance with a subject which can only be thoroughly known by practice, it is not unlikely that I might have felt myself competent to demonstrate to any antagonist the impossibility of successfully performing the operation with as much clearness as Dr. Lardner is said many years ago to have demonstrated on economical and other grounds the impossibility of establishing a remunerative ocean steam navigation. Just eight weeks after the publication of the article I heard with very great surprise and interest that a distinguished surgical colleague of mine intended, in conjunction with a gentleman attached to a school of medicine not far removed from the one in which we are now assembled, suddenly to reduce, after the manner of Calot, the curvature in a number of cases that he had collected for the purpose. The interest of the proceeding determined me to be present to witness this most recent and most daring disregard of an authority rendered venerable by centuries of obedience, and it was with feelings of excitement difficult to suppress that I saw the deformity instantly reduced in five cases in succession, while the tension became positively painful when in one instance the spine gave way under the force applied to it with a crack that resounded all over the theatre, causing those who were present to look at each other with anxious faces indicative of their fears of the immediate effects of so much violence. I asked, and easily obtained, permission closely to examine every case as often as I pleased. The number soon rose from five to many times five, and the first question asked with reference to every one was, What was the amount of the paralysis that was said to be inevitable? The answer was always the same. The inevitable had somehow been avoided; paralysis was uniformly absent. Was there fever? No. But surely, it will be asked, there must have been pain? Yes, there certainly was pain, for I followed many from the operating table, watched them as they emerged from the influence of the anæsthetics and heard their cries. Yet the pain was but evanescent, for on the following day the little patients were smiling and contented, while in all cases, and a late one was aged twenty-two years, the spines were straight and have remained straight ever since. To all the objections henceforward raised against this method, as against so much else, we may reply in the spirit of Pascal's words concerning the treatment of Galileo, "It is in vain that you have procured against Galileo a decree from Rome condemning the opinion of the earth's motion. Assuredly that will never prove it to be at rest, and if we have unerring observations proving that it turns round not all mankind together can keep it from turning and themselves from turning with it."

To authority of another and more insidious kind, which is threatening to weaken the vigour of our profession and which, therefore, has to be watched and if necessary opposed, I will ask your attention. Owing to the many-sidedness of medicine and that rapid expansion of which I spoke at the commencement of this address it is quite impossible for any one man accurately to acquaint himself, even mentally, with all its parts, and equally so for him to attempt to practise them all, and hence specialisation becomes more or less a necessity. But there is a good and a bad specialism. Its tendency just now is to run into ludicrous excess and to

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infect the public mind with the injurious belief that the human body is composed of a great many minute and independent parts and that he alone can speak with authority concerning any one of these parts who has devoted himself wholly to the consideration of it to the exclusion of all the rest. The departmental habit of mind is always a narrowing one, yet it is one which these ridiculous extremes tend directly to foster. They impair the power of forming a broad and comprehensive conception of man as a whole, whose organs are mutually interdependent, and convert those who run into them into mere prying supervisors of some single organ, or even of some small portion of a single organ. As an illustration of the latest phase of this cutting up process I may mention the work known as "Twentieth Century Practice," now in course of publication. It will consist of twenty volumes, each of some 700 or 750 large octavo pages. Let us take only one portion of the human organism on the whole of which good, sound, common-sense books well worthy of careful study have been written by general physicians, but which in this system is sub-divided into many minute parts and each sub-division handed over to a separate "eminent authority." It does not matter which portion is selected, for the same principle is applied to all alike. Suppose we fix on the respiratory organs. Beginning, then, with the nose—considered, however, in its strictly medical aspect only—we find it handed over to the care of an "eminent authority" in London, but lest he should be weighted with a burden that might prove intolerable to him, the adjacent naso-pharynx, pharynx, and tonsils have to be considered by another in France, while a third, this time in North America, takes charge of the larynx; but the trachea and bronchi being too much for any one man, are consigned, the first to one eminent Scotchman and the second to another; the lungs, but only on the understanding that nothing is to be said of influenza, are confided to a South American; while the last department, that of the accessory sinuses, falls to New York; and a fine comprehensive idea of man as a whole—as one who is "fearfully and wonderfully made," to use the grand but simple language of the Hebrew psalmist—will any student possess who should happen to live long enough to acquaint himself with all the different views of all the different eminent authorities on the disorders of all the different minute sub-divisions of all the organs that go to make up a man as they are set forth in a system like this. The assumption seems to be that by this minute sub-division of labour, between us, and bit by bit, we can get to the very heart of things and solve all the mysteries of life and disease.

It is difficult to give examples of the harm that may be done by the departmental view of man when carried fully out into practice without running the risk of reflecting on persons, which it is very far from my desire to do. It is the system that is bad, while some of those who almost without thought are giving support to it are among the most honourable of men. The injudicious devotee to a specialty—for please remember that it is of him, and him only, that I am speaking, and not, as I shall explain further on, of the legitimate and useful specialist—has usually a very large amount of enthusiasm and a very moderate amount of judgment. He devotes his whole mind and thought to a small section, or not unusually to a particular method of treating the disorders of a small section of the body, and can see nothing and think of nothing except in relation to it. He often sees what nobody else can see and hears what nobody else can hear, and, moreover, not unfrequently takes his patient into a close and confidential co-partnery with himself in his special knowledge and methods, and thereby does him more harm than all his efforts, however well intended, can do him good, for what is essential in most cases is to divert the attention from, and not to concentrate it on, the diseased organ, if it really is diseased, and not to give it the appearance of being diseased if it is not. It is of comparatively little importance which organ of the body is taken by way of illustration. The strongest-minded man among us would quickly have his strength converted into weakness if daily and hourly by the very method which was to cure him of some real or supposed ailment he was made to think of it instead of everything but it. Take the heart. I have in my mind a refined, scholarly, sensitive man, who had the double misfortune for one constituted as he was to inherit large wealth and to adopt a profession which seems to be thought inconsistent with the enjoyment of many innocent indoor and outdoor sports. I never saw him but once, and that after he had been led to place himself under the care—so I learned from his medical adviser—of an eminent authority who had a special system for converting diseased hearts into healthy ones, and he (the patient) showed me with an intense but wholly misplaced interest large charts on which the outline of his heart had been mapped out for him before he began the treatment, during its continuance, and after it was ended. These charts had been given to him for his information, guidance, and encouragement, and as well a little book accurately indicating—the directions being illustrated by drawings—what was to be done each day and each portion of each day. The result was what might have been anticipated by any man of common sense and broad general ideas of a nervous man's constitution. Though the condition of the heart grew better and better—the charts were declared to prove that, and the patient implicitly believed it—the general condition grew worse and worse. The heart certainly was not diseased when I saw him. If, therefore, it ever had been this system may possibly be accredited with the change. But what is the advantage of curing a man's heart if by the very method of cure you make him a more pitiable valetudinarian than he was before it was tried or than nature ever designed him to be? The patient does not know, he cannot know, and he ought not to know, anything about the area of dulness that can be mapped out by skilled fingers, and a chart of which is useful enough when made and kept for the practitioner's own information or for that of another; and to make him believe that he does know it is to do him harm; and if this kind of treatment is suggested in good faith, the faith must be much stronger that the judgment. You devote years of your life to acquiring the knowledge that will enable you to determine whether a heart is healthy or unhealthy, dilated or not dilated. At the end of your first year you will be much puzzled in your efforts to clear up the point, and is it to be believed that the method of resolving the doubt can be intelligibly communicated to a patient, who has had none of your preliminary training, in a few minutes? Or take another organ. Not long ago a stranger—a lady—consulted me who in a similar way had been made to believe by an eminent authority that she knew what in no proper sense she ever could know, for the knowledge at the very best could be to her but a knowledge of words and not of things, many minute details concerning an ailment from, instead of to, which her mind might advantageously have been directed. She also presented a chart on which everything had been put down in the most exact—the most scientifically exact, as it is called—and detailed manner. If the facts, as set forth, had been communicated by one medical man who happened to know more of the subject to another who happened to know less, it could not possibly have done any harm, even if it did no good. But it is quite another matter when there is given to a nervous person for permanent reference a formal sheet, on which she is informed that the disease from which she is suffering is "uric acid diathesis from sluggish liver," and that the 800 cubic centimetres of an important liquid excretion examined had a specific gravity of 1026, an amber colour and reaction; 3·306 (so precise was it) percentage of urea, increased uric acid, normal chlorides and alkaline sulphates, but slight excess of aromatic sulphates; that phosphates were in excess; that no hæmatin or urobilin was present; that indican was increased, but that happily bile pigment and bile acids were absent; that there was a slight amount of mucus, but neither sugar, acetone, aceto-acetic acid, hippuric acid, nor oxalic acid; that the sediment was slight, but that, slight though it was, it contained "numerous quadriurates and some uric acid crystals, epithelial cells, and a few casts." It was evidently with no small feeling of alarm, and yet at the same time with something of conscious pride at being the subject of so many very extraordinary things, that she favoured me with a sight of the document, and I am not sure that my efforts to reassure her by telling her that the whole thing was of no serious importance may not have been more successful in hurting her pride than in diverting her attention from what was injuring her by a constant contemplation of it. It ought, perhaps, to be added that the full name of the eminent authority and his official residence conspicuously and consistently ended the statement. These are examples of a kind of authority which I venture to think is bad—at least, in the mode in which it is exercised—which is increasing, and which ought to be checked. But how can we help to check the illegitimate and unwise specialism while availing ourselves of that which is legitimate and wise? I will tell you. By the assiduous cultivation of a robust but modest independence of mind founded on

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an accurate knowledge of facts actually and often observed. This is something very different from conceit, which in the practising as much as in the non-practising student—for every one of us must all our life long continue to be a student—is insufferable. It should be an encouragement even to the youngest to know that it was on cases accurately observed and recorded during his hospital student days that Laennec founded that great work that revolutionised medicine and made for himself an enduring fame as a benefactor of his profession and his race. If I selected any portion of this syllabus as being in my judgment specially valuable where all is so valuable it would be that which says that great importance is attached to individual teaching at the bedside and in the special departments. This is the kind of teaching which of all others is most strongly and permanently stamped in upon the mind, and if it were attended to as thoroughly as it should be medical men would enter on the work of their lives with a quiet and assured confidence in no other way attainable—a confidence in themselves which would make them unassailable by the criticism of those whose practice may be more special than their own. It is fear arising from consciousness of ignorance that brings mental subserviency and makes a man readily defer to the dogmatically asserted statement of others, and it is not fair to ourselves or our profession willingly to consent to see with another man's eyes what with a little extra trouble we can learn very well how to see with our own.

> "Segnius irritant animos demissa per aurem,
> Quam quæ sunt oculis subjecta fidelibus ....."

says Horace in his "Ars Poetica," and this is a maxim that should be imprinted deeply on the mind of every medical student.

Are we all to know everything then? No. As I have already said, there must be specialists in a profession so many-sided as ours. I have mentioned what I venture to think some of the injurious forms of this. I will now narrate an incident which struck me very forcibly at the time of its occurrence as showing, not only the necessity of specialism, but as defining to a certain extent its just limits. It happened a long time ago, during one of the years of my presidency of the Liverpool Medical Institution, that a small pedunculated tumour was shown which had been removed from one of the vocal cords of a gentleman who had been hoarse, and at times completely voiceless, for years. He had consulted many medical men without the least advantage until, coming at length under the notice of a general surgeon, he was for the first time carefully examined by the laryngoscope and the cause of all his trouble recognised. But what did this gentleman do? Remember he was, and is, possessed not only of great skill as an operator, acquired in the practice of one or the largest provincial hospitals, but also of sound surgical judgment. What did he do then? Why, he told the patient with that assured confidence which, as I say, can only come of a knowledge acquired by careful observation, conducted by the only means that can make the observation careful, exactly what was the matter with him, but he did not attempt to relieve him. He felt that to do this required a manipulative dexterity in the use of delicate instruments which could only be acquired by long and special practice, and he sent him to a gentleman who had acquired this qualification, and who by means of it soon effected a cure. Now what I venture to say is that it would have been as wrong for the general surgeon to have tried to do the special work as it would have been for him not to ascertain for himself what the special work was that had to be done. And what I further venture to say to you, gentlemen, is that if with the admirable facilities afforded to you by this and the neighbouring institution for acquiring an accurate knowledge of the use of such instruments as the ophthalmoscope and the laryngoscope for the purposes of observation, and of telling your patients what is or is not the matter with them, so far as those instruments can enable you to do so (and I only use them as illustrations), and whither they may perhaps go to obtain relief, you will be no more true to yourselves or your profession than you will be if with this increased power of accurate observation you confuse in your minds and consciences the power to observe well with the ability to operate well, which are two entirely different things, and things which an honest mind will always keep distinct from each other.

But can there possibly be time for the acquisition of all this knowledge? I admit that a medical curriculum looks very formidable when viewed as a whole and that you could not possibly conquer it if you had to attack it all at once; but if ever you should be inclined to despond at the magnitude of the work to be accomplished think of what the dial-plate said to the discontented pendulum when one morning it suddenly stopped swinging through fright at the work to be got through in the course of a year. "It is not of six strokes that I complain," said the pendulum, after finding on trial that it could manage these without fatigue, "nor of sixty, but of millions." "Very good," replied the dial plate, "but recollect that although you may think of a million strokes in an instant you are required to execute but one, and that, however often you may hereafter have to swing, a moment will always be given to swing in." If you carry out the syllabus on this principle and in this spirit there will be—indeed, there must be—not only plenty of time for this work, but plenty also for much else about which, if medicine through you is to exercise that authoritative influence on the national life which is so essential for its progress, it is necessary that you should form sound judgments based upon sound knowledge.

Take the great subject of our recreations, on which you will be consulted every day of your lives, and which is becoming daily of greater importance now that shorter hours of labour are everywhere becoming more general. On no subject ought medical opinion to be more clear and precise than on this. If the brain is to work healthfully it must have its due periods of diversion and of rest, and a portion of this diversion cannot better be obtained than by the pursuit of those magnificent outdoor sports which happily are the glory as they are the strength of our race. This noble passion for cricket, boating, cycling, golfing, football, hunting across country, shooting over moors, for everything, indeed, that tends to foster hardihood, muscular endurance, a fine spirit of fair play and justice, as well as health, should be encouraged and never repressed by us who are best qualified to judge of its effects. Do not lightly tell a mother on some petty technical ground and with an air of authority that cycling will not be good for her daughter. Her indulging in this fine exercise may make all the difference between her becoming a Katherina or an Imogen. But the best way to prove the value of your doctrines to the public is to practise them yourselves. I do not believe that any man can thoroughly and healthfully master his curriculum without indulging largely in some form of severe physical exercise. Recreation—re-creation—so necessary for each one of us if we are to do our work well, is obtainable no doubt in many different ways, but in few perhaps better than such as those afforded by the students' club, with its branches of cricket, football, tennis, and I should hope in the near future, if not at present, cycling, swimming, and other forms of athletic exercise—a department of college life of inestimable advantage, and one in which you have ample means of obtaining the relief which you should require if your work within wards and class-rooms is done as it ought to be. An experiment of great value, as it seems to me, and one to which I often refer, was performed by Mr. Charles Paget, formerly M.P. for Nottingham, in the village school on his estate at Ruddington, and the principle underlying which is equally applicable to a medical school in London or anywhere else. He was not satisfied with the general progress made by the boys and provided for them therefore a large garden. The school was then divided into two sections, one of which was kept to the ordinary school work for the ordinary hours, the other for half of these hours only, the rest of the school time being devoted to work in the garden. At the end of the term, the half-term, or gardening boys, had excelled the others in every respect—in conduct, in diligence, and in the results of study. In these times of brain-pressure such a fact as that may well be remembered by all of us in relation both to our own needs and those of the public.

This perhaps is the most appropriate place briefly to mention one other matter of general importance as affecting the medical man's and (through the individual medical man) the medical profession's influence upon the society of his time. He of all others ought to be a man of general culture. Everywhere throughout the kingdom he is being asked to take part in the public life of the place in which he resides, and as a member of urban or district council, board of guardians, bench of magistrates, school board, or otherwise, has opportunities of impressing that life with his own ideas. Yet the more technical portion of his reading is of such a character as to shut it out, and to shut him out

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also, from general society if he can talk and think of nothing but it. In one of two addresses given some twenty years ago to the students of Cheshunt College by the late Dean Stanley he expressed the hope that Sir Walter Scott's novels were among the best part of their theological reading. What has always struck me as a misfortune is the readiness with which medical men drop all that earlier classical knowledge on which as a foundation their more technical instruction is reared. Yet it would be very easy to keep it up, though difficult to re-acquire it when lost. Every medical student has, for example, to make himself acquainted with at least one book of some Latin author; and every medical man has to write prescriptions into which Latin enters. An hour, or perhaps half-an-hour, a week would be quite enough to keep up his acquaintance with the first, which, if it were done, besides being valuable to the mind generally, would make the particular exhibitions of defective culture in the latter less remarkable than they too frequently are at present. It certainly is not advantageous to us as a profession, and not likely to promote our influence on the educated people of our times, when such words as these which I remember to have read in a review written nearly forty years ago on the best-known and most quoted Latin poet—words which are certainly as true now as then—are thought applicable to us. "The country gentleman, the clergyman, sometimes even the lawyer and the doctor, ... all draw from the same well instances and illustrations." *Even* the lawyer, and, last of all, *even* the doctor! I am not pleading for pedantry or for a pretence of a full and critical acquaintance with ancient classical authors, which latter it is impossible that we can possess, but merely for such a continuance of, and possibly advance on, our school or college acquirements as shall not make us feel on a lower level of education than that occupied by the reviewer's country gentleman. But whether this kind of learning is kept up or not other kinds must be, for consciously or unconsciously to ourselves as a nation, but surely and steadily, changes are everywhere being wrought in the great forces of civilisation and commerce which, if they are to issue in good rather than evil, should be clearly recognised by medical men and made the subjects of their calm, deliberate, and intelligent judgments. I can only briefly allude to some of these. It will be for you to reflect on them.

The strong, swift, and ever-increasing set of the current of human life from the country to the great towns is one of them. It is idle to lament, and still more to try to prevent this. But what is not idle is clearly to apprehend the causes which in all past times made the aggregation of vast numbers of human beings into limited areas injurious to health, to attack and overcome these causes, and thus to make city life not only physically healthy, but what it is always capable of being—intellectually and morally the noblest kind of life. The work done in this direction in recent years is enormous, but the problems which remain are great, and are such as medical men alone can effectually solve. And it is no small earnest of their ultimate success that this vast city, unexampled in all time for the extent of its population, has been made under the enlightened and judicious counsels of such men as Sir John Simon, Sir Richard Thorne Thorne, the late Sir George Buchanan, and others, not only one of the healthiest cities of the world, but far healthier even than many rural districts. I will venture to quote one question and answer from the first report of the Health of Towns Commission. Dr. Neill Arnot was the witness. "From what you have seen with respect to the state of the atmosphere in buildings generally, do not you consider that it would be a matter of great importance, not only for medical men, but also for architects and engineers, that the subject"—i.e., of ventilation—"should be enforced as a branch of education among those professional classes?" "I do," was the reply. "I think acquaintance with it almost as important to the utility of a medical man as acquaintance with anatomy."

Another of the great social questions which presses for solution, and in which the voice of medicine should be clearly and authoritatively heard, is the *rôle* which alcohol plays in the individual, social, and national life of our time. I am not going to take an unfair advantage of my position here to preach on the utility of total abstinence. But I should be failing in my duty if I did not urge upon you the necessity of a careful and independent consideration of this subject, not guided alone by the small experiments of the laboratory, but by those larger experiments that are being performed for us in every city and village of our land, and the results of which can be witnessed in ruined health in thousands of wrecked and wretched homes, in gaols, in workhouses, in asylums, and in hospitals. Those facts and figures on a large scale, which, in his appendix to the Registrar-General's Thirty-ninth Annual Report, the late Dr. Farr regarded as necessary for determining this question, have, since the publication of that report, and probably in consequence of it, been supplied, and should be carefully weighed by every medical man.

Although I have taxed your patience very long I must for a few minutes before concluding allude to one other department in which demands on our faith and even on our credulity of a very exacting character have been made by those who, owing to the special nature of their studies, claim to speak with the voice of authority. I allude to that dark region that is intimately but mysteriously associated with the operations of mind. Here especially, while acknowledging with thankfulness whatever there is of real discovery, we have need to guard ourselves against a too slavish submission. There are certain fundamental principles on which human society is established and which cannot be disturbed without seriously disturbing it. Such are the great moral intuitions, as we have been content to consider them. We know that we are possessed of them as certainly as we know anything, and more certainly than we know most things, but that is all. If the cerebral pathologist or physiologist could afford the slightest real clue to the solution of the most intricate of all problems, the relation between the brain and thought, the genesis of will and of the idea of responsibility, we should thankfully accept it. But when, instead of doing this, he informs us that these supposed moral intuitions are, after all, nothing but delusions, that he has investigated the matter and discovered that what, for example, we in our ignorance suppose to be a free exercise of will is not so, but that "by a strange phenomenon of which *we are incessantly the dupes* it comes to light in the *form* of spontaneity in our ideas, our work, our acts," we are entitled to ask him for proofs, and to demand that the proofs shall be rigid and exact and not a pretentious display of real ignorance dressed in high-sounding but meaningless phrases; and especially are we entitled to demand this when by virtue of his special knowledge he assumes an air of superiority over all those who have gone before him. Let me for a moment or two ask your opinion on a few of the alleged explanations of the inexplicable that have been given to us by some of our self-styled philosophic physicians—for, gentlemen, neither you nor I have any right weakly to renounce our judgment in matters such as these. One of them complains that "the controversies of philosophers and metaphysicians which have been taking place from time immemorial have succeeded in arriving but at one thing—the expression in sonorous language of their ignorance, more or less complete, of the fundamental characters of psychical life," and thus raises in our minds the expectation of a lucid and simple exposition about which there can be no doubt. You must judge. To start with, we are told that there are certain fundamental properties of nervous tissue, among which are organic phosphorescence and automatism. Everything then becomes plain. Does it puzzle you to understand by what process sensibility can become a property of matter? It is only a proof that you have not read M. Luys on the Brain and its Functions, for it comes about in this wise. "The simple physical impression produced by the external world is transformed as it becomes incorporated with the organic tissues into nervous vibrations, and these nervous vibrations passing through successive agglomerations of cells undergo the action of the different media through which they pass until they arrive, transformed and purified, in the plexuses of the cortical substances, which are set in motion impressed and vivified by them alone"; and again, "The connexions between the peripheral plexuses and those of the sensorium are so intimate that so soon as an impression has been produced in the former their partner cerebral regions immediately enter into unison with them. There is a nervous condition of similar pitch which harmonises one part with another, and whenever the primordial impression has been sufficiently intense and sufficiently prolonged, whenever there has been an effective participation of the nervous plexuses laid under contribution, the partner plexuses of the cerebrum sympathetically associate in their excitation and enter upon a concordant period of erethism. The incident excitation arrives, then, in the plexuses of the cortical substance purified and animalised by the peculiar

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metabolic action of the nervous plexuses in the womb of which it is incarnated, and then transforming itself into a psychic excitation it develops the latent energies proper to the cerebral cells, imprints itself upon them, and perpetuates itself in them in the form of persistent vibrations like a phosphoric gleam of the external world."

Very much in the same spirit writes another distinguished authority in the same realm of medicine. Like Dr. Luys, Dr. Maudsley is very severe on the "philosophers of the study" who "indulge in vagueness of thought and expression, and seem to be unable to get clear and exact notions of psychological facts in their mental relations." He resolves, therefore, so he tells us, "to leave the barren heights of speculation for the plains on which men live and move and have their being." Clearness and exactitude of thought and expression are certainly most desirable ends. Whether your own notions as to sensations are more clear and exact than they were before, when you find them spoken of as "representing the source of multitudes of activities that are going on below the threshold of consciousness, and which, albeit unperceived and unfelt, immediately vibrate subtilely in the most intimate and intricate interactions of organic depths and in the result deeply affect the tone of consciousness," you must judge. Or perhaps, if not absolutely enlightened by this, you will become so after reading a little further on that there are "two leading facts, and for us ultimate facts, which it behoves us to apprehend and fix firmly in mind—first, that there has been what we may call a *nisus* of nature, and secondly, that successive transpeciations of matter have been events of it. Continuity of nature certainly, but as certainly not of kind in nature, for the continuity is of different kinds, therefore in some sort a discontinuity, a new springing up from the bases of the old kind—not continuity by homogeneous but by heterogeneous generation." You will no doubt recognise from the unexampled lucidity of thought and exactitude of expression displayed in these passages the advantage of leaving the barren heights of speculation in which men expressed in sonorous language their ignorance more or less complete of the fundamental characters of psychical life; and coming down modestly to the plains where authoritative guides can address us in language which all can understand. And you will probably not be surprised to be informed that "it is the superaddition of consciousness"—and nothing more than that—"to definite susceptibility to impressions, and definite reaction thereto, which are common properties of all organic matter, that makes them sensation and effort." It is all so very simple. One would imagine that this superaddition of consciousness to various kinds of organic matter imparting to it sensation and effort were taking place under our eyes every day of our lives, so offhand is the manner in which it is thus casually alluded to. Whereas this is the very problem of problems, the solution of which, whether attempted on the mountain or the plain, by means of the microscope or without it, eludes us, as it has always done, and is as far off now as ever. And probably our deference to authority in this branch of our studies will be considerably shaken when we listen to the final results as given by the two authors themselves, each in his own language. Thus Dr. Maudsley assures us with reference to every possible human action that the doer of it "certainly could not have done otherwise than as he did on that occasion, but he is not, therefore, fate-bound to do the same on another occasion"; while, according to Dr. Luys, besides being dupes of a supposed moral freedom which we do not possess, "we see, then, to sum up what precedes, that the processes which produce voluntary motion pass in their evolution through phases inverse to those of the processes of sensibility. While these latter, as they approach to the central regions of the sensorium, are purified and made perfect, being more and more intellectualised by the metabolic action of the different nervous media through which they are propagated, the former, on the contrary, conceived as psychical vibrations at the moment of their genesis, amplify and are materialised more and more as they descend from superior regions. They become complicated by the addition of adventitious elements which reinforce them as they progress ..... and thus become in the last term of their evolution a true synthesis of agglomerated organic elements, which resume in themselves the vital forces of the system through which they have been developed." "Conceived under this simple formula," says the author—"simple," mind! of all other terms applicable to such a formula,—"conceived under this simple formula, the processes which produce voluntary motion present the fascinating picture we constantly see presented to us in the working of steam-engines."

Very fascinating, truly! Very lofty and ennobling! How different is the spirit displayed in writing such as this from that of one whose name can never be mentioned here without a feeling of respect and pride. Huxley craved for truth in these, as in other, great questions, but he hated shams and pretences too intensely to deceive himself or others into the belief that he had attained to it so long as there was room to doubt; and in all the great controversies of his, which are indeed the controversies of our time, was willing to admit the limitations of human knowledge. When it was a question of the origin of life, and assertions were dogmatically made as to its alleged outcome from not living matter, there was no ambiguity or want of clearness in his utterance. "The fact is," he wrote, "that at the present moment there is not a shadow of trustworthy direct evidence that abiogenesis does take place, or has taken place within the period during which the existence of life on the globe is recorded"; and in another place "the present state of our knowledge furnishes us with no link between the living and the not living"; when it was one of the relations between matter and thought the same fair, candid, and cautious spirit manifested itself. "Matter may be regarded as a form of thought; thought may be regarded as a property of matter; each statement has a certain relative truth."

How different is this from that proud and self-sufficient philosophy which pretends to explain all things, pretends to a knowledge which it does not possess. Mystery, reverence, awe are all to disappear before the penetrating gaze of these cerebral philosophers. The heights of man's noblest aspirations, the depths of his deepest despair, his spiritual cravings, his consciousness of moral freedom, are all to be explained on purely physical theories and by purely physical processes. That he is a being who has within himself anything whatever that cannot be seen by the modern microscopist, or analysed by the advanced chemistry of the latter end of the nineteenth century, or searched through and through by Roentgen rays, can hardly be credited by the self-sufficient philosophy which is doing its utmost to tyrannise over us to-day. Actions and inter-actions between stimuli and nerve-cells, which the subjects of them can no more control than they can the growth of their hair or nails, must in some way be made to account for remorse, anger, will, and every other quality of mind; and, this being so, they are made to account for them—at least, to the satisfaction of the philosophers themselves, if of nobody else. Conviction, conscience, devotion to the death in the cause of truth, and many another noble characteristic of our species which no mere philosophy of the scalpel and test-tube can comprehend, have to be carefully considered as important facts of human nature by medical men. Gentlemen, on such questions as these also, on a right or wrong view of which the happiness of mankind so much depends, we must preserve a strong if unobtrusive independence of mind. To use the words of Bishop Butler, "Let reason be kept to"; and if proofs can be given that the undying beliefs in the truth of these great moral intuitions are ill-founded, then let them, "in the name of God, be given up," but let us not be content to be cheated out of them by a mere trick of high-sounding but meaningless phrases.

The schools of medicine are probably at this moment the most stimulating schools of thought throughout the whole world. That "sacred torpidity" which is said still to permeate at least one of the older seats of learning, and to "dishearten early" all but its boldest intellects, is unknown and unfelt here. The great problems of life, disease, and death are too intense and too close at hand to admit of lethargy. But in the stimulation there may be danger. Speculation is apt to run riot. In attempting, then, the solution of these problems, if and when they are soluble, do not in a spirit of slavish submission bow down to authority. Do not, on the other hand, in a spirit of recklessness and to show the world how independent you are, needlessly run counter to it because it is authority. But with pure and honest hearts, conscious of a manly integrity, and with a noble but quiet determination to fulfil to the utmost those sacred duties which it has pleased Almighty God in His Providence to entrust you with, "prove all things and hold fast that which is good."

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An Introductory Address

ON

THE MEDICAL STUDENT: HIS WORK AND ITS OBJECT.

Delivered to the Students of the Medical Faculty of University College, London, on Oct. 4th, 1897.

BY RAYMOND JOHNSON, M.B., B.S. LOND., F.R.C.S. ENG.

GENTLEMEN,—We are assembled here to-day to inaugurate the seventieth winter session of the Medical Faculty of this College, and those of you who are beginning your studies and those who are continuing or concluding them are invited to meet together and listen to an introductory address. From time immemorial it has been the custom to surround the admission of students to the profession of medicine with some kind of ceremony. Thus we are told that in the earliest Sanscrit writings the function is described as of a most imposing character. The gods were first propitiated by numerous offerings and then the students were treated to an excellent introductory lecture in which, amongst other things, the teacher counselled them "to be chaste and temperate, to speak the truth, to obey him in all things, and to wear a beard." And in passing it may be remarked that this matter of the beard seems ever to have been under consideration, and by the middle of the sixteenth century it was decided that no apprentice of the Barber-Surgeons Company should wear a beard of more than fifteen days' growth, the penalty being that the unshaven apprentice should forfeit his apprenticeship and that his master should pay a fine of 6*s* 8*d*. Doubtless this regulation was framed with an eye to business, for since the professions of barbery and surgery have been divorced from each other, the medical student has been allowed to follow his own tastes entirely in the clothing of his chin.

It seems but natural that we should begin our year's work by a general meeting together before we start off upon our different duties and doubtless the delivery of an introductory address is a very business-like commencement. Personally, however, I had wished that on this occasion the well-worn custom had been honoured in the breach rather than in the observance and that, having heard the Dean's report and the announcement of the prizes, you, gentlemen, might be free to spend the remainder of the meeting in some more congenial manner than in gathering the dry crumbs which are the best that I can offer you. You are familiar with the words:

> "Some are born great,
> Some achieve greatness,
> And some have greatness thrust upon them."

If my position here to-day is any evidence of greatness I can assure you it has been thrust upon me. And yet, gentlemen, my first and chief duty is a very easy and a very pleasant one—to wish those of you who are here for the first time to-day a very hearty welcome to University College. May the years you spend within these walls be the happy ones they have been to hundreds before you. May the friendships you make grow firmer with advancing time and be something much deeper than mere acquaintances. May you never have reason to regret your choice of a medical school, but may University College become in the highest sense your Alma Mater to whom in future years, wherever your lines may be fallen, you may look with gratitude and respect—I would venture to say with love. Gentlemen, the profession which you have selected for your life's work will call for the exercise of all your energy if you wish for any success. In no other circumstances could you find a wider field for your labours, for I may with confidence assume that each one of you desires to become a widely-informed scientific worker, and something much higher than a mere "medicine man." To none more fully than to those who are engaged in the study of medicine do the words of Alexander Pope apply:

> "The proper study of mankind is man."

We are concerned with man. Man is the material upon which we are called to exercise our craft, and therefore there is nothing concerning mankind at large which a medical man will not be the better for knowing. A great physician has said that each case which comes before us should be considered as "the disease + the person." The "disease" element is provided for in the medical curriculum, the "person" element can only be fathomed by him who from experience has learned to make a rapid and accurate estimate of the man with whom he has to deal. And thus it is that a medical man should be in the highest sense "a man of the world." Let me urge you, therefore not to allow the keen interest which you cannot fail to have in your medical studies to prevent you widening your general knowledge in every possible direction. Keep up your general reading, take a lively interest in all that is going on in the world, and never lose an opportunity of adding to your fund of general information. In your everyday work you will be brought into contact with every conceivable variety of individual, and the more thoroughly you can put yourself into the position of your patient the more accurately will you be able to estimate the personal element of which I have been speaking.

Be sure of this, also, that your patients will expect of you much knowledge which can hardly be called medical. The family medical man is consulted about all kinds of matters which have but a very indirect bearing on his profession, questions which only a sound common-sense and a rich fund of general information can enable him to answer. He is a witness of many plays on the stage of life, and if he would enter into the spirit of the actors he must be a man of "many parts." Each one from "the infant mewling and puking in the nurse's arms" onward to the "lean and slippered pantaloon" and the weary player in the "last scene of all" will look to the doctor for sympathetic interest and will expect to find in him an intimate acquaintance with the part he plays.

These remarks may seem to you somewhat premature at this stage of your proceedings, but it is just when the student's mind first becomes engrossed with the many subjects of our crowded curriculum that there is the greatest danger of general knowledge and culture being neglected; and although it is perfectly true that an earnest worker must find his greatest happiness in his work, it is none the less true that much additional happiness and healthy relaxation can be obtained from outside interests. A hard-worked man without a hobby is like a high-pressure boiler without a safety-valve, likely to burst from overstrain at any moment. Some men are so engrossed with their work that they cannot even enjoy a holiday, and should they in due course be able to retire from active practice, instead of spending their declining years in well-earned leisure, they break up and die, literally from want of something to do. The course of study which you begin to-day resolves itself into two great periods—first, that in which you are concerned with the structure and functions of the healthy human body, together with the study of such sciences as may help to elucidate them, and, secondly, the period in which you will study disease in all its aspects. The importance of thoroughness and method in your earlier studies cannot be exaggerated, for they possess a double value. Not only are they obviously indispensable as a preliminary to the strictly medical part of the course, but they afford an invaluable training of the powers of observation and a means of acquiring a scientific habit of mind. They have, therefore, both a strictly technical and a general educational value. For this reason such subjects as anatomy and physiology demand the most thorough and painstaking study. Frequently the student will find himself confronted with matters in which he fails to see the remotest possibility of any practical application. Not the less on this account must he endeavour to master them and who indeed shall venture to pick out the smallest fact in anatomy or physiology which is necessarily devoid of all practical importance? The study of chemistry, moreover, is daily becoming of greater importance for the proper understanding of the nature and treatment of disease.

Above all things I would implore you not to neglect your practical work in the dissecting room. A thorough knowledge of anatomy will prove of inestimable value to you and can be obtained only in one way—by actual dissection. You may supplement this by the study of text-books, but anatomy learned by reading only is an empty sham. The student may know in order every branch of every nerve and every artery, and be able to draw the brachial plexus on a blackboard with his eyes shut, and yet altogether fail to recognise even the most important of the structures about which he knows so much when he meets with them in their only

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right, but to him unfamiliar, place—the body. Who is not familiar with the sorry sight of the would-be anatomist who, armed with a "Pocket Gray" in one coat-tail and a packet of diagrams and mnemonics in prose and verse in the other, is vainly endeavouring, with the additional aid of illustrations and other people's dissections, to cram up in a few short weeks the knowledge which he should gradually have been acquiring by diligent work in the dissecting room? Such a quasi-knowledge of anatomy may, if the student have good luck, secure him the minimum of marks required for a pass at an anatomical examination, but it will disappear as quickly as it was acquired and need not be mourned for, being from the practical point of view absolutely valueless. At the present time a strong plea for individual practical work in anatomy and the other subjects of the earlier part of the curriculum seems to me to be particularly necessary. The medical curriculum is very crowded—possibly over-crowded—and the constant chain of classes and demonstrations which the student is called upon to attend is in danger of seriously curtailing the time devoted to individual study, especially in practical anatomy. Indeed, I fear that we are in risk of unduly multiplying these classes and demonstrations, valuable as they are, if rightly employed.

There is a grievous error into which the medical student is very apt to fall, that of regarding the acquisition of knowledge as necessary merely for the successful passing of his examinations. Examinations are a very necessary evil, for by such means alone is it possible to determine, however imperfectly, that a student has acquired that degree of knowledge which entitles him to receive official permission to practise his profession. Some such guarantee must be forthcoming; the public who place themselves in our hands demand it, and the State, which entrusts important duties to the medical profession, must have some guarantee of fitness. It is disastrous, however, to regard those tests as the final object of study. And yet how often is the mistake made! The result is invariably the same: the student's work becomes paroxysmal, and occasional periods of phenomenal exertion are separated by long intervals of more or less complete quiescence. In these circumstances the one endeavour is to induce the brain to assimilate for the time being the necessary store of facts, which must be so condensed and arranged as shall fit them to be the more readily brought forth again in the time of need. It is a travesty of the name of knowledge to apply it to such a conglomeration. The information thus obtained lacks, amongst other things, all perspective. Each solitary fact stands out of all relations to its surroundings. The "likely" and the "unlikely," the "probable" and the "possible," are all hopelessly jumbled together. Such information cannot be used for practical application, and is too frequently concerned with the extraordinary to the exclusion of the commonplace. One man may be able to rattle off quite faultlessly the course and branches of of all the petrosal nerves, and yet hardly be able to distinguish a kidney from a spleen, whilst yet another can construct a list as long as his arm of the causes of retention of urine, putting dislocation of the femur in the perineum at the top, and adding stricture of the urethra as an afterthought at the bottom. Gentlemen, let me urge you to look to the quality as well as to the quantity of your knowledge, and aim at something higher than the bare minimum with which so many are content. George Herbert's advice is excellent—

> "Pitch thy behaviour low, thy projects high
> So shalt thou humble and magnanimous be,
> Sink not in spirit: who aimeth at the sky
> Shoots higher much than he that means a tree:"

advice which we may more particularly accept because the poet concludes his verse—

> "A grain of glory mixed with humbleness
> Cures both a fever and lethargicness."

Obtain your knowledge at the fountain head and digest it down by your own efforts, so that it may become assimilated and form an integral part of yourselves. Do not crave too much for specially prepared knowledge or you will lose the power of teaching yourselves, and in course of time, according to the law that the supply is determined by the demand, you will convert the teachers into mere cramming machines warranted to force the largest amount of semi-digested intellectual pap into the student in the shortest possible time and with the least possible effort on the part of himself.

Much has been said in introductory addresses and elsewhere both for and against the systematic courses of lectures which will engage a good deal of your time and attention. Some men—I believe the great majority—can obtain a better grasp of a subject by listening for an hour to the expositions of a capable lecturer than by spending a similar period of time in reading the best of text-books. It is proverbially easier to express ideas in speech than to commit them to writing, whilst the individuality of the teacher should be an important help in impressing the facts which he is endeavouring to elucidate. Moreover, a clear lecturer may avoid uncertainty by a degree of repetition which would hardly be pardonable in the pages of a manual, and is able to draw similes and quote instances which would appear trivial if reduced to black and white. But I would say, if a student honestly believes that he can employ his time better than by attending lectures by all means let him do so; he alone is the loser if he has judged wrongly. Let his absence, however, be honestly due to this belief alone and not in the least degree determined by the fact that the hour fixed for these discourses is often 9 o'clock in the morning. I would repeat that for most men attendance at lectures is one of the most useful means of acquiring knowledge. Frequently, however, a most industrious student may altogether lose the chief value of the lecture by a misdirected energy in note-taking. He labours incessantly from beginning to end taking down the words of the lecturer as far as he can verbatim, and possibly spending much of his evenings in making a fair copy. He thus provides himself at infinite trouble with what is practically the unrevised proof of a text-book on the subject. The serious weak point in such a system is that the student gains nothing during the hour of lecture except a certain quantity of written material from which, doubtless, he may gain useful information by subsequent study, but which has lost the personal stamp of the lecturer. Let the most that is attempted during the lecture be to go carefully with the lecturer along the course which he marks out and merely to note down in the shortest manner the main headings of an argument or of the facts under consideration which may be somewhat amplified when the matter is being subsequently studied.

It so happens that in this College a main thoroughfare runs between the medical school and the hospital, an arrangement which serves to impress the maxim—do not meddle with the affairs on the other side of the road until you have finished with those on this. Nothing is gained, but much valuable time is lost, by a student who is occupied with the earlier part of the curriculum resorting to the operating theatre or wards of the hospital. The desire which attracts him there is not much higher than that which induces a crowd to collect at the sight of an ambulance in the street—morbid curiosity. The sights presented to him are but meaningless tragedies unsoftened by the real interest they will possess for him if only he will wait until he comes to study and not merely to gaze upon them. It is, indeed, needless for me to assure you that only by the most steady and persevering application to your work will you be able to master all that is required of you in the first two years of your studentship. Do not let the first burst of energy be a mere flash in the pan, but begin steadily as you mean to go on.

It may be thought by some that the question of a medical student's recreations, which are not provided for in the curriculum, hardly comes within the scope of an introductory address. Surely, it may be urged, a man may be left to make his own plans for his recreations and amusements. Quite so, and yet surely it is highly desirable that in any institution where men are collected together for purposes of study all reasonable facilities should be afforded by the authorities for the different forms of athletic exercises. In this respect the medical schools of London have been well to the front, and it should be the endeavour of the students of this College to see that their school takes its proper place in the cricket and football fields as well as in the more serious fields of learning and research. Thanks to the Union Society, to which every student and teacher should, if possible, belong, we are now in possession of an excellent athletic ground, and thus a long-felt want has been supplied. To every man, whatever his occupation, regular out-door exercise is absolutely necessary if he wishes to remain the possessor of a healthy mind in a healthy body, and it must be remembered that a professional man is dependent upon his own individual efforts and may

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be compelled to abandon his practice for a degree of ill-health which in many other circumstances would not prevent him remaining at the head of his concerns. It should be his endeavour, therefore, to remain in good working order as long as he can. Whatever form of recreation is adopted, let it be, like your work, indulged in with some sort of method, so that the one may not suffer but benefit as a result of the other. One is but too familiar with the opposite extremes between which, of course, lies the happy mean. One student thinks of absolutely nothing but his work; from morning until night, week in, week out, Saturday afternoon and Sunday included, no relaxation is taken. A student of this class was positively met on his way to the College, with a femur under his arm deep in the contemplation of its inferior extremity. On the other hand, who has not come across the student who, from all appearances is endeavouring to qualify rather as a professional cricketer than as a practitioner of medicine. In this matter I cannot do better than recommend to your consideration the advice lately given by the Master of Trinity, which you will not appreciate the less because it was addressed to a gathering of school boys: "Strive to preserve a right balance between your different enthusiasms." Cultivate the habit of throwing off all thoughts of work at the proper time for recreation, but do not let the latter so occupy you that the more serious matters which should be your first concern are relegated to spare moments when there seems to be nothing else to do. Football and cricket will, of course, take precedence of all other games, and of these the former certainly has the advantage that it can more easily be indulged in without interference with the work of the school. Moreover, football offers the additional advantage that it often combines pleasure with business and affords no small experience in the rendering of first aid to the wounded and a valuable personal acquaintance with the more ordinary fractures and dislocations.

In such an institution as this we necessarily miss much of the social life of a university. A man may, if he be so disposed, pass through the whole of his career here and never know in any real sense a single one of the men with whom he is daily brought into contact. But although such a state of things is possible it is none the less undesirable and by no means necessary. The man who locks himself up within the narrow limits of his own self is denying himself one of the most valuable means of preparation for his part in life. We are all more or less roughly-cut stones—though some perchance be diamonds—and are much improved by gentle friction with others of a like kind. In his work the student will necessarily find himself in constant association and competition with his fellows, and the wise man will not allow any feeling of jealousy to lessen the valuable assistance which he can gain from intercourse with those who are stronger than himself. How exactly does R. W. Emerson hit off what all of us must feel in this matter of friendship. "Our chief want in life is somebody who shall make us do what we can. This is the service of a friend. With him we are easily great. There is a sublime attraction in him to whatever virtue is in us. How he flings wide the doors of existence! What questions we ask of him! What an understanding we have! How few words are needed! It is the only real society."

> "He who has a thousand friends
> Has not a friend to spare,
> And he who has one enemy
> Shall find him everywhere."

Let us then, for our general and individual advantage, do what we can to promote real friendship amongst us. There can be no doubt that many a man has been driven to something approaching despair and has sadly failed in his work for want of nothing more than a real friend to whom he could have gone with his troubles and anxieties and by whose help his way might soon have become smooth again.

Let me here recommend to you the many societies which we have in this college, and of these more particularly the Medical Society. Since its formation in 1828 this has done excellent work. By all means join it, attend its meetings, and do not be a silent member. It affords excellent schooling in the art of speaking—a gift which, unfortunately, so few of us possess. We know exactly what we want to say, but once on our feet we do little more than perspire and splutter and lose our heads; the carefully thought-out sentences rapidly vanish; forty are begun but none ended; until, finally, we sit down, flurried and trembling, leaving our audience in the most blissful ignorance of what we hoped to convey to them. It is a gift worth much pains to acquire to be able in a few clear words to express our meaning, and the medical man will find it particularly useful if he can do this without the use of phrases which to the lay mind may be perfectly unintelligible.

To those who to-day are about to begin their practical work in the hospital how much might be said. Let us ever bear in mind that a hospital such as ours fulfils two great functions. In the first place it is a charity, and in the second place it is a training-ground for students of medicine and a centre for the advancement of medical knowledge—two functions of the greatest importance to the community at large. Now, contrary to what many persons seem to imagine, there can be no doubt that the work of the charity is all the better performed by reason of its connexion with a medical school—I mean that the presence of students in a hospital is certainly an advantage, and not a disadvantage, to the patients. I do not speak only of the many duties which the students in a hospital perform under the direction of the medical officers—duties which are all the better done by reason of that feeling of responsibility which, especially when first appreciated, is such a strong incentive to good work. I refer to the healthy criticism which stimulates into action the best efforts of those upon whom it is brought to bear. Who will venture to deny that a physician or surgeon sitting in the out-patients' room, and for several hours attending to the various complaints of the patients who come before him, will not do his work better and with less risk of some serious oversight when he is surrounded by a group of earnest students than when he works uncriticised and unobserved?

In his clinical work in the hospital the student will find that those habits of method and thoroughness which he has contracted in his earliest studies will prove of the greatest value to him. The two great faculties which the student of medicine should strive to cultivate are, first, the power of accurate observation, and, secondly, the power of drawing accurate conclusions from the facts observed—faculties not different from those aimed at in any form of education, general or special. In speaking of the education of the young it has been observed that "scientific training is not the imparting to others the results of someone else's observations, but the developing in every individual child a mind capable of making its own observations and of drawing its own accurate conclusions. It is not how much a child knows that matters, but how much a child is able to find out and learn for himself." It is better to have a store, scanty though it may be, of carefully made personal observations than a brain loaded to the full with facts said to have been observed by other people. From the very vastness of the subject it goes without saying that the student of medicine will find himself compelled to accept as true many facts which he has not the opportunity of verifying for himself, but these should not be one more than necessary, for they lack that reality which serves to impress facts personally observed. Gentlemen, no period of your career can compare as a training in the art of observation with that which is spent as clerks and dressers in the wards of the hospital. The cases with which you will then be individually concerned will, if rightly observed and investigated, serve as a very sure foundation of your experience of disease. Each case should be followed through with the utmost care, and no detail, however insignificant it may appear, passed by unnoticed. In many instances it may appear to you as though the elaborate details of the written records of the cases, for which you will be in part responsible, are superfluous, and the preparation of them a waste of time. There can be no greater mistake. The training thus obtained in the observation of the symptoms and physical signs of disease is invaluable, and even should the result of your labours be to show that the supposed patient is in reality sound, the time you have spent in coming to this conclusion will not have been wasted. You will often be called upon to decide whether an individual is in a state of health or disease, and before you are justified in stating that to the best of your belief no evidence of disease is present you must have left no stone unturned in your examination. There can be no doubt that many more mistakes in diagnosis result from incomplete examination than from faulty deduction. The latter is excusable, although serious; the former is less serious, but quite inexcusable. Each case thus thoroughly investigated and recorded will become fixed indelibly in the memory and will serve as a standard with which similar cases afterwards met with can be compared.

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In this way alone can a living picture of a disease be obtained which will subsequently be of practical value. The knowledge thus gradually accumulated must of course be supplemented by systematic reading, but this must be kept in its right place and not allowed to take precedence of clinical work. The man whose only acquaintance with disease is that which he has obtained from the pages of a text-book is trusting to a broken reed, and it is proverbial that those who have the greatest store of book-learning are by no means always those who are best able to apply it practically, so that their opinion as to the nature and treatment of a case may be vastly inferior to that of a man whose knowledge, though much less than their own from the point of view of quantity, has been derived from practical experience. Therefore, above all things let your resolve be to see things for yourselves and not to take other persons' words for them. One case thoroughly investigated is worth more than a hundred merely seen.

From the day of its foundation thoroughness in clinical work has ever been the pride of University College Hospital. The hospital is not a large one and, comparatively speaking, is never likely to be, and yet some of the first clinicians of the last half century have received their training within its walls. But whilst urging the paramount importance of a few cases thoroughly observed I would not for a moment under-estimate the value of an abundance of clinical material. No two individuals even in a state of health are exactly alike, and still less are two examples of the same disease ever precisely similar. Every case will exhibit something new and will differ more or less widely from the standard or type with which we compare it, and thus we see the need for the cultivation and exercise of a wise judgment. This alone will serve to distinguish between the fundamental and the superficial. It often happens that the most obtrusive symptom which a patient presents, and of which he himself may chiefly complain, is of small importance as a guide in diagnosis compared with some less obvious sign apparent only to the trained observer. We very rightly entertain the greatest admiration for the man who possesses in a high state of development the gift which we call "clinical instinct." By this he is enabled often with astonishing rapidity to form a correct opinion of a difficult case by a process of the steps of which he is himself scarcely conscious. The ideal clinical teacher is he who not only possesses in a high degree of perfection this clinical instinct, but is also able to analyse for those who are less gifted than himself the train of argument by which he arrives at his conclusions. It is useless for the student to attempt to imitate such brilliancy, much as he may admire it; it is enough for him to keep a strict watch over his power of reasoning and satisfy himself that he has a good sound basis for any conclusion at which he arrives. By such means alone can he hope to gain any firm belief in his own opinion, and, having formed it, to stand by it resolutely, but not pigheadedly. Carlyle tells us that the gift which we call *genius* enables a man to express "what all men were not far from saying, were longing to say." Therefore, I take it, we should all be something more nearly approaching geniuses than we are if only we had the courage to say what we think or are longing to say. Let us learn, then, as Emerson bids us, "to abide by our own spontaneous impression with good-humoured inflexibility then most when the whole cry of voices is on the other side; else to-morrow a stranger will say with masterly good sense precisely what we have thought and felt all the time, and we shall be forced to take with shame our own opinion from another."

It may not be out of place for me to remind you of the necessity of being very broad-minded in your medical studies and of not allowing any special liking or aptitude for some particular branch to cramp your efforts in other directions. It is sufficient for the present that your aim should be to obtain such a sound general knowledge of the principles and practice of medicine and surgery as the few short years at your disposal will allow. This is an age of specialism, and before you know the names of the bones your relations and friends will be asking you what particular branch of practice you intend to adopt. Tell them "general practice" and let this be your aim. Specialism is absolutely necessary on account of the enormous scope of the science of medicine, and men must be found who will limit their efforts mainly to special branches, and by so doing attain to a degree of special skill and knowledge which is impossible to the general practitioner whose sphere of work knows no such narrow limits. The point, however, which at the present day seems to require more full appreciation is that no man has a right to style himself a specialist until he has already shown himself possessed of the knowledge required to equip him for general practice. In fact, some of the most celebrated specialists who could be named spent their earliest years in general practice until a special taste or success in some particular department led them to devote their attention exclusively to it. A specialist should know everything that is known about something, and something about everything else, whereas too often he knows something about something and nothing about anything else. Cavities have a natural charm for him, and gradually his view of life is apt to narrow itself to that which can be obtained through the particular speculum suited to the particular orifice which he has appropriated to himself. He becomes in course of time like the blind crabs in the caves of Kentucky whose eye-stalks still remain, but whose eyes have long since disappeared for want of use. A story is told, for the truth of which I would not vouch were it not transatlantic in origin, of an urinary specialist of this type who explained the presence of an ingrowing toe-nail as the result of the impaction upon the digit of an urinary calculus which he felt sure the patient unconsciously had passed per urethram. Every medical man who is not in general practice is a specialist, although the limits of his special branch may vary much in different instances. His proper function is to serve as a referee for the general practitioner in special cases, and it is certain that the public will live to regret it if they go too far in deserting the good old custom of entrusting themselves to the care of the well-tried family medical man and instead allot their various members and organs to the charge of special custodians. Turn to Oliver Wendell Holmes's "Over the Teacups" and hear what conclusion the Counsellor's friend came to: "Following my wife's urgent counsel I kept on for a whole year with my specialists, going from head to foot, and tapering off with a chiropodist. I got a deal of amusement out of their contrivances and experiments. Some of them lighted up my internal surfaces with electrical or other illuminating apparatus. Thermometers, dynamometers, exploring tubes, little mirrors that went half way down to my stomach, tuning forks, ophthalmoscopes, percussion hammers, single and double stethoscopes, speculums, sphygmometers,—such a battery of detective instruments I had never imagined. All useful I don't doubt, but at the end of the year I began to question whether I shouldn't have done as well to stick to my well-tried practitioner. When the bills for 'professional attendance' came in, and the new carpet had to be given up, and the old bonnet trimmed over again, and the seal-skin sack remained a vision, we both agreed, my wife and I, that we would try to get along without consulting specialists except in such cases as our family physician considered to be beyond his skill."

We are indeed at the present day possessed of a wondrous "battery" of means for the investigation of disease, many of the greatest value, some requiring much skill for their right application, but all worthy of our most careful study. The physician who suspects tuberculosis proceeds to search for the bacillus tuberculosis in the secretions and discharges and may even resort to experimental inoculations; he confirms his diagnosis of typhoid fever by observing Widal's remarkable reaction, and in a doubtful case of diphtheria forms his decision by noting the character of the growth of micro-organisms obtained from it. The surgeon calls in the aid of the microscope to clear up his doubt as to the nature of a tumour; he trusts to the Roentgen rays to tell him whether he is correct in his diagnosis of fracture; and frequently has resource to that valuable, but sometimes abused, investigation—an exploratory operation. All these and many other such methods are of the greatest value if rightly used, but there is just this fear that in our eagerness to resort to them we may at times be inclined to neglect those more ordinary methods of examination which can be conducted by the skilled eye, the educated touch, and the trained ear. Let us not use our naked eyes the less carefully because we are enabled when necessary to supplement them by oil-immersion lenses, not pay less regard to all the clinical features of some obscure abdominal tumour because in the end we intend to expose it by operation and see what it really is.

Gentlemen, I must soon close or you will be inquiring whether my vocation in life is to preach or to practise, but before doing so I would ask you to bear in mind that you will lose much of the value of your hospital work unless while you are learning how to deal with disease you learn

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also how to treat the patients. Be kind and courteous to them, for an ailment which to us may be trivial and possessed of but little interest is to them a very real and serious affair, and they will naturally be disappointed and distrustful if they notice that we regard it as a matter of little concern. Much patience and tact are often required to extract the information we require, whilst considerable skill is often called for rightly to interpret the answers to our questions. It is needless to say that no gentleman will adopt one plan of treatment for the poor in the hospital and another for the well-to-do outside it. Further, the student, whilst performing the duties of even the most humble appointment, should appreciate the fact that the work he does will reflect either to the credit or discredit of his hospital, according as it is carried out thoroughly or carelessly, and that a very little pains more or less on his part may make just the difference to the comfort and welfare of the patients with whom he deals. Those who after receiving their qualifications are fortunate enough to obtain resident appointments in the hospital cannot too fully appreciate the responsibility of the position they occupy. In duty to themselves they should endeavour not to miss a single one of the many advantages for practical study which hospital life affords them. In duty to the institution they must recognise the dignity and grave responsibility of the work which they have voluntarily undertaken. In duty to the more junior men, who will take their standard from them, they must be punctual, thorough, and painstaking; for of this I am sure, unless a remarkable change has occurred in the few years since I was a student in the hospital, that the clerks and dressers look more to their house physician or house surgeon than to the members of the staff for their first lessons in the practical aspect of their work, and the resident officer who neglects this part of his duty is missing a splendid opportunity, for there is no better way of teaching oneself than by endeavouring to teach others.

We are rejoicing to-day in the magnificent service which Sir Blundell Maple has done to University College, and many of you will have the privilege of enjoying at least some of the advantages of the new hospital. Since the day of its foundation as a humble dispensary on Sept. 28th, 1828, University College Hospital can show a record of work of which we may well be proud, and it is not without a passing pang that we realise that the old building will soon be numbered among the things of the past. May a double portion of the spirit of energy and enthusiasm which has stimulated our workers in the past fall upon those who shall be privileged to carry on their labours among the far more favourable surroundings of the future. May we never merit the reproach that we have missed the splendid opportunities which lay before us. Gentlemen, we pride ourselves on our past achievements, but we must not live upon them alone. The future is ours, and we have the making or the marring of it. It is to you, gentlemen, who year by year come forward with fresh instalments of enthusiasm that the College looks to make her reputation in the past an earnest of great deeds in the future. Were I possessed of the highest eloquence and powers of oratory they should all be employed in my endeavour to fire you with enthusiasm. Successes and failures must come to each one of us. Let success be an encouragement to further efforts and not an inducement to rest upon the laurels gained. Let failure not dishearten us, but rather stimulate our energies to follow it with success. And if at times you feel despondent do not give way to despair—"Look not to the mournful past—that comes not back; wisely improve the present—it is yours; go forth into the future without fear and with manly heart."

HOME FOR CRIPPLED CHILDREN AT GOSFORTH.—A new Home for Destitute Crippled Children was opened at Gosforth, Northumberland, on Sept. 30th, by Mrs. Hilton Philipson, who unlocked the principal door with an ornamental golden key in presence of a large and influential gathering. The institution provides accommodation for 110 boys and girls; it has cost about £10,000, and continues the work of the former home at Wallsend. The annual report was read, in which it was stated that the building fund had reached a total of £8500, leaving about £1500 still to be raised. Mr. Hilton Philipson had contributed £2000 to endow five cots, in addition to a sum of £1100 which was given by him at the commencement of the home's career in Wallsend, and which formed the nucleus of the building fund.

Remarks
UPON
CANADA: ITS CLIMATE AS A HEALTH RESORT AND ITS POSITION TOWARDS MEDICAL SCIENCE.

Being the Introductory Address delivered at the Middlesex Hospital Medical School on Oct. 4th,

BY LORD STRATHCONA AND MOUNT ROYAL, G.C.M.G., &c.,
HIGH COMMISSIONER FOR CANADA, AND CHANCELLOR OF MC GILL UNIVERSITY, MONTREAL.

GENTLEMEN,—While appreciating most fully the honour of being asked to address the students, past and present, of the Middlesex Hospital School and to distribute the prizes I must confess that my idea of what the duty of doing so involved fell far short of the reality. It occurred to me that at the most a few words of a more or less formal character would be all that was needed, and only quite recently did I begin to realise what is expected on such an occasion. A little more consideration, instead of consenting rather hurriedly to comply with the request, might have led me to hesitate to accept the very kind and flattering invitation of the Council conveyed to me through Dr. Pasteur, the Dean, especially now that I call to mind the eminent men who have preceded me in the position. Yet I am glad to be here, since I regard the medical profession as one of the noblest of all the professions in view of the great service it has rendered, still renders, and unquestionably will continue to render, more and more to mankind. And, again, no one more thoroughly recognises than I do the immense utility — indeed, the absolute indispensability of the great hospitals — among which the Middlesex Hospital has played so important a part for over a century and a half. They supply the best medical advice and assistance to those among our suffering humanity who are not able to pay for the attention they are thus enabled to receive gratuitously; and the opportunities they afford of raising to a still higher standard education both medical and surgical, and in connexion with the training of skilled nurses—now so essential an adjunct to the medical profession—cannot be over-estimated.

It has been my privilege within the last few weeks to be in Canada during the meeting of the British Medical Association in Montreal, and I am glad to be able to refer to its success from every point of view. It was a happy idea that such a *réunion* should take place in one of the outlying portions of the empire, especially in the present year, when Imperial sentiment seems to have shown a vigour not previously witnessed, and when the Dominion of Canada and the colonies of the empire have been brought much more closely towards the mother country than they have ever been before. The fact that two great associations like the British Association for the Advancement of Science and the British Medical Association should both in one year hold their annual meetings in Canada is proof in itself of the improvement that has taken place in the means of communication between the different parts of the world. It tends further to show the colonies that the term "British" includes them, and that they are as much a part of the empire as any of the counties or divisions of the United Kingdom. Nothing but good can result from the opportunity of the interchange of thought between the medical men of the United Kingdom, Canada, and the United States, and I venture to think that the greatest possible benefit will follow the recent successful meetings of these important bodies. We were delighted to welcome the British Medical Association in Canada for many reasons. It was doing the country an honour that they should visit us, and it was felt also that the occasion would afford the opportunity to a large number of men of light and leading in the medical profession to form an idea of its climatic advantages, of its position as a health resort, and as a new field for travel in the case of those requiring both rest and change—without the necessity of giving the change to the waiters and the rest to the keepers of the hotels, which has

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humorously been said to be the net result of a good deal of the foreign travel which takes place. In the western districts of Canada—that is, on the prairies—the air, from the altitude of the plains, is very dry and bracing, and a stay there has been found to be very beneficial in cases of lung and chest troubles. This is becoming recognised in the United Kingdom, and many persons who have suffered from pulmonary complaints and affections of the kind have been practically free from them while staying in the Dominion. This is also the case in the Rocky Mountains, among the pine forests, and the Kamloops district; and the establishment in that district of a large institution in the nature of a sanatorium is seriously contemplated. There are likewise medicinal springs to be found in places, not the least known among them being the sulphur springs of Banff, where water of a temperature of 100° and upwards flows from the sides of the mountains. They are now visited by invalids from Canada and the United States, and no doubt their fame may some day extend to England. Canadians are proud of their country. They are anxious that it should be better known among their fellow subjects in the mother land than it is to-day, and we are quite certain that those ladies and gentlemen who visited the Dominion this year as members of the two associations already referred to will return with feelings as warm as our own for what we regard as not the least important part of the British Empire.

The practical annihilation of space resulting from improved means of communication was strikingly illustrated to me a few years ago during the lifetime of my late dear friend, Sir Andrew Clark. A young man of good family was taken seriously ill in British Columbia. He was in a critical condition, and his friends were naturally most anxious about him, especially in view of the 6000 miles that separated them. It was arranged by the courtesy of the Cable Company to have a conversation between London and Victoria during the night—Sunday night it was—when the cables and telegraphs were not much engaged. Sir Andrew Clark kindly framed some questions to be put to the medical adviser of the distant patient. From the office in London messages were interchanged as rapidly as they could be transmitted, the symptoms were explained, and the treatment discussed, and I am happy to say that the young man recovered. Of course, I do not mean to imply that this was the direct result of the telegraphic communication, but it enabled the friends of the young man to be assured that everything possible was being done for him, and the practitioner in Victoria had the benefit of the opinion and advice of the eminent and good man with whom it was my privilege to be on terms of friendship for many years.

You will, I think, be interested to learn that the training of the medical profession in Canada has made much progress in the last few years. Year by year large numbers of young men are trained and qualified in practice, and many of them visit England and the Continent after obtaining their degrees in order better to prepare themselves for the important work to which they propose to devote their lives. The excellence of the instruction given in Canada and of the clinical advantages that are available are demonstated by the fact that it is the exception for any of the Canadian graduates to fail in the examinations for degrees on this side. There are eleven medical schools in Canada. The oldest as well as the largest is that of McGill University, Montreal, which is now entering upon its sixty-seventh session. Many of the requirements and advances in medical education on the American continent were first instituted there. It is the only Canadian medical school that has an endowment (derived from benefactions from the citizens of Montreal), the others being dependent on the students for carrying on their work. All the Canadian medical schools require a four years' course, with sessions of from eight to nine months, and the methods of teaching follow closely those of the English and Scotch schools. The Faculty of Medicine at McGill is always kept up to date. The latest improvement is the equipment of the Museum of Public Health, and considerable additions have also been made to the Laboratory of Experimental Pharmacology. It is now four years since the department of hygiene was established, and part of the interest of the endowment was set aside to provide a Museum of Public Hygiene and Preventive Medicine. This has been allowed to accumulate for the last few years in order that a sufficient sum might be available to make a good start. The museum occupies three rooms in the medical building, and at present is chiefly of interest on account of the number and excellence of the working models illustrating the best modern methods of sterilisation, disinfection, filtration, and ventilation, together with a very useful collection of modern sanitary apparatus. It is expected that the museum will be found of great advantage in connexion with the lectures on public health, which for the future are to be regularly given. The students have also the advantage of the pathological laboratory at the Royal Victoria Hospital, which is admitted to be one of the most complete and instructive of any to be found either in America or in this country. While touching upon the question of education it is right to mention that medical students in most parts of Canada have the advantage of attending many excellent hospitals in the different centres of population. This is especially the case in Montreal, and members of the British Medical Association are said to fully appreciate the work that is being done by hospitals in that city and the manner in which the institutions are equipped. Some of the Canadian hospitals will compare more than favourably with institutions of the kind in the provincial towns of the United Kingdom, and even with many of those to be found in the great metropolis. Within the last few years, also, the training of nurses has attracted much attention, and numbers of these devoted women are to be found pursuing their noble work in every part of the country.

I regret I am not able to say that the position of the medical profession in the different provinces of Canada is as satisfactory as it might be in some respects. Licences to practise are issued by the medical boards in the different provinces, but they are only tenable in the provinces in which they are granted. A graduate in one province could practise in another on carrying out the local conditions, but in my judgment a licence issued in one part of Canada should entitle the holder to carry on work anywhere within the limits of the Dominion, and, indeed, in any part of the empire. The granting of authority to practise medicine should be under the control of a Dominion medical board as a matter affecting the community in general, and there should be uniformity in regard to the standard of study and the qualification to practice. The absence of facilities of this nature in Canada also operates to prevent Canadian medical men practising in the United Kingdom. They cannot be placed upon the registry for that purpose at the present time on the strength of their local qualifications until the Act of 1886 is extended by Order of Council to the provinces of the Dominion. This has not yet been done, as none of the provinces have passed the legislation necessary to enable reciprocal treatment to be extended to graduates from the United Kingdom. The matter is, however, receiving attention in the medical profession, and we trust it will not be long before the difficulties to which attention has been called are removed. No inconsiderable part of my life has been passed in some of the less populated districts of Canada where members of the medical profession were conspicuous by their absence. In fact, I hardly think I saw a medical man for a period of fifteen or sixteen years. Perhaps with some the introduction of the profession was not altogether popular, and there may have been an idea that when medical men were about complaints and sickness were rife and that little or no trouble of the kind existed and no malingering among the work-people when the medical man was absent. This no doubt resulted from the good health they experienced themselves in the salubrious surroundings of the northern climate in which they passed so many years of their lives.

You may be interested, perhaps, to learn something of the condition of things in the part of the Dominion to which I refer—the coast and inland district of Labrador—from the medical point of view, at any rate so far as they can be told by a layman. There is always a large mortality among the native children, resulting largely from lung diseases, and adults suffer a good deal from similar complaints. Rheumatism and affections of that kind are little known. Fevers are more or less common, but few of the organic diseases of civilisation are prevalent, and insanity and nervous diseases are more or less unknown. The people cannot be said to be long-lived, although exceptions occasionally occur, and from fifty to sixty years is regarded as a good age. It is very rare that one sees a bald head among the natives, and the hair does not change much in colour with age. So long as the natives keep to their own food and habits—they live largely on meat and fish, always cooked, and upon wild berries and fruits—they

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generally retain their teeth. In fact, I have seen teeth worn almost to the gums without showing signs of decay. But in the case of the natives from the interior who adopted the food of the white men they soon lost their teeth; and from indigestion, and it may be from other causes incident to the change of living, their lives were often shortened. Although the climate is severe and the summers are short the country is healthy, and no doubt the open-air life conduces to freedom from disease. With regard to the treatment of disease they have their own remedies. A form of Turkish, or rather vapour, bath has been in vogue among the natives as far back as we have any records. They rig up a small tent, put stones that have been intensely heated inside and pour water upon them, and then take the bath. This is regarded by them as the most beneficial treatment in many complaints. They have also their decoction of herbs and they understand the preparation of nourishing foods, which are given in cases where there is a failing of strength and vitality. In the case of lung diseases they have much faith in the virtues of a decoction made from boiling crushed bones and marrow, and it is largely used. Small-pox is, of course, known, although fortunately it is not common, and vaccination has been accepted by the Indians cheerfully as a preventive measure. Amputations are occasionally performed by the natives themselves, or by the European and Canadian residents, in a primitive way. This is inevitable in that part of the country where medical men are often hundreds of miles away, but in this connexion I must refer to the improved state of things which has resulted in the last few years from the organisation of the Medical Mission to Labrador under the auspices of the Deep-sea Mission, whose hospital steamer patrols the coast during certain seasons. The mission extends medical relief to the inhabitants requiring it, and provides limited hospital accommodation throughout the year at one or two places.

It may interest you to know that what may be termed a primitive and somewhat rude form of antiseptic treatment was practised in the district many years before Lord Lister introduced his great discovery. For the treatment of wounds, ulcerated sores, &c., a pulp was made by boiling the inner bark of the juniper tree. The liquor which resulted was used for washing and treating the wounds, and the bark, beaten into a plastic, pliable mass, was applied after the thorough cleansing of the wound, forming a soft cushion lending itself to every inequality of the sore. Scrupulous cleanliness was observed and fresh material used for every application. It will, I think, be admitted that this is essentially the basis of the antiseptic treatment which is now so important, and with which the name of Lord Lister will ever be honourably associated. It shows that while discoveries and inventions are being made in centres of the highest civilisation they may yet be practised in a primitive way in distant and more or less inaccessible localities of which scientists may at the time be unaware. Perhaps I may be permitted to relate to you another little interesting experience which came to my notice. On the Labrador coast thirty or forty years ago there was a serious outbreak of scarlet fever accompanied with diphtheria. Many of the people died, both children and adults, and the survivors were so alarmed by the spread of the disease and its fatal results, and were in such an abject state of fear, that they kept away from the houses in which people were known to be suffering. There is little doubt in my mind that many of the persons died from simple dread of the disease and the fright occasioned by the mortality. An officer of the Hudson Bay Company visiting the settlement found this state of things existing. It was reported to him also that the family of a former employé of the company, a Scotsman, had taken the disease at a place some twelve miles distant. The official mentioned went there and found the whole family confined in a small hut, the different members being scattered over the floor, and, in fact, in any place where room could be found. The door was shut and so were the windows, and the odour that came when the door was opened can best be left to the imagination. One of the family, a boy, had died, and was lying in an outhouse. The first thing to do was to break open the window and let in air, and then to administer some remedies. All the other members of the family recovered, and the utter helplessness and abject terror which had previously prevailed among the inhabitants were at once changed into a feeling of hope. They saw that death was not inevitable, and, happily, although the disease still lingered on for some time, not a single fatal case was subsequently recorded. I merely mention this to show the moral effect of the return of confidence, which resulted from the death record having been temporarily stopped by the exercise of a little common sense. Another curious incident comes to my recollection. A resident in the country returned to England in consequence of a severe illness. He consulted the best medical men, and his case was diagnosed as one of Bright's disease. He was told that he could not last more than a few months, and made up his mind to return to Labrador to end his days; but the unexpected happened, and he lived for many years afterwards. Some of the natives knowing of his complaint, or, at any rate, of the symptoms, advised him to prepare a decoction from the juniper shrub and to drink nothing else for several months. In despair he did what was suggested, and after some time appeared to be perfectly cured. It is not claimed, of course, that the recovery was due alone to the efficacy of the remedy; it may have been that the case was imperfectly diagnosed or that a mistake had been made, but the circumstance shows the local belief in native remedies, and that not a little attention is paid to natural medicine and to the properties of the trees and shrubs which are found in the country even in the absence of any skilled knowledge of botany or experience of medical science.

A point suggests itself to me which may not be without interest to some of you. It is in connexion with the relative value of a meat and fish diet in respect to health and sustaining powers. A very general belief prevails, I think, that meat is the more nutritious and strengthening of the two, but this is not borne out in the experience of the Hudson Bay Company. In former years in certain districts the food of the employés was almost solely the flesh of the buffalo, deer, &c. In others it consisted mainly of fish. Opportunity was offered for testing the merits of the different foods each spring when the brigades of boats were on the way out with their furs. In these circumstances there were naturally trials of strength in rowing, and in the result the fish-eating crews invariably had the advantage, especially in long-sustained efforts. This proves, it appears to me, that theory and practice in these matters do not always coincide.

I hope I am not wearying you with these little incidents which I have come across during my life in Canada, but it has been suggested to me that I might relate to you an experience that came under my observation as showing the tenacity of infection, although it relates to animals and not to human beings. About forty years ago there was an epidemic among the dogs in the Arctic regions, and I need hardly impress upon you the consternation which it caused, seeing that in those parts of the world the dogs provide the only means of communication between the different districts during the long winter. The disease, which was not the ordinary distemper, came from the far north, indeed, as far north as the Esquimaux were to be found, and gradually spread itself south along the Labrador coast in the course of two years. The dogs which caught the infection were seized with vertigo and within a few hours death ensued. I knew of a dog that had not been within 100 miles at the time of any infection. An Esquimaux, however, arrived one day in the depth of winter, after a journey of more than 100 miles, which took him about eight or ten days, and in the intervening period he had not been in contact with any dogs. On his reaching the place the dog, knowing him, jumped upon him and gambolled about. The next day it was taken with the malady and in a few hours was dead. The assumption is that the man's wallet, in which he carried his letters and belongings, had been in contact with dogs at other places, and that the infection was conveyed in that manner, notwithstanding the intense cold which prevailed. It might be mentioned as a curious coincidence that only the native dogs suffered from the affection, whatever it was, and that dogs of the smaller types escaped either entirely or at any rate with slight attacks. As already suggested, the Hudson Bay posts became in a way medical centres in the districts in which they were established. The officers, for their own benefit and for the benefit of the natives, tried to acquire a certain amount of medical skill from text-books, and of course they were supplied with the simple remedies for certain diseases. They were also called upon to practise surgery, amputations having occasionally to be performed, especially as the consequence of the extremities being frozen in the severe climate of the far North. Many of them acquired more than a local reputation,

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and there is reason to believe that bread pills and simple lotions, accompanied by faith, have effected marvellous cures.

But I am sure you have had enough of these personal experiences, and I should like to take the advantage of saying a few words on the subject of Canada. The proportion of medical men is fairly large in the Dominion, although not so large as in the United States. There are, however, large parts of Canada, particularly in the West, that are not yet occupied. That they will afford homes to millions of people in the more or less near future is as certain as that I am standing here, and there will thus be new fields continually being found for the activity of the students graduating every year, the numbers of which are ever on the increase. At the same time we do not encourage young medical men to go out from this country to Canada in search of employment for their skill unless they have friends in the country or are not dependent upon immediate work for their subsistence. The demand for medical men is amply met by the supply on the spot, although the old axiom that there is always room on the top of the ladder applies equally to Canada as elsewhere. You have no doubt seen recently that the few medical officers in the newly opened up goldfield of the North-West Territories in the Yukon district seem to be reaping a golden harvest, and £40 a visit has been mentioned as a common thing. I hope this will not encourage any of my audience to go out this year. The country is difficult of access, the mode of living is necessarily rough, and the expenses are great, so that notwithstanding the high fees that may rule for a time (and they can only be temporary) there are compensating disadvantages which have to be carefully considered.

In conclusion, will you allow me to say that in my opinion it cannot be too strongly impressed upon medical students that an important heritage descends to them, that they have to maintain the reputation of the school, built up by those distinguished men who have gone before them, and that great opportunities are open to them, as the result of their studies and investigations, of making life more pleasant and happier. It is only right, in my judgment, that the qualifications of graduates should be submitted to a severe test before they are allowed to practise; and, on the other hand, it seems to me to be a duty belonging to our legislators to see that persons without such qualifications are not let loose upon the community. Further, it is surely desirable that every proper means should be used to prevent quackery and to restrict the wide and unrestricted advertisement of nostrums. In fact, I should like to see a great deal more done to protect, promote, and encourage, in the interests of mankind, the beneficent work of the medical profession. Eminence in your profession, or, indeed, in any of the higher walks of life, cannot be attained without much labour and application. Indeed, it has been said that medical men must always remain students, and no one who has thought of the subject at all will dispute the statement. May I therefore venture to earnestly impress upon my audience the necessity of steady work and perseverance? It may appear at times tedious and tiresome, although such feelings are almost impossible when one's heart is in one's work. But success cannot be attained without effort, and for the ambitious man, the man who wishes to build up a reputation and to improve the condition of his fellow men, I know of no more attractive and inviting field than that offered by the medical profession. Besides, there is the competition which has to be faced in modern times. This may be good for the community, but it is also good for the profession, for the man of ability, the man of method, the man of investigation, must always come to the front. We often hear of certain persons of transcendent ability. In almost every case it is known that such a reputation has been made by indomitable perseverance and by abiding application, and does not so much depend upon any inherent pre-eminence in the individual. I trust you may agree with me in thinking that the attainment of the highest standard is open to the majority of our fellow men—that, given a sound body, ordinary intelligence, and a fair education to start with, any man who applies himself with all his might, and who will allow nothing to draw him aside from his purpose, may, apart from that ethereal, and might I dare say mythical, thing called genius, succeed in doing whatever others have been able to accomplish. At any rate, it is always safe for a young man to keep such an ideal before him. It is far from my desire to preach, but I have lived a good many years, and I am sure that what is true in other professions applies with much greater emphasis to the medical profession. I have only now to thank you very much for the patient hearing you have given to the disconnected remarks I have ventured to make, and to assure you that I shall always take great interest in the welfare and success of the Middlesex Hospital and of its medical school.

A THEORY OF ACTIVE AND PASSIVE IMMUNITY FROM THE BACTERIA OF CHOLERA, TYPHOID FEVER, AND THE LIKE.

BY PROFESSOR MAX GRUBER,
OF VIENNA.

Communicated by HERBERT E. DURHAM, M.B., B.S. CAMB., F.R.C.S. ENG.

THE experimental observations which have been made by myself, conjointly with Mr. Herbert E. Durham, during the last eighteen months upon the microbes of cholera, typhus abdominalis, &c., lead to the following conclusions in regard to the origin and nature of the immunity produced by means of these microbes:—

1. A high degree of long persisting immunity can be obtained by means of intra-peritoneal injections (in guinea-pigs) of microbes killed either by chloroform or by exposure to a temperature of 60° C. Such killed cultures of cholera, and other vibrios, of typhoid, and coli bacilli, &c., have little or no poisonous properties; the guinea-pigs show trifling symptoms in the course of treatment; they recover rapidly, even when such large doses as 0·5 gramme per 1 kilogramme are eventually exhibited. The only constant symptoms arising from these injections are to be attributed to the peritonitis, which is caused by the proteins of the bacteria. It follows from these facts that the dead bodies of the bacteria are not poisonous in themselves; and, furthermore, that the immunising constituents of the bacteria are not identical with the bacterial toxins.

2. The animals, when immunised by this method against the above-named bacteria, are truly infection-proof, but they are by no means toxin-proof. At the present time we are not dealing with toxin-proof immunity; and we are far from saying that animals cannot be rendered proof against the toxins of the above-named bacteria by the use of suitable methods.

3. The destruction of the bacteria takes place through the medium of the juices in actively immunised animals as well as in animals which are protected passively by means of the serums of immunised animals. This fact has been correctly observed and emphasised by Pfeiffer. The (polynuclear) phagocytes only play a secondary and comparatively unimportant part in the process.

4. Protective or antagonistic substances (antikörper) are always present in the blood and juices of the immunised animals. They are already formed and are not suddenly produced at the moment that a further inoculation is given, as has been asserted.

5. Both in actively and in passively immunised animals these substances (antikörper) react directly upon the bacteria, whether the contact occurs within the body or *in vitro*. There is no evidence that they undergo any changes or transformations in conjunction with the normal juices when animals are protected passively by their aid.

6. These protective substances are the characteristic constituent of the blood and juices of immunised animals. They are not capable of actually killing the bacteria by themselves.

7. The actual destruction of the bacteria is effected in all animals, whether actively or passively immunised, by means of the alexins of Buchner. These alexins are general protective substances entirely without specific action; they are universally present in all animals. Phagocytosis only takes a secondary share in the destruction.

8. The essential action of the protective substances of the blood and juices of immunised animals consists in making the bacterial cell walls adhesive. This is shown by the fact that

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the bacteria become sticky when treated by these juices; in consequence, they adhere together in clumps and lose their motility. This fundamental phenomenon in the action of protective sera has been entirely overlooked by Pfeiffer and his pupils (see note appended); it has been seen by Metchnikoff and Bordet, but they have neither recognised its importance nor its true meaning. On account of this fundamental action we propose to call the specific antagonistic substances of immunised animals "agglutinins."

9. The agglutinins act upon the sheaths of the bacteria and make them more penetrable. The alexins are enabled thereby to reach the bacterial protoplasm and to destroy it—in other words, to kill the bacteria. This process takes place quite indifferently inside the living animal or *in vitro*, the only condition necessary being that both agglutinins and alexins are present.

10. The agglutinins are used up during the process, perhaps by chemical combination or perhaps by actual destruction. It therefore follows that the extent of action of the juices of an immunised animal is directly proportional to the amount used.

11. Active immunity never occurs without evidence of the presence of agglutinins.

12. Active and passive immunity are identical in nature. Both forms of immunity depend upon the presence of agglutinins.

13. It has been asserted that active immunity persists even after complete disappearance of the protective substances—that is to say, after the tissue juices have lost the power of conferring a specific passive immunity. This in reality is only the expression of the fact that the degree of concentration of the agglutinins gradually diminishes as time goes on; eventually the proportion of agglutinins present is insufficient to be effective in producing passive immunity.

14. I have been able to prove the presence of agglutinins thirteen months after the last immunising injection. How much longer they persist I am unable to say, as at present I have not any animals which have been kept a longer time since their last treatment.

15 Agglutinins are specifically different. Each kind of bacterium has its own kind of agglutinin.

16. The influence of these specific agglutinins is, however, not limited specifically; it shows gradations in intensity of reaction, the maximum intensity of action being manifest upon its own kind. On other species the action is the more intense the more closely allied the microbe is to that by means of which the agglutinin was prepared.

17. Pfeiffer's assertion that an absolute specificity exists in the action of protective sera is not in accordance with, or supported by, observed facts.

18. The agglutinins are without doubt derived from certain constituents of the bacteria themselves (specific proteins?). They are produced only in the bodies of actively immunised animals, probably by combination with some constituents of the animal body. The site of production is perhaps in the macrophages; these cells ingest and destroy the polynuclear leucocytes which are laden with bacterial products.

19. The above conclusions are drawn from experiments with the microbes of cholera and allied vibrios, of typhoid fever, and the like. In diphtheria and tetanus other factors are probably present.

Note by Mr. DURHAM.—Professor Gruber has kindly invited me to give some of my own views on the subject of the above remarks. In the first place it must not be thought (*vide* Conclusion 1) that agglutinins are present solely in animals treated according to the manner described. It appears to be quite indifferent whether the bacteria used in the immunisation are living or dead in so far as the production of agglutinins is concerned; moreover, lately I have proved that immunisations carried on with germ-free filtered products also give rise to the presence of agglutinins. It goes without saying that the avoidance of inoculating with living microbes has great advantages in the immunisation of animals. With regard to the toxicity of the bacterial bodies it is interesting to note that Pfeiffer himself admits that the killed bacteria are not less than twenty times less poisonous than the living bacteria,[1] 12 milligrammes of killed culture being equivalent to 0·6 milligramme of living cholera vibrios, although he has long been the champion of the pretended great toxicity of dead bacterial bodies.

It must not be understood that the substances which we have termed agglutinins are only able to cause susceptible microbes to gather together in clumps or flocculi; they also act as inhibitors to the growth of the organisms, as also to the formation of metabolic products. For instance, pyocyaneous serum inhibits the formation of pyocyanin, and the serum of a phosphorescent vibrio can annul the phosphorescent power of this vibrio, as I recently demonstrated to the Fellows of the Royal Society. These and many other facts point to a weakening of the microbe by the direct action of the agglutinins upon them, and I cannot but think that this influence is exerted upon the bacterial protoplasm rather than upon the dead sheaths of the bacteria. It is well known that in the face of highly virulent microbes both alexins and phagocytes are unavailing, whilst with the microbes of a low degree of virulence these means are ample for ensuring the destruction of the microbes. By the use of an appropriate kind of serum an extremely virulent microbe can be made non-virulent in a few seconds, or possibly in less time, so that it degenerates when brought into contact with alexins.

I have shown that the requisite degree of weakening can be obtained by heating an emulsion of bacteria to a sufficient extent; the bacteria are then unable to withstand the alexins and they degenerate rapidly. That the protoplasm of the bacteria is the most important part of the micro-organism there can be no doubt, and the above facts appear to me to point to the conclusion that the prime action of the agglutinins is upon the bacterial protoplasm. This is further shown by the influence these substances have upon the naked protoplasm flagella of the microbes; the agglutinins paralyse their movement. In extremely diluted sera some individuals can be seen to stick to one another without doubt by their flagella; they rotate madly about their fastened extremity. So that it is evident we are dealing with something more than a mere increase of adhesiveness of the surfaces (sheaths) of the bacteria, which stickiness may, after all, be due to some sort of secretion.

Although the amœbocytes, especially the polynuclear leucocytes (*vide* Conclusions 3 and 7), only play second string to the extra-cellular agents in the destruction of bacteria, yet it must be admitted that their action as scavengers is by no means unimportant in ridding the animal of its unwelcome parasites. Personally I am inclined to regard the polynuclear amœbocytes as very important agents in the broad field of bacterial destruction. In my paper before the Royal Society, and in a paper which will shortly be published in the *Journal of Pathology*, I have avoided the term "specific" as inappropriate (*vide* Conclusion 15); in its place I suggest that the words "special" and "specialise" should be used as they designate the reality more accurately. In conclusion, Pfeiffer has quite recently shown that even after his long years of study on the "specific" action of the sera in typhoid fever and cholera he has at last recognised the fundamental fact of the action of agglutinins.[2]

[1] Deutsche Medicinische Wochenschrift, Nos. 7 and 8, 1896.

[2] Pfeiffer and Kolle: Deutsche Medicinische Wochenschrift, March 19th, No. 12, 1896. The following papers may also be consulted; M. Gruber (abstract): Münchener Medicinische Wochenschrift, No. 9, p. 206, 1896; (longer paper, Wiener Klinische Wochenschrift, Nos. 11 and 12, 1896; H. E. Durham (abstract): Proceedings of the Royal Society, Jan. 3rd, 1896; and Brit. Med. Jour. (epitome), March 14th, 1896, p. 44.

ON FOUR CASES OF GOITRE TREATED BY OPERATION, AND CERTAIN DANGEROUS SYMPTOMS WHICH MAY FOLLOW THE OPERATION.[1]

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THESE four cases of tumour of the thyroid gland were operated upon during the time I was house surgeon at University College Hospital. Three of the cases were under the care of Mr. Horsley and one was under the care of Mr. Heath. My purpose is especially to investigate the meaning of certain symptoms which were present in two of the cases with a fatal result in one—symptoms well known to

[1] A paper read before the Medical Society of University College, London, Feb. 9th, 1897.

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all who have had experience of thyroid disease, but about which not much has been written.

CASE 1.—A married woman, aged forty-nine years, was admitted to the hospital on Feb. 20th, 1896. She had a very large cystic thyroid gland involving both lobes and causing serious dyspnœa by pressure on the trachea. The dyspnœa was very marked and prevented her from lying down, so that she slept propped up in bed. In spite of this she had continued at her work until a few days before admission, and she insisted on walking upstairs to the ward, but arrived at the top of the stairs in a very alarming condition. When quiet her pulse was 116 and her respirations were 40 per minute. On the next day Mr. Horsley operated. The right lobe of the thyroid gland, which was the larger, was dissected out through a free incision, all the vessels being clamped before they were cut. A cyst on the left side was afterwards enucleated, but it was ruptured during removal and a good deal of the pale brown contents necessarily escaped into the wound. The trachea was found much compressed—reduced almost to a slit. No irrigation was employed, but the wound was closed, a small drainage-tube being inserted at the lower end. The patient bore the operation very well considering her previous weak condition; there was but little shock and the breathing was immediately relieved. The wound was dressed at 9 P.M. (six hours after the operation). There was, as usual in these extensive operations on the neck, very considerable oozing, which had soaked through the dressing. The patient felt very comfortable, the pulse was quiet, the respiration had been relieved, and she expressed herself very hopeful as to the result. She continued like this in a quiet, comfortable condition, taking occasional sips of milk, until 1.30 A.M. Then suddenly her symptoms changed completely. She became extremely restless, tossing herself about in bed. This was the most striking symptom, as previously she had been a very tractable patient. The pulse ran up to about 180; the respirations became very rapid (from 50 to 60) and shallow, but not embarrassed; there was no stridor. Whereas previously she had been hopeful, she now declared she knew she was about to die—a declaration one does not treat lightly when coming from a person not known to be hysterical. The temperature, taken in the axilla, was found to be 99·2° F. I gave her three minims of morphia hypodermically in order to quiet the restless condition, hoping she might sleep off these effects and wake up better. She remained quieter for a time, but the symptoms returned and she was about as before only weaker when I saw her again at 3 A.M. I abstained from giving more morphia as already a fairly large dose had been ineffectual, but in the light of subsequent events it might have been better to have given it. At 6 A.M., about fifteen hours after the operation, I was called to her again, but found that she had just died.

Necropsy.—A post-mortem examination was made by Mr. Drew. The part of the thyroid gland removed was completely riddled with cysts separated by fibrous strands. The cysts contained brown colloid in parts, while in others they contained intra-cystic growth. Examination of the dressings and of the neck and chest showed that there had been no bleeding to speak of since the dressings were changed at 9 P.M., therefore the symptoms can obviously not have been due to internal hæmorrhage. A careful dissection of the neck showed that there had been no damage to any of the main nerves. The remaining lobe of the thyroid gland was found to be extensively diseased—in fact, similar to the part removed. The trachea showed signs of compression, it contained no blood, secretions, or other obstruction internally. The other organs were normal.

CASE 2.—An adenoma of the thyroid gland was removed by Mr. Horsley from a young neurotic woman. There were no cysts present. The wound healed perfectly and the patient got well without a bad symptom. She was admitted to the hospital on April 18th, 1896, and left on May 12th.

CASE 3.—Mr. Horsley dissected a solitary cyst from the thyroid gland of a boy aged thirteen years. The cyst was removed unopened. The wound healed perfectly and the boy never had a bad symptom. He was admitted to the hospital on April 27th, 1896, and left on May 9th.

CASE 4.—A woman, aged thirty-five years, had a cyst of the right lobe of the thyroid gland. She was admitted on June 8th, 1896. Mr. Heath removed the cyst through a small incision, it being necessarily ruptured during removal and the contents extravasated. Bleeding was stopped by plugging the wound with iodoform gauze. There was considerable shock after the operation. On recovering from the shock the patient was very restless, though not to the intense degree that the first patient had been. She got very little sleep and complained a good deal of pain. Her pulse before the operation had been 132. On the evening of operation, June 17th, the temperature was 99·2° F., the pulse was 100, and the respirations were 40. On the evening of June 18th—i.e., some thirty hours after the operation—the symptoms began to be alarming, the temperature had risen steadily to 101·3°, the pulse to 136, and the respirations were 36. I gave her three minims of morphia hypodermically. After this she slept continuously for eight hours and woke up in a very different state. She was cheerful, contented, free from pain and no longer restless. After this she made an uninterrupted recovery and left the hospital on July 17th.

The symptoms to which I wish to draw attention are essentially restlessness, a rapid pulse, rapid respiration, accompanied by a considerable amount of mental anxiety, with in certain cases a fatal result. I need say nothing as to the necessity of studying these symptoms so far as we can. Anyone who has witnessed them will carry away a very vivid if painful impression, and those who in the future may have the after care of cases from which thyroid tumours have been removed by operation should know what little is to be known in order that they should be alive to the importance and dangerous significance of the symptoms. In published literature there is not much directly bearing upon the matter. In Erichsen's Surgery there is no mention of this group of symptoms among the dangers of operation, whether for ordinary goitre or for the exophthalmic form. Treves's Surgery makes no mention whatever of these symptoms, though it is stated without explanation that there is a considerable fatality attaching to operations for exophthalmic goitre. Turning to the original English papers to which I have been able to refer I find that two different views have been held on the subject, and I wish to show how far these cases support one of these views. It will be generally admitted from clinical experience that these symptoms to which I am drawing attention are particularly and specially connected with the thyroid gland. The dyspnœa is not at all like that of obstruction of the larynx or trachea. The rapid pulse and restlessness might suggest very severe hæmorrhage, but as a fact no hæmorrhage is found post mortem. The clinical picture is different from that of collapse after serious lesions of the abdomen; for example, perforation of a viscus into the peritoneum. Granting that these symptoms are intimately related to the thyroid gland we have next to inquire whether these symptoms are due to an excess of the thyroid secretion or whether they are due to a deficiency. Both these opinions have been held.

ANALOGY TO THYROID DISEASES.

Of known diseases connected with the thyroid gland we all recognise myxœdema, whether idiopathic or following total extirpation of the gland. Thanks to the researches of Gull, Ord, Kocher, Horsley, and others this disease has been clearly established as due to want of thyroid. But the apathy and dulness, the slow pulse and respiration of myxœdema bear no resemblance to the symptoms which may immediately follow a thyroid operation.

The other thyroid disease with which physicians are familiar is exophthalmic goitre. I do not propose to enter into an elaborate discussion of this disease, but I would draw attention from the clinical point of view to the rapid pulse, the easily embarrassed breathing, and the nervous instability familiar in this disease, and present also in the two cases I have described after operation. With regard to its pathology many views have been held, but I wish to emphasise here Murray's view, put forth at a discussion of the British Medical Association in August, 1896.[2] Murray compares the thyroid gland in exophthalmic goitre with the changes which occur experimentally to compensate for the removal of part of the gland. The most important changes in this hypertrophied gland are (1) the formation of the new alveoli; (2) folding of the wall of the alveoli in some places, so that the internal surface of the epithelium is increased in extent; and (3) a change of the epithelial cell from a cubical to a columnar form. Compared with a normal thyroid gland we have here the appearances presented by a gland which is working at high pressure. In exophthalmic goitre there is found an increase of the

[2] Brit. Med. Jour., Oct. 3rd, 1896.

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secretory tissue, for the number of alveoli is increased, and the epithelial cells themselves, instead of being cubical, are columnar. It is evident that the thyroid gland in exophthalmic goitre has a strong resemblance to a portion of gland which has undergone compensatory hypertrophy, and which is in a condition of over-activity. We know very little about the nature of the secretion of the thyroid gland in exophthalmic goitre. It is probable that it is altered in quality as well as in quantity. Anyhow, there is a satisfactory anatomical basis for considering the symptoms as due to an over-activity of the gland. Clinical evidence also gives support to this view. Improvement occurs in many cases when as a result of operation the secretory activity of the gland is diminished—i.e., either by excision of part of the gland or by ligature of some of its vessels.

In an article in the *Practitioner* for November, 1896, Mr. Carless reviews the treatment of exophthalmic goitre. In considering the thyroid theory of the disease he states that the treatment by belladonna succeeds by diminishing the thyroid secretion. Thyroid given in moderate doses has sometimes produced some of the features of exophthalmic goitre, but this may possibly be due to toxic products of putrefaction. If given in exophthalmic goitre it increases for a time the cardiac and nervous symptoms. In discussing the operative treatment of the disease he refers to the symptoms which I have described as follows: "The death-rate amounts to not less than 12 per cent. This is due in a measure to a curious condition which not infrequently supervenes after an apparently clean and successful operation. All goes well for a few hours and then suddenly the temperature rises to 103° or 104° F., the pulse runs up to a high rate, the urine is loaded with albumin, the patient becomes delirious or comatose, and finally dies perhaps within fifteen hours of the operation." This description coincides in the main features with the description I have given. With regard to the cause Mr. Carless adds that "it has been suggested that it is an excessive secretion of the thyroid secretion brought about by handling the tumour or by a stimulation of the secretive activity by the anæsthesia. It has occurred after the simplest cases as well as after the more serious ones, but curiously has never been noticed after dealing with simple goitres." The last statement can scarcely hold true any longer, and though I have not found records of published cases of these symptoms occurring after operation on simple goitre I have heard of such cases. The clinical effects of giving an excess of thyroid also support this view. For example, in a case described by Murray a woman took by mistake ninety-two grammes of thyroid gland in eleven days. The symptoms she suffered from were tachycardia, rapid respiration, exophthalmos, tremor, rise of temperature, and insomnia, symptoms analogous to the condition to which I have drawn attention.

In the two cases above described which showed symptoms cysts were removed from the thyroid gland and a considerable quantity of the fluid escaped into the wound. Hence it would easily be absorbed by the lymphatics, and this, I may say, is the way in which it has been shown that the thyroid secretion normally is conveyed from the gland into the circulation. I therefore submit that the symptoms of exophthalmic goitre, of cases where thyroid has been administered in excess medicinally, and of cases where during operation the contents of a cyst have been emptied into the wound, bear an intimate relation to one another, and that they are due to an excess of thyroid secretion in the circulation. Further, in support of this view, and against the view that the symptoms are due to a want of thyroid, I would point out that in these cases only unhealthy thyroid is removed, that the symptoms are independent of the amount removed or left behind, that they occurred in Case 4, where only a cyst was removed and plenty of thyroid was left, and especially that they occur in exophthalmic cases where only one lobe is removed.

[The writer then referred to Mr. Horsley's explanation of the symptoms in Case 1 as being due to lack of thyroid secretion, to which cause also he attributes the symptoms of exophthalmic goitre. He proceeded to describe fully the symptoms of cachexia strumipriva.]

The subject can only be solved by experimental investigation and by accurate clinical observation coupled with a more complete publication of unsuccessful cases. I submit that none of the important researches which I have quoted offers any fundamental objection to the following propositions: (1) that the symptoms to which I have been drawing attention—namely, rapid pulse and respiration and restlessness—are analogous to those of exophthalmic goitre; (2) that they are due, as in that complaint, to the absorption by the lymphatics into the circulation of a perverted secretion of the thyroid, not to the absence of normal thyroid; and (3) that in the cases where these symptoms have been most frequently seen after thyroidectomy — namely, after operation for exophthalmic goitre — it is due to squeezing out some secretion while handling the tumour; and that in the cases I have described it entered by the cyst being ruptured into the wound.

[The writer concluded by urging the importance of guarding against these serious symptoms by taking as much care to prevent the contents of a thyroid cyst from entering the wound as a surgeon takes in dealing with a fluid tumour of the abdomen. Should the symptoms arise the hypodermic injection of morphia, he considers, seems to promise the best results.]

Gloucester-terrace, W.

AN UNUSUAL CASE OF WOUND OF THE HEART; RECOVERY.

BY SAMUEL PRIOR, M.B., C.M. GLASG.,
ASSISTANT PHYSICIAN TO THE WOODILEE ASYLUM, LENZIE, GLASGOW.

WOUNDS of the heart are serious both from the immediate danger of wounding the heart itself and from the complications that are apt to arise. Recovery or even partial recovery is all the more satisfactory. The following case, ending in complete recovery, may be interesting.

The patient, a man aged forty-three years, was an epileptic whose mental decadence was not much advanced. The fits were infrequent and usually slight—of the character of *petit mal*—though he had occasionally well-marked convulsions. He was a confirmed pickpocket and hoarded up pins, nails, pieces of wire, &c., which were, as a rule, used by patients for cleaning tobacco pipes. In the year 1890 he had shown a strong suicidal tendency by inflicting a deep wound on his neck. He is a type of patient well known in asylums, requiring careful and strict supervision day and night. Last April he made another suicidal attempt. He cunningly chose the time when the patients were getting up and the attendants were very busy for this determined though unsuccessful attempt. The attendant in charge in the sick-room observed the patient doing something unusual, and on removing the bed-clothes was astonished to find an iron pin projecting from the chest in the region of the heart. The exact situation was 1¾ inches below and 1 inch internal to the left nipple. This pin was directed slightly upwards and inwards. It moved vigorously with every beat of the heart and travelled about an inch upwards and downwards every time. On examination the pin was felt to be firmly embedded in the wall of the heart, which was felt tugging at the inner end of the pin. Removal of this peculiar foreign body was not undertaken without some misgivings as to the result. The pin was rotated and gently withdrawn; the part within the chest measured 3 inches, making a total length of 4 inches of $\frac{3}{16}$-inch iron wire. The patient was collapsed; he had a small, feeble pulse, 64 per minute; respiration was shallow, 24 per minute; and the skin was cold. There was practically no hæmorrhage from the wound. No external hæmorrhage appeared subsequently to this, and there were no signs of effusion of blood or serum into the pericardium. The patient kept his eyes closed. He did not resist an examination of the pupils, which were dilated and reacted but slightly to light. When spoken to he would not answer. I thought he was conscious of all that was said, and subsequent events made this almost certain. The wound was dressed antiseptically, and there was no visible suppuration at any time. On the day following the infliction of the wound there was some subcutaneous emphysema round the wound. The physical signs of pneumothorax appeared, but this and the emphysema disappeared again in twenty-four hours. The temperature, pulse, and respiration rates rose to a maximum thirty-six hours after the wound was made. The records were as follows: at 7 P.M. the temperature was 100·8° F., the pulse was 112, and the respiration was 36; at 9 P.M. the temperature was 101·0°, the pulse was 109, and the respiration was 32; at 11 P.M. the

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temperature was 101·0°, the pulse was 105, and the respiration was 38. The temperature remained slightly febrile for a week and then became normal. The patient would not take food or drink for four days, and seemed indifferent to everything about him. On the fourth night he asked for a drink of water. The following day he looked round the room several times when he thought no one was watching him. He asked why he was kept in bed and wished to get up. Several pieces of wire were found in his bed, showing that he was still occupied with suicidal projects. He was removed to another bed, it being supposed, and rightly so, that he had concealed these in the wire mattress. A handful of pieces of wire, needles, pins, &c., was taken out of the mattress. He was excessively annoyed at having his bed changed and the wire, &c., removed. He told one of the attendants he "hadn't succeeded yet, but would try again and succeed." His appetite soon returned and he recovered his usual health. Numerous pulse tracings were taken. Soon after the pin was removed the tracing showed a low tension pulse with almost full dicrotism and slight irregularity. On the third day the tracing showed a better tension pulse; the dicrotism was nearly gone. On the fourth day there was still some dicrotism; the tracings showed great amplitude of the percussion wave. Normal tracings were obtained on the succeeding days. There are now (nearly six months after) no signs of pericardial adhesion. The only evidence left of the injury is a reddish linear scar half an inch long, directed downwards and outwards.

It is rather surprising that such a thick and dirty piece of wire produced no suppuration or irritation of the pericardium. The pin must have entered at least two inches into the wall of the left ventricle, but did not enter the cavity of that ventricle. The patient seemed rather surprised and ashamed at his failure. Although kept under the closest supervision day and night he declares his intention plainly of "trying to manage it yet." Life for him has no attraction—it is indeed a weariness to the flesh; he has reached a point where "the terrors of life outweigh the terrors of death."

Glasgow.

ON THE SURGICAL TREATMENT OF SPASTIC PARALYSIS IN CHILDREN.

BY J. JACKSON CLARKE, M.B. LOND., F.R.C.S. ENG.,
ASSISTANT SURGEON AT THE NORTH-WEST LONDON AND CITY ORTHOPÆDIC HOSPITALS.

WHEREVER many disabled children are seen a certain proportion of them will be found to be suffering from spastic paralysis. Though recognised from the earliest times the affection was first systematically described by the English orthopædic surgeon, Little, who rightly ascribed the majority of cases to superficial lesions of the cerebral convolutions resulting from meningeal hæmorrhage induced by the pressure of the maternal pelvic bones on the fœtal skull. It is naturally commonest in first-born children and is usually congenital. Some cases, however, are not congenital, but arise in infancy from thrombosis of the superficial cerebral vessels during the course of fevers, such as measles, scarlet fever, and influenza. All grades of the affection are met with. There may be muscular rigidity of the neck and trunk as well as of the limbs, or only the lower limbs may be affected. The intellectual functions may be totally destroyed or completely intact. In the latter case it has been supposed that the affection is of spinal origin, though there is no satisfactory proof that this invariably holds good. As an introduction to the surgical aspects of spastic paralysis one of these slighter cases may be briefly considered, a case in which the intellect is unaffected and the spasm is limited to the muscles of the leg with resulting talipes equinus, equinovarus, or equino-valgus. Electricity and massage have been tried till the parents of the child have grown weary and the uselessness of these measures has become obvious. Recourse has then been had to retentive apparatus in order to try to effect a gradual correction of the deformity. Hope is awakened, and with patient endeavour the apparatus is given every chance of effecting its purpose. But after months or years of perseverance the uselessness of retentive apparatus alone becomes evident. It is uncomfortable and wearisome to the little patient, increasing the spasm of the stronger muscles, and in this way rather impeding than helping progression. And whenever the apparatus is left off for a moment the deformity at once returns with, if anything, greater rigidity than ever. At last, with reluctance and sometimes with but little confidence, operative treatment is suggested, and the parents of the child accept it as a last desperate chance. If the operation is done thoroughly, every resisting tendon being completely severed and the limb fixed at once in an over-corrected position and so left for four or five weeks, it is found that at the end of this time the tendency to return to the deformity is greatly diminished and walking is again possible to the patient, and, if the latter is intelligent, by exercise of the will the tendency to deformity may soon be entirely overcome, so that retentive apparatus may be dispensed with in the day and at night only a light and simple shoe may be required to render the cure a permanent one.

If a case of infantile paralysis is compared with one of spastic paralysis, a marked contrast may be observed. Infantile paralysis is caused by destruction of the cells of the anterior cornua of the spinal cord; spastic paralysis is attributable to partial disablement of the cells of the motor cortex or to partial blocking of the pyramidal tracts. In infantile paralysis massage and Faradaism in the early stages help the recovery of any muscular fibres of which the nutritive nerve cells have not been completely destroyed; in spastic paraplegia massage is of no use apart from complete tenotomy. In infantile paralysis suitable apparatus prevents the occurrence of deformity; in spastic paralysis the deformity is only overcome by the use of much force and at the cost of some distress to the patient. In deformity due to infantile paralysis tenotomy, &c., are only employed to bring the limbs into workable shape and, save in the very slightest cases, the retentive apparatus must be worn for the rest of the patient's life; in spastic paralysis efficient tenotomy, by weakening the muscles the persistent over-action of which produces the deformity, tends to restore the balance of muscular power, and in most cases this may be so far successful that retentive apparatus can be dispensed with.

Lorenz,[1] who has recently published an important series of observations on this topic, attributes the good effect of thorough tenotomy in spastic cases, to the shortening of the bellies of the tenotomised muscles, so that their range of action is diminished. In severe cases of spastic contraction of the knee Lorenz recommends excision of from one inch to one and a half inch of the tendons of the biceps, semi-tendinosus, and semi-membranosus muscles; and even after such tenectomies and subsequent straightening of the knee Lorenz has never observed a failure of union in the widely-separated ends of the tendons. Thus, after an ordinary tenotomy failure of union need not be feared. For the marked adductor spasm, which, by causing the knees to press against each other, is often such a serious hindrance to progression, Lorenz has found that in mild cases forcible stretching of the adductors combined with manipulation is successful, in more severe cases subcutaneous tenotomy answers, whilst in the most pronounced cases he has successfully excised a section of the obturator nerve—an operation of some difficulty in the adducted position of the limb.

Indications for operative treatment.—Before deciding to undertake the operative treatment of any case various factors have to be weighed. In the first place, the condition of the intellectual faculties must be considered. Often the mind is altogether vacant and in such cases it is not worth while to rectify malpositions. Sometimes the condition is complicated by bilateral athetosis (general chorea) and this may be taken as a distinct contra-indication. Epilepsy is a somewhat rare complication and would also be an argument for non-interference. General rigidity renders improvement of the condition of the legs of but little service to the patient. In diagnosis the cases of infantile cerebral degeneration with symmetrical changes at the macula, first observed by Waren Tay and recently described by Kingdon and Risien Russell,[2] must be borne in mind. Such cases begin in infancy and end fatally about the end of the second year. They are marked by progressive paralysis and some rigidity.

The paraplegic forms of spastic paralysis are the more

[1] A. Lorenz: Wiener Klinische Rundschau, Nos. 21-26, 1897.
[2] Transactions of the Royal Medical and Chirurgical Society, 1897.

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amenable to treatment, especially when the chief part of the disability consists in spastic club-foot. Such cases give complete satisfaction to all concerned.

Old Cavendish-street, W.

A CASE OF PUERPERAL ECLAMPSIA SUCCESSFULLY TREATED BY CHLORAL AND BROMIDE OF POTASSIUM WITH INHALATION OF CHLOROFORM.

BY WILLIAM FREDERICK GARDENER, M.R.C.S. ENG., L.R.C.P. LOND.

I WAS called on Dec. 6th, 1896, at 4.45 P.M., to see a woman who had engaged me to attend her in her confinement about that date (Dec. 8th to 15th). She was forty-one years of age, and this was her first pregnancy. On arrival I found her dressed and seeming very dull. It was said that she had been complaining of "her head" and suddenly went off into some kind of fit, her features being convulsed and blackened. The case seeming like puerperal eclampsia she was at once removed to bed. A soap-and-water enema had been given in the morning which had acted slightly. At 5.15 the patient was seized with a second fit, in all respects typical of puerperal eclampsia. Three grains of calomel were placed on the back of the tongue and followed by 20 grains each of chloral hydrate and bromide of potassium. Most of the calomel was swallowed and the whole of the mixture. At 5.50 a third convulsion occurred which was cut short by administration of chloroform vapour. At 6.50 another fit was similarly treated, the inhalation of chloroform being prolonged for the purpose of making a vaginal examination. The os was found to be dilated to the diameter of a little less than half an inch. At 8 o'clock $\frac{1}{10}$ gr. pilocarpine hydrochlorate was injected subcutaneously. In response to repeated inquiries the patient complained of sickness. At 8.45 and 9.32 the fits recurred. By 9 P.M. the os had dilated very slightly. At 10.30 the patient commenced to moan, her eyes opened, and lateral nystagmus became visible with turning of the head and eyes to the left. A few whiffs of chloroform removed all these symptoms and staved off another convulsion, as in this way the previous ones had commenced. At 11.5 P.M. and 12.55 A.M. the nystagmus returning convulsions were again prevented by a prophylactic use of chloroform. Every three hours a nutrient enema of beef-tea and milk was administered containing twenty grains each of bromide of potassium and chloral hydrate. At 9.15 P.M. urine had been passed into the bed and at 10.45 P.M. the bowels had commenced to act. At 2.25 A.M. on Dec. 7th a convulsive attack again seized the patient, the first not prevented since 9.32 the previous evening. At 4.25 A.M. the temperature was 103° and the pulse was 108. At 10.20 the temperature was 100° and the pulse 118. At 12.30 P.M. the first specimen of urine was obtained, being drawn off by catheter; it was "porter-coloured" and yielded five-sixths albumin. In consultation with Mr. Soltau Eccles, of Norwood, it was decided to leave the case to nature unless there should be any return of the convulsive seizures. The pains were then becoming fairly regular and the os was very slowly dilating. There were no more fits. The mixture of bromide of potassium and chloral hydrate was given in small enemata of milk and beef tea every four hours. The pupils remained contracted, and the patient complained occasionally of great pain in the head, but the nystagmus and twitching of the muscles were absent and the bowels acted freely and often. By 4 o'clock the amount of albumin present had diminished to one-sixth, lessening slightly towards evening. At 11 o'clock the fœtus was born without any very strong pains. It was stillborn, and had apparently been dead some days. At 2 A.M. on Dec. 8th the temperature had fallen to 99·4°, and at 8 o'clock to 97·2°. From this date to Dec. 19th there was considerable variation of temperature from 97° to 102°. The urine contained from one-tenth to one-eighth albumin up to this date, then slowly cleared off, till early in January only a very faint trace remained. Very severe headaches were present during the whole time, for which a variety of drugs were tried, ammonium chloride giving the best results. A mixture of acid tartrate of potash and digitalis was given for some weeks, with 40 gr. of pulv. jalapæ co. at night.

The great interest in this case was the extraordinary ease with which the fits were arrested by chloroform inhalation. One hundred grains each of chloral hydrate and potassium bromide were retained by the mouth and rectum.

Sydenham.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF TUBERCULOUS DISEASE OF THE BLADDER TREATED BY SUPRA-PUBIC CYSTOTOMY AND CURETTING.

BY EDWARD COTTERELL, F.R.C.S. ENG.,
SURGEON TO OUT-PATIENTS, LONDON LOCK HOSPITAL, &C.

I WAS consulted in the spring of 1895 by a man aged thirty-two years who complained of great irritability of the bladder both by day and by night. There was pain in the hypogastric region, in the perineum, and in the middle of the penis during and after micturition, and occasionally there was stoppage of the stream. Now and then a few small clots of blood passed after micturition. These symptoms had been coming on for some ten or twelve months and were becoming gradually intensified. The patient was losing flesh; he looked ill and altogether appeared to be in a very unsatisfactory state of health. The urine was alkaline, of specific gravity 1012, and contained a large amount of muco-pus, but tubercle bacilli were not detected in the deposit after centrifugalisation. The prostate was slightly tender, but was not nodular or perceptibly enlarged. The testicles were free from evidences of tuberculous disease. Cystoscopic examination showed that the bladder was markedly trabeculated, and a small ragged ulcer was detected just below the mouth of the right ureter. Upon June 23rd, 1895, I performed supra-pubic cystotomy and thoroughly curetted the ulceration, after which the raw surface was freely burnt with Paquelin's thermo-cautery. The after history of the case presented nothing unusual. The wound healed within a month, and the urine gradually became acid and free from pus and mucus. After the wound had healed the irritability of the bladder was found to have disappeared completely, but owing to the contracted state of the bladder micturition for some time was a little more frequent than is usually the case; but gradually this condition improved and approached the normal standard. In the following December the patient was apparently quite well. The urine was acid, with a specific gravity of 1028. There was no irritability of the bladder by day or by night. There was no pain, and altogether the general as well as the local condition had much improved since he came under my care.

I am induced to add the notes of this case to those on the same subject which have previously appeared in THE LANCET as a further contribution to the modern surgical treatment of tuberculosis affecting the bladder. At the present time (September, 1897) the patient is quite well in health. He has had no urinary symptoms or trouble whatever since convalescence from the operation has been established, so that the case appears to promise well for the future.

West Halkin-street, S.W.

NOTE ON A CASE OF DEATH FROM LIGHTNING STROKE.

BY C. F. GLINN, M.R.C.S. ENG., L.R.C.P. LOND.

ON April 28th, 1897, about 4 P.M., during a thunderstorm of unusual severity, I was called out to see a farmer, aged fifty-four years, who, it was stated, had apparently been struck dead by lightning about half an hour previously. On my arrival I found the man dead and lying on the kitchen floor, where he had been placed when brought in. I was told that at the commencement of the storm he had said to his wife that he would go out in the field just behind the house to-

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drive in some cattle to shelter. Two or three minutes later his son, aged sixteen years, came in by the front entrance and said he had had a narrow escape from the lightning, as "he had felt it strike along the front of his leggings, and it had made his legs feel numb-like up to his knees." An older son then went out to see if his father was safe, and on passing through the gate of the yard saw his father lying on the ground about thirty yards from the house. He went up to him and found that he was dead; he was lying at full length with his face downwards, his right hand in his trousers pocket. A small pool of blood was under his head, his hat (a black felt one) was lying about a yard away, and was torn to pieces. Both cloth leggings were torn almost from top to bottom and a small piece of one was lying near. On proceeding to examine the body I found over the situation of the upper anterior angle of the left parietal bone a wound the size of a penny, the soft structures of which were quite disorganised down to the bone, but the bone itself appeared uninjured. The hair round the wound was burnt and a good deal of blood was coagulated in the hair around. From the direction of this wound a red line of hyperæmia about a quarter of an inch broad could be distinctly seen running in an oblique direction down the neck and over the middle of the clavicle to the epigastrium. The hair of the neck and body was burnt and singed along this line and there was a strong smell of burning when the clothes were removed; at the epigastrium this line merged into a diffused hyperæmia which involved the whole of the lower part of the trunk and both thighs; the hyperæmia ended at the knees, but a red line similar to that above described ran down the outer side of the right leg and foot to the little toe (the inner surface of the right boot was torn along a line corresponding to this). On the under surface of the left foot just below the instep was a fresh bleeding wound the size and shape of a threepenny-piece. There were two bullæ about the size of a man's thumb in the left groin. On removing the body upstairs the wound on the head began bleeding again so freely that a considerable pool of blood (about half a pint) was formed on the floor; this appeared to indicate an abnormally fluid state of the blood. The face was very livid. There was no watch or any other article whatever found in the pockets. There was an iron wire round the brim of the hat, apparently used for stiffening purposes; the hat itself was torn to pieces, leaving this exposed.

Hatherleigh, North Devon.

A NOTE UPON THE RELATIVE VALUE OF SILK AND CATGUT AS MATERIAL FOR SUTURES.

BY A. BOUILLON, M.D., C.M.

ON Aug. 11th, 1897, I was called to attend a farmer whose right arm had been caught in a mill. The limb from the fingers to the elbow was all crushed or bruised. I had to perform disarticulation at the elbow, and fortunately there was sufficient skin on each side, so I sutured it with antiseptic catgut and silk thread in alternate stitches. On Aug. 15th I went to see my patient. To my great surprise the man was sitting and smoking with other members of the family. I removed the bandage, and everywhere where I had sutured with silk the skin was white and natural and the edges were firmly adherent as if it had been merely a slight cut; but at the gut sutures the edges of the skin were slightly separated and pus was oozing out where the stitches passed through the skin and the skin was red and swollen. The conclusion to be drawn from this is that the best ligature to use in amputation is silk.

Matane, Canada.

THE SEWAGE OF BRISTOL.—The sub-committee of the sanitary committee appointed to inquire into the nuisance arising from the pollution of the River Avon and the New Cut by the discharge of the Bristol sewage have unanimously resolved to ask their committee to report to the Bristol Town Council that the best way of dealing with the evil is to carry the sewage into the Bristol Channel by the plan of extending their main sewers. Although expensive it may be anticipated that this plan will receive the confirmation of the sanitary committee at their next meeting.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum propriis collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

A CASE OF SARCOMA OF THE UPPER JAW IN A WOMAN TWENTY YEARS OF AGE; EXCISION; RECOVERY.

(Under the care of Mr. CLEMENT LUCAS.)

MYELOID sarcoma of the upper jaw in young adults is by no means rare, and its starting point is almost always the alveolar border of the bone. In a very large proportion of the cases there has been extensive caries of the teeth on the affected side, and the association is sufficiently constant to justify the assumption that there is a causal relation between the caries and the sarcoma. In the following case the caries of the teeth had been extensive and of long duration.

A woman, aged twenty years, was admitted into Guy's Hospital on May 19th, 1897, complaining of a swelling in the mouth. The patient's health had always been good, but she had for years suffered much from her teeth. About last Christmas (1896) she noticed that her right cheek was becoming more prominent, and about three weeks before her admission to the hospital she found that the gum of the upper jaw on the right side was swollen and this swelling had increased rapidly. On admission it was seen that the alveolar border of the right superior maxillary bone was the seat of a swelling extending from the middle line outwards for about one and a half inches. The anterior part of the alveolar process was pushed forwards, obliterating the naso-labial fold, and a great portion of the process was loose, the right central and lateral incisor teeth moving with it. The growth extended also backwards on to the hard palate for about an inch. The surface of the growth was uneven, firm and elastic to the touch, and pink in colour; no egg-shell crackling could be made out. The right cheek was somewhat more prominent than the left. On May 24th the patient was anæsthetised and an incision was made through the upper lip and round the right ala of the nose; the lip and cheek were dissected off the right superior maxilla and the bone was sawn through just to the right of the septum and also immediately below the orbit and at its attachment to the malar bone. The superior maxilla was then wrenched away, leaving the orbital plate, and the hæmorrhage having been stopped the wound was dusted with iodoform and tannin, the lip was drawn together with two harelip pins, and the edges of the incision were sutured with horsehair. The whole was then dressed with a "sealed" dressing of iodoform and collodion on gauze. On examination of the portion of bone removed it was seen to be much softened and infiltrated by the growth; when examined microscopically it was found to be a giant-celled sarcoma. The mouth was washed out frequently with warm water and gargled with a solution of resorcin (ten grains to the ounce). On the 27th the sealed dressing was taken off and all the stitches were removed together with the harelip pins. The part was re-sealed with iodoform and collodion painted on sal alembroth gauze. The dressing was finally removed on June 4th, when it was found that the face incisions had all healed by first intention. The patient left the hospital on June 6th convalescent.

BIRMINGHAM GENERAL HOSPITAL.

A CASE OF ACUTE GENERAL SUPPURATIVE PERITONITIS TREATED BY LAPAROTOMY.

(Under the care of Mr. LEONARD GAMGEE.)

THE treatment of acute general suppurative peritonitis is exceedingly unsatisfactory. An expectant treatment, with or without the use of drugs, may in a few—a very few—cases

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be followed by recovery; but a doubt must always exist as to the peritonitis having been general, for the probability is decidedly in favour of its having been only partial, localised by the formation of adhesions. The results of surgical interference are hardly more satisfactory; cases do occur in which energetic flushing and draining of the peritoneal cavity prove successful in saving the patient's life, but unfortunately these cases are quite exceptional. For the usual fatal result several adequate causes can be assigned. In the first place the general condition of the patient is so grave that the additional shock of a laparotomy, slight though that shock may be, is sufficient to lead rapidly to a fatal result, but another cause is the practical impossibility of washing away all the exudation; some of it is very adhesive, and cannot be removed by a stream of water; and, lastly, as has been pointed out by Mr. C. B. Lockwood in his lectures on Traumatic Infection at the Royal College of Surgeons of England,[1] at a very early period of the disease the micro-organisms penetrate the epithelial lining of the peritoneum and thus would be quite undisturbed by the most thorough flushing of the peritoneal cavity. At the Carlisle meeting of the British Medical Association in 1896, in a discussion on Appendicitis, Mr. Mitchell Banks mentioned that he had never seen a patient's life saved if general perforative peritonitis had occurred, even though the peritoneal cavity had been thoroughly washed out.[2] It is probable that the variety of micro-organism causing the peritonitis has much influence on the ultimate result. The utility of judicious flushing of the peritoneal cavity in certain cases is amply borne out by the very interesting case under the care of Mr. Gamgee which is recorded below.

A girl, aged sixteen years, was admitted into the General Hospital, Birmingham, on Jan. 1st, 1897. Fourteen days before admission the patient, while engaged in household duties, felt a sudden severe pain over the lower half of the abdomen. With the onset of the pain she became faint and had to lie down. Her temperature rose to 102° F. At the end of eight days from this time the pain had gone and her temperature was normal. On Dec. 30th, 1896, two days before admission, she had taken a dose of castor oil and a few hours afterwards was seized with a sudden acute pain in the abdomen and profuse vomiting. At the same time the temperature rose to 101·6° and the abdomen rapidly became distended and tender on pressure. On Dec. 31st the patient's condition remained the same, but the pain and tenderness seemed distinctly worse over the right iliac fossa than over the rest of the abdomen. On admission on the evening of Jan. 1st, 1897, the condition was as follows. The patient was evidently very ill. The temperature was 101°; the pulse was 132, regular, and of fair strength; the respirations were 40. The tongue was covered with a thick white fur, but was moist. Frequent bilious vomiting occurred. There was general distension of the abdomen, accompanied by extreme tenderness and rigidity on palpation. No localised swelling could be felt, and the rigidity and tenderness were not more marked in one part than in another. The bowels were constipated. The liver dulness was not obliterated. No prior history of abdominal trouble was ascertainable. At 9 P.M. on Jan. 1st the abdomen was opened in the middle line below the umbilicus and was found to contain a large quantity of thin, foul-smelling pus which seemed diffused all over the peritoneal cavity. In the right iliac fossa a few recent adhesions were felt. The abdominal cavity was flushed with warm water and drained with a Keith's tube. The patient's improvement was slow but constant, and by Feb. 12th she was walking about the ward apparently well. On Feb. 17th she felt a sudden intense pain in the centre of the abdomen. Her pulse rose to 150, her temperature sank to 97°, and she vomited once. There were moderate general abdominal distension and marked tenderness on pressure just to the left of the umbilicus. This condition gradually passed off and all symptoms had disappeared at the end of ten days. At the present time the patient is perfectly well.

Remarks by Mr. GAMGEE.—In this case the diagnosis of suppurative peritonitis was fairly clear, but the cause was doubtful. However, the condition for the fortnight preceding operation, and more especially the greater intensity of the pain at the onset of the second attack in the right iliac fossa, made it appear probable that the peritonitis was caused by a perforation of the vermiform appendix, and this diagnosis was borne out by the discovery of a few recent adhesions in the right iliac fossa. In treating a case of this nature the question always arises as to whether a prolonged search should be made for the appendix; but the patient is, as a rule, in such a condition as to preclude any prolonged operative procedure, and so simple incision, flushing, and drainage give the best chance of recovery.

[1] THE LANCET, March 2nd, 1895, p. 527.
[2] THE LANCET, Aug. 8th, 1896, p. 424.

WORCESTER GENERAL INFIRMARY.

A CASE OF INGUINAL HERNIA WITH BLADDER IN THE WALL OF THE SAC.

(Under the care of Mr. T. BATES.)

FOR the notes of the case we are indebted to Mr. Robert J. Hillier, who was acting at the time as house surgeon.

A man, aged sixty-four years, suffering from retention of urine, applied at the casualty department of the Worcester General Infirmary on the night of July 30th. A catheter was passed without any difficulty whatever and the bladder was emptied. Nothing abnormal was noted in the urine; but it was observed that he had a small tense inguinal hernia on the right side. Attempts to reduce this failed, and on questioning the patient it was found that he had been constipated for three or four days and had vomited once that day. The hernia, he said, had frequently been down before, but had up to that time never given any trouble in reduction. There was no impulse in it on coughing. He had never worn a truss. He was advised to enter the infirmary at once, but refused to do so. The next morning he again visited the casualty department, having suffered considerable pain from the hernia during the night. There had been no more vomiting and the bowels had acted freely early that morning. The hernia was found to be larger, quite as tense, and still irreducible and without impulse on coughing. He was again advised to enter the infirmary, and this time he consented to do so. He was at once put to bed and an icebag was applied to the hernia. About midday Mr. Hillier made an attempt at reduction, and almost immediately the whole swelling disappeared with the characteristic gurgling feeling and sound. On passing the finger into the ring there still seemed to be some slight thickening which at the time was considered to be a thickened sac. A pad and spica bandage were applied until a truss could be obtained. Late in the afternoon of the same day, a truss having been procured, Mr. Hillier proceeded to put it on the patient, but as soon as the pad was removed the hernia reappeared; and this time it could not be reduced. As it was not then paining him, and as there were no symptoms of strangulation, it was decided to leave him alone until the next day. On the next morning (Aug. 1st) it was found that he had had a good night and had slept well. There had been no vomiting; but his bowels had not acted and the hernia had increased still further in size. He had taken plenty of nourishment, and up to this time had had no trouble with his urine since admission. He was ordered a castor-oil enema, which he returned almost immediately with hardly any fæcal matter. At the same time he passed a little urine, which was blood-stained in appearance, but of which a specimen could not be obtained for more accurate examination. Late in the afternoon a final attempt at reduction was made, but again without result. In the evening Mr. Bates decided to operate. The skin incision was made parallel to Poupart's ligament and as far outwards as the mid-Poupart plane. The sac was opened in the usual manner and was found to be empty. It was ligatured at its neck, cut off, and the stump replaced in the abdomen. As soon as this was done, what appeared to be another and thicker sac was found lying internal to, and partly behind and adherent to, the first one, and having attached to it several large tags of fat. This second supposed sac was also opened, and then almost immediately the fact was recognised that it might be the bladder, and a catheter passed per urethram confirmed the suspicion by appearing in the wound, from which some urine which at first was thought to be peritoneal fluid had escaped on incision. The wound in the bladder having been carefully united by about a dozen Sänger and Lembert sutures of sterilised silk, and some of the above-mentioned tags of fat ligatured and removed, the skin incision was sutured over the unreduced wounded portion of the bladder, a drainage-tube being inserted along

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the whole length of the incision with its ends protruding at each angle of the wound. The whole was dressed with the double cyanide gauze. The patient stood the operation extremely well, and very quickly recovered from the effects of the anæsthetic (ether). Next morning it was found that he had passed a very good night and had had no pain or sickness; his pulse was very good and he expressed himself as feeling so well that he wanted to get up. He had passed sixteen ounces of urine per urethram without any difficulty whatever. The urine contained blood and urates, but the amount of the former was not at all excessive. From this time onward he made a perfectly uninterrupted recovery, the amount of blood in the urine rapidly decreased, and in a few days disappeared altogether. The wound was dressed on the third day, the tube was removed on the fifth day, stitches were removed on the tenth day, and the bowels acted first on the eighth day after a saline purge. The temperature never rose above the normal, and at no time was there any leakage from the tube or wound which could point to the vesical wound not being perfectly watertight. The small portion of bladder in the ring was not subsequently reduced, but was left where it was found at the time of the operation, and although there is a slight impulse in the scar on coughing this piece of bladder gives him no apparent discomfort. The herniated portion of the bladder belonged to the part below where the peritoneum is reflected from the bladder to the anterior abdominal wall, and consequently had no true peritoneal coat, although it was covered by the peritoneal sac of the intestinal hernia, which sac was adherent to it.

Remarks by Mr. HILLIER.—The chief reason of course for reporting this case (for permission to publish which I am indebted to the courtesy of Mr. Bates) is not so much the treatment (although that was sufficiently instructive) but the rarity of this condition. On looking up the literature of the subject I find that Mr. Macready records thirty-six cases, of which twenty-six were scrotal, four labial, two femoral, one vaginal, one perineal, one ischiatic, and one ventral. Undoubtedly the condition is a very rare one, and since the publication of Mr. Macready's book there do not seem to have been more than about half-a-dozen cases recorded. The cause of the condition seems to be very obscure; most writers upon the subject incline to the view that the bladder is dragged through the ring by a hernia to which it is adherent. Mr. Treves has recorded a case[1] from which he argues that it is due to a growth of pre-vesical fat along the inguinal canal which drags the bladder finally through the ring. In the case under notice both conditions were present—viz., the bladder was adherent to the sac of the original hernia and also some of the pre-vesical fat was outside the ring, so that it was quite impossible to decide with any degree of certainty which was the actual determining cause. It has been stated that if a thick cushion of fat is found at or about the neck of a hernial sac the near proximity of the bladder is to be suspected, and the point seems to me to be one well worth remembering. In nearly all the cases that I have been able to find the patients have been fat persons.

[1] THE LANCET, June 8th, 1895, p. 1424.

PROPOSED SEAMEN'S HOSPITAL FOR CARDIFF.—At a meeting of the executive committee of the Cardiff Seamen's Hospital Fund held on Sept. 27th, under the presidency of the mayor, it was stated that the subscriptions received up to that date amounted to £10,924. This includes the sum of £5000 which was promised by Lord Bute conditionally upon £30,000 being raised.

BRISTOL ROYAL INFIRMARY.—At the half-yearly meeting of the committee of the Bristol Royal Infirmary, held on Sept. 28th, the Rev. S. W. Wayte, who was in the chair, said that the alterations in the operating theatre recommended by the late Mr. James Greig Smith would probably be carried out during the next few months. Soon after Mr. Greig Smith's death some of his friends, acting independently of the infirmary authorities, formed a committee having Mr. Arrowsmith as chairman and Mr. F. B. Girdlestone as treasurer, with the object of setting up a bust in the museum and library and a medallion in the infirmary as memorials of him. Subscriptions were still being asked for with a view to the fund being closed. The subscriptions to the infirmary had unfortunately fallen off considerably, and the treasurer was authorised to sell £2000 of the invested capital.

Reviews and Notices of Books.

Doctor Mendini's Hygienic Guide to Rome. Translated from the Italian and Edited, with an Additional Chapter on Rome as a Health Resort, by JOHN J. EYRE, M.R.C.P., L.R.C.S. Irel., D.P.H. Camb. London: The Scientific Press. 1897.

"ROME would be one of the healthiest of cities if it were not Rome"—if it were not, that is to say, a city of catacombs, of basilicas and churches, of picture galleries and sculpture galleries, of ruins and excavations, all of which attract the visitor, generally with limited time at his disposal and so tempted to over-exert body and mind in his eagerness to miss nothing during his sojourn.

The sentence which we have quoted is written by Dr. Gsell-Fels, a physician by profession and a man of letters as well, whose guide-books to Italy, from "the Alps to Etna," have won the admiration of authorities like the late Professor Freeman for their fulness, trustworthiness, and critical discrimination. It conveys a just opinion, as statistics more than demonstrate, and it sounds a note of warning which the world of travel is extremely prone to neglect. The "foreign resident" in Rome who "does as the Romans do" has never reason to complain of the city's unhealthiness. Indeed, he is generally able to "make more of life" than in any other European capital, and certainly, as English-speaking residents can testify, he often reaches a longevity rarely equalled elsewhere. But it is quite another affair with the "foreign visitor" whose stay is restricted to weeks or even days, and who generally contrives to pack into his brief holiday an amount of sight-seeing—that is, of physical and mental fatigue—which makes him a "candidate" for whatever insanitary mischief may for the moment be prevalent either in the air, the water, the soil, or the conditions inseparable from concentrated population. In ninety-nine cases out of a hundred, as generations of English-speaking or, for that matter, of French or German practitioners can attest, it is the "foreign visitor" with his imprudences and his ignorance or defiance of local experience and prescription who incurs disease or premature death in Rome, and whose "record" has wrought for the city that evil name which at no time, assuredly not since 1870, has it deserved.

It is to this class—an annually increasing one—that Dr. Mendini addresses the carefully compiled "Hygienic Guide" so opportunely given to the English-speaking world by Mr. J. J. Eyre. "Carefully compiled," we say; for few or none of his observations are original or are other than familiar to readers of the professional journals in London, Paris, Berlin, or Vienna. But Dr. Mendini is an accomplished physician and a trained observer, and in his work of compilation he generally knows by personal experience and independent research what to select and what to omit from the publications of his predecessors. Very full and satisfactory is the section on the Mortality in Rome and other Italian Cities, from which it appears that, measured by her national sisters, Rome has much the smallest death-rate in general and is much less subject than they are to special diseases such as small-pox, scarlet fever and measles, diphtheria, typhoid fever, or tuberculosis. In illustration of this follows another section on the Physical Robustness of the Citizens founded on the examination of the young men who yearly present themselves at the conscription to be passed into military service. Of the rejections Rome gives fewest—19·68 per cent. of those examined; while Turin in "robust upper Italy," as it has been called, heads the list with 21·99.

The section on the Relative Salubrity of the Several

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Quarters of Rome introduces us to a full and carefully illustrated chapter on the Climate, in which we find tables on temperature, humidity, cloud, rain, and wind which tell their own tale, and that, in comparison with other health resorts even in Italy, an eminently reassuring one. The section on Malaria which follows is (thanks to the translator) brought up to date by a succinct statement of Dr. Manson's "Mosquito Theory" supplemented by Surgeon-Major Ross's experiments in relation to it; but the prescriptions of How to Protect Oneself from Malaria are far from complete—witness the omission of Dr. Tommasi Crudeli's lemon potion (more than once described in THE LANCET), by which that eminent physician and hygienist protected a vast number of labourers employed in constructing a railway through a notoriously malarious tract of southern Italy. A word of caution too should not have been left out as to the use of quinine without medical advice. The reckless consumption of "that veritable poison to the vaso-motor system," as Dr. Tommasi-Crudeli calls it, explains on the part of many a patient in Rome his non-response to the drug when properly prescribed by the physician, to say nothing of the fact that it is often unprofessionally taken in cognac or whisky as a vehicle, so as seriously to compromise the hepatic and renal viscera at a time when their functional power should be at its best.

The Waters of Rome form the subject of a very useful chapter, mainly drawn from the analysis made by the Senator Professor Cannizzaro and Professors Nasini and Piccini in 1884, of which a full account was given in THE LANCET[1] towards the close of that year. But we need not follow Dr. Mendini chapter by chapter throughout his serviceable and opportune manual, nor need we do more than pass a cordially favourable judgment on Mr. Eyre's supplement on Rome as a Health Resort, addressed primarily to his own countrymen. Rather let us point out a few blemishes which ought to disappear before the volume finally takes its place on the bookshelf of the busy consultant or in the knapsack of the academic visitor. Mr. A. B. Stevens, M.A., M.B. Oxon., who is responsible for its revision in proof, should have been careful to weed out the numerous errors in classical quotation which disfigure it—for instance, the sentence from Herodotus (p. 15), which neither the Father of History nor any Greek, it is safe to say, ever wrote; or the citation of Sextus Gullius (*sic*) Frontinus (p. 39); or the reference to "Vitige," which all English scholars spell "Vitiges" (p. 50). Even the English style savours too much of the amateur in its rendering of the Italian—for example (p. 8), "may be *retained as being* absolutely correct" would be more idiomatically rendered "may be *held to be*," &c. Such blemishes are surprising, to say the least, and ought certainly to be removed in the next edition, even though they do not materially impair the value of a volume at once useful and well-timed.

Handbook to the Workmen's Compensation Act, 1897. By M. ROBERTS JONES. Cardiff: Tudor Printing Works. 1897. Price 1*s*.

THIS is a *brochure* of some seventy-eight pages containing the text of the new Workmen's Compensation Act and some comments on it such as a perusal of the statute suggests. It is no doubt intended to be the forerunner of a law-book upon the subject, and the commentary for the most part is subjoined to the text in the form of what is in effect a subsequent chapter. This is not a very convenient mode, from the reader's point of view, of arranging the materials of a work of reference. In this case, however, in which the authorities are largely, if not indeed mainly, derived from the debates in Parliament occasioned by the passing of the Bill there is a fitness in the collection in this way of the comments in a separate chapter which can be bodily removed from the book in a subsequent edition without serious mutilation of the part which will be left remaining. This no doubt will happen when the impromptu utterances of statesmen can be replaced by the more authoritative deliverances of the Courts.

The legislative experiment which this Act will set on foot is one of great range and interest, destined probably to have momentous consequences in the future. The trades immediately affected are railways, factories, mines, quarries, and engineering works. Indirectly affected, as being certain to share eventually in the benefits of the scheme, or of some modification of the scheme, if it should be found to work out to the advantage of the community, are practically all industrial undertakings throughout the length and breadth of the land. Its results will therefore be canvassed with the greatest eagerness as soon as there are any results to be reported. Till then it is perhaps premature to dogmatise as to whether the security afforded to the workman of compensation in any ordinary case of injury from accident will tend to occasion carelessness, and so to diminish the security of life and limb, or whether the new responsibility cast upon the employer will stimulate his interest in the safety of his workmen to such an extent as to increase the security of industrial employment. Anything like intentional self-injury is no doubt sufficiently guarded against by the clause which provides that the statutable compensation shall be disallowed in any case in which the injury is attributable to the serious and wilful misconduct of the workman injured.

Among the provisions introduced for the benefit of employers is a very proper regulation that the workman who makes a claim must submit to medical examination by a practitioner appointed by the employer and acting in the employer's interest. Medical men are to be appointed for the purpose of the Act by the Home Secretary, to whom the arbitrator or judge when adjudicating upon a disputed claim may refer for a report upon the injury occasioned by the accident.

LIBRARY TABLE.

The Origin of Matter and Force. By R. C. SHETTLE, M.D. St. And., Consulting Physician to the Royal Berks Hospital, Reading. London: Simpkin, Marshall, Hamilton, Kent, and Co. 1897. Pp. 56.—In this pamphlet an attempt is made to establish a scientific theory of the mutual relations of matter and force in the production of all physical and vital phenomena, and to show from a physical point of view that the *works* of God testify absolutely to the truth of the *word* of God. An immense amount of original thought is shown throughout every page. Dr. Shettle is a conscientious observer. We do not intend to enter fully into his arguments in this review, but we wish to point out to the author the wrong impression he makes when he uses the terms "inspired author" and "the first chapter of the book." Anybody who takes up this pamphlet and reads the first few pages will imagine that Dr. Shettle is about to justify the creation of the world in six periods of twenty-four hours; but as the reader advances he finds that such is not at all the writer's intentions; the period required for the creation of the world is not mentioned—the first two *verses* of the Bible only are taken and discussed with relation to accepted physical laws. We have read the arguments with considerable interest, but we have not space to set down the lines of thought along which he travels; we can, however, recommend the perusal of the treatise to all who are interested in the vital questions therein considered. Two of the paragraphs given in the summary which concludes

[1] THE LANCET, Dec. 20th, 1884, p. 1125.

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the pamphlet may be quoted as showing the general idea of the work. "I have now attempted to show—(1) that the universe was created and is maintained in its present state by means of power which, when originally impressed, produced various degrees of density, and so brought every form of matter and gravity into existence. ..... (15) That the human soul is an entity, the germ of which was given by the Creator when man became a living soul, ... that the inner man is typical of the outer man; is the seat of memory; and records within itself the life-history of the individual, just upon the same principle as is embodied in the formation of the seed germ in vegetable life."

Traité de Gynécologie Clinique et Opératoire. Par S. POZZI, Professeur Agrégé à la Faculté de Médecine de Paris, Chirurgien de l'Hôpital Broca, Membre de l'Académie de Médecine. Troisième édition. Avec 628 figures dans le texte. Paris: Masson et Cie. 1897.—This, the third, edition of Professor Pozzi's valuable work on Gynæcology maintains the high standard of excellence of those which preceded it. The work has been carefully revised, and several chapters have been completely altered. Especially is this so as regards the sections of the book dealing with asepsis, with the surgical treatment of fibromyomata, with the indications for vaginal hysterectomy in pelvic suppuration, and with the procedures suggested for the treatment of backward displacements of the uterus. There is an excellent account of Pelvic Hæmatocele and Extra-uterine Pregnancy. The author's opinion on the relation of these two things accords with that held generally here by the best authorities—namely, that pelvic hæmatocele in the immense majority of cases is "only a chapter in the history of extra-uterine pregnancy." Professor Pozzi's book ranks as one of the best standard works on the subject of which it treats. The references are both copious and cosmopolitan.

The Student's Guide to Medical Diagnosis. By SAMUEL FENWICK, M.D. St. And. and Durh., F.R.C.P. Lond., Consulting Physician to the London Hospital, and W. SOLTAU FENWICK, M.D., B.S. Lond., M.R.C.P. Lond., Physician to the London Temperance Hospital, Physician to Out-patients at the Evelina Hospital for Sick Children. Eighth edition. London: J. & A. Churchill. 1897. Price 9*s.*—Fenwick's Medical Diagnosis is so well known and has proved useful to so many generations of students, that it is unnecessary to do more on this occasion than call attention to the fact that this the eighth edition has been brought thoroughly up to date as regards the latest discoveries in the science of which it treats. Perhaps the statement that actinomycosis almost always ends fatally is a little too sweeping, for several instances of recovery, though not of course where the lungs or liver were affected, have been recorded under the use of large doses of iodide. This, however, is a slight blemish upon an excellent work. The descriptions are admirably clear, and the all-important subject of pathology is rightly put in the forefront. Any student who works carefully with this book in the out-patient room and at the bedside should have no difficulty, even if he cannot satisfy himself as to what a disease actually is, in being able to say pretty certainly what it is not.

La Technique des Rayons X. (The Production and Practical Employment of the X Rays.) Par ALEXANDRE HÉBERT, Préparateur à la Faculté de Médecine. Paris: Georges Carré et C. Naud. 1897. Pp. iv. and 134. Price 5 francs.—The practical applications of the x rays as described by M. Hébert are to all intents and purposes exclusively medical and surgical. Having introduced the subject with a few paragraphs on the recognition of foreign bodies, whether embedded in the tissues or impacted in the œsophagus, larynx, &c., he next deals with the observation of the process of repair occurring in bones from which sequestra have been removed, and in fractures which have been united by metallic fastenings (wiring, screws, &c.). Several instances are given in which the rays have been of service in the diagnosis of the diseases of bone, the most recent being a case communicated to the Academy of Sciences by M. Potain, who was able to distinguish chronic osseous rheumatism from gout by the fact that the increased density in the former condition, due to osteitis, caused the extremities of the bones to appear darker than usual on the fluorescent screen, whilst in the gouty patient the ends of the phalanges and metacarpal bones presented pale markings showing a diminution of the normal opacity. The examples of diagnosis of thoracic disease include three cases of inflammation of the right pleura with effusion, under the care of Dr. Bouchard; in the picture on the screen the affected side was darker than the other one as far as the upper border of the effusion, the shadow increasing in depth towards the base of the lung until the liver was reached; as the fluid became absorbed the transparency of the lung returned. In phthisical patients the transparency of the tuberculous portions of the lungs was found to be diminished. In addition to the various medical and surgical applications of the rays, some of which have just been enumerated, M. Hébert suggests that they may be of service in the detection of unauthorised articles sent through the post-office, and that they may assist jewellers in distinguishing between real and imitation diamonds. The sections describing the various forms of Roentgen ray apparatus and their use, as well as the chapter on photography, are very complete and are copiously illustrated with engravings. There are also ten full-page or folding plates with photo-prints of Roentgen photographs of hands, human fœtuses, small animals, &c.

The Return to Nature. By JOHN FRANK NEWTON. *The Life of William Lambe, M.D., F.R.C.P Lond.* By E. HARE, C.S.I., Inspector-General of Hospitals. London: The Ideal Publishing Union. 1897. Pp. 158.—Of these two monographs, originally published at distant intervals, and now bound together in one volume, the second is the most interesting. Dr. Lambe, who was a graduate of Cambridge University, went from Warwick to London in the year 1800, and soon attained a somewhat prominent position in the Royal College of Physicians of London, being Censor for several years, Croonian Lecturer in 1814, 1815, and 1816, Harveian Orator in 1818, and Consiliarius in 1839. He was born in 1765, and having suffered much from ill-health while a young man he renounced animal food in 1805, and from that time till his death in 1847 he was a strict vegetarian. Moreover, he drank only distilled water, regarding which he wrote in 1819 that distillation properly conducted is really a less troublesome process than filtration. Mr. Newton, who wrote the "Return to Nature" about 1811, was a friend of Dr. Lambe, and, like him, a vegetarian. He lays considerable stress on the good health and good looks of the family which he had brought up on this system, and mentions with satisfaction that only sixpence was charged for medicine in his apothecary's bill for a household of seven persons in the year 1810.

JOURNALS AND REVIEWS.

The Monist.—In a paper on Egg-structure and the Heredity of Instincts Professor Jacques Loeb, of the University of Chicago, endeavours to show that the complicated mechanism of the instincts is the result of very simple circumstances which do not require any complicated structure for their transmission through the egg. For instance, the caterpillars of Porthesia (a butterfly) are oriented by light—i.e., the light causes them to bring their plane of symmetry into the direction of the rays of light

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and to turn their oral pole toward the source of light. "This process is purely mechanical. The light produces in the skin of the animal a change (probably chemical), and this produces, through the central nervous system, changes in the tension of certain muscles. ..... This is also the mechanism by which the moth is forced into the flame. There is no such thing as an attraction of the moth by the light, but its fatal flight is only due to an orientation." Chemical substances emanating from putrefying meat or cheese have the effect of orienting the female of the common fly, the result being that the eggs are deposited on these materials by a reflex action without any assistance from either experience or conscious choice. Professor Loeb also offers an explanation of the continuity of bodily form in successive generations irrespectively of qualities transmitted by the egg.

Journal of the College of Science, Imperial University, Japan. Vol. X., Part 2.—The present number is entirely zoological and botanical, the titles of the six articles being as follows: A Species of Ephelota occurring in Misaki and its Spore Formation, by Professor C. Ishikawa; Iron Bacteria in the Warm Springs of Ikao, and Sulphur Bacteria in the Warm Springs of Yumoto, by Professor Manabu Miyoshi; the Development of the Gonophores in Physalia Maxima, by Professor Seitaro Goto; the Development of the Pollen Grains in Allium Fistulosum, by Professor C. Ishikawa; and the Formation of the Heart in Petromyzon, by S. Hatta. Abstracts of the papers on Iron Bacteria and Sulphur Bacteria have already appeared in THE LANCET, the former on Sept. 4th, p. 611, and the latter on Sept. 25th, p. 805. The first five articles are in German and the concluding one is in English. There are seven full-page plates of illustrations. The publishers are Maruya and Co., in Tokio, and R. Friedländer und Sohn, in Berlin.

Analytical Records
FROM
THE LANCET LABORATORY.

TABLOIDS OF ERYTHROL TETRANITRATE.

(BURROUGHS, WELLCOME, AND CO., SNOW-HILL-BUILDINGS, E.C.)

THE therapeutic action of the organic nitrates and nitrites, as is well known, has been very closely studied during recent years, with the result that some very valuable vaso-dilators have been added to the materia medica. The latest addition is represented in erythrol tetranitrate, which is now supplied in the obviously convenient form of tabloids. It is said to be valuable in conditions of cardiac pain with high arterial tension, and recently it has been employed with excellent results as a vaso-dilator in angina pectoris, and in the asthmatic attacks of chronic nephritis. In angina pectoris it appears to have been used not with the idea of replacing amyl nitrite and trinitrin in stopping an attack after it has manifested itself, but in preventing its onset.

(1) COCOA ESSENCE; (2) SOLUBLE COCOA.

(THE TOWER TEA, LIMITED, 5, JEWRY-STREET, E.C.)

The soluble cocoa (which is a cheap article) is admittedly a mixture, being mixed with arrowroot. "Tower Cocoa Essence" is a very pure cocoa which has had an exceptionally large proportion of the indigestible fat removed. It was found to contain only 19·5 per cent. fat, the lowest amount we have ever recorded. From a consideration of the amount of ash and its degree of alkalinity it is evident that the cocoa has not been treated with alkali. The ash amounted to 1·8 per cent., and its alkalinity to 0 51 per cent. reckoned as potash. The cocoa is not held in suspension in the infusion as long as desirable, and in a short time there is a considerable sediment at the bottom. There are now well-known processes in vogue by which this may be avoided and the cocoa made, as is dietetically desirable, more miscible.

DIGESTENZYMES (DAMANCY) IN TABLETS AND PILLS.

(AGENCY: ARTHUR AND CO., 69, BERNERS-STREET, OXFORD-STREET, W.)

Chocolate is the excipient in these tablets, which contain diastase, pepsin, pancreatin, and bismuth, together with phosphates and albuminoids. We have proved the digestive activity of the tablet on starch as well as on white of egg in both an alkaline and acid medium. The activity of the enzymes present is thus established. The tablets should therefore supply a distinct aid along the whole alimentary tract in providing the specific enzyme that may be indicated. It is stated that the enzymes are combined in such a way as not to have any prejudicial action on each other during the exposure of the food to the various digestive processes.

DIASTOL.

(THE STANDARD MALT EXTRACT COMPANY, LIMITED, 21, WATER-STREET, LIVERPOOL, AND 23, BILLITER-STREET, E.C.)

Diastol is a comparatively thin, clear, limpid, reddish-brown liquid containing a very large proportion of the active digestive principle of malt. It contains a distinct amount of alcohol and possesses a strong, rich, malty taste. In our experiments we found that on adding a few drops of diastol to thick starch paste the mixture became brilliantly clear in a few seconds, and in as many minutes the solution was perfectly free from starch, complete conversion into maltose having resulted. The advantage of such a preparation in amylaceous dyspepsia is obvious, since all the digestive properties of diastase are presented unassociated with an excess of sugar as is the case in ordinary malt extracts. The dosage is thus very materially reduced, while its digestive activity upon starch may be relied upon.

EAU MAICHE.

(THE INDUSTRIAL INVENTIONS DEVELOPMENT COMPANY, LIMITED, BROOK HOUSE, WALBROOK, E.C.)

Eau Maiche is described as "bi-oxydised (*sic*) water," and is, in fact, nothing more than peroxide of hydrogen of such a strength that, as our analysis shows, one volume contains nearly three volumes of available or loosely-combined oxygen. Hydrogen peroxide is no new introduction as a cleansing and deodorising agent in the treatment of foul wounds and suppurating surfaces. The sample before us contained a distinct amount of chloride. Eau Maiche, however, is also recommended to be taken internally, but the claims made in respect of its curative effects are such as we are in no wise prepared to endorse. As one example of this we may quote the following: "There have been many cases of cancer where not only has growth been entirely arrested, *but, as far as can be judged in the time*, all traces have been removed from the system." The italics are ours.

ELECT EXTRACT OF COCOA.

(ROWNTREE AND CO., COCOA WORKS, YORK.)

Our examination of this cocoa showed that, in the first place, a cocoa of excellent quality is selected; and, secondly, that it is carefully prepared so as to develop its nourishing qualities and to make it to a high degree miscible with hot water. These desirable characteristics have been attained by that peculiar mode of preparation based on the Dutch process which adds to the mineral constituents of the cocoa without necessarily making it alkaline. We found that the cocoa contained 32 per cent. cocoa fat and 7·84 per cent. mineral matters. The alkalinity of the incinerated cocoa was equivalent to 2·88 per cent. The cocoa gives a good, rich infusion of exceptional strength and of fine flavour, and is found to be free from objectionable sediment, even after standing for some time.

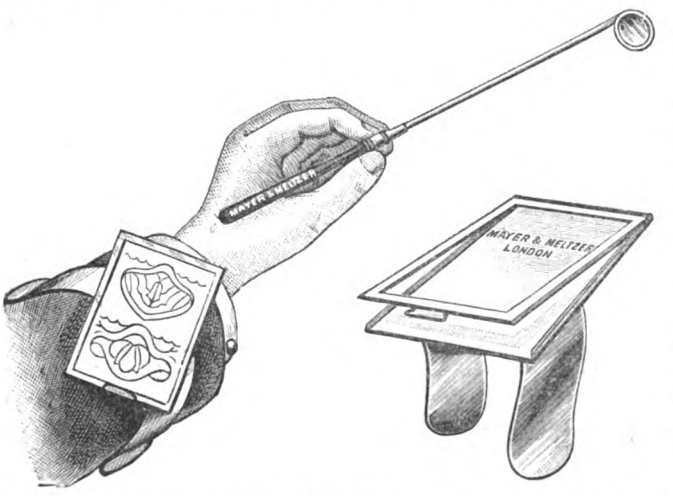
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New Inventions.

A "WRIST-EASEL"

(With tracing tablets specially adapted for facilitating the drawing of the appearances found in cases of disease of the throat, nose, or ear).

THE "Easel" is a plate of thin metal measuring 3 inches in height by 2¼ inches in width. It is fixed on to the "wrist-clip," a somewhat omega-shaped strip of metal, which can be readily clipped on to the left arm and as readily removed. The easel plate is attached to this by means of a flattened loop of metal which slips on to a hook. In order that the plate may be in the most favourable position for drawing while the left hand manipulates the laryngeal mirror or the nasal or aural speculum this hook is placed obliquely on the "wrist clip." The drawing card is held firmly in position on the easel by means of spring catches or of a frame hinged to its top and fixed down over it. The illustration will convey the disposition of parts. The "tracing tablets" consist of layers of tracing paper, under the uppermost of which is placed a card bearing the conventional outline of the normal appearance of the part under examination—membrana tympani, larynx, &c. The observer can rapidly sketch over this the abnormal appearance even if not endowed with skill in draughtsmanship, and the rest of the outline can be traced out at the same time or later either by himself or by an assistant. The "outline cards" used by the deviser of the instrument represent the normal larynx during phonation and inspiration (on one card), the fauces, the post-rhinal image, the anterior nares, the transverse vertical section of the nasal cavities, the membrana tympani of each ear with (on the same card) the inner wall of each tympanum.



The ordinary indiarubber-stamped outlines may of course be used on pieces of paper of suitable size fitted into the "wrist-easel," but the "tracing-tablets" present the great advantage that the sketches made, while traced as far as possible on the given outlines, are not confused by the retention of these along with the new ones.

Messrs. Mayer and Meltzer, of Great Portland-street, W., have constructed the apparatus most satisfactorily.

DUNDAS GRANT, M.A., M.D., F.R.C.S. Eng.

PEAT WOOL (BÉRAUDINE).

IT is now many years since peat was first introduced as a surgical dressing, but the results were not perfectly satisfactory. It certainly absorbed the discharges well and kept them sweet, but the peat was very friable, and in great part it was in the form of a powder, and as it had little tendency to cohere it was necessary to enclose it in gauze bags. These objections detracted greatly from its value in surgical cases and it could not be called an elegant dressing. We have had the opportunity of examining the Béraudine Peat Wool, and may say at once that it possesses all the advantages and none of the disadvantages of the unmodified peat. All the dusty portion of the peat has been removed, and only the fibres of the mosses, of which the peat in great part consists, have been retained. The resulting product is a brownish mass composed of innumerable interlaced fibres; it is completely free from the powder, which is so great a hindrance to the employment of ordinary peat, and it forms a very soft dressing. Its absorbent power is great; we found that one specimen took up more than twelve times its own weight of water, and after it is fully saturated it has not nearly so much tendency to cake together to form a hard mass as cotton wool has. Its elasticity, too, is great, and therefore it is of value in cases where it is desired to exert an elastic compressing force. It is further claimed for it that it has antiseptic properties; without going quite so far as this we may say that it seems to possess the power of retarding the growth of micro-organisms, and this, of course, enhances its value. Altogether we consider it to be a useful dressing, especially in cases where great power of absorption of discharges is required. We are not aware of the cost of this peat wool, but if not more expensive than cotton wool it should largely replace that substance in surgical practice. It is manufactured by the Peat Industries Syndicate, Limited, 15, Walbrook, London, E.C.

FOCIMETER AND LENS ANALYSER.

THIS instrument has been devised by Mr. W. Banks, of Astley Bridge, Bolton, for the purpose of ascertaining the focal length of lenses and for indicating whether they are spherical, cylindrical, prismatic, or combinations of these. It is an instrument of precision founded on the principle of placing the lens, the power of which it is desired to ascertain, in the path of rays rendered parallel by a convex lens. If the spectacle lens to be examined be convex the parallel rays issuing from the lens attached to the focimeter are brought to a focus on a slip of paper which can be moved along a rod supplied with a scale or index and its strength easily read off. When the spectacle lens to be examined is a strong one the slip of paper will have to be brought nearer to, and when weaker to be removed farther from, the source of light. In the event, however, of the spectacle lens being concave the parallel rays issuing from the focimeter lens are rendered divergent and consequently do not unite on a focal point. In this case a second lens is introduced into the focimeter which is termed the analysing lens. This lens is of known, and rather high, power. As the position of the principal focus of this second lens is known, it is obvious that the focus will be removed to a greater distance from the lens after the rays have been rendered divergent by their transmission through the concave spectacle lens. The difference between the first and second foci gives the power of the concave lens. The analysis of a sphero-cylindrical lens is accomplished by placing it on the stage in the same manner as a spherical lens and the screen is moved along, commencing near the focimeter lens, until an approximate focus is obtained. The disk on which the lamp is mounted is then revolved until the image of the incandescent filament coincides with the axis of the cylinder, when the scale indicates the focal length of the combination and the line of light on the screen will coincide with one of the angular divisions into which the latter is divided and give the inclination of the axis of the cylinder. On turning the lamp at right angles to its former position the refractive power of the spherical lens alone will be indicated at some distance along the graduated scale. The first reading minus the second gives the strength of the cylinder. The deviation caused by prisms is also shown on the screen, which is marked in metre angles. Mr. Banks claims for the instrument that determinations of the power of all kinds of lenses can be made with rapidity and exactness. The few trials which we have made lead us to believe that it is a reliable instrument. The price, with three sets of analysers, special electric lamp, dry battery, and switch, is £3 17*s.* 6*d.*

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THE LANCET.

LONDON: SATURDAY, OCTOBER 9, 1897.

THE medical session has been duly opened, and the introductory lecture still shows every sign of vitality. There are some schools, indeed, which affect a superiority to such things. At Guy's Hospital, for example, the opening ceremonies are little advertised and are said to be of a strictly domestic character. Students and their teachers and friends, however, gather together very much as in other schools, and are favoured with two addresses instead of one. On this occasion Sir SAMUEL WILKS, who presided, was greeted with unbounded applause evoked by the honours conferred on him by his Sovereign and by his College. Not only did he preside, but he delivered himself of many quaint and characteristic thoughts on the present state of the profession and of medical science, which will be remembered many years by the students to whom he spoke. In addition, he was succeeded by Dr. MUSPRATT, of Bournemouth, a loyal alumnus of the school, who delivered an address on several subjects of great practical interest to students, giving them some conception of the duties which they are being trained to meet and of the spirit in which those duties ought to be discharged.

Introductory lectures must not be regarded merely from the student's point of view, though to him, unless he be a very superior or a very conceited person, they cannot fail to be of use. They are of obvious interest to the public, as is shown by the space and the attention given to them by the leading organs of the press. The medical profession is essentially the silent profession, and its wisdom has to be expressed for the most part in the consulting-room of practitioners or in the houses of patients. But a very cursory study of society and of contemporary literature and civilisation is enough to show that this silence of the profession may be overdone. The profession has advice to give to the public, it has warnings to utter, it has claims to advance, it has complaints to make, and grievances to ventilate. For all these purposes there are few suitable opportunities, and one of the few is the introductory lecture at the opening of the medical schools. It is pleasant, too, to the profession to see the duty of the introductory address put occasionally into the hands of laymen. This course was happily followed in the present session at St. Thomas's Hospital, where Principal FAIRBAIRN discoursed on medicine as only a divine and a scholar of his learning and character could have spoken. It is so customary for members of the profession to hear from those outside it words of criticism or censure that it is gratifying that so capable a critic as Principal FAIRBAIRN should express the opinion that it is wonderful for medicine to have been able to achieve so much as it has done. At the Middlesex Hospital Lord STRATHCONA AND MOUNT ROYAL gave an interesting address on the medical schools of Canada and the devices of those who in the remote north-west regions of the Dominion have to meet their diseases without medical aid. He does not advise English medical men to go there without personal connexions or some predilection, as the medical schools of Canada, eleven in all educate a number of men practically sufficient to supply its wants.

One pleasant feature of the opening addresses of the medical schools is the wide range of subjects discussed. Occasionally this leads the orator to make a slightly excessive demand on the time of his audience, not to say their patience. But it would be difficult to say that any of the subjects were irrelevant or unfit for the care and consideration of medical men and it is no slight testimony to the interest infused into the subjects that such lectures—exceeding the length of ordinary lectures—should be so well listened to. Sir JAMES CRICHTON-BROWNE excelled himself in the eloquence with which he vindicated some old-fashioned doctrines of mind and conscience while showing his familiarity with all that is latest in the achievements of physical research. His protest against the realism and coarseness of much of our current literature and the disposition to exalt the natural above the moral in man is much needed, and it is to be hoped will be taken to heart by writers. He speaks with a large knowledge and experience of man both in health and disease, and he magnifies free will and the individuality of man as distinguished from the most anthropoid of his fellow creatures. If few of us can play the part of great men that "exceed their antecedents," and have no explanation in their environment, we can all "build up the being that we are" and in a smaller sphere magnify our free will with no other compulsions than those of duty and of virtue. It will be well for every student to read Sir JAMES CRICHTON-BROWNE'S address in its entirety and to yield to the spirit of its teaching—"hold fast to the importance of the individual and do not worry yourselves about the insignificance and evanescence of man." The address of Dr. WILLIAM CARTER, of Liverpool, at Charing-cross Hospital will also well repay perusal with its fine appreciation of "the everlasting expansiveness of medicine," of the victories over disease which it has already achieved, and greater ones yet in store. By way of emphasising the indispensable importance of independent and close personal observation of disease and the exercise of a manly and independent judgment he quoted the case of LAENNEC as that of one whose great work was founded mainly on cases accurately observed in his student days. While Dr. CARTER and other speakers recognised the inevitable tendency to specialism and division of work, they were careful to deprecate all narrowness and to insist on the necessity of broad general knowledge of disease as the only adequate basis for the erection of special knowledge and practice. It is simply pitiable to see a narrow specialist spending his own strength and his patient's perhaps scanty means in investigating a prominent symptom of a patient's case and leaving unnoticed the wider taint of the blood or constitution of which the local evil, for which he is sought, is a mere limited and secondary expression. Dr. CARTER was justified in insisting on the enormous influence of medical opinion on society. The questions on which medical opinion is desired, as

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Mr. RAYMOND JOHNSON pointed out, are ever extending with the growing range of medicine itself, and tend more and more to share with philosophy, and even divinity, the regulation of man's life in all its stages. The medical man must adapt the teaching that he has to give to all classes of men. It may be true, as Dr. CARTER says, that our effect will depend entirely on the respect which we can gain for our opinions among the thinking portion of mankind who constitute its true rulers, but grievous mischief creeps in—witness the position of the vaccination question—if we cannot also influence the imperfectly educated classes who are now in a very real sense our rulers. Dr. PATRICK MANSON reminded us of the extent of our empire by pointing out to us that many of our students will be called on to treat diseases of climates and countries other than our own, and urged the importance of including instruction in such diseases as a part of the regular curriculum. This ought to be done by the Medical Schools and Examining Boards apart from the influence of the General Medical Council. But it is so urgent that the General Medical Council will not always be justified in withholding a strong expression of its opinion. Mr. RAYMOND JOHNSON did well to impress on his hearers the importance of individual practical work in the fundamental subjects of anatomy and physiology and to remind them that examinations are not the final test of a man's worth. Is it not a condemnation of much in our present examinations that they are not more practical in their nature, that they do not more faithfully tell a man's character and capacity, and forecast the result of the great examination that awaits all students after qualification—their ability to cope with actual disease in actual patients, or, as he well puts it, with "the disease and the person"? Dr. PYE-SMITH at Sheffield, Mr. D'ARCY POWER at the Royal Veterinary College, and Mr. J. GROSVENOR MACKINLAY at the Royal Free Hospital, illustrated other aspects of medical study which we have not space to discuss. Students may be somewhat alarmed at the range of knowledge covered by these addresses and the amount of study they imply. Let them note also that the best teachers enjoin rest and recreation as well as work. Ours should be a cheerful profession. We study disease with a view to its mitigation and removal—even its prevention. Let students learn to avert it by lives in accordance with the laws of health and with the high philosophy that is enforced in the able addresses which it has been our pleasure to publish.

THE rapid development and widespread prevalence of typhoid fever at Maidstone clearly indicate that we are in the presence of an epidemic spread by water. Other causes may produce epidemics, but none are so effective in the rapid propagation of the disease as a contaminated water-supply. How fatal such a contamination may be has been proved only too often. Already 4 per cent. of the population at Maidstone have contracted the disease, and this reckoning is based on the population of the entire town. The number of inhabitants of the central district, which was not supplied with the contaminated water and which consequently escaped, is not known, otherwise it could be shown that, in the parts of the town where the infected Farleigh water was drunk, the percentage of cases is much higher. Yet results far worse than this have followed on the contamination of a water-supply. For instance—and to give an extreme case—in 1887 an epidemic of typhoid fever due to water contamination broke out at the Collège de Cluny in the department of Saône-et-Loire, France. There were 215 pupils in this school, and no less than 119 suffered from the fever. This is not 4 per cent. of the population, as at Maidstone; it is more than 50 per cent. But this brings us face to face with an all-important difference in predisposition which has not yet been sufficiently noticed, discussed, and examined at Maidstone. It is obvious that the pupils living in a large school are all submitted to the same predisposing influences. Whatever defects there may be in the drainage, the ventilation, the food, and the condition of the subsoil of the school, the pupils collectively experience these unwholesome influences. The same cannot be said of the inhabitants of a town. There is a far greater variation of conditions; and, consequently, though the contaminated water may be equally distributed to each, the effects it produces are very different. Therefore, though it is in the first instance essential to ascertain what is the distributive medium or cause of an epidemic, this in itself in no wise suffices for the thorough elucidation of the problem. It is first necessary to discover what is the distributive medium, because the most practical measure that can be taken during the emergency is to lay hands on that medium and destroy it. But it would be worse than folly to imagine that, having done this much, no further measures need be adopted. If we treat a patient we have to deal, not only with the acute stage of the disease, but above all true medicinal treatment depends on the successful treatment of those constitutional conditions which rendered the disease possible. A town, like a patient, is composed of individual molecules which together conglomerate to form a collective whole. Some parts of the body are strong and wholesome; others are weak and susceptible to disease. The object of sanitary science is to discover and remove the cause of this difference. If no such difference exists at Maidstone why is there not the same proportion of cases of fever at Maidstone as at the Cluny school? Surely it is in the existence of these differences that we shall find most valuable indications as to the true means of preventing or limiting future epidemics.

Guided by these principles, our Special Commissioner, who proceeded to make investigations on the spot, first fully described the water-supply, as this was undoubtedly the medium by which the epidemic was spread. This week, however, we publish an account of what may be qualified as the predisposing causes. These are more complex, but they are also very suggestive. First with regard to the different levels in the town. On either side of the two rivers, the Medway and the Len, there is a zone of considerable size where the ground is low-lying and does not in any place exceed an altitude of 40 ft. It is precisely on this low-lying ground that there has been no fever. Then, if we take the next zone, which varies from 40 ft. to 100 ft. in altitude, we find here also a general immunity from the fever. The exception is in the south-eastern district; but even here the epidemic appears as if it only began at an altitude of 78 ft. The map which we publish likewise indicates the fever-stricken districts, which are for the

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most part above 100 ft. in altitude. These last correspond exactly with the districts where the contaminated Farleigh water-supply was distributed, but it will be seen that they also correspond with the high levels. The suggestion is then made that the sewer air has easier access to the dwellings on these high levels. The branch sewers run down steep gradients to collecting mains below, which are badly constructed, having insufficient fall. The branch sewers may therefore act as ventilating shafts for the main sewers which pass below and which generate a great volume of sewer gases because they are not self-cleansing. On the other hand, sufficient details are given to show that the house drains are far from perfect. Sewer air will naturally be attracted by the heat within dwellings and thus reach the inhabitants unless the house drains are very carefully trapped and ventilated. From all these facts, we are justified in surmising that the inhabitants of those streets and houses where the greatest number of cases of fever has occurred (and these streets are also marked in the map), have been breathing a larger volume of sewer air than their more fortunate neighbours. In the lower districts where the branch sewers do not descend such sharp gradients they are less likely to act as ventilation shafts; and though these lower districts were not supplied with the contaminated water, their inhabitants must, to some extent at least, have occasionally drunk the contaminated water when they visited friends in what subsequently became the infected areas. Yet these inhabitants of the central district have, practically speaking, escaped the epidemic. It would seem as if they were living under conditions rendering them less susceptible to the typhoid contagion.

Then there is also the question of the subsoil that may help to account for this marked difference in respect to predisposition. Mr. MATTHEW A. ADAMS, medical officer of health of Maidstone, has already shown, in a remarkable paper communicated to the International Congress of Hygiene, held at Budapest in 1894, how the prevalence of diphtheria in Maidstone followed upon the rising of the water levels in the subsoil. He is now engaged in making similar comparisons with regard to the present epidemic of typhoid fever, and we may here again find another predisposing cause. We have already before us this fact, that a certain portion of the soil in the non-infected district is of clay and therefore less porous than the soil in the infected districts. Also, it has been found that some of the sewers in the infected district were in a very defective condition and likely to contaminate the surrounding subsoil. Consequently, it would be most imprudent to rest satisfied with condemning only the water-supply. If immunity from typhoid fever depended only on a pure water-supply and not on any other consideration, then—if we may judge from the precedent afforded by the experience acquired at the Cluny College mentioned above—there should be at Maidstone, not 1400 to 1500 cases of typhoid fever, but something more like 15,000 cases. Most fortunately, the inhabitants of Maidstone are not all equally predisposed as were the pupils of the college in question; but does not the enormous difference in the percentage of cases at Maidstone and at the Cluny College clearly indicate the immense importance of studying, and then of removing, all predisposing influences? That such influences still exist at Maidstone our Special Commissioner has attempted to demonstrate; and in so doing will, we believe, have rendered no slight service to the cause of sanitation.

THE votes of the registered medical practitioners of England and Wales must all be recorded by to-morrow (Saturday), and doubtless the great majority of voting papers have been returned. It is to little purpose to enlarge further on the questions at stake or the fitness of the rival candidates. It is satisfactory that the contest has been practically narrowed to one of two candidates. As the profession grows in experience of its elective duties and in detecting the qualities which go to make a really effective and desirable representative it is reasonable to hope that candidates will become fewer in number and sometimes will agree with the number of the vacancies to be filled. The opponents of Direct Representation feel fortified when they see anything like the arts of electioneering practised in the selection of a member of the General Medical Council. This is a strong reason why the friends of Direct Representation should avoid the appearance of such arts. It would be pitiable indeed if it should prove advantageous to a candidate to have recourse to methods for influencing registered medical men similar to those which are considered fair and even necessary in political warfare. Sir WALTER FOSTER cannot be charged with having instigated the notice of himself in the *Young Man* with a view to his candidature for the vacant seat on the General Medical Council. This for two reasons—it must have been well in hand, we imagine, before he could have been aware of the mysterious movements in Dr. RENTOUL'S mind, and, secondly, he must have been cognisant that such a notice was not likely to commend itself to medical men or to help his election. But we are sorry to find him making a defence of the notice even as a political method. Such notices are accorded by many journals of which better things might be expected to members of the profession, and presumably they have some value or they would not be desired. But that a politician of Sir WALTER FOSTER'S calibre, and an eminent member of the medical profession, should justify such a notice is unsatisfactory. He cannot complain at being asked to explain his responsibility for it, and while we readily acquit him of any reference to the election to the General Medical Council in sanctioning it we are still sorry that he should in any way assist in the diffusion of such literature.

The result of the election will not be officially declared until Saturday, the 16th inst. As far as the programmes of the rival candidates go the difference between them is very slight. Our reasons for preferring Mr. VICTOR HORSLEY on this occasion are that he was first in the field, that he has a quite exceptional knowledge of the defects of the Medical Acts, and that he feels a remarkable sympathy with the rank and file of the medical profession. Both candidates are members of the British Medical Association. Sir WALTER FOSTER is the older member and has very strong claims—claims of past services and claims of present

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ability. But these were not pressed last year when the pressing of them would have involved no opposition to one of the most brilliant and, we will add, one of the most active members of the Association, so that we may be allowed to express our feeling that the prominence given to them now is a little inopportune. The result will soon be known. Whichever of the two candidates is elected the cause of Direct Representation will not suffer, and we may expect the Council to go on its way without those explosive incidents which are injurious to its reputation as the controlling body of the medical profession and as an intermediary between that profession and the State.

Annotations.

"Ne quid nimis."

THE NEW GOVERNMENT LABORATORIES.

THE English nation is supposed to move slowly in regard to the application of science to industrial processes, and of late we have heard a good deal of the necessity for educating men in special scientific work with the view of applying their knowledge to the manufactures and arts. Germany we know is a long way ahead in this respect, but in the completion of the new buildings last week close by King's College Hospital, which contain admirably equipped laboratories for carrying on the duties of an important department of revenue work, this country has taken an initiative. For not the least interesting feature about the new building is that it is the first State laboratory in this or any other country which has been specially designed for the departmental work which was formerly carried out in a few incommodious rooms in Somerset House. The work of the Somerset House chemists has increased enormously during the last decade. Originally—and it is now more than fifty years ago—the principal work done for the Government was that of detecting the adulteration in tobacco. This soon extended to the examination of beer. The laboratory then consisted of a few rooms situated in Arundel-street, Strand. So rapidly did the field for Government analysis widen that special rooms were provided in Somerset House in the year 1859. And here the services of the chemists proved to be in request by almost all the Government departments. Thus to them were referred the stores, provisions, and other supplies for the troops, and perhaps the India Office put forward more claims to the skill of the department than any other section of the Government. Later, when in 1875 the Food and Drugs Act came into operation, the onus of reference was thrown upon the staff at Somerset House who thenceforward came to be regarded as officially the Government analysts and referees. All this has involved, as might be imagined, a large increase in the working staff and a need for better accommodation suited to the increasing requirements. In 1867 the laboratory accommodation at Somerset House consisted of at the most three rooms, but later twenty rooms were occupied for the purpose. In 1867 again the number of samples analysed was 9055, and in 1887 39,224, and last year no less than 64,664 samples were analysed. These figures appealed to the Treasury Office when they were brought to their notice, with the result that it was agreed to provide a separate establishment for the work, and Dr. Thorpe, who was appointed the Principal of the Government laboratories a year or so ago in succession to Dr. Bell, undertook to draw up the plans of the new laboratories and to supervise their construction. All this has been done, and the laboratories are practically complete and occupied by a staff numbering over seventy. It need hardly be added, in view of Dr. Thorpe's great practical knowledge of the construction of the leading laboratories abroad, that the new Government laboratories are equipped with appliances and apparatus that are fully in compliance with modern requirements. The sum voted by the Treasury towards the completion of the work was nearly £30,000. Our own interest in the new Government laboratories is centred of course in the administration of the Food and Drugs Act, in the disputed cases coming under which the chemists at the new laboratories are the referees. The public analysts have from time to time entered many complaints of the reticence of the Government chemists as to the methods they employ and have taken very strong exception to the apparently low standard of food, and especially of milk, which they have adopted in reference cases. We confidently expect that these objections will be met when the new Bill comes into operation. It cannot be doubted that the work of reference is entrusted to skilled men, and it is only as to the interpretation based upon the results of analysis that the differences of opinion have occurred. But we believe that the standards thus adopted by the referees were not below those capable of justification under the present law. In the proposed new Bill a court of reference is suggested which should be empowered to deal with the subject of prescribing limits and standards of the quality and purity of food as well as with other matters such as the use of antiseptics. In whatever way the administration of the Acts may be modified in regard to referred samples it is evident that the new laboratories and the increased accommodation will considerably facilitate the work of this department and add to its usefulness in the interests of the general community.

THE HEALTH OFFICER OF THE CALCUTTA CORPORATION.

SANITARY science has conferred many benefits on the community, but a cordial public recognition of the fact is so uncommon an event that an instance of it deserves special notice. It happens now and then that medical or surgical services rendered to individual patients may be substantially rewarded, but the care of the public health seems not to appeal either to sentiment or to the popular imagination; its results are not always immediately apparent, and from the nature of the case it is inevitable that some departments of medical practice must dwindle in proportion as preventive medicine advances. The union of sanitation and preventive medicine has had the effect of prolonging the average duration of human life, of raising the general standard of health, and of controlling epidemics so that they are now but little more than semblances of what they used to be in the pre-scientific era. To the readers of THE LANCET these are mere commonplaces, but the public at large bestow only vague and casual attention on such subjects unless their interests are touched by the inconveniences of quarantine in foreign countries or by the heavy outlay entailed by modern drainage systems or by the demolition of insanitary buildings. Under these circumstances it is gratifying to find that at Calcutta the work of Dr. W. J. R. Simpson, the health officer of the corporation, is so highly appreciated that on the occasion of his retiring from his appointment an influential public meeting was held for the purpose of presenting him with a farewell address. The ceremony took place in the Dalhousie Institute on Sept. 4th, and among the numerous company were the Honourable Mr. Justice Rampini, Mr. W. R. Bright, chairman of the corporation, Colonel Wilford, Mr. E. N. Baker, collector of Calcutta, Mr. W. Parsons, secretary of the Bengal chamber of commerce, and Mr. L. P. D. Broughton, Administrator-General of Bengal; many members of the corporation were also present, both British and natives being represented. Mr. Bright

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presided, and opened the proceedings with an eulogistic speech in the course of which he said that for the past eleven years Dr. Simpson had brought all his energies to bear on the task of improving the sanitation of the town, and now that he was compelled by ill-health to leave Calcutta he would in his retirement carry with him the good wishes of all who knew him. Dr. Bolai Chunder Sen, president of the Calcutta Medical Society, then read the farewell address, which has been published in the Calcutta *Englishman*, and contains the following passage: "The period of your incumbency as health officer of this city has been signalised by many important sanitary measures, the credit of which is largely due to your undaunted zeal and unwearied perseverance. Among the more important of these have been the inauguration of measures to prevent pollution of the subsoil and to place on a sounder basis the drainage system of the town; the introduction of the principle of incineration of the town refuse; the demonstration of the need of efficient building regulations for the town; the organisation of an agency for the investigation of the causes and course of preventable diseases and the adoption of preventive measures; the establishment of a well-appointed laboratory, the first of its kind in India, for food analysis and bacteriological research; the reorganisation of the departments of food inspection and registration of births and deaths; the testing of the results of Professor Haffkine's system of anti-cholera inoculation and the timely precautions taken to prevent the importation of plague into Calcutta. The medical public is under deep obligation to you for re-affirming the relationship between small-pox and cow-pox; for creating an epoch in the history of medical progress in India by largely assisting to bring to a successful issue the first Indian Medical Congress; for urging the necessity for the whole of India of an organised sanitary service which the Government of India has fully endorsed. Your successful researches into the bacteriology of rinderpest, your contributions to the etiology of tropical diseases, and the able manner in which you have acquitted yourself as president of the Calcutta Microscopical Society, as secretary to the Calcutta Medical Society, and as editor of the *Indian Medical Gazette*, will be long and gratefully remembered by your colleagues in the medical profession in this country. In bidding you farewell and God-speed we wish you and Mrs. Simpson a safe and pleasant voyage home and long life with health and happiness." Mr. Hughes, chief engineer of the corporation, then made some complimentary remarks, after which Dr. Simpson spoke at considerable length, saying that the occasion was one to which his wife and himself would look back with pride and that this kindly acknowledgment of his work was particularly gratifying and refreshing after the labour of eleven years, which had been spent in placing the health interests of Calcutta on a sound basis. He concluded as follows: "I wish to thank the members of my own profession for the appreciation which they have expressed of my work in connexion with the Indian Medical Congress and the proposals therein made and afterwards approved of by the Government of India for the organisation of a sanitary service in India. I trust that it will not be long before the proposals of the Medical Congress are put into practice, to the advantage of the Indian medical profession and of the country at large. In leaving Calcutta I am specially sorry to take leave of the officers of my own department who have worked with me so long. There is Dr. Sen, the able assistant health officer, who has been with me for nearly ten years; there is Dr. Ram Mitter, the deputy superintendent of vaccination, whose services in the cause of vaccination in Calcutta are invaluable; there are also Dr. Dutt and Dr. Ghose, both expert analytical chemists, Dr. Mittra, Dr. Mookerjee, Dr. Lahiri, and Dr. Chatterjee, excellent food inspectors, Dr. Chowdry, an expert at anti-cholera inoculation, Dr. Dass and Dr. Roy, excellent medical inspectors able to find out by inquiry, if any one can, the causes which have led to an outbreak of disease. In departing from Calcutta I have the satisfaction of knowing that I leave behind me a small band of Indian medical men, the first of their kind, who are sanitary experts and who are thoroughly trained in the principles and practice of public health." Mr. R. D. Mehta, in proposing a vote of thanks to the chair, observed that it was to a large extent through Dr. Simpson's efforts that the plague had been prevented from reaching Calcutta. The proceedings then terminated. Before going to India in 1886 Dr. Simpson had acquired a large experience in the diversified questions connected with public health administration. For five years he was medical officer of health and police surgeon to the city of Aberdeen; he was also lecturer on public health in Aberdeen University and president of the Sanitary Association of Scotland. In 1883 he was in Egypt observing the epidemic of cholera, and he drew up a report on the subject which was presented to Parliament in 1884; in the same year he was appointed to hold a special inquiry on behalf of the Local Government Board into the prevalence of diphtheria in Somersetshire and Wiltshire.

ERGOT BEFORE DELIVERY.

A CASE was recently reported in the Manchester papers in which a midwife was stated to have given a dose of ergot in a case of complicated presentation where she ought at once to have sent for a medical man. Mr. Broadbent was ultimately sent for. He found it to be a presentation of footling, funis, hand, and vertex. The midwife seems to have examined the case at 9.45 P.M., and then, instead of sending for medical assistance, she appears to have failed to recognise the complexity of the case, and administered a dose of ergot. Mr. Broadbent, who saw the patient only at 11.30 P.M., found the presentation as above stated; the cord was pulseless, and all the parts presenting were jammed, so that he was not able to deliver till 2.30 A.M. An inquest was held on the child, at which the midwife said in reply to the coroner that when she gave the ergot she was not aware of the serious nature of the case. The practice of giving ergot before delivery merely to expedite labour is undoubtedly bad. In all well-managed maternity departments midwives and students are forbidden to give ergot till after the placenta has been expelled. The tonic contraction of the uterus produced by ergot is fatal to the child by interfering with the utero-placental circulation if for any reason delivery does not take place rapidly after the ergot has been administered; and there is, as regards the mother, a very appreciable risk of rupture of the uterus, if there is any obstacle to the expulsion of the fœtus.

THE VALUE OF CLINICAL OBSERVATION TO THE STUDENT.

OWING to the multiplicity of subjects to which the unfortunate medical student is now required to devote himself for the purpose of examination there is no small danger that he will be led to forget the practical part of his profession, and two of the addresses delivered at the opening of the medical year laid special stress upon this matter from different points of view. At St. Mary's Hospital Dr. W. J. Gow referred to the importance to the student of familiarising himself with medical and surgical technique and quoted a remark of Lord Armstrong to the effect that a man's success in life depended far more on his capacity for useful action than upon his acquirements in knowledge. Intelligent clinical study, too, said Dr. Gow was of the utmost importance. At Leeds Mr. T. R. Jessop recounted his experience at Moscow and related how surprised he was to find what a magnificent

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hospital that ancient city possessed. Standing about two miles outside the city it consisted of some dozen blocks, every one devoted to some special branch of medicine or surgery.[1] This building had been erected by the munificence of private individuals, supplemented by a Government and municipal grant. Here, then, was the centre for teaching the future medical men of Russia, and Mr. Jessop naturally expressed a hope that a similar institution might arise in England. The nearest approach to the Moscow ideal is afforded by the hospitals of the Metropolitan Asylums Board, but even they are not Government institutions though they are municipal in a way, and means for familiarising the student with the clinical details of the infectious fevers are still very far from complete. As to a State grant for hospitals the only instance we can call to mind of the State dealing with a hospital is not encouraging, for it is the case of the robbery of the revenues of St. Bartholomew's by Henry VIII. In time, however, the State may recognise that it is as important to train up medical men as to teach board school children "social economy."

CONGENITAL FACIAL PARALYSIS.

AT a recent meeting of the Society for Neuropathology and Psychiatry in Moscow Dr. Minor showed a case of this character presenting some interesting features. The patient was twenty-six years old. He was born of an intemperate mother, but no instruments were used at his birth. He was, however, much asphyxiated, being of a dark blue colour all over. At the moment of birth it was observed that the face was strongly drawn to the left side. This condition still persisted and in an aggravated form, but psychical development had gone on naturally until he was eighteen years of age, when he began to suffer from epileptic attacks. When he was shown there was facial paralysis on the right side. The zygomaticus major had escaped and so had the upper part of the orbicularis oris. The platysma was much atrophied and no electrical response to either current could be obtained in the muscles other than those mentioned as having partially or wholly escaped. Dr. Minor regarded the condition as the result probably of an intrapontine lesion, perhaps a hæmorrhage in the facial nucleus occurring at the time of birth and associated with the asphyxia which was present. Some speakers, however, thought that the lesion might be in the nerve. Similar cases, it is pointed out, have been described by Schultze and Bernhardt, and also by Möbius. The last-named has described them as cases of nuclear disappearance in infancy.

ANOTHER RAILWAY FATALITY.

DEATH has once more come to a passenger while travelling by train without any accident having happened to the train itself. On the arrival of the Manchester express at Liverpool on the night of Sept. 30th the window of a first-class carriage was found to be broken and the carriage and footboard were bespattered with blood and hair. On the line being searched between Manchester and Liverpool the body of a man much mutilated was found on the line close to Brunswick Dock Station at the south end of Liverpool. The body was lying near some empty coaches which were standing in a siding and the window in one of them was broken. At the inquest held upon Oct. 2nd it was stated by the foreman shunter who searched the line that the side lamp on the stationary train, which was unlighted, was much bent. The carriages were standing in a tunnel and close to them he found the body of a man. The right leg was cut off and the head was much injured. It was not the custom to light the lamps of a stationary train. It seems evident that the unfortunate man, who has been identified as Mr. H. S. Harvey, must have been looking out of the window—or rather leaning out of it—have come into violent contact with the broken lamp, and so have been dragged out of the window, and cut up by the train in which he had up to that moment been travelling. There are cases on record of travellers having been killed by striking their heads against something when looking out of a carriage window but we do not remember any instance of a passenger being dragged out of the carriage. It is always easy to be wise after the event, but it cannot be too strongly impressed upon the mind of the travelling public that to lean out of a carriage window is highly dangerous at all times, and doubly so when passing through a tunnel or in the dark. The jury added a recommendation that stationary trains on the central line should in future be lighted, but probably if this had been the case in the present instance it would have made no difference. The serious part of the matter seems to us to be the statement of the foreman shunter that there was only a space of twenty inches between the projecting part of the empty train and any train passing it. To widen the tunnel would be, we suppose, a matter of some difficulty, but surely a siding might be constructed for the reception of empty trains in some other part of the line where more space could be afforded.

MEDICAL EVIDENCE AT CORONERS' INQUESTS.

AN inquest recently held at Twerton, near Bath, disclosed some interesting medico-legal points. Shortly, the case was as follows. A man, aged forty-seven years, reached his home about half-past eleven at night and almost immediately went out to the stable. About ten minutes afterwards his wife called to her son that she heard her husband groaning. The son found his father lying on the footway near the stable, and on being questioned he replied: "Someone knocked me down." The son raised him up, and he managed to walk two yards, but could go no further, and he never spoke again. The son added that the father's trouser pockets were turned inside out, and a £5 note which deceased was supposed to have had in his pocket was not there. In contradiction to this Dr. Heathcote, who was the first medical man to see the deceased, said that on arriving he found him lying dead on the footway; he wore trousers with a flap, and the right-hand pocket was lying outside the flap, but not turned inside out. Deceased had a wound on the back of the head and a slight cut over the right eye. At a post-mortem examination he found a lacerated wound over the left elbow and a bruise over the right eye. The heart was enlarged and fatty, the liver fatty, and the spleen and kidneys were engorged with blood and enlarged. In his opinion death was due to cardiac failure, the wounds on the head and elbow were caused by the fall, and the bruises on the face by the deceased having struggled in the road or having fallen against the wall. He thought that the deceased fell in the middle of the road, got up, walked to the foot-path, fell again, and then got up and fell or leaned against the wall, on which there were marks of blood. People dying under such conditions often had erroneous impressions as to the cause of their falling and were apt to attribute the pain they felt in the head to a blow. The solicitor representing the deceased's family put a series of questions to Dr. Heathcote suggesting that a person dying from cardiac failure could not get up after having fallen. Could Dr. Heathcote cite any similar case from a medical book as to this point and his evidence as to erroneous statements being made under similar circumstances? To this Dr. Heathcote replied that he was giving his own statements,

[1] Illustrations of the Moscow Clinique and of some of its various departments will be found in our Special Supplement, "Medicine, Past and Present, in Russia," published on Aug. 7th.

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and the coroner refused to allow the solicitor to pursue this line further without notice. The solicitor called another practitioner (Dr. W. H. Cooke), who said that he considered that a person dying from sudden cardiac failure would not get up after having fallen down. In the end the jury returned a verdict of death from disease of the heart, but whether accelerated by shock of any kind there was no evidence to show. We think everyone will agree that the coroner deserves the thanks of the profession for the way in which he conducted this inquiry. Here were two medical men giving evidence on the same questions and taking an apparently opposite view, but, as the coroner said in summing up the case, Dr. Cooke had not attended the post-mortem examination, but simply gave his evidence on generalities. As to the verdict, he said, they might return one absolutely in accordance with the evidence of Dr. Heathcote. This the jury proceeded to do and we think everyone will agree with it.

SMALL-POX IN CYPRUS.

ACCORDING to a communication from Reuter's agent at Larnaca, published in the *Times* of the 2nd inst., an epidemic of small-pox broke out towards the end of last month in Cyprus and was especially severe in the Turkish quarter of Larnaca, other parts of the town having been likewise attacked. The appearance of the disease in Larnaca was soon followed by an exodus of people from that place to other towns and villages in the island, and it is feared that the disease disseminated in this way may soon become widespread unless prompt and stringent precautions are taken. The disease is stated to have been introduced by a Turkish family from Béirût. Very inadequate means for the isolation of the sick, and those of the most primitive kind, exist in Cyprus as may well be imagined; there is a paucity also of medical attendance; and we know next to nothing of the condition of the population of Cyprus as regards vaccination. It seems probable that the island will furnish another object lesson of what the ravages of small-pox may effect among an unprotected population. There are some advantages in living under British rule under such circumstances as these, for we do possess laws for the repression of contagious disease and the machinery for practically applying them.

VARICELLA GANGRÆNOSA.

OUR knowledge of varicella gangrænosa is still so incomplete that every well-recorded case is of interest. In the September number of the *Archives of Pediatrics* are given two good examples of the disease. The first is described by Dr. William F. Lockwood, of Baltimore, and is accompanied by a photograph. A well-nourished female child, aged two years, exhibited the eruption of varicella. Next day a wide zone of dusky red dermatitis occupied nearly the whole surface of the trunk. Rapid ulceration of the spots within this area ensued. The contents of many of the vesicles became hæmorrhagic. Bleeding from the mouth and nose occurred and blood was extravasated in the skin over the pubes and about the genitals. The gangrenous spots varied in depth, and in size from a pea to a surface measuring 1 in. by 2 in. They often occurred where there were no varicella vesicles. On the trunk were large patches where the epidermis only was removed, exposing purplish dry surfaces. These were due to the dermatitis, and did not radiate from the chicken-pox vesicles. The deeper spots showed a dry, hard, black eschar in the centre, an ulcerating border, and an elevated inflamed edge. The left eye was closed from swelling and ulceration of the upper lid, and there was free purulent discharge from between the lids. The child emitted an extremely fetid odour. Death took place on the eighth day, apparently from broncho-pneumonia; but satisfactory examination of the chest was not possible. The second case, described by Dr. Lewis Mann Silver, of New York, was that of a boy in good condition, aged two years. The illness began with diarrhœa, which was followed by a temperature of 103° F., lethargy, and a convulsion. On the fourth day the body was covered with the characteristic rash of varicella. The mucous membranes of the mouth and conjunctiva were congested. On the third day of the eruption circles of congestion from ¼ in. to ½ in. in width were noticed around several of the spots, which had become black and depressed in the centre. Next day three gangrenous areas, measuring from 1 in. to 2½ in. across, appeared on the neck. On the following day both eyelids were so much swollen that they could not be opened, and there was a profuse discharge of blood and serum from the mouth and nose. The urine contained abundant albumin and numerous granular casts. The child died in the evening soon after a convulsion. It is curious that varicella, the mildest of all the infectious diseases, should present such a grave complication. What explanation can be offered? Mr. Hutchinson, who first described the disease, attributed the occurrence of the gangrene to idiosyncrasy, as it usually occurred in healthy children. Dr. Barlow, however, denies this and asserts that in none of his cases were the children healthy. A second infection by some microbe supervening on the varicella has also been offered as an explanation, but evidence on this point is wanting.

EXACT LOCALISATION AND MEASUREMENT BY THE X RAYS.

AS most workers with the Roentgen rays know it is often very difficult to ascertain by the photographs they produce the exact locality of foreign bodies embedded in the tissues. The x ray photograph fails to give any definite information as to the exact position and size of the foreign body, and the surgeon when exploring for it has met with disappointment and dissatisfaction because he may have caused his patient pain without discovering the *locale* of the foreign body. This has detracted very considerably from the value of x rays in surgical work. A method, therefore, which ensures the exact localising of the foreign body in both a vertical and a horizontal plane and the exact determination of its size will be of immense service. We hope shortly to bring to the notice of our readers an account of this method which has been carefully elaborated by Dr. W. S. Hedley and Mr. Mackenzie Davidson. For the present all we need say is that the method of measurement employed renders the x rays a really accurate means of locating the position and size of foreign bodies in the tissues. At a demonstration at which we were present the results were satisfactory and convincing both as to the practicability and utility of the method, while it relieves the patient of any unnecessary inconvenience and detention.

SURGICAL SYMPTOMS IN CONNEXION WITH FILARIA SANGUINIS.

AT a recent meeting of the Bombay Medical and Physical Society Surgeon-Lieutenant-Colonel W. K. Hatch called attention to the enlargement of various lymphatic glands and the varicose state of the lymphatics of the spermatic cord which are met with in cases of filaria sanguinis. A full description of the former of these conditions has hardly, he said, been given by any writers with the exception of Dr. Patrick Manson and the late Dr. Vandyke Carter. The gland usually affected are those in the groin, and next in order of frequency the axillary, then the iliac glands, and very rarely those of the neck. The glands have usually a soft, doughy feel and when small can be made almost to disappear, but when the pressure is removed they gradually resume their

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former size. These glands are subject to periodical enlargement, becoming tense, hot, elastic, and often extremely painful; the patient at the same time suffers severely from fever, lasting for several days, during which he is quite incapacitated for work. The filaria sanguinis can generally be detected in the blood at night during the attacks, hence the difficulty of diagnosis (which may be considerable) arises from making an examination in the interval between the attacks. The glands have an open spongy structure with numerous large lymphatics in connexion with them on all sides; if they are opened while still in the body a large quantity of reddish fluid escapes. Such enlarged glands have been sometimes mistakenly attributed to femoral hernia, to pelvic inflammation, &c. They should generally be left alone; if they are removed the healing of the wound is usually tedious. In one case in which Surgeon-Lieutenant-Colonel Hatch was prevailed on to operate against his inclination all went well for a few days, but suddenly the temperature went up, the face became dusky and the extremities livid, the circulation in the radial arteries and then in the brachial ceased gradually, and the patient sank. A case of varicose lymphatics of the spermatic cord has been operated on in the Jamsetjee Jejeebhoy Hospital. This patient had no enlargement of the testicle, but in other cases both cords and both testicles were large, smooth, and elastic, and moderate hydrocele was present.

COFFINS ONE PENNY ONLY.

THE heart of the Funeral Reform Association must be glad, for never in its most exalted moments could it have imagined that a coffin would be supplied at the price of one penny; and yet we learn that the Contracts Committee of the Preston Union have accepted a tender for the supply of coffins at prices ranging from one penny to fourpence each. The coffins are to be of specified good quality. According to the *Yorkshire Post* the explanation of this bargain is that "in some instances the friends of deceased persons have club money to draw which enables them to purchase a superior class of coffin, the contractor thus recouping himself for the penny articles." We do not quite see the logic of this argument, but the fact remains that a coffin may be purchased for a penny. The sums wasted upon funerals—and by none more than by the very poor—are a perfect scandal, although we know that the expense is incurred out of a mistaken idea of showing reverence for the dead. This is a feeling all too rare nowadays and should be respected, but it would be much better to turn it into a more useful channel. If half the sums now squandered on horses, plumes, mutes, and other pagan vanities were handed over to the ecclesiastical authorities of the parish to be spent in relieving the poor and destitute, with a provision that the name of the deceased should be commemorated, reverence for the dead would be kept up, their memory would be kept green, and some, if only a small portion, of unhappiness would be relieved. The Preston guardians will, we hope, now that a coffin can be purchased for a penny, make the funeral of a pauper somewhat less of a perfunctory ceremony than it is at present and take some care to show that a body should not be huddled into the ground at the cheapest rate and in the most careless manner. Extravagance, as we have said above, is to be avoided, but decency and dignity should by all means be considered.

A MEDICAL VICE-CHANCELLOR AT CAMBRIDGE.

WITH the appointment of Dr. Alexander Hill as Vice-Chancellor of Cambridge University the medical profession has for the first time in history the satisfaction of seeing the highest executive office in one of the two great English universities filled by a medical man. John Caius, who, like Dr. Hill, was a student of St. Bartholomew's Hospital, ruled over the College, which he re-founded and endowed, from 1559 to 1573, but he did not fill the office of Vice-Chancellor. John Harvey was appointed Warden of Merton College, Oxford, in 1644, but lost his office six months later on the fall of Charles I. Of other medical men, if any, who have filled headships of colleges there is, we believe, no record, Dr. Alexander Hill's mastership of Downing alone excepted. Of late years medicine has made great advances at the universities, and we must look upon the election of Dr. Hill not only to the mastership of Downing but to the Vice-Chancellorship of the University as a proof of the increasing influence of our profession at Cambridge, and also as one of many recent indications that medicine is rapidly stepping into a position of equality with the sister professions of theology and law. Dr. Hill holds the office of Lecturer in Advanced Anatomy to the University. He was for some time Hunterian Professor of the Royal College of Surgeons of England. He is the author of many papers on the anatomy and physiology of the nervous system, the translator of Obersteiner's "Central Nervous Organs," and the author of the "Physiologist's Note-book" and other works. Last year he succeeded Sir William Broadbent as President of the Neurological Society, and it is as a neurologist that he is chiefly known to the profession. With the public his name is also familiar as the chairman of the National Home Reading Union, over which excellent institution he has presided since its foundation eight years ago. Recently Dr. and Mrs. Hill took their children for a voyage round the world, and we understand that the incidents of their travels as well as various observations upon the ethnology, natural history, geography, and the resources of the Queen's dominions will be published during this month by Messrs. Swan Sonnenschein and Co., under the title of "A Run Round the Empire; being the log of two young people who circumnavigated the globe, written out by their father."

WATER ANALYSIS AND TYPHOID FEVER.

THE value of both a chemical and bacteriological analysis of water with a view to pronouncing it fit or unfit for drinking purposes has often been impugned, and this fact has not a little to do with the refusal of some authorities to have the water-supply frequently and systematically examined. This may or may not have been the case at Maidstone, where, unfortunately, one of the severest epidemics of typhoid fever on record has broken out not very long after it was decided to reduce the number of analyses which had hitherto been made. We do not for a moment affirm that had the analyses been made more often the outbreak would have been avoided. Still, the periodic and frequent examination of a water-supply is, in our opinion, a step that should never be neglected, for although neither bacteriology nor chemistry can be depended upon to determine with certainty whether a water is actually injurious to health, yet both alike may afford an indication of risk and impurity. We could quote several instances where a water-supply has been traced with certainty as the source of typhoid fever, yet on chemical analysis the water showed a high standard of purity. And bacteriological examination is just as likely to be misleading as a chemical examination. Indeed, as a rule, where bacteriological examination succeeds in tracing impurity, so also does chemical analysis. The only safe and satisfactory way to control the purity of a water-supply is to have periodic bacteriological and chemical examinations made, and, above all, especially if the results are negative, to make from time to time a thorough investigation of the source of supply and to ascertain every conceivable possibility of contamination, whether occasional or enduring. It must not be forgotten that accidental pollution may

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happen which would be sufficient to produce an epidemic of disease, and that the moment of pollution may occur sometime between the taking of the samples. In short, it is imperative that not only should a water-supply be examined frequently, both chemically and bacteriologically, but that every step should be taken, especially where the supply is dependent upon wells, to examine minutely the source of the water and ascertain whether there is any possibility of its contamination.

POST-MORTEM EXAMINATIONS AND HOSPITAL PATIENTS.

AT an inquest held upon Oct. 5th at the Lambeth coroner's court a question of great interest to hospital authorities was raised. The inquiry, held at the request of the father of the deceased, was upon the body of a boy aged sixteen years. Five years previously the boy had had his thorax opened and drained at the Westminster Hospital, presumably for an empyema, and the opening had never healed up. On Sept. 18th, 1897, the father brought him to St. Thomas's Hospital, where the boy was admitted. According to the father's evidence, he saw Dr. H. P. Hawkins and told him that he objected to any operation; the boy also objected, whereupon Dr. Hawkins said: "Then nothing shall be done to you, my boy." Witness than left for Brussels, and while there on Sept. 29th he received a telegram saying that the boy was dead. On arriving at the hospital he found that an operation had been performed and a post-mortem examination made. He had given his consent to neither. Dr. H. P. Hawkins, assistant physician to the hospital, said he first saw the boy, who was very ill, having a collection of matter in the right side of his chest, on Sept. 20th. He afterwards saw the father and explained to him that an operation enlarging the opening already present in the side would be necessary. At first the father objected, but upon matters being explained he gave his consent. Dr. Hawkins contradicted the father's statement that he had said "Then nothing shall be done to your boy." Dr. H. G. Turney said that the post-mortem examination was made in the ordinary routine way, and Mr. Sidney Phillips, the steward, said that an order was issued automatically on the occurrence of every death for a post-mortem examination to be made. Consent was never asked, but the friends of a patient were informed as soon as possible on the occurrence of a death, and he considered it tolerably well known that a post-mortem examination would be made. Mr. W. H. Battle said that the operation was performed by him on Sept. 23rd, and the boy died on the 29th from tuberculosis. The jury found that the boy had died from heart failure following tuberculosis, that the hospital authorities were quite justified in operating, and that the father had given his consent. They thought, however, that relatives and friends should be allowed an opportunity of objecting to a post-mortem examination. We quite agree with the verdict; and with regard to the rider, as a matter of fact, we believe consent is asked at most of the metropolitan hospitals. It is very rarely refused if the matter is stated plainly and temperately to the relatives, but the feeling against these examinations is in most cases the outcome of ignorance and, although easily set aside, should be respected and allowed for.

WE are informed that on Sept. 15th, in a case at the Evelina Hospital for Sick Children, Mr. A. H. Tubby successfully and immediately reduced the deformity arising from caries of the spine, and that on Wednesday, Sept. 29th, the same surgeon operated on a similar case with success. These are the first occasions in which this method of forcible reduction has been carried out in London, although Mr. Robert Jones and Mr. Tubby have previously employed it in Liverpool.

THREE courses of lectures and clinical demonstrations will be given at the National Hospital for the Paralysed and Epileptic in each year. During the present or winter course a clinical lecture or demonstration will be given weekly in the theatre on Tuesdays, at 3.30 P.M., by one of the members of the staff. There will be demonstrations on other days as occasion offers. All communications respecting clinical appointments, lectures, and hospital practice should be made by letter only, addressed to the secretary-director at the hospital.

AT the Hospital for Diseases of the Nervous System three courses of clinical demonstrations will be given in the session 1897–98 for medical practitioners and senior students. The courses are designed to cover the subject of neurology in a systematic manner. The first course will commence on Tuesday, Oct. 12th, at 4.30 P.M., and will be continued on consecutive Tuesdays at that hour until Dec. 14th. The fee for one course will be a guinea, and a composition fee of two guineas may be paid for the three courses. Cards of admission may be obtained from the honorary secretary, 60, Upper Berkeley-street, W.

SOME members of the Royal Commission on Tuberculosis, including Sir Herbert Maxwell, Bart., M.P. (chairman), Sir Richard Thorne Thorne, Mr. Cooke-Trench, and Mr. John Speir, have started on a visit to Glasgow, Edinburgh, and Belfast, to see the methods of dealing in the public slaughter-houses at the different places with animals or carcases affected with tuberculosis, and to obtain information on other points connected with their inquiry. On Monday next they hope to visit Dublin for a similar purpose, and possibly one or two English towns on their return.

MR. HUTCHINSON will resume the clinical conferences at the Museum, 211, Great Portland-street, which have been suspended during the vacation, on Wednesday next at 4 P.M. They will be continued every week at the same hour, and the attendance of all members of the profession (not ladies) is invited.

IT is stated by the *Times* correspondent that the Quebec College of Physicians and Surgeons has issued a decree prohibiting medical men from accepting positions as physicians of charitable or benefit societies under pain of withdrawal of the privilege to practise.

AT the opening meeting of the winter session of the North-West London Clinical Society, to be held at the North-West London Hospital on Oct. 20th at 8 30 P.M., the President, Sir William Broadbent, Bart., M.D. Lond., will deliver the annual address.

NO reliable details can yet be given as to the numbers of the new students at the various schools, but we hear that as a whole the total is below the average, although certain schools are rejoicing over a probable increase.

DR. SYDNEY STEPHENSON'S report on the prevalence of ophthalmia in the metropolitan poor-law schools was issued on Oct. 2nd. We shall take an early opportunity of referring to it in detail.

UNIVERSITY OF CAMBRIDGE.—The new Vice-Chancellor, Alex. Hill, M.D. Cantab., Master of Downing College, was formally admitted to office on Oct. 1st. The retiring Vice-Chancellor in a valedictory address announced a gift of £2000 for the general purposes of the university. He hoped that this first response to the statement of needs recently issued by the Chancellor would be followed by many like benefactions.

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Pharmacology and Therapeutics.

GEOSOTE.

GEOSOTE is the name given to a combination of valerianic acid with creosote which has been employed in practice by Dr. Rieck. It is an oily liquid, with a sweetish taste, but without the burning character of creosote, and when injected under the skin in doses of from fifteen to thirty grains the smarting sensation produced soon passes off. For children from two to eight years of age four to ten drops may be given in mucilage or in a spirituous solution. Adults can take it in capsules containing thirty grains, one, two or three capsules being a dose. It appears to be a decided tonic in debility and chlorosis and to be useful in intestinal catarrh and in infantile diarrhœa where calomel, castor oil, and tannin have failed. In the pulmonary catarrh of adults, as well as of children, it is particularly valuable, as of seventy-six cases of phthisis only thirteen are reported as not having derived benefit from it. Indeed, Dr. Rieck has never seen any other remedy productive of so much good. Similarly, it has been satisfactorily employed by the hypodermic method in tuberculous glands, joints, and bones.

CREOSOTE IN HABITUAL CONSTIPATION.

According to Dr. Vladimir de Holstein, of Paris, who writes in the *Semaine Médicale*, one of the best remedies for habitual constipation is to be found in creosote, at least if administered according to a certain plan which he describes. He was first led to employ this drug for constipation from observing its effects on the intestinal functions of a chlorotic young woman for whom he had prescribed it after ferruginous and arsenical preparations had been given for some time without having any appreciable effect on her general condition. Dr. de Holstein's belief was that chlorosis often depends on some auto-intoxication having its origin in the bowels, and he therefore thought that perhaps creosote, being capable of destroying noxious micro-organisms in the digestive canal, might lead to an improved condition of blood. The patient constantly suffered from the most obstinate constipation, which had been treated without very satisfactory results by means of abdominal massage and oil enemata. To Dr. de Holstein's surprise, after the creosote treatment was commenced a daily evacuation was obtained without any artificial assistance. Since then he has employed similar treatment in a large number of cases of habitual constipation and so far has not come upon a single one in which either the creosote was not well borne or in which it did not prove successful. Beech creosote is always used, and he does not approve of pills, perles, or solutions containing spirit, but always administers it in drops in a glass of wine and water, milk, or plain water twice a day after meals. In order to accustom the patient to the burning taste of the creosote it is best to commence with a single drop and gradually to increase this to seven or eight or even more if that should prove insufficient. The treatment should be persevered in for several months and is said to have no ill effects on the teeth or other organs. Of course there is no reason to suppose that creosote possesses purgative properties, its effect on constipation appearing to be due to its neutralising some intestinal toxin which in patients with chronic constipation paralyses the action of the digestive canal.

KOLANIN, THE STIMULATING PRINCIPLE OF THE KOLA NUT.

Dr. Knebel, working in the Pharmaceutical Institute of the University of Erlangen under the direction of Professor Hilger, has found that the active principle of the kola nut is not, as has been supposed, an alkaloid, but a glucoside, which he has isolated and had made into tabellæ containing three grains in each. These appear to exert a better and more stimulating effect than other preparations of the nut. Dr. Dornblüth, of Rostock, has recently published an account of his observations on their employment in practice, having first satisfied himself by experiments on his own person that he might safely prescribe this so-called kolanin. After a more than usually arduous and fatiguing time of seeing patients he found that a single tabella relieved the feeling of exhaustion in a few minutes in a way that caffein had never been able to do, and, moreover, without leaving any unpleasant exciting effects as the latter drug generally did. With patients he found, too, that it relieved many who complained of exhaustion, and left no unpleasant after-effects in the way of lassitude. In the cardiac weakness of neurasthenics, where the pulse is small and fluttering and the patient feels very faint, kolanin generally produces an excellent effect. In two patients with organic heart disease complicated with kidney trouble, where digitalis had not proved as successful as might be desired, kolanin given in three-grain doses every half-hour soon caused a marked improvement. In migraine of a vaso-paralytic character it was also useful, as well as in headaches due to excitement, overwork, or alcohol.

HELOUAN, ITS CLIMATE, WATERS, AND RECENT IMPROVEMENTS.

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HELOUAN or, as it is sometimes called, Helouan-les-Bains is a small town situated on one of the slopes of the Mokattam Hills, in latitude 30° N., and is surrounded on all sides by the Arabian Desert. It is an artificial oasis sixteen miles due south of Cairo, 200 ft. above the Mediterranean, and 140 ft. above the eastern bank of the Nile, which is about three miles distant. Assouan lies 600 miles further south and Luxor about 450 miles. Helouan has a population of 7000, and covers about two-thirds of a square mile. It was planned and laid out under the direct auspices of the Egyptian Government. The late Khedive, H.H. Tewfik Pasha, built a large palace there and chose it as his favourite residence, an example quickly followed by many of the Egyptian princes and pashas.

Communication.—Trains run from Helouan to Cairo in from twenty-five to forty-five minutes, and there is a train each way on an average every hour. Cairo is five or six days from London by the overland route; it is twelve or fourteen days by the long sea route. There is a telephone between Helouan and Cairo.

Soil.—Helouan stands on a mixture of sand and gravel which is continuous with the surrounding desert. To the east gradually rise the Mokattam Hills, which consist largely of early tertiary nummulite limestone and pass without a break into the mountains and valleys of the Arabian Desert. The rounded summits of the hills in the vicinity of Helouan rise to a height of 1200 or 1500 ft. and alternate with broad plateaus or winding valleys. To the north and south are undulating slopes of the desert the surface of which consists of sand or gypseous saline conglomerate, offering unrivalled opportunities to the equestrian. A few miles to the north also are the remains of a sea beach through which the railway to Cairo has been cut. And within an hour's ride past occasional inscriptions, are the huge quarries of Turah and Massarah, from which the stone was taken for building many of the Pyramids. To the west of Helouan the desert slopes gradually down for two and a half or three miles to the narrow strip of cultivated land which fringes the Nile. On the other side of the river lies the town of Bedrashein. A large weekly market is held there, and it is one of the towns in which the primitive life of the Egyptian fellaheen can be well seen and studied.

Just beyond Bedrashein are the ruins of Memphis, founded more than 4000 years B.C. by Menes, the first historic king of Egypt, while an hour's further donkey ride brings the visitor to the step Pyramid and Sakkara with its beautiful and vivid remains of the Egyptian civilisation some 3000 and 4000 years B.C. The character of the situation of Helouan and of the view from it is sufficiently evident from the fact that it includes no fewer than twenty pyramids—namely, those at Gizeh, Abu Roash, Sakkara, and Dashur, the Nile and its valley, with cultivated land and palms, the desert, the Arabian hills, and Cairo in the distance.

The climate of Helouan.—The above brief account of the situation of Helouan will suggest the character of its climate. That which prevails in summer is of no importance, since Helouan as a winter resort is the special subject of this article. The season for Europeans may be said to last from the beginning of November to the middle (or end) of April; its termination partly depends on the question whether the visitor is in search of health or interest or of both.

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The following account of the climate is based upon the results of my own observations made daily at 9 A.M. and 9 P.M. The instruments had been chosen with care, and I believe that the facts ascertained are thoroughly trustworthy. The barometer was of the Kew pattern, and the maximum and minimum thermometers, the wet and dry bulb instruments, the soil thermometers (4 ft. and 1 ft.), and those with black bulb in vacuo for solar radiation were all by Casella, and had been tested and approved at Kew Observatory. The rain gauge had a diameter of 5 in. The Robinson's Anemometer and Jordan's Sunshine Recorder were by Negretti and Zambra, and worked admirably. The self-recording thermometer and hair hygrometer were made by Richard Frères, of Paris, and the chart for each was changed every Monday at 9 A.M. The shade instruments were placed in a Stevenson's screen of the pattern approved by the Royal Meteorological Society—viz., double wooden roof, with double louvred sides, &c.—on the large flat roof of the hotel 40 ft. above the ground.

Air.—The air at Helouan is that from the desert, and usually described as quite free from germs and organic matter of all descriptions. It must in any case be remarkably low in those constituents. (Some observations being made on this point I hope to bring forward on another occasion.) From the fact that the desert surrounds Helouan the air must be remarkably pure, dry, bracing, and invigorating; and as there is no doubt that one of the chief factors in the beneficial influence of a climate is the aseptic condition of its air, the importance of the practically sterile condition of the desert air at Helouan can scarcely be sufficiently emphasised. Anyone who has experienced the effect of breathing the desert air on a fresh morning will vividly remember what a light-hearted, buoyant feeling it produces, combined with a desire for physical exercise.

Sunshine (see Table I.).—The influence of sunshine in promoting natural processes is as important in the case of animals as in that of plants. Its powerful effect in destroying bacteria is well known but not sufficiently utilised. To take one example only, Koch has shown that whereas in diffused daylight tubercle bacilli live for five or seven days direct sunlight kills them in at most a few hours, and not infrequently in a few minutes.

TABLE I.—*Showing the Amount of Sunshine at Helouan.*

—	Actual sunshine.	Daily sunshine, average.	Morning sunshine, average.	Afternoon sunshine, average.	Greatest daily amount.	Smallest daily amount.	Solar radiation black bulb in vacuo, average.
1896.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	
Nov.	238 25	8 37	4 28	4 9	10 0	0 10	147 8
Dec.	229 25	7 24	3 52	3 32	9 20	0 20	138 3
1897.							
Jan.	213 5	6 53	3 35	3 18	9 20	1 5	137·1
Feb.	229 30	8 11	4 17	3 54	10 25	2 5	143·9
March ...	291 12	9 24	4 58	4 26	11 45	1 50	151·6
Totals	1221 37	7 57	4 14	3 51	—	—	143·6

The average sunshine at Helouan during the last winter (November to March) was nearly eight hours a day, and 1221 hours 37 minutes of sunshine were recorded for the five months, of which the greatest amount (291 hours) in one month occurred in March and the least in January (213 hours). It is interesting to note that on an average for the winter there were twenty-three minutes more sunshine registered daily before midday than after, whereas later it will be seen that there was 75 per cent. more wind through the day than through the night. Perhaps the most striking evidence of the character of the climate was the fact that not a single day occurred without some sunshine. Moreover, the atmosphere is peculiarly transparent to the sun's rays, both luminous and chemical, as measurement of the actinic effects of the light demonstrates in a very precise way. The average maximum solar radiation as registered by a thermometer with its blackened bulb in vacuo was 143°. The heat in the sun was usually most agreeable, and many people preferred to wear an ordinary straw hat or cloth cap without any other protection, and were able to do so without inconvenience.

Temperature (see Table II.).—It will be seen from the tables that the temperature during the winter months at Helouan is well suited for invalids. It is true that there is a distinct difference between the mean maxima and minima for each twenty-four hours, but the difference (21°) is not a disadvantage and is pleasant rather than otherwise. This daily range of temperature, however, is less at Helouan and Cairo than at Luxor or Assouan, and is decidedly less than in the Alps and

TABLE II.—*Showing the Temperature at Helouan in degrees Fahrenheit.*

—	Maxima, mean.	Minima, mean.	Mean of maxima and minima.	Daily range.	Extreme highest.	Extreme lowest.	9 A.M., mean.	9 P.M., mean.	Soil temperature (4 feet). 9 A.M.	9 P.M.	Difference.
1896.											
Nov. ...	79·1	58·7	68·9	20·4	88 4	51·0	67·0	67·6	78 0	78·6	0·6
Dec. ...	73 0	51·0	62·0	22 0	86·4	43·0	60·0	63·0	71·93	71·94	0 01
1897.											
Jan. ...	67·3	47·5	57·4	19 8	78·0	43 4	56·2	57·0	69 77	69 8	0 03
Feb. ...	66·9	47·1	57·0	19·8	78·0	43 4	56·9	56 9	69 97	70 01	0·04
March ...	74·5	50 2	62·3	24·3	88·8	45 0	62·7	61·9	70·95	70·98	0·03
	72 1	50·9	61·5	21·2			60 5	61·3			
April (to 24th only)...	82·5	55·3	68·9	27·2	97 2	51·0	71·8	69·1	73·5	73·6	0·1

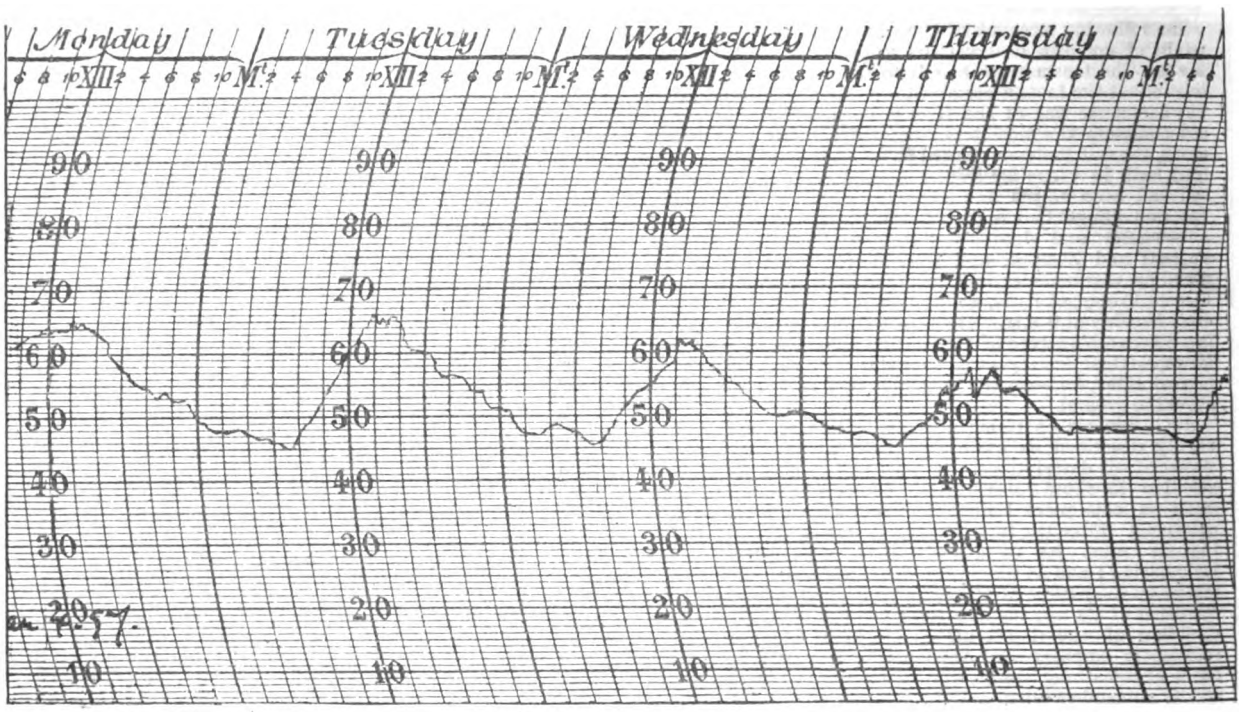
in Colorado and many well-known health resorts. Also, the comparative equability of temperature at Helouan is still more marked if one takes the range of extreme temperatures—Davos giving 10·5° more and Colorado Spring 26·3° more variation as the average for each month (see Table II.). Taking the invalid's day as lasting from 9 A.M. to 9 P.M., it will be seen that he can live out of doors in pure desert air from the beginning of November to the end of March in an average temperature of from 60° F. at 9 A.M., increasing steadily to 72° at about 3 P.M., and returning slowly to a temperature of 61° at 9 P.M. At night the average minimum for the same period is 50·9° F., and therefore, sleeping with open window, there would be no risk of catching cold. Indeed, owing to the retention of heat by the walls of the room the lowest temperature in the room itself would be about 5° or 6° higher.

So much is heard of a sudden fall in the temperature at sunset that a passing remark is necessary. At Helouan, as in desert climates generally, no sudden drop in the temperature occurs as is so frequent elsewhere; and that this is so a glance at the actual temperature chart for the four days, Jan. 6th to 9th inclusive, 1897, will show. The temperature there is self recorded, and given accurately for every moment in the week, yet there is no appreciable drop at the time of sunset, but the temperature gradually falls from the daily maximum to the minimum. Indeed, not only is this true of Helouan, but at a discussion of the Royal Meteorological Society on Dec. 16th, 1896, Dr. Marcet and Dr. Theodore Williams stated that they "experienced no appreciable chill at sunset" even at Luxor or in Egypt generally.

It is important to notice that, as is well known, the temperature of drained land is more equable than that of undrained,[1] and at Helouan the 9 P.M. temperature of the soil four feet in depth only showed an increase of less than one-fifth of a degree over the 9 A.M. temperature. In December, January, and February the difference was even less (see Table II.) and scarcely appreciable. During the winter this four-foot temperature scarcely varied from hour to hour or day to day, and from the beginning of December, when it stood at 75°, it descended gradually until it reached 68·8° at the end of January, and rose gradually to 71·8° at the end of March. At no time did it exceed these extremes. It will be noticed that the temperature of the soil four feet below the surface is above the average in other places, and this peculiarity is without doubt due to the conditions which cause, or are associated with, the thermal springs.

[1] Buchan, Encyclopædia Britannica, vol. vi., 1877; and Climate in the Treatment of Disease, by Weber and Foster, in Allbutt's System of Medicine, vol. i., p. 256.

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Temperature chart showing gradual fall from about 3 P.M. to 7 A.M., but no sudden drop.

Humidity (see Table III.).—The mean of the 9 A.M. temperature for the five months Nov. to March was 60·5° and the mean of the evaporation temperature (wet bulb thermometer) was 53·3°, whereas the mean of the 9 P.M. temperature for the same period was 61·2° and of the wet bulb thermometer was 53 6°. These results were obtained by eye observations of the standard instruments at the hours named, and give by calculation with Glaisher's tables a relative humidity at 9 A.M. of 60 per cent. and 9 P.M. of 59 per cent. The relative humidity as indicated by a recording hygrometer has daily maxima and minima for the same period of 84 and 30 per cent. respectively. Thus, again, taking the invalid's day as from 9 A.M. to 9 P.M. a visitor at Helouan could breathe desert air from November to April inclusive, containing on the average at that period of the twenty-four hours only between 30 and 60 per cent. of moisture (relative humidity).

TABLE III.—*Showing Humidity at Helouan.*

—	Wet bulb 9 A.M. mean.	Dry bulb 9 A.M. mean.	Relative humidity 9 A.M. calculated by Glaisher's tables.	Wet bulb 9 P.M. mean.	Dry bulb 9 P.M. mean.	Relative humidity 9 P.M. calculated by Glaisher's tables.	Relative humidity by recording hygrometer: maximum mean	Relative humidity by recording hygrometer: minimum mean
1896.	Deg.	Deg.		Deg.	Deg.			
Nov.	59·1	+ 7·8	60	58·0	+ 9 5	54	83	26
Dec.	54·4	+ 5 6	68	55 6	+ 7·3	60	86	35
1897.								
Jan.	49·3	+ 6·9	61	50·5	+ 6·5	62	86	35
Feb.	49·7	+ 7·2	59	50·2	+ 6·7	61	86	29
March ...	54·2	+ 8·4	56	53·8	+ 7·1	60	82	24
	53·3	+ 7 2	60	53·6	+ 7·4	59	84	30
April (to 24th) only	59·3	+ 12·5	45	57·1	+ 12·0	46	78	15

Wind (see Table IV.).—The mean numbers given by the Robinson anemometer were for the five months, November to March, 20·75 between 9 P.M. through the night to 9 A.M., and 36 45 for the mean twelve hours 9 A.M. to 9 P.M. That is, there was an increase of about 75 per cent. of wind during the day. It will be seen on reference to the table that February was the most windy month, March rather less windy, and November least.

TABLE IV.—*Wind and Rain at Helouan.*

—	Wind measured by Robinson anemometer read at: 9 A.M. mean.	9 P.M. mean.	Total mean.	Total rain-fall in inches.*
1896. November.	19·9	33·0	52·9	0
December.	21·1	35·1	53 2	436/1000 †
1897. January.	19 2	35·3	54 5	1/50
February.	22 9	41·7	64·6	1/200
March.	20·6	37·1	57·7	12/1000

* Less than half an inch during the five months.
† In one evening, Dec. 2nd.

Dust.—So much prominence has been given by some writers to the dust in Egypt that a few remarks are necessary. It may be divided into two chief kinds, that arising from the dried cultivated land or towns and that from the desert. The latter has a much higher specific gravity, and is in larger granules than the former. If one gives a kick into the desert soil so as to send up a small cloud, dust particles will be seen to remain in the air for a few seconds only and rapidly settle on the earth again; but if one performs the same little experiment with the dried soil of the cultivated land the particles of dust remain for several seconds, or even minutes, floating visibly in the air. Hence in those parts of Egypt (viz., by the river and in the cultivated land chiefly) where dried agricultural soil predominates dust in the air is much more common than in the desert, and from the golf links at Helouan clouds of dust can frequently be seen driving along by the river, while the air at Helouan remains perfectly clear. As Professor Flinders Petrie has pointed out, the occasional strong winds raising dust almost invariably originate to the west of the Nile, and expend a great deal of their force in crossing to the eastern bank. Hence dust is less abundant on the eastern bank.

Possibly one reason for the erroneous idea prevalent as to the amount of dust in Egypt is that the windiest season—

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viz., the latter half of February and beginning of March—is precisely the time of year at which most pleasure-seekers visit Cairo, and after a flying visit they depart with the idea that the conditions they have seen locally for a few days must be prevalent throughout the country for the whole season.

Rain (see Table IV.).—Less than half an inch of rain fell in the five months (November, 1896, to March, 1897). The exact amount was $\frac{47}{100}$ in., and of this $\frac{43}{100}$ of an inch fell in one evening (Dec. 2nd). Therefore, as far as invalids are concerned, the winter was practically rainless.

Thermal waters.—The climate is not the only physical advantage which Helouan offers to those in search of health. It also possesses valuable thermal springs[2] giving in abundance three kinds of waters—viz., sulphur waters, saline waters, and chalybeate waters. There are several springs, but they may be roughly divided into three groups—a group near the present baths, consisting chiefly of sulphur water; a group in the desert, about a mile to the north of Helouan, consisting simply of saline water; and a few springs to the west of the Khedivial Palace containing chalybeate water. The thermal mineral waters of all kinds are in abundance. Three of the sulphur springs near the baths are reserved exclusively for use at the bath establishment; one of the springs gives twelve gallons of sulphur-saline water a minute, and is running to waste day and night; the other two give similar quantities and are in the bath establishment itself. The temperature of the water in the spring is 90° F. Through the kindness of Messrs. Suares I was enabled to obtain an analysis of the water from Professor Attfield, F.R.S., and his analysis (given below) coincides with that of Professor Gastinel Pasha, made several years ago.

TABLE V.—*Analysis of the Sulphur Water of Helouan-les-Bains by Professor J. Attfield, F.R.S. (Oct. 30th, 1896).*

Dissolved solids.	Grammes per litre.	Grains per gallon.
Potassium chloride...	0·2923	20·4610
Sodium chloride	5·0690	354·8300
Calcium sulphate	0·0694	4·8580
Calcium carbonate...	0·8250	57·7500
Magnesium sulphate	0·5069	35·4830
Iron and alumina	0·0160	1·1200
Silica	0·0290	2·0300
Sulphuretted hydrogen	0·0918	6·4260
	6·8994	482·9580

The above weight of sulphuretted hydrogen gas corresponds to rather more than sixty cubic centimetres in one litre, or more than two cubic inches in one imperial pint. The sulphur water of Helouan-les-Bains is therefore practically identical in strength as regards sulphur with the celebrated Montpellier sulphur spring of Harrogate.

Analytical data.—Grains per gallon: potassium, 10·7100; sodium, 139·5100; calcium, 24·5280; magnesium, 6·9300; iron and alumina, 1·1200; silica (SiO_2), 2·0300; sulphuric radical (SO_4), 31·9830; chlorine, 225·0710; carbonic radical (CO_3), 34·6500; and sulphuretted hydrogen (H_2S), 6·4260. Total dissolved substances in grains per gallon—that is, parts per 70,000 parts—482·9580.

TABLE VI.—*Analysis of the Saline Carbonated Iron Water of Helouan-les-Bains, by Professor Attfield, F.R.S. (Oct. 30th, 1896).*

Dissolved solids.	Grammes per litre.	Grains per gallon.
Potassium chloride...	0·2862	20·0340
Sodium chloride	4·7050	329·3500
Calcium sulphate	0·7340	51·3800
Calcium carbonate...	0·5157	36·0990
Magnesium sulphate	0·3613	25·2910
Iron and alumina	0·0150	1·0500
Silica	0·0350	2·4500
Total dissolved solids	6·6522	465·6540

[2] The Advantages of Dry Desert Air and the Application of Mineral Waters in Gout, Rheumatism and Early Phthisis.—Dr. Hinsley Walker, THE LANCET, October 7th, 1893.

Analytical data.—Grains per gallon: potassium, 10·4860; sodium, 129·500; calcium, 29·5400; magnesium, 5·2920; iron and alumina, 1·0500; silica (SiO_2), 2·4500; sulphuric radical (SO_4), 56·2800; chlorine, 209·3980; carbonic radical (CO_3), 21·6580. Total dissolved solids, in grains per gallon, 465·6540.

There is also a simple saline water containing 4·9690 grammes per litre, or 347·8300 grains per gallon of similar salts. In addition to this there are several springs yielding water in abundance, but not yet carefully analysed.

Baths.—The bath establishment in present use is the property of the Egyptian Government, who last summer granted a concession of the same for a term of forty-five years to Messrs. Suares on condition that certain stipulated improvements be made. On taking over the old bath establishment it was found that immediate improvements and alterations were necessary, and these were carried out with due dispatch. New pipes throughout and heating apparatus (boilers and thermas) were set up. A tower was built supporting two large reservoirs thirty-five feet high, so as to supply hot sulphur water and cold sulphur water at a sufficient pressure for the various douches. An electric bath was fitted and also a large room constructed for the inhalation of sulphur vapour, as at Bath, Marlioz, &c. (so-called dry inhalation). Also sulphur inhalation steam sprays were installed for use in throat complaints, &c. Hence at the present moment immersion baths, douches of all kinds, needle baths, electric baths, hot air baths, inhalations, and pulverisations can be administered, and the so-called Aix- (massage) douche is given by skilled European attendants. It has, however, been decided to erect an entirely new bath establishment to supplement the old one. The plans of the new bath establishment have been drawn up on the basis of the most modern balneological and hygienic ideas, and have been (according to the terms of the concession) submitted to the enlightened Public Works Department of the Egyptian Government under Sir J. E. Garstin, K.C.M.G., and approved. H.H. the Khedive also, after a careful examination of the plans, expressed his entire approval of them. The new baths are already in process of construction and probably will be completed during the present winter. They will contain a spacious hall with entirely separate entrances and accommodation for ladies and gentlemen, waiting-rooms, cooling-rooms, twenty-six simple immersion baths, eight large combination bathrooms, each containing an immersion, a needle bath, douches and sprays of all kinds, whilst opening into each combination-room directly will be three separate spacious dressing-rooms, so that the bathers need never be hurried after their bath. Also, accommodation for hot air and steam (local and general), electric baths, inhalations and pulverisations, and all the most modern and necessary appliances will be provided. Adjoining the bath establishment is a large swimming bath of sulphur water, about 70 yards long and 25 broad, through which fresh sulphur-saline water is flowing day and night. It is divided into two portions, one being reserved for ladies and one for gentlemen.

Hence at present Helouan offers during the winter months many exceptional advantages to those in search of health or rest and change. The two chief factors of course are the climate (with the various influences included under that term) and the thermal waters, but to them should be added the powerful influence exerted on the body through the mind by the unfamiliar surroundings and the unique interest of Eastern life and the remains of Egypt's former greatness. The climate, as pointed out above, is a desert climate, and therefore dry and invigorating, and during the winter months almost ideal from the point of view of the seeker after health.[3]

INDICATIONS.

It is evident that by residence in such a warm, dry, equable climate, with air unusually free from dust and germs, with abundance of sunshine and practical immunity from rain, mist, or snow, with healthy mental occupation and surrounded by the resources of civilisation, sufferers from early chest trouble, enlarged glands, scrofula, renal disease, and albuminuria are likely to derive important benefit. Such conditions will obviously be very efficacious also to patients convalescent from severe illness and to those who are anæmic and debilitated or in dubious health. Moreover, such a decided change as Helouan offers in physical and mental surroundings is of the greatest help in cases of functional diseases of the nervous system, especially if

[3] Egypt as a Health Resort, by Dr. Sandwith.

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previously associated with overwork or mental strain. The thermal waters (sulphur, saline, and chalybeate), as pointed out above, may be used either internally or externally or combined. Judiciously employed they certainly exert an eliminative action and are of distinct benefit in cases of gout, lithæmia, and allied conditions. They are useful also in cases of bronchial, laryngeal, and pharyngeal catarrhs, stasis of the portal system, and abdominal plethora, whilst sufferers from dyspepsia, engorgement of the liver and pelvic organs are often indirectly benefited, especially if their troubles are associated with a gouty or rheumatic diathesis. Patients with rheumatoid arthritis distinctly improve, and, as Dr. Bannatyne states, Egypt is *par excellence* the place for sufferers from that disease to winter in. Conditions such as sciatica, rheumatism, stiff joints, or arthritis, whether affecting one joint or more widely diffused, undergo most marked improvement at Helouan, and in these cases it is difficult to apportion the amount of advantage derived from the waters and the peculiar warm, dry desert air. Also, cases of chronic skin disease and special cases of debility are frequently much improved or cured by the use of the waters.

To sum up, Helouan is unique in Egypt in three important particulars and in what follows therefrom—viz., in being surrounded on all sides by the desert, in being not on the level of the Nile, but 140 feet above it, and in the possession of thermal, sulphur, and muriated saline waters; moreover, so far as I know, no other resort within several weeks' journey of London possesses a combination of thermal sulphur waters, &c., and a warm, dry climate during the winter months.

In conclusion, I can corroborate the testimony of Dr. Fenyes, who has been for some years in practice at Helouan, and who has not seen a single case of typhoid fever, diphtheria, scarlet fever, dengue, malaria, or so-called specific disease, which had originated in Helouan.

OTHER RESIDENTIAL PLACES IN EGYPT COMPARED WITH HELOUAN.

Assouan.—This town, which is 600 miles further south and 35 miles from the tropics, is situated on the Nile bank. It has a mean temperature (from December to March) of 8·4 degrees warmer than Helouan,[4] but is much less equable, the mean daily range of temperature being 6·2 degrees more; the range of extreme temperature for the four months is also greater, being in the mean 50·4°, as against 40·5°.[5] As Assouan is warmer the relative humidity is less; the mean is given by Dr. Canney as 40·5°, against 54·2° at Helouan.[6] The mean absolute humidity, however, is only slightly less at Assouan—viz., 28° at Assouan and 30° at Helouan[7] (calculated as grains of aqueous vapour per 10 cubic feet of air). The results for the two relatively drier months, November and April, at Helouan are not given. It is interesting to note that the absolute humidity at Assouan in February was the same (28°) as at Helouan in January, and was the same (29°) at Assouan in March, as at Helouan in February. The late Dr. Jalland worked an anemometer which I placed at Assouan, and the results he sent me when compared with those obtained by an identical method at Helouan confirm the general idea that there is distinctly more wind at Assouan; also, there is more sunshine. The season at Assouan is shorter—viz., from the beginning of December to about the middle of March. The hotel, with accommodation for seventy people, is quite comfortable and has a dependance in the shape of a disused steamer.

Luxor.—This place, which is 450 miles south of Helouan and situated on the Nile bank in cultivated land, has more sunshine than Helouan, and in December to March is 3·6° warmer in the mean, but is much less equable, having a mean daily range of temperature of 6·2° more. The range of extreme temperature is also greater in the mean, being 49·6° as against 43·5°.

The relative humidity is higher—viz., 56·9, as against 54·2, and the absolute humidity is greater—viz., 31 (grains per 10 cubic feet) at Luxor, as against 30 at Helouan. There is less wind than at Assouan or Helouan. The chief hotel is comfortable, but stands in a luxuriant garden and is largely surrounded by the native village.

Mena House.—This is situated nine miles by road from Cairo, just above the level of the high Nile and 100 yards from the cultivated land. The temperature is in all respects much the same as at Helouan, and there is rarely a difference of 1°F. The moisture in the air is, however, distinctly greater both relatively and absolutely. Relative humidity (December to March) had a mean of 68·9 and absolute humidity gives 35 (grains of aqueous vapour in 10 cubic feet of air) as against 30 at Helouan. It is slightly more windy than at Helouan.

Cairo.—Cairo is situated on the level of the Nile, and has a population of about half a million people. The temperature is much the same as at Helouan. Humidity, both absolute and relative, is greater than at Mena, and still more so, therefore, than at Helouan. Owing to the changes produced in the soil and atmosphere by the High Nile it is very distinctly less healthy at the beginning of the winter than later. Its attractions are chiefly social. As an Eastern town with its commingling of Eastern and cosmopolitan life, each moment unfolding the scenes of the Arabian nights, with its mosques, its citadel, its absolutely unique museums, its attractions innumerable, its official and military elements, to say nothing of polo, races, cricket, golf, tennis, and military tournaments, few places can compare with it in its season. For those requiring such attractions or suffering merely from over-worked nervous systems or such disorders as neurasthenia it can be strongly recommended.

Accommodation, &c.—In Helouan there are two chief hotels, boarding-houses, and many villas on hire. The Helouan Hotel was built five years ago. The rooms are unusually lofty, large, and well-ventilated, and the hotel is comfortably furnished. It has electric light in every room, a large, well-appointed dark room for photographers, English and French billiards, and an excellent lending library, with books in English, French, and German. The cuisine is at least equal to that of the best hotels in Cairo. The sanitation is beyond reproach. Pension and room from 50 piastres—i.e., just over 10*s.* a day. The Grand Hotel des Bains adjoins the bathing establishment, and was entirely renovated last year. It accommodates about fifty visitors, and is well appointed in every way. Its sanitation, new throughout, has been approved by the Sanitary Department of the Egyptian Government under Dr. Rogers Pasha. Pension and room from 32 piastres—i.e., about 6*s.* 6*d.* a day.

The water-supply is constant and excellent. The water is taken from the Nile about eighteen miles above Cairo and pumped up to the town reservoir. For drinking and bedroom purposes in the two hotels mentioned it is filtered through Pasteur filters and is always in abundance.

At Helouan there are now good golf links in the desert five minutes' walk from the Helouan Hotel, and a golf club house is being built. Asphalt and cement lawn tennis courts, croquet, bowls, &c., horses, camels, or donkeys can always be obtained (or, if preferred, hired from Cairo and stabled in Helouan). Sand carts for driving into the desert, &c., can be hired from the hotels. Helouan forms a very convenient starting point for visiting the Pyramids and tombs of Sakkara, Dashur, &c., and the expeditions into the desert are interesting at first, later fascinating, and always health-giving. Cairo with its unique attractions and environs can be reached in twenty-five or at most forty minutes, and, as has been already stated, there is a train each way about every hour.

By the river there is the usual shooting obtainable in Egypt—viz., quail, snipe, and wild fowl, whilst the fauna of the desert though scarce fully repay the chase. The river, about three miles distant, can be reached by bicycling or driving or in the special trolley which runs over an old rail. And on the river the hotel steam launch can be hired at 30*s.* a day, or 20*s.* the half-day. Sailing boats are also to be had. An Egyptian military band plays every Sunday afternoon and evening at Helouan, and not infrequently (mostly on Thursdays) an English military band plays in the quadrangle of the Helouan Hotel.

At Helouan there are three posts a day, five mails a week from England (transit from five to seven days), and telegraphic and telephonic communications. The latter with all parts of Cairo is constantly available.

It may be interesting to compare the following meteorological observations with those at Helouan. Only the averages are shown, and there are no sunshine records except

[4] Dr. Leigh Canney (Quarterly Journal of the Royal Meteorological Society, April, 1897, p. 192) placed a self-recording thermometer and hygrometer in a screen at each of the following places—viz., at Assouan (worked by Dr. Longmore and Dr. Jalland), at Luxor (worked by himself), at Mena (worked by Dr. Bentley and Mr. Hichens), and at Helouan (worked by the electrician, Monsieur Douat). His temperature and moisture results thus obtained are quite the best comparative meteorological work yet done on the above places.

[5] Ibid., p. 195. [6] Ibid., p. 179. [7] Ibid., p. 186.

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for Falmouth. The figures were obtained from the Royal Meteorological Society by the kindness of Mr. Marriott.

TABLE VII.—*Showing Meteorological Observations at sundry Health Resorts for the Five Months from November, 1896, to March, 1897, inclusive.*

—	Temperature (deg. F.).				Relative humidity.	Rain.		Sunshine.
	Mean maximum.	Mean minimum.	Extreme maximum.	Extreme minimum.		Amount.	No. of days.	
Falmouth	45·2	40 3	53·2	32·0	85·0	5·18	20·8	78·9
Nice	54·8	41·7	64·7	32·0	71·4	4·23	7·4	—
Algiers	64·8	51·7	79 5	43·8	—	4·06	11	—
Funchal	66·0	51·4	70·8	46·4	70·0	4·49	9	—
Colorado Springs	—	—	63·6	1·4	—	0·34	—	—
Denver	46·2	21·4	67 2	1·6	49·0	0·54	5·2	—

Welbeck-street, W.

THE VACANCY IN THE GENERAL MEDICAL COUNCIL.

MR. VICTOR HORSLEY'S CANDIDATURE.

MR. VICTOR HORSLEY had a crowded meeting at the rooms of the Medical Society of London, 11, Chandos-street, on Friday afternoon, Oct. 1st, to hear his views on medical reform.

Mr. STAMFORD FELCE, in introducing Mr. Horsley to the meeting, said it was a pleasure to support Mr. Horsley in anything that he did because he always did it so zealously and painstakingly. The work that Mr. Horsley had done already for the profession in connexion with the Medical Defence Union would alone fit him for the larger sphere of usefulness he now sought to fill. Sir Walter Foster had relinquished his post on the General Medical Council and he had shown no cause in his address why he should now have altered his mind.

Mr. VICTOR HORSLEY expressed his regret that he had been unable to arrange the meeting so that a report of it could appear in the medical press of last week. He was before them to-day wishing to enter the General Medical Council for a very specific purpose. His experience in the work of the Medical Defence Union had shown him clearly that unless the work of medical defence had some sort of representation on the General Medical Council all those evils which pressed most heavily at the present time on the profession would remain unrelieved as they had done during the last decade. As he had already explained in his address he had much experience in the work of medical defence, and if he was returned as a Direct Representative to the General Medical Council he would exercise that knowledge and would at the same time be ready to receive suggestions and help from his former colleagues. Among the reforms which seemed to him most urgent was undoubtedly the reform of the constitution of the Council. This came first, although it seemed to fall in importance behind other questions which dealt more immediately with the actual lives of medical men. Yet it would be clear to everyone that unless the great principle of political representation was given more scope in the constitution of the Council they could not hope for any rapid advance in practical reforms. Mr. Horsley then referred to the over representation of the universities and corporations as compared with the representation of the profession directly, and laid stress on the fact that this question, one which concerned the interests of the general practitioner as opposed to those of the consultant, could only be solved by making direct representation also to some extent geographical representation. He would strive to make representation topical, representative of divisions of the country, in order that the candidate for a seat on the Council might have full advantage of his local reputation. With regard to the reform of the by-laws of the General Medical Council Mr. Horsley claimed that the Council had power under the Privy Council to draw up by-laws for the conduct of its own business. Last year he had ventured to draw attention at the meeting of the British Medical Association at Carlisle to the work of the penal committee of the Council, and especially to the really extraordinary by-laws under which that committee was acting, because he considered that their by-laws conferred an exceedingly dangerous power upon the President and the legal adviser of the Council. The justice of his contention had since been acknowledged by an alteration in the by-laws relating to the penal procedure. Mr. Horsley then went on to say that though grateful for the kind way in which his candidature had been spoken of in THE LANCET he wished at this point to refer to one error which had slipped into the enumeration of what were termed by that paper his virtues. THE LANCET said that he had made unwarrantable attacks upon the President of the General Medical Council. What he really did was, as he had always said, to show that the by-laws conferred certain powers on the President of the Council which might have evil effects. Without giving him the slightest opportunity of demonstrating the correctness of his contention the Council had condemned his action. He then published a letter in the press challenging comment in a public manner, but received no reply. Mr. Horsley then quoted from the minutes of Council certain resolutions and amendments which he held to justify his statement that the by-laws of the Council at that time were in a very dangerous condition. With reference to the past work of the Direct Representatives Mr. Horsley said that to the question, "Who among the Direct Representatives has worked most for us?" the answer was simple and certain. It was Dr. Glover, and Mr. Horsley invited those who had seen other statements made to peruse the official Minutes of the Council. They would then see that the man who had brought forward and initiated most movements in favour of reform in the Council was Dr. Glover, to whose name he would now add that of Dr. Bruce.

Referring to his advocacy of a one-portal system he had heard it stated that there seemed to be very little feeling on the subject in the profession, but he had had letters sent to him from all parts of the country drawing attention to the inequality under which men gained access to the profession, and complaining of the absence of a uniform degree. He had never been able to see the objection to the granting of such a degree. The Act of 1886 was designed to import such uniformity into our system by establishing the triple qualification of medicine, surgery, and midwifery. An attendance at a meeting of the Council would show that the representatives of the corporate bodies represented the bodies who sent them rather than the union of the portals of the profession. Referring to the question of medical aid associations Mr. Horsley said that if he were asked his views in the Council on this point he would repeat what he had stated publicly for several years, that it was a question which could only be decided by the Council itself, and from an ethical point of view under the clause which gave the Council power to deal with a practitioner whose conduct was "infamous in a professional respect." There was no doubt whatever that if a medical practitioner was brought before the Council on the charge of having employed touts or canvassers he would be struck off the register, or at any rate threatened if he did not give up the practice.

Mr. Horsley then corrected certain mis-statements that had been made by Mr. Colin Campbell and in the press concerning a statement attributed to him that £400 a year was sufficient to support a medical man, and concluded by reading to the meeting the brief statement which follows of his position with regard to the question of the registration of midwives.

As I find that considerable misconception and confusion prevails concerning the so-called "Midwives question" I beg to lay before you the following facts:—

1. Persons called midwives are at the present time and in considerable number carrying on midwifery nursing and irregular midwifery practice.

2. In recent years, but especially since 1889, when Sir Walter Foster brought forward and carried in the General Medical Council a motion urging the Government to construct and pass a law for the registration of midwives, a popular agitation had been carried on to effect this and to confer upon them what is practically a professional title and status.

3. There is also a widespread and obviously just feeling that the calamities which are caused at present by ignorant midwives cannot be allowed to continue, and the registration of the title midwife or midwifery nurse has been erroneously supposed by the General Medical Council to safeguard the interests of the public.

4. To procure safety for the public it is clear that the so-called midwives must be taught midwifery nursing, and that any person who follows the calling of a midwifery nurse without having had such teaching must be punished by statute.

5. No legislative guarantee of this kind, however, is possible unless

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the names of properly taught midwifery nurses are placed on a list or register.

6. To meet the requirements of the public as laid down in the report of the Select Committee of the House of Commons, 1893, it is evident that the Privy Council will at no very distant date introduce a Bill which, to judge from the two (Lord Balfour's and Mr. Egerton's) already sent to the General Medical Council for consideration and report "as soon as possible" (*vide* Minutes G.M.C., 1897), will probably contain no safeguard either to the medical profession or the public.

7. The case of the medical profession has been gravely prejudiced by the practical adoption by a committee of the General Medical Council (of which Sir Walter Foster was a member), and subsequently by the Council, of the former of these Bills, and by its amendment in various unimportant particulars without provision of a single safeguard against the establishment and quasi-legislation of a body of unqualified practitioners in midwifery, such as the existing midwives.

8. The General Medical Council has now appointed a committee to consider Mr. Egerton's Bill; the question is therefore practically re-opened.

9. The Parliamentary Bills Committee of the British Medical Association, through a sub-committee of which I was chairman, has prepared a Bill for the teaching and regulation of obstetric nurses, which is now before the Council of the Association for consideration.

10. The point of immediate importance to the profession in this question at the present time is the strict preservation of the triple qualification in Medicine, Surgery, and Midwifery alone possessed by registered medical practitioners.

11. There are two methods of securing this, of which the first is the proposition by the Lancashire and Cheshire Branch of the British Medical Association—namely, "that every case of midwifery attended by a midwife should be seen by a registered medical practitioner within twenty-four hours of the commencement of labour." This I believe would adequately meet the case.

12. The second, however, is more fundamental in principle, and is what I should endeavour to secure acceptance by the General Medical Council and reference to the Privy Council as being a complete legislative safeguard against the attempted contravention of the Medical Acts. I propose that when any report on a Midwifery Nurse's Bill is brought forward for final adoption there shall be first adopted a Bill for the amendment of the Medical Acts to prevent the practice for gain of medicine, surgery, and midwifery by any but practitioners registered under the Medical Acts.

13. This safeguard will at the same time put a stop to the irregular practice in diseases of women and children carried on at the present time by midwives, certificated or otherwise, and chemists.

Mr. LOCKWOOD then proposed the following resolution: "That this meeting, having heard Mr. Horsley's address, pledges itself to do all in its power to secure his election as Direct Representative."

This was seconded by Dr. BENNETT, who said that he felt certain that what Mr. Horsley had promised to do he would do.

Dr. BATEMAN then read a list of letters which he had received from persons unable to be present, and asked leave to make a little personal statement. At Sir Walter Foster's meeting the other day he had felt it necessary to call attention to an article in a lay magazine which he considered to constitute a form of advertising. There ought not to be one law for the L.R.C.P. and another for the F.R.C.P.; one law for the G.P., and another for the J.P. In the current issue of the *British Medical Journal* there was an article headed "Sir Walter Foster and the *Young Man*" which said that "Sir Walter Foster has a right to complain of what we cannot but agree with him in calling an unchivalrous attack upon him on the score of an interview which has recently been published in a journal entitled the *Young Man*. This matter, we understand, was sprung upon him at the meeting without notice." This Dr. Bateman denied, explaining that Sir Walter Foster had had notice of the so-called attack. Dr. Bateman went on to say that about eighteen months ago he had been asked by the *British Medical Journal* for his assistance in a legal difficulty arising out of an ethical question. He had then, in behalf of the *British Medical Journal*, asserted that advertising was in every case unprofessional. Now the *British Medical Journal* sought to show that the interview in the *Young Man* was not unprofessional.

Several questions having been addressed to Mr. Horsley with the object of further elucidating his policy the motion before the meeting was unanimously carried.

A meeting of the Medico-Ethical Society of North-East London was held at 184, Mare-street, Hackney, on Friday, Oct. 1st, at 9 P.M., the Vice-President, Dr. C. T. Aveling, being in the chair. Mr. Victor Horsley delivered an interesting and instructive address on Medical Reform, in which he indicated clearly and concisely the changes that were necessary and how they could best be brought about. He made special reference to the Medical Act and explained fully his position with regard to the Midwifery Nurses Registration Bill, which he distinctly said he would not support until Clause XL. of the Medical Act had been amended so as to prevent midwives and midwifery nurses opposing medical men in practice. At the close of the meeting a unanimous vote was recorded in favour of Mr. Horsley's candidature for a seat on the General Medical Council.

On Saturday afternoon, Oct. 2nd, a meeting of the members of the medical profession in East Anglia was held in the Medical and Chirurgical Society's Rooms at Norwich to hear an address from Mr. VICTOR HORSLEY. Sir FREDERIC BATEMAN, M.D., presided, and there was a large attendance of medical practitioners from Norwich, Yarmouth, and other parts of the eastern counties.

Mr. VICTOR HORSLEY in the course of his address urged that the direct representatives ought to be general practitioners, and said that as such men were seldom very little known beyond their own district in order to give them a chance of election there ought to be district representation. The whole country ought to be marked out into districts, for it was not fair that all the candidates should have to appeal to the whole constituency. In this way the wants of each district could be properly represented. The last two years had seen a reform of the by-laws and of the procedure of the General Medical Council and the merit for this was due entirely to Dr. Bruce, the direct representative of Scotland, and to the Council of the Medical Defence Union. That Union had for years fought the General Medical Council on numerous points, but more especially as regarded their penal procedure. Two years ago a case occurred which revealed the fact that the President and the Solicitor of the General Medical Council had powers of an absolutely arbitrary nature. He exposed this fact at Carlisle. In an editorial article in THE LANCET it was stated of him: "He is impulsive; sometimes he is prejudiced and occasionally rather too aggressive. He is apt to be borne along with the very impetuosity of his perceptions and convictions. On one or two occasions he has allowed himself to make unwarranted charges against the President of the General Medical Council which offended not only the President but the Council." The charges he brought forward at Carlisle were published in the *British Medical Journal*, and the cases on which they were based were published at the same time. He showed that under the by-laws the President was the only person who could have done the things he complained of. The matter was taken before the Council by members of the Council sitting *in camerâ*, and they never called upon him to produce his documents, but issued an *ex-parte* statement to the effect that the President was not responsible. Immediately that was published in the *Times* he wrote to that paper a letter pointing out that the President alone and no one else could have done the things of which the Medical Defence Union complained. That letter had never been answered and never would be. The documents were in the office of the Medical Defence Union, and if necessary would be used at the proper time. The sentences in THE LANCET were written, he was sure, in all kindliness of spirit but in ignorance of the actual facts. Very great reforms had been achieved. A new set of by-laws had been drawn up by which all improper powers had been taken away from the executive officers of the Council, so that now the profession had the satisfaction of knowing that penal cases were no longer subject to the dictum of one man, but must go first before the committee and then before the Council. Mr. Horsley went on to speak of the attitude of the Council towards the questions of medical aid associations and midwives, which, he said, had been reopened. As to overcrowding in the profession, he noticed that Mr. Colin Campbell had represented that he (Mr. Horsley) had said at Manchester that £400 a year was sufficient to support a medical man. Of course that was not correct. What he said was that some had to live on that amount, and he regretted it very much. He thought it quite possible that too many students were entering the profession, and that if the preliminary examination were raised and the five years' curriculum maintained their number would be fewer. The decreasing incomes of medical men, however, were not due so much to this cause as to irregular competition, such as hospital abuses, quacks, and medical aid associations. The medical aid associations formed a question of medical ethics which ought to be dealt with by the General Medical Council; but that body consisted for the most part of men who represented corporate bodies and who would resist to the death anything that would diminish the number of graduates they turned out; therefore, they held that it was not the business of the Council to do

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anything at all, but that the qualifying bodies should deal with it in a quiet way. As he was on the Senate of the University of London he would do all he could to bring the matter clearly before them. The question was a perfectly simple one, as had been shown by the Medical Defence Union long ago. No officer of a medical aid society was received as a member of the Medical Defence Union. No doubt the evils of the medical aid associations could only be remedied by the General Medical Council itself, under the clause by which if a registered medical practitioner was after due inquiry judged to be guilty of infamous conduct in a professional respect his name should be removed from the Medical Register. The clause gave the Council no power to reprimand only, but they sometimes did so in an indirect way, and in any amendment of the Medical Act that power would be demanded. He feared, however, the General Medical Council had lost prestige with the Privy Council. As there had been gross misrepresentation of his views on the midwifery question, he had issued a circular upon the subject. He was not pledged to support the registration of midwives. If the General Medical Council was not brought to a sense of the dangers and difficulties of the position the medical profession would soon have another system of unqualified practice to contend with. Undoubtedly midwifery nurses must be taught, but they must not be permitted to treat mothers and children as they so frequently did. This evil, of course, would be accentuated if these nurses had a registered title. The Lancashire and Cheshire branch of the British Medical Association proposed that every case of midwifery attended by a midwife should be seen by a medical man within twenty-four hours of the commencement of labour, and this safeguard had been accepted by Mr. Egerton in his Bill on the subject. This would retain the moral position the profession possessed, but he felt they ought to go deeper and bring about an amendment of the Medical Act before the Midwifery Nurses Bill was brought in. The profession was suffering a great deal from the irregular practice of quacks, and that was to be stopped. He did not believe that the members of the General Medical Council were acquainted with the Act under which they were brought together and which they practically had to administer. It would be a simple matter to reform the constitution of the Act and to increase the direct representation. Mr. Horsley went on to speak in detail of the clauses of the present Act and to point out certain abuses connected with their interpretation.

The CHAIRMAN said the qualifications for the post sought by Mr. Horsley were that he should be well in touch with his profession and that he should be of sufficient social and scientific standing to enable him to speak with something like authority on the General Medical Council. He thought Mr. Horsley possessed these qualifications.

Mr. ALLEN moved: "That this meeting, having heard Mr. Victor Horsley's statement, expresses confidence in him and promises to use its best efforts to ensure his return as one of the Direct Representatives of the General Medical Council."

Dr. BEVERLEY seconded the motion.

Mr. WYLLYS, Mr. WHITTAKER, and Mr. THOMAS having made some remarks, the motion was adopted.

A vote of thanks to the Chairman was carried and this concluded the proceedings.

SIR WALTER FOSTER'S "COLLEGE REFORM" SUB-COMMITTEE AND MR. VICTOR HORSLEY'S CANDIDATURE.

A whip has been issued by the "College Reform" Sub-committee of Sir Walter Foster's Election Committee claiming support from the profession for Sir Walter Foster as the only candidate in favour of a certain reform programme. It is to be regretted that this whip was issued, and we are sure that Sir Walter Foster will share this feeling with us, inasmuch as Mr. Horsley had actually replied to Mr. George Jackson, one of the signatories of the whip and of the programme, in the following terms:—

COPY.

25, Cavendish-square, W., 4th Oct., 1897.

DEAR MR. JACKSON,—I agree with all the Reforms mentioned in the circular you kindly send me, and though some are plainly impossible of attainment for a long period I would use every effort to press them forward.

May I add that I cannot see that our views as to what is urgently required to further the interests of the profession are in any degree divergent.

And remain, yours sincerely,

George Jackson, Esq., F.R.C.S. VICTOR HORSLEY.

The sub-committee are, we understand, giving what publicity they can to Mr. Horsley's favourable reply, but manifestly their hasty and inaccurate whip may have misled many voters inasmuch as voting commenced last Monday.

THIRTY-NINTH ANNUAL REPORT OF THE GENERAL BOARD OF COMMISSIONERS IN LUNACY FOR SCOTLAND.

THE number of lunatics under official cognisance in Scotland on Jan. 1st, 1897, was 14,500. This represents a total increase for the year 1896 of 407, as compared with 241 in the previous year. Between Jan. 1st, 1896, and Jan. 1st, 1897, the following increments took place among the insane in Scottish asylums. The population of the Royal and District Asylums shows an increase of 17 private patients and 502 pauper patients. In private asylums there is a decrease of 7 patients; in parochial asylums a decrease of 109 pauper patients; in lunatic wards of poor-houses an increase of 11 pauper patients; in private dwellings an increase of 2 private patients and a decrease of 33 pauper patients. All patients located in the above-mentioned establishments are termed registered lunatics, and the total increase of this class during 1896 was 383, of whom 12 were private patients and 371 pauper patients. The changes in the number of non-registered lunatics are indicated by the following figures. The number of insane criminals in the lunatic department of Perth Prison shows an increase of 5, and in the training schools for imbecile children there is an increase of 3 private inmates and 16 pauper inmates.

The table which records the number of admissions of registered lunatics into establishments, after deducting transfers, shows that the number of private patients admitted last year was 482, or 33 fewer than during the preceding year, and that the number of pauper patients admitted was 2645, being 111 more than in 1895; 87 voluntary patients were admitted into asylums with the sanction of the Board. The Commissioners continue to regard the provision of the law which permits the admission of patients without certificates as satisfactory, and they state that nothing has occurred to indicate any difficulty or disadvantage traceable to the presence of this class of patients in asylums. During 1896 the number discharged recovered was 1340; of these, 209 were private patients and 1131 pauper patients. The number of private patients who died in establishments during the year was 131, which is 6 more than in 1895; the number of pauper patients who died was 721, being 93 less than in the preceding year. The rate of mortality per cent. was for private patients 6·8 and for pauper patients 7·9. General paralysis, phthisis, heart disease, and senile debility were the most frequent causes of death; in this connexion it is worthy of mention that no death took place from phthisis in any of the private asylums. The statistics afford no information as to the total number of post-mortem examinations performed, but a perusal of the notes of the Commissioners on the various asylums leads to the belief that the number is capable of being increased. At the same time, it is only right to state that original pathological research seems to be carried on with assiduity in many institutions. 180 patients effected their escape; with the exception of 20 all were brought back within the statutory period of twenty-eight days; indeed, 93 were absent less than twenty-four hours. There were 100 accidents, of which 18 terminated fatally, including 12 suicides. Of the 6 fatal accidents not due to suicide 4 were caused by suffocation in bed during a fit, 1 by assault of a fellow-patient, and 1 probably occurred during a struggle with an attendant. This matter was fully investigated by the Crown authorities and by the Commissioners; the attendant implicated was apprehended, but the charge against him was eventually abandoned. The management of the various establishments is favourably spoken of by the Commissioners in the reports of their visits. Overcrowding seems to be rife in the majority of the royal and district asylums, and in these institutions, with one exception, the use of restraint and seclusion is more or less in vogue, although always applied for adequate reasons.

The Commissioners continue to express unabated confidence

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in the system of boarding out suitable cases in private dwellings, and the beneficial effects of this method are set forth in glowing terms in the lucid and instructive reports of the Deputy Commissioners. As the result of their inspections the Deputy Commissioners are agreed that the condition of those so boarded out is generally satisfactory, and that their environment is conducive to their well-being, both mental and bodily, except perhaps in some instances where the patients are living singly with relatives, whose mistaken kindness frequently leads to the further deterioration of the lunatic. Under the circumstances it is somewhat disappointing to find that the number of pauper lunatics boarded out in private dwellings has decreased during the year 1896 from 2700 to 2667. The authorities, however, do not attach any special significance to this decrease, but attribute it to certain restrictions adopted by them to meet the growing tendency of accommodating more than 2 patients in one house and to prevent the aggregation of lunatics in certain localities. It is not anticipated that these restrictions will have more than a temporary influence upon the number of patients provided for in private dwellings.

The report contains a powerful appeal on behalf of the poorer class of private patients who are only able to pay a very moderate rate of board. The accommodation for this class is at present very inadequate, and the majority have no option but to have recourse to the parish council, who usually consent to their removal to asylums as paupers on the understanding that the whole board, or as much of it as possible, shall be refunded to the parish. The relatives, however, speedily realise that the patient is completely pauperised by this proceeding and frequently endeavour to escape from the burden of maintaining him. The Commissioners, therefore, consider that fresh legislation on the subject is desirable, both in the interests of private patients of the poorer class and the ratepayers, and they recommend that district boards should be empowered to provide accommodation suitable for this class. The proportion of private lunatics in establishments was 46 per 100,000 of the population, which is the same as last year. The ratio of pauper lunatics in establishments per 100,000 of population was at the beginning of this year 224, which is 8 above last year, and is the highest figure yet recorded. The proportion of all pauper lunatics per 100,000 of population shows an almost continuous increase since 1858, and at the beginning of the present year attained its highest point, 287, as compared with the next highest, 281, which was attained last year. The Commissioners, however, are of opinion that the increasing number of registered lunatics does not prove that there is any increased liability to insanity in the community. In this they are in agreement with their *confrères* in England and Ireland. It is a comforting assurance, and it is to be hoped in the national interest that in the long run it will prove correct. The report yields in no particular to its predecessors, and is characteristic of the practical and enlightened policy which has always marked the administration of Scotch lunacy affairs.

OPENING OF THE LONDON MEDICAL SCHOOLS.

WINTER SESSION, 1897-98.

St. George's Hospital.—The opening of the winter session was inaugurated by a pleasant and successful dinner held on Oct. 1st in the Whitehall rooms of the Hôtel Métropole, under the presidency of Dr. T. Whipham, who has recently taken the melancholy step upwards from senior physician to consulting physician. There were over one hundred guests present, and the speeches were all of a cheerful character, as the progress of the school has recently been very great. The best speeches were made by Mr. Holmes, whose connexion with the hospital as honorary treasurer is rather a remarkable sequel to his long connexion with the hospital as surgeon, and by Dr. Isambard Owen, who was able to announce that the respectable number of upwards of fifty students had joined. A hearty vote of thanks was accorded to Mr. G. R. Turner and Dr. Dakin for their services in arranging the dinner. Dr. Manson's introductory address has already been published in our columns.

St. Mary's Hospital Medical School.—The annual dinner of the past and present students took place at the King's Hall of the Holborn Restaurant on Oct. 1st, Mr. A. J. Pepper being in the chair. The dinner was well attended, upwards of 160 persons being present. The chairman was supported by Sir William Broadbent, Mr. George P. Field (the dean of the medical school), Mr. Edmund Owen, Dr. Lees, Mr. Herbert Page, Dr. Luff (sub-dean), and other members of the hospital staff. Among those present were Fleet-Surgeon Preston, R.N., Brigade-Surgeon-Lieutenant-Colonel Myers, Surgeon-Lieutenant-Colonel A. F. Clarke, Dr. John Anderson, C.I.E., Mr. Thomas Wakley, junior, Dr. Waller, Mr. Plimmer, Dr. Laurie, Dr. Danford Thomas, Dr. Nix, Dr. Cundell, Dr. Wills, Mr. B. Thornton, and Dr. John Moore. The toasts of "The Queen" and "The Prince and Princess of Wales" were given from the chair and received with enthusiasm. The chairman proposed "The Army, Navy, and Reserve Forces," which was responded to by Fleet-Surgeon Preston for the Navy, Brigade-Surgeon-Lieutenant-Colonel Myers for the Army, and Brigade Surgeon-Lieutenant-Colonel Danford Thomas for the Reserve Forces. In proposing "Prosperity to St. Mary's Hospital Medical School," the chairman alluded to the great progress made by the medical school during the last fifteen years and to the important positions to which its old students had attained in every branch of the profession. He referred to the successive improvements which the medical school had undergone, and more particularly to the extensive alterations now approaching completion. He contrasted the facilities which now existed for the teaching of physiology with those of former days, and cited as evidences of progress the increased opportunities recently provided for experimental work and laboratory teaching in pathology, including bacteriology, as well as in physiology and chemistry. Dr. Lees proposed the health of the Dean of the Medical School, Mr. G. P. Field responding. The toast of the "Past and Present Students" was proposed by Mr. G. P. Field and responded to by Mr. H. Manders for the past and Mr. W. H. Willcox for the present students. Dr. J. P. Wills proposed "The Staff." Dr. Sidney Phillips replied, and gave the health of the chairman, to which Mr. Pepper responded. A musical programme, arranged by Dr. Scanes Spicer, concluded the proceedings, and the dinner was in all respects one of the most successful of recent years.

Guy's Hospital.—The session opened on Oct. 4th with a house dinner of the Students' Club in the College dining-hall, and a general meeting of the Students' Physical Society in the new lecture theatre. Sir Samuel Wilks was the guest of the Students' Club, and he subsequently presided over the meeting of the Physical Society. More than three hundred past and present students assembled and accorded a hearty welcome to the chairman on his first official visit to the hospital since he had received the honour of a baronetcy. Sir Samuel Wilks welcomed the students who had that day entered the hospital and recounted many amusing reminiscences of the medical school with which he had been connected for more than fifty-five years. He created great merriment among his audience by his criticism of modern "scientific" prescriptions, and pointed out that while so little real progress had been made in therapeutics the profession was making rapid advances in pathology and sanitary science. Dr. Muspratt read a paper to the Society dealing with some of the difficulties—professional, ethical, and legal—to be met with in private practice. At the termination of the meeting the company adjourned to the new physiological laboratories and class-rooms, where an exhibition was held of physiological apparatus, surgical instruments, pathological drawings, &c.

King's College.—On the afternoon of Oct. 1st, the Principal, the Rev. Dr. Robertson, distributed the prizes to the successful candidates, and he delivered an interesting inaugural address. In the evening the customary annual dinner of old students of King's College Hospital was held at Limmer's Hotel, Conduit-street, the chair being taken by Mr. F. Richardson Cross, of Clifton, whose popularity was demonstrated by the numbers attending the dinner, many of whom came very great distances at considerable personal inconvenience. In proposing the toast of the evening, "King's College Hospital and its Medical School," Mr. Cross gave a brief but interesting account of the history of the foundation of University College and of King's College, and dwelt upon the special aims of the founders of King's College, and the impossibility of materially altering these aims unless by appealing for a new charter. He made

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kindly reference to the long connexion of Richard Partridge with the College and hospital, and in an endeavour to compare the work of Fergusson and of Lister he found a happy simile in the title of Erichsen's Text-book of Surgery. "The Science and Art." Art was represented by Fergusson, science by Lister. The work of Kelly, Baxter, Sir George Johnson, Sir Alfred Garrod, Sir William Bowman, Dr. Todd, Dr. Beale, Dr. Rutherford, and Dr. Ferrier, were in turn dwelt upon in felicitous terms. The Rev. Dr. Wace and the Rev. Dr. Robertson replied on behalf of the Hospital and the Medical School.

London Hospital.—The session was opened by the annual old students' dinner on Oct. 1st. Dr. A. E. Sansom presided over a successful gathering of old students and distinguished visitors, amongst whom were Professor Clifford Allbutt and Dr. John Lowe. The speeches were purposely made as few as possible in order that the foregathering of old friends in the museum might be early indulged in. Dr. Sansom proposed "The Hospital and College" in very felicitous terms. The House Governor made an excellent speech in replying for the hospital, and Mr. Treves responded for the college in his usual admirable style of after-dinner oratory. Professor Allbutt, in replying to the toast of "The Visitors," expressed the great pleasure that he felt in visiting the hospital where so many of his pupils completed their clinical studies, and he trusted that the present cordial relations between the London Hospital and the university which he represented might long continue. The Hospital Photographic Society took a most successful picture of the company by flash light.

Royal Free Hospital and the London School of Medicine for Women.—On Oct. 1st a conversazione was held at the Royal Free Hospital to inaugurate the winter session. Moore Ward, which was temporarily empty, was utilised, having been prettily decorated for the occasion. In addition to a selection of vocal and instrumental music an address, an abstract of which will be found in THE LANCET of last week, was delivered by Mr. J. Grosvenor Mackinlay, the senior ophthalmic surgeon to the Hospital.

University College Hospital.—The winter session was opened at University College Hospital on Oct. 4th, by a lecture delivered at the college by Mr. Raymond Johnson, assistant surgeon to the hospital. The address will be found in another column. In the evening the past and present students of the Faculty of Medicine dined together in the Victoria Room of the Hôtel Cecil, Dr. Charlton Bastian, F.R.S., being in the chair. After the usual toast of "The Queen" the chairman proposed "Success to University College," and mentioned that, owing to the liberality of Sir Blundell Maple, the re-building of the hospital had already commenced, and that it was hoped that the north-west pavilion would be ready for occupation by this time next year. During dinner Dr. F. T. Roberts, Dr. Tait, and Mr. Turner contributed to the enjoyment of the evening by singing several songs, which were enthusiastically received. Among those present may be mentioned Sir William Gowers, Sir John Williams, Dr. Hare, Mr. A. E. Barker, and Mr. R. J. Godlee, the Dean of the Faculty of Medicine.

Westminster Hospital.—The winter session of the medical school opened with an inaugural address by Professor G. B. Howes, F.R.S., and the distribution of prizes by Mrs. Howes. After the address a conversazione was held, which was attended by a large number of old and present students and their friends, a very pleasant evening being passed. No dinner was held this year, but the conversazione attracted a much larger number of old students than usually attended the annual dinner.

St. Thomas's Hospital.—On Oct. 2nd, after the annual distribution of prizes in the Governor's Hall at the Hospital, the old students dined together at the Whitehall Rooms of the Hôtel Métropole. Sir William MacCormac., Bart., took the chair, and the gathering was a most successful one, the number present (181) being an increase of nearly forty over any previous occasion. Dr. Fairbairn, who had given away the prizes in the afternoon, proposed "St. Thomas's Hospital, Past and Present," in a witty speech. This was responded to by the Treasurer, by Dr. Hawkins (the Dean), and by Dr. Foord Caiger. The Dean, in noting the chief improvements of the past year, mentioned the now nearly completed clinical laboratory. He also congratulated the school on having obtained nine acres of the best ground in London for the use of the amalgamated athletic clubs. He spoke in regretful terms of the retirement of Dr. Ord who, in addition to proposing "The Chairman," made a feeling speech in response to an enthusiastic impromptu call. Sir Felix Semon was also congratulated on his recent honour. The chairman on rising to respond to his health met with a great reception and the toast list was completed with the "Honorary Secretaries" proposed by Dr. Barry Blacker.

Middlesex Hospital.—The annual dinner of the past and present students took place on Monday, the 4th inst. Mr. Storer Bennett, F.R.C.S., dental surgeon to the hospital, took the chair. There was a very large gathering, the company numbering upwards of 150, including Lord Strathcona and Mount Royal, Sir Arthur Watson, Bart., deputy-chairman of the weekly board of the hospital, Dr. Buller, of Montreal, Mr. Wilhelm Ganz, Mr. T. W. Nunn, Mr. Balding, of Royston, and all the members of the medical and surgical staff. The toast list comprised the usual loyal toasts, followed by that of "The Services," given by the chairman and responded to by Surgeon-Lieutenant-Colonel G. S. Griffiths, Surgeon E. D. J. O'Malley, R.N., and Captain Wm. Duncan. The chairman next gave the toast of "The Middlesex Hospital and School" in an eloquent speech, in which he referred to the establishment of the Clacton Convalescent Home, the building of the new cancer wing of the hospital, and the extensive additions and alterations now being made to the school buildings. The toast was responded to by Sir Arthur Watson and Dr. W. Pasteur, the dean of the medical school. Dr. Cayley gave the toast of "The Past and Present Students," which was replied to by Mr. J. Smith Turner and by Mr. H. F. Hine, the Broderip Scholar of the present year. The toast of 'The Guests" was proposed by Mr. Henry Morris and acknowledged by Lord Strathcona and Mount Royal and Mr. W. Ganz. Sir R. Douglas-Powell, Bart., proposed "The Chairman," which closed the proceedings which had been of a most enthusiastic and enjoyable description. The musical arrangements were under the admirable guidance of Mr. W. Ganz, who in his speech referred to the fact that he had been present at these annual gatherings for a period of nearly thirty years, the vocal part of the entertainment being rendered by Miss Stella Maris, Mr. James A. Bovett, and Mr. J. W. Myler, whilst Mr. Paul Storving gave two excellent selections on the violin.

THE FRONTIER RISING AND INDIAN POLICY.

WE have, in addition to the war news from the front, reports of the speeches of Sir George White, the Commander-in-Chief in India, and those of Mr. John Morley in this country on Indian policy. With the political aspect of the question regarding the border tribes on the north-west frontier we are not concerned; it is not within our province as medical journalists to discuss questions of military policy. We cannot avoid, of course, forming some opinion thereon in common with any other interested reader of the news from our great Eastern dependency, but our views in this respect can have no special interest for our readers. The future policy of the Indian Government with regard to the tribes occupying the extensive belt of territory between India and Afghanistan is without doubt a very grave question as far as that Government and its exchequer are concerned, and it will most probably form the subject of serious debate when Parliament meets. The present is no time, however, for discussing questions of this kind or for criticising the wisdom or otherwise of the "forward" policy. It is not a time for arguing, but for action. The campaign that has been entered upon must be fought out spite of the cost in life and still more in money that it entails. This country cannot "back out" of the situation without a loss of prestige, which, where Eastern races are concerned, would be little short of disastrous, for it would be great incitement to further action on the part of the aggressive and turbulent tribes on the one hand, and a grave impairment of the moral strength of our own army on the other. The tribesmen must be read a severe lesson and taught that they cannot treacherously raise a revolt against our power with impunity. When that matter has been unmistakably settled will be the time for debating about

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questions of policy. One of the most surprising and curious things about these frontier risings is the fact that they were totally unexpected. The political officers of the Indian Government were entirely ignorant of what was going on beyond the frontier, the tribes were in our pay for keeping the mountain passes open at the time of their rising against us, there had been no outward and visible sign of their discontent beforehand or at the moment, much less of the widespread nature of the rising and the more or less general inter-tribal organisation that existed. As far as the Afridis were concerned they had been unusually quiet for some time, receiving their retaining pay from the Indian Government and amicably fulfilling their obligations. The fact that this was so shows the necessity where Asiatic tribes are concerned for our being always on the alert. Matters had gone beyond the power of the "politicals" to settle when the exact nature of the situation was disclosed, and it only remained for the sword to cut the knots in it. This has in a great measure been already done. The rapidity, all things considered, of the military movements, the gallantry and success of the troops in the field, and the loyalty and devotion displayed by the native army have been striking features in all that has taken place. A good deal has been made of the hard fighting and apparent checks that have arisen in connexion with General Jeffreys' force, whereas the explanation has simply been that an unexpected and disproportionate amount of difficulty and fighting has fallen to the share of this brigade, which has from the first found itself in several tight places. But it is only fair to say that the General has always been equal to the occasion, and in the expressed opinion of General Sir Bindon Blood has handled his force with great dexterity and skill. General Elles's column and the other brigades have all done extremely well; they have seemingly had less difficulties and, on the whole, less hard fighting to encounter. The wounded are reported to be going on satisfactorily and the troops in the field are enjoying good health. The field hospital system is working well considering the difficulties of the country, of transport, and commissariat it has had to encounter. It may be fairly said that the Mohmand campaign has been a successful one, regard being had to all the trying circumstances attending it in the way of heat, pressure of work, scarcity of water, and the severity of the opposition. The hardship encountered on expeditions of this nature is really very considerable, and the difficulties have, in the opinion of those best able to judge, been admirably surmounted. One of the measures adopted in this campaign—namely, that of disarming the recalcitrant tribes—is a very wise one, for the tribesmen will always be ready to use any arms in their possession. Everything has by this time been pretty well arranged for Sir William Lockhart's punitive expedition to Tirah, and if all goes well with it, as we have every reason to hope and believe, the submission and disarming of the Afridi and Arakzai tribes will before long be secured. The force gathering on the north-west frontier in point of numbers and quality is the finest that has appeared there; it includes the pick of the army, European and native. The number of native followers and of mule and camel transport is enormous, and the expense of the expedition must be enormous also.

ST. MARY'S HOSPITAL, which has been closed for two months for extensive repairs, has now been re-opened for the reception of in-patients. The out-patients' department resumed work on Oct. 4th.—At the Medical School the following scholarships have been awarded:—Entrance Scholarships in Natural Science (September, 1897): £144, M. F. Kelly; £78 15*s*., J. B. Albury; £78 15*s*., D. E. Finlay; and £52 10*s*., J. H Wells. University Entrance Scholarships: £57 15*s*., F. C. Eve; and £57 15*s*., C. Killick.

DERBY ROYAL INFIRMARY CONVALESCENT HOME.—The Holbrook Convalescent Home, which receives cases from the Derby Royal Infirmary, is about to be pulled down and replaced by a larger building which will provide accommodation for twenty-eight inmates. The front of the new edifice will be two storeys in height, the corridors and staircases will be fireproof, and there will be a central tower for the storage of a supply of water. The divisions allotted to each sex will be completely separated. The cost of building is estimated at £5000 or upwards, the whole of which will be defrayed by Alderman Herbert Strutt, J.P., who has also provided an additional sum of £3000 as an endowment.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the Sanitary Circumstances of Wribbenhall, by Dr. THEODORE THOMSON.—Wribbenhall is a village of 1278 inhabitants in the rural district of Kidderminster; its ordinary death-rate slightly exceeds that for rural England; but of 218 deaths registered in ten years, no fewer than 54 took place in children under one year of age; the rate of infant death per cent. of registered births being distinctly excessive. Having regard to this, Dr. Thomson describes the sanitary circumstances of the village in much detail, and he gives a number of specific instances of the existing state of affairs. Amongst the latter we find a record of dwellings that are damp and are built back to back, of ill-paved yards, of leaky cesspools close to houses, of offensive cesspit privies, of lack of scavenging even where the closets are of reasonable construction, of wells sunk in the same porous sandstone as that which receives privy and cesspool soakage; and, in short, of most of those conditions which go to make village life even more risky than that of some of our largest communities; and, when it is remembered that infant life is perhaps the most sensitive test of unhealthy conditions of dwellings and their more immediate surroundings, it is not surprising that there is an excess of infant death in this village. Prominent amongst the sanitary needs of the place are a water-supply that shall not be subject to pollution, a decent system of sewerage, a proper system of closets and of excrement disposal, the paving of yards with such an impervious paving as shall prevent soakage of liquid refuse into the soil about houses, and the closure or improvement of houses which are unfit for habitation. Now that these matters have been distinctly set out for the Kidderminster Rural District Council it is to be hoped that some systematic action will be inaugurated.

On the Sanitary Circumstances of Eaton Bray, by Dr. S. W. WHEATON.—This report deals with a Bedfordshire parish of 1330 persons, lying in the newly constituted rural district of Eaton Bray. As regards dwelling accommodation, it seems clear that under the previous sanitary administration a substantial beginning of good work had been done; but there still remains plenty to do to remedy or close houses that are unfit for human habitation by reason of dampness of floors and foundations, bad drainage, and stagnant pools of water or farmyard drainage about them. Then, again, wells are very commonly sunk in such positions as make them liable to contamination from surface washings, from manure deposits, and by reason of leakage from vault privies; and it seems clear that extension of the system under which wholesome water has already been in part procured through the action of the district council is much needed. There is no system of sewerage, and, as must almost necessarily result, nuisance from accumulations of liquid filth arises. Pail privies are replacing vault privies, but the scavenging is imperfectly done. At the same time, it is due to the district council to explain that, whilst they undertake the emptying of pail privies through their contractor, they decline to do the same for vault privies because they thus desire to induce the replacement of the vault privy system by the much more cleanly and wholesome system of pails. Reviewing the whole circumstances of this village it becomes especially clear that until the district council provide a wholesome water-supply for all the inhabitants, and lay down some means of drainage that shall properly dispose of the liquid filth of the place they will not have performed their statutory duty.

On the General Sanitary Circumstances of the Borough of Bewdley, by Dr. THEODORE THOMSON.—This inquiry was instituted on a representation made by the Worcestershire County Council as to the failure of the Town Council of Bewdley to provide a proper water-supply for the borough, to put in force the Housing of the Working Classes Act, and to provide the borough with efficient sewers and thus prevent the pollution of the Severn by the discharge of sewage into it. It would appear to be the custom of the Local Government Board to hand these representations in the first instance to their Medical Department, and in a large number of cases

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this has done away with the need for further and more formal action, the authorities concerned having acted on the advice given them to remedy the conditions complained of. Bewdley is one of the old and little boroughs of England, and it is diminishing even further in population, the number of inhabitants having fallen from 3088 in 1881 to 2876 in 1891. It thus compares rather with rural than with urban districts, and as such its annual death-rate of 17·3 per 1000 is by no means small. The infantile death-rate is distinctly in excess of that for England and Wales. The cause of this is not far to seek. In certain parts of the town the yard surfaces are broken and uneven, and the dwellings are old, badly lighted, dilapidated, and damp. Indeed, of the dwellings inspected, Dr. Thomson says: "There were few that did not present some defective condition." The existing barrel sewers have their bricks set in mortar. They are of excessive size, and naturally they have become defective and contain silted-up and offensive material; besides which they have no manholes or lampholes, and they are for the most part unprovided with means of ventilation. Some houses are undrained; here and there cobble channels allow of stagnation of slop-water, and the house drains are seldom properly disconnected from the sewers. The cesspit privy prevails generally in the district, and it is contrived on precisely those conditions which ensure nuisance and danger to health and, above all, to infant life. The Town Council contract to empty these structures, but they allow the contractor to make a charge on the tenants. This duplicate system is one that not only always fails, but it is probably quite illegal under the Public Health Act. Drinking-water is scanty at certain seasons in some parts of Bewdley and it is equally defective there in point of quality. "All wells ....., whether public or private, are sunk into formations necessarily largely fouled by excremental and other refuse matters from leaking cesspits, ashpits, sewers, and drains with which the ground under the town of Bewdley is riddled." Dr. Thomson discusses the whole question of the local sanitary administration in detail, and he shows in a convincing manner how unfortunate that administration has been. These small dwindling boroughs are often in default because their responsibilities are beyond their means and their power of action; and it is quite possible that this may be the reason for the persistent neglect of this Town Council to give effect to the advice of their medical officer of health. We are only astonished that the County Council limited their representation to the three matters specified; but we assume they deemed them the most pressing. Now that the maintained neglect in so many matters has been definitely set out, and now that it has been shown that some of the commonest causes of the excessive infant death-rate in this steadily diminishing population are in full operation, it is to be hoped that the County Council and the Local Government Board will follow out the initial step which has been taken in the matter.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

St. Pancras District.—The St. Pancras Vestry have, Dr. John Sykes reports, sanctioned the bacteriological examination of secretion from doubtful cases of diphtheria and of blood from cases suspected to be enteric fever. Every medical practitioner in the district has had an outfit box sent to him, which, when the occasion requires, is remitted charged to the medical officer of health, an uncharged box being at once sent him in return. The charged boxes are transmitted daily to the British Institute of Preventive Medicine, and next day the result is forwarded through the health department to the medical practitioner. Sleeping accommodation has now been added to the St. Pancras "Shelter," in order that persons whose houses are being disinfected and the walls stripped and cleansed may remain in comfort during the whole process. While dealing with the subject of washhouses, and the difficulties pertaining to their provision on an adequate scale, Dr. Sykes expresses the opinion that (1) "in every tenement house there should be required to be provided a place where the occupants can do their clothes washing and personal cleansing"; and (2) that "as St. Pancras contains such a very large number of one- and two-roomed dwellings the by-laws for tenemented houses should be supplemented by a by-law requiring the provision of accommodation for clothes washing and personal cleansing." Dr. Sykes gives a complete list of bakehouses in St. Pancras, and he has constructed an ingenious diagram showing the number of bakehouses above or below the ground. Of the two hundred bakehouses in the parish only 15 per cent. have the floor above the ground level, while 74 5 per cent. have the floor 6 feet or more below the level of the ground.

Islington District.—According to the first quinquennial census the population of Islington on the night of March 29th, 1896, was 336,764. This population gives to Islington a very prominent position as compared with that of most of the thirty-three large towns, the only towns besides London possessing a population in excess of that of Islington being Birmingham, Liverpool, Manchester, Leeds, and Sheffield. It is not customary to think of the parishes of the metropolis in this manner, and hence to some extent their individuality appears to be lost sight of. The density of the population of Islington is greater than that of any of the thirty-three large towns, but there are seventeen sanitary districts in London having densities of population greater than Islington. There were 288 deaths in Islington from measles during 1896, and there seems to have been some want of harmony between the sanitary authority and the London School Board. Mr. Harris points out that if there is to be anything like satisfactory joint action between medical officers of health and the medical officers of School Boards it will be necessary that the *locus standi* of the latter officers shall be defined by the Local Government Board. Medical officers of health have very definite powers with respect to school closure, &c., and although it is eminently desirable that complete harmony should obtain between these officers and the School Board medical officers it appears to us that anything like dual control might at any time prove a source of friction and a danger to the public health. Voluntary coöperation let there be by all means, and let the usual courtesies of interchange of information and opinion always obtain, but decisive action should rest with one officer alone. Mr. Harris, after referring to a case of small-pox which was erroneously diagnosed as chicken-pox, urges that the General Medical Council should compel all students to examine a certain number of cases of small-pox before proceeding to their examinations. However desirable this restriction may be, we are afraid there would be found serious difficulties in the way of carrying it into effect, and although in the future small-pox may be more prevalent than it is at the present time we doubt the expediency of making the proposed restrictions in anticipation. To afford every facility and encouragement to students and medical men to see cases of small-pox when they occur is, it seems to us, as far as matters can go at present. With infectious diseases other than small-pox the case is different, but at the same time we would not withhold a diploma because the applicant for it had not seen a patient suffering from typhus fever. We note that the work of Miss Gray, the female inspector of workshops in Islington, has been attended with good results.

Glamorganshire County District.—Glamorganshire is by far the most important county in Wales, whether regard be had to its area, its population, or its trade; and it is as it should be that the county is setting an excellent example to other Welsh counties, and not a few English ones, in the matter of its public health administration. Dr. William Williams, the county medical officer of health, has made himself thoroughly familiar, by means of a personal survey, with the condition of the administrative county, and he is now turning his knowledge with much effect to the bettering of its sanitary state. Aberdare, with a population of 44,000, is now the only district in the administrative county outside the provisions of the Compulsory Notification Act, and it is to be hoped that before the next report reaches us the district will have tired of its unique position. Glamorganshire has a high birth-rate, both the urban and rural rates being considerably in excess of that for England and Wales. The county death-rate was but 17 per 1000, the separate rates varying from 20 3 and 9 9, while the infantile mortality amounted to 180 per 1000 births. Dr. Williams notes with much satisfaction that the incidence of, and mortality from, enteric fever has diminished. As regards isolation hospital accommodation much has been done during 1896, and we read of a small-pox hospital at Bridgend and of another at Pontypridd, while the sanitary authorities of Cardiff and Barry have erected on the Flat Holm island in the Bristol Channel a joint hospital for the reception of cases of cholera and bubonic plague. What an excellent situation for a hospital for small-pox if suitable sea ambulance provision were obtainable. The progressive people of Barry have, we are glad to see, decided to build a permanent hospital. There are good prospects of further progress during the present year, and there is probability that soon all the districts of

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the county will be provided with accommodation. Dr. Williams devotes some space to an effort to obtain better regard for the provisions of the dairies, cowsheds, and milkshops order in the county, and he points out that by the improvement of the health of cows the food supply of infants will also improve, and a reduction in infantile mortality may be affected. The condition of the slaughter-houses in the county has much improved of late, a fact for which Dr. Williams can vouch as the result of having visited every such building in the county. Dr. Williams speaks highly of the good effects which have accrued from the visits of inspectors of the Local Government Board. He states that during the last four years from twelve to fourteen authorities have been reported to Whitehall by the county council, and that when government inspectors were sent down beneficial results always followed.

Cardiff Urban District.—The Registrar-General's estimate of the population of Cardiff in the middle of 1896 at 162,690 is, Dr. Edward Walford considers, probably too low, as the usual basis of estimation has been rendered somewhat unreliable by the rapid growth of Cardiff within recent years. Forty-eight cases of small-pox were brought to the notice of Dr. Walford during 1896, thirty-one of the cases occurring in January and February. In a special report upon the subject it is pointed out that among those attacked (*a*) there was no vaccinated child under ten years, (*b*) the only child attacked under ten years was unvaccinated, (*c*) no revaccinated adults were attacked. Dr. Walford points out to his sanitary authority the lesson to be learned from a study of small-pox and vaccination, and we are glad to hear that the Cardiff guardians did their duty as to vaccination. In an interesting and special report upon meat inspection Dr. Walford reminds the council that Cardiff is in quite an exceptional position as regards facilities for such an inspection, inasmuch as it possesses two public abattoirs, and has, through a private Act of Parliament, closed all the private slaughter-houses. Dr. Walford refers to the report of the Royal Commission on Tuberculosis, and insists upon the necessity for proper inspection. He suggests that a veterinary inspector should inspect all the carcasses and meat in the public meat markets, and should submit to him a written report upon any meat which he considers diseased. The medical officer of health would then, if necessary, visit the abattoir and decide upon the necessary steps to be taken. The veterinary inspector should also visit all the cows in the registered cowsheds and perform the tuberculin test upon them, every demonstrated or suspected case of tubercle to be referred to the medical officer of health. Dr. Walford is to be congratulated upon his report being acted upon by the Council and the necessary veterinary inspector being appointed. As far as we are aware the Cardiff Town Council is the first sanitary authority in the United Kingdom which has ventured to propose to apply the tuberculin test to the cows in the cowsheds, and we shall watch the development of the situation with much interest. Dr. Walford also furnishes a special report upon sewer-ventilation: he has obtained returns from several large towns on the methods of sewer ventilation and as to the existence of any illness supposed to be due to the ventilation or non-ventilation of sewers. As a result of his investigations he has been unable to detect "any influence either for good or evil upon the inhabitants of any particular method of sewer ventilation.

Renfrew County District.—Dr. Campbell Munro, when treating of isolation hospital provision in his annual report, asks if it is wise to exceed the original estimate in building such a hospital. In the case of one of the Renfrew hospitals the original estimate was £6000, but the actual cost was £11,500, and Dr. Munro observes that if the actual cost of the hospital had been known in the first instance the hospital would not have been erected and the Joint Hospitals Board would not have been formed. Nevertheless, in this instance there appears to have been no extravagance, and under-estimation seems to have been the only fault. We have known hospitals where similar circumstances have obtained—i.e., where the estimates, owing to the architect's inexperience of such buildings, has been largely exceeded, but where, had the ultimate cost been furnished in the first instance, the hospital would not perhaps have been erected for another ten years. If it is desired to avoid these under-estimates, it is most important to engage an architect who has had previous experience of such buildings, and of their fitting up. The cost of bedding, &c., is often altogether omitted from the original estimates.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6294 births and 3538 deaths were registered during the week ending Oct. 2nd. The annual rate of mortality in these towns, which had declined in the seven preceding weeks from 29·5 to 17·1 per 1000. further fell last week to 16·8. In London the rate was 15·3 per 1000, while it averaged 17·8 in the thirty-two provincial towns. The lowest death-rates in these towns were 11·7 in Cardiff, 12·0 in Croydon and in Halifax, 12·7 in Blackburn, and 12·9 in Portsmouth; the highest rates were 21·5 in Wolverhampton, 21·6 in Newcastle-upon-Tyne, 23·1 in Preston, and 23·7 in Liverpool. The 3538 deaths in these towns included 514 which were referred to the principal zymotic diseases, against 722 and 608 in the two preceding weeks; of these, 229 resulted from diarrhœa, 67 from diphtheria, 61 from "fever" (principally enteric), 60 from measles, 51 from scarlet fever, and 46 from whooping-cough. No death from any of these diseases was recorded last week in Swansea; in the other towns they caused the lowest death-rates in Brighton, Plymouth, and Halifax; and the highest rates in Norwich, Burnley, Preston, and Wolverhampton. The greatest mortality from measles occurred in Preston and in Burnley; from whooping-cough in Derby; from "fever" in Norwich and Burnley; and from diarrhœa in Wolverhampton, Salford, Burnley, Bradford, and Preston. The mortality from scarlet fever showed no marked excess in any of the large towns. The 67 deaths from diphtheria included 49 in London, 4 in Leicester, 4 in West Ham, and 3 in Cardiff. No fatal case of small-pox was registered last week in any of the thirty-three towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital on Saturday last, the 2nd inst., was 3677, against 3579, 3653, and 3697 at the end of the three preceding weeks; 349 new cases were admitted during the week, against 376 and 358 in the two preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 113 and 165 in the two preceding weeks, further rose last week to 167, but were 37 below the corrected average. The causes of 58, or 1·7 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Nottingham, Leeds, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Plymouth, Liverpool, Preston, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·4 and 17·8 per 1000 in the two preceding weeks, rose again to 19·4 during the week ending Oct. 2nd, and exceeded by 2·6 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 10·2 in Perth and 17·3 in Aberdeen to 22·8 in Greenock and 25·2 in Dundee. The 579 deaths in these towns included 41 which were referred to diarrhœa, 18 to whooping-cough, 7 to "fever," 5 to scarlet fever, 4 to diphtheria, and 3 to measles. In all, 78 deaths resulted from these principal zymotic diseases, against 101 and 78 in the two preceding weeks. These 78 deaths were equal to an annual rate of 2·6 per 1000, which was slightly above the mean rate last week from the same diseases in the thirty-three large English towns. The 41 fatal cases of diarrhœa showed a slight increase upon the number recorded in the preceding week, and included 14 in Glasgow, 12 in Dundee, and 7 in Edinburgh. The deaths from whooping-cough, which had increased from 15 to 20 in the three preceding weeks, declined again to 18 last week, of which 9 occurred in Glasgow and 3 in Leith. The deaths referred to different forms of "fever," which had been 9 in each of the two preceding weeks, declined to 7 last week, of which 5 were registered in Glasgow. The 5 fatal cases of scarlet fever were within 1 of the number recorded in the preceding week, and included 2 in Glasgow and 2 in Edinburgh. Of the 4 deaths from diphtheria 2 occurred in Edinburgh, and the 3 fatal cases of measles included 2 in Glasgow. The deaths

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referred to diseases of the respiratory organs in these towns, which had been 96 in each of the two preceding weeks, rose to 137 last week, and exceeded by 92 the number in the corresponding period of last year. The causes of 33, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 22·4 to 28·3 per 1000 in the three preceding weeks, declined again to 26·5 during the week ending Oct. 2nd. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city has averaged 24·0 per 1000, the rate during the same period being 19·4 in London and 18·4 in Edinburgh. The 178 deaths registered in Dublin during the week under notice showed a decline of 12 from the number in the preceding week, and included 20 which were referred to the principal zymotic diseases, against 28 and 39 in the two preceding weeks; of these, 8 resulted from diarrhœa, 6 from "fever," 3 from diphtheria, 2 from scarlet fever, and 1 from whooping-cough. These 20 deaths were equal to an annual rate of 3 9 per 1000, the zymotic death-rate during the same period being 2·1 in London and 2·1 in Edinburgh. The fatal cases of diarrhœa, which had been 13 and 21 in the two preceding weeks, declined to 8 last week. The deaths referred to different forms of "fever," which had been 6 and 9 in the two preceding weeks, declined again to 6 last week. The mortality from diphtheria exceeded that recorded in the preceding week, while the deaths from scarlet fever and from whooping-cough showed a decline. The 178 deaths in Dublin last week included 47 of infants under one year of age and 44 of persons aged upwards of sixty years; the deaths of infants showed a slight decline, while those of elderly persons exceeded the number recorded in any recent week. Five inquest cases and 4 deaths from violence were registered; and 54, or nearly a third, of the deaths occurred in public institutions. The causes of 15, or more than 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-LIEUTENANT J. McD. MCCARTHY is appointed to the Staff of the Royal Victoria Hospital, Netley, for duty, and is posted to the Medical Division. Surgeon-Lieutenant Cummins is appointed for duty to the Cork District, and Surgeon-Lieutenants Poe and Jephson have been transferred for duty to the Curragh. Surgeon-Major Maturin will hold himself in readiness to embark for service in India shortly. Surgeon-Major Smythe and Surgeon-Captain Tatham have embarked in the transport *Avoca*. Surgeon-Lieutenant W. A. Ward is warned to be ready to embark for India in December.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Lieutenant Clemesha (Bengal) are replaced at the disposal of the Military Department. The services of the under-mentioned officers are placed temporarily at the disposal of the Government of Bombay for employment on plague duty:—Surgeon-Captain Collins, A.M.S., Surgeon-Lieutenant Morgan, A.M.S., Surgeon-Lieutenant Howell, A.M.S., Surgeon-Lieutenant Baines, and Surgeon-Lieutenant Sealy. The services of Surgeon-Lieutenant Robertson (Bengal) are replaced temporarily at the disposal of the Government of Bombay for employment on plague duty. The services of Surgeon-Lieutenant Watling (Bengal) are replaced at the disposal of the Military Department. The services of the under-mentioned officers are placed temporarily at the disposal of the Military Department:—Surgeon-Major Money-Shewan (Bengal), Surgeon-Captain Woodwright (Bengal), Surgeon-Captain Close, (Bengal), Surgeon-Captain Crawford (Bengal), Surgeon-Captain Jordan (Bengal), Surgeon-Captain O'Kinealy (Bengal), Surgeon-Captain H. St. John Fraser (Madras), Surgeon-Captain Fink (Bengal), Surgeon-Captain Hare (Bengal), Surgeon-Captain Wilkinson (Bengal), Surgeon-Captain Hunter (Bengal), Surgeon-Captain Dawson (Bengal), Surgeon-Captain Westropp White (Bengal), Surgeon-Captain Chatterton (Bengal), Surgeon-Captain Davidson (Bengal), Surgeon-Lieutenant Bensley (Bengal), Surgeon-Lieutenant Stevenson (Bengal), Surgeon-Major Deane, A.M.S., Surgeon-Captain Rivers, A.M.S., Surgeon-Captain Fleury, A.M.S., and Surgeon-Lieutenant Knapton (Bombay).

VOLUNTEER CORPS.

Royal Engineers: 1st Durham: Surgeon-Major W. Mearns, M.D., to be Surgeon-Major.

ARMY MEDICAL SCHOOL, NETLEY.

The seventy-fifth Session of the Army Medical School, Netley, commenced on Oct. 2nd. The following is a list, in their order of merit, of the Surgeons on probation who have joined at Netley:—

ARMY MEDICAL STAFF.

H. O. B. Browne-Mason	J. D. G. Macpherson
B. Watts	W. P. Gwynn
H. G. Martin	C. J. O'Gorman
F. S. Penny	M. M. Lowsley
S. de C. O'Grady	N. H. Ross
J. G. Berne	E. A. Bourke
A. H. O. Young	A. C. Lupton
J. E. S. Old	P. H. Collingwood
F. F. Carroll	G. B. Carter

INDIAN MEDICAL SERVICE.

T. H. Delany	G. Tate
J. W. F. Raitt	P. K. Chitale
S. R. Douglas	G. MacPherson
S. Hunt	F. D. S. Fayrer
E. J. O'Meara	W. H. Cox
R. T. Baird	de V. Condon
A. T. Gage	H. A. J. Gidney
G. C. Laing	A. G. Sargent
H. Kirkpatrick	W. Lethbridge

CHOLERA.

The Anglo-Indian papers report that a serious outbreak of cholera has occurred in the wing of the Shropshire regiment at Sitapur; twenty-nine deaths are stated to have taken place in two days. There have been no cases in the Dorset regiment since Aug. 24th, and the report that the corps is still suffering from cholera is incorrect. The latest accounts from Bombay show that the disease is declining in that city and it is hoped that it will soon disappear altogether.

THE RISING OF THE FRONTIER TRIBES ON THE NORTH-WEST.

The papers received from India by the last mail are naturally full of the tribal rising on the north-west frontier and give detailed descriptions of the fighting up to the date of publication, but the telegraphic intelligence received in this country has for the most part anticipated their news.

We hear that Surgeon-Major D. Semple, M.D., Assistant Professor of Pathology in the Army Medical School, Netley, has proceeded on short leave to Maidstone to offer typhoid vaccine and explain the method of vaccination against typhoid fever.

AT a meeting of the British Laryngological, Rhinological, and Otological Association on July 16th the following officers were elected for the ensuing year:—President: Dr. Dundas Grant. Vice-Presidents: Mr. F. Marsh, Mr. G. C. Wilkin, Dr. J. Davison. Council: Dr. W. Milligan, Dr. A. B. Kelly, Mr. V. H. Wyatt Wingrave, Dr. W. Hill, Mr. P. Jakins, Dr. H. Woods, and Mr. Richard Lake. Hon. treasurer: Dr. MacNeil Whistler. Hon. secretaries: Mr. St. George Reid and Dr. F. Potter.

PAUPERISM IN THE NEWPORT (MON.) UNION.—At the meeting of the Newport Board of Guardians, held on Sept. 25th, Mr. Bircham, the Local Government Board Inspector, stated that ten years ago the Newport Union spent £14,000 on in-door and out-door relief, now the expenditure was £21,000, an increase of 33 per cent. The population had not increased at the same rate, and the rateable value had only increased 12 per cent. In 1887 there were 2562 paupers in the union, now they had 3400, an increase of 25 per cent. Mr. Bircham also said that the union was understaffed with relieving officers; a relieving officer could not properly look after more than 200 or 300 cases, but in the Newport Union some of these officers had over 500. The cost per head of each pauper in 1887 was £4 18*s*., now it was £5 9*s*. Mr. Bircham thought that these matters would justify the guardians' very serious attention to these figures, as strict administration was a real kindness and would foster thrift amongst the poorer classes.

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Correspondence.

"Audi alteram partem."

"THE ELECTION OF A DIRECT REPRESENTATIVE ON THE GENERAL MEDICAL COUNCIL."

To the Editors of THE LANCET.

SIRS,—Although I am very sensible of the kind expressions you have employed in regard to my candidature in the above-named election, I am sure you will permit me to correct an unintentional error in your description of my work. You say in a leading article in THE LANCET of Oct. 2nd that "on one or two occasions he has allowed himself to make unwarranted charges against the President of the General Medical Council which offended not only the President but the Council." I presume that you are referring to a report issued by a committee of the Council to the effect that the President was not as I had shown at the annual meeting of the British Medical Association last year responsible for the execution of certain arbitrary and, as I considered, dangerous by-laws. When that report was issued I at once published with Dr. Bateman in the *Times* and in your columns the extracts from the by-laws which proved that the President and no other official was responsible in the matters named. To this day no one has ventured to challenge our statements made in correction of the finding of the committee. The expression "unwarranted" I feel therefore is not so correct a judgment as your criticism of my other failings which you justly allude to and of which I am very conscious myself.

I am, Sirs, yours sincerely,

Cavendish-square, W., Oct. 4th, 1897. VICTOR HORSLEY.

DANGER TO THE EYES DURING ELECTRIC WELDING, BORING, AND OTHER ENGINEERING OPERATIONS.

To the Editors of THE LANCET.

SIRS,—I have read with very great interest Surgeon Robert Hill's account of the two cases of Electric Light Blindness occurring on H.M.S. *Mars*, published in THE LANCET of July 24th, 1897.

It may be remembered that some years ago I reported the cases of several engineers staying in Leeds who, after witnessing electric welding operations with their eyes only partially guarded, presented some hours afterwards identically the same symptoms—if more severe—which Surgeon Hill describes. In the case of my patients, also, cocaine "acted like a charm," and the spectacle of splendid examples of humanity writhing on their beds in agony, with their lids tightly closed as compared with their appearance and cheerfulness as they entered my rooms on the morning of the day following bears out most fully what Surgeon Hill reports. The publication of my experience, which at the time was the first of the kind on record, drew a letter from a ship-surgeon—I regret that his name escapes me—in which he recorded two very severe and similar cases, both of which occurred in electricians after attending to the electric search-lights carried on the bows of the great liners as they feel their way "dead slow" through the Suez Canal at night. Every one who has traversed "the Ditch" at night will recollect the enormous power of these electric lights. In the case of one of these electricians the attack was so severe that acute delirium set in for a while almost amounting to mania, necessitating temporary restraint.

In all the cases I have seen the vision became normal within twelve hours or less, though the great pain, photophobia, and spasm of the eyelids really made it impossible to test the vision satisfactorily during the attack. It will be observed that a considerable interval intervenes between the exposure to the electric light and the acute period of the attack. Surgeon Hill's cases agree with those I saw in this respect, though my patients noticed nothing abnormal for some hours afterwards, in fact, the electric weldings were witnessed in Birmingham and it was not until after midnight that I received a summons to see the sufferers at their hotel in Leeds. After this experience I made many inquiries and some experiments to enable me to determine the best form of shield to be held in the hands of the workmen, or glasses to be worn as protectors, whilst engaged in these operations with electricity, and I visited several works in Sheffield for this purpose.

Surgeon Hill states that "dark glasses are now always used by the men so employed" amongst the dockyard hands. I suppose from this he means "dark smoked glasses." I have no experience of the actual intensity of the electric glow in the operation known as electric boring, but it is found by experience in Sheffield that ruby glass shields or spectacles of such a density as to reduce the full light of the sun's disc to the intensity of a single candle-power are required to preserve the workmen's eyes from the effects of large electric welding operations. In view of the ever-increasing application of electricity for welding, boring, and like engineering operations, the reports of such symptoms (which agree in all details with those which I had some time ago the opportunity of observing and reporting) are of the greatest interest and importance, as pointing to the best means for their prevention and, when they unfortunately do occur, their cure.

I am, Sirs, yours faithfully,

H. BENDELACK HEWETSON,
Honorary Ophthalmic and Aural Surgeon, Leeds General Infirmary, etc.

Hanover-square, Leeds, Sept. 29th, 1897.

"REFORM IN THE SPELLING OF THE MEDICAL VOCABULARY."

To the Editors of THE LANCET.

SIRS,—Although in his very interesting allusion to the derivation of the word empyema Dr. Moore is quite correct in stating that this word is never spelt empyæma according to the Greek root from which it springs, this word has been spelt with the diphthong. Empyæma, for example, occurs in Dr. Lauder Brunton's Text-book of Pharmacology, where on page 1093 of the 1885 edition Dr. Moore will find it so written.

I am, Sirs, yours faithfully,

Oct. 4th, 1897. M.R.C.S.

A LADY-HELP.

To the Editors of THE LANCET.

SIRS,—Is it customary for examiners' wives to assist their husbands in their work? The following facts were communicated to me by an eye-witness who travelled north from Manchester on Sept. 29th. In the same carriage was seated an examiner in connexion with a northern college. Producing a bundle of papers he handed half of them to his wife to read and mark, which she did, and these were not subsequently read by the examiner himself. The work was most expeditiously gone through—the whole of the papers having been disposed of by the time the train reached Carlisle. All above a certain percentage were torn up and left under the carriage seat. Probably the lady was more than equal to the task, but it would be interesting to know whether she had been duly appointed as an examiner by the college authorities.—I am, Sirs, yours faithfully,

Oct. 4th, 1897. ENQUIRER.

MIDDLESEX HOSPITAL.—The existing school buildings of the Middlesex Hospital are about to be considerably enlarged and partly reconstructed according to plans prepared by Mr. Keith Young. Part of the buildings on the west face of the hospital garden will be pulled down, but the museum and the large theatre will remain untouched. The new buildings will form a block consisting of two portions set at right angles, one of which will contain on the ground floor a complete chemical department, including lecture theatre, laboratory, and lecturer's private laboratory; the upper floor will be occupied by pathological and bacteriological laboratories. The remaining portion of the new block will have in the basement and on the ground-floor a physical laboratory and a very complete physiological department, whilst the whole of the upper floor, some 120 feet long, will be occupied by the dissecting-room and anatomical classroom. The work has been commenced and the buildings are to be ready for use next year.

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THE EPIDEMIC OF TYPHOID FEVER AT MAIDSTONE.

(BY OUR SPECIAL SANITARY COMMISSIONER.)

DURING the recent European cholera epidemic there was a strong tendency to shirk the difficulties of complex investigations by laying all the blame on the water-supply. This had a double advantage; theoretically it simplified the problem and practically it was much easier for the local authorities to deal with their water-supply than to attempt to grapple with the hundred and one other reasons that might be adduced as explaining the prevalence of the epidemic. The very elaborate reports which we published and which were the result of careful investigations conducted in the towns which had most suffered from cholera demonstrated very conclusively that the water-supply was only one of many contributing circumstances that had to be considered. It has also been shown that in the long run a great epidemic is beneficent in the saving of human life. It is only in response to the distress and alarm caused by a virulent scourge of this description that the Governments and local authorities concerned can be stirred to take effective measures and remove those conditions which produce ill-health that have always been present. A permanent cause of preventable disease is more fatal than occasional epidemics. In other words, if an occasional epidemic results in the adoption of such measures as will permanently reduce the death-rate, more lives will be saved in the course of a few years than were lost during the epidemic. These are general considerations, but they have a direct bearing on the epidemic of typhoid fever at Maidstone. On all sides the water-supply has been blamed, and there can be but little doubt that the water was the medium by which the disease was spread. If, however, one rests content with this assertion, what will be the result? The water-supply will be improved and there will be less danger of another epidemic; but this risk will not be altogether removed, and there are other epidemics possible besides those of typhoid fever. It is almost certain that the Farleigh supply, which is now completely cut off, will never be utilised again. The Cossington and Boarley supplies, which are derived from the chalk and at considerable depth, seem to be safe, but can it be said that they are absolutely safe? If pure at the intake, can no accident occur during the course of transmission by which they may become contaminated? Then are there no other means by which typhoid fever and other epidemic diseases may be communicated except by the water-supply? Have not epidemics of typhoid fever been traced to milk-supplies? Does it not seem evident that the securing of a pure water-supply only constitutes a part of the task that has to be accomplished? What is more particularly needed, not only with regard to typhoid fever, but with respect to all other preventable diseases, is the removal of all those causes which predispose the population to epidemic disease. It is not only a question of how the pathogenic germs were distributed among the population, but, above all, it is desirable to ascertain why the population was so remarkably susceptible to their influence.

Taking the first fortnight of the epidemic, that is, up to the morning of Oct. 1st, it was found that in the western district of Maidstone there had been 509 cases of typhoid fever notified. In the north-eastern district there were 417, and in the south-eastern district 147. All these three districts received the Farleigh water-supply. In the central district, which received the chalk water from the Boarley and Cossington intakes, there had only been 35 cases. These figures have been taken to prove that the Farleigh supply was the sole cause of the epidemic. But the question arises whether, after all, these figures do not prove too much. It might be urged with at least some show of reason that if the Farleigh water-supply was the sole cause there ought to have been more cases in the central district. If the district spared had not been the central district, but had been situated at some distance from the infected area, and its inhabitants had little or no intercourse with that area, then the argument would have held good. But this is not the case. Maidstone is only a very small town. Even when starting from the most distant points from five to ten minutes' walk suffices to bring one out of the central district and into one of the three districts where the Farleigh water is drunk. There is probably not a single inhabitant of the central district who has not relatives, friends, or business connexions living in one or more of the districts that depend on the Farleigh water-supply. Not scores but hundreds of inhabitants of the central district must have consumed in one form or another water outside their own little district; that is to say, they must have taken some of the Farleigh water, and this at the time when it was contaminated, yet there were only 35 cases of typhoid fever in the central district, as opposed to 1073 cases in the surrounding districts. Again, it may be asked, is not this proving too much? Unfortunately, it has been so far utterly impossible to ascertain the population of the respective districts. The only official figures available divide the town into two instead of four districts. There is the western side of the Medway, which has 16,383 inhabitants; this district—with the exception of two or three streets near the river and on a low level—is supplied exclusively from the Farleigh springs, and it is here that there had been up to Oct. 1st 509 cases. Then there is the eastern side of the Medway, with a population of 17,172. This eastern side comprises the central district with its 35 cases, and the north and south-eastern districts with 564 cases between them. What is the population of the central district? No one knows, and in the confusion and the stress of work caused by the epidemic it is not possible to obtain a computation from the authorities. The proportionate consumption of water would not throw any light on the subject because the employment of water for industrial purposes would render a comparison worthless. Nor can we judge of the population by the size of the respective areas, for though the map shows that the north and south-eastern areas are small they are more densely populated than many parts of the central area; in fact, they are the residential quarters, whereas in the centre many houses are merely business premises. But the eastern and northern sides of the central district are composed of residential streets, and off King-street there are some of the worst slums of the town. Even if only the smaller half or a third of the 17,172 persons who live on the east side of the Medway reside in the central district, it is nevertheless most remarkable that there should have been but 35 cases of typhoid fever. It does seem as if the inhabitants of this locality were less susceptible, and therefore it is necessary to inquire in what respect their condition of existence differs from the rest of the population.

The accompanying map, which with the very courteous and obliging aid of the borough surveyor I was able to draw for this purpose, clearly indicates that there is a marked difference in the local conditions. Figures dotted here and there represent the altitude of the ground in feet. With the aid of these figures it has been possible to divide the town into three zones. That nearest to the watercourses does not exceed at its highest points 40 feet. This, the lowest zone, is indicated in the centre of the map by horizontal lines. A considerable portion of the soil is composed of clay. The next zone, indicated in the map by a light stipple (cf. the area of Mote Park), marks the districts where the levels vary from 40 feet to 100 feet. All the districts beyond these two zones are above 100 feet in altitude, and it will at once be seen that it is in these high districts that the epidemic prevails. The parts of the map shaded with vertical lines represent the three districts that received the Farleigh water-supply. In two places the stippled zone overlaps these vertical lines. It will at once be obvious that the epidemic, which is confined to these Farleigh water-supply districts, is also confined to the high level districts. In the north-eastern district the 417 cases are considerably above the 100 foot limit drawn in the map. The south-eastern district with its 147 cases comes down lower, but only in one or two corners does it go one or two feet below 80 feet. On the other side of the river, in the western district, there is a more considerable overlapping; the Farleigh water-supply here descends to the 40-foot level; but the distribution of the 509 cases has not followed the water-supply and is mainly confined to the higher regions. Indeed, it is a fact on which too much emphasis cannot be laid that the epidemic was not only limited to those districts supplied with the Farleigh water, but that the greater number of cases occurred in the higher parts of those districts which are already in themselves higher than the rest of the town. This was especially remarkable at the

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commencement of the epidemic. In the map those streets which have been more particularly afflicted—that is, where the greatest number of cases have occurred, as, for example, Milton-street and Holland-street—have been heavily shaded, and it will be seen that they are in the higher parts of the elevated portion of the town. The arrows in the map show the directions in which the sewage flows, and the dark lines show the main or collecting sewers.

Thus a second characteristic fact is demonstrated—namely, that the epidemic does not coincide only with the distribution of the Farleigh water-supply, but it also coincides with the higher latitudes. Though it is generally considered more healthy to live on high ground the reverse has been the case with regard to the present epidemic. That this should be so is not altogether unusual. For instance, in Paris a great deal of typhoid fever has been noted in such high districts as Belleville, Montmartre, and Les Batignolles, while the low-lying quarters nearer to the Seine were comparatively free from the disease. The theory then propounded was that the sewer air travelled upwards and that a greater volume of sewer air forced its way into the houses draining into the upper extremities of the sewers. Might not this also account for the fact that at Maidstone the epidemic is confined almost exclusively to the highest parts of the town? It must be confessed, however, that though topographically this seemed plausible, the manner in which the sewers are built and laid does not tend to confirm this theory. First of all, the great majority of the sewers are pipe-sewers—that is to say, very small. Where there is, as is usually the case in Paris, a very large sewer and proportionately very little water, the downward flow of the water does not prevent the upward current of the air. On the other hand, if the sewer is very small, consisting of a pipe a third or half full of water, the friction caused by the downward rush of the water attracts the air, which then follows the flow of the water and would go down instead of upwards. But, on the other hand, the discharge of sewage is irregular, and though the air might travel downwards in the morning when the pipe sewers are very full of sewage, this would scarcely be the case at night when the pipes are nearly empty. The sewer air, undisturbed by the friction of the rushing water, would travel upwards at night and seek an exit when it approached the top or highest part of the sewers. Here the greater atmospheric pressure coming up from below would force its way through obstacles such as badly constructed traps which it had been unable to penetrate lower down the hill where the pressure was not so strong. Now it is precisely at night that sewer air produces the most deadly effect, for there is less ventilation in the houses and the power of resistance of the sleeper is probably not so great as that of a person who is awake and active. When to this is added the fact that it is acknowledged that the domestic drainage of Maidstone is far from being in a good condition, and that there are many closets which as yet are unprovided with any flushing apparatus, it seems quite clear that there are favouring circumstances to weaken the resistance to typhoid infection, when this is introduced by the medium of a contaminated water-supply.

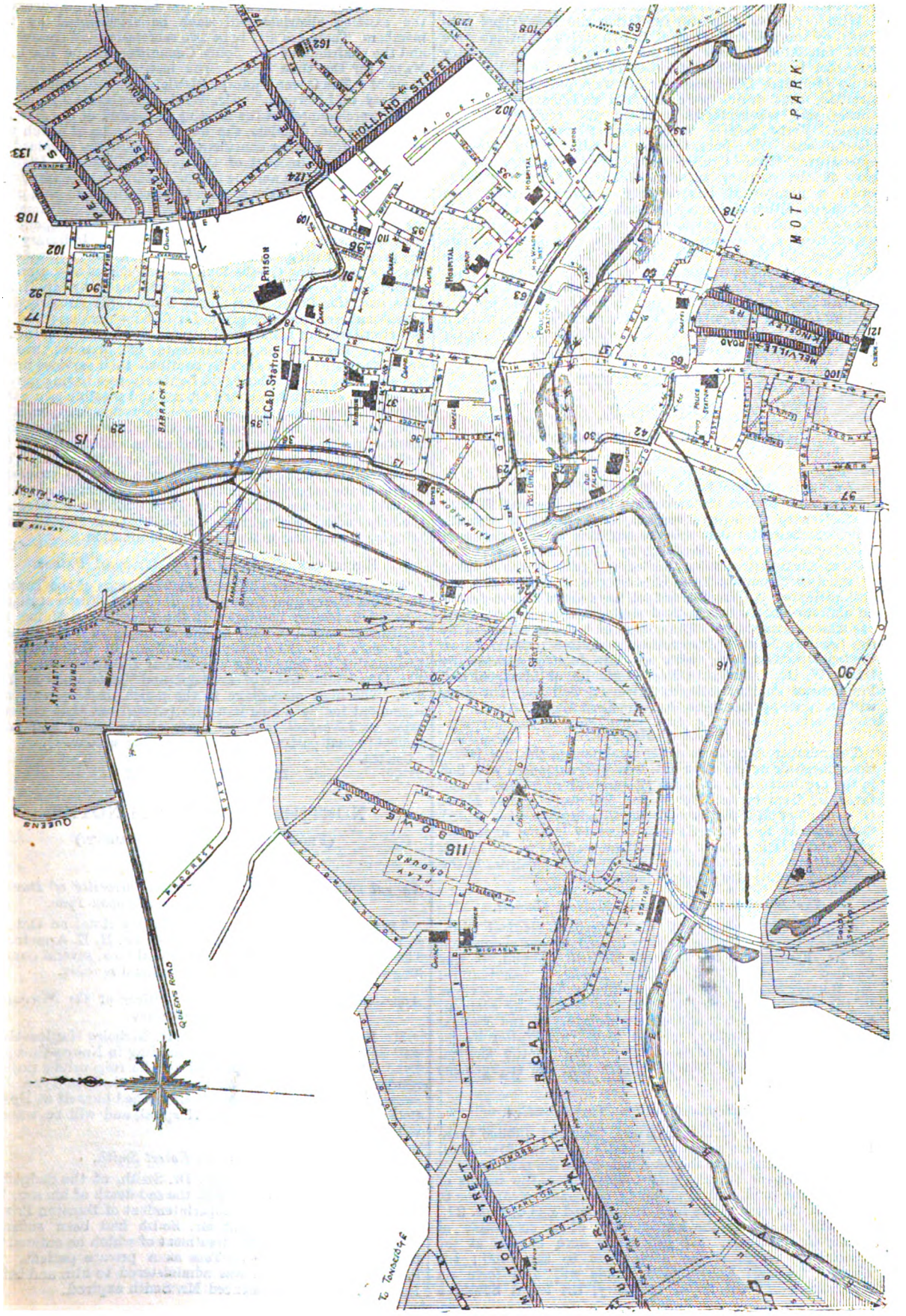
In mitigation of this argument it must be noted that the general plan of drainage does not altogether favour this theory of the ascension of the sewer air to the higher levels, at least where the central district is concerned. First, it must be noted that the town is cut in two by the Medway. In the map is shown by arrows the direction in which the sewage flows, but the lines drawn only indicate the main collecting sewers. The two principal collecting sewers are on either side and close to the river. They are large sewers with insufficient fall and therefore they are not self-cleansing. They have only been thoroughly cleaned out once, but they are constantly being partially cleaned. The western side of the town, which is shaped like an elbow, is entirely surrounded at its base by its main collector. Towards its northern extremity this collector receives the whole of the sewage from the eastern side of the town. The gases generated on the western side cannot, however, travel over to the eastern side, for the syphon which conducts the sewage from the eastern bank of the Medway right underneath the river bed to the collector on the western bank constitutes a gigantic trap which would effectually arrest the passage of sewer air. It will be noted, however, that at a very short distance beyond this connecting syphon there is a branch main sewer which travels at right angles up Buckland Hill till it reaches the asylum, which is at an altitude of 234 ft. This branch sewer, as it follows an upward course, might well constitute itself into a sort of ventilating shaft for the principal collector, and this just at the point where the two drainage systems join together and the sewage of the en town passes by. It is also to be observed that, though complaints are made in almost all directions of the bad odours escaping from the man-holes or street-sewer ventilators, a man-hole connected with this branch collecting drain, which, as explained above, may act as a ventilating shaft for the principal collector, is considered one of the very worst in the town. The main collector proceeds to a distance of about one and three-quarter miles from the town. Here there are precipitating tanks. The sludge obtained by mixing lime with the sewage is pressed into cakes, but the manure thus made is of such little value that the town authorities instead of selling it have to pay a shilling a ton to get it carted away. The sewage after clarification flows into the tidal part of the Medway. The treatment of the sewage at the outfall can, however, have little or no bearing upon an epidemic which has occurred nearly two miles away up the stream. What is of interest is to trace how far the sewer air from the main collector which runs at the foot of the western district can travel upwards and so permeate the houses above as to render their inhabitants especially susceptible to the germs of typhoid fever.

It would be a strong argument if it could be shown that, on the other hand, in the central district where there have been so few cases of fever no such permeation of sewer air exists. It may be said that this is indeed the case because the houses of the central district are built on lower ground and that there is likely to be a greater escape of sewer air in the higher grounds beyond. But by referring to the map it will be seen that the sewers of the central district have no direct communication with the sewers of the north-eastern infected district and are cut off from the south-eastern infected district by two collecting mains and by the little River Len. The north-eastern district is hedged round by a collector of its own which separates it from the central district—unless, however, some slight connexion is established by means of storm overflows. In any case there is a greater rise from the north-eastern collector to the district it drains than there is from the central collector up to the central part of the town. The same observation may be made for the south-eastern district. Thus it will be seen that the sewers of the three infected districts are more likely to act as ventilators for the main sewers that flow below than the sewers of the central and non-infected district. May not this fact help to account for the extraordinary susceptibility of the inhabitants of the three infected and high districts? May it not likewise explain the immunity which is equally extraordinary and which the inhabitants of the low-lying central district have enjoyed? The fact that these latter have a different water-supply does not, under the circumstances, and as has been already explained, suffice to account for the immunity enjoyed in the central district, as so many of its inhabitants must in their social intercourse have drunk the water of the infected quarters.

Under all these conditions it does seem most essential that the investigations concerning the epidemic should not be limited to the question of the water-supply. It will then be found that, at least in the north-eastern infected district, many houses are jerry built, the domestic drains faulty, and the public sewers defective. The soil being hard, to save time and expense headings were driven through instead of digging trenches. These headways were often not straight, and instead of drilling through rocks the sewers were sometimes conducted over rocks. Under these conditions the sewers were easily blocked, and several have had to be re-laid. Also a part of this north-eastern district is on quarried ground. The hollows have been filled up with quarry rubbish, which if not in itself unhealthy is certainly very unsteady. Consequently, as the sewers do not rest on a firm foundation they are apt to bend and break. The subsoil then gets saturated with sewage, and the gases generated are attracted to the interior of the houses by the higher temperature prevailing within the dwellings. On the western side of the town there are also notable imperfections. Innumerable complaints have been made of the abominable smells emanating from the big sewer which runs down the Queens-road from the asylum and across the northern extremity of the western district. It is this sewer which ultimately reaches the main collector just after it has received the whole of the sewage from the

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A MAP OF THE MAIDSTONE EPIDEMIC (*for explanation see page 947.*)



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eastern side of the town. There is a good fall in this sewer, but probably there is not sufficient water.

With regard to domestic sanitation the last report published by the medical officer of health states that there were 6007 inhabited houses in the borough. The sanitary inspector in his report relates that in the course of last year in no less than 200 houses drains were provided or reconstructed, that drains were repaired and cleansed in 436 houses, and water-closets cleansed and repaired in 300 houses. Forty houses were provided with new water-closets and 346 houses were supplied with flushing apparatus. These figures show laudable activity on the part of the sanitary authorities, but as applying to so small a number of houses they likewise indicate how bad the condition of domestic drainage must have been. It is notorious also that any number of houses still remain in urgent need of the sanitary inspector's visit, and that there has been the very greatest difficulty in compelling some landlords to put the drains of their houses in order. With all these facts before them it would seem like an attempt to shirk their responsibilities and to avoid the performance of their obvious duties if the local authorities were to limit their effort in dealing with this epidemic to the simple question of the water-supply.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

University College, Liverpool.

THE work of the winter session of the Medical Faculty of University College, Liverpool, commenced on the 4th inst., a feature of which was the omission of the customary introductory address. Profiting by Lord Lister's expected visit to Liverpool to take the leading part in the opening of the new Thompson-Yates Laboratories in May, 1898, the authorities of the medical school have asked him to deliver an address also to the medical students, a request which he has kindly acceded to. The course of lectures arranged by the Sanitary Science Instruction Committee commences on Wednesday, Oct. 6th, with an introductory address by Dr. E. W. Hope, Medical Officer of Health of Liverpool and Professor of Public Health in University College. The chair will be taken by the Right Hon. the Lord Mayor.

Health of Liverpool.

The number of patients under treatment in the city infectious hospitals on the 30th ult. was 412, compared with 358 in the previous week. Of these 17 were suffering from typhus fever, 90 from typhoid fever, and 289 from scarlet fever. Of a total of 276 deaths registered during the week ended Sept. 25th no less than 80 were those of infants under one year, and this in spite of the persistent efforts of the health authorities to instruct parents in the poorer localities in the matter of feeding and hygienic influences.

The Election to the General Medical Council.

At a special meeting of the Liverpool Medical Club, convened to consider the vacancy caused by the resignation of Dr. Rentoul in the General Medical Council, it was decided to support Mr. Victor Horsley's candidature. Mr. Horsley has accepted an invitation to explain his views to the members at the club-rooms on Wednesday evening, Oct. 6th. He is also to address the members of the Medical Institution on Thursday, the 7th inst. Sir Walter Foster was also to have addressed a meeting at the Medical Institution this week, but it appears that the engagement has been cancelled.

Liverpool Diamond Jubilee Commemoration.

The final stage of the Liverpool Diamond Jubilee Commemoration Scheme was enacted yesterday at the Town Hall, when the subscribers to the fund met under the presidency of the Lord Mayor to take into consideration the means of applying the fund, and to appoint a permanent committee to carry out the work. The fund has realised £23,472 19*s.* 2d., and will be under the management of a committee of twenty-six members. Six gentlemen were chosen at the meeting to represent the subscribers to the fund; the Nurses Training School and Home will also have six representatives; the Royal Infirmary, the Royal Southern Hospital, the Northern Hospital, the Hospital Sunday and Saturday Committees, and the lady-superintendents of the existing districts will each be represented by two members. There are also to be two secretaries and treasurers, and the chairman of the Joint Committee will be the Lord Mayor for the time being. The institution will bear the name of "The Queen Victoria District Nursing Institution of the City of Liverpool." Mr. William Rathbone's proposals which were adopted at the meeting, consisted of the division of the city into districts, the number and area of which will be matter for further consideration, though the standard of nursing should be that of the present Liverpool District Nursing Association and the Queen Victoria Jubilee Institute, London. To enable the scheme to be carried out on a comprehensive basis, Mr. Rathbone suggested a plan of amalgamation with the present Nursing Institution and of coöperation with the hospitals. He proposed that the Royal Infirmary and the present Nursing Institution should be asked to transfer to the new institution (1) the four district homes now used by them; (2) the endowment of £10,000 made by Mr. Henry Tate and the Roger Lyon Jones Fund; (3) subscriptions and donations specially given for district nursing; and (4) the contributions from the Hospital Sunday and Saturday Funds. The lady-superintendents of districts are to be at the same time asked to continue their services under the new institution. The David Lewis trustees having agreed to build a central home and offices, and possibly two other district homes if required, the commemoration fund, together with the funds and income transferred from the existing institution should be appropriated as an endowment for the maintenance of the new institution and its work. The Northern and Royal Southern Hospitals are also requested to join in the supply of a certain number of trained nurses to be paid by the new institution. The Lord Mayor eulogised the help he had received from Mr. Rathbone in maturing and bringing the scheme to a successful termination.

Percentages of Lunacy in the Liverpool Unions.

Attention was drawn at the recent meetings of the Toxteth and West Derby guardians to Mr. H. Jenner-Fust's statistics relating to pauper lunatics. In the West Derby Union the proportions were 1 in 332; in the township of Toxteth-park they were 1 in 423 of the population; in the parish of Liverpool 1 in 208. The proportions for Lancashire were 1 in 448; whilst those of England and Wales stood at 1 in 410. The high percentage in the parish of Liverpool was accounted for by a guardian who pointed out that patients came to Liverpool from all parts of the world and were landed in that parish and in the adjoining unions.

Oct. 5th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Annual Dinner of Old Students of the University of Durham College of Medicine at Newcastle-upon-Tyne.

THIS dinner took place at the County Hotel on Oct. 1st at 7 P.M. The chair was occupied by Dr. H. E. Armstrong. There was a good attendance of medical men, several coming long distances to be present at this annual *réunion*.

Appointment of Resident Medical Officer at the Newcastle-upon-Tyne Dispensary.

Mr. W. Hardcastle, the son of Mr. Nicholas Hardcastle, a well-known medical practitioner residing in Newcastle-upon-Tyne, has just been appointed to the responsible post of resident medical officer at the Newcastle-upon-Tyne Dispensary. Mr. W. Hardcastle distinguished himself at Epsom College and at Charing-cross Hospital, and will be warmly welcomed in his new office.

Sad death of Mr. Robert Smith.

Much sympathy is felt with Dr. Smith, of the Sedgefield Asylum, and with his family at the sad death of his son, Mr. Robert Smith, the medical superintendent of Dunston Private Asylum. It appears that Mr. Smith had been suffering from fistula in ano, for the treatment of which he entered the hospital at Stockton-upon-Tees as a private patient. On Sunday last chloroform was administered to him and before the operation was commenced Mr. Smith expired.

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PARIS

(FROM OUR OWN CORRESPONDENT.)

Anti-leprous Serum.

AT a recent meeting of the Academy of Medicine M. Hallopeau read a communication upon the treatment of leprosy by hypodermic injections of the serum prepared after the manner of Dr. Carrasquilla. M. Hallopeau's conclusions are not altogether favourable. He points out that the therapeutics of leprosy are in need of much further elucidation, for it is well known that this disease advances by successive exacerbations which are followed by periods often lasting for a considerable time of spontaneous amelioration and retrogression of the disease so marked as to simulate cure. If any drug is given during the time of exacerbation the cessation of acute symptoms which follows is very likely to be attributed to this drug, although the same result would have followed without the intervention of anything at all, and if, on the other hand, treatment is begun during a period of retrogression it is very easy, although quite wrong, to attribute the continuance of the amelioration which follows to the influence of the treatment rather than to the fact that such periods of amelioration almost always follow and continue for some time after an acute stage. A method of treatment which was really curative would be marked by the appearance of the retrogressive stages at shorter intervals, by making these more complete, and by preventing the occurrence of the crises. The anti-leprous serum prepared and reported on by Dr. Carrasquilla does not satisfy these requirements. It is made by injecting horses with serum from the blood obtained by bleeding a leper. To take this point first, there is no proof that this human serum contains the specific leprosy microbe, and, again, the blood not being taken from the horses with strict antiseptic precautions always contains a multitude of organisms unconnected with leprosy. Nevertheless, it is generally well borne and seldom provokes any but slight reactions both local and general. As to its action on leprosy this appears to be but slight, the tubercular manifestations persist even after its use for a long time, and despite the assertions of its introducer it does not prevent new crises appearing. The periods of retrogression which appeared in lepers treated by this method in the hospital of St. Louis did not in any way exceed those which occur spontaneously after a crisis. An anti-leprous serum could more probably be prepared by injecting into some animal the lepra bacillus. It is proposed to continue investigations into the serum therapeutics of leprosy despite the many difficulties which surround the subject, not the least of which is the fact that leprosy cannot be cultivated in animals.

The Action against a Medical Man.

Dr. Laporte has been set at liberty conditionally owing to the persistent representations of the Syndicate of Medical men of the Department of the Seine. The judge has expressed a wish to be supplied with the full report of the experts who consider the matter to be a case of "homicide by imprudence, but attended with hardly any responsibility." The syndicate has given bail for 2000 francs, and Dr. Laporte has gone to stay at the house of his brother-in-law, where he will be out of the way of the reporters, who have on this account become much less sympathetic. The trial will take place in about three weeks. At the commencement of the legal proceedings, which took origin in an information laid by the resident medical officers at the Tenon Hospital, where the patient was taken after the operation by Dr. Laporte and where she died two days later, the committee of the syndicate sent a letter to the President of the Surgical Society and to the President of the Society of Hospital Medical Officers. In this letter, which was couched in very moderate though definite terms, the committee begged the "Chef de Service" to point out to the resident medical officers that in the interest of the profession great prudence was necessary with regard to the terms in which they referred to the treatment adopted by the outside practitioners in the case of patients before their admission to the hospital. The opinion of the resident medical officers was said to be almost always unfair because they ignore the surroundings of the patients previously to admission, and such opinion has the most deplorable effect, not only on the patient, but also on outsiders, for they induce the relatives of the patient to make representations which the magistrates are only too glad to listen to, and the scandal affects the entire profession. All the men in private practice approve of the terms of this letter, which is intended to bring about a remedy for a really crying abuse. On the other hand, a municipal councillor is going to demand that every police station shall provide a case containing all the instruments necessary for operations of urgency, and in particular those which have to do with obstetric operations. The councillor is going to ask for a vote of 25,000 francs. As there are eighty police stations in Paris it is very unlikely that for this sum either enough instruments will be provided or that those which are will be of the best quality.

Anniversary of the Death of Pasteur.

An impressive celebration was held in the Pasteur Institute in the Rue Dutot at 3 P.M. on Oct. 3rd, the occasion being the second anniversary of the death of M. Louis Pasteur. The entire staff of the institute and of the establishment at Garches assembled at the tomb in the crypt of the institute and laid on it a wreath of flowers from the gardens at Garches, where the horses used for the production of anti-toxin serum are stabled. In the morning the Pasteur family, who are at present in the Jura, attended Divine service in the Church of Arbois, the native place of the lamented deceased. M. Duclaux and Dr. Roux, who are also at Arbois, will return to Paris this week, and a meeting of the committee for the Pasteur monument will then be held. The amount on the subscription list, which will thereupon be closed, is at present upwards of 300,000 francs (£12,000).

The late Professor Verneuil.

A bust of Professor Verneuil, provided by those interested in the seaside homes for phthisical patients and executed by M. Salières, was unveiled on Oct. 3rd at La Baule (Loire Inférieure), the small town where Professor Verneuil was born. He was one of the first to recommend the treatment of chronic tuberculosis, and especially of surgical tuberculosis, by removing the patients from the general hospitals, which he rightly considered to be incubators for the cultivation of Koch's bacillus, and dispersing them in special sanatoria near the sea. He was the founder of this system of seaside hospitals, to which it should be mentioned that the medical profession very liberally subscribed, and the whole of the latter part of his career was devoted solely to its organisation. Professor Le Dentu presided at the unveiling of the bust and delivered an admirable address on Professor Verneuil's life and work, the proceedings terminating with a banquet at the Hôpital Mauspha.

Oct. 4th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

A Poet's Advice to Medical Students.

AT a time when so much wise counsel is being given to "the brave young British soul" (as Carlyle called him) on the threshold of nature-study and its application to the healing art it may not be superfluous to add the advice of one of Italy's humanest and strongest poets, whose lyric faculty has won for him the name of the "Italian Heine." Not book-learning, he warns the student, will make a man of him, although it enriches him intellectually. He must interview nature face to face, he must keep in touch with living reality, if he is to act as well as speculate and to leave his personal imprint for good on the contemporary world. The mere "arm-chair scholar," for all his wealth of knowledge and facility of discourse, is but a poor performer when he comes out into the open to give practical effect to what he knows—nowhere poorer or more "ineffectual" (to use Carlyle's favourite word) than in grappling with disease at the bedside. But let us hear Giuseppe Giusti:—

"Bevi lo scibile
Tomo per tomo,
Sarai chiarissimo
Senza esser uomo.
Se in casa eserciti
Soltanto il passo,
Quand' esci sdruccioli
Sul primo sasso.
Dal fare al dire
Oh! v'è che ire:"

(You may drink in the knowable from volume after volume; you will gain the height of celebrity without being a man.

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If only within doors you try your paces, when you go abroad you stumble over the first stone. Between doing and discoursing there is, oh! such a journey.) Wise words these when the tendency is to "read up" the literature of the subject rather than to "look up" the facts as they are found in nature. "You cannot be too much in the hospital," "you cannot be too familiar with the aspect of disease," were admonitions to the commencing student which Syme and Hughes Bennett (two of the best teachers of the Edinburgh school) were never tired of repeating. "Disease has a language of its own," said another clinician of the same seat of learning; "its expressions, *φωνᾶντα συνετοῖσι*, must be interpreted aright if you are to encounter it on equal terms." So said Thomas Laycock when insisting on the value of that "physiognomic diagnosis" of which the typical master was the "English Hippocrates," Thomas Sydenham. "A great physician" is not only "a great artist," he is also "a great moral force," testing the speculation of the study by the touchstone of the consulting-room and inspiring confidence by his habit of "getting at the root of things." As man of thought and as man of action he fulfils the twofold part described so well by Goethe:—

"Es bildet ein Talent sich in der Stille;
Sich ein Charakter in dem Strom der Welt."

(A talent moulds itself in tranquility; a character in the stream of the world). By no nationality, it may be said with safety, has this ideal combination been exemplified to better purpose than by the British—a fact attested by the more candid, as well as competent, observers of continental Europe; a fact to be remembered and laid to heart by every young aspirant to the medical career in the English-speaking world.

Professor Sanarelli and the Yellow Fever Bacillus.

I hear from Genoa that Professor Sanarelli, director of the Istituto d'Igiene at Montevideo, is shortly expected at that port, whence he will start on a series of visits to our leading medical schools, at each of which he will deliver a lecture on his discovery of the bacillus of yellow fever and set forth his maturer recommendations for its prophylaxis as well as clinical treatment. The recent outbreak of the disease in latitudes hitherto supposed to be proof against its inroads lends a practical interest to this aspect of the subject which is sure to be reflected in the discussions which, I understand, he cordially invites.

The Health of Leo XIII.

The few who on Sunday last were privileged to be present at the mass which His Holiness celebrated in the "Capella Interna" (inner chapel) of his private apartments were struck with the strength of voice and general aspect of health he displayed. In the afternoon of the same day, profiting by the change to genial warmth after the recent fall of temperature, he descended to the Vatican Gardens and enjoyed their unique amenities for about an hour and a half. Since then he has availed himself of the continued fine weather to spend many hours of each day in that delightful retreat, the Palazzina della Torre di Leone IV., already described in THE LANCET.

Oct. 3rd.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

Unveiling of the Pirogof Statue in Moscow.

"To the Memory of Pirogof" is the title of a small pamphlet which has just been published in Moscow under the editorship of Professor Diakonof. This little work contains a complete record of the proceedings in connexion with the erection and unveiling of the statue to the great surgeon which now adorns the space in front of the cliniques in Moscow. The statue was unveiled with considerable ceremony on Aug. 3rd (15th) of the present year. It was originally intended and arranged to perform this function during the week of the International Medical Congress so as to enable foreigners to be present, and it is, perhaps, rather regrettable that this intention was not adhered to. The occasion was an interesting one, and many foreign medical men would have been glad to have the opportunity to assist in doing honour to the greatest of Russian surgeons. Probably it was found impossible to fit this in with the many other arrangements made for the Congress week, and consequently the Sunday preceding the opening of the Congress was selected for the ceremony. The statue is a bronze seated figure of heroic size, on a pedestal of the same material. It was the last great work of the sculptor, Mr. W. Sherwood, a Russian artist and Academician of English descent, whose death within the last few weeks has left a vacancy in the roll of members of the Russian Academy of Arts. Of the ceremony of unveiling the monument and presenting it in permanence to the University of Moscow little need be said. It commenced with a *panikhidi* or memorial service for the dead at the base of the statue, followed by the formal presentation of the statue to, and its acceptance by, the University authorities. A vast number of wreaths were laid on the base of the monument and this completed the first part of the ceremony. The second part was held after a short interval in one of the large theatres of the clinique. The meeting here was under the presidency of Professor Diakonof, who holds the chair of operative surgery in the University of Moscow. In the many laudatory orations which were here spoken in memory of Pirogof, and which now appear in print in the pamphlet just issued, a very full and clear account is contained of the life-work of this unquestionably great surgeon and administrator. It is for his services to the art and craft of surgery that he is probably best known outside Russia. In his own country he is quite as much remembered for what he did in the cause of education during his brief tenure of office under the Ministry of Education and by his powerful writings as for his work as a surgeon. Nor were these the only services he rendered to the cause of progress. Space, however, does not permit of their recapitulation here; and it must suffice to say that, when all allowance is made for the glamour of the occasion upon which the speeches now printed were delivered, and for the rhetorical hyperbole not infrequent on such occasions (to be quite just, the present collection of speeches do not err excessively in this direction), these addresses will remain as a worthy tribute to the memory of a man of whom Russia is rightly proud.

The Effect of Smoking on the Health.

The vice of smoking (if it be a vice) is thought to be rather decreasing in Russia. Certainly there is a very general impression that the number of non-smokers now met with is considerably greater than it was a few years ago, when smoking was practically universal among the so-called upper classes. Dr. Mendelssohn[1] publishes a number of observations which he made a few years ago upon the effect of smoking on the health of students, and the statistics he gives are not without interest. In 1890 a circular form was sent to every student of the Army Medical Academy in St. Petersburg and in the Technological Institute containing a large number of questions which the students were asked to answer, and 1071 replies were received. Among the medical students 54·66 were found to be habitual smokers, and among the technological students only 47·18. Juvenile smoking must be common in Russia if we are to accept the table of returns of the age at which these students began to smoke. Two were returned as beginning the habit at the age of six years, 3 at the age of nine years, 11 at the age of ten years, 5 at the age of eleven years, 27 at the age of twelve years, and so on, the maximum being reached at the age of seventeen years. The average number of cigarettes smoked daily by a medical student was 19·64 and by a technological student 22·88 (Russian cigarettes are more than half paper mouthpiece and therefore much smaller than English cigarettes). But the most interesting figures are those which deal with the effect of smoking on the health. Of the smokers 16·09 per cent. were found to have some affection of the respiratory tract, while only 10·69 per cent. of the non-smokers were so affected. In regard to diseases of the alimentary tract the figures were respectively 11·88 and 9·92 per cent., and of both tracts combined 8·77 and 3·22 per cent. In every case the smokers gave the higher percentage. Turning to the effect of the age at which the habit was begun it was found that those who had acquired the habit before the age of sixteen years gave higher percentages of illness (19·05, 13·09, and 13·69 in the above three groups) than those who began at or after that age (14·77, 11·34, and

[1] The Journal of the Russian National Health Society, September, 1897.

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6·6 respectively). Another table shows the deleterious effect of inhaling the smoke when smoking; inhalers gave percentages of illness of 16·14, 12·2, and 9 25 respectively, as compared with 15 38, 7 69, and 2·56 among those who did not inhale. Some other tables complete the article, which closes with some *pia desiderata*, more particularly as to the need of instructing the youth of the day in the harmfulness of smoking. There is of course nothing new in the figures or in the conclusion they point to, but they serve to emphasise the long since admitted fact that smoking is to a certain extent a harmful habit, especially in the young.

A Green Cross Society.

In 1891 a movement was set on foot in St. Petersburg for the formation of a society having for its object the organising of "first aid" in case of accidents, and to be called the "Green Cross Society." No practical results, however, followed the suggestion until the present year, when a committee was formed and a constitution of the society was drawn up which only awaits ratification. The need for some such organisation is shown by some statistics collected by M. Chernik, the originator of the movement, from which it appears that in the twelve years 1881–93 there were in St. Petersburg alone 46 618 registered accidents, and that the number is increasing yearly.

Sept. 23rd (Oct. 5th).

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Infectious Disease in Melbourne.

THE health officer of the city of Melbourne (Dr. James Jamieson) has submitted a report on the prevalence of infectious disease in the city since 1891, the year that notification came into operation. The comparisons are made for the first half of each year 1892 to 1897, and include all cases reported, though many on inquiry proved not to have originated in the city. The figures are put into the form of tables showing the number of cases reported in each of the months January to June for six years.

Typhoid Fever.

	1892.	1893.	1894.	1895.	1896.	1897.
January	23	10	21	21	41	27
February	39	29	18	33	39	19
March	40	29	31	25	33	20
April	30	27	24	19	24	8
May	18	23	14	8	17	18
June	11	8	5	7	7	10
Total for six months	161	126	113	113	161	102

Diphtheria.

	1892.	1893.	1894.	1895.	1896.	1897.
January	0	4	4	2	3	10
February	5	0	5	3	10	12
March	4	1	6	12	7	7
April	5	2	4	4	8	10
May	6	3	1	6	10	14
June	6	3	3	4	4	23
Total for six months	26	13	23	31	42	76

Scarlet Fever.

	1892.	1893.	1894.	1895.	1896.	1897.
January	2	5	2	5	3	7
February	5	8	1	1	12	17
March	6	3	5	2	4	24
April	6	6	4	2	1	20
May	10	8	8	5	7	22
June	4	2	3	2	20	19
Total for six months	33	32	23	17	47	109

It will be noted that typhoid fever showed less prevalence in the first half of this year than in any other of the period, and less probably than in any year since records have been kept. Cases of that disease are fairly, if not amply, provided for in the general hospitals. Diphtheria has become steadily more prevalent and fatal since 1893, when it had reached a low level. The epidemic has not attained the dimensions of the great outbreak of 1889–90, but hardly seems yet to have reached its climax. Scarlet fever has also been much more prevalent in 1897 than in any other year of the period, though there is some reason to believe that there will not be any further considerable increase. Happily, the epidemic has been a mild one and the fatality comparatively small. For these two diseases the present hospital accommodation is quite inadequate, the only provision being a few beds at the Melbourne Hospital. Until provision is made more in accordance with the needs of a large city like Melbourne the task of checking outbreaks of these diseases is a hopeless one.

The Queen's Jubilee Hospital for Consumption in New South Wales.

As previously stated, it was decided to establish hospitals for phthisical patients in New South Wales as a permanent memorial of the Queen's reign. Considerable difference of opinion exists, however, as to the character of the hospitals to be provided. Dr. Sydney Jones champions the view that country sanatoria should be first built and a receiving house in Sydney (and a resolution to that effect was carried at a meeting of the profession held on June 11th). Dr. W. C. Wilkinson is the chief upholder of the other view that a special hospital for phthisical patients should be built near the city. At the last meeting of the New South Wales Branch of the British Medical Association the questions were discussed again, and Dr. Wilkinson's proposals were carried. His view is that our observations and treatment of phthisis should be carried out on scientific lines, and a scientific station established where the various forms and stages of the disease can be scientifically discriminated and classified. From this as a base the scheme, in ever-widening circles, as funds were provided, would include other hospitals and homes in the country. The special hospital would afford the most efficient means of prophylaxis by affording the most accommodation for the poor and removing the sources of infection from the homes of the poor. In the early stages also much good could be done in such an institution by the use of tuberculin. He did not deny the value of climatic treatment. It is indispensable in many conditions, especially when streptococcal infections are present; but the idea of cottage homes, however specious at first sight, was impracticable; owing to the great expense entailed relatively few would be benefited by the large outlay, therefore he advocated the erection of a special hospital first and the continuance and enlargement of the present Home for Consumptives at Thirlmere.

A Medical Man Convicted of Administering a Noxious Substance with Illegal Intent.

On Aug. 23rd last a medical practitioner named George Joseph Walsh, of Exhibition-street, Melbourne, was convicted at the Criminal Court of administering a noxious substance to Lucy Jessup with illegal intent. From the evidence of Jessup it appeared that fearing she was pregnant she consulted Walsh, who confirmed her suspicions and gave her some medicine and pills to bring on a miscarriage. Two days afterwards she aborted, and the family physician, Dr. J. H. Williams, was called in, but declined to attend, and told them to communicate with the police. Walsh then saw her and secured the unused medicine. At the trial the defence was a denial of the charge.

Death of Dr. Youl.

One by one the older members of the profession in Australia are passing beyond that bourne whence no traveller returns, and on Aug. 5th died one of the best known men in Melbourne, Dr. Richard Youl, who for forty-four years had filled the post of city coroner. He was of marked personality and his name was a household word to all sections of the community. He was a man of great natural shrewdness, with a keen and often caustic wit. His faculty for discriminating between true and false evidence was remarkable, and his charges to juries were an admixture of humour, cynicism, and quaint philosophy, but were always logical and showed a profound knowledge of human nature. He frequently interlarded the evidence of witnesses with remarkable comments, and his peculiar idiosyncrasies and singularities of thought and utterance made him a striking figure in public life. During his long period of office he held over 12,000 inquests and applied himself enthusiastically to his duties, especially studying the causes that contributed to accidental deaths. He insisted on a post-mortem examination being held in every case, and it is largely due to his exertions that much greater care is now taken to prevent accidents to workmen and that the sanitary condition of the hospitals and similar institutions has been so much improved. It was almost entirely due to his efforts that the Infant Life Protection Act was passed, and it was on his suggestion that the Victorian Infant Asylum was founded. Besides holding the post of coroner Dr. Youl was President of the

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Medical Board, and was for a long time President of the Board of Health until that body was re constituted. He was also an official visitor to the lunatic asylums and chairman of the Police Medical Board. He remained also in the practice of his profession and was regarded as a very sound physician, though his official duties prevented him from engaging in much practice; but his medical services were always at the disposal of the poor without fee. In private life he was highly esteemed, being a brilliant and witty conversationalist, and though somewhat abrupt and satirical he was at heart extremely kindly and charitable. For many years he was a martyr to gout, so that his life was burdensome, but he worked on with indomitable courage and literally died in harness, having held three inquests only two days before his death, which occurred from heart failure and bronchitis in his seventy-first year. Truly it might be said of him—*Labor vita vitæ est.*

Aug 30th.

Obituary.

CHARLES SMART ROY, M.A. CANTAB., M.D. EDIN., F.R.S.,

PROFESSOR OF PATHOLOGY IN THE UNIVERSITY OF CAMBRIDGE.

ALTHOUGH Professor Roy had been in failing health and unable to do any work for the last two years, the sad news of his death at the premature age of forty-three years, which occurred suddenly in an epileptic fit on the evening of Monday, Oct. 4th, will come as a surprise to his past pupils and many friends who only knew that he had been obliged to stand aside from active work. The complete nervous breakdown which culminated two years ago and necessitated his giving up his professional duties and the appointment of a deputy professor, Dr. A. A. Kanthack, had been for some time foreshadowed by attacks of ill-health, and his mental activity had been greatly impaired thereby.

Born in 1854 at Arbroath his early education, begun at St. Andrews, was continued at Edinburgh University, where he took the M.D. degree in 1878 after having held the post of resident physician at the Edinburgh Royal Infirmary in 1875. After this appointment he worked for a time at the Brown Institution on the pathological anatomy of epizootic pleuro-pneumonia. He then acted as surgeon to the Turkish troops in the Servian War, and it is to be feared that his ultimate breakdown and premature death were the indirect result of mental and bodily strain experienced during this campaign. On his return to England he resumed work at the Brown Institution for a time, but soon went to the Continent, and for about a year worked at physiology under the late Professor du Bois Reymond and at pathology under Professor Virchow, in Berlin. During the next year he acted as assistant at the physiological institute of the University of Strassburg and then went to work at Leipzig under Professor Cohnheim, whose influence made itself felt on his future life's work. During this time he had begun publishing a series of papers on the heart, spleen, and kidneys, and demonstrated by means of the oncometer the variations in volume of the two latter organs; in the case of the spleen he pointed out the rhythmic contractions that normally occur, and on the kidneys he studied the effects, as regards the bulk of the organ and the excretion of urine, produced by introducing water, urea, and drugs into the blood of the renal arteries.

In 1880 he was appointed as the first George Henry Lewes student in physiology, and did original work under Professor Michael Foster in Cambridge. After investigating for the Argentine Republic an epidemic which was shown to be anthrax, he was in 1882 appointed Professor Superintendent of the Brown Institution. In 1884, being then thirty years of age, he was elected to the Fellowship of the Royal Society and to the newly made Professorship of Pathology in the University of Cambridge, entering on his duties in October of that year. He became attached to Trinity College, and had rooms in Nevile's-court until his marriage in 1887 to Violet, daughter of the late Sir G. E. Paget, Regius Professor of Physic. Before this he had, together with Dr. C. S. Sherrington, now Holt Professor of Physiology in University College, Liverpool, investigated an outbreak of cholera in Spain.

As a pathologist Dr. Roy devoted himself chiefly to the experimental part of the subject and especially to the investigation of the disturbance of function; pathological physiology, in fact, was the line of research to which, as Cohnheim's pupil and follower, he was most attracted. He was, as has been already seen, a physiologist first and only became a pathologist secondarily, and perhaps as a result the subjects of morbid anatomy and histology hardly received from him the amount of attention and research that would be required from an ordinary teacher of pathology in a hospital school. His aim, however, was to carry on pathology to the same extent and along much the same lines as those on which the sister science physiology had been advanced. There can be no doubt that he was extraordinarily well fitted for this object. In the first place he had a genius for the invention of apparatus for recording graphically the results of experimental research; in connexion with his favourite subject, the vascular system, there are quite a number of instruments for registering the arterial and endocardial pressure, the expansion of the heart and vessels, and so forth which remain as memorials of his ingenuity and inventive power. His powers of mechanical invention and his bias for problems dealing with physical questions can be traced, not only in his own researches, but in those of his pupils and demonstrators. In the second place, he was a skilful and accomplished operator; the rapidity and accuracy with which he made the dissection necessary in experiments on animals were very striking.

As a teacher he appealed rather to the advanced students and to those anxious to do some original work on their own account than to the rank and file of pass men. It was, in fact, one of his ambitions to form around him a school of workers like that which centred around Ludwig, and to have a steady stream of work issuing from his laboratory. Although his earlier years in the professorial chair had been hampered by the facts that adequate laboratories and thoroughly appropriate fittings were not forthcoming until about 1889 and although the later part of his term of office was interrupted by failing health, the list of researches and papers that he directed or in part carried out is a long one. Among his demonstrators are many whose names are well known and who are now holding responsible teaching posts, while the John Lucas Walker students (Hunter, Adami, Kanthack, Lorrain Smith, Westbrook, and Cobbett) worked under his direction. Most of his own work at this time was done conjointly and no mention of it would be complete without a reference to his researches into cardiac mechanics and experimental disturbance of the circulation published in conjunction with Dr. Adami, who for three years acted as his demonstrator and only left Cambridge to take up the chair of pathology at Montreal. Their work on the papillary muscles, on the relation between the heart-beat and the pulse, and on strain as a cause of valvular disease has a most important bearing on the problems of clinical medicine. He originated, planned the outlines, and unselfishly helped his pupils in researches on endocardial pressure, the specific gravity of the blood, the pathology of shock, the production of lymph, and other subjects. Had his health and life been spared he would no doubt have accomplished his desire of bringing out an exhaustive treatise on cardiac physiology and pathology. As a lecturer his matter was excellent, stimulating and suggestive of original thought and work, and dealing largely with experimental physiological pathology, but his delivery was rather indistinct, too rapid, and therefore somewhat difficult to catch. A rather bluff manner and abrupt address were the outward expressions of a thoroughly sterling and generous nature. Strong in his convictions and forcible, if sometimes impetuous, in his acts, Roy was certainly no courtier, but these very properties made him a generous and steadfast friend to those who knew and trusted him.

Mrs. Roy, who devotedly watched over and nursed her husband during a long and terribly anxious period of failing health and illness, has no children to console her in her bereavement. We are informed that Professor Roy's funeral will take place on Friday, Oct. 8th. The service will be held in Trinity College Chapel at 3 P.M. before the interment at Mill-road Cemetery.

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Medical News.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—At the Convocation held on Sept. 25th the following degrees and diploma were conferred:—

Doctor in Medicine.—Wilfred Ernest Alderson, M.B., B.S. Durh.; Walter Alexander Atkinson, M.B., B.S. Durh.; Octavius Beven; M.B., B.S. Durh.; Charles Vincent Dingle, M.B., B.S., B.Hy. Durh. Robert Ayton Dunn, M.B., B.S, B.Hy. Durh.; Harry Harte Gourley, M.S. Durh.; Ferdinand Henry Halse-Francis, M.B., B.S. Durh.; Arthur Jervis, M.B., B.S. Durh.; Sodeinde Akisiku Leigh-Sodipe, M.B. *(in absentid)*; Robert Cecil Leonard, M.B. Durh.; Richard Pearson, M.B., B.S. Durh.; Frederick Robson, M.B., B.S. Durh.; and Charles Rawdon Wood, M.A., M.B., B.S., Durh.

Doctor in Medicine (Practitioners of Fifteen Years' Standing)—Thomas Reuell Atkinson, M.R.C.S., L.S.A.; George Booth, M.R.C.S., L.R.C.P.; Charles Donkin, L.R.C.P., L.F.P.S.; Percy Septimus Jakins, M.R.C.S., L.S.A.; Frederick William Jordan, M.R.C.S., L.R.C.P.; Hugh Pugh Rowlands, M.R.C.S., L.R.C.P., L.S.A.; Charles James Vlieland, M.R.C.S., L.S.A.; and Oliver Withers, M.R.C.S., L.R.C.P.

Bachelor in Medicine (M.B.).—Arthur William Aldridge, M.R.C.S., L.R.C.P., Mason College, Birmingham; Walter Osborne Arnold, Grant Arnott, John David Dodds, Joseph Livingstone Frazer-Hurst, Ernest William Gilroy, Percy Holgate, Albert Adam Hope, James William King, Malcolm Gordon McBean, Norman McCall-Smith, and Walter Augustus Peverley, College of Medicine, Newcastle-upon-Tyne; Arthur Riley, M.R.C.S., L.R.C.P., Westminster Hospital; Charles Salkeld, B.A., and Thomas Ovens Scott, M.A., College of Medicine, Newcastle-upon-Tyne; Henry Francis Shea, St. Thomas's Hospital; Gilbert Smith, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; Alfred Edward Stevens, St. Thomas's Hospital; John Aston Swindale, Mason College, Birmingham; William Ardendt Hagestadt Waite, Yorkshire College, Leeds; and William Longstaff Wight Walker, College of Medicine, Newcastle-upon-Tyne.

Bachelor in Surgery (B.S.).—Arthur William Aldridge, M.R.C.S. L.R.C.P., Mason College, Birmingham; Walter Osborne Arnold, Grant Arnott, John David Dodds, Joseph Livingstone Frazer-Hurst, Ernest William Gilroy, Percy Holgate, Albert Adam Hope, James William King, Malcolm Gordon McBean, Norman McCall-Smith, and Walter Augustus Peverley, College of Medicine, Newcastle-upon-Tyne; Arthur Riley, M.R.C.S., L.R.C.P., Westminster Hospital; Charles Salkeld, B.A., and Thomas Ovens Scott, M.A., College of Medicine, Newcastle-upon-Tyne; Henry Francis Shea, St. Thomas's Hospital; John Aston Swindale, Mason College, Birmingham; William Ardendt Hagestadt Waite, Yorkshire College, Leeds; and William Longstaff Wight Walker, College of Medicine, Newcastle-upon-Tyne.

Bachelor of Hygiene (B Hy.).—William Edmund Harker, M.D., B.S.

Diploma in Public Health (D.P.H.).—George Clement Belcher, M.R.C.S., L.R.C.P.

PRESENTATIONS TO MEDICAL MEN.—Mr. Richard Adams, L.R.C.P. Edin., M.R.C.S. Eng., Medical Superintendent of the Cornwall County Asylum, at Bodmin, gave on the 24th ult., on his retirement from that office, which he had held over forty years, a farewell evening entertainment in the Great Hall of the Institution. Advantage was taken of the occasion to present Mr. Adams with a valuable silver coffee tray as a testimonial of esteem, subscribed for by 157 of the officials, past and present.—Dr. Jas. Wheatley, medical officer of health of the borough of Blackburn, has been the recipient of a clock and barometer. The testimonial bore the following inscription: "Presented to James Wheatley, Esq., M.D., by the inspectors and officials of the Health Department, on the occasion of his marriage as a small token of respect and esteem."—Mr. Robert Laidlaw, M.B. Edin., of Ladybank, Fife, has been presented by the members of the Ladybank Branch of the St. Andrew Ambulance Association, with a gold albert chain, in recognition of services rendered as their lecturer.—Mr. J. P. Bickersteth, the Deputy-Chairman of the London and North-Western Railway Company, on distributing on the 28th ult. the First Aid certificates of the St. John Ambulance Association to the successful members of the staff in the assistant goods manager's and chief passenger superintendent's offices, pointed out the advantage—in fact, the necessity—of a staff of a railway company being acquainted with ambulance work. This had led the directors recently to bring First Aid prominently before the staff all over the company's system and to provide the means whereby all who wished could obtain a practical knowledge of the work. The present opportunity was embraced to present to their gratuitous instructor, Dr. Ramage, a box of microscopic apparatus as a small token of esteem.—At Pontypridd, on Sept. 30th, Mr. Howard Davies, M.R.C.S. Eng., L.S.A., was presented with a silver-mounted riding whip by the members of the St. John Ambulance class in appreciation of his services as honorary lecturer. Mr. Nathan Raw, M.D. Durh., B.S., was on Saturday last, just before his departure from the Dundee Infirmary for his new sphere of labour in the Mill-road Infirmary, Liverpool, the recipient of a present, subscribed for by the nursing staff of the former institution, which consisted of a pair of silver candlesticks and silver inkstands enclosed in a case. On the outside of the lid of the inkstand are engraved Dr. Raw's initials, and inside is the following inscription: "Presented to Nathan Raw, Esq., M.D., B.S., L.S.Sc., F.R.C.S.E., by the nursing staff of the Dundee Royal Infirmary in grateful remembrance of his unfailing courtesy and consideration. October 2nd, 1897."

THE PLAGUE IN BOMBAY PRESIDENCY.—The accounts from Bombay and from different districts of that Presidency are not by any means so satisfactory as could be desired. The epidemic of bubonic plague has been slowly extending itself and seems to be following, more or less, the course of that which visited Hong-Kong. The disease has not disappeared from Bombay, and is even still more prevalent in Poona, Kirkee, and in the Kolabar, Nasik, Satara, and other districts; hence it is thought that, in addition to the disease indigenous to Bombay, it is probably increased by cases being imported into the city. Moreover, the death-rate from fever and other causes in Bombay continues high.

DIPHTHERIA IN LONDON.—In our issue of Aug. 7th we gave a summary of the data respecting diphtheria prevalence and mortality in London during the four-weekly period ended on July 17th, and showed that the total of 1011 notifications exceeded that for any like period since November last. The average weekly yield of cases in July was 253 against 224 in June; and the registered deaths 135 in number against 137 in June, the per case mortality for the respective months being 13·3 and 15·3 per cent., the smaller total of cases in June having been accompanied by a slight excess of registered mortality. But if the data for the July period were thus excessive, those for August, ended on the 14th, were still less satisfactory, the notifications reaching 1111 and the registered deaths 163. The cases notified yielded a weekly average of 278, and whilst all the sanitary districts of London save one were invaded, 6 of them had each upwards of 50, and an aggregate of 397 notifications, as compared with only 20 notifications in all in other 6 districts. The deaths, 163 (a weekly average of 41), exceeding as they did those of the July period, were, despite a higher total of attacks, sufficiently numerous to increase the per case mortality, which became 14·7 per cent. The next succeeding four-weekly period, ended on Sept. 11th, witnessed a decided fall alike in notified attacks and registered deaths. The notifications were 866, or an average of 216 per week. Three sanitary districts returned no cases, and other 4 had each 50 and upwards, and an aggregate of 246. In 6 districts, however, only 10 cases were notified in all. The registered deaths were 117, or 29 weekly, and the per case mortality was 13·5 per cent, approximating to that of the July period. The deaths in the next succeeding week, ending Sept. 11th, were 35, or 6 above the average of the preceding four weeks; and a still greater rise was witnessed in the week ending Sept. 18th, the deaths registered being 45, although the corrected decennial average for the thirty-eighth week of the years 1887-96 was 44. But apart from the fact that the decennial average for any one week is a very fluctuating and unreliable figure, it must be held in mind that the high total of the week last named is almost identical with that average only by reason of the excessive persistence of the disease in fatal form for many years past, the decennial average thus ever growing as the several weeks of each year continue to show heavy mortality data. Going back ten years we find that the decennial average for the particular week now in question was only 17·2; five years later it had grown to 26·4, and now it is 44·4. Hence the fact that the deaths nowadays in any one week only reach the average has become a false factor in determining the potency of the disease. In the week ended Sept. 18th Paddington and Islington had each 4 deaths, and St. Marylebone, St. George-in-the-East, Whitechapel, and Wandsworth 3 deaths each. The admissions were 167, as compared with 131, 140, and 156 in earlier weeks; and on the Saturday 1021 patients were returned as being in hospital on account of diphtheria. In the Outer Ring there were 12 deaths registered from the

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disease, 6 being in West Ham, and 3 in Brentford registration districts. Last week's returns show a still further increase in fatality from diphtheria alike in the county and Outer Ring of London.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.—The first Broderip Scholarship has been awarded to Mr. H. F. Hine and the second to Mr. G. H. Lucas. The first Entrance Scholarship has been awarded to Mr. Wm. Gillitt and the second to Mr. Rees Phillips.

LONDON HOSPITAL MEDICAL COLLEGE.—The following Entrance Scholarships have been awarded: Price Science Scholarship, £120 Mr. J. Jones; Price Anatomy and Physiology Scholarship, £60, open only to competitors from Oxford or Cambridge, Mr. C. Warren (Oxon.); Science Scholarship, £60. Mr. R. T. Dolbey; science scholarship, £35, Mr. M. T. Williams.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—The first Entrance Scholarship in Natural Science (£150) has been awarded to Mr. W. H. Harwood-Yarred, and the second (of the value of £60) to Mr. Francis H. Whitehead. The University Scholarship (of the value of £50) has been awarded to Mr. Frank Cecil Eve, B.A., of Emmanuel College, Cambridge.

AN AGED PHILANTHROPIST.—Mr. George Müller, the founder of the orphan houses at Ashley Down, Bristol, entered upon his ninety-third year on Sept. 27th, and the anniversary was, as usual, marked by a large number of congratulatory messages from friends and former inmates. There are now upwards of 1700 orphans in the homes, with nearly 200 helpers.

CHARING-CROSS HOSPITAL MEDICAL SCHOOL.—The following Entrance Scholarships have been awarded: The Livingstone Scholarship (100 guineas), to Mr. S. A. Boyd; the Huxley Scholarship (55 guineas), to Mr. W. J. O'Brien, and the Universities' Scholarship (60 guineas), to Mr. W. G. Rogers. Entrance Scholarships have also been awarded to Mr. E. Bayley (60 guineas), Mr. C. L. Lakin (40 guineas), and Mr. G. S. Welham (30 guineas).

WATER-SUPPLY OF THE ISLAND OF PORTLAND.—The scheme of water-supply promoted by the local authority of Portland has received the approval of the Local Government Board. It will supply the Government departments, Admiralty, prison, and the inhabitants. The source of the supply is situated in the chalk hills at Upwey, between Weymouth and Dorchester, and the water will be conveyed by pipes to Portland. The work will be commenced immediately.

DUNDEE ROYAL INFIRMARY.—Dr. Nathan Raw, the medical superintendent of Dundee Royal Infirmary, having been appointed superintendent of the Mill-road Infirmary at Liverpool, was entertained at dinner at the Queen's Hotel, Dundee, on Sept. 28th. Lord Provost McGrady presided, and there was a numerous company. The chairman, in proposing Dr. Raw's health, made very complimentary references to his administrative ability, saying that he came to the Dundee Infirmary from Bolton in 1893, and that those who were connected with the institution, especially the directors, regarded the period of over four years which he had spent there as one of the most successful chapters in its history. Dr. Raw, in replying, said that at the time of his appointment he was a complete stranger to Dundee, but he now seemed to know everybody, and would always cherish the recollection of the kindness which had been shown him.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ARMITAGE, E., L.R.C.P., L.R.C.S. Ed., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Grimsby Rural District Council.

BRIERLEY, JAS., has been appointed Analyst for the Borough of Newbury.

CLOTHIER, H., M.D. Lond., L.R.C.P., M.R.C.S., has been re-appointed Medical Officer of Health by the Hornsey Urban District Council.

CORBETT-SINGLETON, F. E., L.R.C.P. & S. Edin., has been appointed Clinical Assistant to Out-patients at the Chelsea Hospital for Women.

CRAN, R. D., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Salford Sanitary District of the Salford Union.

DENT, H. C., M.R.C.S., has been appointed a Medical Officer by the Erpingham Guardians and Council.

FARRAR, J., M.D. St. And., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Gainsborough Sanitary District of the Gainsborough Union.

GRAHAM, D. J., M.B., C.M. Edin., has been appointed Assistant Medical Officer to the City Hospital for Infectious Diseases, Edinburgh.

GRANT, F. W., M.D., B Sc. Edin., has been appointed Medical Officer of Health for Lossiemouth and Branderburgh.

HARRIS-LISTON, T., M.R.C.S., has been appointed Assistant Medical Officer of the Lawn Hospital, Lincoln.

HODGES, G. W. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 2 Sanitary District of the Bridgnorth Union.

HOOTON, W. A., L.R.C.P. Lond., M.R.C.S., L.D.S. Eng., has been appointed Dental Surgeon to the Manchester Royal Infirmary, vice G. W. Smith, resigned.

HOUSLEY, J., M.D. St. And., M.R.C.S., D.P.H. Glasg., has been re-appointed Medical Officer of Health by the Retford Urban District Council.

JACKSON, D. H., M.A., B.Sc., Ph.D., has been appointed Junior Demonstrator in Chemistry at University College, Bristol.

LE PELLEY, AMELIA M., M.B. Lond., has been appointed House Surgeon to the Belgrave Hospital for Children, London, S.W.

MACKAY, H. J., M.D. Edin., has been re-appointed an Honorary Medical Officer for the Devizes Cottage Hospital.

MCCARDIE, W. J., B.A., M.B., B.C. Cantab., has been appointed an Anæsthetist to the General Hospital, Birmingham.

MONTGOMERY, WM. P., M.B., B.S. Lond., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Resident Surgical Officer to the Manchester Royal Infirmary.

MOULD, P. G., L.R.C.P. Lond., M.R.C.S., has been appointed a Third Assistant Medical Officer to the Cheadle Asylum.

MUSGRAVE, C. B. T., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed a Medical Officer by the Erpingham Guardians and Council.

OLIPHANT, FRANK, M.B. Edin., has been appointed House Surgeon to the Kidderminster Infirmary.

OWEN, ARTHUR DUNLEY, B.Sc., M.R.C.S., L.R.C.P. Lond., has been appointed District Surgeon and Surgeon to the B.S.A. Police at Melsetter, Rhodesia, South Africa.

PAGET, CHAS E., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed Medical Officer of Health for the County by the Northamptonshire County Council.

PARTRIDGE, S., M.D. Edin., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health by the Darlaston Urban District Council.

PEARSON, H. A., L.R.C.P. Lond., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the No. 5 Sanitary District of the Blandford Union.

PORRITT, ERNEST E., M.B., C.M. Edin., has been appointed Assistant Medical Officer to the City Hospital for Infectious Diseases, Edinburgh.

PROSSER, T. G., M.R.C.S., has been re-appointed Medical Officer for the Rockfield Sanitary District of the Monmouth Union.

RABY, L., M.D. Durh., M.R.C.S., has been re-appointed an Honorary Medical Officer for the Devizes Cottage Hospital.

ROSCOE, H., L.R.C.P. Lond., M.R.C.S., has been appointed a Resident Medical Assistant to the Dyffryn Aled Asylum, near Colwyn Bay.

TRUMPER, O. B., M.B., Ch.B. Vict., has been appointed Medical Officer for the Market Rasen No. 1 and the Tealby Sanitary District.

SELKIRK, J., M.A., M.B., C.M. Glasg., has been appointed Medical Officer for the Boston Spa Sanitary District of the Wetherby Union.

SHIRREFFS, WILLIAM, M.B., C.M. Aberd., has been appointed Medical Attendant for the Water, Sewage, and Roads Department of the Aberdeen Town Council, vice J. A. R. Glennie, resigned.

SLADEN, G. W. B., L.R.C.S. Irel., has been appointed Medical Officer for the Blyton Sanitary District and the Workhouse of the Gainsborough Union.

SMITH, R. R., L.R.C.P., L.R.C.S. Irel., has been appointed Assistant Medical Officer for the Walton Workhouse of the West Derby Union.

SUTCLIFFE, J., L.R.C.P. Edin., M.R.C.S., has been appointed an Assistant Medical Officer to the Cheadle Asylum.

THOMSON, G. D., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer by the Ruskington (Lincoln) Urban District Council.

TROW, A. V., M.B., C.M. Aberd., has been re-appointed an Honorary Surgeon to the Devizes Cottage Hospital.

TUXFORD, REGINALD, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Resident Medical Officer to the Guest Hospital, Dudley, vice T. E. Hickman, resigned.

WAYLEN, G. S. A., L.R.C.P. Lond., M.R.C.S., has been re-appointed an Honorary Medical Officer for the Devizes Cottage Hospital.

WILLIAMS, J. T. C., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Whiteland District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN.—Out-patient Surgeon. Applications to the Honorary Secretary, Beechenhurst, Selly-hill, Birmingham.

CORPORATION OF CALCUTTA, Bengal, India.—Health Officer for the town of Calcutta for five years. Salary not less than 1200 rupees and not more than 1500 rupees a month. The appointment is subject to specified conditions. Applications to the Secretary to the Corporation, Calcutta.

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DUNDEE ROYAL LUNATIC ASYLUM.—Medical Assistant. Salary £100 per annum, with board, lodging, and washing.

GENERAL HOSPITAL, Birmingham.—Surgical Casualty Officer for one year. Salary £50 per annum (non-resident).

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians. Also Assistant Resident Medical Officer. Salary £50 per annum, with board and residence.

KENT AND CANTERBURY HOSPITAL, Canterbury.—Assistant House Surgeon, unmarried. Salary £50 a year, with board and lodging.

KING'S COLLEGE London.—The Sambrook Surgical Registrarship. Applications from King's College students only.

LINNEAN SOCIETY OF NEW SOUTH WALES, Sydney.—Macleay Bacteriologist. Applications to Dulan and Co., 37, Soho-square, London.

LONDON THROAT HOSPITAL, Great Portland-street.—House Surgeon, non-resident. Honorarium, £25 per annum.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer for six months each. Salary at the rate of £50 per annum for the senior post.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-road, London, S.E.—Resident Medical Officer, for one year. Salary £70 per annum, with board and residence in the hospital.

ROYAL SEA-BATHING INFIRMARY, MARGATE.—Assistant Resident Surgeon. Salary £52 per annum, with board and residence. Applications to the Secretary, R. S. B. Infirmary, 30, Charing-cross, London, S.W.

STOKE-UPON-TRENT UNION.—Resident Medical Officer for the Workhouse. Salary £100 per annum, with board, washing, and furnished apartments in the hospital. The appointment is subject to statutory reductions. Applications to the Clerk to the Guardians, Union Offices, Stoke-on-Trent.

SUFFOLK GENERAL HOSPITAL, Bury St. Edmunds.—House Surgeon. Salary £100, with board, lodging, and washing.

THE RETREAT, York.—Junior Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

UNIVERSITY OF SYDNEY, New South Wales, Australia.—Demonstrator of Physiology. Salary £350. Passage money allowed, £60. Applications to the Acting Agent-General for New South Wales, Westminster Chambers, 9, Victoria street Westminster.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea.—House Physician, for eight months. Honorarium at the rate of £50 per annum, with board and lodging in the hospital. Also House Surgeon for twelve months. Honorarium £50, with board, and lodging in the hospital.

Births, Marriages, and Deaths.

BIRTHS.

BATEMAN.—On Oct. 5th, at Devonshire-street, Portland-place, W., the wife of A. G. Bateman, M.B., C.M., of a daughter.

REICHARDT.—On Oct. 5th, at Dorset House, Ewell, Surrey, the wife of E. Noel Reichardt, M.B. Lond., of a daughter.

RUSSELL.—On Sept. 10th, at Subatha, Punjab, India, the wife of Surgeon-Major M. W. H. Russell, Army Medical Staff, of a son.

MARRIAGES.

BRIDGES—RIDLEY.—On Oct. 4th, at St. Stephen's, Avenue-road, Regent's-park, N.W., Ashley Colston Bridges, M.R.C.S., &c., Perth, Western Australia, to Miriam, youngest daughter of the late Edward Ridley, of Bridgnorth, Shropshire.

CAZALET—LYON.—On Oct. 2nd, at St. John's, Caterham-valley, Grenville William Cazalet, L.R.C.P. Lond., M.R.C.S. Eng., of Grey Friars green, Coventry, to Edith Louisa, eldest daughter of Jeremiah Lyon, Riddings Court.

CRAIG—MUNGALL.—On Sept 28th, at Balmoral Hotel, Princes-street, Edinburgh, by the Rev. John Sinclair, assisted by the Rev. James Aitken, M.A., William Craig, M.D., C.M. Edin., Foulford House, Cowdenbeath, to Isa Elder, eldest daughter of Henry Mungall, Esq., J.P., Woodside House, Cowdenbeath.

MORTON—LAW.—On Sept. 30th, at St. Bartholomew's, Maltby, by the Rev. J. Vernon, vicar, Samuel Ernest Morton, L.R.C.P., M.R.C.S., son of Samuel Morton, M.R.C.S., L.S.A., of 8, Burngreave road, Sheffield, to Mary Gertrude, eldest daughter of Wm. Law, The Manor, Maltby.

RITCHIE-THOMSON—POWYS.—On Sept. 28th, at St. Peter's, Wallingford, George Ritchie-Thomson, M.B. Edin., F.R.S.E., to Mabel Alice, second daughter of the late William Cunliffe Powys, Captain in H.M.'s 22nd Foot, and of Garden Creek, Fredericton, New Brunswick.

DEATHS.

CASSIDY.—On June 22nd, at Datta Khel, of wounds received on June 10th in the Tochi disaster, Surgeon-Captain Christopher Clemons Cassidy, son of the late Edward Cassidy, Derry, aged 32 years and 9 months.

FISHER.—On Sept. 19th, at Bawtry, Yorkshire, Jane, for 50 years the widow of the late George Fisher, M.R.C.S. Eng., L.S.A., of Bawtry, Yorkshire, aged 81 years.

KIRKMAN.—On Oct. 3rd, whilst crossing the Arabian Sea, Montague Kirkman, L.R.C.P. Ed., L.F.P.S. Glasg.

ROY.—At Cambridge, on Oct. 4th, Charles Smart Roy, M.A., M.D., F.R.S., of Trinity College, Professor of Pathology in the University of Cambridge, aged 43 years.

SMITH.—On Oct. 3rd, at Stockton Hospital, Robert Gillies Smith, M.A. Aberd., B.Sc. Lond., M.R.C.S., L.R.C.P., eldest son of Robert Smith, M.D., Durham County Asylum, aged 36.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 7th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Oct. 1	29·93	N.E.	...	84	61	51	51	53	Foggy
,, 2	30·20	NNE	0·20	84	63	51	51	53	Foggy
,, 3	30·24	W.	...	100	63	52	52	52	Fine
,, 4	30·39	N.W.	...	86	56	48	47	50	Fine
,, 5	30·40	E.	...	84	56	46	46	50	Cloudy
,, 6	30·43	E.	...	85	56	44	44	47	Foggy
,, 7	30·43	S.W.	...	73	53	39	39	40	Dense Fog

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which was completed with the issue of June 26th, was given in THE LANCET of July 3rd. It is intended, in future, to include the Index and Title-page for each past half-yearly volume in the first number of the succeeding volume, as in the present case, instead of in the last number of the volume itself, as heretofore.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18., carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

IMPRISONMENT FOR SELLING BAD MEAT.

AT Leamington on Monday last a drover was sentenced to three months' imprisonment for depositing for sale meat unfit for human consumption. The defendant having bought a cow for 12*s.* 6*d.* in a neighbouring town, slaughtered it, and offered the flesh for sale. The Mayor of Leamington pointed out that the health of the population could not be preserved if such offences were permitted, and very properly sent the offender to prison.

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"THE ALFORMANT."

IN our notice last week of this apparatus for the disinfection of air by means of formaldehyde generated by heating tablets of "paraform" in a special lamp, it was stated that each tablet on heating yielded two and a half times its weight of gas. It should have read that each paraform tablet yielded formalin vapour equivalent in amount to two and a half times its weight of liquid formalin. A saturated aqueous solution of formalin contains 40 per cent. of gas, so that one part by weight of "paraform" is equivalent to two and a half parts by weight of liquid formalin. The discrepancy is pointed out in a communication which we have received from Dr. S. Rideal, who has very thoroughly investigated the disinfecting powers of formalin and its preparations.

Mr. George E. Clemow.—There can be no hesitation in affirming that it is not only inexpedient, but most improper, that the charge of wards for infectious diseases should be given to the same resident officers of a general hospital who have to conduct "major surgical operations, abdominal sections, &c." Indeed, the project of establishing such wards within sixty yards of the main building is fraught with danger. That the bacteriological laboratory should be conducted by the same officers is perhaps unwise, but less open to objection on the score of liability to the transmission of disease, since precautions could easily be taken. The laboratory would, we imagine, be mainly used as an adjunct to the clinical work of the institution, and the size of the hospital is not too great to prevent the officers devoting some of their time to such scientific investigations.

Enquirer (H. C. D.) is recommended to consult his medical man.

CHEAP JAM.

A CORRESPONDENT who ought to know writes to us as follows concerning a paragraph in our last issue: "I notice in THE LANCET a paragraph referring to the quality of the jam given to the inmates of the Bedwellty workhouse. The small sum of 2½*d.* per pound suggests at once to the uninitiated in practical details a sweet slush, or a miserable substitute for jam. I do not think this need necessarily be the case. At the present very low price of good sugar, and with the opportunities of securing sound fruits in bulk quite cheaply (which the commissariat department of public institutions ought to be on the alert to do), a good jam can be furnished at the figure named. I am talking now of home-made jams, and of course such jams may be spoilt by careless preparation. With regard to manufactured products, after the preparation of choice jams in large manufacturing establishments there are quantities of preserve often left not quite shapely in form, or up to the high standard of the particular market. A mixture of these remnants is retailed in some places at the low price of 1*s.* 6*d.* for seven pounds, and in larger quantities can be procured at a still lower figure. It is known as 'household jam' and is thoroughly good and wholesome. In conclusion I see no reason why a sound and palatable jam cannot be provided at 2½*d.* per pound."

Constant Reader (Southsea).—Articles on colitis have appeared in THE LANCET of the following dates: By Dr. Thompson, Nov. 28th, 1891 (p. 1220); by Dr. Goodhart, Feb. 13th, 1892 (p. 345); by Dr. Sainsbury, Aug. 13th, 1892 (p. 367); by Mr. Howard Marsh, Feb. 25th, 1893 (p. 414); by Dr. Carter, March 10th, 1894 (p. 610); by Dr. S. W. Wilson, Jan. 5th, 1895 (p. 75); by Mr. Wood, Jan. 12th, 1895 (p. 131); by Dr. W. H. White, March 2nd, 1895 (p. 537); by Mr. Skene Keith, March 9th, 1895 (p. 639); by Dr. Mackern, June 8th, 1895 (p. 1424) by Dr. W. H. White and Mr. Golding-Bird, Dec. 21st, 1895 (p. 1578); by Dr. Pye-Smith, Jan. 25th, 1896 (p. 233). For other references our correspondent might consult Neale's Digest.

Interested.—There are articles on Maternal Impressions in THE LANCET of the following dates: by Dr. Mackay, Dec. 19th, 1891, p. 1388; by Dr. Halket, Jan. 23rd, 1892, p. 212; July 7th, 1894, p 40; and Nov. 24th, 1894, p. 1233. We regret that we cannot give our correspondent a full bibliography from English and foreign sources, but we recommend him to consult Neale's Digest and Licetus de Monstris.

Enquirer (E. G. A. M.).—A vaccination officer holds office until he dies or resigns or is removed by or with the consent of the Local Government Board, to which body we recommend our correspondent to take his case.

TOSSING FOR A CORONER.

AT the Essex County Council, held at Chelmsford on Tuesday last, there was a tie in the voting for the coroner for the metropolitan district of the county, and the chairman of the council tossed up a coin, and upon head coming up declared Dr. Ambrose, of Buckhurst-Hill, duly elected.

PRESENTATION TO MR. W. J. C. MILLER, B.A.

WE recently announced that a fund was being raised, mainly by "educational" friends, to present a testimonial to Mr. Miller, late Registrar of the General Medical Council. The testimonial, consisting of a watch and purse, was presented to Mr. Miller on Friday, Oct. 1st. The watch bears a monogram, with the following inscription on the inner case: "Presented, with a purse of gold, to W. J. C. Miller, Esq., B.A., by friends and correspondents in England, America, India, and on the Continent of Europe, as a small token of personal esteem and in acknowledgment of his eminent services to mathematical science through the *Educational Times*. October, 1897." A complete list of the names of the subscribers to the fund was published in the *Educational Times* of Oct. 1st.

J. W. C.—So far as the improvement of the voice is concerned the earlier the false palate is employed the better, but the younger the child the more difficult it is to fix the obturator firmly, so that there may be no danger of its being swallowed. It must further be borne in mind that in children the false palate must be changed frequently to correspond with the rapid increase in size of the mouth which occurs in childhood. All these points being taken into consideration it may be said that a false palate should not be fixed until the child has attained the age of two or three years. If the employment of the obturator be delayed to a later age there is great probability that the nasal tone of the voice will be permanent.

Mrs. S. M. Bosanquet will find that we have made frequent allusion to the peril possibly latent in the chalice.

THE EULOGY OF QUACKERY.

To the Editors of THE LANCET.

SIRS,—This is a cutting from "Stray Notes" in the *Whitehaven Gazette* of Sept. 30th:—

> "There has been much talk lately about the wonderful cure effected to a Carlisle lady by the use of the water at St. Winifred's Well, at Holywell. . . .
>
> "After all is said and done, I don't see anything very miraculous in the cure. We all know how ignorant medical men are as a rule in connection with broken bones or dislocated joints. Even in Whitehaven cures have been effected in less than an hour of ailments that medical men have given up in despair.
>
> "Mr. Wilson, the bone-setter, of Aspatria, who attends the various market towns of the county once a week, has effected greater cures than this at Holywell, and no one attaches any extraordinary virtue to his treatment. He simply understands what he is about, and puts his knowledge into practice."

Comment is needless except to add that the opinion therein expressed is a very popular one in this part of the world, and that we are constantly subjected to censure by all classes because the bone-setter's diagnosis differs from ours. With the many associations and societies to which members of the profession are asked to subscribe for their mutual protection can nothing be done to stop this branch of unqualified practice? When will the public be willing to allow that it requires a braver and often more skilful man to confess doubt upon a point of diagnosis than to assert an absolute opinion, be it right or wrong, in all cases? I am, Sirs, yours faithfully,

Gosforth, Cumberland, Oct. 1st, 1897. C. H. POWERS.

*** The General Medical Council, it is hoped, will soon attempt to do something to stem the tide of quackery. It is in the meantime very regrettable that journals should publish these sweeping puffs of bone-setters. A little inquiry into the claims of such persons to knowledge or past success would always reveal their ignorance.—ED. L.

W. W.—Every case must be judged on its merits. We cannot guess what the Local Government Board might do without knowing the particular circumstances, but it probably has complete power to act as our correspondent describes.

A NURSE'S "MEDICAL AND SURGICAL SERVICES."

THE following advertisement appeared in a recent number of an evening paper:—

> SYDNEY.—A Lady, skilled Nurse, æt. 28, will Give her medical and surgical Services, or act as Companion to a Lady or special case, on a voyage to Sydney or to any port within 300 miles of there, and, if necessary, will stay a short time on arrival, in return for passage; highest testimonials up to date and diploma.—Address Dr. ——, York.

We should be glad to know what are the medical and surgical services of a nurse, what is the difference between a "lady" and "a special case," and what is the "diploma"?

Sigma is asked to sign a letter or give his address for publication, so that answers can be sent direct to him.

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A POINT IN COLLIERY APPOINTMENTS.

DR. J. COWAN WILSON writes to us at some length concerning his position towards the practice in a colliery in his neighbourhood. The colliery in question has been until recently under the medical care of another practitioner residing elsewhere. Certain of the colliers having desired to be under the treatment of the medical man residing nearer them the medical officer offered to put an assistant in the place. But upon a ballot 143 colliers voted for employing Dr. Wilson, resident in the place, against 22 who did not wish to change. The manager of the colliery does not sanction any change and will continue to deduct the agreed weekly charge from the wages of the 22, and to hand it to the original medical officer. The 143 dissentients will not have this deduction made from their wages, but must make a collection among themselves for their medical man, which detracts from the safety and convenience of the appointment. Dr. Wilson's contention is that the majority having declared in his favour the same facilities should be given them with regard to their choice as are given to the minority who have decided to uphold their former medical man, and upon the face of it the argument has much force.

A PREDISPOSITION TO HERNIA?

To the Editors of THE LANCET.

SIRS,—A boy, aged seven and a half years, rather under the average size, has ridden a fat little cob since he was six years of age. He is comfortable in the saddle, can ride for ten or twelve miles without any fatigue, and is passionately fond of it. To my mind no harm can accrue, but everywhere I find the lay mind very much exercised as to the harm that will be done to him by putting him on such a wide mount. I find the general impression is that it will produce hernia, but I cannot see why opening the thighs in a light little boy should be any more dangerous than jumping about at play. The cob is very gentle and intelligent, in every way suitable otherwise, and I should be very sorry to have to change, but of course if there is anything in the popular idea I must not risk a rupture for the boy.

I am, Sirs, yours faithfully,

Oct. 3rd, 1897. THE FATHER, M.D.

*** As the inguinal canal is somewhat opened in the abducted thigh it is possible that if the thighs were kept for several hours daily in the abducted position the child would to some extent be risking a predisposition to hernia. The risk would not be great, but it would exist. We know of no observations on the subject.—ED. L.

Worried should consult his family medical man, who will respect his confidence.

THE GENERAL PRACTITIONER AND THE "NURSES' COÖPERATION."

A CORRESPONDENT has sent us for comment the following advertisement which appeared in *The Borough of Marylebone Mercury* of Saturday last:—

MIDWIFERY BRANCH.

Ings House. - - - - Nurses Co-Operation.
81, NEW BOND STREET, W.

Ladies are attended by Certificated Midwives at Fees from 7s. 6d.
(London Obstetrical Society.)
Matron can be seen privately every morning before 12 a.m.
All Cases must be booked and paid for beforehand.
Fully Trained Nurses are sent out for all cases.

TELEPHONE No. 5,109.
Telegrams, "OVERNIGHT," London.

He asks whether the London Obstetrical Society is aware of the way in which its name is being used, and quotes the advertisement as a striking example of the competition against which the general practitioner has now to contend. It would be interesting to know what the nurses would do if the case turned out to be a complicated one, for even certificated persons are not infallible. Would they tend for the nearest general practitioner to assist them or have they a particular medical man upon whose services they can rely by arrangement? In the former case is the medical man likely to be paid well when 7s. 6d. has already been obtained from the patient for inadequate services? In the latter case has the medical officer of the Coöperation considered that he is assisting in a dodge for obtaining the patients of his fellow practitioners?

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (13th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (14th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (16th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (11th).—MEDICAL SOCIETY OF LONDON.—8 P.M. General Meeting. 8.30 P.M. Ordinary Meeting. Dr. A. E. Sansom (President): On the Investigation of some of the Nervous Disturbances of the Heart.—Dr. W. Anderson: John Arderne, the Father of English Surgery, and his Time.

THURSDAY (14th).—SOCIETY FOR THE STUDY OF INEBRIETY (Medical Society's Rooms, 11, Chandos-street, Cavendish-square, W.).—4 P.M. Surgeon-Major G. K. Poole: The Etiology of Inebriety.—Dr. W. Bode: The New German Code and Inebriety.

BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Specimens by Dr. Macnaughton Jones, Dr. Collins, and Mr. Hodgson. Paper:—Mr. S. Keith: On Dysmenorrhœa.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

TUESDAY (12th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Buzzard.

HOSPITAL FOR NERVOUS DISEASES (73, Welbeck-street).—4.30 P.M. Dr. H. Campbell: On the General Anatomy of the Neuro-muscular System.

WEDNESDAY (13th).—HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. S. Martin: The Diagnosis of Early Phthisis.

EVELINA HOSPITAL (Southwark-bridge-road, S.E.).—(Post-Graduate Course).—4.30 P.M. Dr. Nestor Tirard: Clinical Demonstration on Diseases of Children.

THURSDAY (14th).—THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Garrod: Demonstration of Selected Cases.

During the week marked copies of the following newspapers have been received:—*Hereford Times, Rushden Echo, Hull Daily News, Newcastle Chronicle, Northampton Mercury, Manchester Guardian, Devon Gazette, East Anglian Daily Times, South Wales Daily Post, Bradford Daily Telegraph, Carlisle Express, Scotsman, Times of India, Pioneer Mail, Builder, Kent Messenger, Leicester Post, Cambria Daily Leader, New Zealand Herald, Architect, Yorkshire Post, Oban Times, Worcestershire Chronicle, Royal Cornwall Gazette, Bucks Herald, Leeds Mercury, Birmingham Gazette, Western Morning News, Dundee Advertiser, North British Daily Mail, Liverpool Daily Post, Salisbury Journal, Sheffield Independent, Blackburn Standard, Beverley Guardian, Bristol Mercury, Sussex Daily News, Bury Free Press, Grantham Journal, Midland Mail, Oldbury Weekly News, Derbyshire Advertiser, Isle of Wight Observer, Worcester Herald, Hampshire Telegraph, Glasgow Herald, Sanitary Record, Reading Mercury, City Press, Weekly Free Press and Aberdeen Herald, Mining Journal, Hertfordshire Mercury, Local Government Chronicle, Norfolk News, Local Government Journal, Public Health, Engineer, Surrey Advertiser, Kilmarnock Herald, Gazette (Montreal), Fifeshire Advertiser, Englishman (Calcutta), Public Health, West Middlesex Herald, Cardiff Times, Guernsey News, &c., &c.*

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X.—X. Y. Z, Lond.

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Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

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A Lecture
ON
SOME TYPICAL FORMS OF CURVATURE OF THE SPINE.

Delivered at the City Orthopædic Hospital on Sept 29th, 1897,

BY NOBLE SMITH, F.R.C.S. EDIN., L.R.C.P. LOND.,
SENIOR SURGEON TO THE HOSPITAL, AND SURGEON TO THE ALL SAINTS' CHILDREN'S HOSPITAL.

GENTLEMEN,—The pathology of spinal curvature has not yet been thoroughly worked out. We know of caries, of cancer, of osteo-arthritis, of rickets, of lateral curvature, and of some few more rare conditions, and we talk of spinal weakness, which some of us call "neurotic spinal trouble," but further than this our text-books hardly carry us. Our museums contain a few cases of obvious osteo-porosis in which the spinal column has given way posteriorly or laterally, but instances of severe ordinary lateral curvature are so extremely frequent that skeletons showing very severe deformity are quite a common feature of our pathological collections. I would ask, Is it possible that the spine can give way either posteriorly or laterally, irrespective of caries, to the extent of the many severe cases of deformity which exist without there being some undue softness of the bones or unnatural laxity of the ligaments? It is the exact pathology of these cases which, I have suggested, is not sufficiently known.

All the above-mentioned conditions may commence with symptoms of ordinary weakness alone, and therefore it is of importance to deal cautiously with so-called "spinal weakness." Many a case of incipient spinal caries has been stimulated into severe activity by the "exercise treatment," whereas the plan which I adopted in the following cases would have been more suitable whether the case had been caries or debility alone. It is well known that the spine may give way laterally or posteriorly from weakness. Such weakness is often attributed to want of power in the muscles alone, but this view of the cause of the trouble does not coincide with certain facts which I have observed.

During the last eighteen years I have measured the backs of many hundreds of patients, and have found that when the body has been well developed for the age and the individual has been robust the length of the back from the level of the shoulders to the level of the chair in sitting has been equal to a measurement taken from the spine between the scapulæ round one shoulder back to the spine again. In a very large majority of the patients suffering from weak and crooked spines, the length of the back has been in excess of the shoulder measurement. The shoulders (which will generally be sloping downwards and forwards) should be brought back to a normal position at the time of measurement. The excessive length of back in proportion of the robustness of the body supports the view that weakness of the back is not so much due to muscular debility as it is to weakness of the spinal column itself—i.e., weakness of the ligaments accompanied not infrequently by undue softness of the bones. Debility from illness, from insufficient nourishing food, and rapid growth have seemed to be the most frequent causes of such want of stability in the spine. This view is supported by a number of facts, the most noticeable of which are recorded in the following history of a typical case.

A patient (say a girl about thirteen years of age) possesses a spine measuring one and a half inches in excess of the shoulder circumference (as above described); there is inability to sit up straight without assistance (that is the patient stoops perpetually), there is a complaint of almost constant or very frequent aching in the back, and when sitting there is to be seen a distinct lateral curve in one particular direction. By means of treatment, directed to preventing the spine from falling into bad positions without interfering with muscular action and improvement of the general health, the back gradually becomes straight and strong. The length of time during which the treatment will have to be carried out depends chiefly upon growth. Perhaps a year or eighteen months may elapse before the child will have "outgrown" her want of physical robustness. This result, however, will be attained sooner or later, and when it has happened treatment may be thrown aside absolutely. Measurement will then often show an adjustment of the dimensions, so that the shoulder measurement will be the same as the measurement of the spine.

There are, however, some individuals who grow up without efficient treatment having been adopted for this condition, and although they may have been able to follow their avocations in life fairly well, yet they are liable to suffer greatly from their weakness. They may develop scoliosis and become very deformed or kyphosis, and if the latter deformity is produced the symptoms may closely simulate those of caries, in fact it may be very difficult to decide whether any inflammatory disease be present or not, and those who have had most experience will probably have the greater difficulty in forming an immediate diagnosis. Fortunately it matters comparatively little at first what the exact nature of the weakness may be, for the treatment should be the same for a certain length of time in both cases, and during that time we shall have an opportunity of studying the affection sufficiently to arrive at a more definite diagnosis. Certain it is that we had better err upon the side of excessive caution than assume too readily the absence of inflammatory disease.

I am not referring to cases in which hysteria plays a prominent part, although it must not be forgotten that even hysterical patients may have real disease or real weakness, and when such a combination exists efficient treatment of the spine helps materially in overcoming the hysterical element. The following case is one in which there was undoubtedly great weakness and in which a suspicion of caries existed.

CASE 1.—A woman, aged twenty-two years, single, was sent to me by Dr. Buzzard on Nov. 8th, 1894. She had suffered for two years from pain in the back, chiefly in the lumbar region. This pain had been getting gradually worse until, a week before I saw her, she had been obliged to give up her work, which involved much standing about. She had not been without treatment directed to the improvement of her general health, and shortly before she came to me a surgeon had seen her and recognised the necessity of giving some support to her back. This he had attempted to do by means of a plastic felt jacket. The effect of this jacket was very unsatisfactory; the patient derived no benefit whatever from wearing it, but on the contrary felt the pain much worse. At the time of her visit to me she seemed to be extremely ill, with no other apparent cause than the weak back. Although the jacket was brought up much higher in the back than is usual and therefore might be thought to give more complete support than the ordinary jacket yet its effects in this direction were attained as usual at the expense of pressure upon the chest, and as this patient suffered from a chronic cough and much dysphagia any pressure upon the thorax and consequent interference with the free action of the heart and lungs was very detrimental to her. Several alterations in the position of the felt casing were made, but with little or no relief to the patient's sufferings. She was then told that the only course open to her was to go home and lie up entirely for six months. She thereupon gave up her employment, but before going away she consulted Dr. Buzzard, as it was supposed that her troubles might be due to some nerve trouble. Dr. Buzzard considered that all her pain came from weakness of the back and sent her on to me. By means of support with the "Adaptable Metal Splint" described elsewhere[1] the pain was quickly relieved, and instead of lying up for six months, she went back to work at the end of three days and never felt any more pain worth noticing. She steadily improved in health and strength, becoming much more robust.

In writing subsequently to me (April, 1897) she expressed herself as follows: "As soon as you put on the instrument I felt relief, and in three days afterwards I went back to my work, and could walk about without much pain. [A week previous to this she had not been able to move without extreme pain in the back and in the left thigh and leg.] In a fortnight I felt quite comfortable in the instrument, and from that time my general health began to improve. Three weeks afterwards I lost the cough which I had had for over a year, and it has never returned. I am very well now and can take longer walks, and can do much more than I have ever been able to do in my life." The subsidence of

[1] Caries of the Spine, second edition. London: Smith, Elder and Co. 1897.

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cough is a very frequent result of this treatment and is doubtless due to the forced expansion of the lungs brought about by the apparatus. The treatment of this patient involved a very moderate amount of attention. During the first three weeks I had to see her about eight times, and after that only occasionally when the apparatus required slight adjustment in accordance with the patient's improving physical condition. Moreover, after the third day she was able to continue her work without interruption. In November, 1896, two years after her first visit, her back was quite strong and she did not require any further support.

CASE 2.—The next case is that of a patient in whom the symptoms were very similar to the last, but in whom the evidence of caries was stronger. A single woman, aged twenty-two years, came to see me in March, 1897. She had begun to feel pain in her spine about three years previously. During 1896 she was getting worse, and for the six months before the above date the pain had been constant. For the last four months she had, under medical advice, been resting almost completely—that is, she had walked downstairs in the morning, lain down on a sofa, and walked upstairs in the evening. She had given up all her work. The pain was described as dull and aching, but very severe, and it was just as bad after a night's rest as at any other time; she could not get into a comfortable position. Her suffering had gradually affected her general health, she was weak, anæmic, and had a very poor appetite. She had to be assisted from a cab into my room, and in sitting down she assumed the attitude shown in Fig. 1 (copied from a photograph) and could not sit up any straighter.

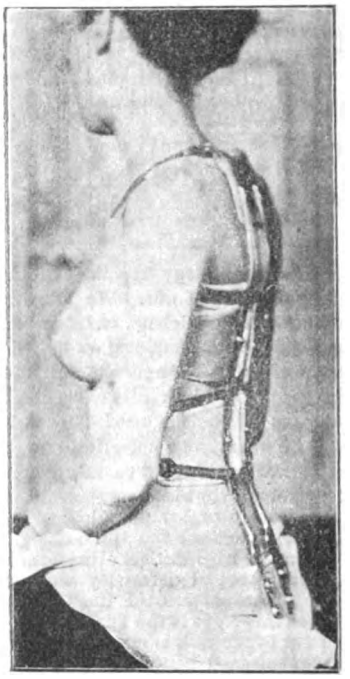
FIG. 1.



Showing the usual position assumed by the patient in Case 2 before treatment (March, 1897).

There was a slight excess of knee-jerk. The spinous processes of the ninth, tenth, and eleventh dorsal vertebræ projected rather more than the others, and pain was particularly severe in the region of these vertebræ, proceeding downwards and forwards. There was also aching pain upon each side of the whole spine, from the neck to the sacrum. The application of the adaptable splint at once afforded relief, and six days later the pain had completely left her. On April 6th—that is, eleven days after putting on the instrument—she felt so much improved in every way that she could walk a mile with comfort, and only felt anything of the former pain if she happened to move suddenly in the night. Two medical men who had seen her previously had attributed her symptoms to caries. I thought it probable that either this view was correct or that there was some other inflammatory condition of the vertebræ or intervertebral cartilages. Fig. 2 shows the patient on May 3rd, 1897, with

FIG. 2.



Showing the same patient on May 3rd, 1897, wearing the adaptable metal splint.

the apparatus on, and Fig. 3 shows her sitting up without the support at the same date, and without inconvenience. I did not think it advisable to let her try to maintain this position

FIG. 3.



Showing the same patient on the same date after removal of the apparatus. She is sitting without any support.

for more than the few moments necessary for the photograph to be taken. Judging from other similar cases I should expect her to be quite well and strong in about a year from

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the commencement of treatment, but it is probable that she will feel well and be able to do her work with the help of the apparatus some months earlier.

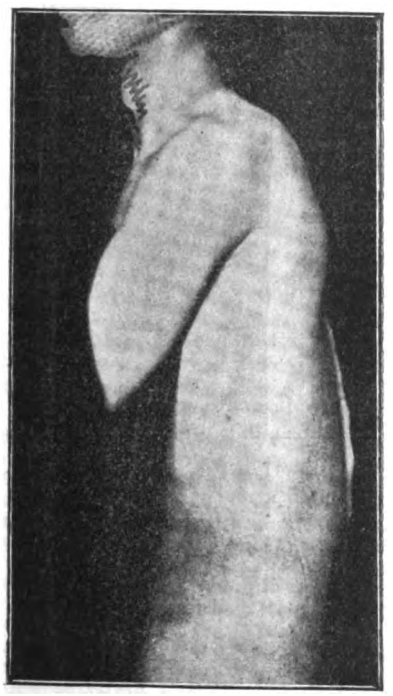
Subsequent to writing the above (June 12th) she expressed herself as feeling absolutely well, and in August she was doing some light work with perfect comfort. She came to see me on Sept. 17th. She had remained very well and only complained of feeling very tired after two hours' work at the desk. I examined her back again, and although the general contour of the spine was perfect yet the three vertebræ which at first had projected beyond the others were still seen slightly but clearly projecting, and upon movement of the body this part of the spine was rigid. I therefore came to the conclusion that it was a case of caries.

It is only during recent months that I have taken photographs of my cases, and therefore have selected this one and the following in preference to describing others of which I could record ultimately satisfactory results, but of which I have not photographic records. I have never met with any difficulty in giving up the use of the apparatus when the patients have become strong, although in some instances I have thought it advisable to supplement the treatment of local support by a short course of massage and sometimes a few gentle systematic exercises before advising the entire discarding of the apparatus.

There is rather a large class of cases in which the symptoms are somewhat similar to those recorded above, but in which there should be no suspicion of active caries, although the trouble may have originated in slight caries at some previous period of the patient's life. The following is a typical instance.

CASE 3.—A married woman, aged twenty-nine years, consulted me on Jan. 11th, 1897. She had been troubled with pain and a sense of weakness in her back since childhood, but there was no history of a definite cause. There was pain, chiefly between the shoulders and also in the lumbar region. This pain and a feeling of weakness had been gradually increasing and had lately become almost constant. The

FIG. 4.



Showing position of the spine in the patient in Case 3 when first seen on Jan. 11th, 1897.

general health suffered in consequence, severe headaches being a prominent symptom. If she attempted to walk it soon brought on pain and a feeling of weakness. She sometimes felt better for a night's rest, but not always. She had been married three years, but had had no children. Although the spine was obviously at fault inquiry was directed to the organs of the thorax and abdomen, but nothing more than functional disorder could be detected. The reflexes were normal as were also the various functions, although there was weakness of circulation and of digestion. Fig. 4 shows the position of the spine at the time of her first visit (Jan. 11th, 1897). She was not able to sit up any straighter, but upon pressure with the hands it was possible to move the spine in different directions, showing that there was no rigidity and therefore presumably no inflammatory mischief. She felt immediate relief from her pain upon the application of the splint, and the pain had entirely ceased in a week; the general health rapidly improved, and two months later (April, 1897) I was able to take the photograph represented in Fig. 5.

FIG. 5.



Showing marked improvement in the same patient in April, 1897. She is sitting up with perfect comfort.

This patient now requires very little surgical attention and will, I expect, be permanently cured when she has worn the instrument a few more months. She now only feels pain (in the lumbar region) when very tired. She has at my advice taken to cycling, which she can do with comfort. Her circulation and her digestion are now excellent and she is steadily gaining strength.

CASE 4.—Another somewhat similar case is that of a girl, aged twenty years, who had never been very strong, but was able to do a considerable amount of active manual work. She had for some years been liable to pain in the back and also to severe headaches, the origin of which was obscure. As regards the thoracic and abdominal viscera nothing but functional disorder was present, she being in much the same condition as Case 3, but neuralgia at the back of the head was very severe. Her ordinary posture in sitting was that shown in Fig. 6 from a photograph taken during her first visit to me (March 18th, 1897). She could sit up a very little straighter than this, but only with a great effort and for a moment at a time. The lower three dorsal vertebræ and all the lumbar vertebræ curved laterally to the left. Relief from the pain was felt immediately on application of the splint and quickly lessened; and I was able to straighten the spine rapidly, so that on April 3rd it had arrived at the position shown in Fig. 7, and on April 21st she stated that the headaches had practically ceased, having only occurred once during the previous few weeks, whereas before the treatment was commenced she suffered from headaches nearly every day, lasting all day, and this had been the case for years with a few intervals of about a month at a time. At this date

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(April 21st) she also stated that she had never been so well as long as she could remember. Fig. 8 is from a photograph taken on May 3rd (six weeks and four days from her first visit) showing that she was able to sit up without a support.

FIG. 6.



Showing the usual position assumed by the patient in Case 4 when first seen on March 18th, 1897.

The lateral curvature was also much improved. I saw this patient again on Sept. 16th and found her apparently perfectly well, in almost robust health and spirits, and her back perfectly straight. She will wear the appiratus a few

FIG. 7.



Showing improved position of the spine while wearing the support in this patient on April 3rd, 1897.

months longer, feeling absolutely no inconvenience from its use. I can promise her that when she gives it up she will only feel the want of it for a few days.

Another class of cases which have given rise to considerable trouble and in which treatment by apparatus is most valuable is that of elderly patients afflicted with lateral curvature.

CASE 5.—I saw a married woman, aged sixty years, on April 16th, 1889, at the request of the late Sir Russell Reynolds. This patient had suffered from severe pain and aching in the back for some years, chiefly in the lumbar region. Her symptoms gave rise to much difference of opinion as to their cause, and she had recently been seen by an eminent surgeon who had diagnosed a bony growth in connexion with the left crest of the ilium, close to the spine. There was only slight lateral curvature in the spinous processes of the lumbar vertebræ to the left. This was clearly a case of lateral curvature in which the rotation of the vertebræ existed with very little deflection of the spinous processes, and the "bony tumour" was composed of the transverse processes and the bodies of the rotated vertebræ. These are rare cases in comparison with the ordinary forms of lateral curvature. One very remarkable instance—that of the late Dr. Gideon Mantell—was recorded by Mr. W. Adams, in which the spinous processes formed

FIG. 8.



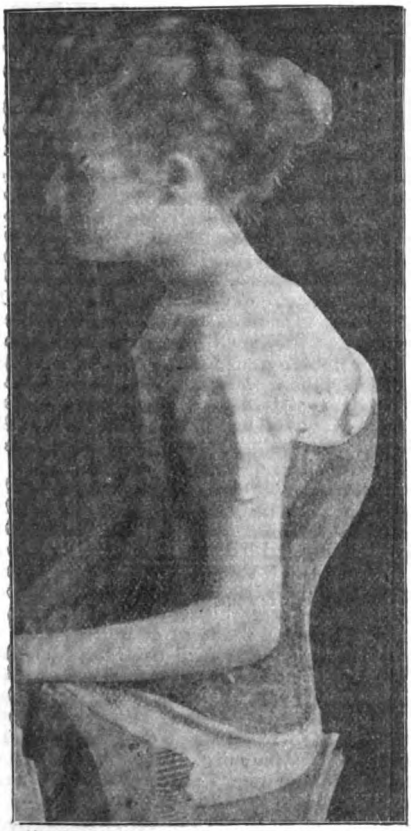
Showing marked improvement in the patient of Case 4 after less than seven weeks' treatment.

an absolutely straight line while the bodies of the vertebræ were rotated into a severe curve. I have also recorded some similar cases. Various palliative remedies had been tried for this patient but had failed to relieve her, and the deformity was increasing. I applied an adaptable metal splint with a single bar and a specially made pad to support the rotated vertebræ. This afforded her relief and stopped the progress of the deformity, but owing to the great severity of the displacement of the vertebræ there was more difficulty than usual in attaining quite a comfortable position. The patient also was aging rapidly, and died on Dec. 31st, 1890, so that she only wore the instrument nine months. I am indebted to Lady Russell Reynolds, who knew this patient, for the information that after the last re-adjustment which I made on Sept. 26th, 1890, the patient had more ease and comfort.

The relief from pain in these cases greatly depends upon one's ability to support the ribs from contact with the crest of the ilium. The spine in the last recorded case was greatly rotated in the lower lumbar region, and I was only just beginning to succeed in relieving this contact at the date of that last visit. I give this case as one of the most difficult I have had to deal with, and it shows that even under such

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FIG. 9.



Showing the depression of the chest and roundness of the back in the felt jacket.

FIG. 10.



Showing the effect rapidly produced by the adaptable metal splint

adverse circumstances a deformity can be stopped from increasing and relief given to the patient's suffering.

With regard to the plastic felt jackets which are so commonly used in the present day when a support is required, I would remark that they are not satisfactory in their mode of action; they press on the chest, but do little towards holding back the shoulders; they interfere with the use of the muscles, they interfere with the evaporation of perspiration, and they fail to give efficient support. The following figures show the ineffectiveness of the ordinary felt jacket in controlling the position of the spine and the immediate effect of applying the adaptable metal splint.

The metal splint has the following advantages: 1. It leaves room for action of the muscles. 2. It develops the chest and does not press upon it. 3. It prevents the spine from subsiding into bad positions. 4. It forms a fixed basis from which to apply pressure upon lateral curves. 5. It enables the surgeon to see the effect upon the spine while the apparatus is *in situ*. 6. It is made of steel, the lightest material for the purpose, which is so tempered that it can be bent into any form by the surgeon himself. 7. It is comparatively light and is so helpful to the patient that a weak child can do more with it on than without it. It may be accepted as an axiom that whatever position the spine is held in by means of the adaptable metal splint that position will in time become permanent.

NOTE ON THE WOUNDED IN THE NAVAL BATTLES BETWEEN JAPAN AND CHINA DURING 1894-95, WITH SOME CONSIDERATIONS OF SANITARY CONDITIONS PREVAILING DURING THE WAR.[1]

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IN the Japan-China war during 1894 and 1895 the naval battles at Phung-do and Yalu, the attacks upon Tangchow, Wei-hai-wei, and the Pescadores were the principal engagements; the bombardments of Hwa-yuan-kow, Talien Bay, Port Arthur, Yingching Bay, and Keelung, Takau, and Anping in Formosa are also reckoned as sea-fights of importance. The naval battle of Phung-do on July 25th, 1894, was fought between the *Yoshino*, *Naniwa*, and *Akitsushima*, forming the first flying squadron of Japan, on one side, and the *Tsi Yuen*, *Kwang-yi*, and *Tsao-kiang* of the Chinese fleet, on the other side, the *Yoshino* receiving two shells in her side and the *Naniwa* receiving one, also in her side; but no material damage was done, neither was any one killed or wounded. From other cause, however, three persons on board the *Yoshino* had their membrana tympani perforated, and three on the *Naniwa* were slightly injured by burns. Attacks upon Tangchow were made by the Japanese warships on three occasions; firstly by the *Yoshino*, *Naniwa*, and *Akitsushima* on Jan. 18th and 19th, 1895; secondly by the *Tenryu* and *Kaimon* of the Third Flying Squadron, on Jan. 26th; lastly, by the *Tenryu*, *Yamato*, and *Musashi* of the above squadron on Feb. 21st. The forts on Tangchow replied to our attacks with volleys from their heavier or lighter guns. Though the *Kaimon* received two shells in her side there was no actual damage to our squadron and no case of killed or injured. The attack upon the forts on the Pescadores occurred on March 23rd, 1895; the Japanese combined squadrons, composed of the *Matsushima*, *Itsukushima*, *Hashidate*, *Naniwa*, *Takachiho*, and *Akitsushima* leading the transports carrying a mixed detachment, subjected the Kon-peh-tai fort to a fierce bombardment. The Chinese garrison replying to this with volleys from their heavy guns, the engagement continued for five hours. But no shell struck our warships and the guns on the Fort were silenced after having been nearly destroyed. During this engagement the mixed detachment landed on Li-sei-kakû and marched to the interior. At dawn the next morning each war-ship ordered a landing

[1] A paper read before the Twelfth International Medical Congress held at Moscow Aug. 19th to 26th, 1897.

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party to advance as a reinforcement to the army. On March 25th the whole of the islands surrendered to the Japanese. During the course of the fighting only one person on the *Naniwa* was wounded receiving a fracture of the lower jaw and a lacerated wound of the neck from the deliberate aim of the enemy. He was immediately treated by a surgeon belonging to the landing party and afterwards sent back to the naval hospital of the Port Admiralty at home, where he quite recovered, a deformity of the lower jaw being left. In regard to the above-mentioned battles there were no actual damages on our side as I have already narrated, I shall therefore only give the surgical statistics of deaths and injuries resulting from the Battle of Yalu, and the attack on Wei-hai-wei with a general review of sanitary conditions. When the "History of the Health of the Imperial Japanese Navy in Relation to the Japan-China War," which is now being compiled, is published we shall be able to see the details of the sanitary conditions during the war.

THE BATTLE OF YALU.

It was on Sept. 17th, 1894, that the Japanese combined squadrons, composed of the Principal Squadron, which comprised the *Matsushima*, *Itsukushima*, *Hashidate*, *Fuso*, *Chiyoda*, and *Hiyei*; the First Flying Squadron, which comprised the *Yoshino*, *Naniwa*, *Takachiho*, and *Akitsushima*, and the gunboat *Akagi* with the ex-merchant steamer, *Saikyomaru*, transformed into a cruiser for the time being, fought on the Yellow Sea with the Chinese fleet, consisting of the *Ting Yuen*, *Chen Yuen*, *King Yuen*, *Lai Yuen*, *Ching Yuen*, *Chih Yuen*, *Ping Yuen*, *Tsi Yuen*, *Yang Wei*, *Chao Yang*, *Kwang Chia*, *Kwang Ping*, and two torpedo boats. The great battle was commenced at 12.50 P.M. and closed at 5.30 P.M. Our warships received more than one hundred shells in various parts and the number of persons killed or injured amounted to 298. The tables which follow give the details for the number of persons killed or injured in this battle. The highest numbers of killed or injured were on board the following vessels: (1) the *Matsushima*, (2) *Hiyei*, (3) *Itsukushima*, and (4) *Akagi*, &c.; but if we consider the ratio of killed or injured we find the numerical order to be as follows—viz.: (1) the *Matsushima*, (2) *Akagi*, and (3) *Hiyei*, with the *Saikyomaru*, *Itsukushima*, *Akitsushima*, *Fuso*, *Hashidate*, *Yoshino*, *Takachiho*, *Naniwa*, &c. From the fact that the numbers of killed or injured on board the *Matsushima*, *Akagi*, and *Hiyei* were especially numerous it is easy to imagine what an important part these three warships played in the action. Comparing the number of killed or injured according to their rank, the most numerous are seamen, being 57·38 per cent.; next come petty officers and officers, with 16·44 per cent. and 10·07 per cent. respectively; the lowest are the civilians, with 2·35 per cent.; while the other non-combatants account for 6·38 per cent. in each class. As the number of persons in each rank differs much it is difficult to estimate the real ratio from the above percentages. The percentage-ratio of killed or injured to the number of persons engaged, however, shows little difference between the different ranks, except that the non-combatants indicate the maximum, while the stokers and blacksmiths represent the minimum. In all engagements on land the infantry had always more killed or injured than the artillery, engineers, and sanitary corps, because the former approach nearer to the enemy than the latter. In sea-fights, however, any person above the water line of a warship may be easily injured by the enemy's shells irrespectively of his work; thus seamen who are exposed on barbettes to the discharge of shells, or non-combatants working on the main deck—in fact, all those who are working above water line—are equally liable to be killed or wounded. As our ships were not perforated by any shell below the water line during this war those who were working below it were safe; the natural result is, therefore, that the number of persons killed or injured belonging to the engineering class, who were always working below the water level, is the smallest. On board the *Itsukushima* five persons of the engineering class were killed or injured at one time owing to the explosion of a 15-centimetre shell, which perforated a starboard coal bunker in midships 3 ft. above the water line and crushed a ladder in the boiler-room of the afterpart.

The number of killed or injured includes those who were injured by the vibration of air caused by the firing of their own guns—viz., five men on board the *Itsukushima*, one on the *Hashidate*, one on the *Yoshino*, two on the *Naniwa*, and one on the *Takachiho*. It is not proper to make calculations based on an inclusion of persons killed or injured in this way. Therefore, subtracting these cases from the number of killed or injured the following ratio is found—that is, the *Itsukushima*, 3·3 per shell; the *Hashidate*, 1·1 per shell; the *Yoshino*, 1·4 per shell; the *Naniwa*, 0·0 per shell; and the *Takachiho*, 0·4 per shell. The order arranged according to the magnitude of ratio of the number of killed or injured to the number of shell hits is as follows: the *Matsushima*, *Akitsushima*, *Itsukushima*, *Hiyei*, *Fuso*, *Yoshino*, *Hashidate*, *Akagi*, *Saikyomaru*, and *Takachiho*. On board the *Naniwa* and *Chiyoda* there was no case of killed or injured by the shells of the enemy. The order simply calculated according to the magnitude of the number of shell hits is *Akagi*, *Hiyei*, *Saikyomaru*, *Hashidate*, *Fuso*, *Naniwa*, *Matsushima*, *Itsukushima*, *Takachiho*, *Akitsushima*, *Chiyoda*, and *Yoshino*. But the number of killed or injured is not necessarily proportionate to that of shell hits. Of shell hits, some were from heavier and some from lighter guns; some burst and others did not burst; while others were only pieces of shells. Thus the degree of damage is different according to the kinds of shells or the result of bursting. When the shells burst the damage was always greatest, the *Matsushima* having 30 persons killed at one time and 70 persons injured (half of these owing to the explosion of gunpowder itself) by a 30·0 centimetre shell, the *Hiyei* 14 persons killed and 27 persons injured by a well-directed shell of the same kind, the *Itsukushima* 8 persons killed and 3 persons injured by a 21 centimetre shell, and the *Akitsushima* 5 persons killed and 9 injured by the same kind of shell. On board the *Itsukushima* 4 persons were killed and 6 persons injured by the bursting of even small shells of 50 millimetres. Though the *Saikyomaru* was hit with 30·5 centimetre shells on her side and the *Chiyoda* with 21 centimetre shells in the same part, yet little damage was done, because the shell only perforated the ships' sides without bursting. Quoting one more example: in the naval battle of Phung-do a 15 centimetre shell hit the *Yoshino's* deck-house and passed down to her engine-room rolling about there around the men, but it did not burst fortunately, so no one was killed or injured. Thus we may see how much the number of casualties depends on whether the shells burst or not. The reason why the number of exploded shells is not proportionate to the number of killed or injured is conditional upon circumstances; for example, if there was no one near the place where the shell burst there was no case of killed or injured, but when the opposite was the case the result was a great number of casualties. It must be remembered that, moreover, fragments of ships' planks, &c., or "indirect-shot" gave heavy damage to our ships. For example, the funnel of the *Fuso* having been perforated by a shell the fragments of it dispersed around and either killed or injured ten seamen. The bursting of the shell of the *Hiyei* either killed or injured forty-one seamen; of this number more than ten men were either killed or injured by the indirect shot.

TABLE I.—*The Seat of Injuries.**

Seat of injury.	Number of killed or injured.	Ratio of seat of injury according to number of killed or injured.
Greater part of the body	57	19·13
Various parts of the body	24	8·05
Head	66	21·15
Neck	7	2·35
Chest and back	19	6·38
Abdomen and lumbar region ...	25	8·39
Upper extremity	55	18·46
Lower extremity	45	15·10
Total and ratio	298	99·01

* As most persons injured had several wounds the above table classifies according to the severity of the wounds. But it is impossible to classify the complete destruction of the body and extensive burns as one particular part of the body. These fatal injuries are analysed in Table III.

Of the total number of 298 killed or injured the part of the body most liable to be wounded is shown in Table I. thus. The number of head wounds was the greatest, the ratio being 21·15 per cent. of the total number. Next in

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order came the wounds of the greater part of the body, of the upper limbs, of the lower limbs, of the abdomen and lumbar region, of the various parts of the body, and of the chest and back, while the fewest injuries were in the neck. Leaving out the number of wounds of the greater part of the body and the various parts of the body from the total number, the number of wounds of the head stands first, followed in order by those in the extremities, the abdomen and lumbar region, the chest and back, the last and fewest being those of the neck. In a land-fight the number of wounds of the lower extremity is commonly greatest and that of the upper extremity and head next; then come the chest and back, abdomen and lumbar region, and the neck wounds are the fewest. Now, comparing the number of wounds received in a land-fight with those received in a sea-fight it is found that they are almost identical. The only marked difference between them is that in the former case the greatest number of wounds received are those of both extremities, the head wounds coming next, while in the latter case the head wounds are the most numerous, and those of both extremities come next. This difference is but natural, because in land-fights soldiers are injured only by shells and bullets (though there are some exceptions), but in sea-fights all materials around the combatants, as ship's planks and rigging, &c., being blown to pieces by the bursting of shells, increase the causes of injury.

TABLE II.—*Result of Various Injuries.*

Seat of injury.	Killed at once.		Died.		Recovered.*		Totals.
	No.	Per cent.	No.	Per cent.	No.	Per cent.	
Greater part of the body... ...	34	59·65	21	36·84	2	3·51	57
Various parts of the body ...	—	—	—	—	24	100·00	24
Head	22	53·66	3	7·32	16	39·02	41
Face...	—	—	—	—	25	100 00	25
Neck...	3	42·86	1	14·29	3	42·86	7
Chest and back	6	33 33	1	5·56	11	61·11	18
Abdomen and lumbar region...	16	64·00	3	12·00	6	24 00	25
Spinal column and spinal cord	—	—	—	—	1	100·00	1
Upper extremity...	—	—	1†	1·82	54	98 18	55
Lower extremity...	9	20 00	3	6·67	33	73·33	45
Totals	90	30 20	33	11·07	176	58·72	298

* Including invalided. † Died from erysipelas.

By Table II. it will be seen that the greatest number of immediate deaths, or deaths shortly supervening, occurred from injuries under the title of injuries to the greater part of the body. This is a natural result, because the destruction of the body by burns which extended over one-third of the body are included in this column. The sum total, viz., 57 cases in this column (with the exception of 2 cases of burns over one-third of the body), terminated in death. The numerical order of immediate death or death shortly supervening is as follows: of the head, the lumbar region and abdomen, the lower extremity, the chest and back, the neck, and the upper extremity. Under the headings of the various parts of the body, the face, spinal region and spinal cord, there were no deaths, but under the headings of chest and back, abdomen and lumbar region and lower limbs, the number of immediate deaths is comparatively great, because, unlike wounds perforated by rifles, the greater part of the body was crushed or destroyed or the viscera and the large blood-vessels were destroyed by the pieces of shell. As the wounds were so severe some died a few minutes after the injuries received, none surviving more than four days. The details will be found in Table III.

These deaths took place before admission to hospital. I will now say a few words about those who died after admission to hospital. 1. Of three persons who were burned over one-half of the body two died three days after admission and six days after receiving the injury, and the third nine days after admission and twelve days after the injury, the mode of death being by coma in each case. 2. One person whose skull was penetrated by a fragment of a shell above the right frontal eminence followed by symptoms of compression of the brain died from coma, notwithstanding trephining fifty-three days after admission to hospital and fifty-six days after the injury. 3. Of two persons who received a penetrating wound of the abdomen the ribs of the one were fractured by the fragment of a shell which passed through the left false rib and penetrated the thoracic and abdominal cavity crushing the abdominal viscera; when admitted to hospital peritonitis

TABLE III.—*Analysis of the Injuries Resulting in Death.**

Nature of injury.	Killed at once.	Died.		—
		Before admission.	After admission.	
Complete destruction of the body ...	32	—	—	32
Burns of greater part of the body... ...	2	18	3	23
Mutilation of head	11	—	—	11
Compound fracture of skull	3	2	—	5
Penetrating wound of skull	7	—	1	8
Perforated wound of skull	1	—	—	1
Lacerated wound of neck...	1	—	—	1
Penetrating wound of neck	2	—	—	2
Perforated wound of neck	—	1	—	1
Penetrating wound of chest	—	1	—	1
Perforated wound of chest	4	—	—	4
Lacerated wound of chest	2	—	—	2
Penetrating wound of abdomen	1	—	2	3
Perforated wound of abdomen	4	—	—	4
Destruction of abdominal wall	3	—	—	3
Lacerated wound of abdomen	4	—	—	4
Perforated wound of lumbar region ...	3	—	—	3
Compound fracture of pelvis	1	—	1	2
Compound fracture of upper extremity	—	—	1	1
Compound fracture of lower extremity	4	1	1	6
Mutilation of lower extremity	5	1	—	6
Total...	90	24	9	123

* Except two the whole number of complete destruction of the body belonged to the *Matsushima*. Though this number was returned by the surgeon on board we believe there may be included in it some who were thrown out into the sea by explosion of ammunition and lost their lives.

had already commenced, making his condition unfit to undergo laparotomy, and he died from exhaustion five days after admission and nine days after injury. The other one received a penetrating wound of the left umbilical region from a fragment of shell injuring the intestinal canal at several points; the intestinal contents passed out into the abdominal cavity causing peritonitis, and he died from exhaustion thirty-eight days after admission and forty-one days after injury. 4. One person had a compound fracture of the lumbar region from the fragments of the planks of the ship penetrating the sacro-iliac joints into the pelvic cavity and rupturing the bladder; he died from exhaustion thirteen days after admission and seventeen days after the injury. 5. One person, who had severe compound fracture of the right scapula and humerus, nearly recovered after admission, but unfortunately was attacked with erysipelas six months after and died within a fortnight after the complication, the whole course of illness lasting 179 days after admission and 181 days after injury. 6. One person had a compound fracture of the right thigh by a shell, destroying the thigh bone below the great trochanter, severing the soft tissues, and rendering it hopeless to attempt conservative treatment, so amputation at the upper part of the thigh was performed, but he died from exhaustion complicated with traumatic delirium twelve days after admission and fifteen days after injury.

All injuries, except the cases of gangrene resulting from injuries of blood-vessels in compound fractures and wounds of joints, were treated with antiseptic precautions and as a consequence no infectious diseases of wounds occurred except in one person, who died from erysipelas.

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KILLED OR INJURED DURING THE ATTACK UPON WEI-HAI-WEI.

After Jan. 30th, 1895, our combined squadron and torpedo flotillas moved against Wei-hai-wei with a strong force. The enemy's forts, coöperating with their squadron in the port, defended themselves to the utmost; but they were no match for the furious attacks of our squadron or the bold attack of our torpedo flotillas, and the bombardment from the captured forts at last led to the surrender of the enemy on Feb. 12th. In this battle our war-ships received twenty-eight shells, and sixty-six persons were killed or injured. (Tables IV., V., and VI. show the details.) Forty-six shells which struck above ships were discharged from the forts of Jhih and Liukung Islands. While our landing party on the captured battery of Lau-cha-tsao at Wei-hai-wei was bombarding the enemy's warships which were anchored in the port the party received a 30·5 centimetre shell discharged from the *Ting Yuen* and the two shells discharged from the *Tsi Yuen*, by which seven men were either killed or injured. During the attack by our torpedo flotillas on Feb. 5th No. 9 boat received thirteen shells from the enemy, and as one of them struck the boiler of the boat eight persons were scalded. During the next day's attack No. 22 struck against a reef below the Lung-miao-tsai Fort on her way to the anchorage. At this critical moment two persons on the boat jumped into the sea, hoping to reach the shore by swimming, but the extreme cold prevented their bodily motion and they were drowned. Three of the others tried to reach the shore in a canvas boat, but on their way the boat was upset and one man died from the extreme cold; the other two, though suffering from severe frost-bite, reached the shore by swimming.

TABLE IV.—*The Seat of Injuries.*

Seat of injury.	Number of killed or injured.	Ratio of seat of injury according to number of killed or injured.
*Greater part of the body	12	18·2
†Various parts of the body... ...	3	4·5
Head	15	22·7
Neck	—	—
Chest and back	3	4 5
Abdomen and lumbar region ...	6	8·1
Upper extremity	8	12 1
Lower extremity	19	23·8
Total and ratio...	66	99 9

* Under this heading "Greater part of the body" six cases of scalds, two of frostbite, one of laceration of the trunk, and three by drowning are reckoned.

† Under this heading "Various parts of the body" a case of scald of the face, upper and lower extremities, and two cases of contused wound of the face, upper and lower extremities, are reckoned.

TABLE V.—*Result of Various Injuries.*

Seat of injury.	Killed at once.		Died.		Recovered.*		Totals.
	No.	Per cent	No.	Per cent.	No.	Per cent.	
Greater part of the body	8	66·67	3	25·00	1	8 33	12
Various parts of the body ...	—	—	—	—	3	100 00	3
Head	6	75·00	1	12·50	1	12 50	8
Face	—	—	—	—	7	100·00	7
Neck...	—	—	—	—	—	—	—
Chest and back	2	66·67	—	—	1	33·33	3
Abdomen and lumbar region...	4	66·67	1	16 67	1	16 67	6
Spinal column and spinal cord	—	—	—	—	—	—	—
Upper extremity	—	—	—	—	8	100·00	8
Lower extremity...	—	—	2	10·53	17	89·47	19
Totals	20	30·30	7	10 61	39	59 09	66

* Including invalided.

TABLE VI.—*Analysis of the Injuries resulting in Death.*

Name of injury.	Killed at once.	Died. Before admission.	Died. After admission.	—
Destruction of head	1	—	—	1
Compound fracture of skull	5	1	—	6
Complete laceration of trunk	1	—	—	1
Perforated wound of chest	2	—	—	2
Perforated wound of abdomen	1	1	—	2
Complete laceration of abdominal region	3	—	—	3
Mutilation of both thighs	—	1	—	1
Mutilation of legs	—	1	—	6
Scald of whole body	4	2	—	1
Death from extreme cold	—	1	—	1
Drowning	3	—	—	3
Totals	20	7	—	27

THE SANITARY CONDITIONS DURING THE WAR.

The sanitary improvements which we have been gradually effecting for many years have always borne good fruit in the decrease of patients statistically and the annual increase of body weight; but this was especially the case during the late war. From the beginning of the Imperial Japanese Navy up to 1883 the sanitary condition of the navy was in a very slow state; for example, the men-of-war sent to distant seas or those despatched to Corea during the outbreak of troubles in that country (1882) produced many patients, especially those suffering from kak'ke, an endemic disease in the east. Kak'ke was predominant from 1878 to 1883, there being 30, or 40 per cent., of cases of kak'ke among seamen, which produced the deaths of forty or fifty seamen every year. Had there been a collision with any other nation at that time it would have been very perilous for us to open war under such circumstances. Since 1882 a committee for preventive measures against kak'ke was appointed, and after thorough investigation it was decided that kak'ke originates from improper administration of food — that is, too large a quantity of carbohydrates, as rice, and too little of albuminoids, as meat; so since 1884, by diminishing the quantity of rice and increasing that of meat for the seamen's rations, an improvement in the scale of diet was put into practice. Since then, as we anticipated, the cases of kak'ke suddenly decreased, and the health of the seamen in general being promoted, not only kak'ke, but all other diseases of seamen were diminished. Thus kak'ke was nearly extirpated in 1886. At the same time that the improvement in the scale of diet was effected a rule was made that the body-weight of seamen should be taken in March and September every year, with a view to ascertaining the sanitary conditions of seamen as affected by the new scale of diet. Previously to the improvement of diet the average individual weight of body was 52 50 kilogrammes, but after the improvement the weight increased considerably year after year. Though the general health of our navy had made such excellent progress as a result of the improvement in the scale of diet, yet some fears were expressed with regard to the health of the navy at the commencement of the war, on account of our having had no experience of sanitary conditions during war-time. But trusting to our sound principles, already put into practice for many years, we maintained routine regulations as to diet with most successful results, as will be seen in the following table of patients (Table VII.). The number of killed or injured is excluded from the table, which shows the number of patients in the navy in general from July, 1894, to December, 1895. During this time the total number of cases of diseases was 7106, the average cases of disease per day being 12 94. Those patients who were employed under actual service are included in this number of cases, so that the number of patients who lost their duty entirely is less than the number above mentioned. The average percentage of days' sickness

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per 100 of force was 3·71, being only an increase of 0·25 when compared with the average ratio 3·46 of the last five years. The total number of deaths during these eighteen months was 215, the percentage ratio to the total force being 1·06. If we subtract 35 cases of drowning (an unavoidable occurrence in seafaring life) and 3 of suicidal death from 215, the number of the real deaths from disease was only 177, being a loss of 0·87 per cent. If we compare the number of deaths with that of killed (150) the former is greater than the latter by only 27. As the number of deaths (177) includes seamen in general, without distinction between seamen on active service or seamen on duty at home stations, the number of deaths on active service is less than 177 in reality. A glance at the ancient and modern history of battles will show that the number of deaths have generally exceeded the number of killed; sometimes the former was many times greater than the latter. Though there is some difference between sea-fights and land-fights as regards sanitary matters, yet such a comparatively small number of deaths is a proof of the satisfactory health of our navy.

THE GENERAL SICK-LIST.

Of the principal diseases of the appended table (see Table VII.) the number of cases of venereal disease and its sequels is 37·69 per cent. of the total number of cases of disease. This may be regarded as an evil resulting from the war. The number of injuries (persons wounded exclusively) is 13·86 per cent. of the total number of cases of disease, and that of diseases of the digestive system is 10·09 per cent. These diseases were much more frequent during the summers of 1894 and 1895 than in the other seasons, and may be partly attributed to debility of gastric function in the summer. The number of cases of diseases of the respiratory system is 9·01 per cent. of the total number. These diseases were especially prevalent in the winter of 1894. The cause of it is attributable to the severe climate of the northern localities, such as Talien Bay, Port Arthur, and Wei-hai-wei, at which most of our ships were stationed. The reason of the diminution in the same diseases in the winter of 1895 is that many of our vessels returned home or cruised to warm southern climes, as Formosa. The number of diseases of the integumentary system is 8·91 of the total number. These diseases mostly occurred in the summer of 1894 and diminished gradually month after month. At the commencement of the war, when every preparation was in haste, our seamen could not take warm bathing or wash their clothes regularly even in hot climates. Sometimes when coolies were scarce they were obliged to coal their ships themselves — a fact which sufficiently accounts for the prevalence of diseases of the skin at this time. The total number of infectious diseases was 603—that is, 8·49 per cent. of the total number of all diseases.

One case of scarlet fever occurred on board the *Omimaru*, but the disease did not spread. Of the total number of 131 cases of typhoid fever, 55 cases (about one-fourth of the total number of the complement) occurred on board the *Yamato* during the expedition to Formosa. A few of the rest occurred on other ships abroad or at home stations, but the sickness did not spread. The character of the fever was somewhat malignant and 24 men (18·32 per cent. of the total number of cases of the disease) died from it. Of the total number of 95 cases of cholera, of which 48 cases occurred on vessels and the remaining 47 cases at shore stations, 52 or 54·74 per cent. of the total number of cholera cases died. The greater number of cases of cholera occurred on board the *Omimaru* (10), in the Naval Barracks of Yokosuka (10), at the Defensive Mine Station of Sasebo (10), in the Naval Barracks of Kure (9), on board the *Kaimon* (7), and *Matsushima* (6). A few cases of the disease occurred on other vessels or shore stations. During the operations at the Pescadores cholera broke out in some companies of the Imperial army, and it prevailed throughout the army in general. At this time landing parties from the navy were sent to reinforce the army; also our surgeons and medical attendants gave helping hands in the treatment of numerous patients in the army, and conducted the disinfection of soldiers, &c. Under such difficult and dangerous circumstances it is a matter for congratulation that only three persons of our navy were infected with cholera. It is, then, easy to infer how satisfactory were our preventive measures against infectious diseases. Of 83 cases of dysentery, 5 or 6·02 per cent. of the total number died. The disease occurred principally among the colliers in the Base station of "Longreach" in Corea (20), in the naval barracks of Kure (12), on board the *Fuso* (8), and on the *Matsushima* (5); a few

TABLE VII.—*Number of Men on the Sick-list in the Navy from July, 1894, to December, 1895 (War Time).*

Disease or injury.	1894. July. Cases.	1894. July. Died.	1894. Aug. Cases.	1894. Aug. Died.	1894. Sept. Cases.	1894. Sept. Died.	1894. Oct. Cases.	1894. Oct. Died.	1894. Nov. Cases.	1894. Nov. Died.	1894. Dec. Cases.	1894. Dec. Died.	1895. Jan. Cases.	1895. Jan. Died.	1895. Feb. Cases.	1895. Feb. Died.	1895. March. Cases.	1895. March. Died.	1895. April. Cases.	1895. April. Died.	1895. May. Cases.	1895. May. Died.	1895. June. Cases.	1895. June. Died.	1895. July. Cases.	1895. July. Died.	1895. Aug. Cases.	1895. Aug. Died.	1895. Sept. Cases.	1895. Sept. Died.	1895. Oct. Cases.	1895. Oct. Died.	1895. Nov. Cases.	1895. Nov. Died.	1895. Dec. Cases.	1895. Dec. Died.	Cases.	Died.
Respiratory system	34	1	34	1	33	—	31	1	41	—	60	1	43	3	32	—	48	5	38	4	36	—	42	—	33	1	41	1	26	1	26	1	19	1	18	1	640	21
Circulatory system... ...	1	—	2	1	1	—	—	—	—	—	—	—	1	—	—	—	1	1	2	1	1	—	1	—	2	—	1	—	4	—	3	—	1	—	2	—	22	6
Absorbent system	—	—	—	—	1	1	1	—	1	—	1	—	3	—	1	—	3	—	2	—	2	—	1	—	1	—	2	—	2	—	2	—	1	—	3	—	25	—
Digestive system	40	1	44	4	43	2	88	1	29	1	24	1	46	2	26	1	27	3	34	1	38	—	41	—	106	1	60	2	66	2	27	—	21	1	18	3	717	15
Genito-urinary system...	6	1	8	1	4	—	12	—	8	1	4	—	8	1	3	—	6	—	10	—	12	—	17	—	13	—	9	—	15	—	13	—	5	—	4	—	166	2
Nervous system	8	—	4	—	4	—	3	—	7	1	4	—	10	—	4	—	1	—	1	—	6	—	7	—	7	1	10	—	9	—	5	—	3	—	4	—	106	2
Skin and cellular tissue...	65	7	70	12	37	6	42	3	34	1	39	1	46	8	44	9	32	7	33	6	32	1	27	1	27	1	43	1	62	1	19	—	24	—	5	—	633	1
Organs of locomotion ...	7	—	12	1	6	—	12	—	6	—	13	—	8	—	9	—	7	—	14	—	15	—	8	—	9	—	4	—	5	—	6	—	2	—	5	—	174	1
Infectious diseases... ...	22	6	27	1	49	2	27	1	15	—	12	1	8	—	8	—	18	2	25	3	27	—	17	1	16	1	66	5	61	2	62	—	7	—	28	6	603	89
Kakke...	2	—	4	—	20	—	3	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	2	—	—	—	—	—	—	—	—	—	43	3
Poisoning	—	—	2	—	—	—	—	—	1	—	1	—	1	—	1	—	1	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	4	1
Alterations of blood ...	1	—	2	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	14	—
Tumours	1	—	2	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	—
Injuries	66	1	52	1	63	1	70	2	56	2	72	1	81	2	60	1	87	4	67	—	43	—	44	1	43	1	34	2	39	1	42	1	33	2	32	3	965	60
Diseases of the ear	7	—	15	1	13	—	13	—	14	1	9	—	13	—	3	—	3	—	13	2	11	—	6	—	4	—	10	—	15	—	12	—	9	—	13	—	263	9
Diseases of the eye... ...	6	—	186	—	128	—	170	1	130	1	115	—	83	—	64	—	71	1	123	1	153	1	193	1	170	1	156	1	166	2	169	—	154	1	150	—	2873	3
Venereal diseases	186	—	—	—	1	—	1	1	1	1	—	—	3	—	10	1	13	1	2	1	13	—	1	1	4	1	1	—	2	—	6	—	—	—	1	—	3	—
Suicide	—	—	2	2	1	1	1	1	1	1	—	—	—	—	1	1	1	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	35	3
Drowning	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7106	215
Totals	451	4	465	8	400	6	415	4	344	5	354	6	372	9	263	3	134	14	359	10	392	15	417	6	498	25	439	26	433	27	381	21	357	11	312	16		

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cases of the disease occurred on other vessels or at some other stations. Of 167 cases of malarial fever, 8 or 4·79 per cent. of the total number died. The disease principally occurred on board the *Yamato* (23), *Yoshino* (21), *Akitsushima* (10), and *Yayeyama* (10) which were despatched to Formosa, and on the *Chokai* (13) which was sent to Peh Yang or the northern sea of China; a few cases of the disease occurred on board some other vessels. Seventeen cases of fever occurred in the stations of Sasebo, six in those of Kure, seven in those of Yokosuka, and three in the special service party on the captured territory at Liaotung peninsula. With regard to small-pox we were quite victorious, as there was no single case notwithstanding our forces have traversed Chinese or Corean territory where sporadic cases of small-pox are always to be found; this is undoubtedly due to our strict rule of revaccination for all seamen, &c., every five years. Of the 43 cases of kak'ke 3 died, the ratio of cases per 100 of force being 0·21. The forty-three cases of kak'ke occurred on board the following vessels, viz.: the *Takachiho* (12), *Matsushima* (3), *Atago* (3), *Omimaru* (2), *Akashimaru* (2), *Akitsushima* (1), *Kongo* (1), *Katsuragi* (1), *Yamato* (1), *Tenryu* (1), *Kaimon* (1), *Amagi* (1), *Maya* (1), *Shinagawamaru* (1), *Genzanmaru* (1), *Yedomaru* (1), and *Genkaimaru* (1). The others occurred at the following shore stations, viz.: the Naval Barracks at Kure (3), the Naval Barracks at Sasebo (2), the Gunnery training ship (1), the Naval Barracks of Yokosuka (1), the Naval Barracks of Port Arthur (1), and the Base station of Long-reach in Corea (1). As already mentioned, an improvement in the scale of diet was effected after 1884, and in consequence this disease had diminished year after year until it had been nearly extirpated in the navy. The disease, however, broke out afresh. Let us examine why this was. In April, 1894, the *Takachiho* was despatched to Hawaii, and as soon as she returned she was repaired with extraordinary speed. After her repairs were finished she immediately sailed for the expedition. As the seamen of the ship suffered from a comparatively poor supply of fresh food they ate too large a quantity of rice. Of the twelve patients of the *Takachiho* ten were stokers, whose hard work in the boiler-room at a high temperature in a hot climate caused them to drink water to excess, in consequence of which they disturbed their digestive organs. Under such circumstances it was that so many cases of the disease occurred on the ship. The three patients of the *Matsushima*, suffering from a poor supply of fresh food and eating too large a quantity of rice, overworked themselves in the hot climate of Formosa. The two patients of the *Omimaru* and the one of the *Akitsushima* did not eat too large a quantity of rice, but both suffered from a poor supply of fresh food and overwork in the hot climate of Formosa. The one patient of the Maya always disliked meat and was fond of liquors; as the one patient of the *Kaimon* had a great taste for sweet articles he celebrated his return home by eating sweets to excess and disturbed his digestive organs. The three patients of the *Atago*, one each of the *Kongo*, *Katsuragi*, *Amagi*, and the Base station were obliged to take preserved food for a long time during the expedition, and took a dislike for preserved meat and hard biscuits toward the end of the expedition. The two patients of the *Akashimaru* and the one each of the *Shinagawamaru*, *Genzanmaru*, *Yedomaru*, and *Genkaimaru*, with the two of *Sasebo* and one of Kure Barracks (the last three men were from the crews of transports who were enlisted after the occurrence of the disease), did not take regular food while on board the transports because these vessels are not war-ships and not under navy regulations. The other case from the Kure Barracks was a second-reserve man who had already suffered from the disease before the call. The one patient of the naval barracks of Port Arthur was attacked by kak'ke after the occurrence of rheumatism. One patient from each of the *Tenryu*, *Yamato*, and the Yokosuka Barracks disturbed their digestive organs by over-eating and over-drinking after returning home after a long stay in camp. The cause of two cases of kak'ke—one in Kure Barracks and one on the *Yokosuka* gunnery training ship—is not certain. Summing up the above mentioned I conclude that the cases of kak'ke directly originated from want of proper food and indirectly from the impossibility of taking proper food which resulted from injury of the digestive organs from certain cause. Hence the principal cause of this disease is undoubtedly due to improper and bad food. To ascertain how the war affected the constitution of the forces the body weight of the force was calculated. Its result was that in 1894 the average individual body weight of the force amounted to 58·238 kilogrammes, but in 1895 it had increased to 58·463 kilogrammes. Comparing these weights with those already mentioned it is found that the body weight during war showed a greater increase than before. This, I take it, is a proof of the excellent health of our naval forces.

Tokio, Japan.

TWENTY-SIX CASES IN WHICH AN ABDOMINAL SECTION HAS BEEN PERFORMED A SECOND TIME.[1]

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IN this paper I include every case in my practice in which an abdominal section has been performed a second time,[2] with the exception of six cases already recorded.[3] I have selected these cases for publication together because their histories illustrate a considerable number of complications, accidents, and causes of death which may occur in abdominal surgery, and because very few of them are without special points of interest. The cases may be divided into three groups. In the first eight the second operation was performed on account of a return of disease after a period of good health. The second group consists of five cases in which the first operation was insufficient to effect a cure. In the remaining thirteen cases the second operation was required on account of some complication arising as an immediate or a remote consequence of the first.

GROUP I.

CASES 1, 2, and 3.—The first three cases were examples of the growth of an ovarian tumour in the second ovary after the removal of an ovarian tumour. In Case 1 the second ovary had completely separated from its normal connexions, probably by twisting, and was nourished by adhesions in its abnormal position. The patient is alive and well. In Cases 2 and 3 the patients very nearly died from obstruction of the bowel during convalescence. The former is alive still; the latter died from pneumonia at the age of sixty-five years, nearly five years after the second operation.

CASE 4.—In this case an ovarian cystic tumour had been removed by another surgeon three and a half years before I saw the patient. I diagnosed a second cystoma, but on opening the abdomen I found a very large collection of ascitic fluid, encysted by peritoneal adhesions. The left ovary and tube were absent. The right appendages were dotted over with a granular growth which might have been either tuberculous disease or papilloma. I removed the ovary and tube and the patient made a good recovery.

CASES 5 and 6.—In these cases it was supposed that both ovaries had been completely removed for neoplasms before the patients came under my care. In each case I was informed of this by the gentleman who had operated. Nevertheless, I performed in each case an operation in no way differing from an ovariotomy with deep enucleation of the growth except that the Fallopian tubes were absent. Both cases recovered. These two cases show a local recurrence of an ovarian growth. The condition is in marked contrast to the secondary development of malignant disease which took place in the following case.

CASE 7.—In this case I performed a fairly easy ovariotomy on June 6th, 1893. The patient made an uncomplicated recovery and continued in good health until October, 1895, when she began to suffer from an increasing difficulty in keeping the bowels open. I saw her on Jan. 26th, 1896, and she then had an almost complete intestinal obstruction with abdominal distension, pain, and vomiting. I recommended an exploration with the formation of a fistula to relieve the vomiting and the pain due to peristaltic efforts, if no more

[1] Abstract of a paper read before the Medical Society of London.

[2] The operation of paracentesis abdominis has not been considered an abdominal section, although it might be maintained that the abdominal cavity is opened thereby.

[3] Illustrations of Some Modes of Death from Ovariotomy: Transactions of the Royal Medical and Chirurgical Society, vol. lxxviii.; Two Cases of Rupture of Intestine caused by the Separation of Adhesions to Diseased Ovaries: THE LANCET, Sept. 28th, 1896; and Cases of Liver and Gall Duct Surgery: Transactions of the Medical Society of London vol. xviii.

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effectual treatment should be possible. The peritoneum was found studded over with numerous cancerous nodules and I therefore opened a coil of gut and made an artificial anus. The operation was successful in relieving pain, but death from exhaustion took place a month later.

CASE 8.—The gentleman who performed the first operation in this case informed me that he had found an ovarian tumour so thin-walled and so deeply embedded in the broad ligament that he thought it wise to drain the tumour instead of removing it. When I opened the abdomen, nine years later, I found a multilocular very thin-walled cystoma of the right ovary and commencing disease of a similar nature on the left side. I had no difficulty in removing both completely. It is now two years since the operation, and the patient is stout and well, nothing abnormal being palpaple in the pelvis.

In the foregoing cases I performed both operations in only two instances, the first and seventh. Death was not caused by the operation in any of these cases, and six of the patients are alive and well.

GROUP II.

In the following five cases the first operations failed to effect a cure. In each instance I performed the second operation only, and there were two deaths.

CASE 9.—The left ovary was removed from the patient in May, 1890, for the relief of inflammation accompanied by constant aching pain. After about two months the pain returned in the remaining ovary. The patient became so ill that, after consultation with the gentleman who had performed the first operation and with others, I removed the second ovary in March, 1891. The patient suffered much for about a year after the operation. She then began to improve, and last spring she informed me that she only suffered from a bearing-down sensation of comparatively little consequence.

CASE 10.—This patient dated her illness from 1881, when she was much shaken and frightened by an accident. A few months later she began to suffer from profuse, frequent, and painful menstruation. In 1885 she sought advice at one of our metropolitan hospitals. Something was removed through the vagina, but no benefit resulted. Early in 1893 an abdominal section was performed by the obstetric physician to another London hospital. After this the patient could not get about at all. A profuse red discharge from the uterus continued for three or four weeks at a time, and it was considered necessary to plug the vagina on several occasions. The pain was so great that injections of morphia were required almost daily. After ten months a ligature escaped from the vagina and there were subsequently repeated discharges of matter and blood. The gentleman who had operated told me that he had removed the left ovary, which contained a small dermoid tumour, and also the right ovary, but he was not sure if he had removed the latter completely. I reopened the abdomen on March 22nd, 1894, and after separating many adhesions I removed the left Fallopian tube with a small nodule that was evidently the tied stump of the left ovary. Part of the right Fallopian tube also remained, and it was removed together with that part of the broad ligament to which the ovary should normally have been attached. Two small pedunculate fibroids—the largest about the size of a walnut—were then tied off and cut away, and I noted that there were numerous other small fibroids in the uterine wall. Convalescence gave no trouble. After the patient got up uterine discharges continued at intervals till August, but there was then no blood in these discharges. I saw the patient in June, 1895. She was then in the best of health, without any pain or discharge. Obviously the arrest of the functions of the uterus was essential to a cure in this case, and this had not been effected by the first operation.

CASE 11.—In this case the patient complained of a swelling in the abdomen and of having had much pain for six years. During that time she had attended a hospital for women and had been an in-patient twice. In April, 1895, an abdominal section had been performed, and since that time the patient's health had been much worse than before, the pain had been more severe, and the periods had been very irregular. On examining her I found extreme tenderness in the pelvis, which made it impossible to define the parts with certainty. The womb, however, seemed somewhat enlarged, and I detected two swellings—one the size of a Tangerine orange on the left side and a smaller one on the right, this last being much the more tender of the two. The woman was in a state of great exhaustion from constant suffering, and every examination caused excruciating pain, which only subsided after two or three days. Her pulse was never below 120, and the temperature varied between 97·4° and 99° F. On June 1st, 1896, about thirteen months after the first operation, I re-opened the abdomen and found that the fundus uteri was retroverted. I found three interlocked silk ligatures in a cavity between the right broad ligament and the sigmoid flexure. I carefully removed the walls of this cavity and also the left ovary and tube, which formed an inflamed mass the size of a Tangerine orange. The patient died on the third day, with a high temperature and a rapid, feeble pulse. At the necropsy there was no evidence of peritonitis, and there was no fluid in the peritoneal cavity except a few drachms of blood-stained serum. I attribute this death to the severity of the operation and to the exhausted and poisoned condition of the patient.

CASE 12.—In this case a fibroid tumour was cut down upon by the patient's medical attendant in 1891, but nothing was removed. Afterwards a cystic tumour was tapped on several occasions, and in May, 1893, a cyst was opened and drained. Other tumours developed in the abdomen, and in July, 1894, the gentleman who had operated brought the patient to me for advice and further treatment. The patient was then forty-seven years of age and had ceased to menstruate. When I had made a careful examination the patient and her friends were plainly told that an operation would involve unusual danger, but as the tumours were very large and partly cystic I advised that they should be removed, and the patient decided to have this done, with the full approval of the gentleman who had performed the first operation. Accordingly, on July 25th, 1894, I removed the part of the uterus above the cervix with two solid and two very large cystic fibromata. There were very strong and extensive adhesions caused by the first operations, and two of the tumours required very deep enucleation from the left broad ligament. The ovaries and Fallopian tubes were also removed. The adhesions on the right side were so tough that their separation required a very difficult and prolonged manipulation. After an operation lasting nearly three hours the patient was put to bed in very fair condition, but she died seventeen hours later with symptoms which indicated that a ureter or the bladder had been injured. I did not think the latter could have been wounded because in separating it from the enlarged uterus I had had a catheter passed as a guide until I thought I was working well behind the bladder. At the necropsy, however, an opening was found in the posterior wall of the bladder near its base. I can only offer a conjecture as to how and when the accident happened. I presume it must have been when I was enucleating the smaller solid tumour which was situated deeply in the cellular tissue to the left of the vagina. As I have said, I thought when I was enucleating this growth that I was working below the bladder, and I kept a keen look out for the ureter, which, however, I did not see. At this part the tissues were very vascular, and the catheter used to define the position of the bladder had also emptied it, so that I got no assistance from the sudden gush of urine that might otherwise have taken place. I think that probably the left ureter was pressed low down by the tumour in the deep part of the broad ligament, and that a portion of the bladder had been drawn down with it. The post-mortem report stated that the bladder was very large. This accident was most distressing, for the patient's chance of recovery would have been fairly good if it had not happened. I record the case because it is necessary to complete the series, and also because it shows how the ordinary anatomical relations may be distorted by pelvic growths.

CASE 13.—The last case in this group was a most unpromising one. The patient was forty-four years old and had had her ovaries removed by the obstetric physician to one of our metropolitan hospitals in May, 1893, for the purpose of arresting hæmorrhage caused by a uterine tumour. Her periods ceased for six months after the operation and then returned, blood being constantly lost in small quantity and very copiously for a few days about once a month. On two subsequent occasions the patient had some operation performed through the vagina, an anæsthetic being given. The second of these minor operations was performed in November, 1895, and there was no discharge after it, but the tumour began to grow rapidly and became very painful. The patient decided to seek advice at the Samaritan Free Hospital, where she was admitted under my care on July 6th. She had a tumour of the uterus rising to the level of the navel, with an irregular surface and

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very tender. It expanded the cervix uteri down almost to the external os, but it was fairly movable from side to side at its upper part. Those of my colleagues who saw the case advised that the tumour should be removed, although it was obvious that the patient was very feeble. I agreed that an operation alone could give relief. Nevertheless, I should have hesitated about undertaking such an obviously dangerous course if the patient had not urged me to do so after I had clearly expressed to her my opinion that the result would be very doubtful. On July 16th I performed hysterectomy, fixing the cervix of the uterus, secured by a serre-nœud, between the lips of the wound. When this can be done I believe it gives the patient a far better chance of recovery than any of the methods by which the abdomen is at once closed. The patient gave no trouble from a surgical point of view during convalescence, although she was in a position of extreme danger for weeks on account of her debility and the state of her lungs. I saw her on Oct. 5th, 1896, when her wound was quite healed; she was free from pain and had put on much flesh. Microscopically the tumour was a round-celled sarcoma. In the spring of 1897 this patient was successfully operated on by another surgeon for acute obstruction of the intestine. I am informed that now (October, 1897) she is very ill and not expected to recover.

GROUP III.

In the remaining cases the second operation was performed on account of some complication resulting from the first operation or arising during convalescence. In this group I performed both operations in six cases. In the other seven I performed the second operation only. Five of the patients died. The first three cases in this group indicated three forms of bowel difficulty which may arise after an abdominal section.

CASE 14.—The patient when I first saw her was forty-four years of age, and had been under treatment for uterine tumours in America for eleven years. She had constant and increasing pain, which was more severe at her monthly periods. I was at first inclined to take the view which had probably been taken by others—namely, that an operation for the removal of the growths was unjustifiable when the patient might shortly hope for relief by passing through the change of life. After keeping her under observation for about six months, however, I came to the conclusion that she really did suffer sufficiently to justify surgical interference. On opening the abdomen, I found that there was in each iliac region a very hard oval tumour the size of an orange attached to the top of the uterus by a pedicle about one and a half inches long and as thick as an ordinary cedar pencil. These growths were almost devoid of blood-supply and had undergone a kind of calcareous degeneration, so that they were practically foreign bodies. They had created much inflammation and were attached by adhesions to everything they touched. Without doubt these adhesions were a chief cause of pain. In addition to the above there was a large, soft fibroid tumour tensely filling Douglas's pouch. I removed all the tumours and also the ovaries and Fallopian tubes and fixed the stump of the uterus outside the peritoneum in the usual way. Convalescence was complicated by the fact that every attempt to feed the patient by the mouth gave rise to pain, retention of flatus, and abdominal distension, these unpleasant conditions ceasing when nutriment was administered only by the rectum. This alternation of conditions was repeated over and over again, the pulse and temperature being only very slightly affected. The bowels were moved from time to time by enemata, but the administration of these also gave much pain, and laxatives always caused distension. Two months after the operation I ordered that feeding by the mouth should be persevered with for a few days. The result was that after four days the pain became very severe and culminated in a kind of fit. Under rectal feeding the patient returned to her usual condition; but after this attack she was able to take food more freely, and laxatives had more effect than before in moving the bowels. I believe that some adhesions gave way at this time. The patient left my immediate charge a fortnight later with instructions to be very careful in keeping the bowels open and to limit the diet if she became distended. I hoped that the partial obstruction which evidently existed would be overcome in time by the gradual stretching of adhesions. The patient continued to be much troubled by pain and distension. She could not take laxative medicine or use an enema without suffering severely, and the bowels would not act spontaneously. After an interval of twenty-two months I agreed to the patient's urgent request that I should re-open the abdomen and separate the adhesions which I believed to be the cause of her trouble. On Oct. 16th, 1895, I opened the abdomen and found that the centre of the transverse colon was fixed to the back of the abdominal incision nearer to the pubes than to the umbilicus, so that this portion of the gut had a V-shape, and the acute angle at the middle of the colon was at the time of operation occupied by a scybalous mass of fæces. The omentum was much adherent to the abdominal wall and also to the sigmoid flexure, which was thus fixed to the centre of the transverse colon. I separated the transverse colon from the omentum and put it in its proper place. The patient made a good recovery, and her bowel condition was much improved. She still complains of distension and pain in the right side, but Mr. Thorburn Steer, under whose observation she has been recently, tells me that the attacks of pain are certainly less troublesome as time goes on.

CASE 15.—The next case illustrates a remote and rare effect of a pelvic operation. The patient had a double ovariotomy performed in 1882. This was followed by troublesome constipation, which became a serious difficulty ten years later. She came under my care in May, 1893, when no treatment either by the rectum or by the mouth made the slightest impression on the bowels. This condition had developed very slowly. The finger in the rectum could not reach the seat of obstruction, but large masses of fæces were felt both through the rectum and through the vagina, and also by palpation of the abdomen. There was no rise of temperature. After consultation I opened the abdomen on June 2nd, 1893 and found the whole colon enormously distended, but I could not find the cause of obstruction. As there had been no fever, and the patient, although very weak, was not acutely ill, the small gut not being distended, I decided to sew the sigmoid flexure to the wound and to open it later. By 8 P.M. on the day of operation, however, the patient's condition was extremely serious, the pulse being 140 and the temperature 102° F. It was obvious that the bowel must be opened without further delay. This was done and a large quantity of fæces was removed, but death occurred about midnight. At the necropsy it was found that there had been no escape of fæces into the peritoneal cavity. At the lower end of the sigmoid flexure the canal of the gut was almost completely obstructed by a mass of cicatricial tissue which had ulcerated on the mucous surface. The lumen of the canal was reduced to the size of a cedar pencil and passed obliquely through the diseased tissues. It is easy to say now that in this case it would have been wiser to open and clear the bowel at the time of operation.

CASE 16.—This patient had a supra-vaginal hysterectomy performed in 1893, from which she made a good recovery. She continued well until March 22nd, 1896. On the evening of that day she ate a hearty supper, and on the following morning she was seized with severe pain in the abdomen. I was asked to see her on the 24th, when I found the pulse 72 and the temperature below 100° F. To the left of the middle line I could define a distended coil of intestine which I thought might be the sigmoid flexure. Further consultation was desired, and as a consequence operation was postponed. In the meantime opium and belladonna were given, food by the mouth was withheld, and the patient was nourished by nutrient enemata. Next morning the pulse was 108, the temperature was 103°, and the abdomen was somewhat distended. I opened the peritoneal cavity and found a coil of small gut strangulated and sloughing. It had been tightly constricted by a band of adhesion which was very strong although not thicker than a piece of No. 3 Chinese silk. I washed out the peritoneal cavity and made an artificial anus; but diffuse septic peritonitis already existed, and the patient died about 10 o'clock in the evening of the day of operation. Surgical treatment cannot be employed too soon for the condition which existed here, but it is not always easy to decide beforehand when to operate. Cases of obstruction by band if promptly treated should give as good results as the operation for strangulated hernia. Unfortunately, the diagnosis is more difficult and the initial treatment is too often a purgative.

In the next two cases, Nos. 17 and 18, the second operation was required on account of a hernia in the scar of the first.

CASE 19.—Though the peritoneum was not opened this case is included in the series because the kidney is an

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abdominal organ. The patient had lost a great deal of pus from the right kidney for five years before I saw her. I drained the organ, giving great relief, but four weeks later an obstruction in the left ureter necessitated a left nephrotomy. The patient died three days after the second operation.

CASE 20.—In this case an unusually adherent dermoid ovarian tumour was removed on June 11th, 1896, and the patient's condition gave no trouble or anxiety for a fortnight. On the sixteenth day she was allowed to get up and lie on a sofa, and she then complained that her belt hurt her. Two days later there was a rise of temperature. The patient was confined to bed again and I discovered a decided tenderness in the left kidney which was enlarged. I then obtained a history that for eighteen months the urine had from time to time been thick when passed. The specimen which I had examined before operation became very slightly hazy on boiling. The urine passed during the first fortnight of convalescence was abundant, acid, and clear, but I did not examine it for albumin. On July 3rd, the twenty-second day after the operation, some urine was passed containing about half its bulk of pus. After this the patient's condition improved somewhat and the urine again became clear and contained only a trace of albumin. There was no trouble from the bowels. The lower abdomen was soft and flaccid, and no hardness or tenderness was detected in the pelvis by bimanual examination. The left kidney remained very tender. On July 6th, the twenty-sixth day after the operation, the patient's condition was again worse; the left kidney was very hard and could not be touched without causing severe pain; the temperature rose to 105°, and the pulse, which had kept steady, about 84 to the minute, rose above 100. The patient became drowsy and indifferent, and I expressed the opinion that she would die if an opening were not made into the left kidney. On July 7th, in consultation with Sir Douglas Powell and Mr. Coker, of Uxbridge-road, it was agreed that the kidney should be opened, and this was done immediately. The kidney was not less than nine inches long, and broad in proportion. On tapping it with a trocar and cannula I drew off some red fluid but no pus. I therefore made an incision into the pelvis, but still got no pus. On inserting my finger I found that the calices were much enlarged, and I divided several septa, pushing my finger into the kidney in all directions, but gaining no further information as to the cause of mischief. The parts outside the kidney were quite normal. I inserted a drainage-tube and closed the wound. The patient was very feeble for a couple of days, and the temperature remained high, but after July 9th the course of convalescence was one of steady improvement. Later it was discovered that these attacks yielded promptly to purgation, and Mr. Coker suggested that free purgation might have obviated the necessity for the second operation. This is just possible, although I hardly think it likely. It did not occur to any of us to treat the case in this way at the time of serious danger, and the bowels were then being frequently moved without difficulty. It should further be considered that although I discovered nothing but a much dilated kidney at my second operation I must certainly have altered the relations of its calices to each other by my manipulations, and that in this way I may have broken down some obstruction to the exit of urine. I am inclined to think that this patient had suffered from pressure of the tumour on her ureters, especially the left, for many months before operation, that the kidney was distended occasionally, and that when she got up after lying on her back for a fortnight the left kidney was tilted over and induced a valve-like obstruction, which was closed by the pressure of the fluid within the kidney, and relief was not obtained till the kidney was opened. At the second operation I probably removed some valve-like obstruction such as is described by Fauger in the Annals of Surgery for June, 1896.[4] In July, 1897, this patient's health was thoroughly re-established.

In the following six cases an immediate operation was deemed necessary during convalescence from various operations. In two cases I performed both operations, and the results were fatal. In the last four cases I performed the second operation only and all recovered.

CASE 21.—The patient was a woman, aged thirty-five years, in whom extreme anæmia had been induced by profuse hæmorrhages caused by the presence of a fibroid uterine tumour. The patient was very feeble, but on the ninth day after hysterectomy the bowels had acted freely, the sloughing pedicle seemed to be separating nicely, the patient enjoyed her food, and I thought all would be well with her. On this day I made a note that the wound above the pedicle was free from all signs of irritation, and I removed all the sutures except those next the sloughing pedicle. The following night the patient was restless and uncomfortable. On the twelfth day after the operation I found that about an inch of the upper part of the incision had yielded, exposing the omentum. There was no sign of adhesion or other inflammatory reaction. I carefully cleaned and re-closed the opening by three sutures, but the patient gradually sank and died thirty-six hours later. At the necropsy there was no evidence of inflammation in the abdomen except some injection of peritoneum behind the seat of rupture of the wound. There was much congestion of the lungs, and all the tissues were very anæmic. I have seen a considerable number of cases of rupture of the abdominal wound due to a sudden strain, as from retching or coughing after the sutures have been removed, but I have never seen any other than this, in which there was no attempt at union of the exposed viscera to the edges of the incision, or any in which a fatal issue has resulted from the accident.

CASE 22.—This patient was a woman, aged forty years. There had been a uterine discharge for six years, which had constantly increased and had been very offensive for about two years. The uterus had been curetted by one of my colleagues in February, 1896, but a microscopic examination of the scrapings had not indicated that the disease was malignant. After a time, however, a clinical diagnosis of malignancy was made, and I was asked to remove the uterus. When I saw the patient her womb was slightly enlarged and was discharging great quantities of offensive matter, and as a consequence she was extremely anæmic. Removal of the uterus seemed possible, and the patient, although made fully aware of the serious nature of operative treatment, was most anxious to take the risk. My colleagues with whom I consulted thought an operation was justified as affording the only chance of relief. I therefore agreed to open the abdomen and to perform hysterectomy if the disease seemed confined to the womb. I performed this operation, but cancerous disease had almost destroyed the whole circumference of the uterine wall at the inner os. In the evening, although the patient was very feeble, her condition, both physically and mentally, was satisfactory. Next day she appeared to be doing well in many ways. She had passed ten ounces of urine in the night without the aid of a catheter, and had had some quiet sleep. Flatus had escaped when a rectal tube was passed, and there had been no vomiting. The temperature had risen to 102·2° F. in the axilla, but had come down to 99·6° by 10 A.M. The pulse, however, was extremely feeble, had risen to 140, and during the afternoon the heart failed still more. Early in the afternoon the patient suddenly collapsed, the temperature falling to 97° and the pulse becoming uncountable. When I saw her a little later she was evidently moribund but still sensible, and the condition seemed to me to simulate the effects of hæmorrhage so closely that, after I had ascertained that there was no escape of blood from the vagina, I determined to re-open the abdomen. The patient was so ill that no harm could result if there was no hæmorrhage, and it did not seem right that I should leave the question of the possibility of the existence of hæmorrhage undecided. The second operation was a very trivial one—merely the removal of a few sutures and the insertion of the finger—but it might have been a very important procedure, as in Case 24, and it brings the case within the title of this paper. The patient died an hour later. At the necropsy some coils of intestine were found to be adherent in the pelvis, and there was some turbid serum there also, but no blood. It was undoubtedly an error of judgment to yield to this patient's desire to be operated on; but I have always been guided in this question by the view that if there be any doubt as to the course to be adopted, that is, if I think there is any chance at all of benefit being derived from an operation, the patient should be allowed to decide for or against this course if he or she has been made clearly to understand the risks involved.

In the last four cases in my list I was fortunate in being able to perform successful operations in emergencies occurring in the practices of others.

CASE 23.—In this case the operations were the same as in Case 21—namely, a hysterectomy and a re-sewing of a

[4] The Operative Conservative Treatment of Sacculated Kidney. Annals of Surgery, June, 1896.

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ruptured incision on the eleventh day. But in this case the patient was a strong woman; her wound gave way suddenly during the night, and when I examined it some hours later I found the protruding bowel firmly adherent to the divided edges of the incision. I cleaned the parts, returned the viscus, and sewed up the wound, which did not give any further trouble.

CASE 24.—I was asked to see a patient about two hours after a hysterectomy had been performed. She had suddenly become very pale and faint whilst in the act of retching. When I saw her she had every appearance of severe hæmorrhage. As the gentleman who had operated was not at hand I opened the abdomen, found that its cavity was full of blood, and that the right broad ligament had slipped completely from its ligatures. I re-secured the divided broad ligament and removed large quantities of blood, but I did not wash out the abdominal cavity because healthy blood-clot is not likely to do harm. A glass drainage tube was placed in the pouch of Douglas. It was doubtful for many hours, indeed for days, whether the patient would survive; but she gradually rallied and made a perfect, though slow, recovery. She was alive and well five years after the operation.

CASE 25.—In this case the inverted fundus of the uterus simulated a polypus, and had been removed by means of scissors, the nature of the operation being discovered by examination of the specimen. I saw the patient within an hour, and although her condition did not appear serious I thought it best to ensure against hæmorrhage by opening the abdomen and securing all the bleeding points. The second operation was begun within two hours of the first. Very little bleeding had taken place, but the disturbance of the parts set up free hæmorrhage, and there can be little doubt that the patient would have run a very serious risk when reaction set in if the hæmostatic power of nature had been trusted to. I tied the uterine arteries and broad ligaments and sewed together the divided uterine surfaces so as to close completely the opening from the vagina to the peritoneum. The patient made a perfect recovery.

CASE 26.—The accident that occurred in this case is, I believe, very rare. In dressing a patient whose pelvis was being drained I discovered on the fourth day after operation that the glass drainage-tube was fractured. I removed some sutures and fished up the lower half of the tube with a pair of forceps, the blades of which were guarded by rubber tubing. The two pieces of glass accurately completed the tube. Another tube was inserted for twenty-four hours. Beyond a sharp rise of temperature and pulse, which was recovered from next day, the accident caused no trouble and it did not delay convalescence.

The two great dangers in operating on the abdomen are the introduction of septic mischief during the operation and the occurrence of obstruction of the bowels or of pseudo ileus after the operation. In the foregoing cases I have succeeded in avoiding a fatal issue from these conditions, although in all the fatal cases septic mischief was primarily or secondarily an important cause of death. If a patient has to be operated on when the blood is already saturated with the products of septic mischief, as in Cases 16, 22, 11, 15, and 19, it is very difficult to avoid a fatal issue from septicæmia. But besides septicæmia and bowel complications there are many dangers and accidents which may occur in connexion with an abdominal section. The bowel conditions in Cases 14, 15, and 16 indicate remote dangers. The cancerous recurrence in Case 7 is a condition of great importance. Many accidents and mistakes are illustrated in my paper—injury to the bladder, Case 12; rupture of the abdominal wound, Cases 21 and 23; slipping of ligatures, Case 24; and mistaking of an inverted fundus for a polypus, Case 25. All these accidents have occurred before, and doubtless they will occur again; but I think that by bringing these together I may impress on operators the necessity for the greatest care during and after operations so that these and other dangers may be avoided.

Portman-street, W.

THE NEWPORT (MON.) WATER-SUPPLY. — A special meeting of the County Council was held on Sept. 28th to consider the present condition of the Wentworth Scheme for the water-supply of Newport. Many failures have from time to time occurred during the course of the work, and the chairman mentioned that the cost of the undertaking up to the present had been £100,408.

ETIOLOGY OF DIPHTHERIA, WITH SPECIAL REFERENCE TO TWO LOCALISED OUTBREAKS IN WANDSWORTH.

BY P. CALDWELL SMITH, M.A., M.D. GLASG., D.P.H. CAMB.,

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To all sanitarians as well as to medical men generally the increased prevalence of diphtheria in London is a subject of the greatest importance, and any addition, however small, to our knowledge of the etiology of this disease ought to be carefully studied for future guidance. It has been well said by Dr. Creighton in his admirable book on the History of Epidemics in Great Britain that "diphtheria is, perhaps, the most obscure and complex of all the infectious diseases in its causes and favouring conditions" and its continued prevalence in the metropolis has verified the above statement. The death-rate for diphtheria in London for the ten years 1871–80 was 120 per million living; in 1881–90, 260 per million; while in the year 1893 this rate was 740; in 1894, 610; in 1895, 520; and in 1896, 602 per million. On the continent the death-rate is in some towns higher than the 1895 rate, it being in St. Petersburg 590 per million and in Berlin 540; while in Paris, Brussels, Amsterdam, Vienna, and Rome the rate was in the same year lower, in the latter city being only 80 per million. The above statistics tend to modify the view that insanitary conditions in dwelling houses are the cause of diphtheria, nor do they altogether agree with the statement of Sir R. Thorne Thorne that "sewage gas produces a morbid condition of the fauces rendering the patient more liable to the reception of the diphtheria poison." In the first place there is no doubt that in London the sanitary condition of the houses of the working classes is much better than it was in the decennium 1871–80, when the diphtheria mortality was 120 per million, as compared with 602 per million in 1896; and in the second place it is certain that the general sanitary arrangements in London are superior to those existing, not only in continental towns, but also in provincial towns in England and Scotland, which have a much lower diphtheria mortality. That it is even a predisposing cause would also seem to be negatived by the same statistics, so that for practical purposes we are confronted with the only other possible sources of infection—viz., infection by milk and infection from person to person. In this regard the remarks made by Bristowe in his "Theory and Practice of Medicine" may be quoted. He says that "there is reason to believe that the sanitary state of houses and localities and the condition of health of those who are exposed to its poison have much influence over its development." That was the general and accepted professional opinion twenty years ago, and even yet it is maintained that sanitary defects play an important part in its causation. Again, we know that the zymotic disease most intimately related to insanitary conditions is enteric fever, although even in this the specific organism must be present before infection can occur. Specifically polluted milk, water, and other articles of food are of course the most common causes of outbreaks of enteric fever, but, as has been stated by Dr. Theodore Thomson, "there is no doubt that the air of sewers and drains which has become specifically contaminated may, if allowed to find its way into dwellings through defective house connexions, cause from time to time enteric fever among the inhabitants of such dwellings."

If, then, the sanitary condition of the metropolis has been improved we would expect a gradual diminution in the typhoid fever death-rate, and this is what has taken place. The death-rate which was in the decennium 1871–80 240 per million fell to 190 per million in 1881–90, 140 per million in 1895, and 127 per million in 1896. These figures would lead one to believe that the sanitary condition of the houses in the metropolis is better now than it has ever been, and yet we see that the diphtheria mortality has increased from 120 to 602 per million in twenty years. Seeing, then, that insanitary conditions do not explain the great rise in diphtheria mortality some other method of infection must be looked for. Dr. Klein, after elaborate research and experiment, came to the conclusion

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that cows can be infected with the diphtheria bacillus, and that the milk from these cows, if drunk, would produce diphtheria in the human being. It is not denied by sanitarians that milk, if infected from a human source with the diphtheria bacillus (for milk is a good medium for the growth of this bacillus), will produce the disease in persons drinking it; but whether this disease of cows is true diphtheria, or the bacillus described by Klein is similar to the Klebs-Löffler bacillus, has not, as far as I am aware, been definitely determined by other authorities. The only animal in which it is probable that diphtheria occurs is the domestic cat, and several cases have been traced to infection from this source. In the cat no membrane has ever been observed on the fauces or larynx, and the principal organs affected are the lungs and kidneys. No doubt the bacilli are exhaled and expelled in the mucous discharge, and in this way infection of human beings may take place. It is important to note in this connexion that it is now decided that the affection of fowls and pigeons in which a membranous growth occurs in the throat has no connexion with diphtheria in human beings. One certain mode of infection is by fomites, and although this will not explain all cases yet many have been recorded proving that the virus can be conveyed by persons or things. I know of one case, or rather one household, that was infected in which the poison was conveyed by a letter, as has often happened in the case of scarlet fever. Jacobi is of opinion that diphtheria is exquisitely contagious, that the germ clings to body-linen, bed-linen, clothes, and wood-work, and furniture of rooms in which a case had occurred.

Far more important than the probable causation by defective sanitary arrangements, specifically infected milk, domestic animals, and fomites is the causation and spread of the disease by personal infection, and it is this, I believe, that is the cause of the great increase in urban districts, and especially in London, in recent years. When one remembers the opportunities now existing for close personal contact among children in public and private schools, Sunday-schools, and private gatherings, as compared with what was the case even twenty years ago, it is not to be wondered at that such increase in diphtheria has taken place. The wonder is that it is not greater and that outbreaks such as recently occurred in the parish of Wandsworth have not been more numerous. In these outbreaks there is no doubt that in every case personal infection was the only cause in operation, although it was not in every case that such could be definitely proved. These outbreaks occurred in Wards 1 and 3 of the parish of Wandsworth, which had a population, principally working class, of 8670 and 11,817 respectively at the census of 1896. The wards are not adjacent to one another, and the outbreaks had, as far as could be ascertained, no connexion, although in both school infection was proved to have been the means of spread, and this most definitely in the outbreak in Ward 3. That school attendance is a prominent factor in the dissemination of diphtheria has long been known, and Sir R. Thorne Thorne, in his Milroy Lectures, has summarised all our knowledge of the subject. The conclusions arrived at by Sir R. Thorne Thorne are so generally known that it is unnecessary to recapitulate them, but there is one statement that, in view of the recent outbreaks in this district, is specially noteworthy. Sir R. Thorne Thorne states that "there are ample grounds for believing that the aggregation of children in elementary schools constitutes one of the conditions under which a form of disease of particular potency for spread and for death may be, so to speak, manufactured"; or, in other words, that in diphtheria there is a "progressive development of the property of infectiveness."

Before proceeding to discuss this as a cause of the virulence of the outbreaks it will be necessary to give some particulars with reference to them. In Ward 1 sporadic cases of diphtheria had occurred during 1896, 27 cases having been notified in that year at intervals of from fourteen to thirty days. Most of the cases were exceptionally mild. In January, 1897, however, 8 cases were notified with 3 deaths, 5 of the cases occurring in one family, 2 of these proving fatal. The causation of these 5 cases is important as showing a certain connexion between this outbreak and the one at Roehampton in the adjoining parish of Putney, which had occurred in the months of October and November, 1896. One of the children affected attended a school in Roehampton, at which all the children affected there were scholars, while the other four children attended the board school in Ward 1 of this parish. During the month of February 20 cases were notified with 7 deaths, and in March 17 with 2 deaths. The total number of cases in the ward was 45, 25 males and 20 females, with 12 deaths, a percentage of 26·5. These 45 cases occurred in twenty-three households; in four households 5 cases occurred in each; in six, 2 cases; and in thirteen, 1 case. In this ward there are two schools, one a board school and the other a national school, and of the twenty-three households affected the first cases occurred in thirteen households in children attending the national school, in nine the board school, and in two households the children infected had not been to any school. At first it was difficult to localise the school in which infection took place, as in a preliminary inquiry it was found that the cases occurred in both schools at varying intervals and among children who did not in school associate with one another. In the board school an examination of the cases showed that 10 attended the infant department, 3 the girls' and 2 the boys' departments. In the infant department the first three cases were members of the same family, and none of them had been in attendance at school for over seven days. The next two cases in that department did not occur for three weeks, the first on Jan. 21st and the second on Jan. 26th, but they did not attend the same class at school, although they, on entering and leaving school, passed through the same corridors. In this department all the children have a common playground. In the girls' department the cases occurred in separate classrooms. In the boys' department the first case was notified on Feb. 4th and the second on March 2nd. Attention was then directed to the national school, which was attended by a little over 100 scholars, and here, also, it was in the earlier cases difficult to say that school attendance was the sole cause of the outbreak. Five out of ten cases occurred up to Feb. 27th in which the infection was caught at school, two of these being members of the same family. These cases were notified, one on Feb. 16th, two on Feb. 18th, one on Feb. 20th, and one on Feb. 22nd. It was then thought that the outbreak had abated as far as this school was concerned, but on March 3rd three notifications were received, in one of which the first symptoms appeared on Feb. 22nd, in another on the 24th, and in the third on the 27th. On March 4th two notifications were received, in one of which the symptoms were said to have appeared on Feb. 20th, and in the second on the 27th. On March 5th four notifications were received, three of these being with respect to two children and one adult in a previously infected house, while the fourth case did not go to the day-school at all, but to the Sunday-school. All the first children infected had been in close contact in the above day-school or Sunday-school, and it was also ascertained that of the earlier cases several were in attendance on the Sunday-school, which was held partly in the same building as the day-school. The board school, although attended by over 800 scholars, was excluded as the cause of the disease, but the national school was closed on my instructions on March 5th for fourteen days, with the almost immediate effect of checking the outbreak. After that date six notifications were received, only one of these from a household not previously infected. This child had been to school on March 5th, the first symptoms appearing on the 7th. The other five were secondary cases. Out of the twenty-three households infected in only six were there any sanitary defects, and these were of a minor character. In four the connexion between the water-closet and the drains was defective.

In this outbreak it was at first difficult to arrive at a definite conclusion as to its causation, owing to delay in notification of the cases. In four of the cases no medical man was called in until some time had elapsed, and children from the infected households were meanwhile attending school. In one or two cases there was difficulty in diagnosis, as some of the attacks were mild and not well-marked, whereas others were of a severe and virulent type. The fact that the outbreak was checked by the closure of the school affords strong grounds for the belief that, at any rate in the later cases, the infection was received at school, and principally at Sunday-school, where the same control is not possible as far as overcrowding is concerned.

The outbreak in Ward 3 was of a very malignant character, and this was specially marked in the primary cases. This outbreak was limited to children attending one school, and the infection was traced to the attendance of a child suffering

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from the disease at school on the afternoon of March 2nd. For some months previous to this no cases had occurred in this neighbourhood, and the school had always remained very free from diseases of an infectious nature. Inclusive of the above case, 31 notifications were received between March 6th and 18th, and 13 deaths resulted, a percentage of nearly 42. The first case which was the cause of the outbreak proved fatal, and of the 11 cases primarily infected by this 7 died. In 7 cases the first symptoms appeared on the evening of March 4th, and of those 6 died; in 4 on March 5th, with 1 death; and in 4 on March 6th, with 1 death. These 15 cases were all infected at school on March 2nd, 3rd, and 4th, and, as might have been anticipated, were the cause of other cases, not only in the same households, but in others. One monitor, a girl aged fourteen years, was infected on March 5th as on that date in school she nursed one of the previously infected cases who had turned ill, and the first symptoms appeared on March 8th. The type of disease in the early cases was more virulent, but the secondary and tertiary cases were of a milder type. In all, twenty-five households were infected, but owing to prompt diagnosis, notification, and isolation the outbreak did not last long. The disease was so virulent and the symptoms in the early stages were so definite that prompt isolation was at once carried out, with the result that in these households only two had secondary or tertiary cases. The school was closed on March 8th for twenty-one days, and after that date thirteen cases were notified, but of these four cases occurred in households previously infected. An analysis of the other nine cases showed that two in whom the first symptoms appeared on March 9th had been at school on the 5th and 8th, while the remaining seven were all ascertained to have come into direct contact with some of the previously notified cases. The last notification from this part of the district was received on March 22nd, the first symptoms having appeared on the 20th, and the outbreak subsided almost as rapidly as it had commenced. In nine of the houses where cases occurred sanitary defects were found after testing, but these, as in the outbreak in Ward 1, were of a slight character, mainly consisting of defective water-closet arrangements. In all the cases occurring in these houses a definite history of contact with a previous case was obtained. The milk-supply in all cases was the subject of careful inquiry, but no connexion between this and the outbreaks in either ward could be traced. The sanitary arrangements of the school in Ward 1 were carefully examined and the drains tested, but only a slight defect was found, this consisting of an untrapped rain-water pipe. In Ward 3 the sanitary arrangements of the school were excellent, the drains having only recently been laid under the supervision of the sanitary inspector.

A review of all the circumstances attending the three outbreaks—the one at Roehampton and the two in Wandsworth—emphasises the fact that diphtheria may show varying degrees of virulence in different outbreaks. In the Roehampton outbreak out of 30 cases reported not one proved fatal. In the first outbreak in this parish 45 cases were reported, of which 12 proved fatal, and in the second 31 cases with 13 deaths. Again, in Ward 1 of this parish diphtheria had been present, though in a mild form, during the previous year; and it is a well-known fact that virulent outbreaks are frequently preceded by a prevalence of sore-throat or of true diphtheria of a mild character. It is difficult to say definitely whether the outbreak in Ward 3 arose out of that in Ward 1. Every inquiry was made into the history of the child first affected in Ward 3, but no definite information could be obtained as to contact with any of the cases in Ward 1. It is quite within the bounds of possibility that such contact did take place, and if so it would further verify the statement made by Sir R. Thorne Thorne as to the progressive power of infectiveness of this disease. The lessons to be drawn from these and similar outbreaks are, in my opinion—that all cases of sore throat should be immediately isolated, and that when possible a bacteriological examination should be made. Immediate notification should be made to the medical officer of health, not only of cases where the symptoms are on the first examination definite, but also in all cases which are at all suspicious. These measures would ensure the exclusion of all infected children from school, and this is, in my opinion, the most important etiological factor in the dissemination of diphtheria in urban localities, and especially in the metropolis.

Wandsworth, S.W

A CASE OF APPENDICITIS WITH SOME UNUSUAL SYMPTOMS.

BY CHARLES D. GREEN, M.D. LOND., F.R.C.S. ENG.

AN ill-nourished and undersized lad, aged fifteen years, was on Sept. 27th, 1893, while employed in field work, obliged to return home on account of abdominal pain. I saw him the same evening; he gave no history of any previous bowel trouble. He had felt a little pain in the abdomen before starting for work, but went to work as usual, walking nearly two miles for the purpose. He continued at work during the morning, but was obliged to return early in the afternoon on account of increase in the pain. He had vomited once during the day. When I saw him he was lying on his back; he did not appear to be seriously ill; his abdomen was not distended, and no tenderness was elicited on examination; his tongue was clean and moist, and his bowels had been open. He had eaten some raw turnip, amongst other things, during the day; no aperient was given, but absolute rest was enjoined. The next day some tenderness was evident in the right iliac fossa. On the 29th the temperature was 101° F.; there was some exudation on the right side; the abdominal walls were rigid; there was a distinct tender spot two inches below, and one inch external to, the umbilicus, and at this spot there seemed to be a greater sense of resistance than elsewhere. The sense of resistance was, however, ill-defined and diffuse; there was no dulness on percussion. The next day (the 30th) the temperature was 102° and there was a little dulness over the tender spot; the general condition did not seem grave. On Oct. 1st and 2nd there appeared to be some amelioration; the temperature on the latter date was 100°, the tongue was moist and clean, there had been no further vomiting since the onset, and the general condition remained about the same; the signs of local exudation were more distinct. So far the case had appeared to me to have been a simple one of appendicitis, localised and threatening to suppurate, but not calling for immediate operation. On the night of the 2nd, however, a sudden and severe exacerbation of pain took place. On the 3rd the temperature was 101°, there was considerable distension of the abdomen, and severe pain referred to the right iliac region; the dulness previously noticed had disappeared. On very light percussion, however, the note seemed somewhat damped over a small area the centre of which was about the middle of a line drawn from the umbilicus to the middle of the right Poupart's ligament. There had been no vomiting. The treatment had hitherto been small doses of opium and enemata; these latter had, however, only brought away a small quantity of hard fæces, evidently from the lower bowel, and it was stated that no flatus had been passed. It was now evident that operation was called for, and it seemed to me that perforation of the appendix had taken place during the night and that if general peritonitis had not already begun the risk of its occurrence would be materially increased by moving the patient. I therefore decided to operate on the spot, although the patient was a pauper and the surroundings far from favourable. On the morning of the 3rd, chloroform having been administered, I made an incision three inches long in the right iliac region; the peritoneum was thick and vascular, and on dividing it I came upon a thickened mass which I took to be the edge of the great omentum. On separating the lower edge of this from its connexions about four ounces of foul-smelling fluid escaped; this was thin and semi-purulent, with flocculent material floating in it; no actual pus was found. The finger inserted into the wound failed to define clearly the appendix, it appeared to be curled up behind the cæcum; a mass of adherent small intestine could be felt at the upper and inner part of the cavity; the finger brought away two fæcal concretions of the size and shape of rice grains, and four other similar concretions were subsequently found in the fluid that had been evacuated. The cavity was gently irrigated with warm mercuric chloride solution (1 in 2000), the upper part of the wound closed with a silk-worm gut suture, and a rubber drainage-tube inserted. The patient rallied well from the operation, the pain was relieved, and there seemed at first every prospect of a quiet course. The temperature did not rise above 100°; the bowels, however, in spite of enemata, were not opened, no flatus was passed, and only a small lump of hard fæces, evidently from the lower

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bowel, the abdomen became increasingly distended, and by the evening of the 6th this symptom had reached an alarming extent; during the night the patient became much worse and vomiting commenced. On the morning of the 7th the temperature was 97° and the condition of the patient was very alarming, and it appeared to me that there was intestinal obstruction, probably from matting together of small intestine, and that it would be necessary to open the bowel for relief. About 11 A.M., however, a considerable quantity of flatus was passed with some relief to the distension and I decided to wait; in about an hour a copious evacuation followed and all anxiety about obstruction was at an end. Except for the passage of residual contents of the large bowel, constipation had apparently been complete for ten days. During the afternoon of the same day (the 7th) a series of fits occurred, beginning with movements of the fingers of the right hand and gradually spreading to all the limbs, and followed by a period of complete unconsciousness lasting fully five minutes. During these attacks the head was turned strongly to the right and the eyeballs were turned upwards. There was no optic neuritis. On the following morning the patient appeared to be a little better, though much exhausted, but complained that he was totally blind. The pupils were widely dilated. No change was discovered in the retinæ and there was no squint. A slight fit occurred about 4 P.M. The wound was looking well and quite sweet. During these two days there were frequent alvine evacuations, and in the course of the violent convulsions the dressings became disarranged and the wound soiled with fæces. The distension of the abdomen was now completely relieved. On the night of the 8th he had a long and refreshing sleep. The amaurosis had disappeared on the 9th, and for several days afterwards the case ran an uneventful course. On the night of the 17th, however, the patient again complained of abdominal pain and his temperature went up to 101°. The wound had by this time much contracted and was looking well. The tube had been extruded on the 8th, and as there was very little discharge it had not been replaced. The temperature remained during the next two days at from 101° to 102° and the pain continued. On the 19th Mr. Ballance very kindly saw the patient and advised that a counter-opening should be made as far back as possible; this step was carried out on the 20th and a drainage-tube was carried through; irrigation was practised from behind forwards. Some troublesome oozing took place. After the operation the temperature had fallen to 99° and some considerable degree of improvement was manifested, but the patient's condition was not entirely satisfactory; there was considerable abdominal pain and the temperature did not reach the normal. On the 23rd, during irrigation, some clear fluid passed from the anus, but this did not again occur. On the 24th and 25th there was some hæmorrhage from the anterior wound and the temperature had gone up again to 102°. On the 27th there had been no further hæmorrhage, but the temperature remained high, the discharge was offensive, and the patient was evidently suffering from septic absorption; the anterior wound was therefore dilated with the finger, some septic clot was removed, the cavity was well irrigated with hot perchloride lotion, and gauze packing was substituted for the drainage-tube. In the evening the temperature was 100°; there was no pain, and the general condition had already improved. The cavity was irrigated daily with hot chlorinated soda from behind forwards, and the plug in the anterior wound was changed daily. On the 30th a small slough separated, and on the 31st six large pieces of slough were washed away, none of which could be recognised as being the appendix. From this date convalescence was uninterrupted, and when last seen (in June, 1896) the lad was in good health and had been in active work since the spring of 1894. There was some tendency to hernia through the cicatrix. With the exception of the concretions found at the first operation no fæcal matter had passed through the wound at any time.

Remarks.—This case in its protracted and stormy course, and in the extensive sloughing of false membranes that occurred, resembles that described by Mr. Stanmore Bishop in THE LANCET of Dec. 19th, 1896. I am at a loss to explain the convulsions that occurred—I suppose they were a toxic effect of the retained intestinal contents. I have, however, seen one such fit occur in a man during the course of a mild attack of appendicitis. I was inclined to attribute the sloughing in my case to some secondary septic contamination the result of puerperism and dirty surroundings, but in Mr. Bishop's case, in which the lesions must have been very similar, there were no such influences. The development of a dangerous degree of abdominal distension after an apparently satisfactory operation was, I think, a remarkable feature in my case. I do not think Mr. Moynihan, in his article in THE LANCET of Dec 26th, 1896, quite fairly represents the advice of Professor Reclus in regard to the operative treatment of these cases, for in the article on Appendicitis in the sixth volume of the "Traité de Chirurgie," edited by Reclus and Duplay, on p. 527 there occurs this passage: "Roux, ... Dennis, Reclus, Berger, sont d'avis que trente-six ou quarante-huit heures d'aggravation progressive justifient pleinement l'intervention." One other curious phenomenon I met with in what I believe to have been an appendix case is, perhaps, worth relating. In the beginning of November, 1889, a man, aged thirty-four years, had abdominal pain and fever followed by well-marked exudation in the right iliac region; his symptoms were never acute, but in the second week, when the exudation was clearly subsiding, there developed emphysema over the right abdominal wall and the back of the right thigh; this persisted some three days and was not attended by any exacerbation of symptoms; no suppuration occurred. He made a good recovery without operation. I last saw him in the early part of 1896 and there had been then no recurrence. I think there must have been in this case a minute extra-peritoneal perforation.

Upper Edmonton.

REMOVAL OF A BULLET FROM THE THIGH AFTER THREE YEARS BY THE AID OF X RAYS.

BY W. J. COLLINS, M.S., M.D., B.SC. LOND., F.R.C.S. ENG.,

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A MAN, aged forty-three years, when leaving the train at Halifax, Nova Scotia, about three years ago, was shot at by a woman carrying a revolver. The woman was a stranger to him. At the trial a plea of insanity was set up, but failed, and she is undergoing fourteen years' imprisonment. Examination at the time showed that a bullet had entered the right thigh between the great trochanter and the crest of the ilium. An attempt was made to extract it, but unsuccessfully. On Aug. 28th of this year he applied for admission under my care at the London Temperance Hospital. He was a healthy man; the cicatrix of the wound of entry was plainly visible about an inch above the right great trochanter. On the outer side of the right thigh, about midway between the great trochanter and the outer condyle, was a small abscess, evidently leading to a sinus. This had only appeared about a fortnight, and there was no

FIG. 1.

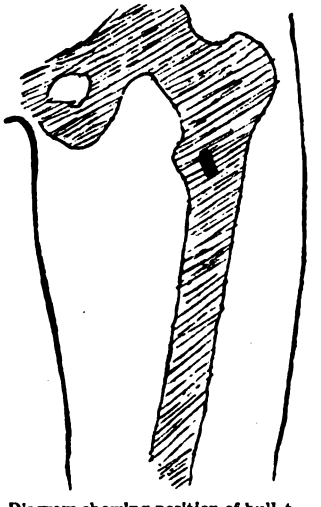


Diagram showing position of bullet as seen in skiagraph.

FIG. 2.



Facsimile of bullet.

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other known cause for it than the possible effects of the presence of the alleged bullet. On Aug. 31st he was by my direction x-rayed by Messrs. Coxeter, and being satisfied from an inspection of the negative of the presence of a bullet in the neighbourhood of the femur about the level of the trochanters I determined the same day to make an attempt to extract it. It was not possible to adjust an "Esmarch" at this level. The single radiogram did not permit of predication as to the bullet being in front of, or behind, the femur. I accordingly elected to follow the sinus above mentioned as an Ariadne's thread to the object of my search. Following for some six or eight inches this sinuous track by the guidance vouchsafed by its granulation-clad walls I reached the femur at the level of the lesser trochanter. My left index finger led me to a hard-walled cavity at the back of the femur, in which I felt the end of the imprisoned bullet. I passed a Nélaton's probe over its surface, but without a very reassuring result. A pair of sequestrum forceps, however, easily facilitated the extraction of the bullet. The wound healed rapidly and he was discharged on Sept. 16th. The bullet was a conical one, three-quarters of an inch long and seven-sixteenths of an inch broad.

I have used the x rays in several other cases. In one I was led by their use to the discovery and extraction of a portion of a needle jammed into the superior tibio-fibular articulation so firmly that it required considerable force to remove it with pliers. I ought to add, by way of caution, that in another case I was assured by the radiographer that there was a needle in a boy's knee, as the boy himself alleged and as a radiogram seemed to show. I opened his knee-joint and searched in every nook of that joint and found nothing. On again submitting him to the radiographer I was assured the needle had disappeared. I am glad to say the joint was none the worse for its searching scrutiny, and the boy afterwards ran about without any pain or inconvenience. I merely cite this case to show that some caution is necessary in interpreting our newly acquired means of diagnosis. I also know of a case in which a peculiar appearance of a portion of the femur led the radiographer to infer the presence of necrosis of a considerable area of the shaft of the bone. The symptoms of the case were, however, conclusively against such a possibility. This case again leads me to the conclusion that while gratefully acknowledging the valuable addition to our methods of investigation which Professor Roentgen's discoveries have placed in our hands, it is a mistake to suppose that even in the limited region to which the new method is applicable it has reduced surgical diagnosis to the mere contemplation of pictorial effects. Radiography requires surgical insight and surgical judgment to interpret correctly the phenomena it presents us with and to direct appropriately the course of treatment to be founded thereon.

Albert-terrace, N.W.

SWINDON VICTORIA HOSPITAL.—At a meeting of the committee, held on Sept. 28th, it was reported that the total sum subscribed as the Jubilee Memorial in Swindon towards the Swindon Victoria Hospital Endowment Fund was £1847. The expenses amounted to £265, leaving a balance of £1576 to be vested in the trustees of the hospital.

THE SOCIETY FOR PHYSICAL VOICE-TRAINING.—A public meeting was held under the auspices of this society at Nottingham during Church Congress week, with the object of furthering the work amongst candidates for holy orders. Archdeacon Emery gave a brief sketch from the chair of the movement which had its origin at Nottingham, when the British Medical Association met there in 1892, and mentioned the names of Dr. Dundas Grant, Dr. Sandford, and Mr. Wyatt Wingrave as the medical pioneers. Archdeacon Emery concluded his address by recalling to his hearers the memory "of his old college friend, the late Rev. Professor D'Orsey, who had done so much for thirty years to establish a higher standard of elocution at the Universities, in Parliament, and in the Church." The honorary secretary (Miss D'Orsey, a daughter of Professor D'Orsey) reported that the work was going steadily forward, and read a letter from the secretary of the Junior Clergy Society of London asking for a medical lecturer to address the clergy at Sion College in October as a proof that laymen were waking to the facts that voice-training had its distinct medical side.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A PERSONAL EXPERIENCE OF MALIGNANT DISEASE OF THE LARYNX.

BY C. FLEMING, L.R.C.P. & S. IREL.

THE loss of so many valuable lives from cancer of the larynx, the importance of early diagnosis, and of skilled surgical interference, is my excuse (if any is needed) for bringing my own case before the readers of THE LANCET. About the end of June, 1895, my friends noticed a certain amount of change in my voice—huskiness or weakness, they said. I spoke as if I had chronic "laryngeal catarrh." I attributed it to getting heated whilst bicycling and congestion of the throat following from the inhalation of the colder air. My voice became very gradually more muffled in tone; I had no other discomfort whatsoever, no pain, no tenderness on external pressure, no swelling, no glandular trouble, no difficulty in swallowing, in fact, up to the very last I felt in perfect health. Loss, or rather a husky condition, of voice was absolutely my only symptom. In November, 1895, as matters grew worse, I consulted Dr. (now Sir Felix) Semon. After a thoroughly exhaustive examination he discovered a very small growth on my left vocal cord, no surrounding inflammatory or glandular mischief, and the character of the growth not determinable. He wished to see me again in two months' time. As I did not seem to get very much worse I am sorry to say that I delayed my next visit for nearly five months; even then there was no definite diagnosis. In May, 1896, I made my next visit. Dr. Semon again thoroughly examined my throat, and expressed a wish that I should consult Mr. Butlin; I did so, but he was also unable to come to a conclusion as to the nature of the growth. The first week in July, 1896 (or as nearly as possible twelve months from the commencement of my symptoms), I again saw Dr. Semon. At this visit he advised an operation, at least of an exploratory character, but wished to have his opinion supported by another. Accordingly, I called again on Mr. Butlin, who, without being aware of my visit to Dr. Semon, said, "If I were you I would have an operation." I made up my mind at once. It was the first inkling I had given me that the growth might be malignant and I knew that I must lose no time. I now come to a most important factor in my case—namely, the universally expressed opposition I had to encounter from friends—medical and otherwise—when I expressed my intention of submitting to an operation; in fact, I must confess to sitting down to write for an appointment with a very eminent surgeon at their earnest solicitation. Happily my better judgment, or I should say my thorough confidence, prevailed. I can now fully understand the difficulties the lay mind has to contend with before accepting the final verdict and the reason why so many valuable lives have been sacrificed through similar "friendly" advice and misguided persuasion. I placed myself unreservedly in the hands of Sir Felix Semon, and on July 21st, 1896, he performed his operation, tracheotomy, laryngotomy, and complete removal of the left vocal cord, together with a certain amount of healthy tissue. The operation lasted one and a half hours. On the fourth day I sat up for an hour; on the twelfth day I went down to Brighton for a few days before returning to my work; and at the end of a fortnight the external wound had quite healed. Since then I have had no drawback, and my voice has wonderfully improved in tone and quality. The last examination, on July 29th, 1897, disclosed a most satisfactory condition, a well-marked cicatricial ridge having formed just as Sir Felix Semon expected, and quite accounted for the improvement in voice. My age was forty-nine years last February. There is no family history of malignant disease. The following is a copy of Mr. Shattock's microscopical examination: "The sections show typical squamous-celled carcinoma in an early stage. ..... Little horny transformation has taken place. I have made also horizontal sections to see how far the removal is microscopically complete. No cells of the growth reach the divided edge."

Worksop.

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THE GLANDULAR FEVER OF CHILDHOOD.

By G. SCOTT JACKSON, M.D. GLASG.

THE following case appears to me to be fairly typical of this disease as described by Dr. Dawson Williams,[1] and yet it presents one or two points of peculiar interest. First as to the "point of entry" of the infection. In this district at present we are passing through a well-marked epidemic of "milk infection," the sufferers presenting evident symptoms of systemic poisoning, with purging, vomiting, and high temperature, which are only relieved by the complete withholding of all milk. In several instances there are also present one or two swollen glands in the neck which I presume are caused by absorption of poison from the intestine. The diarrhœa, however, in these cases carries off the poison already present and the change of diet prevents any fresh introduction. Where such is not the case and constipation is present instead of diarrhœa the absorption is more complete and glandular fever, as in the instance I am about to relate, results. This child's symptoms were so very similar to those of others round about him suffering from the epidemic, with the exception that (1) he was constipated instead of purged, and (2) the swelling of the glands was more complete, that I cannot help thinking that there is some connexion between the two disorders. That the infection is derived from the intestine rather than from the pharynx is the view held by many responsible authorities. Secondly, as to the termination of the disorder Dr. Dawson Williams observed that this is "marked by the passage of thin greenish fæces mixed with mucus" and Dr. Charles W. Chapman[2] noticed epistaxis in four out of five cases. In my case convalescence was begun by a sudden attack of hæmaturia and by the voiding of two or three offensive stools. The temperature came down at once and improvement was fairly rapid.

The patient was a healthy child, aged three years, with good family history. He went to bed apparently well on Sept. 6th, but he awoke soon after midnight screaming and seemed to be quite delirious. He vomited once or twice and was very feverish. He was a little better on the morning of the 7th, but was hot and restless all day. After another bad night I was sent for on the 8th to find the child with a temperature of 102·8° F. and a certain amount of tenderness across the bowels, which had not been moved for two days. There was no sore throat and no marked redness of the pharynx. The next day the temperature was 103° and there was a tender swollen gland along the anterior border of the left sterno-mastoid. The bowels had been opened after a dose of castor oil, but the tongue was very coated and the child refused all food. On the 11th the whole chain of glands on the left side were enlarged and tender. The temperature was still up to 102·6° and the patient was much distressed. The right side now began to be affected and on the morning of the 14th the head seemed to be fixed by a row of hard glands on each side, the temperature reaching 103·5°. In the evening of the same day I was summoned to find that the patient had been seized with an attack of hæmaturia. The temperature, however, was lower (102°) and the child seemed easier. He had a fairly good night and the next morning, after the passage of two or three watery stools, the temperature fell to normal. Though the urine contained a trace of albumin till the 20th and the swelling of the glands did not entirely subside for some little time, the child never afterwards retrogressed, but made a complete, if somewhat tardy, recovery.

Alnwick.

A CASE OF ACUTE INTUSSUSCEPTION.

By FREDERICK BROOKE, M.R.C.S. ENG.

CASES of acute intussusception are so grave in character that notes of those in which treatment has been attended with a successful issue will probably be of interest, especially since, as appeared in a recent article by Dr. F. Holme Wiggin in the columns of THE LANCET,[1] opinions differ as to the best method of treating them.

On Aug. 29th last I was called to see a female child, eleven months old, who, the mother informed me, had suffered from constipation and until that morning had not had a motion since Aug. 27th. The motion which had just been passed was lumpy in character and was slightly streaked with blood; it was not saved for my inspection. The child was well nourished but pale, was rather sunken about the eyes, and had a somewhat anxious expression. She had occasional paroxysms of pain, but in the intervals she was bright, took notice of her surroundings, and raised herself up in her cot. There was no vomiting. The pulse was not quick, but full and regular, and the skin was dry. The appetite had fallen off. Two hours before my arrival the mother had administered a teaspoonful of castor oil. The abdomen was moderately distended and not particularly sensitive to pressure. The resonance of the colon was well marked. A provisional diagnosis of constipation associated with flatulence was made and laxatives and a carminative mixture were prescribed. At my visit about 11 A.M. on Aug. 30th the eyes were sunken and the face pale and anxious-looking. The child was in great pain, there were violent straining and tenesmus, and the buttocks were covered with blood-stained mucus which was seen to be exuding from the anus; there was frequent vomiting. On passing my forefinger into the rectum I found it almost entirely occupied by a sausage-shaped tumour round which the finger could be swept and presenting a central orifice. Pressure, however slight, on the abdomen gave rise to great pain. To effect reduction I made use of enemata of warm water combined with inversion of the patient. At the first attempt practically none of the water was retained, but as it was forcibly injected a subsequent examination showed that the tumour had receded very slightly. After a short interval another pint of water was injected slowly but forcibly, and since a certain quantity of this was retained I now had the patient inverted. Per rectum the intussusception could now only barely be reached with the tip of the forefinger. Once more the treatment was repeated, the rectum being encouraged to retain as much of the fluid as possible and inversion practised as before. A further examination failed to show any signs of the presence of the intussusception. The hips were now elevated and the child ordered to be kept perfectly quiet. On calling two hours afterwards I was informed that the patient had rested quietly, had not been sick, and was very willing to take nourishment, which was only allowed in small quantities at a time. Drop doses of tincture of opium were ordered every four hours to quiet peristalsis and the patient was allowed to suck ice. On my visit at 11 A.M. on Aug. 31st I found that the child had slept for two hours at a time and that she had pain only occasionally; the abdomen was sensitive to pressure and was moderately distended. She vomited once in the early morning and once again at 6 A.M. The patient seemed brighter and the eyes were less sunken. During the day she passed flatus several times. The resonance of the colon was well marked. At 8 P.M. I was informed that there had been no further vomiting and that the child had "talked" for the first time since her attack and shown an inclination to play. Nourishment was taken readily. There was no discharge from the bowels. On Sept. 1st the child passed an almost healthy motion in the morning, the only departure from normal being the admixture of a perceptible quantity of mucus. She was laughing and playing in the mother's arms when I made my visit. The further progress of the case presented no points of interest and there has been no return of the symptoms.

West Bridgford, Notts.

[1] THE LANCET, Jan. 16th, 1897.
[2] THE LANCET, Feb. 20th, 1897.

[1] Infantile Intussusception: A Study of One Hundred and Three Cases treated either by Enemata or Laparotomy, and a Report of Two Hitherto Unreported Cases, THE LANCET, Aug. 28th, 1897, p. 525.

SLAUGHTER-HOUSES IN BATH.—At a meeting of the Bath Sanitary Committee, held on Oct. 4th, the sub-committee recommended that if a person or a private company would submit plans for the erection of slaughter-houses on an approved site they should be favourably entertained. This recommendation was adopted, and a resolution was passed urging the Corporate Property Committee, who own the slaughter-houses in Parson's Yard, to treat for the surrender of the lease in order to close them.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. BARTHOLOMEW'S HOSPITAL.

A CASE OF STREPTOCOCCUS PYÆMIA TREATED WITH ANTI-STREPTOCOCCIC SERUM.

(Under the care of Mr. BUTLIN.)

IN THE LANCET of July 10th, 1897, p. 91, we published a case of pyæmic arthritis which had been under the care of Mr. Butlin and Mr. Lockwood and in which recovery occurred after the use of anti-streptococcic serum; but in that case no bacteriological evidence of the presence of streptococci was available, and, moreover, there was no definite proof of any benefit resulting from the injections. In the following case the pus from an affected joint gave a pure culture of streptococci, but the injections seemed to be of no obvious utility and death ensued very much as if the serum had not been employed. Up to the present time no certain decision can be expressed as to the value of anti-streptococcic serum; its employment has in certain cases been followed by recovery, but not in a sufficient proportion to justify the opinion that the serum was certainly the cause of the recovery. It is therefore highly desirable that as many cases as possible should be put on record in which it has been employed intelligently and with a bacteriological examination of the case. For the notes of this case we are indebted to Mr. J. Preston Maxwell, house surgeon.

A man, aged sixty-seven years, was admitted into St. Bartholomew's Hospital on April 15th, 1897, with the following history. He had always enjoyed good health until August, 1891, when he had an attack of cellulitis of the right arm and forearm. The following December he was admitted into the hospital, and a localised abscess in the neighbourhood of the right elbow was opened. In January and again in July, 1893, he was admitted with another abscess in the same situation. No necrosed bone was found on any of the occasions, and he left the hospital in August, 1893, well, with all the incisions soundly healed. He returned to the hospital on April 15th, 1897, saying that for the past week the right elbow had been swollen and painful and that it had begun to discharge. From the middle of the forearm to the middle of the arm the limb was swollen and œdematous and the skin was red. In front of the elbow-joint was a discharging sinus, and fluctuation could be obtained over the inner surface of the ulna. Several scars of old incisions were present around the joint. The temperature was 97° F., the pulse was 96, and the respirations were 30. About an hour after admission he had a severe rigor and the temperature ran up to 104°, falling again to normal in about an hour. The same evening he was anæsthetised and the elbow explored. The sinus in front was found to lead directly into the elbow-joint, of which all the articular surfaces were bare of cartilage. The joint was washed out with a solution of biniodide of mercury (1 in 2000), and counter incisions for drainage were made. The abscess on the inner surface of the ulna was opened, and found to communicate with the joint. He passed a bad night, and his temperature gradually rose till it reached 103° at 11 A.M. on the 16th. His condition was then worse; he was drowsy, his pulse was 100, and the respirations were 30; the bowels were not open, and as he had retention of urine a catheter was passed. In the evening of the 16th he began to complain of pain and stiffness in his left shoulder-joint, which was found to be distended with fluid. He was again anæsthetised, the skin was disinfected, and a sterilised needle was introduced into the joint; pus was withdrawn, which on being cultivated yielded a pure culture of streptococci. An incision was made downwards from the point of the shoulder, the fibres of the deltoid were separated, and the joint was opened; it was washed out thoroughly with solution of biniodide of mercury (1 in 2000) and a counter opening made for drainage into the axilla. His temperature continued to rise, and at 7 A.M. on the 17th it had reached 104°. He was worse and had begun to pass his motions under him. At 6 P.M. the first injection of anti-streptococcic serum was given, 15 c.c. being injected into the right rectus abdominis muscle. At midnight 10 c.c. more were injected, and sulphate of quinine was given in doses of five grains every six hours until twenty grains had been given. On the 18th his condition was still worse; he was semi-comatose and was passing everything under him. His temperature was 102°, the pulse was 84, and the respirations were 40. He was perspiring profusely and was able to take fluids fairly well. His whole body seemed to be tender, pressure anywhere appearing to cause pain. His other joints were natural. The joints which had been opened were irrigated daily with a solution of biniodide of mercury (1 in 4000) and dressed with antiseptic gauze. At 11 A.M. a further injection of 10 c.c. of the serum was given, and at 10 30 P.M. 15 c.c. were injected. The administration of quinine was also continued. He grew steadily worse, and on the 19th he was almost comatose and could not recognise his friends. The urine and motions were passed involuntarily. The temperature varied from 100° to 104°; 10 c.c. of anti-streptococcic serum were injected at 10 30 P.M. and the dose was repeated at 11.30 P.M. He now commenced to take nourishment badly and was unable to swallow properly. During the 20th he steadily grew worse; 10 c.c. of the serum were given at 10.30 A.M., but after this the injections were stopped, as it was clear that the patient was dying. He remained unconscious till his death at 1 20 A.M. on the 21st. After death the temperature rose till it reached 105°. A post-mortem examination was not allowed, but as far as could be ascertained no result whatever had followed the injections and no rash or inflammation appeared at the sites of puncture of the hypodermic syringe.

ST. MARY'S HOSPITAL.

FIVE CASES OF INJURY TO THE HEAD.

(Under the care of Mr. H. W. PAGE.)

IN few of its departments has surgery made more advance of recent years than in the treatment of fracture of the skull and its complications. Trephining was always a perilous procedure when there was so much likelihood of a septic meningitis following the operation; but at the present time it is not accompanied by anything more than a very slight risk if due care is taken in the performance of the operation and complete asepsis is practised. C. B Nancrede has shown[1] that at the present time the mortality from trephining is less than one-seventh of that occurring in pre-antiseptic days.

CASE 1. *Abscess in frontal lobe following fracture of frontal bone.*—A little boy was admitted to the hospital early in March, 1896, with a small open wound over the right frontal eminence, from which there was said to be a great quantity of purulent discharge. It had been caused by a blow on the part some weeks before. The child had a normal temperature and seemed to be in no way ill save that he was somewhat apathetic, listless, and dull. The propriety of examining the bone was obvious, and having enlarged the wound there was found a punctured fracture, and pus welled up from within the cranium. A piece of bone was therefore removed by a quarter-inch trephine, when it was seen that the pus came from beneath the dura mater and the probe passed into a cavity in the frontal lobe. The opening into this was dilated, and thus the cavity was washed out and a small drainage-tube was inserted. The discharge ceased with striking rapidity and in a few days the boy was well. A marked change, moreover, became noticeable, in that the dull, listless, and apathetic child became bright, merry, and playful. The case, indeed, afforded a very good example of the kinds of mental disorder which have often been noted in connexion with lesions of the frontal region of the brain.

CASE 2. *Compound comminuted depressed fracture; trephining a week after the injury.*—A boy, aged ten years, was brought to the hospital on March 19th, 1897, with a history that on the 12th he had been struck by the seat of a swing on the right side of his head. There was a good deal of bleeding from a wound an inch long an inch above the tip of the auricle,

[1] Medical News, Philadelphia, 1888, p. 85.

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and this having been attended to by a surgeon the lips were drawn in apposition with plaster—somewhat antiquated surgery. The boy was more or less unconscious for a few hours. On the 14th and 15th there is a vague account of twitching of his left limbs having been noticed by his mother, and he was said to have wandered. He commenced also to complain of pain in his head, and as, moreover, his temperature had begun to rise and the wound discharged and looked foul he was brought to St. Mary's Hospital. The wound was now much inflamed and the temperature was 100° F. The child was perhaps rather drowsy, but it could hardly be said that any of the symptoms were really indicative of cerebral disturbance, the state of the wound being sufficient to account for them. He was, however, promptly removed to the theatre, and under anæsthetic exploration it was at once obvious that there had been considerable injury to the bone. The wound was therefore prolonged right and left, and a semilunar flap was turned down. It was then seen that there had been an extensive horizontal fracture involving the region and following the direction of the squamous suture three inches in length from the pterion backwards. The upper part of the bone had been driven in and was so tightly wedged beneath the lower that it became necessary to make three separate trephine holes in order to raise and replace it in position. This was satisfactorily accomplished, and from the dura mater itself there was cleared some adherent stuff which looked like partially decolourised blood-clot mixed with lymph, but no pus was seen. The brain pulsated naturally. With the application of carbolic acid fomentations the wound was in three days clean and the temperature had fallen to normal, but healing took place by granulation and was somewhat slow because of the exfoliation of a piece of the outer table of the replaced bone. Never at any time were there symptoms of cerebral irritation or disturbance, and in the middle of May he left for a convalescent home. Two months later he was seen to be quite well.

CASE 3. *Compound depressed fracture; wound of the dura mater.*—A youth, aged seventeen years, was admitted to the hospital in an unconscious state on the afternoon of Dec. 18th, 1895, having been thrown from a trap, of which the end of one shaft had then been driven into the side of his head. Soon after admission he vomited blood, which had probably come from the nose. The unconsciousness then became less profound and he was able to speak. Over the left parietal eminence there was a superficial graze, and immediately above the auricle was a jagged lacerated wound which was bleeding freely. Beneath it was a deep pit, as of in-driven bone. A flap of scalp having been turned back it was seen that a circular piece of bone, the size of the end of the shaft, had been driven inwards. This involved the squamous portion of the temporal as low as the petrous. The opening having been enlarged by Hoffmann's forceps the circular piece of bone, which was really in three fragments, was easily withdrawn. There was a laceration of the dura mater, and particles of brain substance, together with fragments of dried paint from the end of the shaft, were removed in the process of cleansing the depths of the wound. The bleeding had been altogether superficial, although at one time it was feared that the source of it might be a branch of the middle meningeal. The wound was closed without drainage, remained dry, and healed at once. The pulse and state of consciousness improved after the operation, but the temperature continued to be subnormal for four days. When he left the hospital early in February he was well, his long stay having been necessitated by the treatment of old-standing discharge from both middle ears. In connexion therewith it should be said that for a few days after the accident he had slight left facial paralysis, and it was by no means certain that this was not due to fracture extending into the petrous portion of the temporal bone.

CASE 4. *Compound fracture; extensive splintering and depression of bone.*—On Nov. 22nd, 1893, a boy, aged fifteen years, fell forty feet on to a rockery in a garden beneath when cleaning windows, and was brought directly afterwards unconscious to St. Mary's Hospital. He rallied, however, soon. There were several minor injuries and a bruised wound of the scalp immediately above the right ear leading to bone which was evidently much comminuted. There was no bleeding of moment. By enlargement of the wound the fracture was seen to involve the region of the pterion, and portions of all the bones which meet at this part were found to be broken and depressed. It was necessary to trephine in two places in order to elevate, and it was then found that a portion of the squamous bone of about the size of a postage stamp had been driven in towards, and lay horizontally upon, the floor of the skull. It might easily have been overlooked. When all the parts were restored to their relative positions the deficiency of bone in the cranial wall was of a dumb-bell shape—two trephine holes with an intervening portion—and extended in the horizontal direction for two inches. The middle meningeal was intact, although lying immediately beneath the line of fracture. The soft parts were adjusted with deep and superficial sutures, and excepting that middle part of the wound which had been originally contused forthwith healed without trouble. And the boy himself, as far as his head injury was concerned, was soon quite well, so that when he left on Jan. 9th, 1894, he returned to his former master's employ. When heard of subsequently he was in the best of bodily and mental health.

CASE 5. *Fracture of base; fatal hæmorrhage from lateral sinus.*—Remarkable in more ways than one this case was certainly beyond the range of surgery, but it is worthy of note because of the several interesting features which it presented. A man, aged forty years, was picked up in a street near the hospital by a policeman who the moment before had passed him walking, but happening to look round saw him, as he thought, in a fit in the middle of the road. When admitted the man was profoundly comatose, but twitchings were noticed of the right angle of the mouth, of the right arm and leg. There was no evidence of injury and he was taken into a medical ward, the story of the policeman and his symptoms alike suggesting that this was the proper place for him. He had not been long in, however, before a distinct swelling was seen in the left temporal region, and as this somewhat rapidly increased in size Mr. Page was sent for. The dressers meanwhile began to shave his head, and when the surgeon arrived at the hospital three and a half hours after the patient's admission he was greeted with the announcement that the man had that moment died. And dead to all appearances he lay. Without a second's delay, therefore, artificial respiration was begun, and under artificial respiration, the pulse having now returned, he was moved to the theatre and proceedings were undertaken to explore. A flap having been turned down from the temporal region a horizontal fracture was seen to run right across the squamous bone and blood was issuing from it. A trephine opening was made over the middle meningeal, but this vessel was found to be whole. Blood, nevertheless, poured in volumes from between the dura mater and the bone, and seemingly came from the posterior part of the cranial cavity. Plugs of gauze failing to arrest it a second opening was made over the temporo-sphenoidal lobe, and it now became possible, although with much difficulty, to plug and arrest the bleeding, which appeared to come from the neighbourhood of the left lateral sinus, if not from this blood channel itself. Artificial respiration was now no longer necessary, but after so much terrible bleeding the pulse had become extremely feeble and the man gradually sank, at no time having aroused in the slightest degree from the profound coma in which he lay. It was found that he had been a hospital patient five years before for concussion of the brain and that he had never been quite right mentally since.

Necropsy.—At the necropsy the frontal lobes were found to be most severely and extensively lacerated, and the left hemisphere was much flattened, as by compression from recent blood extravasation. There was an extensive horizontal fracture on the left side of the skull, and a basal fracture, starting near the lambdoid suture, ran in various directions and crossed the left lateral sinus at its sigmoid curve and freely lacerated it in its course. This was the source of the hæmorrhage which was in the end controlled. There was no sign of hæmorrhage in the interior of the brain.

Remarks by Mr. PAGE.—Cases 3 and 4 may be contrasted with 1 and 2 in that in the two former the promptest treatment was brought to bear upon the injured skull and restoration to health was impeded by no untoward event, whereas in Cases 1 and 2 dangers of no inconsiderable import arose in consequence of delay. Waiting for symptoms, waiting, that is, for the mischief that gives rise to them, is happily a thing of the past. It is hardly worth while to speculate what might have been if this or that had been done differently or earlier in Case 5, for I take it that even if the lateral sinus hæmorrhage could have been stayed with greater expedition the man had undoubtedly received mortal injuries to his brain. I would direct especial attention, however, to the fact that artificial respiration was of real

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service in restoring life, and in giving the opportunity of resorting to measures which in a less serious case might have been followed by success. And it is conceivable that death from compression of the brain by blood might thus be averted, when in case of unavoidable delay it would otherwise prevent resort to the only means which the surgeon has at his disposal for attempting to save life. I am indebted to my dressers, Mr. Tenison, Mr. Gardiner, Mr. Wilson, and Mr. MacCallan for the notes of these cases.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Presidential Address.—The Works of John Arderne.

A SPECIAL general meeting of this society was held on Oct. 11th, the retiring President, Mr. REGINALD HARRISON, being in the chair.

The reports of the council and treasurer were read and adopted, and showed that the society is in a flourishing condition. A vote of thanks to the retiring president and to the retiring secretary, Mr. G. R. Turner, were carried with much enthusiasm. The first ordinary meeting of the society for the present session was then constituted, the President, Dr. SANSOM, being in the chair.

The PRESIDENT delivered his inaugural address on the Investigation of Some of the Nervous Disorders of the Heart, of which the following is an abstract:—There are some variations from the normal functioning of the heart which are attended by feelings of acute pleasure. This fact has been recognised from time immemorial and has been incorporated into the language of every-day life. So we have the words in the vernacular—*hearty*, *heartfelt*, and, derived from the Latin, *cordial*, with its substantive, *cordiality*. Conversely, an aching heart is in ordinary language the expression of sorrow and depression. It is a truism to many that variations of the functioning of the heart associated with subjective feelings of pleasure or of pain are consistent with a structural integrity of the organ so far as can be determined by physical means of investigation. Perturbations of the heart's rhythm, whether in the sense of tachycardia or of arhythmia or of bradycardia, are essentially independent of any structural disease of the heart and of its valves, and are entirely due to causes involving the nervous mechanism of the cardiac reflex. In a great majority of such cases careful physical examination during life reveals no trustworthy evidence of structural disease, and in some of the few in which death has occurred, and has been followed by necropsy, no organic changes in the heart have been noted. I conclude that when structural disease of the heart has been observed in the subjects of perturbed rhythm, either the latter has been a coincidence, a superadded phenomenon, or the organic cardiac changes have been secondary to the disorder of the nerve mechanism. For instance, I have seen well-marked Graves's disease supervene upon chronic valvular disease, the result of antecedent rheumatic endocarditis; and I have observed dilatation of the heart with mitral incompetence to occur in the course of Graves's disease when there has been no reason to suspect any intercurrent malady. In the latter case I have found that the signs of structural disease of the heart have borne no proportion to the degree of cardiac tumult. The subject of a very rapid heart (from 120 to 160, such rate being manifested for many months) may never show signs of cardiac dilatation or of structural change, whilst one in whom there is only a moderate tachycardia (100 and under) may manifest the advent of undoubted dilatation of the left ventricle with valvular incompetence. It is therefore necessary in every case that in addition to the employment of the ordinary method of physical diagnosis for the discovery of organic changes within the heart there should be a careful investigation of the nervous system, more especially in its relation with the cardiac reflex. On this point I propose to suggest a scheme of examination and to offer a few hints. It will of course be understood that what I propound must of necessity be brief and incomplete. In the first place I would urge the importance of keeping the patient who is to be examined as tranquil as possible. I dare suggest that in some instances it is probable (in the cases of candidates for life assurance, for example) that a life has been embittered because the physical examination has been conducted on a subject in a state of abnormal excitement, and a systolic murmur at or near the apex has been wrongly interpreted as the index of an organic disease. I suggest, therefore, that the examination should be commenced when the patient is in the sitting position, the ordinary clothing not being removed. Amongst the most important are the signs observed by inspection of the eyes and eyelids. Any protuberance of the eyeball will, of course, be observed and its relation with the condition of the thyroid and the rate of the heart's pulsation recorded. Any retraction of the upper eyelids towards the margin of the orbit must be noted, for this is a sign of considerable importance. It often exaggerates the prominence of a bulging globe and sometimes it produces the semblances of an exophthalmos when there is really no prominence of the globe. Another sign is observed in regard to the upper eyelids in many cases of tachycardia. When the patient has been told to close the eyelids gently the upper lid has manifested a very marked and unusual tremor. This sign may be observed in the early stages and also in the recovering stages of Graves's disease. Von Graefe's sign and Dalrymple's (eyelid) retraction often co-exist, but the one may be observed without the other. In some cases the normal balance of the muscles of the globe is somewhat perverted, so that one eye appears to be on a lower level than the other.[1] I have also noted in some instances a decided inequality of the pupils—of course, unexplained by organic causes—which become restored to the normal when the other disorders of function ceased. When these signs exist, especially in combination, I think they have an important significance. In the great majority of cases they are associated with heart disturbance or heart distress. The most frequent form of disorder is tachycardia, the rapid heart, persistent or paroxysmal. This has long been recognised; the association of the eye and eyelid phenomena with Graves's disease, of which tachycardia is so marked a feature, has been fully acknowledged. Less frequently the association is with extreme irregularity of the heart's action; and such irregularity, rather than rapidity, I have found in some cases of typical Graves's disease. I have observed well-marked von Graefe's sign in a man, aged forty-nine years whose pulse was only 68, but showed very marked irregularity, and in whom there was much subjective heart distress. In some of the cases in which I have observed the signs noted there were great variations of rate in the heart-beat, a state which may perhaps be termed irritable heart—for instance, in a man aged forty-eight years, manifesting slight exophthalmos and inequality of pupils, the heart-rate 76 in the sitting position, 84 in the standing, and then a sudden rise (without any evidence of discomfort) to 114. In other cases, though there have been no perversions of rate and rhythm of the heart to be noted, the patients who have shown well-marked eye and eyeball signs have manifested symptoms of distress referred to the heart. It is no doubt correct that well-marked eyelid phenomena may occur (though rarely) in those who show no cardiac signs or symptoms. Sharkey found von Graefe's sign in 12 out of 613 cases of all disease in his out-patient room. Dalrymple's sign has been recorded as frequently seen in neurotic and hysterical subjects. In many of these, however, it is probable that subjective distress at least or else deviations of rhythm occurred. I have seen well-marked von Graefe's sign in a young man addicted to alcohol and in an old woman with emphysema, both of whom manifested heart symptoms. Nevertheless, I cannot doubt that the signs I have mentioned are of considerable practical significance, for they indicate very strongly the probability that the patient who manifests them will present signs of disorder or distress of the heart. It is important that the auditory mechanism and the naso-pharyngeal tract be explored, for from data which I have already published[2] I have convinced myself that irregularity of the heart is sometimes the result of disease of these organs. The pulse at the wrist should be carefully explored by palpation and its lessons supplemented and controlled by a determination of the rate and character of the heart's pulsations as determined by auscultation. Such auscultations should at first be practised when the patient is sitting quietly,

[1] Transactions of the Ophthalmological Society, 1886.
[2] Transactions of the Medical Society, vol. xvi., p. 107.

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the clothing as yet unremoved. Much valuable evidence, notably the accentuation of the second sound in its predominance in the aortic or pulmonic area, is obtained by this preliminary method of auscultation. The existence and site of muscular tremors should be observed and noted. If fine tremors of the muscles of the trunk are present they suggest a disorder of the nervous mechanism of the heart of the nature of Graves's disease. The clothing being removed the chest is, of course, to be examined by the ordinary means of physical diagnosis. In regard to the nervous disorders of the heart the most important points are the determination and the significance of dilatation of the heart and the characters and diagnostic indications of a systolic murmur heard at or near the apex. Extreme dilatation of the heart may occur from causes affecting the nervous elements, such as neuritis of the vagi, and yet the normal conditions may return in the course of a fortnight. The bulk of the heart in some cases varies considerably in the course of twenty-four hours. Hutler brought evidence to show that in the normal heart there are rhythmic diurnal variations in volume. A systolic murmur heard at or near the apex of the heart is sometimes erroneously interpreted as the index of structural disease. It may certainly be entirely independent thereof and only an indication of nervous disorder. In such cases it is of the first importance to determine whether or no there are persistent changes in the bulk of the various chambers or in the sounds which indicate overstrain in the circuits. A loud second sound over the pulmonary artery means structural disease. On the other hand in the case of a systolic apical murmur due to neurosis, the heart is not dilated, and in the great majority of cases is smaller than the normal. A systolic murmur which is independent of structural disease seldom attains its maximum audibility at the exact apex, but slightly to the right, to the left, or above this point. It is usually soft and does not replace the first sound. It does not occupy the whole, but a middle period of the systole (it is meso-systolic). It is much influenced by the movements of respiration. As a rule it is intensified both during expiration and respiration (especially the latter), but it often becomes inaudible at the end of an expiration. If, therefore, rhythmical *crescendo* and *diminuendo* in the sound of the murmur are heard during the respiratory acts the murmur is probably not due to organic change. It is important that auscultation should be practised, not only in the erect or sitting, but also in the recumbent position of the patient. Very frequently a murmur is very audible in the recumbent position, but disappears when the sitting or erect position is assumed. In such case a confident opinion may be given that there is no structural disease. In a minority of cases the rule is reversed, and a murmur which is not detected in a patient in the recumbent position becomes audible when the erect or sitting posture is assumed. Potain has made a most valuable and elaborate study of these which he calls cardio-pulmonary murmurs. He believes them to be due to causes external to the heart. When the heart is distended in diastole certain portions of the adjoining lung are pressed against the thoracic wall and the air is squeezed out of them, when there comes the systolic recession; provided always the muscular contraction is accomplished rapidly the comparatively airless tongue of pulmonary tissue becomes quickly inflated, and this sudden inflation causes the sound. The mechanism reverts for its determining cause to the nervous elements. There must be an abnormal suddenness of ventricular contraction, and for the establishing of the validity of the theory it may persist for months and even for years. With the highest appreciation of the conscientious and elaborate researches of Potain, I think that a more probable explanation of the murmur is to be found in a derangement of the nervous mechanism of the cardiac systole. The ventricular systole is a complex act—a correlated sequence of muscular contractions, as shown by the researches of Roy and Adami, of Ludwig and Hesse. It is not difficult to realise that these may be disturbed and may continue so disarranged for protracted periods, the effect of such disarrangement being a slight mitral reflex, harmless and transitory, or abnormal vibration communicated to certain portions of the structure. Whatever the proximate cause the ultimate cause is a disturbance of the nervous mechanism of the heart. My object has been to urge the importance of an investigation into the nervous condition of the heart, which should go *pari passu* with the use of the ordinary means of physical diagnosis.

Mr. WILLIAM ANDERSON read a paper on John Arderne and his Time (which will appear in full in THE LANCET shortly). He said that the hero of his communication was born in 1307, and was a contemporary of Chaucer, Wycliffe, Froissart, Petrarch, and the great French surgeon, Guy de Chauliac. He practised at Newark, in Nottinghamshire, from 1349 (the year of the Black Death) to 1370, when he settled in London and published some twenty essays in Latin on the treatment of various medical and surgical complaints. He owed nothing to his predecessors in England, where surgical practice was almost entirely in the hands of the illiterate and unskilful. His writings show him to have been well acquainted with the French and Italian writings of the time, and he appears to have been acquainted with the writings of Galen and Hippocrates. Surgery in his day was held in extremely low repute. The regular physicians looked on surgery as beneath their notice and its practice fell into the hands of:—1. Masters of surgery who probably had some slight scholastic training—a class to which Arderne himself probably belonged. 2. The barber surgeons, who had inherited the manual functions of the erstwhile monkish physicians, who were now prohibited by Papal decrees from practising. Neither the masters nor the barbers appear to have done more serious operations than phlebotomy, opening of abscesses, and extraction of teeth. They had no knowledge of how to arrest hæmorrhage, and charms and incantations formed a large part of the treatment. 3. The "specialists," who were chiefly foreign, and native itinerant bone-setters, lithotomists, and others. 4. Amateurs, mostly charitable ladies, with their simples, who probably did no more harm than the regular fraternity. There are twenty-two Arderne manuscripts in the British Museum, most of them fully illustrated, particularly with drawings of the plants which he recommends as drugs. The only operations which he describes fully are those for fistula and for cutting stones from the urethra. But mention is made of a special instrument for crushing a vesical calculus. In his preface to one of his essays, "On the Manner of the Leech," he gives much shrewd advice as to the deportment and private life of a surgeon, coupled with practical hints as to asking for a sufficient fee, giving a guarded if not wily prognosis, &c. His directions for the operative treatment of fistula *in ano* are greatly in advance of what is found in subsequent English writings till we come to the time of Richard Wiseman, although there is little that is in advance of the Greek methods. He could not, however, free himself entirely from the superstitious ideas of his predecessors, teaching, for example, that operations about the anus must not be performed when the moon is in Scorpio, Libra, or Sagittarius, "because these signs token the part in question," and that hæmorrhoids and menstruation are provoked by phlebotomy of the internal saphenous vein; while blood-letting from the external vein has the exactly opposite effect. The external applications which he chiefly employed were arsenic, verdigris, alum, &c., and oily preparations made from various flowers; but there are few of the loathsome preparations which disgrace the materia medica of later times. Of internal medicines, the two which he most commends depend chiefly on opium for their activity. Altogether, although he does not inaugurate a new era he shows both scholarship and capacity far in advance of his contemporaries, and succeeded in raising his profession in the world's esteem.

CLINICAL SOCIETY OF LONDON.

President's Address.—Loreta's Operation for Stricture of the Pylorus. — Cerebral Sinus Thrombosis. — Impaction of Tooth-plate in the Œsophagus.

THE first meeting of the session was held on Oct. 8th, the President, Mr. LANGTON, being in the chair.

The PRESIDENT thanked the members for the honour that they had done him in electing him to the chair, which he had formerly filled temporarily when a vacancy was caused by the death of Mr. Hulke. Alluding to the prospects of the society he pointed out that although its prosperity, as evidenced by the number of members and the state of its finances, was more satisfactory than it had ever been, there were difficulties to contend with. They had to fear the indifference of members as well as the rivalry of younger societies. He pointed out how thoroughly the society had justified its existence, and referred in particular to the important discussions during last session on the operative treatment of disease of the appendix and to the report of the

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committee on myxœdema, which had not only enlightened the profession as to the pathology of the disease, but had led to the discovery of a means of combating the disease which had proved applicable in a number of other morbid conditions. He presented the new volume of the Transactions to the society, congratulating the secretaries on the punctuality with which they had prepared it, and announced that the new index to the first thirty volumes was almost ready and was, he believed, the best index of the kind in existence. In conclusion, he announced his intention of deferring the usual inaugural address until the first meeting of next session.

Dr. WM. HENRY WHITE and the PRESIDENT related a case in which Loreta's operation was performed for the relief of Stricture of the Pylorus. The patient was a man, aged thirty-two years, who had had good health till he was twenty-eight years of age, when he had typhoid fever. For three or four years he had had severe gastric pain increased by solid food and relieved by vomiting, and during the last few months before he came under observation he had emaciated rapidly, and he had become almost unable to retain food at all. In July, 1893, when Dr. White saw him, he weighed only 7st. 3½lb. He was very restless, and there was considerable pain, especially after food. The abdomen was retracted, and on deep palpation an indefinite swelling could be detected in the neighbourhood of the pylorus. As the emaciation and vomiting continued in spite of treatment Dr. White asked Mr. Langton to see him with a view to surgical assistance. It was agreed that the duration of the symptoms rendered malignant stricture unlikely, and the consent of the patient was obtained to the operation of laparotomy in order if possible to perform dilatation of the pylorus. A few adhesions present were easily separated, and the pylorus was found to be very dense and hard. An opening was made into the stomach, and the pyloric orifice proved to be so tightly stenosed that it only admitted a No. 1 catheter. Larger and larger instruments were cautiously passed through the pylorus until at length two fingers could be introduced. The wound in the stomach was then closed with Lembert's sutures. The patient made an uninterrupted recovery, and was able to take solid food on the twelfth day. He was seen three years after operation in perfect health, able to eat anything, and weighing 11 st. 7 lb. The publication of the case had been delayed until it could be certain that the relief of symptoms was permanent — Mr. PEARCE GOULD congratulated Dr. White and Mr. Langton on the success of the operation. He remarked that Loreta's operation had never become popular in this country, pyloroplasty being in much greater favour. Recently at a congress of German surgeons pyloroplasty, or sometimes anastomosis between the stomach and small intestine, had been recommended even when the ulceration was elsewhere than at the pylorus, so as to allow of ready escape of the gastric contents. The objection to Loreta's operation was that there was a tendency for the symptoms to return. He had published several years ago a case in which he performed Loreta's operation for a simple stricture of the pylorus with immediate relief to the patient's symptoms. The subsequent history of that case was very instructive. Some months later the symptoms recurred, and on exploration extensive adhesions were found between the pylorus and the liver, which he broke down, and there was again immediate but temporary relief. Twelve months later he was again compelled to operate and found still more extensive adhesions. At the present time the symptoms had again returned and the patient was in as miserable a condition as before the first operation.—The PRESIDENT said that the operation in this case had been done four years ago before pyloroplasty had come into vogue. He felt certain now that that was the best operation for cases of this description. In such a case as Mr. Gould's, where there was recurrence, he thought that the best course would be to perform gastro-enterostomy. Judging, however, from the statistics of his own hospital the risks of this operation were very great.

Dr. A. G. PHEAR read an account of a case of Cerebral Sinus Thrombosis occurring in a child aged seven years. The onset of the symptoms was abrupt, the child, after calling out loudly, immediately becoming unconscious, and not fully regaining consciousness throughout her illness, of which the duration was twenty days. There was no evidence of middle-ear disease, nor could an account be obtained of antecedent diarrhœa, or of any acute specific fever except measles at the age of five years that there must have been previous ill-health was, however, indicated by the contracted state of the kidneys discovered at the necropsy. The main features of the case consisted of prolonged unconsciousness, with great restlessness and irritability, the child often tossing her limbs about with considerable violence, crying out, and actively resenting interference, though in other respects insensible to her surroundings and passing urine and fæces under her. There were no convulsions or vomiting. The only sign of motor irritation was rigidity of the posterior neck muscles and of the abdomen; the rigidity was persistent, the head being retracted and the abdomen at times hollowed. There was for a short time a slight divergent strabismus. The pupils were equal. No satisfactory view of the fundus was obtained. There was no discharge from the ear, no epistaxis, and no localised œdema about the root of the nose or elsewhere. The knee-jerks were exaggerated; no ankle clonus was obtained. The temperature was raised at the beginning and end of the illness; it gradually fell from 104° F. at the onset to 99°; there was then a period of eight days during which the temperature was normal; later it again rose to 102·4°. Cheyne-Stokes respiration was noted twice; on the first occasion groups of two or three forcible respirations were separated by a prolonged pause; the second occasion was characterised by a gradual rise and fall in the amplitude of respiration. Respiratory symptoms were at no time urgent. Towards the end of the illness diarrhœa set in; with this the strength rapidly failed and the child died from exhaustion. At the necropsy the whole of the superior longitudinal sinus was found to be blocked with partly decolourised adherent and ante-mortem clot, extending for about an inch into the tributory veins on either side. The left lateral sinus was distended with similar clot, continued into the internal jugular vein, the whole length of which was occupied with ante-mortem clot, extending for a short distance into the left subclavian vein. The left innominate vein contained dark post-mortem clot. There was no œdema or softening of the brain substance; the ventricles contained no excess of fluid. There was no evidence of meningitis. Both middle ears were healthy. The left branch of the pulmonary artery was completely blocked with decolourised and adherent clot, extending into its ramifications. The left lung was for the most part solid, of a deep plum-colour and firm consistence; it was in places broken down into a brownish semi-liquid material; there were also small areas in the lung substance, pale and tough, apparently of cicatrised tissue. The left ventricle of the heart was hypertrophied. The kidneys were shrunken, especially the left kidney, which weighed only 1 oz. The capsule stripped with difficulty, and the kidney substance was pale, opaque, and very tough.—Dr. KINGSTON FOWLER referred to a specimen of the same nature from an adult in the Middlesex Hospital Museum in which the longitudinal sinus and its tributary veins were blocked. In this case the whole of the centrum ovale and the cortex were studded with punctiform hæmorrhages, and Dr. Phear's case, he thought, was exceptional in the absence of such hæmorrhages. Great difficulty was found in making a diagnosis at an early stage, as many of the cases occurred in anæmic girls, and the mental condition often strongly suggested hysteria. The condition of the lung was interesting. It would be noticed that infarction was found only in the left lung, and that it was the left pulmonary artery only that was thrombosed, confirming the view (which has been opposed by some pathologists) that infarcts may be due to thrombosis of the pulmonary artery.—Dr. BERTRAM ABRAHAMS said that he was not aware that any of these cases had been previously attributed to renal disease. The causes were to be arranged in three groups: (1) septic, affecting especially the lateral sinus; (2) traumatic, as in a case quoted in which thrombosis of the cavernous sinus followed fracture of the base of the skull; and (3) a depraved condition of the blood such as occurred in anæmia, &c. It seemed to him that in this case the disease might possibly have been septic as there was breaking down of the pulmonary infarcts, and he inquired if any bacteriological examination was made of the thrombi. —Dr. PHEAR, in reply, agreed that it was usual to find hæmorrhages, even so extensive as to lead to softening, but they were searched for in vain in this case. The question of hysteria had been raised, but the sustained pyrexia excluded it. He thought that pulmonary infarcts in a slowly dying unconscious patient were very likely to become contaminated with retained septic mucus from the higher respiratory passages, and he would therefore hesitate to regard the

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disease as originally septic, because septic changes were found in the infarcts. In his Goulstonian lectures Dr. Newton Pitt had referred to renal disease as having been associated with venous thrombosis in several cases.

Mr. G. H. MAKINS related a case of Œsophagotomy for the removal of an impacted tooth-plate in which cellular emphysema developed in the tissues of the neck although the pleura was not injured. The patient was a man, aged forty-eight years, and the plate, which was swallowed during sleep, had been in the gullet for four days. The position of the plate having been determined by the use of the fluorescent screen the classical operation was done at the root of the neck on the left side. During its performance dilatation of the lower angle of the wound was followed by the distension of the loose tissue of the carotid sheath with air. Beyond this when the œsophagus was opened air passed in and out of the tube with the movements of respiration, and as primary union of the wound did not occur, in consequence of the ulcerated condition of the gullet, gastric juice apparently found its way upwards, with the result of somewhat retarding the permanent closure of the wound. The first point was explained by the opening up of the subpleural tissue of the mediastinum and the entrance of air from without, which on expiration was driven into the tissues of the neck, and the second point by the patent condition of the gullet noted at the time of operation.—The PRESIDENT said that he had seen many instances in which foreign bodies after being swallowed had been arrested at the level of the cricoid cartilage. He recalled one case under the care of the late Sir William Savory in which a dental plate had been swallowed five or six days before. There was a good deal of emphysema in the neck, and diffuse cellulitis set up by the ulceration of the œsophagus. The patient died from acute blood poisoning, as in his experience most of these cases did if the plate had been impacted more than a day or two. He had seen air pass down into the anterior mediastinum outside the pleura when glands were being dissected out at the root of the neck, but the cases all did well. — Mr. PEARCE GOULD recalled a case at the Middlesex Hospital in which a tooth-plate had ulcerated through the pharynx and caused death from blood poisoning. It was most important to remember the extreme mortality connected with these cases. He remarked that Mr. Makins's case illustrated the extreme value of the Roentgen rays in detecting not only the position but the existence of the foreign body, as it was often most difficult to determine whether or not there was a foreign body in the œsophagus. He was aware of one case in which a man was supposed to have swallowed a tooth-plate. A probang was passed and the plate was supposed to have passed down into the stomach, but a subsequent examination showed that it had slipped up behind the soft palate. In Mr. Makins's case the escape of gastric juice was a more remarkable complication than the emphysema, and he inquired whether it was acid or contained peptones.—Mr. MAKINS, in reply, said that he thought that the œsophagus was rarely found collapsed, at any rate in adults; and in flatulent conditions he thought that the cardiac orifice of the stomach might be patulous, and it was in this way that he explained the escape of gastric juice in his case. Unfortunately no attempt was made to analyse the fluid which escaped until very small quantities were available, but the discharge had exactly the appearance of that which escapes from gastric fistulæ.

OBSTETRICAL SOCIETY OF LONDON.

The Management of True and False Capsules in Ovariotomy.—Exhibition of Specimens.

A MEETING of this society was held on Oct. 6th, Dr. C. J. CULLINGWORTH, President, being in the chair.

Mr. DORAN read a paper on the Management of True and False Capsules in Ovariotomy. He distinguished a false capsule formed of mesentery, omentum, or inflammatory deposit (Pawlik), a true anatomical capsule, which consisted of the mesosalpinx alone, and a false anatomical capsule, where the lower part of the broad ligament, the parietal peritoneum, or the parametrium was involved. The management of the first variety was simply a question of breaking down adhesions; the treatment of the second and third was a less simple matter. Mr. Doran discussed when a capsule should be cut away, when it should be let fall into the pelvis, and when it should be stitched to the lower end of the abdominal wound and drained. The first course should always be followed, if possible, when the capsule was healthy. The second was necessary when the base of the capsule was too broad to be made into a pedicle, or wherever for any other reasons no pedicle could be formed, the tissue of the capsule being healthy, and hæmorrhage under control. Fixation of the capsule and drainage were needed when hæmorrhage under similar conditions was hard to control, and in all cases where the capsule showed advanced inflammatory changes associated with suppuration of the tumour. In the latter condition oozing of serum increased the danger of septic infection. A case was related where there was free general oozing from the capsule of a large suppurating cyst. The capsule was therefore fixed to the parietes and plugged with sterilised iodoform gauze, which was removed on the third day. Thus hæmorrhage was stopped and sepsis averted. Mr. Doran discussed the advantages and dangers of iodoform plugs. He also dwelt on the prejudice of many surgeons against the practice of fixing the capsule to the wound. The danger of strangulation from a loop of intestine slipping beneath the capsule was theoretical.—Dr. EDEN asked for a fuller explanation of the difference between the true and the false anatomical capsules. A pediculated broad ligament cyst opened up the mesosalpinx, but not the lower part of the broad ligament, which remained as the pedicle, and its capsule would therefore be, according to Mr. Doran, a true anatomical capsule. But many broad ligament cysts burrowed right down into the floor of the pelvis and possessed no pedicle. According to Mr. Doran's classification the capsule of such a cyst would be true in its upper part and false in its lower part.—Dr. HERMAN thought that Mr. Doran had completely disposed of the theoretical objection to stitching the capsule to the wound. — Dr. HERBERT SPENCER agreed with all the main points of the paper, but did not think that intestinal obstruction from adhesion of intestine to the stump in ovariotomy was a rare occurrence. These cases did not go to special hospitals, but the surgeons attached to general hospitals knew that this accident was far from being a rare cause of intestinal obstruction. Cases in which the intact sac could be stitched to the abdominal wall did well with the drainage-tube, but cases in which the sac had been torn or which could not be fixed to the wound and suppurative cases should be treated by gauze drainage. He had employed iodoform gauze for the last four years with very satisfactory results. In the last three years he had only once at a laparotomy used a drainage-tube, and then it was unnecessary. He thought there was in gauze an excellent means of checking hæmorrhage, averting sepsis, and blocking out intestines from torn capsules and infected areas.—Dr. EWEN MACLEAN remarked that in addition to those mentioned in Mr. Doran's paper an ovarian tumour developed within and distending a complete ovarian sac would present a true anatomical capsule of peritoneum which did not involve either the mesosalpinx or the lower portion of the broad ligament.—After remarks by Dr. DRUMMOND ROBINSON, Mr. BUTLER-SMYTHE congratulated Mr. Doran on having introduced such an interesting discussion. His usual practice with regard to the treatment of capsules was as follows. All ordinary thin capsules would be tied and dropped into the pelvis. Where portions of the cyst wall were unavoidably left attached to the capsule, rendering it thick and likely to suppurate, the capsule would be stitched in the lower end of the wound and a glass tube inserted. In those rare cases where the broad ligaments had been enormously separated, and where adhesions had been formed high up in the abdomen previously to the enucleation of the tumour, and where a large bleeding surface was left exposed, the cavity would be plugged with iodoform gauze, which would be left in for three or four days. He had frequently seen cases of iodoform poisoning, and the first symptoms usually appeared about the fourth day and were unmistakable—rapid pulse, sudden rise of temperature, headache, giddiness, and, in severe cases, vomiting.—The PRESIDENT expressed a general concurrence with the views advocated in the paper. With regard to gauze packing he had not had a large personal experience. The removal of the gauze was so formidable a matter and was apt to produce so much distress, both bodily and mental, in the patient that he had never had recourse to it unless he was compelled. At the same time he recognised its immense value in certain cases—as, for instance, in hæmorrhage from vessels to which it was impossible to apply the ligature owing to their lying so deeply in the pelvis.—Mr. DORAN

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observed, in reply, that he had discussed the anatomy of the subject at length in his article on Capsules, False and Real, in Ovariotomy, with Notes of Six Cases.[1] The complicated form of tumour, of which the President and Dr. Eden had reported cases, was Pawlik's cyst, where the broad ligament was not invaded by the new growth, but was adherent to it and stretched over its surface, the false capsule being completed by adherent omentum or mesentery. He was interested in Dr. Spencer's remarks on the frequency of intestinal obstruction caused by an old ovarian pedicle. He would like to know whether in most of these cases the raw surface of the pedicle had been left exposed or sewn over. He made a necropsy many years since on a case of obstruction where the operator had closed the raw surface by suture as a precaution against the very complication that occurred. He used the drainage-tube much less now than formerly. But he found that patients did not object to it, whilst he agreed with the President that packing and abstracting iodoform gauze often gave them great annoyance. He maintained that a pulse of 144 or 156 in a case where Mikulicz's treatment was adopted all other symptoms being favourable clearly signified iodoform poisoning. In reference to Mr. Butler-Smythe's remarks he referred to a case where he removed a large cystic myoma of the uterus. The pedicle fixed by the serre-nœud was hard to keep dry, so it was freely treated with tannin and iodoform powder. The pulse became very rapid and did not fall until the powder was discontinued.

The following specimens were exhibited:—

Dr. MCCANN: Sarcoma of the Cervix Uteri.

Dr. ROBERT WISE: (1) Abortion Sac, with hæmorrhage into the fœtal membranes; and (2) Pregnant Horn from the uterus of a cat.

Dr. JOHN PHILLIPS: Ruptured Uterus, treated by intra-peritoneal hysterectomy. The patient was in the sixth month of pregnancy and the breech presented. All attempts at artificial extraction under an anæsthetic failed. Rupture occurred during the passage of the vertex. The laceration extended from the fundus to the level of the internal os uteri on the left side. On opening the abdomen several ounces of fluid blood escaped, the uterine arteries were tied, and the torn uterus was removed. The pedicle was treated intra-peritoneally. The patient when last heard of, forty-eight hours after operation, was doing well.

Remarks were made by the PRESIDENT, Dr. GRIFFITH, Dr. HERMAN, Dr. HEYWOOD SMITH, Dr. SPENCER, and Mr. DORAN.

Reviews and Notices of Books.

Clinical Methods: a Guide to the Practical Study of Medicine. By ROBERT HUTCHISON, M.D., M.R.C.P., Demonstrator in Physiology, London Hospital Medical College; and HARRY RAINY, M.A., F.R.C.P. Edin., F.R.S. Edin., University Tutor in Clinical Medicine, Royal Infirmary, Edinburgh. Messrs. Cassell and Co. 1897. Pp. 552. Price 9*s*.

THERE are so many and such excellent manuals on the same lines as this volume that it seems at first that there is no room for another. And yet we have very little doubt that this book will rapidly win for itself a large measure of success. It is fresh, terse, thoroughly up to date, and obviously the result of much practical experience in teaching on the part of both authors. An abundance of good material is crowded into the volume and the standard of accuracy maintained is very high. The first chapter, on the Method of Taking a History and the Way to Start Investigating a Case, could not be better done. Chapter II. treats of General Conditions and Appearances and is necessarily somewhat sketchy, but the student who assimilates it will have learnt a good deal. The Alimentary System and Abdomen occupy the third chapter, which is divided into six sections: mouth, pharynx, and œsophagus; abdomen; stomach; chemical investigation of stomach contents; examination of vomit; and examination of fæces. Each of these is thoroughly and fully treated, and anyone should easily be able to carry out from the descriptions the methods advised; these have been selected with much judgment. The diagrams of viscera modified from Luschka are very clear and good. The fourth chapter, on the Circulation, covers 83 pages, and is very detailed and yet very concise. The illustrations are simple and easily understood, and the text admirable. The method of percussion is thus described to a beginner: "The stroke should be delivered from the wrist and finger-joints, not from the elbow, and the percussing finger should be so bent that when the blow is delivered its terminal phalanx is at right angles to the metacarpal bone and strikes the pleximeter perpendicularly. Whenever the blow has been given the striking finger must be raised lest it should impair the vibrations it has excited, just as the hammers of a piano fall back from the wires as soon as they have been struck." Some exception may be taken to the cardinal rule the authors lay down that "in defining the boundaries between resonant and non-resonant or less resonant organs, the percussion should invariably be performed from the former towards the latter." In many, perhaps in most, cases it is wise to train the beginner to adopt both methods and to work both ways, from resonant to non-resonant and *vice versâ*. The authors adopt the more usual explanation of the presystolic murmur, and throughout are very safe to follow. To show that they are well up to date there is even a reference to Hill and Barnard's new sphygmometer, the account of which has only been published within a very short time. The clinical examination of the blood is dealt with adequately in the fifth chapter; it is short—twenty-seven pages. Methods of preparing and staining films and precise directions for mixing the stains are given. A very good coloured explanatory plate should be of great help. The sixth chapter, on Respiration, renders as intelligible as can be the various terms employed, and will be particularly useful for making more widely known Dr. Wyllie's symbols for the different abnormalities of sound, which can easily be represented on charts. In the chapter on Urine nothing is too simple or too complex to be omitted. The quantities of urine normally passed by children of various ages (from some data furnished by Dr. Still) represent a small useful point not generally referred to. The accounts of all the quantitative testings will prove refreshingly clear to those who have a horror of figures. The detection of albumins and nucleo-albumins, and the many pitfalls in testing for sugar, are lucidly described, and there is even a paragraph about Pentosuria which should satisfy the most exacting. The eighth chapter, on the Skin, is rather short, and will bear re-casting in a new edition. The Nervous System (Chapter IX.) occupies nearly 100 pages, well illustrated by old friends and new. As a whole, it is a sound introduction to the fascinations of neurology. Perhaps it is not quite adequate nowadays to say "if the upper neuron suffers damage in any of its parts the restraint on the lower neuron is diminished, the tone of the muscles is raised, and, as a consequence, what are known as the 'tendon reflexes' of the muscles become exaggerated" (p. 364). However, the authors qualify this later by reference (p. 435) to the well-known fact that in complete transverse lesions of the cord the deep reflexes below the level of injury are not exaggerated, but disappear. The description of the systematic examination of a nervous case is excellent. Chapter X., on the Eye, Ear, Nose, and Throat, and Chapter XI., on the Locomotor System, contain much that is useful, but are necessarily somewhat brief. There is a good short chapter (Chapter XI.) on the Clinical Examination of Children, and the main points of difference between the examination of a child and an adult are well brought out. The last two chapters are on the Examination of Pathological Fluid and Chemical Bacteriology; both are full of

[1] Brit. Med. Jour., April 18th, 1896.

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information, and the latter gives the simplest and most precise account of Widal's test we have yet seen.

Dictionary of National Biography. Edited by SIDNEY LEE. Vol. XLIX. Robinson—Russell. London: Smith, Elder, and Co. 1897. Pp. 496. Price 15*s*.

THE most extensively-known name in the present volume of the Dictionary is undoubtedly that of the Rothschild family, the rise of which is traced from Meyer Amschel Nathan Rothschild, of Frankfurt-am-Main, who was born about 1745, and died in 1812. His third son, Nathan Meyer, who was the founder of the London branch, was sent to Manchester in 1797, settled in London in 1805, and died in 1836 while on a visit to Frankfurt. Through one of his agents, a man named Roworth, he was informed of the victory of Waterloo before anyone else in London; but the story that he himself brought the news from Waterloo and was able to open large financial transactions before it was generally known, is declared to be mythical. The Evelina Hospital for Sick Children in Southwark was named after one of his grand-daughters who died in 1866. Passing over George Romney, painter (1734–1802), William Roscoe, historian (1753–1831), and Lord John Russell, statesman (1792–1878), we come to Dante Gabriel Rossetti, painter and poet, who was born in London in 1828; his father, Gabriele Rossetti, a native of Vasto in the kingdom of Naples, came to England in 1824 and was appointed professor of Italian in King's College in 1831. Rossetti's poetic faculty was developed early. The ballad of "Sir Hugh the Heron" was written in 1840 and printed two years later; "The Blessed Damozel," "Retro me Sathanas," and other remarkable pieces were written about 1847. His collected "Poems" were published in 1870, and "Ballads and Sonnets" in 1881. From about 1870 to the end of 1881 he was addicted to the use of chloral, which ruined his health, and he died at Birchington, near Margate, in 1882. The present life of him is from the pen of Dr. Richard Garnett, who says: "Rossetti is a unique instance of an Englishman who has obtained equal celebrity as a poet and as a painter. It has been disputed in which class he stands higher; but as his mastery of the poetic art was consummate, while he failed to perfectly acquire even the grammar of painting, there should seem no reasonable doubt that his higher rank is as a poet."

The biographies of medical men are thirty-one in number. George Rogers was born in London in 1618, graduated as M.B. at Oxford University in 1642, was incorporated as M.D. in 1648, was elected a Fellow of the College of Physicians of London in 1664, was Harveian orator in 1681, treasurer in 1683–85, and president in 1688. He died in 1697. Peter Mark Roget was born in London in 1779, his father being a clergyman of Geneva. He graduated as M.D. at Edinburgh University in 1798 and travelled on the continent for some time, after which he was in 1805 appointed physician to the Manchester Infirmary and became one of the founders of the Manchester Medical School. In 1808 he removed to London where "he pursued a career of almost unexampled activity for nearly half a century." He lectured at the medical schools in Great Windmill-street and Aldersgate-street, was the first holder of the Fullerian professorship of physiology at the Royal Institution, was a founder of the Society for the Diffusion of Useful Knowledge, and wrote for its "Library of Useful Knowledge" treatises on electricity, galvanism, magnetism, and electro-magnetism. He was elected a Fellow of the Royal Society in 1815 and was secretary from 1827 to 1849. In 1831 he was elected Fellow of the Royal College of Physicians of London and delivered the Goulstonian Lecture in the following years. In 1837 and the subsequent years he took an active part in the establishment of the University of London, and was a member of the Senate until his death, which occurred in 1869. George Rolleston was born near Rotherham in 1829. He graduated at Oxford University as B.A. in 1850, M.B. in 1854, and M.D. in 1857. After becoming qualified he held a hospital appointment in Smyrna, and in 1857 was elected physician to the Radcliffe Infirmary in Oxford. In 1860 he was appointed the first Linacre professor of anatomy and physiology at Oxford and filled the chair with conspicuous ability until his death in 1881. In 1873 he delivered the Harveian Oration of the Royal College of Physicians of London. Tancred Robinson, born in Yorkshire between 1655 and 1660, graduated at Cambridge University as M.B. in 1679 and as M.D. in 1685. He was appointed Physician in Ordinary to George I., by whom he was knighted. He published numerous observations in connexion with natural history and botany, and died at an advanced age in 1748. Joseph Rogers, born in 1821, commenced medical practice in London in 1844, and in 1856 was appointed medical officer to the Strand Workhouse. "In 1868 his zeal for reform brought him into conflict with the guardians, and the President of the Poor-law Board, after an enquiry, removed him from office. In 1872 he became medical officer of the Westminster Infirmary. Here also the guardians resented his efforts at reform and suspended him; but he was reinstated by the President of the Poor-law Board, and his admirers presented him with a testimonial consisting of three pieces of plate and a cheque for £150. He was the founder, and for some time president, of the Poor-law Medical Officers' Association." He died in 1889. George Leith Roupell was born in Sussex in 1797. He studied medicine at Cambridge University, graduated M.B. in 1820, M.D. in 1825, and in 1826 was elected a Fellow of the Royal College of Physicians of London. He was censor for three years and Croonian lecturer in 1832 and 1833. In 1837 he read before the College "Some Account of a Fever prevalent in the Year 1831," for which he proposed the name "febris typhodes rubeoloida," and which seems to have been epidemic cerebro-spinal meningitis. He died from cholera in London in 1854. James Russell, born in Edinburgh in 1754, was admitted a Fellow of the Royal College of Surgeons of Edinburgh in 1777, and was president of the College in 1796–97. From 1786 onwards he gave clinical lectures in surgery until in 1803 he was appointed to "the clinical and pathological professorship of surgery," a chair founded by the town council of Edinburgh entirely in consequence of his exertions, and which he transferred to James Syme with the sanction of the Lord Advocate in 1834. He died in 1836. James Ross, born at Kingussie, Inverness-shire, in 1837, graduated at Aberdeen University as M.D. in 1864, and in 1876 was appointed pathologist to the Manchester Infirmary. In 1881 he published "A Treatise on the Diseases of the Nervous System," in two volumes, which was the first large modern text-book in English on its subject and was widely read. He was elected professor of medicine in Owens College, Manchester, in 1887, and died in 1892. Samuel Rowe, born in Cheshire in 1835, received his qualifications to practise medicine in 1856, obtained an appointment on the army medical staff in 1862, and was sent to Lagos, where he filled various offices, both administrative and medical. In 1865, while home on leave, he graduated in medicine and surgery at Aberdeen University. In 1866 he returned to West Africa and had a large share in withstanding the earlier attack of the Ashantis in 1873. In 1877 he was appointed Governor of the West Africa Settlements, and was knighted as K.C.M.G. in 1880. He died at Madeira in 1888. William Roxburgh, born in Ayrshire in 1751, graduated as M.D. at Edinburgh University and obtained an appointment in the East India Company's Madras establishment in 1776. An accomplished botanist and cultivator of useful plants, he sent hundreds of drawings to England, and in 1793 was appointed

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superintendent of the Calcutta Botanic Garden. He returned to England in 1805 and died in Edinburgh in 1815 His "Hortus Bengalensis" was published in 1814, and his "Flora Indica" in 1820, 1832, and 1874. B yan Robinson, born in 1680, graduated M.D. in 1711 at Trinity College, Dublin. He was anatomical lecturer there in 1716–17, and in 1745 was appointed professor of physic. In 1712 he was elected Fellow of the King and Queen's College of Physicians in Ireland, and was president in 1718, 1727, and 1739. He had a reputation both as a medical and a mathematical writer. He died in 1754. John Forbes Royle was born in Cawnpore in 1799 and was educated in Edinburgh. In 1819 he was placed on the medical staff of the Bengal Army and in 1823 was chosen superintendent of the garden at Saharunpore. In 1831 he returned to England and in 1837 was appointed professor of materia medica in King's College, London. He was the author of numerous valuable works on Indian plants, and also published a Manual of Materia Medica. He died in 1858.

Although George John Romanes was not a medical man, it seems right to include his biography among the present excerpts on account of his eminence as a biologist. He was born in Canada in 1848 and was brought to England at an early age. From 1874 to 1876 he studied under Professor Burdon Sanderson in the physiological laboratory at University College. Researches by him on the influence of injury on the excitability of motor nerves and investigations on the nervous and locomotor systems of the medusæ and the echinodermata were subsequently communicated to the Royal Society, and he was elected a Fellow of the Society in 1879. He died at Oxford in 1894. In addition to the papers already mentioned his works included treatises on mental evolution, organic evolution, and Darwinism, some of them not being published till after his death.

LIBRARY TABLE.

Elements of Human Physiology. By ERNEST H. STARLING, M.D. Lond., Joint Lecturer on Physiology at Guy's Hospital. Third edition. London: J. & A. Churchill. 1897. Price 7*s.* 6*d.*—We have already had occasion to notice with praise this manual, written by a physiologist who has been for some time past engaged in teaching physiology in a large medical school in the metropolis and who is therefore well qualified to judge of the requirements of the medical student and of the amount and kind of physiological knowledge that will prove most serviceable in practice. The present edition differs but little from its predecessors and is not overburdened with details in regard to the construction of scientific instruments, a knowledge of which is of little value to the student. The more important facts in the sections devoted to each of the functions of the body are given clearly and well and the work as a whole is well up to date. As an evidence of this we may refer to the chapter devoted to the subject of the coagulation of the blood, in which the recent views of Hammarsten are given. The danger of all manuals is that of increase of size by the interpolation of new matter. It is satisfactory to find that Dr. Starling has resisted this temptation and that the present only exceeds the preceding edition by about a dozen pages. The work may be regarded as one of the best of those which seek to compress the wide subject of physiology into a reasonable compass. Fourteen fresh woodcuts have been introduced.

Diseases of the Eye, a Practical Handbook for the use of General Practitioners and Students. By CECIL EDWARD SHAW, M.D., M.Ch. R.U.I., Ophthalmic Surgeon to the Ulster Hospital for Children and Women, Belfast. With Illustrations and a Test Card for Colour Blindness. London: J. & A. Churchill. Pp. 103.—This short treatise is intended by the author to furnish the general practitioner and the student with a concise account of the principal forms of ophthalmic disease which they are likely to meet with in practice. The descriptions of disease are sufficiently clear and accurate, and the author has, we think, done wisely in not burdening his book with the details of ophthalmoscopy which can only be learned in the out-patient room or in the wards of a hospital or with an account of operations which are only undertaken by those who are devoting themselves to ophthalmic practice and have at hand the appropriate instruments in good order. An exception is made in regard to the operation for the extraction of cataract, and an observation is added to the account given to the effect that many surgeons now omit the iridectomy when removing cataract, the advantage being that it simplifies the operation and gives a better pupil; but in England the consensus of opinion is still in favour of doing iridectomy as the safer method. The modes of determining errors of refraction are given in some detail and are intelligible to any student.

The Mathematical Psychology of Gratry and Boole Translated from the Language of the Higher Calculus into that of Elementary Geometry. By MARY EVEREST BOOLE. London: Swan Sonnenschein and Co., Limited. New York: G. P. Putnam's Sons. 1897. Pp. 116. Price 3*s.*—Lovers of abstract speculation will find much to interest them in this little book, which is a kind of primer or introduction to the generalisations contained in the "Laws of Thought" published in 1854 by the late Mr. Boole, Professor of Mathematics in Queen's College, Cork, as well as to those contained in the earlier work "Logique," written by M. Gratry. Its merits, however, are somewhat impaired by the circumstance that the gifted authoress has presented the elements of the mathematical part in a manner so very concise that a psychologist unacquainted with mathematics might be pardoned if he fell into the error of supposing that the differential calculus is as hazy and indeterminate as some portions of his special subject. The dedication to Dr. Maudsley shows that the infinitesimal calculus is the process chiefly in question, but Mrs. Boole's explanation of it is mainly a diagram of a differential parallelogram together with the tangent to a curve. Not many pages would, however, have been required both for showing the process of differentiation of a few selected expressions, and also for giving some simple examples of the results obtained by its aid in particular instances, such as in the drawing of tangents to parabolas of the second or third order, or in finding the maximum rectangle that can be inscribed in an equilateral triangle. Psychologically, the resultants (i.e., the diagonals) of parallelograms of forces are to be interpreted as the necessary compromises of conflicting views and interests in the ordinary affairs of life (p. 34), and the circumstance that the evanescent differentials of a mathematical function have a definite ratio to one another is to be understood as follows (p. 46): "For those who are seeking from the calculus information about human psychology it is a fact of overwhelming importance that the special knowledge about the curve which is to be got by means of the varying ratio between two fictitious elements comes only at the moment when these elements vanish; i.e. when the subject matter which has been under investigation vanishes to No-Thing." The most practical part of the book is perhaps Chapter VII., which treats of the method of drawing inferences from antagonistic arguments. The facetious puerilities introduced into the description of a fluxion should be omitted in a future edition.

The Law of District and Parish Councils. By JOHN LITHIBY, LL.B. London: Effingham Wilson and Sweet and Maxwell. Second edition. Price 15*s.*—We drew attention to this book and expressed a warm appreciation of Mr. Lithiby's work when the first edition

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appeared. That is now three years ago, and the interval affords full justification for a second edition of the work. The changes in the law are not, however, very momentous, and it can hardly be matter of surprise that the editor of these statutes has taken somewhat easily the task of preparing a second edition. The result, however, is a little disappointing, for although the new matter is to be found by those who search for it within the book it is not always to be found where it should be. To take an illustration of what we mean. On page 69 the qualifications of parish councillors are set out from the Act of 1894 and comprise *inter alia* a twelve months' residence. On page 396 the amending Act of 1897 is set out, and shows that this particular qualification has been abolished in the case of candidates who enter into residence before March 25th in any year. The amendment has not, however, been incorporated in the notes to the earlier statute and Mr. Lithiby's text in one place is therefore misleading. The book is a great repertory of information, but the impression which it leaves upon our mind is that it would be greatly improved by careful re-editing.

Liza of Lambeth. By W. SOMERSET MAUGHAM. London: T. Fisher Unwin. Price 3*s.* 6*d.* — The author of this powerful if somewhat sombre work is, the publisher informs us, a medical man. He certainly has one valuable quality for one in his profession—namely, the gift of observation — and another equally valuable, though not so common, literary skill. The story inevitably invites comparison with Mr. Morison's "Child of the Jago," which deals with a similar class of society, and though not so much of a "story" is to our minds superior in that it avoids the somewhat Dickens-like pathos which is the blemish of Mr. Morison's otherwise excellent book. Mr. Maugham's picture of life among the poor is not a pleasant one, though wonderfully graphic, neither do we mean to contend that all the poor are like his characters. But that there are such among the lower classes no one who has ever done any work among them will deny for a moment. The way in which the women talk about their children, the number of "misses" they have had, the ghoul-like pleasure they take in funerals and deaths, are all admirably described, and the scene at Liza's death-bed, where her mother discourses to a select circle of friends upon the difficulty she and her neighbours had in getting her husband into his coffin, is true to the life. The animal-like wooing of Jim and the death of Liza are the two most powerful scenes in the book, but should Mr. Maugham write another book—and we hope he will—he might choose a somewhat less sordid subject.

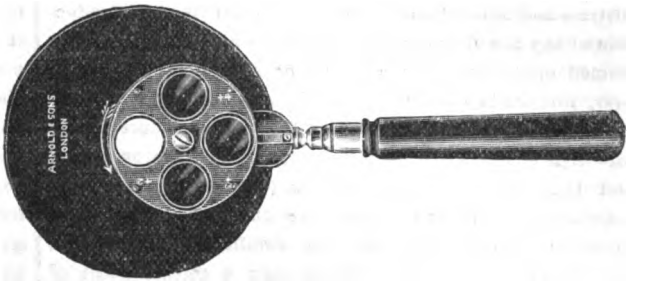
JOURNALS AND REVIEWS.

IN the October number of the *Phonographic Record* Dr. Griffiths narrates a case of rheumatism followed by pericarditis and double pneumonia in which oxygen inhalations are said to have averted death, and Mr. Norman Porritt discusses the action of the coal tar derivatives. He regards the effect of this class of bodies upon the hæmoglobin as the explanation of their toxic action. We learn from this number that Sir William Gowers has been elected Patron of the National Federation of Shorthand Writers' Associations in place of the late Sir Isaac Pitman, and that the Society of Medical Phonographers intends to entertain him at dinner to congratulate him upon the honour which Her Majesty the Queen has recently conferred upon him.

New Inventions.

NEW AURAL AND THROAT MIRROR.

WITH this mirror an enlarged, well illuminated, and distinct view of the tympanum may be obtained. It is a concave mirror three inches in diameter with a sight hole of 15 mm. and having a focal distance of about seven inches. A rotary disc at the back carries three lenses, + 2 D, + 3 D, + 4 D, which in turn can be moved opposite the central

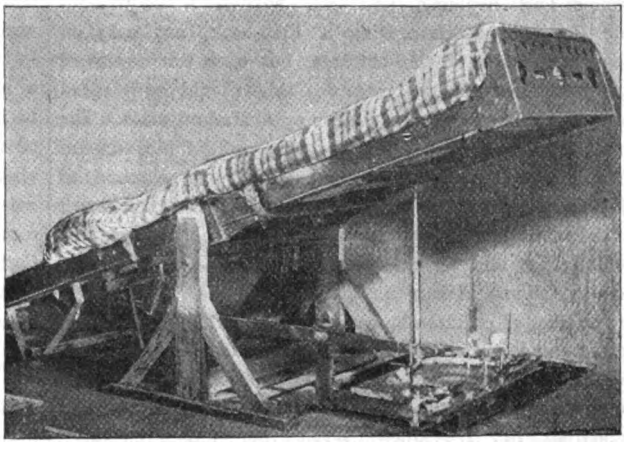


hole. The best results may be had by holding the mirror about midway between the eye and the object. If the observer be presbyopic he can use the mirror in the usual manner, selecting the lens which suits him. Messrs. Arnold and Sons, West Smithfield, E.C., are the makers.

THOS A. GOODCHILD, L.R.C.P., L.R.C.S. Irel.
Queen's-road, N.E.

A MOVING BED.

AN ingenious method of communicating a gentle rhythmic movement to a bed has been invented by Mr. Walker, Hartwood, West Calder, N.B. It is so designed as to be easily adapted for use either in public hospitals or in private houses. The bed is fixed at its centre, and by means of hydraulic machinery of simple construction and noiseless action the head is alternately raised and lowered, so as to give the bed a gentle movement upwards and downwards. The accompanying illustration gives a good idea of the whole arrangement. The bed was for some time in operation in the Edinburgh Royal Infirmary, where, through the kindness



of Sir Thomas Grainger Stewart, many members of the medical profession have been enabled to witness its effects. In many neurotic affections it has been found to produce beneficial results, more particularly in cases of insomnia and restlessness. It has, moreover, been of use in digestive, circulatory, and respiratory troubles.

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THE LANCET.

LONDON: SATURDAY, OCTOBER 16, 1897.

IT is probable that only a few of those who are practising medicine, and scarcely any of the laity, are aware of the distress and annoyance that are occasioned by the introduction of any one of the group of diseases which are collectively termed ophthalmia into a school or asylum. Those, however, who are in charge of such institutions know only too well that to effect a cure in the patients unremitting attention is required, extending over many days or weeks, and that the most persistent and carefully considered measures often fail to prevent the disease from spreading to those who occupy the same dwelling-rooms or who use the same lavatories. When once a certain form of the disease has gained a firm footing in a colony of children years often elapse before it can be regarded as eradicated, whilst impairment of vision of a more or less serious nature is a very common result in those who have been affected. Such cases, it has been justly remarked, whilst they interfere with discipline and interrupt education, seriously handicap the victims in their struggle for existence. Their wage-earning value is reduced. The chances of a relapse into pauperism are multiplied, and there is always a risk that the disease may be communicated to those with whom they are brought into contact. Owing probably to the frequency with which their attention is directed to ophthalmic disease and the expenses which an outbreak entails, the Local Government Board recently directed an experienced and able ophthalmic surgeon, Mr. SYDNEY STEPHENSON, to investigate the ophthalmic state of Poor-law children, with the result that that gentleman has inspected a large number of schools and asylums, and has written a very valuable Report, just issued as a Blue-book, not only on the present state of the children, but upon the causes of the prevalence and the measures that should be adopted to diminish or altogether abolish ophthalmic disease. The report is worthy of perusal by every ophthalmic surgeon as well as by the matrons and other officers attached to large schools; and great praise is due to Mr. STEPHENSON for the very painstaking manner in which he has conducted his inquiries and for the sound, practical, common-sense remarks and suggestions that are to be found on every page. The number of children he has examined is 17,002, of whom 860 were under two years of age. The ophthalmic affections which commonly present themselves in schools and asylums are acute and chronic ophthalmia with their effects, and blepharitis, the last-named disease, though chronic, being comparatively unimportant. The acute ophthalmias are divisible into muco-purulent and purulent. It is gratifying to find that acute purulent ophthalmia is practically absent, although 860 were, as just stated, only infants. Muco-purulent ophthalmia or blight, on the other hand, is not uncommon, existing in 4·72 per cent. of the total number of children examined. This affection occasionally appears in the form of an epidemic, associated probably with certain atmospheric conditions, but does not last long, and even when not subjected to treatment does not produce any serious or permanent lesion of the eye. The chronic and by far the most important forms of disease which are prevalent in schools are follicular ophthalmia and trachoma. Mr. STEPHENSON has arrived at very positive conclusions in regard to the follicular disease, and his large experience gives great weight to his opinion. The disputed question on which so many essays have been written both at home and on the continent as to the identity of purulent, follicular, and military or Egyptian ophthalmia with trachoma, it is now pretty clear, is to be decided in the negative. Purulent ophthalmia has its own micrococcus and does not constitute a stage, as some have thought, of trachoma. Follicular disease has also in all probability its own specific virus. It is exceedingly common among children and is usually regarded as associated with overcrowding and vitiated and damp air. Mr. STEPHENSON, however, is not satisfied on this point and does not consider sufficient evidence is forthcoming to demonstrate that it is the outcome of an unhealthy environment. It was present in 2·24 per cent. of 10,967 children examined in the district and separate schools. Trachoma—the "granular lids" of many English writers—is the real scourge. It is a separate affection and also probably has a microbe of its own. The supposed transition of follicular disease into trachoma has arisen, it is thought, from children with follicular disease being placed in wards with trachomatous children, from whom they have contracted that infectious disease. Trachoma, then, remains as the most important of all the forms of ophthalmia affecting schools and asylums. Insidious in its origin and progress, revealing itself in its early stages only to careful examination, it is very persistent, leads in most instances to haziness of the cornea, and not infrequently to loss of useful vision; it has the obnoxious quality of being highly infectious. Amongst the 17,002 children examined no less than 973 cases of trachoma were found, very few instances, however, occurring in the children under two years of age. Lesions of a more or less serious nature of the cornea were found in 277 cases, the ill-effects ranging from slight impairment of vision to almost complete blindness. The institutions visited by Mr. STEPHENSON were separate schools or those belonging to a particular parish, district schools which receive children from more than one union or parish, Roman Catholic certified schools, the training ship *Exmouth*, the Ophthalmic School at Hanwell, the certified convalescent homes, and, lastly, the metropolitan infirmaries and workhouses. It is noticeable that not a single separate school was free from trachoma, the number of cases varying from 1·63 to 13·15 per cent. of the inmates, the average being 4·60 per cent. In the district schools 3·65 per cent. were suffering from active trachoma and 1·37 per cent. bore traces of having formerly suffered from it. In the workhouses the proportion was 6·41 per cent.; in the infirmaries, 5·60 per cent.; in the Roman Catholic certified schools, 7·48 per cent.; and in the *Exmouth*, 0·84 per cent. Long experience and the visitations of many institutions

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have enabled Mr. STEPHENSON to discover weak points in their construction and management that might easily pass unnoticed, but which have an important influence on the propagation of ophthalmic disease. Details are given in the report in regard to the warming, ventilation, and the supply of light to the school and other rooms, to the disposition of the closets and lavatories in regard to other apartments and their drainage, the size and cleanliness of the baths, the supply of towels, the storage of clothes, and many other particulars, all of which are now carefully inquired into by an excellent board of inspectors.

The most valuable portion of the report is that containing suggestions with regard to the stamping out of trachoma. The two principles on which Mr. STEPHENSON proceeds are exclusion and eradication. In regard to the first, he considers that before any children are admitted, however healthy they may appear to be, they should be subjected to careful and skilled medical inspection and they should undergo a period of probation in some school specially set aside for the purpose. Such a proceeding would materially contribute to the abolition of trachoma by preventing its admission and the possibility of its being grafted on follicular ophthalmia. Where trachoma has unfortunately gained a footing its eradication must be attempted by isolating the affected children and placing them under the best conditions for recovery in a central school where they may be properly classified and specially treated whilst they continue their education. Periodical inspections of all the schools should be made by experts so that the affected may be weeded out without loss of time. Indirect means for the suppression of disease should not be omitted, such as attention to washing and bathing when contagion most easily occurs, and the improvement of all conditions of environment, any defects in which tend to weaken the individual and lower his power of resistance, such as defects in ventilation, floor and cubic space, warming, food, exercise, clothing, and drainage. Attention to these particulars, it may reasonably be anticipated, will greatly diminish, if it does not completely exterminate, this scourge of large schools, and we may hope that in a few years, as the public mind becomes more enlightened on the subject, the severe strictures which Mr. STEPHENSON has found himself compelled to make on the hygienic conditions that surround the Poor-law children will no longer be applicable and that chronic ophthalmia will be a thing of the past.

The case of the *Exmouth* training ship which succeeded the *Goliath* demonstrates the utility of preventive measures. A correspondent in describing in our columns in 1874 the condition of the *Goliath* pointed out the danger of the mode in which the washing of the boys was conducted, and shortly afterwards Mr. NETTLESHIP found more than one-third of the boys suffering from granular lids. By adopting wise preventive measures the proportion of cases of trachoma has now fallen to less than 1 per cent. The conclusion is obvious.

BIRMINGHAM, with its half a million of people, its large medical charities, and its citizens of municipal and even Imperial fame, well deserves the attention which has been given to it by our Special Commissioner, whose four papers on Hospital Abuse as illustrated in that city will interest all students of that subject. Thirty years ago some of the first suggestions in favour of an improvement in club practice and the remuneration for it came from a Birmingham practitioner, Mr. HESLOP. The provision for medical relief under the Poor-law in Birmingham is of the stateliest kind. Its hospitals and dispensaries are so attractive that not less than one-third of its inhabitants in the year become hospital patients. The late Mr. SAMPSON GAMGEE brought the organisation of the Hospital Saturday Fund to such perfection that the contributions of the workmen exceed those of the wealthy. For every £100 subscribed more than £200 are received in registration fees. Such substantial contributions entitle the workmen to a powerful voice in the management of the charities, and our Special Commissioner makes the startling statement that there is hardly a hospital in the town which would not be bankrupt if the workmen withdrew their support. The working classes are naturally proud of their contributions, and the governors of the different institutions are only too willing to meet their natural pride by every concession that they can make to their views. One significant little fact is recorded by our Commissioner. One of the medical institutions which is said to be most abused in Birmingham is the General Dispensary. The Hospital Saturday Fund makes a large contribution to this dispensary—something like £600 a year. By way of return for this sum and other sums accruing from the purchase of tickets—for extra tickets may be bought for 4*s.* at the time of illness—the committee of the Birmingham General Dispensary some years ago resolved to omit from the letters supplied to workmen's societies, &c., the words "object of charity," leaving it to be understood that the medical service rendered was really paid for as it might be in a provident dispensary and that the person receiving it was under no charitable obligation to the institution or its medical officers. Naturally, a large proportion of the patients treated at this dispensary are comfortable people, well able to pay reasonable remuneration to a medical man. It was ascertained that 25 per cent. of the patients at one of the branches were in receipt of £100 a year. Needless to say that the same abuse has been shown by our Commissioner to obtain in the general hospitals and in the Eye Hospital and institutions that receive large contributions from the Hospital Saturday Fund and further sums in the shape of registration fees. The working of the system is shown in many cases. Men with large incomes saved by thrift and industry see their less provident friends get all they want at the hospitals and wonder why they should be expected to pay the ordinary fees—and so they get their cataracts extracted and other operations performed for nothing too.

It must not be supposed that this great change in the conception of hospitals and dispensaries is still quite complete. There are still men who realise that the contributions of the workmen to the charities by which they are so much benefited are essentially free gifts for the good of others rather than themselves. They were asked for originally by Mr. SAMPSON GAMGEE, as they are asked for now by Hospital Saturday and Sunday funds, as helps to enable the managers of hospitals to meet urgent cases of sickness and accident. Alderman COOKE, chairman of the Hospital

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Saturday Fund, said emphatically to our Commissioner: "A subscription to a fund, whether it be weekly or yearly, gives no right whatever. If a man or woman presents himself or herself at a hospital and demands treatment as a right bought by a subscription to the Hospital Saturday Fund he or she takes an absolutely unjustifiable position. The subscription carries with it no right; the princely gift of so many thousands per annum carries with it no equivalent. It is a free gift to the free work of the medical charities of the town."

We cannot too strongly endorse and enforce the view laid down so clearly by Alderman COOKE. If it is not shared by the workmen of Birmingham who give so generously to the charities we are persuaded that it is due to a misunderstanding of the very nature and origin of the institutions which they support. Let us illustrate our argument by a London case. It is well known that a London employer of labour has lately placed £120,000 or more at the service of a London hospital and all men recognise the generosity of the gift. But what would be the change in the public view of it if this gentleman had accompanied it with the conditions that he and his family, his workmen, his servants, and his employés generally had to be treated in all their ailments in consideration of his gift? The gift would be robbed of all its grace and its virtue and the giver would be little thanked. It is not otherwise with the systematic and generous contributions of the workmen of Birmingham to her charities. They are very fine so long as they are given for the use of the institutions as originally defined, but they bear a very different aspect if they are used to turn these institutions into cheap dispensaries for ordinary cases. Yet it is said that Mr. SMEDLEY, a man of wealth and strong humanitarian feelings, who is, we presume, in succession to Mr. SAMPSON GAMGEE, the great promoter of Hospital Saturday, regards the Hospital Saturday Fund as favouring the idea that the hospitals are provident clubs. He admits the great abuse of the out-patient department, but, contrary to the opinion of the great majority of medical men, he does not recognise any serious abuse of hospitals in the sense of their being frequented by numerous patients who can afford to pay private practitioners. The great point is to determine whether hospitals and dispensaries are for those who are in work and for their ordinary ailments or only for the poor and for those in exceptional circumstances of disease or accident? To judge from the tenour of our Commissioner's reports the Hospital Saturday Fund is being used so as to convert the medical attendance on those who contribute to it into a huge charity, much as that word is disliked. It is not even a provident arrangement, for that would attempt to pay the medical men concerned more or less adequately. It is a huge and somewhat shabby device to get medical attendance without paying for it in the same honest sense in which a British working man pays for his bread and his beer.

We wish we could see in our Commissioner's account proof of any serious realisation of the plight in which the profession is left by such a misuse of hospitals or of any adequate effort to grapple with the situation. Birmingham has great notions of the power of municipalisation; but is the medical profession to be municipalised out of its position and its function? Are the duties of half a million people to the medical profession to be discharged by charitable contributions and petty registration fees to hospitals? Is the profession on this subject to be divided into two hostile parties—one seeing itself magnified by the hospital system and the other seeing itself degraded or extinguished? Our brethren in Birmingham have a great opportunity of solving some great questions; but unless more unity and decision are shown than have yet appeared the profession will be given away by those who ought to lead and uphold it.

THE most important subjects dealt with under the section of public health and local administration in the annual report of the Local Government Board are the working of the Sale of Food and Drugs Act, and the efficiency of the metropolitan water-supply. The urgency of all the questions implied under the consideration of these branches of public administration increases, and the material before us in the twenty-sixth report which has just been issued has increased in proportion, so that we shall make no attempt to deal now with the immense Blue-book as a whole, but shall limit our remarks at present to a review of the working of the Sale of Food and Drugs Act.

With reference to the working of this Act the twenty-sixth report is of special interest because in the statistics therein recorded a series of twenty years is completed, and therefore an approximate measure may be made of the real work that the Act is effecting in connexion with the suppression of food adulteration. To us the interest in this fact is intensified when we reflect that the Sale of Food and Drugs Act had its origin in the fearless exposure of gross adulteration and fraud which the Founder of THE LANCET brought to light at a time when legislation exercised absolutely no control in this matter. Adulteration in the days of THE LANCET Analytical Sanitary Commission was not only a species of fraud upon the public, but, as was shown, a positive danger to the public health. Slow as is the reduction year by year of the total number of adulterated samples, yet the fact remains that this number has steadily declined during the last twenty years, so that while in the year 1877, when the results of the analysis were for the first time tabulated, 19·2 per cent. were condemned the proportion has fallen to a little over 9 per cent in the official year just closed. As to the injurious forms of adulteration in vogue thirty or forty years ago, they have "almost, if not entirely, disappeared." While it is, on the whole, true to say that the public are now cheated rather than poisoned, yet there should be no reason why the extent of this cheating should not be further reduced. This can be done even under the provisions of the present Act, but more vigilance on the part of the authorities entrusted with the working of the Acts will have to be exercised. Abundant evidence on this point is afforded by the fact that where more active measures have been taken, especially in increasing the number of samples submitted for analysis, the proportion of those reported against has gradually declined. This is well illustrated in the case of the district of St. Mary Newington, where no action whatever had been taken under the Acts up to the end of 1887. In the following six years samples were taken at the rate of thirty-three per annum, and over a third of

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them proved to be adulterated. In 1894 the percentage of adulterated samples amounted to 30. In the following years the authorities instructed their officers to take over 1000 samples, and legal proceedings were instituted where an offence had been committed, with the result that in 1896 the proportion of condemned samples was brought down to 11 per cent. We have often reflected upon the neglect of the authorities to avail themselves of the powers they possess, and our views in this regard are now fully justified in the instances just quoted. Again, nothing could be more absurd than the extraordinary leniency shown by magistrates towards offenders in regard to fines. Especially is this so in the case of milk and spirits. The fines in some cases were so trifling that it was clear to the blindest that it would pay an offender to adulterate his wares again and again during the year and undergo the resulting legal punishment, so big was the price which he got for the added water and so trifling were the fines exacted from him. We would have these shabby rogues dealt with in the salutary way suggested in the recommendations of the new Bill—that is to say, we would have published as widely as possible *and at the expense of the offender* the fact of his committal for fraudulent practice, and in some instances, so serious do we hold the offence of adulteration, justice would not be overdone if the premises of the offending person were placarded with a full advertisement making a similar announcement.

London still leads the way in regard to the extent of milk adulteration, the proportion of watered samples being 17·7 per cent., as against 9·1 for the rest of the country. The Local Government Board regard this as a matter for regret, and so do we. And why is it so? For the simple reason that a standard of unimpoverished milk has not yet been fixed by statute. The fact that milk of the poorest possible quality is regarded as genuine gives the unscrupulous milkman the easy device of watering milk of good rich quality down to zero. The London milkmen are ever on the watch to catch the authorities sleeping since it has been found that on taking samples of milk on Sunday no less than 47½ per cent. in one instance were found to be adulterated. But "as soon as the local authorities seriously take the matter in hand the Sunday rate of milk adulteration is reduced." Here is another practical lesson that increased vigilance on the part of the authorities is largely, though not entirely, what is required. The Act even in its present form would have presented but a few objections had not the local authorities in so many instances failed to perform their duty. As it is, the extent of adulteration has been reduced to 9 2 per cent., which is the lowest figure yet attained.

The working, therefore, of the Sale of Food and Drugs Act has not been without satisfactory results, and we confidently anticipate that with the new modifications of the present Act, which a new Bill will embody, the public will have a still stronger guarantee of being supplied not only with unadulterated food but with food of a desirable standard of purity and quality. It is curious that the highest percentage of adulteration recorded during the past year has been for spirits, which is the only article for which a standard of strength has been legally fixed. In many instances the proportion of water was so large as to make the selling of the mixture exceedingly profitable. Some people have tried to justify the publican in selling diluted spirits on the plea that he is selling a much less intoxicating mixture than the Act would compel him to sell. Such an argument is utterly beside the point at issue. Whisky (for instance) is one price, and water quite another, and when the purchaser pays for the former the vendor has no right to give him the latter. There are other points in the report with which we have not space to deal, but in the main they relate to those defects in the present Act which we hope will be removed in the new Bill, the recommendations in which were drawn up in a report by the Select Committee on Food Products Adulteration in July last. The Local Government Board report observes that "many importants amendments to the law are recommended, and we have under consideration the question of promoting legislation on the subject." The pressure of public business however was the excuse of the leader of the House of Commons for not dealing with the Bill last session, but we trust that it will be considered at an early stage when Parliament reassembles.

MR. VICTOR HORSLEY has been elected a Direct Representative for England and Wales by a substantial majority over his only serious opponent, Sir WALTER FOSTER. The profession must wait until the day fixed for the declaration of the poll for all the exact figures in a contest which, in the personalities of the candidates and in its importance for the future of direct representation, has been one of real interest and importance to the whole profession. It would be premature to enlarge upon these details at the present moment, but we need not defer the expression of our great satisfaction at Mr. HORSLEY'S election, inasmuch as we have favoured his cause from the beginning of the contest into which the profession was so unexpectedly thrown by the resignation of Dr. R. R. RENTOUL. The event will immediately restore some of the lost prestige of direct representation. Mr. HORSLEY'S ardour of temperament and strong opinions in regard to the defects of the Medical Acts and to the imperfect use of them by the General Medical Council are well known, and these perhaps will lead some to fear that in the discussions which he will invite his zeal may outrun his discretion. We do not think so. Not only the responsibilities of office but also the very sincerity with which he wishes to procure reasonable reforms will moderate the pace with which Mr. HORSLEY will seek to urge the Council to adopt his ideas. The General Medical Council is a body capable of great resistance. It will be strengthened by the presence of a member with strong convictions of the necessity for more actively asserting its functions, and we do not believe that it will blindly refuse to listen to reasonable arguments in support of such a view, or, if necessary, in support of a demand for larger powers than it at present possesses. But the Council cannot be "rushed." If a reform programme is to find supporters in the Council it must be presented by men who are perfectly clear and convinced in their own minds, and can preserve their own consistency. The strength of Mr. HORSLEY'S position is that while standing as a surgeon high in the world of science, and

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having only the smallest personal interest in any action of the Council or in any alteration of the Medical Acts, he has shown for years the greatest possible interest in all matters which affect the rank and file of the profession. He is, besides, in virtue of his position familiar with the latest aspects of medical education, and so will be in a position to take a useful part in promoting those improvements in teaching and in examinations which the reports of the Council's inspectors show to be so much needed. On all these grounds we rejoice to record the success of Mr. HORSLEY in this important by-election. His conduct during the contest has been perfect in temper and in argument. He paid the electors the compliment of avoiding all claptrap, all humiliating alliances and concessions, and of discussing the most delicate subjects with gravity and moderation. We also congratulate the profession on their choice. Their Direct Representatives, if they are to be of any use, must be men of high character and standing; and they have chosen such a man. Sir WALTER FOSTER will not, we trust, be much discouraged by losing the battle, for certain of his supporters may take most of the blame. He found Mr. HORSLEY in the field and well advanced in the contest. It would have been more gracious to have recognised Mr. HORSLEY'S claims and to have given the profession the advantage and the pleasure of an uncontested election; but he decided otherwise, and has the satisfaction of having been beaten by no mean opponent.

Annotations.

"Ne quid nimis."

"VACCINATION" AGAINST TYPHOID FEVER.

AT a time when public attention is so strongly drawn to typhoid fever by the epidemic at Maidstone and the sensational notices on the "posters" of the evening papers it may be well to remind medical men of certain points in regard to the means by which the contagion is spread and the prophylactic measures which may be adopted. A contaminated water-supply has been so much discussed in relation to the Maidstone epidemic that we need not enter further into that part of the subject; a thorough treatment of the stools by means of disinfectants such as carbolic acid and perchloride of mercury is also adopted as an ordinary routine measure; similar precautions as regards the urine, however, are not usually taken, but as the pathogenic bacilli have been found in the urine of patients suffering from typhoid fever the suitable disposal of all the patient's excreta should be carefully superintended. Numerous papers have been published from time to time demonstrating the spread of the infection by milk, vegetables (notably watercress), oysters, &c., and we need not comment further on similar possible channels of infection. We have received a letter from Dr. A. E. Wright, Professor of Pathology at the Army Medical School, Netley, reminding us of a paper published by himself and Surgeon-Major D. Semple, Assistant Professor of Pathology at the same school.[1] In this communication the writers detailed the results of experiments which they had made with anti-typhoid "vaccines." Most of the "vaccinations" were performed upon medical officers of the Army or Indian Medical Services, or upon surgeons on probation who were preparing to enter those services, so that the results were carefully observed. Very severe and unpleasant symptoms were experienced after the inoculations, but in Dr. Wright's letter to us, dated Oct. 6th, he informs us that the subsequent hours of misery and constitutional disturbances have now been reduced to a minimum by further experiments, and now all that is felt is a few hours' discomfort and a little local soreness, and equally good results in the blood are obtained with the diminished doses. The experiments showed that the patient's blood contains some substance which, although the bacilli of typhoid fever are not killed by it, yet exerts such a deleterious influence on them as results in the effectual protection of the patient against typhoid fever. Dr. Wright also wishes us to make public the fact that the resources of his laboratory have been placed at the disposal of the Maidstone authorities, by permission of the Director-General, Army Medical Service, and Surgeon-Major Semple has proceeded to the town with an ample supply of the "vaccine," enough for the whole population of Maidstone. The result of this proceeding will be watched with interest. We would take this opportunity also of protesting against the general public alarm which may accrue from statements made in the daily papers as regards the prevalence of typhoid fever in London and elsewhere. At this time of the year there is always an increase of this fever, and at the present time the numbers are not in excess of the average. The public should know that typhoid fever is not infectious in the same way as scarlet fever and measles, and that if frequent analyses of the water-supply are made and the excreta are disinfected no widespread diffusion of the disease need be feared.

[1] Brit. Med. Jour., Jan. 30th, 1897.

THE "SPECTATOR" ON THE MEDICAL PROFESSION.

A WRITER in the *Spectator* has been thrown into some confusion by the Maidstone epidemic and led to express some doubts as to the "supposed capacity of science to deal with the problem of disease." To see hundreds of the inhabitants of a small, pleasant country town, with no deleterious local industry, with every condition favourable to health, within easy reach of the world's greatest city with all its manifold scientific agencies, stricken down by one of the most insidious diseases seems to stagger our excellent contemporary's faith in medicine. The writer quotes a very eminent man of science as saying—what he would not dare to say himself—"that three-fourths of medical science is little more than pure quackery." Surely this is rather a superficial and unscientific view of a great public calamity, and one which leads to putting the saddle on the wrong horse. Science, medical science, has taught for years that if communities do not protect their water-supply from contamination they will pay for it in three most definite forms—diarrhœa, cholera, and typhoid fever. This is an enormous lesson taught by science—by medical science—attention to which would have saved Maidstone from this calamity. Science in one sense will never go further, even in the pleasantest country town or in the greatest city with the greatest number of wise men in it. Science will not alter the properties of the typhoid poison, any more than it will alter the property of arsenic or of opium. The great thing is to avoid swallowing such things, and this requires only a little extra expenditure of money and of care on the part of communities and a little less selfishness on the part of water companies. Surely a comfortable community of 30,000 people at the end of the nineteenth century might be expected to take such obvious precautions for their own safety without troubling either Providence or the Local Government Board. We are sure that our contemporary will not on due consideration find any serious ground in the sad experience of Maidstone for reflecting on medical science, which really lights up the whole subject, dictates measures for public safety, and conducts

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individual cases skilfully back to health. We are the more assured of this when we turn over a few pages of the same paper and find a most appreciative article on Sir J. Crichton-Browne's introductory lecture, eulogising especially the cheerfulness of the medical profession. The praise is just. Dr. Johnson said of Dr. Mead that he lived more in the broad sunshine of life than any man he ever knew; and the same holds of all true disciples of Æsculapius. They bring hope and relief. They "obviate" as Cullen said "the tendency to death." They eliminate disease on a large scale altogether from the employments and homes of men, and where they do not altogether succeed they fight it bravely when it comes. That they are successful in a large degree is shown by their very cheerfulness. If success were not their ordinary experience they would be of all men most miserable. And notoriously, as Sir J. Crichton-Browne says, and as our contemporary agreeing with him says, the contrary is the case.

THE PLAGUE IN BOMBAY FROM A FRENCH POINT OF VIEW.

DR. BONNEAU, medical officer of the first class in the French Colonial Service, who was deputed by the Governor of the French Possessions in India to make a study of the outbreak of plague at Bombay, has embodied the fruits of his mission in a lucid and instructive article which appears in the *Archives de Médecine Navale et Coloniale* for September. With regard to the genesis of the epidemic this writer comes to no positive conclusion. "It is certain," he says, "that the first cases occurred in a densely populated native quarter where the merchandise of the entire world is heaped up in the greatest profusion, awaiting distribution either by means of exportation or else internally to meet the industrial and commercial requirements of the country itself. The produce of China is there stored side by side with the cereals from Northern India. Was the disease imported from Hong-Kong, or did it travel with the wheat from the sub-Himalayan districts? This is a question that will probably remain unanswered." Certain observers have found an argument in favour of the Himalayan origin of the pestilence in the enormous mortality that took place among the rats infesting the go-downs where the wheat was lying, but Dr. Bonneau very effectively disposes of this theory by remarking that if more rats died there than elsewhere it was simply because they existed in greater number. The plague at first advanced slowly and insidiously, taking a long time to, as it were, put forth its roots, and Dr. Bonneau is quite satisfied that if energetic repressive measures had been adopted soon enough it could easily have been stamped out. Unfortunately, nothing at all was done by the municipal authorities until it was too late to summarily extinguish the innumerable foci of infection which had had time to establish themselves over the entire city. Mandevi, the quarter first contaminated, "consists of an agglomeration of unclean houses that are overflowing with filthy inhabitants. Not one single rule of hygiene is observed in this slum, where man and beast live together pell-mell amidst semi-darkness and respiring a heavy vitiated atmosphere. The sewers are not in working order, and on either side of the street close to the houses there are open drains about two feet in depth which, owing to defective flushing, are lined with an evil smelling deposit made up of vegetable and animal detritus." And yet, in spite of this shocking condition of things, the pestilence did not rage more severely in Mandevi than elsewhere, and when at last repressive measures were adopted it had almost completely disappeared from that quarter. The exodus that took place from Bombay was enormous. At the commencement of the present year it was calculated that upwards of 300,000 people had left the city, spreading themselves all over the peninsula. Old writers asserted that the plague never occurred south of a certain latitude, and as a matter of fact it has never crossed the equator; but great atmospheric heat cannot, as was alleged, be the sole cause of the exemption, because at the very time the epidemic was most severe in Northern India the temperature there was quite as high as it was in the south, which remained immune. Dr. Yersin's method of treatment is the only one of which Dr. Bonneau speaks approvingly. It is true that his results in Bombay were not so favourable as they had been in Hong-Kong, but this was owing to the manner in which the serum was prepared. In China it was obtained after the intravenous injection of living cultures, whereas in India the latter were dead and were injected subcutaneously. Yersin's serum is likewise, he considers, valuable as a prophylactic, but Dr. Bonneau was not at all impressed with the preventive quality of M. Haffkine's lymph, which he characterises as not only crude but dangerous. M. Haffkine's method, moreover, does not in his opinion possess the merit of novelty, having already been essayed by Ferran in Spain and Pfeffer in Germany.

THE DUTIES OF BOARDS OF GUARDIANS.

WE are of opinion that it is one of the duties of boards of guardians to grant relief and shelter to the vagrants, tramps, and such like persons who apply to them for relief. We are also of opinion that it is one of the duties of boards of guardians to administer that relief at the least possible expense to the ratepayers and consequently in a way which shall not tend to aggravate an evil which is one of the most difficult and pressing of our social problems. It is claimed, and claimed, we believe, rightly, that the Salvation Army by reason of its shelters has much to answer for in attracting to certain districts and neighbourhoods a class of persons who make mendicity a means of livelihood, and who, when "trade" is slack and they cannot get the necessary pence to swell the coffers of the Salvation Army, are obliged to seek the shelter of the casual wards and workhouses. Thus an increased burden is put upon the ratepayers, and the population of in too many cases an already overcrowded district augmented to an extent which, by reason of the character of that augmentation, is a menace to the public health. This being so it is surprising that a board of guardians should be found so apathetic to their responsibilities and duties as to attempt a procedure which encourages these pseudo-charitable institutions to carry on a work which is admitted by all who have rightly studied the question to be pernicious. From a letter in the *Times* from the pen of the Rev. J. E. Hand, assistant curate of St. Jude's, Whitechapel, it would appear, however, that the Bethnal-green board of guardians have adopted the practice of sending men to the Salvation Army Homes, for whom they pay 5*s.* per week per man. These men are troublesome to the guardians, hence they shift their responsibility to the Salvation Army at the ratepayers' expense. The Local Government Board do not appear to have sanctioned this practice (although we have not the letter written by the Local Government Board to the guardians on the subject before us), and had they done so we quite agree with the Rev. J. E. Hand that they would be "indirectly sanctioning the guardians to allow their 'loafer' paupers to enjoy immunity from any practical supervision by Poor Law authorities." Mr. Bramwell Booth has, of course, written a letter attempting to defend the guardians, but beyond correcting one or two errors in Mr. Hand's letter which are obviously the result of hurried writing—and the assistant curate of an East End district cannot be expected to find time hang heavily upon his hands—he practically makes no defence at all. Such statements as "Most of the men have remained in our employment

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for some time, costing the guardians less with us than in the workhouse"; and "perhaps he (Mr. Hand) has not yet realised the responsibilities of a household and felt the bitterness of having to pay out of slender and hardly-earned income for the support in comparative luxury of idle wastrels whose whole business in life is to get through it at other people's expense," &c., are plausible; but, unfortunately for Mr. Booth, in this last sentence which we have quoted he gives his whole case away. It is these wastrels, as he very aptly calls them, who are the source of all the trouble; but whatever may be the inability of the guardians to deal with them there can be no shadow of a doubt that they should not be encouraged in this course of life. It is the shelters of the kind run by the Salvation Army which help to manufacture such kind of men, and as long as this class of people know that by suffering a little hardship—and hardship is second nature to them—they can obtain food and shelter to tide them over their vicissitudes, they will continue to live by the methods they have adopted. For this class of persons the shelters are nothing more than hotbeds for the forcing of mendicity. The Salvation Army shelters are not, and cannot be, in spite of anything which Mr. Booth may say to the contrary, under the control of the local authorities, as they do not come within the meaning of the Common Lodging Houses Acts, and it is monstrous that these places should have been allowed to attain the proportions they have. Surely it is time that the legislature should step in and place them under control, for until this is done, whatever steps may be taken to stamp out vagrancy in other directions, they will be circumvented by these so-called charitable institutions. We have nothing whatever to say against the motives of the Salvation Army, but their methods are often distinctly bad.

THE AWFUL BARGE STORY.

A GRUESOME story has appeared in the columns of several of our contemporaries about a barge full of hospital refuse, which was described as lying and leaking in the Thames during most of last week opposite the intake of one of the metropolitan water companies. The true facts of the case are as follows. The barge was loaded at the Lambeth Vestry wharf with ordinary house refuse. There is no truth in the statement that her cargo or any part of it consisted of hospital refuse, and in the interests of sterling fiction we should like to know who invented this report. The barge went up the river to discharge her cargo, but in consequence of its alleged origin no one would receive it. She was then allowed to lie on the foreshore until she became a nuisance, when an order was served on her by the Port of London Sanitary Authority "to abate." This order was complied with by the removal of the barge through Teddington Lock, out of the jurisdiction of the Port Sanitary Authority. By this time her story became known, or rather the untrue rumour about her contents became known, and she was refused facilities for discharge by everyone. She was then brought back into the jurisdiction of the Port Sanitary Authority when at once a fresh notice was served upon her "to abate." She was by this time leaking and her cargo was decomposing. The owner then brought her down to Chiswick and turned over the greater part of the cargo to a sailing barge which, with the original barge, was on Wednesday last towed down to the mouth of the river where the nuisance was thrown overboard. The main reason for serving a nuisance order was on account of the injury to the river from pumping out her bilge and not from any smell or effluvium from the material, which had been freely treated with chloride of lime under the supervision of the Medical Officer of the Port, Dr. W. H. Collingridge. We understand that the owner of the barge, having practically refused to take steps to abate the nuisance, has been summoned at the West London Police Court. There is no doubt that he did not show a ready compliance and that his inaction might have been perilous to the community, but we can understand his feelings of helpless exasperation at the treatment that he received on the river-bank and the lying rumours concerning his cargo.

THE OUTBREAK OF TYPHOID FEVER AT UNIVERSITY COLLEGE HOSPITAL.

IN the course of the last ten days several cases of typhoid fever have occurred amongst the nurses and maids at University College Hospital. In all about eighteen have been attacked. A temporary dining-room had been provided for them in the course of the summer when certain houses in which they had been previously accommodated were pulled down on account of the re-building of the hospital. The water which had been used for drinking in this room, instead of being taken from the main as is usual throughout the hospital, was drawn from a cistern which became contaminated. The defect has now been remedied, but it has been thought best to provide another dining-room in a different part of the building. No cases have appeared amongst the patients in the wards, the sisters, or the resident officers. Up to the present time all the cases are doing well.

RECURRENCE OF HEPATIC ABSCESS AFTER INCISION AND APPARENT RECOVERY.

DR. PAUL REBREYEND reports[1] an interesting case of recurring hepatic abscess in an old soldier, aged forty-seven years. The patient had suffered from dysentery in Algeria in 1874, but it was not until he quitted the army five years later that he began to feel pain, accompanied by a sensation of weight, in his hepatic region. These somewhat vague symptoms recurred at intervals during the next three or four years, each recurrence necessitating the interruption of his work for a few days; and in 1883 he for the first time became aware of a swelling which in the course of about a fortnight developed into a well-defined epigastric tumour. For this he was treated in the Hôtel-Dieu by Professor Le Fort, who performed aspiration three times at intervals of a week, injecting tincture of iodine on the last two occasions. With regard to the character of the matter evacuated the patient was quite positive. At no stage did it resemble hydatid fluid, having from the beginning been reddish-brown in colour and so thick that it was only with difficulty it could be made to flow through the cannula. A week after the last aspiration, as the tumour had again filled and was larger than before, a vertical incision five centimetres long was made slightly to the left of the median line, and in ten days, cicatrisation being firmly established, the patient was discharged completely recovered. Six months later, however, he experienced a return of his former malaise, the pain and heavy feeling lasting several days, but his medical attendant administered quinine and a few doses of calomel, and the trouble seemed to pass away definitively. It was not until fourteen years had elapsed that he again sought treatment on account of his hepatic affection. A fortnight previously, without any obvious cause, he was seized with pain in his epigastrium, and soon a tumour as large as an orange made its appearance at the old site. On examination the liver was found to be small and retracted, hidden under the false ribs but not encroaching on the lung. There had been no jaundice, vomiting, or diarrhœa, and his appetite was good. During the interval the patient's general health had remained satisfactory; he had lost neither flesh nor strength,

[1] Duplay's Archives for August, 1897.

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and his renal excretion had been normal. On June 13th, 1897, Dr. Marchand operated at the Saint-Louis Hospital, reproducing his predecessor's incision, but prolonging it slightly downwards. The tumour contained yellowish-green, grumous pus, and was firmly adherent to the parietal peritoneum. Its walls were very thick and fairly smooth internally, but the contained cavity was somewhat irregular in shape. The pus, examined under the microscope and also by culture on gelose, was pronounced to be sterile. Hooklets and other relics of the echinococcus were carefully searched for but with negative results. In conclusion Dr. Rebreyend gives it as his opinion that the case is the first on record in which recurrence of an hepatic abscess occurred after operative interference followed by such a long interval. The cause or causes which led to the recurrence are, however, still to seek, but the fact that the pus evacuated at the second operation was sterile is greatly in favour of the view that the second abscess was not of recent formation; the thickness of its walls also points in the same direction, so that we are justified in thinking that it had formed a long time, probably years, previously—perhaps it had commenced immediately after the first operation. The sudden appearance of the abscess may easily have been due to a little fresh exudation into it caused perhaps by some slight unnoticed trauma and the increase in size may have sufficed to break through some fascia which had held it down, so that it formed an obvious swelling.

CHEWING GUM.

AN inquest was held on Oct. 6th at Lincoln upon the body of a child, aged seven years and eleven months, who died after eating "chewing gum." The sweetmeat in question was labeled "for chewing only" and "this is not to be eaten." After hearing the medical evidence the jury returned a verdict "that death was due to peritonitis of which they were unable to say the cause. At the same time the foreman stated they would like to say that in their opinion the sale of chewing gum should be strictly prohibited and shopkeepers asked to refrain from selling it." This last request seems to us to be superfluous in view of the preceding words, and besides to ask anyone to refrain from selling a harmful substance is silly. The right course is to pass a law to make anyone who sells stuff of this kind liable to a heavy penalty. We refer in our leading columns to this subject, but it is our firm opinion that quack medicines and the like will never be got rid of until such practices are made unprofitable. A fine of 10*s.* for adulterating foodstuffs is absurd, and in addition to increasing the fine by at least a hundred times the recommendation of the Select Committee ought to be enforced as to the convicted person publishing a notice of conviction in his place of business. What chewing gum is made of we do not know, but it is probably similar to that delectable mixture "chocolate chumps," which consist largely of paraffin wax and are quite indigestible.

THE SYMPTOMS OF CONGENITAL DIAPHRAGMATIC HERNIA.

CONGENITAL diaphragmatic hernia is rare; much more rarely is it the subject of clinical observation. The following case, published in the *Archives of Pediatrics* (New York), September, 1897, is therefore important. A healthy child, aged one month, was attacked by indigestion and colic, attended with frequent vomiting and quickened, laboured breathing. The pulse was from 130 to 160 and the respirations were from 60 to 80, with inspiratory recession. Percussion resonance of the chest was accentuated and the tympanitic sound of the abdomen was transmitted high into the thorax. Vesicular breathing was heard everywhere, but it was much more feeble than normal. The vomiting ceased in a day or two, but the laboured breathing continued. On the sixth day there was an exacerbation, and a frightful picture of Henoch's asthma dyspepticum was presented. After a short spell of crying the child suddenly became blue in the face and hands; he made violent respiratory efforts with slight success; his pulse was not perceptible; the extremities became cold, and cold perspiration dripped from the face. Active movements of intestinal gas could be heard. Warm mustard cloths were applied, but the paroxysm was not relieved until it had lasted an hour. He improved during the next few days, losing the inspiratory recession of the chest. But another asthmatic paroxysm occurred on the ninth day in which the ensiform cartilage was retracted almost to the spine and twitchings of the muscles of the face and arms occurred. After this other attacks took place from time to time, but they gradually diminished in number and intensity. They generally passed off with an escape of gas from the stomach and intestine. Gas could be felt moving in the abdomen and sometimes over the whole body. At the end of six weeks, when the child was apparently quite well, a moderate paroxysm occurred, in which he died. At the necropsy a deficiency was found in the diaphragm on the left side. The left pleural cavity was filled by the whole of the small intestine except the first two inches of the duodenum, the cæcum, the ascending, transverse, and part of the descending colon, together with the pancreas. The left lung was compressed into a small space. The heart was situated to the right of the median line deep in the mediastinum. During life the case was diagnosed by the writer, Dr. Booker, of Johns Hopkins University, and by Dr. Osler as asthma dyspepticum. A correct diagnosis of these cases is scarcely ever made.

YELLOW FEVER IN THE UNITED STATES.

YELLOW fever is still prevalent in the southern part of the United States, and if the sensational accounts published daily in the New York lay papers can be credited the condition of affairs in the Mississippi States is indeed lamentable. Happily, these are without a doubt highly coloured reports, and it would seem, judging from the American medical journals, that the epidemic is of a mild type and likely when cold weather sets in to disappear entirely. The circumstance that the outbreak has occurred in the autumn rather than in the spring must be regarded as fortunate, for it is more than probable that if the germs had been conveyed to the Gulf shore in the early part of the year a far-spreading and severe epidemic would have been the consequence. The work of combating diseases of an epidemic nature falls on the Marine Hospital Service, and most effectively have they discharged this duty. The appearance of yellow fever so soon after the announced discovery of the germ of that disease by Sanarelli is a somewhat peculiar coincidence. Another feature of the outbreak is the extraordinary panic that has seized the inhabitants of the districts, not only within the infected area, but of districts far outside. In fact, the inhabitants of the region in which the disease is raging appear to have kept calm in comparison with these outsiders. Every town and village in Alabama and Mississippi has established what a well-informed correspondent in the district has termed in a communication to us a "shot-gun quarantine." Although the disease has been officially declared to be yellow fever, and doubtless is, yet several medical men in New Orleans and the adjacent country stoutly deny the assertion, but say that it is a form of malaria or what is known in India as sun fever. Many of the resident health officers, who, of course, support the contention that it is yellow fever, say that the disease is as yet in an inchoate form; and Dr. Alfred Duperier, a southern health official,

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draws attention to the fact that the worst epidemic of yellow fellow ever known in America, that of 1853, came in, like this year, with dengue, and that for some time it was difficult to distinguish between the two. Dr. Duperier goes further than this and states his belief, in which he is supported by the late Dr. Austin Flint (in his work on the Practice of Medicine), that these diseases are germane. Excellent authorities, however, believe that when frosty weather sets in the disease will disappear. In connexion with Sanarelli's discovery it is interesting to note that the majority of medical men in the United States are coming round to a belief in its genuineness.

PANCREATIC LITHIASIS.

AN abstract of the following case, published by J. Nicolas, appears in a recent number of the *Revue des Sciences Médicales*. A man, aged forty-seven years, entered a hospital in consequence of an affection which began suddenly two and a half months previously and was characterised by loss of strength, anorexia, and violent epigastric pains of an intermittent and paroxysmal type. Very abundant melæna, amounting to a litre, took place, which relieved him. This occurred again. There was no diarrhœa. The signs of pancreatic diabetes showed themselves. He passed 179 grammes of sugar per day. Six months after the onset of the disease he died from caseous pneumonia. At the necropsy the duct of Wirsung was found to be obstructed by fifteen or twenty calculi embedded in the walls. The duct communicated with a large purulent cavity which occupied a third of the pancreas, which was sclerosed. The cavity opened into the duodenum by a fistula. Probably from its walls the blood of the melæna had issued.

DISINFECTANT SOAPS.

AN important investigation into the relative antiseptic properties of a number of commercial and medicated soaps has recently been made by Dr. S. Rideal and the results are of undoubted interest. It is not surprising that he finds that many so-called disinfecting soaps are quite worthless as germicides. He points out the incompatible character of many of the antiseptic agents which have been incorporated with soaps for this purpose. Boracic acid, for example, is converted into sodium borate, which possesses little antiseptic power. Metallic salts are precipitated and disappear in an insoluble form from the water in the curd. Oleates of the metals are similarly inert. Dr. Rideal suggests that the metallic oxides dissolved in soda or potash might give better results. Mercuric iodide dissolved in potassium iodide to form potassio-mercuric iodide appears to be an excellent antiseptic, which is, moreover, quite compatible with soap basis. A soap prepared in this way containing 3 per cent. of iodide of mercury when tried with vigorous growths of both the bacillus coli and the staphylococcus pyogenes aureus inhibited growth, and rendered the liquid sterile from the time of its addition. Formalin however, compares very favourably with these results, since soap containing only 0·4 per cent. of formalin effected sterilisation within thirty minutes of the time it was added. The experiments were conducted with a 2 per cent. solution of the soap. Dr. Rideal regards the disinfectant power of the essential oils as having been much over-rated, and in a series of experiments in which carbolic and clove oil soaps were tried, it was found that these had an antiseptic action equal to, but not exceeding, ordinary curd soap. In the same series of experiments the biniodide soap proved superior, while carbolic soap containing three pounds of phenol to the hundredweight of soap proved for practical purposes to be of little avail. The inquiry is of the greatest value, not only in connexion with the uses of so-called antiseptic soaps in medical and surgical work, but also in connexion with the popular belief that the use of many so-called antiseptic or disinfectant soaps necessarily guarantees immunity from infectious diseases.

THE HOSPITAL REFORM ASSOCIATION.

A CONFERENCE has been arranged by the Hospital Reform Association to take place at St. Martin's Hall, Charing-cross-road, London, on Thursday, Oct. 21st, at 4.30 P.M. The Earl of Stamford will preside, and Mr. Timothy Holmes, Sir William Broadbent, Mr. Victor Horsley (the newly elected Direct Representative on the General Medical Council), Dr. Lovell Drage, Dr. Isambard Owen, Sir Henry Burdett, and Mr. C. S. Loch have promised to attend and speak. It has been arranged to discuss the administration of medical relief in the out-patient and casualty departments of hospitals and dispensaries, and the association suggests that the conference should deal more especially with (1) subscribers' letters, (2) patients' payments, (3) limitation of the number of new cases, and (4) the means to be employed to restrict relief to fit and proper cases. Hospital managers, members of the medical staffs of hospitals, general practitioners in medicine, and representatives of supporters of hospitals are invited to attend and join in the discussion, Mr. T. Garrett Horder, Cardiff, the hon. secretary of the Hospital Reform Association, informs us that the conference will adjourn at 6.30 P.M. and meet again at 8 P.M., so that ample time will be given for the meeting to hear the views at length of many speakers. Mr. Horder will be glad to receive donations towards defraying the expenses of the meeting.

THE LONDON COUNTY COUNCIL, TYPHOID FEVER, AND WATER SUPPLY.

THE zeal of the London County Council in its interest to guard the public health is of course worthy of commendation, but we imagine that its recent decision to refer to the Public Health and Water Committee the question for them to inquire and report upon as to whether the causes which have led to the typhoid fever epidemic in Maidstone have any parallel in the conditions of the London water-supply, and what steps, if any, should be taken to prevent the propagation of the disease in London, will lead to an answer which has long been known before. To commence with, the source of supply in Maidstone is from wells, while the metropolitan supply is, with the exception of the Kent Company, which is but a small fraction of the whole, derived from flowing rivers, the Thames and the Lea. Further, the water supplied to London is with the same exception filtered. There is no such intercepting purifying process at Maidstone. This is a fact alone which should reassure the London public. The extraordinary purifying effects of sand filtration are well established, and it is not too much to say that so effective is this filtering method that the filtered water is again and again found to be sterile—that is, free from organisms, whether pathogenic or non-pathogenic. It is even doubtful whether pathogenic organisms occur in the water drawn at the intakes since the flow of a river is very inimical to the life of the disease germ, especially when associated with a countless number of harmless organisms. The practical absence of water-borne diseases like typhoid fever and cholera in London during the last thirty years is undoubtedly due to the efficiency of sand filtration, and it is of vital importance that this efficiency should be always maintained. In such a case the London water-supply that is derived from the Thames and the Lea may be depended upon. What we should like the County Council to do is to take some action which shall result in the appointment of a competent authority, whose duty it shall be to inspect and control the great filtering

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processes at the waterworks of the several companies. How important the efficiency of sand filtration is may be judged from the fact that it is this mainly which has kept London water-drinkers free from disease. Then let this efficiency be doubly secured by a system of independent control and inspection.

MEDICAL AND SCIENCE STUDENTS AND THE INDIA CIVIL SERVICE.

WE may briefly call attention to a communication from a correspondent in connexion with this subject which appears at page 1011 of the present number of THE LANCET. Concerning the high reputation and character which the India Civil Service deservedly enjoys and the opening and opportunities it affords to men of ability and culture for distinguishing themselves there can be no doubt; but it must be borne in mind that ability and culture of a superior kind are indispensably requisite on the part of intending candidates, for the examination is of a high standard and the competition is severe. We quite concur with our correspondent in what he says about the stress and hardship of competition in the medical profession in this country, and valuable appointments and promising careers for medical and science students outside the profession are therefore to be well considered and welcomed. Whether this career is within the reach or not of such students, and whether the character and scope of the India Civil Service examination be such as to offer them fair and reasonable chances of success we cannot say, but our correspondent declares that they are, and the special object of his communication is to show this to be so. Hitherto Oxford, Cambridge, and Dublin University men running on classical or mathematical lines have mainly been the successful competitors for these appointments, and there has been a virtual absence of candidates who have devoted themselves to natural science. The subjects embraced by the India Civil Service examination give it an elevated and broad standard, and that the mere preparation for it tends to put a man on a high intellectual plane by the wide and accurate reading and sound liberal culture demanded of him is certain, so that even the unsuccessful student will have little or no cause to regard his studies as wasted time, whereas if he is successful he will enter on a career that is lucrative and well worthy of his ambition.

PSYCHRO-ANÆSTHESIA.

IN the last number of *Brain* Dr. Leonard Guthrie has described under this name a curious case of sensory disturbance. The patient was a bricklayer, aged fifty-two years, who was seen in 1894 and complained then, as he has continued to do since, of a sensation of painful coldness affecting at first the right leg, but later also the arm on the same side. He had always been in good health since 1892, but when kneeling at work his right knee became locked. In August, 1893, he fell, and effusion took place into the joint. He was then also found to have a loose cartilage in the joint. He said that when the coldness first came on it seemed as though his foot was placed on ice in the hollow of the foot, but now it was all over the foot, and the coldest pain came from the roots of the toes. He described the sensation in the foot and leg as if a number of insects were trying to pass each other and could not. The foot was most comfortable in a hot bath or in bed, but he could not bear anything to touch him on the leg besides the bed-clothes. The knee-jerks were active and equal on the two sides and there was no unsteadiness. Tactile sensation was perfect, and pin-pricks were recognised readily and accurately. He also appreciated heat and cold, but application of cold to the right leg was distressing, while that of heat was agreeable. There was no difference in the temperature of the limbs and no evidence of trophic disturbance; but the whole of the right lower extremity was flabby, and the thigh on this side measured an inch less, and the calf three-quarters of an inch less, than the corresponding parts of the opposite leg. The sensations of cold were not confined to the area of distribution of particular nerves. Dr. Guthrie remarks that he has adopted the term "psychro-anæsthesia" used by Silvio to describe symptoms somewhat resembling those of his patient. "Meralgia paræsthetica" is a term used by Roth of a similar condition, and the subject has also received attention from Bernard, Escat, Osler, Hirsch, and Weir Mitchell. After discussing the various possible conditions which might give rise to the symptoms in this case, Dr. Guthrie is inclined to think that the most likely condition is one of syringomyelia in which the function of the posterior commissure is perverted but not destroyed, and he reports that so far all the ordinary remedies have failed to afford any relief.

DAMAGES FOR NEGLIGENCE IN BELGIUM.

AN action has recently been tried in Liège in which a member of a medical aid society who had been injured sued the medical officer for damages on account of non-attendance. It was stated that he was repeatedly sent for, but did not visit the plaintiff for six days, and no explanation of this negligence appears to have been offered. It was not shown that the plaintiff's recovery was as a matter of fact retarded as another medical man was called in, but the court considered that the plaintiff had to bear physical and moral pain to an extent which he would not have had to endure had he received immediate medical attention and as a solatium awarded him 200 francs. In commenting upon this case the *Scalpel* points out that, quite apart from the merits of this particular instance, the reason given for this award appears to open up a new terror for the medical officer of a club, for whenever he may be prevented from attending immediately it may always be possible to affirm that the patient has had to endure "physical and moral pain" which might have been allayed by earlier attention, and so is entitled to substantial damages. Indeed, the adverse legal decisions and the growing exactions of the clubs have led the *Scalpel*, which may be regarded as giving expression to the feelings of the profession in Belgium, to declare that there is only one way of solving the difficulty, and that is by medical men refusing all contract appointments and insisting on clubs and medical aid societies paying a fee for each attendance.

OPENING OF THE MEDICAL SESSION AT ST. VINCENT'S HOSPITAL, DUBLIN, AND THE ARMY MEDICAL SERVICE.

THE opening of the medical session at St. Vincent's Hospital, Dublin, under the presidency of Sir Christopher Nixon, on the 5th instant, was largely attended. Dr. Cox delivered the address on the occasion, and mainly took for his theme the genesis and development of the Army Medical Service as it is at present and as it should be. The lecturer, in the course of an eloquent address, alluded to the distinguished part which the medical service had always played in the history of the army and vindicated the claims of medical officers to have their grievances considered and redressed. The medical service, he declared, required to be advanced another step and to be constituted, like the Royal Engineers, into a Royal Corps, and its officers to have purely military rank and titles with limited power of command, but absolute within its own sphere. Dr. Cox, in the course of his address, after alluding to many conspicuous services rendered by medical officers, proceeded to cite some illustrations of the treatment which had been

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accorded to them by some high military authorities, attributable apparently to a dominating and aggressive spirit of militarism. Sir Christopher Nixon and Sir William Thomson, President of the Royal College of Surgeons in Ireland, who proposed a vote of thanks to Dr. Cox, followed with some speeches to a similar effect. It is quite clear that the Army Medical Service owing to its present unpopularity has ceased to attract a sufficient number of candidates to fill its vacancies, and it is not likely to be otherwise until it is authoritatively known what steps are proposed to be taken by the Government in the matter. The sooner the new warrant is published the better for all concerned.

THE TREATMENT OF GENERAL SUPPURATIVE PERITONITIS.

RECOVERY after laparotomy for suppurative peritonitis is rare. A new method of operating, described by Dr. J. M. T. Finney in a recent number of the Johns Hopkins Hospital *Bulletin*, which proved successful in five consecutive cases therefore demands attention. He attributes the failure of previous methods to insufficient removal of the infectious exudation. The observations of Pawlowsky show that in purulent peritonitis the lymph channels are choked with bacteria and inflammatory products. The naturally great powers of absorption of the peritoneum are much diminished and it is unable to dispose of the inflammatory products. Dr. Finney operates as follows. A sufficiently long incision to admit of easy access to all parts of the peritoneal cavity is made. The coils of small intestine are quickly withdrawn, beginning with the one that is perforated. All or as much as is necessary of the small intestine is placed outside the abdomen and covered with warm gauze or towels. The peritoneal cavity is then thoroughly and systematically wiped out with large pledgets of gauze wrung out of hot salt solution, paying particular attention to the pelvis. In some cases it may be well to flush with warm salt solution, but this is rarely necessary. Next the small intestine is systematically examined loop by loop while still outside the abdomen and cleansed by wiping. It is necessary to wipe with considerable force at times in order to remove adherent flakes of partly organised lymph. Success depends on the thoroughness with which this is done. The cleansing process is facilitated if the wiping of the coils is carried on under a constant irrigation of warm salt solution. The intestines are replaced with the damaged or sutured coil the most superficial, in order that it may be the better drained by being packed around with gauze if necessary. The abdominal wound is tightly closed, leaving just room enough between two sutures for a gauze drain. If there are any evidences of distension or pain Paquelin's cautery should be thoroughly applied to the abdomen, and the bowels should be moved early by calomel in repeated doses followed by salts and a turpentine enema. To ensure success, the operation should, if possible, be performed within a few hours of perforation. In Dr. Finney's five successful cases the peritonitis was secondary to typhoid perforation in one and to appendicitis in four. He operated unsuccessfully in one case of appendicitis, but the patient was *in extremis* at the time of the operation, which was only undertaken as a forlorn hope.

ON the recommendation of the General Purposes Committee the London County Council have approved the appointment of Dr. Clowes to the post of chemist in the place of Mr. Dibdin, who resigned some months ago. Dr. Clowes (D.Sc. Lond.) was the professor of chemistry at the University College, Nottingham, where he was very popular, and where he has carried out some important work of investigation. His name may be remembered chiefly in connexion with the introduction of a method for the accurate detection of the quantity of explosive gas in the air of coal mines.

IT has been decided to hold a dinner of the members of the Society of Medical Phonographers to congratulate Sir William Gowers on the recent honour which Her Majesty has been pleased to confer upon him. The dinner is to be held on Nov. 25th, and Sir William Broadbent, who ever since the foundation of the society has been one of its warmest friends, has expressed his willingness to take the chair on the occasion. Inquiries should be addressed to Mr. L. E. Creasy, 1, Windsor-road, Ealing, or to Dr. James Taylor, 49, Welbeck-street, W.

A PATHOLOGICAL meeting of the Neurological Society of London will be held at 11, Chandos-street, W., on Oct. 28th, at 8.30 P.M. Members wishing to make communications are invited to let the secretaries, Dr. F. W. Mott, F.R.S., and Dr. J. S. Risien Russell, know as soon as possible, and are requested to send very short abstracts dealing with the salient features of their communications.

THE annual public night in connexion with the Medical Society of University College, London, will be held on Wednesday, Oct. 20th, when an address will be delivered by Dr. W. B. Ransom on "Vis Medicatrix Naturæ." The chair will be taken at 8 P.M. by the President, Dr. G. B. Hunt. There will also be an exhibition of Roentgen rays, instruments, slides, &c.

THE autumn dinner of the Irish Medical Schools' and Graduates' Association will take place at the Café Monico, Piccadilly, on Nov. 2nd, at 7.15 P.M. Professor Alexander Macalister, F.R.S., will preside, and the association will entertain Field-Marshal Lord Roberts, V.C., G.C.B.

THE Roentgen Society will hold its opening meeting at St. Martin's Town Hall, London, W.C., on Nov. 5th, when the presidential address will be delivered by Professor Silvanus Thompson. There will be an exhibition of Roentgen apparatus, photographs, and methods.

THE Leprosy Conference which has been sitting during the week at Berlin has had a full programme both scientific and social. We may expect as a result of its deliberations some authoritative and practical conclusions concerning the pathology and treatment of leprosy.

DR. COUPLAND'S report to the Royal Commission on Vaccination concerning the outbreak of small-pox in Leicester in 1892–1893 was issued on Wednesday last as a Parliamentary paper.

MR. E. H. DOUTY, M.B. Cantab., has resigned the office of assistant surgeon to Addenbrooke's Hospital, being obliged to leave Cambridge by the state of his health.

WE draw the attention of our readers to an advertisement announcing the proposed formation of a whist club to which members of the medical profession will be elected under favourable circumstances. Too much whist is as bad for a medical man as for anybody else, but a little whist in the evening would be a very useful prescription for many over-worked practitioners.

PATHOLOGICAL SOCIETY OF MANCHESTER.—At the annual meeting of the above society held on Wednesday, Oct. 13th, 1897, the following gentlemen were elected office-bearers for session 1897–98:—President: Mr. C. E. Richmond. Vice-Presidents: Dr. H. A. G. Brooke and Dr. R. B. Wild. Treasurer: Dr. T. A. Helme. Secretary: Dr. T. N. Kelynack. Committee: Dr. A. Brown, Mr. J. Collier, Dr. J. E. Platt, Dr. E. T. Milner, Dr. E. S. Reynolds, Mr. J. W. Smith, Mr. W. P. Stocks, and Dr. R. T. Williamson. Auditors: Dr. F. C. Moore and Dr. W. E. Fothergill.

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A METHOD OF PRECISE LOCALISATION AND MEASUREMENT BY MEANS OF ROENTGEN RAYS.

BY JAS. MACKENZIE DAVIDSON, M.B., C.M. ABERD.,
AND
W. S. HEDLEY, M.D. EDIN.

A SKIAGRAPH is a shadow upon one single plane of objects that may be situated on various planes. The shadows thus obtained indicate the presence of an object, but give no correct idea of its form or size or relative position. The picture has no relief. It is indefinite and apt actually to be misleading. It is not surprising, therefore, that in the case of foreign bodies embedded in the tissues operative failure has often followed a too exclusive reliance upon the indications of the Roentgen photograph. In fact, the latter has hitherto been accepted by the prudent surgeon as evidence of the presence only of a foreign body in a part and not as reliable evidence of its position or size. It has long been evident, therefore, that some method must be devised for arriving at the size, shape, and position of the real object.

The present writers have lately worked out a method which is fully able to accomplish this. Many suggestions have been made from time to time as to varying the position of the tube or of the object and taking two or more pictures and estimating by triangulation the position of the foreign body. There are many practical difficulties in the way, and none of these suggestions have hitherto resulted in any method sufficiently definite to meet the actual requirements of practice. It occurred to one of us (Dr. Mackenzie Davidson) to actually work out the position of the foreign body by means of fine silk threads so arranged as to represent the actual path of the x rays which produced the negatives. He then constructed the apparatus to carry out the method, which is as follows. Two wires at right angles to each other are placed upon the photographic plate, film, or paper. The Crookes's tube is then placed with its anode at a measured distance from the plate and exactly perpendicularly to where the wires cross. The tube is fixed in a holder which slides in one plane. Further, one of the cross wires must be in exactly the same plane as that in which the tube is to be displaced. The wires being painted over with some pigment the part to be photographed is placed on the plate and carries with it a mark of the cross wires. The tube is then displaced to a measured distance to one side of the perpendicular and an exposure given, then to a corresponding point on the other side of the perpendicular and another similar exposure given. The resulting negative shows double images from the two different points of view. A further precaution is necessary—viz., to mark one quadrant of the plate and the corresponding quadrant on the patient's skin.

The negative having been developed, fixed, and slightly washed is at once placed on a horizontal stage illuminated from below by a suitable reflector (an arrangement similar to a re-toucher's desk). The negative may be placed with the gelatin surface upwards, or downwards if the glass is not too thick. In the case of celluloid films it is most convenient to place them downwards. The negative is adjusted so that a perpendicular dropped from a notch in a horizontal scale falls upon the point where the shadows of the wires cross. On each side of it another notch is made at the exact distance and height that the anode of the Crookes's tube occupied in the two exposures. A fine silk thread is then passed through each lateral notch and a small lead counter weight is attached to one end of each thread, while the other is passed through the eye of a fine needle. The needle is weighted with lead so that its eye lies flat on the surface of the negative. In short, these two silk threads represent the path of the x rays, so that if each needle be carefully placed upon a corresponding point in each shadow it follows that the point where these threads cross marks the position occupied by the corresponding part of the actual object. Further, its distance can be measured perpendicularly from three planes—from the horizontal which gives its depth and from the two planes represented by the shadows of the cross wires. By measuring any other desired corresponding points the precise size, position, and direction of the object can be determined, and remembering that the cross wires have left their mark on the patient's skin we can at once from these data give the surgeon all the information he can possibly desire. One of us (Dr. Hedley) has suggested that instead of displacing the tube, two tubes be used and a simultaneous exposure given.

It appears to us that this method has the following advantages: (1) the exact localisation can be completed a few minutes after the photograph is taken; (2) it can be used by anyone without recourse to any mathematical formulæ; and (3) it will be useful for measuring bony surfaces and cavities—e.g., the pelvis. The method has been fully tested on the living subject as well as on artificial models,[1] and has proved very accurate and reliable. Messrs. Curry and Paxton, 195, Great Portland-street, have made an apparatus to Dr. Mackenzie Davidson's design by means of which the method can be carried out conveniently, accurately, and quickly.

CALENDAR OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual Calendar has just been published by the Council of the College. It shows that there are 1191 Fellows on the roll of the College (as compared with 1175 last year), of whom 1023 obtained the Fellowship by examination, 15 were elected as Members of twenty years' standing under Section 5 of Cap. 15 Vict., 151 are Fellows by election, and 2 are *ad eundem* Fellows. There are 17,333 Members (as compared with last year's total of 17,102) and 590 Licentiates in Midwifery, the examination for this Licence having been discontinued since 1876. The Licentiates in Dental Surgery are stated to number 1186 (or an increase of 94 over last year) and the Diplomates in Public Health to number 282.

During the past collegiate year 9 candidates presented themselves in elementary physiology, 8 of whom passed and 1 was referred; 387 candidates presented themselves in elementary biology, of whom 246 passed and 141 were referred. Of 503 candidates who presented themselves in chemistry 300 passed and 203 were referred; in materia medica, of 98 candidates 59 passed and 39 were referred; in practical pharmacy, of 309 candidates 228 passed and 81 were referred.

The proportion of the fees paid by candidates for these examinations receivable by the College amounted to £1933 11*s.* 6*d.*, the examiners elected by the College receiving £195 5*s.* The examiners in elementary biology are appointed by the Council of the College, those in elementary physiology in conjunction with the Royal College of Physicians of London, and those in chemistry, materia medica, and practical pharmacy by the Royal College of Physicians of London, under the scheme for an Examining Board in England.

The examiners in anatomy and physiology for the Second Examination are appointed in conjunction with the Royal College of Physicians of London; they have conducted the Primary Examination under the Old Regulations as well as the Second Examination of the Examining Board; 715 candidates presented themselves for examination in anatomy, of whom 349 passed and 366 were referred; 702 presented themselves in physiology, 346 of whom passed and 356 were referred. The proportion of fees paid by candidates to the College for these examinations amounted to £3219 16*s.* 6*d.*, the examiners appointed by the College receiving £1159 16*s.*

The Board of Examiners in anatomy and physiology for the diploma of Fellow, elected annually by the Council of the College, held two meetings for the examination of 193 candidates, of whom 59 passed, whilst 134 were referred. The fees paid by candidates amounted to £1207 10*s.*, of which the Board received £772.

The Court of Examiners, ten in number, are elected by the Council from the Fellows of the College only for a period of five years. They conduct the Third or Final Examination in surgery of the Examining Board in England as well as the Second or Final Examination for the diploma of Member

[1] As an extreme instance it may be mentioned that a No. 5 shot has been accurately localised in a mass of paraffin made opaque by lamp-black. The shot was reached by a single needle puncture at the estimated depth before being cut down upon.

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under the Old Regulations and the Pass or Final Examination for the diploma of Fellow. During the past collegiate year the Court held two examinations for the Fellowship and four for the Membership. At the former there were 96 candidates, 50 of whom passed; 43 were referred for six months and 3 for one year. For the Membership 783 candidates presented themselves in surgery, of whom 493 passed and 290 were referred. The fees paid by candidates for these examinations amounted to £10,365 14*s.*, and the fees paid to the Court of Examiners and the examiners in midwifery amounted to £5172 19*s.* The examiners in medicine under the scheme for an examining board in England are elected by the Royal College of Physicians of London. Of 794 candidates examined 489 passed and 305 were referred. The examiners in midwifery are appointed in conjunction with the Royal College of Physicians of London and have examined 932 candidates, of whom 576 passed and 356 were referred.

The Board of Examiners in dental surgery have held two meetings for the examination of 141 candidates, 98 of whom received the Licence and 43 were referred. The fees received from candidates amounted to £1029, of which the Board received £592 4*s.*

The examiners in public health appointed in conjunction with the Royal College of Physicians of London examined 43 candidates in Part I., 32 of whom passed and 11 were referred; in Part. II. out of 51 candidates 29 received their diplomas and 22 were referred. The fees received by the College for both parts of the examination amounted to £222 12*s.*, the examiners receiving £141.

With regard to the finances of the College, it appears that the income from all sources amounted to £28,975 7*s.* 3*d.*, the largest item being derived from the fees paid by candidates for the diplomas of the College—viz., £17,978 4*s.*—the next largest being from dividends on the Erasmus Wilson bequest, £4885 4*s.* 10*d.*; rents from chambers adjoining the College produce £750; investments, £797 6*s.* 10*d.*; hire of rooms, sale of questions, &c., at Examination Hall, £701 5*s.* 1*d.*; incidental receipts at the College, £231 13*s.* 3*d.*; receipts from trust funds, £290 2*s.* 8*d.*; dividends from sinking fund for Savoy Estate, £6 3*s.* 3*d.*; expenses, repayable by Metropolitan Asylums Board at Midsummer, 1896, £282 0*s.* 6*d.*; fees retained for candidates, £404 5*s.*; amount paid by the London County Council on taking over Lincoln's-inn-fields, £1162 19*s.* 5*d.*; balance at Midsummer Day, 1896 (including half-balance Goldsmiths' Company Research Grant), £1486 2*s.* 5*d.*

The expenses for the year amounted to £27,184 12*s.* 2*d.* (leaving a balance at the bankers, including half Goldsmiths' Grant, of £1790 15*s.* 1*d.*), the largest item being (as in the receipts) in connexion with the examinations—examiners' fees, £8033 14*s.*; half expenses of Examination Hall for the purposes of examinations, £4151 13*s.* 2*d.* (this amount includes rent, rates, taxes, fuel, and light, which absorb the no small amount of £2087 1*s.* 4*d.*); expenses of Fellowship and Dental Examinations, £376 15*s.* 1*d.* Half expenses of the Scientific Laboratories on the Victoria-embankment amount to £689 12*s.* 3*d.* (this amount does not include rent, rates, taxes, fuel, or light). At the College rates, taxes, and insurance stand at £1314 19*s.*; extraordinary expenses—i.e., reconstructing lecture theatre, Hunterian festival, &c.,—£1003 0*s.* 8*d.*; alterations and repairs, £329 11*s.*; fees to members of the Council, £236 5*s.*; law expenses, £144 5*s.* 9*d.*; stationery, printing, &c., £405 10*s.* 7*d.*; salaries, wages, and pensions in the three departments—Museum, Library, and College—£4782 6*s.*; lectures, catalogues, specimens, &c., for museum, £346 11*s.* 11*d.*; purchase and binding of books, &c., for library, £740 4*s.* 2*d.*; trust funds, £339 2*s.* 2*d.*; purchase of stock, £2505 14*s.*; fees returned to candidates, £427 7*s.*; corporation duty, paid under protest, £158 1*s.*; Metropolitan Asylums Board (re-payable), £295 17*s.* 10*d.*; miscellaneous items—i.e., printing calendar, fuel and light, furniture, &c.—£727 16*s.*; disbursement of Goldsmiths' Research Grant, £176 5*s.* 7*d.* The expenses of the Museum and Library are exclusive of rates, taxes, repairs, fuel, light, &c.

The Secretary's report contains an abstract of the work done by the Council and committees, the Committee of Management of the two Royal Colleges, the Research Laboratories on Victoria-embankment, also reports of meetings of Fellows and Members, elections, &c. From the annual report of the Finance Committee we find that the gross income of the College for the past collegiate year is £804 less than the gross income of the previous year. This decrease is due to the falling-off in the receipts from the examinations of the Combined Examining Board. Under this head there is a decrease of £530 on the First Examination, of £240 on the Second, and of £842 on the Final, while there is an increase of £249 on the Diploma Fees paid by University candidates, making altogether a net decrease on these examinations of £1363. The receipts from the Fellowship and Dental Examinations continue at a satisfactory figure, being in each case higher than in any previous year.

The expenditure of the College for the past year is £1341 less than the expenditure of the previous year. This large difference is chiefly due to a reduction of £957,—arising in consequence of the smaller number of candidates examined, in the amount of the fees paid to the examiners under the combined Examining Board. This reduction, of course, to a great extent compensates for the decrease of £1363 in the receipts. The expenses, however, which are less liable to variation than the examiners' fees, have in most instances been smaller than in the previous years. There is thus a reduction of £248 in the expenses of the Examination Hall, of £140 in the expenses of the laboratories, of £445 in the general working expenses of the College in Lincoln's Inn Fields, and of £239 in the special expenses of the Museum. The expenses of the Museum have not been so low for several years, but the difference in the general working expenses of the College is only brought about by the inclusion under this head in the previous year of a payment of £405 for seven years' insurance. There is only a difference of about £4 in the special expenses of the Library for the two years (the difference being in favour of last year), this being the department of expenditure least liable to variation. The extraordinary expenditure has been even heavier than in the preceding year, the chief item being a sum of £753 expended on reconstructing and redecorating the Lecture Theatre. The balance on the "income and expenditure" account amounts to £2015. The fact that so large a margin has been left, notwithstanding the heavy expenditure on the Lecture Theatre, must be regarded as very satisfactory and as an indication of the sound financial position of the College.

From the report of Dr. G. Sims Woodhead, the Director of the Research Laboratories of the two Royal Colleges, it appears that on June 4th last the number of those working or having received permission to work in the laboratories was 14. The agreement with the Metropolitan Asylums Board for the examination in the laboratories of specimens from the throats of the diphtheria patients admitted to the hospitals of the Board was continued up to Dec. 31st, 1896. During the half year, from June 5th to Dec. 31st, 8701 specimens, or an average of 55·4 per diem, were examined and reported upon. The Board have now made arrangements for the conduct of this work in their own hospitals.

The preparation of antitoxic serum for the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board has been carried out during the year, and this work is to be continued for the Board. From June 5th, 1896, to June 4th, 1897. the Director has supplied 8473 doses of 4000 units, 1539 of 3000 units, 350 of 2000 units, 786 of 1500 units, and 3258 doses of 1000 units (or no less than 43,646 doses of 1000 units each).

The grant entrusted to the two Royal Colleges by the Goldsmiths' Company is still being administered by the Laboratories Committee for the furtherance of the antitoxin treatment of diphtheria. Since the last annual report on the work done in connexion with the grant, Dr. Cartwright Wood has continued his investigations on the production of potent diphtheria antitoxins and has succeeded by his new method in obtaining large quantities of strong antitoxic serum. The strongest of these serums prepared by Dr. Wood has been supplied to Dr. Sidney Martin at University College Hospital, who reported to THE LANCET, Oct. 17th, 1896, that he had obtained most remarkable results by its use. In 1894 the percentage death-rate from diphtheria in that hospital was 39. In 1895, the first year in which antitoxin was used, the death-rate had fallen to 28, and in 1896 (Sept. 22nd), when the strong serum was used, to 20·5. In Dr. Martin's figures additional evidence is supplied of the importance of the treatment of diphtheria by antitoxic serum at as early a stage of the disease as possible.

During the past collegiate year many valuable specimens have been added to the Museum of the College; these have already been noticed in THE LANCET of July 24th, p. 209.

In the Library Department Mr. Victor Gustave Plarr, B.A. Oxon., formerly librarian to King's College, London, has been

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appointed to succeed the late Mr. James Blake Bailey, B.A. Oxon., who died, regretted by all who knew him, on April 14th, 1897. Mr. Bailey was appointed librarian in 1887. On the completion of the additions to the library premises in 1888 the collection of books was re-arranged by Mr. Bailey, and under his able management many improvements have since been introduced whereby the value of the library as a place of study and reference has been very greatly increased.

THE FRONTIER RISINGS.

THERE is not much to be chronicled this week in the way of news regarding the tribal fighting on the Indian frontier, the bulk of which has probably yet to come. There is an apparent lull at the present time, but it is only apparent, for the preparations for the advance of Sir William Lockhart's large force to Tirah have been proceeding most actively, and the expedition is now ready; 30,000 men, at the least, have been mobilised and active operations will begin at once. Meanwhile, the tribesmen in the Khyber have attacked our troops at Fort Jumrud, and the Orakzais and Afridis are understood to be assembling in force. Winter is apparently setting in, for there has been a heavy snowfall in the Safed Koh range of mountains. The Mamund tribe have surrendered and are giving up their arms and the tribes have been offered medical aid for their wounded by General Blood. Notwithstanding all the disastrous events that have recently taken place in India, and the anxiety and hard work to which these have given rise, the conduct of affairs in that country has apparently been very energetic and judicious under exceptionally trying circumstances. The Government has lost no time in dealing with this big frontier outbreak. It was not an occasion, as we have said, for arguing, but for action; the rebellion must be put down by force and the tribes that have taken part in it subdued and disarmed. It is a very fortunate circumstance that the present Viceroy was appointed by the late Government and not by the present Ministry.

All that Lord Elgin has done since his appointment has been based, of course, upon the knowledge he has acquired in the country as Viceroy of India and as one responsible for the government of that great Eastern dependency. We see that Lord Onslow, in his courageous and statesmanlike speech at Guildford the other day, altogether denies that there has been any breach of faith with the tribesmen of the Chitral districts, maintaining, on the contrary, that the proclamation had been adhered to and fulfilled. What Lord Elgin had done had been done deliberately in what he conceived to be a spirit of justice to the tribes and in the interest of the country over which he ruled. The last persons to attack his policy would seem to be the party who appointed him to the post he now fills, and in any case Lord Onslow is justified in saying that there was no alternative between trusting and removing a high official charged with grave responsibility under most difficult circumstances. That the present Viceroy enjoys the confidence of those in India is undoubted, and nothing is more gratifying than the way in which the Rajahs have come forward to join the soldiers of the Queen, or the bravery, devotion, and loyalty exhibited by the native troops. The sick and wounded, we are glad to say, are reported to be doing well. The Royal West Kent Regiment has been escorting a large convoy of sick to Panjkora. The latest papers from India are, as might be expected, full of details respecting the military operations on the frontier, but their news is discounted by the fact that it has for the most part already arrived here by telegraph. From intelligence which has reached us we gather that the hospital service has worked satisfactorily and well. Great stress is laid upon the extremely difficult nature of the country, upon the fatigue and hardship imposed upon the troops by their expeditionary marches, the heat of the climate and great diurnal changes of temperature, and the difficulties in regard to food-supply, but the health and spirits of the troops—British and native—are, all things considered, very good.

The base hospital of the Malakand Field Force is, or was, at Nowshera. From a communication we have received we learn that the hospital patients, many of whom are officers, consist of wounded from Malakand Fort and district and cases of dysentery and fever, and among the latter several of enteric fever. It had been very hot, but the evenings were (the end of September) getting cool; there were occasional dust-storms. An officer of the Guides who had been seriously ill was getting quite well, and the patients generally were progressing favourably. The medical and nursing staff of the hospital had, of course, been very busy and all engaged had had an active time of it.

THE BATTLE OF THE CLUBS.[1]

THE POSITION AT YARMOUTH: A LIBERAL JOURNAL.

"IT should be remembered that above and beyond professional interests are the public, and surely those who are the paymasters of the profession have the right to dictate the terms upon which they shall be served." So says the *Eastern Daily Press* of Oct. 8th in referring to the relations which exist between the friendly societies and the medical men in the town of Yarmouth. What sentiments from a "Liberal" journal, as we believe the *Eastern Daily Press* to be! The *Eastern Daily Press* also says that the "doctors came into conflict with the societies upon a pocket question." This is not true. The facts are that the medical men and the clubs always worked amicably together with mutual benefit until the clubs from being benefit societies for *bonâ-fide* working men turned themselves into so-called medical aid societies, which only paid the medical officer a proportion of the sum earned by his labours, allowed him no voice in the selection of members, and admitted the well-to-do to their charity. The doctrine that the paymaster has a right to dictate terms to his employed may appear to be a sound one to this singular Liberal journal, but how would it work in practice? For instance, why should not the public demand their *Eastern Daily Press* for a farthing instead of a penny, or seek to have advertisements inserted at a half-penny per column or at some reduced rate? The public are the paymasters of the paper, why should they not "dictate the terms upon which they shall be served"? If this argument were alone employed by the masters in the engineering strike, would the *Eastern Daily Press* side with the masters? We will not labour the point, for it is clear that the *Eastern Daily Press* wrote with but little comprehension of medical matters or the actual position between general practitioners and medical aid associations.

A correspondent writing under the pseudonym of "Medicus" replied on the following day in excellent terms to the reflection of the Liberal newspaper upon the medical profession, and with laudable fairness the letter was inserted as a whole. A portion of it we quote: "The medical profession," he wrote, "naturally objects in its own interests to a system which deprives it of a large portion of its legitimate earnings, and hence considers the conduct of such of its members as consent to undergo this 'sweating' as 'infamous,' a term which has been employed by the Medical Council for unprofessional conduct. Your leader goes on to state 'that above and beyond professional interests are the public.' Just so. Those who are best able to judge are of opinion that the public cannot be properly attended to by medical men who undertake to 'physic them wholesale.' The proportion of two medical men to the 6000 members in Yarmouth and to 11,000 in Norwich speaks for itself. The whole system which governs these newly constituted medical institutes and medical aid societies is not only degrading to an honourable profession, but is equally detrimental to the best interests of that class of the public who have until recently been glad to avail themselves of the services of their club doctors."

This puts the whole matter in a nutshell and quite deprives the persons who take club appointments that have been refused by their fellow practitioners of the claim that is constantly put forward for them that they act out of humanity. They do nothing of the kind. It is not humane to bolster up a system of medical attendance which is not only based upon robbery of the medical profession, but which

[1] A reprint of the previous articles on the above subject has been published in book form entitled, "The Battle of the Clubs," and can be obtained from THE LANCET Office, price 1s.

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offers at the same time totally inadequate care to the sick poor. It is not humane. It is on the other hand cruel as well as stupid.

THE HEARTS OF OAK SOCIETY AND THEIR MEDICAL OFFICERS.

The following circular has been received by one of the medical examiners to the Hearts of Oak Benefit Society:—

322, Winchester House, Old Broad-street,
London, E.C., Sept. 6th, 1897.

THE HEARTS OF OAK AND THE PRINCE OF WALES'S HOSPITAL FUND COMMEMORATION STAMPS AND STAMP ALBUM.

SIR,—I have the full permission of the Committee of the Hearts of Oak for placing the following facts before you and for asking you to assist in this matter as medical officer to the Society, and should further be glad to know if you will inform me whether your medical agent (if you have one) is trustworthy, and if he can be employed in the same benevolent object.

The Prince of Wales's Commemoration Hospital Fund Stamp was issued to afford those who could subscribe a small sum a tangible memento of this charity.

The Stamp is printed in two colours, blue price one shilling, and red price half-a-crown. The die having been destroyed in the presence of the Duke of York no more can be issued.

The stamp was not only issued to benefit the Hospitals, for the object which the Prince of Wales had also at heart was to interest the working classes in this noble and benevolent scheme.

An album in ornamental form is now to be issued containing pages for the stamps for several years, a letter from Lord Rothschild, reproductions of the portraits and signatures of Her Majesty the Queen and H.R.H. the Prince of Wales, as well as explanation how the production of it with the owner's own signature therein will ensure the bearer or his family immediate and special attention in any Hospital.

Thus the working man will benefit himself (subject, of course to the prior assistance of your own valuable organisation) whilst he assists the charity.

The Album will be sold to him at the price of 6*d.* net.

You, Sir, can obtain it at the trade price either from the Hearts of Oak office, 17, Charlotte-street, Fitzroy-square, or from me. This not for cash, but on sale or return at about one month.

The stamps also so obtainable carry a 10 per cent. commission on all sold direct from me or as arranged by you with the Hearts of Oak office, as they have the 10 per cent. on all sold through them.

A special notice of such sales will be communicated to the press, and further particulars will be found in the September issue of the *Hearts of Oak Review*.

May I hope you will kindly favour me with a reply and state what number of Albums I may be permitted to place with you.

Believe me, yours faithfully,
H. S. C. M. GORDON,
Acting for the Prince of Wales's Hospital Commemoration Fund.

It is characteristic of the position to which lay organisations attempt to degrade their medical men that they should ask them to tout for the sale of books among their patients, whether "on sale or return" or on any other principle. We should much like to know, too, why any "bearer or his family" should obtain "immediate and special attention in any hospital" because he had bought a sixpenny album. We do not see why the hospital authorities should not resent the attempt to interfere with their routine and even refuse to see the patient who put forward greedy claims to earlier and more particular treatment than other sick poor. We should much like to know who Mr. H. S. C. M. Gordon is, and what right he has to describe himself as acting for the Prince of Wales's Commemoration Fund. The authorities of the Fund are privy to this circular, we suppose? If they are we are sure they have not realised what it means. If they are not, Mr. H. S. C. M. Gordon should be made to explain by what right he signs as acting for the Fund.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6349 births and 3414 deaths were registered during the week ending Oct. 9th. The annual rate of mortality in these towns, which had declined in the eight preceding weeks from 29·5 to 16·8 per 1000, further fell last week to 16·2. In London the rate was 15·5 per 1000, while it averaged 16·7 in the thirty-two provincial towns. The lowest rates in these towns were 9·4 in Portsmouth, 9·9 in Croydon, 10·9 in Halifax, and 11·5 in Blackburn; the highest rates were 21·3 in Sunderland, 21·7 in Manchester, 25·1 in Wolverhampton, and 26·2 in Bolton. The 3414 deaths included 433 which were referred to the principal zymotic diseases, against 608 and 514 in the two preceding weeks; of these, 131 resulted from diarrhœa, 86 from diphtheria, 73 from "fever" (principally enteric), 52 from measles, 47 from whooping-cough, and 44 from scarlet fever. No death from any of these diseases was recorded last week in Croydon; in the other towns they caused the lowest death-rates in Bristol, Brighton, Nottingham, and Blackburn; and the highest rates in Newcastle-upon-Tyne, Sunderland, Preston, and Wolverhampton. The greatest mortality from measles occurred in Burnley and in Sunderland; from scarlet fever in Huddersfield; from whooping-cough in Plymouth and in Gateshead; from "fever" in Wolverhampton; and from diarrhœa in Wolverhampton, Oldham, Preston, and Salford. The 86 deaths from diphtheria included 53 in London, 6 in Cardiff, 5 in West Ham, 3 in Leicester, and 3 in Liverpool. No fatal case of small-pox was registered during last week either in London or in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 3653, 3697, and 3677 at the end of the three preceding weeks, had risen again to 3692 on Saturday last, the 9th inst.; 400 new cases were admitted during the week, against 376, 358, and 349 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 165 and 167 in the two preceding weeks, further rose last week to 176, but were 47 below the corrected average. The causes of 28, or 0·8 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Leeds, Hull, Newcastle-upon-Tyne, and in sixteen other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Liverpool, Preston, and Bradford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·8 and 19·4 per 1000 in the two preceding weeks, further rose to 19·8 during the week ending Oct. 9th, and exceeded by 3·6 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 8·5 in Perth and 15·9 in Leith to 22·0 in Greenock and 24·2 in Dundee. The 590 deaths in these towns included 28 which were referred to diarrhœa, 13 to scarlet fever, 12 to whooping-cough, 12 to "fever," 5 to diphtheria, and 3 to measles. In all, 73 deaths resulted from these principal zymotic diseases, against 78 in each of the two preceding weeks. These 73 deaths were equal to an annual rate of 2·4 per 1000, which slightly exceeded the mean rate last week from the same diseases in the thirty-three large English towns. The 28 fatal cases of diarrhœa showed a decline of 13 from the number in the preceding week, and included 15 in Glasgow, and 5 in Dundee. The deaths referred to scarlet fever, which had been 6 and 5 in the two preceding weeks, rose again last week to 13, of which 5 occurred in Glasgow, 3 in Edinburgh, and 3 in Aberdeen. The 12 fatal cases of whooping-cough showed a further decline from the numbers recorded in recent weeks, and included 7 in Glasgow and 3 in Dundee. The deaths referred to different forms of "fever," which had been 9 and 7 in the two preceding weeks, rose again to 12 last week, of which 7 occurred in Glasgow, 2 in Edinburgh, and 2 in Paisley. The 5 fatal cases of diphtheria included 2 in Glasgow and 2 in Dundee. The deaths from diseases of the respiratory organs in these towns, which had been 96 and 137 in the two preceding weeks, further rose to 162 last week, and were more than double the number recorded in the corresponding week of last year. The causes of 28, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 28·3 and 26·5 per 1000 in the two preceding weeks, further declined to 21·9 during the week ending Oct. 9th. During the thirteen weeks of last quarter the death-rate in the city averaged 24·0 per 1000, the rate during the same period being 19·4 in London and 18·4 in Edinburgh. The 147 deaths registered in Dublin during the week under notice showed a decline of 31 from the number in the preceding week, and included 17 which were referred to the principal zymotic diseases, against 39 and 20 in the two preceding weeks; of these, 10 resulted from diarrhœa, 4 from "fever," 3 from

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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS OF LONDON—SEPTEMBER, 1897.

(Specially compiled for THE LANCET.)

Sanitary Areas.	Estimated population in the middle of 1897.	Notified Cases of Infectious Disease.											Deaths from Principal Infectious Diseases.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,463,169	1	3155	1386	—	14	7	23	620	—	5706	13·3	—	93	85	187	126	—	73	1	485	1050	2·5	6687	15·6	156
West Districts.																										
Paddington	126,161	—	61	30	—	6	—	1	23	—	121	10·0	—	—	3	9	3	—	1	—	17	33	2·7	167	13·8	173
Kensington	171,427	—	141	31	—	22	—	2	25	—	221	13·4	—	2	2	8	—	—	2	—	11	25	1·5	206	12·5	150
Hammersmith	105,969	—	51	7	—	10	—	1	12	—	81	8·0	—	—	2	2	1	—	—	—	17	22	2·2	154	15·2	145
Fulham	120,040	—	109	52	—	3	—	1	7	—	172	14·9	—	—	5	8	7	—	1	—	13	34	3·0	177	15·4	131
Chelsea	98,692	—	55	23	—	9	1	—	10	—	98	10·6	—	—	1	5	5	—	1	—	5	17	1·8	142	15·3	170
St. George Hanover-square	80,330	—	25	8	—	7	—	—	7	—	47	6·1	—	—	1	2	—	—	2	—	4	9	1·2	92	11·9	127
Westminster	53,027	—	28	6	—	4	1	—	8	—	47	9·2	—	1	—	1	3	—	1	—	5	11	2·2	86	16·9	127
St. James Westminster	22,576	—	23	1	—	1	1	—	4	—	30	13·9	—	—	1	1	—	—	—	—	1	3	1·4	25	11·6	136
North Districts.																										
Marylebone	140,808	—	42	25	—	11	—	2	34	—	114	8·4	—	—	—	4	2	—	1	—	13	20	1·5	211	15·6	154
Hampstead	77,275	—	16	9	—	3	—	1	2	—	31	4·2	—	—	1	2	2	—	1	—	4	10	1·3	79	10·7	160
St. Pancras	242,255	1	121	36	—	32	—	—	22	—	222	9·6	—	3	1	6	11	—	4	—	18	43	1·9	383	16·5	184
Islington	341,134	—	242	59	—	38	—	3	33	—	375	11·5	—	3	5	9	14	—	7	—	20	58	1·8	423	12·9	133
Stoke Newington	34,136	—	11	4	—	7	—	—	5	—	27	8·2	—	—	—	—	—	—	1	—	—	1	0·3	38	11·6	95
Hackney	216,698	—	214	80	—	49	2	—	27	—	372	17·9	—	8	1	10	2	—	7	—	20	48	2·3	295	14·2	125
Central Districts.																										
St. Giles	37,840	—	28	8	—	7	—	—	9	—	52	14·3	—	1	—	—	—	—	—	—	1	2	0·6	56	15·4	71
St. Martin-in-the-Fields	12,711	—	4	1	—	2	—	—	1	—	8	6·6	—	—	—	—	—	—	—	—	—	—	—	18	14·8	45
Strand	23,562	—	26	5	—	4	—	—	3	—	38	16·8	—	1	—	1	—	—	1	—	1	4	1·8	43	19·0	187
Holborn	30,493	—	11	12	—	3	—	—	7	—	33	11·3	—	—	—	—	—	—	1	—	2	3	1·0	45	15·4	100
Clerkenwell	66,162	—	54	60	—	5	—	—	11	—	130	20·5	—	3	3	6	3	—	2	—	12	29	4·6	142	22·4	250
St. Luke	41,279	—	46	25	—	8	—	—	10	—	89	22·5	—	—	2	2	1	—	—	—	9	14	3·5	83	21·0	160
City of London	30,228	—	19	6	—	7	—	—	5	—	37	12·8	—	1	—	1	—	—	1	—	2	5	1·7	53	18·3	182
East Districts.																										
Shoreditch	121,883	—	79	47	—	23	1	1	21	—	172	14·7	—	6	2	3	13	—	4	—	32	60	5·1	251	21·5	196
Bethnal Green	129,098	—	118	70	—	15	—	1	33	—	237	19·1	—	4	2	7	8	—	2	—	14	37	3·0	213	17·2	168
Whitechapel	79,724	—	78	44	—	7	—	1	21	—	151	19·8	—	7	—	6	2	—	1	—	6	22	2·9	150	19·6	181
St. George-in-the-East	47,917	—	40	17	—	7	—	—	7	—	71	15·4	—	2	3	3	1	—	—	—	11	20	4·4	117	25·5	286
Limehouse	58,508	—	58	23	—	10	—	—	7	—	98	17·6	—	5	1	3	1	—	—	—	8	18	3·2	122	21·7	192
Mile End Old Town	111,883	—	120	48	—	13	—	1	13	—	195	18·2	—	2	4	4	4	—	3	—	11	28	2·6	184	17·1	158
Poplar	169,811	—	129	59	—	27	—	1	24	—	240	14·7	—	2	5	6	8	—	3	—	18	41	2·5	283	17·4	157
South Districts.																										
St. Saviour Southwark	24,919	—	18	9	—	1	—	—	5	—	33	13·8	—	—	—	2	1	—	—	—	5	8	3·3	37	15·5	136
St. George Southwark	60,388	—	68	23	—	9	—	—	15	—	115	19·9	—	4	2	4	4	—	4	1	13	32	5·5	118	20·4	153
Newington	122,191	—	121	36	—	16	—	—	17	—	189	16·1	—	5	3	4	5	—	2	—	15	34	2·9	220	18·8	162
St. Olave Southwark	11,480	—	11	2	—	3	—	—	1	—	17	15·4	—	—	—	1	—	—	1	—	3	5	4·5	16	14·5	122
Bermondsey	85,629	—	73	42	—	13	—	—	11	—	139	16·9	—	4	6	6	1	—	2	—	15	34	4·1	176	21·4	217
Rotherhithe	40,643	—	46	6	—	7	—	—	7	—	66	16·9	—	2	4	2	—	—	—	—	4	12	3·1	61	15·7	129
Lambeth	300,048	—	163	89	—	27	—	1	36	—	316	11·0	—	9	4	11	5	—	1	—	28	58	2·0	446	15·5	131
Battersea	168,877	—	254	74	—	14	—	—	24	—	366	22·6	—	3	7	11	6	—	4	—	16	47	2·9	237	14·6	142
Wandsworth	195,612	—	109	71	—	20	—	2	28	—	230	12·3	—	4	4	13	2	—	2	—	20	45	2·4	2 0	11·2	135
Camberwell	257,575	—	147	118	—	19	—	2	30	—	316	12·8	—	9	6	15	8	—	3	—	26	67	2·7	361	14·6	166
Greenwich	178,367	—	73	63	—	24	1	2	25	—	188	11·1	—	1	2	5	1	—	5	—	20	34	2·0	284	16·7	147
Lewisham (excluding Penge)	86,152	—	41	23	—	6	—	—	7	—	77	9·3	—	1	—	1	1	—	1	—	12	16	1·9	98	11·9	112
Woolwich	41,409	—	19	13	—	4	—	—	4	—	40	10·1	—	—	1	2	—	—	—	—	8	11	2·8	54	13·6	107
Lee	39,215	—	27	11	—	6	—	—	5	—	49	13·0	—	—	—	—	1	—	—	—	4	5	1·3	48	12·8	216
Plumstead	61,057	—	34	10	—	5	—	—	4	—	53	9·1	—	—	1	2	—	—	1	—	21	25	4·3	83	14·2	179
Port of London	—	—	2	—	—	1	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 32 cases of membranous croup.

† Including deaths from membranous croup.

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scarlet fever, and not one either from small-pox, measles, diphtheria, or whooping-cough. These 17 deaths were equal to an annual rate of 2·5 per 1000, the zymotic death-rate during the same period being 2·0 in London and 1·8 in Edinburgh. The fatal cases of diarrhœa, which had been 21 and 8 in the two preceding weeks, rose again to 10 last week. The deaths referred to different forms of "fever," which had been 6, 9, and 6 in the three preceding weeks, further declined to 4 last week. The mortality from measles slightly exceeded that recorded in the preceding week. The 147 deaths in Dublin last week included 34 of infants under one year of age and 39 of persons aged upwards of sixty years; the deaths of both infants and of elderly persons showed a decline from those recorded in the preceding week. Eight inquest cases and 6 deaths from violence were registered; and 48, or nearly a third, of the deaths occurred in public institutions. The causes of 14, or nearly 10 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING SEPTEMBER, 1897.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during September in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 13·3 per 1000 of the population, estimated at 4,463,169 persons in the middle of this year. In the three preceding months the rates had been 8·7, 11·2, and 10·2 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Hammersmith, St. George Hanover-square, Marylebone, Hampstead, Stoke Newington, St. Martin-in-the-Fields, and Plumstead; while they showed the largest excess in Clerkenwell, St. Luke, Bethnal Green, Whitechapel, Mile End Old Town, St. George Southwark, and Battersea. Only one case of small-pox was notified in London during September, against 4, 7, and 1 in the three preceding months; this case belonged to St. Pancras sanitary area. No small-pox case was admitted into any of the Metropolitan Asylum Hospitals during September, and no patients remained under treatment at the end of the month. The prevalence of scarlet fever in London showed a marked increase upon that recorded in recent months; this disease was proportionally most prevalent in St. James Westminster, Hackney, Strand, St. Luke, Whitechapel, Limehouse, Mile End Old Town, Newington, Rotherhithe, and Battersea sanitary areas. The Metropolitan Asylum Hospitals contained 3585 scarlet fever patients at the end of September, against 2786, 3064, and 3390 at the end of the three preceding months; the weekly admissions averaged 350, against 272, 364, and 346 in the three preceding months. The prevalence of diphtheria in London showed an increase upon that recorded in the preceding month; among the various sanitary areas this disease showed the highest proportional prevalence in Fulham, Clerkenwell, St. Luke, Bethnal Green, Whitechapel, Bermondsey, Battersea, and Camberwell. There were 1033 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of September, against 864, 957, and 1006 at the end of the three preceding months; the weekly admissions averaged 150, against 125, 139, and 131 in the three preceding months. The prevalence of enteric fever in London during the month under notice showed a marked further increase upon that recorded in recent months; this disease was proportionately most prevalent in Stoke Newington, Hackney, St. Luke, City of London, Shoreditch, Limehouse, and St. Olave Southwark sanitary areas. The Metropolitan Asylum Hospitals contained 173 enteric fever patients at the end of September, against 70, 82, and 133 at the end of the three preceding months; the weekly admissions averaged 28, against 20 and 26 in the two preceding months. Erysipelas showed the highest proportional prevalence in Marylebone, St. Giles, St. Luke, Bethnal Green, Whitechapel, and St. George Southwark sanitary areas. The 23 cases of puerperal fever notified in London during September included 3 in Islington and 2 each in Kensington, Marylebone, Wandsworth, Camberwell, and Greenwich sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas of the metropolis, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the five weeks ending Saturday, October 2nd, the deaths of 6687 persons belonging to London were registered, equal to an annual rate of 15·6 per 1000, against 13·9, 18·3, and 23·7 in the three preceding months. The lowest death-rates during September in the various sanitary areas were 10·7 in Hampstead, 11·2 in Wandsworth, 11·5 in St. James Westminster, 11·6 in Stoke Newington, 11·9 in St. George Hanover-square and in Lewisham (excluding Penge), 12·5 in Kensington, and 12·8 in Lee; the highest rates were 20·4 in St. George Southwark, 21·0 in St. Luke, 21·4 in Bermondsey, 21·5 in Shoreditch, 21·7 in Limehouse, 22·4 in Clerkenwell, and 25·5 in St. George-in-the-East. During the five weeks of September 1050 deaths were referred to the principal zymotic diseases in London; of these, 485 resulted from diarrhœa, 187 from diphtheria, 126 from whooping-cough, 93 from measles, 85 from scarlet fever, 73 from enteric fever, and 1 from an ill-defined form of continued fever. These 1050 deaths were equal to an annual rate of 2·5 per 1000. No deaths from any of these diseases were registered last month in St. Martin-in-the-Fields; in the other sanitary areas they caused the lowest death-rates in St. George Hanover-square, Hampstead, Stoke Newington, St. Giles, Holborn, and Lee; and the highest rates in Clerkenwell, Shoreditch, St. George-in-the-East, St. George Southwark, St. Olave Southwark, Bermondsey, and Plumstead. The 93 fatal cases of measles were 16 below the corrected average number in the corresponding periods of the ten preceding years; this disease showed the highest proportional fatality in Shoreditch, Whitechapel, Limehouse, and St. George Southwark sanitary areas. The 85 deaths referred to scarlet fever were 36 below the corrected average number; among the various sanitary areas this disease was proportionally most fatal in Clerkenwell, St. George-in-the-East, Bermondsey, and Rotherhithe. The 187 fatal cases of diphtheria were 16 below the corrected average number; the mortality from this disease was highest in Clerkenwell, Whitechapel, St. George Southwark, Bermondsey, Battersea, and Wandsworth sanitary areas. The 126 deaths from whooping-cough were 28 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Fulham, Chelsea, Shoreditch, Bethnal-green, and St. George Southwark. The 73 fatal cases of enteric fever were within 2 of the corrected average number; this disease was proportionally most fatal in St. George Southwark sanitary area. The 485 deaths from diarrhœa were very slightly below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in St. Luke, Shoreditch, St. George-in-the-East, St. Saviour Southwark, and St. George Southwark. In conclusion, it may be stated that the mortality during September from these principal zymotic diseases was nearly 9 per cent. below the average.

Infant mortality in London, measured by the proportion of deaths of children under one year of age to registered births, was equal to 156 per 1000. Among the various sanitary areas the lowest rates of infant mortality were recorded in Stoke Newington, St. Giles, Holborn, St. Olave Southwark, Lewisham, and Woolwich; and the highest rates in St. Martin-in-the-Fields, Clerkenwell, Shoreditch, St. George-in-the-East, Limehouse, Bermondsey, and Lee.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-LIEUTENANT P. MACKESSACK, A.M.S., having reported himself at the Royal Victoria Hospital, Netley, for duty, is posted to the Surgical Division from Oct. 5th. Brigade-Surgeon-Lieutenant-Colonel Frederick Lyons, M.D., retires on retired pay.

1st Life Guards: Surgeon-Major Horatio R. O. Cross, from Royal Horse Guards, to be Surgeon-Major, vice Surgeon-Lieutenant-Colonel J. S. Forrester, F.R.C.S. Edin., who exchanges.

Royal Horse Guards: Surgeon-Lieutenant-Colonel James S. Forrester, F.R.C.S. Edin., from 1st Life Guards, to be

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Surgeon-Lieutenant-Colonel, vice Surgeon-Major H. R. O. Cross, who exchanges.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of the under-mentioned officers are placed permanently at the disposal of the Government of Bengal:—Surgeon-Captain Sunder (Bengal), Surgeon-Captain Maynard (Bengal), Surgeon-Captain O'Kinealy, and Surgeon-Captain F. C. Clarkson. The services of Surgeon-Lieutenant King (Bombay) are replaced at the disposal of the Military Department. Surgeon-Captain McNaught, A.M.S., has been transferred from the Bombay District to the Quetta District. Surgeon-Captain Newland, A.M.S., has been transferred from the Quetta District to the Nagpore District. Surgeon-Captain Hodgens, A.M.S., has been transferred from the Nagpore District to the Bombay District.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major R. M. P. Low, M.B., resigns his commission. The under-mentioned officers to be Surgeon-Majors:—Surgeon-Captain F. W. Gibbon, Surgeon-Captain A. B. Wade, M.B., and Surgeon-Major Walter Smith Cheyne, M.B., 2nd Volunteer Battalion the Gordon Highlanders.

VOLUNTEER CORPS.

Rifle: 4th (Cambridge University) Volunteer Battalion the Suffolk Regiment: Surgeon-Lieutenant L. E. Shore, M.D., to be Surgeon-Captain.

INDIAN AFFAIRS.

In addition to the news regarding the Tirah expedition now starting, the return of the forces with their sick and wounded from the Mohmand expedition, and the progress of the plague in the Bombay Presidency, we learn that there has been a daring and unexpected Burmese raid on Mandalay Fort. Things have generally been very quiet in Mandalay since its occupation by the British, although there has been from time to time a good deal of disturbance on the part of dacoits in Upper Burmah beyond it. The attack on Mandalay Fort was happily a very small affair. On the part of the garrison, an officer and two sepoys of the Madras Infantry were wounded, and a private of the Royal Scots seriously so. Troubles, like other things, rarely come singly. The Indian Government has its hands full of responsible work at the present time, and the drain—actual and potential—on its exchequer must be very great.

THE NILE EXPEDITION.

We have heard but little of late of General Kitchener's expeditionary force. Meanwhile, a work is being pushed on which will have an excellent effect on the future material interests of the country and on its pacification—namely, the railway. This is to be extended to Berber, and the Egyptian Government has granted the money for the purpose. Kassala is to be occupied by Egyptian troops in December. It seems probable that an advance will take place towards Khartoum early in next year.

The *Broad Arrow* says: "A large brass tablet mounted in oak is shortly to be placed in Haslar Chapel in memory of the two naval surgeons who lost their lives in the Benin Expedition. The memorial has been subscribed for by the medical officers of the Royal Naval Hospital and the brother officers of the deceased surgeons who went through the instructional course together at Haslar. Round the tablet is a cable-pattern border, and in each corner a naval emblem or crest. The inscription runs as follows: 'In memory of Surgeon Charles T. Fife, R.N., aged thirty, who was killed in action February, 18th, 1897, while attending to a wounded comrade; and Surgeon Richard H. Way, R.N., aged twenty-nine, who died of heatstroke February 21st, 1897, during the Benin Expedition. Erected by Naval Medical Officers.'"

We regret to learn that Surgeon-Major Semple, Assistant Professor of Pathology in the Army Medical School, who, it will be remembered proceeded to Maidstone to vaccinate against typhoid fever, has been obliged to return to Netley owing to an attack of Malta fever. Surgeon-Captain W. B. Leishman, M.B., has, we hear, arrived at Maidstone to continue the work which Surgeon-Major Semple initiated.

We understand that there are three commissions vacant in the Militia Medical Staff Corps. Under recent regulations an officer joining can have five or six months' employment during the first year. Early application should be made to the Officer Commanding Militia Medical Staff Corps, Aldershot.

At the quarterly meeting of the directors of the Naval Medical Supplemental Fund, held on the 12th inst., Inspector-General W. H. Lloyd, M.D., being in the chair, the sum of £48 was distributed among the several applicants.

Correspondence.

"Audi alteram partem."

"THE EPIDEMIC OF TYPHOID FEVER AT MAIDSTONE."

To the Editors of THE LANCET.

SIRS,—I have read with interest the report of your Special Sanitary Commissioner on the epidemic of typhoid fever in Maidstone, but cannot agree with all his conclusions. I will admit that the drainage system is perfect only in theory. Some of the main trunks have been badly laid, and many of the terminals are not properly flushed. But the condition in September, 1897, is much better than it was a year or two ago, and the figures your Commissioner quotes "show laudable activity on the part of the sanitary authorities." Now, typhoid fever has never been epidemic in Maidstone before, so that the sewers when in a worse condition than at present never produced typhoid fever.

Your Commissioner seems astonished at the "extraordinary susceptibility of the inhabitants of the three infected and high districts," and he describes "the immunity which the inhabitants of the low-lying central districts have enjoyed" as "equally extraordinary." Surely the reason is perfectly simple; the three high districts are supplied with the same poisoned water from the reservoir at Barming (Farleigh water) which can alone supply them, whereas the central district is supplied direct from the chalk at Boarley or from the springs at Cossington. Moreover, the western district—i.e., that nearest the Barming reservoir—has suffered more severely than either the north-eastern or the south-eastern areas of distribution of the Farleigh water. I may add, too, that some of the most severe cases (described by Sir William Broadbent as "virulent") occurred in one family at Barming who derived their water direct from the rising main as it ascends from the Farleigh pumping station to the Barming reservoir. The household consisted of seventeen persons; seven members of the family, all water-drinkers, suffered from the fever, two have died and two more are barely recovering from a virulent attack. All the servants escaped; they never drank water except when boiled as tea, &c., always drinking beer (brewed in Maidstone) for their dinner and supper.

I will relate the experience of my own terrace. There are six houses draining into a common drain which crosses a lawn and empties into the common sewer with an interceptor. No. 1, eight persons, drink water from their own well; no cases. No. 2, ten persons, drink water from their own well; no cases. (In both the above the company's water is not laid on.) No. 3, eleven persons, drank water from their own well until Aug. 20th, when the water was thought to taste of carbolic acid and so the company's water was drunk; six cases, two severe. No. 4, ten persons, drink the company's water; four cases. No. 5, empty house. No. 6, seven persons drink the company's water; three cases, all very severe indeed. The incidence of the fever has been on the servants and children, all water-drinkers. I have no doubt that the water was the sole cause of all these cases.

Then, again, your Commissioner thinks 35 cases occurring in the central district as proving too much. People do not visit their friends to drink water, but tea or beer or wine, though many of the 35 cases have been proved to have partaken of the polluted water. I do not for one moment wish to minimise the importance of putting our drainage in order. In fact, at a meeting of the medical practitioners of the town called by the mayor on Oct. 7th a resolution was passed asking the sanitary authorities to flush all the house drains throughout the town as well as to ensure that in future they shall be all supplied with a good flush of water. One fact has not been mentioned in your report. In the middle of the month of August there were a great many cases of severe diarrhœa, some of which passed on to enteritis

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and a few were fatal. The diarrhœa was associated with a temperature of about 103° F. on the first day and thus differed from the ordinary summer diarrhœa. I am informed that several such cases occurred among the inmates of Barming Asylum, which received its water-supply entirely from the Farleigh source. Four of these cases died from colitis as verified by post-mortem examination. Were not these people suffering the direct effects of the initial poison which they purged away, thus rendering them less likely to develop the specific form of typhoid fever?

I am, Sirs, your obedient servant,

Maidstone, Oct. 10th, 1897. CHARLES E. HOAR, M.D. Lond.

RESPONSIBILITY FOR THE INSANITARY CONDITION OF HOUSES.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 2nd, p. 871, you refer to a decision by the Recorder of Belfast that if a citizen takes an unfurnished house which is not in a sanitary condition "he must examine it" and "must at his own expense make it right. Neither the landlord nor the agent was bound to do so." May I venture to observe that this decision apparently requires qualification having regard to the Housing of the Working Classes Act, 1890, Sec. 75, which reads as follows: "In any contract made after the fourteenth day of August, one thousand eight hundred and eighty-five, for letting for habitation by persons of the working classes a house or part of a house *there shall be implied a condition that the house is at the commencement of the holding in all respects reasonably fit for human habitation.* In this section the expression 'letting for habitation by persons of the working classes' means the letting for habitation of a house or part of a house at a rent not exceeding in England the sum named as the limit for the composition of rates by Section 3 of the Poor Rate Assessment and Collection Act, 1869, and in Scotland or Ireland four pounds."

The annual rent limit referred to in the Poor Rate, &c., Act, 1869, is £20 (or 7*s.* 8*d.* per week) in London; £13 (or 5*s.* per week) in Liverpool; £10 (or 3*s.* 10*d.* per week) in Manchester and Birmingham; and £8 (say, 3*s.* 1*d.* per week) elsewhere.—I am, Sirs, yours faithfully,

CHARLES PORTER, M.D. Irel., D.P.H. Camb.,
Medical Officer of Health.

Health Office, Stockport, Oct. 12th, 1897.

THE IMMEDIATE REDUCTION OF ANGULAR CURVATURE OF THE SPINE.

To the Editors of THE LANCET.

SIRS,—A paragraph in THE LANCET of Oct. 9th, p. 931, reads to the effect that the above-named operation was performed for the first time in London on Sept. 15th of this year. May I venture to point out that this is incorrect? On Aug. 19th, at the North-West London Hospital, I reduced under anæsthesia an angular curve in the upper dorsal region of a girl aged two and a half years. The deformity readily gave way (with a slight crack) to moderate pressure, and the spine was easily maintained in an over-corrected position whilst a plaster case, which the patient still wears, was being applied from the head to the pelvis. Since the operation the general health of the patient has greatly improved.

I feel sure that Mr. Tubby would not regard an operation as "successful" until there had been time for the ultimate result of the operation to have been reached, and in this particular measure this cannot be known before many months have elapsed. Since this mode of treatment is still on its trial it is important that it should be used only in really suitable cases. Rapidly progressive cases with abscess formation or fever on the one hand and on the other old healed and ankylosed cases are in my opinion unsuitable, and if they are treated by this method discredit is likely to be thrown upon what promises to be a very valuable help in the treatment of tuberculous kyphosis.

I am, Sirs, yours faithfully,

J. JACKSON CLARKE.

Old Cavendish-street, W., Oct. 9th, 1897.

"MEDICAL EVIDENCE AT CORONERS' INQUESTS."

To the Editors of THE LANCET.

SIRS,—I have read the annotation on the above subject in THE LANCET of Oct. 9th, and there are one or two points of general interest which arise out of it from a medical jurisprudence point of view. In the case of a man found dead it is quite common for the police or friends to call the medical man who lives nearest the spot. The medical man so called may be quite the most suitable person to speak as to the cause of death and as to the numerous other medico-legal points that may arise; but, on the other hand, he may not. He may be a man who, however good at his profession, knows nothing as to the nature of evidence; he may be incapable of distinguishing properly between the facts that he observes and the inferences that he draws from these facts. He may, too, from want of experience in the witness-box, not be able to answer questions in such a way as to make his meaning clear.

The medical man first called to the deceased may then not be the right man in the right place; it is a matter of chance whether he is or not. Now from your remarks it would seem to be implied that the theories of the first medical man were to be accepted without question, and that a second medical man who disagrees with those theories should not have given evidence. In the case in question you say the second medical man who was called was not present at the post-mortem examination. But what of that? He was called, not to controvert any facts observed by the other medical man—these he accepted—but to speak as to the deductions that he drew from those facts. He was there as an expert witness—a neither unusual nor unprofessional position for a medical man. The coroner in this case, when perfectly relevant questions were being put to the first medical witness by the solicitor who represented the friends of the deceased, said: "I will not allow cross-examination in the court" That surely would be a strange court of inquiry when witnesses could give their evidence without challenge and without cross-examination. It is to be noticed, however, that although the coroner in this inquest protected the medical witness from uncomfortable questions, yet he allowed the superintendent of police to cross-examine other witnesses. You say the thanks of the medical profession are due to the coroner for the way he conducted this inquiry. Why? Does the medical profession as a body put itself so incompetent in the witness-box that it wants to be saved from being cross-examined by a layman upon matters which the profession is supposed to be specially competent to deal with? If so, it does not say much for the confidence of the profession in their own capacity. If this is to be the rule it would follow that the most junior member of the profession just qualified might give in his evidence the most startling theories and he is not to be cross-examined as to them—that is to say, the accuracy and value of his evidence is not to be tested. How does it make for truth that in a court of justice the first statement of an expert witness is to be accepted without undergoing the best test of all evidence—viz., cross-examination?

I think the medical profession as a body have too much self-respect and too much desire for the truth to wish to escape from those tests to which all witnesses in every other profession are subject when they give evidence in court. If any expert medical witness gives evidence in the Queen's Bench he is liable to cross-examination. Why, then, in a coroner's court should this be considered improper, and why should the medical profession thank the coroner?

I am, Sirs, yours faithfully,

Bath, Oct. 12th, 1897. PRESTON KING, M.D. Cantab.

To the Editors of THE LANCET.

SIRS,—I have read your remarks in this case and feel sure you cannot have been made fully acquainted with the facts of the case. I send you the papers containing the reports of the inquest. You say that without my having seen the post-mortem examination I gave my evidence on generalities. I did not attend the post-mortem examination, but I fully and entirely accepted Dr. Heathcote's report as to this, and my evidence was based upon that and upon the other proved

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facts in the case of which I had an equal opportunity with him of judging. My evidence was therefore not as to generalities, but based upon the actual facts of the case as proved by Dr. Heathcote and the witnesses who were present at the death. Wherein I differed from Dr. Heathcote was on the scientific conclusions to be deduced from those facts not in dispute.

Here was a man found in the road bruised and dying; he was fully conscious and stated twice that some one had knocked him down; his money was found on the pavement, his pocket was outside his trouser flap, and his keys were absent; asked where his keys were, he stated that they were in the road, some little distance away; this was found to be correct—they were found there. He had been seen by many people that day and was known to be in possession of money, and it was sworn that he had a £5 note in addition, but this was gone. Under these circumstances it was suggested that death was due to simple cardiac failure, and that the statement that he had been knocked down was a delusion due to the cardiac failure, although the statement he made in the same breath as to his keys was found to be absolutely true. It was also said by Dr. Heathcote that "the wounds on the back of the head were certainly caused by falling and that on the elbow also"; and that the marks on the face were "probably due to his struggling on to the footpath; you see he fell once, and I could distinctly see where he fell and then hit himself against the wall." All this as to his falling is pure surmise and Dr. Heathcote no more saw it than I did. Then being asked, Does not a man die suddenly as a rule in such a case; does he not fall down dead at once? Dr. Heathcote said: "Lying on the ground might make him recover somewhat, because dying on the ground there is less for the heart to do, and then when he attempted to get up he would faint again." He added that "people in that state very often say things that are not true; taking into consideration the general state, I should say he was under a wrong impression and was not hit."

Now I ask you, Sirs, if a man dying as suggested from sudden cardiac failure makes statements which are delusions, whilst he is able at the same time to state facts accurately? I simply say that it is not my experience; it does not appear to me to consist with the facts, and I have never met either in books or in the experience of my friends such a case. If the theory under such circumstances of sudden death from heart disease is so easily accepted, how simple and easy murder of a man with known heart disease will become. If the case was so simple as appears to be assumed, why did the coroner adjourn it three times and hold four distinct sittings, taking evidence at each, and why was such an effort made to trace the £5 note and a reward offered for its recovery? All this was surely beside the mark if it was a death from natural causes. The coroner himself remarked that if the deceased received a blow and failure of the heart resulted it was a case of murder. Dr. Heathcote said there was nothing to show that deceased had not received a blow.

Now the whole question resolves itself into this: Did the deceased die from primary heart failure or did he die from heart failure as the result of violence, he himself stating twice that he had been knocked down? Which is the more probable in these circumstances, that the deceased died from simple heart failure or from heart failure as a result of injury? To accept the former theory we have to assume that the deceased fell down from heart failure, fainted, got up again, walked a short distance, then fell down again in a second faint, and, after all this, was able to say to two persons that he had been knocked down, and also able to state correctly where his keys would be found, and that then he died from primary heart failure. In the theory that failure of the heart resulted from injury there is not a single difficulty and not one fact in the case which is not consistent with the deceased's own statement that he had been knocked down. It is to be remarked that the jury did not return a verdict of death from natural causes, as they would have done if the inquest had been closed at the first sitting, but that in consequence of the evidence subsequently given they left it in doubt by their verdict whether the deceased's death was due to violence or not.

I am, Sirs, yours faithfully,

WILLIAM H. COOKE,
Resident Medical Officer Royal United Hospital, Bath; late House Physician St. George's Hospital, London.

Oct. 12th, 1897.

THE PREHENSILE POWER OF THE HANDS OF THE HUMAN INFANT.

To the Editors of THE LANCET.

SIRS,—Will you allow me space in which to draw attention to the above character, which was ingeniously brought forward five years ago by Dr. Louis Robinson, before it becomes accepted as an argument for the descent of man from the lower animals? It has enjoyed a singular immunity from criticism, as far as I can learn, which seems hardly deserved. The observations made by Dr. Louis Robinson put into scientific form the previous experiences of mothers, nurses, and others who had occasion to notice the habits of the human infant, and none need dispute their substantial correctness, though I must add my negative testimony, which extends over about the same number of human infants as Dr. Robinson examined. I can only say that as yet I have not found one infant which could support its own weight by a finger or other object placed in its palm. Frequently an infant has partially, but never entirely, supported its own weight. However, this is only a matter of detail. Those children which I examined were nearly all of the well-to-do classes, and it would be worth enquiring whether, on the theory in question, these were more or less "ancestral" than those which Dr. Louis Robinson examined. Broadly speaking, the facts of the latter may stand undisputed. But what of their significance? They were sufficiently convincing for the late Professor Romanes, and perhaps ought to be so for us. He even thought fit to stereotype them in his able controversial work "Darwin and After Darwin." This prehensile power of the hand of the infant is certainly a reflex phenomenon, and is in excess of the muscular power of the infant in most other directions. Is it then an ancestral legacy from the "grapnel-like" grasp of the common ancestor of man and the higher apes—Pithecanthropus ignotus we may call it—still shown in the human infant as a "vestige" of a formerly useful power, or is it a mere physiological character, exactly what one would expect if man never had any other than human ancestors? I submit that the latter is the more reasonable view and propose the following simple explanation. During the last four or five months of fœtal life the familiar "movements" felt by the mother are very frequent, almost constant. These are undoubtedly of a reflex character, and if one may judge from those of the last two or three months are entirely caused by the lower limbs of the fœtus, except perhaps in those few cases in which the fœtus lies in an abnormal position, when the upper extremities may be more in motion than usual. During all these months the upper extremities must have had little or no muscular exercise through reflex influence, certainly not the flexor muscles, and the hands (fortunately for the maternal tissues) none at all. When the child is born one would expect nothing else than that the inherent power of grasp possessed by the hands, which is to be so conspicuously employed in later life in a purposive manner, should be disproportionately excited to reflex action by stimulation applied to the palm of the hand, and that the flexor muscles of the forearm and arm should react strongly to the influence of tension for the first time. At about the age of three weeks this disproportionate power of grasping begins to disappear and is gone, as such, in two or three months, when the novelty of reflex stimulation of the palm and flexor muscles has worn off. The explanation of this disappearance given by Dr. Louis Robinson is most lame—viz., that it is due to the rapid increase of fat and weight which takes place, and to failure to exercise the power. The latter has nothing to do with the point, for no practice of any kind served to maintain or originate the power. As to the second point, we know that an average infant, weighing seven pounds at birth, would weigh seven pounds, or less, after one week of life; after two weeks, perhaps seven and a quarter pounds; after three weeks seven and three-quarters, and so on, gaining weight at the rate of half a pound a week, or if an exceptional infant it might gain a pound a week. Thus, at the age of three weeks a seven-pound infant would have put on weight to the extent of three-quarters of a pound—a very "drop in the ocean" when compared with such striking muscular power as the human infant manifests in this particular performance. But this remarkable power of the infant in the matter of prehension does not stand alone among most powerful reflex actions which it is able to perform immediately it is

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born. The post-natal cry of a baby in many cases is something startling for power and endurance. To take an extreme case, I remember one infant which, from the moment of its birth, for a solid three-quarters of an hour roared without five seconds' cessation, a feat which no strong man could perform. I remember it the more vividly by reason of the concurrent fact that the mother was all that time in a dangerous state from hæmorrhage. This was an exceptional feat, but purely a reflex phenomenon like that of Dr. Louis Robinson's infant which supported itself for "two minutes thirty-five seconds"! In most cases the power and endurance of this cry, shown for the first few days in most vigorous infants when their skin is exposed to the air for washing, is very striking, even if it disappear earlier than the prehensile power of the hand. The power of sucking possessed within five minutes of birth by a strong child, and the cry for food which so soon shows itself loud and strong, are only two more among many reflex phenomena which rank in significance or insignificance beside the particular character before us. There is also a phenomenon which the foot of the human infant manifests corresponding to that noticed in the hand by Dr. Louis Robinson which one is surprised that he did not proceed to investigate. I have examined the prehensile power of the toes of many infants ranging from a few hours to a year in age, and find it singularly constant. It is excited by placing a small finger or similar body in contact with the flexor surfaces of the toes, which immediately close upon the finger in an attempt at prehension. This muscular act is proportionately as strong and as quickly evoked in a child of a year old, when it is passing from the purely reflex to the purposive phase of life, as in a new-born infant. In later life, in the case of savages and others intelligent enough not to cramp their feet by tight boots, about the corresponding degree of prehensile power of the toes can be exercised voluntarily. One would like to know whether or not Dr. Louis Robinson would look upon this reflex action of the infant's foot as supporting the "vestige" theory. Is this also the vestige of a prehensile power which man's simian ancestors exercised in the course of their arboreal life? If it be so it behaves in a very different manner from the analogous phenomenon in the hand whose course is so brilliant and brief. The hand of man and the ape are not so strikingly different in structure or function, but the differences between the foot of man and that of the ape are profound as to structure not less than function, and these were strongly brought out by Sir William Turner in his address on Anthropology at Montreal this year. Sir William Turner there points out that the prehension of the foot of the ape is[1] more important than that of its hand, the pollex in apes being feebly developed. If man had any genetic connexion with the ape surely the "vestige" of prehension of his foot ought to be a more marked character than the corresponding "vestige" pertaining to his hand. It is not so, for, as pointed out, it is very feeble, it is persistent and varies little for a year or more, it corresponds closely to the degree of prehension which adults can exercise voluntarily, and it never is accompanied by an attempt on the part of the hallux at opposition, an act for which the anatomy of the foot in man is eminently unfitted. Moreover the difference between the response to reflex stimulation of the muscles of the upper and lower extremities in an infant is very striking, and to a degree which bears out the suggestion as to previous use or non-use during fœtal life which I have ventured to put forward. The slightest stimulation to the prehensile muscles of the hand and the flexor muscles of the arm and forearm, in attempted extension of the part, produces a prompt and strong resistance, as Dr. Louis Robinson has shown. It is not so with those of the lower limb, for in addition to the feeble prehension exercised by the toes, the muscles which flex the thigh upon the pelvis and those which flex the leg upon the thigh show a strange indifference to attempts at extension. The novelty of this class of action has worn off. The evidence which these phenomena are supposed to afford for the descent of man from the ape has indeed been overdone, and it resembles some of the other sensational lines of evidence of this class which are open to provokingly simple physiological and anatomical explanations, Darwinism apart. On this account I venture to think some expression of opinion upon this interesting subject is desirable.

I am, Sirs, yours truly,

Sept. 25th, 1897. WALTER KIDD.

[1] Reported in Nature, Sep 2nd, 1897, p. 430.

"THE COMPARATIVELY STATIONARY DEATH-RATE IN PRIVATE OBSTETRIC PRACTICE."

To the Editors of THE LANCET.

SIRS,—A perusal of "M.D.'s" letter on this subject in THE LANCET of Oct. 2nd suggests to one what an advantage it would be both to the public and the profession if a supply of good obstetric nurses asking from six to eight guineas a month were available. The certificated nurse usually requires ten guineas, her travelling expenses (since she generally resides in a large town), and her meals apart from the servants, often an insuperable objection to the lady engaging her. I have spoken to many of my medical friends on the subject and they agree with me that in the usual two and three guinea midwifery cases the trouble and anxiety that accrue principally from the ignorance and conceit of the nurses in charge make these cases not worth the fee earned, but of course a man must be very strong to be able to refuse them.—I am, Sirs, yours faithfully,

Oct. 9th, 1897. G. P.

IMPERFECT VACCINATION: A CASE THAT WANTS A REMEDY.

To the Editors of THE LANCET.

SIRS,—There is a matter which it seems should receive the attention of the General Medical Council; I refer to the most unfair working of the Vaccination Act. Public vaccinators in the instructions issued by the Local Government Board are strictly directed when vaccinating to make not less than four insertions, and, of course, their work is periodically inspected, while it is a notorious fact that there are men in the profession who do not hesitate to make three, two, or even one insertion only, according to the caprice of the parents, as I am constantly asked whether I will not vaccinate in "one or two places only as Dr. —— does," and on my refusal the child is taken elsewhere. Surely it is high time that anyone who is authorised to give a certificate of successful vaccination should be bound to conform to the Local Government order, and also if proved to be guilty of such unprofessional conduct should be censured by the General Medical Council, for not only is the public vaccinator mulcted of his fees for doing his duty, but the vaccination must be in many cases inefficient and hence calculated to bring it into greater disrepute.

I am, Sirs, yours faithfully,

Oct. 14th, 1897. A PUBLIC VACCINATOR.

THE EPIDEMIC OF TYPHOID FEVER AT MAIDSTONE.

(BY OUR SPECIAL SANITARY COMMISSIONER.)

PERHAPS one of the most significant recent items of news from Maidstone is the announcement that two extra assistant sanitary inspectors have been appointed. Their special mission will be to make a house-to-house inspection of domestic drains. This sounds somewhat like closing the stable-door after the horse has been stolen; but, to judge by the continuation of the epidemic, it would seem as if there was more than one horse to be stolen. Also the same criticism may be made of every measure taken when once an epidemic has broken out. The importance of the appointment of extra sanitary inspectors rests in the double fact that it is a practical admission that there may be something else than the water-supply which has favoured the spread of typhoid fever; and, secondly, it shows that the general sanitary condition of the town is not as perfect as was at first inferred. Undoubtedly a great number of inhabitants of Maidstone were under the impression that the town was well drained and exceptionally healthy. Such a conviction cannot have been based on actual knowledge of the facts, but is more likely to have arisen from the favourable figures published as to the death-rate. The birth-rate was for 1896 equal to 23·91 per 1000, and the death-rate 13·47, and the medical officer of health in his last annual report adds that consequently "the total loss by

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death in an equal number of persons, in all respects comparable as to age and sex, was 862 in Maidstone, as against 1000 in England and Wales at large, by which it is seen that we continue to hold the same enviable position for comparatively low death-rate." As against this it should be noted that the birth-rate is low and the zymotic death-rate is high. The average birth-rate at Maidstone for the decade 1870–79 was 32·50 per 1000 and for the decade 1880–89 it was 31·17, while last year it was only 23·91 per 1000. The zymotic death-rate was equal to 2·01 per 1000, the corresponding rate for England and Wales being 2·18. It is obvious that in a small country town like Maidstone the death-rate should be very low, for those special conditions which in great industrial centres favour a high death-rate should be absent. There was last year an excess of measles, 1·31, as compared with 0·56 for England and Wales, and of diphtheria, 0·44, as compared with 0·29 for England and Wales. The other zymotic diseases were considerably below the average for England and Wales. When we add to these figures, which are not altogether satisfactory so far as preventable diseases are concerned, the devastation made by the present epidemic there is evidence enough to justify the suspicion that the general sanitary condition is not all that could be desired. Under these circumstances we therefore welcome the announcement that two extra sanitary inspectors have been appointed.

Letters published in the local papers bear further witness to unsanitary conditions. Thus the *Kent Messenger* of Sept. 5th contained a letter from a local builder, Mr. J. H. Bridge, in which he advises everyone not to stand near the street sewer ventilators, which he qualifies as "a vile nuisance." He also observes that the sanitary authorities insist on a ventilating pipe from the house drains being carried up to the highest part of the buildings. But they also require an intercepting trap placed some five feet from the front door and connected with a fresh-air grating, "which every practical man knows full well is half the time discharging sewer-gas, while the fresh air is going down the higher pipe." Certainly if the sewers are cut off from the smaller ventilators they require a system of ventilation of their own, and under this head Mr. J. S. Anscomb, formerly mayor of Maidstone, writes in the *Kent Messenger* of Oct. 2nd that some years ago he recommended that all rain-water pipes "should have sealed joints the same as soil-pipes and communicate with the sewer. This, calculating two to each house, would open 10,000 ventilators, which, although small in diameter, would represent a capacity of 7000 superficial feet, and every ventilator, however small, in my opinion must be of importance." As there are now over 6000 houses in Maidstone the ventilation would be one-fifth more than the figures given by Mr. Anscomb. But if the sewers in the first instance had been properly laid and built, ventilation, though equally necessary, would not occasion the nuisance which is now the subject of many complaints. A self-cleansing sewer does not give off offensive odours.

A great deal has been said concerning the hop-pickers who came from the slums of London and are supposed to have contaminated one particular water intake—that of Tutsham-in-Fields. This source of supply is stated to have been cut off on Sept. 20th. If this had sufficed to put a stop to the epidemic there should now be no more or only very few fresh cases of fever. But if the yield from the Tutsham springs was cut off the mains were not disinfected, and there was some ground for supposing that perhaps some of the other sources of the Farleigh supply were also contaminated. The Special Sanitary Committee of the Maidstone District Council wrote on Sept. 25th to the water company asking them to cut off the entire water-supply known under the generic term of the Farleigh Supply. The Council held a special meeting on the 29th, and at that date this letter had not even been acknowledged. It was further announced that the directors of the water company were not going to meet before the ensuing Friday. What excuse was given for such delay has not yet transpired. On the Friday in question the directors of the water company decided to cut off the entire Farleigh supply, and this, it is believed, was done on the following day, Oct. 2nd, though, according to another account, the water was cut off on the 30th, the day previous to the meeting of directors. But again, on this as on the former occasion, the mains were not disinfected, so that the pure supply from Boarley and Cossington, where the water is derived from the chalk, passed through the pipes that had probably been rendered impure by the former presence of the Farleigh water. Dr. Theodore Thomson, the Local Government Board inspector, is stated to have urged that the pipes should be disinfected with lime previously to receiving a new and pure supply. This, however, was not done and the epidemic still continues. Well may the inhabitants of Maidstone clamour for a public inquiry into all these circumstances, for there is certainly urgent need of a full and ample explanation. Doubtless the Local Government Board is justified in replying to the request made for a public inquiry that "they do not consider that the holding of a public inquiry would in any way further the investigations of Dr. Thomson," but they have less reason to add "or assist in dealing with the outbreak." Even this last sentence, however, may be true so far as immediate measures are concerned; but it should not be forgotten that ultimately it is the electors who will have to deal with the matter, and how are they to know for what measures to vote if there is not a public inquiry?

The figures as to the number of notifications, it is urged, look more favourable if instead of the daily returns the weekly averages be taken. Thus for the first week, beginning Sept. 16th, there was a daily average of 67 cases, for the second week of 81 cases, for the third week of 59 cases, and for the following six days the average is only 23 cases—an average, however, that will be somewhat increased by the later returns. These figures seem to indicate that the epidemic is gradually subsiding; but if it is entirely due to the water-supply, and that water-supply has been suddenly cut off, should not the epidemic cease, if not with equal, at least with corresponding, suddenness? That this is not the case suggests that the mischief due to the water has not been entirely removed, that the pipes are still infected, or that there are other causes at work besides the water-supply. Food kept in houses and placed close to inefficiently trapped and flushed drains may be contaminated. Some little time ago it was discovered that a vendor of penny ices in Maidstone used to store his ice in his closet as a convenient place because he could easily drain the water from the melting ice into the pan of the closet. Now that there is so much typhoid fever in the town the closets are likely to be exceptionally dangerous. Let us remember also that hop-pickers did not confine their attention only to the hop-fields. It is computed that about 10,000 hop-pickers travelled through Maidstone last season; many of them lodged in Maidstone. There are seventeen public-houses that take in from four to fourteen men lodgers, and there is a large number of registered fourpenny common lodging-houses. One proprietor of these common lodging-houses let out 500 beds in the course of one month during the hopping season. Then there are many unregistered houses that take in hop-pickers. The tramps frequent the south-eastern district in numbers, and here there have been a great many cases of typhoid fever. The district council so far recognised this danger that they decided to build a municipal common lodging-house, but some seven months ago the matter was referred back till a site in a suitable position at a moderate price could be found. Nothing has been done since then. If, previously to the contamination of the water-supply, some portion of the drainage system had received typhoid dejections from these hop-pickers or from other persons, and if the drains are not properly cleaned and ventilated, mischief might be done and its effects might not be entirely removed the moment the water-supply is altered. If the sewers are not only deficient in respect to their ventilation and cleanliness, but also leak and contaminate the surrounding subsoil, then we have unhealthy and dangerous conditions which will only be modified with the advent of copious rains or with the rebuilding of those sewers that leak. All these are considerations which gain in importance as we find that the epidemic still lingers in spite of the alteration of the water-supply.

MEDICAL AND SCIENCE STUDENTS AND THE INDIA CIVIL SERVICE.

(FROM A CORRESPONDENT.)

THE advantages of the Indian Medical Service are sufficiently appreciated by students of medicine of the United Kingdom. It is probable, indeed, that many more would compete for these valuable appointments, were they fully aware of the stress and the hardship of competition in the

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medical profession at home. Still, the number of candidates competing is adequate testimony to the knowledge of the advantages of the Indian Medical Service among the class from which competitors should be drawn; and there is no ground for extending to this service the criticism and charges which have for some time operated as a deterrent against properly qualified men offering themselves freely and numerously enough for corresponding posts in the army. But we are here concerned with a service even more dignified, responsible and pecuniarily attractive than the Indian Medical Service—I mean the India Civil Service itself. In directing the attention of "medical students" (as appears in the heading) to this service I am well aware that I am raising hopes where they have not been wont to be entertained, and, further, that I am even entering upon ground which is *terra incognita* to the bulk of the "medicals" and science men of our universities and colleges. Let it be understood, then, that I am dealing with facts and not mere conjecture. And, first, be it remembered that the India Civil Service is still the prince of public services open to competition. The initial salary is good—£300 to £400, according as the rupee is reckoned for England or for India. Opportunities for rapid promotion may not be as plentiful as they were under the old *régime* before the days of unrestricted competition, but they are regular and are deemed satisfactory. Entering the service when he is between twenty-one and twenty-three years of age, the successful candidate is at once launched on a career in which he is spared all anxiety in the matter of a competence both in active life and on retiring. When he is still under fifty he may leave the service with a pension of from £800 to £1000 per annum. Such is the epitome of the normal career—the lot of the man who has not been favoured of fortune, but has merely "gone through" the service and done his plain duty from day to day.

That this career, with prospects even in excess of those just sketched, is well within the reach of the "reading" men among our medical and science students it is the special object of this article to show. The character of the India Civil Service examination was changed by the authorities five years ago. The age-limits were raised from 17–19 to 21–23 years, and the subjects of examination and the marks assigned to each were greatly modified. It was the intention of the authorities that the university student might enter himself for the examination without breaking the line of study which he was following for a learned profession or for his own culture at college. Hence the very wide scope of the examination, and hence also the non-obligatory rule in respect of subjects: no subject is compulsory; a candidate may take up as many or as few as he pleases, and with the exception of English composition and mathematics the marks assigned to candidates in each branch are liable to deduction in order to secure that "a candidate be allowed no credit at all for taking up a subject in which he is a mere smatterer." The Oxford classic, accordingly, does not take up mathematics; the Cambridge wrangler shuns Greek and probably Latin; the History "First" tries to score something in classics and to be strong in his own special branch as well as in the cognate studies—political science and political economy, and perhaps English or Roman law. Under these conditions the medical and science student has an equal—an "even"—chance with the classical, the mathematical, or the history man, perhaps even a superior chance. A few facts and figures will make this clear. To Latin and Greek 750 marks each are assigned, and an exceptionally strong Oxford classic will make from 700 to 850 in the two combined. To mathematics (which only very fair mathematical students attempt) and to advanced mathematics 900 marks each are assigned, and a very strong Cambridge man may be considered safe for from 800 to 950 in the combined subjects, to judge by the marks obtained during the last four years. Both the classical and the mathematical man have a number of subsidiary or cognate subjects in which they naturally offer themselves for examination. Now, in addition to the three groups of students whose interests, as we have stated, are consulted in the competition—the classical, the mathematical, and the history man's—there is another. Seven subjects are grouped together in the syllabus of examination under the head of natural science. They are the following: elementary chemistry and physics, higher chemistry, higher physics, geology, botany, zoology, and animal physiology. To *each* of these 600 marks are assigned—subject, as usual, to a deduction in the case of the marks gained by each student, to ensure that the mere smatterer shall be discountenanced and discomfited. It is evident that, were a student free to offer all these sciences as given above he would be at a very material advantage compared with the non-science man. It is, therefore, provided (1) that not more than *three* of them can be taken up; and (2) that elementary chemistry and elementary physics (one subject) may not be taken up by those who offer either higher chemistry or higher physics or both. Even with this expedient and reasonable restriction, however, the science man has a fair field—perhaps, indeed, favour, if one may reckon from the marks obtained by those few who have taken up this branch in the examination.

Every year a number of our best reading medical students find themselves unsuited to the profession for which they are registered students. Some of them are drawn to science and the more or less uncertain prizes (in the worldly sense) which its pursuit promises to the fit; others are stranded. Not only, however, on those who withdraw from the professional study of medicine, but on all students of medicine of more than average merit I would impress the following definite facts and conclusions:—1. For the last three years every sixty appointments in the India Civil Service have been offered annually; this year (August—September) the number is sixty-six. Besides, there are now offered, as the result of the same examination, Eastern cadetships (for Ceylon, &c.) and "Class I." clerkships in the Home Civil Service, which, taken together, make about thirty appointments more. 2. The medical student at the close of his second *annus medicus* is very often just of age to compete—twenty-one years; and out of his prescribed professional course of study during his first two years he can offer three subjects conveniently, since he has four at his command—elementary chemistry and physics, botany, zoology, physiology. 3. The intending candidate will have to specialise on his three sciences. He will have to study the subjects carefully for himself and be guided by good men. But he may rest assured that the questions set are fair questions, and the practical examinations should especially commend themselves to the student who knows his work. 4. An excellent man may make 1100 to 1250 marks in his three sciences. Several have made 400 in a science subject already. Like the classical man and others the science man has other subjects on which to draw—say, English composition (as a certainty), for which 500 marks (without deduction for "smatterers") are allowed, French (500), German (500), and political science (400), which subject almost all take up. 5. In 1896 the last successful candidate for the India Civil Service made 1492 marks; fewer were required for an Eastern cadet appointment.

The writer will give an illustration from the case of a successful candidate last year, the particulars of which are well known to him. It is not a case of a medical student, for he believes that owing to ignorance of the conditions of the examination no medical student has yet competed. But on that very account the instance is the more striking. The candidate in question had no leanings towards science. He was a history man, strong in English history, but not sufficiently strong in the other history subjects and in cognate branches to warrant his dependence on these solely. In November, 1895—that is, ten months before the examination—he began geology and botany. During these ten months he had to keep up his work in English history, read widely in Roman and general modern history (most of it new ground), begin political science (apart from a general knowledge of the subject from history), and brush up Latin and French, which he had not touched for two years. Yet with all these drawbacks and without going through any university course in the two sciences mentioned the candidate in question scored an average of 200 in each of them—rather more in geology, rather less in botany. Had he specialised in science he might easily have doubled his marks in these two subjects.

Hitherto (since the coming into force of the revised regulations) the two most outstanding features of the India Civil Service examination have been the predominance of Oxford and Cambridge men in the successful list and the virtual absence of candidates offering natural science. It is the main purpose of this article to remedy this defect by calling upon the student of natural science to claim his place in this examination. If he is a medical student and is drawn by the examination to the study of one or two subjects which fall rather under *belles lettres* than within the

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scope of his professional curriculum he may not have reason to regret his decision, even should he not be successful. Wider reading, more liberal interests, and some sound pretensions to culture are just what most of our students of medicine especially stand in need of at the present day.

What has been said applies still more forcibly to "students of science"—those studying for B.Sc. and similar examinations—in our various colleges. The published reports of the examination during the last four years prove unmistakably that the character of the examination and the advantages of the service are to them practically unknown. And yet the science man is usually also a mathematician; he prides himself on *knowing* his physics, his chemistry, his geology, and his botany; he should be able to write a tolerable essay on one of the three or four themes prescribed with commendable catholicity of choice; he is not generally a "duffer," and he should be able to find in the long list of the examination subjects one or two subsidiary ones by which to make success assured. Let him do so.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Musical Festival.

THE proceeds of the triennial musical festival go to the General Hospital and form a substantial element in the funds of that charity. This year the programme was arranged for the 5th, 6th, 7th, and 8th of the present month. There was a large attendance, favoured by fine weather, and the highest musical talent. The total receipts amounted to £13,874 4*s.* 11*d.*, being £635 more than the last festival. It is estimated that the sum of £5000 will be handed over to the new hospital committee; it will be gladly welcomed in the face of the numerous and heavy expenses incurred in the removal from the old building.

Sudden Death of Dr. F. W. Barry.

Dr. Barry, senior medical inspector to the Local Government Board, was found dead in a bedroom of the Grand Hotel this morning. He was expected at the parish offices for official purposes and left word to be called at 7.30 in the morning; no reply being received to this summons the room was entered, when Dr. Barry was found lying upon the floor dead and cold. An inquest will be held in due course. Dr. Barry's high attainments in sanitary science and his ability as an administrator will cause his death to be deeply regretted apart from the sad circumstances of its suddenness.

Midland Medical Society.

The inaugural meeting of the present session is announced for the 21st inst., when Sir Richard Thorne Thorne will deliver an address on "Soil and Circumstance in their Control of Pathogenic Organisms." It is expected that a large gathering will be present.

Death of the Coroner for South Staffordshire.

Mr. Edwin Hooper, whose death occurred on Oct. 3rd at the age of sixty-six years, held the office of coroner for South Staffordshire for a period of thirty-seven years, and for the borough of West Bromwich since it was constituted a county borough. For some years Mr. Hooper had been the subject of cancer of the tongue, for which he had undergone several operations. His death finally was attributable to pneumonia. It is estimated that he held over 13 000 inquests during his tenure of office. His duties were conducted with dignity and clearness of judgment. Already there are several candidates in the field, two of whom are medical men practising in the locality.

A Sad Coincidence.

An inquest was recently held on the body of a boy, aged seven years, whose death occurred under singular circumstances. The child came with his father and mother into the town. In a crowded street the father was knocked down by a cab; in the confusion which followed the child was run over by a cart and killed—a disastrous ending to the visit.

The Workhouse Infirmary.

An unpleasant incident has led to the resignation of the infirmary management committee. For a long time the committee state that they had felt that they had not the confidence of the board in their authority over the scrubbers and charwomen employed. These servants number about forty and are paid at the rate of 2*s.* a day, the annual sum for scrubbing alone amounting to about £1200.

Oct. 12th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Large Gifts to Owens College.

THE half-yearly meeting of the Court of Governors of Owens College was held on the 5th inst., when the chairman, Mr. Alderman Joseph Thompson, who regretted the unavoidable absence of the Duke of Devonshire, said that he had three very important and gratifying announcements to make. Mr. R. C. Christie, for long a member of the Court and the Council of the college and one of its most generous benefactors through his gift of the building of the Christie Library, had now given one-third of the balance of the estate of the late Sir Joseph Whitworth—as one of the three residuary legatees—amounting to not less than £50 000, and probably somewhat exceeding that sum. It would enable the Governors to complete the quadrangle and erect a college hall. The chairman further announced that two friends of the college who did not for the present wish their names to appear had offered through the Principal sums of £10,000 and £5000, the first for the erection, and the second towards the maintenance, of suitable buildings for the physical laboratory of the college. A further sum of £5000 would be needed to provide fully for the maintenance of the laboratory, and this the chairman hoped the college would in some way obtain. Another very welcome gift had been made by Mr. Edward Holt, one of the city councillors, who had given £1500, the cost of the new gymnasium. In a resolution thanking the donors of these munificent gifts, moved by Sir Ughtred Kay-Shuttleworth and seconded by the Principal (Dr. Ward), hopes were expressed that the council would take steps "to associate the name of Mr. Holt in some permanent manner with the new gymnasium." A resolution was also moved by Sir W. H. Houldsworth, M.P., and seconded by Sir Henry Roscoe, expressing the great regret of the Court at the "impending resignation of the distinguished principal of the college, Dr. A. W. Ward," and desiring to place on record its sense of "the immeasurable value of his services for more than thirty years as professor and eight years as principal." Mr. Alfred Neild and Mr. Thorburn supported the resolution, the latter speaking as a representative of the *alumni* of the college.

Salford Board of Guardians.

At the last meeting of the Salford guardians it was resolved: "That in future, with the consent of the Local Government Board, the period of training for probationer nurses be three years instead of two as heretofore, and that the scale of payment be as follows—viz., first year, £8 8*s.*; second year, £12 12*s.*; third year, £15 15*s.*" At 2 P.M. the meeting was made special to consider the best means of relieving the congested state of the workhouse and infirmary. Mr. H. Jenner-Fust, jun., general inspector of the Local Government Board, and Mr. W. M. Moorsom, assistant general inspector, were present. After some discussion it was resolved: "That a new workhouse be at once proceeded with, and the Sheffield system of scattered homes for children be adopted experimentally." In the course of the discussion Mr. Jenner-Fust addressed the board in favour of a new workhouse—for which, indeed, the land has been bought—and discountenanced the amalgamation of the workhouse and infirmary, and said that the epileptics should be lodged in new blocks. He also advocated entirely separate management for the two institutions. He was in favour of cottage homes—which one of the guardians characterised as "nothing better than juvenile workhouses"—where they had 370 children to deal with. The resolution was carried by 9 votes to 5.

The Police and First-aid.

Since 1891 it has been made a condition of service in the Manchester police force that applicants should pass an examination as to proficiency in the work of first-aid. The order was not made retrospective, so that many of the men have have not passed this examination. The week before last certificates for proficiency were given by the Lord Mayor to a number of the men. Out of 44 entitled to the certificate 41 were present. There are now in the force 771

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of a possible 1037, or 74·3 per cent., who have passed the examination. This scheme might well be adopted all over the country. It would often be the means of saving life or limb, it would give increased interest to the work and tend to raise the tone of the men, and so ameliorate the policeman's lot which, it is said, "is not a happy one."

Unsound Meat in Salford.

A butcher in Salford was summoned to the Salford Police Court the other week for exposing for sale meat unfit for human food. The veterinary surgeon and meat inspector for the corporation said that he found eight pieces of meat exposed for sale which were quite unfit for food, and they were destroyed by order of a magistrate. The interest of the matter lies in this: that the defendant told the witness he bought the meat at the abattoir and gave 2*d.* a pound for it. According to the report there was no contradiction of this statement, and if the corporation abattoir was meant it suggests culpable laxity in supervision.

The Unsolved Sewage Question.

The majority of the members of the Manchester City Council visited the sewage works at Davyhulme yesterday week, at the invitation of the rivers committee, with the object mainly of seeing for themselves that the committee had done all that was practicable with the facilities at their command to purify the sewage of the city. Up to the present time the sum of £207,485 has been spent at Davyhulme, including the expenditure on the tanks and equipment, works in progress, and £24,500 for the new sludge steamer. There were differences of opinion expressed on the various schemes; some were in favour of the culvert, some were for deferring the matter for six or twelve months, and others, notwithstanding the object-lesson at Davyhulme, which was to have converted them, still maintained their opposition to the culvert. At a meeting of the rivers committee letters were read from eminent engineering experts who were, of course, in favour of the culvert, for it would be impossible for the engineering mind to resist the bewitching vision of a great sewer sixteen miles long. On the same day a meeting of the Mersey and Irwell joint committee was held, at which Mr. Killick, chairman of the consulting sub-committee, replied to a speech of Alderman Joseph Thompson at a meeting of the city council in which he had complained of the harsh treatment of the corporation by the committee. Mr. Killick said that Manchester had been treated like Salford, Bolton, Bury, &c., but had been granted extra time. He said, also, that it was a mistake to say that it was out of the power of the rivers committee to turn out a satisfactory effluent, for it had been done again and again when the sewage had been treated by precipitation and filtration. When precipitation alone had been used the effluents were much worse than the water of the Ship Canal into which they were turned. In connexion with the lamentations of Alderman Thompson, Mr. Killick made the suggestive remark that "it might be pointed out that Manchester had taken part in compelling authorities in the watershed to spend more money per head of the population than the highest estimates of the most costly schemes yet put forward for their own adoption." It should not be forgotten that Alderman Thompson is the vice-chairman of the Joint Committee, and so is not free from responsibility as regards this, and that he is chairman of the Rivers Committee of the Corporation, and so is in the interesting and perplexing condition of a man divided against himself. At a special meeting of the city council on Wednesday last a resolution in favour of promoting a Bill in the next session of Parliament authorising the construction of what a local paper calls "the great culvert" was adopted, there being three dissentients. The poll of the citizens is to take place about the end of the month and may lead to fresh developments.

Oct. 12th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal Commission on Tuberculosis.

THE Royal Commission on Tuberculosis paid a visit to Dublin on Oct. 12th and inspected the abattoir, the cattle market, and the fruit market. The members were received by Sir Charles Cameron and by the various officials connected with the markets, and were subsequently entertained at luncheon by the Lord Mayor at the Mansion House.

St. Vincent's Hospital, Dublin.

At the opening of the medical session at St. Vincent's Hospital on Oct. 5th Dr. Cox delivered an address on the grievances of army medical officers. Sir William Thomson, in moving a vote of thanks to the lecturer, made some very interesting observations.

The National Hospital for Consumption for Ireland.

The Marchioness of Zetland and Lady Milton, accompanied by Mr. and Mrs. Frank Brooke, visited the National Hospital for Consumption for Ireland at Newcastle, Co. Wicklow, on Oct. 7th. The party travelled by special train from Shillelagh, where the Marchioness is at present staying with her daughter, Lady Milton. After minutely examining the arrangements of the hospital, with which they were much pleased, the visitors returned to Shillelagh.

Imprisonment of a Medical Man.

An event, happily of very rare occurrence in the medical profession, took place at Lurgan Quarter Sessions on Oct. 7th, when Mr. James Millen Moore, L.R.C.P. & S. Edin., was sentenced to be imprisoned for one month in Armagh Gaol for an assault upon a boy who was in his employment. It would appear that the boy—between thirteen and fourteen years of age—went into Mr. Moore's employment in August, 1896, when he was a year younger. Mr. Moore, being dissatisfied with his conduct, ordered the boy on one occasion to strip himself in an outhouse, where he was beaten by the medical man on the naked back with a cane or other weapon. On another occasion being dissatisfied with the lad—and apparently, as the county court judge stated, he had cause to be—Mr. Moore made the boy strip with the exception of his trousers and shoes and had him tied to a post and beaten in a very severe manner. It was stated that the medical man acted *in loco parentis*, and that his father had given him authority to punish the boy. The case came originally before the Lurgan magistrates, who by a majority sent it for trial to the quarter sessions, where the grand jury found a true bill. Mr. Moore pleaded guilty, and for the defence it was urged that the sum of £28 which he had paid to the boy's father and the serious effect which the incident and the prosecution would for years have upon him as a practitioner and a representative public man more than atoned for his indiscretion. The county court judge and the magistrates present had a long discussion in reference to the merits and demerits of the case and they did not arrive at a unanimous conclusion, and the judge said in announcing the decision that he did not concur with it. At the same time, he was bound to give effect to the view of the majority of the magistrates, and that was that Mr. Moore should be kept in gaol for one calendar month without hard labour. Two magistrates, it was announced, did not concur with the decision and thought that Mr. Moore should be let off with a fine. A majority of the magistrates, the judge said, thought a month's imprisonment would be sufficient, but in his opinion a fine or one month's imprisonment did not touch the merits of the case, and he himself would have given a heavier punishment.

Epidemic of Typhoid Fever.

At the present time there is a widespread epidemic of typhoid fever in Belfast, and a large number of cases are being treated in the Union Fever Hospital and in the Royal Hospital. One of the dispensary medical officers asked his committee for further medical assistance, which was granted, owing to the large number of cases in his district. The Public Health Committee of the city at a meeting on Oct. 7th advised that the water retailed from the Cromac springs had not improved in quality and was unfit for human consumption. They pointed out the necessity for the regular cleansing of cisterns in houses and instructed their sanitary officer to have them inspected. They appointed a sub-committee to confer with Dr. Lorrain Smith, lecturer on pathology at Queen's College, with a view to arranging for the examination of forms of food, drink, and secretions bacteriologically in order that the origins of diseases might by this means be traced. There is a strong feeling that the Belfast Water Commissioners should publish fortnightly or every month an analysis of the city water (as is done in other towns) for the guidance of the public.

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Belfast Royal Hospital.

Mr. Thomas Houston, M.B., B.S. R.U.I., has been appointed assistant gynæcologist.

Belfast Lunatic Asylum.

At the usual monthly meeting held on Oct. 11th the new superintendent, Dr. Graham, in his report pointed out the want of baths, there being none whatever in either the male or female hospital and only four for the whole institution. The entire lavatory department is improperly constructed; there are no receiving, sorting, or airing rooms, and no disinfecting chamber; the washing machines are obsolete; and the drying closets are dangerous, so that if a patient tripped he or she would be burnt. The entire laundry department needs to be remodelled. The kitchen is unsuitably situated and deficient in culinary apparatus. There is no mortuary or proper receptacle for the dead. There is no telephonic, electric, or other mechanical means of communication between the medical officers' quarters and the hospital wards. A committee was appointed to look into the matter. A governor also suggested the desirability of giving the inmates better bread.

On the recommendation of the Lord-Lieutenant of the county the Lord Chancellor has appointed Mr. E. C. MacDowell, M.D. Dub., F.R.C.P. Irel., of Mall House, Sligo, a magistrate for the county of Sligo.

Oct. 13th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Pathogenic Rôle of the Dust in Living Rooms.

M. KELSCH and M. Simmonnin read before the Academy of Medicine an interesting communication upon the above subject. According to these observers, the floors of our dwellings are as fruitful and dangerous a cause of infection as drinking-water. As a matter of fact, with the exception of typhoid fever and cholera, which are almost always spread by means of water, by far the greater part of other common maladies, such as the eruptive fevers, diphtheria, pneumonia, and, above all, tuberculosis, almost always arise from germs preserved in dust, except when direct infection takes place. This view is specially applicable to dwellings where a number of persons gather together, such as public schools, workshops in large towns, hospitals, and barracks. There is always present in these surroundings the danger of a sudden outburst of infectious disease. Infectious epidemics which occur in barracks without having been imported from outside arise from the dust where lie hid germs from former epidemics, or those brought in by the shoes of men who have infected their foot covering from the dirt of stables or latrines. This theory is already a commonplace in military epidemiology. Everywhere the watchfulness of the commanding officer, guided and helped by science and the progressive zeal of the army medical department, pursues the solution of the double problem of the purity of water and the absolute asepsis of the "surfaces" on which live the bodies of men for whom he is responsible. The ideals of the "service de santé" with regard to inhabited places are backed up by sundry measures which no doubt have not yet arrived at perfection, but which surpass anything hitherto attempted with regard to this matter. Such measures are cleansing of the flooring which by age and long microbial infection is specially dangerous, or even relaying it according to special systems which afford facilities for rendering it aseptic; doing away with, or at least disinfecting thoroughly and often, the interstices between the planks; or finally making the planks impermeable by means of some substance which will at the same time fill up the holes and disinfect any dirt which may be lodged therein. Such are the means by which military hygiene carries on the strife, and not unsuccessfully, against the origins of disease in barracks. The rendering of planking impermeable has for some years past been carried out in a number of barracks, and many a proof exists as to the minimising of the chances of infection which this process offers. It has passed through the stages of doubt, the tentative stage, and that of careful study, and it is now decided that the best process is coal-tarring, a usage to-day widely spread throughout the army, for this method is the one that best reconciles the demands of hygiene with those of economy. "Coaltarisation" has had unfavourable criticisms here and there; but these are due less to the process itself than to its application by unskilled hands. The experience of the last ten years has served only to fortify the opinion of the military medical staff as to the pathogenic *rôle* played by the dust which lies hid in the planks. M. Laveran, who has been for many years a military medical officer, has given it as his opinion that "coaltarisation" is not enough and that the only real remedy is to do away with planking altogether.

The Serum Treatment of Leprosy.

Señor Olaya Laverde, of Bucadramanga, Columbia, has sent to the Academy a long communication on the serum treatment of leprosy. The method which he employs differs from that of the medical man at Bogota, inasmuch as he prepares his animals by means of subcutaneous injections of fluid from leprous tumours which have just been removed from patients in an active stage of the disease. These animals always experience a well-marked general reaction, which disappears completely at the end of from five to six days. The blood of these animals, drawn when they have fully recovered their health, is collected with antiseptic precautions and injected in the ordinary way; accidents incidental to the operation are unusual and unimportant. On the first injection the patients show a pronounced febrile reaction, with malaise, pain in the back and the abdomen, and sometimes diarrhœa; this reaction commences six hours subsequent to the injection, and after an interval varying from twelve hours to three or six days, according to the case, it terminates in copious perspiration, a general feeling of comfort, and recovery of appetite. The therapeutic results are very marked and extend to all the symptoms. The good effects on the nervous system, for instance, are shown by the disappearance of anæsthesia, wandering pains, palsies, and pains in the joints. The improvement in the condition of the mucous membrane is manifested by the renewal of nasal respiration, the disappearance of ozæna, anosmia, and blepharitis, and the healing of conjunctival and corneal ulcers. The results on the skin are that perspiration returns, the hair on the scalp, the chin, and the eyebrows grows afresh, extensive ulcers rapidly heal, and leprous nodules are absorbed. The bacilli which could formerly be found with ease in the parts of the skin infiltrated with leprous nodules also disappear. The duration of the treatment is from three months to one year at the most. The good effects observed have been fully maintained in sixty cases up to the present time, and six of the patients may be considered to be cured, as a year has now elapsed since their restoration to health, but time alone will show whether the success obtained is permanent, and whether the majority of the patients will be thoroughly restored to health or only improved. Ordinary therapeutic measures, such as the actual cautery, may be employed at the same time as the serum treatment; the patient's food and general hygiene should also be attended to. The author makes special reference to "lavages du sang," by which he means large injections either of normal serum into the cellular tissue or of artificial serum into a vein; these injections seem to be valuable adjuncts to the serum treatment.

The Charge Against a Medical Man.

Dr. Laporte will appear before the police-court in a few days on a charge of homicide by imprudence. The various medical societies of Paris continue to take the utmost interest in his case, the decision in which will be of much consequence to all surgeons and accoucheurs. The medical society of the seventeenth arrondissement, where Dr. Laporte lived, the society of the observatory, the society of French medical practitioners, &c., have signified their disapproval of the proceedings. Surgeons and accoucheurs have written to the ordinary newspapers giving accounts of situations similar to that in which Dr. Laporte found himself, and taking credit to themselves for acting as he did—that is to say, for making use in time of need of such every-day instruments as happened to be immediately available. This unanimity of the profession seems to have acted favourably on public opinion and to have diminished the hostility to medical men which has been so prominent in the newspapers for some time past. Dr. Variot, physician to the Hôpital Trousseau, has written a strongly-worded letter, which all the papers have published, and in which he blames the experts consulted by the magistrate for not having at the outset declared that the case was not one which called for the immediate arrest of the accused.

Oct. 11th.

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ROME.

(FROM OUR OWN CORRESPONDENT.)

The White Death.

"LA Morte Bianca" is not likely to figure in the programme or the discussions of the Eighth Congress of Internal Medicine, which holds its sittings in Naples from the 20th to the 24th inst. And yet, all too prevalent as it is in Italy, it prevails in most typical form in Naples itself. "The White Death," less swift in operation than its "black" counterpart, numbers more victims in the long run, and, even when it does not shorten life prematurely, its "conditions precedent" do much to impair the survivors' organism and tell disastrously on his offspring. But whence the name and what does it connote? The name is given by Dr. Achille Spatuzzi, professor of hygiene in the Neapolitan School, and the fact it describes may be found in his fascinating if melancholy work, "Saggi di Demografia e d'Igiene per gli Ufficiali Sanitari" (Essays in Demography and Hygiene for Sanitary Officers). Another writer on the theme is a colleague of Professor Spatuzzi, also a physician, Dr. Colajanni, professor of statistics in the same seat of learning, and it is his most recent deliverance on it that now concerns me. Much talk, he says, in the press, among the public and in Parliament, has been caused by the "strage degli innocenti" (slaughter of the innocents) disclosed last summer in the Brefotrofio dell' Annunziata; but this mortality of illegitimate foundlings, he continues, prevails in Italy "sempre e dappertutto" (always and everywhere) and need not distract attention from the "total mortality of the people of Naples." While throughout the kingdom the death-rate conspicuously declines, as infective diseases are more and more successfully combated, "the general specific mortality of Naples among the great civilised cities remains characteristically unique." The mean death-rate in Italy—a mean which takes account of deaths by malaria, pellagra, and by the chronic malnutrition of so many unfortunate regions—has sunk in a few years from 29 per 1000 to below 26. That of Naples, on the other hand, from 1879 to 1895 shows but insignificant oscillations—from 31·9 to 29 3—"an oscillation," he says, "indeed insignificant, for no further back than 1893 there was a mortality of 30·6—indeed insignificant," he proceeds, "if we reflect that in the comparatively rich quarter of San Ferdinando it sank to 18·2—that is, to proportions approximating those of civilised capitals, while in the wretchedly poor quarter of San Carlo all' Arena from 1881 to 1892 it had risen from 27·7 to 32 1. The difference," continues Professor Colajanni, "in mortality between rich quarters and poor quarters is indeed deceptive, though well enough known; but it may be profitable to illustrate it for Naples in one of her exceptional moods. During the cholera visitation of 1884 in the rich quarter of San Ferdinando the mortality scarcely touched 26·2 (the present mean in Italy), while it reached 47·4 in the Vicaria, 59·7 in the Pendino, and 64·4 in the Mercato." But (the reader may interpose) "all this is death in general; how about the 'White Death'?" Let him hear Professor Colajanni: "The foreign visitor, comfortably lodged and entertained in the principal hotels, is as safe on the lovely Neapolitan bay as in any European city; infective diseases, to which the stranger is most liable, are steadily declining in Naples; typhoid fever, with the Serino aqueduct bringing in pure water in any quantity, has almost disappeared. But 'la morte bianca' which reaps its thousands in the Neapolitan slums is the death by inanition and exhaustion; it is the death by slow degeneration, by misery, by nutrition of the worst kind, and even that defective; it is the death preceded always by anæmia, by chlorosis, by 'dusky pallor,' it is this death which marks a steady rise. Take the following figures by way of proof. In 1873 the deaths associated with congenital deformity (*vizi di conformazione*) were 131; in 1896 they were 240. Again, the deaths by tuberculosis in 1873 were 1216; in 1896 they were 1812; this, too, with no corresponding increase of population to account for it" There you have the "White Death" according to Professor Spatuzzi and Professor Colajanni, eloquently indicating physical degeneration, general and progressive, going *pari passu* with the moral degeneration which yields precocious delinquency as well as adult crime so alarmingly. Leading up to "the White Death" is the malnutrition which, though copiously illustrated in the works of Somma, Spatuzzi, Manfredi, and other Neapolitan hygienists, does not detain Professor Colajanni, who hastens on to the "material conditions of habitation" under which the poor of Naples live or rather die. London, for example, has 196 inhabitants for each square kilometre. Paris 265, Rome 280, Turin 340, Naples 939 and in her Pendino quarter 1254! "There is no hyperbole," he adds, "in saying that the Neapolitan population lacks air, oxygen, light, and that it huddles together in houses which are not human dwellings, but wild beasts' lairs." The children who go from these dens to schools make little change for the better as to ventilation. Professor Fazio, in his report to the Minister of Public Instruction, describes these schools as no better than they were demonstrated to be by a lamented Neapolitan philanthropist, the common councilman, Signor Casini, "omicide, costituenti un' offesa alla civiltà ed all' umanità" (homicidal, constituting an offence to civilisation and humanity). Professor Colajanni, whom no one will suspect of reactionary sympathies, adds that sixty years ago the illustrious Dr. De Renzi (it is mostly the medical man who plays the philanthropist in Italy) protested against the "condizioni tristissime" (deplorable circumstances) in which Naples languished under the Bourbon, whose Government resolved itself into the three f's—"feste, farina, e forche" (entertainments, meal, and gallows). But he asks, Is she much better off now? The "gallows" has been abolished, "meal" is diminished to starvation point, the "entertainments" continue, mostly in the form of the unveiling of monuments to the "heroes of the revolution," whose "commemoration" has already cost the country milliards of lire. Be it the task, he concludes, immediate and effective of the new *régime*, whether parliamentary or municipal, to redress the balance in favour of "farina" at the expense of the "feste," confident that a better-fed, better-housed, better-clothed populace would be a worthier commemoration of those heroes than all the statues, memorial tablets, unveilings, and fireworks, rhetorical or pyrotechnic, with which it is vainly sought to scare the wolf of hunger from the house and the "White Death" from its inmates.

Oct. 10th.

Obituary.

FREDERICK WILLIAM BARRY, M.D., F.R.S. EDIN., D.P.H. CANTAB.

WE regret to announce that Dr. F. W. BARRY, the senior medical inspector of the Local Government Board, was found dead in his bedroom at the Grand Hotel, Birmingham, on Tuesday last. The deceased was born at Scarborough (where his father was a town councillor) in 1850. He received his medical education at Edinburgh University where in 1876 he graduated as M.D., and took up the subject of public health immediately on being qualified, receiving the Diploma in Public Health from the University of Cambridge in 1877. His first appointment was as medical officer of health to the Craven Combined District of Yorkshire, an office which he filled from 1878 to 1879. In 1880 he was sent to Cyprus as superintendent of quarantine and of the Sanitary Commission. Here he did an admirable and useful work, and the census of Cyprus which was taken in 1881 was almost entirely his work, as well as the report upon the sanitary condition of the island for 1881. In July, 1882, he commenced his term of office at the Local Government Board, and a little later was called to the bar from the Middle Temple, and in addition was elected a Fellow of the Royal Society of Edinburgh. He was also elected Examiner in Medical Jurisprudence and Public Health at the Edinburgh University, and at the time of his death filled the same office at Aberdeen University. He leaves a widow and two children, a son aged nineteen and a daughter aged ten years. Dr. Barry had a wonderful faculty for collecting statistics and drawing valuable conclusions from them—in fact, he was, as one of his colleagues has said, the head of the intelligence department of the Local Government Board. Among the various reports which he drew up, besides the ones we have referred to above, we may mention the one written in coöperation with Mr. T. Gordon Smith upon "Back-to-back Houses," printed in 1888, while two reports of

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his which have become classical are the "Report on an Epidemic of Small-pox at Sheffield during 1887-1888" and the "Report on an Epidemic Prevalence of Enteric Fever in the Tees Valley during 1891." Other reports which were very valuable were those upon "Cholera in England and Wales during 1893," the "Report on the Western Diffusion of Cholera during 1893," and the "General Report on the Sanitary Survey of the Coast-line of England and Wales for 1893-1894." Dr. Barry was very thoroughly examined before the recent Royal Commission on Vaccination, mainly with reference to the Sheffield outbreak of small-pox; and in the final volume of evidence just issued will be found his exhaustive and convincing refutation of the criticism which Mr. Alex. Wheeler had made on his memorable Report.

Some twelve months ago Dr. Barry met with a serious accident while travelling in Yorkshire. He was passing through a low stone doorway and thinking he had got completely through, raised his head suddenly and struck it against the lintel. Unfortunately for himself he was not so stunned as to be unable to continue his work, which he did for some ten days, but at the end of that time he was compelled to take to his bed, as symptoms of serious injury to the upper part of the vertebral column appeared. For some sixteen weeks he was kept in bed with his head and upper part of the spine kept completely at rest by means of sand bags. He was absent from his work for about seven months altogether, but had apparently completely recovered. Dr. Barry's loss will be severely felt by all his colleagues at the Local Government Board. He was extremely popular and kindly, a very hard worker, and a very charming colleague to work with.

The inquest was held on Wednesday last before Mr. Bradley, the Birmingham coroner, when the jury returned a verdict of death from natural causes.

EDMUND PERCIVAL FRANCE, M.R.C.S. ENG., L.R.C.P. LOND.

THE death of Mr. E. P. France occurred on May 20th, at Port Darwin, in Australia. Mr. France was surgeon on the Eastern and Australian Company's s.s. *Menmuir*, having left England in March, 1896, in the s.s. *Australia* of the same company. Returning to the *Menmuir* with some passengers on the night of May 20th the gangway to the ship was found to be very steep owing to the great fall of tide. According to the *Hong-Kong Telegraph*, from which we quote, Mr. France slipped from the gangway and fractured his skull against the wharf, death ensuing soon afterwards. Mr. France was educated at University College, London, where he held the appointment of assistant to the Professor of Physiology (Mr. Schäfer), with whom he did valuable research work on the brains of monkeys, the results of which were published in the Transactions of the Royal Society. In 1890-91 Mr. France was house surgeon to the North-Eastern Children's Hospital. In 1892 he was appointed principal medical officer to British North Borneo, a position he held for three years. In March, 1896, he joined the Eastern and Australian Company's steamers and remained with them till his death. His firm but kindly manners made him many friends and he was much esteemed by his patients.

JOHN COMELY WICKHAM, L.R.C.P. LOND., M.R.C.S. ENG., L.S.A.

MR. WICKHAM, who died at his residence, Gordon House, Tetbury, Gloucestershire, on Sept. 30th, in his ninety-fifth year, was by many years the oldest resident in the town and was long and affectionately known as "old Dr. Wickham." He received his medical education at St. George's Hospital, London, taking the M.R.C.S. Eng. qualification in 1825 and the L.R.C.P. Lond. and L.S.A. in 1843. Fifty years ago Mr. Wickham went to Tetbury from Didmartin. He was formerly medical officer to the Tetbury Cottage Hospital and to the Tetbury Dispensary. Mr. Wickham will be much missed by his numerous friends and acquaintances in Tetbury and the surrounding district.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Rafael Branchat y Vime-Prada, Professor of Hygiene in the Granada Medical School.—Dr. Jean-Baptiste de Mayer, formerly a much respected Antwerp practitioner, at the age of eighty-two years.—Professor Max Burchardt, Directing Surgeon of the Ophthalmic Department of the Charité Hospital, Berlin, on Sept. 25th from a pulmonary affection at the age of sixty-six years. While serving in the army, from which he recently retired with the rank of surgeon-general, he was stationed for a time at Königsberg, and he there attached himself to the university as *privat-docent*. His original work was carried on first on dermatological matters and afterwards in ophthalmology. He devised an erecting ophthalmoscope and published papers on the determination of the acuteness of vision and on the detection of malingering amongst soldiers by pretence of bad sight.—Dr. Hjalmar Heiberg, whose death is announced at the age of sixty years, was in early life a marine surgeon and after his return to Christiania acted as assistant to Professor Wruge in the Anatomico-pathological Institute of the University, becoming afterwards Professor of Pathological Anatomy. He conducted valuable researches on the bacteriological causes of puerperal fever and pyæmia, and published a book on the subject in the German language.—Dr. Edmund Drechsel, Professor of Physiological Chemistry in the University of Berne, who was formerly a lecturer in Leipzig, died suddenly from heart disease in Naples, whither he had gone to work in the Marine Zoological Station.—Professor Lopold Auerbach, of Breslau, whose death has been announced, was in his seventieth year. He was a pupil of Purkinje and carried on many researches of a physiological and anatomical character. His name is known to every medical student in connexion with the plexus mesentericus or Auerbach's plexus. He also published papers of great originality on the early determination of sex, on amœbæ, and on the physiology of muscle.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—In the primary examination the following candidates have passed in the subjects indicated:—

PART I.

Biology.—H. M. Huggins, St. Bartholomew's Hospital.
Chemistry.—J. Freeman, Bristol; F. B. Hargreaves, Manchester; and K. Heanley, Royal Free Hospital.
Materia Medica and Pharmacy.—A. E. Gilford, R. Gillett, C. Hind, H. M. O. Jones, and D. E. Lockwood, Royal Free Hospital; L. R. Marshall, St. Mary's Hospital; L. S. Molony and F. M. Payne, Royal Free Hospital; and H. F. Stilwell and R. Storrs, St. Bartholomew's Hospital.

PART II.

Physiology.—N. C. Beaumont, St. Bartholomew's Hospital; T. Burdekin, University College Hospital; J. D. Graham, Belfast and Glasgow; K. E. Gregg, Royal Free Hospital; N. Hodgetts, Birmingham; B. Holroyd, Leeds; A. D. Nicolson, Glasgow; J. Notley, Birmingham; L. W. Roberts, Cambridge; H. M. Serjeant, Royal Free Hospital; L. S. Shoosmith, St. Mary's Hospital; and F. W. Whyte, Belfast.
Anatomy.—W. P. Allen, Birmingham; J. R. Bentley and M. B. Dawson, Middlesex Hospital; J. D. Graham, Belfast and Glasgow; A. T. Harvey, London Hospital; N. Hodgetts, Birmingham; B. Holroyd, Leeds; F. J. F. Jones, Guy's Hospital; H. G. Lewer, Edinburgh; A. D. Nicolson, Glasgow; J. Notley and S. Page, Birmingham; L. W. Roberts, Cambridge; H. M. Serjeant, Royal Free Hospital; and L. S. Shoosmith, St. Mary's Hospital.

UNIVERSITY OF GLASGOW.—The following have passed the First Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subject or subjects indicated (B., Botany; Z., Zoology; P., Physics; C., Chemistry):—

Thomas Anderson (B., C.), William Archibald (B., C.), William Armitage (B.), John Stoddart Barr (B., P.), Thomas Thompson Bathgate (Z.), George Thomson Bogle (B., P.), William Macalister-Brown (B., C.), John Joseph Burke (B.), Hector Charles Cameron (B., P.), Robert David Campbell (B.), Daniel Lyall Carmichael (Z.), Edward Seymour Chapman (B., Z., P.), Walter Bartlett Chapman (B., P.), George Herbert Clark (B., P.), James Bertie Wylie Cook (B., P., C.), Samuel Campbell Cowan (B., P.), James Craig (B., Z.), Ernest Hamilton Cramb (Z., C.), Andrew Currie (B., C.), John Shedden Dale (Z., P.), David Beattie Davidson (B., P., C.), Gregor Hugh Grant Davie (B., Z.), James Dick, M.A. (B., C.), Hugh M'Millan Donaldson (P.), Andrew Robertson Dow (B., Z.), George Horn Downie (B., C.), Reginald Nairn Dunlop (B., C.), George Ferguson (Z., P.), Gilbert Garrey (Z., C.), David George Somerville Gartshore (P., C.), William Gemmill (B., Z., C.), William White George (Z.), John Ritchie Gilmour (B., Z.), William Girvan (C.), George Gordon (B., P.), John Miller Gordon (B.), Archibald Gow (B., C.), Andrew Parlane Granger (B., C.), John Guthrie (B., P.), George Pillans Harlan (B., P.), Saul Hyman Harris (P.), Francis

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Joseph Henry (B., C.), Charles Milburn Hope (B., P.), Douglas William Hunter (B., Z., P., C.), Neil M'Coll Hutchison (Z.), William Johnstone Isbister (B.), George Rutherford Jeffrey (B., P.), Daniel Ross Kilpatrick (P., C.), Alexander King (B.), John Lambie (B., Z., P.), Robert Lauder (Z.), Alexander Linn (B., Z., P., C.), Frank Lochrane (B., P.), John Lockhart (B., C.), Alexander Logan (Z., C.), William Jamieson Logie (B., C.), Joseph Paterson Lusk (Z., P.), Edward Magoveny (B., C.), William Alexander Masson (B., Z., P., C.), Robert Menzies (B., P.), James Grant Millar (B., C.), Robert Joseph Mills (B., C.), William Alexander Milne (B., C.), John Morison (P., C.), Allan Howie Muir (B., C.), John Muir (B., Z.), Coll Macdonald (B.), Daniel Douglas M'Dougall (B.), William Ferguson M'Glashan (B., Z., P., C.), Thomas M'Laren (B., Z.), Alex. Maclean (P., C.), Hugh Archibald M'Lean (B.), Alexander M'Gaw M'Millan (P., C.), James M'Pherson (Z., P.), James Roy M'Vail (B., P.), John Dunn Nisbet (C.), John Paton (C.), Alexander M'Millan Pollock (P.), James Nimmo Prentice (P.), Thomas Hood Rankin (P.), Peter Mackenzie Reid (C.), Thomas Richmond (Z., P., C.), William Robertson, Kilmarnock (B., C.), Thomas Ritchie Rodger (B., Z.), William George Rodger (B., C.), Norman Cumming Rogers (B., Z.), Andrew Taylor Ross (B., C.), Charles James Ross (Z., C.), David Sandler (B., P.), Frank Donald Scott (Z.), James John Sinclair (B., Z.), Malcolm Bernard Gathorne Sinnette (B., C.), Donald Steel (B.), John Strathearn (B., C.), Robert Rennie Swan (C.), James Nathanael Todd (B., C.), Joseph Goodwin Tomkinson (B., C.), John Wright Turner (B., C.), John Unsworth (Z.), Robert Warden Valentine (B., C.), William Dinning Walker (B.), George Smith Wallace (B., C.), Thomas Irby Wallace (B., P.), Hugh Fleming Warwick (Z., P.), John Forrest Weston (Z., C.), David Ashley Wilson (Z., C.), David Watson Wilson (C.), John Wilson (B., C.), Thomas Watson Wilson (P., C.), William Webster Watt Wilson (P., C.), William Robertson Wylie (Z., P., C.), James Wyper (Z.), John Young, Bearsden (C.), John Young, Glasgow (B., C.), and Watson Young (B., P.). Women—Margaret Edith Bryson (B., Z.), Minna Edgar (B., Z.), Helen Mary Gordon (C.), Isabel Hill (Z.), Janet Thomson Miller (P., C.), Alice Moorhouse (B., Z.), Jessie Seath M'Ewen (B., Z.), Mary Janet Pirret (B. Z.), Mary Ann Thompson Ritchings (B.), Elizabeth Ness MacBean Ross (B., Z., P., C.), Martha Hunter Scott (B., Z.), Agnes Bankier Sloan (B., Z.), Elizabeth Macfarlane Sloan (B., Z.), Edith Christine Wallace (B., Z.), and Henrietta Fraser Young (B., Z., P.).

The following have passed the First Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

Robert Cumming, B.D., and William Henry Ferran.

The following have passed the Second Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subject or subjects indicated (A., Anatomy; P., Physiology; M., Materia Medica and Therapeutics):—

James Freeborn Bennett (M.), William Broad (A., P., M.), Andrew Brownlie (M.), Thomas Bullough Calland (A., M.), Thomas Carruthers, M.A. (A., P.), James Robert Chalmers (M.), David Maclure Cowan (A., P.), John Craig (A., P., M.), George Morris Crawford (A., P.), William Crerar (P., M.), Charles Peter Garvie Crichton (A., M.), Charles Cheven Cumming (M.), James Austin Dickie (P.), Frank Lindsay Dickson (M.), David Curr Douglas (P., M.), James Drummond (M.), Hugh Campbell Ferguson (M.), George Gardner (A., P.), John Gardner (A., P.), George Garry (M.), William Gibson (M.), Hyam Goodman, M.A. (M.), Archibald Wilson Harrington (A., P., M.), Isaac Mackay Huey (M.), Thomas Inglis (A., M.), Nicol Jamieson (M.), Andrew Kerr (M.), Andrew Love (A., P., M.), Ramsay Millar (P., M.), Hugh Miller (M.), Norman M'Leod Miller (M.), Ebenezer Mitchell, M.A. (A., P.), Daniel Morrison (A., P.), Alexander MacCulloch (A., P., M.), James Hogg Macdonald (M.), Peter M'Fadyen (M.), John M'Gilchrist (M.), Anderson Gray M'Kendrick (A., P.), Charles Forbes Maclean (P., M.), George Todd Maclean, M.A. (A.), Norman Forbes MacLeod (M.), William Johnston Maclure (A., P.), John M'Millan (M.), Thomas Neill (A., P.), John Patton (M.), Thomas Stephens Picken (A., P.), John Reid, Lanark (A., P., M.), Robert Rennie (A.), William Alexander Riddell (M.), Arthur Robin (M.), James Scott, M.A. (M.); James Shearer (M.), Andrew James Smith (A.), David James Smith (M.), William Stewart Stalker (P., M.), Peter Alexander Steven (M.), Alfred George Stewart (M.), Frederic Richardson Stewart, M.A. (A., M.), James Douglas Brownlee Stewart (M.), Robert Taylor (A., P.), Charles Pinkerton Thomson (M.), William Brown Thomson (P., M.), Thomas Bird Tierney (A., P., M.), Joseph Swinburne Townley (A., P.), Arthur Vost (A., P., M.), Alexander Laurie Watson, M.A. (A., P. M.), Alexander Simpson Wells, M.A. (M.), Robert Orr Whyte, M.A. (A., P., M.), Alexander Wilson (A., P.), William Wright (P., M.), and John Doctor Young (M.). Women—Auguste Boyes (M.), Sarah Davidson (M.), Marjorie King Henderson Fleming (M.), Mabel Hardie (M.), Jessie Sophia Beatrix Hunter (A.), Ina Lochhead M'Neill (M.), Sara Maude Robertson (P., M.), Maud Spencer (M.), Gertrude Florence Fleetwood Taylor (P.), and Edythe Marjorie Stewart Walker (A., P.)

The following have passed the Second Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

Thomas Holmes, Richard Hewson Hunter, and John Joseph Lowell.

The following have passed the Third Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subject or subjects indicated (P., Pathology; M., Medical Jurisprudence and Public Health):—

Robert Fisher Ballantyne (P., M.), James Barrowman (P., M.), William Bennett (M.), John George Wilson Boleyn (M.), John Brunton (P., M.), John James Buchan (P., M.), Ranald Douglas Campbell (P., M.), James Carruthers, M.A. (P., M.), Robert Carswell, M.A. (P., M.), John Ronald Currie, M.A. (P., M.), James Fulton Findlay (P., M.), Robert Fullarton, M.A. (M.), Alexander Garrow (M.), James Garden Green (M.), David Sloan Harvey (P., M.), Harold Smith Heap (M.), Ernest Frederick Lionel de Jersey (P., M.), Edward William Reese Jones (P., M.), Archibald Jubb (P., M.), Andrew Stewart Lang (P.), John Wilson Leitch M.A. (P.), Percival Ambler Mitchell (P., M.), Archibald Turner Macewan (P., M.), Dugald M'Kinlay (P., M.), Alfred Duncan Macnair (P., M.), William Gardner Neill (P., M.), Percival Lealie Pearce (M.), William Hart Steel, B.A. (P.), Francis Stevenson (P.), Frederick Ernest Stokes (P., M.), Thomas Morton Strang (P., M.), Andrew Taylor (P., M.), Henry Nisbet Turner (P., M.), Robert Andrew Hannan Watson (M.), and William Webster (P., M.). Women.—Mary Gardner (P., M.), Jane Lorimer (P.), Margaret Wallace Howie M'Neil (M.), Margaret Elizabeth M'Neill (P., M.), and Jean Effie Prowse (P.).

The following have passed the Third Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

A, including Pathology.—William Kilpatrick Hutton, M.A., and Charles Edward Cortis Stanford, B.Sc.

B, not including Pathology.—Lionel Mitchell Mackay, and William Shearer.

THE GREIG SMITH MEMORIAL.—The sum of £458 has been already received towards raising a permanent memorial to the late Mr. Greig Smith. The amount still needed is about £400, and as the fund will shortly be closed it is hoped that further subscriptions will be sent at an early date to the treasurer, Mr. F. B. Girdlestone, 4, Downside-road, Clifton.

THE Forfarshire Medical Association held the usual quarterly meeting in the University College, Dundee, on Sept. 30th, Dr. Alex. Campbell, President, being in the chair.—Mr. Greig showed two cases after Fracture of the Neck of the Humerus. (*a*) A boy, aged thirteen years, fractured his humerus six months ago. Mr. Greig wired the fragments owing to the difficulty in these cases of keeping the ends in apposition with splints. The result showed free movement at the shoulder-joint. (*b*) A boy, aged thirteen years, fractured his humerus seven years ago, when it was treated with splints. The movement was impaired, due chiefly to contraction of the latissimus dorsi and teres major muscles, which were divided this year. Mr. Greig also showed a patient after Pyæmic Arthritis, with free movement at joints which had been affected.—Dr. Mackie Whyte showed a specimen of Carcinomatous Tumour pressing on the Superior Vena Cava and the Right Bronchus.—Mr. Greig showed two specimens of Tuberculous Bursæ removed from under the quadriceps extensor tendon in both cases, pointing out that by early removal of tuberculous bursæ tuberculous arthritis might be prevented.—Dr. Dickson (Carnoustie) read notes of a case of Vesical Calculus, illustrating the action of piperazin on vesical calculi. The patient, aged seventy-two years, had passed small calculi at intervals and suffered severe pain. He refused operative treatment, but was treated with piperazin, with the result that he improved, passing numerous small calculi at frequent intervals. Dr. Dickson suggested that the piperazin caused disintegration of the calculi by acting on the uric acid.—Dr. Templeman read notes on the Disinfection of Rooms by Spraying. The first dealt with disinfection by sulphurous acid gas, its disadvantages and possible inefficacy, as he said it had been proved that 4½ per cent. was incapable in twenty-four hours of killing spores and even bacilli in from six to eight hours. He recommended disinfection by spraying with a germicide as more efficacious. It caused no damage and the material used was non-poisonous. The substance he advocated was formalin (40 per cent.) with the Equifex sprayer. Several specimens of wall-paper which had been sprayed that morning were exhibited, and the sprayer was explained and used before those present.—Dr. Dickson and Dr. Miller said they were not prepared to give up sulphur without further proof.—Dr. Mackie Whyte read notes of a case in which Chyle had Transuded into the Pleural, Pericardial, and Peritoneal Cavities. The patient, a girl aged twenty-one years, had been under treatment previously for tuberculous glands in the neck. Between 500 oz. and 600 oz. in all were drawn off from the various cavities, reaccumulation quickly taking place. There was no necropsy, but it was believed the condition was due to obstruction of the thoracic duct near its termination. An analysis by Dr. Lockhart Gillespie showed 4 per *mille* of fat. The literature of the subject was reviewed and the case commented on in this light.—Dr. Mackness showed a Placenta from a case of Triplets in which labour was induced at the sixth month.—On the motion of the President the various speakers were accorded a hearty vote of thanks for their interesting papers.

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UNIVERSITY COLLEGE, LONDON.—The following Medical Entrance Scholarships have been awarded:—131 guineas, Mr. J. E. Stratton; 55 guineas, Mr. J. D. Bolton; and 55 guineas, Mr. H. A. Lyth.

WE have been requested by the Registrar of the Royal College of Physicians of Ireland to state that at the monthly business meeting of the College, held on Oct. 1st the following resolution was adopted: "That the censure of the College be passed on Dr. C. L. Lumley, in consequence of his unprofessional conduct disclosed in the case of Balmer *v.* Balmer, Phillips, Lumley, and Rohe."

SANITARY MATTERS AT WHITCHURCH, SOUTH WALES.—At a meeting of the Whitchurch Parish Council, held last week, the members were quite indignant that the erection of an infectious diseases hospital should have been suggested, and in order to signify their disapproval of the proposed scheme the clerk was instructed to write to the several ground landlords asking them not to let any land as a site for such a building.

KING'S COLLEGE.—The following Entrance Medical and Science Scholarships have been awarded:—Medical Entrance: W. E. Blackall, 60 guineas. Sambroke Medical (Science): J. A. Drake, £50; and M. R. C. MacWatters, £50. Warneford Medical (Arts): H. B. Day, £25 for three years; and A. A. Myers, £25 for two years. Worshipful Company of Clothworkers (Science): E. Hinks, £30 for two years; and A. E. Ruffhead, £20 for two years. Engineering Entrance: G. H. Lovegrove, £15.

THE GLASGOW SOUTHERN MEDICAL SOCIETY: SESSION 1897-98.—The annual business meeting was held on Oct. 7th, Mr. Stuart Nairne being in the chair, when the following were elected:—President: Dr. James W. Allan. Vice-President: Mr. R. H. Parry. Treasurer: Dr. Yeo W. Thomson. Secretary: Dr. Wm. Watson, Gartmore, Langside. Editorial Secretary: Dr. Henry L. G. Leask. Sealkeeper: Dr. Alex. Roxburgh. Court Medical: Mr. Stuart Nairne, Dr. Alex. Rankin, Dr. Eben. Duncan, Dr. R. W. Forrest, and Professor James Dunlop. Extra Members of Council: Dr. J. Fraser Orr, Dr. Hugh Kelly, and Dr. T. W. Jenkins. Representative to Board of Victoria Infirmary: Profesor James Dunlop.

DISTRIBUTION OF PRIZES AT UNIVERSITY COLLEGE, LIVERPOOL.—Sir John Brunner, Bart., M.P. (in the absence of the Earl of Derby), distributed the prizes and certificates, on the 9th inst., to the successful students of the medical faculty of University College, Liverpool. The dean of the faculty (Dr. A. M. Paterson) read the annual report of the work of the session, a summary of which appeared in THE LANCET of Aug. 14th. The first award of the new Robert Gee Fellowship in Anatomy, a prize of the value of £100, was made to Mr. W. Graham, M.B., Ch.B. Vict. Mr. Edward Lawrence, who occupied the chair, commented on the prosperous condition of the medical school compared with that of other departments of the college, which were sorely in need of funds.

LITERARY INTELLIGENCE.—The works recently published by Mr. H. K. Lewis, of Gower-street, include the thirteenth edition of the Handbook of Therapeutics, by Dr. Sydney Ringer and Dr. Harrington Sainsbury; the fourth edition of Dr. Aldersmith's Ringworm and Alopecia Areata; the fifth edition of Dr. L. C. Parkes' Hygiene and Public Health; Manuals of Obstetric Practice and of Gynæcological Practice by Dr. D. A. Dührssen of Berlin (translated by Mr. J. W. Taylor and Dr. F. Edge); Dr. William Gray on Influenza; and the Sanitary Inspectors' Handbook, by Mr. Albert Taylor. Mr. Lewis also announces for early publication a Handbook of Diseases of the Nervous System, by Dr. C. E. Beevor; the fifth edition of a Practical Text-book of the Diseases of Women, by Dr. A. H. N. Lewers; and Mastoid Abscesses and their Treatment, by Dr. A. Broca and Dr. F. Lubet-Barbon (translated by Dr. H. J. Curtis).—A new weekly medical journal has just appeared in Breslau entitled *Wochenschrift für Therapie und Hygiene des Auges*, which is to deal entirely with the treatment and hygiene of the eye. This would seem to most of us to be a somewhat limited field for a weekly journal, but the learned editor, Dr. Wolffberg, of Breslau, and the eminent staff who are to coöperate with him—amongst whom we notice the names of Professor Cohn, of Breslau, and Dr. E. Jacobson, of Berlin—have doubtless taken good care to inform themselves of the probabilities of success before embarking on such a serious undertaking as that of a weekly publication.

THE Corporate and Medical Reform Committee have received from Sir William Thomson and Mr. George Brown, Direct Representatives of the profession for Ireland and England respectively on the General Medical Council, favourable replies concerning a programme of reform suggested by the committee.

THE Water Committee of the Council for the Borough of Hastings (which includes St. Leonards-on-Sea) state that samples of the water supplied to the borough have just been submitted to the analysis of Dr. Dupré, who reports that the waters "are in every respect admirably adapted for a town supply, both as drinking water and for general domestic use."

DIPHTHERIA IN LONDON.—The deaths from diphtheria in London, which had been growing in numbers week by week during September, having been 25, 35, and 45 in the three weeks ended on the 25th, showed still further increase in the seven days to Oct. 2nd, during which they totalled 49, although even then they were 3 below the corrected decennial average for the thirty-ninth week of the period 1887-96. The Camberwell sanitary area had 6 deaths, Hackney and Lambeth each 5, Battersea 4, and Kensington and Bethnal Green areas each 3 deaths credited to them in the week. Only one of the 49 deaths was in an infant, other 26 were of children under five years of age, and 2 of persons aged upwards of twenty years. The admissions to hospital in the week were 165, and 1039 cases remained under treatment in hospital at the close of the week. In the Outer Ring there were 14 deaths registered from diphtheria, including 5 of persons belonging to West Ham and 3 to Edmonton registration districts. Last week there were as many as 53 deaths from diphtheria registered in London, 49 being the corrected decennial average for the particular week. Hackney had 6 deaths, Poplar and Lambeth each 5, Kensington 4, and Bethnal Green and Wandsworth sanitary areas had each 3 deaths credited to them. Not one death occurred of an infant or a person aged over twenty years, and 37 were of children aged one to five years. The admissions to London hospitals numbered 157, and 1050 patients were under treatment in these institutions on Saturday last. In the Outer Ring 13 deaths were registered from the disease, 7 being in West Ham and 4 in Hendon registration districts. Thus, we seem to be face to face with an increasing autumnal mortality from this malady in and around London.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BENNETT, F. DILLON, M.R.C.S., L.R.C.P., L.S.A. Lond., has been appointed Junior Medical Officer to the Army and Navy Coöperative Societies, vice Stanley De Butts, resigned.

BRADBURY, J. B., M.D., F.R.C.P. Lond., has been appointed Assessor to the Regius Professor of Physic at Cambridge University.

CAMERON, A. G. R., M.B., B.S. Durh., M.R.C.S., L.R.C.P. Lond., D.P.H. Camb., has been appointed by the Government of India to act temporarily as Medical Officer in the Sanitary Department.

CARMICHAEL, E. W. S., M.B., C.M. Edin., has been appointed a Resident Surgeon to the Edinburgh Royal Infirmary.

DE BUTTS, STANLEY B., M.D. Brux., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to Messrs. Cook and Son's (Egypt) Nile Steamship Service.

EWENS, H. L., M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the St. Peter's Sanitary District of the Maldon Union.

FOWLER, H., M.B., C.M. Edin., has been appointed a Resident Physician to the Edinburgh Royal Infirmary.

GEMMELL, J. E., M.B., C.M. Edin., has been appointed an Assistant Medical Officer to the Hospital for Women, Shaw-street, Liverpool.

GIBBONS, W. E., M.B., C.M. Edin., has been appointed a Resident Surgeon to the Edinburgh Royal Infirmary.

HANCOCK, G. C., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Port of London Sanitary Authority.

HARPER, THOMAS, M.B., C.M., D.P.H. Aberd., has been appointed Medical Officer of Health for the Burgh of Stranraer.

HARVEY, W. T., M.B., C.M. Edin., has been appointed a Resident Physician to the Edinburgh Royal Infirmary.

HIGGINS, H., M.A., M.B. Camb., M.R.C.S., L.R.C.P. Lond., has been re-appointed Demonstrator of Anatomy for five years at Cambridge University.

IRVINE, R., M.B., C.M. Edin., has been appointed a Resident Surgeon to the Edinburgh Royal Infirmary.

JACOMB-HOOD, C. J., L.R.C.P. Lond., M.R.C.S., has been appointed an Honorary Surgeon to the Brighton and Hove Hospital for Women, and Lying-in Institution.

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KIRKPATRICK, STEWART, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for Connah's Quay, Flintshire.

LONG, T. F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 8 Sanitary District of the Aylesbury Union.

MATTHEW, E., M.B., C.M. Edin., has been appointed a Resident Physician to the Edinburgh Royal Infirmary.

MCALLISTER-HEWLINGS, W. F., M.B., C.M. Edin., has been appointed Medical Officer for the Third Sanitary District of the Leicester Union.

MOORE, A. J., M.R.C.S., has been re-appointed Medical Officer for the District of St. Lawrence of the Reading Union.

MORRIS, C. E., L.R.C.P., L.R.C.S. Edin., has been appointed House Surgeon to the Royal Southern Hospital, Liverpool.

MURRAY, J. H., M.B. Lond., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant Medical Officer to the North-Eastern Fever Hospital (Metropolitan Asylums Board).

PATCH, WINIFRED S., M.B., has been appointed Junior House Surgeon to the Infirmary, Huddersfield.

PEATHING, A. V., L.S.A. Lond., has been appointed Clinical Assistant to Out-patients at the Chelsea Hospital for Women.

PRIOR, SAMUEL, M.B., C.M. Glasg., has been appointed Non-resident House Surgeon to the Western Infirmary, Glasgow.

RIDDELL, R. G., M.B., C.M. Edin., has been appointed a Resident Surgeon to the Edinburgh Royal Infirmary.

ROBERTSON, JEAN F., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Resident Physician to the Royal Sick Children's Hospital, Edinburgh.

ROSS, T. A., M.B., C.M. Edin., has been appointed a Resident Physician to the Edinburgh Royal Infirmary.

SCOTT, J. G. C., M.B., C.M. Edin., has been appointed Medical Officer for the Brafield Sanitary District of the Hardingstone Union.

SHACKEL, G. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Ludlow Rural District Council.

SNELL, E. H., M.D., L.R.C.P. Lond., M.R.C.S., D.P.H. Camb., has been appointed Medical Officer of Health for the City of Coventry.

SPICER, FREDERICK, M.D. Durh., has been appointed Surgeon to the Metropolitan Ear, Nose, and Throat Hospital.

STRUTHERS, J. W., M.B., C.M. Edin., has been appointed a Resident Physician to the Edinburgh Royal Infirmary.

TAYLOR, F. H. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Kidlington Sanitary District of the Woodstock Union.

WATT, A. H., M.B., C.M. Edin., has been appointed a Resident Physician to the Edinburgh Royal Infirmary.

WHITTELL, A. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Fylingdales District of the Whitby Union, vice J. Greenhalgh, resigned.

WINDLE, J. D., L.R.C.P. Irel., L.R.C.S. Edin., M.R.C.S. Eng., has been re-appointed Medical Officer of Health by the Southall, Norwood, District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ADDENBROOKE'S HOSPITAL, Cambridge.—Assistant Surgeon.

BRADFORD EYE AND EAR HOSPITAL.—Surgeon.

BRIGHTON THROAT AND EAR HOSPITAL, 23, Queen's-road, Brighton.—Non-resident House Surgeon. Salary at the rate of £52 per annum.

BRIDGWATER INFIRMARY.—House Surgeon. Salary £80 per annum, with board and residence.

CHESTER GENERAL INFIRMARY.—Visiting Surgeon for six months. Salary at the rate of £90 per annum, with residence and maintenance in the house.

CONSUMPTION HOSPITAL AND ORPHAN HOMES OF SCOTLAND, Bridge of Weir.—Resident Medical Officer. Salary £80 per annum, with furnished apartments, board, &c. Applications to the Hon. Secretary, 194, St. Vincent-street, Glasgow.

CORPORATION OF CALCUTTA, Bengal, India.—Health Officer for the town of Calcutta for five years. Salary not less than 1200 rupees and not more than 1500 rupees a month. The appointment is subject to specified conditions. Applications to the Secretary to the Corporation, Calcutta.

COUNTY ASYLUM, Shrewsbury.—Junior Assistant Medical Officer for four years. Salary to commence at £100 per annum (and £8 in lieu of beer, &c.), with board, lodging, and washing, rising to £120 at the end of two years' service.

COUNTY OF LANARK.—Resident Physician for Lightburn Joint Hospital for Infectious Diseases, Shettlestone, near Glasgow. Salary £120 per annum, with board, &c. Applications to the Clerk of the Joint Committee, 194, Ingram-street, Glasgow.

DEPTFORD MEDICAL MISSION.—Medical Officer and Superintendent. Applications to the Rev. F. A. Pring, M.R.C.S., St. Luke's Clergy House, Deptford, S.E.

DEVON AND EXETER HOSPITAL, Devon.—House Surgeon. Salary £120 per annum, increasing £10 a year up to £150, with board and lodging.

DURHAM COUNTY ASYLUM.—Pathologist and Assistant Medical Officer. Salary £150. Applications to Dr. Smith, Durham County Asylum, Winterton, Ferryhill.

GATESHEAD UNION.—Resident Assistant Medical Officer at the workhouse, unmarried. Salary £100 per annum, with furnished apartments, rations, and washing, valued at £50 per annum, subject to statutory deductions. Applications to the Clerk to the Guardians, Poor Law Union Offices, Prince Consort-road, Gateshead.

GENERAL HOSPITAL, Birmingham.—Surgical Casualty Officer for one year. Salary £50 per annum (non-resident).

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—House Physician for six months, unmarried. Salary £20, with board and residence in the hospital.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, 26, Margaret-street, Cavendish-square, London.—Physician-in-Ordinary.

LINNEAN SOCIETY OF NEW SOUTH WALES, Sydney.—Macleay Bacteriologist. Applications to Dulau and Co., 37, Soho-square, London.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, Soho-square, London.—Resident Medical Officer for six months. Board, residence, laundry, and an honorarium of 10 guineas.

NEW HOSPITAL FOR WOMEN, 144, Euston-road, London.—Medical Women as Clinical Assistants in the Out-patient Department, for one year.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon for six months. Board, apartments, and washing provided.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer for six months each. Salary at the rate of £50 per annum for the senior post.

ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, Wigan.—Junior House Surgeon for twelve months. Salary £80 a year, with apartments and rations, exclusive of wines, spirits and washing.

ROYAL ISLE OF WIGHT INFIRMARY AND COUNTY HOSPITAL, Ryde.—House Surgeon, and to act as Secretary. Salary £60 per annum, with board, lodging, and washing.

ROYAL PORTSMOUTH HOSPITAL.—Assistant House Surgeon for six months. Board and residence, and an honorarium of £15 15s.

ROYAL SEA-BATHING INFIRMARY, MARGATE.—Assistant Resident Surgeon. Salary £52 per annum, with board and residence. Applications to the Secretary, R. S. B. Infirmary, 30, Charing-cross, London, S.W.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King-street, Regent-street, London.—Surgeon.

STOKE-UPON-TRENT UNION.—Resident Medical Officer for the Workhouse. Salary £100 per annum, with board, washing, and furnished apartments in the hospital. Subject to statutory deductions. Applications to the Clerk to the Guardians, Union Offices, Stoke-on-Trent.

SUFFOLK GENERAL HOSPITAL, Bury St. Edmunds.—House Surgeon. Salary £100, with board, lodging, and washing.

THE WINDSOR ROYAL INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with residence, board, and attendance.

UNIVERSITY OF SYDNEY, New South Wales, Australia.—Demonstrator of Physiology. Salary £350. Passage money allowed, £60. Applications to the Acting Agent-General for New South Wales, Westminster Chambers, 9, Victoria street Westminster.

WEST LONDON HOSPITAL, Hammersmith-road.—Assistant Physician.

Births, Marriages, and Deaths.

BIRTHS.

ANDERSON.—On Oct. 9th, at Hoghton-street, Southport, the wife of G. Reinhardt Anderson, F.R.C.S., of a daughter.

BROOKE.—On Oct. 10th, at Buxton House, West Bridgford, Notts, the wife of Frederick Brooke, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

FORBES.—On Oct. 9th, at Drumminor, Calverley-park, Tunbridge Wells, the wife of Norman Hay Forbes, of Forbes, F.R.C.S. Edin., L.R.C.P. Lond., of a daughter.

LAMBE.—On Oct. 11th, at West Bridgford, Notts, the wife of Thomas Lambe, M.R.C.S., L.R.C.P., of a daughter.

WOOD.—On Oct. 5th, at Darnaway-street, Edinburgh, the wife of Russell E. Wood, M.B., F.R.C.S. Edin., of a daughter.

MARRIAGES.

BEAN—RIGG.—On Oct. 12th, by licence, at St. Edmund's Church, Salisbury, by the Rev. Arthur Jeffreys Douglas, Louis C. Bean, M.R.C.S. Eng., L.R.C.P. Lond., youngest son of Alfred C. Bean, of Hanwell, to Lucy M. Le Blond Rigg, of Tavistock, youngest daughter of the late Rev. William Rigg, M.A., D.D., formerly of Kingston-on-Thames.

BLUMER—KITCHING.—Oct. 7th, at St. Maurice's Church, York, by the Rev. T. L. Brashaw, M.A., vicar of Wortley, brother-in-law of the bride, assisted by the Rev. H. Robinson, M.A., rector of the parish, Frederick Milnes Blumer, B.A., M.B., of Stafford, third son of Luke Blumer, M.D., of Sunderland, to Isabel, eldest daughter of the late Rev. Robert Kitching, M.A., vicar of Westow, Yorks, and of Mrs. Kitching, West View, Bootham-crescent, Yorks.

BROOKE—SWABEY.—Oct 6th, at St. Thomas à Beckett, Bath, by Rev. Stephen Swabey, B.A., assisted by Rev. Maurice Swabey, M.A., Gilbert Edward Brooke, B.A. Cantab., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., L.S.A. Lond., of Bayfield House, Bath, to Alice Marie, fourth daughter of Rev. H. B. Swabey, M.A., Chaplain to R. U. Hospital, Bath.

SIMMONS—HIGGINBOTHAM.—At Christ Church, Sutton, on Saturday, Oct. 9th, by the Rev. J. R. Courtenay Gale, Gerald Allpress Simmons, M.D., B.S. Lond., to Ann, third daughter of the late John Edwards Higginbotham, of Glasgow, and Mrs. Higginbotham, of Meadowcroft, Sutton, Surrey.

DEATHS.

DRING.—On Oct. 5th, at West View, Seaford, Herbert Johnson Dring, M.B., M.Ch., in his 39th year.

LUPTON.—On Oct. 8th, at Waterhead, Oldham, James Lupton, L.S.A., of Brookhurst, Stockport-road, Ashton-under-Lyne. Interred at Dukinfield Cemetery on Tuesday, Oct. 12th. Friends please accept this intimation.

MCWATT.—On Oct 11th, at Haymount, Duns, N.B., Robert Charles Mc Watt, M.D., L.R.C.S., aged 69 years.

WICKHAM.—On Oct. 7th, at Gordon House, Tetbury, John Comely Wickham, L.R.C.P., M.R.C.S., and L.S.A., aged 94 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (20th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), ing's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (21st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (23rd).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (19th).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. J. F. Payne (President): Introductory Address.—Dr. G. F. Still: The Bacteriology of the Simple Posterior Basic Meningitis of Infants. Specimen:—Mr. C. Spurrell: A Case of Multiple Spontaneous Fracture. Card Specimen: Dr J. Calvert and Mr. Strangeways Pigg: A Case of Melanotic Sarcoma. Mr. D'Arcy Power: Empyema of the Antrum in a Child aged eight weeks.

WEDNESDAY (20th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Mr. T. Comber: The Limits of Species in the Diatomaceæ.

MEDICAL SOCIETY OF UNIVERSITY COLLEGE (London).—8 P.M. Annual Public Night. Dr. W. B. Ransom: Vis Medicatrix Naturæ. Exhibition of Microscopes, Drugs, Instruments, Roentgen Rays, Chromoscope, &c.

THURSDAY (21st).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-sq., W.).—8 P.M. Card Specimens:—Mr. A. Frost: Odell and Porter's Centring Instrument for Ophthalmic Lenses.—Mr. A. Lawson: Leuco-sarcoma of Choroid.—Dr. Rayner Batten: (1) Foreign Body on Optic Papilla; (2) Pulsating Tumour of Orbit. 8.30 P.M. Mr. H. R. Swanzy (President): On some Congenital Anomalies of the Eye, as illustrated in the Society's Transactions. (Introductory Address) Papers:—Mr. E. Clarke: Some Experiments on the Union of Corneal Wounds.—Mr. T. Bickerton: Spontaneous Dislocation of the Lens into the Anterior Chamber: Replacement by Operation.

HARVEIAN SOCIETY.—Ordinary Meeting. Dr. Clifford Beale: Recent Experience of the Use of Creasote in Phthisis; Clinical Cases.

FRIDAY (22nd).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 30 P.M. The following cases will be shown:—Dr. St. Clair Thomson: (1) Very Distensible Nævus of the Frontal Region, with Defect in the subjacent Bone in a Man aged fifty years; (2) A Young Woman with Primary Tuberculosis of the Interior of the Nose and Secondary Infection of the Pharynx, with microscopic specimen.—Dr. B Abraham: Hemiplegia in a Child aged two years.—Dr. J. K. Fowler: A Case of Functional Tremor. Patients in attendance at 8 P.M.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

TUESDAY (19th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Ferrier.

HOSPITAL FOR NERVOUS DISEASES (73, Welbeck-street).—Dr. T. D. Savill: On the Clinical Investigation of Disorders of the Nervous System.

WEDNESDAY (20th).—HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Habershon: Angina Pectoris.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—Mr. S. Paget: Surgical Cases.

NORTH-WEST LONDON CLINICAL SOCIETY (North-West London Hospital).—8.30 P.M. Sir William Broadbent: Annual Address.

THURSDAY (21st).—THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Voelcker: Demonstration of Selected Cases.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 14th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Oct. 8	30·29	W.	0·05	77	57	40	45	47	Cloudy
,, 9	30·15	N.W.	...	86	58	46	49	51	Cloudy
,, 10	30·29	W.	0·03	70	56	50	48	52	Overcast
,, 11	29·99	N.W.	...	97	60	51	52	56	Cloudy
,, 12	29·96	N.W.	...	88	56	41	41	43	Hazy
,, 13	29·85	W.	0·02	79	54	42	42	45	Overcast
,, 14	29·72	S.	...	83	61	43	51	53	Cloudy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

"A PREDISPOSITION TO HERNIA?"

To the Editors of THE LANCET.

SIRS,—Will you allow me to reply to the letter in THE LANCET of Oct. 9th, signed "The Father, M.D."? I have conducted a large general practice for thirteen years in the Australian bush, where hard riding is the rule. Children, one might almost think, were born on horseback. Bare-backed or in the saddle the Australian child is at home on the horse at a much younger age than his. I have had every opportunity of observation, and during those thirteen years not one single case of inguinal hernia in children has come under my notice. Further, I am the medical referee for ten Australian Life Offices, and have not had a case of hernia to report upon for any one of them. I do not wish to say that hernia does not exist in Australia, but merely confine my remarks to his question—viz., horse-back exercise. The public are always fond of talking upon subjects they know nothing about. I think your correspondent need not trouble about his little child. But if still in doubt, and before making a change, it would do no harm to allow the boy to wear a properly-fitted truss as a means of precaution, though I consider it unnecessary. Enclosing my card, which is at your correspondent's service.

I am, Sirs, yours faithfully,

Oct. 12th, 1897. COO-EE.

Nurse.—We do not prescribe or recommend treatment or individual practitioners. Surely our correspondent must know a medical man whom she can consult.

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THE UNQUALIFIED ASSISTANT.

To the Editors of THE LANCET.

SIRS,—Will you kindly give publicity to the following? On July 27th last my wife gave birth prematurely to a son, since which time he has been attended at different times by the assistant of a local medical practitioner, which assistant I believed to be a fully-qualified medical man. On Sept. 29th the child died while still under his care, he having been summoned to him only the day before his death. I reported the death at the surgery, and was informed for the first time that the said assistant was unqualified, and that therefore a certificate could not be granted until the coroner had been communicated with. I was also informed that I had no right to assume that he was a fully-qualified practitioner. The police visited my house to make full inquiries respecting the child's death. This has caused me much pain, annoyance, and trouble, after having done all in my power to save the child's life. Holding a public position, I shall be glad if you will kindly advise me through the medium of your journal as to what course I should take in order to remove from the minds of my neighbours and the public any misgivings which may arise respecting the child's death. Trusting something may be done in order to prevent the practice of unqualified men attending cases of illness and putting the public to the same inconvenience that I have been subjected to,

I am, Sirs, yours faithfully,

WM. IVE TUCKER.

Farnham-terrace, St. Mary's-road, Ilford, E., Oct. 7th, 1897.

*** We agree with our correspondent that the public ought to be informed when the assistant is not qualified.—ED. L.

Verax is recommended not to have anything to do with the matter.

AN UNFORTUNATE CIRCULAR.

WE have received the wrapper which is sent out, we are informed, upon a preparation known as Fearnley's Sedative Pomade. The wrapper bears a testimonial from a medical man speaking highly of the efficacy of the preparation. "I have used it myself," says the medical man, "and have prescribed it for my patients with equal benefit," and his full name and address, qualifications, and past and present honorary positions are appended. We strongly advise this medical man to approach the enterprising hairdresser and perfumer with a view to the suppression of the unprofessional circular.

Sigma would be glad to hear of a home where an epileptic boy aged thirteen years could be received for half a guinea a week. Address letter to THE LANCET Offices.

Interested has omitted to give us his name and address.

"THE GENERAL PRACTITIONER AND THE 'NURSES' COÖPERATION.'"

To the Editors of THE LANCET.

SIRS,—We beg to call your attention to the misleading character of the above headline in your issue of last week. The Nurses' Coöperation, 8, New Cavendish-street, was founded in 1891, and incorporated in 1894, and has over 400 nurses on its staff, but it has no branches or other offices. It is therefore an obvious injustice to the fully-trained experienced nurses of the Nurses' Coöperation to have the title which belongs exclusively to them used as a heading to a paragraph about a private institution. We have no "midwifery branch," although we supply certificated nurses for maternity cases. Our scale of fees and other particulars are shown in the annual report enclosed herewith. We shall be greatly obliged by your inserting this letter in your next issue, as the comments made in THE LANCET of last week might give your readers an erroneous opinion of the aims of this society. We have from the first worked with and under the doctors, not in opposition to them; and in return we have received from them most generous support and appreciation.

I am, Sirs, yours faithfully,

H. F. GETHEN, Secretary to the Nurses' Coöperation.

The Nurses' Coöperation, 8, New Cavendish-street, W., Oct. 12th, 1897.

To the Editors of THE LANCET.

SIRS,—In answer to "General Practitioner's" remarks, will you assure him that although we are fully qualified midwives (I personally hold three certificates), and most grateful to the London Obstetrical Society for having raised the standard of a midwife's work and education, we have no intention or desire to infringe or impose on our superior officers' rights; instead of so doing we are prepared to call in any specialist in midwifery who would attend or general practitioner who lives in the neighbourhood of any patient we may attend should the slightest complication arise. The time has not arrived, however, I fear, when a woman could be allowed to do what is essentially a woman's work without calling upon herself undeserved rebuke. It is impossible for the busy family practitioner, kind-hearted and long-suffering as he often undoubtedly is, to do the work we do, for in many cases fever, or perhaps something worse, would have followed had we not previously well cleansed the patient; and, again, in nearly all cases (we only attend respectable married women) the mother has not only to be attended to, but her gruel, &c., prepared, and the baby is also generally washed for several days. Personally—and I believe every woman with proper feeling will express the same sentiment—I should be very sorry to undertake any responsibility my capabilities will not allow me to do safely. Instead of injuring any professional gentleman we have been the means often, not only of saving years of suffering, but of upholding the doctor, for it is no unusual thing to be accosted with, Can you tell me what to do for such and such a thing or such a person? And the reply has always been to the effect, Go at once to a good doctor and get reliable advice, pay a reasonable fee if you can, and be sure you follow his directions. As to any professional gentleman connected with this institution dodging to obtain another practitioner's patients I must be allowed to say that in all our work, both public and private, we have only met one professional gentleman who has in any way forgotten that he is a gentleman (this does not apply to your correspondent), and we have met with so much real kindness from both specialists and general practitioners that rather than cause any feeling of jealousy or idea of unjust dealing I am prepared to give up the work we so much like—that is, midwifery amongst the respectable poor, who so greatly need our assistance in their hour of trial. At the same time, permit me to assure "General Practitioner" that there is no medical officer here who would act as he describes, for no matter what the world may think we only wish to fulfil our contract with the public.—viz., send out reliable, trustworthy nurses, and do good where it may be done without either professing to be what we are not or injuring in any way those who, in any hour of need, are self-forgetful and always hard-worked and badly paid. If your correspondent will call upon me I shall be pleased to assure him of our coöperation with, not against him.

I am, Sirs, yours faithfully,

Oct. 10th, 1897. MATRON.

To the Editors of THE LANCET.

SIRS,—I omitted to send you one of our midwifery cards yesterday, and upon again referring to the advertisement in THE LANCET I see the Marylebone people have left out "*diploma*," also I see your correspondent, in speaking of our work, says, "*inadequate*" services. This I deny. Our services have hitherto been not only adequate, but most successful, for we have never had a torn perineum or dead baby or fever; and our patients not only get up well, but remain well. Kindly make what use you please of this communication, which can easily be verified.

I have the honour to be, Sirs, yours truly and obliged,

M. CANNING, Matron, L.O.S.,

(A midwife and nurse of twenty years' experience).

New Bond-street, W., Oct. 11th, 1897.

A newsagent has sent us the following for insertion: "In answer to an address of loyalty and congratulation addressed to the 'Queen' by the matron and nurses of Ings House Nurses' Coöperation, 81, New Bond-street, W., the following reply was received:—

"Whitehall, 4th October, 1897.

"MADAM,—I have had the honour to lay before the Queen the loyal and dutiful address of the matron and nurses of the Ings House Nurses' Coöperation on the occasion of Her Majesty attaining the sixtieth year of her reign, and I have to inform you that Her Majesty was pleased to receive the same very graciously.

"I have the honour to be, your obedient servant,

(Signed) "M. W. RIDLEY."

*** We have received the above four communications concerning a paragraph which appeared in THE LANCET last week. Disregarding the fourth—for we have not impeached the loyalty of Ings House—we must point out that the questions that have been asked remain for the most part unanswered. We have not suggested that nurses have no place by the lying-in bed, but only that the advertisement which we quoted attempts to exclude medical men therefrom. We note without enthusiasm that the services of Ings House are only at the beck and call of respectable married women. The title of our paragraph was suggested by the advertisement under consideration. We have before us printed matter showing that the Ings House institution styles itself "Nurses' Coöperation," but it seems from Miss Gethen's letter that they have not the earliest claim to the title.—ED. L.

M.B.—Is not our correspondent a little quick to smell evil? A's conduct looks to us like that of an off-hand and busy but perfectly honourable man.

J. S. G. (Bristol) should consult his medical attendant.

A DANGER OF THE ANASTOMOSIS BUTTON.

IN the *Edinburgh Medical Journal* for September, 1897, Mr. H. J. Waring records the following case. A patient suffered from a malignant growth which involved both the small intestine and the transverse colon. Both were resected and the divided ends united by anastomosis buttons. On the third day there were symptoms of intestinal obstruction and the patient died. At the necropsy each button was found completely blocked with orange pips, three being fixed in the larger and two in the smaller. To prevent such an accident the writer advocates the use of a button of larger lumen made of decalcified bone, and so capable of being dissolved by the intestinal juices. He prefers the shape recommended by Mr. Bailey.

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AN INTERESTING CASE.

To the Editors of THE LANCET.

SIRS,—Kindly allow me to publish the following case for the benefit of young practitioners who are in doubt as to the respective merits of version and forceps in deformed pelvis. A woman, aged twenty-five years, was delivered four years ago of a living child by forceps—a difficult operation. About two years ago she was again delivered by forceps of a dead child. The operation was more difficult and more painful to the woman. On Aug. 28th I saw her at 3 A.M., and found the funis prolapsed on the thighs and the os fully dilated. Having during the preceding few months performed version three times for arm presentations, and the patients mending well, I thought that it might suit her better than forceps. I introduced my hand into the uterus, but the patient screamed, held herself rigid, &c., so that in less than two minutes I withdrew my hand and suggested $CHCl_3$. An elderly friend of mine who has a great partiality for version came to see the patient, so I gave two and a half drachms of chloroform, and he turned; from beginning to finish he was nearly three-quarters of an hour, and he said that the head was impacted, and he had to use very great force and jaw-traction to deliver. Little hæmorrhage followed. The pulse was about 100, rather small at the finish. The patient came round and talked to us before we left her at 5 o'clock. She had immediately after recovery from the chloroform excruciating pain, and after 7 o'clock began to roll about the bed in agony. When I got there a little before 8 o'clock she was dead. Looking back at the case I wish that, seeing that the funis was pulseless, I had perforated the head and extracted by forceps as I consider the patient died from the shock and injury of the version. In the first two parturitions I did not give chloroform. The projection of both the pubes and the sacrum into the pelvic cavity was very well marked. The patient was rickety with small, much-bowed legs, and a large well-developed body.—I am, Sirs, yours faithfully, J. C.

* * The case would appear to have been one of ruptured uterus.—ED. L.

C. G. G.—The Act says that the guardians *may* with the consent of the Local Government Board pay to medical officers reasonable compensation for extraordinary services, and in the scale of prices simple fractures of the thigh or leg are put down at £3. As the word used is "may" we suppose the guardians may be within their legal right in refusing payment, but even then we presume they would have to give reasons. We advise our correspondent to write to the Local Government Board, giving a clear statement of his case, and we feel sure that that department will see justice done.

"ADVERTISING EXTRAORDINARY."

IN reference to some remarks made by us recently concerning the application for the post of surgeon to the G.W.R. Provident Society by a Dr. William Polson a correspondent has sent us the circular advertisement of a "Dr." A. Hands, another and also unsuccessful competitor for this appointment. Mr. Hands holds the qualifications L.R.C.P., M.R.C.S., but in the circular to the voters he gives himself a medical degree and includes a reproduction of his photograph. If the wording of Mr. Hands's advertisement is not as offensive as that of Dr. Polson—and it is not—the circular still remains a very regrettable production, and neither gentleman can be held in the least degree excusable because of the methods of the other.

M.B., C.M.—"Gas referees" have been appointed under the following Acts: The City of London Gas Act, 1868; The Gaslight and Coke Companies Act, 1876; The South Metropolitan Gaslight and Coke Companies Acts, 1869 and 1876; The Commercial Gas Act, 1875, and The Gaslight and Coke and other Gas Companies Acts' Amendment Act, 1880. The clause under the heading of "Sulphur Compounds other than Sulphuretted Hydrogen" reads thus: "The maximum amount of sulphur with which gas shall be allowed to be charged shall be 17 grains of sulphur in every 100 cubic feet of gas." This order emanates from the following address—17, Buckingham-street, Adelphi, W.C., and is dated March, 1889. Further information could doubtless be obtained at the gas-testing offices of the London County Council, Spring-gardens.

THE LIABILITIES OF A BONE-SETTER.

To the Editors of THE LANCET.

SIRS,—I should be glad to know whether a bone-setter is liable to damages for mal-practice in the same way as a medical man is, or whether any distinction is made by the courts of law?

I am, Sirs, yours faithfully,

Oct. 10th, 1897. INQUIRER.

*** The bone-setter is certainly liable for damages, but usually escapes such prosecutions. The patient having lost his money, and not having regained his health, does not care to expose his folly publicly. Where a patient, on the other hand, thinks he has a chance of proving mal-practice against a registered medical man, so far from being deterred by the fear of the ridicule of his neighbours he is spurred on to legal action by the certainty of their sympathy.—ED. L.

THE DOLOMITE ALPS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers give me any information concerning the value of a sojourn in the district of the Dolomite Alps, Austrian Tyrol, for malarial fever?

I am, Sirs, faithfully yours,

Oct. 10th, 1897. B. D.

Mr. F. H. Madden.—The Spas and Mineral Waters of Europe, by Hermann Weber and F. Parkes Weber (London: Smith, Elder, and Co.); Bradshaw's Dictionary of Mineral Waters (London: Kegan Paul, Trench, Trübner, & Co.); Annuaire des Eaux Minérales (Paris: Publishing office of *La Gazette des Eaux*); Allgemeine und Specielle Balneotherapie, by Karl Grube (Berlin: Hirschwald); Balneotherapeutisches Lexicon, by E. H. Kisch (Vienna and Leipzig: Weber und Schwarzenberg).

NEGLECT OF VACCINATION IN ISLINGTON.

IF Islington is again overtaken by one of those great epidemics of small-pox which have affected it more than once in the last twenty-seven years it will not be the fault of its indefatigable medical officer of health, Mr. Alfred E. Harris. Mr. Harris has just published some statistics which may well alarm the public of this great parish. These figures show that there has been a steady increase in the neglect of vaccination during the last twelve years, so that, whereas in 1885 of 9683 children born only 8·0 per cent. were finally unaccounted for, in 1896 of 9752 children born no less than 22·4 per cent. are unaccounted for. Such wholesale violation of law is doubtless the fault of the guardians more than of the inhabitants. It is nothing short of a scandal that a board of guardians should override the wisdom of the Legislature. The vestry of Islington has very properly protested against the guardians being in this matter the sanitary authority. One thing, however, is clear, that if at the approaching election of guardians this question is not put into the very front of those on which the election will turn the inhabitants will then become responsible for the unprotected state of the children and for general treason to the teachings of science and of common observation.

Nemo.—1. Storage and exposure to air will remove iron as will also sand filtration. 2. It is the duty of the sanitary authority to see that every place under their supervision has a fairly pure and wholesome supply of water. On the representation of any person to any local authority that within their district the water in any well, tank, cistern, or pump is so polluted as to be injurious to health such authority may apply to a court of summary jurisdiction for an order to remedy the same and may make an order directing the well, tank, cistern, or pump to be permanently or temporarily closed, or such other order as may appear to them to be requisite to prevent injury to the health of persons drinking the water; and the court may, if they see fit, cause the water complained of to be analysed at the cost of the local authority applying under the section. 3. Since the above are provisions in the Public Health Act, clearly the medical officer of health in considering the quality of the water-supply is only carrying out a public duty to report from time to time his opinion as to its fitness or unfitness for drinking purposes. This being so he is surely beyond the pale of private legal action.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Newcastle Chronicle, Luton Reporter, Isle of White Observer, Batley Reporter, Express and Star, Manchester Courier, Temperance Record, Wilts Standard, South Wales Daily News, Birmingham Post, Western Morning News, East Anglian Daily Times, Dunstable Advertiser, Times of India, Pioneer Mail, Norfolk Chronicle, East Essex Advertiser, Liverpool Daily Post, Architect, Scotsman, Builder, Northampton Mercury, Sussex Daily News, Bedford Standard, Sussex Express, Sheffield Telegraph, Portsmouth Times, Brighton Gazette, Leicester Post, The Universe, Bristol Mercury, Derbyshire Times, Hereford Times, Worcester Herald, Dundee Courier, Leeds Mercury, Cambs Times, Kidderminster Times, Weekly Echo, Devon Gazette, Yorkshire Post, Sanitary Record, Lincolnshire Echo, Eastern Post and City Chronicle, City Press, Hertfordshire Mercury, Weekly Free Press and Aberdeen Herald, Reading Mercury, Mining Journal, Local Government Chronicle, Surrey Advertiser, Public Health, Engineer, Local Government Journal, Bath Herald, Bath Chronicle, Cape Argus, Craven Herald, Kentish Observer, Daylight, Wigan Examiner, Thanet Guardian, Cable, Le Temps (Paris), Eastern Post and City Chronicle, West Middlesex Herald, Denbighshire Free Press, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Messrs. Allen and Hanburys, Lond; Messrs. Adlard and Son, Lond.; A. B. C., Lond.; Royal Albert Edward Infirmary, Wigan, Secretary of; Apollinaris Co.

B.—Dr. F. E. Beddard, Lond.; Mr. E. H. Blomfield, Calais; Sir W. H. Broadbent, Lond.; Mr. A. E. Broster, Wirksworth; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs. Banks and Co., Bolton; Dr. Beverley, Norwich; Dr. A. Byers, Eccles; Brisbane, Registrar-General of; Mr. F. Brodie, Notts; T. B. Browne, Ltd., Lond.; Mrs. E. A. Blackmore, Lond.; Bridgwater Infirmary, Secretary of; Mr. C. A. G. Browne, Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Bonâ-fide, Lond.; Messrs. W. H. Bailey and Son, Lond; Mr C. Birchall, Liverpool; Messrs. Burge, Warren, & Ridgley, Lond.; Messrs. Baker and Co., Boxford; Messrs. W. Byles and Sons, Bradford; Messrs. Bates, Hendy, and Co., Lond.; Mr. H. V. Brereton, Bilston.

C.—Mr. J. G. Creasy, Wrotham; Messrs. E Cook and Co., Lond.; Chester General Infirmary, Secretary of; *Charlotte Medical Journal*, Charlotte, N C., U.S.A.; Chicago Medical Society, President of; Dr. Cheatle, Oxon.; Dr. J. Craig, Dublin; Dr. B. Crozier, Lond; Dr. A. T. Cabot, Boston; *Clinical Review*, Chicago, Editor of; County Asylum, Shrewsbury, Superintendent of.

D.—Mr. A. H. G. Doran, Lond.; Dr. S. B. De Butts; Messrs. S. Deacon and Co., Lond; Devonshire Hospital and Buxton Bath Charity, Buxton, Secretary of; Devon and Exeter Hospital, Exeter, Secretary of; Messrs. W. G. Dunn and Co, Croydon; Surgeon-Lt.-Col. S. L. Doble, Dunain Park; Durham County Asylum, Winterton, Clerk of.

E.—Mr. J. Eastwick, Lond.; Etudiant, Lapd.

F.—Mr. C. A. Francois, r.s. *Sir John*, Cape Town; Messrs. J. F. Farwig and Co., Lond.; Mons. H. Falcon, Valence, France; Messrs. Fassett and Johnson, Lond.; Dr. N. Hay Forbes, Tunbridge Wells; Mr. A. G. E. Foulerton, Sutton; Dr. J. C. Fergusson, Great Malvern; Falona Food and Cereal Co., Lond.; Messrs. Fairbairn and Sons, Edinburgh.

G.—Mr. E. B. Goulden, Canterbury; Mr. S. Gourlay, Musselborough; Mr. G. G. Gidley, Cullompton; Gateshead Union, Clerk of; Dr. C. D. Green, Edmonton; Dr. L. G. Guthrie, Lond.; Mr. S. Gowan, Manchester; General Press Cutting Association, Lond.; Dr. G. A. Gibson, Edinburgh; Dr. L. G. Glover, Lond.; Dr. L. Grant, Edinburgh; Dr. R. J. Godlee, Lond.; Glasgow Royal Infirmary, Secretary of.

H.—Mr. F. Hobday, Lond; Dr G Halley, Dundee, Hastings Urban Sanitary Authority, Clerk of; Hospital-Trained Male Nurses' Association, Lond., Superintendent of; A. L. Hammel Advertising Agency, New York, U.S.A.; Dr. W. H. Hewlett, Wivenhoe; Mr J. W. Hayward, Whitstable; Mr. J. Heywood, Manchester.

I.—Incorporated Medical Practitioners' Association, Lond., Secretary of.

J.—Dr. G. S Jackson, Alnwick; Dr. J. H. Joyce, Canterbury; *Journal de Médecine*, Bordeaux, Editor of; Mr. D. H. Jack, Glasgow.

K.—Surgeon R. A. Kirby, H.M.S. *Victory* Depôt, Portsmouth; Mr. G. P. Kling, Lond.; King's College, Lond., Secretary of; Messrs. J. B. Keene and Co., Bath; K. L. S., East Grinstead.

L.—Dr. A. H. Laver, Sheffield; Dr. J. F. Little, Lond.; Messrs. Lovejtt and Sones, Coventry; Lightburn Joint Hospital Committee, Glasgow, Secretary of; Lithanode Electric Storage Co, Lond, Managing Director of; Leslie, Lond.

M.—Mr. W. L. G. Morgan, Bournemouth; Messrs. J. and C. Moat, Stafford; Messrs. C. Mitchell and Co., Lond.; Marlow Incandescent Fittings Co., Lond.; Maltine Manufacturing Co, Lond.; Malto, Ltd., Lond.; Manchester Clerical, Medical, and Scholastic Association, Secretary of; Medical Society of Victoria, Melbourne, Hon. Secretary of; Mr. J. H. Morgan, Lond.; Medical Service Committee, Lond., Hon. Secretary of; Messrs. Meyer and Meltzer, Lond.; Mr F.H. Madden, Lond.; Mr. A. S. McSorby, Liverpool; Mr. A. S. Morton, Lond.; Mr. J. MacKenzie, Kirkby-in-Ashfield.

N.—Messrs. Newton, Chambers, and Co., Lond.; North Staffordshire Infirmary, Hartshill, Secretary of; National Hospital for Diseases of the Heart, &c., Lond., Secretary of.

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FROM EVERY WINE MERCHANT and GROCER in the KINGDOM.

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ABSOLUTELY FREE FROM SUGAR.

THE LANCET, January 13th, 1894.—"Apart from its freedom from sugar, this wine contains also a wholesome and palatable proportion of the acid constituents of the grape, a feature of some importance also to the diabetic patient, since it has been observed that light acid wines exercise a powerful retarding influence on salivary digestion, impeding the digestion of starchy materials and the consequent production of sugar. It is a brilliant, sparkling wine, possessing all the agreeable qualities of a high-class champagne, and yet one which may be taken, according to our analytical observations, in approved quantity where strong alcoholic and saccharine drinks are prohibited."

The BRITISH MEDICAL JOURNAL, January 20th, 1894.—"It has long been the crux in dieting diabetic patients or rheumatic and gouty persons, or those tending to excessive obesity, to enable them to include in their dietary any form of champagne or other sparkling wine, most of which are heating and heady, and more or less loaded with partially fermented saccharine. The 'Champagne-Sans-Sucre' (Laurent-Perrier) which Messrs. Hertz & Collingwood, 38, Leadenhall-street, have submitted to us, justifies its name under analysis, and is free from these defects."



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Sample Bottle for examination will be sent free to any practising member of the Medical Profession on receipt of his card. Medical Men who desire this Wine for their own use would oblige by writing for the special professional quotation to the

Sole Proprietors, HERTZ & COLLINGWOOD, 38, Leadenhall Street, London, E.C.

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Hunyadi János

A VERY INTERESTING and important contribution on Natural Mineral Waters of the purgative saline type was published in the report of a Special Analytical Commission in THE LANCET of December 5th, 1896. This report is made all the more interesting and reliable from the fact that a LANCET Commissioner personally visited the Saxlehner Springs, near Buda Pesth, and obtained samples on the spot, which were subsequently analysed in THE LANCET Laboratory, and the results obtained compared with samples purchased at a number of shops in London. The results showed that **HUNYADI JÁNOS, the Prototype of all Bitter Waters,** was, wherever it might be obtained, a water showing a **perfect uniformity of composition,** and one that could be **relied upon absolutely** as at **all times being identical** with that drawn from the Spring and fountain head. The numerous analyses in THE LANCET Report give very striking evidence not only of the **honesty of the water,** but bear out also the **remarkable uniformity of composition** that has characterised **HUNYADI JÁNOS** for **a third of a century.** Thus, the results recently obtained in THE LANCET Laboratory accord exactly with those obtained in Liebig's Laboratory over thirty years ago. **Nothing could be more satisfactory than this from the therapeutic point of view. Practitioners can thus depend** upon the water they prescribe, and may be assured that when **HUNYADI JÁNOS** is administered the **medicinal effects will always be the same,** and **with the same good results.** As is pointed out in the Report, an important feature in **HUNYADI JANOS** Water is the constancy of ratio of the active saline constituents to each other. The sodium and magnesium sulphates are together in almost exactly equal proportions, so **that what therapeutic property is lacking in the one is balanced by the other.** Neither the sodium sulphate nor the magnesium salt are in excess of each other. **In this way the purgative effect is not drastic,** but **mildly yet decidedly effective.** Again, besides these chief medicinal salts there are present in important quantity also in **HUNYADI JÁNOS** Water, Sodium Chloride, **Sodium Carbonate,** and **Lithium Chloride.** It cannot be doubted that each of these constituents contributes towards the **favourable action of the water,** which has for so long been a **distinctive and satisfactory feature attending its administration.** Last, but by no means least, the report of THE LANCET Commission shows that **HUNYADI JÁNOS** Water is bottled under **admirable sanitary precautions.** In the details of the analyses given there was not the slightest indication that **HUNYADI JÁNOS** Water contained any objectionable organic matter from whatever source. While therefore the medicinal properties of **HUNYADI JÁNOS** as a natural aperient are **sure and reliable,** it is **safe** also from the very important fact of its **extreme organic purity.**

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"ABSOLUTELY FREE FROM FERMENTABLE SUGAR."

For further analyses see THE LANCET, May 22nd, 1897, and "The British Medical Journal," April 24th, 1897.

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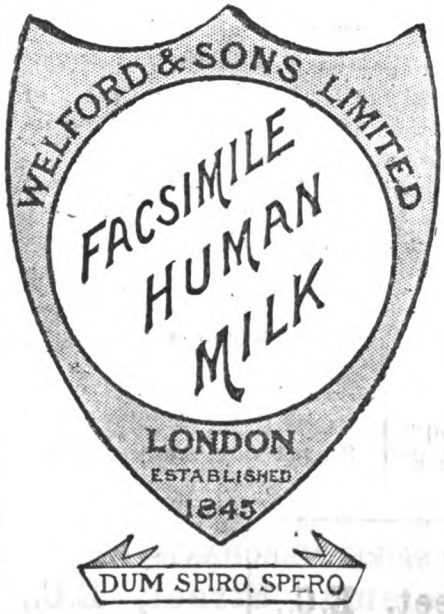
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The Harveian Oration

ON

SCIENCE AND MODERN CIVILISATION.

Delivered before the Royal College of Physicians of London on Oct. 18th, 1897,

BY SIR WILLIAM ROBERTS, M.D. LOND., F.R.S.,
FELLOW OF THE COLLEGE.

I.

MR. PRESIDENT AND GENTLEMEN,—We have met to-day to commemorate a great name and a great discovery. By his demonstration of the true motions of the heart and blood Harvey laid the foundation of animal physiology as a department of exact science. This work is memorable, not only from its historical relation to physiology and practical medicine, but perhaps still more so from its constituting the earliest example of the solution of a biological problem of the first rank by an orderly process of observation and experiment, conceived and carried out on the lines of modern scientific research. Harvey flourished at the dawn of exact science. Indeed, he was himself one of the heralds of that dawn which in our own time has broadened out into such marvellous day. And I propose, on our present anniversary, to consider Harvey's life and work, not so much as they concern our special studies, but as symbolising the commencement of a new era in human progress—the era of exact science—which in the present age is slowly but surely transfiguring the aspects and prospects of civilised society. I need not long detain you over the particulars of Harvey's life. He was the eldest son of an opulent Kentish yeoman,[1] and was born at Folkestone in 1578. Harvey passed his schoolboy days at the King's Grammar School in the pleasant city of Canterbury. Thence he migrated, at the age of sixteen years, to Caius College, Cambridge. Harvey spent some three years at the University, and graduated as Bachelor of Arts in 1597, just three hundred years ago. At the age of twenty years he proceeded to Padua to pursue his medical studies. At that period Padua was one of the foremost universities in Europe, and was especially famous as a school of anatomy. Harvey passed four years at Padua, and had for teachers the most celebrated anatomists of the day—namely, Fabricius of Aqua Pendente and Casserius—names which are still embalmed in our anatomical nomenclature. It was obviously of the greatest advantage to Harvey in view of his future work that his attention was thus early fixed on the solid data of descriptive anatomy, which could be directly verified by eye and hand in the dissecting room, rather than on the pedantic aphorisms and cloudy speculations which constituted so large a part of the medical learning of that time. At the end of his course of study at Padua he obtained the degree of Doctor of Medicine, and returned to England in 1603. In the same year he received his doctor's degree from the University of Cambridge. The young Harvey now settled in London, and entered on his professional career amid the most favourable surroundings for commanding success, whether as a fashionable physician or as a scientific investigator. He was in easy circumstances, and he had the prestige attaching to the highest education the time afforded. In his twenty-sixth year he married a daughter of Dr. Lancelot Brown, who had been physician to Queen Elizabeth. This alliance must have brought him in touch with the nobility and Court circles. In addition, he was endowed with a brilliant intellect, a sound character, good health, and indomitable industry. To crown all, he was inspired with an enduring passion for original research—a passion which persisted throughout his long life of close on eighty years. With these manifold advantages, intrinsic and extrinsic, it is not surprising that Harvey made rapid way. At the age of twenty-nine years he became a Fellow of this College; at thirty-one years of age he was elected physician to St. Bartholomew's Hospital; and at thirty-seven years of age he was chosen Lumleian Lecturer on Anatomy to the College of Physicians. About the same time he was appointed physician extraordinary to James I. and subsequently physician in ordinary to his successor, Charles I. These latter appointments gave Harvey command of the herds of deer in the Royal parks for the purpose of the vivisections and dissections which he practised in the course of his researches on the motions of the heart and blood, and in his investigations on animal generation and embryology.

Harvey delivered his first course of Lumleian lectures in 1616, when he was thirty-eight years of age. It was in these lectures that he first propounded his views concerning the motions of the heart and blood, and demonstrated before the Fellows of the College the anatomical and experimental evidence on which he based his conclusions. These demonstrations were, as he tells us, annually repeated at the Lumleian lectures for nine or ten successive years, no doubt with ampler and ampler proof of the truth of the new doctrine of the circulation of the blood. It was only after this long and searching probation that Harvey ventured to give his discoveries to the world. This he did in the form of a little treatise printed at Frankfort in the year 1628. Before proceeding to analyse this remarkable work I will conclude what I have to say, and very briefly, concerning the other work and the rest of the life of Harvey. After the publication of his treatise on the circulation Harvey seems to have concentrated himself, as regards physiological work, on his investigations concerning the generation of animals. He bestowed long years and an immense amount of labour on this subject. Over and over again he minutely dissected the organs of generation in various kinds of animals. He watched with patient observation the slow growth of the embryo, from its earliest inception to its full maturity and birth. In this way he gradually accumulated an enormous mass of information which he embodied in fragmentary disquisitions, composed apparently at irregular intervals, as leisure and work permitted. These disquisitions were eventually collected together and printed towards the close of Harvey's life in a separate volume under the supervision of his friend, Sir George Ent, with the title of "Exercitationes de Generatione Animalium." This work, though many times larger than the treatise on the motions of the heart and blood, is incomparably less satisfying and conclusive. To the modern reader of these disquisitions the reason of their shortcomings is plain enough. Harvey was stopped—and stopped absolutely—at every critical point by his want of a larger magnifying power. He had at his disposal only a pocket lens, which magnified perhaps four diameters. The ovum must have appeared to him as a structureless mass of material, and the seminal discharge as a homogeneous fluid. He knew nothing, and could know nothing, of the cellular elements of the ovum, or of the motile filaments which constitute the "vital spark" of the spermatic fluid.

The later years of Harvey's life were passed in peaceful retirement. The civil troubles of the time had broken up his household and scattered his patients, but had left his private fortune unimpaired. At the age of sixty-eight years he relinquished his appointments and practice, and went to reside with one or other of his brothers, who were wealthy London merchants. He still continued the studies he loved so well, and maintained his interest in the College of Physicians. Sir George Ent gives us a touching glimpse of him as he appeared in his seventy-third year at the house of his brother Daniel at Combe. "I found him," says Sir George Ent, "with a cheerful and sprightly countenance, investigating, like Democritus, the nature of things. Asking if all were well with him, 'How can that be,' he replied, 'when the State is so agitated with storms and I myself am yet in the open sea? And, indeed, were not my mind solaced by my studies and the recollection of the observations I have formerly made, there is nothing which should make me desirous of a longer continuance. But thus employed this obscure life and vacation from public cares, which would disgust other minds, is the medicine of mine'" Harvey had the satisfaction of living to see his great discovery of the circulation of the blood generally accepted as true. In his old age he was known and honoured throughout the learned world. The College of Physicians erected a statue in his honour. In his seventy-sixth year he was

[1] In those days the yeomen of Kent were persons of consideration. There is an old rhyme which runs:—

A knight of Cales,
A squire of Wales,
And a laird of the North countree;
A yeoman of Kent
With his yearly rent
Will buy them up all three.

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elected President of the College, but declined the honour on the plea of the infirmities of age. He accepted, however, the office of councillor, which he held for two years. He enriched the College with many gifts; he furnished the library with books, and filled the museum with "simples and rarities," as well as with specimens of instruments used in surgery and obstetrics. Finally, in the year preceding his death, Harvey made a transfer to the College of his paternal estate of Burmarsh, in Kent. In the deed of gift conveying this property to the College there is provision for a salary to the College librarian and for the endowment of this annual oration. The orator is directed to exhort the Fellows "to search out and study the secrets of nature by way of experiment, and also for the honour of the profession to continue mutual love and affection among themselves." This double injunction of our venerated saint and apostle has, I venture to believe, been fairly observed according to the measure of their abilities by successive generations of the Fellows of this College even to the present day. Harvey made a peaceful ending in his eightieth year, and was buried full of years and honour in his brother Eliab's vault in the parish church of Hempstead, near Saffron Walden, in Essex. Seventeen years ago, on Oct. 18th, 1883, by the piety of this College, his remains were removed from the dilapidated vault, and, with befitting solemnity reinterred in a marble sarcophagus in the Harvey Chapel attached to the same church.

Harvey's activity as an investigator ranged over a wide field, but his fame as a discoverer and his rank in the hierarchy of science must always depend on his researches on the motions of the heart and blood. These researches were published in 1628 in the form of a small Latin quarto of only seventy-six pages. This little volume embodies the results of some twenty years' work, carried on during Harvey's prime, when his inventiveness and receptivity were at their highest. The book is in several respects a remarkable one. It presents to us the earliest record we possess of a really scientific investigation in the domain of biology, based on observation and experiment. Although written 270 years ago, the work is essentially modern in tone and method. It is, in fact, the prototype of the scientific "paper" or "monograph" of our own day; and for clearness of demonstration and conclusiveness of proof stands favourable comparison with the most renowned masterpieces of recent times. Harvey begins with an account of the state of knowledge on his subject at the time he wrote. He describes the confusion and contradiction reigning in men's minds concerning the actions and offices of the heart and the movements of the blood. He then sets forth in a series of chapters the dissections, vivisections, observations, experiments, and reasoning by which he proved that the blood flows in a continuous stream along its now well-known route. He shows that the motor power for the movement of the blood resides in the heart, that the heart is a muscular organ, and that the auricles and ventricles are hollow muscles which contract in action and forcibly expel their contents. He demonstrates that the disposition of the valves within the heart, and at the roots of the aorta and pulmonary artery and along the veins, is such that the blood expelled by the contractions of the heart must of necessity flow onward in the direction indicated, and that any reflux in a contrary direction is a mechanical impossibility. He argues that the blood-stream must be continuous throughout its whole course, because, wherever you tap the channel, whether in an artery or in a vein, the whole of the blood contained in the body is drained away in a few minutes. He fortifies his argument by a number of collateral proofs, all converging and pointing to the same unavoidable conclusion. Especially ingenious and original is the following argument, which has a curiously modern ring about it. If you estimate the charge of blood delivered into the arteries at each stroke of the ventricle at one or two drachms, and calculate the rate at which the heart is beating at from 60 to 70 per minute, you arrive at a volume of blood passing through the heart in the course of every half-hour which is greater than the aggregate ingesta of a whole day, and greater than the total sum of blood contained in the body. The infererence is therefore irresistible that the whole of the blood, and the same blood, must be incessantly passing and revolving through the heart. Harvey was much exercised as to the precise way in which the blood found its way from the terminal arteries to the commencing veins. He had absolute proof before him that it did somehow find its way, but how? He was able, by minute dissection of the organs and tissues, to satisfy himself that it was not, as some of his contemporaries supposed, by coarse anastomosis between the arteries and veins. "I have myself," he tells us, "pursued this subject of the anastomosis with all the diligence I could command, and have given not a little both of time and labour to the inquiry; but I have never succeeded in tracing any connexion between arteries and veins by a direct anastomosis of their orifices. Neither in the liver, spleen, lungs, kidneys, nor any other viscus is such a thing as anastomosis to be seen; and by boiling I have rendered the whole parenchyma of these organs so friable that it could be shaken like dust from the fibres, or picked away with a needle, until I could trace the fibres of every subdivision and see every capillary filament distinctly."[2] Harvey with his simple lens could not detect the delicate capillary network which united the minute arteries and veins into a closed vascular system; and he was reduced to the conjecture that the blood percolated the organs and tissues as water percolates the earth and produces springs and rivulets. It is almost pathetic to contemplate this eager, earnest inquirer, looking with wistful, straining eyes for the communicating channel which he knew must exist, but could not see, and to remember that the solution of the puzzle was almost within his grasp; for hardly had he closed his eyes than the improvements in the microscope enabled Malpighi and Leeuenhoek to demonstrate the completion of the circuit of the blood through the capillaries in the web of the frog's foot. It is singular that Harvey in all his writings nowhere betrays any consciousness of his sore want of a higher magnifying power. He did not, apparently, divine that it was possible to enlarge objects beyond the power of the common lens which had been in use from antiquity, yet it was precisely this want which foiled him at almost every step in the prosecution of the studies to which he devoted his life.

When Harvey was entering on his career as an investigator, in the early years of the seventeenth century, the great movement of the Renaissance had produced its full effects. Starting in Italy in the fourteenth century, it spread during the fifteenth and sixteenth centuries and permeated the rising nationalities of Western Europe. It was through the zeal engendered by this movement that the priceless literary and artistic treasures of Greece and Rome were rescued from oblivion and made the secure heritage of all time. The study of those monuments of ancient genius and the inspiration communicated by them, saved mediæval Europe from barbarism and created a new civilisation not inferior in polish to that of the classical ages. Upon literature and the fine arts the spirit of the Renaissance reacted with the happiest possible effects. It inspired the masterpieces of poetry, painting, architecture, and sculpture, which constitute the glory of the fifteenth and sixteenth centuries, and compel the admiration and challenge the rivalry of the nineteenth century. But as regards natural knowledge the influence of the Renaissance was at the first, and even for a long time, distinctly unfavourable. The writings of Hippocrates, Aristotle, Ptolemy, Galen, and other masters were studied and searched, not for inspiration to new inquiry and higher development—but these great names were erected into sacrosanct authorities, beyond whose teaching it was vain, and even impious, to seek to penetrate. The result of this perversion was that the pursuit of natural knowledge degenerated into sterile disputations over the words of the masters. This numbing despotism of authority comatosed the intellect of Europe during many generations. It received the first rude shocks from the discoveries of the great anatomists of the sixteenth century; and it was finally overthrown by the force of the demonstrations of Galileo and Harvey—powerfully aided, no doubt, by the philosophical writings of Bacon and Descartes. These four men—Galileo, Harvey, Bacon, and Descartes—were the dominating spirits of their epoch in the sphere of natural knowledge; they were contemporaries; and three of them must have had more or less personal acquaintance with each other. Harvey was Bacon's friend and physician; and we can easily believe that much talk went on between the investigator and philosopher concerning the studies in which they were mutually interested, and that Bacon imbibed his enlightened notions respecting the importance of experiments in the pursuit of knowledge from the precepts and practice of Harvey. It does

[2] Works, p. 103.

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not appear that Descartes was personally known to Harvey, but he was one of the earliest to accept the doctrine of the circulation and to write in its defence. When Harvey was a student at Padua Galileo occupied the chair of mathematics in that university. These two men take rank as the twin founders of modern science—the one in the domain of biology and the other in the domain of physics. Their lives largely overlapped; they were contemporaries for sixty-four years, and both nearly reached the patriarchal age of fourscore. Roughly speaking, their period of activity covered the first half of the seventeenth century. They were, each in his respective department, pioneers in the method of searching out the secrets of nature by observation and experiment, and in proclaiming the paramount necessity of relying on the evidence of the senses as against the dicta of authority.

II.

The present year is the 300th anniversary of Harvey's graduation at Cambridge and of the commencement of his career as a student and investigator of nature. That date (1597) corresponds roughly with the birth-time of modern science. The occasion is therefore not inappropriate for a survey of the changes impressed upon civilised society by science—after three centuries of expansion and growth. The lapse of time is sufficiently long and the advance made is sufficiently great to enable us to estimate approximately the scope and strength of this new factor in our environment, and perhaps even to appreciate the influence which the cultivation of science is likely to have on the future of modern civilisation. All the older civilisations have issued either in extinction or in permanent stagnation. The civilisations of Egypt and Chaldea and of Greece and Rome, after a phase of progressive decline, eventually perished by military conquest. The ancient civilisations of the Far East—those of India and China—still persist, and have a semblance of life, but it is a life of helpless torpor and immobility. Is our modern civilisation doomed to share a kindred fate? There are, I think, good reasons for believing that in this respect history will *not* repeat itself. Special features are observable, and special forces are at work, in contemporary civilisation which differentiate it profoundly from all its predecessors. It may be said, broadly, that the older civilisations rested essentially upon art and literature (including philosophy), and that modern civilisation rests in addition upon science and all that science brings in its train. This distinction is, I think, fundamental, and connotes a radical difference as regards stability and continuance between ancient and modern society. A comparison of the mode of growth of the fine arts and literature on the one hand, with the mode of growth of science and its dependent useful and industrial arts on the other, brings out this point very clearly. The evolution of literature and art displays the following well-marked characteristics. Starting from some rude beginnings, each branch of literature and each branch of the fine arts grows by a succession of improved ideals until a certain culminating level of excellence (or phase of maturity) is attained. When this level is reached no further growth takes place, nor even seems possible. When and after this summit level of excellence is achieved, all subsequent expansion, if any, is quantitative rather than qualitative, and consists in modifications, variations, repetitions, and imitations, but without any real advance in artistic and literary excellence. It may be further noted that there is observable in the past annals of literature and the fine arts a fatal tendency to a downward movement. The variations are apt to show meretricious qualities, which indicate, in the judgment of critics, a degradation from the high standard of the earlier masters. The life of each of the fine arts seems, as Professor Courthope has expressed it, to resemble the life of an individual in having periods of infancy, maturity, and decline. The witness of history bears out this view.

It is almost startling to consider how long ago it is since most branches of art and literature had already reached their highest known pitch of excellence. The Homeric poems are supposed to have been composed a thousand years before the Christian era, and no one doubts that as examples of epic poetry they still stand in the front rank. In the fourth and fifth centuries B.C. there occurred in Greece an extraordinary outburst of artistic and literary genius, such perhaps as the world has never seen before or since. During this epoch sculpture was represented by Phidias and Praxiteles, architecture by the builders of the Parthenon, painting by Apelles and Zeuxis, dramatic poetry by Sophocles, Euripides, and Aristophanes, and speculative philosophy by Plato and Aristotle. Greece maintained her political independence for two centuries after this period; but she did not produce anything superior or apparently even equal to the masterpieces of this golden age. A parallel sequence is observable in the history of ancient Rome. Art, literature, and philosophy, and all studies that may be grouped under these headings, attained their culmination in the Augustan age; and no advance thereupon took place, but rather a falling-off during the subsequent centuries of Imperial Rome's political existence. If we turn our eyes to the far east we see that the masterpieces of architecture and ornamental metal work and of poetic and philosophical literature are all old—many of them very old. Neither in India nor China nor in any other far eastern country are there any indications of advance for many centuries in the domain of artistic and literary culture. The history of Western Europe tells a similar tale. The finest examples of Gothic and Norman architecture date from the twelfth and thirteenth centuries. Painting culminated in Italy during the fifteenth and sixteenth centuries with Raphael, Da Vinci, Correggio, Titian, and Paul Veronese. The same art reached its highest level in the low countries with Rembrandt and Rubens, in Spain with Velasquez and Murillo, in France with Claude Lorraine and Poussin—all artists who flourished in the seventeenth century. In England nothing greater than the works of Reynolds, Gainsborough, and Turner have been produced by later artists. Similarly with literature: most of the masterpieces belong to a past age. Italy can show no higher examples of poetry than the creations of Dante, Petrarch, Tasso, and Ariosto. The most ardent admirers of the Victorian poets would scarcely contend that any of them stand on a higher pedestal than Shakespeare and Milton; nor would any German critic claim equality for any recent poet of the Fatherland with Goethe and Schiller. In the delightful art of music the masterpieces of Haydn, Handel, and Mozart, judging by their popularity at the present day, are not surpassed by the works of any of the later musical composers.

I need not pursue the subject in greater detail. Wherever we look—in all ages, among all peoples—we encounter the same story with regard to that large and varied and most precious outcome of the human mind which may be grouped under the categories of the fine arts and literature. There is a history of improvement and growth up to a certain culmination or phase of maturity. Beyond that point no further growth seems possible, but rather, instead, a tendency to decline and decadence.[3] The evolution of science differs fundamentally from that of literature and the fine arts. Science advances by a succession of discoveries. Each discovery constitutes a permanent addition to natural knowledge and furnishes a post of vantage for, and a suggestion to, further discoveries. This mode of advance has no assignable limits, for the phenomena of nature—the material upon which science works—are practically infinite in extent and complexity. Moreover, science creates while it investigates; it creates new chemical compounds, new conditions of substances, and strange new environments such as do not exist at all on the earth's surface in primitive nature. These "new natures," as Bacon would have called them, open out endless vistas of lines of future research. The prospects of the scientific inquirer are therefore bounded by no horizon; and no man can tell, or even in the least conjecture, what ultimate issues he may reach. The difference here indicated between the growth of art and literature and the growth of science is, of course, inherent in the subjects and is not difficult to explain. The creation of an artist, whether in art or literature, is the expression and embodiment of the artist's own mind, and remains always in some mystic fashion part and parcel of his personality. But a scientific discovery stands detached, and has only a historical relation to the investigator. The work of an artist is mainly subjective—the work of a scientific inquirer is mainly objective. When and after a branch of art has reached its period of maturity the pupil of a master

[3] If we take a wider view of the constituent elements of organised society, and embrace in our consideration the religious systems, the political and civil institutions, the military organisations, the commerce, and the miscellaneous disconnected mass of natural knowledge existing in the older civilisations, we look in vain for any constituent which had more than a limited scope of expansion and was not subject to decay.

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in that art cannot start where his master ended and make advances upon his work; he is fortunate if at the end of his career he can reach his level. But the pupil of a scientific discoverer starts where his master left off, and even though of inferior capacity can build upon his foundations and pass beyond him. It would seem as if no real advance in art and literature were possible except on the assumption that there shall occur an enlargement of the artistic and literary faculty of the human mind. No such assumption is required to explain and render possible the continuous advance of science. The discoverer of to-day need not be more highly endowed than the discoverer of a hundred years ago, but he is able to reach further and higher because he stands on a more advanced and elevated platform built up by his predecessors.

III.

The fatal weakness of previous civilisations lay in the absence of any element which had inherent in it the potentiality of continuous growth and unlimited expansion, and this is precisely what exact science supplies to modern civilisation. A sharp distinction must be drawn between the so-called science of antiquity and the science of to-day. The ancients had a large acquaintance with the phenomena of nature and were the masters of many inventions. They knew how to extract the common metals from their ores, they made glass; they were skilled agriculturists; they could bake, brew, and make wine, manufacture butter and cheese, spin, weave, and dye cloth; they had marked the motions of the heavenly bodies and kept accurate record of time and seasons; they used the wheel, pulley, and lever, and knew a good deal of the natural history of plants and animals and of anatomy and practical medicine. This store of information had been slowly acquired in the course of ages, mostly through haphazard discovery and chance observation, and formed a body of knowledge of inestimable value for the necessities, conveniences, and embellishments of life. But it was not science in the modern sense of the word.[4] None of this knowledge was systematised and interpreted by coördinating principles or illuminated by generalisations which might serve as incentives and guides to further acquisitions. Such knowledge had no innate spring of growth; it could only increase, if at all, by casual additions, as a loose heap of stones might increase, and much of it was liable at any time to be swept away into oblivion by the flood of barbaric conquest. It is quite obvious, from the subsequent course of events, that there came into the world of natural knowledge about three centuries ago, in the time of Galileo and Harvey, a something—a movement, an impulse, a spirit—which was distinctly new—which Bacon, with prophetic insight, termed a "new birth of time." This remarkable movement did not originate with any startling revelation; it consisted rather in an altered mental attitude and a method. There arose a distrust in the dicta of authority and an increasing reliance on ascertained facts. These latter came to be regarded as the true and only data upon which natural knowledge could be securely founded and built up. Doubt and question took the place of false certainty. The hidden meaning of phenomena was sought out by observing them under artificially varied conditions or, to use the words of Harvey, "the secrets of nature were searched out and studied by way of experiment." *A priori* reasoning from mere assumptions, or from a few loosely observed facts fell into discredit. Observations were repeated and made more numerous and more exact. These were linked together with more rigid reasoning to stringent inductions. Hypotheses (or generalisations) were subjected to verification by experiment, and their validity was further tested by their efficacy in interpreting cognate problems and by their power to serve as guides to the acquisition of fresh knowledge. Instruments of precision were devised for more accurate observation of facts and phenomena—for weighing and measuring, for estimating degrees of temperature, the pressure of gases, the weight of the atmosphere, and for recording time. The sense of sight was aided by means of the telescope and microscope. The invention of instruments and appliances for assisting research was an essential and invaluable feature of the "new philosophy." It is singular that so little progress in this direction was made by the quick-witted Greeks of the classical period; and their neglect or incapacity in this respect largely accounts for their conspicuous failure in science as contrasted with their brilliant success in art and literature.[5]

IV.

The new method soon began to yield fruit—at first slowly, then more and more rapidly as the workers increased in number and the method was more fully understood. Discoveries were no longer solely stumbled on accidentally, but gathered in as the fruit of systematic observation and purposive research. It is not necessary for me, even if I had the time and ability, to trace the history of scientific discovery from the time of Harvey onward. I will only mention a few particulars by way of illustration. You all know how, as time passed on and knowledge expanded, the primary sciences became divided into separate departments for more minute study; how new sciences have arisen, some of which have now grown to vast proportions; show improved instruments and appliances of infinite delicacy have been invented to aid research; and how, in the present age, the gains of pure science have been turned to innumerable channels of practical utility. The advances made in physics and mechanics during the seventeenth and eighteenth centuries prepared the way for the invention and perfection of the steam-engine in the nineteenth century. The introduction of the steam-engine increased at a bound the power of the human arm many fold.[6] Through its instrumentality the land has been covered with railways and the sea with ocean steamers. Electrical science has given us the telegraph and telephone, a new illuminant, and a new motor. The steam printing-press, the telegraph, and the railway together, have made it possible to produce that perhaps most wonderful of all the indirect outcomes of the growth of science—the modern newspaper. The great science of chemistry has revealed the composition of the material world; has originated vast industries, which give work and wages to millions of the population; and has placed all kinds of manufacturing processes upon a basis of scientific precision. Under cover of chemistry have sprung up the sub-sciences of photography and spectroscopy, which have given a new and unexpected development to our knowledge of the heavenly bodies. The revelations of palæontology and embryology have led to the establishment on a firm basis of the theory of organic evolution. This theory—by far the most penetrating generalisation of our time—has not only thrown a flood of light upon the deepest problems of natural history, but has also revolutionised the whole domain of speculative thought. Physiology and practical medicine have profited immensely by the general advance of the sister sciences and by the adoption of scientific methods in the prosecution of research. Optical science gave birth to the achromatic microscope. The microscope has laid bare the minute structure of plants and animals and introduced zoologists and botanists to a vast sub-kingdom of minute forms of life previously undreamed of. The microscope, also, in conjunction with chemistry, founded the new science of bacteriology. Bacteriology has inspired the beneficent practice of antiseptic surgery; it has also discovered to us the parasitic nature of zymotic diseases, and opened out a

[4] "It is not a collection of miscellaneous, unconnected, unarranged knowledge that can be considered as constituting science."—WHEWELL.

[5] Whewell observes (History of the Inductive Sciences, vol. i., book 1, chap. iii.): "The Aristotelian physics cannot be considered as otherwise than a complete failure. It collected no general laws from facts; and consequently, when it tried to explain facts it had no principles which were of any avail." Whewell argues that this failure was not due to the neglect of facts. He goes on to say: "It may excite surprise to find that Aristotle and other ancient philosophers not only asserted in the most pointed manner that all our knowledge must begin from experience, but also stated in language much resembling the habitual phraseology of the most modern schools of philosophising, that particular facts must be *collected:* that from these general principles must be obtained by *induction;* and that these principles, when of the most general kind, are *axioms.*" Then he quotes passages in proof from Aristotle's writings. It is, however, pretty evident that Aristotle's reverence for facts was no more than a pious opinion, which he habitually ignored in the actual handling of questions of natural knowledge. His treatise "On the Parts of Animals" bristles with errors of observation which a very moderate amount of painstaking would have rectified. Had the ancient Greeks and their successors in the middle ages been more accurate observers of facts, and had they sought for and invented instruments for the more exact observation of facts, they would not have so conspicuously failed to establish at least the foundations of exact science. The historian of the inductive sciences, however, will have it otherwise. He sums up his argument thus: "The defect was that although they had in their possession facts and ideas, the ideas were not distinct and appropriate to the facts." Is it not rather the case that the "ideas were not distinct and appropriate to the facts," precisely because the "facts" were indistinctly seen and imperfectly apprehended?

[6] Mr. Mulhall calculates that "our steam-power in the United Kingdom is equal to the force of 169,000,000 able-bodied men—a number greater than the whole population of Europe could supply."—"National Progress during the Queen's Reign," p. 22.

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fair prospect of ultimate deliverance from their ravages. Thus have the several sciences advanced, and are still advancing in concert step on step, by mutual help, at an ever-increasing speed—pushed on by that irrepressible forward impulse which has characterised the scientific movement from its inception. This movement has now become the dominant factor in civilisation.

There is no doubt that under the reign of science a striking amelioration in the state of society has taken place. The mass of the people are better housed and fed, and, above all, better educated. Their sanitary surroundings are improved and the death-rate has fallen. Crime and pauperism have diminished, and there is greater security for person and property. The amenities and enjoyments of life are on the increase, and the average scale of comfort is markedly raised. Moreover, this amendment is not confined to the material and physical well-being of the population. There is some evidence that the complex of conditions we term "modern civilisation" is acting favourably in the direction of making people more reasonable and better conducted. Peace is now the normal condition between civilised states; and there is a growing trend of opinion in favour of settling international differences by the more rational method of arbitration rather than by war. Political morality approximates more nearly to that recognised as proper in private life. The duel has almost been laughed out of court. Industrial quarrels are conducted with more order; there is an appeal to facts and reason on both sides, and more readiness to adjustment by compromise. The whole environment of modern life seems in several ways calculated to foster habits of correct thinking and acting. The inclusion of science in the scope of general education is a very important innovation. This extends the range of subjects in regard to which precise reasoning is possible; and tends to promote the application of scientific modes of thinking and reasoning to all the problems of life. We may be quite sure that exact thinking leads in the main to correct conduct; an evil deed is not only a crime, but also a blunder. The periodical press must, one would think, be a good training school for thinking and reasoning. The discussion of all sorts of questions in its columns can scarcely fail to have an educating effect. The disputants must perforce read one another's arguments and be, consciously or unconsciously, influenced thereby. It may be assumed, or at least hoped, that there is in arguments, as in organic forms, a tendency to the survival of the fittest, and that in the long run the better argument carries the day. The blaze of publicity amid which we live through the ubiquitous newspaper lends an additional motive to right-doing. The "fierce light which beats upon a throne" beats nowadays also upon the citizens, and doubtless helps to keep them in the straight path.

But, say the prophets of evil: "This will not endure; modern civilisation, based on science, will in time go the way of all its predecessors, and end in extinction or in decay and stagnation." It is proverbially unsafe to dogmatise about the future; and in all human affairs, even those termed scientific, there is nothing so certain as the unexpected. This, however, may be affirmed: that if modern civilisation is to come to an end it will not perish in the same way or from the same causes as previous civilisations. One of the standing perils of civilised communities in ancient times was the risk of being subjugated by less civilised neighbours or of being overwhelmed by hordes of barbarian invaders. This danger no longer threatens us. Power has passed for ever into the hands of the nations which cultivate science and invent. The appliances of war are now placed on a scientific basis; and the issue of battle is decided in the laboratories of the engineer and chemist. The late C. H. Pearson argued that the dark and yellow races, in virtue of their greater number and fecundity, might in time come to dispute the supremacy of the white races—that they would learn the drill and copy the armaments of European armies, and thus equipped would be able by their superior mass to hem in and curb, if not to subjugate, the western nations. But the march of science and invention never stops; and it is inconceivable that the scientific nations shall not always be many stages in advance of the unscientific nations in the destructiveness of their weapons and the perfection of their military equipments, and this would give them an advantage which scarcely any disparity of numbers could neutralise. The "yellow terror" can never be more than a phantom until these races begin to show capacity for scientific discovery and the further (and somewhat different) capacity for turning their discoveries to practical uses.

Against the more insidious peril of decay and stagnation the scientific movement seems also to offer effective safeguards. We sometimes hear complaints of the hurry and bustle—the stress and strain—of modern life; this unrest may incommode individuals—but it is the antiseptic of society. Probably the deadliest predisposing factor in the decline of former civilisations was the mental inanition arising from deficiency of fresh and varied intellectual pabulum. Physiological analogies lead us to the inference that an idle brain, like an idle muscle or an idle gland or nerve, would deteriorate in function; and, conversely, that a well-exercised brain would tend to reach its possible best. I conceive that our forefathers and the ancients, for the most part, led somewhat monotonous lives. They had but little fresh and varied food for thought. The generality could not, for lack of "news," take a sustained interest in the course of public events. The world of science was an unopened book. Intercommunication was slow and difficult, and the whole current of existence flowed sluggishly. Contrast this with the vivid abounding life of the present day. Veins of interest are greatly multiplied to meet and satisfy the infinitely varied individual aptitudes of men and women. A considerable number of persons of both sexes now busy themselves, either as amateurs or something more, with the study of some branch of science or natural history. Those whose bent is to politics, art, letters, sport, or fashion find in the daily newspaper and the periodical press an unfailing fresh supply of the mental food they love. Business and pleasure are carried on with a briskness formerly unknown, and the pulse of national life is quickened through every part. It seems impossible that decay should invade the body politic while such conditions of all-pervading activity prevail, and there is no valid reason why these conditions should not continue to prevail. It has often been remarked that periods of national upheaval, when men's minds are deeply stirred—like the rise of Islam, the Protestant Reformation, and the French Revolution—were exceptionally prolific of able men. It does not appear altogether unreasonable to suppose that the stir and movement of modern life may be similarly favourable to the production of "men of light and leading" for the service of the community. The proximate cause of the downfall of states seems always to have been a defective supply of strong and capable men at the head of affairs and in positions of trust. The *dolce far niente* is not conducive to the formation of strong characters, and those who sigh and yearn for social quietism may find comfort in the reflection that the hum and buzz which disturbs them is a sure token of the health and strength of the common hive.

Gentlemen, it is given to few to deliver a stroke of work like that of Harvey; but many of those before me have done something, and some a great deal, to forward the beneficent march of science. To lift the veil from even the smallest corner of the unknown in nature is not only a pure delight, but is surely also doing a service in the cause of humanity. We are here to-day all disciples of Harvey—paying willing homage to his great name; and though we cannot pretend to his genius we can all of us take to heart the lesson of his life and seek to emulate his gentleness, his patient industry, his single-minded devotion to a high purpose, and his unswerving loyalty to truth.

MIDLAND MEDICAL SOCIETY. — The annual meeting of this society was held in the Medical Institute, Birmingham, on Oct. 13th, the President (Dr. Alfred Carter) being in the chair. Mr. J. W. Taylor was unanimously elected President for the ensuing year. The report of the council and the treasurer's report were received and adopted. It was resolved to add £10 to the deposit account. Votes of thanks were passed to the retiring President (Dr. Carter), the treasurer (Mr. Garner), the retiring secretary (Mr. Heaton), and the auditors (Mr. Marsh and Mr. Haynes) for their valuable services during the past year. Mr. John Garner was re-elected treasurer, Dr. Kauffmann and Mr. Christopher Martin were appointed secretaries, and Mr. Marsh and Mr. Haynes auditors for the ensuing year. The following gentleman were elected to fill the vacancies on the council: Mr. Eales, Mr. Barling, Dr. Foxwell, Mr. Marsh, and Mr. Heaton. Mr. Greenwood and Mr. Wood were elected members of the society.

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Address
ON
SOME RELATIONSHIPS OF INDIGESTION.

Being the First Hunterian Society's Lecture for the Session 1897-98, delivered on Oct. 13th, 1897,

BY W. H. ALLCHIN, M.D., F.R.C.P. LOND.,
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GENTLEMEN,—In the living organism with its complexity of structure and intimate interaction of functional manifestations it is difficult, if not impossible, to conceive that when disease is established in one tissue or organ, however localised and however slight in degree, it can continue without producing some effect—some perversion both of structure and function in adjacent and associated parts. A morbid condition, in short, occurring in any region becomes thereby a disturbing factor in the environment of the surrounding area in which it tends to determine a secondary complication. The nature and severity of this latter will depend in great part upon the nature and extent of the primary disease as well as on the relationship, structural and functional, that may exist between the original seat of the mischief and the part secondarily involved. I have ventured to think that I might not unprofitably employ the hour that the courtesy of your committee has placed at my disposal in bringing before you some of the relationships which perversions of the digestive function bear to the organism as a whole, not only as regards the various precedent or causal conditions of such perversions, but also the disturbances which they in turn give rise to in parts remote from those primarily at fault. It appears to me that considerations such as these are essential to the proper understanding of the protean symptoms of dyspepsia, and for want of them, or of others similar, much confusion exists in the intelligent observance of the manifestations of indigestion and in their systematic investigation, as well as in formulating a rational and successful plan of treatment in place of the empirical and haphazard therapeutics which so largely prevail in this department of practical medicine.

The digestive organs, strictly speaking, are those concerned with the preparation of the ingesta, both solid and liquid, in such manner as may fit them for absorption into the blood current either directly or *viâ* the lymphatic channels. They consist of a canal many feet in length, suitably provided with means for the sub-division, mixing, and propulsion of the contents; and associated glands, some of which are in the thickness of the walls of the canal, others—as liver, pancreas, and salivary glands—at some distance from the tube, with which they communicate by ducts. Structurally the tract consists of a lining of mucous membrane, the epithelium of which presents the microscopic characters—spheroidal, columnar, and squamous—associated with glandular, absorbent, and merely protective functions. External to this membrane, in which the blood and lymph capillaries are disposed for the most part in a meshwork of adenoid tissue, is an arrangement of contractile muscular tissue so arranged as to effect the complex movements of mastication, deglutition, and gastro-intestinal peristalsis. The entire serous coat of the stomach and intestines takes no part that I am aware of in the digestive process proper. Genetically the epithelium of the canal with its associated glands, except that lining the cavity of the mouth, is derived from the hypoblast, whilst the connective tissue, muscular and serous coats with the bloodvessels and lymphatics are developed from the mesoblast, as the nerves are epiblastic in origin. The process of digestion—i.e., the reduction of the food to a diffusible state—is effected by the chemical agencies of certain acid and alkaline secretions, together with the ferment action of bodies whose nature is very imperfectly known, such as ptyalin, pepsin, trypsin; and supplementary to these changes, but as shown to be by no means essential to efficient digestion, are various disintegrations and decompositions brought about—at least in the intestinal contents—by the action of micro-organisms which have obtained entrance with the food and air that have been swallowed. Although carried out in different sections of the alimentary canal under the all-important influence of the body heat, the function of digestion is, to all intents so far as the actual body tissues are concerned, performed outside the body, and in respect to many articles of food is a continuation of the preliminary changes effected in the course of cooking. I have no need to enter into a detailed account of the specific action of the several digestive secretions which differ among themselves in the conditions needful for their activity, in the rapidity with which they produce their results, and in their relative importance to the efficient performance of the function. But there are several considerations of a general character upon which stress must be laid. It is all-important to remember that these secretions act upon the ingesta successively—that is, each one not only effects certain changes in one or more of the alimentary principles, rendering it more or less diffusible, but also determines other changes which are needful to the efficient action of the secretions which subsequently mingle with the food. Carried out in a progressive series of stages, each stage is marked by its own specific share in the process of digestion, and each contributes in some degree to the proper performance of those which follow. Disturbance of one, therefore, not only produces a direct effect, but indirectly affects those which come after.

A circumstance which confers a distinctive peculiarity upon the digestive function and characterises in no small degree its imperfection, is that there are special organs subject to the same kinds of structural disease as are other parts of the body, and there is also, to some extent independent of these organs, a material undergoing complex chemical changes. It is the existence of these two factors—organs and material—which has to be recognised in all questions connected with digestion, and to a certain degree to be considered separately as well as in combination. Comparison with the other nutritive functions shows nothing such as obtains in digestion. In respiration, e.g., noxious gases may be inhaled, but none are formed in the lungs; though poisonous bodies may be excreted by the kidneys they are not absorbed by those organs, and the same is probably true as regards the skin.

It is well with the purpose we have in view clearly to limit our conception of digestion to the conversion of the ingesta into a diffusible state. The further process by which the digesta are absorbed, intimately associated as it is with digestion proper on the one hand and with the circulation of the blood and lymph on the other, is nevertheless a different function and is carried out in its own peculiar way. And it is also desirable not to allow the nutritious character of the food taken to be confounded with its digestibility. The two qualities are not co-terminous. Many exceedingly nutritious—i.e., of value in the production of tissue or energy in the economy—substances require much digestion, whilst others demanding but a minimum of change to allow of their absorption may nevertheless be most harmful. How far in the course of the true digestive process the various aliments, in addition to those modifications in construction which render them diffusible, also enter on the path of those requisite alterations (anabolic or synthetic) which fit them ultimately for protoplasmic formation, having regard to the reconversion of some of the absorbed products to the form in which they were originally submitted to digestion, is a question that cannot be entered on here; but it would seem likely that some of these constructive changes do take place in the intestinal mucous membrane, and still more probably in the liver. Under healthy circumstances the successive stages of this complicated function are performed—except so far as the ingestion, mastication, and deglutition of the food and the evacuation of the egesta are concerned—without giving rise to any conscious sensation. But this state of health assumes a suitable dietary, a structural integrity of the organs concerned, an adequate vascular supply, and a normal nervous control. Improprieties or disturbances of one or other of these fundamental conditions determine imperfections in the digestive process, severe or slight, lasting or transient, and establish indigestion or dyspepsia.

In the whole category of terms used in the description of diseased states it may be safely affirmed that none are employed with less precision than are these synonyms. Scarcely two persons, lay or professional, attach to them the same meaning, and the conditions they are supposed to denote are the most diverse. This unfortunate vagueness of language commonly expresses a corresponding vagueness of idea, and a subject that is intrinsically difficult and uncertain is made more so by this lack of exactness in

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language. It is difficult, no doubt, to be precise in the use of words the full significance of which is frequently changing with advances in knowledge or an altered point of view; but some attempt at consistency should be made and some common agreement arrived at which should prevent one authority applying the words to the failure in the digestive process restricted perhaps to one particular phase, and another of equal weight implying by them the symptoms which such failure may give rise to. Much of the difficulty would be removed by a preliminary definition of terms and a consistent use of them in the sense defined. I mean by indigestion or dyspepsia some perversion of the function of digestion, wherever in the alimentary canal, whether mouth, stomach, or intestines, this may take place, whatever may have been its cause, and whatever may be its symptoms. Though referring to perverted function I none the less conceive it as determined either immediately or remotely by some alteration in structure, be that alteration of a gross character or one requiring a microscope for its detection, or still further some abnormality in the "chemical structure" of the tissues concerned. Inasmuch as the first object of clinical investigation is to ascertain "what is wrong" and "how it is wrong" before attempting treatment, we regard the morbid signs and symptoms present in any case as the evidence upon which our opinion is based, and the more accurately we obtain the evidence the more correct is likely to be our final judgment. Clearly, then, the numerous and diverse symptoms which may result from a malperformance of the digestive function should be used as the material upon which the actual seat and nature of the fault should be diagnosed. To some minds so satisfying is the word "functional" that its application to a morbid state is considered to absolve the user from all further responsibility of seeking out the underlying causal and associated conditions, and a "symptomatic treatment" is the logical sequence. For the intelligent appreciation of the symptoms of indigestion, to refer them to their cause and rightly to interpret the bearings of the symptoms to one another, require, to my mind, these qualifications: a knowledge of the normal anatomy and physiology, an experience of the symptoms themselves and the circumstances under which they occur, and a systematic and orderly conception of the subject whereby the investigation of any given case may be pursued. As a contribution towards providing the last the following remarks are offered.

Given, then, some defect in digestion, there require to be examined, (*a*) the conditions which have given rise to it (the so-called causes), and (*b*) the perversions of well-being which it in turn has determined. The former is often far to seek and may at the best, with the present means at our command, be but imperfectly obtained, so complex are the circumstances; for the latter accurate observation is essential. Though regarded separately, it is none the less true that they are overlapping aspects of a common problem towards the solution of which each contributes.

The causal relationships of indigestion are of the widest; the antecedent conditions are well nigh innumerable, but they may be conveniently grouped thus—

A. Dietetic errors, improprieties in the ingesta.—These are among the most frequent, as they are the most obvious, causes of dyspepsia. It is not necessary that the food should of itself depart from a physiological standard; perfectly normal articles of diet may be presented under conditions which render them indigestible. Thus there may be far too much taken or a wholly insufficient quantity to excite the digestive process, the former error being, in this country at least, the more frequent. The excess or deficiency may extend to all the requisite alimentary principles or be confined to one of them; too much or too little fluid, for example, with meals may each be responsible for an impaired digestion. Or, again, certain ingredients may be so associated as to render them indigestible, whilst taken separately they are open to no objection; such, for instance, are starchy or proteid foods enveloped in fat, as met with in meat smothered in greasy sauces or hot buttered toast or pastry. Ices or iced beverages, perhaps harmless alone, may seriously interfere with the digestion of other substances taken with them. Or food may determine indigestion by being imperfectly cooked, by a too monotonous repetition or presentation in an unappetising form, thereby preventing rather than inducing the needful flow of saliva with such consequences as that brings about. Another and common cause of dyspepsia is irregularity in meals, upsetting thereby the rhythm of digestion, or, as when too quickly following one another, interfering with the gastric digestion in its progress. Nor must idiosyncrasy in respect to certain articles of diet easily digestible by the great majority be forgotten. These are possible circumstances in which suitable and fit food may become harmful. Not infrequently, however, the error consists in some element of the food being distinctly noxious. This condition is represented in its simplest form by articles of diet which contain a large proportion of material which is absolutely indigestible, for the digestion of which, that is, the solvent juices of the canal are incapable. Such are the husks, skins, and seeds of vegetable or fruits and many uncooked food stuffs. The ill effects of such bodies are mainly caused by the mechanical irritation they give rise to. More serious are the results which follow those ingesta which are more actively irritant or even toxic, such as mineral poisons or the more subtle agents developed in decomposing or tainted nitrogenous food. In estimating the results which follow one or other of these dietetic errors regard must be had to whether it be of occasional or habitual occurrence, and allowance has also to be made for the wonderful degree of tolerance which the human alimentary canal may acquire by habit.

B. Next to these immediate causes of an indigestion of external origin are those which arise in the body itself, and of these the simplest are: 1. *Imperfections in the performance of the various movements connected with digestion.* To insufficient mastication many a case of dyspepsia may be referred, and a habit of "bolting the food" is as frequently responsible for this as are defects in the teeth; whilst such causes as paralysis of the masticatory muscles or ankylosis of the temporo-maxillary joint are as obvious as they are exceptional. Disturbances of the normal peristalsis of the stomach and intestines however induced, whether by structural changes in the organs themselves or mal-innervation, are of common occurrence, sometimes accelerating the passage of the contents, at others delaying it, more especially perhaps in certain sections of the canal, but in any case interfering with the orderly and progressive sequence in the digestive stages which is so essential to the proper performance of the function. As regards the movements of the stomach proper there is reason to believe that they are capable of being aided in their effect upon the gastric contents by the movements of the diaphragm and even of the heart, which may together be sufficiently effective to compensate for the complete absence of the stomach peristalsis when that organ by adhesions or from other causes is incapable of acting. 2. Less obvious than these impairments of motility are the imperfections due to *faults in the composition and quantities of the digestive secretions*, although the growing practice of examining the stomach contents is doing something to provide more precise knowledge of this difficult subject. A deficiency of saliva, besides leading to failure in the amyloid digestion is indirectly harmful by removing one of the normal stimuli to gastric secretion, whilst an excess in salivary flow diminishes the activity of the changes in the stomach. An over secretion of hydrochloric acid or a considerable deficiency of the same is regarded as of more frequent occurrence than errors in the quantity of pepsin that may be found. But from whatever cause it may arise gastric indigestion not only determines its own particular perversion of the entire digestive process, but also tends to occasion disturbance further on by submitting to the other fluids a chyme which is ill adapted to be acted on by them. Of the precise effects of abnormalties in these later fluids—the bile, the pancreatic and intestinal juices—our knowledge is far from satisfactory, but we do know sufficient to be able to affirm that errors in their composition or quantity are followed by some fault in the normal intestinal changes. The problem to be solved is how to distinguish the indigestion primarily resulting from their shortcomings from that which is purely gastric in origin. 3. A third group of conditions liable to determine maldigestion are those brought about by *bacterial action in the gastro-intestinal contents.* In health the changes induced by these micro-organisms, which may be regarded as normal inhabitants of the canal, are accessory to and in some degree an aid to the regular chemical processes carried out by the secretions, although they are scarcely to be regarded as absolutely essential. But it may be easily seen that whether from the ingestion of toxic organisms or from the perverted action of those which are under ordinary circumstances harmless (such, for instance, as their having to deal with material of an unusual character) poisonous substances may be formed and indigestion set up. 4. Another source of

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disturbance in the process of digestion is connected with a function of the alimentary mucous membrane and its glands, which is too often overlooked. It is forgotten that this membrane has besides its extensive secretory capacities a duty to discharge as a channel of *excretion*. Little is accurately known of this it is true, and it is probably when there is some general morbid state existing, such as fever, that this property of the mucous membrane is best appreciated. In this respect, as, indeed, in many others, the membrane may be compared with the skin, the eliminative powers of which even of products of intestinal fermentation are well known, as are also the results of their arrest. There is also good reason for believing that the accumulation of gases found in the stomach and intestine owe their origin in part to direct transfusion from the blood, especially when rapid distension takes place after the removal of ascitic fluid in hysteria and cardio-pulmonary disease. 5. Ordinarily the products of digestion as they become diffusible are absorbed from the stomach and still more from the small intestine into the blood and lymphatic currents, and not only the digesta but also the greater part of the many pints of the various secretions that are daily passed into the canal. It may not unreasonably be surmised that the gradual removal of these materials facilitates the necessary changes in that which still remains in the tube and that a failure in their absorption interferes with the normal course of digestion. In this way, then, such conditions as may *interfere with absorption*, a function quite distinct from that of digestion, may become the cause of a very considerable dyspepsia.

Having thus indicated *seriatim* the various directions from which digestion may be immediately interfered with, it must not be supposed that each acts alone, for seldom can such be the case. Far more frequently the causal or precedent conditions are a complex the factors of which interact in the production of each other as they also do in bringing about the diseased state. In order, however, to arrive at a more comprehensive conception of the causal relationships of indigestion it is desirable to consider these various groups of preceding and associated conditions from other points of view, such as how or by what means do they bring about their ill effects and to what more remote state or states may they in turn be referred. It is clear that, given one or other of these determining conditions of indigestion, it may act by irritation or injury of the structures concerned, that is the alimentary canal and its glands, leading to perverted action on their part; or its effect may be mainly, if not entirely, upon the material in the stomach or intestines which is undergoing digestion interfering therewith and having little or no effect upon the organs themselves; or it may be that the given cause acts in both of these directions. It is to the second of these, when the process is disturbed without any associated abnormality of the organs, that the term "functional dyspepsia" is alone permissible, if it be permissible at all. The ingesta, including therein the micro-organisms which gain entrance to the canal, are provocative of dyspepsia either by any direct unfavourable action they may exert upon the canal in virtue of irritant or toxic properties they may possess, and by setting up vascular, catarrhal, or even more serious inflammatory lesions lead to an impaired motility or perverted secretory action and thus determine an indigestion; or the same result may be reached by a direct interference by the ingesta, owing to its bulk or specific character, with the chemical processes carried on by normal secretions in a healthy canal, or the two modes of perverted action may combine in producing the morbid state. Disturbances of motility produce effects by prejudicially affecting the character of the digesting foodstuffs, interfering with their mechanical disintegration and the necessary admixture with the secretions, or by delay in propulsion favouring abnormal decompositions by the fluids or by organisms, a condition well exemplified in a dilated stomach or in a chronic constipation. It is to this cause also that sensory-motor symptoms such as colic are to be referred. Errors in the quantity or quality of one or more of the several digestive fluids, or perversions of the excretory function of the mucous membrane causing an escape into the canal of noxious bodies, or interference with the due absorption of the digested products, will act as causes of indigestion by disturbing the proper chemical changes in the canal, giving rise maybe to toxic substances which in turn react upon the mucous membrane and glands either directly or after absorption, thus establishing a vicious circle. Directly or indirectly, sooner or later, however apparently diverse the causes may be, the resultant is perversion of the chemical process to which, as will be seen, the manifold symptoms which may occur are to be referred.

Passing now to consider how these groups of causes may themselves beseverally induced, the ingesta may be at once dismissed and attention directed to those which arise within the body itself. Of these undoubtedly the most important are the errors in quantity or quality of the secretions. It has already been stated that our knowledge of this subject leaves much to be desired, and beyond the saliva and gastric juice we assume rather than know. But at least we can recognise two separate sorts of conditions which may determine such errors. The most obvious are primary structural defects in the organs concerned, whether these be of a temporary and transient character such as vascular states of congestion or hyperæmia and the milder inflammatory lesions, or those of a more permanent character, such as degenerations, fatty, lardaceous, and the like, or definite new growths; or such accidental complications as the blockage of the bile or pancreatic ducts by a calculus. The interference with the proper secretion of the various juices which such lesions may cause is apparent, and not less obvious is their harmful effect on the movements of the canal, on the excreting functions of the mucous membrane with its glands, and on the due absorption of the digested materials. It is going outside my present limits to discuss the etiology of these structural changes, though it must be remembered that some at least are induced by those dietetic errors which have already been referred to as causes of indigestion. More obscure, and perhaps on that account more interesting, are the morbid states of organs and functions apart from the digestive tract which give rise among other symptoms to some of a dyspeptic character. Foremost among these remote causes are those which may be classified as "nervous." Concerning the innervation of the gastro-intestinal musculature we have a certain knowledge both as to the share taken therein by the vagus and sympathetic respectively, and our information on the nervous supply and function of the salivary glands is as precise as any that we possess concerning secretion; beyond that much cannot be claimed. It would not be difficult, however, to adduce examples of indigestion which are clearly attributable to nervous states causing a disturbed peristalsis and a perverted secretion or both; the nausea, vomiting, diarrhœa, and even gastro intestinal pain which may result from violent emotional states are well known, and closely similar to such a centrally acting cause are those more numerous reflexly induced by such as ovarian and uterine diseases, renal or biliary calculus, &c. An excellent example of a dyspepsia of reflex origin is to be found in the indigestion so frequently accompanying phthisis quite apart from that due to an associated structural disease of the stomach and intestines. The explanation of the pathology of the condition we owe to the admirable work of Dr. Head,[1] who has shown that both during the very earliest stage before there are any marked signs in the lungs, and also during the stage of gradual invasion of the tuberculous disease, there are attacks of referred pain and superficial tenderness over the mid-dorsal areas, as well as bi-temporal headache and tenderness of the scalp. These sensory phenomena are liable to ensue "when the bases of the lungs become affected with disease of a certain type. But these areas from the sixth to the ninth dorsal stand in close relation with the stomach, especially those on the left side. These two organs, the bases of the lungs, and the stomach send sensory impulses into the same segment of the central nervous system; an affection of the one which causes referred pain and superficial tenderness tends to cause a reflex disturbance in the other organ that refers into the same areas." Hence the liability of symptoms referable to the gastro-intestinal tract when fresh outbursts in the lung have set up pain and tenderness in the areas mentioned. Such symptoms are nausea, loss of appetite, and even vomiting. "The tongue is at first quite unaltered, the bowels remain regular, and the evacuations are unchanged in character; the pain is not increased by food, and vomiting does not necessarily relieve the pain and headache. On the other hand, anything which relieves the pain and headache will remove the nausea and vomiting." The dyspepsia of the latest stages of phthisis, which "is rarely accompanied by referred pain and superficial tenderness, is mainly characterised by flatulence, eructations, and signs of dilatation of

[1] Brain, 1896.

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the stomach and feeble motor and sensory activity, accompanied by marked signs of organic change in the walls and mucous membrane of the stomach." Whilst we may have some notion of how a peripheral nervous impulse may reflexly inhibit or stimulate gastro-intestinal peristalsis, we have no knowledge of the paths taken by such impulses as determine the secretion of a gastric juice deficient in hydrochloric acid or containing a large excess of that ingredient such as undoubtedly occurs, and with every reason to believe through perverted innervation. Whilst it is conceivable that the necessary fluids may fall short in their normal character from a deficiency of materials from which they may be formed by the secreting glands it is doubtful if such really occurs. But at the same time there are good grounds for believing that in conditions where the general tissue metabolism is gravely impaired or the chief excretory organs seriously diseased the consequent throwing into the circulation of unusual or excessive products of waste supplies to the several digestive glands a blood from which vitiated secretions are prepared. It is probable for various reasons that the liver is particularly liable to suffer in this direction. The frequent association of gastro-intestinal complication with renal disease is well known, and there is some reason to believe that the indigestion of this state is in part at least due to a perverted excretory function of the alimentary mucous membrane determined by the disturbance of the kidney function with its consequent failure to eliminate the waste products.

To summarise what has been said as to the causal relationships of indigestion, it would seem that the immediately preceding and associated conditions are separable into six groups, two of which are of origin external to the body, whilst the others are internal; and that the latter are directly referable to primary structural defects of the digestive organs or to impaired innervation of the muscular and secretory apparatus centrally or reflexly induced. And that whatever may be the nature of the disturbing cause it produces its effects almost entirely by interfering with the chemical processes which take place in the alimentary canal. It is this latter circumstance that confers upon digestive disorders their peculiarity, serving to distinguish them from the diseases of other systems and suggesting also the lines upon which their treatment, at least, in great part, should be based. It is less the disorders of the organs involved than abnormal processes taking place in the material undergoing digestion that constitute the *fons et origo* of most indigestions, and we have nothing like that to deal with when considering the morbid states of other functions, when for the most part some structural change, obvious or obscure, underlies the abnormal manifestations.

Having now considered the relationship which indigestion exhibits towards precedent and associated states, let us turn to those aspects of the subject which deal with the effects upon the organism which the indigestion itself brings about, with the sequential results of which it is the cause or antecedent, as exhibited by what are known as the signs and symptoms. The symptom complex which may attend any form of indigestion requires to be carefully unravelled ere the real relationships of the phenomena presented are satisfactorily understood and before a reasonable plan of treatment is formulated. To begin with there are the associated symptoms due, not primarily at least to the indigestion, but to the underlying cause of it and of them. Possibly no doubt the indigestion may tend to aggravate or modify these as they in turn may qualify the more strictly dyspeptic manifestations. Inasmuch also as the ultimate object of the digestive process is to supply the material for the tissue nutrition it may well be that among the remote results of an indigestion, especially if it be of any duration, the general nutrition should suffer. It is needful to differentiate the evidences of this from the dyspeptic symptoms proper. After making, however, due allowance for these there still remains a most extensive and varied range of departures from sound health of all degrees of severity which are distinctly to be ascribed to some flaw or other in the digestive process. The extreme diversity of these symptoms is one among other reasons which renders the investigation of the subject so difficult. But this very diversity is only what might reasonably be expected when the great extent of the organs is considered and the many and different phases of the digestive function is remembered. The widest and most abundant opportunity of disturbance exists in the natural condition of things, and the directions whence disturbance may arise being as numerous as they are a complicated and variable manifestation is the inevitable result. It will be convenient in the consideration of the symptoms and their bearings to adopt the distinction of *local* and *remote*, though it be in some respects an artificial arrangement and not capable of being strictly observed. By *local* symptoms is meant those which are obviously and directly connected with the digestive organs, and among the most constant are abnormal sensations. Inasmuch as the function should be performed without giving rise to any sensation after the food is swallowed it may be laid down that any conscious feeling in the course of the process is wrong. Frequently there is nothing beyond a sense of weight and oppression vaguely referred to the epigastrium or generally over the upper half of the abdomen, or this may amount to positive pain. Most variable and of uncertain significance is this symptom; strictly localised or widely diffused, relieved by pressure or acutely tender, stabbing, cutting and paroxysmal or continuous, are but some of the qualities by which it is marked. A nasty taste in the mouth with a furred tongue and foul breath may be the frequent complaint of one patient, whilst another, equally a dyspeptic, finds no place for such in his category of ailments. Acidity and heartburn, nausea and vomiting, uncomfortable distension of the abdomen, flatulence and the passage of wind, gaseous eructations and belchings of an acid or bitter or tasteless fluid, diarrhœa or constipation, with possibly an impaired appetite, capricious or entirely wanting, and unhealthy stools of all variety of consistency, odour, colour, and appearance, complete a list the items of which in all degrees and combinations constitute the local symptoms of indigestion.

It is not my present purpose to discuss these phenomena in detail nor to indicate so far as may be possible their respective significance as diagnostic of the nature and seat of the determining fault; but referring to the two main conditions under which, as we have seen, the various exciting causes of indigestion may be grouped—viz., obvious structural disease of the organs and direct interference with the chemical processes taking place in the stomach and intestines—it is certainly the case that these local symptoms are present in a greater or less degree whatever may be the character of the cause, and in the more pronounced and graver structural lesions they may almost be regarded as paramount, the remoter manifestations being in the greater number of cases scarcely existent. The symptoms immediately resulting from an indigestion not connected with the alimentary canal or its glands, but with parts and regions remote therefrom, are both clinically and pathologically the most interesting phenomena connected with dyspepsia. Insomuch as many of these are induced by affections of other systems they are not diagnostic of indigestion, and their true value in the diagnosis thereof becomes proportionately more uncertain, requiring more careful weighing for their proper appreciation. They may be the grounds upon which the patient seeks advice, and the manner in which they may be presented is often such as not to suggest, at least in the first instance, a digestive disturbance as being at the root of the matter. Since also they may and frequently do occur without any pronounced symptoms more obviously referable to the digestive organs the difficulty of diagnosis becomes the greater, and not seldom the condition may be regarded as one of primary nervous cardiac or pulmonary disease the relation to an underlying indigestion being so obscure.

Prominent among the *remote* manifestations are those which may be comprehensively designated "nervous," and of these headache is perhaps the most frequent in occurrence, as in turn indigestion is probably the commonest cause of headache. As regards locality, whether generally diffused or localised to the frontal, vertical, temporal, parietal, or occipital regions, the time of its occurrence in relation to food, its characters—so far as words can describe it—dull, aching, throbbing, &c., nothing specifically characteristic can be affirmed—nothing, that is to say, which can at once enable a given headache to be set down as dyspeptic in origin, however probable such may be the case. Once, however, its cause can be so defined some significance may be attached to these several features as helping to indicate the special factor or factors of digestion which may be at fault. But inasmuch as the laborious researches of Dr. Head have shown that these areas of pain with their associated areas of scalp tenderness are primarily at least to be regarded in connexion with corresponding regions of pain and tenderness over the trunk rather than with the thoracic and abdominal

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viscera which may be at fault, the diagnostic value of headache in respect to dyspepsia becomes somewhat diminished. None the less, as symptoms of indigestion, headache, and hyperalgesia are amongst the most frequent, whilst the absence of tenderness, though the pain may be excruciating, distinguishes the true megrim from the bilious, sick, or dyspeptic headache. Scarcely less frequent than the foregoing, and often extremely distressing, are giddiness and vertigo. Subjective affections of sight, such as amblyopia, coloured flashes of light, muscæ volitantes, &c., or of hearing, such as tinnitus aurium, are also of no unusual occurrence in dyspepsia. The association of drowsiness with indigestion is generally familiar, but the connexion of wakefulness with the same state is not perhaps so well-known. The condition of irritability, of temper, contrasting so strongly as it does with the sense of comfort and placid well-being that attends a good digestion, is closely simulated in the course of still more remote disturbances of nutrition to which undoubtedly dyspepsia contributes to the development of, although it is here sought to distinguish between the symptoms for which indigestion is distinctly responsible from those due to the later metabolic change in the tissues which are really different from the true digestive processes. Attacks of mental depression amounting to actual hypochondriasis and melancholia with delusions of suspicion are well recognised as of frequent dependence on imperfections in digestion; the very name melancholia, a term of Hippocratic medicine, signifies the connexion. It has also been made clear that outbursts of mania or other psychic disturbances in those whose mental powers are perturbed are not infrequently traced to failures in the digestive process, especially if there be constipation. A close relationship between that condition of deficient nerve power known as neurasthenia and disorders of digestion has been described, although here again the general deterioration of nervous energy may more immediately be the expression of an impaired nutrition of which a dyspepsia may be but one factor in the production. Corresponding in some measure to neurasthenia of dyspeptic origin is a general sense of lassitude and muscular weakness of like cause, though partly due in all probability to an inadequate removal of the results of an abnormal tissue metabolism; and the same may be said for those violent cramps, more especially of the muscles of the calf, which not infrequently result from dietetic or digestive errors. Pains in the back and in the limbs, usually of a dull, aching character, the former sometimes due to a loaded colon, and therefore more properly to be reckoned among the local symptoms, are commonly complained of, or a pain about the right shoulder so frequently associated with hepatic trouble and to that extent a possible accompaniment of indigestion.

Among the disturbances of the circulatory function attributable to a disordered digestion may be mentioned palpitation and all degrees of cardiac irregularity up to complete intermittence or even fainting and pains over the region of the heart often closely simulating angina. The displacement of the organ by flatulent distension of the stomach or intestines may interfere with its action; but this is not the only way in which indigestion disturbs the heart. The effects exhibited by the peripheral circulation are not less marked, as witness the flushing of the face so often following a meal even free from alcohol and of the simplest character. The coldness of the extremities is another phenomenon of the same class. Respiratory defects are much less commonly observed, though the so-called "stomach cough" is among the symptoms appreciated by the laity. Whilst doubtless an expression of gastric or gastro-intestinal irritation, it does not usually accompany the more definite evidences of indigestion. A true dyspeptic dyspnœa is less well known, but of its existence there is little doubt both with other dyspeptic symptoms or so predominating as to obscure its real origin. Along with a sense of oppression and impeded breathing is a constant desire to take a deep inspiration occurring in attacks often of some hours' duration and not infrequently at night—a condition which recalls in its description an asthmatic paroxysm as provocative of which indigestion also takes a high place.

A connexion between indigestion and affections of the skin has long been recognised, although different opinions have been held as to the degree of the relationship. For whilst it is very certain that an eruption of urticarial wheals, of erythema, of pruritus, or even of eczema or acne rosacea, to mention only those cutaneous affections of most frequent occurrence, may follow the ingestion of certain articles of diet, just as these and other rashes may be caused by various drugs, the actual conditions of their development is apt to be most uncertain. Not only are such results met with in but few individuals and are of nothing like universal occurrence, but they are not constant even in the same individual, and they may or may not be accompanied by definite dyspeptic symptoms, such as pain, vomiting, diarrhœa, &c. Setting aside for the moment the question of how such eruptions are produced, it is doubtful whether they can be regarded as results of indigestion, and whether they are not rather to be considered as caused by the direct toxic action of certain ingredients contained in the articles of food with which the process of digestion is not strictly concerned. Sometimes there is good reason to believe that coincident with the cutaneous urticaria or eczema similar if not identical conditions are developed in the alimentary mucous membrane, and in such cases evidences of a perturbed digestion are of course likely to be manifested. The long-continued ingestion of certain articles of diet, such, for instance, as alcohol, may, by the injurious effect it exerts in the nutrition of the tissues, tend to produce certain skin affections, but such are not to be regarded as true dyspeptic phenomena, from which indeed they are really remote; rather are they true skin diseases predisposed to by the malnutrition which improper feeding or imperfect digestion have determined and immediately induced by some locally exciting cause. It is on the whole probable that the relationship of skin affections to dyspepsia is not so close as was formerly supposed, and that in most cases the element of idiosyncrasy has to be considered—a circumstance that would go far to shift the responsibility for any given eruption to the cutaneous structures themselves or their trophic governance rather than to place it upon a disordered digestion. The evidences of indigestion manifested in the urine are seldom the cause of actual discomfort to the patient, and beyond the familiar deposit of urates usually require an elaborate analysis for their detection, whilst as yet the significance of the abnormalities thus observed is only very vaguely understood. Even the precipitate of lithates, as well as of phosphates and oxalates, which may accompany very definite dyspeptic conditions are probably expressions of later metabolic perversions rather than of direct imperfections of digestion. It is very certain, however, that the process of digestion even in health does exercise a very real effect upon the character and composition of the urine as witness the increased alkalinity after meals and the variations in the amount of the nitrogenous constituents, urea, uric acid, and creatinine, with a full or diminished diet, although such bodies as these are only remotely connected with digestion and are products of tissue waste. The kidney as an excretory organ is concerned with the elimination of some of the results of intestinal putrefaction which are absorbed into the blood in place of being voided with the bowel evacuations. The most important of these substances are the aromatic sulphates and albumoses. The former are compounds of such bodies as indol and skatol with sulphuric or glycuronic acid and alkalies, especially potash. These bodies known as chromogens are themselves colourless though readily giving rise to pigments on the addition of acids. They are mainly, if not entirely, originally derived from the intestine, and their presence in excess may be regarded as an index of undue intestinal putrefaction. It has been proposed to ascertain the point at which excess is reached by considering the ratio of the ethereal to the so-called "preformed" sulphates or neutral salts of the alkalies, but the exact significance of their presence beyond the general fact I have mentioned I am unable to say. The existence of albumosuria or the very exceptional occurrence of peptonuria are indicative of a certain degree of proteid digestion, the products of which have been absorbed into the blood, and in virtue of their toxic properties have induced an irritation of the kidney and thus led to their excretion. But it by no means follows that this digestive process has taken place in the alimentary canal, for the albumins of the tissues may be so dealt with by microbic invasion. Even when their source may with reason be assumed to be the gastro-intestinal tract, their presence in the urine may not necessarily depend upon an error in digestion so much as some imperfection in the process of absorption from the mucous surface of the bowel. Glycosuria, oxaluria, and phosphaturia are probably but indirectly symptomatic of mal-digestion, whilst their relation to tissue metabolism is unquestioned. On the whole it may be said that the urinary abnormalities immediately due to dyspepsia are few, and interesting as they may be, and

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valuable as is their promise, they cannot at present be said to count for much in the actual diagnosis of indigestion, far less to afford any indication of the precise nature of the digestive flaw.

In seeking to explain these exceedingly diverse and widespread results of an imperfect digestion it becomes necessary to consider the structural relations of the alimentary tract with the other organs of the body and thereby to trace the functional relationships which these remote symptoms express. By two distinct structures is this connexion established—the nervous and the vascular. The blood-supply to the alimentary organs is most extensive, so much so that at any moment a third of the total quantity of the blood of the body is contained in their vessels. This amount is easily capable of great increase by conditions of central or reflex origin which lead to paralysis of the splanchnic area. The direct arterial supply from the aorta possesses—at least, as far as the stomach and intestines are concerned—a most complete series of anastomoses sufficient to compensate for any arrest or obstruction to the circulation in any one part; and this direct supply *viâ* the cœliac axis and inferior mesenteric vessels is further supplemented by a most elaborate system of post-peritoneal communications between the visceral and parietal branches of the aorta sufficient, as has been shown, efficiently to carry on the circulation even when the main gastro-intestinal trunks have been obliterated. Even more extensive are the arrangements for the venous return, and although there is interposed an obstruction to the gastro-intestinal flow in the shape of the hepatic portal circulation, this is in part counteracted by the free communications between the gastric and mesenteric veins with the œsophageal and inferior hæmorrhoidal as well as the sub-peritoneal parietal venules. Accessory to this venous drainage, and also concerned in removing the digested products is the lymphatic system of vessels and glands. Our knowledge of the innervation of the digestive organs is in some particulars admittedly inexact. Fibres from both the cerebro-spinal and sympathetic systems are distributed to the various structures and in some cases have been traced to an intimate connexion with the muscular and glandular elements, but concerning the paths taken by many of the afferent impulses information is much to be desired. Enough is known, however, to enable us to recognise generally the connexion of the alimentary organs with the nerve centres and thus to appreciate the reflex and referred phenomena induced in other systems. So extensive and intimate a neuro-vascular connexion with other organs of the body at least indicates the possibility of remote symptoms being induced by digestive disturbances, suggests the channels by which they may be developed, and permits us to regard these disturbances as being in the nature of irritants to those distant parts, such irritation acting either on the nerve terminals in the digestive tract and so reflexly affecting the functional manifestations of other organs, or by the direct transference by the blood and lymph currents to these structures of toxic material absorbed from the gastro-intestinal canal. By whichever of these routes the remote organs become secondarily affected there appear to be two conceivable methods in which they may be disturbed—either by the direct interference with the normal activities of their protoplasmic elements, or by some modification of the blood-pressure in their vessels. That either of these methods is possible must, I think, be admitted, but proof of any one of them is at present wanting. But inasmuch as toxins are known to be formed in the alimentary canal under conditions of mal-digestion and the injection of bodies possessing poisonous properties into the blood current is well known to lead to the production of symptoms characteristic of the poison, it would seem highly probable, to say the least of it, that noxious substances absorbed from the intestine would equally determine morbid symptoms in distant parts. Doubtless to a very great extent the organism is protected against the enterogenetic poisons, and it may be—at least, in the majority of cases—that some impairment of the integrity of the intestinal mucous membrane is necessary to permit the absorption of the toxins, and this might be such as the poisons would themselves inflict on the epithelial cells. Whether when absorbed into the circulating medium these substances produce their effect directly on the tissues or indirectly upon them *viâ* the nervous system there is little or no evidence to show, merely surmise; but whether by either or both means such poisons would seem adequate to explain most if not all the remote symptoms which are properly referable to indigestion. That peripheral irritation of gastro-intestinal origin might of itself be sufficient to induce distal symptoms without the absorption of any harmful material appears possible, for the presence of intestinal worms has been known to produce such results. As to the other suggested explanation for some of the distal symptoms—viz., that they are due to variations in blood pressure reflexly induced by gastro-intestinal states—very little can be said. Such symptoms as giddiness, vertigo, and even some dyspeptic headaches, may be thus explained, and some grounds for this may be found in the circumstance that some of these phenomena may immediately disappear after action of the bowels—a circumstance that is always attended with a fall of blood-pressure as constipation is accompanied by the reverse. The relief from headache may follow so quickly as almost to negative the idea that the emptying the bowel has simply produced the effect by getting rid of toxic material.

Mention has already been made of the fact that definite structural lesions of the alimentary tract, however marked may be the local symptoms, are frequently wanting in any special evidences of perturbed function in other organs except in so far as they may share in the general malnutrition which the change engenders. Conversely it may be said that whilst disturbances in the chemical processes taking place in the stomach and intestines may, and usually do, give rise to local symptoms it is pre-eminently in connexion with these immediate digestive imperfections that the remoter manifestations are likely to occur and may indeed be the sole evidences. This distinction if true would be of distinct value for diagnostic purposes, and my experience leads me to believe it to be of some value in this direction.

Among the many features of dyspepsia that call for comment the uncertainty of its manifestations is as well known as it is remarkable. How commonly is it the case that a patient—the subject may be of frequent indigestion—consumes with impunity a meal that violates in quantity or quality most of the dietetic rules he has been accustomed to observe and has found almost essential to his well-being. What is one man's meat is another man's poison all are familiar with, and even how often the food which is suitable to-day may disagree to-morrow or the plainest fare may provoke an indigestion. The fact that what are called errors in diet do not of necessity induce discomfort, local or remote, and with many people rarely, if ever, lead to indigestion, would seem to suggest that the *materies morbi* is less in the ingesta as presented than in the subsequent digestion processes, and is to a great extent independent of the actual food taken. It is to remedy this that the treatment should be directed, and, as I fully believe, often with more success than by elaborate dietetic rules.

Lastly, if we compare the precedent with the sequential relations of dyspepsia, we find on the one hand the causal conditions acting in most cases by inducing a perversion in the chemical processes with production of toxins and themselves determined by noxious ingesta or by motori-secretory perversions due to structural change in the digestive organs or far more often to a defective innervation; on the other hand are resulting symptoms the expressions of local perversion of the digestive function or of the distant effects due to toxic absorption or reflex irritation.

My time, gentlemen, but not my subject, has reached its limits, and I am fully conscious that in the remarks I have made, or, perhaps, more particularly in the way I have treated my theme, that I have laid myself open to the charge of having expressed in too formal, too cut-and-dried a manner a subject which presents too much uncertainty and variety rightfully to admit of being so considered, and that I have aggravated my offence by saying nothing that is new. To the latter count I plead guilty at once, and can only urge in extenuation of the former that it is the want of some formal outline that appears to me to be responsible for some at least of the vagueness in which the subject is enveloped, and that what I have said, if it serve no other purpose, affords a basis for criticism and probable improvement. It is possible, of course, that my method tends to strain relationships and to overlook much that is important for the sake of uniformity, but, at the same time, it allows us to formulate what we do know and to indicate the directions in which we are ignorant, whilst I believe the suggestions I have offered to be more comprehensive than the groupings of dyspepsia which are commonly put forward. However lofty be the platform from which the superior mind unfettered by formality surveys the efforts of the systematic observer, there are many, I believe, who would be helped by some guide, imperfect though it be, in the labyrinth of morbid phenomena involved in "dyspepsia," and in that belief I have submitted

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to your appreciation the foregoing remarks as embodying the considerations which, in my judgment, are essentially preliminary to the formation of a diagnosis, and, therefore, to the rational treatment of any case of indigestion.

WIDAL'S REACTION IN THE TROPICS.

BY W. C. BROWN, M.D. ABERD.

SINCE M. Widal in July of last year brought the reaction now generally associated with his name to the notice of the profession there has been in almost every issue of the medical journals some account of the theory, the technique, or the results of the test. But in view of the extreme importance of the subject and the fact that it has so far received but little practical attention in the tropics no apology is necessary for further increasing in some measure this amazing amount of literature. Nowhere is the correct diagnosis of enteric fever more essential than in the tropics. Nowhere is it more difficult, and nowhere has it been admittedly more unsuccessful. Opinions of the most careful and experienced physicians have been, and still are, hopelessly at variance as to the immunity and resistance of different races and individuals to the poison. The frequency of the occurrence of enteric fever, its power of assuming altered phases under altered climatic conditions, and its connexion with the ubiquitous malarial poison, are still undecided questions. It is held by many Indian physicians that natives of India are immune to enteric fever, and by others that it is their commonest scourge. In some text-books a variety of tropical fever is described as "typho-malarial fever." Lengthy descriptions are given of its symptoms, progress, and treatment. It is held by many of the best authorities that there is no such fever existing *per se;* that the cases described as typho-malarial are all referable either to the enteric or to the malarial type, and that if rarely a combination of the two occurs it must be regarded as a combination of two poisons and not as a separate and distinct disease. Post-mortem evidence has not availed to extricate us from this clinical confusion; almost, at times, it seems to increase the difficulties of differentiation. Fatal cases frequently occur which have exhibited a typical enteric temperature and well-marked abdominal symptoms, but which at the necropsy are found to be conspicuously devoid of enteric characteristics. On the other hand mild cases of what is apparently simple continued fever suddenly develop hæmorrhage from the bowel; severe cases of fever, with continued high temperature curve, constipation, and none of the usual symptoms of enteric fever, end fatally by perforation of the intestine, and a post-mortem examination reveals typical enteric lesions. And so far, and contrary to expectation, the microscope also has done little to help us. The frequency with which the malarial organism is met with in specimens of blood has no relation to the intensity of malarial infection. In the gravest cases of malarial fever examinations repeated at different times during a cycle of forty-eight hours frequently show an inexplicably normal condition of the blood. On the other hand, parasites occasionally swarm in the blood-stream of malarial patients who are able to walk about and are probably in better than average health. It is somewhat humiliating at this date to have to admit that a too implicit reliance on the indications for diagnosis afforded by the malarial parasite in any of its phases is a certain source of error; but so it is. Professional opinion in the tropics has in consequence become one of perpetual doubt. The physician, face to face with a grave fever, with the best aids to diagnosis at his disposal, has walked, if not in darkness, in the almost equally unsatisfactory twilight of uncertainty and doubt—an uncertainty incomprehensible to those who have not watched the rapidly changing phases of a tropical fever—a doubt which may not be dispelled even in the post-mortem room. In such a state of affairs the possibility of the existence of an agency that would reliably differentiate enteric fever has been eagerly canvassed, and the developments of sero-diagnosis have been watched and treated with unusual interest. There has now been sufficient time to form a just estimate of the help it will be likely to afford to tropical physicians; and after a somewhat extended investigation of the reaction I am of opinion that in the method of Widal we have been put in possession of a rapid and fairly easy test which, if not absolutely reliable, is of the very highest value. Clinical microscopical science must always be an inexact one; failures must occur in the application of this great discovery, but, if care is given to primary precautions, and attention paid to some simple rules, these can be reduced to a minimum.

Testimony as to the value of the reaction as a diagnostic test may at this date seem superfluous; it must, however, be of interest to know that in the tropics—probably the original *foyer* of all enteric fever—experience has shown that it loses none of its reliability. After a series of examinations of over a hundred suspected cases during the last five months I can point to only two instances where subsequent events did not confirm the diagnosis given by Widal's reaction; and in three cases that were not considered to be enteric fever the diagnosis obtained by means of the reaction received an almost startling confirmation in the subsequent history of the disease. I have appended a table of twenty selected cases from my case-book, showing the general character of the results obtained. Case 4 in the table is a striking instance of the diagnostic value of the reaction. My patient was a young Burman priest of good family who had been living for some time in a very malarial district. When I saw him after he had been brought here on the sixteenth day of his illness, he had had continuous high fever ranging from 103·5° to 104·8F., with no morning remissions; the bowels were constipated, there were no spots and no abdominal symptoms, and his condition was most critical. The case was considered to be one of continued malarial fever. The following day an examination of the blood was made. Malarial parasites in considerable numbers were found, but a slow reaction was obtained with a three days' culture of Eberth's bacillus on agar. The test was repeated on the next day with a 24 hours' culture, with the result that the reaction was somewhat more prompt and decisive. The patient appeared to improve rapidly until the twenty-first day, when he died somewhat suddenly from hæmorrhage from the bowel.

In the tropics a not uncommon form of malarial fever in Europeans may be described as "acute pernicious." It generally occurs in strong full-blooded individuals of middle age: fever comes on suddenly, runs up rapidly from 105° to 107°F. or higher, and is accompanied by marked head symptoms, delirium, and unconsciousness. Death, which invariably takes place within four or five days, is generally attributed to sunstroke; but if the brain is examined it is found to be highly congested and its capillaries blocked with malarial parasites. Case 6 was supposed to be a well defined instance of this grave type of malaria, but the blood gave a prompt and marked reaction with an eighteen-hour bouillon culture. Hæmorrhage from the bowel began on the sixth day, and death occurred from perforation on the 10th. No malarial organism was found, and the ileum was found to be extensively ulcerated.

So much has been written on the technique of the reaction that it appears necessary for me to deal with it only so far as it is influenced by altered climatic conditions. The tests have been confined to microscopical observation; naked-eye observation of serum in test tubes seems to require too much blood to be readily applicable to practice, and I have not been able to avail myself of the ingenious sero-sedimentation tubes of Professor Wright. In applying the test, otherwise a very easy process, the great difficulty—a difficulty which, I think, has been under-estimated but which is practically the only likely cause of error—is the difficulty of distinguishing between true and false clumps. If a loopful of blood serum from an enteric fever patient is mixed with nine loopfuls of a fresh bouillon culture or agar emulsion, the bacilli run together quickly in *true* clumps, the field clears rapidly between the clumps, and the bacilli become motionless. The clumps are characteristic in that they are closely packed, the bacilli actually seeming to *adhere* to each other in thick globular masses which are not all in focus at once. False clumps—the *pseudo amas* of French writers—are more loosely united; the masses are not so dense, and they are less globular. They can be brought into focus generally all at once, and the field is not so rapidly cleared of loose bacilli, for which the false clumps seem to have no specific attraction, and which retain their motility, though that also is lessened. How difficult the distinction is

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we may gather from the conflicting opinions of bacteriologists on the characteristics of the grouped bacilli. Gruber has described a thickening of the enveloping membrane of the bacillus as distinctive of true clumping; but this alleged characteristic, though supported by several writers, is denied by M. Widal and M. Ricard.[1] If it exists at all, it is so insignificant as to be worthless as a diagnostic sign. Probably the best and only preventive against error is experience in comparison of false and true clumps. In the meantime the chief causes of the formation of false clumps should be noted in order that precautions may be taken against their occurrence. In my experience there are five principal causes of false clumping, and therefore sources of error, in the application of the test. 1. The dilution of the suspected serum may be too great or too small. This is a primary point insisted on by all observers and already fully described, and my own experience corroborates the view that a proportion of 1 part of serum to 9 parts of emulsion gives the best results, and that a stronger or weaker solution is apt to cause false clumping or failure of the test. 2. The culture may be too attenuated. There can be no doubt that if old cultures of the bacilli are used there is much more liability to false clumping. It is so difficult in the tropics to keep tubes of bouillon always ready for inoculation that if the test depended on the ideal condition of an eighteen hours' bouillon culture, it would be useless in practice. Fortunately it does not. The simpler the conditions of any test the greater its practical value. There is no difficulty about keeping cultures on agar, and the highest pitch of virulence and activity can be obtained by making use of a twenty-four hours' sub-culture from a twenty-four hours' culture. The more virulent the culture the more reliable the reaction and the less likelihood of false clumping. No rule, however, can be laid down; old cultures, though not reliable, and always to be used only as a *pis aller*, will often give a perfect reaction. It has been recently pointed out that dead bacilli possess marked agglutinative powers, and they will probably be the reagents of the future.

3. The mechanical preparation of the emulsion may be faulty. The best method to secure an approximately uniform strength of the emulsion is to place fourteen loopfuls of distilled water on a coverglass, to pick up as much fresh bacillus growth from the surface of the agar as can be easily seen on the end of a platinum needle, and to rub this down in the water until it takes on a faint, cloudy, homogeneous, white colour. Care should be taken to rub down the culture very gently but thoroughly. A twenty-four hour culture is easily rubbed down; an older one is more coherent. If the emulsion is not carefully prepared in this manner clumps of unseparated bacilli will be left floating about in the water. I have found a strength of one to fourteen the most suitable proportion for the emulsion, but the faint white colour it assumes is the best index of a right dilution. If it contains too many bacilli they are so crowded in the field as to obscure the reaction; if too free true clumping is more difficult to determine. All emulsions should be examined under the microscope before mixture with the suspected serum, for even in fresh bouillon cultures false clumps are not unfrequently seen. 4. The specific gravity of the emulsion may have altered since it was mixed. This is especially liable to occur in the tropics, and it is a fruitful source of false clumping and error. If the emulsion is allowed to remain on the cover-glass for a few minutes either before or after admixture of the suspected serum, altered physical conditions are established which favour the formation of false clumps. In order to avoid evaporation and drying which take place rapidly on a flat slide, it is best always to use the hanging drop method, and to moisten the edges of the hollow in the slide by water or a film of vaseline. Reactions on a flat slide are unreliable. After the emulsion is prepared it should be examined as quickly as possible, and never allowed to remain on the cover-glass without putting it on the slide. In working at this point I observed that if a hanging drop in which true clumping has occurred is allowed to dry almost entirely the clumps become fixed in position on the cover; but if the film is then rubbed up with a drop of water the clumps separate and the bacilli resume active movement for a minute or two. The agglutinative material then again

TABLE OF TWENTY SELECTED WIDAL'S REACTION TESTS.

No.	Sex.	Age.	Nationality.	Duration of illness.	Diagnosis (before test).	Reaction.	Remarks and diagnosis as established by progress of disease.
1	F.	18	Siamese	18 days	Enteric fever	Immediate	Death occurred on the twenty-fourth day from exhaustion and high temperature. No necropsy.
2	F.	54	Chinese	17 days	Continued malarial fever	Nil	Recovered. Plasmodia found in large numbers; no enteric symptoms.
3	M.	32	Chinese	33 hours	Malarial fever	Nil	No plasmodium found. Recovery was rapid under quinine.
4	M.	25	Burmese	16 days	Malarial fever	Slow reaction	Died on the twenty-first day from hæmorrhage of the bowel.
5	M.	30	Chinese	20 days	Beri-beri	Nil	Diagnosis was confirmed by necropsy.
6	F.	42	European	4 days	Enteric fever	Immediate	Death occurred on the eighth day from hæmorrhage of the bowel. Diagnosis was confirmed by necropsy.
7	M.	6	Eurasian	13 days	Enteric fever	No reaction	Recovery in ten days, with no confirmatory symptoms of enteric diagnosis.
8	F.	30	Jewess	13 days	Doubtful	No reaction	Apparently true enteric; duration of illness three and a half months; two relapses.
9	M.	36	European	15 days	Enteric fever	Immediate	A typical case of enteric fever masked by malarial symptoms.
10	F.	24	European	10 days	Enteric fever	Immediate	A typical case of mild enteric fever ending in recovery.
11	F.	18	Chinese	10 days	Enteric fever	Slow reaction	A severe case of enteric fever ending in recovery; plasmodia found.
12	M.	8	Eurasian	5 days	Congenital meningitis	No reaction	Test repeated on the twentieth day with the same result; death on the thirtieth day.
13	M.	2	European	5 days	Enteric fever	Slow reaction	Recovery in twenty-two days; a mild case of enteric fever.
14	F.	56	Chinese	16 days	Enteric fever	Immediate and marked	Repeated hæmorrhages from bowel; very severe case; recovery.
15	M.	29	Chinese	2 years	Leprosy	No reaction	No case appears to have yet been recorded of reaction of bacillus typhosus with leper's blood.
16	M.	24	Eurasian	10 days	Doubtful	Immediate	A severe case of true enteric fever; hæmorrhage from bowel; recovery.
17	M.	32	European	12 days	Enteric fever	Slow reaction	An ordinary case of enteric fever; recovery in twenty-five days.
18	M.	38	European	18 days	Malarial fever	No reaction	A doubtful case of continued malarial fever with some enteric symptoms. Plasmodia found.
19	M.	26	Hindoo	10 days	Enteric fever	Immediate	Recovery after severe hæmorrhage from bowel; no plasmodia.
20	F.	19	Chinese	21 days	Doubtful	No reaction	Probably malarial, but no plasmodia found.

[1] Annales de l'Institut Pasteur, May, 1897.

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exercises its power, and the bacilli clump once more. This would appear to indicate that true clumps are not so coherent as is supposed, and that the agglutinative action is paralysing and not killing. 5. The exposure to light may be excessive. It is laid down by most observers that clumping after a certain lapse of time is unreliable and a time limit of half an hour has been fixed by Gruber, Grünbaum, and others. This seems a reasonable limit if the specimen is removed from the microscope between each examination. I am of opinion, however, that this false clumping is caused by the strong rays of light from the condenser acting on the vitality of the bacilli, and if the specimen is kept on the stage all the time half an hour is too long. If, on the contrary, it is removed and examined once every five minutes for half an hour it is a reasonable time. If an emulsion without added serum is kept on the stage for half an hour clumps will occasionally be seen to form. Clumps that form after half an hour's exposure may therefore reasonably be considered quite unreliable.

Little need be said about the best method of collecting blood. Capillary glass tubes should be sterilised by heating them in a steriliser or an oven. Their ends should then be sealed. After washing the skin with alcohol the finger is pricked with a sterilised needle and the tube opened. The first drop of blood should be wiped off with the needle and the next drawn into the tube, which is then sealed. The specimen will in most cases be sterile, and may be kept for days. One or more cover-glass films of blood should be made at the same time for examination for malarial parasites. The serum will separate from the clot in the tube in about six hours and may be blown out on a slide practically free from corpuscles. The cases given in the table on p. 1037 have been selected principally with the view of illustrating the practical value of the reaction, and are a fair sample of general results in an examination of over 100 suspected cases. It will be seen that the diagnosis made before the test was applied has been recorded, as well as the evidence, confirmatory or otherwise, of its accuracy that was obtained by subsequent developments, and in some cases by post-mortem examinations. The view that enteric fever is very rare in adult natives of India has so lately as last August been endorsed by Surgeon-Major Freyer.[2] He explains this alleged exemption by a theory that natives gain a comparative degree of immunity in adult life from an almost universal and unsuspected prevalence of enteric fever in children. Whatever may be the state of affairs in India, I can only say that his theory is not supported by the results of blood examinations in the Straits Settlements, where the sanitary condition of Chinese and other races is little better than it is in India. Numerous control experiments have shown that if the necessary precautions are observed healthy blood serum, from whatever race it is obtained, has no agglutinative action on a fresh culture of the bacillus.

Penang.

[2] Brit. Med. Jour., Aug. 7th, 1897.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—The opening meeting of the session of 1897–98 was held in the Library of the New Hospital for Women on Oct. 5th, at 8 P.M., Miss Cock, M.D. Brux., President, being in the chair. There was a large attendance of members, including some home on furlough from India and China. After some preliminary business had been transacted the following papers were read: 1. A Fatal Case of Meningitis, probably Tuberculous, Lasting Four Months, by Miss Anderson, M.D. Lond., of Manchester. (The paper was read in her absence by the secretary.) The patient was a child, aged three and a half years, and was not seen for a month after the beginning of the illness, so that no notes of the early symptoms were obtainable and no post-mortem examination was allowed. The diagnosis had therefore to be made from the clinical aspect of the case only and the significance of the various signs and symptoms observed was discussed. 2. A Visit to Aix-les-Bains, by Miss Helen Webb, M.B. Lond. Miss Webb gave a detailed account of the properties and uses of the waters at Aix-les-Bains, and dwelt specially on the excellence of the arrangements made in connexion with the administration of the baths and on the attention paid to the comfort of patients in many important respects. The paper was illustrated by photographs and charts prepared by Dr. Forestier, showing the changes produced in renal secretion by the different forms of treatment.

ON THE CONVEYANCE OF DIPHTHERITIC INFECTION BY APPARENTLY HEALTHY INDIVIDUALS.

BY ALEXANDER G. R. FOULERTON, F.R.C.S. ENG., D.P.H. CAMB.,
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AND
A. LLEWELLYN WILLIAMS, M.R.C.S. ENG., L.R.C.P. EDIN.

THE following case is an excellent example of the conveyance of diphtheritic infection by an apparently healthy individual. It also furnishes an illustration of the importance under certain conditions of the bacteriological examination of the throat in those who have been exposed to the risk of diphtheritic infection, but have not themselves contracted the disease.

A pupil at a good preparatory school in the country, aged twelve years, was one amongst several boys who were attacked during February, 1896, with a form of tonsillitis, and in his case the symptoms appeared on the 13th of that month. On March 6th a "swab" taken from his throat was examined bacteriologically and reported on as being free from the diphtheria bacillus. The boy was shortly afterwards sent down to the seaside; he was suffering at the time from some difficulty in deglutition and from an attack of erythema nodosum, but the mucous membrane of his throat appeared to be quite healthy. He returned to school in May presumably well. During July of the same year a second outbreak similar to the former occurred at the school. The boy was not affected, but a swab from his throat was again examined and found to be free from the diphtheria bacillus. In the following November yet a third outbreak of the same nature occurred, and on the 30th of that month all the apparently healthy boys, the one under observation amongst them, were sent to their homes. During the three outbreaks there were altogether 43 cases, all amongst the boys, no one else being attacked. Two deaths occurred, both due to heart failure. On the school being broken up the boy did not return to his own home; as he had a younger and very delicate sister it was thought well to put him in quarantine elsewhere for a time. On Dec. 8th a swab taken from his throat was examined by one of us at the British Institute of Preventive Medicine and a pure culture of the Klebs-Löffler bacillus was obtained from it. This culture was of active virulence. A guinea-pig inoculated with it died in less than forty-eight hours. On the 13th a second swab was examined and the specific bacillus was again found. On the same date, his sister meanwhile having been sent away, the boy went to his home. Swabs subsequently examined on Dec. 15th and 20th, 1896, and Jan. 20th, 1887, were found to be free from the bacillus of diphtheria. On his return home the boy was more or less isolated from the rest of the household with the exception of a servant who alone attended on him. On Dec. 21st this maid showed obvious signs of an attack of diphtheria, and the Klebs-Löffler bacillus was cultivated from a swab taken from her throat on the same day. She was at once removed to a hospital, where she remained for six weeks. No other members of the household were attacked, and swabs taken from the throat of each of them proved to be free from the diphtheria bacillus. As regards the case of the maid no possible source of infection other than the obvious one could be suggested.

The Klebs-Löffler bacillus may be found in the throat of an apparently healthy individual under two sets of conditions. Of these the cases of more frequent occurrence are those in which the bacillus persists in and about the throat for a more or less lengthened period after complete convalescence from an attack of diphtheria. The other class of cases comprises those in which the bacillus exists in the throat of an individual, such as a nurse, who has been exposed to the risk of infection, but has escaped an actual attack of the disease. Cases which come within the first class are not by any means rare. But it is difficult to know the precise value to be attached to any figures bearing on the subject unless one at the same time knows the treatment which has been adopted in the various cases, since the persistence of the

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bacillus is without doubt largely influenced by the method of local treatment adopted during the acute stage of the disease and afterwards. The most striking instance recorded is a French case in which the bacillus was still to be found in the throat at the end of fifteen months. But so prolonged an infection as this must be quite exceptional. Out of some 4000 bacteriological examinations in cases of diphtheria or of suspected diphtheria which have been carried out at the British Institute of Preventive Medicine, the case in which the longest duration of the bacillus has been noted is one in which it was found by Dr. Hewlett at intervals during twenty-two weeks. In this case, as in ours, the virulence of the culture was proved by experimental inoculation. Cases, again, in which the bacillus is still present three weeks or so after convalescence are in the experience of the Institute of not infrequent occurrence. With reference to this matter the following statistics lately issued by the New York Health Department may be quoted. They give the result of the bacteriological examination in 605 cases of diphtheria. In 304 cases the specific bacillus had disappeared within three days; in 176 cases it persisted for seven days; in 64 for twelve days; in 36 for fifteen days; in 12 for three weeks; in 4 for four weeks; in 4 for five weeks; and in 2 for nine weeks. The case above described, however, belongs, we think, to the second class; that is to say, we look upon it as a case in which the bacillus was found after exposure to the risk of infection in an individual who happened, whether because of a previous infection or not, to be for the time immune against the disease. That the bacillus had persisted in his throat for the forty-three weeks which elapsed between the commencement of the attack in February and the bacteriological examination in December is rendered improbable by the fact that two previous examinations in March and July had given negative results. During the three outbreaks at the school a very careful medical supervision was exercised over all the boys, and from the time when he left school on Nov. 30th up to the time when the bacillus disappeared from his throat a fortnight later the boy was under medical observation daily. It is therefore practically certain that he did not have a second slight attack of diphtheria in November, which might perhaps have otherwise passed unnoticed. As regards recent exposure to infection we ascertained that the boy was in the same class, but not in the same dormitory, as three of the boys who were attacked during the November outbreak. We are also informed that a bacteriological examination of the throat had been made in the case of several other boys from the school. In one case the diphtheria bacillus was found in the throat of a boy under very much the same conditions as those of the one under notice. Four other boys who had suffered from either tonsillitis or pronounced diphtheria in November were found to be still harbouring the Klebs-Löffler bacilli when their throats were examined between Jan. 20th and 30th. In three of these latter cases the bacilli were still present as late as the middle of February.

The treatment of such cases as these is usually satisfactory if thoroughly carried out. It is not sufficient to confine one's attention to the disinfection of the fauces and pharynx. The nasal fossæ also must be douched or sprayed with a germicidal lotion. The nasal fossæ appear to afford a habitat particularly favourable to the growth, or at any rate to the prolonged existence, of the bacilli. This view is supported by the results lately obtained by several bacteriologists who have shown that a bacillus identical both morphologically and in its pathogenic action on guinea-pigs with the Klebs-Löffler organism is to be found in certain cases of chronic rhinitis which had not hitherto been considered as of a diphtheritic nature. In those somewhat rare cases of prolonged diphtheria, too, in which after an acute onset a chronic membranous pharyngitis associated with the presence of the Klebs-Löffler bacillus persists, it may be for months, we believe that an affection of the nasal fossæ also has usually been present. In the case described the nasal fossæ were douched with a solution of sulphurous acid, with which the pharynx also was sprayed. This treatment was commenced on Dec. 10th, and five days later the bacilli had disappeared. A 1 in 2000 solution of mercuric perchloride will efficiently serve the same purpose, but must, of course, be used with a little discretion. This treatment has been recommended when advice has been sought at the British Institute of Preventive Medicine with regard to cases in which the bacilli have persisted in the throat after recovery from an attack of diphtheria, and in the cases in which it has been carried out and in which the results could be ascertained has been very successful.

The recognition of these cases is, it is scarcely necessary to say, of extreme importance from the public health point of view. They explain, for example, that recrudescence of diphtheria which is sometimes coincident with the re-opening of schools. They explain also the occurrence of a series of outbreaks with irregular intervals at schools, such as the instance we have more particularly referred to. And in passing it may be pointed out that it is such outbreaks as those mentioned which, in the absence of obvious evidence of the conveyance of infection from one patient to another, led in the past to the belief in the intimate causative relation between defective drainage and diphtheria—a belief now discarded because of the greater exactness in tracing causation which we owe to bacteriology. Medical men generally are now quite aware of the necessity for a bacteriological examination before a convalescent diphtheria patient can for the sake of others be safely released from isolation, however perfect the recovery may appear to be clinically. To this a further rule might with advantage be added: that after a school has been closed temporarily because of an outbreak of diphtheria no scholar should be re-admitted without a bacteriological examination of the throat, whether there is a previous history of diphtheria or not.

THOMSEN'S DISEASE: A FAMILY HISTORY.

BY J. C. CLEMESHA, M.D., M.R.C.S. ENG., L.R.C.P. LOND.

IN January, 1896, I was called to attend a man, aged thirty-three years, who was suffering from hæmoptysis. The symptoms and physical signs led to the diagnosis of phthisis. On inquiry into his past condition he mentioned being subject to a "family complaint," and I elicited the following history. At different intervals during the past twenty years he had been subject to attacks of transient paralysis, which generally affected his arms and legs, rendering him perfectly helpless. At times the muscles of the neck and head were included. He became affected about the age of thirteen years (puberty), and the other members of the family who were so affected were between the ages of thirteen and eighteen years when the disease first developed. Dampness and cold predispose to an attack—or, perhaps, to speak more correctly, are exciting causes. The attack begins by a peculiar sensation of clumsiness or uselessness in the hands and feet, which gradually increases until there is complete loss of power of motion. If, however, the patient, when he perceives these symptoms, walks for two or three hours he can abort the on-coming paralysis. Should he during one of these walks happen to fall he cannot get up without assistance, but when placed on his feet can go a long distance without fatigue. When the patient was younger these attacks came on every three or four weeks, but of late years three or four months may elapse between them and they are not nearly so severe. If an attack comes on during sleep, and he happens to have his arms and legs flexed, on awakening he is unable to extend them without assistance. In his father's case the muscles of the neck, head, and trunk have occasionally been involved in addition to the extremities, causing complete paralysis of the entire body.

The following information has been obtained from the patient's father, who stated that his mother had the disease and was the only one in a family of seven so afflicted. He was unable to state whether his mother's parents were affected. He had one brother, T—— (who had three children who were not affected), and one sister, M—— (who had no family), older than himself not affected. Two of his (the patient's father's) four children were affected. J——, the next brother, did not have it, nor any of his eight children. The next brother, J——, had it, and had a family of eight, only one of whom, the eldest son, had it. E——, a sister, had it when young, but seems to have grown out of it. She was not married. F——, a brother, had it, and died during an attack at the age of thirty-eight years. He was being carried downstairs when he "fainted" and died.

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He was not married. V——, who never married, has not had it, nor D—— nor H——, nor their families. The disease in every case developed when the subjects of it were in their "teens." In the patient's father's case the attacks generally came on in the night, most frequently on Sunday night, the day's rest apparently predisposing to the attack. He had his first attack about the age of fifteen years. Cold and dampness seemed to have been exciting causes. He seldom had any premonition of an attack, but would wake up quite helpless and remain so for forty-eight hours, or if the attack was severe for three days. The head and neck were seldom affected. During the first attacks he had at times some difficulty in breathing. At first the attacks came on every year, generally in the spring, but of late only once in three or four years, but they were as severe as ever—even more so.

I was led to record the above family history from reading an epitomised account in a recent number of the *British Medical Journal* of an interesting and important article which was published in the *Deutsche Zeitschrift für Nervenheilkunde* by Dr. Goldflam. Five years ago he communicated some particulars of a family of eleven who suffered from occasional complete paralysis of all four extremities. He has since had the opportunity of carefully and continuously observing two of the members of the family. The condition affected the young people of the family, and showed itself in complete flaccid paralysis affecting the limbs and the trunk, and was characterised by loss or diminution of reflexes and of mechanical and electrical excitability of muscles. The muscles which were hypertrophied showed but little strength, and the examination of freshly excised portions showed that the fibres were unusually large, that the primitive bundles were wasted, and that there was vacuolation in them. In his first communication Dr. Goldflam hazarded the guess that the disease perhaps depended upon some toxic substance acting upon the muscles and their nerve-endings so as to influence and disturb them. This hypothesis receives a certain measure of support from the fact that a ptomaine-like substance is present in the urine of the patients and that a fairly constant condition of leucocytosis is also present. Possibly the poison exerts an influence on the muscles that have undergone some change in structure which renders them more susceptible to the influence of the substance. No doubt an analogy exists between such cases and those of Thomsen's disease.

Buffalo, N.Y., U.S.A.

SPRAINS OF THE JOINTS, WITH PARTICULAR REFERENCE TO SPRAINS OF THE ANKLE.

BY WILFRID B. WARDE, M.B., L.R.C.P. LOND., M.R.C.S. ENG.

DURING the past few years I have had unusual opportunities for studying severe sprains of joints, and more particularly of the ankle joint. At one time I had six cases of sprained ankle under my care in rapid succession. The observation of these and other cases and a contrast of various modes of treatment led me to certain conclusions which have had a most satisfactory result as far as my own practice is concerned.

If cooling lotions are used or if no special treatment be adopted a sprain passes through the following stages: (1) the joint swells and is very painful; (2) the pain and swelling during the next two or three days are increased by inflammation; (3) usually the joint is distended with synovial fluid; (4) the swelling slowly disappears; (5) considerable stiffness is felt which is slow in disappearing; and (6) there is great tendency to relapse. To one who has tried this kind of treatment and then tried the effects of pressure the contrast is most marked. Pressure, to act most efficiently, must be uniform and should be applied as early as possible in order to check the flow of blood from the injured vessels, which appears to be the cause of the early swelling of the joint. There is nothing better for the purpose than the starched bandage with a good thick layer of wool to completely envelop the joint. The effect of such treatment is as startling as it is satisfactory. The pain is immediately lessened, the swelling is arrested, the subsequent improvement is far more rapid, and there is less tendency to relapse. Uniform pressure acts mainly by lessening extravasation, and certainly the other results follow.

But pressure acts in another way. The more swelling there is the greater will be the interference with all movements of the joint, and, further, the greater the distension and the longer it continues the more relaxed will be the tissues, and so there will be a greater tendency to relapses. If pressure has been well applied from the beginning it is astonishing how little real stiffness, as opposed to mere weakness, there is, and it is quite easy to keep the joint from becoming distended when the patient begins to walk about. Some, however, appear to carry the principle of pressure a little too far. The injured joint is put up in plaster-of-Paris and kept in its casing for several weeks or even two or three months. This is going to the opposite extreme. The joint when set free is very stiff and often exceedingly weak.

I cannot do better than briefly describe the course I have adopted of late in severe sprains of the ankle. As soon as possible I cover the joint with a stiff starched bandage over a thick covering of wool. The limb is kept raised and at rest. At the end of a week I slit up the bandage, examine the joint, and move it as far as it will go in all its movements. It is no uncommon thing then to find that almost all swelling has disappeared and that the movements are fairly good. If the injury is very severe I place the joint back in the original covering, apply over it a fresh bandage, and have that starched. This at the end of another week is again slit up and the joint moved about freely. In slighter cases I re-apply the old cover and simply put a bandage over it. This is undone every day and the joint well worked. When from ten to fourteen days have elapsed from the date of the injury I allow the patient to begin to walk, and the distance covered is increased every day. After three weeks I make the patient use a well-known orthopædic exercise which consists of alternate flexion and extension of the ankle joint with rotation of the foot. It is no uncommon thing to have such a case practically well in a month and absolutely free from stiffness and weakness in six weeks. There is no tendency to relapse. For a severe sprain of the ankle such a result is satisfactory.

Knowsley.

ISOLATION IN SCARLET FEVER UNNECESSARY AND INEXPEDIENT.[1]

BY ARTHUR WIGLESWORTH, L.R.C.P. LOND., M.R.C.S. ENG., L.S.A.

I HAVE on several occasions called your attention to the great value of carbolic acid in the treatment of scarlet fever, for in my hands it has proved a specific for that hitherto much dreaded zymotic disease. Without troubling you again with details I may summarise the results by stating that if I saw my patients in the *initial* stage of the disease they all recovered; that I have had only three cases of albuminuria, all transient in duration; only one of glandular suppuration; and all other usual sequelæ have been characteristically absent. Finally, all the patients have recovered in a remarkably short space of time and with but little enfeeblement of strength. This treatment consists in administering to all patients, so soon as scarlet fever is suspected or diagnosed, from one to six grains of carbolic acid (according to age) freely diluted with water and continuing it every two hours until the rash has finally disappeared, and then reducing the dose and frequency of administration until convalescence has been fully established. This practice I have pursued for over sixteen years and each succeeding year confirms my opinion of its inestimable value.

The subject of this paper has, however, only recently forced itself upon my attention, and was chiefly due to a perusal of Flügge's work on Micro-organisms, which has given me a scientific basis to work upon. It is to this scientific

[1] The above paper was read before the Liverpool Medical Society nearly four years ago. Subsequent experience has amply confirmed these views so far as practical observation can demonstrate their truth. Considering the rapid multiplication of bacteria, as stated by Cohn, it is imperative that the administration of the acid should commence immediately on the outset of symptoms leading even to a suspicion of scarlet fever. The complete success of the treatment will depend on a strict observance of this rule.—A. W.

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basis, founded upon pathological experiments, as described in that work, that I desire to call attention. I may premise that it was not till some years after I commenced the use of carbolic acid that I was led to adopt my present views and prepared for this latest development. The first stage was to administer carbolic acid as a possible prophylactic; and it arose in this way. Two children in a family were attacked with scarlet fever, and it was found quite impossible to isolate them from the rest of the children—three in number—because there were only an elder sister and the mother to attend to the wants of the entire household. I put this sister and the other two upon two-grain doses of carbolic acid administered twice a day, and the freest communication existed between the inmates of the sick chamber and the rest of the household. The result was eminently satisfactory; none of the rest took the infection, though about three years afterwards they were attacked, showing that there was a susceptibility to the zymotic poison.

With the experience thus gained I decided to pursue this line of prophylactic treatment in all subsequent cases, giving carbolic acid to those not infected, and then allowing the freest communication between the attendants in the sick room and the other inmates of the household; but not allowing uninfected children to enter the sick chamber. The results of this treatment were remarkably striking. I found that most of the household escaped infection altogether, but they not infrequently had an attack in after years. That those who did take scarlet fever invariably—there is not a single exception—took the infection in a milder form, and in only one instance did a sequela occur; finally, that after disinfection no other cases ever arose unless imported from a fresh source. I concluded, therefore, that there was some special effect produced upon the unknown micro-organism of scarlet fever which rendered it much less virulent, and this view seemed to me to receive a measure of support from the fact that whenever a patient had taken a certain quantity of carbolic acid a peculiarly dark colour of the urine appeared (which I now look upon as indicative of "carbolisation" having been effected), and that when this was produced the urine would remain free from the usual putrefactive changes from a week to a month, and if it occurred ultimately the usually highly offensive ammoniacal odour of putrid urine was almost absent. It was not, however, until I had read Flügge's work that many points which I did not understand were made clear to my mind, and thenceforward I entered upon a new course—namely, *that of abandoning isolation*—hitherto with highly successful results. My plan, therefore, is to first carbolise my patient with doses according to age, and at the same time to put all the uninfected members of the household on carbolic acid, and when the characteristic hue has become manifested in the urine of the patient to introduce into the sick chamber the other children, allowing them free access to the invalid until desquamation is completed and the house disinfected. Before, however, giving details of cases in support of this unusual procedure I must give the following few extracts from Flügge's work concerning bacterial attenuation, which determined me to pursue my present course. "The loss of the fermentative or pathogenic properties (in micro-organisms) is shortly termed the '*attenuation of the bacterium.*'" "The vital phenomena which are in this way lost (as far as has yet been ascertained) are only the power of producing fermentation and that of exciting disease." "The smallest degree of injury which micro-organisms can experience as a result of external influences consists in the disturbance of their complete development." "Minute departures from the normal conditions of existence often lead to a cessation of some one biological function. Thus by alterations ..... we may have cessation of the swarming power, of the secretion of peptonising ferments, of the fermentative action, &c.. whilst growth multiplication and all other vital phenomena remain unaltered." "Their power in producing disease also may be influenced by similar trivial alterations in the conditions of life, and may be even temporarily removed ..... for example, by *small doses of specific poisons* we might be able to neutralise the superiority of the pathogenic bacteria over the cells of the animal body." "By noxious influences of definite intensity we may so alter many bacteria that they lose certain of their vital functions." "The noxious factors which are suitable for this action are less energetic than those which cause complete death of the bacteria; on the other hand, the effects are more marked than in the case of inhibitory means, which only exert their influence so long as they are present in the nutrient substratum." "At times, however, the greater effect necessary for *attenuation* can be produced by sufficiently long-continued action of the milder means." "When properly regulated, various chemical poisons are able to produce a permanent attenuation." Pasteur, writing on "The Attenuation of Bacteria" by chemical means, says: "*Each cultivation* of the attenuated bacterium is a *vaccine* for the more virulent—that is to say, a virus capable of producing a more benign malady." "The bacteria attenuated by antiseptics, whether they give rise to spores or not, preserved their *diminished virulence* through repeated cultivations" "It would seem, therefore, that the new (or attenuated) virulence of the varieties of bacteria thus produced is the better fixed the more gently the modifying influence acts upon them." These, then, are general principles concerning the attenuation by chemical agents of those bacteria which cause disease.

The next point to which I would briefly direct attention is an important one to the subject in hand—viz., the action of carbolic acid as an "attenuator" and "bactericide" upon a given bacillus. The anthrax bacillus, observes Pasteur, has been experimented upon more than any other—the one best studied. It is one comparatively easy of cultivation, has marked and distinctive characters, and is one of the *most resistant* of the bacillus tribe to inhibitory influences, and being a facultative parasite affords every facility for experimental observations; hence its behaviour under the influence of carbolic acid is of very great importance, because this acid alone of all the more powerful germicides is one that can be given in large and repeated doses, and these can be continued for a lengthened period of time without producing any deleterious effects upon the system or its organs, unlike many of the mineral and organic germicides. In all the experiments made on the anthrax bacillus it should be borne in mind that its cultivation was made in the most nutritive fluids—i.e., those that were the most favourable for the growth, multiplication, and development of its virulent powers—and that the varying proportions of the carbolic acid were added to these fluids. Therefore, the bacillus had advantages conceded to it which were foreign to its habitat in the animal body, whilst conversely a certain but unknown percentage of *disadvantage* accrued to the germicidal powers of the carbolic acid, because when this special form of nutrient material is withdrawn the carbolic acid acts with far greater energy. There is a considerable difference, however, exercised on those anthrax bacilli which have spores and those free therefrom. Bacteria free from spores are completely and rapidly destroyed (not attenuated merely) by a very small proportion of carbolic acid, being killed in a few minutes when from 0·25 to 0·5 per cent. is added to the nutrient fluid, whilst from a 4 to 5 per cent. is required to destroy its spores in from twenty-four to forty-eight hours. Gärtner and Plagge, however, found that a 3 per cent. solution was required to destroy the non-spore-bearing anthrax bacillus, but that this was accomplished in eight seconds, and a 1 per cent. solution caused their rapid disinfection. All experimenters, however, agree that carbolic acid is a very efficient bactericide.

The next series of experimental results to which I would direct attention is the *amount* of carbolic acid necessary to attenuate this very resisting bacillus. Koch found that there was a distinct hindering of growth when $\frac{1}{1250}$ of acid was added to the nutrient fluid, and that a complete cessation of growth occurred when the strength was increased to $\frac{1}{850}$. In these experiments it was found that the "action of the antiseptic was to diminish the virulence of the bacterium," and by continuing these experiments, by cultivations taken at lengthening intervals from the original flask containing the antiseptic, it was found that decreasing virulence was exhibited until an attenuated virus was produced capable of preserving animals from a fatal form of anthrax—i.e., a *vaccine* was the resultant. All these experiments were made outside the body, and under the most favourable circumstances for the growth and strength of the bacillus, but a great difference was observable when it was taken direct from the blood and then exposed to the action of the antiseptic. For instance, Koch observes that bacterial filaments taken from a virulent drop of blood in a case of anthrax soon perished when placed in a solution of carbolic acid of $\frac{1}{600}$, though, if a similar drop was put into the nutrient broth and carbolic acid of the same strength was added, the bacilli lived and grew therein. Lord

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Lister, in his observations, has found that normal blood serum is by no means a favourable soil for bacterial growth, and he states that he has returned to the use of carbolic acid for disinfecting purposes. So much, then, for the definite and decisive experiments with carbolic acid on the anthrax bacillus, but in drawing comparative reasoning between its action on this bacterium and its supposed action on that which causes scarlet fever we at once pass from the domain of fact into the region of theory. Nevertheless, I think it may be taken for granted that the same general laws which govern the attenuation and ultimate destruction of the known bacteria, though outside the body, will also govern, in a measure, these effects in the unknown ones, especially if their usual zymotic effects in a certain measure correspond. Nevertheless one naturally feels at a grave disadvantage from the fact that a scarlet fever bacterium has never been discovered. Still, I think no one doubts in these days its absolute existence, and that it partakes naturally of a virulent character, often modified, however, by a variety of unexplained circumstances.

Bearing in mind the potent action of carbolic acid on anthrax bacilli outside the body I was anxious to discover what amount would have to be given to a patient suffering from anthrax provided the effects were similar, with a view of ascertaining if there were any similarity of dose between what would be required in this disease and in that of scarlet fever, the dose being regulated to cause (1) a hindering of growth of the bacterium; (2) to cause a cessation of growth: and (3) to kill outright; for I concluded that if there were anything like unity in amount my success in my prophylactic treatment would be accounted for. I therefore had a table prepared, based, first, upon the weight of the body. I then allowed ⅛ for the average amount of blood contained therein, and calculated therefrom the approximate amount of carbolic acid that would have to be administered to produce the three separate effects described; and afterwards compared the doses with the one that I was in the habit of giving to my patients suffering from scarlet fever at varying ages.

TABLE I.—*Table showing the Effect of Carbolic Acid on Anthrax Bacillus, and Compared with the Amount of Carbolic Acid given in Scarlet Fever.*

Average weight of body in children and adults.	Amount of blood, ⅛ of weight of body.	Amount of carbolic acid given in scarlet fever in 24 hours.	Number of grains to hinder growth in anthrax bacillus 1/60.	Number of grains to destroy growth of anthrax bacillus 1/60.	Excess or deficiency. To hinder growth.	Excess or deficiency. To destroy growth.
st. lb.	lb.	Grains.				
3 3	3½	30	19½	28½	+ 10½	+ 1½
4 1	4½	36	25	36	+ 11	0
7 4	7½	60	43½	64	+ 16½	- 4
8 0	8½	60	48	70	+ 12	- 10
9 13	10½	60	60½	88½	- ½	- 28½
10 8	11½	60	69½	94½	- 4½	- 34½

In the above table the amount required to kill the anthrax bacillus is omitted, being too large to administer to a patient; but it should be borne in mind that the bacillus was placed under the most favoured conditions to establish robust growth, that it had not the vital antagonistic condition of the blood to contend with, and hence a much larger quantity of carbolic acid was necessary to produce the above results. It will be perceived that to a child from three to five years of age I gave thirty grains of carbolic acid in twenty-four hours, which would be ten and a half grains *more* than is requisite to effect the hindering of growth of the anthrax bacillus, and one and a half more than sufficient to stop its growth. In children from eight to ten years, averaging 4 st. 1 lb., thirty-six grains would be the amount given in the twenty-four hours, being eleven and a half more than necessary to effect the first purpose on the anthrax bacillus, and just sufficient for the second. Coming to those weighing 7 st. 4 lb., the average weight of young people, the dose to scarlet fever patients would be increased to five grains, or sixty in the twenty-four hours; and here we have plus sixteen for the first purpose and minus only four and a half for the second. It is not till we come to 9 st. 13 lb. that the amount given is barely sufficient to hinder growth, and twenty-eight and a half grains *less* than necessary to stop it altogether. In a person weighing 10 st. 8 lb.—the highest calculation made—there is only a deficiency of four and a half grains in the first column, but thirty-four and three-quarters in the second.

This table, of course, is but a basis upon which to ground certain broad inferences as to dose and effect; but I venture to think that the nearness of the dose in the first few years of childhood is of great value, demonstrating, as it does, that in the case of the anthrax bacillus its virulence would be seriously impaired by a dose smaller than that given in scarlet fever, and by analogical reasoning (on the ground that the bacillus of anthrax is of a very resisting nature) we might be justified in assuming that a very much smaller dose would be required to produce a far greater effect on the scarlet fever bacterium. There is, however, a very important point to be noted in the above table, and one apparently fatal to any conclusions we might wish to draw therefrom, and that is, that in the case of the anthrax bacillus the requisite quantity of carbolic acid required to produce the various effects described in the experiments is added at once in its entirety with the nutrient material, whereas in scarlet fever it is divided into twelve parts, and these distributed over twenty-four hours. This apparently fatal objection is met from several points of view; first, I think, there are good grounds for believing that the scarlet fever bacterium has much less resisting power than that of anthrax, and I am led to hold this opinion by observing the condition of the urine in a thoroughly carbolised patient. It must surely be conceded that there is some very powerful germicidal influence at work when the putrescent decomposition of urine—passed by a person suffering from this zymotic disease—is in many cases delayed for several days, and, secondly, prevented from assuming that highly offensive odour (so well known to us all), however long it is kept. We can hardly assert that there is a less antiseptic condition of the blood than of the urine, and if the blood is in this condition it must surely prove, in a great measure, inhibitory to bacterial growth and activity, remembering that "their power to produce disease may be influenced by a trivial alteration in the conditions of life." Then, though we know nothing concerning this bacterium, there is the ascertained fact that a person taking scarlet fever from a carbolised patient *invariably* has a milder attack, demonstrating that a feebler micro-organism has come into existence; and as it is reasonable to assume that the anthrax bacillus is of a more virulent type than that of scarlet fever a much smaller amount would be required to attenuate it—i.e., diminish its virulent power. Then we have to remember that the vital condition of the blood (that vital condition which is termed its life and exists only during the life of the animal) has an inherent antagonism to bacterial growth, therefore with the aid of a germicide of even feebler power than that used in experiments outside the body, bacterial activity would be still further hindered; and it has been proved by experiment that it takes one-third less of carbolic acid to destroy bacterial filaments taken direct from the blood than is required for those grown in nutrient broth, and so we at length get within a measurable distance of a much more moderate dose to effect the attenuated and germicidal powers required by my table than is required for the anthrax bacillus.

There is one other remaining point of importance to be noted. Cohn states that bacterial increase by the usual method of fission is so great that if only two were produced from one bacterium every hour their multiplication would amount to the almost incredible number of 4772 billions in three days. Further observation proves that this fission occurs every twenty minutes. Now each of these, whether more or less in number, would be produced in a fluid antagonistic to bacterial growth, and not under circumstances which would probably weaken the germicide ultimately, but in a fluid which would every two hours be subject to a renewal of the germicidal power. Hence this progeny would in time become "attenuated"—i.e., lose more or less the power of exciting disease, and if not completely attenuated would nevertheless have diminished virulent powers, and so approach that attenuated virulence called a "*vaccine*"; for, as Pasteur remarks, "each cultivation of the attenuated bacterium is a 'vaccine' for the more virulent—that is to say, capable of producing a more benign malady." Why, therefore, should we acknowledge the power of carbolic acid to attenuate and bring into the condition of a "vaccine" the progeny of the anthrax

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bacillus and deny the same power in the case of the bacterium of scarlet fever?

Such a line of argument would appear to me to be somewhat untenable, contrary to scientific truth, and irrational. I think, therefore, I am fully justified in my belief that carbolic acid given in scarlet fever *does* produce a virus capable of exciting a more benign malady, and without having absolutely witnessed with the physical eye the attenuation of the scarlet fever bacterium by carbolic acid, I contend that the results I have obtained do by analogical reasoning justify my assumption that such is produced, and that the bacterium so attenuated is, in fact, a "vaccine" endowed with all the beneficial results that accrue to such attenuated cultivations. In full confidence of these results ensuing I assert that isolation in scarlet fever is both unnecessary and inexpedient, and have in consequence given up isolating my patients, and feel that I am fully justified by the results of this method in the following cases.

CASE 1.—This case was certainly one of the most unfavourable for experiment. The father of the children suffered from curvature of the spine, and therefore a tuberculous tendency in the children would probably be inferred. The mother was of the sanguine type, highly nervous, and constitutionally delicate. All the children were of the blonde type—thin, pale, lymphatic, always requiring cod-liver oil. The two elder ones had taken scarlet fever some two years previously, when all of the others were carbolised and isolated, and escaped infection. Last year in a fresh locality one of them contracted scarlet fever from that hotbed of zymotic contagium, the board schools. I immediately gave the child carbolic acid, also the remaining two, and on the second day instructed the mother to bring the unaffected children into the sick room. The next day I learnt that they were so terrified that they could not be induced to enter. However, on urging the matter strongly they occupied the chamber, with the result that both took scarlet fever. The first day the pulse and temperature ran high, but on the second the attack suddenly collapsed, and the children were well somewhat more rapidly than usual. In this case had not my confidence in the value of carbolic acid been unassailable I should have had doubts about the wisdom of the procedure (when I found the initial stage so violent), but I was able to assure the mother, who was much frightened, that all would end favourably, and she subsequently acknowledged the wisdom of the proceeding.

CASE 2.—This case was equally instructive. On a former occasion two out of a family of four contracted scarlet fever, the remaining two took carbolic acid, were isolated, and escaped. Last year, in a new house and locality, one of these contracted the disease. The child was duly carbolised and then the other, semi-carbolised, was admitted to the room, spending all the day there, and this was continued until a prolonged desquamation was completed and the house disinfected, yet this fourth child was never attacked.

CASE 3.—Scarlet fever broke out in a house where there was a family of five children, only one of whom had previously been attacked some three years before. After carbolising the patient, and giving the uninfected ones carbolic acid, these were admitted to the room, and remained in it the greater part of the day. One child only, one year old, did not take the acid. All have remained free from attack. Singularly the one who had previously been infected did not take any medicine, and she was attacked with a slight diphtheritic sore-throat.

CASE 4.—I saw a patient suffering from scarlet fever in a family of six. After carbolising the patient, and giving the remaining five the acid, they were all allowed in the room on the second day, and I saw three of them on the bed together on one of my visits. Nevertheless, none of them took it. The house was disinfected, and no further outbreak has occurred. This was six months ago.

CASE 5.—A child, aged eight years, took scarlet fever, and in thirty-six hours the urine showed that she was carbolised. The next day a child barely two years old was attacked, and one and a half grains of carbolic acid was given every two hours. Her urine was soon discoloured. The remaining child, aged four years, took carbolic acid twice a day, played and slept in the room, and so far remains well. The mother had never had scarlet fever, and she also took the acid. There is no evidence of further infection.

So far, then, I have exposed fourteen persons to the direct contagium of scarlet fever and only two have been infected, which is at the rate of about 14? per cent.; and if facts are worth anything for the purpose of demonstrating truths I think I have fully proved that if a patient is duly carbolised from the initial stage (and I make this a great point), and all non-infected persons take small doses of the acid, the risk of infection is very small indeed, and if the contagion does find entrance into the system the attack is invariably mild. Why, then, should we isolate the patient? I contend that it is rather our duty to do all that we can to spread the contraction of this attenuated virus to all the other children in the house, knowing that they will have a mild attack, be immune for the future, and the chance of a prolonged illness is *nil*, whilst that of the appearance of a sequela is about 1 to 1000. But this is by no means all. If they escape infection they may at a later period contract, perchance, a virulent attack with all the subsequent disastrous consequences. One such case is painfully present to my mind.

CASE 6.—There was a family of two only—a boy and a girl. The boy took scarlet fever, was carbolised, and when desquamation was completed the house was disinfected. The girl was semi-carbolised and did not come into contact with her brother until then. Some time afterwards she contracted scarlet fever at school, had the usual vomiting and purging, which the parents attributed to a cold, and she was allowed to go out on a bleak day. The scarlet fever was suppressed and she died a few hours after I was called in.

This case has made me consider the question whether it is quite wise to semi-carbolise the unaffected children at all in a house where scarlet fever has made its appearance, but rather to allow them to enter freely the sick chamber, in the hope that the attenuated virus from the carbolised patient (without being further attenuated in the semi-carbolised) will be sufficient to induce a mild attack, for it is certain that when semi-carbolised the risk of receiving the contagion is very small indeed. On the other hand, we can never be quite certain what response a child's system will make to a zymotic poison. We have all seen mild cases give rise to virulent ones in almost every zymotic. We see it also in vaccination. Two babies apparently alike in physical constitution may be vaccinated from the same vaccine pock, yet on the eighth day one will present a small, well-defined inflammatory area around the vaccine, whilst the other will exhibit a hard indurated inflammation from shoulder to elbow. The introduced zymotic vaccine has been benign in one case, but has produced a virulent type in the other. I have therefore concluded for the future to *diminish* the dose to the unaffected to about one grain, in the hope that this will allow of infection, and, if so, on the earliest appearance to at once give the full dose for scarlet fever. The only exception to this that I think of possibly adopting, after more experience; is that if the first outbreak shows a decidedly mild type to give no carbolic acid to the unaffected, for it shows that we have but a feeble micro-organism to deal with; whereas if the first case shows anything like the virulent type then full semi-carbolism should be at once adopted.

The more, then, we isolate the uninfected the less chance is there of this attenuated bacterium taking up its abode in them and producing a more benign malady, and so protecting them for life. Hence isolation is quite unnecessary. And it is inexpedient. True, I have laid it down as a law not to be broken that the semi-carbolised children when mixing with the enfeebled patient shall not hold any communication with others foreign to the household, and that the open-air exercise necessary for them shall be taken in the garden. Where this is impossible, few gardens existing in overcrowded cities, I have directed those in charge of them to allow no inter-communication with others in the street, and I do this—though it is quite contrary to my theory and belief—because I do not think it right to force my opinions, however beneficial they may be, upon others. Nevertheless, I hold that the more freely the contagion from a carbolised scarlet fever patient is diffused the better it will be for the welfare of the community at large, and if this course is universally adopted scarlet fever will in time be no longer the dreaded zymotic it is at present. I am quite aware that I am making very startling statements, that deeply-rooted prejudice will both hinder and thwart the inauguration of this plan of treatment, that many will look upon it as absolutely Quixotic, and that it will take a long time to overcome both professional and public sentiment, so dreaded is the very name of scarlet fever. Nevertheless, scientific therapeutic medicine must prevail in the end.

Liverpool.

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A CASE OF SPONTANEOUS ANEURYSM OF THE RADIAL ARTERY IN THE TABATIÈRE: TREATMENT BY EXCISION OF THE SAC; RECOVERY.

BY ROBERT BRAMWELL SMITH, M.R.C.S. ENG.

ON Jan. 25:h, 1896, I was called to see a woman who was suffering from hemiplegia of the right side. Speech and deglutition were affected. I was told that two weeks previously she had had a stroke whilst engaged in household duties. On examining the right arm I noticed a fluctuating swelling about the size of a large marble in the space known as the "tabatière anatomique." Near the back and outer side of the wrist joint this swelling had all the classical signs of an aneurysm. After about three months treatment by rest and the administration of iodide of potassium the patient improved so much that she was able to use her limbs fairly well and her speech gradually returned. I then elicited the following history:—She was fifty-seven years of age, married, of mixed Spanish and English blood, and a dressmaker by occupation. At the age of fourteen years she had had her right leg amputated at the knee for incurable disease of the foot. She had had fourteen confinements at full term, the forceps being used in every case. Twice craniotomy had been performed and twelve children were born alive. Nine of the children were then alive and all were apparently healthy and of adult age. Two had died in youth from scarlet fever and one from bronchitis. She had had no miscarriages and there was no history of syphilis. At the age of twenty-seven years (thirty years previously) she had had a "stroke." Paralysis of one side followed and she lost her sight for ten days. This occurred a fortnight after one of her confinements. On examination a well-marked systolic bruit was to be heard at the junction of the sternum and the manubrium, which was conveyed along the carotids with great distinctness. On passing the finger-tips over the vessels of the neck the peculiar rosary-like feel of atheroma was experienced. Not the slightest sign of degeneration could be detected by the fingers in either the brachial, radial or ulnar arteries of either side. Arcus senilis was well developed. The patient first noticed the swelling at the wrist about five years previously, her attention being drawn to it by the uneasy sensation produced when she used her scissors. There was no history of injury whatever. I had the patient under observation for the rest of the year 1896. On March 18th I began to treat the aneurysm as the patient felt a great deal of pain proceeding up the arm from the swelling. Pressure over the radial artery above the sac together with pressure below and upon the sac by means of an elastic bandage was applied on three different occasions for some hours each time and discontinued when pain was too severe for the patient to bear. Pressure was kept up on the radial artery in the intervals. At the end of three weeks the pulsations had ceased altogether in the sac. Unfortunately, the cure was not permanent; probably from voluntary movement of the thumb the clot was disturbed and pulsation began to show itself. Rather strangely, at the time that the pulsation was noticed the patient had a third, though slighter, attack of hemiplegia. In addition to the paralysis there were several shorter attacks of spasm of the muscles of the arm on the affected side. The arm was brought round and the muscles were held in a condition of tonic contraction. There was well-marked anæsthesia all down the right side. The symptoms of paralysis left her by November, when she was persuaded to see Mr. Thomas Jones at the Manchester Royal Infirmary and he advised excision. As the patient now had great pain and as her hand was useless I determined to operate after showing the case at a meeting of the Manchester Medical Society. On Dec. 26th the patient was put under chloroform and the brachial artery being controlled by digital pressure I made an incision of three inches in length directly over the swelling. The superficial structures and fascia were cut through and several large veins were cut and clamped. The sac was exposed, occupying the space between the tendons of the extensor ossis metacarpi pollicis, extensor primi internodii pollicis, and extensor secundi internodii pollicis, passing under the latter tendon. After some dissection, owing to the tumour extending into the substance of the abductor indicis two branches were seen proceeding from the distal end of the sac, one being probably the continuation of the radial artery to the deep palmar arch. These, and the radial artery itself, which was much enlarged, were tied with recently boiled silk, and the wound was sutured with silkworm gut. No drainage tube was used, and the wound was dressed with Lister's double cyanide gauze.

Two weeks after the operation the wound had healed by first intention, except where one suture had been disturbed. In three weeks the wound was healed and the patient, contrary to my advice, was at work with her machine. Within a month she had done a day's washing. The aneurysm was of about the size of a large marble or a chestnut and of the sacculated variety. It was partly filled with a firmish white clot. The points of interest are: 1. The rarity of non-traumatic aneurysm in the radial artery. 2. The absence of any satisfactory reason for the formation of an aneurysm in such situation. My own opinion is that the aneurysm was due to embolism and probably dated much further back than the period of five years during which the patient had noticed it. I believe the increased prominence of the symptoms were due to degenerative changes peculiar to the patient's age and that nature was attempting a cure in an imperfect way. I cannot help thinking that the clot in the sac being disturbed had something to do with the second and third attacks of hemiplegia. 3. The advantages of excision in accessible cases over other methods. The patient was a most unpromising subject for operative measures or chloroform narcosis, yet she made a perfect recovery without a single bad symptom.

Manchester.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON A CASE OF CHOLESTEATOMA OF THE ATTIC OF TWENTY YEARS' DURATION SIMULATING DISEASE OF THE MASTOID PROCESS.

BY ADOLPH BRONNER, M.D.,

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A STRONG, healthy man, aged thirty-one years, saw me in January, 1896. There had been a discharge from the right ear for more than twenty years. Three times (ten, six, and two years ago) there had been a large, painful swelling behind the ear, which was incised. Frequently during the last few months there had been severe attacks of pain in the ear, accompanied by swelling and tenderness over the mastoid region. When I saw the patient there was an extensive fluctuating swelling behind the right ear, extending downwards to below the mastoid process, and upwards and forwards into the temporal region. The temperature was 101° F. and the pulse was 89. There was a copious, offensive discharge from the ear, and a fairly large perforation of the membrana tympani. On Feb. 5th a large incision was made into the abscess down on to the bone. Some pus escaped. A large quantity of unhealthy granulation tissue was removed by scissors and a sharp spoon. There was no fistula of the mastoid process, but the bone was rough in some places. I opened up the mastoid antrum and surrounding cells, which, to my great surprise, were apparently normal. The incision was then prolonged upwards round the upper part of the auricle, the cutaneous auditory meatus was cut through, and the ear was pulled downwards. The middle ear was thus exposed. A grey soft mass seemed to protrude into the upper part of the middle ear and a probe could be passed upwards for over half an inch. This was evidently the greatly distended attic. The upper wall of the osseous auditory

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meatus and the outer wall of the attic were then chiselled away and a cavity the size of a large cherry was exposed, which was filled with soft caseous matter. The walls of the cavity were smooth. The projecting edges were removed and the wound and cavity were plugged with iodoform gauze. The discharge for the first few days was extremely offensive, in spite of the local application of glycerine of carbolic acid and a perchloride of mercury lotion (1 in 100). The wound was plugged from above daily for three weeks and allowed to heal up from below by granulation. In two months the wound had completely healed with the exception of a small fistula above the auricle which was kept open by silver wire. In five months the discharge from the ear ceased. There has been no recurrence of the discharge or swelling. The hearing was so improved that a watch which was heard at a distance of one inch from the ear before the operation could afterwards be heard two inches away.

The interesting features of this case seem to be (1) that the attic had been affected for twenty years and the disease had not spread into the mastoid antrum or cerebral cavity; (2) that disease of the attic should have caused such extensive and repeated attacks of periostitis of the mastoid process; (3) that the cholesteatoma should have formed in the attic and not in the mastoid cells, as is generally the case; and (4) that the wound was kept open and allowed to heal up from below by granulation, as suggested by McEwen and Victor Horsley. The method generally adopted is to try to keep a large permanent opening above or behind the ear.

Bradford.

DEATH OF FŒTUS IN UTERO FROM GUNSHOT WOUND; RECOVERY OF THE MOTHER.

BY SAMUEL WILLIAM ROBINSON, M.D., B.CH. DUBL.,
MEDICAL OFFICER, NORTH-EAST ARGENTINE RAILWAY.

ON the morning of Aug. 25th, 1894, while on a pleasure trip in the country, about fifteen miles from the town of Empedrado, in this province, I was called to see a young woman, aged eighteen years, married eight months, who had been shot in the abdomen. On arrival I found her lying on a bed with two or three women about her, but with very little expression of shock or suffering. On examination I found a bullet wound, made by a fair-sized ball, a little to the right of the umbilicus and slightly below. There was no bleeding more than an odd drop of venous blood for a radius of two inches round the wound; there was extravasation of liquid in the tissues, at the time thought to be blood, but now believed to have been amniotic fluid. The abdomen was very pendulous, as is generally the case with the peasantry of these parts. I gave her opium and sent for instruments in case of necessity. About one hour afterwards labour set in, and went on slowly until 2 o'clock next morning, when, the woman being fairly exhausted and the pains weak, the os being sufficiently dilated, she was delivered by long forceps. The post-partum hæmorrhage being very sharp there was no time to examine the child, which had already begun to decompose. The hand was next passed into the uterus, and an opening in the anterior wall could be distinctly felt, with a part of the membranes prolapsed and held tight in the same. This no attempt was made to loosen, but the membranes were torn off close to the uterine walls, and the hand withdrawn with placenta which was loose in the cavity. The uterus was washed out with hot antiseptic solution (creoline), and ergot was given. On examining the child, which was at almost full time, it was found that the ball had entered the right shoulder by the junction of the acromion process with the scapula, and had come out in the left iliac region, drawing with it a coil of small intestine which was not wounded. As there was but one wound perceptible in the uterus the question arose: Where had the ball gone to? However, this was easily settled, as, on examining the clots, &c., it was found in the débris. The mother made an uninterrupted recovery, her treatment consisting in the application of iodoform to the external wound, which healed without suppuration, as all wounds do which have been made by a bullet having a great velocity (this one had been fired at a distance of three metres), ordinary antiseptic treatment being used. The uterus was washed out twice a day with a solution of creoline. The mother gave birth to a live child in 1895, and must have had little trouble, as she was attended by a native midwife.

Monte Caseros, Province of Corrientes, Argentine Republic, South America.

NOTES ON A CASE OF ASPHYXIA NEONATORUM IN WHICH THE HEART CONTINUED TO BEAT FOR MORE THAN FOUR HOURS WITHOUT THE RESPIRATORY FUNCTION HAVING ACTED.

BY JOHN MACKENZIE, L.R.C.P. & S. EDIN., L.F.P.S. GLASG.

ON Aug. 11th, 1894, I was called to attend in confinement a woman aged forty years. On examination the presentation was found to be occipito-posterior. The os was rigid and the uterine contractions were slow and feeble. The patient, a soft, flabby woman, had been in labour since the early morning (it was then 5 P.M.) and was much exhausted. The os having been dilated, delivery was effected by the forceps. The passage of the fœtus through the parturient canal took about half an hour. The delay was chiefly due to traction being used only during the pains. In the interval the blades were loosely held to obviate the effect of prolonged pressure on the fœtal head. When the child (a male) was born the funis was round his neck, the face was livid, the lips were blue (livida pallida), the heart was beating feebly, respiration was absent, and there was no pulsation in the cord. In the hope of relieving stasis in the fœtal channels the cord was cut and left unligatured, but no blood escaped. Considering this a very grave sign, and to guard against the possibility of mistaking any adventitious sounds for the heart sounds, I carefully auscultated and found the latter to be quite clear. I immediately began artificial respiration, practising alternately Marshall Hall's and Silvester's methods, and douched the infant with hot and cold water, &c. Remembering also Mr. Victor Horsley's advice in cases of arrested respiration from cerebral pressure, I applied hot fomentation to the head, at the same time continuing artificial respiration. For fully two hours I persevered with the ordinary treatment for asphyxia neonatorum, means I had never once seen before to fail with such a regular and even cardiac action; still there was not the faintest sign of respiration. Loth to give up the struggle I resolved on another manœuvre. The child was placed in the recumbent position with the head and neck extended, the tongue was pulled out, the jaws were kept apart, and I gently blew air through his mouth and nostrils. With every effort the chest and abdomen expanded as in natural breathing. Counter-pressure with the left hand on the lower part of the thorax expelled the air with a whistling noise through the glottis. It was noted that counter-pressure on the abdomen alone failed to produce this noise. Soon the heart's action considerably improved, becoming louder and quicker to such an extent that I could easily see its impulse against the chest-wall, yet there was no effort at voluntary breathing, the face and lips remaining the same. Exceedingly puzzled at the phenomenon of a heart beating for hours without the faintest appearance of respiration, the idea struck me that in all likelihood the heart was stimulated mechanically through the terminal filaments of the vagus by air passing along the œsophagus into the stomach, and not as I had imagined by the presence of oxygen in the fœtal blood. To clear up this doubt I managed to pass air into the stomach by means of a small gum-elastic catheter. Whilst doing so the heart beats fell back to the original condition, slow and feeble, just ticking in the distance, but on resuming blowing air through the mouth and nostrils the heart responded and improved as already described. This I did over and over again, and at last in despair (for it was now 10 P.M.), and to my regret, I left the infant who then had a strong, bounding pulse. How long the heart continued beating I am unable to say. I found the child dead next morning.

Remarks.—The above notes were written at the time, three years ago. After reading Sir Dyce Duckworth's paper, read at the Moscow Congress and published in THE LANCET of Sept. 4th, on Cases of Cerebral Disease in which the Function of Respiration entirely ceases for some Hours before that of the Circulation I thought this case of sufficient interest for publication.

Kirkby-in-Ashfield.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WESTMINSTER HOSPITAL.

A CASE OF RUPTURED HYDRO-ENCEPHALOCELE WITH EXTREME CONGENITAL HYDROCEPHALUS; EXCISION.

(Under the care of Mr. WALTER SPENCER.)

IN the following very interesting case the protruded membranes formed so large a swelling that rupture took place as the child was born; to this rupture is undoubtedly to be attributed the septic infection which occurred. The operation effectually prevented any further loss of cerebro-spinal fluid or any further absorption of septic organism. Removal of these large protrusions is always indicated, but it not rarely happens, as in this case, that the condition of brain which is present is incompatible with the child's continued existence. In many cases the interference with the intracranial pressure which results from the removal of the swelling is the cause of convulsions and death. For the notes of this case we are indebted to Dr. F. Kenneth Wilson, house surgeon.

A female child, aged thirty-six hours, was admitted into Westminster Hospital on Aug. 3rd, 1897. The mother, a primipara, was reported to have been in the second stage of labour, after eight months of pregnancy, when the swelling of the child's head was first perceived. Dr. Sydney Wright, under whose care the mother was, used forceps to deliver the arrested head. When born the tumour was about the size of the child's head. Dr. Wright sent the case to the hospital. On admission the child's head appeared to be of normal dimensions, but the sagittal and coronal sutures, including the posterior fontanelle, were still unclosed to the extent of a finger's breadth, and the occipital bone was in the same plane as the nape of the neck, no occipital prominence being present. Attached to the occipital bone was a soft, fluctuating swelling, somewhat less than one half the size of the head; it was covered with skin of the same thickness as the rest of the scalp. The skin was somewhat bruised and lacerated, and a little fluid was seen to be oozing from one point on the tumour. The child's temperature was 101° F. It was not considered advisable to administer any anæsthetic. Mr. Spencer made an incision round the base of the tumour and turned the skin back; the pedicle was cleared as far as possible, and then it was pinched between the finger and thumb. This pressure caused no disturbance, and no solid matter could be felt in its interior. The pedicle was then transfixed by a round needle carrying a strong silk ligature; the halves of the ligature were interlocked and the pedicle was tied, and another ligature was placed round the pedicle as a whole. The tumour was removed and the flaps which had been raised were drawn together. No more cerebro-spinal fluid escaped. On examination the tumour removed was found to consist of a thin-walled sac with a smooth inner surface; it contained blood-stained serous fluid. The child appeared to be none the worse for the operation and subsequently took milk well and a little brandy. The next day (Aug. 4th), as the temperature had risen to 104°, the sutures were removed from the middle of the wound, but only normal coagulated exudation was found and no pus. During the whole of that day and the next (the 5th) the temperature remained between 102·5° and 104·5°. On several occasions on these two days the child had slight attacks of general convulsions. The temperature remained high in spite of sponging, reaching 104° on the fourth day (the 6th), and on the morning of the fifth day after admission the child died. The intracranial pressure was normal throughout; certainly it was never excessive.

Necropsy.—At the post-mortem examination the parietal bones and the frontal bone were found to be unduly separate but partly ossified. The occipital bone was complete except for an opening admitting the thumb at the junction of the inter-parietal and supra-occipital elements of the bone. On opening the skull the two hemispheres formed distended sacs with very imperfectly marked convolutions. Between the hemispheres was the roof of the third ventricle of the usual reddish colour. This roof of the third ventricle extended backwards over the corpora quadrigemina, and was constricted at the tentorium, the opening in which was of the usual size. On opening the posterior fossa all that was at first seen was a distended sac formed by the roof of the fourth ventricle. As the middle lobe of the cerebellum was absent, the roof of the fourth ventricle was attached to the opening in the occipital bone corresponding with the ligature of the pedicle on the exterior. The large sac, which consisted therefore of the dilated third ventricle, the aqueduct of Sylvius, and the fourth ventricle, contained a greenish serous fluid without any sign of exudation, pus, or fibrin. In this brain were absent the corpus callosum, the fornix, the roof of the aqueduct, and the vermis of the cerebellum. The stage of development in which the arrest had taken place corresponded to one of His's drawings of a fœtus of two and a half months, reproduced in Quain's "Anatomy."[1] The hydro-encephalocele was therefore a protrusion from the roof of the fourth ventricle in the position usually occupied by the middle lobe of the cerebellum. It is remarkable that the skull should have been so well formed, being, except for the aperture in the occipital bone, the skull of an infant in the eighth month of pregnancy. The high temperature had commenced before admission, and was apparently due to general septic infection, as there was no evidence of inflammation about the wound or within the skull. The operation did not appear to affect the child at all. The care that was taken to ligature the pedicle of the tumour prevented any further loss of cerebro-spinal fluid.

JAMSETJEE JEJEEBHOY HOSPITAL, BOMBAY.

A CASE OF OBSTRUCTION OF THE PYLORUS FROM SPASM OF THE SPHINCTER; LORETA'S OPERATION; RECOVERY.

(Under the care of Surgeon-Lieutenant-Colonel W. K. HATCH.)

DIGITAL dilatation of the pylorus, or Loreta's operation as it is usually called, has been used in a fair number of cases, but it is less frequently employed at the present time than it was a few years ago. When the stricture of the pylorus is very rigid the dilatation by the finger is rather apt to cause rupture of the wall with a fatal result, and even when the dilatation has been effected with safety re-contraction of the pyloric orifice may occur and lead to obstruction at that point as early as the fifth day.[2] For these reasons Loreta's operation has been in great part replaced by pyloroplasty, or the Heineke-Mikulicz operation. In the following noteworthy case spasm of the sphincter may have been, as Surgeon-Lieutenant-Colonel Hatch suggests, the cause of the obstruction, but the stenosis may have been due to cicatrisation of a small shallow ulcer, possibly traumatic in origin.

The patient, a Hindoo, twenty-eight years of age, was admitted into the medical wards of the hospital under the care of Surgeon-Captain Childe on July 6th, 1897, and was transferred to the surgical wards on Aug. 6th. He had been treated during that time medically, but with no improvement, and an operation was advised. He stated that he had suffered from burning pain in the epigastrium and vomiting at night for the last two years, and had consulted several qualified and unqualified practitioners, but had received no benefit; previously to this his health had been good. He attributed his illness to the fact that he was unable to get sufficient food during the day, but drank large quantities of water; in the evening he had his food about 8 P.M., and at midnight he usually commenced to vomit a considerable quantity of water and particles of food; this was followed by a burning pain in the epigastrium. When admitted into the surgical wards he was thin and weighed 89½ lb., but was not anæmic. The pulse was small and regular, the tongue was coated and fissured, and the gums were spongy. He

[1] Tenth edition, vol. i., part i., p. 60.
[2] THE LANCET, Jan. 9th, 1892, p. 87.

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said that he felt extremely miserable on account of his prolonged illness and would be glad to die. Vomiting and burning pain at the epigastrium were the two symptoms of which he complained. The lungs and the heart were healthy and the liver was not enlarged. The abdomen was concave and the muscles were thin and flaccid; after food it became somewhat distended below the left costal border. No tumour could be felt, though the weakness of the abdominal muscles allowed every part to be easily examined. The stomach was found by percussion to be somewhat enlarged, but succussion sounds were not elicited. The appetite was rather increased, but there was no vomiting during the day. He was fed at 9 A.M., 2 P.M., and 6 P.M. About two hours after this last meal he usually complained of giddiness and eructations; this was followed by vomiting, about two cupfuls of fluid altogether, and was succeeded by pain of a burning character in the epigastrium. The bowels were constipated, the stools being hard and scanty. No blood had ever been vomited or passed by the bowel. On Aug. 11th the patient was chloroformed and a longitudinal incision three inches long was made in the linea alba, beginning an inch below the ensiform cartilage; the stomach at once presented. Examination of the pyloric end and of the duodenum did not clear up matters, the parts appearing to be perfectly healthy. Surgeon-Lieutenant-Colonel Hatch therefore opened the stomach near the pylorus and, introducing the finger, examined carefully the mucous membrane in all directions. Search was then made for the pyloric opening, but it was so tightly closed that for some time no opening could be discovered. At last a slight slit-like depression could be felt, and the finger being gradually pushed against this forced open the sphincter, which was then forcibly dilated; a ring-like constriction which gradually gave way was felt, but no real hypertrophy could be distinctly made out. A second finger could not be introduced, but the single finger moved freely from side to side. The stomach and abdominal incisions were then closed. From that time the vomiting and other symptoms ceased and the patient made a satisfactory recovery, the wound healing soundly. He now takes the same food as ordinary patients and has regained his strength to a considerable extent. He was not allowed to sit up for a month, and solid food was given for the first time fourteen days after the operation. The temperature rose to 100° F. on the evening of the operation, but fell next day to normal, and continued so until the present time, the patient being now perfectly well.

Remarks by Surgeon-Lieutenant-Colonel HATCH.—Native patients, particularly Hindoos, are very reluctant as a rule to undergo any abdominal operation, and the fear of this generally prevents them from coming to hospital even in cases of intestinal obstruction until their friends have tried all ordinary medicines. Consequently our statistics in abdominal surgery do not show very satisfactory results as compared with those of English hospitals. It was only when this man was tired of his life that he applied for relief, and I believe this case to be the first in which Loreta's operation has been performed in Bombay. As no ulcer or growth was met with I conclude that this was a case of pure spasm of the pylorus, and I may remark that ulcer of the stomach is extremely rare in Bombay either in males or females; only once have I met with a case of perforating ulcer, and in that instance I operated unsuccessfully. Although anæmia and disorder of digestion are very common among native females, the rarity of ulcer in India as compared with its frequency in England is extremely interesting.

LEEDS GENERAL INFIRMARY.

A CASE OF LIGATURE OF THE EXTERNAL ILIAC ARTERY FOR ANEURYSM BY THE TRANSPERITONEAL METHOD.

(Under the care of Mr. W. H. BROWN.)

THE introduction of the transperitoneal method of ligature of the iliac arteries was due to Dr. Dennis, of New York.[1] Among its advantages are the less danger to the peritoneum and other structures that it entails, the greater ease with which the operation can be performed and the choice which it gives to the surgeon of the best position for the ligature. In many cases also the older incision is rendered exceedingly difficult by the presence of the aneurysm for which the ligature of the artery is required. There is in the transperitoneal incision certainly the added risk of sepsis in the peritoneal cavity, but with even ordinary care this risk is slight.

A man, aged forty-five years, was admitted into the infirmary suffering from an aneurysm situated at the junction of the external iliac and the femoral arteries. The aneurysm was about the size of a hen's egg. Under ether Mr. Brown opened the abdomen in the line of the external iliac artery, cutting through the peritoneum. He tied the vessel midway between the bifurcation of the common iliac and Poupart's ligament, a silk ligature being used. Pulsation was immediately stopped. The peritoneum was then stitched together and the abdominal wound closed in the ordinary way. The patient made an uninterrupted recovery and is now walking about.

Remarks by Mr. BROWN.—This is the second time that I have had occasion to tie the external iliac artery for aneurysm, and in each case I have operated by the transperitoneal operation and with a good result. I think the method has many advantages over the older operation, and provided strict cleanliness is maintained is not more likely to be attended with disaster. In both cases the ordinary operation would have been difficult, if not impossible, owing to the position of the swelling.

[1] New York Medical Journal, 1886, No. 20.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Presidential Address.—Posterior Basic Meningitis of Infants.—Multiple Spontaneous Fractures.—Exhibition of Specimens.

THE first meeting of this society for this session was held on Oct. 19th, the President, Dr. J. F. PAYNE, being in the chair.

The PRESIDENT, after thanking the members of the society for electing him to the chair, referred to the objects of the society. He said that some had criticised the name of the society, holding that the term pathology is much too wide for the subjects which come under its notice. But the association of the idea of morbid anatomy with the term pathology, although regrettable as giving an incomplete view, is so bound up with medical literature of the past that it is difficult to see what other name could have been given to it by its founders and no one could reasonably propose that the name of the society should now be changed even if a more appropriate one could be selected. The limitation of topics is largely due to the fundamental rule of the society that except in rare instances no communication should be received which is not accompanied by a material specimen of some kind, a rule assuring greater authority and trustworthiness in the communications which are admitted. The advantages of this rule have been recognised by other societies, and the demonstration of experiments and the exhibition of living cases have become established institutions. The study of disease or pathology in its widest sense has always rested on two foundations—(1) the study of the material changes which are found associated with disease either as cause or effect; and (2) the study of the dynamical or functional changes. These two lines of thought may be more or less clearly distinguished through the whole history of medicine, sometimes one and sometimes the other being predominant. One may be called the anatomical school and the other the functional or dynamical. The Pathological Society belongs to the anatomical school. The utility of the study of material changes in the body has been questioned by some eminent men both in ancient and modern times. Even Sydenham was in opposition to, or at least out of sympathy with, the anatomical school. He avowed that he had never devoted himself to minute investigations in anatomy, which he considered to have no application to the art of healing; and of pathological anatomy he speaks with something like contempt. He says: "Others have more pompously and speciously prosecuted the promoting of this art by searching into the bowels of dead and living creatures to find out the seeds of disease destroying them, but with how little success such endeavours have been and are likely to be attended I shall in some measure make appear"; and his friend Locke (who was an

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accomplished physician as well as a great philosopher) follows in the same strain: "All that anatomy can do is to show us the gross and sensible parts of the body or the vapid and dead juices, all which after the most diligent search will be no more able to direct a physician how to cure a disease than how to make a man." Had he lived in the present century Sydenham would probably have taken a different view of morbid anatomy. Probably his example had something to do with the neglect of anatomy by English physicians in the eighteenth century when his influence was supreme. And even in spite of the triumphs of morbid anatomy in the present century there has been a certain undercurrent of disparagement or neglect which has not ceased even in our own time. The term "morbid anatomy" should not be used as restricted to post-mortem examinations, but as including the investigation of the material changes of tissues and organs by whatever means this investigation can best be carried out. The morbid anatomy of the ovaries has been chiefly elucidated by specimens removed during life, and the same is true of the pathology of the vermiform process and of tumours. It is a mistake to call all that is observed during life clinical and only that which is observed after death pathological. Physical diagnosis, including not only auscultation, but also the simpler investigation of abdominal organs, is really a study of morbid anatomy. Auscultation was introduced by Laennec, a profound pathological anatomist, who first showed how the facts of morbid anatomy, known by post-mortem examination, could be detected and studied in the chest of a living patient. It was only when physical signs were found systematically connected with known changes in the internal organs that they became significant. It is not too much to say that in diseases of the internal organs, other things being equal, the most precise diagnosis will be that of the physician who can form to himself the most precise mental picture of the state of a diseased organ and who knows also how to infer the existence of that state by observations during life of men like Sir William Jenner, Sir Samuel Wilks, Dr. Bristowe, and Dr. Murchison. It is claimed that while there are other methods of investigation, morbid anatomy supplies the most solid and fundamental facts, and that without it modern clinical medicine could not exist. In addition to its value in medical practice, morbid anatomy has played a great part in the advance of the scientific side of medicine, as shown conspicuously in recent years by the triumphs of bacteriology. The bacteriologist when making cultures is a botanist, when he detects bacilli in the tissues of man or animals is a morbid anatomist, and when studying the production of immunity in living animals is a clinical investigator, but he can seldom dispense with pathological anatomy and histology. Dr. Payne expressed the hope that the society would continue in its present course of bringing the results of pathological research into relation with practical medicine, and stating them in such a manner as to be intelligible to all who take an interest in pathology, even if they are unable to take part in original research.

Dr. G. F. STILL exhibited slides and cultures illustrating the bacteriology of the Posterior Basic Meningitis of Infants. He said that the disease occurred chiefly in the first year of life, and had been recognised recently as a definite disease both clinically and as regards its morbid anatomy, which is quite distinct from ordinary suppurative cerebro-spinal meningitis of pneumococcal infection or the septic meningitis from nose or ear disease. The cases are sporadic and occur most frequently in the spring. Seven consecutive cases were examined bacteriologically after death, and in all except one, which died three and a half months after the onset, the same organism was found. Subsequently a pure growth of the organism was obtained from each lateral ventricle in a child who had been ill over three months. In five out of the six cases it was obtained as a pure growth. The organism is a diplococcus, smaller than the pneumococcus, occasionally found in the cells, but more frequently floating in masses in the fluid. No definite capsule has been demonstrated. It stains easily by ordinary methods, but is decolourised by Gram's process. It is aerobic, and grows well at 37° C., but not at the ordinary temperature of the room. Rapid growth occurs on glycerine agar and agar-agar, which are the most convenient media, giving rise to slightly raised, greyish-white colonies, which are viscid and tend to run together to form rose-shaped patches. The growth is much thicker and more opaque, and the colonies are larger than those of the pneumococcus grown under similar conditions, and it also differs in not causing coagulation of milk. The organism grows well in broth, but very slightly on blood serum. It exhibits unusual vitality, living from thirty to forty days. It is seldom present in large numbers, and is easily overlooked unless a large piece of lymph is spread on the medium. Even when no cultures could be obtained from the adhesions at the base Dr. Still had found the diplococcus present in the fluid in the lateral ventricles. He had never succeeded in demonstrating it in the blood during life. Eleven inoculations had been made on mice, rabbits, and guinea-pigs. Subcutaneous injections produced no effect, and after intra-peritoneal injection the guinea-pigs merely refused their food, but none of them died. Dr. Still thought that the organism was certainly not the pneumococcus, but that it closely resembled the diplococcus intracellularis which had been described by Weichselbaum in connexion with epidemic cerebro-spinal meningitis. It differs in its strong vitality, in its growth in broth, and in its being non-toxic to mice and guinea-pigs. But Dr. Still held that these differences might easily be explained by a natural variation such as has been artificially produced in other micro-organisms, and that if this view is correct these cases must be regarded as sporadic cases of the same disease as epidemic cerebro-spinal meningitis.

Mr. C. SPURRELL showed specimens of Multiple Spontaneous Fractures taken from a married woman, thirty-seven years of age. She was of a neurotic temperament and, giving a long history of an indefinite illness, was admitted to the Poplar and Stepney Sick Asylum for spontaneous fracture of the right femur on March 6th, 1896. There was softening and deformity of the skeleton and the pelvis was especially distorted. She died from cystitis and septic nephritis on July 14th, 1897, and then had three fractures of the left femur, one of the right femur, fifth metatarsal, right and left tibia and fibula, right radius and ulna and six ribs on the left side. At the necropsy the femur was almost wanting in places, and all the bones could be easily cut with a knife. The medullary cavity of the bones of the upper extremities was diminished in size. Microscopically the bone appeared to be absorbed by giant cells and its place taken by hyaline cartilage and fibrous tissue.

Mr. EDGAR WILLETT showed specimens from a case of Multiple Spontaneous Fractures, the history of which has already been recorded by Mr. Langton,[1] from a man who was thirty years of age at the time of his death. He had had a succession of fractures from the time he was eleven years of age, in some of which bony union and in others fibrous union only occurred. When he was twenty-eight years of age a spindle-celled sarcoma developed at the seats of the fractures in his right humerus and the limb was amputated, but he died some months later from secondary deposits. The specimens showed fractures united by fibrous tissue and much displacement. There was no evidence of growth in any of the fractures except those in the right humerus.—Mr. J. R. LUNN remarked on the absence of nervous symptoms in the case related by Mr. Spurrell. The case bore some resemblance to one which he had described in the St. Thomas's Hospital Reports as acute osteitis deformans. The condition was very difficult to distinguish from osteomalacia.—Mr. D'ARCY POWER asked if the sarcoma was considered to be an accidental complication in Mr. Willett's case. He quoted the case of a boy who had a spontaneous fracture at the age of eight years, and afterwards had a succession of such fractures. He was still alive, and no light had been thrown on the pathology of the condition.

The following card specimens were exhibited:—

Dr. CALVERT and Mr. T. STRANGEWAYS PIGG: Melanotic Sarcomata in Various Organs.

Mr. D'ARCY POWER: Empyema of the Antrum in a Child aged eight weeks.

Dr. VOELCKER: (1) Carcinomata of the Heart and of the Pylorus; (2) Ulcerative Colitis; and (3) Uterus Bicornis.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—Dysmenorrhœa.

A MEETING of this society was held on Oct. 14th, the President, Mr. MAYO ROBSON, being in the chair.

Dr. MACNAUGHTON-JONES showed a Uterus, the seat of both Carcinoma and Fibroid, removed by vaginal hysterectomy. The patient, a multipara aged fifty-three, had had no

[1] Transactions of the Clinical Society, vol. xxix.

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symptom except hæmorrhage. Microscopic examination demonstrated the malignant character of the growth. While the operation was in progress the fibroid of the fundus offered considerable difficulties, being left behind owing to the tearing away of the friable lower portion of the uterus. He delivered the fibroid after compressing it with Doyen's forceps.—Mr. TENISON COLLINS (Cardiff) showed (1) a Foreign Body removed from the Bladder, consisting of a Pencil-holder round which a Stone had formed, and which had been *in situ* for two and a half years without causing symptoms and was discovered accidentally while dilating the cervix for stenosis; and (2) two Uteri removed by vaginal hysterectomy for Carcinoma.—Dr. CLEMENT GODSON showed a Glass Button-hole Flower-holder which he had recently removed from a Bladder. It had caused retention of urine. The patient came of a neurotic family.—The PRESIDENT, Dr. PURCELL, and Mr. BOWREMAN JESSETT, Mr. SKENE KEITH, and Mr. O'CALLAGHAN, joined in the discussion on the specimens.

Mr. SKENE KEITH read a paper on Dysmenorrhœa, which was limited to the treatment of uterine dysmenorrhœa. It was pointed out that the pain was caused, not by a stricture, but by the bending of the uterus *plus* the thickening of the mucous membrane and the congestion naturally present at the commencement of menstruation. The necessity of thoroughly trying general treatment before even thinking of anything local was insisted on, and the general treatment recommended was chiefly with the view of keeping the patient warm and thus preventing internal congestion. For the severe cases where all remedial measures had failed local treatment by stem pessaries, dilating in its various forms, division of the cervix, division with stitching, Dudley's operation, and Apostoli's treatment were considered; special attention being directed to the two last as being newer and less known than the others.—The PRESIDENT had had a very satisfactory experience of Dudley's operation, with which he had become acquainted through Dr. George Keith's paper before the society. It was simple and effective. He related a case illustrating its advantage over other procedures, and stated that he had not yet had a failure. He employed chromicized catgut sutures which did not require removal.—Dr. W. TRAVERS had had experience of the operation in four cases; he also had learned it from Dr. George Keith and indeed generally thought of it as "Keith's operation." One case, a neurotic woman and hitherto sterile, had been almost bedridden for seven years. After operation the first two periods were painless; at the third there was some return of pain; after this she got quite well and became pregnant.—Dr. HEYWOOD SMITH thought that a combination of incision, dilatation, and the use of the stem-pessary often answered very well. Dilatation alone did not usually lead to permanent improvement. The mistake was often made of incising too freely; the mucous membrane should be incised, just nicking the subjacent parts, and the dilators should then be introduced, after which a sterilised glass stem-pessary might be left in for a few days.—Mr. TENISON COLLINS said that when Dr. George Keith read his paper he was much worried over a case in which he had already dilated twice without avail. Dudley's operation led to complete cure. In two other cases the result had been equally satisfactory, and one of the two patients had since become pregnant and was delivered of a living child at term.—Dr. ARTHUR GILES acknowledged his indebtedness also to Dr. George Keith for his knowledge of Dudley's operation, which he had performed in about a dozen cases. In nearly all the result had been most satisfactory. In one or two there had not been much improvement, probably either because constitutional disorders had become established which took some time to subside or because the dysmenorrhœa was partly of central nervous origin. In one case all kinds of treatment for dysmenorrhœa had been tried for many years; the patient had been married twelve years and was thought to be sterile. After the operation the first two periods were absolutely free from pain, and she then became pregnant. He agreed with Mr. Skene Keith as to the importance of preventive hygiene in the early years of puberty. He thought that they needed here the coöperation of mothers, who should be impressed with the idea that dysmenorrhœa was no necessary portion of a girl's early menstrual years.—Dr. SCHACHT thought it would be very useful if at some future time all who had had experience of this operation would tabulate their results and send them in. He would willingly analyse and summarise such records for publication in the journal.—Mr. BOWREMAN JESSETT called attention to the fact that many young girls of from fifteen to seventeen years of age suffered from dysmenorrhœa, from which they were relieved by medical means, and great care should be used in selecting cases. It would be a great pity if the impression was created that the society advocated this or any other operation for all such cases. In cases of pure stenosis it was not indicated, but the plan suggested by Dr. Heywood Smith would probably answer quite well.—The discussion was then adjourned to the following meeting.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

Election of Officers.—The Purvis Oration.

THE first meeting of the forty-second session of this society was held on Oct. 8th at the Royal Kent Dispensary.

The annual report having been adopted, the following were elected officers for the ensuing year:—President: Mr. W. Arbuthnot Lane. Vice-Presidents: Dr. Morgan Dockrell and Dr. Edward H. Ezard. Council: Dr. R. Scholefield, Dr. George Herschell, Dr. John Mackern, Dr. Thomas C. Meggison, Mr. C. J. Parke, Dr. P. C. Scott, and Dr. Septimus Sunderland. Treasurer: Mr. J. P. Purvis. Secretary: Dr. J. P. Henry. Librarian: Dr. H. Bowen Williams.

Dr. G. H. SAVAGE then delivered the Purvis Oration. Having pointed out the immense progress which had resulted from the recognition of the facts of evolution he proceeded to consider the mental disorders associated with evolution and dissolution. The so-called ethnic division of idiots was suggested by the late Dr. Langdon Down. Some European idiots resemble Malays, Tartars, Mongols or Negroes. These cases happen to be human sports and not in any way to indicate that Europeans are the pinnacles of all civilisation. The Chinese may be able to return the compliment and say that certain Chinese idiots resemble Europeans. In idiot asylums one can meet with defects ranging from the slighter moral, intellectual or sensory defects to complete absence of all but the organic nerve reflexes. A few children come into the world simply reflex machines and not always good at reflex acts. Some seem without hunger or the desire for food and are quite unable to feed themselves or seek for food. Other children seem never to develop beyond the eating stage. Such seem to be morally defective from the first and may become adroit thieves. The young animal whose centre is his stomach is essentially egotistical. The deficient development of any altruistic feeling arises from defective development of the reproductive function. In another set of cases there is not complete arrest of development, but there is retardation of evolution. Some of these seem to be developed on one side at the cost of the others; they may be mechanical inventors or distinguished athletes, while reading, writing, and spelling may be almost impossibilities. There are moral idiots and moral imbeciles—children to whom truth, honesty, and any regard for others cannot be taught. Some such are brilliant musicians or infant prodigies of one kind or another. It is at the adolescent period that the neuroses, truly so-called, are most evident, such as hysteria and hypochondriasis, which almost always has a sexual basis. The patient thinks he has ruined his health by self-indulgence, or exaggerates some personal peculiarity. If so much fuss were not made about masturbation we should see fewer disastrous effects. The most delicate, most sensitive, and most conscientious are those most likely to indulge to their own injury. More harm follows the moral than the physical trouble. In some cases the worry rather than the physical effect leads to melancholia which is often suicidal. In general paralysis of the insane the reduction of mental power proceeds from the last and most specialised acquirement to the less developed, and in the end may leave little beyond a reflex machine. The inability to judge of one's own condition is very striking. As few old men recognise their failing powers till they are gone so the general paralytic is quite unable to recognise his state. Dissolution is the complement of evolution and is equally instructive. The mind gives way in different ways according to its physical environment, more rapidly in the city than in the country. Some nervous systems are calculated to work for a certain time and then break down. Neurotic heredity in many cases

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shows itself in this tendency to break down prematurely. Dissolution is the reverse process to evolution and it follows the same lines in the reverse order, the most highly specialised functions failing first. In many cases the memory of recent events is lost while that of long past events is made clearer. With early signs of dissolution hysteria and sexual desire long absent seem to flicker up and often lead to trouble. In some cases there are marked sensory disorder and hallucinations of sight or hearing, and a tendency to dwell on supposed defects of the sexual organs. Co-related to this is the strange reversion which is often met with, so that the tastes, habits, and ways of youth reappear with age. In both evolution and dissolution we meet with disorders due to want of power and others depending on loss of control. King Lear and Don Quixote represent the very poles of senile dissolution. The oration was illustrated by a number of cases representing the different types of disease described.—Dr. EZARD, Dr. TAYLOR, Dr. BOWEN WILLIAMS Dr. MEGGISON, and Mr. ROBERTS having spoken, votes of thanks to the orator and out going officers were passed.—Dr. SAVAGE and Mr. PURVIS replied.

Reviews and Notices of Books.

Die Geschwülste des Nervensystems: Eine Klinische Studie. Von Dr. LUDWIG BRUNS. Berlin: S. Krager. 1897. (*Tumours of the Nervous System: A Clinical Study.* By Dr. LUDWIG BRUNS Berlin: S. Krager. Glasgow: F. Bauermeister. 1897.) Price 12*s.*

THERE is abundant scope for clinical and pathological investigation in the domain of new growths implicating the several parts of the nervous system. Indeed, it is not too much to say that our knowledge of cerebro-spinal functions has been considerably amplified by such studies, whilst conversely the more exact determination of the localisation of these functions has aided materially in the diagnosis of the position of tumours and their amenability to radical removal. Varying much in their nature and rate of growth, tumours which involve brain or spinal cord present also great differences in situation, and therefore produce manifestations in associated signs and symptoms that demand close study for their differentiation. The records of cases illustrating every variety of new growths are sufficiently extensive to afford material for a most interesting and instructive monograph, which by collating and systematising the facts they describe cannot fail to be of service to neurological science and practice. This task has been well fulfilled by Dr. Ludwig Bruns, of Hanover, who has succeeded in presenting a survey of the subject that is sure to be appreciated. His subject matter falls naturally under the three heads of (1) Tumours of the Brain; (2) Tumours of the Spinal Cord; and (3) Tumours of the Nerves, each department being dealt with first from the anatomical and then from the clinical standpoint.

The thoroughness with which Dr. Bruns discusses the subject may be shown by a brief survey of the chapters devoted to cerebral tumours. In the first place he devotes many pages to the description of the various forms of tumour, pointing out the characteristics of gliomata and sarcomata, which he shows to be by far the most frequent forms, and also describing in detail gummata and tuberculous growths, as well as the less frequent examples, such as psammoma and cholesteatoma. Nor does he omit mention of cysticerci and echinococci, simple cysts, and aneurysms. The interesting question of the relationship of traumatism to cerebral tumours is debated with impartiality, inclining rather to the conclusion, even in cases where no symptoms arose until after the infliction of the injury, that this latter acted rather to reveal the presence of a growth (mostly gliomatous) which had been latent prior to that occurrence. At the same time he cannot doubt the occasional direct relationship and perhaps the more frequent excitation to increased activity of the new growth by the agency of traumatism. He does not think, as some do, that a hæmatoma can be converted into sarcomatous or other organised formation. The effects of a tumour upon the brain substance, whether by compression or infiltration, or the supervention of inflammatory changes, of softening and of hæmorrhage, are next described, and the all-important subject of symptomatology is entered upon. This is discussed in a thoroughly scientific as well as exhaustive manner. The general symptoms of cerebral tumour are held to be definite and characteristic. They comprise, in the first place, headache, the most frequent and the most important of all, the character and site of which are by no means indicative of the seat of disease (unless an occipital headache be accompanied by retraction of the head), and attributable to irritation of the nerves supplying the dura mater owing to the increased tension of the membrane; vertigo, a symptom of less frequency than headache, but of value when it occurs; vomiting, fairly constant, and generally sequential to headache; slowness of pulse, slow and irregular respiration, mental disturbance, chiefly dulness and hebetude. Convulsions, especially those of Jacksonian type, and optic papillitis are also fully described. Dr. Bruns is decidedly of opinion that the last-named characteristic is not of inflammatory origin, and that the old term of "choked disc" (Stauungs-papilla) is really a more accurate description of its nature. He gives various reasons for thus reverting to a doctrine that has been discarded by many high authorities, and some of them have certainly the merit of cogency. One of these is the fact, established by the recent successful ablation of brain-tumours, that the removal of the growth, or even the operation of trephining, which reduces the intracranial pressure, has been followed by a subsidence of the so-called "optic neuritis." The next portion of this chapter deals with local symptoms, and the effects of tumours in each part of the brain in turn are described. It is obviously impossible here to follow him through all these descriptions, the study of which proves how precise has become the means for localising lesions in this organ. It is pointed out that tumours in the frontal region produce ataxic symptoms similar to those due to cerebellar growths, and a valuable tabular comparison is given of the associated symptoms which enable the differential diagnosis to be clearly established. This question of diagnosis is also very fully treated subsequently, both from the point of view of the general signs of tumour as distinguished from those of abscess, meningitis, sclerosis, hysteria, &c., and from that of the locality and nature of the growth. Lastly, the subject of treatment is amply discussed, a full review being given of the experiences of surgical intervention.

The tumours which may involve the spinal cord are as various in their nature as those liable to affect the brain, but the effects they produce are less numerous, and their differentiation in consequence more simple. Yet the importance of their study is also great, since an exact determination of their situation and a satisfactory proof of their extra-medullary nature may enable them to be removed by operation. Intra-medullary growths, associated as these often are with syringomyelia, have a symptomatology of their own, of which the most prominent features are the bilateral distribution of muscular atrophy and paralysis, the dissociation of tactile, thermal, and algesic sensory defects, and the occurrence of cutaneous and other trophic disorders or of vaso-motor derangements. Such growths are of course beyond the sphere of ablation, but those which grow from membranes and are limited in extent may be readily removed. The tumours of peripheral nerves are more summarily treated; but the

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section dealing with them gives many interesting facts upon neuromata of special nerve-trunks, besides those remarkable cases of multiple neuromata of which molluscum fibrosum forms the most striking example. The monograph is undoubtedly one which fills a place in medical literature hardly perhaps so fully occupied before. It abounds in facts of high interest and importance and has been prepared with manifest care as well as good judgment.

Saint Bartholomew's Hospital Reports. Edited by SAMUEL WEST, M.D. Oxon., and W. J. WALSHAM, F.R.C.S. Eng. Vol. XXXII. London: Smith, Elder, and Co. 1897. Pp. xlix. and 548. Price to subscribers, 6*s.*; to non-subscribers, 8*s.* 6*d.*

THE first place in this volume is given to a sympathetic "In Memoriam" notice of Sir George Murray Humphry by Mr. C. B. Lockwood, and this is followed by a similar appreciation of Mr. Morrant Baker by Mr. Alfred Willett. Mr. Thomas J. Horder contributes a collection of 258 Aphorisms enunciated by Dr. Gee during the years 1895 and 1896; they vary of course greatly in interest, but many of them are of distinct value and well deserve to be rescued from oblivion. It would be of interest if similar collections were made from the utterances of other physicians.

Every surgeon must have experienced the difficulty of diagnosing between true intestinal obstruction and some forms of colic, and Dr. A. M. Mitchell gives notes of four cases of enteritis and colic in which the resemblance of the symptoms present to those of intestinal obstruction was so great that in three out of the four cases a laparotomy was performed, but no obstruction of the bowel was found; a useful table of the chief points in the four cases is added for comparison. Mr. Edgar Willett has a short paper on the Roseolous Rash which appears in some cases during the administration of ether; it shows itself about four minutes after the commencement of the administration and lasts for about ten minutes. It is more common in women than in men, and occurs in about 5 per cent. of all cases. Mr. McAdam Eccles contributes a paper on Hernia of the Vermiform Appendix; he has collected twenty-nine cases of this condition; in sixteen of these the appendix was alone in the hernial sac and was acutely strangulated, in seven cases it was alone in the sac but was inflamed, in four cases it was alone in the sac and unaffected, and in two cases it was in the sac with other viscera, and acute inflammation of the appendix existed. It is probable that the presence of the vermiform appendix in the sac of a hernia is by no means rare. Dr. F. W. Andrewes has written a valuable paper on the occurrence of the Diphtheria Bacillus in a series of cases of sore-throat amongst the female staff of the hospital. He examined systematically every case of sore-throat of whatever type which presented itself to him in his capacity of medical attendant to the nursing staff. The conclusions at which he arrives are as follows: the clinical characters are sufficient for the purpose of diagnosis of diphtheria in a large proportion of the cases, but in some cases, perhaps a ninth of the whole number, bacteriological examination proves the presence of the diphtheria bacillus although the clinical aspect of the case is not that of diphtheria. Dr. Andrewes considers that absence of virulence in a bacillus is no indication that it is not a true diphtheria bacillus, and that the spread of diphtheria is chiefly due to those slight unrecognised cases which clinically would not be considered to be cases of the disease. In one case the cultures of the bacillus when first isolated from the throat were non-virulent, but after some months of cultivation they became highly virulent. This case is in itself sufficient to show that virulence is quite untrustworthy as a criterion. Space will not permit of detailed references to all the papers contained in the volume, but we may mention a useful paper on Thiersch Grafting, by Dr. H. J. Paterson; an elaborate article on the Leucocytosis of Scarlet Fever, by Dr. R. Sevestre; and a valuable paper, by Mr. H. Holmes and Dr. A. A. Kanthack, on the Relationship of Cardiac Hypertrophy and Œdema to Chronic Renal Disease.

Dr. Morley Fletcher's paper on the Etiology of Chorea is also interesting. He concludes from the consideration of the records of 307 in-patients and 273 out-patients suffering from the disease that chorea is a manifestation of rheumatic fever, but that many other causes may coöperate in the production of the disease. Dr. Arthur Heath records four cases of Congenital Absence of the Radius in one family. Dr. H. H. Tooth has contributed the results of his investigations into the Pathology of Alcoholic Neuritis, and arrives at the conclusions that in some cases, though symptoms of alcoholic paraplegia have been present for a considerable period, yet post mortem no alteration of the nerve fibres can be found, that the change in the nerves when it does occur is always degenerative in character and never inflammatory, and that marked pigmentation of the cells of the anterior cornua is a common feature. The article is accompanied by a very copious bibliography of the subject. Descriptions of the specimens added to the museum during the year ending September, 1896, and statistical tables of the patients under treatment during 1895 by the medical registrar (Dr. W. P. Herringham) and the surgical registrar (Mr. James Berry) conclude the volume. These tables are very elaborate and must represent a vast amount of labour expended in their compilation. Details of a large proportion of the surgical cases are also given and add much to the value of the surgical registrar's report. An interesting table is that of the amputations with the percentage of deaths during the ten years 1886 to 1895 inclusive.

It is often said that hospital reports are of little value, but a volume like the one before us completely disproves any such statement.

Health in Africa: A Medical Handbook for European Travellers and Residents, embracing a Study of Malarial Fever as it is Found in British Central Africa. By D. KERR CROSS, M.B., C.M., F.R.G.S., Medical Officer for British Central Africa Protectorate. With an Introduction by Sir HARRY JOHNSTON, K.C.B., H.B.M.'s Commissioner for British Central Africa Protectorate. With numerous Illustrations. London: James Nisbet and Co., Ltd. 1897. Price 3*s.* 6*d.*

THE author of this laudable attempt to be of service to those who live in Africa on the outskirts of civilisation tells us in his preface that ten years' residence in British Central Africa as a medical man has impressed him with the need of a small handbook on health. He points out several reasons why this should be so, both in reference to the personal health and well-being of the new-comer to malarial regions and in reference to others, as, for example, the natives of Africa, by whom any European is regarded as a medical man to whom they frequently appeal for advice and medical aid when sick. In a volume like the present, embracing so many and such variety of subjects, which are treated in a necessarily condensed but plain and useful fashion, it is difficult to select passages illustrative of the way in which its author has fulfilled his task. A work of this kind is, and must be, in great part a compilation, but no pains seem to have been spared to render the information useful and trustworthy and up to date. It is very far from being, however, a simple compilation or sample of bookmaking, for the information is conveyed in an intelligent, scientific spirit. That part of the chapter on Specific Fevers which treats of malarial fever strikes us as good. Malarial diseases, although very unequally distributed over the globe, are the most ubiquitous of all diseases; they recede as

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civilisation advances; and drainage, cultivation of the soil, and the rendering of the surface of it more or less hard and impervious, have nearly abolished them in Europe. In climates like those of Africa it is far otherwise, and this will, it is to be feared, long remain so. The account of these fevers—their different forms and varieties, symptomatology, clinical features, treatment, and causation—is well done, and a lucid and interesting, if condensed, explanation of the life-history of the micro-organism with which they are associated—the plasmodium malariæ—is given. Black-water fever, or bilious hæmoglobinuria, is also shortly but well described. We notice, by the way, a typographical error at page 50, in which "retention" is used for "retraction" of the testes. The book contains a large amount of very useful and practical information on a variety of topics; it is very well illustrated and has a good index, and it may be honestly recommended as an excellent guide to those for whom it is designed.

LIBRARY TABLE.

A First Series of Fifty-four Consecutive Ovariotomies, with Fifty-three Recoveries. By A. C. BUTLER-SMYTHE, F.R.C.S. Edin., F.R.C.P. Edin., Senior Surgeon to the Grosvenor Hospital for Women and Children, Senior Surgeon to Out-patients, Samaritan Free Hospital for Women and Children. London: J. & A. Churchill. 1897. Price 6*s.* 6*d.*—The author says in the preface: "When I had completed my first fifty cases I decided to wait and see if I could obtain a clear run of fifty successful operations, inasmuch as I had been unfortunate enough to lose my fourth patient. Having now succeeded in attaining my object I venture to publish the results." There is always a little difficulty in classifying cases that have to be published under the title of "Ovariotomy." The term is here defined as meaning "removal of solid tumours of the ovary, cystomata, broad ligament tumours, parovarian, tubo-ovarian cysts, and cystic ovaries." There are a few general remarks on the operation, and on the significance of certain symptoms, at the beginning of the book. The author believes in flushing out the peritoneum in certain cases—for instance, where pus has been met with during the operation. Many operators, however, believe that such flushing tends rather to diffuse offensive matters to distant parts of the peritoneum previously unsoiled, and rely entirely on sponging to remove the pus. As regards drainage, another point as to which there is a good deal of difference of opinion, the author evidently believes it to be frequently required, as it was employed in twenty-five out of his fifty-four cases. We do not agree with the author in his views about the pulse in patients after ovariotomy. He considers that "too much importance is attached to rapidity of the pulse." ..... "In the absence of further indications, a rapid pulse should not be looked upon as denoting danger." Certainly a rapid pulse is generally of less importance during the first two days after ovariotomy than it is a day or two later. No doubt also the size of the pulse must be considered when estimating the importance of its rapidity. But, with these qualifications, we think most operators agree that the state of the pulse is by far the most important guide as to the condition of the patient after ovariotomy and similar operations. Mr. Butler-Smythe adopts a somewhat picturesque style in describing his cases, which reminds us of Mr. Charles Wyndham recounting the numerous objects of his admiration in *The Case of Rebellious Susan*. Thus "Mrs. M., a short woman; ..... M. W., a tall woman; ..... E. C., a thin woman; ..... E. W., a medium-sized woman; ..... J. R., a dark-haired woman; ..... A. B., a brown-haired woman; ..... M. P., a stout woman with iron-grey hair; ..... A. E., a putty-faced woman; ..... E. R., a pasty-faced woman; ..... (these last three were not included if we remember rightly in Mr. Wyndham's series); M. T., a fair-haired woman; ..... L. C., a full-faced woman; ..... M. G., a merry-faced woman," &c. The last case given is E. H., a widow, whose appearance the author, no doubt for good reasons of his own, does not venture to describe. A faithful record of a series of operations is always interesting, especially to those engaged in similar work, and to this rule Mr. Butler-Smythe's little book is no exception.

Sight-testing for the G. P. By F. DAVIDSON. Pp. 36. London: A. La Riviere. Price 2*s.* 6*d.*—In this little book, the title of which is inelegant, the subject of glasses and of sight testing is given from an optician's point of view, and the statements made are sufficiently correct for all ordinary cases. They would probably enable the country practitioner, who has not had an opportunity of attending an ophthalmic hospital or the eye wards of a general hospital (if there be such), to determine a simple case of myopia, or hypermetropia, or of astigmatism. We doubt, however, whether it is quite within the province of an optician to pose as the instructor of medical men in these respects. The physiological factor is, of course, overlooked, and the patient who is suffering from spasm of the muscle of accommodation consequent on hypermetropia, might easily have concave glasses ordered for him to his detriment, as there is no caution given in regard to that condition. Again, the maxim here laid down, "Advise the invariable use of glasses for reading and all near work in myopia," must depend for its correct application on the degree of myopia. Many persons who are moderately myopic have got into the habit of holding the book at a certain distance, and are indisposed to wear glasses which make a change in their position requisite. Once more, it is stated that astigmatism is *always* corrected by means of cylindrical lenses; but, alas, there are cases of irregular astigmatism in which no form of cylindrical lens that can be ground will afford much help. Fortunately, however, these are rare.

Analytical Records
FROM
THE LANCET LABORATORY.

PICNIC CONDENSED MILK.

(THE CONDENSED MILK COMPANY OF HOLLAND, LIMITED, ROTTERDAM, AND 21, MINCING-LANE, E.C.)

PERHAPS the most satisfactory feature in the composition of this condensed milk is, as our analysis shows, the excellent proportion of fat or cream-equivalent which it contains. The fat amounted to 12·00 per cent. and the mineral matters to 1·80 per cent. On diluting the milk with 3½ parts of water the resulting milk presented the composition of genuine rich milk, containing nearly 4 per cent. of fat. For infant feeding it is directed to dilute the milk seven times, in which case a milk of the following composition is obtained: Total solids (including cane sugar), 15 83 per cent.; fat, 1·90 per cent.; mineral matters, 0 30 per cent. The sample was in a sound and excellent condition and free from preservatives other than cane sugar. It is not in any degree deficient in the nourishing constituents of rich cow's milk.

ANTI-DIABETIC BREAD (FOUGERON).

(MESSRS. FOUGERON AND CO., 30, RUE ST. AUGUSTIN, PARIS. LONDON AGENCY: R. HOWDEN, 23, GRACECHURCH-STREET, E.C.)

On examination this bread proved to be somewhat heavily loaded with fatty matter, while on boiling a portion in hot water the resulting liquid when cooled gave a strong starch

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reaction with iodine. The basis of the bread is evidently almond flour. We are not sure whether the bread is offered as a remedy for the disease or as simply a suitable food for the diabetic. In a pamphlet accompanying the sample submitted to us it is said that the use of this bread decreases the glycosuria "in large proportions," and "in the case of diabetics where the urine has a small trace of sugar it causes it to disappear." We ask, Why? The bread contains a distinct quantity of starch and has a not very agreeable oily taste.

ST. RAPHAEL QUINQUINA WINES.

(E. DELACOSTE, 16, NEWMAN-STREET, OXFORD-STREET, W.)

A red wine and a white wine were submitted to us for examination. The results of analysis were as follows. Red wine: Alcohol, by weight 15·33 per cent., by volume 18·88 per cent., equal to proof spirit 33·08 per cent.; extractives, 7·36 per cent.; mineral matter, 0·30 per cent. White wine: Alcohol, by weight 15·67 per cent., by volume 19·28 per cent., equal to proof spirit 33·79 per cent.; extractives, 13·82 per cent.; mineral matter, 0·30 per cent. Neither of the wines yielded quinine on extraction with a suitable solvent, but a residue was obtained, which was bitter to the taste and somewhat pungent. This residue with potassium tri-iodide gave a reddish-brown precipitate, a reaction which is characteristic of the cinchona alkaloids. The solution of the residue, however, in sulphuric acid did not exhibit fluorescence. Both samples had "crusted" to a small extent at the time they were received. The wine selected as a basis in each case was of excellent quality and of generous character, possessing good, fruity, and slightly aromatic flavour.

MARVINE GELOIDS.

(THE MARVINE SYNDICATE, LIMITED, 28, ELDON-STREET, AND BROAD-STREET HOUSE, E.C.)

Complete confirmatory evidence was obtained of the statements made in regard to the composition of these "geloids," or lozenges, as they really are. They possess a pleasant acid flavour and dissolve readily in the mouth, a distinct but pleasant taste of beef extractives and cocoa at the same time being noticeable. The mineral matter obtained on incinerating a "geloid" contained a large proportion of potassium phosphate. Apart from the presence of the other ingredients this soluble salt, as is well known, affords a very refreshing beverage when dissolved in water. Marvine geloids act well as "thirst quenchers," due chiefly to the presence of the acid of lime juice. In addition, they contain well-known nourishing and stimulating ingredients. They keep well, but contain no objectionable preservatives.

LE VIN DÈSILES.

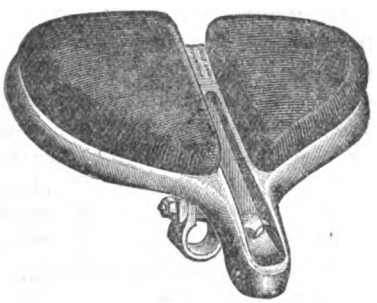
(AGENCY: FASSETT AND JOHNSON, 32, 33, SNOW-HILL, E.C.)

We cannot recognise that this wine is, as stated, a remedy for anything like the great number of complaints enumerated in a pamphlet which accompanied the sample submitted for examination. It doubtless serves as an agreeable restorative and tonic, since it contains the extracts of coca, kola, and cocoa, together with iodo-tannin and phosphate of lime. The excipient is "Special Dèsiles." We had little difficulty in confirming experimentally the presence of the many and various constituents indicated. The composition of the wine was as follows: Absolute alcohol 16·23 per cent., by volume 19·96 per cent., equal to proof spirit 34·98 per cent.; extractives 23·45 per cent.; mineral matters 0·26 per cent. The wine is sweet to the taste and has a strong flavour of coca leaf. It is described as a "Cordial Régénérateur." Its composition is certainly complex, and this is why, we suppose, it is recommended for so many ailments—a recommendation to which we refuse to lend the slightest support.

New Inventions.

THE "CHRISTY" ANATOMICAL BICYCLE SADDLE.

IT is generally conceded that the most important item in a bicycle is the saddle, for upon this depends the comfort of the rider, and it determines in large measure the question whether or not cycling is a healthful or a harmful exercise. The saddle under consideration is built so as to avoid any perineal pressure. As will be seen by the illustration it consists of two pads separated by a groove and the surface lies in a horizontal plane and is not wedge-shaped. The only difference between the saddle intended for a man and that for a woman consists in the peak being slightly shorter in the case of the latter. We have submitted each form of saddle to a competent rider of either sex and have received a favourable report thereon. At first there is a feeling of insecurity, but this very soon wears off after a little practice. The makers are Messrs. Spalding and Bros., 54, Holborn Viaduct, E.C.



THE INDIAN RISING AND THE TIRAH EXPEDITION.

THERE has been some sharp but desultory fighting on the border, on the Samana range, and two squadrons of the 9th Bengal Lancers reconnoitring from Fort Bana in the Khyber fell into an ambuscade and sustained a rather severe loss. The way has now been cleared, after the desperate fighting at Dargai on the 20th, for the advance of the main column of the force for Tirah, and the arrangements for the expedition under Sir William Lockhart have been completed. If we may judge from the samples we have already had of the fighting the advance of the expedition will be stoutly opposed, and the next point to be carried where the tribes are likely to make a stand will be the Sanpagha Pass. Ambuscades and surprises and the extreme difficulty of getting at the enemy in mountain warfare of this kind are the main obstacles to be overcome. One great anxiety connected with the expedition has, as usual, been the transport. While every effort has been made to reduce the amount of baggage and material to the utmost, the number of transport animals accompanying the force is necessarily very large. There will be as little tentage as possible with the troops—that allowed for hospital purposes will be on a very reduced scale, and considering the physical features of the country and the nature of the expedition it cannot be otherwise. We have not yet seen any official list published of the medical *personnel* of the forces and we can only trust that the number of medical officers accompanying the troops will be fully adequate to their requirements. The expedition is on a large and bold scale and must prove a very costly one, but it had become inevitable. The tribes had no excuse whatever for their rising at the present time; they had been subjected to no unjust or aggressive treatment, and they were being paid for keeping the roads and passes open. The movements of the expeditionary force sent for their punishment will be followed with great interest. Nothing can exceed the pluck, loyalty, and devotion of the native army, and the troops—British and Indian—of the expedition are in excellent health and fettle. As the expedition had to be undertaken we trust it will not be regarded simply as a punitive one. The opportunity must be seized for reducing the Afridi and Orakzai tribes to order and for securing some settlement that shall secure the frontier from a repetition of treacherous revolts of this nature. The recalcitrant tribes must be taught that the Indian Government is master, and intends to remain so. Having learnt that lesson it will remain for a wise, judicious, and conciliatory policy to effect the rest.

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THE LANCET.

LONDON: SATURDAY, OCTOBER 23, 1897.

THE theme of the notable address delivered by the Harveian Orator at the Royal College of Physicians of London on Monday last was happily chosen, whilst its spirit was consonant with the life-work of the master—our "venerated saint and apostle"—whom it commemorated. With admirable skill Sir WILLIAM ROBERTS showed how intimately bound up with modern civilisation are the methods of scientific inquiry which were practically initiated by HARVEY and his great contemporaries, GALILEO, BACON, and DESCARTES, and he felt justified in doubting whether it were possible for a civilisation so supported to share the fate of those ancient civilisations which have either become wholly extinguished or have remained stagnant and effete. For he pointed out that those ancient civilisations rested upon the cultivation of pursuits that are finite and personal, upon art and letters which seem to be incapable of advance beyond a certain pitch of excellence, and then to suffer decline. To be sure, they may be revived, and the world may yet witness another Renaissance, but they cannot in the nature of things undergo that expansion which in the sphere of science seems well-nigh illimitable. It was far from the orator's intention to institute any comparison between these mainsprings of human thought and endeavour; his admiration for the treasures that have been handed down by the masters of arts and literature proves that he did not disparage the part they had played in the cultivation of mankind; but he truthfully pointed out how some of the most precious masterpieces are those that were produced in dim antiquity, and how far below the heights then attained have fallen the endeavours of all but a few who have since laboured in the same fields.

Exact science—that based on the observation of facts, on experiment, on generalisation and deduction—dates from the time of HARVEY, and during the three centuries that have elapsed it has been undergoing an evolution which within our own time has proceeded with amazing rapidity to the great advantage and welfare of mankind. It may be that its progress will be less rapid in the future, but that it will continue to progress there can be little doubt. Sir WILLIAM ROBERTS, in the skilful exposition of some of the gains which have already accrued from the development of the sciences, expressed no doubts on this score. The spirit and methods of true science are such that when properly pursued they admit of no retrogression. Facts established as facts cannot be shaken; and one discovery of these secrets of Nature which HARVEY exhorted us to seek out leads to another being revealed from her inexhaustible store. Therefore, the Harveian orator has no fears for our modern civilisation, nor does he share the view expressed by the late Professor PEARSON as to its ultimate destiny. The nations that have pursued science can never be overwhelmed by the unscientific. Equally hopeful was his outlook of the effects of a civilisation based on science in promoting peace and improving culture, whilst the very storm and stress which are introduced into modern life by means of this activity are evidence of vigour and vitality as well as of progress.

Thus, then, did the Harveian orator convey a lesson which may well be taken to heart. It is not one indeed which is needed by members of the medical profession. They know too well the immense gains to health and prosperity which have arisen directly from the pursuit of natural science. But there are some persons in these days who seek to disparage science, and write or talk as if the world would have been the better without it. It is to be hoped that such people will embrace the opportunity afforded them by Sir WILLIAM ROBERTS of learning to how great an extent they are dependent on that which they affect to despise. He is no true lover of science who claims for it that which does not rightly belong to it, nor does it befit the follower of science to be arrogant and bigoted. Those who have best contributed to its advance have been men who have pursued it in the spirit of HARVEY, whose life and work have seldom been more happily and tersely sketched than they were in this oration. It is well to commemorate such a man, and it is well for us, too, to be reminded of the great work he did in laying down the first principles of scientific observation which have yielded so much up to the present and promise to yield yet more in the future.

WE dealt last week with the subject of adulteration of food, and drew a few lessons from the mass of interesting material supplied by the twenty-sixth annual report of the Local Government Board which has recently been issued. With the same report under consideration we may now turn our attention to the water-supply of the metropolis. Recent events have contributed largely in bringing the questions of the quality and quantity of the water supplied to London prominently before the public, and in their report Major-General SCOTT deals with quantity and Sir EDWARD FRANKLAND with quality.

In regard to the former section of the subject it is well known that during the last year or so considerable arrangements have been made for increased storage, and this is notably the case with the East London Waterworks Company, while the construction of storage reservoirs near Staines on a very large scale is about to be commenced under Parliamentary powers obtained by three of the metropolitan water companies during the last session of Parliament. The mean daily discharge of the Thames at Kingston is 1,300,000,000 gallons, and the quantity of water daily abstracted for the use of the metropolis is limited to a maximum of 130,000,000 gallons in twenty-four hours. The withdrawal of the quantity taken by the companies "can have no appreciable effect on the *régime* of the river in a general sense." But exceptional droughts in the summer must be taken into account, and it is at this time that the flow of the river is reduced to a minimum while the abstracted quantity approaches a maximum. Proper storage is the

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only means of coping with this difficulty if the present sources of supply are to be counted upon as adequate for future requirements. This applies with still more force to the Lea, which may be reduced to a stagnating quantity and to a minimum fraught with risks to the public health. Major-General SCOTT rightly emphasises the necessity for enforcing strict conservancy and regulations for sewage farms situated on or near the rivers above the intakes, and for the rejection as far as possible of the water of the Thames and the Lea during periods of rain when the rivers are swollen by surface drainage. These precautions become more and more urgent every year as the population in the river districts increases. Consequently upon the experience of severe frosts during recent years several of the companies have relaid their mains at a greater depth, and considerable advances have been made in extending the system of constant supply. Cisterns, however, cannot be dispensed with; but, at the same time, there should always be a draw tap on the supply pipe so that water can be obtained for drinking and cooking purposes in a pure and cool condition direct from the main. We are surprised to find that in spite of the importance of a good "head" of water being maintained in the mains for the purposes of fire extinction the companies at present are under no statutory obligation.

Sir EDWARD FRANKLAND'S report on the quality of the metropolitan water-supply is full of interesting reading and its purport is decidedly reassuring. No unpalatable or objectionably tinted water was detected during the year. The unfiltered water of the Lea was generally superior in regard to organic matters to that of the Thames. Sir E. FRANKLAND refers to those researches which have shown that zymotic agents are rapidly destroyed in running water, so that the most minute microscopic inspection of the water as it reaches the intake has failed to discover in it a single pathogenic germ. Efficient sand filtration, it is pointed out, would further prevent the passage of such germs into the filtered water even should they arrive in a living condition at the intakes of the companies. Thus, he says, the hygienic objection to the use of filtered water taken from the Thames and Lea is removed. We are quite willing to accept this statement, but only so long as efficient filtration is held to be the highest possible degree of efficiency of which the filters are capable. The organic matter present in river water as delivered in London was according to the construction put upon Sir E. FRANKLAND'S analyses during the past year to a very large extent of vegetable origin. Both the Thames and Lea waters delivered during the year 1896 were somewhat below the average quality of the previous years in regard to organic matters. In regard to suspended matter Sir E. FRANKLAND adds a paragraph which we imagine would not have appeared had not the London County Council's chemists about this time last year published a report in which it was shown by DIBDIN'S micro-filter method that suspended matter identical in character with that occurring in raw Thames water was found in the water drawn from the London public supply. Sir E. FRANKLAND is very precise in demonstrating how all water, even the purest in nature, contains abundance of suspended matter. He adds that the amount of this suspended matter in the *efficiently* filtered river water supplied to the metropolis rarely if ever exceeds 0·0002 gr. in a tumblerful, and therefore in order to imbibe a single grain it would be necessary for the consumer to drink no less than 5000 tumblerfuls of the water. This is a popular way of putting it, which forcibly reminds us of the London County Council's Report in which the amount of suspended matter was calculated in terms of mud containing 90 per cent. moisture.

Sir E FRANKLAND again evidently had Dr. KLEIN'S portion of the London County Council report just referred to in his mind when he pronounced upon the standard of bacteriological purity. He does not consider that the presence of the bacillus coli communis in water is a proof of sewage contamination, because this organism is one of the most ubiquitous and persistent of harmless microbes. We do not think this statement will go without challenge. We are again reminded of the London County Council report in Sir E. FRANKLAND'S expression of opinion that it is of little use to examine the filtered water delivered in London, not only because it is a mixture of the effluents from many filters, but especially because the multiplication of ordinary river and harmless microbes is so rapid that the number is generally increased many fold between the filtration works and the standpipes in London. He supports his argument by the results of experiments which showed that whilst the Lambeth companies' filters were passing water containing only 116 microbes per c.c. a sample drawn from one of their standpipes in the streets contained 1560 in the same volume. Further, as he has previously shown, the results of the bacterioscopic examination of the unfiltered waters again demonstrate the remarkable effect of storage in reducing the number of bacteria. In some instances he found a number of microbes in the water-supply in excess of the standard, and in June, for some unexplained reason, the filtration plants of nearly every metropolitan company were simultaneously unable to perform efficiently their work of bacterial purification. Sir E. FRANKLAND has failed to find an explanation of this singular occurrence. As he reasonably observes, if it had occurred only in one or two cases it might have been attributed to accident or carelessness, but the fact that it occurred in every supply indicates that the cause must be some condition or conditions affecting both the Lea and the Thames.

THE election of Mr. VICTOR HORSLEY, as we said last week, was secured by a substantial majority. He received 6946 votes against 6112 given for Sir WALTER FOSTER—a majority of 834. This result appears to be very satisfactory to the profession as a whole, for Mr. HORSLEY'S opponents recognise in him a man who will support the dignity of direct representation, while his friends have every confidence in his energy and his devotion to the cause of medical reform. If he expresses advanced opinions he will give grounds for them, and it cannot be supposed that one occupying his high position in science will advocate anything that will tend to any deterioration of the educational standards of the profession.

The general lessons of the election are not to be

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disregarded. It is comparatively gratifying to gather from the report of the Registrar that 59·64 per cent. of the voters did their duty by voting for the candidate they preferred. Of 22,576 voting papers sent out—that is, by the way, just one less than the number issued last year—13,466, or 59·64 per cent., were returned by the voters within the proper time. This is an improvement in the numbers voting equal to 5·42 per cent. of the whole as compared with the election of last year. But it is not wholly satisfactory. It still leaves 8061 voters who have not availed themselves of the privilege conferred on them by the Act of 1886. Though larger than in 1896, the proportion of voters is less than in 1886, when it was 74 per cent. of the voters, and than in 1891, when it was 61·3 per cent. More than a third of the constituency have abstained from voting, which seems to show an indifference to the privilege or a great satisfaction with the "powers that be" in the profession. The fact must be pondered by those who are contemplating large additions to the number of Direct Representatives. They will be expected to explain why so large a proportion of the profession do not care enough for the principle to return a voting paper at the expense of a penny. Parliament does not care to concede votes to those who are not importunate in demanding them and faithful in the use of them when conferred.

A feature of this election was the practical concentration of the votes on two candidates. When the votes are scattered over ten candidates, as they were in the election of last year, the influence of the candidate returned is weakened. The rest of the Council may, if they choose, regard such a Direct Representative as the delegate of a section rather than as the choice of the profession. On this occasion there can be no doubt that Mr. HORSLEY and Sir WALTER FOSTER constituted between them the choice of the profession—or rather of those members of the profession who chose to exercise their prerogative of voting. The votes were practically divided between them, and as their public promises differed in no material way either can, if he likes, claim to represent the medico-political views of his opponent's supporters. In a second respect the recent election has been significant. Hitherto two principles have had considerable sway; firstly, that there should be a rough territorial representation as between the metropolis and the provinces, and secondly that the Direct Representatives should be general practitioners. These principles have been quite ignored. The member whose retirement created the vacancy was a provincial representative. An eminently able provincial physician offered himself for the vacancy, and he has been beaten by a London candidate who received very great provincial support. The other principle, that preference should be given to a general practitioner for a Direct Representative, seeing that the Council consists so predominantly of members of the consulting or teaching class, has been no less neglected. Concerning this point, we are still strongly of opinion that, other things being equal, the seats of direct representation should be filled by men in general practice. But other things must be somewhat equal, and it would have been difficult to find any general practitioner with Mr. HORSLEY'S knowledge of the reforms needed to make the general practitioner's life easier and his remuneration more secure. Certainly no one possessing similar practical experience presented himself on this occasion as a candidate for election. We shall watch Mr. HORSLEY'S career in the Council with the greatest interest. His first official action, as announced in his letter to the profession, which we publish in another column, is full of promise. With distinct self-sacrifice he pledges himself to retire from the Council in 1901, when the term of the other two Direct Representatives for England and Wales expires, thereby saving the profession from the inconvenience and the Council from the expense which would otherwise have been entailed by Dr. RENTOUL'S procedure.

Annotations.

"Ne quid nimis."

ABSENCE OF MEDICAL EVIDENCE AT INQUESTS.

WE have read the reports of two inquests recently held in Gloucester. Inquest number one was on the body of a man, unidentified, which was found in a pond. A police constable deposed to finding the body. He "got it out and removed it to the mortuary, but could find no marks of injury; ..... he believed it had been in the water eight or nine days." An open verdict was returned. Apparently there was no medical evidence called and no attempt to find the cause of death. Inquest number two was held on the body of a girl, aged nineteen years, which was found in the canal on Oct. 4th. The mother deposed to seeing her daughter for the last time on Sept. 29th; she was then perfectly well and cheerful. William Voyce spoke as to the recovery of the body and bringing it to the mortuary, and Emma Maisey said she made an examination, but found no marks whatever on the body or any sign of injury. The coroner said there was no sign of suicide or any evidence to show how the girl got into the water. If the jury were not satisfied he would adjourn the inquiry. The jury thought it unnecessary to adjourn the inquiry and an open verdict of found drowned in the canal was returned. Now we should very much like to know how this jury arrived at the conclusion that the girl was drowned. Is anyone found dead in the water necessarily drowned? The deceased might have been murdered and thrown into the water dead, or drugged and thrown into the water while still alive, or have fallen in accidentally, despite her hat and umbrella having been found on the bank; but what is the use of pursuing further hypotheses? Suffice it to say that if ever there was a case which called for a strict inquiry and medical evidence founded on a post-mortem examination this case is such an one.

SEWER VENTILATION AND TYPHOID FEVER.

A CORRESPONDENT at York sends us a newspaper cutting from which we gather that the question of sewer ventilation has been exercising the minds of the City Council. The city has spent upwards of £200,000 on its system of sewerage and has adopted, under competent advice, the plan of surface ventilators. These have proved less successful than could have been wished; the smells arising from them are stated to be abominable, and during a recent discussion at a meeting of the Streets and Buildings Committee the prevalence of typhoid fever in the city was by certain councillors openly ascribed to this source. Other members of the council, and amongst them a highly qualified medical man, maintained that the escape of sewer gases into the fresh air, though

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possibly deleterious, was incapable of causing typhoid fever; and it is this statement which has excited our correspondent's ire. The question, as a matter of fact, is one of considerable difficulty. Cases are not wanting in which the escape of sewer air has apparently led to typhoid fever, as in the instance of Eastney barracks, where proper sewer ventilation put a stop to the frequent occurrence of the disease. On the other hand, we have not only the growing evidence that typhoid fever is in the main a water-borne disease, but the fact also that men employed in sewers and sewage works are not specially subject to it. Above all, we have good experimental evidence that sewage does not, under ordinary circumstances, give up the bacteria which it contains to the air in contact with it. The testimony on this point is almost unanimous. Miquel, Carnelly and Haldane, and Laws all find sewer air remarkably free from germs, and the last named, in an investigation carried out for the London County Council, proved that the species of micro-organisms present in the sewer air in London were related to those of the fresh air outside and not at all to those present in the sewage. Not once in numerous experiments did he find the bacillus coli communis in sewer air, though it was shown to teem in the sewage. Thus the balance of evidence goes to show that the conveyance of the typhoid fever germ by sewer air must at least be very exceptional, and we know of no proof that the disease ever arises as the result of the mere escape of sewer gases into the open air. That the inhalation of sewer air may produce injurious effects no one will dispute, but precisely how it does so is at present obscure. It is more than probable that its escape into houses may be a serious predisposing cause of typhoid fever, diphtheria, and other diseases, presumably by leading to general ill-health and thus to a lowering of the powers of resistance against infection borne by other channels. We have only recently pointed out in these columns that the distribution of typhoid fever in Maidstone may be in part explained by the action of such a predisposing cause as the ascent of sewer air into the houses in the higher regions of the town. But certainly the injury is at a minimum where the sewer gases escape into the open air. If the sewers of York give rise to offensive effluvia this may be either that the surface ventilators are not sufficiently numerous or that the sewers have not a fall adequate for their efficient flushing. The experience is pretty general that for large towns surface ventilators are on the whole the best means of ventilating sewers. In London they may be said to work well, and such nuisance as may from time to time locally arise is rather a useful indication of imperfect flushing than a danger to the health of the community.

OVER-PRESSURE IN SWISS SCHOOLS.

EDUCATION itself has not a little to learn, and in the European country where it exceptionally flourishes it is at present conning the self-imposed task contained in the copyline, "Ne quid nimis." "Surmenage," or what we call "over-pressure," is now a recognised evil in Swiss schools, productive, as Sir J. Crichton-Browne and THE LANCET demonstrated in a memorable controversy, of neurasthenia and many other organic ailments, imperfectly summarised under that term. Nearly every canton in the Confederation can point to its cases, more or less numerous and aggravated, of "la neurasthénie scolaire," and the canton of Lucerne, at a recent conference of its "Régents," had under consideration a series of propositions for combating the evil. These were eight in number, and they came before the conference under the high educational authority of Dr. S. Stocker, who is also an expert in school hygiene. The first proposition would limit instruction in primary schools to reading, writing, and arithmetic, drawing ("dessin"), object-lessons pursued by preference in the open air, gymnastics, and singing. These branches should form the work of the six classes recognised in Swiss primary schools, but in such a way that drawing, object-lessons, and physical exercise should predominate in the lower classes. Proposition two would put an end in primary schools to all tasks to be performed at home, while in secondary schools they would be permitted only in a restricted degree. The third proposition would regulate the "passages to be learned by heart," limiting them to those which are "concise in style," and even then requiring them to be moderate in length and to be exacted only from the upper classes. The fourth would interrupt the lessons from half hour to half hour by pauses of ten minutes, and the fifth would entirely suppress "examinations on the work done at the close of the day." Proposition six would in summer and when the heat is great have the lessons conducted every afternoon in the open air, and proposition seven would interpose every six or eight weeks a vacation of one or more weeks in the class work. Finally (proposition eight), attendance at school should not commence till after the child has passed the age of seven. The innovations proposed by Dr. Stocker and the influential party he represents may appear too drastic, or, in other words, too indulgent to the pupil. That they have been recommended at all, however, is a proof of the evil they have to cope with—an evil certainly not lessening in an age of competitive examinations and nowhere tending to assume graver proportions than in the British Isles. Readers of THE LANCET may remember the opposition, neither well-inspired nor always fair, encountered by Sir J. Crichton-Browne and other medical authorities at the hands of officialdom headed by the late Mr. Mundella; but the crusade so energetically promoted, if at first resisted by "those in authority" with more zeal than knowledge, justified itself at length and suggested similar movements on almost identical lines in the New World as well as the Old. The vindication of the wisdom that started it came in steadily and strongly from Continental Europe in particular, and finds its latest exemplar in the nationality which, thanks to Pestalozzi and his adherents, has in many ways led the van in popular instruction.

CHLOROFORM ADMINISTRATION TO CANINE PATIENTS.

THAT dogs die readily under chloroform has been commonly held. Like many popular beliefs it has not only no foundation in fact, but is negatived by such evidence as exists upon the subject. The pariah dogs of India, as was shown in the Reports of the Hyderabad Chloroform Commissions, died rarely, unless the vigilance of the administrator was relaxed from his task. Professor Hobday, of the Royal Veterinary College, who has devoted especial attention to the subject of giving chloroform to dogs, has published statistics of 250 cases of chloroform administration with one death. The casualty was due to the rupture of the portal vein in an obese pug dog whilst it was struggling to free itself from its bonds. This death was probably not directly due to the anæsthetic. The apparatus in 180 cases was one which Professor Hobday devised and which allowed air to be drawn over the surface of the chloroform by the direct aspiration of the animal's breathing. The dogs were of various breeds, ages and sizes, and in all stages of condition, some being pregnant, and all being out-patients, so that no preparation was possible. Vomiting is not mentioned as a complication. The students gave the anæsthetic. The patients were usually anæsthetised in the "abdominal position, being the safest and most convenient for the production of anæsthesia; the patient was afterwards placed as required." One dog proved refractory.

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and after twelve minutes a more concentrated vapour of chloroform was successfully employed. Three "untoward cases" occurred; two recovered after two minims of Scheele's hydrocyanic acid had been placed on the back of the tongue and artificial respiration had been employed, and the third, which died, was the fat pug referred to above. Professor Hobday regards hydrocyanic acid as antidotal to chloroform and directs the use of a "full medicinal dose" it in respiratory failure. But as artificial respiration is also used it is perhaps not certain what *rôle* the drug plays in the resuscitation. The lateral posture and rapid rhythmic compression of the ribs are the means of artificial respiration recommended, and there is no doubt that in most cases animals with pliant ribs can be rapidly restored by this method even without traction of the tongue, although that is often a valuable aid. The remaining seventy patients were chloroformed by Professor Hobday's other inhaler,[1] which is practically a small Wolff bottle, the animal breathing air which has been pumped over the surface of the chloroform and not as in Junker's apparatus driven through the anæsthetic. Professor Hobday's conclusions are that chloroform is not particularly dangerous to dogs or other animals unless improperly administered in an insufficiently diluted vapour and in an irregular manner.

VIEWING THE BODY.

AT an inquest recently held at Accrington by Mr. F. D. Robinson, the deputy coroner, the jury complained through their foreman of having to view the body and asked if they were compelled to do so by law. Mr. Robinson replied that they were so compelled. The foreman then asked if the coroner was not obliged to view the body also, and received an answer in the negative. It is, of course, the fact that the coroner is not bound by law to view the body, but in our opinion he certainly should do so, above all if he be a medical man, for certain appearances might very well be present which might in that case lead him to conduct his inquiry in some particular way or to adjourn the inquest so as to have a post-mortem examination made. This, in fact, is one one of the great reasons why we have always insisted on the propriety of the coroner being a medical man. The jury finally passed the following resolution, "The jury believe the viewing of dead bodies by juries to be useless, but if the law so directs we believe that the coroner's presence should be necessary." As now carried out the viewing of bodies is certainly rather a perfunctory ceremony, but, to quote the compilers of the Prayer Book, "the abuse of a ceremony doth not take away the lawful use of it."

A FURTHER IMPROVEMENT IN DISINFECTION BY STEAM.

SATISFACTORY as are the results obtained by the use of such apparatus as those of Lyon, Reck, and others, it must be admitted that the air confined in a closed chamber presents an obstacle to the penetration of the interstices of stuffed or packed goods by the superheated vapour which is not met with when "current" steam is employed, though this preliminary loss of time is more than compensated by the greater efficiency of the higher temperatures (from 220° to 240° F.) over the lower (from 170° to 180°), however prolonged. Since, however, the high temperature must be not only reached but maintained for about a quarter of an hour in the interior, it follows that the exterior of an article of clothing or bedding is exposed, more or less to its detriment, twice as long as is really necessary. This objection has now been completely overcome by a contrivance as simple as it is ingenious adopted in the apparatus with which the disinfection steamboat, *James Wadsworth*, engaged in the Port of New York, is provided, and which is described by Dr. Alvah Doty, the health officer of the port, in the August issue of the *American Journal of the Medical Sciences*. It consists in the exhaustion of the air in the chamber so as to produce a partial vacuum before the steam is admitted; and it is found that all other circumstances being alike a temperature of 240°, that of the steam in the chamber, is reached in the interior of a mattress or like article in less than three minutes with the vacuum, though without it from ten to fifteen minutes are required. The *James Wadsworth* oven is constructed with double walls and is encased in a jacketing of asbestos, which so prevents the loss of heat by radiation that the room in which it is fixed is not perceptibly warmer than others in the vessel or building. The special feature, however, is the steam exhaust, which consists simply of a powerful jet of steam coming directly from the boiler, where a pressure of 65 lb. to the square inch is maintained, passing across the mouths of 1½ in. pipes connected with the chamber of the oven, and with the space between its inner and outer walls. A similar pipe communicates between the chamber and the outer air, and the steam is admitted by one of 2½ in. in diameter, furnished with a regulating nozzle by which the pressure may be reduced to 15 lb. or 10 lb., which is sufficient for a temperature of 240° in the chamber. All these pipes are of course provided with stop-valves. The operation, after articles to be disinfected have been introduced and the doors securely closed, is to set the steam exhaust to work until the manometer or steam gauge indicates a pressure in the chamber and surrounding wall space of not more than twenty inches—a partial vacuum which is attained in about one minute. The valves are then closed and the steampipe opened, when the superheated vapour entering under a pressure of two atmospheres into the rarefied atmosphere of the chamber penetrates the densest fabrics and stuffed or packed goods, raising their temperature throughout to its own in three or four minutes. Ten minutes at 240° destroys bacilli of plague and anthrax, however protected, with absolute certainty, so that in fifteen minutes from the commencement of the process the steam may be turned off, when the steam exhaust is again set in action, though on the chamber only, until the former vacuum has been restored; then the air inlet is opened, and the exhaust still acting draws such a powerful current through the chamber that in two or three minutes every trace of moisture has been removed, and wearing apparel may be resumed within less than half an hour of its having been given up, an interval clearly none too long for the bath and cleansing of the persons of the wearers—in this particular instance mostly steerage passengers, immigrants from places where cholera, yellow fever, or other epidemic prevailed, or among whom cases had occurred on the passage.

THE SANITARY OATH.

A CORRESPONDENT writes: "The profession has to thank Mr. Justice Day for the happy phrase—'the sanitary oath'—and does so gratefully, as he thereby acknowledges that the ordinary form of oath is insanitary. I well remember hearing him christen it and the tone of scorn in which he asked if anyone could believe that diseases were contracted by kissing a New Testament. I know of one New Testament that has been in constant use for thirteen years, and what there is left of it is not a pleasant thing to caress. Though the Scotch form of oath has, perhaps, not made such rapid progress as one might wish, it is doubtless steadily coming into favour with those best qualified to judge of its worth. The late Mr. Justice Cave stated in public that he liked to see the oath taken in this way, and last week, when the magistrate's clerk [illegible] had to give evidence in a case of alleg[illegible]

[1] See THE LANCET, July 24th, 1897.

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this method. The great objection seems to be that the witness has to repeat the words and stand in a more or less constrained attitude, thus making himself very conspicuous. This to a man of a nervous or retiring temperament acts as a deterrent. Again, the time occupied is considerably greater than with the ordinary oath." Our correspondent concludes by asking if it would not be possible for the clerk to repeat the words of the English oath and for the witness to assent to them, not by kissing the book, but by raising the hand. This, we think, is a very good suggestion, but it would be at the present moment illegal.

A NEW OCULIST'S SEAL.

A NEW seal of a Roman oculist has recently been discovered in France, and its inscription may be found in the *Révue Archéologique*. This seal brings the number of known examples of these interesting monuments of medical antiquity up to about 200. The text upon the seal is, "Luxsuri Diasmyrnes post, impetum. Decorati cloron Opobalsamum." As in several other cases, the seal apparently bears the name of two oculists. The first remedy, diasmyrnes, or myrrh, Διὰ σμύρνης, is frequently prescribed on these seals for "post impetum (pituitæ lippitudinis), which Sichel, in reference to a passage of Celsus VI., 6, 1, translates as "after the mucuous secretion of ophthalmia." All the great medical classics, of course, allude to it, as also do Scribonius, Marcellus, and Actuarius. Up to the present it has been found designated as a remedy for post impetum, by itself, upon six of the oculists' seals. Cloron, perhaps from χλωρος, green, is mentioned by Galen and Aetius, and occurs upon a seal found at Kenchester (see Simpson in the *Monthly Journal of Medical Science*, 1851, p. 250). Opobalsamatum, ὀποβάλσαμον, sugar of balm, is upon the seals only stated to be given by itself *ad caliginam* and that on only one seal. It is, however, mentioned upon two others and on a vase without the addition of the name of the malady to which it was applicable. Among other authors it is spoken of by Paulus Aegineta and Nicolas Myrepsus. It is frequently found upon oculists' seals associated with other collyria such as copper and oil of myrrh.

THE TREATMENT OF SEPTICÆMIA.

SEVERAL observations have been published on the treatment of pyæmic affections by means of yeast and its preparations. In the *Medical News* (New York) of Sept. 25th is a paper by Dr. Walter Courtney entitled "Yeast Nucleinic Acid in the Treatment of Septicæmia, with Report of Cases." For the purposes of this article Dr. Courtney defines septicæmia as "a general systemic invasion by one or more varieties of the pyogenic or putrefactive bacteria, their products, or both." Dr. Courtney had observed Dr. Vaughan's experiments with yeast nucleinic acid on rabbits and guinea-pigs which had been inoculated with the bacillus tuberculosis, the bacillus of tetanus, and the bacillus anthracis, and in different animals. The inhibitory and frequently curative effect of the nuclein treatment of these various infections was most marked, and Dr. Courtney subsequently tried it in the treatment of patients suffering from septicæmia. The results, as shown by ten cases published in full, were very satisfactory, only one case proving fatal; but, as Dr. Courtney candidly admits, the auxiliary treatment employed may have had something to do with the results; these aids were those "which effect free elimination by all of the emunctories that may be pressed into service, so as to rid the system of all the toxins possible," especially free purging. Dr. Courtney sums up his experience thus: 1. The yeast nucleinic acid should be given at the earliest possible moment that septic infection is suspected. The physician should not wait for the typical and classic symptoms as given by text-books. Dr. Courtney's observations have led him to believe that if delay is made until rigors, icterus, diarrhœa, delirium or apathy, profuse perspiration, and a foul-smelling and discharging wound are added to an abnormal increase in temperature and pulse-rate, and a restless alertness on the part of the patient, to convince the observer that it is septicæmia that must be dealt with, instead of surgical fever or something else, a serious waste of most valuable time must occur. 2. The nuclein should always, in septicæmia at least, be given hypodermically if possible, in order to secure prompt action of the given dose. If the 1 per cent. solution is used, at least from 30 to 40 minims, undiluted, may be given every three or four hours. If the 5 per cent. solution should be used, from 10 to 15 minims may be given every three or four hours, but ought to be diluted with distilled or at least with sterile water. This is necessary to avoid the local reaction which is sometimes caused when this solution is given undiluted. In Dr. Courtney's experience the 5 per cent. solution is preferable, for one reason at least—it is always stable. The 1 per cent. solution is not stable; it sometimes becomes cloudy and unfit for use. 3. The injection region should be examined daily in order to determine if local reaction can have anything to do with the patient's increased temperature and pulse-rate. If it has it is due to one of two things—either to insufficient dilution of the 5 per cent. nuclein solution or to imperfect preparation of the skin or syringe. In conclusion Dr. Courtney remarks: "The results of my work with yeast nucleinic acid in septicæmia are sufficiently encouraging to justify a feeling of confidence and a continuance of its use."

THE EARTHLY PARADISE.

BY the above title we do not mean the Vale of Kashmir, or Atlantis, or the Armenian Plateau, but we refer to the somewhat prosaic district of Montagu-square. It appears from a case tried before Mr. Curtis Bennett on Oct. 16th that the dwellers in that favoured region have a private Act of their own—namely, 54 George III.—empowering them to bring offenders before the magistrate for annoying people by selling newspapers "and noisily endeavouring to attract attention that they had newspapers for sale." Three boys were charged with this offence, and their respective mothers made to enter into their recognisances in £5 to bring them up for judgment if called upon. Mr. Curtis Bennett's remarks were so much to the point that we give them.

"In giving judgment Mr. Curtis Bennett said there was no doubt that these street cries had become an intolerable nuisance in London. Complaints were continually being made in the daily papers. A Bill for the suppression of these noises was brought in during the last session, but, unfortunately, there was no time for it to pass, and it suffered what was known as the 'massacre of the innocents.' People who wanted to be quiet on Sunday ought not to be troubled with the yells and cries of boys, which went on morning, noon, and night. They (the boys) were the plague and pest of every quiet citizen. Not only were people annoyed in their houses, but even when they went to church their ears were filled with these incessant cries. There was one thing—this case would have the effect of making property in Montagu-square more valuable, because it was only where the inhabitants had a special Act of Parliament that they could put a stop to such an annoyance. The time had come, however, when it must be stopped all over London, for it had gone beyond all endurance, and Sunday, instead of being the quietest day in the week, was becoming the noisiest."

We are glad to see that Mr. Curtis Bennett feels the annoyance. It is more than an annoyance—it has become a perfect curse, not only on Sunday, but on every day. The Strand is well-nigh unbearable from midday until any hour at night. Piccadilly-circus is a perfect bear-garden, and even Bond-street, which used to be one of the pleasantest streets in London, is now invaded by the "winner"

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yelling fiend. It is quite unnecessary to yell. Many of the newspaper-sellers never do so and why should others? We have been hoping for some time that the London County Council would do something to put an end to the nuisance; the press has taken up the question, and it only remains for the police or the County Council, or Parliament, or all of them, to make London what it should be instead of what it is. Unfortunately, we cannot all live in Montagu-square, but it is only laziness and the hopeless dilatoriness which seems to affect our rulers in every department, except that of raising rates and taxes, which prevent other regions of London from being as well off.

THE NEW ISOLATION HOSPITAL AT OBAN: THE GENEROSITY OF A MEDICAL MAN.

As will be seen from the account given in another column by one of our own correspondents in Scotland, the much frequented Highland health resort of Oban has recently acquired an isolation hospital. As medical journalists we are always interested in hearing that any town is alive to the necessity of availing itself of the provisions of the Public Health Act, and specially so when the town in question is a health resort and also much frequented by holiday makers. But in the case of Oban there is more than this, for the new isolation hospital has been provided by the generosity of a member of our own profession—namely, Dr. McKelvie, a well-known and highly-esteemed practitioner in the neighbourhood. The cost has been about £2000, and, as will be seen from the account given by our correspondent, the building has been erected according to the latest plans and has every appliance for doing the work which will be required of it. In the fight against infectious diseases isolation is all-important, and Dr. McKelvie's munificence will be the cause of making the town of Oban a still more attractive resort than it is at present.

PURPURA HÆMORRHAGICA WITH MULTIPLE INFECTION.

PURPURA, like many other terms, should no longer be regarded as a disease, but as a symptom. It may be found in a number of diseases. Of these the infectious form an important group. The following case, published in the *Montreal Medical Journal*, August, 1897, by Dr. Hamilton and Dr. Yates, is not only of great clinical interest, but a contribution to an ill-understood subject—the etiology of purpura hæmorrhagica. A student, aged twenty-two years, healthy and well developed, noticed an eruption of bright red spots of the size of a pin's head, which began over the left ankle and then became numerous over both lower limbs. Three days afterwards a few spots appeared on the arms and then on the chest. The abdomen remained free until the sixth day. A slight knock on any part induced the appearance of extensive and severe bruising. On the night of the fourth day, not having felt ill yet, he was awakened with coughing and spitting of blood. On the following day he lost large quantities of blood from the nose, mouth, and throat, and felt for the first time weakness, rawness of the throat, and slight pains in the knees. On examination, the spots, which were also present on the face, were found to be hæmorrhages. Here and there were larger purpuric areas varying in size and colour. The conjunctivæ presented a few hæmorrhages. The nose was slowly but constantly bleeding. The lips were of good colour. The gums were not spongy. On the soft palate and left tonsil hæmorrhagic areas were seen. The temperature was 102·8° F., the pulse was 100, and the respirations were 24. The fundi were normal. Cultures of the blood were negative. The red corpuscles were 4,840,000, the white corpuscles 6000, and the hæmoglobin 87 per cent. The patient steadily became worse; the hæmorrhages were persistent and intractable; hæmoptysis, hæmatemesis, hæmaturia, and melæna occurred. The palate became sloughy and the eyelids became œdematous. The temperature ranged from 99° to 104°. Finally he became delirious and died on the twelfth day. A necropsy was made ten hours after death. There were many visceral hæmorrhages. The cardiac vessels contained air and the right auricle was distended with gas. The great vessels contained mixed frothy clots. The liver was emphysematous and floated in water. The bacillus aerogenes capsulatus, the staphylococcus pyogenes aureus, and a small bacillus (which on inoculation proved fatal to a rabbit) were cultivated from the blood and viscera. The clinical picture was thus similar to that of an acute infection; between good health and death there was an interval of only eight days. From the history of the case it is hardly possible that the bacillus aerogenes capsulatus was the primary infection; possibly it was the staphylococcus.

PROJECTED SANITARY IMPROVEMENTS IN NEW YORK CITY.

THE large centres of population in America are, with but few exceptions, far behind those of Europe in so far as sanitary arrangements and municipal government are concerned. Of all the cities of the United States New York is probably the most backward in many of the features that tend toward the preservation of the health and comfort of its citizens. Its tenement buildings and its lodging-houses are among the worst in the world and have been lately characterised by a prominent New York reformer as a disgrace even to America; public baths are conspicuous by their absence, and open spaces and playgrounds are few and far between. This state of affairs is in a large measure due to the apathy and indifference of its inhabitants, but there are very evident signs that public spirit is being aroused and interest awakened in any steps which may be taken to further the well-being of the community at large. The question of public baths will be one of the first to be dealt with when the municipal authorities of Greater New York have been elected. In 1895 a law was passed to the effect that "all cities of the first class should maintain such number of free public baths as the Local Board of Health might deem necessary." This law, however, was permissive, and in New York City at least its provisions have not been executed. In certain sections of New York City, and these the most densely populated, there is a great need of water both for domestic use and for the purpose of washing clothes. The suggestion has been mooted in several American cities that the German system of converting the basements of schools in the poorer districts so that they may be utilised as baths should be followed. This plan has met with much success in Germany, and Boston is about to try the experiment. The difficulties in the way of providing New York City with playgrounds of sufficient size in the lower part of the town are very great owing to the lack of space. Strong efforts are being made to overcome these difficulties, and two admirable small parks have recently been opened in the most crowded parts of the east side. Legislative authority has also been granted to the city to expend a million dollars (£200,000) a year for the purpose of providing and laying out parks and open spaces. Still the parks that have been opened up to the present time, excellent as they are, being for the most part covered with grass on which the children may not go, do not fulfil the object of playgrounds. A decision, too, has lately been arrived at by the mayor's committee on playgrounds and open spaces that no free school shall in future be constructed in New York City without being supplied with an open-air playground. In

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consequence of the small area of uncovered ground the builders were at their wits' end, until finally the brilliant idea struck one of their number that the roofs of the schools might be utilised for the purpose, and thus the problem is to be solved. For a considerable length of time roof-gardens have been prevalent in all parts of America, but the experiment of aerial playgrounds will be altogether a novel one. Although, as has been already mentioned, the municipality of New York City has done little or nothing as regards the decent housing of the poor private enterprise has stepped in and shown the way. In the heart of the "Bowery," the Whitechapel of New York, there has been lately erected, and will shortly be opened, the most palatial building for the accommodation of the poor man that has ever been constructed in any country. This building is designed to afford sleeping accommodation for upwards of 1500 men and the charge is to be 20 cents nightly. The planning and construction of this lodging-house are due to Mr. Ogden Mills, a well-known philanthropist, and it is to be hoped that his example will be followed by other rich men even if it does not rouse the city itself to efforts in the same direction.

THE EFFECTS OF X RAYS ON THE ANIMAL ORGANISM.

MANY cases have been recorded in which the taking of Roentgen photographs of the living body has been followed by troublesome dermatitis and even by ulceration of the skin, but these lesions are by no means constant, and the exact method of their production is not fully explained. The precautions to be taken for the minimising of this inconvenience in the practical use of the rays were described in a communication made to the Congress of Neurology, Psychiatry, Medical Electricity, and Hypnology, which met at Brussels last September, by Dr. Foveaux de Courmelle, of Paris. He stated that these accidents were not infrequent in radiography, where the contact-breaker of the induction coil was made to vibrate slowly, and the Crookes's tube, being uncovered, gave off both x rays and cathode rays. In radioscopy, on the other hand, the motion of the contact-breaker is very rapid, the current is one of high frequency, and the vacuum tube is wrapped in black cloth which stops the visible or light-producing rays, but presents no obstacle to the x rays; under these circumstances it is known that injury to the skin is unusual, and even after prolonged exposure does not amount to more than superficial desquamation. Moreover, the interposition of an aluminium plate between the Crookes's tube and the patient obviates the accidents which many observers attribute to x rays produced by electrostatic currents or high frequency currents. It would appear that it is only the cathode rays that are injurious, and there is no difficulty in excluding them.

ACUTE PLEURISY A FORM OF TUBERCULOSIS.

THE time-honoured doctrine that exposure to cold alone can produce pleurisy, or, indeed, any internal inflammation, seems to be entirely disproved. That cases of acute pleurisy are often tuberculous has been known for some time; that they are almost invariably so seems now to be proved. Attention was first drawn to the subject by continental writers. In 1890 Dr. Alfred G. Barrs read a paper before the Leeds Medico-Chirurgical Society. As the result of carefully compiled statistics he confirmed the conclusion of Mayor that "the majority of cases of simple idiopathic pleurisy or pleurisy from exposure to cold conceal or reveal a tuberculous process." In 1893, however, Dr. William Osler, in his Shattuck Lecture, which we noticed,[1] concluded that two-thirds of the cases were non-tuberculous. But more delicate tests support the former conclusion. In 1895 Eichhorst published the results of injecting the fluid obtained from cases of serous pleurisy into the peritoneal cavity of guinea-pigs. Two-thirds of the animals developed tuberculosis. The *Boston Medical and Surgical Journal* of Aug. 5th, 1897, contains an important paper by Dr. George G. Sears. On injecting tuberculin in ten cases of acute pleurisy he obtained a reaction—rise of temperature—in nine. He limited the reaction to this by using a very small dose—one milligramme—increased if necessary. His results are nearly identical with those quoted by Netter, where thirteen out of fifteen reacted. The question is of practical importance. Though the prognosis as regards the attack is good there remains the tendency to develop other and more serious forms of tuberculosis. Measures to improve the general health may be of great service.

[1] THE LANCET, Sept. 16th, 1893.

THE TREATMENT OF HÆMOPHILIA WITH CHLORIDE OF CALCIUM.

PHYSIOLOGISTS have known for some time that lime salts play an essential part in the coagulation of the blood. This suggested to Dr. A. E. Wright the possibility of artificially increasing the power of coagulation. He made some valuable researches and showed that the administration of chloride of calcium caused a considerable increase. He found that in hæmophilia the coagulation time could be reduced about one-half. He therefore suggested the use of this salt in the treatment of hæmophilia and other diseases attended with recurrent hæmorrhages. His conclusions have been fully confirmed by the results, especially in the case of hæmophilia, where they are even brilliant. But the value of the treatment appears still to be but little recognised. The following case, published by Dr. Clifford Perry, and abstracted in a recent number of the *Revue des Sciences Médicales*, is very definite evidence. Severe hæmorrhage followed incision of a dental abscess in a case of hæmophilia. Only after four hours' energetic work, and packing the whole space between the alveolar process and the cheek with gauze saturated with strong solution of perchloride of iron, did the hæmorrhage cease. Later epistaxis and recurrence of hæmorrhage from the wound took place, which ceased when the patient was on the verge of collapse. After six hours alarming hæmorrhage again occurred, which all ordinary means failed to stop. Chloride of calcium was given in doses of 1·30 gramme every four hours. In a few hours the effect was marked; a firm clot formed and the hæmorrhage ceased.

ISOLATION IN SCARLET FEVER.

"I AM quite aware that I am making very startling statements, that deeply-rooted prejudice will both hinder and thwart the inauguration of this plan of treatment, that many will look upon it as absolutely Quixotic, and that it will take a long time to overcome both professional and public sentiment, so dreaded is the very name of scarlet fever. Nevertheless, scientific therapeutic medicine must prevail in the end." Such is the last paragraph of a remarkable article by Mr. Arthur Wiglesworth in our present issue. We fancy that most of our readers will agree with the sentiments expressed therein, although they may take objection to the words "deeply-rooted prejudice." We give the author full credi for having published his method of treatment and thus braved full criticism, but in his paper he states that it was read before the Liverpool Medical Society nearly four years ago, and that "subsequent experience has amply confirmed these views so far as practical observation can demonstrate their truth." Mr. Wiglesworth makes use of some very strongly expressed opinions, and we should be interested to know whether he so impressed any

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of his hearers at the meeting of the Liverpool Medical Society at which he read this paper that they also had made trial of this method. For instance, one sentence runs: "I contend that it is rather our duty to do all that we can to spread the contraction of this attenuated virus to all the other children in the house, knowing that they will have a mild attack"; and in another place it is maintained that not only is isolation quite unnecessary, but "it is inexpedient." Would Mr. Wiglesworth propose to let the unattacked members of the household associate freely with the neighbours who are uncarbolised? Such propositions are entirely contrary to all accepted notions of the spread of infectious fevers, but as Mr. Wiglesworth has the courage of his opinions we have thought it right to submit his views to the criticism of the profession.

SERUM DIAGNOSIS OF TYPHOID FEVER.

THE diagnosis of typhoid fever has been considerably aided by the process which has become generally known as "Widal's test." The application of an observer's name to a disease, process, or test is not a satisfactory one, as is shown by the numerous terms under which exophthalmic goitre is known; but when one name has once become intimately associated with a disease or test, it makes confusion worse if the name is changed or another added. In the *Edinburgh Medical Journal* for this month a paper appears by Dr. Herbert E. Durham on "Serum Diagnosis," in which the writer points out that "if the name of any investigator is to be attached to the method of using the reaction of the blood serum of patients on appropriate bacilli, it should undoubtedly be that of Professor Max Gruber, of Vienna," who was the first to suggest the method, and who urged others to make observations upon the specific agglutinating power of the blood serum of persons who had passed through attacks of typhoid fever and cholera. Widal in Paris accepted the invitation given by Professor Gruber, published his results, and thus his name became associated with the test. Whilst, therefore, giving to Professor Gruber all due credit for being the first to suggest this method of diagnosis, much confusion would result from substituting his name for that of Widal. The latter has done excellent service in elaborating the test and deserves full recognition for his labours. Many reports are now to hand as regards the value of the test, and the general consensus of opinion seems to be that in this reaction we have a great aid to diagnosis in doubtful cases. Dr. J. C. Da Costa, writing in the *New York Medical Journal* of Aug. 21st, gives the conclusion he has arrived at from the observation of a large number of cases. He found that in more than 90 per cent. of cases of enteric fever a positive reaction may be obtained. In more than 90 per cent. of cases examined from the fourth to the seventh days of the disease inclusive a positive reaction may be obtained. In more than 3 per cent. of diseases other than enteric fever reactions are produced which are indistinguishable from typical typhoid reactions. Positive reactions are occasionally met with in individuals who have had enteric fever some months previously, but who are in good health at the time of the examination. Negative reactions are obtained with the blood of healthy persons who have not had enteric fever recently. Typhoid blood which has been kept in a dried state for eighty-six days will produce a typical reaction. In our present number we publish a paper on this subject by Dr. W. C. Brown, detailing his experience with Widal's reaction in the tropics. Its value in diagnosing between typhoid fever and some forms of malarial fever appears to be great. Dr. Brown also draws attention to the errors that may arise from false clumping and the precautions to be taken against their occurrence.

AT the Royal College of Physicians of London on St. Luke's Day the Moxon medal was awarded to the President, Sir Samuel Wilks, Bart., and the Weber-Parkes prize of 150 guineas and a silver medal to Dr. Arthur Ransome. A similar medal, called the second medal, was awarded to Dr. Peter Paterson, of Glasgow. The Baly medal was awarded to Professor Schäfer, of University College.

THE Morison Lectures of the Royal College of Physicians of Edinburgh will be delivered in the College Hall, 9, Queen-street, Edinburgh, by Dr. Alexander Morison, at 5 P.M., on Nov. 1st, 3rd, and 5th. The subject of the lectures will be "The Anatomy and Physiology of the Nervous Mechanism of the Viscera."

DR. A. T. SCHOFIELD delivered on Monday last, at the Library, Lambeth Palace, by permission of the Archbishop of Canterbury, the first of a series of lectures on Sanitation and Hygiene for the Clergy.

HER MAJESTY THE QUEEN has sent the Lord Mayor a donation of £50 to the fund being raised at the Mansion House for the relief of the sufferers by the epidemic of typhoid fever at Maidstone.

DR. D. C. M'VAIL has been re-appointed by Her Majesty the Queen in Council for another term of five years a member of the General Medical Council.

DR. FREDERICK ST. GEORGE MIVART has been appointed a Medical Inspector of the Local Government Board in place of the late Dr. F. W. Barry.

UNIVERSITY COLLEGE, ABERYSTWITH. — The inaugural address for the session 1897-98 was delivered in the Examination Hall of the University College of Wales, Aberystwith, on Oct. 13th by Professor Henry Sidgwick, LL.D., who took "The Pursuit of Culture as an Ideal" for the subject of his address.

ONE of our own Correspondents in Scotland writes:—"An interesting ceremony was performed in Oban on Monday, when Mr. Patten McDougall of Gallenach, a member of the Local Government Board for Scotland, opened the new isolation hospital for the burgh of Oban. For the last seven years the local authority has adopted the Notification Act, but it possessed no hospital for the reception and isolation of infectious diseases. The parochial board, and latterly the parish council, allowed the local authority the use of the hospital in connexion with the poor house for the reception of cases in emergency; and while this concession has proved a great benefit there were obviously many objections to its continuance longer than could be helped. The local authority three years ago secured four acres of ground upon the hill-side of Glenshellach—in every way a most desirable spot for such a purpose. When, however, the question of expense came to be considered inevitable delays occurred, and there appeared to be a danger of the indefinite postponement of the question, but at this juncture Dr. McKelvie, the senior medical practitioner of Oban, came forward, and in the most generous of terms offered a sufficient sum of money to the local authority to enable them to carry out the project which to-day has been successfully completed. The plans were approved by the Local Government Board for Scotland. The building is constructed upon the pavilion principle. There are four wards and an administrative department, and accommodation can readily be made for twelve patients. Situated some distance from the main buildings is a very complete department for the reception of infected goods and for their thorough disinfection. This department comprises an ambulance wagon room, an infected and disinfecting chamber, washhouse, and laundry. The infected and disinfecting chambers are fitted with a double-doored Washington Lyons steam disinfector, with Alliot and Paton's hot-air vacuum improvements, erected by Manlove, Alliot, and Co., of Nottingham. By this means the Notification Act can now be properly utilised"

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JOHN ARDERNE AND HIS TIME.[1]

BY WILLIAM ANDERSON, F.R.C.S. ENG.

WHEN the council of the Medical Society of London honoured me by an invitation to write a paper for the first meeting of the session 1897-98, it appeared to me that we might be interested to pause in the midst of our progress through the closing years of the nineteenth century and transport ourselves for a brief space into the lurid and fitful light of the later middle ages, there to make, or renew, an acquaintance with an ancient and most worthy master of the craft of surgery whom we should all delight to honour.

The name of John Arderne is an unfamiliar one even for surgeons, although numerous manuscript copies of his writings are preserved in the British Museum and at St. John's College, Oxford, and appreciative reference to his work has been made by many high authorities on medical and surgical history—notably, by Dr. Daremberg in his "Histoire des Sciences Médicales," by the late Mr. John Flint South and Mr. D'Arcy Power in "The Craft of Surgery," and by my learned colleague, Dr. J. F. Payne, in the "Dictionary of National Biography." It is to the last-named gentleman that I owe my first introduction, now some years ago, to the subject of my discourse. The time at my disposal will allow only a very imperfect study of the man and the time, but if I am fortunate enough to induce a few of the members to inquire further into a curious page of surgical history my chief object will be achieved.

John Arderne, a contemporary of Chaucer, Wycliffe, Froissart, Petrarch, and Guy de Chauliac, belongs to a period of extreme interest in the evolution of general and surgical literature, and it will be seen that he within his sphere gave no mean aid towards the advance of a higher culture. Of biographical facts we have but little record, but it is known that he was born in 1307[2] and that he practised at Newark in Nottinghamshire from 1349, the year of the plague, until 1370, when, at the age of sixty-three years, he settled in London. Thenceforth he appears to have devoted his days to the publication of his experiences in the form of treatises upon medicine and surgery. It is surmised that he had been previously attached for a time to the English forces during the French wars in the capacity of field surgeon, for there is no doubt that he was well acquainted with France and its language, and that he had an extensive experience in the treatment of wounds; but although he calls himself "Chirurgus inter Medicos" there is nothing to show that he possessed a Master's degree or any formal licence for the exercise of his calling. However this may be, his writings prove that he was a man of clerkly attainments, with a good knowledge of Latin and French, and well read in the available literature of his profession, quoting freely from the works of the mediæval surgeons, the Arabs, and even from the Greeks. That he achieved fame as a surgeon is no less certain. He refers with pardonable pride to a number of distinguished patients whom his ministrations had restored to health, and he is said to have received from the Black Prince a grant of land in Connaught, and with it the right to prefix the noble particle "de" to his name. It is hard to say whether the position of an Irish landlord was more enviable then than now, but the colossal fees he was able to command from his wealthy clients probably rendered him independent of his Hibernian rentals. In his case, as in that of Guy de Chauliac, the literary labours which have preserved his memory were the outcome, and not the cause, of his success, for it was not until he had won an honourable repose that he found leisure to give the world the secrets of his practice. His writings, couched in fair Latin and dealing with nearly the whole of medicine and surgery as they were then known, were noteworthy productions of a reactionary but still illiterate age, and they appear to have been duly valued during the next three centuries, although none received the honours of the press except an abstract translation of an essay on Fistula, which was printed in 1588 by John Read as an appendix to a translation of Franciscus Arceus on Wounds.

To understand the position of Arderne it is necessary to recall something of the time in which he lived. His period was signalised as one of struggle for emancipation from a long-endured state of physical and intellectual bondage; but science was permitted to lag behind, while metaphysics, astrology, and alchemy took the place of solid research. The study of medicine was perhaps more deplorably in the rear of progress than any other branch of learning. For many hundreds of years the preservation of the lore of the Greeks from oblivion was left almost wholly to the Jews and Arabs, until at last the giant Europe, so long torpid, roused enough to stretch its stiffened members, first in Italy, then in France, then in England, but only to doze again and again before sinking into a new century of slumber. When Arderne was in his prime there was but one scientific centre in Europe where any pretence of surgical teaching was maintained. The once famous school of Salerno had already become effete. The Italian revival under William of Saliceto, Theodoric, Lanfrank, Mondini, and others, had given place to the old stagnation against which Bologna had made a valiant fight before sinking into premature decay. Paris, too, after listening to the teaching of Lanfrank and of Henri de Mondeville, had resolutely turned her face to the wall, and Montpellier alone, thanks in part to its geographical position, which brought it within nearer touch of Arab learning, was liberal enough to sanction the cultivation of anatomical and surgical science, not, indeed, within the walls of its university, but in extra-mural classes, in which, amongst others, Guy de Chauliac, the greatest surgical figure of the age, took a leading part. Even this tolerance soon died out, and Montpellier went the way of Salerno, Bologna, and Paris, but not until the work of Guy de Chauliac and John Arderne was ended. In England the age of Chaucer and Wycliffe made no provision whatever for medical progress, and there was no school of anatomy or surgery throughout the land, and no English contributors to the literature of the subjects could be said to exist, if we except such theoretical references as may be found in the works of Gilbertus Anglicanus and John of Gaddesden, written, like all medical treatises of the time, in Latin. It is true that the writings of the Arab physicians, which gave an imperfect sketch of Greek surgery, and those of William of Saliceto, Roger, Theodoric, the Four Masters, Lanfrank, de Mondeville, and after 1363 the masterpiece of compilation, the *Chirurgia Magna* of Guy de Chauliac, were also procurable in Latin guise, but the knowledge to profit by them was rare indeed in the ranks from which the representatives of English surgery were drawn. In the fourteenth century the lot of those of our countrymen who fell in need of surgical ministrations was a sadly precarious one. The art was regarded by the educated physicians then and for centuries later as beneath their dignity. As expressed by our Elizabethan surgeon, John Read, in the doggerel which he and his fellows loved to prefix and append to their professional writings:—

> "Chirurgery moreover is
> abhorred of the Phisition,
> Who doth esteeme it as a thing
> to vile for his profession."

Outside this august and highly conservative body were several classes of practitioners into whose hands surgery was allowed to sink. First of these came the Masters of Surgery—a small body of men, here, as in France, distinct from the Barber surgeons, but scarcely yet banded into the association that somewhat later strove so well to secure a fitting status for their calling. They held no special position in the social scale of the time and appear to have sprung originally from the same level as the barbers, but to have won especial experience and recognition by the exercise of surgery in the wars and civil disturbances of the time, and in certain instances to have gathered some scholastic training. With this group John Arderne is probably to be classed, and another example may perhaps be found in the person of the author of the remarkable anatomical manuscript brought to light two years ago by Dr. Payne.[3] It is these men, few in number, weak in influence though they were, that we must regard as the most honourable representatives of surgery, and there is no doubt that a dozen men of the stamp of Arderne would have changed the whole history of English surgery. Yet the chirurgery of the Master Surgeon was scarcely a handicraft at all, for the hand played little part in it except in the application of ointments and plasters. The Barber surgeon, the bone-setter, and the travelling specialists did the rest.

[1] A paper read before the Medical Society of London on Oct. 11th, 1897.

[2] Sloane MS., No. 75.

[3] Brit. Med. Jour., Jan. 25th, 1896.

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Next to these came the Barber surgeons, who, thanks to the successive decrees of the Popes in the twelfth, thirteenth, and fourteenth centuries against the practice of medicine and surgery by the priesthood, had inherited the manual functions of the erstwhile monkish physicians, and had begun to develop ambitions above the blood-letting and tooth-drawing, which for some mysterious reason had long been attached to their trade. They had not, however, reached or merited any standing of importance, although as early as 1375 they were strong enough in London to appeal successfully to the corporation for the right to summon persons who practised surgery without due qualification. They themselves were little more than uneducated mechanics, to whom the literature of surgery was a closed book. Much experience must indeed have fallen to their lot, but it fell on a barren soil. Their regular practice seems to have been limited to venesections and dentistry, and to the treatment of contusions, wounds, ulcers, and a few other simple affections; but all ailments outside these were blindly attacked or more discreetly left alone. Neither the Master Surgeons nor the Barber surgeons attempted to deal with the whole of surgery. Beyond the mere opening of a vein or an abscess or the extraction of a tooth there were few operations that were held within the scope of orthodox practice. Arderne says that he knew no man in his time "in all England or in lands beyond the sea" who could cure a fistula—he alone did it. Even operations so simple and then so necessary in warfare as the extraction of arrow-heads were often surrounded by absurdly superstitious formalities. The surgeon and patient were to be clean shriven and to say three Paternosters and three Aves in worship of the Trinity; finally, after a Latin adjuration to the arrow, bidding it come out in the name of God, the surgeon's fingers were permitted to attack the actual task, which was supposed to be miraculously facilitated by the tribute to the Celestial powers. Hæmorrhage, except from a vein opened under proper astrological conjunctions, was a terror to the surgeon, upon whom the idea of the ligature had not yet dawned; strangulated hernia and a score of other grave but remediable conditions were left to the merciful hand of death, and many common affections that should have been perfectly within the sphere of the general surgeon, such as fractures, dislocations, stone in the bladder, &c., were abandoned without a struggle to a low class of specialists of whom we may next speak.

The Specialists constitute the third group of surgical practitioners, perhaps outnumbering both the Master Surgeons and Barber surgeons. The whole country was pervaded by a troop of foreign and native bone-setters, lithotomists, herniotomists, oculists, and others, following traditional methods unguided by anatomical knowledge, but sometimes by dint of experience attaining a fair amount of skill and success and living upon an honestly acquired reputation. Most of them, however, travelled from place to place advertising themselves by barefaced methods not even yet quite extinct or inefficacious, often mingling their handicraft with arrant imposture, and ready to shift their quarters with all needful celerity as soon as the results of their operations threatened trouble to themselves. Such men for this reason were popularly known in France as *coureurs*. That they should be permitted to exist and thrive might perhaps be regarded as the greatest indictment of the surgery of the time were it not that the bone-setter, as ignorant and as impudent as his forbears, is still amongst us even in this last decade of the nineteenth century.

Below all of these there was still another class of pretenders to surgery—a motley crew of base empirics of both sexes, without even a pretence to real knowledge, trading upon herbs, ointments, embrocations, pills, amulets, and the like, mainly for use in such ailments as were capable of recovery in defiance of their intervention. It is unnecessary to speak of them further, their name is legion and their methods eternal, but in that day the orthodox was so little remote from the heterodox in science that poor suffering humanity had small chance of escape.

Finally, outside these various practitioners for gain lay the Amateurs, a numerous body, often of gentle birth, and nearly all of the gentler sex, trained by reading or personal instruction in the use of herbs, drugs, and simple dressings, and prepared to act on emergency as nurses or doctors amongst their families, friends, or dependents. Students of Chaucer may find an inkling of the domestic medical lore of the period in the "Nonne Preeste's Tale," and they may recognise that Damoysele Pertelote still survives in the remoter parts of our provinces. There is little doubt that many of these kindly and charitable people did much good in their generation, and knowing what we know of the bulk of their professional rivals we may think the patients who came under their tender ministrations were not always the most unfortunate amongst sufferers in mediæval England.

Such, then, was the state of surgery when John Arderne came upon the scene. Shorn of almost all the dignity and power it had acquired under the Greeks its prospects were of the gloomiest. What Arderne did towards its revival may be seen by a study of his works.

There are no less than 22 Arderne manuscripts in the British Museum in the original Latin or in early English translations, some of course repeating or overlapping others in matter.[4] They treat more or less fully of almost every kind of medical and surgical disease then known, mainly from the clinical aspect, and with abundant directions for treatment, and nearly all are illustrated with drawings of diseases, surgical appliances, medicinal plants, and other things appertaining to the text. Some of the sketches are curious. One, representing John Arderne examining a case of fistula in ano, has been discreetly reproduced (without the patient) in South's "Craft of Surgery"; another shows the astrological relations of the different parts of the body; fistulas, penile sores, acne rosacea, facial tic, and many other conditions are recognisably figured, and one MS. even shows a portrait of a mad dog. There are, however, no anatomical diagrams. The text consists partly of short essays on the treatment of various symptoms and ailments, partly of elaborate dissertations upon certain sections of surgical disease, as fistula in ano, eye diseases, stone in the bladder, and on wounds inflicted by various weapons, closing with descriptive accounts of the drugs and preparations employed by the author, and careful directions for their use. There is little or no reference to fractures and dislocations, and the only operations described in detail are those for fistula in ano and for cutting a stone out of the urethra. Mention is made of a special instrument for crushing a vesical calculus. Avicenna, Haly Abbas, and the French and Italian surgeons are freely quoted, as well as certain of the writings of Hippocrates and Galen, and the learning of the author is frequently shown also by the use of Greek, Arabic, and French expressions. There is no attempt, however, to construct a complete and systematic arrangement of the diseases the mediæval flesh was heir to from crown to toe after the manner of many of the earlier writers. The English translations are all of early date, the most important of the number being attributed to the beginning of the fifteenth century, and hence probably representing as nearly as may be the language that John Arderne himself would have used in his professional discourse. As this is acknowledged to be the most interesting and original section of the author's work, and will soon, I trust, be brought within reach of the profession and public by the Early English Text Society, I propose to speak of it so far as the time at my disposal will allow. I have to express my thanks to Dr. Furnivall for the loan of a complete transcript which has enabled me to study the style and matter more carefully than would otherwise have been possible. The section in question treats of ischio-rectal abscess, of fistula in ano, and other affections of the lower end of the bowel, and of sinuses in connexion with the bones and joints, and is supplemented by a description of the composition and uses of the various preparations employed by the author, and prefaced by some words of counsel to the neophyte who aspires to success in medical practice. The personality of Arderne is perhaps best shown in this quaint preface. It has already been printed *in extenso* in South's "Craft of Surgery," but a few paragraphs may be quoted now. The introduction, entitled "Of the Manner of the Leech,"[5] begins in a spirit of pious humility and charity that reappears constantly in the course of Arderne's writings. The rest is too pithy to need comment.

"First it behoveth him that will profit in this craft that he set God afore evermore in all his works and evermore call meekly with heart and mouth his help, and sometimes visit of his winnings poor men after his might, that they by their prayers may get him grace of the Holy Ghost. And that he

[4] List of Arderne MSS. in the British Museum, copied from Catalogue of Manuscripts, vol. ii.:—2002, 238.1, 3844, 6.8, 341.1, 3548, 2122, 347.1, 795.2, 56, 76.1, 277.2, 563.2, 2271, 75.12, 335, 76, 3428, 89E, 85B, 86D, 29.301.

[5] In these quotations I have ventured to modernise the spelling, but have kept strictly to the language of the translation.

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be not yfounden temerary or boastful in his sayings or in his deeds. And abstain he him from much speech and most among great men. And answer he slyly [cautiously] to things asked that be be not ytake in his words forsooth if his works be ofttime known, for to discord from his words and his behests he shall be holden more unworthy and he shall blemish his own good fame: wherefore saith a versifyer, '*Vincat opus verbum, minuit jactantia famam*'—'(let) work overcome thy word, for boast lesseneth good lose (reputation).'

"Also be a leech not much laughing nor much playing. And as much as he may without harm flee he the fellowship of knaves and unhonest persons. And be he evermore occupied in things that beholdeth to his craft, either read he, or study he, or write or pray he, for the exercise of books worshippeth a leech. For why, he shall both be holden and he shall be more wise. And above all this it profiteth to him that he be founden evermore sober, for drunkenness destroyeth all virtue and bringeth it to nought, as saith a wise man, '*Ebrietas frangit quicquid sapientia tangit*' (Drunkenness breaketh whatso wisdom toucheth)."

The next counsel is one that cannot even yet be regarded as superfluous: "Scorn he no man, for of that it is said, '*Deridens alios non inderisus abibit*' (he that scorneth other men shall not go unscorned). If there be made speech to him of any leech, neither set he him at nought nor praise him too much, or commend him, but thus may he courteously answer: 'I have not any knowledge of him, but I learned not nor I have not heard of him but good and honest.' And of this shall honour and thankings of each party increase and multiply to him, after this, 'Honour is on the honorant and not on the honoured.'"

Next he becomes more purely worldly and passes on to private counsel not intended for lay ears: "When sick men forsooth or any of their byside [household] cometh to the leech to ask help or counsel of him, be he not to them over few [brief] nor over familiar [homely] but mene [gracious] in bearing after the askings of the persons, to some reverently, to some commonly, for, after wise men, 'overmuch homeliness breedeth despising.'"

"If he will favour to any man's asking make he covenant for his travail and take it beforehand.[6] But advise the leech himself well, that he give no certain answer in any case, but [unless] he see first the sickness and the manner of it, and when he hath seen and assayed it, though it seems to him that the sick may be healed, nevertheless he shall make prognostication to the patient [of] the perils to come if the cure be deferred. And if he see the patient perceive busily the cure then after that the state of the patient asketh (according to the position of the patient) ask he boldly more or less, but ever beware of scarce askings, for over-scarce askings setteth at nought both the market and the thing. Therefore for the cure of fistula in ano, when it is curable, ask he competently of a worthy man and a great. An hundred marks or forty pounds, with robes and fees of an hundred shillings for the term of life by year. Of less men forty pounds or forty marks ask he without fees. And take he not less than a hundred shillings, for never in all my life took I less than an hundred shillings for cure of that sickness. Nevertheless, do another man as him think better and more speedfully."

"And if the patients or their friends or servants ask by how much time he hopeth to heal it, evermore let the leech byhete [state] the double that he supposeth, that is if the leech hope to heal the patient by twenty weeks—that is the common course of the curing—add he so many over, for it is better that the term be lengthened than the cure, for prolongation of the cure giveth cause of despairing to the patients when trust to the leech is most hope of health. And if the patient consider or wonder or ask why that he put him so long a time of curing since that he healed him by the half, answer he that it was for that the patient was strong-hearted and suffered well sharp things, and that he was of good complexion and had able flesh to heal, and feign he other causes pleasable to the patient, for patients of such words are proud and delighted."

"Also dispose a leech him that in clothes and other apparelings he be honest, not likening himself in appareling or bearing to minstrals, but in clothing and bearing (ob)serve he the manner of clerks. For why, it seemeth any discreet man yclad with clerk's clothing for to occupy gentleman's boards. Have the leech also clean hands and well shapen nails and cleansed from all blackness and filth."

"And be he courteous at lords' boards, and displease he not in words or deeds to the guests sitting by. Hear he many things, but speak he but few, for a wise man saith: 'It (be)seemeth more to use the eyes than the tongue.' And in another place, 'If thou had been still thou had been holden a philosopher.' And when he shall speak, be the words short, and as much as he may fair and reasonable and without swaying. Beware that there be never founden double words in his mouth, for if he be founden true in his words few or none shall doubt in his deeds."

"Have also a young leech good proverbs pertaining to his craft in comforting of patients."—Here follow other curious examples of bedside exhortations from Holy Writ, heathen philosophy, and homely proverbs—"Also it speedeth that a leech can talk of good tales and of honest that may make the patients to laugh, as well of the Bible as of other tragedies, and any other things of which it is nought to charge, while that they make or induce a light heart to the patient or sick man."

"Discover never the leech unwarily the counsels of his patients as well of men as of women, nor set not one to another at nought though he have cause; that he be not guilty of counsel, for if a man see ye heed well another man's counsel he will wist better on ye."

"In conclusion, many things, forsooth, well (bene) to be kept of a leech without (besides) these that are said afore, that may not be noted here for over much occupying. But it is not to doubt that if the foresaid be well kept that they shall give a gracious going to the user to the height of worship and of winning, for Cato saith, '*Virtutem primam imputa compescere linguam*' (the first virtue trow you to be to refrain the tongue)."

Passing to the technical chapters of his work we may take first his account of fistula in ano. Every surgeon who reads this attentively will admit that it stands almost alone amongst English surgical writings down to the time of Richard Wiseman as a record of painstaking clinical observation and of practical research after success in treatment. His description is rich in experience and his methods are recited with a remarkable fulness of the kind of detail that only experience can teach. It is true that his operations were identical in principle with those practised by the Greeks, but he had devised appliances which in his hands gave results that we should not be ashamed to claim in our day. There is, indeed, little that we know in this particular item of surgery that he did not know as well or better. I fain would quote some of his crisply written sentences, but it may not be.

Following the section of fistula is a description of cancer of the lower end of the rectum under the name of "bubo in the lure." He not only recognises the nature and fatality of the disease, but sets forth clearly its distinctions from chronic diarrhœa or dysentery and speaks of the injury that may be done by the administration of unsuitable remedies under a wrong diagnosis. Prolapsus ani he describes as a "going out of the lure." His notes upon fistulæ, or sinuses in the fingers, the legs, over the joints, and in other places are more superficially treated, but are still personal observations that appear to owe nothing to tradition. The essay on hæmorrhoids is of a somewhat different kind. Here for the first time he appears as the compiler, conscientiously avowing his indebtedness to the older masters of his craft—to Bernard of Gordon, Richard, Roland, Roger, Gilbertus Anglicanus, Guy de Chauliac (Mayster Guy) "and other expert men whose doctrine he had beholden and seen." This is less happy than his more practical and original writings and is more obscured by the nebulous theories of his predecessors. Nevertheless, his treatment is fairly sound, although he has been unable to shake off some ancient superstitions shared by wiser and less wise men than himself—for example, that the surgeon must not operate about the anus when the moon is in Scorpio, Libra, or Sagittarius, because these signs token the part in question, and that hæmorrhoids and menstruation are provoked by phlebotomy of the internal saphenous vein, while blood-letting from the external saphenous vein has the directly opposite effect; but these and other beliefs were inevitable in an age when the physiological and astronomical dicta of the ancients were accepted like Holy Writ as unassailable by human reason and beyond appeal.

Passing next to the discussion of clysters in constipation our author finds himself again upon the safe foundation of

[6] In another place he says: "And then accord they of covenant, of which covenant all excusations yput aback, take he the half beforehand."

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an extensive experience, and he displays a faith in his methods capable of moving mountains of obstruction. "Be the leech not negligent nor foolhardy in his working with clysters, for it is a work of a perfect mystery, for the which I have gotten a hundred times great honour with lucre in diverse places. For why? At London when Lombards ofttimes administered clysters in their manner to colic men and other men constipate, I, forsooth, with the aforesaid manner of clystering at the first time, within the space of a furlong or two, I delivered the patient for certain, the Lord being mene." It will be noticed that although he refers somewhat contemptuously to the pretentious quacks that were his rivals, he never condescends to the violent and undignified diatribes in which his Elizabethan successors were wont to indulge under like provocation.

The final section, devoted to the enumeration of the preparations used in surgery, is full of interest. Many of his ingredients, such as arsenic, verdigris, sulphate of iron, alum, &c., were powerful as stimulants, astringents, or antiseptics, and appear to have been used with judgment; and with characteristic honesty he tells of his mistakes as well as of his successes—how, for example, he had caused sloughing of the leg of a patient, with subsequent necrosis of the tibia, by the unwary use of a mixture of sublimed arsenic and orpiment. Another set of applications consist of oily preparations of the petals of roses, violets, and camomile flowers, oil of sweet almonds, and oil of juniper, the uses of which are clearly and simply stated, while other much-lauded drugs, such as woodbine and scabious, have succumbed to changes of fashion like so much of the materia medica of the present century. He, however, avoids the loathsome elements, that so commonly disgrace the formulæ of his and much later times, and there is but one of his prescriptions that shows an element of superstition, the so-called *sanguis veneris*. This for the poor is a compound of Alkanet with olive oil—a safe, simple, and cheap application for wounds and ulcers; but for the wealthy it is made up more expensively with aloes, myrrh, and other drugs, and contains as its most valued ingredient "the blood of a maiden virgin or of a maiden damosel about nineteen or twenty years which was never impregned tho' she be corrupt"—for, adds our cautious author, "virgins cometh now full seldom to twenty years." The blood, too, "must be drawn out in the full of the moon, the moon being in Virgine, and the sun being in Piscibus." Another compound called "oil of Masticus" (Masticus one ounce, thuris albi Alexandriæ half an ounce, ol. rosæ 1lb), of sufficiently simple composition, must be referred to, for its virtues, as set forth in all good faith by Arderne, might give a lesson to the modern advertiser of electric belts or liver pills. "It helps," says he, "to every akying of stomach, joints, shoulders, liver, spleen, helps to man in the ethic in the phtisic, or disposed to the lepra and to the morphœa [morfie] and to old men and consumed. And anointed, it moisteth the skin and removeth and restoreth the flesh consumed, and comforteth the stomach and maketh it to defy chills; it represseth abominations in the stomach, it giveth appetite, it sharpeth the minde, it consumeth all cold passions. Finally, it availeth to whole men and to sick in all necessities." It is strange that with so all-embracing a remedy he did not regard the rest of his pharmacopœia as superfluous.

Of internal medicines there are few, but two of the number depend on opium for their chief effect. One of these is recommended as an anæsthetic, "so that the man shal not feel whatsoever is done to him," and the other had won a reputation of a more sinister kind, "to make a man sleep against his will after the manner of ribalds and browsers in France, that fellowshippeth them by the ways to pilgrims, that they may rob them of their silver when they are asleep."

With these our citations must end. It is difficult at the present time to adjudge John Arderne's claim upon posterity, but when we remember into what low repute the art of surgery had fallen in his day in England, and how honestly and successfully he strove to elevate it by his example and teaching, we can scarcely do him too much honour. His art was not all we now understand as surgery, although he at least revived two of the ancient operations of the Greeks, but he was a true clinical observer and based his treatment on experience and reason rather than on precedent and superstition. He was, moreover, almost the only English surgeon of his century who is known to have combined the actual practice of his calling with a scholastic training sufficient to master the surgical literature then available and to commit his views and results clearly to writing. It would be too much to expect that he should rise entirely above the astrological, humoral, and circulatory myths of his day, but he allowed his theories to influence him far less than his experience, and he stands as a singularly capable surgeon according to his lights and opportunities, holding his craft in due honour, and doing more than any Englishman of his century or of the three following centuries to raise it in the world's esteem. If we compare him with his great French contemporary, Guy de Chauliac, we shall find in both the same straightness of purpose, the same solidity of reasoning, and the same harmless superstitions; but while Guy de Chauliac was a compiler of genius with a remarkable literary method and sense of completeness Arderne was perhaps the better clinical student and the more practical surgeon; but as a writer, although he had considerable power of expression and an amusing aptitude for terse and pointed quotation, he was somewhat lacking in that gift of order which in an over-strained and often misapplied form distinguished the earlier European surgical authors. The Frenchman constructed a surgical text-book that in its way stood far above anything that had preceded it, and guided the whole of Europe for two hundred years; the Englishman left an assemblage of original observations that offered better lessons to his followers than could be drawn from any digest of the writings of his predecessors. It cannot be said that either added any striking facts or principles to the legacy of the Greeks.

Of the man himself his book conveys a vivid picture. It is easy to see him as the leech of courtly and obliging manners, sober in attire and moderate in speech, and endowed with a self-restraint born of self-respect, with a tact that bore him well through the many difficulties that must have beset the thorny path of the chirurgeon in his day, and with a strong common sense that never rose too near the dangerous level of genius; a good man and true, kindly and honest, but shrewd withal, with a quick eye to the main chance and a capacity for raising expediency to the dignity of principle. He was through all a surgeon, a scholar, and a gentleman, and in the records that he bequeathed he stands before us as one whom we, his professional descendants, may accept with pride and veneration as the Father of English Surgery.

PRESENTATIONS TO MEDICAL MEN.—Mr. Richard Turner, M.R.C.S. Eng., L.S.A., on his retirement from the post of medical officer of Her Majesty's Prison at Lewes, Sussex, after upwards of 37 years' service, has been presented with an illuminated address, together with a silver salver, suitably inscribed, by the officers of the prison past and present, and also a silver cigarette case by their wives, in recognition of his unfailing courtesy and kindness at all times freely rendered to themselves and their families.—The members of the Haddo Lodge of the Loyal Order of Ancient Shepherds entertained Dr. Beveridge, their lodge surgeon, to supper in the Waverley Hotel, Aberdeen, on Oct. 2nd, and presented him with an emblem of merit, handsomely framed, as a token of appreciation of his professional services to the Lodge.—Last week certificates and badges were presented to the successful candidates of the St. John Ambulance Class formed by the employés of the East Depôt of the Great Western Railway Company, Bristol. After the distribution Mr. E. H. Warner, M.D., C.M. Edin., was presented by the class with a silver-mounted walking-stick suitably engraved as a recognition of his services as honorary lecturer.—Mr. J. T. J. Morrison, M.B. Cantab., F.R.C.S. Eng., Mr. A. T. Holdsworth, M.D. Brux., M.R.C.S., L.S.A., and Mr. E. C. Bark, L.R.C.P. Lond., M.R.C.S. Eng., have each been the recipient of a silver cigarette case from the members of the ambulance classes of the Birmingham city police force as thank-offerings for their valuable services to the classes.—Mr. F. MacDougall, L.R.C.S., L.R.C.P. Edin., lecturer to the Runcorn Branch of the St. John Ambulance Association, has been presented by the class with a silver inkstand for his instructive ambulance lectures.—On Oct. 13th, at the Memorial Institute, Almondsbury, Gloucestershire, Mr. Robert Cecil Leonard, M.B. Durh., L.R.C.P. Lond., M.R.C.S. Eng., who for the past two years has acted as assistant to Dr. J. W. Irwin, was presented by his friends and patients with an inlaid mahogany bureau, accompanied by a book containing an address and the names of 158 subscribers, on the occasion of his leaving the neighbourhood.

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The Lancet Special Commission

ON THE

METROPOLITAN WATER-SUPPLY.

XVII.[1]

NEW RIVER COMPANY.

HISTORY.

THE full style and title of the Company is "The Governor and Company of the New River brought from Chadwell and Amwell to London." A complete history of the New River and of the people and places connected with it would form a large volume. In the present brief sketch we can do no more than mention the more important points connected with the origin of the enterprise, of the difficulties which had to be encountered, and of the chief changes which have taken place since the original design was carried out. No account however brief would be complete if no mention were made of Hugh Myddelton, by whom the original work was supervised if not actually designed. Unfortunately, so much fiction has been mixed up with the facts recorded of this remarkable man that it is not easy to deal so briefly as could be wished with his share of the undertaking, and his relations with the Corporation of London which initiated the scheme and James I. who saved the adventure from ruin by providing money for its completion.

The original project was to supply London with water from two Hertfordshire springs and to conduct the water in an open and tortuous channel to some convenient place near the city. Some writers have curiously exaggerated the greatness of the undertaking, which was a trivial one compared with the engineering feats of the Romans; nor was the idea a new one. Years before the New River was projected Sir Francis Drake, had supplied Plymouth with water from a source seven miles distant from the town by means of a channel twenty-four miles in length. It seems probable that Drake's conduit may have suggested the New River scheme to the London citizens, and led them to get the sanction of Parliament to the project.

In the year 1606 an Act (3 Jac. I., c. 18) was passed to authorise the Corporation of London to bring water from Chadwell and Amwell in Hertfordshire for the supply of the city. It was provided that the necessary land might be taken, but that the owners should receive compensation the amount of which was to be assessed by Commissioners appointed by the Lord Chancellor. The Corporation was to maintain the "cut" or river which they were to make, and the authority over it was to be vested in the Commissioners of Sewers. In the following year, 1607 (4 Jac. I., c. 12), another Act was passed by which the Corporation were enabled to convey the water, if they thought fit, through a brick or stone culvert. The first of these two Bills was strongly opposed and the claims of a Captain Colthurst[2] were considered at some length in the House of Lords. The Corporation of London, however, did nothing to carry into effect the provisions of the two Acts of Parliament which they had obtained. In March, 1609, the Common Council conveyed to Hugh Myddelton the power to carry out the work which they found themselves unable or unwilling to do. This agreement was supplemented by an indenture, dated April 21st, 1609. Myddelton commenced the work as quickly as possible. He had, however, many difficulties to contend with. The owners and occupiers of the land through which the river was to pass gave him no little trouble. It is indeed small matter of wonder that many of them objected to have their land taken, and that the possible evils prophesied as the result of this undertaking were grossly exaggerated.

The Record Office contains a paper entitled "The Effect of a Bill to Repeal the Acts 3 and 4, Jac. I., for bringing the New River into London, &c." The paper consists of the objections classified, and each objection is answered, the objections and answers being written side by side in two parallel columns. It is apparently a careful compilation from a number of documents stating both sides of the question. In a different and bolder hand, not as part of the list of objections and answers, is recorded the fact that at that time Myddelton had expended £3000 on the work in progress. Amongst the objections urged against the making of the river it was stated that the meadows would be turned into bogs, that farms would be cut up into small pieces, and that the river was dangerous to man and beast.[3]

The agitation against the New River attracted much attention in the year 1610; it seemed for a time possible that the scheme might be overturned by Parliament, and a Bill was brought in to repeal the New River Acts. A letter written on May 9th of that year says: "Much ado there is in the House about the work undertaken and far advanced already by Myddelton for the cutting of a river and bringing it to London from ten to twelve miles off through the grounds of many men, who, for their particular interests, so strongly oppose themselves to it that they are like, as it is said, to overthrow it all." The Bill in Parliament was referred to a committee, and on July 16th the report of the sub-committee was given as to the river, which they had inspected. Fortunately for Myddelton, Parliament was prorogued on July 23rd and did not meet again until 1614, by which time the New River was finished. This opposition, however, was not the only difficulty with which Myddelton had to contend. In 1610 there was a rival scheme for supplying London with water from the Lee at Hackney.[4] This must have been an anxious time for Myddelton, for there was great danger that his scheme would fail. He had made the canal as far as Enfield, but he found that he had spent all his money, the expenses of the work having proved considerably more than he expected. It is usually said that he applied to the Corporation of London for a money grant, but there does not seem to be any truth in this statement, which is given on no reliable authority and has been copied from one book to another. Myddelton applied to James I., and the King agreed to grant the necessary money for completing the work, the conditions being that half the business should be his, and that he should pay half the past and future expenses of the work. It will be seen from what has been said that Myddelton displayed great sagacity in invoking the King's aid at this juncture, and from the time at which he became a part owner of the New River the rival scheme gave no more trouble. The terms on which James I. became part owner of the enterprise were by no means unfavourable to Myddelton.[5] In the after-history of the New River it appears that James was of considerable use in supporting the business against competition. The matter was of great importance to the financial success of the undertaking, and we will, therefore, take this opportunity of anticipating events and saying all that is necessary on the subject in this place.

It happened that in the year 1617 some brewers applied to the "City Lands" Committee for the lease of the water-houses at Dowgate, offering to maintain them and supply the conduit with water; they were to have any surplus water for their brewhouse without Cripplegate. Court influence was brought to bear against this scheme. The Lords of the Council opposed it, the reason being that it would interfere with the business of the New River Company. In the year 1634 the Corporation petitioned the Lords of

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[1] Nos. I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., and XVI. were published in THE LANCET of Feb. 20th and 27th, March 6th, 13th, 20th, and 27th, April 3rd, 17th, and 24th, May 1st, 8th, 15th, 22nd, and 29th, and June 19th and 26th respectively.

[2] Captain Colthurst appears to have claimed the right of making the river. We do not know the exact nature of his claims. The Corporation of London declined to give him leave to do the work, but it seems that his claims had some foundation and that he ultimately received compensation; but no particulars as to the amount are known, and the matter need not be dwelt upon further.

[3] It is not without interest to mention that as a matter of fact the river was almost fatal to James I. on one occasion. He happened to be riding near Theobalds, his favourite country house, with Prince Charles. His horse fell, and he was thrown into the river which was frozen over. He was dragged out by his boots which were alone visible. His Majesty was afterwards pleased to make some remarks with regard to the fencing of the river.

[4] This enterprise was to be carried out by the Chelsea School of Divinity, which had been endowed by James I. The school had received less public support than was expected, and a project was started that the provosts and fellows should enrich the college by forestalling Myddelton's enterprise and supplying London with water on commercial principles.

[5] The King paid half the expenses and was to receive half the profits, but all the management was to remain in the hands of Myddelton, it being specially provided that the King should not interfere in any way with matters of business.

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the Council that they might be allowed to bring a water-supply from Roundhead, near Tyburn, into the City. It is stated that the Corporation had spent much money in laying down pipes and that they were then stayed by the King's command, and they therefore asked the Council's leave to petition His Majesty that they might be allowed to finish the work. The desire of the Corporation of London to keep their conduits well supplied with water was a most reasonable and laudable one, and there is no doubt that the only reason which prevented James I. from readily giving his consent was that he did not wish the water business in which he was interested to suffer. The better the supply of water provided by the Corporation the less reason the citizens would have to buy water from the New River.

In carrying out his enterprise Myddelton had very loyal support from the Corporation of the City of London. When in the year 1610, Myddelton asked for an extension of time to carry out the work permission was readily granted. Again, when a Bill was brought in to repeal the New River Acts the Corporation warmly opposed it on the ground that it was for the preservation of the health of the City, and that Myddelton, as the City's deputy, had already expended £3000 on the work. Again in the year 1614 the Corporation granted Myddelton a loan of not less than £3000.[6]

It is not possible here to give a full account of all the changes which have taken place in the New River since it was first constructed to the present day, and we can do no more than briefly describe the original work and mention the alterations which were subsequently made.

Myddelton's general plan in making the conduit was that advantage should be taken of the lie of the land so as to diminish the engineering difficulties to a minimum. The consequence was that the course of the New River from Chadwell to Clerkenwell was very much longer than the direct distance between those places. As a crow flies, the distance from Chadwell to Clerkenwell is about twenty miles. The course of the New River as originally constructed was over thirty-eight miles. It was not possible, however, to conduct the water the whole way simply by digging a course for it. More than one valley had to be crossed. As Stowe said, in some places "it required a sprightful art again to mount it over a valley in a trough between a couple of hills, and the trough all the while borne up by wooden arches some of them fixed under the ground very deep and rising in height above 23 ft." One of these aqueducts was at Bush Hill near Edmonton. Its length was 660 ft., and it was 5 ft. wide and 5 ft. deep. A similar aqueduct was made near Islington. This was 460 ft. long and 17 ft. above ground. It was called the boarded river, and many pictures of it are still in existence. It remained till after the middle of the last century and was removed during the years 1776–78, when an embankment was made to take its place. The Bush Hill aqueduct was similarly replaced by an embankment during the years 1784–85.

The completion of Myddelton's work was very gaily celebrated on Michaelmas Day, 1613, a day on which it happened that his brother Sir Thomas Myddelton was elected Lord Mayor of London for the next term of office. There was a pageant in which sixty labourers carrying their tools took part, the Lord Mayor, Aldermen, and "a worthy company beside" were present, a long speech was given in praise of the work of Myddelton and of the King, and the flood gates were thrown open and the water flowed into the reservoir at Clerkenwell. From this reservoir the water was supplied to the houses through wooden pipes.

In June, 1619, James I. granted a charter of incorporation and Myddelton was appointed the first governor of the newly constituted Corporation. Several attempts were afterwards made to get Parliamentary sanction to the provisions of the charter, but these were not successful.

During the early part of its career the undertaking was not a financial success. The citizens of London resented having to pay for their water. As time went on the supply to the public conduits belonging to the City became more and more inadequate, and the fittings belonging to the Corporation were greatly injured by the fire of 1666. As the customers of the New River Company increased in number it was found that the springs were insufficient to supply the amount of water necessary, and the Company therefore took some from the River Lee, which flowed near their original source of supply. Complaints were made with regard to this, and some lawsuits followed. In the year 1738 an Act of Parliament (12 Geo. II., cap. 32) authorised the Company to take water from the Lee on certain conditions, amongst which were that an annual payment should be made and that the money should be employed for the improvement of the navigation of the Lee. The amount of water to be taken was to be regulated, and a balance-engine and gauge were erected for this purpose. Later, the Company were allowed to use a gauge made of wood, bricks, or stone on condition that the size remained constant. A gauge of marble was afterwards erected. During the early part of its career the New River Company obtained a good deal of water between Chadwell and London. This was chiefly surface water. Of late years, however, the surface water has been carefully excluded, and many channels have been made to intercept it and convey it into the River Lee below the intake of the Company.

The original intake of water from the Lee was near Hertford, but some years later water was also taken at Tottenham and pumped to Newington. This source of supply has, however, been given up. The pumping station will afterwards be described amongst the disused ones. We may here remark that of late years a number of new wells have been sunk in the chalk and that these supply water of a quality greatly differing from that of the Lee at Tottenham.

During the present century great changes have occurred in the demands of the public with regard to the height to which water should be supplied in dwelling houses, and these demands have necessitated great changes in the manner of the distribution of water by the Company. The reservoirs at Clerkenwell are 84½ ft. above the high water level of the Thames, and this height was sufficient to supply the lower stories of houses. About the year 1810 the public generally demanded higher service, and complaints as to the deficiency of pressure became frequent. For the supply of the western part of London a windmill was used for pumping, but this, as an old writer points out, was not always satisfactory "because of the uncertainty and irregularity of its impelling cause." A horse-engine succeeded the windmill and this in its turn was superseded by a steam engine put up by Boulton and Watt in the year 1787. The services rendered by Boulton and Watt with regard to water-supply were considerable, and amongst other things we have to thank them for the approximately accurate knowledge we possess of the amount of water which was supplied from the date at which their engines were first used. When Boulton and Watt put up an engine one of their conditions was that they should "derive a pecuniary advantage from the saving effected by their means in the expense of coal employed for generating the steam." They therefore put up a machine for registering the number of strokes, and it is from these registrations that the first approximately accurate figures are obtained with regard to the amount of water supplied. A register kept from the years 1787–1788 records that during each of these years the amount of water pumped by the New River Company was over 4,500,000 hogsheads yearly. At this time in addition to the steam power a water wheel was used for pumping the water to Islington. In the early part of the century the supply of the New River Company water was given as far westwards as Marylebone, but owing to the severe competition of the West Middlesex and of the Grand Junction Companies the western supply was afterwards discontinued. At one time the New River Company had about 400 miles of wooden pipes through the streets, but in consequence of the public demand for high service, which necessitated increased pressure in the mains, the wooden pipes had to be given up. Iron pipes were put down between the years 1810 and 1820.

Nelson, the historian of Islington, gives some interesting information as to the water-supply of the district in which he was interested. He says that during the latter half of the last century a large part of Islington was not directly supplied by the New River Company. The inhabitants had to buy their water from people who carried it round and sold it at a halfpenny a pail. At the beginning of the present century the inhabitants of Holloway obtained their water from a cart which brought it from the New River, the purveyor obtaining it from a pump at a place called

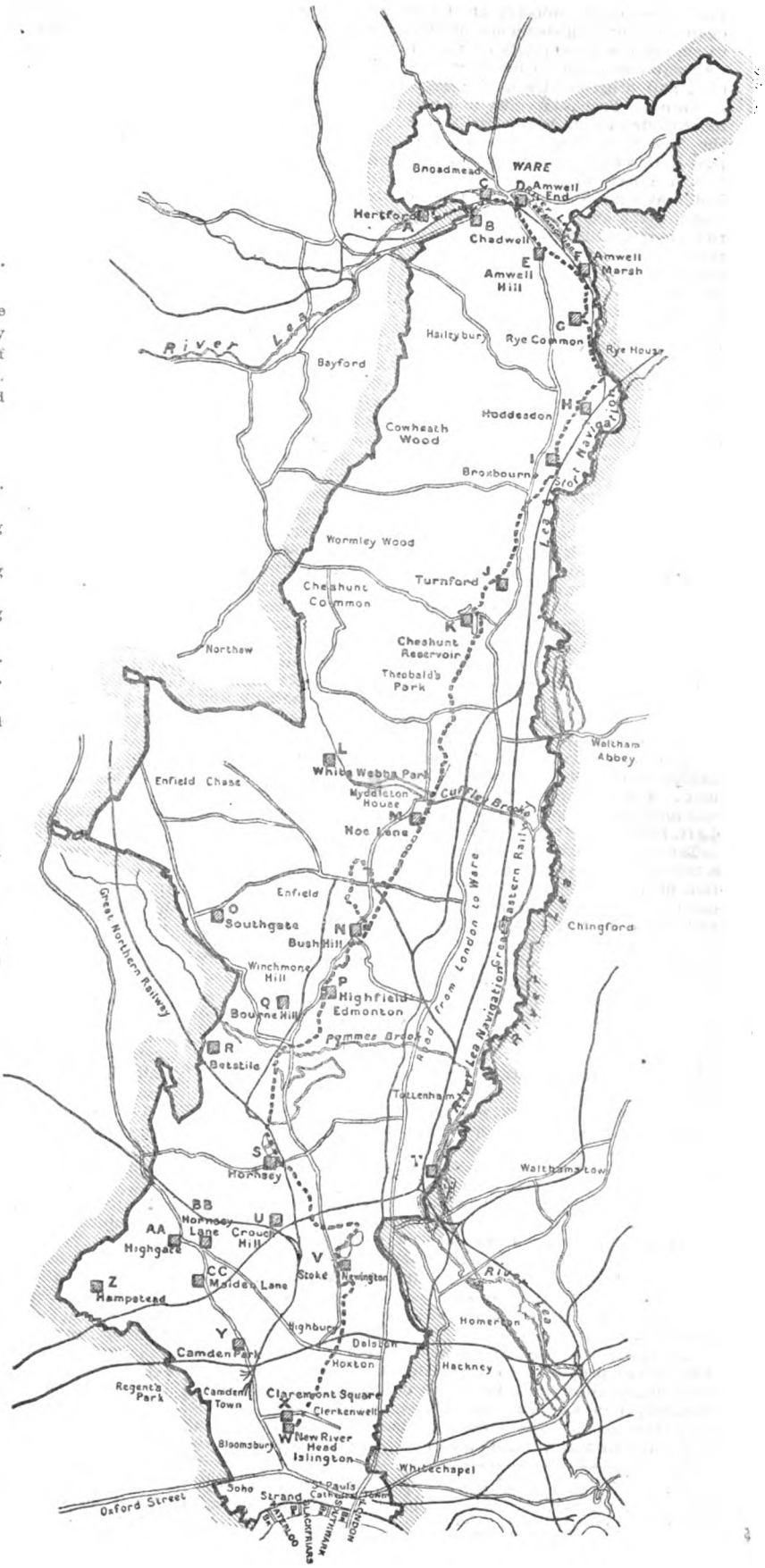
[6] This money does not appear to have been repaid until the year 1634, after Myddelton's death. The Common Council, when the loan was repaid, remitted no less than £1000 to Myddelton's widow on the ground that losses had been incurred by him through breaches made in the water pipes when they were broken up for putting out fires. But a great many years afterwards also the Corporation of London made grants to Myddelton's descendants. These grants have been made as recently as the present century.

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THE NEW RIVER COMPANY.

The part enclosed within the shaded line includes the whole of the area supplied by the New River Company. The course of the New River is shown by a dotted line. The places marked on the map by shaded squares are—

A, Intake from River Lee near Hertford.
B, Chadwell Spring.
C, Broadmead Well and Pumping Station.
D, Amwell End Well.
E, Amwell Hill Well and Pumping Station.
F, Amwell Marsh Well and Pumping Station.
G, Rye Common Well and Pumping Station.
H, Hoddesdon Well and Pumping Station.
I, Broxbourne Well and Pumping Station.
J, Turnford Well and Pumping Station.
K, Cheshunt Well, Reservoirs, and Pumping Station.
L, White Webbs Well.
M, Hoe-lane Well and Pumping Station.
N, Bush Hill Reservoir.
O, Southgate Reservoir.
P, Highfield (Edmonton) Well and Pumping Station.
Q, Bourne Hill Reservoir.
R, Betstile Well and Pumping Station.
S, Hornsey Reservoir, Filter Beds, and Pumping Station; also Campsbourne Well and Pumping Station.
T, Tottenham Pumping Station.
U, Crouch Hill Reservoirs.
V, Stoke Newington: Reservoirs, Filter Beds, and Pumping Stations.
W, New River Head: Reservoir, Filter Beds, and Pumping Station.
X, Claremont-square Reservoir.
Y, Camden Park-road Reservoir.
Z, Hampstead Reservoir.
A A, Highgate Reservoir.
B B, Hornsey-lane Reservoir.
C C, Maiden-lane Reservoir.



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Hopping Lane. In the year 1809 a man named George Pocock, who had property at Holloway, dug a well 172 ft. deep and put up a steam engine and machinery for pumping to supply the inhabitants of the district with water. The well water was said to be of "the finest quality, extremely soft, and consequently fit for washing and every culinary purpose." Pocock formed a small company, which was incorporated by an Act of Parliament (50 Geo. III.).[7] When the New River Company found that the Bill was likely to pass Nelson says that they put down pipes through Islington "with great expedition for the purpose of supplying Holloway with water which was hitherto withheld, notwithstanding the many applications that had for years been made to them and which the inhabitants were now about to obtain through the exertions of an individual." Nelson goes on to say that the Company pulled up a pump from which the Holloway people had been accustomed to get their water "in order to oblige them if possible to have the Company's pipes laid into their premises" He adds, however, that "the housekeepers in the neighbourhood very properly refused to receive water from the New River, and are now for the most part supplied from the well of Mr. Pocock." Mr. Pocock's adventure, however, proved but a short-lived success and soon succumbed to its older rival. In this respect the fate of the little company was identical with that of many other similar enterprises of which a few words may here be said.

Among the undertakings that were bought at various times by the New River Company may be mentioned the London Bridge Waterworks, the Hampstead Waterworks, the York Buildings Waterworks, the North Middlesex Waterworks, and a private enterprise at Bush Hill Park, near Enfield. It is not necessary to enter fully into a description of these adventures. Some account has already been given of the London Bridge Waterworks, and with reference to this part of the subject, it need only be added that when the New River Company took over the business of the London Bridge Waterworks Company it was provided that they should keep up an engine for the purpose of pumping water from the Thames should it be necessary to supplement the supply from the New River in seasons of drought. For this purpose after the destruction of the works on London Bridge, an engine situated at Broken Wharf[8] was for a time used. The engine was of 100 horse-power, and the water was taken from the Thames at a distance of from 30 ft. to 40 ft. beyond low water level.

The northern part of London was supplied with water by a company of adventurers, who obtained from the Corporation of London some of the water rights which had been conferred upon them by an Act of Parliament passed in the year 1543-44 (35 Hen. VIII., cap. 10). This was the earliest Act of Parliament which bore on the London water-supply. By it the Corporation of London were allowed to obtain water from springs at Hampstead Heath, Marylebone, Hackney, and Muswell Hill. The Act authorised the Corporation to enter private lands and search for springs. They were not to interfere with houses, gardens, orchards, or places enclosed with brick or mud walls; but apart from this restriction they were allowed to make ditches and trenches and to lay pipes, and the servants of the Corporation had power to repair the works necessary to convey the water without interruption from the owners of the property from or through which the water was taken, it being only provided that compensation should be paid for damage actually done. In the year 1692 a company of adventurers took over these powers from the Corporation and afterwards made ponds and reservoirs at Hampstead, which were filled by surface water. For some years during the early part of last century the company supplied water over a considerable area, but as the population increased the sources proved insufficient As late, however, as the year 1813 water was supplied to parts of Tottenham-court-road. The area of supply which the company nominally possessed was a large one

The Hampstead Water Company had much trouble with the Hampstead people as to water rights. The ponds are said to have existed in the seventeenth century; the upper pond, however, was smaller than it is at present and covered only three roods. The lower pond had an area of between one and two acres. The Vale of Health Pond was made in 1777. The ponds were fatal, it is said, to many incautious bathers, and there were constant conflicts between the Hampstead people and the water company.

Of the York Buildings Waterworks some account has already been given. The company was finally ruined by the competition of the Chelsea, West Middlesex, and New River Companies, all of which supplied the area in which they were interested. For a time the richer companies reduced their water rates to such an extent that the York Buildings Waterworks were unable to keep their customers. The New River Company then bought up the plant and property of the company.

The water supplied to Bush Hill Park, Edmonton, was put up for the supply of a building estate that was laid out there. A well was sunk, a tower built, and a reservoir made. This business was taken over by the New River Company.

The North Middlesex Waterworks Company carried on business at Betstile, where they sank a well and put up pumping apparatus. This business was taken over by the New River Company.

It would serve no useful purpose to record all the changes which have been made in the course of the New River. The original length of the stream has been considerably shortened and in many places the water is now conducted in pipes, in some the river runs on embankments. The most important improvements which have been made within recent years are that surface water has been as far as possible excluded from the river[9] and that a large number of wells have been sunk to supply the required quantity of water.

GENERAL DESCRIPTION.

The New River Company is the most ancient of all the companies which at present supply London with water. It differs from all the other companies in the fact that it possesses a large quantity of land, and is, as a matter of fact, a land company as well as a water company. With this aspect of the Company this article does not deal, except in so far as the possession of rights affects matters concerning water-supply.

Roughly speaking, the Company supplies the City of London, central London, and the northern suburbs. The area of supply is bounded on the eastern side by the district of the East London Waterworks Company and the district of the Tottenham local board, its southern boundary is the Thames, and on the east the area is bounded by the district supplied by the Chelsea, the Grand Junction, and the West Middlesex Water Companies. The places skirting the northern bank of the Thames are supplied from Charing-cross to the Tower. The most important places supplied are the City of London, Soho, Bloomsbury, Camden Town, Clerkenwell, Hoxton, Kentish Town, Islington, Dalston, Hampstead, Highgate, Holloway, Hornsey, Stoke Newington, Muswell Hill, Betstile, Southgate, and Edmonton.

The water is derived from the River Lee, from Chadwell spring, and from wells at Broadmead, Amwell, Amwell Hill, Amwell Marsh, Rye Common, Hoddesden, Broxbourne, Turnford, Hoe-lane, Highfield, Betstile, and Hornsey, and from ponds at Hampstead and Highgate. The water from the ponds is not used for domestic purposes. The water taken from the River Lee is conducted down an artificial cut, is augmented by that derived from Chadwell Spring and by that pumped from wells situated near the banks of the New River. Of this water, some is filtered at Hornsey and pumped thence into the district around; some passes on to Stoke Newington, where it is allowed to subside in large reservoirs, and is then filtered and pumped to the surrounding district. Some of the water passes on down the New River to New River Head, where it is filtered and pumped to the southern district, including the City of London. Small districts at Betstile and at Amwell Hill are supplied with pure unfiltered well water.

The stations of the Company which are now in working order and which are all marked on the accompanying map are: Intake from the River Lee, near Hertford (A); Chadwell Spring (B); Broadmead, well and pumping station (C); Amwell End, well and pumping station (D); Amwell Hill, well and pumping station (E); Amwell Marsh, well and pumping station (F); Rye Common, well and pumping station (G); Hoddesden, well and pumping station (H); Broxbourne, well and pumping station (I); Turnford, well

[7] An Act for supplying with water Upper and Lower Holloway, Highbury, Canonbury, Upper Islington, and their respective vicinities, all in the parish of St. Mary, Islington, in the county of Middlesex and for other purposes relating thereto.

[8] Broken Wharf was situated between Blackfriars and Southwark bridges.

[9] A former engineer to the Company estimated that at one time something like half the amount of water which fed the river was surface water which flowed into the stream between Chadwell and London.

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and pumping station (J); Hoe-lane, well and pumping station (M); Bush Hill, reservoir (N); Southgate, reservoir (O); Highfield (Edmonton), well and pumping station (P); Bourne Hill, reservoir (Q); Betstile, well and pumping station (R); Hornsey, reservoirs, filter beds, and pumping station, and Campsbourne, well and pumping station (S); Crouch Hill, reservoirs (U); Stoke Newington, reservoirs, filter beds, and pumping station (V); New River Head, Islington, reservoir, filter beds, and pumping station (W); Claremont-square, Islington, reservoir (X); Camden Park-road, reservoir (Y); Hampstead, reservoir (Z); Highgate, reservoir (A A); Hornsey-lane, reservoir (B B); and Maiden-lane, reservoir (C C).

In addition to these stations, all of which are now in use, the following two disused stations are marked on the map. Cheshunt, well, reservoirs, and pumping station (dismantled) (K); and Tottenham, pumping station (T).

A new well is being sunk at White Webbs (see L on map). In the succeeding articles the descriptions will be arranged in the following order: 1. Survey of the New River, commencing at the intake from the River Lee. 2. The wells, pumping stations, and reservoirs. 3. The pond water (for non-domestic supply). 4. Area of distribution and general statistics.

(To be continued.)

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY MEETING of the Council was held on Oct. 14th, Sir WILLIAM MACCORMAC, Bart., the President, being in the chair.

Mr. Victor G. Plarr was introduced and signed the usual declaration on his admission as Librarian.

Mr. C. H. Golding-Bird was admitted a member of the Court of Examiners.

The best thanks of the Council were given to Mrs. Gowland for her presentation to the College of drawings by the late Mr. P. Y. Gowland, F.R.C.S. Eng.

It was resolved that the picture of Henry VIII granting the Charter to the Barbers and Surgeons should be restored.

In accordance with the recommendation of the Committee of Management the following institutions were added to the list of recognised places of instruction in chemistry, physics, and practical chemistry: The Staffordshire County Technical Schools; the Devonport Municipal Science, Art, and Technical Schools; the Salford Royal Technical Institute; the Hull Municipal Technical School; the Higher Grade Board School, Norwich; the Bury Technical School; the Southport Victoria Science and Art School; the Maidstone Municipal Technical School; and the East London Technical College, People's Palace.

Mr. Thomas Bryant was re-elected a member of the Committee of Management, and Sir William MacCormac and Mr. Henry Morris were elected members of the Laboratories Committee.

The Laboratories Committee reported that since June 4th the director, Dr. Sims Woodhead, had supplied 9825 doses of antitoxic serum for the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board, each dose contained 2000 units.

Dr. Woodhead also reported the results of a recent visit to Germany in order to compare his methods of preparation of diphtheria antitoxin with those in use in that country.

"On my arrival in Berlin," he wrote, "I went to see Professor Ehrlich, who at once said that he would do everything in his power to help me in obtaining information and making experiments. My first object was to obtain as exact a comparison as possible between our results in serum-testing and those made by Professor Ehrlich and Dr. Dönitz, as the reliability of all our earlier experiments depended essentially on a comparison between two such sets of results. Dr. Dönitz first made a series of experiments, so that I was able to follow exactly the methods of dilution and of administration used at the testing station. At the same time I carried out a series of dilutions according to the methods used in our laboratories. From day to day the reactions obtained in the different animals injected by Dr. Dönitz were carefully examined and noted, and the several experiments were compared. I then obtained from Professor Ehrlich and Dr. Dönitz records of a series of experiments carried out upon the serum sent to Professor Ehrlich from our laboratories. The results obtained were compared with those obtained by us in our earlier experiments: and it appeared that our readings, obtained by the old method, differ to the extent of only about 5 per cent. from those obtained by the new method. Professor Ehrlich then expressed the opinion that the serum he had thus examined for us was equal to any that is in the market. He also informs me that he has tested a number of the other serums examined by us, and that he had obtained results very comparable with ours, and that we could therefore rely upon our figures as being relatively and, within certain limits, actually correct. Professor Ehrlich also stated that, speaking generally, our methods and results were thoroughly reliable. In this he was corroborated by Dr. Dönitz, and later by Dr. Libbertz, of Höchst. They were also greatly interested in the new method of preparing serum, and all of them have determined to try it, as they say that it will be a great improvement if it will work as well as it seems to do here. I have been requested to ask Dr. Wood to send pamphlets to Dr. Libbertz and Dr. Aronsen. Concerning the method of collecting samples of serum, the modes of sealing and controlling, the price of testing the serum, I have obtained all necessary particulars. In every case six samples are taken from large bottles containing several litres. These and the stock flask are then placed under seal, and are sent to the laboratory. One of these samples is examined immediately; the others are put aside for future reference. The samples are tested, first, as to the presence or absence of micro-organisms; secondly, for the quantity of preservative material that has been added; and thirdly, for the number of units in each c.c. of the sample. These tests are always made in duplicate. When these duplicate experiments do not accord, a final determining experiment is made. If the strength of the serum does not come up to the required standard, it is simply returned as being below what is claimed. A fixed fee is taken for every fresh testing of these returned samples. The new method of testing the serum with large quantities of toxin is that now always used, as it is sufficiently delicate to measure to within 1 per cent. Professor Ehrlich maintains, however, that the old method in capable hands also gives exceedingly good results, probably to within from 5 to 10 per cent. He recommends, however, in all cases that an allowance for such proportion of error and for fall in the antitoxin strength of the serum should always be made."

The Chairman of the Annual Report Committee presented a draft copy of the report to be presented to the Fellows and Members at the annual meeting to be held on Nov. 18th, 1897, at 3 P.M.; it was approved.

Mr. R. J. Godlee was elected a member of the Court of Examiners' section of the Board of Examiners in Dental Surgery in the vacancy occasioned by the retirement of Sir William MacCormac.

A vote of thanks was given to the President and Mr. Jessop for representing the College at the Moscow Congress.

The President reported that he had accepted on behalf of the Council a portrait of Frère Jaques, presented to the College by Mr. Sharon Grote Turner, to whom the best thanks of the Council were accorded.

A letter was read from the Parliamentary Bills Committee of the British Medical Association expressing the hope that the President, with one or more members of the Council, would join a deputation to the Secretary for War on the subject of the Army Medical Service, and enclosing copies of a report of a sub-committee on the question of advancing army medical reform. The matter was postponed to the next meeting, but copies of the report mentioned were ordered to be sent to each member of the Council.

A memorial was read signed by medical practitioners resident in Great Yarmouth, calling attention to certain facts in connexion with medical aid associations and submitting the following questions for the consideration of the Council—viz.:

(*a*) Is the holding of appointments such as are herein described compatible with the conditions under which your diploma is granted and held?

(*b*) If the holding of such appointments by your diplomates does not contravene the existing regulations does not your Council consider that, in the interests of the medical profession and of the public, by-laws forbidding such practice should be adopted?

(*c*) Is not your Council of opinion that for a medical man to hold such appointments should be declared by the General Medical Council to be conduct infamous in a professional respect; and, if so, will your Council instruct its representative on the General Medical Council to support such a declaration?

The following reply was directed to be sent:—

"That the memorialists be informed that there is no provision in the Charters or By-laws of the College prohibiting Fellows and Members of the College from acting as medical officers to medical aid associations, but that the Council, while not prepared to express an abstract opinion on the questions raised, are willing to consider any evidence which may be submitted to them respecting canvassing for patients, either directly or indirectly, by any individual Fellow or Member of the College, with a view to determining whether or not such Fellow or Member has been guilty of a breach of the By-laws."

BORACIC ACID IN BUTTER.—At Barry Police-court on Oct. 11th a local tradesman was fined twenty shillings and costs for selling butter which contained an excessive quantity of boracic acid. The public analyst certified that the butter contained 9 per cent. of boracic acid. Dr. Williams said he considered the amount of boracic acid to be four times the quantity required to preserve butter when no salt was used. The butter, he added, contained 60 grains to the pound, and this would be highly injurious if taken for any length of time.

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THE ELECTION OF A DIRECT REPRESENTATIVE.

As we were able to announce last week, Mr. Victor Horsley has proved the successful candidate for the vacancy caused by the resignation of Dr. Rentoul of his seat as a Direct Representative of the profession for England and Wales. The Branch Council certified on Saturday last the result of the election, and the exact number of votes polled by each candidate proves to have been as follows:

MR. VICTOR HORSLEY	6946
SIR WALTER FOSTER	6112
DR. RIGBY	197
DR. DIVER	81

Mr. Horsley was thus elected by a majority of 834 votes over Sir Walter Foster.

The number of voting-papers sent out was 22 576 (the additions to, and removals from, the Register having so counterbalanced each other as to bring the total within one of the number sent out in 1896). Of these, 13 466 (or 59·64 per cent.) were returned by the voters within the proper time according to the regulations; 227 (or 1·01 per cent.) were returned by the voters, but received at too late a date to be lawfully reckoned in the enumeration; 822 (or 3·64 per cent) were returned through the Dead Letter Office; and 8061 (or 35 71 per cent.) did not come back in any way—total, 22 576.

The percentage of voters on the present occasion was 5·42 greater than in 1896—59·64 per cent. in 1897, as against 54·2 per cent. in 1896.

Of the 13,466 voting papers duly returned, 130 (or 0 9 per cent) were invalid owing to the following various causes: 4 were entirely blank; 11 were signed, but not marked; 82 had no signatures; 28 were improperly marked: 3 practitioners to whom voting papers were sent were stated to be dead; and 2 voters were stated to have gone to the colonies—total, 130.

It may be noticed in this connexion that, although there was but one member to be elected, in two cases the voters selected two candidates, and in two other cases voted for three candidates.

We have been requested to publish the following letters of thanks from Mr. Victor Horsley, Sir Walter Foster, and Dr. Diver:—

To the Registered Medical Practitioners of England and Wales.

LADIES AND GENTLEMEN,—I beg to thank you sincerely for the honour you have conferred upon me by electing me as one of your Direct Representatives on the General Medical Council.

In the confidence thus extended to me I fully recognise that you have desired to give expression to your approval of the reforms initiated, and already in part effected, by the Medical Defence Union and your wish to see them extended and furthered by the same methods. If it should prove that I am able to carry out your wishes in this respect any success achieved will be due to the council and members of that union, as it is to their support, assistance, and teaching that I owe the training for the work you have decided to place in my hands.

There is one point more upon which I would like to say a few words. Under the Medical Acts as they now stand Dr. Rentoul's resignation would entail upon the profession a series of double elections. The costliness and inconvenience of this arrangement are obvious. To restore as far as lies in my power the normal condition of affairs I shall resign my office when the term of the Representatives elected in 1896 expires—i.e., after I shall have served for four years instead of for the full period of five years for which you have elected me. Again thanking you,

I am, yours faithfully,

VICTOR HORSLEY.

To the Registered Medical Practitioners of England and Wales.

LADIES AND GENTLEMEN,—I beg to return my most heartfelt thanks to the 6112 registered medical practitioners who, with only a few days' notice of my candidature, voted for me in the recent election. When I consider that many of my friends were unable to assist me on account of pledges given before my candidature was announced, I feel very grateful for this remarkable expression of confidence on the part of so large a number of my profession.

I am, your obedient servant,

Birmingham, Oct. 18th, 1897. B. WALTER FOSTER.

To the General Practitioners of England and Wales.

LADIES AND GENTLEMEN,—It is with a full—indeed, a keen—appreciation of the firm adherence to my cause of many of my professional friends that I address myself to you with earnest thanks at the close of this election, wherein I appear in the last place. For it must have been apparent to you who voted for me, so soon as the two rivals—Mr. Victor Horsley and Sir Walter Foster—came upon the field with their powerful organisations and the glamour of their names, that they would attract nearly all the interest of the election, and would swiftly draw such a following that the rush would detach a large number of adherents from the other candidates, and sweep their voting papers into the scumper with the rest. That this was so was exemplified upon a large scale by what happened in the grouping about Mr. Jackson. There the mass was disintegrated with the assent of its central figure, who hailed his constituents to gather with him in the wake of the particular rival he selected.

But the polling being over, what is its practical outcome? A man of capacity has been chosen, but from whence? From the ranks of the consulting men of London; and thus our distinctive representation, the increase of which we are earnestly demanding, has been reduced from five to four. That Mr. Horsley has much information of the needs of the medical practitioner is notorious, and that he will work honestly goes without saying. But mark! It is information alone which he possesses, not experience. In his London meeting he admitted that no one in the Council had done more for the profession than Dr. James Glover, and we all know that Dr. Jas. Glover is a general practitioner of long standing and experience; and Mr. Horsley had before said in his brief, that there were two gentlemen of our body, friends of his own, who are worthy of the office he himself was seeking, and if either of these would stand, he would not. Otherwise, he would compete in the interests of us all. Ingenuousness does truly mark our earlier days!

Well, the electorate have taken Mr. Horsley at his own estimate and have opened wide the portals for his entry, whilst thoughtful men have looked on with wonder and concern. But when the dust of contest shall have settled upon the field, and the sunlight and fresh air of truth and common sense shall make our vision and our retrospect clear, we shall perceive that the profession has uttered to itself a stern rebuke and has, in the darkness, made a lash for application to its own body, and at the same time has given to the ill-natured critic of our profession a chance to smile and say, "It serves you right."

Adieu for this time, and with thanks once more heartily felt and respectfully tendered,

I am, your faithful servant,

Devonshire-street, Portland-place, Oct. 20th, 1897. E. DIVER.

THE ASSOCIATION OF CORPORATE AND MEDICAL REFORM AND THE DIRECT REPRESENTATIVES.

WE have received the following letters with a request for their publication:—

11, Adam-street, Strand, W.C., Oct. 16th, 1897.

SIR,—We are requested to represent that its next meeting being on Tuesday, Oct. 19th, our committee will feel obliged by the favour of a reply to the letter addressed to you covering a series of questions submitted to candidates at the recent election to a vacancy in the General Medical Council. Until the movement for medical reform is taken up by his own constituency it is, we feel sure, unnecessary to explain that there can be no suggestion of a claim to a reply from the Direct Representative for Scotland, and his opinion is invited solely because, as has before happened in the

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history of both countries, lovers of freedom and justice in our country may well hope to receive both sympathy and help from his; and we feel every confidence that a request arising from a spirit of courtesy and deference will be met in the same spirit.

Our committee can have no doubt of the will of all the Direct Representatives to act in harmony with the aspirations of their constituencies, yet in the adoption of a course of policy intended to extend to an appeal to Parliament and the nation, an expression of their views in order to enable all appearance of disunion to be avoided would afford valued assistance in deciding upon the most proper measures.

We have, &c,

(Signed) W. G. DICKINSON,
R. B. ANDERSON,

Hon. Secretaries of the Corporate and Medical Reform Committee.

To Dr. J. Grey Glover and Dr. William Bruce.

25, Highbury-place, N., Oct. 18th, 1897.

DEAR MR. SMITH,—I hope you will forgive me for not sooner replying to a letter from a body calling itself the Executive Committee of Corporate and Medical Reform, of which you are the chairman, in which letter are enclosed some thirty or forty questions with a request that I should give a reply to each of them.

I hope you will not think me guilty of any personal discourtesy if I ask you to excuse me complying with this request. Such elaborate heckling is bad enough during an election, and from gentlemen in whom one recognises some authority to speak for the profession or for a considerable section of it. The present is not such an occasion. In spite of the opposition of most of the gentlemen whose names I see in your circular, I am by the favour of the profession—not your delegate as you seem to think—but its representative now for the third time. I claim to be treated with some trust and not cross-examined like an uncertain witness by gentlemen who have constituted themselves, very superfluously as I think, into a new association. I do not think it in the interest of the profession that any half-dozen gentlemen can meet in any small room and dub themselves a new association. Surely we have enough associations already. In a paragraph in the *Times* of Oct. 12th, having clear internal evidence of being supplied by your executive committee (in course of formation), mention is made of the Association of Fellows of the College (Royal College of Surgeons of England?), the Society of Members of the College, the Incorporated Medical Practitioners' Association, the London and Counties Medical Protection Society, the Medical Defence Union, and various other societies and the British Medical Association.

What can be the excuse for another medical association and what its function? The answer is to be gathered from the same paragraph. It is to push them all on and energise them—to be a sort of goad or *vis a tergo*. The modesty of this function, self-assumed by a few gentlemen who are by no means silent members of the other associations, strikes me, as does their happy belief that this last grand new association is necessary to move the greater associations into use and activity. These associations are doing their best. Two or three of them would do all the profession needs if they were loyally supported and not distracted by little competitive bodies whose vanity seems to be in the inverse ratio of their age and numbers. I must, therefore, respectfully decline to recognise the need of your association or its right to question men elected and trusted by the profession of England and Wales as members of the Medical Council.

But my chief reason for declining to answer your numerous questions, which remind me of a celebrated long programme which brought its authors to grief, has yet to be stated. It is not that I do not sympathise much with some of your chief objects, but that I lack confidence in your judgment, in your impartiality, and that I disapprove of the methods by which you propose to realise your objects. You propose to memorialise the Medical Council—a perfectly legitimate procedure. But you intimate in the *Times* an intention, in the event of your appeal to the Medical Council being unsuccessful, of petitioning Parliament and being heard at the Bar of both Houses. I seem to detect in this proposal a development of a threat made by one of my colleagues in a celebrated speech of "shaking the Medical Council to its centre," and, this failing, of "going to Parliament." Whether your committee could claim the privilege of appearing at the Bar is perhaps open to question. But the proposal seems to me dramatic and ridiculous. Were I to join you in attempting to carry it out we should not only make ourselves appear ridiculous—which might be a small matter—but we might bring Direct Representation itself, and even the great profession of which we are all proud to be members, into discredit. It is not thus that the many grievances of medical practitioners are to be redressed or the constitution of the Medical Council is to be improved. I must therefore ask to be severely and entirely disassociated from the authors of such a proposal.

I am, Sir, your obedient servant,

JAMES GREY GLOVER.

To Joseph Smith, Esq., M.R.C.S. Eng., &c., Chairman of the Corporate and Medical Reform Committee.

[COPY.]

The Castle, Dingwall, N.B., Oct. 17th, 1897.

DEAR SIRS,—I have to thank your committee for the compliment they have paid me in addressing me on the subject of their memorial and in doing me the honour to ask me to to sign it. I trust they will not suppose for one moment that I do not sympathise with the feelings which prompted them to issue and to ask for support for their memorial, when, after full consideration, I refuse to adhibit my name to the document. If the committee carry out their intention of presenting it to the next meeting of the General Medical Council I shall frankly and freely express my views, which I hope will be such (as far as they go) as to merit the committee's approval. It humbly seems to me an expression of opinion at this time would be both premature and, let me add, in my personal and unadvised judgment, somewhat discourteous to my colleagues of the General Medical Council. Please excuse haste, as I must write now to catch the post so as this may reach you on Tuesday, and believe me to be,

Yours truly,

(Signed) WILLIAM BRUCE.

To Messrs. Dickinson and Anderson, London, Hon. Secretaries of the Corporate and Medical Reform Committee.

THE EXTENSIONS AT THE BATHS OF BATH.

IT is needless in a medical journal to say anything about the virtues of the Bath waters, but it is perhaps necessary to remark that these virtues are not appreciated by the public as they should be. The corporation of that city in whose hands the control and care of the baths are vested have of late years pursued the wise policy of improving the accommodation and the appliances in every possible way, and the latest addition, a magnificent concert-room and promenade around the old Roman bath, was opened to the public on Oct. 18th by H.R.H the Duke of Cambridge. The day chosen, St. Luke's Day, doubtless on account of the association of that saint with the medical profession, was unfortunate in one way in that it clashed with the Harveian Oration and the meeting of the Royal College of Physicians of London, by which many metropolitan medical men were prevented from accepting the hospitality so kindly offered by the corporation and the medical men of Bath. The proceedings were eminently successful in every way. To begin with the weather was perfect and the beautiful city was looking its best. His Royal Highness on arriving first received the Freedom of the City and afterwards laid the foundation-stone of the new Art Gallery. On the conclusion of this ceremony he was conducted to the building forming the additions to the Pump Room. The promenade or concert-room is a well-proportioned chamber, some 80 ft. long by 40 ft. wide, mainly in the classical style, with Renaissance decoration. At right angles to this runs the old Roman bath which has been lately uncovered; the water is open to the sky at present, though formerly it was roofed in, and the walls and pillars supporting this roof are still to be seen running round the central bath for about the height of four or five feet. Under the present scheme the bath has been treated as the impluvium in the atrium of an ancient Roman house. The external walls are carried up from the ancient walls to form the court, and plain Doric pillars support the flat roofs over the ambulatories at the sides and ends. On the east, south, and west sides are statues of eight of the Roman generals and emperors who had to do with the conquest and occupation of Britain. These are the work of Mr. G. A. Lawson, whilst the architect of the surroundings of the bath is Mr. J. M. Brydon, who

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also designed the concert-room. The Duke of Cambridge having taken his seat, Mr. R. H. Moore, the chairman of the Baths Committee, gave a short but most interesting account of the baths and the various improvements and means for utilising the waters which have been carried out from time to time. That these additions were worth carrying out from a purely commercial point of view was shown by the fact that since they had been in use the income to the city from the baths had increased from £2000 per annum to over £6000. Though the Corporation of Bath naturally rejoiced over this it was not simple selfishness, for the increased and increasing use of the baths meant relief from pain and suffering for many hundreds of invalids. His Royal Highness then, after a short speech of congratulation, declared the additional buildings open. After this the mayor, Mr. C. Woodiwiss, entertained some 250 guests to luncheon in the Guildhall. Among the medical men present were Dr. Allchin, Mr. Lennox Browne, Dr. Cholmeley, Dr. Coupland, Dr. Curnow, Dr. John Harley, Mr. Reginald Harrison, Dr. Hensley, Mr. Cripps Lawrence, Mr. Macnamara, Dr. B. H. Rogers, Mr. Quarry Silcock, and Dr. James Taylor. Mr. Victor Horsley, who had been invited, was unfortunately prevented from being present.

After luncheon the medical visitors were given a private demonstration of the various methods of bathing employed and the different kinds of baths in use. All these were described and explained by Mr. Henry Freeman, F.R.C.S. Irel. A reception and tea were also held at the Royal United Hospital. In the evening the medical profession of Bath and the neighbourhood entertained their professional brethren at dinner. Altogether some forty sat down, Dr. L. A. Weatherley being in the chair. The dinner went off very well and reflected great credit on the indefatigable secretary of the Medical Reception Committee, Mr. W. M. Beaumont. The chairman proposed the health of the guests, which was responded to by Dr. John Harley.

After dinner the company proceeded to the reception given by his Worship the Mayor in the new concert-room. The old Roman bath was illuminated in good taste, the lamps being small and subdued and therefore not productive of any jarring effects, and the whole scene was one of great beauty. Bath, we think, may well be proud of the way in which the various entertainments were carried out, and her guests have every reason to be grateful. Mr. T. Sturge Cotterell, on behalf of the corporation, has spared no pains to impress upon the world at large the beauties and benefits which the city of crescents offers to all alike, while as more particularly concerning ourselves the Medical Reception Committee, through Mr. W. M. Beaumont and Dr. Bannatyne, were untiring in their efforts to show everything that could be seen and to extend an almost overwhelming hospitality. The corporation has intimated its intention of carrying out still further improvements, so that we do not feel ungrateful in suggesting one. Bath is pre-eminently the city in Great Britain which needs, and could support, a casino—we mean a place where the resident or visitor could just stroll in on paying sixpence or so and enjoy a cup of coffee, and listen to a good string band. Perhaps the new concert-room will be sometimes utilised in this way, but we fancy it would be better to have an additional building. It need not be more than a kind of large conservatory, but it must be properly managed, and the fault avoided which spoils so many places in London of ordering people about. This sin is especially in evidence at that notable failure from an entertainment point of view, the Imperial Institute, where the visitor is told he may not do this or that and may not go here or there, and when at length, after many trials, he does arrive at the "gardens," what does he find? An asphalte paved court, surrounded by brick walls, looking more like a prison exercising ground than anything else. We have sore need in this country of more opportunities of simple and cheap relaxation, and Bath is one of the places to show how they can be brought about.

THE SICKNESS AND PLAGUE IN INDIA.

THERE is an unusual amount of sickness and mortality in certain parts in India at the present time, and notably in the city of Bombay and in several of the towns and rural districts of that Presidency. According to the latest papers the mortality in Bombay at the present time stands at the very high rate of 52·83 per 1000. The epidemic of plague has not by any means ceased; on the contrary, it still prevails to some extent in Bombay, and even more so at Poona and Kirkee, and it seems to be slowly but surely creeping along rural districts and villages. According to telegraphic intelligence through Reuter's agency, of the 19th inst. an outbreak of what is believed to be plague has occurred in a village in the Jullundur district of the Punjab. Twenty-three deaths have been reported, and it is believed that the infection has been conveyed to the village from Hurdwar, which is situated on the Ganges, in the Saharunpur district. The situation altogether is not so satisfactory as could be desired and probably gives rise to some anxious consideration on the part of the authorities in India and this country. The prevalence of the disease, too, tends to increase during the winter. An elaborate scheme has been formulated for the sanitary improvement of Bombay which will cost a good deal to carry out, but no reasonable amount of outlay will prove so costly as the continuance of plague and other epidemic diseases.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6345 births and 3566 deaths were registered during the week ending Oct. 16th. The annual rate of mortality in these towns, which had declined in the nine preceding weeks from 29·5 to 16·2 per 1000, rose again last week to 16·9. In London the rate was 16·1 per 1000, while it averaged 17·5 in the thirty-two provincial towns. The lowest rates in these towns were 9·2 in Cardiff, 9·9 in Swansea, 10·9 in Halifax, and 11·6 in Croydon; the highest rates were 21·5 in Bolton, 22·4 in Liverpool, 23·6 in Preston, and 23·7 in Birmingham. The 3566 deaths included 415 which were referred to the principal zymotic diseases, against 514 and 434 in the two preceding weeks; of these, 127 resulted from diarrhœa, 89 from measles, 73 from diphtheria, 51 from "fever" (principally enteric), 39 from whooping-cough, and 36 from scarlet fever. No death from any of these diseases was recorded last week in Brighton; in the other towns they caused the lowest zymotic death-rates in Bradford, Croydon, Swansea, and Oldham; and the highest rates in Birmingham, Sheffield, Burnley, and Preston. The greatest mortality from measles occurred in Birmingham, Manchester, and Burnley; from whooping-cough in Derby; from "fever" in Gateshead; and from diarrhœa in Salford, Blackburn, Preston, and Sunderland. The mortality from scarlet fever showed no marked excess in any of the large towns. The 73 deaths from diphtheria included 45 in London, 4 in Liverpool, 3 in Plymouth, and 3 in Leicester. No fatal case of small-pox was registered last week either in London or in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 3725, against 3697, 3677, and 3692 on the three preceding Saturdays; 440 new cases were admitted during the week, against 358, 349, and 400 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 167 and 176 in the two preceding weeks, further rose last week to 268, and were 15 above the corrected average. The causes of 40, or 1·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Leicester, Leeds, Hull, Newcastle-upon-Tyne, and in eighteen other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Nottingham, Preston, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks from 17·8 to 19·8 per 1000, declined again to 19·1 during the week ending Oct. 16th, but exceeded by 2·2 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from

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12·8 in Aberdeen and 13·3 in Paisley to 21·7 in Edinburgh and 23·7 in Greenock. The 568 deaths in these towns included 29 which were referred to diarrhœa, 20 to whooping-cough, 17 to scarlet fever, 6 to measles, 6 to diphtheria, and 6 to "fever." In all, 84 deaths resulted from these principal zymotic diseases, against 78 and 73 in the two preceding weeks. These 84 deaths were equal to an annual rate of 2·8 per 1000, which was 0·8 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had declined from 20 to 12 in the three preceding weeks, rose again to 20 last week, of which 13 occurred in Glasgow and 3 in Leith. The deaths referred to scarlet fever, which had been 5 and 13 in the two preceding weeks, further rose to 17 last week, of which 7 were registered in Edinburgh, 4 in Glasgow, and 4 in Paisley. The 6 fatal cases of diphtheria also showed a further increase upon the numbers recorded in recent weeks, and included 3 in Glasgow and 2 in Edinburgh. The deaths referred to different forms of "fever," which had been 7 and 12 in the two preceding weeks, declined to 6 last week, of which 3 occurred in Edinburgh and 2 in Paisley. Of the 6 fatal cases of measles 5 were recorded in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 137 and 162 in the two preceding weeks, declined last week to 122, but exceeded by 35 the number in the corresponding period of last year. The causes of 34, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks from 28·3 to 21·9 per 1000, rose again to 24·0 during the week ending Oct. 16th. During the thirteen weeks of last quarter the rate of mortality in the city averaged 24·0 per 1000, the rate during the same period being 19·4 in London and 18·4 in Edinburgh. The 161 deaths registered in Dublin during the week under notice showed an increase of 14 upon the number in the preceding week, and included 14 which were referred to the principal zymotic diseases, against 20 and 17 in the two preceding weeks; of these, 7 resulted from "fever," 3 from diarrhœa, 2 from diphtheria, 1 from scarlet fever, and 1 from whooping-cough. These 14 deaths were equal to an annual rate of 2·1 per 1000, the zymotic death-rate during the same period being 2·0 in London and 2·8 in Edinburgh. The deaths referred to different forms of "fever," which had declined from 9 to 4 in the three preceding weeks, rose again to 7 last week. The 3 fatal cases of diarrhœa showed a marked decline from the numbers recorded in recent weeks. The mortality from scarlet fever also showed a decline, while that from diphtheria and from whooping-cough showed an increase. The 161 deaths in Dublin last week included 27 of infants under one year of age and 36 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a further decline from those recorded in recent weeks. Six inquest cases and 6 deaths from violence were registered; and 56, or more than a third, of the deaths occurred in public institutions.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR CROFTS is appointed for service in West Africa. Surgeon-Major Reade and Surgeon-Lieutenant Bowen have joined at Woolwich for duty. Surgeon-Lieutenant Brodribb is posted to the Station Hospital, Western Heights, Dover. Surgeon-Captain Wright has embarked for Malta. Surgeon-Lieutenant W. A. Ward embarked on the 22nd inst. at Tilbury in s.s. *Arcadia* for Bombay.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of the under-mentioned officers are replaced at the disposal of the Military Department:—Surgeon-Lieutenant Hooton (Bombay) and Surgeon-Lieutenant Standage (Bombay). Brigade-Surgeon-Lieutenant-Colonel Blood, A.M.S., to officiate on the Administrative Medical Staff of the Army, with the temporary rank of Surgeon-Colonel, vice Surgeon-Colonel E. Townsend, A.M.S., appointed Principal Medical Officer, Mohmand Field Force.

The under-mentioned medical officers of the A.M.S. have been detailed for duty with the 24th British Field Hospital, in place of Surgeon-Major Yourdi and Surgeon-Major Berryman, whose tour of service has expired: Surgeon-Major Woodhouse and Surgeon-Major Henderson.

VOLUNTEER CORPS.

Rifle: 12th Middlesex (Civil Service): Surgeon-Lieutenant E. M. Callender to be Surgeon-Captain.

THE WEIGHT OF CANDIDATES FOR COMMISSIONS IN THE ARMY.

Attention has been called to the orders regulating the height and weight of candidates for admission to Sandhurst and Woolwich and for army commissions. In the enlistment of recruits for the army, where the age of the recruit often cannot be accurately known, it was naturally found desirable that some rules and scales, deduced from a large and extended series of examinations and observations, should be laid down for general and medical guidance regarding height, weight, and chest measurement in relation to age. A large amount of statistical and other data exists, and the late Sir William Aitken embodied the results of these in his work on the growth of the recruit and young soldier. The outcome of all this analytical labour was to determine, approximately at any rate, what is or should be, the condition of the human frame in these respects at certain ages of life, and which was expressed by the term "physical equivalents." There cannot be any doubt that men of good build and of good physical strength and health are required for army life. But it is a matter of common observation that men of light weight are frequently very enduring, active, and energetic, both physically and mentally, and will, in the parlance of the day, "walk round" the heavier and altogether bigger samples of humanity in many field sports and exercises. Still, these favourable samples of light weights cannot, after all, be said to be the rule, and it is next to impossible to fix on a working formula or average that will satisfy all. It is contended that the scale of weight laid down and required for young officers for the army is too high, and that it would have excluded some of our most distinguished officers; that many athletes are the reverse of fat and that light weights frequently possess superior powers of endurance—"staying power," as it is called; and there is no doubt a good deal of truth in these statements. It is well known that, owing probably to differences in diet, hygienic care, and outdoor games, the youth of the well-favoured non-labouring classes compare favourably with the artisan or labouring class of the English population in size, weight, and stature. It is often difficult to determine from the physical examination of a youth what he will become later in life. We suspect that many boys of sixteen years of age, 5 ft. 4 in. in height, do not weigh 8 st. 8 lb., although at twenty-one or twenty-two years of age they may develop into fine, active young men in every way well fitted for military officers. But the age of sixteen years does not count in the case of candidates for Sandhurst and Woolwich, for they are rarely so young and commonly of about eighteen years of age when they go up for the examination. If the figures in the regulations be compared with the averages in anthropometrical tables they will, we think, be found to have been fairly fixed. On the other hand, it is an exaggeration to represent that the regulations as to weight in correlation with height and chest measurement required by the army authorities mean fat young men. The young officers of our army, as seen at any military club, strike us as a fine body of well-grown young fellows and they are certainly not fat. What seems to us a legitimate source of complaint is the existence of any rigid rule at all about matters which should be mainly left to the judgment of the examining medical officers. Scales and formulæ should be used as guiding indications rather than as absolute rules for invariable application.

IMMEDIATE LAPAROTOMY IN WOUNDS OF THE ABDOMEN.

A paper on this subject by a French military surgeon named Caillet was read by M. Chauvel at a recent meeting of the Académie de Médecine, the author having based his remarks mainly on two cases which were related in detail. In the first a non-commissioned officer received a revolver shot point blank in the lower part of his abdomen, and an hour later was taken to hospital. The officer on duty dressed

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the wound with iodoform and applied a bladder containing ice. The following morning when Dr. Caillet saw the patient, six hours after the injury was inflicted, he was in a good condition, the temperature was 96·8° F. and the pulse was 80; there was no vomiting, hiccough, or dyspnœa. By four o'clock in the afternoon, however, unfavourable symptoms had set in, and at 7.30 operative interference was decided on. Median laparotomy disclosed four perforations of the small intestines, and the cavity of the peritoneum contained some doubtful-looking fluid, with particles of food and false membrane. Recovery, which was delayed by an attack of pneumonia, took place in about six weeks, the missile coming away in a stool on the ninth day. In the second case a dragoon was stabbed in the left iliac region and immediately vomited some coffee he had just taken. Four hours later he was admitted to the Vincennes Hospital, his general condition being then satisfactory. There was no nausea and his pulse beat firmly at 70. An attempt was made to probe the wound, but the stylet could not be introduced. As perforation seemed uncertain an expectant treatment was adopted, and the next morning the patient was so well that he was allowed several spoonfuls of milk. A few hours after this a complete change took place and urgent signs of generalised peritonitis showed themselves. Median laparotomy was at once performed, but the patient was so weak that only the small intestine could be examined, the result being negative. The abdomen was then closed, after the cavity had been washed out with warm artificial serum. Shortly afterwards the man died, and at the post-mortem examination it was found that the large intestine had been pierced. The author believes that if preventive laparotomy had been essayed both patients would have been saved. There is no intrinsic danger in laparotomy nowadays, he says. Then why delay it even in the most doubtful cases? In the instances cited the impossibility of sounding the wounds contributed largely to the postponement of the operation; but considering the small-sized projectiles now in vogue this method of establishing a diagnosis should not be accorded too much weight, especially when anæsthesia has not been employed. Exploration is, no doubt, of great value where practicable, but inability to effect it is no proof of the absence of perforation. Statistics may be unfavourable to immediate laparotomy in penetrating wounds of the abdomen, but the author, nevertheless, maintains that it is generally indicated, and in this opinion he apparently has the support of M. Chauvel.

CHOLERA IN INDIA.

The news from the headquarter half of the 1st Battalion of the Shropshire Regiment stationed at Sitapur, not far from Lucknow, North-west India, shows that a severe outbreak of cholera has occurred. It is reported that forty non-commissioned officers and men have died from cholera. It is too early to learn any details, but assuming the outbreak to have been a very sudden one it looks like water poisoning; but if that be so, how did it occur on such a scale? Sitapur is, generally speaking, a healthy station, and how did the *comma bacillus* gain an introduction into the affected community?

THE SICKNESS AMONG THE TROOPS IN THE TOCHI VALLEY.

We are glad to hear from the last file of Anglo-Indian papers up to the 2nd inst. that the health of the Rifle Brigade is somewhat improving. They had lost up to date one officer and forty-four men. The valley at this time of year is unhealthy, and a good deal of sickness, mainly of malarious origin, prevails. The temperature during the day has been great—99° F. at Saidgi in a double fly tent; but it will soon, or already has, become cooler.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The autumn meeting of the South Western Division of this association will be held at Brislington House, near Bristol, on Oct. 26th at 2.45 P.M. Dr. Goodall will communicate a paper on the Systematic Collection of Anthropometrical Data in Asylums; Dr. Morton will read notes of a case and open a discussion on the Making of Wills by Certified Patients, and the Duties of Medical Men in Regard to This; Dr. Blachford will read notes on the Order of Disappearance of Rigor Mortis from the Body as observed at Autopsies on the Insane; and Dr. Briscoe will report a case of Fracture of the Fibula in a Melancholic, with Remarks on Fracture in Insane People.

Correspondence.

"Audi alteram partem."

THE JENNER SOCIETY AND VACCINATION.

To the Editors of THE LANCET.

SIRS,—It is thought desirable to put on record in an unquestionable form the opinion of medical officers of health as to the relative merits of vaccination and "sanitation" as preventives of small-pox. Such an expression of opinion will, it is conceived, be the most effective answer to the views to which the statement of the two dissentient members of the late Royal Commission on Vaccination has given so much currency, that "sanitation" can be safely relied on, not as an adjunct to, but in the place of, vaccination, notwithstanding the opinion of the rest of their colleagues to the contrary.

The following declaration, whilst affirming the report of the late Royal Commission, that "sanitation cannot be relied on as a substitute for vaccination, also confirms two other conclusions contained in the report—that vaccination, especially by the use of calf lymph, is free from any serious danger, and that to perpetuate the protection against small-pox afforded by vaccination in infancy it is expedient to repeat the operation at a later age. It has already been signed by upwards of 850 medical officers of health in Great Britain, India, and the colonies. The signatures of those who have no pecuniary interest of any kind in vaccination, nearly 250 of the above number, include those of officers to a number of English, Welsh, and Scotch counties, the metropolitan and many combined provincial districts, and nearly all the large cities and towns. It is still in process of signature, and will, it is believed, be endorsed by medical officers of health in all parts of the world.

I am, Sirs, yours faithfully,

FRANCIS T. BOND, M.D.,
Honorary Secretary of the Jenner Society.

Gloucester, Oct. 7th, 1897.

Declaration.

We, the undersigned, actually or recently medical officers of health, think it right, in view of assertions which have been published, with some appearance of authority, as to the efficacy of "sanitation" as a substitute for vaccination in dealing with small-pox, to make the following statement:—

1. As responsible sanitary officials, to whom the care of the health and lives of the community is especially entrusted, we have every inducement to give due weight to the value of "sanitation" in the widest sense of the term for the prevention of small-pox as of other forms of infectious disease. We include in that term good drainage, the removal of refuse, the supply of pure air and water, and all other conditions which are calculated to fortify the body against disease in general.

2. We are no less alive to the importance of those special precautionary measures which experience has shown to be so valuable, when effectively used, to arrest the spread of infectious disease, such as the immediate notification of illness, the efficient isolation of the sick and of those who have been exposed to infection, and thorough disinfection of persons and things.

3. While thus fully appreciating the value of these agencies for such purposes we unhesitatingly declare our belief that they cannot alone be relied on either to prevent or to stamp out epidemics of small-pox.

4. We believe that the only trustworthy protection at present known against small-pox, alike for the individual and the community, is efficient vaccination in infancy and subsequent re-vaccination, and that the only effective way of stamping out epidemics of this disease lies in the free use of these agencies.

5. We are so thoroughly convinced that the dangers alleged against vaccination are, as the Royal Commissioners have asserted, "insignificant," even without the additional safeguards which the Commissioners have recommended, that, in common with nearly the whole of the medical profession, we not only prescribe it generally, but use it for ourselves, our families, and others, in whose welfare we are personally interested.

6. We repudiate the calumny which has been freely circulated that either we or other members of the medical profession have been influenced in forming or expressing our belief in vaccination by any consideration other than that of the public health, but we think it well to add that a considerable number of us derive no emoluments of any kind from the practice of vaccination.

THE LANE MEDICAL LECTURES.

To the Editors of THE LANCET.

SIRS,—Mr. Christopher Heath, late President of the Royal College of Surgeons of England, delivered during the month of September the second course of the Lane Medical Lectures recently founded in connexion with the Cooper Medica

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College in San Francisco. This course was addressed especially to the students of that school but was also attended by some hundreds of medical men of the Pacific coast; the attention of the audience to the teachings of this eminent English surgeon was markedly intense and reverent. The closing lecture, "A Century of Surgery," was replete with illustrations of the advancement of surgery during the nineteenth century. As a contributor to this progress great distinction was given to Lord Lister. Other men, both Europeans and Americans, who have aided in this advancement received appropriate mention. The lectures of Mr. Heath were characterised by a judicious blending of the science and the art of surgery; of the one not so much as to be tedious, of the other enough for guidance to the surgical practitioner. He taught how in boldness not to be rash, how in conservatism not to be inactive. For the appreciated and satisfactory work done by Mr. Heath in San Francisco the New World now brings its honest tribute to add to the honours and renown, so well and worthily won, with which the Old World has so long distinguished him.

I am, Sirs, yours faithfully,

LEVI COOPER LANE, M.D., M.R.C.S. Eng.,
President of Cooper Medical College.

San Francisco, Sept. 29th, 1897.

"INFECTIVE SWINE DISEASES": A CORRECTION.

To the Editors of THE LANCET.

SIRS,—I find in your issue of Sept. 25th the report of my remarks at the Montreal meeting of the British Medical Association on the infectious swine diseases in the United States, in which this statement occurs, "the term 'Schweineseuche' seems to relate to what he understood as 'hog cholera.'" This is a very unfortunate typographical error. I stated that the German "Schweineseuche" and the American swine plague appear to be identical.

I am, Sirs, yours faithfully,

Ithaca, N.Y., U.S.A., Oct. 15th, 1897. V. A. MOORE.

"THE PREHENSILE POWER OF THE HANDS OF THE HUMAN INFANT."

To the Editors of THE LANCET.

SIRS,—Dr. Walter Kidd's argument is a little difficult to follow. Apparently he maintains that the prehensile power of the hands of new-born infants is merely reflex, and that, therefore, it does not afford evidence of man's descent from a lower animal (e.g., ape). I fancy no one will deny that the action is reflex, for it hardly comes within the category of instinctive action, and it certainly is not rational. But all reflexes have meanings, and, since this particular reflex is useless to the human infant but would have been highly useful to a simian ancestor, surely it is not unreasonable to suppose that it is a "vestige"—just such a vestige as the embryonic branchial arches. Dr. Kidd himself mentions a fact which may be used in support of Dr. Robinson's theory; he says the reflex disappears in a few weeks. This is true, but it is also true that reflexes and instincts which predominate in the lower animals (e g, fish) are to a great extent lapsed and replaced by rational action in the higher (e g., men).[1] According to the doctrine of evolution, the individual in his development recapitulates the life-history of his race, for which reason the infant at birth is much more simian in type—e.g., as regards his features and his in-turned feet—than he is later, whence it follows that we may expect some reflexes, useful to the ape but useless to the man, to be present at birth, but to disappear later. It further follows that since the foot diverged from the quadrumanous type at a much earlier date than the hand its reflex prehensile power is on that account still less. Dr. Robinson's theory does not, indeed, supply proof that man has descended from an ape-like animal, but it affords strong corroborative evidence. The proofs are very massive and for that very reason cannot be entered upon here, but a striking passage from Professor Weismann may be quoted: "It is not only that, in the light of this theory, numerous facts receive for the first time a meaning and a significance; it is not that, under its influence, all the ascertained facts can be harmoniously grouped together; but in some departments it has already yielded the highest results which can be expected from any theory—it has rendered possible the prediction of facts, not indeed with the absolute certainty of calculation, but with a high degree of probability. It has been predicted that man, who in the adult state only possesses twelve pairs of ribs, would be found to have thirteen or fourteen in his embryonic state It has been predicted that in this early period in his existence he would possess the insignificant remnant of a very small bone in his wrist, the so-called 'os centrale' which must have existed in the adult condition of his extremely remote ancestors. Both predictions have been fulfilled, just as the planet Neptune was discovered after its existence had been predicted from the disturbance induced in the orbit of Uranus."

I am, Sirs, yours faithfully,

Southsea, Oct. 16th, 1897. G. ARCHDALL REID.

[1] Vide THE LANCET, June 21st, 1897.

"THE IMMEDIATE REDUCTION OF ANGULAR CURVATURE OF THE SPINE."

To the Editors of THE LANCET.

SIRS,—Mr. Jackson Clarke's letter in THE LANCET of Oct. 16th calls attention to a point that is in some danger of being overlooked in the excitement that may attend the first introduction into this country of Dr. Calot's method of correcting the deformity of Pott's disease. The immediate deformity in this disease is of course due to destruction of bone in the anterior portion of the spinal column, while the posterior portion as a rule is unaffected. This deformity can no doubt be corrected by Calot's method, and it may be hoped that the gap thus inevitably formed *may* in time be filled up by new bony growth. But those who have observed the after-history of such cases must admit that the deformity generally goes on growing with the growth of the patient. This is doubtless due to the fact more or less of the growth centres in the front part of the column having been destroyed. Thus the continued normal growth of the posterior part of the spine unaccompanied by a corresponding growth in front must force the column into a curve if consolidation has taken place. The more extensive the caries the greater will be this secondary increase of deformity. Mr. Jackson Clarke does well to deprecate the description of such operations as "successful" immediately after their performance; but I would go farther than he, and would venture to say that the result cannot be judged till, not months only, but years have elapsed—i.e., when the stage of growth is ended.—I am, Sirs, yours faithfully,

Seymour-street, W., Oct. 19th, 1897. E. MUIRHEAD LITTLE.

THE EPIDEMIC OF TYPHOID FEVER AT MAIDSTONE.

(BY OUR SPECIAL SANITARY COMMISSIONER.)

THOUGH the Maidstone people are slow to move, still, they have at last taken action. A public meeting has been held, and after a noisy debate it was decided to form a Ratepayers' Association which will admit as members all direct and indirect ratepayers. It seems only natural to conclude that there has been serious blundering or neglect. A reaction is already manifest in the public feeling with regard to the water company. More than one inhabitant of the fever-stricken districts has observed to me that it was all very well blaming the water, but they wished the authorities would look after the drains. If some members of the District Council are shareholders or directors of the water company, other councillors are owners of house property. In the face of the great calamity which has befallen the town the sufferers are naturally anxious to fasten the responsibility upon some one, and they are beginning to fear that the persistence with which the whole trouble is attributed to the water-supply may result in the avoidance of a full inquiry into other and contributory causes. On the other hand, the temptation to ascribe the entire blame to the water-supply is very great, for it simplifies

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the problem to a marvellous degree. For many years the water from the Farleigh springs has been drunk, and it has never been shown that any harm resulted. Why, then, should the authorities have been more on their guard this year than on previous occasions? But so soon as an alarm was raised prompt action was taken. On Sept. 18th the water was suspected, inquiries were immediately made on the spot, and the supply from the Tutsham springs was cut off on the 20th. Not satisfied with this the whole of the supply from the Farleigh district was abandoned on the 29th. Considering that this latter measure exposed the town to considerable danger if a fire broke out, and that there were fairly good reasons to believe that it was only the Tutsham springs which were contaminated, it was scarcely to be expected that the whole of the Farleigh supply should at once be given up. Yet this has now been done, and the probabilities are that no Farleigh water will again be utilised. As the plant connected with this supply is supposed to be worth from £30,000 to £40,000 it will be said that the Company, by abandoning so valuable a property, will have given practical proof of disinterested public spirit. It will then be shown that an ample supply can now be obtained from other sources which cannot be contaminated, and thus it will be urged that all danger is completely removed, the problem satisfactorily solved, and that the authorities have nothing more to do than to rest on their laurels and be thankful. In a little while even the water company will be forgiven and its shortcomings forgotten.

The report of the Local Government Board should defeat any such manœuvres, but this report will not be of much use unless it is published at an early date. The inhabitants of Maidstone are primarily interested in clearly defining the responsibilities for what has occurred. Theirs is no theoretical or imaginary grievance. More than a hundred lives have been lost in consequence of the neglect in the removal of preventable causes. Great bodily misery, physical suffering, and financial distress which might have been prevented have been endured by hundreds of families. Shall this calamity be glossed over and forgotten? Are the responsible authorities to be whitewashed by the mixing of some lime with the water-supply and the abandonment of the Farleigh springs? This would indeed be an easy way of getting out of the difficulty. But if the inhabitants of Maidstone could be so easily satisfied it must not be forgotten that though they are primarily interested the Maidstone epidemic is an event of world-wide importance. Other towns have to be told what has happened at Maidstone. They have their lesson to learn from this terrible example, and will they be satisfied when they are told that it is only necessary to turn off a stopcock here, to turn on another stopcock there, and forthwith one of the most complex scientific problems of the age is settled?

Such a solution can only be qualified as a shirking of the whole question. Unfortunately, the municipal elections are close at hand, and it is too soon to fix responsibilities between this and the beginning of next month, particularly as there has been no public inquiry to enlighten the electors. The Maidstone councillors urge with very great plausibility that this is not a suitable moment for an electoral contest. Party divisions and faction fights must be postponed in the face of the present distress. The authorities must present a united front to battle with the prevailing trouble. They must devote all their energies to coping with the epidemic and not lose precious time in canvassing the electorate; therefore, it is suggested that there shall be no contest, that no opposition shall be attempted, and that each councillor shall be re-elected. Certainly there are good grounds for saying that there should be no election contests in the midst of so serious an epidemic, but this is no reason why there should be no contest after the epidemic is over; on the contrary, it is absolutely indispensable that the inhabitants of Maidstone should have full and ample opportunity of examining the whole question and then of pronouncing their verdict by means of an election, otherwise our boasted self-government is reduced to a mere farce. If Maidstone authorities are to avoid censure by deciding, when difficulties arise, that there shall be no contested election, such a proceeding will establish a dangerous precedent by which elected bodies will escape the responsibilities that accrue from their blundering.

There is no objection to the Maidstone councillors remaining in office for a few weeks longer. This may be convenient under the present circumstances, but if it is justifiable to postpone the electoral contest for a few weeks it would be most unjustifiable to postpone it for several years. If, therefore, the present council succeed in preventing a contest, and consequently remain in office, they should first take a solemn and public pledge not to retain their position for more than a few weeks. It should be clearly understood that in, for instance, three months' time they will one and all resign, and thus force on another election which this time would be contested. Otherwise the council will lay itself open to the gravest accusations. This is a point on which the Maidstone Ratepayers' Association might with advantage insist before it is too late. It is not because there is so much evidence to show that the water has been the medium of spreading the disease that therefore there is nothing else to be done but to alter the water-supply. On the contrary, there is also much evidence to show that there were other contributive causes which must be discovered and removed. It should be borne in mind that there has been typhoid fever in Maidstone in former years which was in nowise put down to the water-supply, that there are now some cases of diphtheria which are not attributed to drinking water, and that the number of cases is increasing in spite of the improvement in the water-supply. This is so much the case that the wisdom of opening a *crèche* may be questioned. The *crèche* which is now about to be inaugurated will undoubtedly render great service to poor families where there are cases of typhoid fever, but by bringing many children together it may help to spread diphtheria. Thus, not only in regard to the typhoid fever epidemic, but in respect to the spread of diphtheria, a general inquiry into the sanitary condition of the town dealing not only with the water-supply, but also with the housing of the poor, private drainage, public sewers, the removal of refuse, &c., is imperatively needed. Great vigilance must be exercised so that this investigation is not at first postponed and then altogether abandoned.

To show that other issues are involved I might mention, for instance, how many persons have complained to me as to the difficulty they experience in obtaining the removal of the refuse from their dustbins. This is not done by the municipality, but by a contractor, and in several instances I found that the refuse had been allowed to remain for more than a month, and that the visits of the dustman were few and far between. Is it necessary that a sensational epidemic directly attributable to dustbins should occur before attention can be called to this obvious neglect of public duty? But, above all, the drainage of the whole town must be thoroughly examined. There is evidence enough to show that at least an inquiry is necessary. Taking, for instance, Buckland Hill, it will be found that the inhabitants there are much troubled by the question of sewer ventilation. A secondary main runs down this street and falls into the principal sewage collector at a very short distance beyond the point where it is joined by the syphon that has passed under the river and brought all the sewage from the eastern side of the town. At the lower part of this street there was a ventilator, but a year or so ago a case of typhoid fever occurred in the house nearest this ventilator. A little higher up there is a magnificent tree which has been allowed to remain in the very middle of the roadway. This tree was supposed to mark exactly the centre of the county of Kent, and for this reason and on account of its beauty it has not been felled; but after the case of typhoid fever which happened in the lower part of the street the tree was utilised as a support for a ventilating shaft, and the ventilator lower down was closed. No sooner had this been done than the inhabitants of the house that stood nearest and on the same level with the tree found that bad odours were blown from the ventilating shaft through the bedroom windows into the upper part of their house. This nuisance seemed so serious that the occupier of the villa in question wrote to the Local Government Board. Evidently he had greater faith in the central than in the local authorities. Some correspondence ensued, and finally a few more feet of piping were added to the ventilator. This, however, did not put an end to the odours. They no longer penetrated the upper windows of the villa nearest to the tree, but invaded the next villa, which stands on a higher level and therefore came into line with the increased height off the ventilating shaft. Now, it should be noted that in the house which has thus been freed from the odours given off by the shaft there has been no case of typhoid fever, but next door, where the odour now prevails, there is a case of

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typhoid fever, yet both houses were equally supplied with the Farleigh water.

At the top of Buckland-hill the main sewer turns to the right up the London-road, and then a little further turns again, this time to the left up the Queen's-road. These are very sharp angles for a main sewer.[1] It is very probable that deposits are formed at these points. In any case, at both these corners are street ventilators that give off very foul odours, as I can testify from unpleasant personal experience. There have been several cases of typhoid fever between these two ventilators, though this is one of the best and wealthiest quarters of the town. In the house at the corner of the London-road and the Queen's-road, nearest to what was, at the time of my visit, the more obnoxious of the two ventilators, there is a very severe case of typhoid fever. Indeed, it may be observed in walking through the streets in the western part of the town that where tanyard refuse is put down to prevent the noise of vehicles disturbing the sufferers, and thus testifying to the existence of cases, a sewer ventilator will be found close at hand. This may be a coincidence, but in the several cases which I examined it was a fact. It is also notable that in speaking of the 19 cases of typhoid fever notified in the year 1896 the medical officer of health says in his annual report that "faults of drainage and sewer ventilation nuisance were the ostensible causes in some and direct contagion through nursing in others. Except that 3 cases occurred in Milton-street and 2 on Buckland-hill there was no particular coincidence as respects to locality." Now these two localities stand out very prominently in the present epidemic. Milton-street is one of the thoroughfares where there have been the greatest number of cases, and here the sewer occasions much trouble and has been dug up, repaired, and altered several times, while on Buckland-hill the sewer acts as a ventilator to the main collector that passes below at the foot of the hill. That these facts are not ample enough to prove a theory I readily admit, but they suffice to indicate the necessity for an inquiry. The point to ascertain is whether those houses and localities which suffered most were exposed to sanitary conditions which were not as good as, or which were worse than, those prevailing in other localities where there were not so many cases. Such an inquiry would probably lead to the carrying-out of other sanitary improvements besides the alteration of the water-supply.

In the meanwhile, and whatever neglect there may have been of sanitary questions in the past, it must be acknowledged that the local authorities have displayed great energy in dealing with the actual epidemic. The fitting-up of emergency hospitals has been no light task. Everything was wanting. The houses and the schoolrooms utilised had not the necessary sanitary conveniences. Closets and new drains had to be hastily put in, and it was impossible to find in a small town like Maidstone all that was required. On the other hand, to send up to London involved a loss of time. The work had to be continued day and night without a moment's respite. Nor was it easy to get together some 300 beds for the patients and to lodge more than 100 nurses. Then the patients and nurses had to be fed, and this involved the organisation of a commissariat department which was altogether out of the ordinary attributes of local administrative work. But soon another difficulty arose. A large amount of linen accumulated which was dangerously soiled by the patients. If this linen was scattered over the town and washed anyhow and by anybody the consequences were likely to be very serious. The medical officer of health, Mr. Matthew A. Adams, thereupon conceived the idea of establishing a public laundry for dealing exclusively with the infected linen. With the very efficient aid of Mr. Jackling, the sanitary inspector, a steam laundry, with all the most recent and improved machinery, was promptly opened. Carts are now sent round the town with numbered canvas bags. The linen from each patient is placed in a separate bag distinguished by its number. On reaching the laundry the bags without being opened are plunged in a large copper, where their contents are thoroughly disinfected by prolonged boiling. Then only are the bags opened and each article marked with a number corresponding with that of its bag, and can be washed in the ordinary manner. But so great is the amount of the work that had to be done that it was necessary to establish four large boilers set in solid brickwork, and to put up two huge tents seventy-five feet in length in which the linen is sorted. Another great difficulty soon arose. How was so large a quantity of linen to be dried? Fortunately, in a field opposite there were two oast houses for the drying of hops. These curious-looking, cone-shaped structures are familiar to all who travel in hop-growing countries. In the lower part there is a furnace where smokeless anthracite coal is burnt. Above the furnace and just under the cone-shaped roof there is not a floor, but horsehair matting resting on rafters. It is on this matting that the hops are placed to dry, as the heat passes through readily. For laundry purposes it was necessary to construct a framework all round the roof above this matting so as to hold ropes or poles on which the linen is hung to dry.

The borough surveyor on his side has had no easy task in looking after the flushing of the sewers and of the drains in the houses where there have been cases of fever. It has been necessary to procure and then fit a long hose to all the watering-carts. This hose is carried through the houses and the closets are thus flushed from the watering-carts that stand in the street. Sometimes a hundred gallons of water is thus discharged into a house drain or closet. Then another service of carts had to be organised to take round drinking water while the water-supply mains were being disinfected. The people have very fully responded to the instruction that they were to let their taps run so as to get the lime out of the mains and the branch pipes, for no less than 500,000 gallons of water were thus allowed to escape in about four hours. The smell of the lime is very persistent, and it is anticipated that there will be a tremendous waste of water before this has been completely washed out of the pipes. Under these circumstances the water-supply may run short for a little while; but when once the inhabitants are satisfied that there is no longer any trace of lime in the pipes the supply of water now secured will be ample, and this, of course, without using any of the condemned Farleigh water.

The distribution of the cases of typhoid fever still corresponds with that of the Farleigh water. The last calculation made brings us up to the date of Oct. 15th. At that time a total of 1654 cases had been notified, and about fifty cases have occurred since. Of this total 714 were inhabitants of the Western district and 94 were reported from the asylum, which is also in the west. In the north-east there were 554 cases and in the south east 204 cases. Thus in the three districts where the Farleigh water was drunk there were 1566 cases. The remaining 88 cases occurred in low-lying central districts where the water drunk comes from Cossington and Boarley. Perhaps all these 88 patients had drunk some of the Farleigh water when visiting friends in other parts of the town. In any case a considerable number of them have been proved to have done so. The wonder is that there have not been more victims in the centre of the town, as it is so near and so easy to step out of that district into the districts which used to be supplied with the Farleigh water. Now, however, that no more of this water is drunk the epidemic is evidently subsiding. The local authorities will therefore soon have time and leisure to study the predisposing causes and ascertain why some localities suffered more than others which had the same water-supply.

[1] See Map published in THE LANCET of Oct. 9th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

University College, Liverpool.

THERE were twenty-five entries (including three ladies) for the new course of lectures on Sanitary Science, which number is considered very satisfactory. From eighteen to twenty students are attending Professor Boyce's pathological class at Ashton Hall. Ten gentlemen are also pursuing bacteriological investigations at the evening class, also under Professor Boyce's supervision.

Liverpool Medical Institution.

The first meeting of the session was held on Oct. 7th, when the President, Dr. Caton, delivered the inaugural address, the subject of which was Notes of a Visit to Poland and Russia on the occasion of the Twelfth International Medical Congress (with lantern illustrations). The meeting was exceptionally large, and much interest was evinced in

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the views of the principal places of interest in Warsaw, Moscow, St. Petersburg, and Helsingfors. The members and associates were afterwards entertained by the President to supper *à la Russe*, followed by a smoking concert, which was enlivened by songs and recitations.

Liverpool Royal Infirmary.

The following house appointments have been made at the Royal Infirmary: House physicians: Dr. H. M. Crake, Dr. E. E. Laslett, and Dr. D. G. Hurter. House surgeons: Dr. J. E. Smith, Dr. F. S. Pitt-Taylor, and Dr. J. H. Willett. Resident medical officer to the Lock Wards: Dr. H. M. Henderson. Dr. Laslett won the Torr Gold Medal for Anatomy at University College, Liverpool, in 1894. Dr. Crake obtained the Gold Medal for Physiology in 1894. Both gentlemen held Holt Tutorial Scholarships for 1896–1897 at the same College.

Liverpool Medical Club.

The winter session 1897–98 for club debates and social entertainments commenced on Oct. 14th, when a successful smoking "social" was held. A goodly number of members were present and the evening passed off in a very agreeable manner.

Mr. Victor Horsley.

Mr. Victor Horsley's successful contest for the vacant seat on the General Medical Council was a source of much satisfaction to the medical profession in Liverpool generally, where his candidature was warmly supported. Mr. Horsley has been an honorary member of the Liverpool Medical Institution for some years.

Munificent Donation to the Liverpool Consumption Hospital.

Lady Willox, the wife of Sir John Willox, M.P., has given a donation of £2000 to the proposed new building fund of the Consumption Hospital. Her ladyship has always taken the warmest interest in the welfare of the hospital, where she is a constant visitor.

The New Mayor of Bootle.

Dr. John McMurray has been unanimously selected for the Mayoralty of Bootle for the ensuing year. Dr. McMurray, who is a comparatively young man, has been in practice in Bootle for about ten years, and is honorary surgeon to the Bootle Borough Hospital; he is also visiting medical officer to the Kirkdale Industrial Schools of the Liverpool Select Vestry. He was formerly assistant medical officer at the Liverpool Workhouse Hospital. Dr. McMurray is also a member of the Bootle School Board.

Birkenhead Medical Society.

The annual meeting of this society was held on Oct. 8th, Dr. Marsden, President, being in the chair. The following gentlemen were elected office-bearers for the ensuing year, 1897–98, viz.:—President: R. Sydney Marsden, M.B., D.Sc., F.R.S. Edin. Vice-President: Thos. S. Floyd, M.A., M.D. Dub. Treasurer: James Pinkerton, M.D., C.M. R.U.I. Secretary: Wm. Leask, M.B., C.M. Edin. Librarian: S. Wilkinson, M.R.C.S. Eng. Council: W. R. Floyd, B.A., M.B., Ch.B. Camb.; Joseph Blood, M.A., M.D., C.M. Dub.; J. H. Fardon, M.R.C.S. Eng.; Francis Johnston, M.B., C.M. Glasg.; and S. H. Nazeby Harrington, M.R.C.S. Eng.

Oct. 19th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Eye Infirmary, Newcastle-upon-Tyne.

A SPECIAL meeting of the above charity has just been held to take into consideration the financial position of the institution. The Mayor presided. The secretary made a statement to the effect that the expenditure had now for some years exceeded the income by some £300, and that capital had been spent to meet the deficiency. The Mayor alluded to the attempt recently made to amalgamate the Eye Infirmary with the Royal Infirmary, a proposition which the Royal Infirmary had rejected. Mr. M. Nesham drew attention to the small number of subscribers, and said at the present rate of expenditure the capital of the Eye Infirmary would be exhausted in four years. The Eye Infirmary is a very perfectly-equipped institution, admirably adapted for its purpose, and in years gone by was very successfully carried on. That it should have fallen upon such evil days is much to be regretted, and that means may be forthcoming to enable it to resume its old flourishing condition is much to be desired.

District Nursing.

Sunderland is one of the most enterprising towns in the north of England, and in the particular of district nursing it is not behind. A most influential meeting has just been held under the presidency of Archdeacon Long with the object of placing district nursing in Sunderland upon a firmer footing. The Marchioness of Londonderry, ever to the front in philanthropic movements in the north, delivered an excellent address on District Nursing. Mrs. Watkins, a daughter of Sir H. Thompson, also addressed the meeting. Mr. G. B. Morgan, J.P., the senior surgeon to the Sunderland Infirmary, moved a resolution, which was unanimously carried, proposing that the district nursing committee should affiliate with the Queen Victoria Jubilee Institute for Nurses. It is difficult to over-estimate the enormous amount of good done by the various district nursing associations in the north of England, almost all the large towns and many of the country districts deriving good from their most laudable efforts.

Typhoid fever from eating Uncooked Mussels.

Mr. J. Cromie reported last week to a meeting of the Blyth port sanitary authority a number of cases of typhoid fever in the district the result of eating uncooked mussels collected from beds in close proximity to the spot where the sewage from the hospital for infectious diseases ran into the river. This is not the first time Mr. Cromie has drawn attention to typhoid fever contracted in a similar way. The authority passed a resolution ordering that a warning should be posted pointing out the danger of eating mussels taken from the River Blyth—the least it could do under the circumstances.

New Site for the Royal Infirmary, Newcastle-upon-Tyne.

The freemen of Newcastle, of whom Mr. John Hall is one, agreed a few days ago to give to the governors of the Royal Infirmary a site of eight acres on the Leazes as a free gift. This is the site which the governors of the infirmary wish to acquire, and the one which, in their opinion, will be the most useful for their purpose. The freemen have always shown a most sympathetic spirit towards the Royal Infirmary in its endeavour to procure a new site, and this magnificent gift, valued at some £80,000, is a liberal response on their part to the princely offer of Mr. J. Hall to expend £100,000 of his own money in building a new infirmary. Unfortunately, however, while the herbage only belongs to the freemen the soil is the property of the corporation, and therefore the site cannot be acquired without the aid of the corporation. If that were given an act of parliament would still be required to enable the transfer of the land to the infirmary. On Oct. 13th the Town Moor Management Committee, to whom the petition from the infirmary for a site had been referred by the corporation, met, and as after discussion it was found that there was a pretty equal division of feeling, one section proposing that ten acres on the Leazes and the other that ten acres of the Bull Park should be given for the purpose, it was finally resolved that the committee should recommend the council to give one or other of these two sites, leaving it to the council to make a selection. On Monday last the council met and after a long and animated discussion separated without determining the question, which is again to be discussed on Oct. 28th.

Oct. 19th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

University of Aberdeen.

THE medical, arts, and agricultural classes opened for the winter session on Oct. 13th. At the English literature class Professor Grierson devoted a portion of the opening lecture to a reply to remarks by a writer in THE LANCET on the "Decline of the Scottish Universities." The University court have by a majority resolved that in the present state of the finances they are unable to hand over to the town council the buildings fronting Broad-street which are intended to be removed. The completion of the new south wing of the buildings extension at Marischal College

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will leave the committee with a deficit of perhaps £20,000, and until further funds are raised no further buildings can be undertaken. Hence the desire of the court not to sacrifice in the meantime the rents of the properties mentioned. Hopes, however, are entertained that by a further contribution from Government and private subscriptions the whole scheme will ultimately be carried out, including the widening of Broad-street and the removal of the old, and the erection of a new, Greyfriars church.

New Hospital Buildings in Aberdeen.

The new medical block at Aberdeen Royal Infirmary—the last instalment of the Jubilee extension scheme of 1887—is now completed and was opened for patients on Monday last, Oct. 18th. It is a granite building, four storeys in height, with a frontage of 200 feet to Woolmanhill, and will accommodate 94 patients in all, while the total cost of the block has been about £15,000. On each of the ground, first, and second floors are two wards for male and female cases respectively of the ordinary type, and the top storey is adapted for eight erysipelas patients with two isolation beds. On the first three floors, in the central portion, are the necessary rooms for the work of the wards, and the corridors are eight feet wide. The wards and corridors are floored with Acme patent wood blocks—which have not been used so far north before—and the windows are on Nap's revolving principle. The interior of the walls throughout is finished with enamel and all angles have been rounded. The water-closet, slop, and other sinks are from Doulton and Co., of London, and are of special make suitable for hospital purposes. The heating and ventilation are on the Sturtevant system, and in the wards are Teake's barless grates. On the west side of the building on the upper floors are balconies with wrought-iron railing for airing purposes. At the end of each of the male wards is a separate sitting- and smoking-room and at the end of the female wards a sitting-room. The Otis Elevator Co., of London, have supplied a hydraulic lift which is fitted with safety grip chisels. The whole of the hot and cold water-pipes in connexion with the building are of copper. The stairs are formed of stone and the landings as well as the balconies are paved with Peake's tiles. A tunnel runs under the hospital central yard and connects with the surgical block and mortuary. The building is lighted by electricity and telephonic communication will be introduced. Chorlton and Co.'s patent cots and other hospital furnishings of modern type have been provided under the supervision of Mr. Charles Angus, M.B., C.M. Aberd., the new medical superintendent. The new convalescent hospital at Pitfodels, Cults, about four miles from the city, to be worked in connexion with the Royal Infirmary, and previously referred to in THE LANCET, is also completed, and was likewise opened for patients in the course of this week. It is a granite building of two floors in front and three floors in the rear, and will accommodate twenty-six patients besides the requisite nurses, &c. Water is procured from Aberdeen city water-supply.

New Medical Scholarship at Aberdeen University.

The Fence Scholarship in the Westminster Medical School has now been transferred to Aberdeen through the agency of Dr. Charles Phillips, the well-known writer on pharmacology, whose name the foundation will bear. The annual value is £40, and the scholarship will be awarded in connexion with the materia medica department. The thanks of Aberdeen University Court have been voted to Dr. Phillips and the London trustees.

University of Glasgow.

The Medical Session was opened on the 14th inst. There was no general address to the students, and the only noteworthy feature of the commencing session was the introductory lecture delivered by Dr. Stockman, the newly-appointed Professor of Materia Medica and Therapeutics. Dr. Stockman discussed the relationships between pharmacology and therapeutics and advocated the combined study of pharmacological investigation and clinical observation. He was introduced to the students by Dr. Gairdner, and met with a cordial reception. At a meeting of the University Court on the 15th inst, a communication from Dr. James Finlayson and Dr. Hector Cameron was read offering to the University a replica of a portrait of Lord Lister painted in 1895. The Court accepted the portrait with thanks to the donors. Leave of absence for the winter session was granted to Professor Joseph Coats on account of ill-health. Professor Coats has been much benefited by his residence during the summer in the Channel Islands, but it is deemed advisable that he shall have a further rest, and he is to spend the winter in New Zealand. The University Court have approved of the suggestions made by the General Council that the conditions under which "honours" are granted to graduates in the medical Faculty shall be printed in the University Calendar. They have also accepted the offer of the Bellahouston trustees to provide a certain number of gold medals annually to be awarded to worthy candidates for the degree of M.D. Professor Gairdner and Mr. William Crum have been appointed to represent the university on the board of managers of the Victoria Infirmary. The resignation by Dr. C. O. Hawthorne, of the Lectureship in Materia Medica and Therapeutics in Queen Margaret College, has been intimated to the University Court.

Medical Appointments.

Mr. Albert A. Gray, M.D. Glasg., has been elected assistant pathologist to the Glasgow Cancer Hospital. Mr. John A. Kennedy, M.A., M.D. Glasg., has been appointed visiting physician to the convalescent home of the Royal Infirmary, Glasgow. Mr. J. C. G. Duffus, M.A., M.D. Aberd., has resigned his position as assistant surgeon to the Royal Infirmary, Glasgow. The in-door and out-door house-surgeonships to the Glasgow Maternity Hospital are vacant. It has been decided by the managers of the Glasgow Samaritan Hospital to appoint three assistant medical officers to the "Agnes Barr" Dispensary.

Western Infirmary, Glasgow.

The atmosphere of the infirmary is at present in a somewhat stormy condition. The resignation by Dr. Gavin P. Tennent of his position as one of the visiting physicians was followed by a resolution of the managers to appoint an additional surgeon and not to fill up the vacancy created on the medical side by Dr. Tennent's retirement. This resolution was accompanied by a plan for the redistribution of the wards, and some of the features of this redistribution have given umbrage to certain members of the staff. The friction has, indeed, been so extreme that rumour confidently credits one of the leading surgeons with the determination to transfer his services to another hospital should the proposal to reduce the number of beds under his care be carried into execution. The new arrangements also contemplate the allotment of a certain number of beds to "the clinical teaching of materia medica and therapeutics." It is understood that this decision is the result of pressure from the Glasgow University authorities, who not unnaturally desire to secure for the newly appointed professor of materia medica opportunities for clinical observation. What the public will think of an open proclamation to devote hospital beds which are supposed to be supported for the relief and cure of patients to "the clinical teaching of materia medica and therapeutics" remains to be seen. For the position of additional visiting surgeon created by the decision of the managers there are several candidates, but the contest is understood to lie between Dr. J. Crawford Renton and Dr. T. Kennedy Dalziel, each of whom is already an assistant surgeon to the infirmary.

Oct. 19th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Meath Hospital, Dublin.

THE address introductory to the medical session was delivered on the 11th inst. at the Meath Hospital by Sir Philip Smyly, and dealt mainly with the work which had been accomplished by the General Medical Council in improving the medical curriculum. Lord Holmpatrick filled the chair, the vote of thanks to the lecturer was proposed by Viscount Powerscourt, while the second chair was taken by Sir George Duffey, the President of the Royal College of Physicians of Ireland.

Death of Mr. Stamer O'Grady.

Much regret is expressed by the medical profession here and by the public at the sudden death of Mr. Edward Stamer O'Grady, which took place in the evening of the 18th inst. The deceased was a Bachelor in Medicine of the University of Dublin and a Fellow of the Royal College of Surgeons.

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in Ireland. He succeeded the late Mr. Butcher as surgeon to Mercer's Hospital, and was for many years a lecturer on surgical anatomy at the Ledwich School of Medicine, and a member of the Court of Examiners of the Royal College of Surgeons. At a time when the clinical class of Mercer's Hospital was the largest in Ireland Mr. O'Grady was one of its most brilliant and successful teachers.

Lunatics in Workhouses.

At the last meeting of the Celbridge board of guardians Colonel Sir Gerald Dease, who was in the chair, spoke very strongly in favour of a resolution as to the desirability of provision being made in the Local Government Bill of next session for the removal of all lunatics and idiots from the workhouses in Ireland to the asylums.

The Royal College of Physicians of Ireland.

The annual meeting of the Royal College of Physicians of Ireland took place on St. Luke's Day, Oct. 18th, when the officers of the college for the ensuing year were elected. In the evening the annual banquet of the President and Fellows was held in the college hall.

The Belfast Workhouse.

At the usual weekly meeting of the Belfast board of guardians, held on Oct. 12th, the half-yearly report of Mr. Agnew, inspector of the Local Government Board, was presented, and, as one of the guardians said, it would seem from it "that the whole institution there was unfit for human habitation." Mr. Agnew recommended the substitution of hair for straw mattresses. On the day of his inspection he found the bread and beef were very unsatisfactory, the former being not properly ovened and the latter of inferior quality and almost devoid of fat. He took exception to the ventilation; the drainage from the separation and lunatic departments was in a very unsatisfactory state, and should be remedied at once; the water-closets in the separation department were unsatisfactory, those in the infirmary were in a disgraceful state owing to the want of water, and those in the yards for the use of the lunatics were also in a most insanitary state from the same cause. With regard to the pauper attendants Mr. Agnew said he understood from the officers that they were in the habit of soliciting money from the friends of the patients, and he suggested that a few temporary nurses should be appointed with a view of removing the pauper nurses from attendance on the sick. He had further to remark that some of these women drank and used foul language to visitors who did not respond to their demands for money. The bath-room he reported as being in a discreditable state. The mortality from typhoid fever during last year in the union hospital was only slightly over 8 per cent., which was very low. A committee was appointed to consider this report.

The Typhoid Fever Epidemic in Belfast.

The typhoid fever epidemic (the cases of which are not localised in one district, but scattered all over the city) is slightly diminishing, and the public are still very much exercised as to its origin. At the last monthly meeting of the City Corporation some members hinted that it might be due to the water-supply, and as a result the water commissioners have obtained a report, dated Oct. 13th, from Dr. Frankland, of Birmingham (who recently analysed very fully the Belfast water), on this subject. He is of opinion: 1. That whilst the present sources of the Belfast supply are undoubtedly exposed to a certain amount of contamination in consequence of the gathering-grounds being to some extent populated and under cultivation, the best-known methods for rendering this water safe for consumption have been adopted. The supply is, in fact, provided with most extensive storage reservoirs and with magnificent filtration works. 2. That bacteriological evidence shows that these methods of purification, if properly attended to, furnish most effective barriers against the passage of disease-producing bacteria to the water consumer. 3. That towns which, like London, are supplied with water derived from enormously more populated and cultivated gathering-grounds, but which water is submitted to these same methods of purification, enjoy the most remarkable freedom from typhoid fever. 4. That in view of these facts it appears in the highest degree improbable that the typhoid fever epidemic now prevalent in Belfast should be chargeable to the water as sent out to the consumer. 5. That in view of the duplex character of the supply, a water-origin of the outbreak would almost certainly be betrayed by its general limitation to one of the two water areas of which Belfast is composed. 6. That simultaneous outbursts of typhoid fever should have taken place in outlying districts dependent on the same supply. 7. That the grave dangers of domestic cisterns require careful consideration, with a view to their use for drinking purposes being discontinued, and that taps on the rising main be provided in all houses. It was stated at a meeting of the Public Health Committee, held on Oct. 14th, that the water referred to and condemned at the previous meeting turned out on investigation not to be Cromac water, but had its source in an old-fashioned surface well in no way connected with the celebrated Cromac springs.

The Belfast Hospital for Sick Children.

Mr. W. G. Mackenzie has been appointed consulting surgeon, Dr. T. S. Kirk surgeon, and Dr. Lynass assistant surgeon to this hospital.

Opening of the Winter Session at Queen's College, Belfast.

Lectures in the Medical Faculty at Queen's College, Belfast, began on Oct. 19th, when the various professors met their classes. At the Royal Hospital the session was inaugurated on the same day by an introductory address from Dr. Lorrain Smith, the pathologist to the hospital, on the Value of the Facts Observed in Medicine.

Trained Nurses in Irish Union Hospitals.

At the last meeting of the Clonmel guardians, Mr. R. Bagwell said that Dr. Sheehan, Roman Catholic Bishop of Waterford, proposed to send to the Union Hospital a trained nurse from a London hospital, who would instruct the nuns and attendants and all other persons concerned. It would be no expense to the ratepayers to have her. She had been selected by persons who were connected with the movement generally in Ireland. He (Mr. Bagwell) thought it a step in the right direction and proposed a resolution approving of a trained nurse, nominated by the Right Reverend Dr. Sheehan being accommodated on the union premises on the understanding that the guardians shall not be responsible for any part of the expense. The resolution was carried and the guardians also expressed their thanks to the Bishop for his kind action in the matter.

Oct. 19th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Advances in Radiography.

M. DOYEN has been enabled by means of the x rays to determine the site and shape of a dilatation of the œsophagus, and M. Radiguet has made an admirable print from the negative thus obtained. The method of procedure is as follows. The œsophagus is first explored with an olive-headed metallic sound, and then with two or three elastic hollow sounds filled with mercury, which are photographed *in situ*, their place having been first observed by the fluorescent screen. By using a sound which terminates in a slender pocket of indiarubber filled with mercury it is also easy to determine the size and shape of œsophageal strictures.

Intravenous Injections of Sea Water.

At a recent meeting of the Biological Society M. Quinton mentioned that he preferred injections of sea water to those of salted serum. As a consequence of his researches in evolution presented to the Academy of Sciences he has been led to suppose that "*le milieu intérieur des organismes élevés (mammifère, oiseaux) devait être un milieu marin.*" The learned writer means by this that as all the higher organisms, according to the teachings of evolution, have ascended from a less highly organised marine ancestry the more nearly that the conditions under which their cells grow ontogenetically, approximate to the conditions of the phylogeny the better it is for them. According to this hypothesis the liquid which bathes all the cells of the individual ought to be chemically similar to sea water. To confirm this theory four sets of experiments have been made at the College of France in the laboratory of M. F. Franck. The first series of which M. Quinton read an account consisted in bleeding an animal to such an extent that death would have inevitably followed had the animal been left alone. The animal in question thus placed under

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conditions barely compatible with life, and as a consequence specially liable to be affected by any toxic condition, was then given an intravenous injection of sea water. The dogs experimented on not only survived but recovered with remarkable quickness, and the first dog, some ten days after the operation, showed as tested by the colorimeter a larger proportion of hæmoglobin than before the bleeding. Another dog in which the number of corpuscles fell from 6,800,000 to 2,900,000 per cubic millimetre after the bleeding was attacked by a purulent infection, but showed after an injection of sea water, and probably as a consequence of its fight against the septicæmia, a remarkable degree of leucocytosis. M. Quinton thinks that artificial serum only enjoys the reputation it does on account of its holding in suspension the same salts which are constituents of sea water, and that sea water is physiologically superior. Further experiments will, however, have to be made.

The Congress of Surgery.

The eleventh congress of the French Association of Surgery was opened on Oct. 18th in the great amphitheatre of the Faculty of Medicine at Paris under the Presidency of Professor Gross, of Nancy, a large number of French, Belgian, and Swiss surgeons being present. Professor Gross made an important speech in which he passed in review all the recent victories of science, and referred particularly to the services which the discovery of the Roentgen rays had rendered to medicine and surgery. This medium, as Professor Ollier remarked, allowed one to make a veritable necropsy of the skeleton in the living being. M. Poncet, of Lyons, read a paper upon Botryomycosis in Human Beings, in which he argued that certain papillary tumours in man were identical with the botryomycosis caused by a fungus which brings about complications in the castration of horses. M. Berger read a paper upon Epithelioma of the Neck having a Branchial Origin, and mentioned certain aberrant epithelomata of the thyroid body. M. Lavise, of Brussels, read a communication upon the Treatment of Hernia, and M. Demous, of Bordeaux, one upon Contusions of the Abdomen. The Congress lasts for a week, and very important communications are announced by M. Doyen, M. Calot, M. Tuffier, M. Le Dentu, M. Jonnesco, and others.

The Etiology of Cirrhosis in the Intemperate.

In the Academy of Medicine M. Vallin adversely criticised the views expressed by M. Lancereaux in a communication made to the Academy some time ago,[1] views which M. Vallin considered might have a prejudicial effect on an important branch of industry. M. Lancereaux has found that cirrhosis results from the excessive use of wine, say, from 2 to 6 litres (i.e., from 3½ to 10½ pints), continued for several years, and he quoted in support of his assertion statistics of 210 cases, in 68 of which wine only was the beverage taken in excess, while in 120 both wine and spirits were so taken. M. Lancereaux, in fact, attributed cirrhosis to the use of wine rather than to the use of spirits, the real source of mischief, in his opinion, being the salts of potash. He administered bisulphite of potash for long periods of time to rabbits, guinea-pigs, and dogs, the doses varying from 2 to 6 grammes—i.e., from 30 to 90 grains—and he found when the animals were killed after the lapse of sixteen or eighteen months that they suffered from cirrhosis in all stages. These facts led him to believe that the "plastering" of wine conduces to cirrhosis, and he accordingly urged the prohibition of "plastering." M. Vallin, however, considers that before legislating on the subject it is necessary to have confirmation of the views held by M. Lancereaux. In the first place, the experiments upon which he relies are open to criticism, for the daily dose of 2 grammes of bisulphite of potash given to a rabbit corresponds to a daily dose of 60 grammes (i.e., 2¼ oz.) for an adult man, a quantity which seems excessive; and, moreover, beer and gin, although they cause cirrhosis, only contain a small amount of salts of potash. It must also be remembered that the wine-drinkers quoted by M. Lancereaux imbibe with the wine a quantity of alcohol corresponding to 100 grammes of absolute alcohol (= 260 grammes of brandy) per litre of wine, and it is quite possible that such doses of alcohol might produce the hepatic lesions mentioned by M. Lancereaux, altogether without reference to the salts of potash. It would therefore be advisable in the first instance to collect statistics showing the proportion of cirrhotic cases in countries (the French colonies, for instance) where the use of wine is quite unknown. Aeration of the must is available as a means of preservation instead of "plastering," but very precise statistics would be required to justify such a revolution in the wine trade. M. Lancereaux replied to M. Vallin that in explaining the etiology of cirrhosis he relied on obvious clinical facts. Pathological observations show that the livers of men who drink three litres (five and a quarter pints) of wine over a period of several years are enlarged and merely hyperæmic; they will pass into cirrhosis, which is no more than a final stage. In spirit-drinkers, on the other hand, the liver is fatty and has no "bi-venous" lesions. Cirrhosis, moreover, is unusual in the colonies where the use of wine is unknown. In proof of the injurious effects of plastered wines he mentioned that cirrhosis is comparatively rare in Burgundy, where the wines in use are not plastered, but it is common enough in Paris. M. Laborde said that he did not entirely agree with M. Lancereaux, and asked permission to submit on a future occasion the results of some investigations which he had undertaken.

Oct. 19th.

[1] THE LANCET, Sept. 18th, 1897, p. 748.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The International Conference on Leprosy.

THE International Conference on Leprosy was formally opened on Oct. 11th in the large hall of the Imperial Health Office, Professor Lassar, as President of the executive committee, being in the chair, the other members of the committee being Professor Virchow, Dr. Armauer Hansen, of Bergen (Norway), Professor Besnier, of Paris, and Dr. Ehlers, of Copenhagen. A great many leading dermatologists and hygienists took part in the proceedings. The opening ceremony was attended by representatives of the Government, the university, the Berlin Municipality, the army medical staff, and the Berlin medical societies. Professor Lassar delivered an inaugural address in which, after welcoming the visitors, especially those who had come from foreign countries, he said that the objects of the conference were, firstly, to afford the members an opportunity of discussing questions concerning leprosy, and, secondly, to draw the attention of the various Governments to these questions. Professor Virchow was then elected President, and Professor Lassar, Professor Besnier, and Dr. Ehlers vice-presidents of the Conference. Count Posadowsky, Secretary of State for Home Affairs, thereupon made a complimentary speech, in the course of which he stated that the proceedings of the Conference were regarded with great interest by the Government and that the advice given by the eminent men who had now assembled in Berlin would undoubtedly be followed in the struggle against this terrible disease. The first address was delivered by Dr. Hansen, who was received with loud applause. He emphasised the necessity of isolation of lepers, a measure which he said was as much in the interest of the patients as in that of the community at large. It has been found by experience in Norway that lepers who have been placed in special homes regain the power of doing work, and in this way once more become useful members of society. Leprosy being an affection of many years' duration this fact should not be neglected. In Dr. Hansen's opinion the efforts of Unna, Carasquilla and Danielsen to cure leprosy by means of drugs or by serum treatment have been quite ineffectual. Leprosy diminishes under the influence of strict isolation and increases again when isolation ceases to be enforced. He is hopeful that the disease will have disappeared from Norway in the course of the century now approaching. In the cases where isolation in special asylums is not possible the patient should at least have a room to himself, together with bedding and table utensils set apart for his use. Cleanliness is the best safeguard against infection, and it has been found in America that the cleanly habits of the people had the effect of rendering the spread of leprosy much slower than in the majority of European countries. The hypothesis that leprosy might be due to hereditary influence is erroneous. — In the ensuing discussion Professor Dehio, of Dorpat, stated that the principles which were in force in Norway were also followed in Russia; isolation, however, was not compulsory, but voluntary on the part of the patients. The effects of this system were very satisfactory.—The French delegate, Professor Besnier, of

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Paris, was of opinion that careful surveillance of lepers and the taking of precautions with a view to protect their families were sufficient and that compulsory isolation was not necessary.—The further proceedings of the conference will be reported in my next letter.

The Berlin Dermatological Society invited the members of the conference to a meeting held in their honour on the evening of Oct. 13th. After the usual introductory courtesies Professor Lassar delivered an address on public hygiene and its relations to venereal diseases. Professor Kaposi and Professor Neumann, of Vienna, and Professor Besnier, of Paris were at the same time elected honorary members of the society.

The German Association of Naturalists and Medical Men.

The meeting of this association, which took place in the last week of September in Brunswick, was attended by fewer medical men than on any previous occasion. This fact is partly due to the International Congress in Moscow having attracted an enormous number of German visitors, who naturally felt themselves disinclined to take part in a second great scientific meeting held so soon afterwards. Another cause of the falling-off in the attendance is the great number of congresses of the special branches of medicine. The *Deutsche Medicinische Wochenschrift* accordingly once more suggests that the general congresses of all branches of medicine should be held only every second year, so that the intervening years will be free for special congresses. The next meeting will be held at Düsseldorf in Rhenish Prussia.

The Practitioners' Association.

The last meeting of the Practitioners' Association was held in Eisenach, and as it happened to be the twenty-fifth anniversary the introductory proceedings were marked by more ceremony than usual. The principal subject of discussion was the course to be adopted for the repression of unqualified practice. Fines for unqualified practice were abolished in Germany as far back as 1867, and in no small degree through the efforts of a great combination of medical men who believed that the public had become sensible enough to abstain from consulting quacks. This opinion, however, was not justified by the results, for quacks have greatly increased in number during recent years, and the harm done by them to the medical profession and the public is immense. Dr. Leut, of Cologne, quoted some interesting figures showing the extension of quackery, and after his address, which was followed by an animated discussion, the meeting almost unanimously adopted the following resolutions:—(1) That the abolition of the laws against unqualified practice has done great harm to the medical profession and to the public; (2) that in consequence of unqualified persons engaging in medical practice with impunity the public fail to distinguish between qualified and unqualified men; and (3) that the laws regulating the practice of medicine are in need of alteration. The second subject of discussion was the appointment of medical officers for the inspection of schools. The meeting unanimously approved of the appointment of medical men in connexion with schools in order to control the hygienic condition of the classrooms, to take notice of the health of the children, and to prevent over-pressure. The other subjects on the programme were of minor interest.

Oct. 17th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Lakes as a Source of Drinking-water.

THE north Italian towns, as a rule, are badly supplied with drinking-water pure in quality and abundant in quantity, Milan alone, for example, being a perennial sufferer from that cause, and periodically agitated by controversy as to which of her (at least) five projects for the introduction of "acqua potabile" she should end by adopting. Meanwhile, her Swiss neighbour has been furnishing her with a suggestion she would do well to consider. For some time past the Confederation, through some of its most eminent hygienists, has been experimenting on the Lake of Geneva as to whether by going deep enough it would not be practicable to draw from that sheet of water a constant supply of "acqua potabile" for the many towns upon its banks. The other day a considerable party of medical men, sanitary officers, and public-minded citizens started on board a steamer from Lausanne to make a final experiment in the series that has for some time been in progress. They dropped anchor about 700 metres from the shore of Lutry, at a point where the lake is 120 metres deep. Thereafter they let down a number of tubes and drew up water from a depth of 100 metres. On trial this water was found to be excellent as a beverage, and on subsequent analysis it proved to be absolutely pure. Now, it is being asked, why should not Milan make similar experiments on Lake Como quite near, and if they turned out as satisfactory as those on the Lake of Geneva, why should she not proceed to utilise the water for her ever-increasing population and for her large contingent of the travelling world? Lake Como has a depth of 416 metres between Bellagio and Varenna and one of 150 metres between Bellagio and Cadenabbia. Its superficial space, as a whole, is 143 square kilometres and its waters are fed by thirty-seven mountain torrents and twenty-one streams. As the Swiss Commission seems to have made out, you have only to go deep enough in such extensive inland seas as the greater lakes on either side of the Alps to find water deliciously fresh, absolutely untainted, and almost illimitably abundant. As already indicated, in Lake Como, well-nigh at her door, Milan possesses such a natural reservoir. Assuredly the Swiss experiment is well worth imitation, and if successful might be followed by other north Italian cities in proximity to the Lago Maggiore and Lago di Garda. Milan in an especial degree is called upon to initiate some such enterprise. More than the rest of Italy she is in constant dread that the contract for carrying our Indian mails and travelling public by the Brindisi route should lapse, other competitors for that lucrative undertaking continuing to tender offers peculiarly tempting. Among the objections to Italy retaining the contract are the grave inconveniences of the railway service at Brindisi itself and (to say nothing of the frequent luggage robberies) the insanitary state of the halting-places along the route, for instance, Bologna, and in a graver degree Milan from her very bad water-supply. No time should be lost, therefore, in minimising, on at least one important side, the objections which militate to her disadvantage—objections which if persistently ignored may cost Italy a source of revenue which she has enjoyed for a quarter of a century and deprive the Lombard capital of resources not to be replaced.

The Yellow Fever in New Orleans and the Italians.

From Italian correspondents residing in New Orleans it would appear that the epidemic of yellow fever in that city and neighbourhood shows little sign of diminution. One cause of its permanence is the refusal of the Italian population to report incipient cases to the sanitary authorities. "Our compatriots," says one correspondent, "more than any other part of the community are stubbornly contumacious (*restii*) in thwarting the provisions of the Commission of Hygiene," and the disease has gained ground in the Italian quarter proportionally. Philip-street represents the core of that quarter, and there the sanitary inspectors have had to invoke the police so as by main force to effect an entrance into houses where the inmates were known to be dying or dead from yellow fever. Cases are cited by the correspondents above referred to, such, for instance, as that of a young woman, whose father had died six days before from the fever, and who, struck down by the malady, was herself almost at the point of death. On the arrival of the sanitary officers her relatives, suspecting their object, rolled her up in a sheet and tried to smuggle her out of the house and convey her to some other place. The attempt was frustrated in the nick of time; the dying girl was rescued by the officers, and the rest of the family accommodated in the public "lazzaretto." Such incidents, familiar enough in Naples during a cholera epidemic, strike a jarring note when reported from such a city as New Orleans and tend to explain the extreme unpopularity of the Italian element in its population.

Oct. 18th.

AMBULANCE COMPETITION IN GLAMORGANSHIRE.—The annual ambulance competition, held under the auspices of the Glamorganshire County Council, took place at Pontypridd on Oct. 9th. Seven teams competed. The first prize was won by the Llancarvan team. The judges were Dr. Williams, of Cardiff, and Dr. Thomas, of Ystrad.

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Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated:—

Monday, Oct. 11th:

Anatomy and Physiology.—Samuel Ernest Atkinson, Benjamin Holroyd, James Ebor Bolton, Ernest John Crawshaw, and Talbot Carter Mitchell, Yorkshire College, Leeds; Clifford Price, University College, Cardiff, and St. Mary's Hospital; Miguel Arango, Bogota University, Columbia, and St. Mary's Hospital; Robert James Harbinson and William Stewart Dickie, St. Mungo's College, Glasgow; William Matthew Hunter, Queen's College, Belfast; Leonard Augustine Moore, University College, Bristol; Matthew Frederick Foulds, Owens College, Manchester; George Archibald Carter, Surgeons Hall, Edinburgh; Harold Myrie Cory, Mason College, Birmingham; Frank Gray Quinby, University College, Liverpool; Robert Edward Hodgson, St. Mary's Hospital; John Valérie, St. Bartholomew's Hospital; and Charles Ellard Van Rooyan, Medical College, Ceylon.

Seventeen gentlemen were referred back to their professional studies for three months and one for six months.

Tuesday, Oct 12th:

Anatomy and Physiology.—Thomas Young, Leonard Edgar Whitaker, Gerald William Stone, and Walter Ernest Llewelyn Davies, St. Bartholomew's Hospital; John Stephenson Clarke, Cambridge University and St. Thomas's Hospital; William Edward Denniston and Charles John Ernest Edmonds, St. Thomas's Hospital; Edward Michael William Hearn and George Stafford Ward, London Hospital; Clayton Alexander Francis Hingston and Henry Vernon Swindale, Middlesex Hospital; William Johnson, Guy's Hospital and Mr. Cooke's School of Anatomy and Physiology; Kenneth Vincent Trubshaw and Frank Cordeux Wetherell, Guy's Hospital; and James Ward Lawson, Charing-cross Hospital.

Twenty-one gentlemen were referred back to their professional studies for three months.

Wednesday, Oct. 13th:

Anatomy and Physiology.—Hector Alfred Colwell, Henry Norman Marrett, Edward Vaughan Lindsey, Robert Culverwell Bowden, Digby Sayer Sandiland, and Reginald Bigg, St. Bartholomew's Hospital; Charles Montague Heanley, St. George's Hospital; Joseph Clement Justinian da Silva, Arthur Cedric Lewis, and Hugh Arthur Higgins, Guy's Hospital; Henry Brookes Carr, Firth College, Sheffield, and Guy's Hospital; Gerard Lyne Parsons, Westminster Hospital and Mr. Cooke's School of Anatomy and Physiology; Wilfred Alexander Steen, Gerald Griffin, Eric McLeod Perkins, and Frank Challans, London Hospital; and Ernest Henry Hogg, Middlesex Hospital.

Nineteen gentlemen were referred back to their professional studies for three months.

Thursday, Oct. 14th:

Anatomy and Physiology.—Edward Percival Mitchell, Guy's Hospital; Percy Douglas Hunter and Herbert Vale Bagshawe, Guy's Hospital and Mr. Cooke's School of Anatomy and Physiology; Cecil Hugues Francis-Williams, St. George's Hospital; Walter Seymour Armstrong, St. George's Hospital and Mr. Cooke's School of Anatomy and Physiology; Francis Goding Bowen, George Orissa Taylor, and Thomas Frederick Gisborne Mayer, London Hospital; Hugh Edward Drummond Lloyd, Charles Fisher, and John Ellis Griffith, St. Bartholomew's Hospital; Francisco José Gómez, King's College, London; Cecil Irving Grabham and Edward Henry Bullen, St. Mary's Hospital; Edward Cecil Foster, University College, London; George Osborne Hughes, University of Virginia and Mr. Cooke's School of Anatomy and Physiology; and Robert James Johnstone, Queen's College, Belfast.

Anatomy only.—Elijah Richard Lockwood Thomas, London Hospital; Orme Sterling Kellett, London Hospital and Mr. Cooke's School of Anatomy and Physiology; and Frederick Aylmer Hort, Middlesex Hospital and Mr. Cooke's School of Anatomy and Physiology.

Physiology only.—Alexander Farrington, St. Bartholomew's Hospital; Henry Joseph Butler, St. George's Hospital; and Herbert Charles, Middlesex Hospital.

Five gentlemen were referred back to their professional studies in both subjects, and two in Physiology only for three months.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations and having conformed to the by-laws and regulations, have been admitted Members of the College:—

Welch, Walter Barrows, L.S.A. Lond., St. Bartholomew's Hospital.
Wood, Charles Rawdon, M.B. and B.S. Durh., University of Durham and University College Hospital.

From the report of the council about to be issued to the Fellows and Members of the College it appears that the names of 34 Fellows and 230 Members have been removed from the list published in the College Calendar during the past collegiate year in consequence of death. During the past year the supply of new books and periodicals has been well kept up. Several old books have been presented by Mr. R. H. Lucy, F.R.C.S. Eng. Mr. Longmore has presented an engraving of Bransby Cooper which had formerly belonged to Sir Thomas Longmore. During the past year the library has been open on 271 days, and the number of readers has been 10,965.

AT a meeting of the Lincoln City Council held on Oct. 15th it was agreed that for the coming year Dr. John T. Collier should be mayor. The mayor-elect is a representative of the Middle Ward in the City Council.

NEW UNIVERSITY HALL AT BANGOR.—The new county school for girls, built at a cost of £2320, and the university hall for women students, upon which £5200 have been expended, were opened at Bangor on Oct. 9th, when addresses were delivered by Dr. Isambard Owen, Mr. Acland, M.P., and Mr. T. E. Ellis, M.P.

BRISTOL CONVALESCENT HOME.—The Mayor of Bristol has received £21,500 towards the proposed Convalescent Home for Bristol. This, with the conditional promises, makes a total of £64,500. The sum of £5500 now remains to be subscribed in order to make up the £70,000 required for the institution, and this amount must be received by Dec. 1st if the conditional subscriptions are to be secured. The fund has received such support from the citizens that it is confidently hoped the amount will be forthcoming.

A WOKING druggist was summoned at Guildford last week by the Surrey County Council for selling "Gregory powder" which was not of the nature and substance asked for by the purchaser. A label on the package stated that it was prepared according to the original recipe of Dr. Gregory. As a matter of fact carbonate of magnesia had been substituted for the more expensive oxide. For the defence it was stated that the carbonate had the same effect therapeutically as the oxide, and medical evidence was called to prove this. The Bench held that the article sold was not to the detriment of the purchaser and dismissed the case.

FOREIGN UNIVERSITY INTELLIGENCE.—*Budapest:* The charge of the Surgical Clinic has been temporarily taken over by Professor Dollinger in place of the late Professor Kovács.—*Cracow:* Dr. Obalinski has been appointed Professor of Surgery.—*Königsberg:* Dr. Ernst Leutert has qualified as *privat-docent* in Otology.—*Lemberg:* Dr. Rydygier, of Cracow, has been appointed to the chair of Surgery.—*Naples:* Dr. Donato Greco has qualified as *privat-docent* in Dermatology.—*Zürich:* Dr. Justus Gaule, Professor of Physiology, has been obliged to take leave of absence on account of the state of his health, and Dr. von Frey has been invited to go from Leipzig to supply his place.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—The medical school at the University College was opened on Oct. 4th, an increased number of students enrolling in the books. This session the teaching staff has been increased by the appointment of Dr. Alfred William Sheen as demonstrator of anatomy, and of Mr. S. C. Mahalanobis, B.Sc., as demonstrator of physiology. Professor Francis Dixon commenced his first course of winter lectures at the College, and he has to face the difficult task of refilling the anatomical museum. The specimens being the private property of the late occupant of the chair have for the most part been removed, but will be more than replaced from funds placed at the disposal of the College by the generosity of Professor Alfred Hughes. In the physiological department a large work bench has been constructed at which a class of students may pursue their studies in experimental physiology; it is provided with a shaft run from an electro-motor, from which a series of revolving drums can be run independently of each other within a wide limit of speed. The following students of medicine have obtained entrance scholarships and exhibitions: William S. Hughes (Entrance Scholarship), Joseph William Evans (Glamorgan Free Studentship), David Morgan Hughes (Monmouth Free Studentship), and Arthur Edward Fiddian (Cardiff Free Studentship). A meeting of the council of this College was held in Cardiff on Oct. 13th, under the presidency of Lord Tredegar. A cordial vote of thanks was unanimously passed to Professor Hughes (the late professor of anatomy) for his gift of £350 and a series of illustrations for the anatomical museum of the College. It was stated that the Carmarthen County Council had granted a science scholarship to be tenable at the College. The Principal said that the number of students at the end of last session was 431.

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THE Worshipful Company of Mercers have sent a donation of 50 guineas to the Royal Chest Hospital, City-road, E.C.

UNIVERSITY COLLEGE, BRISTOL.—The Council of University College, Bristol, have accepted the offer of Her Majesty's Commissioners for the Exhibition of 1851 to place at their disposal next year a science scholarship of the annual value of £150 tenable for two years.

MEDICAL MAGISTRATES.—Mr. J. Comyns Leach, M.D. Durh., B.Sc. Lond., of Sturminster Newton, coroner for North Dorset, has been appointed to the Commission of the Peace for the County of Dorset on the nomination of the Lord-Lieutenant.—On the recommendation of the Lord-Lieutenant of Carnarvonshire, Dr. R. Langford Jones, of Bangor, has been placed on the Commission of the Peace for the county.

EDINBURGH GRADUATES' DINNER AT BIRMINGHAM.—On Oct. 14th a large number of the graduates in medicine of the University of Edinburgh residing in the Midlands dined together at the Grand Hotel, Birmingham. Dr. Robert Saundby presided, and Dr. Thomas Chavasse occupied the vice-chair. In every way the dinner was a most enjoyable one. The toast of the evening, "The University of Edinburgh," was proposed by Dr. Saundby and drunk with enthusiasm. It was unanimously decided to form a "Midland Club of Edinburgh Graduates," the members of which will be asked to meet and dine together at least once a year. A committee, with Mr. Christopher Martin and Dr. Douglas Stanley as honorary secretaries, was appointed to make the necessary arrangements. It is hoped that not only all the medical graduates, but also those of the other faculties residing in the Midlands, will join the club which has been so successfully inaugurated.

SOCIETY FOR THE STUDY OF INEBRIETY.—At a meeting of this society held on Oct. 14th Surgeon-Major G. K. Poole, M.D. Erlang., read a paper on the Etiology of Inebriety. He presented the opinions of a large number of clergy, laymen, and medical practitioners, and also of others. With the exception of that of one medical man the testimony was affirmative of heredity as a predominant factor, and of business and domestic distress and worry as causative in a substantial proportion. Some non-medical reporters attributed up to 50 per cent. as being consequent on "doctors' orders," but Dr. Hare, Dr. Morton, Mr. Aydon Smith, Dr. Longhurst, Dr. Paramore, and the President repudiated the accusations, the President stating that not more than ½ per cent. of over 2000 cases could he trace to anything of the kind. Dr. W. Bode, of Hildesheim, stated that in January, 1900, the new German Code would come into operation for interdiction and compulsory dealing with inebriates.

FREEMASONRY.—*The Rahere Lodge No. 2546:* A meeting of the Rahere Lodge was held at Frascati's Restaurant on Oct. 12th, Bro. W. J. Walsham, W.M., in the chair. Bros. Neill and Perram were admitted to the third degree in Freemasonry; Bros. Haines, Sargant, Matthews, Miles, and Shewell to the second; and Messrs. Ellis and Auden and Surgeon Folliot, R.N., were initiated. Bro. C. O'B. Harding, of Eastbourne, and Bro P. B. T. Stubbs, of Wynberg, Cape Town, were elected joining members. A resolution of condolence was proposed by Bro. Keogh Murphy, seconded by Bro. Valerie, and passed unanimously, to Mrs. Forman on the loss of her son, Bro. G. H. Forman, wrecked in the *Aden*. A vote of one guinea to the Home for the Dying was confirmed. Fifty-one brethren with their guests afterwards dined together.—*Æsculapius Lodge:* The seventh installation meeting of the Æsculapius Lodge was held at the Café Royal, Regent-street, on Oct. 13th, the Master, Dr. Thomas Dutton, being in the chair. Mr. Edward H. Ezard, M.D., D.Sc Edin., was installed Master for the ensuing year. Mr. G. Danford Thomas, M.D. Brux., coroner for Central London, was re-elected treasurer. Mr. Thomas Dutton, M.D Durh., M.R.C.P. Edin., was appointed secretary. The auditors brought in the report of the audit committee, which showed a very good balance in the treasurer's hands. Surgeon-Major E. W. Reilly, L.R.C.P., L.R.C.S. Edin., was unanimously elected a joining member. A large number of members and visitors were present, forty-five of whom afterwards dined together and spent a very pleasant social evening.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—The following entrance scholarships have been awarded:—Entrance Scholarships in Arts, of the value of £50: Armin Gascoigne Vavasour Elder, Edward William Dewey, and George Arthur Jones (Pauline Scholar). Entrance Scholarships in Science, of the value of £85: Edmund de la Fosse Bond, B.A., of Keble College, Oxford, Norman J. McCaskie, B.A., of Caius College, Cambridge, and Charles John Nepean Longridge, of Owens College, Manchester.

A DEPUTATION of the Corporate and Medical Reform Committee was received on Wednesday afternoon by the President and Council of the British Medical Association, the object of the deputation being to invite the British Medical Association to take the lead in organising concerted action in favour of a certain reform programme. The deputation consisted of Dr. Hugh Woods, Dr. T. Granville Hockridge, Dr. C. Milner Browne, Dr. J. Wheeler O'Pryon, Mr. A. S. Morton, and Mr. R. B. Anderson, and was introduced by Mr. George Brown.

BRITISH MEDICAL BENEVOLENT FUND.—The British Medical Benevolent Fund has received from the executors of the late Dr. Robert Gee, of Liverpool, a bequest of £200, less duty, to be invested and added to the capital, the dividends on which are appropriated to the payment of the 107 annuitants now on the books. We regret to hear that the other branch of the fund—the Grants department—is much in need of further subscriptions or donations to enable the committee to relieve the many urgent cases consideration of which, at their last monthly meeting, they were obliged to postpone for want of funds.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors of this society was held on Oct. 13th, Dr. Pollock, vice-president, being in the chair. A new member was elected, and the deaths of four were reported. Two widows in receipt of grants had died since the last court; a fresh application for assistance from a widow for herself and daughter was read and grants were made at the rate of £50 per annum to the widow and £12 per annum to the daughter. It was resolved to distribute at the next meeting a sum of £1167 among the 48 widows, 12 orphans, and 6 recipients from the Copeland Fund. The treasurer recommended that a present of £8 should be made at Christmas to each widow, £3 to each orphan, and £5 each to those on the Copeland Fund, in all £434. The treasurer's recommendation was adopted.

SOUTH-WEST LONDON MEDICAL SOCIETY.—The first meeting of the session of this society was held at the Infirmary, Wandsworth, on Oct. 13th, under the presidency of Mr. T. A. Ives Howell. Interesting papers were read and cases shown by Dr. Smyth and Mr. Stares, medical officers of the infirmary. Dr. Smyth gave an outline of the Serum Treatment of Disease, and showed a case of Tetanus in a woman, aged sixty years, which had been successfully treated by antitoxin; also a case of Congenital Pulmonary Stenosis in a child aged four years, and a post-mortem specimen from a case of Malignant Disease of the Œsophagus penetrating into the Aorta. Mr. Stares read a practical paper on the Use of Peroxide of Hydrogen as a Dressing for Ulcers, &c.; he showed a case of advanced Progressive Muscular Atrophy, and also photographs of a case of Acromegaly, with post-mortem notes. There was, in addition, an excellent demonstration of various micro-organisms and cultures which was much appreciated. The meeting closed with votes of thanks to Mr. Neal, by whose courtesy the resources of the infirmary were placed at the disposal of the society.

PATHOLOGICAL SOCIETY OF MANCHESTER.—This society held its annual meeting on Oct. 13th, Dr. T. Harris, President, being in the chair. The officers for the ensuing year were elected, as published in our last issue, after which the time of the meeting was devoted to the consideration of card specimens. The following preparations were shown:—Dr. Ashby: (1) Congenital Syphilitic Disease of Brain; and (2) Mediastinitis. Mr. S. Bishop: Preparations illustrating Abdominal Lesions. Dr. Brooke and Mr. Lancashire: Photographs of Diseases of the Skin. Dr. Burgess: Collection of Sequestra. Professor Delépine: A series of specimens illustrating the Pathogenic Effects of Bad Milk. Dr. Dockray: (1) Experimental Calcification of Kidney; and

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(2) Nephritis following Poisoning by Mercury. Dr. Fox Edwards: Specimens and Drawings of Morbid Blood Mr. T. Jones: Ruptured Bladder showing Surgical Repair. Dr. Lea: Gynæcological Specimens. Dr. Ledward: Series of Photographs. Dr. Milligan: Microscopical Preparations of Nasal, Laryngeal, and Aural Growths. Dr. Moore: Specimens illustrating forms of Lardaceous Disease. Mr. Southam: Series of Drawings illustrating Diseases of the Bladder. Dr. Peter Thompson: Ruptured Aneurysm of Left Common Iliac Artery.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.

The Roentgen Rays in Medical Work. By D. Walsh, M.D. Edin. with an Introductory Section upon Electrical Apparatus and Methods. By J. E. Greenhill. 1897. Price 6s. net.

Heart Disease: with Special Reference to Prognosis and Treatment. By Sir Wm. H. Broadbent, Bart., M.D., F.R.S., F.R.C.P., and John F. H. Broadbent, M.A., M.D. Oxon., M.R.C.P. 1897. Price 10s. 6d.

The Winter Meteorology of Egypt, and its Influence on Disease. By H. E. L. Canney, M.D. Lond. Reprint, 1897. Price 3s. 6d. net.

BAILLIÈRE, TINDALL, AND COX, London, and J. MENZIES AND CO., Edinburgh.

The Principles and Practice of Veterinary Medicine. By W. Williams, F.R.C.V.S., F.R.S.E. Eighth Edition. 1897.

BLACKIE AND SON, Old Bailey, London.

Adventures in Toyland. By Edith King-Hall. Illustrated. Price 5s.

Red Apple and Silver Bells: a Book of Verse for Children of all Ages. By Hamish Hendry. Illustrated. Price 6s.

With Moore at Corunna. By G. A. Henty. Illustrated. 1898. Price 6s.

Lords of the World: a Story of the Fall of Carthage and Corinth. By Rev. Alfred J. Church. Illustrated. 1898. Price 6s.

Just Forty Winks. By Hamish Hendry. Illustrated. Price 5s.

CARRÉ, G., ET C. NAUD, Paris.

L'Agglutination des Microbes. Par Dr. R. Bensaudé. 1897.

CARVETH, J. A., AND CO., Toronto, Canada.

Text-book of Medical and Surgical Gynæcology. By R. W. Garrett, M.A., M.D. Illustrated. 1897.

CASSELL AND COMPANY, London.

Clinical Methods. By R. Hutchison, M.D., M.R.C.P., and H. Rainy, M.A., F.R.C.P. Edin., F.R.S.E. Illustrated. 1897. Price 9s.

CLOWES AND SONS, Charing-cross, London, S.W.

Sanitation and Health. By Brig.-General R. C. Hart, V.C., C.B., R.E., revised by Brigade-Surgeon-Lieutenant-Colonel T. H. Hendley, C.I.E., L.R.C.P., M.R.C.S., authorised by the War Office for use in all Army Schools. Fourth Edition. 1897. Price 1s. 6d.

GRIFFIN, C., AND COMPY., Exeter-street, Strand, London.

Clinical Diagnosis. By Dr. Rudolf v. Jaksch, translated from the fourth German edition, by James Cagney, M.A., M.D. Third Edition. Illustrated. 1897. Price 22s.

JARROLD AND SONS, Warwick-lane, London, E.C.

The Ritual of Health, for the Grown. By H. Cooper Pattin. Third Edition. 1897. Price 1s.

KIMPTON, HENRY, High Holborn, London.

A System of Practical Medicine by American Authors. Edited by A. L. Loomis, M.D., LL.D., and W. G. Thompson, M.D. Vol. I. Infectious Diseases. Illustrated. 1897. Price 25s. net.

A Text-book of Practical Therapeutics By Hobart A. Hare, M.D., B.Sc. Sixth Edition. 1897. Price 21s. net.

Practical Diagnosis: the Use of Symptoms in the Diagnosis of Disease. Second Edition. By H. A. Hare. Illustrated. 1897. Price 21s. net.

LEWIS, H. K., Gower-street, London, W.C.

A Handbook of Therapeutics. By S. Ringer, M.D., F.R.S., and H. Sainsbury, M.D., F.R.C.P. Thirteenth Edition. 1897. Price 16s.

LIPPINCOTT, J. B., COMPY., Henrietta-street, Covent-garden, London.

The Normal and Pathological Circulation in the Central Nervous System (Myel-Encephalon). Original studies. By William Browning, Ph.B., M.D. 1897. Price 7s. 6d.

Appendicitis and its Surgical Treatment; with a Report of Seventy-nve Operated Cases. By Herman Mynter, M.D. (Copenhagen). 1897. Price 10s. 6d.

LONGMANS, GREEN, AND CO., Paternoster-row, London.

The Principles of Chemistry. By D. Mendeléeff. Translated from the Russian (Sixth Edition) by Geo. Kamensky, A.R.S.M. Edited by T. A. Lawson, B.Sc., Ph.D. Vols. I. and II. 1897. Price 36s.

The Dwelling House. By G. V. Poore, M.D., F.R.C.P. Illustrated. 1897. Price 3s. 6d.

Anatomy: Descriptive and Surgical. By H. Gray, F.R.S. Illustrated. Fourteenth Edition. Edited by T. Pickering Pick. 1897. Price 36s.

Darwin and after Darwin. By the late Geo. J. Romanes, M.A., LL.D., F.R.S. Vol. III. 1897. Price 5s.

MACMILLAN AND CO., London.

Perityphlitis and its Varieties. By F. Treves, F.R.C.S. (reprint). 1897. Price 2s. 6d. net.

Practitioner's Handbook of Treatment, or the Principles of Therapeutics. By the late J. M. Fothergill, M.D., M.R.C.P. Fourth Edition. Edited by Wm. Murrell, M.D., F.R.C.P. 1897. Price 15s. net.

MALOUIE, A., Paris.

La Formule Médicale. Par E. Dupuy. 1897.

MURRAY, JOHN, Albemarle-street, London.

Under the Red Crescent: Adventures of an English Surgeon with the Turkish Army at Plevna and Erzeroum, 1877-1878. Related by Chas. S. Ryan, M.B., C.M. Edin., in association with his friend John Sandes, B.A. Oxon, with portrait and maps. 1897. Price 9s.

NICHOLS AND CO., Oxford-street, London.

The German Nature Cure and How to Practise it. By J. Aidall. Illustrated. 1897. Price 3s. 6d.

REEVES, WM., Fleet-street, London, E.C.

Humanitarian Essays: being Vol. III. of "Cruelties of Civilisation." Edited by H. S. Salt. 1897. Price 1s.

SCOTT, WALTER, Paternoster-square, London, E.C.

Sleep: Its Physiology, Pathology, Hygiene, and Psychology. By Marie de Manaceine, St. Petersburg. Illustrated. 1897. Price 3s. 6d.

SIMPKIN, MARSHALL, AND CO., Stationers' Hall-court London, E.C.

Localisation of Headache and Sick Headache, Indicating their Origin, Pathology, and Treatment. By H. B. Hewetson, F.L.S. Illustrated. 1897.

SMITH, ELDER, AND CO., Waterloo-place, London, S.W.

Spinal Caries (Spondylitis, or Pott's Disease of the Spinal Column). By Noble Smith, F.R.C.S. Edin., L.R.C.P. Lond. Second Edition 1897. Price 5s.

Transactions of the Pathological Society of London. Vol. XLVIII. 1897.

SMITH, JOHN, AND SON, Glasgow.

Proceedings of the Philosophical Society of Glasgow. 1896-97. Vol. XXVIII. 1897. Price 10s. 6d.

SWAN SONNENSCHEIN AND CO., Paternoster-square, London.

Children under the Poor-law: their Education, Training, and After-care. By W. Chance, M.A. 1897. Price 7s. 6d.

THE F. A. DAVIS COMPANY, Philadelphia.

An Epitome of the History of Medicine. By Roswell Park, A.M., M.D. Illustrated. 1897.

THE ROXBURGHE PRESS, Victoria-street, Westminster.

Young Men's Guide and Medical Companion. By Dr. Gangadin Fifth Edition. Eleventh Thousand. Price 2s. 6d.

THE SCIENTIFIC PRESS, Southampton-street, Strand, London.

A Manual of Hygiene for Students and Nurses. By J. Glaister, M.D. Illustrated. 1897.

Fevers and Infectious Diseases: Their Nursing and Practical Management. By Wm. Harding, M.D., M.R.C.P. 1897. Price 1s.

UNWIN, T. F., Paternoster-square, London, E.C.

John Hunter: Man of Science and Surgeon. (1728-1793.) By Stephen Paget, with introduction by Sir James Paget. 1897. Price 3s. 6d.

VOSS, LEOPOLD, Hamburg and Leipzig.

Therapie der Hautkrankheiten. Von Dr. L. Leistikow. Mit einem Vorwort von Dr. P. G. Unna. 1897. Price 6s.

WARWICK BROS. AND RUTTER, Front-street West, Toronto.

Fifteenth Annual Report of the Provincial Board of Health of Ontario for the Year 1896.

Kroll's Stereoskopische Bilder für Schielende, von Dr. P. Perlia (Leopold Voss, Hamburg).—The Commercial Uses of Coal Gas, by Thos. Fletcher, F.C.S. (Fletcher, Russell and Co., Warrington, Manchester, and London).

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

COMYNS, BERKELEY, M.B., B.C. Cantab., M.R.C.P., M.R.C.S., has been appointed an Out-patient Physician to the Chelsea Hospital for Women.

DRINKWATER, H., M.D. Edin., M.R.C.S., has been appointed Medical Officer for the Westminster Colliery Sick Relief Committee, vice C. Davies.

ECCLES, C. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Nafferton Sanitary District, vice H. J. Slane, resigned.

EVANS, JOHN J., M.B., M.S. Edin., M.R.C.S. Eng., has been appointed Resident Surgical Officer to the Birmingham and Midland Eye Hospital.

GARDNER, H. BELLAMY, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Anæsthetist to the National Orthopædic Hospital, Great Portland-street.

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GRAY, A. A., M.D. Glasg., has been appointed an Assistant Pathologist to the Cancer Hospital, Glasgow.

HARRIS, F. D., M.R.C.S., L.S.A., has been appointed Medical Officer of Health for the Borough of St. Helen's, vice J. Robertson, resigned.

KENYON, G. A., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer of Health for the Malpas Rural Sanitary District, vice W. N. Thursfield, resigned.

LECHE, A., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health by the Axbridge Rural District Council.

MADDEVER, J. C., M.D. Glasg., has been re-appointed Medical Officer of Health by the Brownhills Urban District Council.

MARTIN, F. W., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Borough of Brighouse, vice M. Young, resigned.

MIVART, F. ST. GEORGE, M.D. Louvain, F.R.C.S., L.R.C.P. Edin., M.R.C.S., has been appointed a Medical Inspector of the Local Government Board, vice F. W. Barry, deceased.

MOORE, E. COTTEW, M.B., M.S. Edin., has been appointed Senior House Surgeon to the Birmingham and Midland Eye Hospital.

PARRY, GEORGE HEARN, M.B., C.M. Edin., has been appointed Resident Physician to the Victoria Hospital for Consumption and Diseases of the Chest, Craigleith, Edinburgh, and also Non-resident Clinical Clerk to the Observation Ward, Royal Infirmary, Edinburgh.

POTTER, E. FURNISS, M.D. Brux., M.R.C.S., L.R.C.P., has been appointed Assistant Surgeon to the London Throat Hospital.

SWINDALE, JOHN ASTON, M.B., B.S. Durh., has been appointed Assistant House Surgeon to the Guest Hospital, Dudley, vice H. A. Belbin, resigned.

THOMPSON, H. E., M.B. Lond., M.R.C.S. Eng., has been appointed Junior House Surgeon to the Birmingham and Midland Eye Hospital.

TRIPP, C. L. H., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer to the Dawlish Cottage Hospital.

WAGGETT, ERNEST, M.B., has been appointed Assistant Surgeon to the London Throat Hospital.

WEBB, C. C., M.B., B.C. Cantab., has been appointed Medical Officer for the Second Sanitary District of the Mansfield Union.

WIGIN, G. W., M.R.C.S., L.S.A., has been appointed Medical Officer of Health by the Methley Urban District Council.

WOOD, J. H., M.B. Lond., M.R.C.S., has been appointed House Surgeon to the Stockton and Thornaby Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRIDGWATER INFIRMARY.—House Surgeon. Salary £80 per annum, with board and residence.

CHELTENHAM GENERAL HOSPITAL.—Junior House Surgeon, unmarried. Salary £40 per annum, with board and apartments.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Junior House Surgeon and Dispenser. Salary £50 per annum, with board, apartments, and laundress.

CHESTER GENERAL INFIRMARY.—Visiting Surgeon for six months. Salary at the rate of £90 per annum, with residence and maintenance in the house.

CONSUMPTION HOSPITAL AND ORPHAN HOMES OF SCOTLAND, Bridge of Weir.—Resident Medical Officer. Salary £80 per annum, with furnished apartments, board, &c. Applications to the Hon. Secretary, 194, St. Vincent-street, Glasgow.

CORPORATION OF CALCUTTA, Bengal, India.—Health Officer for the town of Calcutta for five years. Salary not less than 1200 rupees and not more than 1500 rupees a month. The appointment is subject to specified conditions. Applications to the Secretary to the Corporation, Calcutta.

DURHAM COUNTY ASYLUM.—Pathologist and Assistant Medical Officer. Salary £150. Applications to Dr. Smith, Durham County Asylum, Winterton, Ferryhill.

GENERAL INFIRMARY AND DISPENSARY, Doncaster.—In-door Dispenser and Assistant to the House Surgeon. Board, lodging, and washing provided.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—House Physician for six months, unmarried. Salary £20, with board and residence in the hospital.

LINNEAN SOCIETY OF NEW SOUTH WALES, Sydney.—Macleay Bacteriologist. Salary £400 per annum. Applications to Dulan and Co., 37, Soho-square, London.

LIVERPOOL DISPENSARIES, 34, Moorfields, Liverpool.—Assistant Surgeon, unmarried. Salary £80 for the first year, and £90 per annum afterwards, with apartments, board, and attendance.

LIVERPOOL STANLEY HOSPITAL.—Junior House Surgeon. Salary £70 per annum, with board, residence, and washing.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer for six months each. Salary at the rate of £50 per annum for the senior post.

ROYAL ISLE OF WIGHT INFIRMARY AND COUNTY HOSPITAL, Ryde.—House Surgeon, and to act as Secretary. Salary £60 per annum, with board, lodging, and washing.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields.—Senior House Surgeon.

ROYAL PORTSMOUTH HOSPITAL.—Assistant House Surgeon for six months. Board and residence, and an honorarium of £15 15s.

SALISBURY INFIRMARY.—Assistant House Surgeon, unmarried. Board, lodging, and washing provided.

SEAMEN'S HOSPITAL SOCIETY, "DREADNOUGHT," Greenwich, S.E.—Surgeon for Dispensary, 51, East India Dock-road. Salary £63. House Surgeon for "Dreadnought" Hospital, Greenwich. Salary £59 per annum, with board and residence. Junior House Surgeon for the Branch Hospital, Royal Albert Dock, E. Salary £50 per annum, with board and residence. Applications to the Secretary, Greenwich.

ST. GEORGE'S UNION, London.—Second Assistant Medical Officer at the Infirmary, Fulham-road, S.W., for one year. Salary £50, with board, residence, and washing. Applications to Dr. H. W. Webster at the Infirmary.

ST. THOMAS'S HOSPITAL, London, S.E.—Physician.

WEST HAM HOSPITAL, Stratford, E.—Junior House Surgeon for one year. Salary £50 per annum, with board, residence, &c.

WEST LONDON HOSPITAL, Hammersmith-road.—Assistant Physician.

WESTERN GENERAL DISPENSARY, Marylebone-road, London.—Dispenser. Salary £120 per annum.

WREXHAM INFIRMARY AND DISPENSARY.—House Surgeon. Salary £80 per annum, with furnished rooms, board, gas, coal, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

ABRAM.—On Oct. 12th, at 106, Loudon-road, Reading, the wife of G. Stewart Abram, M.B. Cantab., M.R.C.S. Eng., of a daughter.

ALDRIDGE.—On Oct. 15th, at Hamilton House, Southampton, the wife of Norman Aldridge, M.B., C.M. Edin., of a daughter.

ARMSTRONG.—On Oct. 13th, at Southgate, the wife of A. J. M. Armstrong, M.R.C.S. Eng., L.R.C.P. Edin., of a son.

DALY.—On Oct. 16th, at Cornfield-road, Eastbourne, the wife of W. J. Daly, M.B., C.M. Glasg., of a son.

FORBES.—On Oct. 9th, at "Drumminor," Calverley Park, Tunbridge Wells, Kent, the wife of Norman Hay Forbes, of Forbes, F.R.C.S. (Exam.) Edin., L.R.C.P. Lond., M.R.C.S. Eng., of a daughter (Eilidh).

KENNEDY.—On Oct. 18th, at Burke House, Beaconsfield, Bucks, the wife of William Willoughby Kennedy, M.A., M.B. Lond., M.R.C.S., D.P.H. Camb., of a daughter.

TURNEY.—On Oct. 19th, at Portland-place, W., the wife of H. G. Turney, M.B. Oxon., F.R.C.S., of a son.

MARRIAGES.

CROWLY—SPAIN.—On Oct. 14th, at the Church of the Sacred Heart Quex-road, N.W., Daniel Crowly, M.D., Coroner, Loughrea, Co. Galway, Ireland, to Agnes Mary, second daughter of the late Lewis Spain, of Oaklands, West-end-lane, West Hampstead.

DAVOREN—BROWN.—On Oct. 14th, at St. Matthew's, Redhill, John Davoren, L.R.C.P., L.R.C.S.I., of Streatham, S.W., to Laura Madeline, eldest daughter of the late Charles R. Brown, M.D., of Eastbourne and Beckenham, Kent.

FRANCIS—USHER.—On Oct. 14th, at St. Mary's, Finchley, Harvey Francis, M.B., son of the late Swinford Francis, to Jessie, daughter of Thomas C. Usher, of Woodstock House, Hendon.

GRAY—ORR.—On Sept. 16th, at Curepipe, Mauritius, Surgeon-Captain W. Lewis Gray, son of the late Dr. Gray, of Selby, to Janet Mary Orr, daughter of the late Thomas Orr, of London.

MUSGRAVE—PRENTIS.—On Oct. 16th, at All Saints', Kensington-park, Cecil Musgrave, M.D., of Cromer, elder surviving son of the late Colonel Walter Musgrave, formerly of the Cape Mounted Rifles, H.M.'s 81st Regiment, and of the 15th Bengal Lancers, and the 5th Bengal Cavalry, to Ethel Combe, only daughter of the late Surgeon-Major Charles Prentis, B.M.S., and of Mrs. C. Prentis, 29, Colville-terrace, W.

PEAKE—JAMES.—On Oct. 14th, at the parish church, Hendon, by the Rev. C. Hose, William Harland Peake, M.D., B.S., of Marden, Kent, to Ethelne, youngest daughter of the late Robert James, Esq., and Mrs. James, of Hendon, Middlesex.

WATSON—CRICHTON.—On Oct. 13th, at Westbourne Free Church, Glasgow, Alexander Oswald Cowan Watson, Surgeon-Captain A.M.S., to Marion Macfarlane, eldest daughter of George Crichton, Montgomerie-crescent, Glasgow.

DEATHS.

BARRY.—On Oct. 12th, suddenly, at the Grand Hotel, Birmingham, aged 46, Frederick William Barry, D.Sc., F.R.S.E., of Tower House, Down, Kent, Chief Medical Inspector of Local Government Board, London.

BRADLEY.—On Oct. 18th, at Philbeach-gardens, S.W., Richard Holland Bradley, M.D., F.R.C.S., aged 77 years.

CAMERON.—On Oct. 20th, at Redcliffe-square, S.W., Hugh Cameron, L.R.C.S. Edin., late of 43, Hertford-street, Mayfair, in his 88th year.

CORNISH.—On Oct. 19th, at Corvill, Shelley-road, Worthing, Surgeon-General William Robert Cornish, C.I.E., F.R.C.S., Honorary Physician to the Queen, and late Madras Army, aged 70 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (27th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), ing's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (28th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.). London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (30th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (25th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. T. Churton (Leeds): Some Observations on the Localising Factors in Rheumatism and Chorea, with cases.

TUESDAY (26th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Demonstration of Microscopic Specimens showing the Infection of the Capillaries of the Brain, and Illustrating the Pathological Changes in the Liver which are caused by the Debris of the Parasites. 8.30 P.M. Papers:—Dr. S. Phillips: A Case of Calcareous Metamorphosis of Tracheal Glands, Formation of Mediastinal Abscess and Bronchial Fistula, subsequent Perforation of the Arch of the Aorta, with long-continued Hæmoptysis and Death.—Dr. G. Thin: A further Contribution towards the Pathology of the Pernicious Malarial Fevers of Sierra Leone and our knowledge of the Parasite with which they are Associated.

WEDNESDAY (27th).—DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—4.30 P.M Council Meeting. 5 P.M. Cases and Papers.

HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—8.30 P.M. Clinical Evening. Cases:—Dr. Cotman: Disease of the Ankle.—Dr. F. J. Smith: Osteitis Deformans.—Sir H. Beevor: Congenital Heart Disease. Patients will be shown by Dr. J. H. Sequeira and others.

THURSDAY (28th).—NEUROLOGICAL SOCIETY OF LONDON (11, Chandos-street, W.).—8.30 P.M. Pathological Meeting. Dr. S. Brown and Dr. A. Meyer (communicated by Dr. J. A. Ormerod): Morbid Anatomy in a case of Hereditary Ataxy of the type described by Sanger Brown.—Dr. S. Gee and Dr. H. H. Tooth: A Case of Hæmorrhage in the Region of the Pons Varolii almost entirely on the Right Side.—Dr. W. A. Turner: Symmetrical Softening of the Pyramids and Interolivary Strata.—Dr. F. E. Batten: The Effect of Marchi's Fluid on Nervous Tissue which has undergone Post-mortem Change.—Dr. J. Taylor and Mr. C. A. Ballance: A Case of Tumour of the Right Lateral Lobe of the Cerebellum.—Dr. R. Russell: Contributions to the Study of some of the Tracts in the Spinal Cord.

FRIDAY (29th).—BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION (11, Chandos-st., Cavendish-sq., W.).—3.15 P.M. Exhibition of Throat and Nose Cases by Dr. Pegler, Mr. Wilkin, the President, and others. Papers:—Dr. Tresilian: Throat Lesions in Enteric Fever.—Dr. Pegler: Post-septal Lymphoma (with microscopical preparations).—The President: Some Lines of Progress in Laryngology, Rhinology, and Otology (Presidential Address): Exhibition of Ear Cases.—Mr. F. Marsh: Notes of Five Cases of Cerebral Abscess due to Ear Disease.—Mr. M. Collier: Nasal Stenosis and Tinnitus.—Mr. W. Wingrave: Tuberculous Disease of Middle Ear complicated by Optic Neuritis.—Mr. St. G. Reid: Traumatic Rupture of Tympanic Membrane.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

MONDAY (25th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. G. Stoker: Chronic Glandular Disease of the Nose and Naso-Pharynx.

TUESDAY (26th).—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Stupor; Katatonia; Dementia and Senile Insanity.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Alopecia.

HOSPITAL FOR NERVOUS DISEASES (73, Welbeck-street).—4.30 P.M. Dr. H. Campbell: Cases of Hemiplegia.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Ormerod.

WEDNESDAY (27th).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: House Drainage.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Symes Thompson: Phthisis in Relation to Life Assurance.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—Dr. D. Robinson: Metrorrhagia.

EVELINA HOSPITAL (Southwark-bridge-road, S.E.).—4.30 P.M. Dr. G. Carpenter: On Infant Feeding. (Post-Graduate Course.)

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq.).—5 P.M. Dr. Morgan Dockrell: Eczema.

THURSDAY (28th).—LONDON POST-GRADUATE COURSE.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. Jonathan Hutchinson: Clinical Lecture.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq.).—5 P.M. Dr. Morgan Dockrell: Tuberculosis of the Skin.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Batten: Muscular Atrophy.

FRIDAY (29th).—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Anthrax and Malignant Œdema.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

A POINT IN THE WORKING OF THE "INFECTIOUS DISEASES NOTIFICATION ACT."

To the Editors of THE LANCET.

SIRS,—I wish to know if you will kindly inform me whether the port medical officer has any right to interfere with infectious cases attended by the practitioners of the town seven days after the vessel has entered the harbour, the port sanitary inspector having boarded the ship on the day of entry, and all on board declared well.

I am, Sirs, yours faithfully,

Whitehouse, Fowey, Cornwall, Oct. 4th, 1897. W. H. BOGER.

*** If a case of infectious fever was removed from a ship under the directions of a port medical officer, his duties as to notification and as to the patient would cease on such removal. If infectious disease occurred amongst persons who left the vessel seven days after the vessel entered the port, the port medical officer would notify them if met with on board, but not if they were living in the town—unless, indeed, he was attending them in his private capacity.—ED. L.

THE SINS OF THE "PERSONAL" COLUMN.

THE *Kerry Weekly Reporter* for Saturday last contains the following paragraph, and we are invited by a correspondent who sends us the paper to say what we think of it.

> "We are glad to be able to announce that Dr. Fitzmaurice's health is so much improved that we are authorised to state that he intends to resume his practice and will see patients at Cloghers. Dr. Fitzmaurice is also prepared to go to the country to visit cases as usual. Anyone wishing to consult Dr. Fitzmaurice at Cloghers can have a car, free of expense, from Vaughan's Hotel, Nelson-street."

We think very badly of it, but we are not anxious to blame the medical man as he may be the victim of mistaken editorial kindness.

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SUGGESTIONS IN SERUM THERAPEUTICS.

To the Editors of THE LANCET.

SIRS,—Much has lately been written about the use of the antitoxic, protective, or curative serums, the sole method of using these serums being, as far as I am aware, by subcutaneous injections. It occurs to me that it might be possible for such serums to be administered with probable benefit in other ways than that of the hypodermic syringe method. Thus, they might be administered by the method of feeding in the same way as thyroid extract or creasote, or they might be applied more locally—that is, at or as near the seat of the microbic attack as possible. In typhoid fever, for example, the anti-typhoid serum could be administered in keratin-coated capsules, and in diseases the result of the streptococcus the anti-streptococcic serum might be tried by the mouth or sterile applications of the serum used locally. Apart from any direct anti-microbic action on the cocci it is reasonable to suppose that some antitoxin will be absorbed as well as toxin. Also in diphtheria, cholera, tetanus, tuberculosis, and pneumonia, the respective antidotal serums, or preparations, might be worth trying in some of the above-mentioned ways. If these serums administered by the mouth were found to act as well as they do when given hypodermically our patients would still be able to hold to their old belief in the "efficacy of a bottle of physic," though probably capsules of the serum for prophylactic or curative purposes would be the favourite method of taking them. One would like first to test, as far as possible, the practical value of these suggestions by experiments on the lower animals. Perhaps some colleagues from this brief letter may be induced to help in arriving at some conclusion as to whether or not these methods are of any use in assisting us in our struggle against the pathogenic bacteria and their toxins.

I am, Sirs, yours faithfully,
LACHLAN GRANT, M.D., C.M.Edin.,
Medical Officer, Gesto Hospital, Isle of Skye, N.B.

Oct. 16th, 1897.

A. B. C.—There is not any regulation of the General Medical Council enforcing the presence of an external examiner at the professional examinations of the Scotch Universities.

A. D. N.—We doubt the inference.

THE MEDICAL KNOWLEDGE OF FRENCH SCHOOLMASTERS.

ACCORDING to *Le Progrès Médical* the following "literary exercise" was recently set by a teacher in a Parisian *Lycée*: "1. A medical officer of La Charité Hospital having need of a human subject in order to carry out some medical experiments makes known his requirement to one of the sick attendants, whereupon the latter promises to let him have No. 46, who, he adds, has only a couple of hours to live. Give the conversation between these two persons in ten lines. 2. Such a speedy arrangement does not suit the medical officer, who is obliged to absent himself for twenty-four hours. Give his soliloquy in five lines. 3. A cordial administered to the afore-mentioned number, while *in extremis*, has so happy an effect that after a long sleep the lately moribund patient awakes convalescent. Give the comic disappointment of the attendant, together with the remarks of No. 46, in a dialogue of twenty lines. 4. The next day the medical officer comes to fetch his subject, but the attendant informs him that the dying man has changed his mind. Give the respective remarks in ten lines."

L.R.C.P.I.—It is not a violation of etiquette. We advise our correspondent to read "Difficulties under the Notification of Diseases Act," which is issued from our office, price 1*s.*

THROWING STONES AT TRAINS.

THE custom of throwing stones at trains is far too common, and in addition to its being almost impossible to arrest the idiots who do such things, the penalty provided by the law is far too light. A peculiarly sad accident arising from this insane habit was reported in the daily press on Oct. 19th as follows:

> "Ben Hitchen, a well-known express driver on the North-Western Railway, lies at Crewe unconscious. He had charge of the Scotch express to Carlisle, and when passing under Hartford-bridge, going at great speed, a stone hurled with much violence from the bridge struck him over the eye inflicting a fearful wound. Erysipelas has set in, and his condition is precarious."

Drivers of express trains are exposed to quite enough dangers from the nature of their ordinary work without having to undergo such risks as the one mentioned above. If the scoundrel who threw the stone is ever caught—though we are much afraid he will not be—he deserves the soundest flogging that a criminal ever had. In a case like this one not only is the driver's life imperilled, but the lives of all those in the train. We sincerely hope that the law may be amended so as to make it legal that any one who either throws any missile at a train, whether he hit it or not, or places an obstacle in the way of a train should be well flogged or birched in addition to a term of imprisonment.

IS TYPHOID FEVER COMMUNICABLE FROM CATS?

To the Editors of THE LANCET.

SIRS,—In sending the enclosed note I would ask if the absence of typical typhoid lesions in a cat's intestines might not be due to some difference in the arrangement of the lymph follicles. Mice have been found to be very susceptible to inoculations of the typhoid bacillus, but I do not know whether they are affected by swallowing it; if they are, then it is easy to see how a cat eating an infected mouse might have a diarrhœa capable of communicating typhoid fever to human beings, even if it caused no "typhoid" lesions in the cat itself.

I am, Sirs, your obedient servant,
A. E. BROSTER, M.R.C.S. Eng.,
Medical Officer of Health, Wirksworth Urban Sanitary District.

Wirksworth, Oct. 9th, 1897.

[ENCLOSURE.]

A brother and sister, aged eighteen and twenty-three years, have recently suffered from typhoid fever, the girl's illness beginning on Aug. 31st, and the boy's on Sept. 2nd. They were together at home between Aug. 3rd and 23rd, the girl for her holidays, the boy daily from his work from night to morning. During that period they went nowhere together, and home was the only place at which they had a common meal. Before Aug. 3rd and after Aug. 23rd the girl was away. The last case of typhoid fever notified in the district was in October, 1896, at the same house, the patient in that instance being the present patients' mother. The house, milk, and water-supply were examined in 1896 and again recently without the source of the illness being discovered. Between Aug. 3rd and 23rd a black kitten, aged about five months, suffered from continual diarrhœa and became very thin. It made most offensive messes about the house, which the girl cleared up. She and her brother were attached to the kitten, and both of them nursed it and cuddled it up to their faces. At the same time there were another brother and sister in the house who have been perfectly well, and both of whom, disliking the kitten, never touched it. After Aug. 23rd the kitten lost its diarrhœa and rapidly improved. When seen on Sept. 10th it appeared to be in good health. On that date it was killed with chloroform and forwarded to the Clinical Research Society, who wrote on the 13th that "as all endeavours to produce typhoid fever on the lower animals have been entirely without result we are pretty certain that our investigation will give negative results before we begin," and asking me to wire if I wished them to proceed. This I did. The report on Sept. 21st was as follows: "We made a careful post-mortem examination of the kitten. The organs and intestines were apparently healthy. There were no signs of hæmorrhages, enlarged spleen or ulcerations. The bacteriological examination showed that the blood and spleen pulp were free from organisms of any description. The cultivations from the fæces both from the small and large intestines contained no organisms which resembled in morphology or cultured reaction the bacilli typhi abdominalis." The history of the cases seems to suggest a possible infection from the kitten and the negative results of the post-mortem examination three weeks after its illness are hardly conclusive that the kitten's illness had no connexion with the outbreak of typhoid fever.

*** Before the suggestion implied in Mr. Broster's communication could be accepted it would be needful to explain the singular fact that in the previous year another inmate of the same house had typhoid fever. Does not this suggest some local sanitary defect which had not been remedied after the first illness, rather than infection through the kitten?—ED. L.

Conjoint.—There is no law in these matters, and our correspondent must be guided by his own private sense of what is right. We think that the affix in question ought always to be followed by the letters showing the university whence the degree is derived.

THE DANGERS OF THE CINEMATOGRAPH.

A CASE was reported in the papers recently of an explosion which happened in connexion with a demonstration of the cinematograph. It occurred in a Wesleyan chapel near Bradford, and the explosion appears to have been due to gas, but after the explosion "a large flame flashed to the ceiling" and instantly there was a great panic amongst the assembled crowd. Several people were injured, but happily the consequences were not worse owing probably to the presence of mind of the exhibitors, who cut off the gas from the apparatus, thus preventing the fire from spreading and avoiding an explosion of the gas in the cylinders. The fact of the large flame flashing to the ceiling leads to the conclusion that the celluloid film of which there are enormous lengths in the cinematograph had fired. We have already commented upon the dangers of celluloid in this no doubt entertaining form of popular show, and in the interest of the public it is imperative that something should be done to reduce the savage inflammability of celluloid. It was stated some time ago that celluloid had been made non-inflammable by impregnating it with certain chemical salts. If this be true some steps should be taken to insist upon the employment of this material in all public exhibitions.

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"THE UNQUALIFIED ASSISTANT."

To the Editors of THE LANCET.

SIRS,—As the practitioner who employed the unqualified assistant referred to in your correspondent's (Mr. Tucker's) letter in THE LANCET of Oct. 16th, I think it only fair that all instead of a few of the facts only should be mentioned. In the first place I take every opportunity of showing to any of my patients who may at times be attended by my assistant that the case is under my supervision. In dozens of cases I have told patients that my assistant was not qualified even when they have not asked me. With reference to this particular case Mrs. Tucker showed me so very plainly that she did not want me, and told me that she was more than satisfied with my assistant, that I only saw her as seldom as possible. This is quite contrary to my rule, which is that my assistant shall see any cases as seldom as possible. He does not take 5 per cent. of any visits that come in, and I (not he) would have seen Mrs. Tucker's baby when last seen had she not called in my assistant while he was passing the door. The visit was not sent to the surgery at all. I have never directly or indirectly tried to make people believe that my assistant was qualified. His work consists practically entirely of dispensing and attending simple uncomplicated cases of midwifery. He has never attended any case of midwifery requiring instruments without my presence, when I have always done the operation. I am writing at this great length because I consider the matter a very important one, and also because I want to show that I as well as Mr. Tucker am anxious that people shall not be misled with regard to my assistant's lack of legal qualifications. I am, Sirs, yours faithfully,

Trelyon, Ilford, Oct. 15th, 1897. W. H. BEST.

Sea Side.—It is necessary that the holder of these appointments should be registered. He may or may not possess more than one qualification; this of course depends upon the date of registration.

SCARLET FEVER AND THE PRACTICE OF MIDWIFERY.

MR. BRAXTON HICKS has concluded an inquiry touching the death of the late Mrs. Emily Munday in June last, a week after her confinement. Mrs. Munday had engaged Mr. Whitehead to attend her, but when the time came he was laid up with scarlet fever, in the peeling stage, and his patients were attended by Mr. Bilham and by Mr. Don. Mr. Bilham for the most part attended to the midwifery cases. He lived in Mr. Whitehead's house while doing his work. The patient became ill three or four days after confinement and died in a week. Mr. Bilham seems to have had some doubt about the nature of the disease at first, but with two or three other gentlemen agreed that the case was one of scarlet fever complicated with heart disease of old standing. The husband became anxious to know the source of the infection, and stated that he could find none but Mr. Whitehead. Mr. Felix Kempster, police divisional surgeon, gave evidence. He had made the post-mortem examination, and declared death to be due to old heart disease, probably accelerated by scarlet fever. Asked if as a long-standing medical man he would attend a confinement case while also attending a scarlet fever case, he said, "it is a matter of everyday occurrence." In the end the jury found "unanimously that the death of deceased was due to heart disease, accelerated by scarlet fever, but that how the scarlet fever was contracted there was not sufficient evidence to show. The jury added, however, that they were of opinion that no medical man should attend midwifery cases while he had contagious complaints in hand." The coroner expressed his agreement. The solicitor for the husband expressed himself satisfied with the verdict, and hinted that further proceedings would be taken in another court. Under these circumstances it is well that we should abstain from much comment. Undoubtedly wherever it can be arranged it is desirable that attendance on midwifery and on contagious complaints, especially scarlet fever, should be dissociated; but in this urgent world it is not always possible without greater hardships than such attendance. It is, however, most imperative that the greatest possible care be taken in such circumstances to disinfect the person and to wear clothes that have not been exposed to the poison.

R. D. W.—No. The title of "Dr." implies the possession of a medical degree when assumed by a medical man.

"WARTY NIPPLES."

To the Editors of THE LANCET.

SIRS,—Will you allow me a small space to thank the medical brothers who have written me privately in response to my letter in THE LANCET of Oct. 2nd giving their experience and excellent advice about the treatment of warty nipples in a primipara nearing her accouchement? The condition does not appear to be so uncommon as my own experience had led me to believe.

I am, Sirs, yours truly,

W. J. COLLYER ADAM, M.B. & C.M. Glasg.

Acre-lane, Brixton West, S.W., Oct. 20th, 1897.

THE TREATMENT OF CORNS.

To the Editors of THE LANCET.

SIRS,—I should be grateful if any of my medical brethren could offer me a hint as to the treatment of corns. They are situated on the upper and outer surface of the little toes, are of the usual callous variety, and I think in each case surmount a bursa. For months I have found locomotion a pain and a grief in spite of my best endeavours to obtain relief from the many well-known and published lines of treatment. I have placed the making of my boots in skilful hands, yet I find it impossible to put my feet into them without a shudder. I may add that my general health is fairly good, and for many or most years of my manhood I have been a great pedestrian. Any suggestions will be thankfully received.—Yours very truly,

43, Welbeck-street, W., Oct. 20th, 1897. J. T. JONES.

MEDICAL MEN AS WITNESSES.

AT the Brecon Police-court on Monday, Oct. 18th, a point was raised, as it has been raised frequently before, which is of some interest to the medical profession. A medical practitioner was called by a party to an action. The medical witness said he would decline to give evidence until an order was made that his fee should be paid into court, because his experience in such cases was that the fee was not paid after the evidence had been tendered. The presiding magistrate thought the medical man should take the same risk as other professional men—solicitors, for instance. A solicitor who was present remarked that solicitors took care to get their fees before going into court. The Clerk said a medical man had a perfect right to refuse to give evidence until paid. The Bench decided by a majority not to make an order in the case, and unless the medical man could make an arrangement with the parties who employed him they would have to do without his evidence.

ERRATUM.—An annotation in THE LANCET of Oct. 16th made reference to a paper by Dr. L. Guthrie which had appeared in *Brain*, and quoted the subject of the paper as "Psychro-Anæsthesia." This is a misprint for *Psychro-æsthesia.*

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 21st, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Oct. 15	29·50	S.W.	0·04	103	68	52	56	58	Fine
,, 16	29 60	S.W.	...	104	68	56	56	59	Cloudy
,, 17	30 01	S.W.	...	104	69	57	58	61	Cloudy
,, 18	30 08	S.W.	0·13	91	66	59	57	61	Overcast
,, 19	30·18	S.E.	...	84	66	58	58	59	Raining
,, 20	30 47	W.	...	82	62	46	46	46	Foggy
,, 21	30·56	E.	...	79	58	47	49	50	Foggy

During the week marked copies of the following newspapers have been received: *Alnwick Gazette, Bradford Observer, Eastern Morning News, South Wales Daily Post, Manchester Guardian, Bridgwater Independent, Lincolnshire Echo, Kingston News, Glasgow Herald, Western Morning News, Burton Chronicle, Cornish Telegraph, Manchester Guardian, West Sussex Gazette, Nuneaton Observer, Cheltenham Examiner, Times of India, Pioneer Mail, Middlesbrough Evening Telegraph, Bristol Mercury, Torquay Times, Science Siftings, Derby Daily Telegraph, Preston Herald, Grimsby News, Blackpool Gazette, Essex Telegraph, Wigan Examiner, Architect, Liverpool Daily Post, Colchester Mercury, Birmingham Mail, Beverley Guardian, Staffordshire Chronicle, Halifax Guardian, Wiltshire County News, Norfolk Daily Standard, Sheffield Independent, Newcastle Leader, Devon Gazette, Yorkshire Post, Builder, Bedford Times, Walsall Advertiser, Waterford Mirror, Bury Guardian, Sussex Daily News, Evesham Journal, North Wilts Herald, Worcestershire Chronicle, Wellingborough News, Leeds Mercury, Somerset County Herald, Herald of Wales, Dunstable Advertiser, Globe, Scotsman, Andover Advertiser, Bucks Standard, Mining Journal, Reading Mercury, Hertfordshire Mercury, City Press, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, British Colonial Printer and Stationer, The Colonies and India Journal, Stratford-upon-Avon Herald, Surrey Advertiser, Local Government Journal, East London Observer, Kerry Weekly Reporter, Middlesex Chronicle, Bedfordshire Standard, Public Health, Journal (New York), South-Western Star, West London Press, Bexhill Chronicle, Formby Times, Manchester Evening News, West Middlesex Herald, Ampthill News, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Dr. J. Althaus, Lond.; Messrs. Allen and Hanburys, Lond.; Messrs. Arnold and Sons, Lond.; All World Advertising Co., Belfast.

B.—Dr. Max Breitung, Coburg; Mr. W. H. Best, Ilford; Mr. Blackett, Lond.; Mrs. H. B. Black, Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs. Blondeau et Cie., Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Bibb, Lond.; Messrs. Bates, Hendy, and Co., Reading; T. B. Browne, Lond.; Messrs. A. Bishop and Sons, Lond.; Mr. Lennox Browne, Lond.; Mr. C. Birchall, Liverpool; Bridgwater Infirmary, Secretary of; Messrs. Brady and Martin, Newcastle-on-Tyne; B. and W., Lond.

C.—Dr. A. V. Clarke, Torquay; Consulting Surgeon, Lond.; Cor, Lond.; Cortland Wagon Co., Lond.; Messrs. Crossley, Moir, and Co., Lond.; Dr. J. Craig, Dublin; Mr. J. Cockerill, Lydd; Dr. Jessie Crosfield, Lond.; Mr. W. F. Clay, Edinburgh; Cornwall County Asylum, Bodmin, Clerk of; Messrs. Carnrick and Co., Lond.; Cheltenham General Hospital, Secretary of.

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E.—Dr. D. G. Evans, Bettws-y-coed; Epsom College, Secretary of.

F.—Mr. H. Faulkner, Exeter; Mr. T. Finney, Aberaman.

G.—Dr. A. E. Giles, Lond.; Dr. J. F. Goodhart, Lond.; Great Eastern Railway Co., Lond., Continental Traffic Manager of; G., Lond.; Mr F. J. S. Gray, Sutton Coldfie Mr. E. A. Goodspeed, Shamrock, U.S.A.

H.—Mr. Hnish, Lond.; Mr. T. Hopkin, Chester; Hospitals Association, Lond., Hon. Secretary of; Messrs. Hertz and Collingwood, Lond.; Messrs J. Haddon and Co., Lond.; Mr. J. Heywood, Manchester.

J.—Mr. H. M. Jordan, Lond.; Mr. F. B. Jessett, Lond.; *Journal of the American Medical Association*, Chicago, Editor of; Messrs. Jones Bros., Bristol.

K.—Mr. H. Kimpton, Lond.; Mr. R. Kimpton, Lond.; Herr S. Harger's Verlagsbuchhandlung, Berlin.

L.—Mr. J. L. Leckie, Pontypridd; Dr. J. F. Little, Lond.; Liverpool Stanley Hospital, Secretary of; Messrs. Lorimer and Co., Lond.

M.—Mr. J. Milne, Lond.; Midwives' Institute, Lond., Hon. Secretary of; Dr. C. Martin, Edgbaston; Dr. P. W. MacDonald, Dorset; Messrs. Maple and Co., Lond.; Mr. R. S. Marsden, Birkenhead; Dr. A. Miles, Leith.

N.—Dr. J. Niven, Manchester; Mr. A. Neve, Kashmir, India.

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Q.—Mr. P. W. de Quetteirlee, Jersey.

R.—Mr. Robin, Paris; Dr. J. S. R. Russell, Lond.; Messrs. A. Robb and Co., Lond.; Reginald, Lond.; Royal Cornwall Infirmary, Truro, Secretary of; Messrs. Rebbeck Bros., Bournemouth; Radnor Water Co., Montreal; Messrs. Robertson and Scott, Edinburgh.

S.—Mr. T. Smith, Lond.; Dr. R. D. Sweeting, Lond; Mr. E. M. Spencer, Malmesbury; Sheffield Union, Clerk of; Mr. H. Sell, Lond.; Messrs. Speyer, Schwerdt, and Co., Lond.; Messrs. Smith, Elder, and Co., Lond.; Dr. D. W. Samways, Lond.; Mr. W. P. Stocks, Salford.

T.—Dr. G. Turner, Cape of Good Hope; Typewriter Co., Lond., Managing Director of; Messrs. Tucker and Sons, Totnes.

V.—Mr. Vicars, Lond.

W.—Mr. D. Withecombe, Richmond; Mr. A. S. Williams, Lond.; *Wiltshire County Mirror and Express*, Salisbury, Proprietor of; Wrexham Infirmary, Secretary of; West Ham Hospital, Stratford, Secretary of; Messrs. Widenmann, Broicher, and Co., Lond.

Y.—Dr. I. B. Yeo, Lond.

Letters, each with enclosure, are also acknowledged from—

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An Inaugural Address

ON

MAN AND MEDICINE.

Delivered at the Opening of the Session of the York Medical Society on Oct. 13th, 1897,

BY J. F. GOODHART, M.D. ABERD., F.R.C.P. LOND.,

PHYSICIAN TO GUY'S HOSPITAL; CONSULTING PHYSICIAN TO THE EVELINA HOSPITAL FOR SICK CHILDREN.

MR. PRESIDENT, LADIES, AND GENTLEMEN,—I understand that I am to address this afternoon more or less of a mixed audience, and I long ago made up my mind that if ever such an opportunity presented itself to me, although in doing so I should have to say again many things that at other times and in other places I have said before, I should address myself in the main to the lay element amongst my hearers. Some alleged remedy has conquered pain for fifty years men read as they walk the streets, and many a one believes it—or at least the principle it embodies, and this or that nostrum is bought in consequence, and thus advertisements pay. The man of medicine, on the other hand, turns aside and smiles at the advertiser on the one hand for his brazen impudence, and at the man in the street on the other because he is such a simpleton. It is evident, therefore, that the natural man and the regenerate, if so I may venture to designate the layman and the medical man, look at things from very different standpoints, and it is this difference that I propose in some fragmentary way to consider to-day.

Now when a man is sick he wants to get well. Why does he want to get well? Why ask such a question? you will say. For several reasons that are all too plain. He may have his business to carry on, which no one can do as well as he; there are the care and support of those who are dear to him; there is the discomfort of being out of health, &c. And yet I doubt, important as they are, if these are the most potent elements in the desire for health. For the moneyed man—even more than the bread-winner who *may* sometimes get temporarily tired of life when fagged by the burden and heat of the day—even the wealthy man, I repeat, is just as keen on getting well. Now some would say that this is due to the discomfort, too often distress or pain, of the sickness. Others might hold that the presence of sickness was the shadow of death. And I do not doubt that these things do enter in some measure into the result; but the wish to get well is, I believe, conditioned and inspired by a more active influence than these, and is nothing less than an intense unconscious necessity of living that is implanted in each living thing as it launches into being. "I have often sat to enjoy the view on the side of a hill in the neighbourhood of one of the towns of the Riviera, where far down at the bottom of the valley is a small public abattoir, and I have repeatedly noticed that animals, both singly and in flocks, have wended their way to their doom in perfect peace of mind until the very gates of the charnel house were reached. Then suddenly the scene changed and all was commotion: the animals duck and tumble, run here and there, and do all they can to avoid an entrance into the fatal enclosure. Who can doubt that a sure intuition of danger has been stirred and that unreasoning reason points them clear? Who has not noticed how instinctively a horse will recognise the near proximity of a corpse of its own order, and how it will snort and plunge to get away from the noxious thing? It can hardly be supposed that the lower animals have any *experience*, and therefore fear, of death. They must scent or sight a something that—like the sight of a little blood to many a strong man—makes the heart faint. This living principle, this nervous current, this anima, this soul starts us on the road of life and keeps us going, and the first breath of the sense of its failure produces the foretaste of death. Ah, these foretastes of death! They come to some apparently, and very terrible they are. I remember once watching by the bedside of a strong man in the pride of life who had had a sudden hæmorrhage. So far as I could see there was every hope that the danger had passed; yet there remained a restlessness and an anxiety about the patient that I could not explain. But I knew in a few short hours that he had recognised in some unconscious way what I could not, that in his pulsatile existence some link had gone and had brought him the presentiment of dissolution. The silver cord was loosening and produced a sensation that rightly forecast the issue. This is a somewhat unusual case, but there is a larger number of instances where, I believe, a like sensation comes, and although these people never die they appear to suffer an appalling sense of impending annihilation. Many a woman—aye, and strong man also—has described, or attempted to, this indescribable feeling, a sudden, fearful collapse that seems almost to give them a look over the precipice into the next world, and then leaves them, laughing, as it were, at the poor, helpless, terror-stricken things, with every fibre trembling as from a fearful nightmare.

We are often inclined to smile at what, perhaps, we think the overdrawn picture that the subjects of this complaint portray—to say, or think rather, "Oh! a nervous man or woman," and to pay little attention to their plaints. But I suspect that the suffering that these people undergo is a very real one and that it merits our best attention and sympathy. Happily, the infliction does not come to many. I am never tired of saying, because I am sure it is as true as it is comforting, although in opposition to the general belief, that death has no terrors for the sick man. To the living and healthy man it is quite otherwise, but the sick man upon whom death lays his hand pales gently and imperceptibly out of life. The unwitting legacy of sorrow, sadness, and distress is left around and behind.

At the bottom of all such episodes as I have mentioned there may be, if you like so to express it, a terror of death; but if it be so it surely never comes to the individual in any concrete thought as such. There is rather some sudden shock that is born of interference with an intense well-spring of being; with—oh, well described—the breath of life—a condition that one can best conceive of perhaps by supposing that our driving power, of which I am going to speak again presently, suddenly gives a jolt, or momentarily fails, like the electric light does sometimes, and then goes on again, and of which we can conceive as a by no means pleasant experience. It is said of someone that upon remarking that he must live a companion responded that he did not see the necessity. But that a man must live is a great truth for the individual. Living is an imperious necessity of unconscious energy that we cannot away with, and it is this that seems to make of suicide so unnatural and morbid an impulse. I am no believer in *felo de se*. It may possibly seem to some that this is labouring a point that has not much in it. But it is not so. For if I say that every man is possessed of an intense love of life it will at once be said that there are frequent exceptions. Many a man says, no doubt, that he or she does not value life for its own sake, and there are those who regard a love of life for itself as a selfish or cowardly feeling. Therefore I think it is important to contend that, whatever the living principle may be, it is involuntary, irrepressible, and intense, that it compels to actions oftentimes against our wills, and it is this fundamental living momentum that plays a large part in inspiring the somewhat peculiar attitude in which man stands to medicine—an attitude that in many ways is still even at this the end of the nineteenth century oftentimes quite irrational. For instance, take first the diagnosis of disease—that is to say, the finding out what is the matter with a man. There are few indeed of the sick or of his relatives who will allow that there can be any doubt as to the meaning of the symptoms. That is to say, although when the medical man is in doubt they will admit it is impossible to tell at once what is the nature of the complaint that is setting in, they nevertheless act as if no doubt were allowable, and it speedily is made evident to the medical man that to doubt counts against the doubter for incompetence, and some other opinion is sought to settle the matter. But what are the facts? The boot is so much on the other leg that I would rather contend as the more nearly true that there are few cases if our thoughts were laid absolutely bare that are entirely free from all element of doubt. Every walk in life is paved with uncertainty. Is it likely that the problems of medicine afford easier solution? On the contrary, it is certain that, resulting as they too often do from conditions that we are quite unable to measure in any way, they are too often incapable of solution in any dogmatic way. Only

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yesterday a young man came to me for an opinion. I found as he unfolded his tale that he had seen all the men of the best repute in London. The case presented two alternatives. About half had taken the one view and half the other. He had not paid me the compliment of taking my casting vote, but took me by the way to yet other opinions. I therefore put it to him what was the common-sense explanation of the difference of opinion that he had obtained. There could be only one, and it obviously was that the question he wanted solved was insolvable, and that all he had to do was to accept the situation. But I know he will not. I am afraid it is not in nature to sit down in doubt in the matter of one's health. But doubt must be. You see the symptoms of disease are pain and fever and alteration of the appearance and shape of parts, and so on. And pain, alas, is common to many diseases. Fever also is common, and the enlargement of an organ may arise from several different changes of structure, and still more numerous diseases according to the combinations that come of the re-arrangement of the several morbid changes. No wonder then that the diagnosis of disease is at times at fault. And it were better always to bear in mind that "knowledge brings doubts and exceptions and limitations that are all hindrances to vigorous statement." Yes, it is experience that raises doubts. I am sure that hardly a week passes by in which I am not asked to decide upon the nature of a doubtful case of fever—chiefly whether it be typhoid fever or not. And it is often, indeed, that I am unable to do so. Quite different diseases may have certain features in common, when it is impossible with our present knowledge always to distinguish one from the other. Such a group is formed by influenza, typhoid fever, septic endocarditis, and a form of what the public call "galloping consumption." One often has to wait in such cases until the negative has gradually developed. And because the public will not wait all sorts of things are lumped into the group of typhoid fever that are not of that nature at all.

Take another case. You go to a specialist to ascertain whether you have early phthisis or not, and because you will not take "I am not sure"—you must have a positive opinion—the investigator's judgment is biased, and over and over again a man has been said to have delicate lungs when there was nothing at all the matter with them. It may, of course, be the other way, and that a patient is let off when he ought to have been condemned; but this is less common than the other because it is safer to tell a man that he is delicate and must take care of himself than to say that he is sound and thus lose the opportunity of betterment which an early diagnosis affords and risk a subsequent breakdown. It is impossible to be sure in many a case of early phthisis but the public cannot understand the difficulty, so there is many and many a one roaming about the world condemned to a useless existence because in such a question years ago innocent or guilty were the only verdicts recorded. I grant the importance of a positive opinion when it can be arrived at. But I object to being driven into giving a decided opinion when there are really no sufficient grounds for arriving at any conclusion or as an alternative of being considered incompetent. What's in a name? Well, a very great deal to the general public. I am constantly told: "You must give the disease a name." As soon as the average man has his disease ticketed he seems to be quite happy. He thinks then that the medical man knows all about it. If his disease cannot be ticketed he assumes that the medical man knows nothing about it. Some years ago I saw a woman who was obviously very ill with chronic diarrhœa. It was possible that the real nature of the disease was of cancerous character, but acting upon a rule I have long made for myself, that of two opinions, if the one is hopeless choose the hopeful one if you honestly can, I told the family that the malady was a chronic diarrhœa. Some few weeks later I received a letter from the son to say that having taken so much interest in the case they thought I should like to know that their dear mother had died from sprue. They seemed to be quite content that their dear mother should die from sprue, which is chronic diarrhœa, but they were not content with anything so very commonplace as the synonym that I had applied to the complaint. That did not seem to them to be a disease.

Again, it often happens that someone suffers from a doubtful tumour. It may be a cancer, maybe not. The opinion of the man who is not sure is worth nothing. The patient is therefore taken by his friends from one medical man to another till a decided opinion is obtained. And I have often noticed that contentment is arrived at even with an adverse verdict, provided that there is no longer any room for doubt as to the nature of the malady. But this seems to me to be a most irrational proceeding, for where the satisfaction comes in it is hard to see. And this leads me to say, though it is a little beside the mark, that this is not done by the sick man in most cases. He always clings to the man who will give a hopeful outlook. He may sometimes tell you that he wants to know the truth, but in the greater number of cases he is really hoping to hear that the outlook is a favourable one, and I have several times known, when, in response to an entreaty, it has been revealed to the sick man that his prospects of health were bad, that he has shifted his patronage to some other medical man who can take some more mitigated view. The sick man cannot go outside himself, and that living principle of which I have already spoken will not let him give up hope; and in respect of this point I am often told that this one or that one "will want to know everything. What are you going to tell him?" I reply: "I shall answer his questions"; and I seldom find that I cannot do so, because it is seldom indeed that anyone asks me that tremendous question, "Am I going to die?" Man is incapable of looking at the worst. This is not because he has no hopes for the future, it is not that he is determinedly blind—he simply cannot do it. I have seen some striking instances of this. I remember a medical man who suffered from a disease that if he had seen it in one of his patients he would have said, without a shadow of doubt in his mind, "This will end his life before long." But in his own case he never, so far as I could see, looked that way at all. He made all his plans, on the contrary, as if he were going to get well, and, as I firmly believe, he hastened his end by the extreme rigidity with which he applied himself to getting well. I accept, therefore, this as a great fact in human life, I take it that a kind providence has ordained it so, and I decline to interfere, as some would seem to wish me to do, and spoil this beneficent attribute of life. If a man has a malady that may be, say, a cancer, maybe not, I say, if it be a cancer there is an end of the matter; nothing more can be done save to alleviate symptoms. You had much better hope on and do the best that that hope affords. You are none the worse off, and you are free for a time, speaking only from the human point of view, from the complete paralysis of despair.

And while upon the importance attached by the public to names perhaps I may say also how very careful a medical man has to be in the use of his words. Indeed, for this reason the older one grows the less communicative a man becomes. For instance, it is not at all uncommon for things to fall out thus. You go and see a case of pleurisy, thus rightly called by the medical man of first instance; and in discussing the matter with the friends you in natural course talk of inflammation. Quite speedily the scene changes. They exclaim at once, "Oh, he has got inflammation, has he? Doctor A. never told us that." To have got the inflammation is to be all right or all wrong, as the case may be. The term either satisfies or alarms. On the one hand, it is one of the diseases that the layman *recognises*, and therefore he knows where he is, and meeting with an old enemy he proceeds to subdue it by turpentine, mustard poultices, various embrocations, in many cases the medical man standing afar off. There is no obscurity about "inflammation"—anybody can treat it—and in this light it is a term of satisfaction. On the other hand, with some inflammation is a word of terror, a thing which, if you do not quickly get the upper hand of, will quickly have the upper hand of you; and so if you have, say, a pleurisy, and have not thought of it hitherto, or heard it talked of under that head, you are very likely to think that some new discovery has been made in the nature of your complaint, and that there has been some serious oversight.

Time would fail me even if I could remember the many curious twists and contortions that the original meanings of words undergo when, having been stated plainly, as he thinks, the medical man hears them translated again by others. "The doctor says I've got slugs in my liver," says an old woman. "No," says her listener, "he didn't say that; he said you had a sluggish liver." "Yes," replies the old woman, "they be the very words he used." And there is another side to this matter, for the public are curiously *gauche* sometimes in their use of words. A medical man wrote thus to me the other day in sending a case for an opinion. "I would," says he, "have commended him to you as being a particularly decent fellow had he not remarked to me

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when I suggested the consultation that he thought he would like some *good* advice." Well, then, those doubts that I have spoken of lead me to another difficulty between medical men and patient. Any excessive caution, as it seems, on the part of the medical man is often keenly resented by the patient. Say, for instance, that a young woman consults me for acute indigestion. She has suffered years before from hæmorrhage from a gastric ulcer. She was then treated quite properly by a man who knew his business by rest in bed and a somewhat long attendance, and now, fearing a repetition of this, she comes to me hoping to avoid it. She is quite angry at being sent back again after all to bed and her old friend, and thinks it all nonsense, if not worse, a job. And I am not altogether without some excuses for her. She is very human. I know that when I take my watch to the watchmaker because it has somehow perversely ceased to go he always seems to me to say, "Yes, sir, it has had a fall and the cylinder is broken." And I, knowing nothing about watches or how small a jar may disturb and disarrange their constitution, disallow the reputed blow, and have a strong doubt about the correctness of the watchmaker's diagnosis of a damaged cylinder, more especially because it seems to be about the most expensive breakage that can happen to a watch. Now, the public seems to me to regard medical men from the same point of view that I look at my watchmaker. They know nothing about medicine or the reasons upon which such and such advice is based. They only know that the recommendations are disagreeable, and they think, therefore, in much the same strain as is here recorded in Mr. Gilfil's love story: "Dame Fripp kept leeches and was understood to have such a remarkable influence over those wilful animals in inducing them to bite under the most unpromising circumstances that though her own leeches were usually rejected from a suspicion that they had lost their appetite, she herself was constantly called in to apply the more lively individuals furnished from Mr. Pilgrim's surgery when, as was very often the case, one of that clever man's paying patients was attacked with inflammation."

Another point that the man in the street does not seem to be able to grasp in the least is that all our organs are interdependent upon the integrity of the whole. It is impossible that he can do so when the rage for specialists is so severe. A man treats his component parts as separate entities, and physics this one or that according as it shows signs of what he considers as defect. But the curious part of it all is that although he is very ready to believe all manner of ills of his liver, his heart, or kidney, or what not, he never seems to think any evil of his brain. The only brain disease the public knows is insanity. It is very keen in its dread of going out of its mind, and many a man, I believe, does so from very fright and brooding on such a terrible possibility. But as to the brain having any connexion with, much less control of, say, the stomach or the liver or any other part, they have no conception. Now, I do hope that I am not running away with an idea; but if not, the great proportion of people that come before me are suffering, not from disease of this organ or that of the digestive or circulatory system, but from deficient driving power in their nervous centres. Their brain cells and nervous centres want stoking to enable them to distribute their energy better; to enable them to exercise more effective control over the action of the viscera to coördinate the action of this one and that one, and, perhaps best of all, to learn to control themselves. Their worst enemies are often they of their own household. These people, as a rule, want very little medicine, they have usually taken already more than enough; but what they especially require is a talk upon elementary physiology; it is only thus that any adequate explanation of their various ills can be given them, only thus can they be made to understand why they are sound yet out of health. Did these people but know a little more about themselves how much more healthy and happy they would be. It was but recently that I was advising a man whose heart had failed for the second time under the effects of prolonged mental work. One of the most intelligent of men, he had nevertheless often maintained that brain work has no influence on the body. This is only another way of stating that old absurdity that it is worry, not work, that kills. If all you mean by work is that healthy physiological exercise of a part does not wear it out the aphorism is self-evident and meaningless. If you mean that work that eats into the time that is required for rest and recuperation, whether by sleep or holiday, does not kill, then it is absurd. Do you suppose that a man can go buried in, say, financial problems for many hours during the day, leaving him no time for exercise and little for sleep, without suffering from short commons of nervous energy in other parts of his economy? Therefore, continuous work of any kind—over-work—that trenches upon the necessary physiological rest will kill, or produce functional and organic disease of one kind or another. And I have not a shadow of doubt that one man may come to you always tired, another with a palpitating or a dilated heart, another with indigestion, another with some other organ at fault, because the central nervous system, that ought to energise the whole, has played itself out incontinently on its own account, and the reserves for the local centres are exhausted. Let us next take the question of drugs, because it well illustrates the difficulty there is in treating adequately the subject I have chosen. It is so bound up with the contrariety of attitude exhibited by the public. For a good large section of mankind in the civilised world the love of physic, or perhaps I ought rather to say the craving desire to swallow it, appears to be unconquerable. Do you question it? Then go into the first druggist's shop as you leave this room and stand in its centre and ponder. It is true the proprietor may think you a lunatic, but you ought to learn a useful lesson at this small cost. A druggist's counter always seems to me an appalling thing, until I fall almost to questioning the advantages of a civilisation that has brought us to such a pass. I have always contended that as the world grows older it tends to grow more nervous. I do not see how it can well be otherwise if you and I are at one in what we mean by nervous. I do not mean timid, I do not mean mad. Either of these imputations, which he often supplies for himself, the man in the street is highly resentful of. I mean that as the world grows it is brain that is pitted against brain, and ever and ever increasingly so. It is not liver against liver, or kidney against kidney, or heart against heart, or only indirectly so. The strain does not come on the individual workman, but on the foreman of the works who has to regulate and coördinate the whole. Thus it is nerve that is pitted against nerve until the brain becomes more intricate, a more and more perfect mechanism, and in its perfection all the more readily likely to break down or get out of order. I do not see what else is possible. I am told that in the days long gone by, when living and life were very insecure, there was much more to upset one's nerves than there is now. I do not see any force in that argument. In those days it was more directly heart against heart and liver against liver; the strongest animal lived the longest. In those days strength of body counted for everything. But now the scene has shifted, strength of body occupies a subordinate place, and the rude rough life that made one tough, except in so far that a reasonable cultivation of a strong body is necessary to a sound nervous system, has given place to what sooner or later was bound to be, the commanding influence of the brain. I am told that the brain of the ancient was as good as ours. But again I think that the argument is faulty. For I take it that the history of states is like the history of individuals, that for both there is a birth, a period of growth, a zenith, a decline and fall. Of all the great states of old, where are they now? and it is to me one of the most interesting questions of the day whether it be possible in our attempts to bolster up modern Greece to re-endow a nation with a second life. For myself, then, I do not doubt, though it may be as yet a far cry, that England must decay. It will live again, but not as England; it will be, as we live, in our children, in the nations that are now growing up, as the American nation, the Australian nation, the Canadian Dominion, and so on. Civilisation leads inevitably, apparently, to luxury, and the luxury of life tends to degeneration, and so a nation gradually becomes effete and dies. And in its period of gradual decay it sees its children taking on the spirit of its glory in new lands, where, again, life is less secure; where, again, man has to obtain his bare subsistence by the rude instincts of self-preservation; and where in a more animal existence he is kept more physically robust. It may seem a sad thing to hold that progress and development bring on decay, but so I think things are at present. But we may well hope that at some time or other in the world's history some community will emerge that shall have solved the great question how to live. To live such a life of physiological righteousness individually and collectively that no one organ or sense or function will be cultivated to the detriment of the rest, and that excess of luxury which after all can only be a parasite and in no sense a necessity of progress,

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may thus be curbed, and all the higher intellectual faculties left free to act towards a progressive individual and common good. But the history of societies teaches I am afraid that this is no condition easy of production. One might even fear it were impossible. At any rate, the individual feels, and feels acutely, if he thinks at all, that so great is the resolution constantly required to attain an end of this kind that most of us might well apply to ourselves the *positive* of St. Paul's conditional and say, "When I have preached to others I myself shall be a castaway."

Now I think the latter-day increase of the number of drugs applies itself to my argument and enforces it. You cannot suppose that if one of our best furnished druggist's shops were straightway planted, say, in Central Africa that there would be any use for the greater proportion of its constituents. I daresay the blue and green and yellow and red of the windows might secure the adoration of the natives, in fear lest the end of the world had come, and which the instinct of life, there as here, would resent. The interior might even strengthen the intensity of their religious beliefs, if they should light upon some of the more potent remedies that made them "see stars." The medical man who knew his business would probably select, say, some fifteen common and valuable remedies which, unlike Sir John Lubbock's 100 best books, I will not name, lest you should exclaim as I did, "What a poor dull lot!" and of all that large remainder I fear it would have to be said, not only that they were not wanted, but that they spelt absolute harm to the poor savage. Now mark, I do not say they therefore mean harm to us, but they do mean, they must mean, since they multiply daily by leaps and bounds, that we have in our civilised state numberless ills that rude nature is unfamiliar with, and, also, I surely believe that we appeal far too readily to potions and pills for ills that are little *worries* rather than ills. In other words, our nervous centres take much more ready cognisance of ills than robust organisms should do, and we thus use many drugs to live still more the life of luxurious ease. Yes, we most of us take medicines too readily; but there is one thing that few of us take, and that is advice. I sometimes see as I go along the streets a notice in certain windows—not devoted to the emissaries of the law—"Advice gratis." And I always count medicine an unhappy profession because we all know that if that notice read "Advice charged for" not a soul would go near that druggist's door. The law is much better off because it charges and is paid for advice that is also not taken, unless, indeed, it be as medicine under compulsion in the courts with the nose pinched. But neither is that legal betterment the day towards which my hopes go forth for medicine. I look for the day when the world shall pay adequately for and take advice, and physic—well, yes, physic certainly, but only if we medical men deem it necessary. But that is not the idea of the present. Perhaps you think it is. Oh, dear, no! I have a vivid recollection of talking for an hour to a poor fellow, and I remember that I was stirred by a considerable emotion because I thought that I had saved my friend—by *advice*. Judge, then, of my feelings when I heard afterwards that all the time that he had been listening so attentively, and, as I thought, so receptively, to my advice he had got the name of some other man upon his shirtcuff and that he went at once to him and got a prescription, and, unsatisfied by all my talk, a bottle of medicine had put him at rest. Then I have a dear friend in the commercial world who believes in me. It flatters one a little to be believed in by a hard-headed son of the City. But he always tells me, "If you don't cure me in three visits I shall go to someone else," and ever and anon he comes gently ruffled into my room with "My dear fellow, So-and-So has been to you and you never gave him any medicine." "No," say I, "he did not want medicine." "That doesn't matter," responds he; "he came for a prescription and he ought to have it People don't think anything of you if you do not give them some physic." And that is all true. My friend quite rightly describes the attitude of the public. It thinks that medical men know much more than we do. That there is a remedy for every disease, ay, every symptom, if only the medical man be clever enough to find it. So if they do not get well "in three visits" they go to someone else. But that is not the way we who know look at things; we see too many diseases that can only be watched, for which there are no present indications for giving drugs, and for, I suppose, the large majority of the ailments that flesh is heir to time is at least as important an element in the cure as any drug. There are others that rest only can cure. Time after time people come to me with an ailment for which they have been taking medicine for weeks, but they had not taken the most important curative agency, rest in bed or a holiday. People will swallow any quantity of nasty medicine, but go to bed, oh, no! that is *weakening*. They will swallow any number of pills to keep their livers up to the mark, but stop their whisky or their daily port, oh, no! they know much more than the doctor about that, and, indeed, "Dr. So-and-So said years ago that I wanted keeping up." Keeping up lays many a one low. Only recently have I seen a man who has tabulated out all the years of his sexagenarian life, and the illnesses he has had in each of many years of it, and the many medical men he has consulted. I am his latest hope. I am afraid it is a case of

"Late! late! so late! you cannot cure him now."

But he is still in full and keen pursuit of health as he has been these last thirty years. He still believes the El Dorado of his health is somewhere near, and yet I was obliged to tell him that the nugget of which he was in search had been long ago buried within him, bound round with grave clothes under the garb of prescriptions.

Medicine can hardly progress to its full expansion so long as this present overblind faith in a nostrum prevails. The uncertainties in all directions are so great that the man of knowledge and experience with all his correct appreciation of the essential details of the case, and therefore generally correct diagnosis, with all his plumbing to its depths the most recent advances in applied therapeutics, may yet miss the mark, and the ignorant man or the quack coming in at the end may fire the last shot and appear to take the fortress and thus run off with the prize of an unearned credit. The public judges entirely by results—I confess I do not see how it can do otherwise—and yet as a criterion the result of a case is repeatedly faulty, for it too often brings reputation to the quack while the honest and wise man is sent about his business in more or less of quite unjust and undiscerning discredit.

But there is a class of people who will take advice, but who run to the other extreme. Here also may be traced a too exaggerated opinion of the medical man's knowledge. We are asked, for instance, to tell a given person what he may eat and drink, and perhaps some one may think: "Well, what more natural or sensible?" Well, natural I admit it is, since so many ask it. But sensible, I am not so sure about. Think it out for yourselves, each one for himself, and you will, I think, find much wisdom in the adage: "A man is either a fool or a physician at forty." Before forty you are not worth much if you cannot eat anything (I do not say drink), and by forty you ought to have arrived at certain conclusions as regards your own individual working that are far and away more trustworthy than any a medical man who does not know you can offer you. I do not for one moment underrate the value of the advice that a medical man who does know you can give you. What I want to drive home is that the exaggerated belief in the precise regulation of all the minute details of your daily life does not lead to your applying to him for advice. A trusty general practitioner who knows you, who has probably watched your growth and life for many years, who knows your quips and cranks of constitution, he can think these matters out with some bases to go upon, and undoubtedly he can help many a man to help himself. He cannot do more—mark that; he can only help a man in most cases to help himself. But this desire for the detailed regulation of your life leads you in nine cases out of ten to a specialist who is supposed to be skilled in diet, and that is nearly always to a so-called fashionable physician or, worse still, to an arrant quack. But what can a stranger really know of you and of your constitution in twenty minutes or half-an-hour's talk? If he be a wise man you will probably come to no harm because his wisdom will keep you on the lines of common-sense. If he be a faddy man you consign yourself to a fad, and thus a large proportion of mankind at one time is drinking hot water by the pint; at another drinking no water at all—at least, not at meals; and at another it is rushing off to some latest fashion in watering-places to cure itself of a disease it has not got, or of a disease, perhaps, for which there is no cure.

And this leads me on to the question of specialists. The public will have specialists. Now, it is admitted at once that for parts that are subject to local diseases and that require delicate surgical treatment a specialist is absolutely necessary. The steady hand and eye of an enormous operative experience is necessary to ensure the best results, but as

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regards specialism in medicine it is a rank absurdity. Who is the best man for the heart? Who for the liver? Who for the kidney? Who for the brain? Who is the specialist now on gout, who on asthma, who on this and that are the questions asked on every hand. The man in the street is very fond of talking about his constitution, and yet he is ever doing despite to his very sensible idea when he runs off to a specialist for his liver. He goes off, as he often says, to the fountain head. But in doing so that constitution is clean forgotten. There is that personal element in all diseases that makes medicine still so much an art, and too often in going to a stranger the key to the lock has been left at home in the charge of the family practitioner. "'His father was here afore him,' Mrs. Macfadyen used to explain; 'atween them theyve hed the countyside for weel on tae a century; if Maclure disna understand oor constitution wha does a wud like tae ask?' For Drumtochty had its own constitution and a special throat disease as became a parish which was quite self-contained between the woods and the hills, and not dependant on the lowlands, either for its diseases or its doctor." And having mentioned the constitution and the general practitioner as being *facile princeps* in all questions relating to it, I may say a word upon a cognate matter which perhaps may be called an ethical one except that I dislike the term. All our ethics is comprised in that very old and tersely expressed formula, "Love your neighbour as yourself." I allude to the relations between medical men and their patients. I believe, as a matter of fact, that when you consult a lawyer the official record of the transactions—in other words, the deeds—are kept by him; they are put into a black tin box with your own name in gilt outside, and thenceforth you and your lawyer are one. At least, that is my case. I should need, being nearly a teetotaller, at least three stiff glasses of brandy to enable me to sever my connexion with my lawyer, and I am by no means certain that that would do more than change, so to speak, the character of the bond that united us. But in medicine it is very different. Between the medical man and his patient the only bond of union that is at all of a material kind is that the medical man dispenses the medicine. And the patient, though he will sniff and sniff again at the bottle to try to detect the ingredients, and very likely ask a friend with a reputedly more educated nose to sniff too, is practically helpless in the divination required and is unable to tell what he is taking. But, unfortunately, this is too often a bond of discord, not of union. The average Englishman does not like being under the thumb of anyone, and when he does not know what medicine he is taking he considers himself under the thumb of his medical man, and he by-and-by slips off to some neighbouring town to get, as he *says*, "an unbiased opinion," and with it, as he *thinks*, a prescription, that he may be a free man once more and know what he is taking, and pass his good fortune, maybe, on to someone else who happens to be suffering from very similar symptoms, but from an entirely different disease. And if there be anything that shrivels up a medical man's bowels of compassion it is an action such as this. It must be so; for an old friend of mine, a medical man, in reply to a kindly note I had written to him on the birth of his firstborn wrote back in this curiously Malaprop fashion as one of the chief elements of the happiness of his situation: "Thank God! I am out of the range of the curse of consultants."

Patients and medical men look upon their mutual relationship from different points of view. The man in the street in this instance takes a business view of his association with his adviser. He considers that the payment of the bill is the just equivalent, the *quid pro quo* that settles all claims—indeed, he has been known to think that the *quid* was more than the *quo* and to grumble thereat—and that he can henceforth try, if he be so minded, the latest fashion—the young man who has just come to town, and who is "so clever" (it is only the young that are "so clever"). But the medical man looks at things very differently. He feels, and rightly feels, if it be kept within due limits—but I think we are inclined to push it too far—that in the great majority of cases he undertakes responsibilities, undergoes sacrifices, and enters into delicate relationships by becoming in large measure a partner in other people's anxieties and sorrows as well as having to bear all his own, for the wear and tear of which no money payment is an equivalent. The only payment that we accept as payment *in full* is gratitude, and gratitude for imponderable service such as medicine renders to mankind is too often a stream with full head which rapidly gushes itself out. There is much truth as well as humour in "Gratitude is a lively expectation of favours to come." No medical man could be such and conduct his business on purely business principles. I will not claim for the profession of medicine that it is more righteous than any other calling in life, but I should always maintain that, however much the public might think and wish to have it otherwise, the larger half of the practice of medicine is, and must be, pure philanthropy. Not a case comes before one probably but that much more is done for it than ever the patient supposes. He supposes that he comes for an opinion and he gets it, and that that is the whole of the transaction. If that were all one had to do medicine would be much simpler, perhaps, but it would be much less enthralling. But before forming an opinion you probably have to throw yourself into the position in life of the patient as far as possible, to realise yourself his hopes and his fears, his troubles here and his ties there, and numberless things that have nothing to do with the disease, but everything to do with the treatment and with your power to give the very best advice that the circumstances of the case admit of. And when you have come to an opinion there is then again the necessity of entering into the man's feelings and shaping your words in accordance therewith. Thus at the end of any investigation the larger number of items in the bill cannot possibly be discharged by any equivalent in gold. You have been obliged, even though willingly, to become the friend and confidant of a family, and friendship and sympathy cannot be bought or sold. It is often said, "You doctors are hard men." I have even heard it said of the ladies who have taken to the practice of physic that they, too, upon occasion are not too conspicuous for the exhibition of sympathy. Well, a medical man cannot wear his heart upon his sleeve. I sometimes reply if you could but join us you would know that it is scarcely possible to be hard in the practice of medicine. The outsider knows nothing of the storms of anxiety, born entirely of sympathy, that sweep through the mind of the medical man when harassed by a critical case. Have I done the best possible thing? is present night and day, perhaps for many days together, upon such occasions, and the relief that is experienced when the sick one emerges from danger is so keen that it can only be compared to the feelings of the convalescent himself when he returns to the pleasure of living.

"'Can naethin' be dune, doctor? Ye savit Flora Cammil and young Burnbrae, an' yon shepherd's wife Dunleith wy, an' we were a' sae prood o' ye, an' pleased tae think that ye hed keepit deith frae anither hame. Can ye no think o' *somethin'* tae help Annie, and gie her back tae her man and bairnies?' and Tammas *searched* the doctor's face in the cold weird light.

"'There's nae pooer in heaven or airth like luve,' Marget said to me afterwards. ..... 'Oor herts were as water afore Tammas's words, an' a' saw the doctor shake in his saddle. A' never kent till that meenut hoo he had a share in a' body's grief, an' carried the heaviest wecht o' a' the Glen. A' peetied him wi' Tammas looking at him sae wistfully, as if he had the keys o' life an' deith in his hands.'"

Thus there does grow up in the medical man's being a sense of a peculiarly close interest in the life that in God's good providence he has helped to steer through the quicksands of illness, and he comes to look upon his patients as in some sort his children, and to claim from them an allegiance in all matters pertaining to their health, which they at the most but very imperfectly recognise, and the binding nature of which they cannot therefore understand. But this relationship between men and their family practitioner is a very valuable one, and should be tenderly cherished. For I think there can be no doubt that the tendency in modern life is to change this old, and as I think salutary order of things. But, as I have already said, you may go to the great man in the town, but you still have a constitution or a temperament, of which you know little, and he may see nothing in one short interview. The three orders of medicine—medicine, surgery, and general practice—are still as necessary as ever they were. You may do without the last-named when there is nothing the matter with you, you may go to the specialists in town for an opinion on an obscure case, or to settle a moot point in treatment; but when one is really ill, then it is that you want, and cannot do without, the man with the cheery voice, the kindly smile, the deft hand, the many-sidedness of resource for easing pain born of long experience in many fields, and with it all the ready self-sacrifice that at times like these makes the medical

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man almost seem to be "He that sticketh closer than a brother."

But I must stop. I have even now hardly more than indicated a few of the many points that my subject admitted of, but which were difficult to harmonise within the scope of the interest of an hour. Briefly put, my dominant idea is that man remains much too ignorant at the present day of the rudiments of the workings of his various parts. Thus it happens that at one time there is still a too blind faith in the power of the medical man, and at another time an equally blind intolerance and questioning of the restrictions and regulations that he, in his wisdom, feels called upon to impose. It would be much better for both parties concerned, and much more helpful to the art of healing, if medical man and patient could meet upon some common ground, and if the layman were able to follow the trains of thought that we may wish in some measure to make him understand, to realise in some small measure the great responsibility that medical men have to undertake. I do not suppose that this can be done to any great extent; in the case of the illness of those who are dear to us the issues involved are so tremendous to *us*; that to think on anything, much more on unfamiliar lines, becomes well-nigh impossible. Nevertheless, we should be better off if everyone had learned in some slight fashion to think upon the functions of their various parts and on the way in which those functions are conducted. There would then be less ignorance of the extreme intricacy of the subject; it would be more freely admitted that doubts must arise on all sides; and that watchfulness on the part of the medical man, and patience on the part of the sick man and of his relatives, are often the most important elements in successful treatment. The *Spectator* wrote the other day that "modern medicine discards more and more the old remedies of specific drugs, and relies more and more on the natural agencies, striving to reduce to a minimum artificial devices." And yet how much we see of the old order of things. The mass of mankind does not seem to me to have adequately kept up with this march of medical knowledge, and thus one is still too much in the seethe of excitement over the last new specific; the absolutely impossible is still deemed to be within the range of actual accomplishment; a medicine is still swallowed more as a charm than as a direct means to an end; and ignorance and shrewdness and the chances of life which happily mostly seem to make for health are together able to compete successfully with real knowledge. While this is so it can hardly be wondered at, life being so precious and tenacious as it is, that when common sense advice is tendered it is too likely to be met in the same spirit as of old. "Are not Abana and Pharpar, rivers of Damascus, better than all the waters of Israel? may I not wash in them, and be clean?" And the medical man out of the depths of a yearning disappointment at the apparent hopelessness of his contest against the competing forces is too often driven reproachfully to respond, "If the prophet had bid thee do some *great* thing, wouldest thou not have done it?"

SOME INTESTINAL EXPERIMENTS: A RAPID METHOD OF ENTERECTOMY.

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WHILST in India studying some of the tropical diseases I had the opportunity at Hyderabad of performing several different series of experiments on animals, one of which—on enterectomy—forms the subject of this paper. In this series my endeavour was to devise a rapid and safe method which would obviate: (1) the danger arising from the presence of the large metallic button and the risk of the gangrene spreading further than is necessary in Murphy's operation; (2) the time taken up in closing the two ends, making two new incisions and the presence of the three wounds of the bowel in Senn's method; (3) the two wounds of the gut and the perforation of all its layers by the twenty sutures in Maunsell's; and (4) the invagination or intussusception in Paul's. As the use of mechanical aids presents many advantages a digestible substance is needed to avoid the dangers of the metallic button, so decalcified bone and various vegetables were used; to avoid many sutures penetrating all the layers of the bowel it was necessary to find a suitable, rapid, and easy method of suturing which would only include the two outer layers; to have only one wound of the bowel it must be joined end to end. It may be mentioned here that the four operations just referred to were the only new methods of resection with which I was acquainted during these experiments; subsequently I learned of Mayo Robson's, and still later of its modifications by Allingham and Landerer.

Anatomy.—A short account of the anatomy of the dog's bowel may be desirable. It is rather less than one half the diameter of the human bowel; the peritoneal coat is very fragile and easily torn, and there is the usual triangular space at the mesenteric attachment. The vessels radiate from their origin and generally divide about three inches from the bowel into two or three branches, each of which again divides near the gut into two branches, which run in the apex of the triangular space at the mesenteric attachment, one upwards, the other downwards; the former joins the descending and the latter the ascending branches of the adjoining arteries; a chain of loops is thus formed parallel with the gut, and it is from this chain of loops that the terminal arteries are given off to supply the gut. These run transversely to the longitudinal axis of the bowel, some under the peritoneal, the majority in the muscular coat.

The general principle of my operation was adhered to throughout, but the details were modified from time to time for reasons which it may be well to relate briefly.

Incision.—The abdominal incision was made in the middle line in the first two cases—both dogs—but as the dressings and wound were continuously bathed in urine it was subsequently made—in dogs—in a direction obliquely downwards and inwards external to the deep epigastric artery. In bitches the median incision was always adopted.

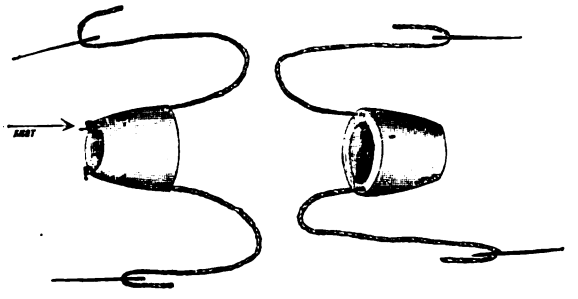
Cones.—In order to bring the ends of the gut together and also to afford support during the suturing I used at first (Cases 1 to 6) two flat discs made from turnip, carrot, decalcified bone, &c. They were made very slightly greater in diameter than the lumen of the bowel, a quarter of an inch thick, with a large central hole and four sutures to each disc. One disc was passed in edgeways into each end of the bowel and rotated so as to lie transversely across the bowel, a fifth of an inch from the cut end. The four sutures were then passed through all the layers of the gut; the two ends of the gut were approximated and held in position by an assistant until the opposite or corresponding pairs of sutures were tied—i.e., mesenteric suture to mesenteric suture. The bowel over these discs being slightly raised allowed of easy suturing. But whilst the second disc was being inserted peristalsis had either expelled or so altered the position of the first that it had to be readjusted, and considerable time was thus lost, and even after the four pairs of sutures had been tied peristalsis caused the discs to lie obliquely. To overcome this clamps were placed across the bowel immediately above the discs when these were in position (Cases 3 to 6), and by the assistant keeping the four sutures tight the shifting was to a large extent controlled, and after the sutures had been tied the clamps kept the discs in position during the subsequent suturing, but the loops of the continuous suture used to unite the cut ends of the bowel repeatedly caught in one or other of the ends of the clamps and caused considerable delay. Owing to the time taken up in inserting and rotating these discs into position, the difficulty of retaining them in their position, and the further loss of time due to the catching of the suture round the clamps, these discs were discarded for two hollow cylinders, three quarters of an inch long, made from the decalcified femora of geese or turkeys. Two sutures were attached to each of these cylinders. These were easier to insert; the first was easily kept in position whilst the second was being inserted, and when the sutures had been passed through all the layers of the gut and the two opposite pairs tied no change of position could take place. As these cylinders required several days for their manufacture and allowed of but a very small amount of bevelling of one end, which is desirable in order to facilitate their insertion, they were subsequently made, immediately before the operation, from fresh carrots, turnips, or potatoes, in the form of a hollow, truncated cone (Cases 12 to 59), the apex being less than, and the base the diameter of, the lumen of the bowel. (Fig. 1). Each "cone" was furnished with two sutures, which were passed through its wall, from the apex to the base, one on each side; a big knot at the end of the suture (made

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by passing the end six or seven times through the loop before drawing tight) prevented the suture being pulled through the cone. They answered extremely well and were most rapidly and easily inserted.

Sutures.—Lembert's and Halstead's interrupted sutures were used in Cases 1 to 4 and 16 to 18 respectively, but were discarded for a more expeditious method. A "button-hole" suture was employed (Cases 5 to 15 and 19) but rejected because (1) it was difficult to avoid tearing through the very delicate peritoneal coat when drawing the transverse loops tight; and (2) the needle had to be inserted in the line of the longitudinal axis of the bowel, and

FIG. 1.



Cones with sutures and needles attached.

it was impossible to avoid at times wounding the terminal branches of the mesenteric artery running transversely to the axis in the muscular coat, as these cannot be seen. In three cases (Cases 6, 13, and 15) these vessels were transfixed and had to be underpinned. All three died, and one death (Case 13) was clearly due to the ligaturing of this artery. 3. In drawing the loops sufficiently tightly together the blood-flow in those arteries included in the loops was retarded and union thus delayed. On the whole it is an excellent and rapid stitch, and by a little manœuvring (pulling the needle towards the last loop until the new loop is sufficiently tight) the first objection can be generally avoided. The second and third objections—transfixion and retarded blood-flow—rendered it desirable that the needle during its passages through the wall of the bowel should be parallel to the terminal vessels. An ordinary overhand continuous suture was tried (Cases 20 and 21) and rejected on account of the slight puckering of the serous coat, and because the needle had to be inserted at right angles to the vessels. In consequence the following suture was tried. A needle was threaded on each end of some fine Chinese twist silk; one needle was inserted an eighth of an inch from the cut margin of the bowel and passed along parallel with it for one-eighth of an inch through the serous and muscular coats only, the other needle was then used similarly on the other cut end, the entry and exit of the two needles being opposite one another respectively. The suture was drawn through equally on both sides and the right hand needle then brought over the cut margins and inserted close to the exit of the left and used as before; the left needle was in like manner inserted on the right side. In this way the bowel was rapidly surrounded, the edges being inverted as the stitches were drawn tight. This suture is unsafe and was only employed twice (Cases 22 and 23); both operations were performed on the same day and both dogs died two days after. The post-mortem examination in each case showed that the suture had tightened on one side and loosened on the other and that extravasation had taken place where the suture had opened out.[1] The suture was therefore modified by a reef knot being tied each time the two needles were brought out. This answered very well and the whole circumference could be surrounded in a few minutes (Cases 24 to 26). Experience proved, however, that a double turn was as efficacious as the knot, and as it saved time it was employed from Case 27 to the end. It is advisable to have two or more of these "two-needled" sutures at hand.

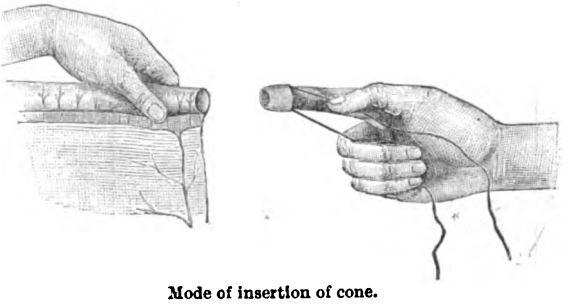
Needles.—Various forms of needles were used for suturing the bowel. It was found that small, round, straight needles with fairly big eyes were best adapted for this purpose; they are easier to use than the curved as they do not rotate or slip between the fingers and are very easily inserted over the convex surface of the cone.

Graft.—An omental graft was applied around the bowel at the site of resection in thirteen of my cases and in three of Dr. Conolly's. It was omitted in all the subsequent cases for reasons which will be fully discussed under the heading of "Remarks."

Mesentery.—A wedge-shaped portion of the mesentery was always removed. It was found that the nearer the edges were to the adjoining arteries the better was the result. The triangular spaces at the mesenteric attachment were closed and brought together by a separate suture. In Case 24 this was not done, and when the dog was subsequently killed a hole was found in the mesentery large enough for another coil to have slipped through.

Operation.—Having thus recounted the changes in the details from time to time the operation as performed in all my later cases (Cases 27 to 59) will now be described. The dog having been chloroformed, the abdomen shaved, and carefully washed, an incision was made two inches long and all the bleeding stopped before opening the peritoneum. The gut to be excised was brought up through a hole in an antiseptic towel and carefully packed all round with sponges. The branch or branches of the mesenteric artery running to the portion of gut to be removed were secured by thrusting the points of a pair of Spencer Wells's forceps through the mesentery on either side of the artery from two and a half to three inches from the bowel; then with two pairs of Spencer Wells's forceps the arterial loops running in the triangular space at the mesenteric attachment were secured in the same way on a level with the points at which it was decided to resect the bowel.[2] The bowel was then divided at right angles to its longitudinal axis with scissors over a large flat sponge on a level with the two latter pairs of forceps, of course on the occluded side of the arteries. By continuing these cuts to the first pair of forceps a wedge-shaped portion of mesentery was removed. The three arteries were then ligatured. The section of the gut caused great contraction of the circular and longitudinal muscle, resulting in great narrowing of the lumen by the former and protrusion of the mucous coat by the latter. This was overcome by the insertion of the tip of the little finger, on withdrawing which one of the cones was at once inserted, apex first (see Fig. 2),

FIG. 2.



Mode of insertion of cone.

and the "cone-sutures" were passed through all the layers of the bowel an eighth of an inch from the cut margin, one at the mesenteric attachment and the other at the opposite side of the gut. The other cone was similarly passed and, both being in position, the assistant approximated the ends of the bowel and the corresponding pairs of sutures were tied moderately tightly. The ends of the sutures were cut as short as possible. The cut ends of the gut were thus fixed in contact, slight inversion of the ends occurring at the two sutures. The bowel was then rotated on its longitudinal axis so as to bring the mesenteric attachment forwards and nearly half an inch of the under side of the gut into view through the severed edges of the mesentery (this was done in order that the mesenteric attachment, the most difficult portion, might be sutured first). The continuous

[1] Since this paper was written I have seen in Treves's "Operative Surgery" that this suture was devised by Gély. In my opinion it is an unreliable suture for the reason above stated.

[2] This method of dealing with the arteries proved to be much more satisfactory than the usual way, and it is much to be preferred to that of dividing the arteries first and picking them up afterwards, as the whole operation is bloodless. Rarely a small muscular branch opposite the mesenteric attachment and running in the direction of the axis of the bowel was found and needed ligature; there is always an artery in this position at the upper portion of the jejunum.

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TABULAR STATEMENT OF CASES.

Case.	Date of operation.	Sex and condition.	Incision.	Length of intestine excised.	Form of disc, cone, &c.	Suture used to unite bowel.	Graft.	Time taken by operation from skin incision to last parietal suture.	Remarks.
1	Aug. 15th, 1895.	Large healthy male. Tapeworms.	Median	2 in.	Discs of decalcified bone	Lembert's	Graft	1 hour	Continual shifting of discs caused great delay. Evisceration during vomiting and intestine urinated over. Hypodermic injection of morphia ¼ gr. Died on the fourth day. *Necropsy.*—No peritonitis except over graft, which was adherent to three coils of intestine. No extravasation. Union of gut firm all round. Lumen diminished about one-third. No obvious cause of death.
2	Aug. 18th, 1895.	Emaciated, unhealthy male. Tapeworms.	Median	6 in.	Discs of turnip	Lembert's	Graft	1 hour	Same difficulty with discs and evisceration during vomiting. Hypodermic injection of morphia ¼ gr. Killed by overdose of chloroform on ninth day. *Necropsy.*—No peritonitis. Graft adherent to two other coils. Lumen reduced about one-third. Wound of gut firmly united. Partial occlusion due to acute bending by adhesions.
3	Aug. 25th, 1895.	Unhealthy male. Bowel full of tapeworms.	Lateral	6 in.	Discs of decalcified bone	Lembert's	Graft	45 min.	Clamps were used to check shifting of discs. Lateral incision to avoid dog urinating on dressings and wound. Hypodermic injection of morphia ¼ gr. During the first two months the dog did well and grew fat and big. Signs of obstruction then appeared. (Vide text for further particulars.)
4	Aug. 26th, 1895.	Medium sized male.	Lateral	3 in.	Discs of decalcified bone	Lembert's	Graft	50 min.	Discs slightly too large. Clamps again used. Loop of artery at mesenteric attachment was transfixed and ligatured. Hypodermic injection of morphia ¼ gr. Died on the fourth day. *Necropsy.*—Gangrene of end of bowel over disc on the side of the ligatured arterial loop. Graft adherent to two other coils.
5	Aug. 30th, 1895.	Emaciated male. Tapeworms.	Lateral	4 in.	Discs of turnip	Button-hole	Graft	50 min.	Suture more rapid than Lembert's, but loops continually caught in clamps and tore through in three places. Hypodermic injection of morphia ¼ gr. Excellent recovery.
6	Sept. 3rd, 1895.	Healthy male. Tapeworms.	Lateral	4 in.	Discs of decalcified bone	Button-hole	Graft	50 min.	Transfixed small muscular branch of artery, which had to be underpinned. Hypodermic injection of morphia ¼ gr. Died on the fourth day. *Necropsy.*—Peritonitis, extravasation along mesenteric disc-suture and under and through graft. Line of union sound except at this point. Graft adherent to two coils.
7	Sept. 5th, 1895.	Healthy male.	Lateral	6 in.	Cylinders of decalcified bone with two sutures to each	Button-hole	Graft	40 min.	Cylinders easier to insert, kept in position most easily by assistant's finger, and after the two pairs of sutures were tied no change in position took place. Clamps were not used. Hypodermic injection of morphia ¼ gr. Died eight hours after, possibly due to large dose of morphia; its use was abandoned in all subsequent cases. The line of resection was watertight.
8	Sept. 6th, 1895.	Small, unhealthy male. Tapeworms.	Lateral	3 in.	Cylinders as in No. 7	Button-hole	Graft	38 min.	Killed on the sixth day. *Necropsy.*—The graft was adherent to three other coils. The gut was firmly united. Contraction of graft had greatly reduced the lumen of the bowel and also caused an annular fold of its wall.
9	Sept. 8th, 1895.	Small male.	Lateral	3 in.	Cylinders (slightly bevelled at one end)	Button-hole	Graft	28 min.	The bevelling of the cylinders facilitated their insertion. The suture tore through in one place. Dog did well until the fourth day, then refused food and seemed poorly; the abdomen was hard and retracted. Whilst an exploratory incision was being made respiration ceased, and all attempts to restore it failed. The heart beat for 2½ min. after respiration ceased. *Necropsy.*—No peritonitis except over graft, which was adherent to three other coils. The gut was firmly united all round; the lumen was slightly diminished.

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TABULAR STATEMENT OF CASES—*Continued.*

Case.	Date of operation.	Sex and condition.	Incision.	Length of intestine excised.	Form of disc, cone, &c.	Suture used to unite bowel.	Graft.	Time taken by operation from skin incision to last parietal suture	Remarks.
10	Sept. 12th, 1895.	Emaciated female Tapeworms.	Median	4 in.	Cylinders as in No. 9	Button-hole	Not used	30 min.	Suture tore through in two places. On March 3rd, 1896, the bitch gave birth to a litter of six pups. The bitch was much larger and healthier. On May 5th, 1896, half the spleen was excised (vide Case 9, "Conservative Surgery of the Spleen"). The bowel was inspected, and the site of resection was indistinguishable from the rest of the gut but for one thin adhesion.
11	Sept. 13th, 1895.	Healthy female.	Median	2 in.	Cylinders as in No. 9	Button-hole	Graft	28 min.	Excellent recovery. On April 29th, 1896, the bitch deserted.
12	Sept. 18th, 1895.	Large male. Tapeworms.	Lateral	5 in.	Hollow truncated cones made from carrot	Button-hole	Graft	25 min.	Cones much more easily inserted. Dog did well. Killed on the sixth day. *Necropsy.*—Graft was adherent to two other coils. About ten drops of pus under graft at mesenteric attachment. Cone-suture knot was lying in this cavity. Partial occlusion by acute bending due to adhesions; lumen was also contracted by graft, which had also caused a small annular fold of the wall.
13	Sept. 20th, 1895.	Large female. Tapeworms.	Median	3 in.	Cones as in No. 12	Button-hole	Graft	30 min.	During the suturing a muscular branch was transfixed and had to be underpinned. Died on the third day. *Necropsy.*—General peritonitis—gangrene of that portion of margin to which the underpinned artery went. Graft was adherent to two coils.
14	Sept. 22nd, 1895.	Healthy male.	Lateral	6 in.	Cones	Button-hole	Graft	35 min.	Dog extremely savage and violent, chained to stake. On the third day free hæmorrhage from wound; exploration revealed a very large spleen, torn almost in two. It was killed; the union of gut was firm. Graft was adherent to two other coils.
15	Sept. 25th, 1895.	Large male. Tapeworms.	Lateral	12 in.	Cones	Button-hole	Not used	24 min	During the suturing a muscular branch was transfixed and underpinned. Died on the fifth day. *Necropsy*—General peritonitis, extravasation along mesenteric cone, suture.
16	Sept. 25th, 1895.	Medium-size male. Tapeworms.	Lateral	10 in.	Cones	Halstead's	Not used	30 min.	Excellent recovery.
17	Sept. 27th, 1895.	Healthy female.	Lateral	13 in.	Cones	Halstead's	Not used	30 min.	Pregnant at time of operation; condition found after the abdomen was opened. On Nov. 11th, 1895, she gave birth to a litter of six pups. Excellent recovery.
18	Sept. 28th, 1895.	Large healthy male.	Lateral	5 in.	Cones	Halstead's	Not used	22 min.	Uninterrupted recovery. Killed on the twenty-seventh day. *Necropsy.*—One coil was loosely adherent to line of resection. Union of gut was perfect. Calibre was that of the rest of the bowel.
19	Sept. 30th, 1895.	Healthy female.	Median	2 in.	Cones	Button-hole	Not used	28 min.	Excellent recovery.
20	Oct. 2nd, 1895.	Female.	Median	6 in.	Cones	Overhand continuous	Not used	22 min.	Suture caused slight puckering of serous coat. Excellent recovery.
21	Oct. 5th, 1895.	Healthy male.	Lateral	9 in.	Cones	Overhand continuous	Not used	25 min.	Suture caused slight puckering of serous coat. Excellent recovery.
22	Oct. 7th, 1895.	Small healthy male. Tapeworms.	Lateral	8 in.	Cones	Double-needled crossed suture	Not used	20 min.	Very rapid suture. Died on the third day. *Necropsy.*—General peritonitis; extravasation through small opening in line of resection where the stitch had "opened out."
23	Oct. 7th, 1895.	Unhealthy female. Tapeworms.	Median	6 in.	Cones	Same as No. 22	Not used	18 min.	Died on the third day. *Necropsy.*—Same as in No. 22.
24	Oct. 11th, 1895.	Small female. Tapeworms.	Median	14 in.	Cones	Knotted crossed	Not used	28 min. (delayed by artificial respiration)	Rapid suture; dog did well. Killed on the seventh day. *Necropsy.*—Perfect union of gut, small opening in mesentery close to bowel.
25	Oct. 12th, 1895.	Unhealthy emaciated male. Tapeworms.	Lateral	6 in.	Cones	Same as in No. 24	Not used	18 min.	Excellent recovery.

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TABULAR STATEMENT OF CASES—*Continued.*

Case.	Date of operation.	Sex and condition.	Incision.	Length of intestine excised.	Form of disc, cone, &c.	Suture used to unite bowel.	Graft.	Time taken by operation from skin incision to last parietal suture.	Remarks.
26	Oct. 13th, 1895.	Small emaciated female. Tapeworms.	Median	15 in.	Cones	Same as in No. 24	Not used	18 min.	Bowel full of tapeworms. Died on the fourth day. *Necropsy.*—General peritonitis; extravasation along the cone-suture opposite the mesenteric attachment, the ends of which had not been cut short enough or properly inverted. They lay between the two inverted margins of the gut and were included in one of the loops of the crossed suture. The bowel immediately around this suture was softened and the peritoneum separated by exudation from the muscular coat.
27	Oct. 15th, 1895.	Very small male.	Lateral	12 in.	Cones	Crossed with two turns instead of the knot	Not used	28 min. (twice delayed by artificial respiration)	Uninterrupted recovery. Dog grew big and fat. Killed on March 25th, 1896 (161st day). *Necropsy.*—Bowel was adherent to one other coil. This and the two mesenteric branches being parallel and close together were the only indications of the line of resection. The lumen was that of the rest of the bowel.
28	Oct. 16th, 1895.	Medium size female.	Median	9 in.	Cones	Same as No. 26	Not used	19 min.	Excellent recovery.
29	Oct. 17th, 1895.	Medium size male. Tapeworms.	Lateral	15 in.	Cones	Same as No. 26	Not used	20 min.	Dog did well. Killed on the ninth day. *Necropsy.*—Line of union was perfect, adherent to one other coil. "Cone sutures" still lying on mucous surface.
30	Oct. 18th, 1895.	Healthy female.	Median	14 in	Cones	Same	Not used	19 min.	Excellent recovery.
31	Oct. 20th, 1895.	Large violent male.	Lateral	8 in.	Cones	Same	Not used	18 min.	Dog being very violent was chained to a stake. On the fifth day—twenty minutes after I had seen him fed—I was called and found that the dog had impaled himself on the stake, torn open the parietal wound, and that the intestine had got entangled round his legs and the stake and was torn in pieces. An overdose of chloroform was at once given, when it was seen that the dog had almost completely disembowelled himself.
32	Oct. 24th, 1895.	Emaciated male. Tapeworms.	Lateral	13 in.	Cones	Same	Not used	19 min.	Uninterrupted recovery. Killed on the nineteenth day. *Necropsy.*—Resected bowel was adherent by one thin band to parietes; no banding of gut. Line of union was perfect. Lumen was undiminished. One cone-suture was still adherent.
33	Oct. 30th, 1896.	Healthy female.	Median	6 in.	Cones	Same	Not used	17 min.	Pregnant at time of operation. Condition only discovered after abdomen was opened. On Dec. 20th the bitch gave birth to a litter of five pups. Excellent recovery.
34	Nov. 6th, 1895.	Small unhealthy male. Tapeworms.	Lateral	6 in.	Cones	Same	Not used	19 min.	Dog did very well. Killed on the seventh day. *Necropsy.*—Line of resection firmly united. The lumen was very slightly diminished.
35	Nov. 9th, 1896.	Healthy female.	Median	9 in.	Cones	Same	Not used	18 min.	Excellent recovery.
36	Nov. 14th, 1895.	Small emaciated male. Tapeworms.	Lateral	15 in.	Cones	Same	Not used	19 min.	Excellent recovery. Grew fat and big.
37	Nov. 20th, 1895.	Healthy male.	Lateral	4 in.	Cones	Same	Not used	22 min.	Kidney was also removed. Dog the same evening appeared comfortable and was walking about. Died the next day. *Necropsy.*—There was no peritonitis except at site of resection, which was covered by a layer of plastic lymph and was watertight. The renal pedicle was perfectly occluded.
38	Nov. 24th, 1895.	Healthy female.	Median	13 in.	Cones	Same	Not used	18 min.	Excellent recovery.
39	Nov. 27th, 1895.	Emaciated unhealthy female. Tapeworms.	Median	5 in.	Cones	Same	Not used	19 min.	Excellent recovery.
40	Nov. 30th, 1895.	Healthy male.	Lateral	14 in.	Cones	Same	Not used	17 min.	Excellent recovery.
41	Dec. 4th, 1895.	Healthy male.	Lateral	12 in.	Cones	Same	Not used	18 min.	Excellent recovery
42	Dec. 5th, 1895.	Healthy male.	Lateral	9 in.	Cones	Same	Not used	19 min.	Excellent recovery.
43	Dec. 8th, 1895.	Large female.	Median	10 in.	Cones	Same	Not used	18 min.	Excellent recovery. On May 5th, 1896, the bitch gave birth to a litter of five pups.

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TABULAR STATEMENT OF CASES—*Continued.*

Case.	Date of operation.	Sex and condition.	Incision.	Length of intestine excised.	Form of disc, cone, &c.	Suture used to unite bowel.	Graft.	Time taken by operation from skin incision to last parietal suture.	Remarks.
44	Dec. 12th, 1895.	Small male. Tapeworms.	Lateral	8 in.	Cones	Same	Not used	18 min.	Excellent recovery.
45	Dec. 17th, 1895.	Emaciated female. Tapeworms.	Median	10 in.	Cones	Same	Not used	18 min.	Excellent recovery.
46	Dec. 23th, 1895.	Healthy male.	Lateral	16 in.	Cones	Same	Not used	19 min.	Dog did very well. Killed on Jan. 17th, 1896 (23rd day). *Necropsy.*—Line of resection loosely adherent to one other coil, this and the two mesenteric branches being close together and parallel were the only indications as to the exact line of union. On further searching at the mesenteric attachment a short length of suture was found. Lumen was undiminished.
47	Dec. 30th, 1895.	Medium sized female Tapeworms.	Median	4 in.	Cones	Same	Not used	17 min.	Excellent recovery.
48	Jan. 3rd, 1896.	Small male.	Lateral	6 in.	Cones	Same	Not used	18 min.	Excellent recovery.
49	Jan. 14th, 1896.	Healthy male.	Lateral	9 in.	Cones	Same	Not used	17 min.	Excellent recovery.
50	Jan. 16th, 1896.	Small female. Tapeworms.	Median	4 in.	Cones	Same	Not used	19 min.	Died on the 8th day. *Necropsy.*—Centre of abdominal wound communicated with peritoneal cavity. General peritonitis. No sign of extravasation. Union of gut quite sound.
51	Jan. 20th, 1896.	Healthy female.	Median	12 in.	Cones	Same	Not used	18 min.	Excellent recovery.
52	Jan. 27th, 1893.	Emaciated male.	Lateral	3 in.	Cones	Same	Not used	19 min.	Excellent recovery.
53	Feb. 2nd, 1896.	Male.	Lateral	8 in.	Cones	Same	Not used	17 min.	Excellent recovery.
54	Feb. 6th, 1896.	Emaciated female. Tapeworms.	Median	6 in.	Cones	Same	Not used	20 min.	Delayed by artificial respiration, and cone-sutures becoming entangled. Excellent recovery.
55	Feb. 14th, 1896.	Male.	Lateral	9 in.	Cones	Same	Not used	19 min.	Excellent recovery.
56	Feb. 16th, 1896.	Small male.	Lateral	3 in.	Cones	Same	Not used	16 min.	Excellent recovery.
57	Feb. 25th, 1896.	Healthy female.	Median	13 in.	Cones	Same	Not used	18 min.	Excellent recovery.
58	Feb. 28th, 1896.	Emaciated female.	Median	9 in.	Cones	Same	Not used	17 min.	Excellent recovery.
59	March 4th, 1896.	Healthy female.	Median	4 in.	Cones	Same	Not used	16 min.	Excellent recovery.

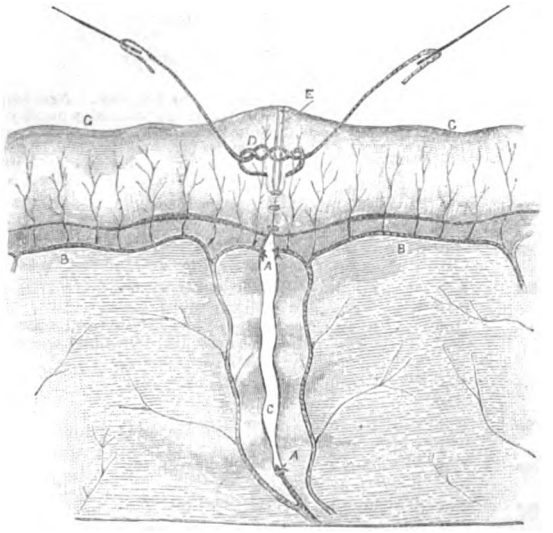
DR. CONOLLY'S CASES (OPERATED UPON DURING NOVEMBER AND DECEMBER, 1895).

Case.	Sex and condition.	Incision.	Length of intestine excised.	Cones.	Suture used to unite bowel.	Graft.	Remarks.
1	Large female.	Median	3 in.	Cones	Button-hole	Not used	Dog took chloroform badly and operation was interrupted twice. After the gut had been sutured all round it was discovered that one end had been rotated through a whole circle, a very severe kink being the result. It was decided to leave the necessary resection for a few days, and so no graft was used. On the fourth day Dr. Conolly reopened the abdomen and excised 6 in. of intestine, including the old line of union, which was firmly united. It died next day. The line of union was water-tight.
	—	—	6 in.	,,	,,	Graft	
2	Large healthy male.	Lateral	5 in.	Cones	Button-hole	Graft	Dog did very well. Killed three weeks after operation. *Necropsy.*—Graft was adherent to two other coils, and also to same coil about 2 in. from line of union; its contraction had caused an acute bend of the gut and partial occlusion. There were no symptoms of obstruction during life.
3	Small unhealthy male. Tapeworms.	Lateral	3 in.	Cones	Cross knotted	Graft	Dog did well. Killed on the fifth day. Graft, which was adherent to two other coils, was carefully removed; gut firmly united; cones not quite absorbed.
	Medium size male.	Lateral	12 in.	Cones	Cross knotted	Not used	Excellent recovery.
5	Small healthy female Tapeworms.	Median	4 in.	Cones	Crossed double-turned	Not used	Excellent recovery. On May 4th, 1896, the bitch gave birth to a litter of six pups.
6	Healthy female.	Median	2 in.	Cones	Same as No. 5	Not used	Excellent recovery.
7	Medium size male.	Lateral	3 in.	Cones	Same	Not used	Excellent recovery
8	Small emaciated female Tapeworms.	Median	14 in.	Cones	Same	Not used	Excellent recovery. Dog grew big and fat.

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"double-turned" suture previously described was commenced on the under surface of the bowel about one-third of an inch from the mesenteric attachment; especial care was paid to the first four stitches (which take in this attachment) to ensure that the knot of the "cone-sutures" was buried beneath the line of the continuous suture. To effect this the needles were here inserted a little farther from the cut margins. The assistant, holding the bowel at the apex of each "cone" between the thumb and first two fingers of each hand, kept the cut ends of the gut in view (otherwise excessive inversion occurred during the suturing) and gradually rotated the bowel back to its original position as the suturing proceeded. When the opposite "cone-suture" knot was reached the same care to conceal it was bestowed as upon the former one. This especial care to conceal or bury the "cone-suture" knots beneath the continuous suture is imperative, as three of the cases (Cases 6, 15, and 26) died from general peritonitis due to extravasation along the "cone suture," but this was prevented in the subsequent cases (Cases 27 and 49) by this extra care being bestowed upon the knots. As each "double turn" (see Fig. 3) of the continuous suture was in

FIG. 3.



Operation half completed (dog's bowel). A, A, Arteries ligatured. B, B, Arterial loops. C, Gap in mesentery. D, Double turn. E, Cut margins of gut. G, G, Gut.

process of being tightened the assistant, with the closed blades of a pair of scissors applied on the flat, or other instrument, inverted the margins of the bowel and kept them so until the double turn was drawn sufficiently tight to invert them permanently. When the gut had been sutured all round the two ends of the suture were tied with a reef knot; the bowel was then carefully cleansed and the line of resection inspected to ensure that the edges were everywhere inverted. If at any point this was not so a stitch or two with a spare "double-needled" suture was taken. The margins being everywhere inverted the gap in the mesentery was closed with one end of the original "double-turned" suture by an overhand continuous stitch. With the other end of the suture, or if preferred an extra suture in a curved needle (the latter is more easily passed), a stitch was taken through both margins of the mesentery close to the bowel; when this was tied it closed and also brought together the two triangular spaces at the mesenteric attachment; but care must be taken in passing this stitch not to wound the arterial loops running in the apices of these spaces, as on them depends the vitality of the ends of the gut. (*Vide* Case 4.) The gut was then bathed in hot water and returned; the peritoneal and the three muscular coats of the abdominal wall were severally united with an overhand continuous suture, and, lastly, the subcutaneous tissue was sutured over all. As these dogs could not be kept quiet and primary union was almost impossible to attain the skin wound was not closed, and all dressings were abandoned after the first nine or ten cases; the wound was kept clean by the dog licking it, and it healed very rapidly. The suture in the subcutaneous tissue was removed about the fourth day.

After-treatment.—The diet of the dogs was confined as far as possible to milk for the first two days, the dogs being allowed as much as they would drink; for the next four days minced meat and boiled rice were substituted, and they were then allowed to eat anything; but as the dogs were unfettered many of them obtained solid food surreptitiously in the first few days. A few of the earlier cases were given a quarter of a grain of morphia subcutaneously immediately after the operation; this was advantageously discontinued.

Remarks.—The number of dogs upon which I personally performed resection was 59. These may be considered under three headings:—

I. Those cases where "discs" were used. The number operated upon was 6 (Cases 1 to 6), with 3 deaths. 1. Case 1, on the fourth day. At the necropsy the line of union was perfect, and there was no apparent cause of death. 2. Case 4, on the fourth day. At the necropsy gangrene of one margin was found. At the operation the arterial loop at the mesenteric attachment was transfixed and ligatured and the discs were slightly too large. The gangrene was on the same side as the ligatured artery. 3. Case 6, on the fourth day. At the necropsy peritonitis and extravasation along the "disc-suture" and through the graft were found. This gives a mortality of 50 per cent., but the first death might be eliminated as the dog had recovered from shock, the gut was perfectly united, no peritonitis was present, and there was reason to believe that the dog was poisoned.

II. Those cases where "cylinders" or "cones" were used, but various kinds of sutures experimented with. The number operated upon was 20 (Cases 7 to 26 inclusive), with 6 deaths. 1. Case 7, eight hours after operation. Death was caused by shock or the effect of half a grain of morphia injected unknown to me. The line of resection was watertight. 2. Case 13, on the third day. At the necropsy gangrene of a small portion of one margin due to the underpinning of a transfixed arterial twig was found. 3. Case 15, on the fifth day. At the necropsy peritonitis and extravasation along the cone suture were found. 4 and 5. Cases 22 and 23, on the third day. At the necropsies peritonitis and extravasation through a small opening in the line of resection were found. These two cases were those in which the unknotted crossed sutures were used. 6. Case 26, on the fourth day. At the necropsy peritonitis and extravasation along the cone suture were found. The mortality in this series was 30 per cent.

III. Those cases operated upon in the manner described—i.e., with cones and the suture finally adopted. The number operated upon was thirty-two[3] (27 to the end) with 2 deaths. 1. Case 37, twenty-four hours after operation; in this case the kidney was also removed. The dog was walking about the evening of the operation and seemed comfortable. At the necropsy the line of resection was found to be watertight. 2. Case 50, on the eighth day. At the necropsy the abdominal wound was found to communicate with the peritoneal cavity. There was general peritonitis; the union of the gut was perfect. This gives a mortality of 6·2 per cent., but Case 50 should be eliminated, as where primary union can be depended upon (in the case of a human being) no such result would happen; and in a total of 105 dogs, of which the above 59 form part, all of which had to be allowed to run about freely without any dressings, this was the only case in which leakage backwards from the abdominal wound occurred. If this case therefore be excluded the mortality would be 3·1 per cent. But in speaking of this mortality of 3·1 per cent. it should be remembered that two of the cases (Cases 29 and 34) were killed on the seventh and ninth days respectively in order to see the condition of the gut operated upon and perhaps before all danger had passed, but from the condition found—the gut perfectly united in both cases—complete recovery seemed to be assured. It must also be borne in mind that the dogs were not suffering from obstruction and that in cases of obstruction the degree of success will depend largely upon the state of the patient at the time of operation. But I believe that I should be correct in stating that if conditions were similar better results would be obtained in man, as the operation is easier, the gut more readily manipulated, the peritoneal coat not so fragile, and—a most important point—

[3] Case 31 is omitted from the following considerations, as the dog disemboweled himself on the fifth day, and such a result cannot be attributed to the operation.

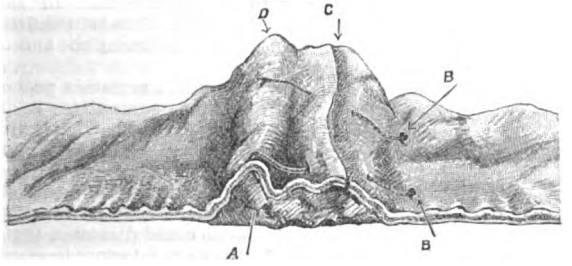
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the patient can subsequently be kept absolutely at rest on a suitable diet and rapid union ensured.

It may be mentioned here that Dr. Waldo Conolly, of Melbourne, who was at Hyderabad studying Lawrie's method of chloroform administration, assisted me in several of these experiments. He performed resection on four dogs by Senn's method; each operation lasted a little over one hour, and all four died from extravasation. He subsequently operated upon eight dogs by my method. In the first operation, after the bowel had been sutured all round, it was seen that one end of the gut had been rotated through a whole circle, a very severe kink being the result. As the dog had been under operation forty-five minutes, and to have resected this kink would, at the same rate, have taken another forty-five minutes, it was decided to postpone the further operation. On the fourth day Dr. Conolly reopened the abdomen and excised six inches of gut, the old line of resection which was firmly united being in the centre. The dog died next day from shock. The remaining seven cases all made uninterrupted recoveries, and the mortality, which would have been *nil* but for this unfortunate misadventure, is, therefore, 12·5 per cent. for Dr. Conolly's series.

As previously stated, a graft was applied in sixteen cases, but afterwards omitted. In every case where it was used and the dog subsequently died or was killed (Cases 1, 2, 3, 4, 7, 8, 9, 12, 13, and 15 of my series, and Cases 2 and 3 of Dr. Conolly's) the necropsy showed that: 1. In cases examined shortly after operation the graft, which had consisted of a thin single layer of omentum, had become greatly thickened by inflammatory exudation and formed a band a quarter of an inch thick round the bowel. In cases examined at a later period this band had become converted into a thick fibrous ring. 2 The graft had formed very firm and extensive adhesions with other coils of intestine, matting them together in such a way as to render their separation difficult and in one of my cases (Case 3) and one of Dr. Conolly's (Case 2) impracticable. 3 Contraction of the graft circularly had resulted in a very considerable narrowing of the lumen of the bowel (see Fig. 4). 4. Contraction of the graft longitudinally had caused large

FIG. 4.



Longitudinal section of gut, showing constriction caused by contraction of graft. A, Graft greatly thickened. B, Cone-sutures on mucous surface. C, Line of union (this is drawn much too distinct, in the specimen it was only just visible). D, Annular fold of wall due to contraction of graft.

annular folds of the wall of the bowel, which still further reduced the lumen. 5. In three cases partial, and in one complete, occlusion by acute bending of the gut had been caused. That the omental graft may be a safeguard against extravasation is shown by Case 12; but in Case 6, in which the dog died on the fourth day from peritonitis due to extravasation along a "disc suture" and then under and through the graft, also shows that but little reliance can be placed upon it and its disadvantages more than outweigh this one advantage. There is but little doubt that had these dogs been allowed to live some, at least, of them would have shown signs of obstruction later, and where a graft has been employed and obstruction subsequently supervenes relief will, in the great majority of cases, be impossible in consequence of the number of other coils of intestine involved by the graft. Case 3 illustrates this almost hopeless condition very well; the dog had made an uninterrupted recovery and remained in good health for two months after the operation, but then began to lose its appetite, to vomit after food, and to lose weight. The abdomen was reopened with a view to resecting the strictured gut, but it was found that five coils of intestine were matted together by such dense adhesions and in such a way as to render their separation impossible. If the whole had been removed the dog would have been left practically intestineless, so an overdose of chloroform was given. Even after death, so dense were the adhesions and so changed and twisted was the gut that the separation of the coils was most difficult; contraction of the graft had reduced the lumen by more than one-half, a large annular fold of the wall had been caused by the longitudinal contraction, and occlusion of the gut from acute bending by the adhesions was also present. A lateral anastomosis might have been performed in this case, but I opined that the dog would die from marasmus as very little intestine could be left free, and so to save suffering the dog was killed. In man, with his very much longer intestine, this operation would in these cases present the best hope.

In addition to these grave objections to the use of the graft there are also: (1) the constant danger of internal strangulation from the presence of these adhesions between the graft and surrounding parts; (2) the acute paroxysmal pain; or (3) the chronic discomfort, ending in a more or less complete disability, from dragging on the adhesions. It will be seen in the tabular statement that two dogs in which the graft was used (Cases 5 and 11) were apparently in good health eleven and seven months respectively after operation. In these cases the most that can be said is that the graft did not produce obstruction, but it cannot be said, of course, that the dogs did not suffer inconvenience or pain. But even granting that in some cases the graft may prevent extravasation and that in a few no obvious ill results follow, its employment is attended by so many and such serious objections that its use is to be condemned and reliance placed entirely upon a careful suturing.

The operation as described is rapid, occupying less than twenty minutes from the skin incision to the last parietal suture. Only two sutures penetrate all the layers of the bowel, and these are subsequently buried and shut off from the peritoneal cavity. There is only one wound of the bowel, and this wound is supported and protected during its union by the cones until their absorption. The "cones" are most easily inserted in consequence of their shape; their calibre is large, thus allowing an immediate and free channel for the passage of fæces past the line of resection without undue strain on the gut; they are dissolved in from three to four days and can be readily and rapidly made anywhere. Of the various vegetables tried fresh carrots were found to be the best as they were stiffer and firmer—if made of some other suitable material the cones could be kept in stock of all sizes; they also afford a firm convex background for the suturing, and the portion of the gut that has to be sutured being raised above the rest permits of this being done more easily than can be the case when the suturing takes place transversely to the long axis at the bottom of a depression, as in Mayo Robson's operation. The suture is a very rapid one; the fact that the needles are inserted parallel to the blood-vessels greatly diminishes the risk of these being transfixed and also prevents interference with the flow of blood through them; it allows of a firm hold being taken on the bowel, and the stitches do not cut through nearly so readily as when made longitudinally; the mucous coat is not involved and risk of extravasation along the suture is thus avoided. Each loop must be drawn only sufficiently tight to keep the edges inverted, if drawn too tight pressure-atrophy occurs and union is delayed as is the case with any form of intestinal suture. With an able assistant the suturing of the bowel can be completed in less than four minutes. Whilst I believe this suture to be the best for all transverse wounds of the bowel it would not be so applicable for longitudinal wounds. At the time of the operation the lumen of the bowel is only slightly diminished, and no contraction of the scar takes place subsequently. The tendency that exists for the mucous coat to extrude is prevented reaching a dangerous degree by the continuous suture, and the slight degree that does take place is beneficial as it allows of end-to-end union of this coat. The operation as described has been for an end-to-end apposition, but it is as applicable for an end-to-side union if one cone and a perforated disc of the same diameter as the base of the cone are used; in every other respect the operation would be the same. For a side-to-side apposition two perforated discs would be used. This would be a modification of Senn's method, the differences being the shape of the discs, two disc-sutures instead of four, and a buried continuous suture instead of an omental graft.

Of all the dogs operated upon 39 per cent. had tapeworms, and freeing the ends of the gut from these delayed the operation somewhat. These worms are also a source of danger in

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the operation, as 66 per cent. of the deaths occurred in dogs afflicted with tapeworms. The three dogs that died from extravasation along the cone or disc-sutures all had tapeworms, and in Case 12 (in which the dog was killed and a few drops of pus were found under the graft) these worms were again present. The reason is, I believe, that in these cases there was a thin greenish-yellow fluid bathing the worms; this fluid was only seen when worms were present, and extravasation of this occurred before any plastic lymph was poured out over the line of union.

In carrying out these experiments there was no selection of the dogs; they were operated upon as they were brought to me, some strong and healthy, others unhealthy, mangy, and emaciated; thus the general conditions, apart from the consideration of obstruction, were similar to those which would obtain in man. Those conditions could have been more closely approximated by obstructing the bowel by a previous operation or wounding it by a shot or stab, but I did not feel justified in resorting to a course which would involve much suffering without affording a promise of much further information. In every case the dog was kept well under the influence of chloroform during the operation and all possible care was taken before and after operation to avoid causing pain. It may be interesting to mention that so little did the dogs appear to suffer that in a number of cases they fought the day after being operated upon, either for food or a bitch on heat. Two of the bitches were pregnant at the time of operation (this condition not being discovered until after the abdomen was opened), three became pregnant subsequently to the operation, all five brought forth large, healthy litters, and in no case did any sign of obstruction appear from traction on the bowel due to adhesions. The dogs were all pariahs, running wild in the native city, homeless, mostly starved, and to whom a regular meal was unknown until they were brought to my bungalow. They rapidly grew fat and friendly, and although allowed perfect freedom only two deserted after being operated upon. I desire to express my grateful acknowledgments to the Medical Department of H.H. the Nizam's Government and to Surgeon-Lieutenant-Colonel Lawrie, Residency Surgeon and Principal of the Medical School, for the facilities and resources they so readily placed at my disposal for these and other investigations.

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A METHOD OF PRODUCING IMMUNITY AGAINST TUBERCULOUS INFECTION.[1]

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PREVIOUSLY to undertaking any original investigations in the treatment or prevention of tuberculosis it was necessary to make a number of experiments so as fully to understand the course, terminations, and post-mortem appearances of tuberculous disease when following its usual course after the artificial introduction of tubercle bacilli. To study these phenomena a number of rabbits and guinea-pigs were inoculated by way of the peritoneal cavity, the anterior chamber of the eye, the veins, and the subcutaneous tissues, with the result that the animals died from tuberculosis after the lapse of varying periods—the interval depending on the dose and its mode of administration. During life the chief evidences of the disease were emaciation and fever, the former steadily increasing until death. On post-mortem examination numerous nodules were found in the internal organs, and these nodules when examined under the microscope were found to have the typical structure recognised as that of tubercle.

In addition to the infection of the internal organs those animals which were inoculated in the peritoneal cavity showed a tuberculous peritonitis, and those inoculated in the anterior chamber of the eye a tuberculous pan-ophthalmitis. In these experiments the bacillus of mammalian tubercle was employed and all the inoculations made into mammals were uniformly successful in inducing the disease, but on trying to produce tuberculosis in birds by injections of the same organism the results were invariably negative. In six fowls I injected into the veins doses varying from 1 c.c. to 10 c.c. of a very opaque (almost milky looking) watery suspension of virulent mammalian tubercle, but the birds remained healthy and strong. After periods varying from ten weeks to five months they were killed, when their organs were found to be free from tubercle even after careful microscopic examination. Yet repeated outbreaks of tuberculosis amongst birds are on record, and in these instances the disease has spread very rapidly amongst the birds and could only be eradicated by killing all the infected fowls and thoroughly washing the aviaries with antiseptics. In these cases the only methods of infection could be by inhalation and swallowing, and in both these ways the number of bacilli taken at any one time would be comparatively small, and they would be brought into contact with healthy epithelium either in the lungs or intestine. Yet these few bacilli were able to overcome the resistance offered by this epithelium and gain a nidus in the body, ultimately leading to the death of the infected birds. On the other hand, in the experimental cases above noted, countless numbers of bacilli were injected directly into the blood stream and had therefore no primary resistance to overcome in the form of epithelium, and yet they disappeared from the body of the inoculated animals without leaving any visible trace.

Still, there might be something in the external conditions of these birds which are infected accidentally whilst running about that makes them more liable to infection than those kept in confinement, though the opposite usually holds. To investigate this point five fowls were kept under the same conditions; of these, three had injected 5 c.c. of a watery suspension of virulent mammalian tubercle into the peritoneal cavity, another had the same dose of virulent fowl tubercle introduced into the peritoneal cavity, whilst the fifth was fed on two occasions with food which had 1 c.c. of the same watery suspension of virulent fowl tubercle mixed with it. At the expiration of ten weeks the birds were killed, when those which had been injected with virulent mammalian tubercle bacilli were found free from tuberculosis, whilst the bird which had been inoculated with the virulent fowl tubercle showed numerous tubercles in the viscera, and the one which had been fed with tuberculous food showed tuberculous nodules of the intestine and a tuberculous ulcer of the gizzard.

The question next arises, Are both these varieties pathogenic towards man? As regards the mammalian it is generally recognised that it is virulent to man. That he is susceptible to the bacillus of fowl tubercle is fairly conclusively shown by the following case.

Some time ago when on a visit to the country I was asked by a man who kept poultry if I could give any reason why his birds were dying off, as, so far as he could discover, there was no evident cause. On investigation I found that for a considerable time past occasionally a fowl would become emaciated and weak and ultimately die. As he was poor, and this meant to him a heavy financial loss, he latterly, when he noticed any of his stock ill, killed them and ate their carcasses after cooking by roasting. On killing and examining one of the diseased birds I had no hesitation in pronouncing the disease to be tuberculosis, and advised him to kill his stock and disinfect their houses and feeding dishes thoroughly, and on no account to eat any of the birds. On seeing his family a few months later his wife and daughter were suffering from tuberculous disease, the wife of the intestines and the daughter of the lungs, and from this they both ultimately died. In these cases the infection was derived doubtless from the poultry, either indirectly by inhaling or swallowing the germs as they were blown about in the poultry-house, or more directly by eating the carcasses of the birds, which may have been insufficiently cooked. The man himself I lost sight of. If the ejecta of these patients had been eaten by healthy poultry, the bacilli having been primarily derived from birds would doubtless have infected them, and so the disease would have spread; on the other hand, the experiments above recorded show that the sputum voided from a patient the host of mammalian tubercle would be swallowed with impunity by fowls.

Now, if there are two varieties of tubercle, and man is susceptible to both, a culture obtained from a patient suffering from fowl tubercle should show the characteristic appearances of that organism, cultures of fowl tubercle growing more rapidly and being moister than those of mammalian tubercle.

[1] This article is an abstract of the author's Weber-Parkes Essay which received the second award from the Royal College of Physicians of London.

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This was actually a strong point in support of the contention that fowl tubercle is only a modification of mammalian tubercle, as hitherto all artificial cultures derived primarily from man have been described as being similar in appearance. Recently I obtained further evidence in favour of a distinction between these bacilli. On opening an abscess and collecting some of the pus to ascertain if it contained tubercle bacilli careful microscopic examination failed to reveal the presence of any germs. A quantity was then injected into the peritoneal cavity of a rabbit. At the end of six weeks, when the animal was killed, tubercles were found scattered over the peritoneum. Some of these were removed with strict aseptic precautions and planted on the surface of glycerine-glucose-agar. No growth was visible for about a week, when a moist white ring appeared spreading out from the implanted nodules. At first I thought I was dealing with a contamination, but I was struck by the similarity of the growth in all the tubes, and on examining the growth more carefully it was found to have all the appearances, both macroscopic and microscopic, of fowl tubercle. I regret that the investigation was not carried further by inoculating birds from the cultures; still, the appearances were nothing like those given by cultures of mammalian tubercle. Only in this one case have I obtained this growth from man; but tuberculosis amongst birds is comparatively rare, and I believe the infection of man with this variety is rarer, otherwise the peculiarities of its cultures would have been frequently observed.

To ascertain if the one variety had any action on the growth of the other variety the following experiments were performed. A number of rabbits had 1 c.c. of a sterilised watery suspension of fowl tubercle bacilli injected into the auricular vein, the bacilli having been killed by one and a half hours' exposure to steam at 100° C. These injections were followed by fever and emaciation, which soon disappeared. 1. One month later ½ c.c. of a very opaque suspension of virulent mammalian tubercle was injected into the peritoneal cavity of several of these animals. To all appearance they remained well, and when killed four and a half months afterwards the only lesion observed was the presence of a number of small pedunculated nodules about the size of lentils adhering to the edge of the liver and the surface of the parietal peritoneum. In no instance did these nodules exceed ten in number. On section they were found to consist of a dense fibrous capsule with calcareous contents embedded in which were a few tubercle bacilli. 2. Others had ½ c.c. of the same suspension of virulent bacilli injected into the subcutaneous tissues. When killed four months later there was a small focus of caseation at the seat of injection, but neither the lymphatic glands nor viscera were infected. 3. Into the auricular vein of others ½ c.c. of the suspension of bacilli was injected. When killed at the end of three months and their viscera submitted to microscopical examination some of the organs taken from a few of the animals presented a few points of irritation as shown by a round-celled infiltration but without any trace of giant cells or caseation; in the remainder of the animals even these points of irritation were absent. During this experiment some of the animals gained as much as half a pound in weight. 4. An injection of 1 c.m. of the suspension of virulent bacilli into the anterior chamber of the eye of another series of rabbits was followed by a tuberculous iritis, but the tubercles soon commenced to diminish in size, so that at the end of five weeks they had completely disappeared in some cases, and almost so in others. On microscopical examination of the latter the nodules were found to consist principally of calcareous salts. 5. One rabbit had all the above injections introduced, and when killed five months after the introduction of the first it was found free from general tuberculosis. This animal gained one pound in weight during the experiment. In the above experiments the effect of introducing the bacterio-proteids of fowl tubercle into rabbits was such as to modify the fluids or tissues of the animals in such a manner that subsequent injections of virulent mammalian tubercle even in large doses were prevented from becoming disseminated throughout the body, but remained localised to the seat of primary inoculation. Further, if the bacilli were in a state of fine suspension and distributed over a large area, as follows an intravenous injection, the tissues were able to destroy them, and the bacterio-proteids thus set free produced the small foci of irritation observed in the viscera. As the proteids were removed the inflammatory points disappeared. When the bacilli were in a coarser state of suspension these injections gave rise to a caseous mass which ultimately became encapsuled and impregnated with calcareous salts, embedded in which one could find tubercle bacilli—the remains of those injected. In other words, injections of virulent mammalian tubercle bacilli into these animals behaved in the same manner as dead tubercle bacilli when these are injected into the same parts.

By injecting the sterilised fowl tubercle directly into the blood stream, as a means to prevent the extension of tuberculous infection, one very obvious disadvantage presents itself—namely, the danger of some of the dead bacilli being deposited in some part of vital importance and setting up an inflammation which might have serious results. This I found actually did occur in several instances where the injections were followed by paraplegia, oscillations of the head, &c. On the other hand, subcutaneous injections produced a caseous mass which on being discharged carried with it a large number of the bacilli which had been introduced, consequently the full advantage of the injections was not obtained. ..... On taking into consideration the immunity shown by fowls against infection by mammalian tubercle, I proceeded to ascertain the effect of their serum when modified by the presence, or action of, the bacterio-proteids of fowl tubercle. Accordingly sterilised suspensions of fowl tubercle were injected into the peritoneal cavity of fowls. The injections were commenced by giving 10 c.c. of a sterilised watery suspension of the bacilli, and at each subsequent injection, these being repeated at intervals of three weeks, the quantity was increased at first by 5 c.c. and latterly by 10 c.c., so that the quantity introduced on the sixth injection was 50 c.c. and the total 165 c.c. After the expiration of the next three weeks the injection of 50 c.c. of the suspension was repeated, and continued to be so every third week. Under this treatment the birds, which during the time occupied by the first three or four injections were emaciated and anæmic, came gradually to be able to withstand the action of the later injections with no apparent detriment to health. I next endeavoured to find if the serum of the fowls so treated had any effect on the growth of tubercle bacilli, both fowl and mammalian. To do this I abstracted some blood from the fowls, having allowed at least a week to intervene between the last injection of sterilised fowl tubercle bacilli and the venesection, and not taking any blood until the sixth injection had been given. Having allowed the serum to separate a quantity of this was drawn into sterilised test-tubes. A number of these were then inoculated with virulent fowl tubercle, others with virulent mammalian tubercle, and then placed in the incubator. After some time there was a distinct growth in the tubes inoculated with the fowl tubercle, but no apparent increase in the number of bacilli in those tubes which had been inoculated with mammalian tubercle bacilli, even although kept for three weeks in the incubator. But here one must be guarded against attributing this want of growth entirely as the result of the previous treatment of the fowls from which the serum was taken, because the fluid serum itself has the power of destroying, within certain limits, any germs which may be introduced into it, and it is possible that the absence of growth was due to this bactericidal property.

Proceeding to try the effect of this serum on healthy rabbits and guinea-pigs I injected 3 c.c. into the subcutaneous tissues of these animals. This was followed in a few hours by a marked rise of temperature, the rise in some cases reaching 3° F. Twenty-four hours afterwards there was a thickening at the seat of injection, and extending for some distance round this point. The injection was repeated once a week until 15 c.c. of serum had been introduced altogether. During this period the animals lost weight, and this emaciation continued to progress for four or five weeks after the cessation of the injections. This loss of weight amounted in one case to 150 grammes, and in one instance, where a dose of 8 c.c. was given, the animal died shortly afterwards. Sections made from the swellings resulting from the injections of serum were found to consist almost entirely of round cells, epithelioid cells, and a few large multinucleated cells. At other points the sections showed small foci having all the appearances of caseation, whilst at others the cells were undergoing a degenerative change, as evidenced by their staining very faintly. Apart from the caseation the above appearances denote the presence of a chronic inflammation only, but the caseation and degeneration reveal the presence of some substance deleterious to the cells of the inoculated animal. That this deleterious property does not belong to the normal serum of fowls was

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shown by injecting normal serum in similar doses into rabbits. These injections produced a very slight rise of temperature and very little swelling, but nothing similar to the degenerative changes above described.

In the foregoing experiments the caseation could not be due to the highly improbable event of any of the dead bacilli injected into the fowl having got into the circulation and escaping with the blood withdrawn, then reinjected with the serum into the rabbits and guinea-pigs, because it has been shown that isolated bacilli do not produce caseation. This result, therefore, must be due to something dissolved in the blood of the fowls, or else their serum is so modified that it is able to produce this change, and yet the birds themselves are to all appearances healthy. I now proceeded to try the effects of the serum on tuberculous animals. For this purpose a number of rabbits were inoculated by the anterior chamber of the eye with virulent mammalian tubercle bacilli. These injections were followed by intense iritis, the formation of yellowish spots on the iris, and slight opacity of the cornea. A fortnight later 2 c.c. of the prepared serum were injected subcutaneously, and this dose was repeated weekly for four weeks. At the end of this period the affected eyes were acutely inflamed, the iris in some cases looking like granulation tissue. After the injections ceased this condition of intense inflammation improved, and a month later the pupils were distinct and the redness had disappeared from the iris, scattered over which a few yellowish specks could be seen. For five or six weeks the eyes remained in this condition, there being no apparent increase in size or number of the yellowish specks situated on the iris. The injections of serum were then recommenced, the dose being 2 c.c., and repeated weekly for three weeks. As a result of this the nodules on the iris increased in size, but there was no development of any fresh foci. Six months from the injection of the mammalian tubercle into the eyes, the animals were killed. On examination the bodies were found to be well nourished, and, excepting the tubercles in the eyes, the animals were free from tuberculous infection.

The results of these injections show that the serum when injected into a tuberculous animal tends to limit the extension of tuberculosis to parts other than those primarily involved, as evidenced by the absence of any tuberculous disease in the internal organs. Even in parts where the disease has become established before the serum is introduced it has a pernicious influence, as in none of the infected eyes did the tubercles exceed seven in number, although 2 c.m. of an opaque watery suspension of virulent mammalian tubercle bacilli had been injected and six months elapsed between the primary inoculation and the death by killing of the animals. The intense inflammation in the eyes during the period of the first series of injections of the serum, followed by a period of quiescence of the tuberculosis after their cessation, and again the increase in the size of the tubercles during the second series of injections, leads one to the opinion that the serum when injected into an animal suffering from tuberculous disease aggravates the affection so long as the injections are continued; but when time has been given for this serum to influence the fluids of the body these fluids are able to a certain extent to prevent any further extension of the disease. If this be so then it would be possible to render susceptible animals immune to the action of the tubercle bacillus by injecting a quantity of this prepared serum and allowing some time to elapse before exposing the animals to tuberculous infection. Hence I endeavoured to make guinea-pigs and rabbits immune to the action of the mammalian tubercle bacillus. The animals had injected subcutaneously doses of 2 c.c. of the prepared serum, the dose being repeated every third day until five injections had been given and they had received a total of 10 c.c. of serum. These injections were followed by the usual rise of temperature, swellings, and emaciation, but after their administration had been stopped these symptoms gradually disappeared. One month from the date of the last injection of the serum virulent mammalian tubercle bacilli in watery suspension were injected into the anterior chamber of the eye of a number of rabbits. This injection gave rise to an acute iritis accompanied by opacity of the cornea. These symptoms continued for a few weeks and then gradually diminished, so that by the end of the sixth week they had completely disappeared and no trace of tubercle could be found in any part of the body on making a post-mortem examination. Two months later—that is, three months from the date of the last injection of serum—1 c.c. of an opaque watery suspension of virulent mammalian tubercle was injected into the peritoneal cavity of a number of guinea-pigs. After this injection the animals appeared to remain in their usual health and were all killed in from two to two and a half months after the introduction of the mammalian tubercle. During this period there was no emaciation, as shown by the absence of loss of weight. On post-mortem examination the only evidences of any injection of irritant matter having been made into the peritoneal cavity was in one case an adhesion of the liver to the diaphragm and in another the presence of three small nodules, about 0·5 mm. in diameter, in the edge of the omentum, which otherwise was normal. All the viscera were perfectly healthy and free from any trace of tubercle even on microscopical examination. Sections of the nodules above mentioned showed that they consisted of a dense, fibrous capsule enclosing amorphous matter, lime salts, and fat globules of various sizes. In none of the sections was there any evidence of an active process, and careful examination failed to reveal the presence of tubercle bacilli. The existence of these nodules may have had nothing to do with the injection of the tubercle bacilli; but from their structure it is highly probable that they were the result of the inoculation, though the bacilli had disappeared. Five months after the injection of the serum a number of the remaining animals had virulent mammalian tubercle injected into the subcutaneous tissues, whilst in others the same organism was introduced into the peritoneal cavity. The subcutaneous injections acted in the same manner as injections of dead bacilli into the same situations—that is to say, a caseous mass formed which was discharged without giving rise to any infection of lymphatic glands or viscera. The injections into the peritoneal cavity disappeared without leaving a trace.

How long this acquired immunity will last in animals it is impossible at present to say definitely, but the results of the last set of experiments recorded above show that it is effectual for at least five months. Having obtained the serum of fowls in such a condition that its injection into such susceptible animals as guinea-pigs and rabbits conferred immunity against the invasion of large numbers of mammalian tubercle in a virulent form I proceeded to try its effects when injected into a healthy man. With this object I injected 2 c.c. of the serum into my thigh. This soon gave rise to pain, which extended for some inches round the needle puncture. Eight hours afterwards the part was slightly swollen and the skin over it was distinctly red. This pain, redness, and swelling lasted for four days, and during this period the femoral glands became enlarged and painful. At the end of this time the above symptoms (with the exception of the enlargement of the glands) gradually disappeared; but two days later—that is, seven days after the injection—pain was felt in the thigh about four inches from the point of injection, the parts immediately surrounding this point being quite free from any tenderness. The skin over the painful part was inflamed. These symptoms continued for three days longer and then disappeared, and at the same time the enlarged femoral glands commenced to diminish in size. During this period the temperature never exceeded 99·4° F. Two weeks after the first injection 5 c.c. of serum were injected into the other thigh. This gave rise in two hours to severe pain at the seat of injection and extending for about three inches round this point. There was also slight swelling of the part. Nine hours after the injection the skin over the part was distinctly red. The temperature was 99·2° and the pulse was 100 per minute. Nine hours later the part was much swollen, the swelling being defined by a red, raised margin. The inflamed part was very tender to pressure. The temperature was 100° and the pulse was 104 per minute. Ten hours later—that is, thirty hours after the introduction of the serum—the skin was very red, the redness extending almost from the knee to the groin and nearly completely round the limb. The glands in the groin were enlarged and painful. The temperature was 100 2° and the pulse was 104 per minute. A few (four) hours later the temperature rose to 100 4°, and there were headache and profuse perspiration. These latter symptoms continued for about eight hours, when they disappeared and the temperature and pulse fell to normal. About the same time the blush over the thigh resolved except from the edges, but the skin was still very much thickened over the affected area. Three days after the injection the limb was almost well, there being only slight thickening round the point of injection. During the whole of this period the femoral glands remained enlarged though

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painless, and this enlarged condition persisted for six weeks from the date of injection. From the degree of reaction which followed the second injection I believe that the increase from 2 c.c. to 5 c.c was too great, and that a more gradual rise in the quantity introduced would be followed by less disturbance.

In man we cannot push the experiment to the test of injecting into his body virulent mammalian tubercle bacilli after the injection of the serum, but we are justified in concluding that if such susceptible animals as guinea-pigs and rabbits are rendered immune by this method against the invasion of large doses of the virulent bacillus introduced into their bodies, man, who is much less susceptible, can in the same manner be rendered immune against the invasion of the few bacilli which may at any one time attack him. I believe this condition of immunity can be attained in man by commencing with an injection of 2 c.c. of the serum, and increasing each administration by 1 c.c until its influence on the body is shown by a distinct rise of temperature. At least a week should intervene between each injection.

The length of time this immunity so acquired will last can only be definitely ascertained by observations in a large number of cases and extending over a number of years; but even if the immunity should be found to diminish or disappear after the lapse of a number of years this does not reduce the value of the serum as a prophylactic, because the injections can be repeated at stated intervals and the immunity re-established. So far as my observations go I am unable to claim any curative effects from the use of the serum in patients suffering from tuberculous disease, but I hold, and that most emphatically, that when injected into susceptible bodies it confers on these an immunity against the invasion of the bacillus of mammalian tubercle. Especially do I recommend these injections to be given to persons who have a tuberculous tendency and to those who have a history of tuberculous disease amongst their relatives. By this means it is possible to diminish, if not altogether to eradicate, tuberculous affections from the race, and as such do I venture to bring it before the notice of the profession.

Glasgow.

TWO CASES OF PERFORATED GASTRIC ULCER TREATED BY OPERATION.[1]

BY A. R. ANDERSON, F.R.C.S. ENG.,
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CASE 1.—The patient, a girl aged sixteen years, was seen in consultation with Dr. Hunter on Nov. 26th, 1895, and the case was diagnosed as one of perforated gastric ulcer. As her surroundings were such as to prevent operation at home I advised her removal to the General Hospital, and she was admitted at 2.30 P.M., about an hour after my visit. The history obtained was as follows. She had for some years been rather anæmic. For three weeks she had been troubled with symptoms of indigestion, for which she had taken some medicine, but which had not been severe enough to induce her to seek medical aid. Her appetite had been extremely good; she always felt hungry and ready to eat anything. In fact, it had for some time been abnormal. The actual attack occurred at 6.30 P.M. on Nov. 25th, the day before I saw her, about half an hour after tea. At this meal she had eaten a small pork pie, some fried bacon, and several helpings of bread and butter and marmalade, and had drunk two cups of tea. She was seized with intense pain in the abdomen above the navel, which doubled her up and which became so severe that she fainted. With difficulty she subsequently got to bed, and passed a sleepless night in great suffering, trying various remedies to relieve the pain. Thirst seemed to have troubled her greatly. During the night she told us that she drank two pints of milk, ten glasses of water, and two syphons of soda water, and in addition to this in the way of medicine, some "Mother Seigel's Syrup," a dose of salts, some ginger and "gripe mixture." In the morning Dr. Hunter was sent for, who at once recognised what had happened, and she reached the hospital as stated at 2.30 P.M. At this time she was suffering from shock and symptoms of commencing general peritonitis. There was great pain and tenderness all over the abdomen which was uniformly but slightly distended. The muscles were perfectly rigid and immobile during respiration. The liver dulness was diminished and the rest of the abdomen was hyper-resonant to gentle percussion. Her face was pale and the expression anxious; the pulse was 130, the respirations were 28, and the temperature was normal. There had been no vomiting. She was aware that the repeated draughts of fluid taken during the night had increased the pain. I operated at 3.30 P.M., an hour after her admission and twenty-one hours after the onset of the symptoms. An incision five inches long was made in the mid-line chiefly above the umbilicus. On opening the abdomen it was found to be full of an opaque fluid in which particles of food were floating. The bulk of this having been removed the stomach was then examined. Nothing was to be seen on that part of it within easy reach, but some thickish fluid containing small solid particles was observed coming down from high up under the left lobe of the liver, and following this up a perforation was found on the anterior surface of the stomach close to its cardiac end, which would admit the end of the finger. By lifting up the left lobe of the liver and the costal cartilages and drawing the stomach downwards and backwards the hole was brought sufficiently into view to enable the sutures to be passed. The material used was silk. After its closure the abdomen was flushed out with boiled water and sponges were finally used for the removal of any fluid or particles that remained. The abdominal incision was completely closed. The operation occupied one hour and five minutes from the commencement of the anæsthetic. I am much indebted to Dr. Sedgwick, one of our house surgeons, for the full and accurate record which he took of this case. The following is a *résumé* of the leading features of the subsequent history. For nine days after the operation the patient progressed without an unfavourable symptom of any kind. The temperature never rose above 100° F., and only reached this point on one occasion. The pulse rate dropped to between 80 and 90 and the abdominal symptoms disappeared. For the first four days the feeding was entirely rectal; after this peptonised milk in small but increasing doses was given by the mouth. The bowels acted regularly in response to simple enemata. The abdominal wound at the end of this period had practically healed and all the sutures had been removed. The patient was repeatedly asking for solid food, and, indeed, seemed convalescent. On the evening of the ninth day the temperature rose to 101°, and on visiting her next morning I found her not quite so well. The temperature had fallen to normal, but she complained of some malaise, headache, and pain in the right shoulder. The pulse-rate had risen to 100. Nothing fresh was discovered on examination of the abdomen. On Dec. 9th (two days later) the patient was in much the same state, the temperature rising to 101° at night and falling to normal in the morning. There was a little swelling at the upper part of the wound with redness round the track of one of the sutures, and a small quantity of pus was let out from a subcutaneous abscess, evidently in connexion with the stitch holes. On the 16th there was slight improvement following on this, but it was not maintained. The temperature during the week varied between 99° and 101·5°, and now suddenly jumped up to 104.° There had been no shivering and no evidence of peritonitis, local or general; the abdomen was flat, and palpation was painless. The only complaint was of headache and pain in the right shoulder over its convexity. These symptoms had persisted during the week. There was no swelling of the shoulder, and its movements were free and painless. In the last twenty-four hours a slight cough had developed and she vomited for the first time during her illness. Dr. Handford saw the patient at my request and carefully examined the liver region and the bases of both lungs, but he could detect nothing abnormal. On the 19th the temperature was still high and fluctuating between 101° and 103°, and in addition to the symptoms mentioned above complaint was now made of pain in the epigastrium. In the absence of Dr. Handford, Dr. W. B. Ransom kindly examined her chest for me, but was unable to discover any signs of fluid at the back of the chest or in front. The liver dulness was normal, and there was no visceral displacement. Thinking it probable that pus existed I decided to operate again, and did so on the following morning (the 20th). The patient was anæsthetised,

[1] A paper read at a meeting of the Nottingham Medico-Chirurgical Society on Feb. 3rd, 1897.

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and an incision four inches long was made in the right linea semilunaris beginning at the costal margin. This exposed the anterior edge of the right lobe of the liver. Nothing was found here either between it and the diaphragm or on its under surface. There were two or three stones felt in the gall-bladder, which was otherwise normal. The incision was then closed and the original wound was opened up and the left lobe examined and also the stomach in the region of the ulcer. There was nothing wrong here, and it was evident that there had been no leakage. This wound was then closed. The shock was slight and soon recovered from. Three days after, on the 23rd, she was still complaining of persistent headache and right shoulder pain, and some pain all over the chest. Cough had now become a prominent symptom and was especially troublesome at night. There was a scanty frothy expectoration. Abdominal examination showed nothing fresh. The wounds were healing without suppuration. On the 30th her condition was distinctly worse. There was more cough and dyspnœa and some drowsiness. The temperature varied from 102° to 103° at night, being lower in the morning. She complained persistently of pain round the right shoulder and of headache. The respirations were 40 and the pulse was 124. The chest was again examined by Dr. Handford, who found some moist sounds and slight crepitations over the upper part, and suggested the possibility of acute phthisis—two brothers had died from the disease,—but failed, as I had done, to detect the presence of fluid anywhere. The sutures were removed, the wounds having healed. There was no evidence of peritonitis. From this time until her death, which occurred five days later, the pulmonary symptoms increased, the dyspnœa becoming more urgent; and on Jan. 2nd, 1896, distinct signs of double broncho-pneumonia were found, and oxygen was administered with strychnia, digitalis, and stimulants. Treatment proved to be of no avail, and she gradually sank and died on Jan. 4th, five weeks and four days after the date of perforation.

Necropsy.—On opening the abdomen there were no signs of peritonitis and no fluid in the peritoneal cavity. The stomach in the region of the ulcer was slightly adherent to the under surface of the left lobe of the liver. The adhesions were easily separated and the stomach was removed. The perforation was situated on the anterior wall close to its termination in the œsophagus. It was soundly healed. The gall-bladder was distended and contained five small calculi. No pus was found on examination of the liver *in situ*, but on removing it an abscess was found between the diaphragm and the posterior part of the right lobe, containing about six ounces of thick pus. The area of suppuration was limited by firm adhesions between the liver and diaphragm, which confined it almost to the angle between the diaphragm and the posterior border of the right lobe. On cutting into the liver a number of scattered abscesses were found, varying in size from a nut to that of a pea. Both lungs were affected with broncho-pneumonia. The other organs were healthy. There was no fluid in the pleuræ.

CASE 2.—A young woman, aged nineteen years, was admitted into the General Hospital on Dec. 16th, 1896, with the following history. She was working as a machinist, but had not been able to follow her occupation recently on account of ill health. For some time she had been suffering from dyspeptic symptoms, and was thought to have a gastric ulcer, for which she had been treated in the out-patient department. Her diet had been regulated and a mixture containing bismuth and soda ordered. She had vomited on many occasions after food, but there had been no hæmatemesis or melæna. She was anæmic. On the morning of Dec. 15th, the day before admission, she took a breakfast consisting of a pint of bread and milk at 8 A.M., having had the same for supper the night before. At 10.30 A.M., whilst washing her hands after cleaning the bedroom, the patient was taken suddenly with violent pain in the abdomen, which almost made her faint, and was with difficulty got upstairs, where vomiting occurred. She was seen by Dr. Blurton at 4.30 that afternoon and again the next morning, and was admitted into the hospital during the afternoon. Only a few teaspoonfuls of milk and soda water had been taken between the time of the attack and her admission. On examination the patient was found to be suffering from a moderate degree of shock, her expression was anxious, the pulse was 130, the respirations were 24, and the temperature was 99·4° F. Severe abdominal pain was complained of. The abdomen was rigid, scarcely moving on respiration, the left rectus being especially tense. There was marked tenderness above the umbilicus, but no distension. The liver dulness began at the sixth rib in the nipple line and extended downwards for 1½ in. The heart and lungs were normal. The patient being anæsthetised, I operated at 5.30 P.M., an hour after admission, and thirty-two hours after the onset of the symptoms. An incision was made in the mid-line extending downwards from just below the xiphoid cartilage. On opening the peritoneal cavity some odourless gas escaped, and the peritoneal covering of the transverse colon and the omentum which presented was found to be markedly injected. The small intestines were affected to a less degree. There was a small amount of turbid fluid, but nothing that could be recognised as stomach contents. At first no lesion could be discovered, but on enlarging the wound in an upward direction and drawing down the stomach a perforation was found on the anterior surface, close to the cardiac end, very much in the same situation as in the first case. It was quite small, of a size that would admit a probe, and surrounded by a layer of lymph. The stomach wall around it for ¼ in. was distinctly thinned and showed up the outline of the ulcer. It was excised, leaving an opening in the stomach 1½ in. long and ¾ in. broad. This was closed by means of Lembert's sutures, silk being the material used. The abdomen was then flushed out by pouring in boiled water, and finally the whole region between the diaphragm and the liver was douched and then wiped clean with a flat sponge. The abdomen was closed in the usual way, the operation lasting forty-five minutes. The subsequent progress of this case was very satisfactory. For three days the patient was fed by enemata and then began to take food by the mouth in gradually increasing quantities. She is now well.

Remarks.—I have related the first case in some detail as it affords a good example of sub-phrenic abscess and of the difficulties attending its diagnosis, especially as regards the localisation of the pus. The prognosis in cases of perforated gastric ulcer varies considerably according to the time which has elapsed between perforation and operation, the size of the opening, and the amount and kind of stomach contents extravasated. In respect of all these particulars this case must be regarded as an unfavourable one. The operation was done after a lapse of twenty-one hours. The hole was large, and an extraordinary quantity of stomach material (corresponding with the amount taken by the mouth) was found in all parts of the abdomen, samples of pork-pie, bacon, bread, marmalade, tea, and milk being visibly represented. I removed pieces of food from both loins and from Douglas's pouch, while the small intestines were floating in pints of turbid milky fluid. As far as this detail went the case could hardly have been worse; yet there was no subsequent peritonitis, and she would undoubtedly have recovered but for the localised suppuration under the diaphragm. No doubt the contents of the stomach are much less dangerous than are those of the intestine when they escape into the peritoneum. All went well with this patient until the ninth day, when unfavourable features began to show themselves. The symptoms presented before the later stages in which the case became complicated with general sepsis are worth bearing in mind. They were pain round the right shoulder, headache, and general malaise, a rise in the temperature and pulse rate, and subsequently pain in the epigastrium. The pain round the shoulder was so persistent and formed so marked a feature that I should in future attach a good deal of importance to it. The question of sub-phrenic abscess was discussed, but I never succeeded in locating it, and my colleagues, Dr. Handford and Dr. Ransom, who repeatedly examined the patient, were unable to discover any physical signs by which its presence could be positively determined. I believe there is no spot in the body where the detection of pus is more difficult than at the back of the right lobe of the liver. This is fortunately an unusual situation for it to occur. After gastric perforation sub-phrenic abscess has been far more commonly found under the left arch of the diaphragm and is attended with signs of localised peritonitis in the epigastric and left hypochondriac regions. But the difficult question remained in this case, Was there any collection of pus, and if so where?

The second operation demonstrated, as I thought, the absence of pus under the diaphragm, as none was found anteriorly between either lobe of the liver and the muscle. This case teaches the important lesson that matter may form and become encapsuled about the posterior border of the liver without any evidence

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of its existence being discoverable by a reasonable exploration from the front. If the diagnosis were made the best course to pursue in treating such a case would be to resect a couple of ribs posteriorly, incise the diaphragm, and evacuate the pus through the pleura. This route should be chosen for two reasons—because it is the nearest by which it could be reached and also because, although the passage of this highly septic material through the pleura would not be free from risk, such risk would be very much less than conduction through the peritoneal cavity, the only other possible method of exit. If unrelieved by operation these abscesses prove very fatal from septicæmia and often infect the pleura and lung of the same side. They sometimes occur as the result of a minute perforation of the stomach which has been closed by adhesions to neighbouring organs and either has not been diagnosed or is accompanied by symptoms not severe enough to make the need for immediate operation clear. In these cases the few drops of stomach contents which escape are sufficient to start the septic process which results in the formation of an abscess in an inaccessible position which soon endangers life. This furnishes an additional reason for the need of immediate operation if the diagnosis of perforation can be made. Such abscesses may occur between the diaphragm and the left lobe of the liver, between the stomach and the liver, between the stomach and the spleen,[2] and lastly between the diaphragm and the right lobe of the liver. In this connexion it is well to remember that in a very large percentage of cases of perforating ulcer the lesion has been found on the anterior surface of the stomach.

Prevention of this unfortunate complication is better than cure, and sub-phrenic abscess can be largely guarded against by the technique observed during the performance of an operation for perforated gastric ulcer. The convex surface of the liver and the pouch that exists above its posterior attachment is the one spot in the abdomen which is likely to be overlooked in the cleansing process if the operator has not this region in mind, and it is a part to which the experience of these two cases has taught me especial attention should be given. In the second case after the toilet of the abdominal cavity had been completed I washed out several ounces of escaped stomach contents from above the liver, which would almost certainly have caused suppuration if left. In both cases the same plan of cleansing was followed, and the results obtained would induce me to repeat this method. The lips of the wound being held apart and lifted up, large quantities of boiled water were poured into the abdomen out of jugs, the size of those used in bedrooms, until it returned clear. This is much preferable to the douche as the volume of water flushes out the cavity very effectually, and it also effects a considerable saving in time. Afterwards the remaining fluid was removed with sponges and wiping was resorted to in any suspicious situations. In cleansing the sub-phrenic space a rubber tube attached to a douche was pushed well to the back of the liver on either side of the suspensory ligament, and by raising the costal margins and depressing the liver, the whole of the convex surface was in this way cleansed. After the water returned clear a flat sponge was introduced down to its posterior attachments and the space wiped out. In the first case the region in question was not cleaned out so thoroughly as this; had this plan been adopted no doubt a successful result would have been obtained.

With respect to the incision it was the same in both cases, a median one, extending from just below the xiphoid cartilage to the umbilicus, or a little below it. This should be sufficient for the closure of a gastric ulcer wherever situated, without any side incisions or cross cuts. Through this opening the whole of the interior of the abdomen can be reached and the various localities where food is likely to collect—the loins, Douglas's pouch, &c.—can be effectually washed and afterwards sponged out. I found no difficulty in passing the hand into the pelvis and wiping its floor with a sponge. In both cases the wound was completely closed and no drainage employed. In the second case the ulcer was excised.[3] The specimen showed well its clean punched-out appearance on the mucous surface and the small round perforation through the peritoneal coat. The question as to whether excision is advisable is still an open one. Some writers deprecate it on account of (1) the additional time consumed; (2) the additional hæmorrhage occasioned; (3) the increase of shock to the patient by converting a small hole into a large gap, requiring a great number of sutures for its closure; (4) the risk of a considerable addition to the escape of the gastric contents; and (5) the difficulty in closure owing to protrusion of the mucous coat. These objections in many cases would be real enough to make the operator decide to give closure the preference over excision. In Case 2 the local appearances indicated clearly that the ulcer was a small and deep one, but even this left on its removal a wound in the stomach wall one and a half inches long by three-quarters of an inch broad, and required fourteen sutures for its closure. I have now the satisfaction, however, of knowing that the woman's disease is cured, that the previously existing symptoms have disappeared, that her digestion is normal, and that she has, I believe, been completely restored to health.

Nottingham.

[2] An interesting specimen of abscess in this situation was shown to the meeting by Mr. W. J. Stephens. The patient, a middle-aged woman, died from what was thought to be a malignant growth under the liver. She was only seen by Mr. Stephens shortly before death, and no clear history could be obtained. Post mortem an ulcer of the stomach was found which had leaked through a minute opening and occasioned an abscess containing nearly a pint of matter, lying in the left hypochondriac region between the stomach and the spleen. There was no general peritonitis.

[3] Both the specimen and the patient were exhibited at the meeting.

A CASE OF

STRANGULATION OF THE ILEUM BY PASSAGE THROUGH A CONGENITAL MESENTERIC HOLE; OPERATION; RECOVERY.[1]

BY J. STANLEY KELLETT SMITH, F.R.C.S. ENG.

A GIRL, aged fifteen years, was seized, while walking in the street on the afternoon of June 23rd, 1897, with violent abdominal pains, quickly followed by persistent vomiting. Mr. Bassett Jones, of Aberystwith, who saw the girl the next morning, reported on her condition then as follows: "The patient complained of severe pain referred to the umbilical region; the pain was continuous, but accompanied with paroxysmal exacerbations about every ten minutes, during which the patient suffered great agony. The tongue was furred. The pulse was 90, sharp and small; the respirations were 20; and the temperature was 98·2°F. The abdomen was flaccid and flat, with the walls moving on respiration; there was no local swelling to be seen. It was resonant on percussion, but not tympanitic; there was a small area of dulness in the right iliac fossa, over which there was some tenderness on pressure. Palpation revealed nothing, except a sense of resistance over the above-mentioned area of dulness. There was no passage of flatus or fæces. Vomiting was frequent and of a bilious character; the act was not preceded by much nausea and the stomach emptied itself without apparent effort. Rectal examination revealed only the presence of small scybala." The lower bowel was emptied by enemata and everything that could be suggested in the way of palliative treatment was tried, but without relief to the symptoms. I saw the patient in consultation on June 27th, four days after the onset of the illness. Intestinal obstruction had remained complete, and she was then in a state of great exhaustion. The pulse was 140 and of very unpromising character. The respirations were 32. The abdomen was tympanitic, excepting a small patch of dulness in the right iliac region, and over this patch any pressure upon palpation was strongly resented by the muscles of the abdominal wall. When I saw her vomiting had just taken place, the ejected matter consisting of diluted bile with particles of curd of the milk which had been given in small quantity as food. There was no suspicion of fæcal odour. Operation was advised and immediately carried out. The abdomen was opened from the umbilicus to the pubes. Coils of distended and congested small intestine bulged through the wound and the escape of these was encouraged until the disposition of the mesentery could be comfortably made out. The gut was then carefully drawn from the abdominal cavity, proceeding always downwards, until the lower part of the ileum was reached, tender manipulation being here necessary owing to

[1] A paper read before the Liverpool Medical Institution on Oct. 21st 1897.

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the greatly increased congestion of the bowel. The cause of mischief was found in the shape of a hole in the lower part of the mesentery, pyriform in shape, measuring some two and a half inches by two inches, with its larger end close to the mesenteric attachment of a small loop of bowel, which, taking its upper and lower limits as fixed points, had swung itself through the hole and thus become strangulated. The parts were judged capable of recovery and so were restored to normal position, recurrence of the accident being guarded against by closure of the aperture. The exposed intestines were then washed with weak perchloride solution and replaced in the abdominal cavity with some difficulty, but without the necessity of puncture for gas drainage. The total time of operation occupied thirty-five minutes. Recovery was uninterrupted. Flatus passed on the day following the operation, and the bowels were voluntarily moved on the fourth and subsequent days.

Remarks.—Holes may occur in the mesentery as the result of disease, of injury, or of congenital malformation. The absence of any sign of previous disease or injury and the negative history thereof, the smooth thickened margin of the aperture, its size and the regularity of its outline, and especially its situation in the lower part of the mesentery, at the spot where such developmental deficiencies most frequently occur, lead me to regard this case as a typical example of a congenital mesenteric foramen.

Liverpool.

ATONIC APHONIA.

BY ALEXANDER WALLACE, M.D. OXON., M.R.C.P LOND.,
SENIOR PHYSICIAN TO THE ESSEX AND COLCHESTER HOSPITAL.

AFTER reading Dr. Bastian's clinical lecture on Hysterical Mutism and Other Functional Speech Defects, published in THE LANCET of Sept. 25th, 1897, p. 775, it struck me that the following case might be interesting as presenting some points of difference to the cases mentioned by him in his paper.

A man, aged thirty-seven years, married, the parent of two children, the youngest of whom was five years old, came to consult me on July 7th, 1897. Eighteen weeks before he had suddenly lost his speech, never having been dumb before. His hearing and other senses were perfect, and his general health, he said, was good, but he had never been strong. His parents had both died from old age. About a week after the seizure he, by the wish of his medical attendant, went to a London hospital, where, according to his account, he was an hour under examination. His larynx was examined externally and by the laryngoscope, and he was somewhat roughly treated, he said, to make him cry out, but to no purpose, and he had remained in the same dumb state since. He was a rather spare, short man, of nervous habit, and somewhat depressed. His wife accompanied him. He wrote in my presence statements regarding himself coherently and accurately; attempting to speak, the lips and tongue movements were correctly made as if speaking, but no sound issued, not even a whisper; this his wife stated was his then normal condition. He complained of some languor and feebleness, with restlessness at night. There was no cough; his appetite was bad, but the bowels were regular and the urine was acid. His memory was good. Sometimes he felt a sudden fluttering at the præcordia with headache. Sensation was unimpaired. Locomotion was not so good as before. "He knows exactly what he wants to say, and frames the words with his lips, but no sound comes." The features were straight and the tongue was not deflected; no trace of any prior cerebral attack could be detected. The pulse was irritable, 90, of good volume, but rather tense. Examination of the neck and external larynx revealed nothing but some old superficial cicatrices. The heart sounds were normal, but rather weak; cardiac dulness was normal. The liver, spleen, and abdomen were normal. The battery had, he told me, been applied to him both at the hospital in London and afterwards by his medical attendant both externally to the larynx and internally, but without any result. The case seemed to me to be unusual because: (1) there was no evidence or history of any cerebral implication; (2) there was not the slightest whisper, such as we hear in hysterical mutism; (3) the mouth and lips were correctly acting as if articulating, yet no sound issued; and (4) his written answers and his written sentences were correctly given and spelt. On further inquiry I elicited that twice since the attack during the first month he had pronounced the names of people distinctly and correctly, but felt weak and vertiginous afterwards, with pain at the præcordia and great pallor; that he was a great walker, doing generally ten miles a day; that he was restless and excitable, brandishing his arms much; and that he smoked six pipes a day and indulged in coitus three times a week. I thought I saw daylight in these faulty habits. I cut down the coitus to once a fortnight, the pipes to two per day, and a bicycle was to be used in moderation instead of walking ten miles a day. I gave him an acid mixture with five minims of solution of strychnia and one and a half grains of quinine three times a day. To my surprise on July 16th the patient came to me to say that on the 14th he spoke audibly, "I feel better," and that he has since spoken a little each day in the evening; he spoke to me that day clearly; in a low, distinct voice he said that he slept better. The pulse was 80 and soft. I saw him again on July 29th; he had quite recovered and had had no return of the mutism. It seems to me that "atonic mutism" is the right description of what I suppose is a somewhat unusual but happily an easily recoverable form. I have recently heard that he remains quite well.

Colchester.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

PERMANGANATE OF POTASSIUM AND OPIUM POISONING.

BY REGINALD NITCH-SMITH, M.R.C.S. ENG., L.R.C.P. LOND.,
LATE SENIOR HOUSE PHYSICIAN AND CHLOROFORMIST, WESTMINSTER HOSPITAL.

THE following case of accidental opium poisoning with successful treatment occurred whilst I was in charge of the casualty department of Westminster Hospital.

A male adult, aged thirty-five years, well nourished, gave on his recovery the following history: "At four o'clock this morning I took two tablespoonfuls of laudanum in mistake for black draught, after which I went to bed, and on being called at seven I thought something must be wrong as I felt so drowsy. I examined the bottle and found I had made a mistake. I then took the proper black draught, got up, and went for a walk. On passing the hospital I felt so very sleepy that I thought it best to come in for treatment." When I saw him, four hours after he had taken the opium, the patient was asleep on one of the seats in the surgery. I immediately roused him, gave him some strong coffee and a hypodermic injection of caffeine, three grains. Two porters were instructed to walk the patient about. His pupils at the time were contracted and failed to respond to light; the mouth was dry and the tongue coated; the skin was cold and clammy. The pulse was 108 and feeble, respiration was somewhat laboured, and the muscles were relaxed. He could only just be roused by loud shouting. Two more caffeine injections were administered with no beneficial result. I now decided to try permanganate of potash, which I gave in the form of the liquor, four drachms. As a result there was slight improvement. Soon after I again gave him four drachms, thus making in all one ounce, = 4·8 gr. Fifteen minutes later the patient vomited a large quantity of black fluid. From then his recovery was rapid and complete. He was, as is usual in these cases, admitted into one of the medical wards and detained for forty-eight hours, my instructions to the nurse being to watch the patient closely and to administer nourishment every three hours. On testing the urine it was found to be normal. There was no meconic acid. It will be seen that the draught taken by mistake contained 33 grs. of opium or 3·3 grs. of morphine.

Dr. William Moor, of New York, ascertained that one grain of permanganate of potash oxidises one grain of morphine. With such undisputed evidence before us it is surprising that such a reliable and easily attainable antidote

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for opium poisoning does not find a prominent place in text-books on poisons and their treatment. The important point in this case is that the permanganate of potash had its desired effect even after five hours had elapsed from the time of taking the poison.

Bessborough-gardens, S.W.

PUERPERAL ERYTHEMA.

BY JOHN JOSEPH STACK, L.R.C.S. IREL., L.R.C.P. EDIN.

ON Aug. 22nd I attended a woman, aged thirty years, who was in her second confinement and was delivered naturally of a healthy male child. Her recovery was uninterrupted for seven days, when she unfortunately used the commode with her bare feet resting on cold oilcloth, and next day (Aug. 29th) complained of a severe headache and thirst, and vomited slightly. The patient's pulse was 120, soft and compressible, and her temperature 103° F. The uterus was syringed out and twenty grains of quinine were given in the form of pills. Immediately after drinking some iced water she was seized with an ague-like rigor which lasted twenty minutes and was followed by profuse sweating. The patient's temperature increased to 105°, and she was hysterical, her pupils being widely dilated and her face flushed. I removed some clots from the patulous os uteri, and injected hypodermically one-fiftieth of a grain of ergotinine citrate. In about half an hour the temperature fell to 100°, her pupils contracted considerably and the headache passed off, but she still looked very haggard and worn. On Aug 30th she felt better; the temperature was 101·2° and the pulse 104. The patient's face and hands were quite red, and there was also a scarlet rash over the breasts. By night time the temperature fell to 99°. On Sept. 1st she passed some clots of blood per vaginam and complained of headache and throbbing on the top of the head. The rash was well out on the trunk. The temperature was 99° in the morning and 99 5° in the evening. On Sept. 2nd she was comfortable and cheerful, but there was an offensive discharge and the uterus was again washed out. The rash was well developed mostly on the trunk and legs. The temperature was 100·4° in the morning and 100° in the evening. On Sept. 3rd the temperature was 100·4°. The rash was well out and extended to the arms and hands, the fingers being swollen and covered by red elevated patches. The uterus was again washed out. On Sept. 4th the temperature was 100·4°. The rash was then disappearing. The urine contained no albumin or sugar. The face appeared puffy; the right breast was hard and painful. On Sept. 5th the rash was completely gone. An abscess was opened in the right breast, which gave trouble for about a week subsequently. The patient ultimately made a complete recovery. There was no desquamation after the rash, the throat was not at all affected, and there was no possible history of scarlatinal contact.

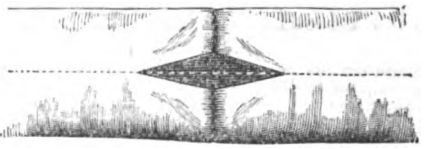
New Cross, S.E.

"A METHOD OF UNITING THE DIVIDED INTESTINE."

BY G. LENTHAL CHEATLE, F.R.C.S. ENG.,
ASSISTANT SURGEON TO KING'S COLLEGE HOSPITAL AND TO THE WEST LONDON HOSPITAL.

IN THE LANCET of May 22nd, 1897, I described a method of uniting the divided intestine the essential features of which were two incisions, one placed in each extremity of the divided ends, and opposite to, as well as parallel with, the mesenteric attachment, so that they enable the operator to sew together the separated ends of the canal with their serous surfaces in perfect apposition. It will be seen that when the ends of the intestine are thus joined one longitudinal opening must necessarily result (see Fig. 1), and I described how this aperture was stitched up as a longitudinal one. This, like most other methods of intestinal resection, leaves the lumen of the canal smaller than normal, and the size of the tube must be still further diminished by the subsequent contraction of the encircling cicatrix. To prevent stricture is a great source of difficulty. Any procedure that has for its objects diminution of the stricture as well as the union of the divided ends must be worthy of consideration. By altering the treatment with regard to the longitudinal opening (see Fig. 1) I hope to make the above method

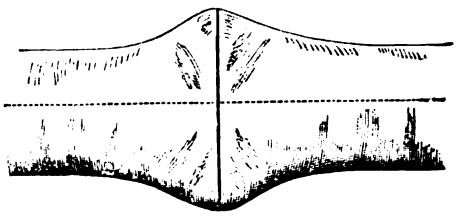
FIG. 1.



Showing the longitudinal opening into the gut after union of the cut ends. It is placed opposite to, and parallel with, the mesenteric attachment. The latter is represented by a dotted line.

accomplish the former object as certainly as it does the latter. In my most recent operations upon dogs I have brought the extremities of the longitudinal aperture (see Fig. 1) into apposition, and thus fixed them and then sewed up the opening that had thereby been made transverse to, or at right angles with, the attachment of the mesentery (see Fig. 2).

FIG. 2.



Showing how the longitudinal opening has been made continuous with the united ends by converting it (the longitudinal opening) into a transverse one by having brought its extremities into apposition and its fixation in that direction. The mesenteric attachment is represented by the dotted line.

And hence nearly the whole length of the previously longitudinal aperture is thrown into the continuity of the lumen, which must necessarily increase its size. Halsted's square stitch I find the best for this purpose. It will be remembered that in non-malignant strictures of the pyloric end of the stomach a longitudinal incision is purposely made into the strictured parts in order to convert it into a transverse one, and Mr. Allingham has done the same thing in similar strictures of the intestines.

Harley-street, W.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

The first meeting of the sixteenth session of this society was held at the West London Hospital on Oct. 8th, 1897. The President, Dr. H. P. Potter, read the opening address entitled "Some Aspects of Heredity," which was received with much appreciation by the members, who had attended in a good number. A vote of thanks was proposed by Mr. C. B. Keetley and seconded by Dr. Symons Eccles and carried unanimously. Dr. Potter replied in a few appropriate words. The officers for the ensuing year are:—President: H. P. Potter, M.D. Durh., F.R.C.S. Eng. Vice-Presidents: C. Wells, M D. R U.I., Swinford Edwards, F.R.C.S. Eng., Donald Hood, M.D. Cantab., F.R.C.P. Lond., R. J. Bannig, M D. St. And., A. Symons Eccles, M.B. Aberd., Bruce Clarke, F.R.C.S. Eng., R. Lake, F.R.C.S. Eng., W. H. Lamb, M B Lond., A. G. Wells, M.R.C.S. Eng., and C. M. Tuke, M R.C.S. Eng. Council: L. A. Bidwell, F.R.C.S. Eng., H. Des Vœux, M.D. Brux., William Hunter, M.D. Edin., F.R.C.P. Lond., F. Lawrence, M.R C.S. Eng., Herbert Menzies, M.R.C.S. Eng., Seymour Taylor, M.D. Aberd., M.R.C.P. Lond., Andrew Elliot, M.D. Edin, F. H. Low, M.B. Aberd., G. H. D. Robinson, M.D., M.R.C P. Lond., James Harper, M.D. Lond., C. Andrews, M.R.C.S. Eng, and Neville Wood, M.R.C.P. Lond. Treasurer: T. G. Alderton, M.R.C.S. Eng. Secretaries: F. J. McCann, M.D. Edin., M.R.C.P. Lond., and W. McAdam Eccles, M.S. Lond., F.R.C.S. Eng. Librarian: C. B. Keetley, F.R.C.S Eng. Editor of Journal: H. Percy Dunn, F.R.C.S. Eng.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

GENERAL HOSPITAL, GREAT YARMOUTH.

A CASE OF TETANUS TREATED WITH TETANUS ANTITOXIN; DEATH.

(Under the care of Dr. H. BLAKE.)

THE discovery in 1885 by Nicolaier of the bacillus of tetanus did much to systematise the treatment of the disease. Amputation had fallen into disuse, as it was found that it rarely succeeded in saving the life of the patient; but now in suitable cases it is an important method of treatment, as it has been conclusively shown that the bacillus is only found in the neighbourhood of the wound, and its presence in the blood or the central nervous system has never been demonstrated. In amputation, however, there is very great risk of inoculating the amputation wound with the bacilli from the original wound or of making the incisions through tissues too close to the site of infection. The value of tetanus antitoxin in certain cases is practically beyond dispute, but in some instances, as in the following, it fails, and we are still in want of exact indications as to the amount of the antitoxic serum which it is desirable to inject. For the notes of the case we are indebted to Dr. F. M. Fellows, house surgeon.

A boy, aged nine years, was admitted to the General Hospital, Great Yarmouth, on Oct. 2nd, 1897. The patient had fallen under a van and the wheel had inflicted an extensive lacerated wound on the inner side of the right knee, opening into the joint. There was great laceration of the soft parts and they were much ingrained with dirt; but, taking into account the age of the patient, it was decided to make an attempt to save the limb. An anæsthetic was accordingly administered and the wound was thoroughly disinfected. Under antiseptic treatment with continuous irrigation of the joint, the patient made good progress up to the 13th, the local condition improving and the temperature being kept within bounds On the evening of the 13th, however, it was noticed that the patient had difficulty in opening his mouth. The masseters were then found to be in a state of tonic contraction, and there was some stiffness of the muscles of the neck, back, and abdomen. The temperature was 99° F. Amputation above the knee through apparently healthy tissue was performed at 10 P.M. and a supply of tetanus antitoxin was telegraphed for. On the 14th he had passed a good night; the temperature was 100·2°, the pulse was 136, and the respiration was 24. The masseters were slightly less rigid, but there was commencing risus sardonicus. 20 c.c. of tetanus antitoxin were injected under the skin of the abdomen in two doses, one at 3 P.M. and one at 11 P.M. On the 15th there was rather more stiffness of the masseters and of the muscles of the face, neck, and abdomen, as well as slight opisthotonos and commencing stiffness of the muscles of the extremities. The temperature was 99·4°, the pulse was 132, and the respiration was 24 29 c.c. of antitoxin were administered in three doses at 7 A.M., 4 P.M , and 12 midnight. On the 16th he had passed a bad night. Two tetanic convulsions, affecting the muscles of the face, neck, and upper extremities, occurred during the night. Food by the mouth brought on a tendency to these convulsions, and rectal feeding was accordingly substituted. The temperature was 100·8°, the pulse was 120 and weak, and the respiration was 24 and laboured. 30 c.c. of antitoxin were injected under the skin of the thigh in three doses at 8 A.M., 12 noon, and 8 P.M. Several partial convulsions, as above described, occurred during the day, but never a general tetanic convulsion. All the symptoms became aggravated. The temperature went up steadily to 105°, the pulse could not be counted after 2 P M., and the patient was evidently dying. Death took place at 11 P.M., the temperature immediately after death being 108°.

Remarks by Dr. FELLOWS.—Although the incubation period was long—eleven days—the disease ran a rapid course, killing the patient in four days. The amputation appeared to delay the progress of the disease, but the course of the disease was apparently quite unmodified by the antitoxin. I should be glad if any readers of THE LANCET could inform me if the bacillus of tetanus has ever been discovered in the general circulation or anywhere in the body at a distance from the site of inoculation. The antitoxin used was that supplied by the British Institute of Preventive Medicine; it produced no local irritation or febrile reaction.

LIVERPOOL STANLEY HOSPITAL.

A CASE OF HERPES; GANGRENE; DEATH.

(Under the care of Mr. DOUGLAS CRAWFORD.)

FOR the notes of the case we are indebted to Mr. F. Deas, senior house surgeon.

A patient, aged four years, was brought to the out-patient department of the hospital on August 24th last. He was then suffering from well-marked herpes, which was limited very exactly to the area of skin supplied by the twelfth dorsal nerve on the left side.[1] The eruption had then been out for a little over a week and showed three characteristic stages. It had commenced near the middle line of the back and gradually spread round to the front. The lesions appeared first as groups of papules on an inflamed base; these soon became vesicular, and when seen many of the vesicles were purulent and many groups had coalesced. All three stages were well seen. None of the vesicles had yet burst. The inflammation was well marked and had spread slightly into neighbouring skin areas. The child complained of acute burning pain in the affected area. The mother said that before the rash came out the child complained of pain in the bottom of his back. The mother gave a syphilitic history, and the child showed many signs of congenital syphilis. The child was put on quinine mixture, and was also given two grains of pulvis hydrargyri cum cretâ every morning. A local application of weak lead lotion with liquor carbonis detergens was also ordered. Mr. Deas saw the child again a week later, and then all traces of the characteristic eruption had disappeared. Instead, the skin area affected presented many patches of gangrene varying in size from that of a threepenny-piece to that of a crown. The inflammation was intense in the patches of skin intervening between gangrenous portions. The child looked extremely ill, but did not appear to suffer much pain. The diseased skin gave forth a horrible necrotic odour. The mother refused to leave the child in the hospital, but brought him again two days later, when he was admitted. He was then evidently suffering from the effects of septic absorption. The gangrenous patches had nearly all coalesced. Every effort was made to get rid of the dead skin and subcutaneous tissue by removal and hot boracic fomentations, but the child never rallied and died from septic poisoning four days after admission. While in the hospital the temperature varied between 99° and 101° F.; just before death it was 102°. The patient had diarrhœa during the last two days.

Remarks by Mr. DEAS.—I suppose the gangrene to be due to vaso-motor paralysis, being a further stage of the cutaneous neuritis. Death from herpes zoster is rare in any case, though more or less extensive sloughing is not very uncommon. Probably the case would not have had a fatal termination had the child been left in the hospital at the commencement of the attack. Unfortunately the body was removed a few hours after death, and I could not get a post-mortem examination.

HERTFORD BRITISH HOSPITAL, PARIS.

RECOVERY UNDER DIGITALIS IN LARGE DOSES IN A CASE OF APPARENTLY IMMINENT DEATH.

(Under the care of Dr. ALAN HERBERT.)

IT is undoubtedly the fact that even small doses of digitalis will materially modify the action of the heart, strengthening the force of the contraction and diminishing the frequency of

[1] Vide Quain's Anatomy, vol. iii., part ii., p. 346.

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the beat, but it is often noticeable that this action of the drug does not manifest itself for two or three days after the commencement of the administration. When a more rapid effect is desired the amount of the dose must be increased, or, what is better, the same dose must be administered more frequently. The innocuousness of very large doses of digitalis under certain circumstances was first pointed out by Mr. Jones, of Jersey, who gave half an ounce of the tincture for delirium tremens, and repeated it if necessary after four hours and again in six hours. In many cases the effect was marvellous, the pulse improved, and sound sleep followed, but in a few cases sudden fatal collapse occurred, and it is probable that these fatal cases, though the death had not necessarily been the result of the digitalis, led to an almost complete disuse of these very large doses of digitalis. In Dr. Alan Herbert's very interesting case the failure of the heart was marked, and, as the result showed, it needed much larger doses of digitalis than are usually given. For the notes of the case we are indebted to Dr. A. A. Warden.

A man, aged forty-six years, was on Oct. 11th, 1897, admitted into the Hertford British Hospital, Paris, under the care of Dr. the Hon. Alan Herbert, in a state of extreme weakness, with a rapid, irregular heart, some œdema of the feet and hands, and passive congestion of both lungs. The patient had had "pleurisy" two years before and had been in hospital at that date with a definite though slight tuberculous lesion of the left lung. Little alteration, according to the nurse's report, took place in his condition until the evening, when Dr. Warden was suddenly sent for on account of an increasing difficulty in breathing. It required little more than a glance to grasp the fact that the man was apparently dying, and dying rapidly. His face was dusky and grey rather than livid, and, with his neck and chest, was bathed in perspiration. The loud tracheal rattle and laboured respiration as he rolled his head in distress from side to side made auscultation valueless. The cardiac impulse, however, irregular and soft, could be felt by the palm of the hand. His pulse was a mere flicker, exceedingly rapid and irregular both in force—an occasional beat being almost surprisingly strong to the finger on the radial artery—and in rhythm, many of the cardiac beats being apparently imperceptible at the wrist. His extremities, especially the legs, were cold. The nurse had at once given him half an ounce of brandy, which, however, was promptly vomited with some slops taken about an hour before. The patient had spent the previous week in Paris, out of work, with practically nothing to live on, and, medically speaking, altogether untreated. So far, therefore, therapeutics had a fair field. At once a hypodermic injection of $\frac{1}{15}$ gr. of strychnine was given, and almost immediately a second injection of 30 minims of ether, while half an ounce of brandy was given by the mouth. This happily was retained, as was all further medicine. Two mustard leaves (about 5 in. by 3 in.) were applied over the heart and six mustard leaves upon each leg along the thighs and calves, with hot bottles to the feet. He was then put upon 20 minims of the tincture of digitalis in 2 teaspoonfuls of brandy every quarter of an hour. These measures were continued, with some irregularity owing to the patient's condition and the difficulty in getting him to swallow the stimulant, from 8.45 P.M. until midnight. In the space of these three and a quarter hours he had taken 3 dr. of the tincture of digitalis and 2$\frac{1}{2}$ oz. of brandy. The result at that hour was appreciable, and as he complained of intense headache and there seemed nothing to gain by supplying stimulant more rapidly than it could be absorbed both the digitalis and the brandy were stopped and milk and soda-water given to relieve his thirst. At 2 A.M. his condition had vastly improved, his respiration being deeper and less laboured, the tracheal rattle less distressing and loud, and the pulse, though scarcely less rapid, was far more regular both in rhythm and in force. His bowels were moved four times in the course of the night, twice spontaneously, the patient being too weak to call forth the action of his sphincters. A specimen of urine which was passed was found to be very smoky and blood-coloured, and the microscope showed abundant red corpuscles. No casts could be detected, but a small amount of albumin was present, such as might have been entirely due to the amount of blood present. The urine was alkaline in reaction, with a specific gravity of 1012. About 4 A.M. he vomited twice, but it immediately followed a drink of milk and soda-water and was not even tinged yellow, as might have been expected. At 9 A.M. he was evidently out of immediate danger. On the evening of Oct. 12th his temperature rose to 101·2°, his pulse varying through the day from 104 to 130 beats per minute. The hæmaturia continued, 20 oz. of urine being passed in the first eighteen hours, some, however, being lost on account of the diarrhœa present. By the 14th his temperature had fallen to normal, his pulse was beating steadily at from 86 to 92 per minute, the urine amounted to 70 oz. in the twenty-four hours, and the lungs were very much clearer.

Remarks by Dr. WARDEN.—I venture to call attention to the following points and would be grateful for the opinion of any therapeutic *maitre* upon them: 1. The digitalis did not slow the pulse so much as it regulated it in every way. It cannot be said to have caused the vomiting which occurred, and the diarrhœa certainly began before the patient had taken more than 30 minims and had quite ceased by the morning of Oct. 12th. Headache and thirst, both of an extreme degree, seemed to follow the use of the drug. Had he vomited recourse must have been had to hypodermic injections of digitalin. 2. The apparent innocence of such doses—toxic according to the British Pharmacopœia; huge according to the general practice of the day—suggests the query, still unanswered satisfactorily I think, Is the regulation dose of 5 or 10 minims three times a day sufficient to affect appreciably the human heart? 3. Can the somewhat heroic treatment so hastily put in force account for the hæmorrhage from the kidneys which, in all probability, were in a state of passive congestion? That there was no vesical congestion is proved by the tolerance of distension shown by the bladder.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Calcareous Metamorphosis of the Tracheal Lymphatic Glands leading to Perforation of the Arch of the Aorta.—Pathology of Pernicious Malarial Fevers.

A MEETING of this society was held on Oct. 26th, the President, Dr. HOWSHIP DICKINSON, being in the chair.

Dr. SIDNEY PHILLIPS read a paper on a case of Calcareous Metamorphosis of the Tracheal Lymphatic Glands, leading to Mediastinal Abscess and the Formation of a Bronchial Fistula and to Perforation of the Arch of the Aorta. The patient was a man, twenty-six years of age, who during two years before the onset of chest symptoms had suffered from several attacks of rheumatism. In 1887 while riding he was seized with intense pain round the right third intercostal space, with hyperæsthesia of the skin of the chest as far down as the sixth rib without any physical signs of disease in the chest. Eleven days later he had a series of rigors followed by sustained pyrexia, the pain continuing. There was a little friction heard on the eleventh day at the left back, and a month later incessant spasmodic dry cough due to irritation of the laryngeal nerves. Suddenly pleuritic effusion occurred into the left pleura and repeated aspiration of clear fluid was necessary. Later there was evidence of the existence of the free air in the pleural cavity and for the first time a small quantity of pus was expectorated. As his breathing was much embarrassed and there were frequent syncopal attacks which threatened life a free incision was made by Mr. Godlee into the pleural cavity and fluid was evacuated. The patient's condition at once improved and he gradually returned to a fair condition of health. He continued well except for some wheeziness of breathing until eighteen months later, when he had sudden severe hæmoptysis. This occurred again and again during a period of eighteen months, till he died from hemiplegia. The necropsy showed the presence of a small tumour at the tracheal bifurcation composed of adherent calcareous glands. In the substance of this tumour an abscess had formed and discharged through the right bronchus, leaving a permanent fistulous opening into it. A perforation had also been formed by erosion between the calcareous mass and the arch of the aorta, the aorta being thus brought into communication with the abscess cavity, and so indirectly with the bronchus. Dr. Phillips commented on the difficulties of diagnosis, and on the remarkable fact that an aperture should have existed for

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so many months in the aorta only a few inches from the heart without causing death earlier.

Dr. THIN contributed a paper on the Pathology of the Pernicious Malarial Fevers of Sierra Leone. In February, 1896, Dr. Thin contributed to the society a note on the appearances found in the tissues in a fatal case of pernicious malaria at Sierra Leone. Since then he had examined tissues in three additional cases of pernicious malaria occurring at Sierra Leone, and in a case of pericarditis not complicated with malaria. In the case of pericarditis no parasite and none of the effects produced by the parasite of malaria were found. He described in detail the condition of the tissues in the three additional cases of malarial poisoning, and summarised the results found in these and the previous case. In the pernicious malarial fevers of Sierra Leone the disease is caused by the development of very great numbers of parasites in the capillaries of the brain. Each parasite in its earliest stage is a very minute, round, nucleated, protoplasmic structure, the diameter of which is about a fourth or a fifth of that of the red corpuscle. As it develops from three to five and sometimes a greater number of spores are formed. The sporulating parasite is comparatively small, in sections of hardened and shrunk tissue not filling more than from a third to one-half of the red corpuscle, and with a disproportionately large amount of central pigment. Small cerebral hæmorrhages are sometimes found surrounding a blood-vessel which contains parasites, the wall of the vessel being probably weakened as a result of the degeneration of the endothelium which is associated with the absorption of pigment. Very few parasites were found in other organs, and these only in the early stage. The veins of the brain and pia mater contain large numbers of white corpuscles loaded with pigment and débris of the parasite The splenic pulp contains great numbers of pigment-laden white corpuscles, which are also found in considerable numbers in the splenic veins and perivascular lymphatic spaces. The lymphoid tissue of the spleen contains very few, and the Malpighian corpuscles none. The blood-vessels of the liver are more or less congested. In one case the capillaries were very greatly distended with blood. The endothelial cells of the capillaries in the liver contain much pigment, and those that contain pigment are degenerated and broken up. Pigment is found outside the capillary wall accumulating in blocks, and very large blocks are found in the interlobular perivascular spaces, presumably partly or entirely in lymphatic vessels, although the walls of such vessels were not seen in the sections. Pigment is also taken up by the liver cells, and the liver cells so affected undergo changes. The first stage in the morbid process is an enormous production of parasites in the brain. The last stage is an accumulation of pigment in the interlobular tissue of the liver, where in cases that recover it is probably destroyed and absorbed. Morphologically, the parasite of these fevers is distinct from the parasites of the quartan and tertian fevers and resembles that described by Marchiafava in the summer-autumn fevers of Southern Italy. The appearances in the spleen and liver correspond with those described by Bignami in fatal cases of malarial fever in Italy, but in the Sierra Leone cases no formation of crescent bodies had taken place up to the time of death, and none of the characteristic appearances in young parasites which are associated with a subsequent development of crescents were observed. Nothing was seen that would indicate that the blood in the spleen was more infected than the peripheral blood, or that the splenic tissue was a special nidus for the parasite. In the four cases examined the breeding place was the brain, which accounts for the symptoms observed during life. In connexion with the special selection of the brain by this parasite Dr. Thin called attention to the comparatively small size of the cerebral capillaries, their calibre not being much more than half that of the capillaries of the other parts of the body, and being scarcely equal to that of a red corpuscle. It is known that the infected red corpuscle adheres to the vascular wall, as is seen in the small veins. This tendency to adhere to the capillary endothelium, in conjunction with the small calibre of the cerebral capillaries, must favour their being blocked by the infected corpuscles. Dr. Thin suggested that the arrest of the infected corpuscles in these fevers in the brain capillaries, while the infected corpuscles in tertian and quartan fevers are not arrested in them, may be due to the greater toxicity of the parasite in these fevers which affects the red corpuscles more severely and renders them more adherent to the endothelium. The blocking once begun will be furthered by the short cycle of development of the parasite — Dr. N. DALTON said that at the meeting of the British Medical Association at Bristol in 1894 he had shown sections of the liver in pernicious cases of malaria in which he had demonstrated the same changes in the endothelium and pigmentation of the connective tissue that Dr. Thin had now shown in association with the life-history of the parasite. The dilatation of the capillaries appeared to be permanent, the cells being found flattened just as in nutmeg liver, and he thought that the condition might lead to the development of interlobular cirrhosis. Possibly the extensive blocking of capillaries described might account for the cases in which high arterial tension without kidney disease was found after long residence in malarial districts.—Dr. JOHN ANDERSON said that information was wanted to explain the abundance of the parasites in the capillaries of the brain in these pernicious cases. In the anomalous cases which were described as a typho-malarial type, and which yielded so slightly to quinine, he thought that cerebral symptoms were more frequent than in the ordinary tertian and quartan forms. He mentioned two cases of people who had returned home after suffering severely from severe forms of malaria abroad, and were now liable to cerebral complications when there was any return of fever, one patient having intense pain in the head, and often delirium, and the other severe vertigo. He found these severe cases apt to resist quinine, but they yielded to arsenic. He often gave very large doses, as much as a drachm, of the liquor sodæ arseniatis three times a day, and the drug was well tolerated. Such doses had also been found useful in pernicious cases by Sir Anthony Home in the Ashanti campaign of 1873, and by Surgeon-General Taylor in the recent Ashanti expedition.—Dr. THIN said that there was a general consensus of opinion that in the pernicious forms of West African fever quinine in large doses was the best remedy. As much as twenty grains might be given every two hours. Unless large quantities of the drug were quickly introduced to kill the parasites they would destroy the patient. What was wanted was some preparation of quinine which could be injected subcutaneously without causing pain. Baccelli had used intravenous injections in some severe cases of Roman fever. He thought that the best treatment of people who were subject to a return of malaria was the continuous administration of moderate doses of quinine and arsenic. There was a troublesome group of patients who were invalided home with "climatic debility" who had never had any rise of temperature and were not supposed to have had malaria, but a prolonged examination of the blood rarely failed to show the presence of the parasite.

MEDICAL SOCIETY OF LONDON.

The Localisation of Rheumatism and Chorea.

A MEETING of this society was held on Oct. 25th, the President, Dr. SANSOM, being in the chair.

Dr. CHURTON (Leeds) read a paper on the Localisation of Rheumatism and Chorea. He said there were nearly 600 cases tabulated, and the state of health before the attack, the assigned causation, and the joints first affected, the occurrence of acetonuria, indicanuria, and constipation were noted. The previous health was decidedly not good in a great majority of cases; when alleged by the patient to be good it was far from perfect, and usually meant that he was not absolutely incapable of work. The causes assigned were chiefly wettings and injuries; in some of the cases in which no causation could be assigned indicanuria was found. It was constantly observed that the joints of those limbs which were chilled or injured were the first to suffer. There was no positive exception to this rule, although in a few cases—probably owing to imperfect information—there were apparent exceptions. But a case which recently occurred showed the necessity for caution A girl, aged twenty years, whose disease began with pain in or about the right lower ribs, was quite unable to give any reason for this until repeated examinations of herself and her friends elicited the fact that after four weeks of unusually hard work at a mill three miles from her home she had hurriedly washed her head and chest one morning at six o'clock, dried her hair very imperfectly, had no time for breakfast, ran most of the way to the mill, worked from 7.30 A.M. to 2.30 P.M.

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without food, and then walked home extremely tired. The same evening pain in the side and all over the head began; afterwards her shoulders and other joints were affected. In 21 cases of rheumatism in 1896 when more care was taken in sifting the evidence obtained, 14 clearly displayed the relation; in 7 it was not precise. In 3 it was a damp house; in 1 it was damp clothing; in another case the patient was a negro circus rider; in another case a miner; in the seventh the patient was a child addicted to eating sweets and ices; she had rheumatism in the lower limbs; acetone was abundant in the urine. The "toxin-local injury" theory of rheumatism had been held by Sir Dyce Duckworth and others. The toxin may perhaps be glycocine (Latham); if so the microorganism would not be found where it has been sought—in the blood, joints, &c. Moreover, disorder of the digestive epithelia and muscles may well be caused by shock to the brain; hence the rheumatic toxin may hereafter be found to be caused indirectly and the localisation of its effects directly by the same shock, or the latter by either simultaneous or subsequent chills or injuries. In 150 cases of chorea tabulated it was with respect to most of them impossible to reply to the questions—How is the connexion of the chorea with rheumatism shown? And even when the patient was admittedly rheumatic, why was the action of the toxin diverted to the brain? A few of the cases, however, showed the localising power of shock in rheumatic patients, thus bringing chorea more sharply into line with arthritis in this respect. Case 1. A man, aged twenty-three years, had chorea when eleven years old. In June, 1896, he had rheumatism of the knees. After a quarrel chorea began. Case 2. A boy, aged fourteen years, had been ill ten weeks with rheumatic fever. A school-board officer hurried him to school during convalescence; in a fortnight chorea appeared. 3. A boy, aged nine years, had had rheumatic fever twice. On Dec. 1st, 1891, he was startled by a man leaping out of an ash-pit in the dark and seizing his arm; chorea began next day, and two or three days afterwards arthritis. Case 4. A man, aged eighteen years, in October, 1895, had subacute arthritis in the knees after kneeling in wet sand. He had nearly recovered when he quarrelled violently with a relative; next day chorea appeared in the right face and limbs. Three days after this the right hand was painful and swollen for five days, when the chorea and pain were nearly gone. Another quarrel then occurred; next day chorea returned in the right hand and quickly spread through all the limbs. In a girl, aged eighteen years, the child of an alcoholic father, overwork in an insanitary house was followed by chorea and arthritis. She became sullen and apparently insane, but recovered under the free administration of port wine after failure of other means including inhalation of chloroform with morphia hypodermically. In the cases tabulated there was no instance of chorea primarily caused by chill and no case of arthritis primarily caused by fright.

Dr. STEPHEN MACKENZIE said that the investigation of rheumatism up to the present had been largely statistical. The method of detailed examination of individual cases adopted by Dr. Churton in his paper would be of the greatest value to future investigators. Dr. Cheadle in his book on Rheumatism in Childhood had shown the sequence of events that occurred in rheumatism traced through the life of several patients. He agreed that rheumatism was not expressed only by arthritis and pyrexia, but by inflammations of the serous membranes, cutaneous eruptions, subcutaneous nodules, and, of course, chorea. The localising effect of various causes had been brought out by Dr. Churton. He agreed that, as a rule, chill and wetting determined affection of the joints, while cases of chorea were chiefly excited by fright. Another localising factor was the age of the patient, chorea being common in children, while arthritis was rare. Possibly the occurrence of chorea in growing children was largely due to the instability of the brain during the period of rapid development, but he knew of no reason for the incidence on the joints in adults. Apart from any possible microbic infection there was in many persons an inherited proclivity to rheumatism. With regard to the previous history of the patients he had been struck with the infrequency of anæmia as an antecedent, although it so often followed as an effect. He expressed his emphatic belief that chorea and arthritis were equally manifestations of rheumatism, although the term rheumatism still required to be defined.

Dr. ARCHIBALD GARROD thought that the localising influence of an exciting cause was seen in an even more striking manner in gout than in rheumatism. He quoted two cases in one of which an attack of gouty eczema followed the application of belladonna liniment and in the other a severe gouty inflammation of the pinna occurred after the ear had been syringed. The grouping of rheumatic manifestations was curious. Chorea and endocarditis were frequently found together, and erythema often occurred in association with arthritis, but erythema was rarely complicated by endocarditis. Pericarditis was nearly always present in severe cases, such as those accompanied by much pyrexia or rheumatic pneumonia. He thought that injury and excessive exertion were very important factors in the localisation of the joint affection. With regard to the influence of fright as an exciting cause of chorea it should be remembered that an emotional condition was as much a symptom of chorea as the motor disturbance, and it was often the emotional condition produced by the chorea that caused the child to be severely frightened by a quite inadequate cause. A history of rheumatism was often unobtainable in cases of chorea, but in children rheumatism was often latent as in one case under his observation in which for four years the only indication of rheumatism was the occurrence of successive crops of rheumatic nodules.

The PRESIDENT read a letter from Sir Dyce Duckworth expressing the strong conviction that arthritis and chorea were two manifestations of the same morbid process. The President added that he himself did not share that view.

Dr. C. W. CHAPMAN quoted a case in which fatal chorea in an adult followed his being garroted.

Dr. C. H. F. ROUTH referred to the changes of type of rheumatism, gout, and other diseases that had occurred within his recollection. He believed that both rheumatism and chorea were due to some acid circulating in the blood, and that they were best treated by the free administration of alkalies. He believed that climatic influences and atmospheric electricity were important factors.

Dr. FLETCHER LITTLE observed that it was often difficult to trace the localising factor and quoted the case of twin sisters who both suffered from neurasthenia and one of them developed arthritis in all her joints, while the other, although exposed to precisely the same influences, remained entirely free from joint trouble. He remarked on the occurrence of epidemics of chorea without special climatic conditions; he thought that there was also an epidemic tendency noticeable in the occurrence of rheumatism as a complication of scarlet fever.

Dr. CHURTON, in replying, mentioned a case in which right brachial monochorea followed a blow on the left side of the head. Dr. Mackenzie's reference to anæmia as a post-rheumatic symptom suggested that anæmia may be one of the signs of pre-existing rheumatic poisoning in choreic children. The cloudy swelling of the pyramidal brain cells mentioned by Sir Dyce Duckworth was strongly suggestive of irritation by a toxin. Probably the urine would hereafter supply further evidence. In heredity the patient's proclivities to disease did not follow those of the parents at random, but only the proclivities of the parent whom the patient most closely resembled.

CLINICAL SOCIETY OF LONDON.

Congenital Dislocation of Both Hips on to the Pubes — Primary Tuberculosis of the Nares — Nævus of the Frontal Region. — Hemiplegia in an Infant — Paraplegia with Multiple Subcutaneous Tumours. — One-sided Blushing on Eating. — Pylorectomy for Cancer of the Pylorus. — Coxa Vara in an Adolescent.

A CLINICAL meeting of this society was held on Oct. 22nd, the President, Mr. LANGTON, being in the chair.

Mr. W. H. BATTLE showed a female infant, twelve months of age, with Congenital Dislocation of Both Hips on to the Pubes and Congenital Dislocation of the Right Humerus. The child was born after breech presentation, but he was unable to say if there had been any injury at birth. The child lay on her back with both thighs abducted and everted. There was very little difference in the attitude of the two limbs; the groins appeared full, while the buttocks were flat. When the child was lifted up the thighs remained abducted and everted. There were signs of an acetabulum of the right side, but none had been discovered on the left. On the right side the dislocation could easily be reduced,

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but it immediately returned. On the left side the head remained on the pubes and was apparently ill-formed. There was also a sub-coracoid dislocation of the right humerus with atrophy of its upper end.—Mr. JACKSON CLARKE said that in specimens which had been dissected there had usually been an acetabulum, although only a small one. He thought that this was a suitable case for Lorenz's operation, if it were performed early.—Mr. MAKINS remarked that the dislocation in all three joints was forward. It was difficult to see how injury at birth could have produced them.—The PRESIDENT observed that for some reason these cases were much more common among female children.

Dr. ST. CLAIR THOMSON showed a woman, aged twenty-five years, who about two years ago began to suffer from nasal discharge and blocking of the right nasal passage. She then presented a smooth, bluish-pink, sessile growth the size of half a filbert on the right nasal septum, which was removed, and when examined histologically was found to be a tuberculous growth, though no bacilli were discovered. The growth had begun to caseate and break down in the centre. A year ago the tuberculous deposit had spread through to the left side, appearing there as a pale pink uneven outgrowth. She was treated with repeated curetting and application of lactic acid to the septum and inferior turbinal on either side. She also had three injections of Koch's tuberculin about a year ago. The patient had come under Dr. Thomson's care six months ago. She then had a perforation of the cartilaginous septum, pale indolent ulceration of both inferior turbinals, and in the centre of the buccal pharynx was a flat swelling about the size of a shilling with an ulcerating surface. There was an adhesion between the left inferior turbinal and the septum, and the perforation in the septum was surrounded by pale hypertrophic tissue covered by crusts. A portion of this was removed with a snare, and the sections—which were placed under the microscope—showed it to be infiltrated with tubercle, the giant-cell systems being well marked with foci of caseation. Sections were stained and examined for tubercle bacilli, but after prolonged search no bacilli were detected. Applications of lactic acid set up some reaction and excited adhesions between the opposite sides, so that everything was abandoned locally except cleansing alkaline lotions. The upper part of the pharynx being atrophic from the interference with the normal functions of the nose daily applications of Mandl's solution of iodine and iodide of potassium were ordered. Under this treatment the pharynx had considerably improved; the tuberculous thickening had shrunk considerably, while the abraded surface was not as large as a threepenny-piece. The improvement to the pharynx was so decided that the same iodine preparation was applied to the inside of the nose, pledgets of cotton-wool being soaked in it and left *in situ* on either side for from five to ten minutes. The patient was healthy-looking and there was no trace of trouble in her lungs. She had admitted being addicted to the habit of picking her nose, and he suggested that this had opened the door to infection. — Dr. SCANES SPICER said that he had examined the nose and could not satisfy himself that the lesion was tuberculous. There was much hypertrophic growth about the septum, but it did not appear to be more than ordinary granulation tissue, which it would relieve the patient to have removed.—Dr. KINGSTON FOWLER protested against an absolute diagnosis that a tissue was tuberculous if, as in this case, no tubercle bacilli were found. Structures indistinguishable from typical "tubercle follicles" were found in other conditions. It had been mentioned that tubercle bacilli were usually present in the nostrils, but he thought that this was open to question.—Dr. WHITFIELD thought that the fact that the patient had reacted to Koch's "old" tuberculin was in favour of the lesion being tuberculous. He suggested that Koch's "new" tuberculin should be tried.—Dr. ST. CLAIR THOMSON, in reply, remarked that in lupus there was often the greatest difficulty in demonstrating the tubercle bacillus. In his case he thought that the pathological and clinical evidence justified a diagnosis of tubercle.

Dr. ST. CLAIR THOMSON also showed a man with a very distensible Nævus of the Frontal Region, with Defect in the Subjacent Bone. The patient was a man, fifty years of age, and in the centre of his forehead was a vertical, depressed, bluish, cicatrix-like surface, about half an inch in length and a quarter of an inch in width. Beneath its surface the smooth, level frontal bone could be felt to be replaced by a depressed surface, which was rough and tender. To the left of this, starting from above the left of the glabella and passing obliquely upwards and outwards for one and a half inches, the skin was seen to be bluish and wrinkled, with a central, somewhat puckered depression. On palpation the bone immediately below this nævus was felt to be hollowed out, the rough floor of the hollow being some depth below the ordinary level of the frontal bone and very tender to the touch. When the patient talked this blue depressed surface was seen gradually to unfold itself and to rise above the level of the adjoining skin; if he strained in any way or blew his nose it swelled out into a round, blue tumour as big as a pigeon's egg. The patient had himself observed that it was always very prominent if he got in a passion. The smaller central nævus also became prominent, but to a lesser degree. There was no pulsation or thrill over this nævus. It was thought at first that there might be a complete defect of the anterior wall of the frontal sinus, and that the swelling was due to the distension of the frontal sinus with air, but there was no tympanic resonance over the swelling, and it could not be distended with air inflated into the nose with a Politzer's bag while the patient swallowed or held his breath. He was therefore disposed to think that either the whole of the anterior wall of the frontal sinus was not affected or else that this curious defect in the bone was not situated over the frontal sinus, but that it involved only the outer table of the frontal bone higher up than the situation of the sinus.

Dr. BERTRAM ABRAHAMS showed a child, two years of age, suffering from Hemiplegia. The hemiplegia occurred during the first few days of whooping-cough, but at the time the cough was by no means severe. The onset was sudden. One evening she was seized with an attack of right-sided convulsions and was unconscious; the pupils were dilated and insensitive to light, and there was marked nystagmus. There were several slight convulsions on the following day. The temperature during the convulsive attack was 103° F. A day or two later she presented complete right hemiplegia and aphasia. There was at present partial hemiplegia, more recovery having taken place in the leg than in the arm. The heart was normal, but there was slight albuminuria. Dr. Abrahams thought that the balance of evidence was more in favour of hæmorrhage than embolism. — Dr. G. A. SUTHERLAND recalled a case in which the onset was very like that described in this case, but which turned out to be one of tuberculous meningitis with an acute onset. He thought that hæmorrhage in the brain often occurred when the cough was of quite moderate intensity.

Dr. JAMES COLLIER showed for Dr. BUZZARD a man, thirty years of age, suffering from Paraplegia with Multiple Subcutaneous Tumours. Two years previously the patient complained of pain and stiffness in the left leg and afterwards in both legs. The paraplegia had slowly increased since that time. Soon after the onset painless nodular subcutaneous tumours developed and slowly increased, becoming as large as a Spanish nut. They were situated over both trochanters, over the ulna on both sides, and over the right external malleolus on both sides. Under iodide of potassium the nodules over the ulna and the fibula had disappeared, but those over the trochanters had persisted. In addition to the spastic paraplegia there was some loss of control over the sphincters and there was anæsthesia over areas corresponding to the fourth and fifth sacral and fifth lumbar roots on the left side. A history of syphilis could not be elicited, but there was evidence of past iritis. The administration of large doses of mercury and iodide of potassium during the last month had not been followed by any improvement in the paraplegia or any diminution in the size of the tumours.—The PRESIDENT regarded the case as one of syphilitic disease of certain adventitious bursæ. Under iodide of potassium such tumours usually subsided to some extent, although they rarely disappeared.—Sir DYCE DUCKWORTH also thought that the case was one of late syphilis.

Dr. PARKES WEBER showed a curious case of One-sided Blushing on Eating. The patient was a young man who exhibited a curious localised blush on the left cheek on eating associated with sweating over the corresponding area. The blush involved the ear, which, however, did not perspire. Mere masticatory movements did not produce the blush, but putting vinegar into the mouth without moving the jaws brought it out. The patient had formerly a suppurating gland behind the ear, and Dr. Weber presumed that some of the vaso-constrictor branches of the cervical

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sympathetic were involved in the scar, so that when the parotid gland became distended under the stimulus of mastication it dragged upon or compressed these branches.

Mr. L. A. DUNN showed a man, fifty years of age, on whom he had performed Pylorectomy for Cancer of the Pylorus. He was admitted with an enormously distended stomach, and on palpation a tumour was felt in the region of the pylorus. On cutting down a growth the size of a small orange, which was quite free, was found and removed, and then, closing the divided end of the stomach, a communication was established with the duodenum by the aid of a Murphy's button. This was passed without difficulty on the eighteenth day, and the patient recovered without giving them any anxiety. He had since gained three stones in weight, and was apparently in perfect health.

Mr. ABBOTT showed a lad, sixteen years of age, a patient under the care of Mr. Clutton, suffering from Symmetrical Coxa Vara. He presented nothing peculiar in his gait until about a year ago, when, a few days after a fall from a van which did not give rise to any obvious pain or injury at the time, he began to experience some difficulty in walking. The stiffness in the hips had increased so that in the course of three months he had to give up work. He now only complained of stiffness, and he walked with a kind of waddle, with everted knees. There was symmetrical eversion of the lower limbs, with great limitation of inversion, flexion, and especially of abduction, while adduction had remained quite free. The great trochanter was not above Nélaton's line. There were no creaking in the joints, no osteophytic growths, and no pain on palpation or movement. Skiagraphs showed that there was shortening of the neck of the femur. He regarded it as a case of coxa vara coming on in adolescence.—Mr. MAKINS observed that in genu valgum of adolescents the bone was usually very soft and largely decalcified.

HARVEIAN SOCIETY OF LONDON.

The Use of Large Doses of Creosote in Phthisis.—Unusually Large Tuberculous Glands.—Varicose Veins in Both Legs complicated with Eczema.—Arthritis.—"Massage Chain."

A MEETING of this society was held on Oct. 21st, Dr. MILSON, the President, being in the chair.

Dr. CLIFFORD BEALE read a paper on Recent Experience of the Use of Large Doses of Creosote in Consumptive Cases, and gave an account of a series of cases of incipient tuberculous disease of the lung and another series of the more chronic forms of disease. The patients had been treated with doses of pure beechwood creosote dissolved in cod-liver oil, beginning with three or five minims, the same amount being added to the previous dose every alternate day until a maximum of 180 or 160 minims per diem was reached. He had found that of all the methods of giving the drug this appeared to be the least objectionable to the patient. The results achieved had been highly satisfactory and in some cases most striking, the most marked effects being produced when the larger range of dose was reached. The fall in temperature, gain of weight, and general subsidence of symptoms had in many instances been surprising, and seemed to be more definite and lasting than the degree of improvement commonly observed as the result of hygienic treatment only. Contrary to expectation, no complaint was made by the large majority of the patients of the smell of the drug, and it was probable, both from clinical observation and chemical experiment, that the creosote was very rapidly broken up in the stomach, possibly forming a more stable compound, in which form it was excreted very freely and rapidly by the kidneys. Its presence could only be detected in the urine after further distillation with strong sulphuric acid. In many instances the patients passed blackened or greenish urine, but it could not be ascertained that either the quantity or chemical composition of the urine was otherwise materially altered, and there were no unpleasant symptoms attending the altered colour of the excretion. Further chemical investigation was, however, necessary to explain some of the changes which the drug undergoes in the body. As a result of purely empirical use it appeared that an amount of success was to be obtained by its employment, especially in the early cases, which was quite equal to, if not better than, the results obtained by the more specialised preparations such as guaiacol and its carbonate, and it was evident that it could be well tolerated when dissolved in cod-liver oil, and hence the painful and unpleasant methods of introduction, such as subcutaneous or rectal or tracheal injection, were rendered unnecessary. The drug was not to be regarded as in any sense a specific remedy for the disease, but rather as a valuable adjunct to the many existing methods of hygienic treatment at present in use.—Dr. ST. CLAIR THOMSON said that his personal experience was limited, and if he were to quote it it would doubtless show that every patient who had recovered or improved had taken creosote. But whether such patients recovered because they were taking creosote, or in spite of having had that drug prescribed, would be a very difficult question to answer. However, he was able to quote the much more valuable experiences which he had heard of this summer when visiting the well-known sanatorium for phthisical patients founded by Dr. Dettweiler at Falkenstein in the Taunus Mountains. The patients in this institution belonged to the well-to-do classes, and the resident physicians had most exceptional opportunities for observing the effect of any drug. Creosote had there been given a thorough trial, and had now been completely abandoned along with tuberculin and all other specific remedies. Small doses were occasionally given, but merely for their effect on the digestive system. Treatment at Falkenstein was entirely symptomatic, and general dietetic and hygienic influences were the only remedies relied on. He suggested that in Dr. Beale's cases the improvement might be due to the rest and good food which the patients obtained in the well-ventilated wards of a chest hospital. Before attributing any virtue to the creosote it would be necessary to see the results obtained in an equal number of similar cases, treated in exactly the same way, but with the creosote omitted.—Dr. STAMFORD G. FELCE inquired whether Dr. Clifford Beale used creosote of any particular manufacture, as he had found the results vary greatly with different specimens of the drug, which, though occasionally well borne, was in a large percentage of cases not tolerated by the stomach. As commercial creosote is a more or less variable mixture, containing toxic cresols, paracresols, and pyrogallol, it seemed to him more rational to use a drug which, possessing equal efficiency, is of a definite chemical constitution—a condition that is fulfilled by guaiacol carbonate; in a fairly large series of phthisical patients he had found this drug well tolerated, and in suitable cases frequently beneficial.—Dr. WILLIAM SQUIRE, Dr. CLEVELAND, and others also took part in the debate.

Mr. EDGAR G. BULLEID showed a case of Unusually Large Tuberculous Glands removed by him from the Right Axilla in a young man, aged twenty-three years.

Dr. ALFRED EDDOWES showed a case of Varicose Veins in Both Legs complicated with Eczema. The patient, a young man, had had several veins excised a few years ago at King's College Hospital with little or no benefit. Dr. Eddowes therefore wished to know whether surgeons had found excision of such veins so generally satisfactory as to justify him in urging this patient to submit to further operation, notwithstanding the first disappointment. If those present could not hold out good hopes of success he intended to adopt a plan of his own which had given him good results. Having cured the eczema—an easy matter in this case—he would cleanse the skin, dust it over with a permanent antiseptic such as calomel, and apply well-fitting elastic stockings, to be worn night and day for two or three months without intermission.

Dr. KNOWSLEY SIBLEY showed a case of Arthritis in a man, fifty-nine years of age, who had been sent to him at the North-West London Hospital by Dr. Macevoy for the Tallerman hot-air treatment. As a small child the patient suffered from scrofulous disease of both hip-joints, which had left scars from healed sinuses over both greater trochanters. When seven years old he went to work in a brickfield and was able to run and jump as well as any boy of his age. He continued at heavy labourer's work until last spring, when he found his hips were becoming stiff and he was unable to bend down as formerly. He was soon compelled to give up work and had been getting gradually worse ever since. At the present time the patient had little or no pain, but he could only just raise his feet from the ground; he walked with his back bent forward from the lumbar region, and was unable to cross his legs when sitting down. He had had only three baths and said that his movements were already much freer and he was able to get about better.

Dr. SIBLEY also showed a new apparatus known as a "Massage Chain," which had been sent to him by a friend

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in Germany some six months ago, and he had given it a trial at the hospital. The chain consisted of a series of small revolving wooden balls with a handle at either end. It was used by holding one handle in each hand and giving a to-and-fro movement over any part of the body to which it was desirous to apply massage.

OPHTHALMOLOGICAL SOCIETY.

Some Experiments on the Union of Corneal Wounds.—Dislocation of Lens; Couching; Recovery.—Exhibition of Specimens.

THE first general meeting of this society for the present session was held on Oct. 21st, Mr. H. R. SWANZY, President being in the chair.

After thanking the society for the honour conferred upon him in his election to the Presidency, Mr. SWANZY proceeded to consider some Congenital Cases of Disturbed Association of Muscular Action, Coloboma, and Microcephalus with Proptosis, the last being illustrated by lantern slides.

Mr. ERNEST CLARKE related the results of some Experiments on the Union of Corneal Wounds, consisting of various operations on the cornea of rabbits whereby the anterior chamber was completely emptied of aqueous with the view of ascertaining the time taken by these wounds in uniting sufficiently to allow the anterior chamber to be re-formed. Descriptions of the methods adopted in operating and preserving the specimens were given. Two classes of experiments were performed. In the first class the animal was kept under an anæsthetic and killed. The anterior chamber was found to be present in two minutes, and fully re-formed in twenty-five minutes. In the second class the animal was allowed to recover and, after varying intervals, ranging from half an hour to two and a half hours, again placed under an anæsthetic and killed. The movements of the animal caused delay in the re-formation of the anterior chamber. The average time was one and a half hours. Wounds at the upper margin united most rapidly with less scar. Wounds across the centre of the cornea and at the lower margin took longer to repair and made a larger scar. The rapidity with which the anterior chamber was re-formed suggested that, if during an operation on the eye where the presence of the aqueous was necessary, this aqueous were accidentally lost, the eye should be bandaged and the continuance of the operation postponed only for half an hour at the outside, instead of postponing it until the next day as was generally done. The experiments also showed the great influence that rest had on the process of repair, and emphasised the importance of keeping patients absolutely quiet for the first few hours after an eye operation. The PRESIDENT, commenting on the value of these experiments, said that their interest would have been still further increased if it could have been determined how soon a wound in the cornea, which had undergone primary adhesion, became impervious to the entrance of infective organisms.—In reply to questions by Dr. ARGYLL-ROBERTSON, Dr. BATTEN, Mr. P. SMITH, and Mr D. MARSHALL, Mr. CLARKE said that the size of the wound was that of a full-sized keratome, 4 to 6 mm.; the eyes were looked at within a few minutes of the incision and conjunctival flaps had been avoided in order not to complicate the experiments.

Mr. T. H. BICKERTON related a case of Congenitally Misplaced Lenses, which became dislocated spontaneously into the anterior chamber. Couching was followed by recovery of perfect vision. The patient was a male, aged twenty-eight years. He had been short-sighted since infancy; at fourteen years of age he had attacks of giddiness, which caused him to fall and injure his forehead. At the age of nineteen years he began glasses: R—6·5 D., L.—6 D He was first seen in December, 1887. At that time the iris was tremulous; the lens was dislocated into the vitreous in each eye: V. R c. +10 D. = $\frac{6}{6}$; L.c +10 D. = $\frac{6}{24}$. On reading the refraction was entirely different: J. 1 at 3½—4 in.; he looked through the displaced lens. In 1893 he suddenly went blind in the left eye, but the vision was restored next morning. He had two more attacks of the same nature afterwards; during the last one eserine was used, and the eye did not recover as it had previously done. When seen after this occurrence in December, 1893, there were pain and congestion and the clear lens nearly filled the anterior chamber. The unsatisfactory results obtained from extracting such lenses and the knowledge that these lenses had been tolerated so long in the vitreous suggested to Mr. Bickerton the alternative of reposition. On Dec. 30th, 1893, this was done; the pupil was dilated, an incision at the margin of the cornea was made with a keratome, to evacuate the aqueous it was attempted to press the lens back through the pupil by the finger applied to the closed lid; this could not be done and a spatula was introduced into the anterior chamber; the lens then slipped back into the vitreous. Perfect recovery followed, and in June, 1897, three years later, the vision of the eyes was R c. + 12 D $\frac{6}{5}$ ptly, $\frac{\text{L.c} + 12\text{Ds.}}{-75\text{ D cyl.}} = \frac{6}{5}$. The interest of the case lay in the fact that blindness followed the use of eserine, which prevented the lens from passing back again into the vitreous, and the fact that the eyes have remained perfectly healthy, although the lenses had been dislocated into the vitreous for nearly four years.

The following cases and card specimens were shown:—

Mr. ADAMS FROST: Odell and Porter's Centreing Instrument for Ophthalmic Lenses.

Mr. ARNOLD LAWSON: Leuco-sarcoma of the Choroid.

Dr. RAYNER BATTEN: (1) Foreign Body found Impacted on the Optic Disc after Removal of Traumatic Cataract; (2) Pulsating Tumour of the Orbit, ? Meningocele.

Mr. J F. BULLAR: Case of Deficiency of the Choroid.

Mr. LANG: Primary Syphilitic Lesion of the Inner Canthus.

LIVERPOOL MEDICAL INSTITUTION.

Ileum Strangulated by Passage through a Congenital Mesenteric Hole—Excision of the Kidney for Primary Carcinoma.—The Typhoid Serum Reaction in Doubtful Cases of Fever.—Clinical and Statistical Evidence of the Value of Antitoxin in the Treatment of Diphtheria.

A MEETING of this society was held on Oct. 21st, Dr. RICHARD CATON, President, being in the chair.

Mr. STANLEY KELLETT SMITH related a case of Ileum Strangulated by Passage through a Congenital Mesenteric Hole, an account of which is published elsewhere in our present issue.

Mr THELWALL THOMAS related a case of Excision of the Kidney for Primary Carcinoma. He exhibited a patient from whom he had removed the right kidney for primary carcinoma. The man, aged thirty-nine years, said that his urine had been coffee-coloured two years ago. Occasional attacks of hæmaturia occurred in the last twelve months and he steadily lost weight. A month ago he fell, striking his right side. He immediately passed half-a-pint of bloody urine and clots; after this he passed no urine for three days. His temperature oscillated, suggesting suppuration. The tumour was large and occupied the kidney area and the right iliac fossa. Operation was performed as follows. A transverse incision immediately under the last rib was made, exposing the kidney, and rapidly enlarged forwards, peeling the peritoneum off the kidney. The tumour, which weighed 2 lb. 2 oz., was removed. The microscope showed a carcinoma with large cells, as seen in suprarenal rests. The patient had gained about 2 st. in weight since the operation.—Dr. E. T. DAVIES remarked that by the transperitoneal incision it is possible to examine the condition of the other kidney, which was a matter of the greatest importance.—Mr. F. T. PAUL said the microscopical characters of the tumour were those usually observed when cancer commenced in the glandular structure of the kidney. He thought the character of the cells, their arrangement, and the presence of cysts pointed to origin in the true renal tissue rather than in adrenal rests.

Mr. RUSHTON PARKER related a case of Carcinoma of the Kidney where he removed the kidney, the patient making an easy recovery; recurrence occured, however, in about two months.—Dr. ALEXANDER also made some remarks.

Dr. CARVER read a note on the Typhoid Serum Reaction in Doubtful Cases of Fever. He related two cases of fever; both were thought, when first seen, to be cases of typhoid fever, the serum in each giving, with a solution of 1 to 30, a markedly positive reaction with Widal's test. Yet both terminated on the sixth and eighth day respectively in recovery. The results must show either, as he believed, that we must enlarge our conceptions of typhoid fever or that the test was applicable to other febrile conditions. In another case there was no reaction on the seventh day, but a marked one on

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the ninth after the introduction of typhoid antitoxin. Yet the serum of a patient suffering from appendicitis into whom a similar dose of typhoid antitoxin had been injected was entirely negative in its reaction, as was also Dr. Carter's own blood when mixed out of the body with a small proportion of the antitoxin and diluted.—Professor BOYCE said that the vast majority of cases of typhoid fever give the reaction. There were two important questions: (1) Does absence of reaction preclude typhoid fever? and (2) does a positive indication always signify typhoid fever? In answering the first question he mentioned (1) retarded reaction; (2) one or two cases of typhoid fever have given reaction when the absence of the typhoid bacillus has been proved; and (3) absence of reaction has been justified by necropsies. The answer to the second question is an almost unqualified affirmative.—Dr. N. E. ROBERTS said that it was disappointing to the physician to come across cases where the serum test did not answer. He had four such cases at present in the wards of the City Hospital. Three were undoubtedly typhoid fever, and he believed the fourth was, yet the result of the serum test was entirely negative. In the large majority of cases, however, the results were highly satisfactory and the test a valuable acquisition.—Dr CATON, Dr. BARR, and Dr. STANLEY GILL also discussed the subject.

Dr. E. P. MANBY read a paper on Some Clinical and Statistical Evidence of the Value of Antitoxin in the Treatment of Diphtheria. He had tabulated about 10,000 cases which had been treated at the Metropolitan Asylums Board Hospitals. He drew attention to the early experiments of Behring and Wernicke with antitoxins, and quoted from Roux's paper on the antitoxic treatment of diphtheria at the Budapest Congress He then mentioned the introduction of the treatment into the metropolitan hospitals, and drew attention to the death-rate before and after the introduction of the antitoxin. He then discussed the question of dosage, and drew attention to the fact that the amount of the antitoxin to be used must be gauged by the severity of the disease and not by the size or age of the patient. He then mentioned how the ordinary course of the disease was modified and how the sufferings were mitigated by the antitoxin injections. He also mentioned the dangers of the injections themselves. The statistical examination of the subject was highly favourable to the treatment.—Dr. N. E. ROBERTS remarked on the relatively small number of cases of diphtheria in Liverpool hospitals as compared to London. He agreed that the serum treatment had reduced the mortality, especially in laryngeal cases. His figures, although too small to be of much value, supported Dr. Manby's views.—Dr. HOPE attached greater importance to careful observation than to deductions drawn from statistics. Although, happily, diphtheria was relatively much less prevalent in Liverpool than in London, the Hospitals Committee of the City Council had made provision for a gratuitous supply of diphtheria antitoxin.—Dr. CARTER, Dr. HUGH JONES, Dr. MACALISTER, Dr. PERMEWAN, Mr. BLAKEMAN, Dr. P. DAVIDSON, and Dr. LOGAN joined in the discussion.—Dr. MANBY replied.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

President's Address.—Exhibition of Cases and Specimens.—Injuries Produced by Cycling.—Treatment of Surgical Tuberculosis.

THE opening meeting of this society was held at the General Infirmary, Leeds, on Oct. 15th, Dr. BRAITHWAITE, President, being in the chair.

The PRESIDENT read a paper entitled "Is there any Principle or are there any Principles, Scientific or Practical, in the Treatment of Disease?"

Mr. STOTT showed a woman who on six occasions had been Exposed for about forty minutes to the X Rays for the Diagnosis of Spinal Caries. Two days after the last exposure severe pain occurred over the sternum followed in eight days by a circular ulcer six inches in diameter. In seven months this had lessened to an area three inches by two inches, and this Mr. Stott had successfully treated by two plastic operations.

Mr. W. H. BROWN showed: (1) A case of Paraplegia following Spinal Caries; laminectomy; (2) Amputation through the Hip joint for Sarcoma; and (3) Aneurysm of the Femoral Artery after Ligature of the External Iliac.

Dr. TREVELYAN showed a Hand Centritugal Machine for obtaining Deposits for Microscopical Examinations, with Specimens.

Mr. KNAGGS exhibited specimens from two cases of Excision of the Knee, Tuberculous and Osteo-arthritic.

Dr. HELLIER showed Secundines and Fœtus from a case of Triple Pregnancy.

Dr. WARDROP GRIFFITH showed: (1) Large Cerebral Hæmorrhage from a patient who presented General Atheroma with Cardiac Hypertrophy and Evidence of Old Embolism of the Kidneys; the kidneys were not granular (Dr. Barr's patient); and (2) Specimen of Communication between the Hepatic Flexure of the Colon and Second Part of the Duodenum from Malignant Disease of the Former. The symptoms were those of collapse and fæcal vomiting without distension of the abdomen and typhlotomy was performed (Mr. Robson's patient).

Mr. E O. CROFT showed a case of Recovery with Movable Joint after Incision of the Knee for Acute Suppurative Arthritis.

Dr. CHURTON showed a specimen of a Tumour of the Middle Lobe of the Cerebellum and read notes of the case. In July or August, 1896, a child, two and a half years of age, a member of a delicate and tuberculous family, vomited, staggered, and in a few days became unable to walk. She soon became nearly blind, but the pupil reflexes remained. The arms were not at first affected. She was admitted into the Leeds Infirmary on May 26th, 1897. The head had enlarged recently. No hemiopia had been observed; there was no pyrexia; no disease was found in the other organs; and there was no wasting of the limbs. The child was usually very quiet, but at times fretful. There was double optic neuritis. On April 7th the right face and arm were almost icy cold; the left was of normal temperature. On April 13th the right face was flushed and hot; the left was pale and cold. Vaso motor reflexes were not distinctive. The legs were rigidly extended; at times she drew up the left thigh and bent the knee, the foot being still extended. She never drew up the right knee. Plantar reflexes were present, the right being greater than the left. There was no ankle-clonus. Patella reflexes were present. Vesical and rectal reflexes were normal; she gave no notice of either being about to act. On June 26th the fontanelles and sutures were reopened; the posterior fossa (occiput) greatly bulged towards the neck, but the frontal region was not enlarged. There was general hyperæsthesia at times, also there were frequent cries and screams as if from paroxysms of pain. Exalgine appeared to prevent those paroxysms for a few hours. On June 28th the thumbs were drawn across the palms, the fingers were flexed, the legs were hyper-extended, the knees were locked, the legs were spread out each to an angle of 25° with the thigh (apparently by action of the outer hamstring muscles), and the left thigh was turned outwards by a rigid tensor fasciæ femoris. On July 9th the right lateral ventricle was tapped through the sagittal suture; 1½ oz of clear fluid were drawn off. Tapping was repeated on July 13th and 30th, and on Aug 9th and 16th, on return of the signs of pain. Complete relief always followed; but emaciation became very marked and death occurred early in September. A sarcoma as large as a Tangerine orange occupied the position of the middle lobe of the cerebellum, the upper part of the lobe formed a roof, while the lateral lobes appeared like easily separable encysting walls for the growth. Chronic tuberculous disease was found in some of the mesenteric glands.

Mr. LITTLEWOOD showed a boy, aged five years, upon whom he had operated on June 12th for Acute Suppurative Arthritis of the Left Hip. An incision was made over the front of the joint and fifteen ounces of pus escaped. The head of the femur and acetabulum were quite devoid of cartilage. The joint was drained and dressed with iodoform. On Aug 12th the incisions were opened again as the joint was not draining well. The incisions had healed and the patient was walking about with an ankylosed hip.—Mr. LITTLEWOOD also showed a Hydatid Cyst with its investing Capsule, of about the size of a goose's egg, which he had removed from the edge of the left lobe of the liver of a woman aged forty-eight years. The cyst was adherent to the omentum and the anterior abdominal wall. Before operation it was thought to be a mass of malignant disease. The patient has made a good recovery.

Mr. W. H. BROWN read an interesting paper on Certain Injuries produced by Cycling and reported several cases where patients had suffered from pain around the anus, in

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the testicles, and inner side of the thighs. In some cases there was extravasation of blood under the skin, in others the penis became insensitive and there was retention of urine. Most of the riders were of the male sex. Mr. Brown attributed the condition to the use of badly fitting saddles and advised would-be riders to pay attention to this most important part of the machine. All his patients recovered with rest and sedatives.

Mr. MAYO ROBSON read a paper on the Treatment of Surgical Tuberculosis, such as psoas abscess, tuberculous joints, tuberculous abscesses connected with the ribs, tuberculous disease of the vesiculæ seminales, &c., which he had been treating for a number of years by iodoform injections with very satisfactory results. He described the details of the methods he employed, and pointed out how in one class of cases—viz., tuberculous joints—operations at the Leeds Infirmary for excisions had fallen from sixty-three in 1891 to thirty-three in 1896, although a much larger number of cases had been treated. He attributed this change to the large number of cases that were now being successfully treated by iodoform injections. He dwelt on the great importance of strict asepsis in performing the operation, and remarked that even if no good were done no harm could follow; but according to his experience benefit had accrued in nearly every case, and in many cure had resulted.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimen.—President's Address.

THE first ordinary meeting of the session was held on Oct. 15th in the Medical Institution, Hope-street, Liverpool, the President, Dr. BRIGGS, being in the chair.

Dr. T. B. GRIMSDALE (Liverpool) showed a Uterus, with large, soft, rapidly growing fibroid, removed by abdominal hysterectomy.

The PRESIDENT delivered his inaugural address, the subject being "The Diagnosis of Cancer of the Uterus in its Early Stages." In his address Dr. Briggs dealt with the causes of delay in gynæcological and general practice in completing the diagnosis in cancer of the uterus. He observed that the argument of the senior gynæcologists against the introduction of vaginal hysterectomy into this country appeared to be still valid—viz., the difficulty in making a diagnosis in the early stages of uterine cancer. The mortality of operations has diminished, but the fact is still with us that the cancerous disease has advanced beyond the uterus before the radical operation is performed. The surgeon, he held, must deplore the haphazard methods of treatment, the attempts at cure by the curette before the diagnosis can be complete, and the consignment of curettings to the sink rather than to the pathological laboratory. The utility of the microscope cannot be seriously doubted except in a few of the adenomata; the ordinary carcinomata can be detected earlier by the microscopical than the clinical methods. By way of illustrating the address thirty micro-photographs of adenomata and carcinomata were shown by the lantern. The gradation in the structural characteristics between the malignant adenoma and the normal glands were shown. The corresponding clinical histories were related and in several instances years had elapsed; malignant cases had died; non-malignant cases had been tested by time. He drew attention to the one solitary stratified squamous carcinoma of the body of the uterus; similar cases had been described by others from time to time; then he pointed out in another carcinoma the gradation from glandular columnar cells to stratified squamous patches according to the cancerous alveoli. There seemed to be no good reason for retaining the term "adeno-carcinoma," which was often used for malignant adenoma and for ordinary carcinoma of glandular origin, and difficulties of comparison were introduced. Sections of glandular and papillary erosions in suspicious cases were also exhibited. Naked-eye water-colour drawings from the recent specimens showed in most instances advanced cancerous growths of the body of the uterus and of the cervix; two of the latter were examples of cancer, starting first below the internal os. One of the latter had been twice curetted and "villous" endometritis was believed to exist. In many other instances the curette had been used, but not for an exploratory purpose, which, from the point of view of all concerned, was to be regretted.—Dr. LLOYD-ROBERTS (Manchester) proposed, and Dr. MACFIE CAMPBELL (Liverpool) seconded, a vote of thanks to the President, which was carried with acclamation.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—The Value of Bacteriological Research in the Diagnosis of Infectious Disease.

THE opening meeting of this society was held on Oct. 3rd, the retiring President, Mr. GODFREY CARTER, being in the chair. After the election of officers—

Dr. EUBICH gave a Microscopical Demonstration.

Dr. GLADSTONE showed a case of Extensive Necrosis of the Cranial Bones, probably syphilitic in origin.

Mr. MCGEE related a case of Broncho-pneumonia which had pursued a very unusual course.

Dr. METCALFE showed a large Enterolith from a Horse.

Dr. CHAPMAN showed a specimen of Epithelioma of the Sigmoid Flexure. The case had presented itself as one of extensive abscess of the thigh pointing above the knee. When opened gas and fæcal pus escaped. The patient slowly sank and at the necropsy the condition exhibited was found.

After a vote of thanks to the retiring President, the President-elect, Dr. ARNOLD EVANS, took the chair and read a paper on the Value of Bacteriological Research in the Diagnosis of Infectious Disease, particularly in relation to Cholera, Typhoid Fever, and Diphtheria. Dr. Evans pointed out that some difficulty had been experienced as to the significance properly attaching to the results of bacteriological examination in the diagnosis of cholera, and expressed the opinion that, so far as at present known, Koch's comma bacillus was not found in the intestinal evacuation in any disease except cholera. It was therefore possible to decide by bacteriological examination whether any particular case was true cholera or not and to give a direct negative or affirmative opinion on the nature of any material examined. As to the assistance given by bacteriological examination in the diagnosis of typhoid fever, Dr. Evans observed that it was twofold—viz.: (1) the recognition of the Eberth-Gaffky bacillus in the bowel discharges: and (2) the effect produced by toxines contained in the body on the life and growth of cultures of the typhoid bacillus, as shown by Widal's reaction. He combated the view put forward some years previously that the bacillus coli communis could obtain under any conditions the pathogenic properties of the bacillus typhosus, and described the points of difference between the two organisms. After discussing the significance of the Klebs-Löffler bacillus in reference to diphtheria and other throat affections he showed a number of cultivations of microbes on agar and other media from the throats of patients suffering from whooping-cough, scarlet fever, croup, and enteric fever. The growths consisted of various kinds of micrococci, streptococci, and saccharomycetes.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

Presidential Address.—Annual Report.

THE annual meeting of this society was held on Oct. 13th in the medical library of University College, Bristol, Dr. J. E. SHAW being in the chair.

Dr. SHAW gave his presidential address on Some Points in Lunacy Practice in Relation to the General Practitioner. In the course of his address he remarked that the diagnosis of insanity is not a special or even medical process under the present state of our law, and that while every practitioner is now liable to be called upon to sign certificates there appears to be fairly adequate protection if the medical man is careful to act with due caution and with good faith. He thought that the present system of keeping lunatics of every mental grade in asylums led to an expenditure upon asylum buildings vastly in excess of what was necessary. He regretted that the present state of the law did not allow many classes of persons medically insane to be legally certified. He thought that it was desirable in accordance with the practice which obtained in Scotland that in this country also temporary certification should be made lawful,

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and that hospitals for temporary retention should be established in the larger towns.

Mr. BUSH (honorary secretary) read his annual report, which showed a balance in hand of £108 8*s.* 1*d.*, with a membership of 134. He referred to the lamented death of Mr. Greig Smith and mentioned that a movement for providing a fitting memorial had been started to perpetuate his memory.

Dr. ROGERS (editorial secretary) read his report.

Mr. L. M. GRIFFITHS (honorary librarian) read his report which showed that in the Bristol Medical Library there were now 16,662 volumes and 206 current periodicals.

The following officers were then elected:—President-elect: Dr. Roxburgh, of Weston-super-Mare. Honorary Secretary: Mr. Paul Bush. Honorary Librarian: Mr. L. M. Griffiths. Members of Committee: Dr. J. Michell Clarke, Mr. J. Dacre, Mr. W. H. Harsant, Dr. Rogers, Mr. Munro Smith, and Dr. Waldo. Library Committee: Mr. Paul Bush, Mr. L. M. Griffiths, and Dr. G. Parker.

WORCESTERSHIRE MEDICAL SOCIETY.

Exhibition of Cases and Specimens.—Cystic Kidney.—Hyperpyrexia.

THE quarterly meeting of this society was held at the Worcester General Infirmary on Oct. 19th, Mr. T. BATES being in the chair.

Mr. BATES showed (1) a man whose Fractured Patella was treated by Immediate Wiring, the result being bony union of the fragments, with perfect movement of the joint; (2) a man with Severe Varix of both Internal Saphenous Veins as high as the knee; (3) a case of Lingual Tumour; (4) a child recently submitted to Tarsectomy for Talipes Equino Varus (before operation the patient was treading on the external malleolus and cuboid bone, but was now treading flat on the sole); and (5) a Multiple (uterine) Fibroid Tumour removed a few days previously.

Dr. COOKE showed (1) a specimen of Aneurysm of the Basilar Artery and (2) a specimen showing a Plum-stone impacted in each Bronchus immediately below the Tracheal Bifurcation. They were removed from a woman who had been seized with an epileptic fit whilst eating an apple. She suffered from intermittent dyspnœa for twenty-four hours, at the end of which time tracheotomy was performed, but without relief, and she died shortly afterwards.

Dr. READ gave outlines of a case of Cystic Kidney admitted under his care and subsequently transferred to Mr. Budd for operation.—Mr. BUDD, Mr. BATES, Dr. CROWE, and Dr. SMYTHE made remarks, and mentioned other interesting renal cases that had been under their care.

Dr. CROWE related a case of Hyperpyrexia of Probable Rheumatic Origin, in which the axillary temperature was 110° F. Cold packing was resorted to, with a resulting rapid decline of temperature to 100° in three hours. The patient lived for five days, gradually becoming comatose and dying at the end of that time.—Dr. POLLARD made some remarks, mentioning a case which had been under his care in which the axillary temperature was 108·2° Rubbing with lumps of ice brought the temperature down to 99°, and it sank half an hour later to 96·6°. The man eventually recovered.—Dr. STANLEY HAYNES asked whether any of the members of the society had tried phenocoll, with which he had seen some very good results in the pyrexia of influenza.—Dr. CROWE replied.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Inaugural Address by the President.

A MEETING of this society was held on Oct. 14th, Dr. SINCLAIR WHITE being in the chair.

After thanking the society for electing him to be president Dr. White gave an address on the Progress of British Surgery during the Victorian Reign. In the sixty years under review remarkable strides had been made in almost every branch of knowledge, and surgery had participated in the general advance to a greater extent perhaps than the majority of other arts and sciences. This was all the more gratifying because in no field had the incentives to the labourer been less selfish. When the Queen ascended the throne Liston and Syme were the rising stars of British surgery—the harbingers of a period of surgical activity which had lasted until now. The introduction of anæsthetics in "the forties" and of antiseptics in "the seventies" were the two most notable features of the period. The former extended enormously the field of surgery, but it was accompanied by at least one drawback. It deteriorated the standard of manipulative dexterity which had probably attained perfection in the early Victorian years, and opened the door to incompetent and bungling surgeons. Lister's discovery of antiseptics was without exception the most important in its results in the history of surgery. It substituted definite knowledge for dark mystery and revealed the character of "septic infection" the surgeon's ubiquitous and most dreaded foe. Step by step the methods of controlling sepsis had been simplified and perfected, and almost imperceptibly antisepticism had given place to asepticism which is now the aim of every intelligent surgeon. By reason of Lister's discovery surgical operations had assumed the nature of laboratory experiments, in the performance of which it was possible to control the conditions, and if failure resulted it would in nine cases out of ten be due to ignorance or, worse still, to neglect of well-known principles. The recent advances in surgery had been possible only because of Lister's work. Of these the more brilliant concerned the cerebro-spinal system, while for variety and the frequency with which they are performed abdominal operations still held the first place. Every region of the body had been diligently prospected by the surgeon and made to yield its tribute to his invincible energy. The vast majority of new operations had been of real service to suffering humanity, but occasionally, in Dr. White's opinion, surgical enterprise had over-reached the bounds of prudence.

Reviews and Notices of Books.

Heart Disease, with Especial Reference to Prognosis and Treatment. By Sir WILLIAM H. BROADBENT, Bart., M.D. Lond., F.R.C.P. Lond., F.R.S., and JOHN F. H. BROADBENT, M.A., M.D.Oxon., M.R.C.P.Lond. London: Baillière, Tindall, and Cox. 1897. Price 10*s.* 6*d.*

THE study of cardiac disease has always had much attraction for the physician. The reason of this is not far to seek; it is bound up with the important office which this organ fills as the centre of the circulation, and the far-reaching results of derangements of its mechanism. As regards the heart itself, the field of observation, although confined within a small area, is so remarkably varied, and affords so much material of interest in the interpretation of signs, as well as in the correlation of lesions, that it is not surprising it should have been assiduously cultivated by so many skilled clinical observers. Gradually there has been built up a conception of the whole subject which for thoroughness and accuracy occupies a foremost position in scientific medicine. This result has been attained in large measure by the careful comparison of the signs manifested during life with the lesions observed after death, together with that of the facts of the normal action of the organ. Yet interesting or even fascinating as the study of valvular lesions is from the point of view of auscultation, the capacity for correctly making a differential diagnosis of such defects is only one part, and perhaps not the most important part, of the physician's aim. He has to determine the extent to which the heart muscle has been affected by the derangement of the valves, and to ascertain from the observation of secondary changes in other organs the amount of actual disturbance of the circulation that has been set up, so that some indication can be obtained as to the means best adapted to restore to the organ that compensatory power which happily it seems to possess in an eminent degree. Much has been done to increase our knowledge of cardiac diseases in every direction, and although from the nature of

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their clinical study the field of facts has often been obscured by the mists of speculation, it is not too much to say that our vision has been made clearer and our deductions sounder by the labours of the many who have studied the subject from every point of view. There are still obscurities in the sphere of etiology, but in the matter of diagnosis we seem almost to have attained the possible limit, whilst in respect to prognosis the views of physicians have become remarkably modified through more rational and more exact inferences upon the precise extent of mechanical derangement that is presented. Finally, as regards treatment there is at the present day much more confidence than was possible at a time when the conditions of the circulation in heart disease were less well understood and the compensatory powers of the damaged organ less fully appreciated.

Amongst those who have contributed largely in our own day to the promulgation of rational views on this subject Sir W. Broadbent occupies an honoured place. The attention which he has paid to the clinical study of cardiac affections, and the wide experience which one in his position cannot fail to have gained, pre-eminently qualify him to speak with authority on the subject. The work before us—in the preparation of which he has been aided by his son, Dr. J F. H. Broadbent—will therefore be certain of a cordial welcome; and we venture to add that this will be all the more cordial when it is found that the authors have not attempted to write an encyclopædic treatise on the subject, but have rather contented themselves with dealing with it from the strictly practical and clinical standpoint. There is indeed one notable feature in the book which deserves especial commendation, and that is the thoroughly reasonable manner in which the phenomena are interpreted, and that, too, in the fewest possible words There are no elaborate disquisitions upon the precise significance of this or that sign, but a plain, straightforward acceptance of the view which seems to be most in accordance with the dictates of common-sense. It is this quality in the book which will render it very acceptable both to practitioners and students, for it constitutes the best kind of teaching—that which is definite and rational. The first chapter briefly describes the anatomical relations of the heart and the methods of its clinical examination with the signs revealed by them are tersely stated. The subject of valvular disease in general is then discussed in several chapters, and also that of their treatment. Then come more detailed descriptions of each individual valvular lesion; and chapters on congenital malformations, adherent pericardium, structural disease (hypertrophy and dilatation) of the heart wall, fatty degeneration, angina pectoris, and functional affections (so-called) of the heart. In an appendix is given a note on the Preparation of the Baths and on the Movements Practised in the Schott Treatment of Heart Disease.

Without attempting to traverse the whole ground covered by the authors, it may yet be of interest if we briefly notice some of the salient points in the work. In the first place, we would concur with the opinion that simple aortic stenosis is the least common of the four valvular defects of the left side, although aortic systolic murmurs due to conditions which are not accompanied by stenosis are relatively frequent. The observation that the loudness of a valvular bruit is often inversely as the amount of the lesion is one which is worth remembering; it is especially well exemplified in mitral stenosis. Another indication of the extent of the valve-lesion which is here pointed out is the persistence or not of the normal heart sound. This fact, the importance of which cannot be gainsaid, is illustrated in cases of aortic incompetence, when the persistence of an audible second sound in the carotid tends to diminish the sense of the gravity of a lesion inferred by a loud diastolic murmur in the aortic area. The accentuation of the pulmonary second sound indicating hypertrophy of the right ventricle points to the severity of a mitral lesion; and the view that reduplication of sounds is due to asynchronism[1] of the two sides of the heart is adopted by the authors without reserve. The characters of the radial pulse in each form of valvular defect are clearly described and illustrated by sphygmograms, and the cause of the irregularity of the pulse in mitral incompetence is fully discussed in the chapter dealing with that affection, where it is shown to be probably due to the varying intrathoracic pressure due to inspiration and expiration influencing the amount of regurgitation into the auricle. In discussing the symptoms of mitral and aortic disease in general the causation of dropsy receives considerable attention. Whilst admitting the possibility of such factors as capillary deterioration and anæmic state of blood the authors clearly think that the mechanical view is sufficient to explain cardiac dropsy, and that the reason why dropsy is comparatively infrequent in cases of mitral stenosis is that the pressure on the arterial side is so much diminished in that affection as not to give rise to effusion of serum. The etiology of valvular diseases is fully discussed, and with respect to mitral regurgitation attention is drawn to the enfeeblement of the constricting muscle at the orifice of the valve as a factor in its production. Upon prognosis much valuable instruction is given both in the general section and in those chapters which treat of each of the individual lesions. Some highly interesting experiences are given as to the duration of life with valvular lesions, and the various circumstances that have to be considered in forecasting the prospects of longevity. The subject of treatment is judiciously dealt with and the value of exercise in cases of less severe lesions pointed out. Naturally, the lines of treatment introduced by Oertel and by Schott here fall to be considered. But in cases where there is failure of compensation to a severe extent stimulants may be needed and are of value; and there are some highly sensible remarks upon the indications for digitalis and other cardiac tonics. Having given a general survey of the subject of valvular disease the individual lesions are considered. Nor must it be thought that this is redundant. There are many points of great clinical interest discussed which will well repay perusal and careful study. We may just refer to one, and that is the occasional occurrence of a presystolic murmur in cases of aortic incompetence without mitral stenosis—"Austin Flint's murmur," as it is sometimes called. It is here suggested to be caused either by the vibration of the mitral cusp from the impact of the regurgitant eddy, or by this latter causing so complete a backward displacement of the cusp as to give rise to veritable mitral obstruction. The subject of mitral stenosis is treated with perspicuity, and the three stages or degrees of the lesion which can be clinically marked are well indicated. We would fain dwell more in detail on these and many other chapters of this most interesting work, but we have no doubt that it will be widely read and that it will be found most helpful, as well as satisfying, to its readers.

Lectures on Physiology: First Series on Animal Electricity. By AUGUSTUS D. WALLER, M.D. Aberd., F.R.S. London: Longmans, Green, and Co. 1897. Pp. 144. Price 5*s.* net.

DR. WALLER is the Fullerian Professor of Physiology at the Royal Institution, Albemarle-street, and a part of his duty is to deliver a course of twelve lectures on Physiology in the course of each year. This first series of lectures is a condensation of the twelve lectures he delivered as his first course. In his preface he feelingly deplores the few

[1] Since the issue of the work the publishers have drawn our attention to an erratum on p. 24, line 17, where the word "asynchronous" is printed "a synchronous," which the reader will at once perceive from the context to be an error.

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and small advances that have been made in physiology by the previous holders of the chair, notwithstanding it has been occupied by men of high scientific attainments, and he attributes this failure to the circumstance that there is neither laboratory nor apparatus at the institution, nor does it "possess even one small room to keep itself alive," which is in remarkable contrast with the great advances that have been made in the other Fullerian professorship—that of chemistry and physics—by such men as Davy and Faraday and Tyndall, who have had command of a splendidly furnished laboratory and have been supplied with every means of furthering research. The first lecture is devoted to the demonstration of nerve and muscle currents, and Dr. Waller proposes two new terms—"zincative" to represent injured or active protoplasm, which is electro-positive; and "zincable" for resting electro-negative protoplasm. The second lecture commences with a description of some terms and of some instruments, and gives the results of the exposure of a nerve to carbon dioxide, to alcohol, and to tobacco smoke. He shows that nerve tissue is highly sensitive to the presence of carbon dioxide, which is not only a product of nerve action, but certainly facilitates nerve activity. In the fourth, fifth, and sixth lectures the effects of polarising currents are considered with an endeavour to render intelligible the phenomena of an- and cath-electrotonus. The lectures contain many facts of considerable interest, and they are not rendered less interesting by the author's acknowledgment of the difficulties he has met with in the preparation of the experiments and of his inability to explain some of the phenomena which he exhibits. It is satisfactory to think that the education of the Royal Institution audiences has risen to the height of enjoying lectures on so recondite a subject.

A Manual of Anatomy By IRVING S. HAYNES, Ph.B., M.D., Adjunct Professor of Anatomy in the Medical Department of the New York University, &c. With 134 half-tone Illustrations and 42 Diagrams. London: Henry Kimpton. 1896. Pp. 680. Price 12*s.* net.

THIS book is a manual of practical anatomy and deals with the structures of the several regions of the body in the order in which they are met with in dissection. The author tells us in his preface that "descriptions of the bones and the joints and of those minute parts which require special preparation for their dissection have intentionally been omitted." It has always been customary to omit from handbooks of practical anatomy descriptions of the bones, for these should have been learned before the commencement of dissecting, but the case is far otherwise with the joints. They should certainly be studied in connexion with the dissected part, for in no other way can the ligaments and the movements of the bones in a joint be understood thoroughly; therefore we cannot but look upon the omission of an account of the joints as a distinct drawback. The descriptions of the various structures met with are decidedly brief, but in a work on practical anatomy this is an error on the right side. As to the illustrations, which are numerous, it is obvious that the author has spent a great deal of trouble in preparing careful dissections and in taking photographs of these; from the photographs the majority of the illustrations have been prepared, and some are moderately successful, and give a very fair idea of the parts, but unfortunately many of the illustrations show very little; for instance, in Fig. 4, which represents a dissection of the side of the head, only the larger structures are discernible. The attempt has been most praiseworthy, but the results are lamentable. The diagrams are very good, and some composite photographs showing the relations of the viscera to the thoracic and abdominal walls are of great value. This form of composite photograph was brought forward by the author before the first Pan-American Medical Congress at Washington in 1893. The index is very copious, occupying more than thirty pages, and is exceedingly well-arranged and accurate.

LIBRARY TABLE.

L'Opération du Trépan. Par FÉLIX TERRIER, Professeur à la Faculté de Médecine de Paris, Chirurgien de l'Hôpital Bichat, et M. PÉRAIRE, ancien interne des Hôpitaux de Paris. Avec 222 figures dans le texte. (The Operation of Trephining. By FÉLIX TERRIER and M. PÉRAIRE.) Paris: F. Alcan. 1895 Pp. 283. Price 5 francs.—It cannot be denied that the authors of this work have treated the subject very thoroughly. They start with the trephining of prehistoric days as revealed to us by neolithic skulls exhibiting apertures made intentionally. When these skulls were first discovered it was thought that the openings were accidental or made after death, but their position, regularity, and the state of the bony margin sufficiently contradict these suppositions. The numerous instruments which have at various times been employed in this operation, and the changes which the operation itself has undergone, are very fully described. The second part deals with the methods of fixing the positions of the important cerebral convolutions and other intracranial structures such as the sinuses; and the third section is concerned with an account of the modern operation and the instruments used at the present day. It is certainly difficult to imagine that a more elaborate or complete work on the subject could be produced, and it is a monument of much hard work and careful research on the part of the authors. The illustrations have been supplied liberally and amount to more than 200 in number. Another point of excellence may be noticed; the references to original treatises on the subject are extremely numerous.

Transactions of the Eighteenth Annual Meeting of the American Laryngological Association, held in the City of Pittsburgh, Pa., in 1896. New York: D. Appleton and Company. 1897.—Many articles of great interest are contained in these transactions, but probably the most interesting refers to a case of fibro-chondroma of branchial origin, which was successfully removed from the pharynx of a child six weeks old by Dr. A. W. de Rosaldes; the tumour was covered with skin, containing hair follicles and sebaceous glands, and there was cartilage in its interior. Another paper of importance is one by Dr. C. H. Knight. It deals with the nasal sequelæ of syphilis and gives a good account of the employment of a platinum bridge for cases of necrosis of the septum; the illustration shows the marked improvement in appearance which may be obtained in some cases by this method of treatment.

Electro physiology. By W. BIEDERMANN, Professor of Physiology in Jena. Translated by FRANCES A. WELBY. London: Macmillan and Co. 1896. Demy 8vo. 17*s.* Vol. I.—To the advanced student of physiology the appearance of an English translation of Professor Biedermann's standard work will be welcome. The subjects dealt with in this volume are the structure of muscle, the phenomena of contraction, of electrical excitation and of electro-motive force in muscle, and the electro-motive action of epithelial and gland cells. We understand that the second volume may be expected shortly. The translation is well done and the style of the book is uniform with Professor Michael Foster's well-known "Physiology."

JOURNALS AND REVIEWS.

Scottish Medical and Surgical Journal.—Of the ten articles contained in the present number the most original is, perhaps, the one on Telegony, by Professor J. Cossar Ewart, of Edinburgh University. The word telegony was proposed by Weismann to denote the case in which

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a female is so influenced by the first sire to which she bears offspring that the subsequent offspring to other sires present some of the characters or peculiarities of the first. Early in the century Lord Morton bred from a chestnut mare a quagga-hybrid, and the mare afterwards produced to a black Arabian horse a filly and a colt marked like the hybrid. In 1895 Professor Ewart formed a small stud and commenced various crossing experiments between horses and zebras. He now has five zebra mare hybrids, and the dam of a last year's hybrid has recently produced to an Arab horse a foal presenting numerous zebra-like stripes over the croup and loins. He enumerates the explanations of this phenomenon that have been suggested by Sir Everard Home, Herbert Spencer, and Weismann, all of which he thinks are highly improbable. An article of about twenty pages in length on Medical Education in Scotland gives full details of the curriculum in the Scottish universities and extra-mural schools.

Edinburgh Medical Journal.—Professor T. R. Fraser contributes the first part of a very interesting paper on Paroxysmal Hæmoglobinuria. The patient was a man between forty and fifty years of age who was under treatment in the Edinburgh Royal Infirmary in 1895 and again in 1897. The illness originated suddenly in 1889 from exposure to cold. The subsequent attacks were invariably due to the same cause, and they could be prevented even in the most inclement weather by the patient remaining in bed all day. With the patient's willing acquiescence several paroxysms were purposely induced by immersing the legs from the feet to the tubercles of the tibiæ for ten minutes in water at 45° F. During the attacks the colour of the urine varied at different times from red to black. Professor Fraser gives minutely detailed accounts of the condition of the urine, blood, circulation, &c. Mr. H. E. Durham, of the Pathological Laboratory, Cambridge, has a paper on the Serum Diagnosis of Enteric Fever, and also describes a modified form of Hæmocytometer. A special feature of this number is an article on Medical Education in the United Kingdom; it is about thirty pages in length, and gives a great variety of information useful to students.

Dublin Journal of Medical Science.—Mr. J. S. McArdle concludes his paper on the Treatment of Acute Intestinal Obstruction. Dr. Patrick Letters contributes the first portion of an article on Infantile Mortality in Ireland. He considers that the general public do not sufficiently appreciate the significance of infantile mortality regarded separately from mortality at all ages. He uses the term "infantile death-rate" to denote the proportion of deaths of infants under one year of age to births registered during the same period over which the deaths occur; it is expressed as so many per thousand births. Medical education and examinations in Ireland are very fully described in a chapter of about forty pages.

Friend of China.—This monthly, which is the journal of the Society for the Suppression of the Opium Trade, states that in fifty-eight years the Government of India derived from the opium traffic a revenue of £253,975,383, and adds that all this opium has gone to debauch the Chinese. This revenue, however, has greatly fallen of recent years, being this year only 5 per cent. of the total net revenue of India, whereas in 1883–84 it formed 19 per cent. of the revenue. A daily newspaper is quoted to the effect that in Johannesburg many Chinamen and Europeans do a thriving business by supplying Kaffirs with opium prepared for smoking.

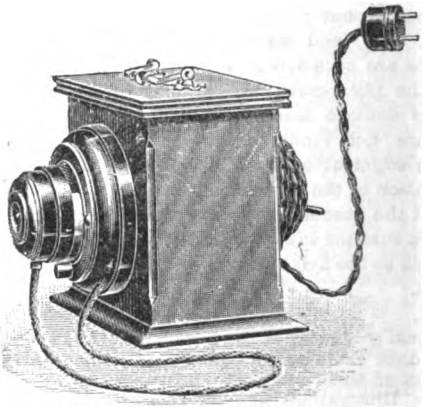
Mercy and Truth.—An adventurous journey of several days' duration made by Dr. A. R. Cook is described by him under the heading of "A Medical Visit in Uganda." There are also portraits and short biographies of eight medical men, most of whom have recently left this country as missionaries.

New Inventions.

THE DIAMOND JUBILEE PORTABLE HOSPITAL TELEPHONE.

THIS ingenious instrument is the invention of the London and Provincial Telephone Company. It will be obvious to anyone that in cases of infectious disease it would be of great advantage to both the patient and other residents in the house if some communication could be kept up, so that during the long period of isolation, during which the patient may be perfectly well in other ways, he or she might not be cut off from all conversation. The instrument consists, as does any telephone, of a receiver and transmitter in addition to a case containing a battery, which are shown in the illustration (Fig. 1). Of course, two of these are required, one set placed in the sick room and the other in the room of the person to be communicated with. When the receiver is in place, as in

FIG. 1.



the illustration, it connects up the bell, the push of which is seen just underneath the receiver. When receiving a message the receiver is slid off the transmitter and held to the ear in the usual way. We have tested this instrument and found it to work admirably. As a practical instance of a case where this instrument would have been of great value we may mention the case reported in our columns last week where a medical man who was suffering from scarlet fever had to call his deputy into the room to give him instructions. Had he been possessed of a telephone of this kind all risk of infection would have been avoided. The price of the two instruments complete with twelve yards of wire cord is £4 10*s*

A similar telephone to the above, but without the case containing the battery and the flexible wire-cord, can be supplied to take the place of the ordinary electric bell-push in sitting- or bed-rooms, &c., for the sum of 36*s*. 6*d*. per pair. The existing bell, wires, and battery are left intact, and all that is required is to substitute one of the telephones (Fig. 2)

FIG. 2.



(which is not very unlike it in size and appearance) for the bell-push, connecting the bell-wire thereto, and the other to the bell or indicator in the servants' hall. This can easily be done by any local electric-bell fitter. Another neat form of instrument is made to stand on the writing-table if required. The advantage of having telephonic communication in conjunction with the ordinary electric-bells in private houses, hospitals, and other large establishments at so small a cost will be apparent to everyone. The instruments can be obtained from the London and Provincial Telephone Company, 11, Queen Victoria-street, E.C.

PLYMOUTH EYE INFIRMARY.—The Countess of Morley has promised to lay the foundation-stone of the new Plymouth Eye Infirmary on Dec. 1st. It is to be erected on a site near Mutley Railway Station.

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THE LANCET.

LONDON: SATURDAY, OCTOBER 30, 1897.

A CONFERENCE on hospital reform, at the instigation of the Hospital Reform Association, was held in St. Martin's town-hall on Thursday, the 21st inst. The discussion was lively, and some new points were raised which will be seen in our report of the meeting on page 1137. One feature of the meeting was the presence of Sir WILLIAM BROADBENT, who displays an interest and an honest courage in dealing with this question which cannot fail to advance its ultimate solution. He spoke of hospital abuse as a great evil and an injury to the really poor.

The speech of Sir HENRY BURDETT is one to be noted by the medical profession. Sir HENRY BURDETT is not a medical man, but he poses so often as a semi-medical authority that his words become important on such questions. His remarks in explanation of the abuse of hospitals and on the remedies for curing them were alike noticeable. The common view of the profession as to the bloated proportions of the out-patient rooms is that the doors are opened too wide, that very indifferent inquiries as to fitness are made, that advice and medicines are given for nothing or next to nothing, and the crowding patients are led to believe that sooner or later, actually or potentially, the gratuitous advice and assistance which they will get are given by the heads of the profession. These great attractions are supplemented by stalls at which refreshments may be had on the same easy terms as the medicine. It is difficult for medical practitioners to compete with such terms as these. And Sir HENRY BURDETT might have found in this circumstance an explanation of the fact that whole classes, whose relief was never contemplated by the original founders of our hospital system take advantage of it. But, as if this were not enough, he must advance the theory that private practitioners are inefficient. This is really too much for the greatly enduring practitioners, who are first educated in the hospitals and then find themselves in sharp competition with them on such unequal terms. The profession might have expected more justice at the hands of one who professes to know so much about it. Has he any doubt that medical men could fill their consulting-rooms by the same methods that fill the out-patient rooms? Dr. WARD COUSINS happily and forcibly vindicated the medical profession, more highly educated and efficient than it ever was, from this unjust suggestion, as he had no difficulty in doing. But it will become a serious question, if these are really Sir HENRY BURDETT'S views, whether medical men should be asked to appear on the same platform with him again for the promotion of hospital reform.

A correspondent calls attention to another suggestion which seems to be equally dangerous. Sir HENRY BURDETT is enamoured of small subscriptions and small payments to hospitals, which seem to be associated in his mind with some claim on the part of those making them to medical attention at hospitals. The association of these things—a personal claim on hospitals for attention and assistance prior to that of poverty and sickness and apart from considerations of the social circumstances or the nature of the illness of those making petty periodical payments, is enough to transform hospitals from being the noblest institutions to being among the meanest, and to divert the streams of that public benevolence on which they must always depend. We shall be glad to hear that in this construction of his words we and our correspondent are wrong. But there is much in current events and in the abuse of hospitals which makes us fear that Sir HENRY BURDETT, with that happy conviction of his own insight into subjects which are not his proper study, is prepared to try experiments on our great hospitals and our great profession which are unwarrantable.

THE conclusions of the International Conference on Leprosy which has just finished its labours at Berlin will be read by medical men with considerable interest. Briefly stated these conclusions are: (1) that the leprosy bacillus (discovered by HANSEN in 1871) is the true cause of the disease; (2) man is the only animal in which that bacillus exists; (3) leprosy is contagious, but is not a hereditary disease; and (4) isolation of leprosy patients is desirable, and under such circumstances as exist in Norway compulsory isolation is to be recommended.

With regard to the bacteriology of the disease HANSEN'S researches from 1871 to 1874, followed by those of NEISSER in 1879 and afterwards by observers in various parts of the world, have fully established the fact recorded in the first of the above statements. For many years all efforts to cultivate the bacillus on artificial media failed. Quite recently, however, CAMPANA, of Rome, succeeded in obtaining cultures from cases actually progressing. This may account for the failures experienced by other observers, for most of their attempts have been made with material removed from advanced cases in which, according to CAMPANA, the bacilli have undergone degeneration.

The most important conclusions at which the Conference arrived, however, were as to the contagiousness of the disease and the methods to be adopted to check its prevalence. The Commission which investigated this subject in India in 1893 thought that the state of alarm occasioned by the report that leprosy was greatly on the increase was groundless, and urged cleanliness, strict observance of sanitary laws, improvement of general health, and variety of diet. Dr. HANSEN brought forward the following resolutions: 1. In countries where leprosy forms foci, or has a great tendency to increase, isolation furnishes the best means of preventing the spread of the disease. 2. The system of obligatory notification, observation, and isolation as carried out in Norway is recommended to all nations with local self-government and a sufficient number of physicians. 3. It must be left to the administrative authorities, after consultation with the medical authorities, to take such special measures as are applicable to the special conditions of the districts. Dr. PHINEAS ABRAHAM'S remarks on these points are especially interesting and will no doubt coincide with

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the opinion of most of our English authorities. Our interest in leprosy is naturally concerned with its spread in India. Dr. ABRAHAM pointed out that where lepers are numerous and their friends still more numerous and not desirous of being separated from them harsh measures of isolation and segregation become impossible, their chief result being the concealment of cases. This has been well exemplified in the case of South Africa, where recent inquiries led to the conclusion that the attempts to send all lepers to Robben Island only resulted in many cases being hidden throughout the country. Many medical authorities of eminence (the speaker continued) strongly disapproved of stringent legislation, and until medical opinion became unanimous and our knowledge of the pathology and etiology of the disease more complete the question of legislation would continue to be decided according to the views of individual governments. This was especially true as regards the British Empire, where social and political conditions in the different colonies and dependencies differed widely from one another. If the Government had had serious difficulty in enforcing simple sanitary precautions in the case of such an acute and fatal malady as the plague in India how much more difficult would it be to insist upon harsh measures in the case of leprosy. The above *résumé* of Dr. ABRAHAM'S remarks we have taken from the *Times* of Oct. 18th, and, as already stated, we feel that his words will commend themselves to English medical men. The difficulties that would arise in applying isolation to our Indian subjects would be immense; but with our advanced knowledge of the bacteriological origin of the disease it behoves those who are concerned in the regulation of sanitary matters in India to pay the most minute attention to the recommendations of the Commission of 1893. The Government will doubtless have the verdict of the Berlin Conference brought to their notice and can hardly venture to altogether ignore it; but whether further investigation will be officially ordered and another report demanded we cannot venture to foretell. The delegates were all high authorities on the subject, and consequently their recommendations must be duly and carefully considered.

THE number of attacks of enteric fever in Maidstone had reached 1748 by the 27th inst., and thus this epidemic only finds one parallel in the modern sanitary history of this country. That parallel is the case of Worthing, where, during an epidemic period of seven months, from May to November, 1893, as many as 1411 attacks were recorded, and both in Maidstone and in Worthing the vehicle of the disease has been a public water-supply. It might be difficult to hold the Worthing Corporation directly responsible for the distribution of the enteric fever poison by means of their water-supply, because the infection that reached the water in that case was the result of accidentally meeting a fissure in the chalk during works carried out to improve, or at least augment, the water service. But after the event it became clear that the wells, sunk as they were in so fissured a stratum as the chalk, had become surrounded by houses, sewers, and drains, as the result of the extension of the town, to such an extent that the supply ought to have been looked on with suspicion. Anyhow, a terrible object-lesson was afforded of the results liable to ensue on the infection, whether as the result of neglect or by accident, of a public water-supply. So long as each house in a town or village had its own well, sunk in a polluted soil, so long was enteric fever fairly general and habitual in its incidence in this country; but we were as a rule spared the great and tragic outbursts which now at times ensue when the infection is allowed to get access to a public water service by means of which thousands of people almost simultaneously run risk of being infected. The later reports of the medical officer of the Local Government Board record epidemics which prove incontestably that the grossest and the most culpable neglect still prevails as regards a number of our public water-services, whether the supply is derived from springs, deep wells, gathering grounds, or streams; and we fear that at times the extent of the negligence and danger bears a definite relation either to the amount of pecuniary profit actually derived from the sale of the water to the public or to efforts made to render that profit greater. This is a state of affairs which has hitherto been all but ignored by Parliament in granting powers to water companies, whether municipal or private; and it is to be hoped that the attention which has been drawn to the subject by the Maidstone epidemic will lead to a much more careful watch than has usually been exercised over the powers and liabilities conferred and incurred in Bills as to public water-supplies.

We studiously avoid implying that blame attaches, whether here or there, in the case of the Maidstone water-service, because it is now announced that the Local Government Board will, if requested, hold a public inquiry into the matter. What this new inquiry will be we do not know, nor is it clear whether or not the official inquiry which has now for several weeks been carried out by Dr. THEODORE THOMSON, of the Medical Department of the Board, will be superseded, or whether two inquiries will go on together. But one thing is clear, that in fairness to the water company judgment as to their proceedings antecedent to the commencement of the epidemic must now be suspended. In one sense this is a misfortune, for the public cannot obviously be informed what is the official decision come to as to the cause or causes of the outbreak until the new inquiry has been held and concluded.

But on one matter we can speak freely, and that is that the visits of our Special Commissioner have shown that Maidstone is placed, by reason of antecedent neglect in its sanitary administration, in precisely that position which will probably make it most difficult to shake off an infection such as that of enteric fever, and that it behoves the town council not to lose an instant in trying to repair the errors of the past. Wherever there has been filth which has had access to the surface soil; wherever there are water-closets—so miscalled—which have no water laid on to them; wherever, in brief, there are conditions which favour the excremental pollution of air breathed, of water drunk, or of soil on or near which dwellings stand,—there it is that the sanitary authority must be hard at work in applying remedies. When all this has been done effectively there may

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be available sufficient information on which to apportion blame for the disaster of the past two months and for the continuance of the disease. It is as much the duty of a sanitary authority to see that its district is free from conditions that tend to harbour infection when imported or otherwise brought into its midst as it is for purveyors of either water or milk to see that their business is carried on so as not to endanger the public health. In most of these epidemics there is often blame on one side as well as on the other.

THE Council of the Hospital Sunday Fund is a cautious body. It spent nearly two hours on Wednesday in discussing a report on the out-patient department of the metropolitan hospitals, and ended by passing the following resolution:—

"That this Council recommend that at the next meeting of the constituents in December the following clause be added to the laws of the constitution: 'That where any hospital, having an out-patient department, has appointed a special and efficient officer for detecting any abuse in that department, it shall be regarded by the Distribution Committee as an important factor in determining the "merits."'"

Neither the report, which will be found in another column, nor the resolution based on it will excite the enthusiasm of those who realise the loose and pauperising way in which the out-patient department of some hospitals is conducted. If any relieving officer admitted applicants for parish relief in the way in which out-patients are admitted to the benefits of charitable medical aid he would soon be replaced by a more efficient successor. But familiarity breeds contempt, and it has accordingly come to pass that the governing bodies of our hospitals see this impracticable mass growing under their hands from day to day without realising its significance or with a sense of incapacity leading them to view with dislike all efforts to control it. They even come to approve it, to defend it, and to vaunt it as an argument of utility.

But though we are under no delusions as to the immediate effect of this resolution in reforming the out-patient department, it is, nevertheless, a step in advance, in that it has committed the Council of the Hospital Sunday Fund to the recognition of a chief measure for curtailing the out-patient department as a "merit" in a hospital. The quality of merit or demerit, according to the rules of the Hospital Sunday Fund, affects the award made by the Distribution Committee. It may be henceforth assumed, supposing the constituency to accept this clause, that a hospital without a special and an efficient officer for the detection of abuse in the out-patient department will be without one "merit," at least, on which the amount of its grant depends. The action of the Council on Wednesday shows its confidence—and very proper confidence too—that it does not exist merely to provide money for the hospitals, but to give friendly suggestions where these are necessary for their better administration, or for securing their benefits to those for whom they are meant.

The same discussion showed a great advance in the Council in the perception of the seriousness of the out-patient question and a disposition to put itself into harmony with public opinion outside. It would be simply disastrous if large funds were to be raised for hospitals from time to time without any guarantee being afforded that their distribution will be made on definite principles that will protect the poor and will at the same time prevent those that are not poor from pauperising themselves. A motion by Dr. GLOVER went, perhaps, a little further than Sir SYDNEY WATERLOW'S, and was apparently grateful to the Council, but in our opinion Dr. GLOVER showed a wise willingness to accept a motion from Sir SYDNEY WATERLOW, the Vice-President of the Fund and Chairman of the Distribution Committee, which was seconded by Sir WILLIAM BROADBENT who has been most helpful in this cause. No one could suspect him of having any designs against hospitals or the independence of managers of hospitals, but he has deep insight into abuses which demoralise the people and injure the profession. He has besides what is not universal in our profession, the courage of his opinions, and a power, amid abounding engagements, to give time to act as a leader, so that we are pleased to find ourselves for the second time in this issue of THE LANCET trumpeting his praises as an advocate of the rights of the profession.

The important matter of the distribution of the Fund has now for the first time become part and parcel of the out-patient question. There can be no doubt that much of the success which has attended the working of the Fund, apart from the efforts of the gentlemen who compose its Council and Committees, is due to the confidence which the public have always placed in the Distribution Committee. With a view to increasing this confidence some of the members of the Fund, and notably Sir HENRY BURDETT, have from time to time asked the Chairman of the Distribution Committee to disclose the mode of distribution of the Fund. This Sir SYDNEY WATERLOW has now done in the Board-room at Charing-cross Hospital on Thursday last, and his words cannot but increase the public trust in the administration of this great charity. We shall publish Sir SYDNEY WATERLOW'S statement next week.

Annotations.

"Ne quid nimis."

PROFESSOR MACEWEN AND THE MANAGERS OF THE GLASGOW WESTERN INFIRMARY.

THE difficulties of the managers of the Glasgow Western Infirmary in connexion with new arrangements of their wards and beds are still causing much anxiety both to them and to those who have the best interests of the University of Glasgow and of medical education at heart. The managers of the Western Infirmary met on Tuesday to consider the questions in dispute between them and Professor Macewen. They were nearly all present, and all but one (Professor Moir) agreed to the publication of a statement by them defining their duties on the one hand to the public to make adequate provision for the care of the sick, and on the other "to make," in consideration of a money payment from the University to the infirmary, "such reasonable provision as is deemed necessary by the Senate of the University of Glasgow and

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the managers for professors of the University engaged in clinical instruction.' The managers traverse with considerable force many of the statements which have been made on this subject, while they express their pride at the connexion of Professor Macewen with their institution. They are evidently in the great difficulty of having to meet the demand for more beds than they can well supply. We think that if this aspect of the case is taken into consideration and a little time given on both sides a solution of this question should be reached. The colleagues of Professor Macewen presented to the managers a very strong and dignified statement regretting the resolution to take away from their distinguished colleague twelve of the beds which he uses so well, and especially that it should have been done without "some inquiry" beforehand into "the disadvantages to which his surgical work and teaching will be subjected by the change proposed." It seems obvious from the very terms of the deed of agreement with the University that the Senate of the University should have been consulted before changes so deeply concerning the interests of medical education in the University were resolved upon. On the face of this representation from the Senate it appears that in restricting the beds at Professor Macewen's service the managers are failing "to make the provision deemed necessary by the Senate." We in no way forget the claims of other professors or the difficulties of the managers, but we look confidently for a solution of the difficulties in a sense that will satisfy Professor Macewen and his colleagues in the Senate. There are times when a school or a university is represented by one of its number. This is such a time. It is not a mere question of surgery which Professor Macewen so brilliantly represents. It is a question of therapeutics, towering over all other questions in therapeutics, in its range, and its importance, and we think that his claims, viewed in this light by the managers, will lead them to conclude that some way must be found to leave him in undisputed possession of his present facilities for teaching.

THE REPORTS OF THE ROYAL COMMISSION ON VACCINATION.

IT may save confusion, or add to it, if we endeavour to explain how matters stand with regard to the publication of the reports, with appendices, of the Vaccination Commission. In all seven reports have been issued. Strictly speaking, each of the first four reports consisted merely of a preliminary note to a volume of minutes of evidence and of appendices to minutes of evidence. These four volumes of minutes of evidence, containing also their relative appendices, are, however, conveniently called the first four reports of the Commission. Each of these four volumes was provided with a good analytical index. Volume I. was published in 1889, Volumes II. and III. in 1890, Volume IV. in 1893, and Volume V. in 1892. The fifth report, which it will be noticed was published before the fourth, was a short document in which the Commission stated their disapproval of repeated prosecutions for neglect of vaccination. Next in order should have come the sixth report; this report, however, was not issued until the present year. Like the first four, the "report" itself is a mere preliminary note, the volume being made up of minutes of evidence and appendices to these minutes of evidence. It differs from the first four volumes in being very much bulkier than any of them and in being published without an index, so that, though it contains the evidence of about eighty witnesses, it is rendered practically useless for purposes of reference. In the interval between the publication of the fifth and sixth reports the final, or seventh, report was issued in 1896, and also without an index. The volume containing this report contains also the Statement of Dissent by Dr. W. J. Collins and Mr. J. A. Picton. Page 6 of the volume gives a "List of Appendices to the Commission's Final Report." But the volume itself contains only the first two appendices mentioned in the list. Appendices III., VII., VIII., and IX. have not yet been published. Appendices VI., V., and IV., however, have now been issued within a few days of each other, Appendix VI. appearing before Appendices V. and IV. Each of these appendices is itself a report, Appendix VI. being Dr. Sidney Coupland's report on the Outbreak of Small-pox in Leicester in 1892-93, Appendix V. Dr. T. D. Savill's report on Small-pox in Warrington in 1892-93, and Appendix IV. Dr. Luff's report on Small-pox in London in 1892-93. These three appendices are published without an index. The appendices yet unissued are to consist of reports on Small-pox in Dewsbury, Gloucester, &c., and of papers relating to cases of injury alleged to be connected with vaccination. It is not known when they will be published or whether they will be indexed.

THE PUGILIST AND THE HOSPITAL.

BOXING has always been one of our national sports, and the National Sporting Club is, we believe, the Mecca of the champions of modern pugilism. We at all events have nothing at the moment to say against it, and are only gratified to learn that a British youth known as "Pedlar" Palmer has recently there met and defeated another "bantam" of Irish-American extraction and been rewarded with a purse of £600. It is also interesting to learn from a contemporary that Mr. Palmer, who is not yet twenty-one years of age has won over £3000 in stakes alone during the past two years, while we congratulate him on the pluck which enabled him to go on and win his last victory fighting nine rounds after one or both of his hands had given way. The same authority informs us in a succeeding issue that the injury consisted in a fracture of the small bone of the left arm, and adds a statement which seems to us almost libellous as it stands. It states that the injury was not discovered till "he went to the Poplar Hospital on the next day to have the hand dressed." We feel sure that "Pedlar" Palmer would as soon winter in the workhouse as accept surgical aid at the expense of a charitable institution, and that if our contemporary's account is correct so far as it goes it has omitted to mention that a cheque for at least £50 out of the last £600 has found its way into the coffers of the Poplar Hospital from the pocket of the grateful pugilist.

THE HEALTH OF THE NAVY.

THE question of how to instruct our naval medical officers in the pathology, prevention, and treatment of tropical diseases is now being debated in the columns of the leading daily journal. It has been suggested that the medical officers at Haslar Hospital should give courses of lectures to the junior naval medical officers as they enter the services. But, as Dr. Walter Reid, Inspector-General, R.N., points out in his letter to the *Times* of the 26th inst., "the great difficulty in the way of success with such a plan is to find a medical man in the service, or, for the matter of that, elsewhere, with the requisite qualifications, particularly as to a knowledge of tropical diseases and of the various modifications in health liable to occur during the service of men abroad. He would require to be a man who has spent years on each of our foreign stations. It would be necessary that he should have had opportunities of seeing and working through several great tropical epidemics, when or wherever they should happen to occur. He would require, for instance, to have been at Hong-Kong the other day for plague, elsewhere for a cholera epidemic, and in the West Indies during one of yellow fever. He would require to have

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wide experience of malarious disease in the many forms which it assumes in different parts of the world. It is safe to say, and no disparagement to naval medical officers, that such a man cannot be found. It would be almost impossible to make him, for he would either be dead or past his work before he had time to acquire the necessary qualifications. The truth is that under ordinary conditions of service the medical officers do not see much of the graver forms of tropical disease except when employed on shore, for the rule is, as it ought to be, that our ships avoid unhealthy ports, or when they must visit them then they leave them as soon as possible. The great watchword which must guide all their endeavours is prevention." The Dean of the Medical School of St. George's Hospital writes on Oct. 23rd that lectures in tropical medicine are delivered there by Dr. Patrick Manson. This is certainly a step in the right direction; but we must remember that Dr. Manson, being physician to the Seamen's Branch Hospital, Albert Docks, and not to the Seamen's Hospital, Greenwich, or old *Dreadnought*, has only some eighteen beds at his disposal, and that these do not afford much clinical material to work upon. Dr. Reid makes a suggestion which we think a good one. It is that the old plan of issuing an annual report on the health of the navy, which used to be carried out under the superintendence of Dr. Mackay, should again be followed. This used to be compiled from the various medical officers' journals and reports, and was, Dr. Reid says, of great value. These reports are still sent to headquarters, but the only report which appears is "practically nothing more than a bald collection of statistics." We should say the sooner "my lords" return to the old style of report the better. All Government departments have a mania for saving halfpence and spending pounds, but the little extra money which a reversion to the old system would cost would be more than counterbalanced by the value of the information which would be put into the hands of those responsible for the health of our first line of defence.

MR. STEAD AND THE CONTAGIOUS DISEASES ACTS.

THE editor of the *Review of Reviews* has degenerated into language concerning the Contagious Diseases Acts that is more than abusive; it is actually rancorous. In an article headed "Our Real Peril in India," which appears in the current number of the journal in question (p. 368), after expressly saying that he does not "wish to assume that the allegations so freely made on the one side and tacitly admitted on the other are really correct," and after announcing his belief "that current reports may be exaggerated, and the Indian authorities may not be doing all that they are credited with," this perfervid champion of free trade in venereal disease commits himself to the following extraordinary statement: "Certainly if the Indian army is to be run by such unscrupulous rogues as those army doctors who are responsible for the cooked statistics with which they have defiled the name of the country and such mutinous officials as those who have set Lord George Hamilton's directions at naught there would be good reason for setting on foot an agitation against enlistment, which would only need a little encouragement to paralyse the War Office." There can be but one opinion regarding a controversialist who thus stultifies himself within the space of a few lines while offending against decency by his outrageous diction. That opinion is that his case is a woefully poor one. As an example of idle vituperation the passage we have quoted might be thought hard to beat; but a little further on in the article there is another outburst which perhaps beats it. Here it is: "Of course, I shall be told at once that I am indifferent to the sufferings of the soldiers, and that if we have not this system we shall see the army eaten up with disease. To which assurance I have simply to make one straight answer—namely, that those who make it lie in their throats and if they had an elementary knowledge of the facts they would know that they lied." Precisely so! Now those unscrupulous rogues, the army doctors, happening to possess elementary, to say nothing of exhaustive, knowledge of the facts are perfectly well aware who is "lying in his throat" or in his journal, as the case may be. Intemperate language is generally the sign of a bad case, and it would be difficult to find a more effectual proof of the unsoundness of Mr. Stead's views than his own utterances, so we continue to quote from him. Here, for instance, is a passage which clearly convicts its writer of prejudice, not to say fanaticism: "The service is not too popular to-day, but if we are to be taught that it is only an ante-chamber to the brothel and the lock hospital the difficulty of recruiting will speedily be increased to a degree which would give Lord Wolseley the nightmare. If we have a few more dissertations like Colonel Turner's, Lord Lister's, and other men of that kind, it may very soon become a duty to convince the masses of the people that the army in India is no fit place for any decent woman's son." What drivel! Now, just one last example of the depth of Mr. Stead's knowledge, without a belief in the possession of which, we suppose, he would hardly have written in this way about "rogues" and "lying in throats." He accuses Colonel Turner of "effrontery" in asserting that "on the Continent youth is generally and efficiently protected by State legislation," and then, in order to demolish his military adversary, he quotes from a "dignified and effective rejoinder" by the Rev. J. Kirk Maconachie, who says: "The French hospital returns show that between 60 and 70 per cent. of venereal disease is contracted from 'protected' women." Clearly Mr. Stead imagines, or would have us believe so, that these "protected" women are registered and periodically examined prostitutes. Does he not know the phrase "protected" women as used for "kept" women, and that such "protected" women are under no police control at all? If he is ignorant of these things he is not in a position to discuss the Contagious Diseases Acts. If he knows them he would appear to have been—well, equivocating in his larynx.

YELLOW FEVER.

IN the *New Orleans Medical and Surgical Journal* for October are four articles on Yellow Fever. The first, on Etiology and Pathology, is by Dr. R. Matas; the next, on Symptomatology and Diagnosis, by Dr. F. W. Parham; the third, on Treatment, by Dr. T. S. Dabney; whilst Dr. J. J. Archinard reports a case with the necropsy. The paper by Dr. Matas gives an interesting historical account of the researches which have been carried out concerning the nature of the fever and the efforts which have been made to discover its cause and the mode of diffusion of its contagion. A full description is given of the micro-organism isolated by Dr. Sanarelli this year, and reference is also made to the organism discovered likewise in the present year by Dr. Havelberg. He concludes his paper by considering what bearing Sanarelli's discovery, if verified, has upon the prophylaxis, diagnosis, and treatment of yellow fever, and sums up as follows: 1. As to prophylaxis. It is legitimate to expect that in dealing with so specific and potent a micro-organism as the bacillus icteroides it is possible, by attenuated culture or by an antitoxic serum such as is now obtained from immunised horses after subjecting them to experimental diphtheria or tetanus, that a reliable preventive and curative agent will be obtained. 2. As to diagnosis. That if the cultures obtained from the bacillus icteroides are specifically characteristic, as claimed by Sanarelli, a pathognomonic

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culture may be obtained in twenty-four hours from suspected cases. Again, if this should be impracticable during life, owing to the paucity of germs in the blood, it is possible that a specific serum reaction similar to Widal's agglutination test may be obtained, which will permit of an immediate and infallible diagnosis in the early stages of the disease. 3. As to treatment. The greatest value of Sanarelli's researches lies in the prospect of obtaining a specific antitoxin which alone can cope with the specific cause in the blood and the tissues. Apart from this, these researches would suggest some important conclusions which affect our present mode of treatment—for instance, that resorting to germicidal medication with the view of destroying the specific micro-organisms in the gastro-intestinal tract is of no use. When the symptoms of yellow fever present themselves the specific germ and its toxins are already in the blood and tissues, and no amount of purgation or gastro-intestinal antisepsis could possibly affect its future course or development. On the other hand, in view of the secondary affections which so frequently complicate this disease by the invasion of the colon bacillus and other bacteria of the gastro-intestinal tract in the graver types of this infection, it is perfectly logical and proper to resort to laxatives and intestinal antiseptics and a total abstinence from all foods, with the view of diminishing these secondary intoxications to a minimum. One of the fundamental and pernicious errors in this disease, according to Dr. Matas, is the belief that food is necessary in its treatment because it is a prostrating disease. This is not a wasting disease, and when it is typical it is self-limited and of comparatively short duration. The cry of the organism is not for food, which will only help to clog up the machinery of elimination, but for water, which is needed to dilute the toxins in the blood, to maintain the secretions of the poisoned organs, the skin, and, above all, to flush out the kidneys, which are blocked up so early in the struggle.

THE UNQUALIFIED PRACTITIONER AGAIN.

AN inquest was recently held in Singapore upon the body of a man who died after taking an overdose of chloral. It should also be added that he was suffering from delirium tremens and was a chronic alcoholic. The interest of the case, however, lies in the fact that the deceased was treated by an unqualified person named Max Wispauer, who in his evidence described himself as a German and a chemist, and said he was not allowed to practise in his own country. He examined the deceased's heart very carefully and gave him what we must allow were sound instructions. He also prescribed bromide and chloral, which drugs are well known to be useful in the case of delirium tremens. But, as everyone knows, persons in this condition require very careful watching during the exhibition of these drugs, and this Mr. Wispauer omitted. This we may see from the verdict, which ran as follows:—

"Death was due to an overdose of chloral hydrate acting on a weak heart. So large a dose as 30 grains of chloral hydrate following 24 grains of chloral hydrate taken during the day, and followed by a similar dose of 30 grains of chloral hydrate, should not have been given in the weak condition of deceased's heart. The chloral hydrate was prescribed by Mr. Wispauer, and he ought to have visited the deceased to note the effect of the first dose of 30 grains of chloral hydrate before allowing the second similar dose to be given. The chloral hydrate was dispensed by Mr. Wispauer, and he was negligent in not writing full directions on the label of the bottle, particularly as he considered the deceased to be suffering from a disease affecting the mind. For if so it was natural to expect that verbal directions might be forgotten or not implicitly followed. Thus in prescribing and in dispensing a poisonous drug so uncertain in its action as chloral hydrate Mr. Wispauer was negligent.

"*Rider*—It is to be regretted that no ordinance exists in this colony to prevent unqualified persons from treating dangerous diseases and prescribing poisons. This colony appears to be the only one where such an unfortunate condition exists."

The colonies are in this case much better off than the mother country. Over here any swindler, however ignorant, can practise as much as he likes and no one can say him nay, so the quack, the faddist, and the cheat may sing in chorus, "Oh! what a happy land is England" Perhaps the advent of Mr. Horsley on the General Medical Council may bring about a better state of things.

SUDDEN DEATH OF A PRISONER.

SOME interesting medical evidence was given the other day at an inquest held in Lancaster Castle on the body of a prisoner who had been found dead in his cell. It appears that he had been an inmate since last June and had often complained of pain in the head and had suffered occasionally from vomiting. In consequence of this he was frequently seen by the prison surgeon. At the post-mortem examination an erosion of the base of the skull of about the size of a shilling was found. Lying upon this was a "softened mass" containing spicules of bone. This seems to be one of those perplexing cases in which gross lesions give rise to few signs or symptoms during life. The vomiting does not seem to have been at all severe, and, of course, as regards the pain, we have only the patient's word. It is not stated whether any ophthalmoscopic examination was made. This, if it revealed optic neuritis, would complete the list of classical symptoms of cerebral tumour. There was a history of a severe fall some months before, and it seems possible that the softening was caused by localised periostitis due to this, or more probably to syphilis.

THE CASE OF DR. LAPORTE.

WE publish in another column a report of a case in which Dr. Laporte, of Paris, was sentenced to three months' imprisonment for alleged negligence in attending a woman when craniotomy had to be performed. It is true that under a law similar to that sometimes exemplified in this country in the case of first offenders the actual infliction of the penalty has been postponed for five years on condition of good behaviour in the meantime, and that if no cause of complaint arises during that period the penalty will not be inflicted. Still, the stigma of the sentence remains, and for that reason much indignation has been excited at the result of the trial. The evidence against Dr. Laporte appears to have been to a great extent of an unsatisfactory kind. It seems to have consisted of the impressions formed by the husband and two neighbours by watching what was done from outside the room through an aperture left by the door of the room not being quite closed. They formed the opinion that Dr. Laporte had applied the forceps in an improper manner. It is difficult to imagine anything more unsatisfactory. How could people unfamiliar with obstetric science possibly come to any useful conclusion on the subject, even if they had been in the room? To the eye of the layman the amount of force often used in difficult forceps cases might easily appear excessive, violent, and therefore improper. As Professor Pinard testified, the fact that the forceps was applied four times, and that nevertheless no lacerations of the vagina and neighbouring organs were found after death, sufficiently disposes of the suggestion that the instrument had been improperly applied. A less satisfactory part of the case is that when craniotomy was decided upon Dr. Laporte appears to have been without the proper instruments, and to have used a long needle instead of the perforator. The woman died two days after the operation, and at the post-mortem examination two perforations were found in the bladder which were supposed to have been caused by the needle. Even supposing these perforations to have

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been caused by the needle, unless the peritoneal coat of the bladder was perforated it is not easy to see how anything worse than incontinence of urine should have resulted. The patient had always had difficult labours, and yet her husband seems to have left her all day long without skilled assistance and only to have sent for a medical man in the evening. It seems only too probable that the unfortunate termination of the case was due to leaving the woman to become exhausted before sending for help. At the same time the case appears to us to teach a useful lesson. If the medical man has not the proper instruments he is extremely likely to be held responsible for whatever happens. We think it would have been more judicious if, when he found craniotomy necessary and knew that he was without the instruments usually employed, he had sent to a lying-in hospital for help. In a large city such as Paris it is surely always possible to overcome a difficulty of the kind in this way.

PROSECUTION UNDER THE DENTISTS ACT.

A PROSECUTION under the Dentists Act has recently taken place at Lichfield, as is reported by our Birmingham correspondent. The plaintiff, a Mr. Morgan, was found guilty and fined £2 2*s.* with costs for using the term "dentist" and not being duly registered. The interesting feature, however, of the case was the endeavour made to obtain a conviction for "obtaining money under false pretences." The plaintiff's daughter had two teeth fitted, for which she paid the sum of 7*s.*, and at the time of the operation the defendant, on being questioned, stated he was Mr. Morgan, "the dentist." The prosecution proved that he was not a duly registered dentist and therefore not entitled to practise, and contended that he had by using the term "dentist" led the patient to believe that he was so registered, and had therefore obtained the money—namely, 7*s.*—under false pretences. The court dismissed the case, the defendant's counsel pointing out that in order to establish such a charge, not only was it necessary to prove that the statement relied upon was untrue, but also that it had influenced the person to pay the money and was made with the intention to defraud. The case is of some interest, not only to the dental and the medical professions, but also to the general public, and although we have no wish to question the decision arrived at in this case, we cannot help feeling that in the majority of instances the assumption of a false title by such irregular practitioners is done with the object of obtaining money under false pretences.

THE PROGRESS OF PUBLIC HEALTH SINCE 1837.

MEDICINE, in common with other branches of natural science, has undergone great development in every department during the sixty years of Queen Victoria's reign. Much light has been cast on the difficult problems presented by morbid phenomena, and there has, moreover, been a marvellous extension of the utilitarian applications of medical science, especially in the prevention of epidemic disease and in the improvement of operative surgery, which has been almost revolutionised by the discovery of anæsthetics and antiseptics, the net result being a great saving of life and diminution of suffering. To write the history of the evolution of sanitation as at present existing would be a task of no small magnitude, but many expositions of selected parts of the subject have from time to time appeared, one of the most recent being a presidential address delivered in the Council House, Birmingham, by Dr. T. R. Bailey, medical officer of health of Bilston, at a meeting of the Midland Branch of the Society of Medical Officers of Health. Cholera, typhus fever, and typhoid fever were the examples which Dr. Bailey employed to illustrate the efficacy of sanitation in reducing the incidence of disease, small-pox coming rather under the head of vaccination. On the subject of typhus fever he said: "In 1837 the disease prevailed in many parts of England, and in 1838 no less than 1271 per million of the population died from it. In the years 1846–48 a frightful epidemic occurred in Ireland on the failure of the potato crop. It spread to England, where, in 1848 786 cases were admitted into the London Fever Hospital alone. In that hospital as many as 14,589 cases were treated during the period 1832–70. In Glasgow, too, the death-rate per million for the five years 1855–59 was 1265, and for the five years 1860–64 1576. These figures show the extremely fatal character of this most formidable disease. Since 1869 this fatality has markedly and continuously decreased until now it has almost reached the vanishing point. In that year the deaths in England and Wales were 4281, in 1895 they were only 318, and the mean rate for the quinquennium 1891–95 had actually been reduced to 4 per million of persons living. ..... Surely if sanitarians could lay claim to no other achievement they would be entitled by this to an honourable place in the history of the Victorian era."

THE PREVALENCE OF TYPHOID FEVER.

UPWARDS of two hundred cases of typhoid fever have been notified in the town of King's Lynn, and the Local Government Board have asked the sanitary authority for an explanation. Contradictory statements are prevalent as to the probable cause of the outbreak, allegations being made against the main sources of the water-supply as well as against the filtering arrangements. The sanitary authority attribute the mischief to pollution of the supply by surface water after a thunderstorm. We are informed that there is also a scattered outbreak of typhoid fever in different parts of Essex which is attributed to the consumption of uncooked oysters from one of the beds at Brightlingsea which was shown in the official report on "Oyster Culture in Relation to Disease" to be subject to risk of sewage contamination. Dr. George Buchanan, who has been instructed by the Local Government Board to inquire into the occurrence, is already on the spot.

THE TREATMENT OF INCONTINENCE OF URINE IN CHILDREN.

A USEFUL paper on this subject, by Dr. J. A Coutts, is published in *Treatment* of Sept. 9th, 1897. He states that the vast majority of cases of nocturnal incontinence can be relieved by waking the child at stated intervals to micturate. Restriction of liquids during the latter hours of the day will help. But in a few cases this seemed to keep up the disorder, the vesical mucous membrane being evidently intolerant of the highly concentrated urine so produced. In obstinate cases if the urine is of high specific gravity and acidity then the child should be encouraged to drink freely towards the end of the day. A signal success may be thus achieved. Of drugs belladonna still is foremost, but it often fails. This sometimes arises from the common method of giving several doses during the day. A much more efficient one is to give one single large dose in the evening, which can be gradually increased every four or five days, and when the incontinence ceases gradually diminished. If belladonna fails recourse must be had to other drugs. Of these he places most reliance on lycopodium, the merits of which have been as yet but little recognised. He gives twenty drops of the tincture three times a day to a small child, and increases the dose gradually to a drachm. Possibly more could be given. He knows of no poisonous properties attaching to the drug, but admits he may be at fault in that respect. In ordinary cases bromide of potassium has proved of less service to him than to some

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others. But there are cases in which it may prove of the utmost benefit—those in which micturition occurs when waking is imminent or takes place. He has seen but little benefit from strychnine, but in combination with iron in cases accompanied with anæmia and lassitude it has been of great service. When drugs fail there remain other methods. In many instances micturition does not occur while the child lies on his side, but immediately when he turns on his back. Here a bobbin strapped over the lower spine is effectual. Circumcision is to be recommended only where there is undue tightness of the prepuce.

A NEW METHOD OF INDUCING SLEEP.

IN the *Journal of the American Medical Association* of Sept. 25th, 1897, Dr. J. B. Learned describes the following method, which he used in his own case. For some years he suffered from insomnia following a fall from his car. He tried many methods of treatment in vain—drugs, hot water and cold water internally and externally, friction, over-feeding and under-feeding, exercise, gymnastics, deep inspirations, and numberless mental occupations. At last the following method proved a success. The principle is to induce muscular fatigue by exercises carried out in bed. Lying on his back the patient first reaches for the foot and head board at the same time. He then raises his head half an inch; at the same time he breathes slowly and deeply about eight inspirations to the minute, which are counted. After about twenty inspirations, the head, which begins to feel heavy, is dropped. The right foot is then raised (the reaching for the boards and counting being continued) and similarly dropped when fatigued. The left foot goes through the same process. The muscles which are used in reaching for the head and foot boards are then relieved, and the body is elevated so that it rests on the head and heels. He then turns on the right side and reaches for the head and foot boards again, and raises first the head and then the foot as before. The same process is gone through on the other side. Thus eight positions have been assumed and a large number of muscles used. If sleep has not been induced the same cycle is gone over again.

PROPOSED AMENDMENTS IN THE NOTIFICATION ACTS.

WE have received from Dr. Meredith Young a special report on the working of the Infectious Diseases Notification Act which he has addressed to the Crewe Town Council. Whilst we agree with him that in certain respects the present Act needs alteration, we doubt if it should be modified in a number of the respects to which this report refers. Dr. Young would leave the fee at 2*s.* 6*d.* for a first certificate of notification, but proposes that if a second case of infectious disease arises in the same house "within one month from the date of such certificate," only 1*s.* should be paid for the second notification, and that the reduced fee should apply to all cases of scheduled disease, and not merely to cases of the disease primarily notified. For example, a case of scarlet fever notified by one practitioner on Oct. 1st is to be paid for at the rate of 2*s.* 6*d.*, and a case of small-pox occurring in the same house on Oct. 31st, although it may come under another medical practitioner's care, is to be paid for at the rate of 1*s.* The idea is that since one notification has brought the infected premises under notice the value of the second notification is decreased. If this means that, assuming the case of scarlet fever to have been removed to hospital on Oct. 2nd, the medical officer of health is to have the place kept under supervision until the expiration of a month, then we fear that the sanitary officers in large populated districts will have their hands very full; if it does not mean this, the notification of Oct. 31st will be of just the same value for public health purposes as that of Oct. 1st. Then, again, Dr. Young proposes that in the case of chicken-pox and small-pox, diseases that are often mistaken for each other, the former should be notified for 1*s.* and the latter for 2*s.* 6*d.* He could hardly have selected two diseases which give more trouble as regards diagnosis, especially in a vaccinated community; indeed, there is no less trouble involved in the ultimate diagnosis when the disease is decided to be chicken-pox than there would be if it were a case of small-pox. Other points that are equally difficult to be understood occur in this report, but we have not space to discuss them. We hope, however, that before any further action is taken in the matter the views of those who will be mainly affected by such changes will be ascertained, and that lessened fees will not be proposed precisely in those cases where the greatest difficulties to notifying practitioners arise. The subject evidently requires more attention than it has yet received in Crewe, but we are informed that the corporation have, since receiving this report, already memorialised the Local Government Board in the matter.

CRUELTY IN A WORKHOUSE.

THE case of an imbecile, aged sixty-three years, whose death occurred in the Bradford Workhouse, was recently investigated at a coroner's inquest. The deceased had been a week in the workhouse, when he was placed, being then in a feeble and restless condition, under the care of one of the attendants. This man, who it is admitted was somewhat the worse for drink, was observed by a ward assistant to strike the deceased, and, according to the testimony of an imbecile inmate, he otherwise violently assaulted him. The death of the latter occurred a day later, and a post-mortem examination showed that several ribs were fractured and that cerebral hæmorrhage had occurred. There was, however, no evidence connecting this hæmorrhage with external injury. The fine point between *post* and *propter* in this instance cannot perhaps be decided with judicial precision. We are consequently unable to define the exact relation between the death and the ill-usage which preceded it. Nevertheless, it is quite clear that the dead man had been treated with unjustifiable violence, and we have no explanation but this to account for his visible injuries. It is therefore surprising to find his attendant dismissed by the coroner and his jury with no further comment than a reprimand for his cruelty. The case, we should have thought, was at least one of aggravated assault and therefore punishable. It is at least to be hoped that the Bradford Workhouse authorities do not think so lightly of their servant's misconduct as to retain him in a position for which he is so evidently unfit. This case, moreover, points another lesson — namely, the duty of observing a more careful supervision over ward attendants as well as greater care in their selection.

THE PLAGUE IN INDIA.

WE have so frequently called attention to the increased occurrence of plague, and to the large increase of sickness and mortality in the towns and districts which had previously suffered from the epidemic, that there is no need to enter upon the subject at any length at the present time. Unfortunately, if we may judge from past experience of the disease in China and elsewhere, an increased prevalence of plague may be expected to occur during the ensuing winter season, and the slow and insidious way in which it is extending itself in India is also a very serious matter. Several Europeans have been attacked during the progress of the epidemic, and we now learn, through Reuter's agency, that it is officially announced that the disease which has appeared in the Jullundur district of the Punjab is true

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bubonic plague. A cordon has been drawn round the infected area. Plague has also appeared in Hubbi and Wai, on the road to Mahabalishwar. At Poona 294 cases are reported from the hospitals and 115 at Bombay. A revived activity of the disease at the beginning of the cold weather was predicted; but the recrudescences in cities that have already suffered are generally of a much milder character than the primary outbreaks. It is the slow dissemination of the disease in rural districts and the difficulty of promptly dealing with it before the infection has gained any foothold in these places that renders the task so onerous and perplexing. Isolation and hospital treatment of those stricken with the disease and the application of effective sanitary measures, including the removal of filth and the opening out of infected localities freely to the air and sunshine, are the obvious remedies; but how to apply these promptly is surrounded with practical difficulties, for it takes time and money, a large staff of officials, a strong administration, and a numerous executive to do it, to say nothing of the provision of numerous isolation hospitals and camps. The Government of India will save themselves an enormous outlay of money and trouble, it appears to us, by devising, through the instrumentality of their medical and other officials, some organised system of dealing with the spread of the disease which is capable of being worked without leading to such an obstinate opposition and resistance on the part of the natives as to render their efforts futile.

PHOTOGRAPHY AT THE NEW GALLERY.

THE kodak, or some similar form of camera, has now become almost a necessity for the traveller and the holiday maker, for it is so portable and easy of manipulation that the many thousands who cannot sketch and yet are desirous of preserving some record of what they see, can by means of a portable camera fitted with films possess as many illustrations of their journeys as they please. Nor are the benefits of photography confined to these uses, for a knowledge of the art is specially useful in medicine and surgery. The Eastman Company, who were we fancy the pioneers in this country of film photography, have opened a very interesting exhibition of apparatus, methods, and results at the New Gallery. The various gradations of toning and colouring which are obtained by the use of different chemicals are quite a revelation, though we cannot agree with the endeavour which is obvious to make a photograph look as much as possible like a water-colour drawing. Compare even the most finished sepia print of a landscape or seascape with the prints of the Liber Studiorum or a sepia sketch of a master like the late Alfred Hunt, and what a difference there is: in the one there is the very soul of th eartist, in the other nothing. A photograph should be a photograph and not attempt to be anything else. Among the radiographs exhibited is a very perfect series of twelve prints of the same hand obtained at one sitting by super-imposing twelve plates one above the other. These were taken on the Eastman x ray paper with a three minute exposure. A variety of cinematograph films were also on show, and the Eastman Company have great hopes that as the apparatus is more perfected it will be possible to obtain radiograph cinematograph films of the joints of the human body, a procedure which would add largely to our knowledge of their structure and functions. Dr. Macintyre, of Glasgow, has for some time been working at this subject and has arrived at some very good results in the frog; but at present the difficulties with regard to human joints—e.g., the knee—have not been overcome. We have mentioned that portion of the exhibition which appeals most to medical men; but in the west gallery there are many very beautiful landscapes and other prints which are well worth seeing, notably Nos. 3 and 5, by Mr. A. Pringle, and No. 11, by Mr. A. Sutcliffe, though it must be remembered that even these are not water-colours.

CITRATE OF IRON AND STRYCHNIA MISTAKEN FOR CITRATE OF IRON AND QUININE.

A RECENT inquest which was held at Gainsborough illustrates the great care which is necessary in selling and dispensing drugs which are poisons and which resemble in appearance drugs which are more or less harmless. It would appear that a woman purchased from a druggist what was sold to her as two-pennyworth of citrate of iron and quinine, but which was in reality citrate of iron and strychnia. The error arose from the fact that the wholesale druggist who supplied the local druggist forwarded in response to an order a bottle labeled in accordance with the order, but containing the poisonous drug. From the evidence given by a representative of the wholesale firm in question it was elicited that citrate of iron and quinine is sent from the factory to the warehouse in tins, whilst citrate of iron and strychnia is received in earthenware jars. The two different combinations of drugs are kept in different rooms, but may be brought into the bottling-room for the purpose of being packed and labeled. The assistant of the local druggist who sold the drug stated that he weighed exactly two scruples, and that two-thirds of the bottle from which he dispensed it had already been sold. As the result of the inquiry the jury returned a verdict to the effect that the woman died from poisoning by strychnia, sent by mistake for citrate of iron and quinine to a local druggist by the wholesale firm of manufacturers in London with whom he usually dealt. They added a rider recommending that the wholesale firm should in future adopt a system in regard to their business of checking those who fill and label bottles, as adopted by many large firms in other trades. They also cautioned the assistant as to weighing in future the ingredients for medicines.

CHRIST'S HOSPITAL SCHOOLS AT HORSHAM.

THE ceremony which took place at Horsham on Saturday marks, it is to be hoped, the end of the unfortunate state of things which has perturbed the minds of the governors of Christ's Hospital and of the general public for some years past. It will be remembered that about seven years ago it was decided to remove the school from Newgate-street in accordance with the scheme of the Charity Commissioners under which the governors were empowered to dispose of the city site and buildings. The financial condition of the charity, as well as general considerations of health and sanitation, rendered this necessary, and a site was selected at Stammerham, near Horsham. Objections, however, from a sanitary point of view were made to this site, but the governors having already purchased it did not feel inclined to seek for a new one. By judicious sanitary measures it was pointed out that the existing drawbacks to the situation might be removed. These difficulties have now, we trust, been overcome, and the first step towards the erection of the new buildings was made on behalf of the Queen by the Prince of Wales on Oct. 23rd, when he laid the foundation stone with the same trowel that was used by his great uncle Frederick, Duke of York, on behalf of George IV., in 1825, the year in which that Prince laid the first stone of the great hall of the historic building in Newgate-street. The new site covers nearly 1200 acres and is situated on rising ground. The residential portion will have a southern frontage with ample interspaces between the house blocks, while the working portion will be placed in the centre and disposed at intervals about a cloistered quadrangle. At present it is intended to erect six house blocks, divided into two houses, each

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for fifty boys and two masters, with domestics and staff. The blocks will be connected by a subway, ventilated and lighted throughout, and containing the pipes, mains, and electrical wires so as to afford facility of examination and repair. The buildings include an infirmary, sanatorium, library, and museum. The accommodation will be for 600 boys, instead of for 620 as originally intended, but it is hoped that eventually the buildings will be completed in accordance with the original designs. The London, Brighton, and South Coast Railway Company has undertaken to build a station on the estate, to fix cheap fares, and to provide other facilities for reaching the station.

THE DEATH OF THE DUCHESS OF TECK.

IN the Duchess of Teck, whose lamented death occurred last Wednesday morning, the nation has lost not only a most popular member of our Royal Family, but also a lady whose warm heart, untiring kindness, and practical sympathy with distress had been placed in evidence in a thousand ways. Her intimate association with numerous philanthropic projects for the good of the suffering and the weak, especially those which had for their object the relief of women and children in distress, had endeared her to the heart of the nation to a remarkable extent, so that her appearance on public occasions was always the signal for a reception the enthusiasm of which left no doubt as to the real affection in which she was held by all. It will be remembered that in April last Her Royal Highness underwent an operation for strangulated umbilical hernia at the hands of Mr. H. W. Allingham. The operation was completely successful, and every one was glad to see the Duchess's stout handsome face at the Jubilee festivities, when she was apparently enjoying her usual health. Latterly, however, she had been troubled both by a feeble heart and glycosuria—both pathological conditions being of some years' standing—and on more than one occasion when indefatigably fulfilling her part in some public function she has appeared to those around her to have been undertaking more than her strength warranted. The Duchess was taken ill on Monday morning last, when she was seen by Dr. Wadd, of Richmond. On Tuesday she manifested slight symptoms of obstruction, and in the course of the day was seen by Mr. Allingham in consultation with Dr. Wadd. In the evening the symptoms became suddenly severe, and Mr. Allingham was again summoned. It was then decided by Mr. Allingham, Dr. Wadd, and Mr. H. Randall Wadd that the only prospect of relief lay in an immediate operation to release a strangulation of the bowel. This was performed by Mr. Allingham, Dr. Hewitt administering the anæsthetic, and a strangulation was found in the neighbourhood of the old umbilical sac. The operation was immediately successful in that all the symptoms were relieved, and she came round from the anæsthetic, but two hours later she died from cardiac failure.

HYDROPHOBIA?

A DEATH attributed to hydrophobia from the bite of a dog formed the subject of an inquest held at St Bartholomew's Hospital on Oct. 25th, the circumstances being remarkable from the fact that the veterinary evidence tended to negative the hypothesis that the dog suffered from rabies. The deceased was a man, thirty-six years of age, who was bitten on the ear by his pet dog on Aug. 29th. He was at once taken to a medical man, who cauterised the wound, but on Oct. 16th he had a fit and was conveyed to the hospital, where he died the following day. The house surgeon at St. Bartholomew's Hospital stated that at the time of admission the deceased was suffering from fits which were compatible with hydrophobia, and that the case terminated fatally in twenty-four hours. He had made a post-mortem examination and considered that hydrophobia was the cause of death; inoculation experiments had been performed with rabbits, but the results could not be known for some time. Mr. Albert Owen Hughes, M.R.C.V.S., said that he received the dog, a fox terrier, on Aug. 29th, but he saw no symptoms of rabies, "and with a little medicine it appeared well after two days." On the fourth day the witness was asked by the deceased to poison it, after which he made a post-mortem examination and came to the conclusion that the dog was sound. He had also inoculated rabbits, which were still alive. The witness further stated that if the dog was proved to be rabid he would be liable to a penalty for not reporting the case. The body of the dog was afterwards exhumed, and on Sept. 7th it was examined by Professor Bradford, of the Brown Institution, with a negative result. By this time, however, decomposition had set in. Rabbits were also again inoculated, and they were still alive. As the circumstances of the case seem to have afforded every conceivable opportunity for investigating the condition both of the man and the dog, it is much to be regretted that the medical and the veterinary evidence could not have been harmonised. The jury ultimately returned a verdict of death from hydrophobia.

THE Society of Anæsthetists will hold a conversazione at 20, Hanover-square on Thursday, Nov. 18th, commemorative of the fiftieth anniversary of the introduction of chloroform as an anæsthetic. An oration on "Empiricism or Science? Anæsthetics, 1847–1897," will be delivered at 8.30 P.M. by the President, Dr. Dudley W. Buxton. "Smoking," "Music," and "Exhibits" are other items of attraction set forth on the card of invitation.

THE inaugural meeting of the Midland Medical Society was held at the Grand Hotel, Birmingham, on Oct. 22nd, when Sir Richard Thorne Thorne, K.C.B., F.R.S., Principal Medical Officer to the Local Government Board, delivered an important and suggestive address on Soil and Circumstance in their Control of Pathogenic Organisms. This address will appear in an early issue of THE LANCET.

WE have just received the report of the Medical Officer to the Local Government Board, which we shall notice in detail in a future issue. Besides the regular reports the volume contains sundry appendices upon subjects of great scientific interest, amongst others one upon Snake Venom by Dr. Kanthack, and one upon Non-pathogenic Microbes liable to gain access to Food, by Dr. Cautley.

THE opening meeting and exhibition of the Roentgen Society will be held in St. Martin's Town Hall on Nov. 5th, at 8.45 P.M. Professor Sylvanus Thompson, F.R.S., will commence his presidential address at 9 P.M., prior to which all members and visitors are requested to be seated. All communications with regard to the new society may be addressed to Dr. David Walsh, 5, Pump-court, Temple.

THE Duke of Coburg is said to be interesting himself in the concert in aid of the funds of the Charing-cross Hospital, which is to take place on Nov. 19th at the Queen's Hall. Madame Albani's services are already promised, and the *World* suggests the probability of Royalty being again represented in the splendid band of the Royal Amateur Orchestral Society.

PROFESSOR JAMES DEWAR, F.R.S., President of the Chemical Society, will lecture on Thursday, Nov. 4th, at Burlington House, on "The Properties of Liquid Fluorine," "The Liquefaction of Air and the Detection of Impurities,"

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and "The Absorption of Hydrogen by Palladium at High Temperatures and Pressures."

WE understand that Mr. Joseph Smith, chairman, and Mr. W. G. Dickinson, one of the honorary secretaries, have resigned their positions on that queerly named body the "Corporate and Medical Reform Committee."

THE sum of £1000 has been received for the endowment of a bed in Westminster Hospital in memory of the late William Farmiloe, as a memorial of a lifelong connexion with the city of Westminster.

HOSPITAL REFORM.

THE Earl of STAMFORD presided over a conference which was held on Oct. 21st at St. Martin's Town Hall under the auspices of the Hospital Reform Association.

In opening the proceedings the CHAIRMAN explained that the meeting had been convened to discuss the question of the administration of medical relief in the out-patient and casualty departments of hospitals and dispensaries. There were several societies working side by side, he said, which were working with the same object in view. He himself did not belong to the Hospital Reform Association, but he was an active member of the Charity Organisation Society. As evidence of the urgent need for reform Mr. Garrett Horder had compiled statistics which showed that in the twenty-two general hospitals of London no fewer than 897 000 out-patients were treated, and at the sixty-eight special hospitals 67,500, during the year 1895. When to these were added those treated by non-provident dispensaries the total number of out-patients reached about 1,000,000 of the population of London. A large proportion of these persons were able to pay for medical treatment. The Charity Organisation Society, after inquiry, had come to the conclusion that only about one-quarter of the whole number were suitable recipients of this form of relief, and a grave injustice was done to the general practitioner.

Mr. HORDER then read a short paper on the subject of Medical Reform, in which, after quoting a number of statistics tending to show that the system of out-patient treatment was greatly abused, he entered a plea for a hospital board in towns and expressed the opinion that provident dispensaries might do much to relieve the hospitals of needless work.

Mr. TIMOTHY HOLMES said that at many hospitals practically nearly every applicant received relief, but nothing could be done without the cordial support and coöperation of the profession as a whole. He was glad to see that the association was largely composed of general practitioners. The abolition of existing methods would, he believe, benefit the poor as well as the majority of medical men; but he feared that improvement would be slow, and he exhorted the supporters of the movement to be cautious and temperate in their conduct and language. He proposed the following motion:—

"That this Conference is of opinion that reform is urgently needed in the methods of administering out-patient and casualty relief in the hospitals and infirmaries of the United Kingdom, and that it be referred to the council of the Hospital Reform Association to form a committee to draw up a scheme for the better administration of such relief for the consideration of a future meeting of the Conference."

Dr. GLOVER seconded the resolution, and said that from his experience of the Hospital Sunday Fund he believed that the abuse of hospital relief was not only very large, but the evil was rapidly growing, and ought to be speedily dealt with. The existing system was hard both on the young consultant and the general practitioner. Hospitals were only for unusual cases, and even grave illnesses ought to be treated at home by the family medical man where home conditions were favourable. To effect an improvement they must secure the coöperation of the staffs of hospitals, and that would not be easy, as the out-patients were looked upon as valuable material for medical teaching. The great number, however, made good teaching impossible, and when the medical man had only a minute for each patient slovenly and inaccurate examination was inevitable. The hospital was the place of all others where such work should be thorough and leisurely.

Sir WILLIAM BROADBENT said he approved of the appointment of a committee, but thought that the staffs of the hospitals were powerless to reduce the number of out-patients. The question was really one of right and wrong, and it was a grave evil, for time wasted on slight ailments or undeserving persons was time stolen from the really poor. He could not quite agree that rapid diagnosis was necessarily an evil, as it enabled a man to gain wide experience of ordinary illnesses.

Sir HENRY BURDETT was opposed to the formation of a committee of investigation. A committee, if appointed, should be called upon to devise a new system. There was only one new element in the out-patient question and that was the increase in the number. But one remedy should not be forgotten—private treatment should be made more efficient. Was it not the truth that some hospital cases became so because of incompetent treatment in the early stages of illness by the general practitioner? Why should not post-graduates, men in actual practice, be allowed to visit the hospitals and thereby gain experience and knowledge? Most of the out-patients could pay something, and many of them would welcome the suggestion that they should become regular subscribers to the hospitals. Every hospital should have a registration officer to make proper inquiries as to means and should provide facilities for small subscriptions. He suggested an adjournment of the conference until next year. The subject had been much forced on the attention of the Hospital Sunday Fund and other bodies, especially by Dr. Glover, and he had reason to hope that some practical suggestions would soon be made which would meet the views of the meeting.

Dr. WARD COUSINS believed that the real sufferers by the present system were the charitable public. Hospitals were for urgent cases, not among the poor alone, but among all those who had not proper accommodation at home. People who were unable to pay for exceptional illnesses or accidents should be admitted, but admitted on the recommendation of the family medical man. Dr. Cousins strongly protested against Sir Henry Burdett's view that there was any excuse for the great abuse of the out-patient department in any want of efficiency in private practitioners. He could testify to an enormous improvement in medical education and in the efficiency of the medical profession. The right quarter to which to appeal was the governing bodies and committees of management.

After considerable discussion the motion was carried.

THE INDIAN RISING.

THE fighting on our Indian frontier during the past week has assumed the character of guerilla warfare, but the advance in force must soon take place now. The task imposed upon the Indian Government and the expedition is a more serious and difficult one than many people suppose, and we must make up our minds that the troops will have to encounter a good deal of hardship and hard fighting before it is over. The illustrations in the pictorial papers will give some idea of the great topographical obstacles and mountain passes of the country and an indication of the enormous difficulties of the expedition in the way of marching, transport, water-supply, and commissariat, which will have to be overcome before the force can reach Tirah. The weather is already becoming colder; there are great diurnal variations of temperature, and the troops are bivouacking without tents. The fact that they are reputed to be very healthy and, as we may believe, daily becoming hardier, shows what can be done in mountain air under the excitement of war if only men are well fed and well clad. The cold during the fast approaching winter will be severe and will tell seriously upon the native followers from the plains of India unless great care has been taken about their clothing and food. Native troops suffer a good deal on field service in the hills from pulmonary disease, but the robust little Goorkhas, who come from Nepaul, are not more affected in this respect than Europeans, and the Sikhs and Punjabi regiments, besides being fine, healthy, hardy soldiers, stand the climate fairly well. As might naturally be expected the

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cold kills the native and the heat kills the European soldier serving in India. If the expeditionary force has to campaign in the mountains and valleys during the winter season a certain number of cases of frost-bite may also be expected to occur. But it may be taken for granted that every effort will be made to push the forces on to their destination before any extreme cold has set in.

We have received from India a copy of the medical arrangements for the Tirah expeditionary force, dealing with the organisation and administration of the hospital service, and including the arrangements provided for corps-units, field and general hospitals, field medical store depots, lines of communication, &c. It consists of a brief pamphlet of eleven pages, issued by Surgeon-Major-General Gore, principal medical officer of Her Majesty's forces, with the approval of H.E. the Commander-in-chief in India. Under the head of organisation it gives the composition of the different brigades of the main and of all the other columns making up the expedition as a whole, with the various sections of field hospitals, British and native, attached to and accompanying the different brigades. We may premise that a Field Service Medical Code was drawn up a few years ago and was issued with the authority of the Government of India in the military department for the information and guidance of everybody concerned, in which everything connected with the subject is fully detailed. This code of regulations, which strikes us as extremely good, is in the hands of all concerned, and medical officers and others are, of course, supposed to be well acquainted with it and to act upon it. The field hospital system in India has been drawn up with special reference to the exigencies of service in that country, although it is based upon the same principles as those of the British service at home and, indeed, of most continental armies. The field hospitals in India are equipped for 100 beds each, and divisible into four sections each complete in itself. These hospitals have distinguishing numbers and the sections are distinguished by letters above the number of the hospital to which they belong. This appears to us a very good and simple arrangement, and capable of making the hospital provision practically adapted to almost any occasion that can arise. To return, however, to the pamphlet under our notice, it lays down the number of hospitals and the sections thereof accompanying the various columns, divisions, and brigades, and those for the lines of communication, together with the general hospitals, British and native, at the base—viz, at Rawal Pindi, Nowshera, and Kohat, for the reception of the sick and wounded coming down from the various forces in the field. These hospitals provide accommodation for about 2000 patients. The principles governing the organisation of a field medical service are pretty well known. Briefly stated they are to provide for the immediate requirements of the force and to relieve it of all non-effectives; to transfer the sick and wounded (trifling cases excepted) in the direction in which they must eventually go—namely, to the base of operations—and to apportion the hospital establishment and equipment to the requirements of the force as a whole. The medical units employed in the operations against the Mohmands are directed to concentrate at Peshawar on the conclusion of that service. It would be impossible, of course, to enumerate the various provisions that have been made, but, speaking generally, the arrangements seem on paper to be very good and to have been well and carefully thought out. The conditions and circumstances of the expedition are of an exceptional character and, we need scarcely add, do not admit of a provision being made on the scale and of the nature employed in European warfare. As regards administration, the following principal medical officers have been appointed:—For the Army Staff: Surgeon-Colonel (with temporary rank of Surgeon-Major-General) G. Thomson, C.B., Indian Medical Service. Secretary: Surgeon-Major W. A. Morris, Army Medical Staff. First Division: Surgeon-Colonel E. Townsend, Army Medical Staff. Second Division: Surgeon-Colonel G. McB. Davis, D.S.O., Indian Medical Service. Line of communications: Brigade-Surgeon-Lieutenant-Colonel (with temporary rank of Surgeon-Colonel) W. E Saunders, A.M.S. Peshawar Column: Brigade-Surgeon-Lieutenant-Colonel R. G. Thomsett, A.M.S. Kurram Movable Column: Brigade-Surgeon-Lieutenant-Colonel W. R. Murphy, D.S.O., I.M.S. The Rawal Pindi Reserve Brigade: While at Rawal Pindi the medical administration will be conducted by the Principal Medical Officer of that district.

METROPOLITAN HOSPITAL SUNDAY FUND.

IN the absence of the Lord Mayor Sir SYDNEY WATERLOW presided over a meeting of the Council of the Metropolitan Hospital Sunday Fund on Wednesday, Oct. 27th, which assembled in the Venetian Parlour of the Mansion House to receive a special report from the Distribution Committee in reference to out-patients.

Sir SYDNEY WATERLOW said he could not commence the business without expressing his own and their deep sense of grief at the loss which Her Majesty the Queen and the nation had sustained by the sudden death of the Duchess of Teck, who had always been ready to assist the cause of charity in every possible way.

Referring to the question of out-patients the Chairman said that twelve months ago the Council inserted a draft paragraph in their report to the constituents of the fund, but when the matter came up for discussion Dr. Glover objected to it on technical grounds stating that it was the duty of the committee to report to the Council, and that upon their report a report should be framed to be put before the constituents. The paragraph was therefore struck out and the matter referred to the Distribution Committee to be considered. For several years the Committee had had their minds very much affected by the discussions about the out-patients' departments of hospitals, and as far back as 1892 they had before them evidence with reference to the matter. Year by year a great deal of fresh information had been obtained, and especially this last year when they had had conferences with the representatives of thirty different hospitals. There was, however, quite a diversity of opinion among the different people from whom they had gained their information. As an example he read replies from some of the large London hospitals and quoted the remarks of speakers at recent meetings on hospital reform. He formally moved the adoption of the following report of the Committee of Distribution:—

The committee of distribution having carefully reviewed all the evidence received by them during the last four or five years in reference to the out-patient departments of the several hospitals, and having recently obtained further information on this important subject, are of opinion that, where no person has been already appointed, efforts should be made to induce the governing bodies of hospitals to appoint efficient persons to make inquiries respecting patients attending out-patient departments with the view of preventing any abuse, and that the Council of the Hospital Sunday Fund should exercise the greatest caution before interfering with the internal management of hospitals.

Mr. F. C. CARR-GOMM said before the adoption of the report was seconded he would like to point out that there did not seem any such diversity of opinion amongst the hospitals as the Chairman had suggested. They did not admit that abuse existed to any great extent.

Sir EDMUND HAY CURRIE, who seconded the motion, said that while the treatment of the in-patients was much improved, no such improvement had been made with regard to the out-patients. This class was chiefly composed of wage-earning people, who were, he believed, ready to pay for treatment if allowed to do so.

Dr. GLOVER suggested that the report be entered upon the minutes. He submitted the following as an alternative motion:—

That the Council of the Hospital Sunday Fund having before it the yearly statistics of the metropolitan hospitals and the report of the Distribution Committee on the out-patient department of hospitals is of opinion that the large and increasing number of out-patients is a matter calling for the anxious attention of the managers of hospitals, and that this council, while disclaiming any wish to interfere with the internal management of hospitals, will look upon the appointment of efficient inquiry officers and other means of curtailment as points of merit in administration.

After some discussion, in which Sir HENRY BURDETT, the Hon. SIDNEY HOLLAND, the Rev. Dr. RIGG, the Rev. Dr. BARLOW, and the Rev. C. H. GRUNDY took part, the CHAIRMAN proposed the following:—

That that this Council recommends that at the next meeting of the constituents in December, the following clause be added to the laws of the constitution: 'That where any hospital having an out-patient department has appointed a special and efficient officer for detecting any abuse in that department, it shall be regarded by the Distribution Committee as an important factor in determining the merits.'

Sir WILLIAM BROADBENT, in seconding the resolution, said that the step which was being taken to-day was a very

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important one. It would be a very efficient check upon those hospitals which had no attached medical school but which actually competed with those that had for out-patients.

Dr. GLOVER was glad that the Council had taken this step. The very size of the meeting and the patience of its members showed that they were dealing with no ordinary question. Whether the figures relating to the number of out-patients were inaccurate as had been suggested or not the fact remained that the numbers were enormous and what struck him most was that the numbers were increasing. Whereas in 1895 the number of out-patients was 1,098,224. in 1896 they were 1,141 444, or an increase in one year of 43,000 persons. He quoted statistics showing the individual yearly increase in several of the large London hospitals and concluded by stating that the present action of the Council would tend to raise this Fund greatly in the estimation of the public.

The CHAIRMAN stated, in reply to a question by the Rev. M. R. Nelligan, that the attention of ministers of all denominations would be called to the matter in the annual circular issued to them. In answer to Sir Henry Burdett, he also stated on behalf of the Council that there was no desire to reduce the salaries of chaplains of hospitals.

The usual courtesies to the Chairman terminated the proceedings.

FORTY-SIXTH REPORT OF THE INSPECTORS OF LUNATICS, IRELAND.

THE Report commences with the usual summary giving the number and distribution of the insane in establishments on Jan. 1st, 1896, and Jan. 1st, 1897, respectively. This summary shows an increase of the insane under care during 1896 in all the different institutions receiving them, except workhouses, viz., an increase of 709 in district asylums, of 2 in the criminal asylums, of 13 in private licensed houses and institutions for the insane; while the number in workhouses has decreased by 120. The total increase for the year—609—was not so large as that for 1895 (702) but considerably exceeded the average for the past ten years, viz., 405. It is significant that an increase has taken place amongst the cases admitted for the first time to district asylums—the number being 106 in excess of the previous year—an increase in this class which has not been exceeded since 1890. The Inspectors attribute this increase to the transfer of cases from workhouses to asylums, as these cases would be returned as not having been previously under treatment in asylums and they would thus be added to the newly-occurring cases of insanity. It seems that in Ireland there is a large number of pauper lunatics wandering at large or residing with relatives. In the census returns of 1891 their number was estimated to be 4,970. The Inspectors are of opinion that the admissions to district asylums have been largely drafted from this class, and that the number of the insane under care is likely to go on increasing until the existing body of unregistered insanity has been absorbed. Further, they state that it seems certain that the accumulation of the registered insane in asylums has not yet reached its maximum. This is no doubt true, but all the admissions do not come under the category of chronic cases above referred to. An examination of Table V., Appendix A, reveals the startling fact that no less than 42·5 per cent. of the total admissions into district asylums were recent cases of insanity, in which the disease originated within three months of admission. No statistics are given by which a comparison can be made between this percentage and that of past years, but from a table on page 6 of the Report it is abundantly evident that there has been an almost progressive increase in the number of first admissions into district asylums since the year 1880, and that the number of first admissions was higher in 1896 than in any year during this period. In the face of such evidence it is more than probable that the increase of insanity in Ireland is not only apparent but real, and, sad to relate, it is fastening itself on a diminishing population. The Inspectors themselves are uncertain on the point, and cannot determine whether the disease is actually increasing or not. Surely they are in a position to ascertain the exact facts, and so end the uncertainty which exists on the subject. In 1880 the proportion of registered lunatics per 100,000 of the population was 250; at the present time it stands at the high figure of 416 per 100,000 of population.

There are twenty-two district asylums in Ireland. No new asylum was opened during the year; but the Antrim and Portrane Asylums are in course of erection. The admissions into the district asylums numbered 3329. The great majority of the cases were admitted under the provisions of the Act 30 and 31 Vic, cap. 118, s. 10, as dangerous lunatics. The Inspectors regret that this should be so, for the procedure is cumbrous and objectionable, inasmuch as it converts the lunatic into a quasi criminal and places difficulties in the way of obtaining any contribution towards his maintenance, either out of his own property or from his friends. The recoveries in the district asylums numbered 1217, the percentage on admissions being 37·2 as compared with 39·3 in the previous year. The deaths amounted to 926. The rate of mortality was slightly under that of 1895. In only 220 cases were post-mortem examinations made, a number which compares unfavourably with that of the preceding year. Three suicides and three fatal casualties were reported during the past year in district asylums. The small number of such deaths speaks well for the care and supervision exercised in the treatment of the insane in Ireland. On the other hand, overcrowding is general and there is a formidable list of cases of zymotic disease due to insanitary conditions. Allusion is made to the reappearance of beri-beri at the Richmond Asylum, of which so much has been heard of late. The Inspectors as a rule speak favourably of the management of the various district asylums. The Central Criminal Asylum at Dundrum continues to be administered with success. The condition and surroundings of the insane in Irish workhouses leave much to be desired.

THE ENTRIES AT THE METROPOLITAN MEDICAL SCHOOLS, 1897-1898.

THE figures in the following table have been kindly supplied to us by the deans of the various metropolitan schools in response to a circular letter from us asking the number of students who had entered at each school this October session:—

Name of School.	Full medical.	Perpetual.	Partial.	Preliminary scientific.	Special classes.	Occasional.	Dental.	Dental students who have entered medical school.	Total.	Total for session 1896-97.
St. Bartholomew's Hospital	—	97	—	22	69		—	—	188	165
Charing Cross Hospital	21	—	—	—	—	—	20	—	41	74
St. George's Hospital...	49	—	—	—	4	—	—	—	53	37
Guy's Hospital	86	—	—	24	26	—	44	43	223	155
King's College Hospital*...	15	—	—	—	—	—	—	—	15	184
London Hospital... ...	68	—	—	10	47	—	—	—	125	148
St. Mary's Hospital ...	54	—	—	13	61†	—	2	—	130	138
Middlesex Hospital ...	14	—	—	—	—	17	15	—	46	76
St. Thomas's Hospital	53	—	—	10	19		—	—	82	63
University College Hospital	37	—	40	30	—	—	—	—	107	144
Westminster Hospital	9	—	10	—	—	—	—	—	19	23
London School of Medicine for Women*	29	—	—	—	—	—	—	—	29	51

* From King's College Hospital and the London School of Medicine for Women we only received exactly what we asked for—namely, the number of students who had embarked upon a full medical curriculum.

† Not counting men who joined for special classes. Including these the number would be 116.

It will be seen that at St. Bartholomew's Hospital the return is made under the head of "Perpetual Students." The figures in the last two columns of the table show the

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comparative popularity of the various schools for the last two years as shown by the gross totals; but it is to the figures relating to the students who have entered for the complete curriculum that chief attention will be directed.

A NEW ELECTROLYTICAL APPARATUS FOR THE PRODUCTION OF CAUSTIC SODA.

SOME of our industrial processes seem nearly as clumsy and circuitous as the method employed by the mythical Chinaman for obtaining roasted pig. Of no process is this more true than of our methods for the production of caustic soda and bleaching powder. All that is required theoretically is to separate the two constituents of common salt; to combine the separated sodium with water on the one hand, and the free chlorine with lime on the other. To accomplish this it is necessary in the Leblanc method to heat the salt with sulphuric acid, producing hydrochloric acid and sulphate of soda. The latter material is heated in a revolving furnace with coal dust and chalk, the sodium carbonate produced being extracted from the evil-smelling vat-waste (calcium sulphide) and subjected to tedious purification. To form caustic soda the carbonate of soda must be boiled with lime, whilst the hydrochloric acid produced in the first part of the process has to be treated by the Weldon, Deacon, or other method for the production of chlorine. The vat-waste itself undergoes another process in which the sulphur is recovered. All this to separate the two constituents of common salt! The Solvay or ammonia-soda process performs the operation in a more satisfactory manner as regards the soda, but the whole of the chlorine is lost. The obvious way of overcoming these difficulties is by passing a current of electricity through a solution of common salt, and many inventions have been based on this principle; but, simple as it may seem, the task of breaking up sodium chloride by electricity is exceedingly difficult on the large scale. The two elements recombine, forming complicated secondary products, necessitating the use of a diaphragm to keep the sodium and the chlorine separate. The diaphragm and the electrodes conveying the current are attacked by the nascent materials, and the diaphragm places a great resistance in the path of the current, so that this method does not answer. The Castner-Kellner process, using an electrode of mercury, requires no diaphragm. The sodium is set free at the surface of the mercury and combines with it, forming an amalgam. By means of a rocking motion the mercury is continually circulated, the sodium being converted into caustic soda by contact with water. The latest electrolytic method using Rhodin's Patent Electrolytical Apparatus was demonstrated at the Hôtel Cecil on the 26th inst., and, as far as can be judged from the working of a laboratory model, seems to approach very near perfection, the efficiency claimed being 95 per cent. of the energy consumed. The apparatus is simple and ingenious in the extreme, and there is no obvious reason why it should not work as well on the large as on the small scale. It consists essentially of a flat, circular, iron dish, containing mercury, connected to the negative pole of the dynamo. A smaller, similar, but inverted dish of earthenware, the edge of which passes down into the mercury, divides the vessel into a central inner compartment and an annular outer chamber. In the former is placed a solution of common salt, whilst the latter is occupied by pure water. The earthenware dish carries a number of carbon rods which project down into the brine, these rods being connected to the positive pole of the dynamo. The whole arrangement of inverted earthenware dish and rods revolves, keeping the contents of the vessel, including the mercury, in continual circulation. As the current passes from the carbon to the mercury the sodium carried with it amalgamates with the mercury, which conveys it to the water in the outer compartment, where caustic soda is formed and hydrogen given off, this hydrogen being employed to heat the apparatus nearly to boiling point. The chlorine passes through a pipe in the centre of the earthenware dish and is conveyed to the lime chamber to make bleaching powder. If Rhodin's process becomes a success, as seems probable, not only will the cost of bleaching powder and caustic and washing soda be much reduced, but, by the elimination of older processes with their objectionable concomitants, sanitary conditions will be improved.

THE ELECTION OF A DIRECT REPRESENTATIVE.

WE have received the following letter for publication:—

To the Registered Medical Practitioners of England and Wales.

LADIES AND GENTLEMEN,—Accept my thanks for the support accorded to me at the recent election of a representative on the General Medical Council. I still adhere to the opinion that the general practitioners ought to be represented on the General Medical Council by a general practitioner, and shall be glad on any subsequent occasion to place my services at your disposal.

I remain, your obedient servant,

Winckley-square, Preston, Oct. 25th, 1897. JAMES A RIGBY.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6770 births and 3572 deaths were registered during the week ending Oct. 23rd. The annual rate of mortality in these towns, which had been 16·2 and 16·9 per 1000 in the two preceding weeks, was again 16·9 last week. In London the rate was 16·8 per 1000, while it averaged 17·0 in the thirty-two provincial towns. The lowest rates in these towns were 11·6 in Derby, 11·7 in Plymouth, 12·4 in Gateshead, and 12·5 in Croydon; the highest rates were 20·5 in Liverpool, 20·6 in Bolton, 20·8 in Preston, and 22·7 in Wolverhampton. The 3572 deaths included 429 which were referred to the principal zymotic diseases, against 437 and 415 in the two preceding weeks; of these, 92 resulted from measles, 82 from diarrhœa, 81 from diphtheria, 79 from "fever" (principally enteric), 49 from scarlet fever, and 46 from whooping-cough. No death from any of these diseases was recorded last week either in Croydon or in Halifax; in the other towns they caused the lowest death-rates in Oldham, Bradford, and Gateshead; and the highest rates in Burnley, Preston, Wolverhampton, and Sheffield. The greatest mortality from measles occurred in Wolverhampton, Burnley, and Preston; from scarlet fever in Sheffield; from whooping-cough in Swansea; from "fever" in Derby, Preston, and Sheffield; and from diarrhœa in Bolton, Preston, and Blackburn. The 81 deaths from diphtheria included 55 in London, 5 in Birmingham, 4 in West Ham, and 3 in Liverpool. No fatal case of small-pox was registered during the week under notice either in London or in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday last was 3585, against 3677, 3692, and 3725 at the end of the three preceding weeks; 342 new cases were admitted to these hospitals during the week, against 349, 400, and 440 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 176 and 268 in the two preceding weeks, further rose to 279 last week, but were 29 below the corrected average. The causes of 45, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Bradford, Leeds, and in nineteen other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, and Huddersfield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·8 and 19·1 per 1000 in the two preceding weeks, rose again to 20·3 during the week ending Oct. 23rd, and exceeded by 3·4 per 1000 the mean rate during the same period in the thirty-three large English towns.

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The rates in the eight Scotch towns ranged from 13·3 in Paisley and 15·3 in Perth to 24·5 in Greenock and 24·6 in Dundee. The 604 deaths in these towns included 29 which were referred to diarrhœa, 27 to whooping-cough, 13 to "fever," 7 to measles, 6 to diphtheria, and 4 to scarlet fever. In all, 86 deaths resulted from these principal zymotic diseases, against 73 and 84 in the two preceding weeks. These 86 deaths were equal to an annual rate of 2·9 per 1000, which was 0·9 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had had been 12 and 20 in the two preceding weeks, further rose to 27 last week, of which 17 occurred in Glasgow and 3 in Greenock. The deaths referred to different forms of "fever," which had been 12 and 6 in the two preceding weeks, rose again to 13 last week, of which 10 were registered in Glasgow and 2 in Edinburgh. The 7 fatal cases of measles showed a slight further increase upon those recorded in recent weeks, and included 5 in Glasgow and 2 in Greenock. The 6 deaths from diphtheria corresponded with the number registered in the preceding week, and included 3 in Glasgow and 3 in Dundee. The fatal cases of scarlet fever, which had increased from 5 to 17 in the three preceding weeks, declined to 4 last week, of which 3 occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 162 and 122 in the two preceding weeks, rose again to 144 last week, and exceeded by 28 the number in the corresponding period of last year. The causes of 28, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 21·9 and 24·0 per 1000 in the two preceding weeks, declined again to 21·2 during the week ending Oct. 23rd. During the past three weeks of the current quarter the death-rate in the city has averaged 22·4 per 1000, the rate during the same period being 16·1 in London and 19·0 in Edinburgh. The 142 deaths registered in Dublin during the week under notice showed a decline of 19 from the number in the preceding week, and included 13 which were referred to the principal zymotic diseases, against numbers declining from 39 to 14 in the four preceding weeks; of these, 6 resulted from "fever," 2 from scarlet fever, 2 from diarrhœa, 1 from measles, 1 from diphtheria, and 1 from whooping-cough. These 13 deaths were equal to an annual rate of 1·9 per 1000, the zymotic death-rate during the same period being 2·2 in London and 1·2 in Edinburgh. The deaths referred to different forms of "fever," which had been 4 and 7 in the two preceding weeks, declined to 6 last week. The fatal cases of scarlet fever, which had been 3 and 1 in the two preceding weeks, rose again to 2 last week. The mortality from diphtheria and from diarrhœa showed a decline from that recorded in the preceding week. The 142 deaths in Dublin last week included 30 of infants under one year of age and 25 of persons aged upwards of sixty years; the deaths of infants showed a slight increase, while those of elderly persons showed a further decline from recent weekly numbers. Four inquest cases and 3 deaths from violence were registered; and 40, or nearly a third, of the deaths occurred in public institutions. The causes of 18, or nearly 13 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR CROFTS has been selected for service in West Africa. Surgeon-Major Maunsell is ordered for service in India. Surgeon-Major Mitchell takes over the charge of the Station Hospital, Newcastle-on-Tyne, relieving Surgeon-Major Dixon. Surgeon-Lieutenant L. A. Ward has embarked for Bombay. Surgeon-Major J. S. Green has embarked for Bombay in the *Dunera* at Queenstown. Surgeon-Captain B. J. Inniss has been placed under orders for service in India.

Brigade-Surgeon-Lieutenant-Colonel Robert C. Eaton to be Surgeon-Colonel, Supernumerary to the Establishment, such promotion to carry no increased pay or allowances prior to the date on which he will be absorbed.

INDIA AND THE INDIAN MEDICAL SERVICE.

The Queen has approved of the following promotions among the Officers of the Indian Medical Service:—Surgeon-Lieutenant-Colonels to be Brigade-Surgeon-Lieutenant-Colonels:—Bengal Establishment: John Scully and Adam Scott Reid. Madras Establishment: Preo Nath Mookerjee. Bombay Establishment: Matthew Lorenz Bartholomeusz. Surgeon-Lieutenants to be Surgeon-Captains:—Bengal Establishment: George Ramsay, David Waters Sutherland, William Selby, Thomas Arthur Granger, Harold John Kinahan Bamfield, John Wemyss Grant, Arthur Henry Moorhead, William Davey Hayward, Archibald William Forbes Russell, and William Elmsley Scott-Moncrieff. Madras Establishment: Charles Ross Pearce. Bombay Establishment: Vivian Boase Bennett, Hugh Myddleton Moore, and Dudley Cater Johnston.

The Queen has approved of the retirement from the Service of the under-mentioned Officers:—Surgeon-Colonel George Cumberland Ross, Bengal Establishment; and Surgeon-Colonel David Erskine Hughes, Bombay Establishment.

NAVAL MEDICAL SERVICE.

The following appointments have been notified:—Fleet Surgeon Alfred Patterson to the *Royal Arthur*. Staff Surgeons: William H. Norman to the *Venus*; William G. Jack to the *Hood*; and George A. Dreaper to the *Magicienne*. Surgeons: Rowland A. Kirby and Hugh P. Turnbull to the *Royal Arthur*; H. E. Tomlinson to the *Rambler*; John C. Ferguson to the *Cambridge*; Albert X. Lavertine to the *Ringdove*; William D. Andrews to the *Venus*; Matthew J. O'Regan to the *Alert*; Walter Bowden D.S.O., to the *Victory*: Ernest S. Tuck to the *Esk*; George Wilson, M.B., to the R.M.A. Eastney, Hilary C. Arathoon to the *Thrush*; Frederick A. Brice to the *Champion*; and Henry J. Hadden to the *Thunderer*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain E. Jones, having retired from the Volunteers, ceases to belong to the Army Medical Reserve of Officers; Surgeon-Captain E. T. Crouch to be Surgeon-Major; Surgeon-Lieutenant Richard Harman Luce, 1st Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment), to be Surgeon-Lieutenant.

VOLUNTEER CORPS

Rifle: 1st Volunteer Battalion the East Yorkshire Regiment: Surgeon-Lieutenant H. G. Falkner to be Surgeon-Captain. 2nd (Earl of Chester's) Volunteer Battalion the Cheshire Regiment: Surgeon-Lieutenant T. J. Selby resigns his commission.

THE ARMY VETERINARY DEPARTMENT.

We have received the Annual Statistical and General Report, drawn up by the Director General (Veterinary-Colonel Duck), of the Army Veterinary Department for the year ending March 31st, 1897. According to the details mentioned the total number of animals on the home strength was 13,386 troop horses, 109 mules, and 1796 chargers, being slightly less than that of last year; the amount of inefficiency was 61·10 per cent., as compared with 60·01 last year and 67·35 in 1894. The number of deaths was 332, or 2·52 per cent. of the average strength, this proportion also being slightly in excess of those of previous years. Of the animals admitted into the infirmary the larger proportion were, as usual, taken in on account of surgical diseases and injuries; there being an increase over the number of last year in the animals suffering from diseases of the chest and air passages, and also amongst those admitted for general diseases. It is especially gratifying to find that there has been no sign of the reappearance of glanders either at home or in Egypt, and that a slight outbreak with the troops in Matabeleland was speedily stamped out owing to the energetic measures employed. This outbreak was confined to one case only, and no further sign of its spread having occurred has appeared. At the Army Veterinary School, Aldershot, the usual classes have been held for officers and farriers, the attendances and number of those presenting themselves for examination showing that both officers and men took great interest in the work done. The Vaccine Institute still maintains its reputation under the management of Veterinary-Major Longhurst and Veterinary-Captain Butler, the number of persons for whom lymph was cultivated during the year being 44,451. Since the opening

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of the institute in January, 1889, lymph has been prepared for 335,047 persons. During the past year the percentage of successes with primary vaccinations was 96·59, and of re-vaccinations 89·40; in the foreign stations the percentage of successes was 82·37 with primary vaccinations, and of re-vaccinations 75·59. Seventeen calves were vaccinated during the year, thus giving an average of 2614·76 persons to each animal. The report concludes with the various diseases arranged in tabular form, and a list showing both the causes for selling the cast animals and the average length of service.

THE NILE EXPEDITION.

There has not been much to chronicle of late in connexion with the Soudan expedition. Little or no fighting has recently taken place, and the Sirdar (General Kitchener) has usually managed to keep all matters connected with his intentions and the operations of the expedition to himself. The most important work that has been carried on has been the construction of the railway which is to be run on to Berber. This will have a very favourable effect on the trade and commerce of the Soudan. There has been a successful gunboat reconnaissance to Metemmeh with the view of inspecting the Dervish camp and fortifications works. The rule of the Dervishes has been a very cruel and tyrannical one, and the Soudanese population which have been subjected to it have everywhere welcomed the arrival of the Egyptian force. The Egyptian troops are healthy, and the medical service has had of late but little to do, but the heat and monotony of the life have proved trying. The progress of the expedition has been slow but sure so far, and it looks as if no military advance or undertaking of importance was imminent at the present moment.

DEATHS IN THE SERVICES.

Surgeon-General William Robert Cornish, I.M.S., C.I.E., F.R.C.S. Eng., Honorary Physician to the Queen and late of the Madras Army, on the 19th inst., at Worthing, in his seventieth year. The deceased officer received his medical education at St. George's Hospital, where he won, among other prizes, Sir Benjamin Brodie's gold medal for clinical surgery and subsequently was appointed to the East India Company's Medical Service as an assistant surgeon of the Madras Army in 1854. After holding various appointments he became secretary to the Director-General of the Medical Department in 1860. After holding that post for nearly ten years he was appointed sanitary commissioner to the Madras Government. In this appointment he rendered excellent service during the famine in Southern India in 1877, for which he received the C.I E. In 1880 he became Surgeon-General of the Medical Department, and retired in 1885, when he was made an Honorary Physician to the Queen. Among his contributions may be mentioned "The Madras Census for 1871," "Prison Dietaries and Food," "Typhoid Fever in the Madras Presidency," "The Cleansing of Indian Towns," and the various annual reports on the causes of deaths in the Madras Presidency. The deceased officer also served for a time as a member of the Legislative Council at Madras, and helped to frame the present Local Government Bill of that presidency. He also assisted in compiling the Famine Code, The late Surgeon-General Cornish was an energetic and able officer of considerable ability and much respected.

Brigade-Surgeon John Kinahan, M.D. St. And., A.M.S., retired list, on the 30th ult., at Southsea, aged sixty years. He had long service at home, in India, China, Canada, the Mediterranean, and finally went through the Egyptian campaign of 1882 (Medal and Khedive's Star), afterwards taking part in the Nile expedition, from which he was invalided home after undergoing great hardships in the course of his arduous duties. He was universally liked and respected.

Surgeon-Major Thomas Allman Wethered, retired list, Bengal Army, at Paris, on the 17th inst., aged eighty-three years.

THE PHYSICAL STANDARD FOR CANDIDATES FOR ARMY COMMISSIONS.

We are glad to notice in the public journals an announcement on official authority which is very closely in accordance with the tenor of the article published in THE LANCET last week on this subject. The scale of physical equivalents is laid down for the general guidance of the examining medical board and not as a standard from which no departure is allowed. The medical board can exercise a discretionary power, subject to the approval of the War Office, in relaxing these requirements, and there is no reason why an otherwise eligible candidate should be rejected because he does not at the time of his examination fulfil these requirements—in regard to weight for example.

Correspondence.

"Audi alteram partem."

HOSPITAL REFORM.

To the Editors of THE LANCET.

SIRS,—I have the honour to inform you that a meeting of the medical profession and of others interested in the administration of the medical charities of Brighton and district will be held at the Athenæum, North-street, Brighton, on Friday, Nov. 5th, at 8.30 P.M., to discuss the best means of promoting Hospital Reform. Sir Joseph Ewart, M.D. St. And., F.R.C.P. Lond., has kindly consented to take the chair.

It may interest you to know that my association has made the following recommendations for the prevention of abuse in the out-patient and casualty departments of hospitals: (1) The abolition of subscribers' letters; (2) the limitation of the number of new patients to be seen by each medical officer; (3) the restrictions of out-patients to cases recommended by medical men; and (4) the casualty department to be limited to the reception of urgent cases of illness.

It will be within your recollection that my association convened a meeting of the medical men practising in Manchester and the surrounding district on May 25th last, when the following resolution was duly passed:

> That in the opinion of this meeting the time has arrived when an inquiry should be made into the mode of administering medical relief in the Manchester and Salford hospitals and dispensaries; and it is further of opinion that such an inquiry should be conducted by a committee which should be representative of all the interests concerned.

I now hear from Dr. E. Vipont Brown (who has been acting as honorary secretary) that such a committee has been duly constituted and will hold its first meeting on Wednesday, Nov. 10th. My association and THE LANCET have done their part and it must now rest with the local men to produce reliable evidence before this committee and to express their views as to the best means of improving the present system of medical relief.

Believe me, Sirs, faithfully yours,

T. GARRETT HORDER,

Honorary Secretary to the Hospital Reform Association.

Oct. 27th, 1897.

To the Editors of THE LANCET.

SIRS,—At the meeting of the Hospital Reform Association on the 21st inst., the Earl of Stamford, who was in the chair, brought forward figures showing that the persons annually receiving gratuitous medical relief in the metropolis only amounted to 1,000,000 in number, a total ascertained by taking only the out-patient figures from the various hospital reports. Roughly speaking, this means that from one-fifth to one-fourth of the whole metropolitan population obtains, by the assumption or allegation of poverty, free access to the medical charities primarily designed to help the deserving poor. These, however, cannot constitute more than a small part of this immense total, and the remainder are able to pay for the attendance they require, though evidently not unwilling to accept it as a charity so long as they can have it for the asking. These figures demonstrate a degree of pauperisation which it is terrible to contemplate, but one of the speakers at the meeting showed that there is a still lower depth of demoralisation. This speaker gravely advanced the monstrous proposal that persons who choose to represent themselves as "supporters of the hospitals" should, by paying some trivial amount—half-a-crown was the lowest annual subscription he mentioned—be provided with some kind of ticket *in evidence of their title to relief on demand*. In plain language this means that the poor are to be utterly thrust out of their medical charities in order that the hospitals may be reduced to the condition of vast medical aid associations, and that the already pauperised mass of well-to-do patients shall be enabled to buy, for a contemptible price, those medical

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services which they now, at any rate, can only obtain as a free gift, and by affecting or asserting a totally fictitious poverty.

There is already abroad, even among those whom one would expect to have clearer ideas, an extraordinary notion that money which they profess to give freely to the service of destitution can also at the same time purchase for them a valuable consideration which is actually itself of far higher monetary worth, and this idea is in many cases pushed to an extreme of meanness barely credible. This new suggestion is the very apotheosis of that "letter-system" which has been largely responsible in fostering this spirit of astute philanthropy, and is already utterly discredited. Once adopt in any disguise the principle that any payment, great or small, secures a right to use the hospital, directly or indirectly, for the benefit of the person making the payment, and the transaction loses its charity and becomes an insurance. Practically this plan would result in two certain consequences—the benevolent would find some better object for their attention, and the work of the hospitals would become so enormously enlarged that these institutions would be forced bodily upon the rates, a socialistic experiment for which we are as yet, perhaps, hardly prepared.

I am, Sirs, yours faithfully,

Oct. 25th, 1897. H. H.

"BERI-BERI AND ERRONEOUS DIAGNOSES."

To the Editors of THE LANCET.

SIRS,—In an introductory lecture at St. George's Hospital Dr. Patrick Manson gives a long list of erroneous diagnoses as transcribed verbatim from the register of the Seamen's Hospital. In the list are anasarca, rheumatism, debility, pericarditis and fits, apoplexy, locomotor ataxia, myelitis, paraplegia, tachycardia, dyspnœa, cardiac diseases, asthma and anasarca, Bright's disease, progressive muscular atrophy, and hysteria. In answer to my inquiry, Dr. Manson has informed me that they are really taken from the register of the Branch Seamen's Hospital at the Royal Albert and Victoria Docks; and he asks me, if my experience does not agree with his, that I should publish it. This branch hospital contains eighteen beds, and his vague use without qualification of the term "seamen's hospital," has led members of the profession to suppose that he is referring to this institution with its 235 beds. I can find no such errors in our register, for at the worst they are merely incomplete diagnoses, giving a prominent symptom as sufficient for admission—e.g., dropsy, œdema of legs, loss of power in legs, anæmia and œdema, &c. We have admitted eighty-seven cases in the past four years. I would add that all the medical certificates, both at the branch and at this hospital, only come from the medical officers of one of our largest shipping companies.

It is because there is such a wide discrepancy between the experience at the two hospitals that I ask you to make this correction.—I am, Sirs, yours truly,

JOHN CURNOW, M.D., F.R.C P. Lond.

Seamen's Hospital Society *(Dreadnought)*, Greenwich, S.E., Oct. 27th, 1897.

"THE POLICE AND FIRST AID."

To the Editors of THE LANCET.

SIRS,—With reference to a paragraph under the above heading from your Manchester correspondent in THE LANCET of Oct. 16th, although in very few police forces is the number of members holding the certificate of the St. John Ambulance Association greater than in Manchester, in many instances the percentage is higher. Much importance is attached by the Home Office, which requires an annual return of certificate holders, to the instruction of the police in rendering first aid "to the injured," and some interesting statistics in connexion therewith will be published in the first number of the *St. John's Magazine*, the official organ of the Order of St. John and its departments, which will appear on Jan. 1st next.

I am, Sirs, your obedient servant,

HERBERT C. PERROTT,
Chief Secretary, St. John Ambulance Association.

John' Gate, Clerkenwell, E.C., Oct. 21st, 1897.

THE PREVALENCE OF TYPHOID FEVER IN THE AUTUMN.

To the Editors of THE LANCET.

SIRS,—The autumnal season of the year is always of interest to medical men, as it is at this period in general we may expect an outbreak of typhoid fever to occur, and this year must be of especial interest, with the serious state of things existing at Maidstone; therefore it is a duty we owe to each other to render what aid we can to limit the spread of such disease or to point out any source of danger to be avoided for future years. I should like therefore to call the attention of my professional brethren to the games of the young, some of which I believe to be a great source of typhoid and scarlet fevers. I was for some time puzzled to know why boys should present more cases of typhoid fever than girls. The reason is not far to seek if we study the games themselves, especially in large towns, such as Sheffield, where that most abominable and insanitary arrangement of ash middens exists, and where the excrement from such places is simply shovelled out into the streets into large heaps, afterwards to be carted away, but leaving a considerable amount of excrement stinking for days lodged amongst the stones of the road, amongst which boys play at marbles, licking their fingers to prevent the marble from slipping whilst shooting from the hand, with the result that the germs of the disease are directly swallowed, and in no small quantities. Peg-top is also a prolific source of danger, for the whipcord used is drawn through the mouth to wet it and so prevent slipping; after the top is spun it is either thrown down or left dragging in the dirt until again used. These games affect boys and not girls, hence the difference in the numbers attacked in each sex, girls not as a rule playing at such games, which are usually on the go in autumn after cricket is over. Some weeks ago I saw a boy with typhoid fever and was asked by his parents how I accounted for his having it, as there was no case in the same street. I therefore asked his mother to let me see the trousers worn by the boy, and showed her how stinking the pockets were; they also contained marbles, &c., and dirt from the street. These games, to my mind, are a great source of danger to children living a town life. But how to remedy the evil is not very easy whilst such an abominable way of dealing with refuse is allowed to go on. I have pointed out this source of danger to the young, as I have not as yet seen any mention of games in any paper or book. Contaminated water, I much fear, is not the only source of typhoid fever, scarlet fever, &c.—I am, Sirs, yours truly,

W. SKINNER, L.R.C.P., Lond., M.R.C.S. Eng.

Sheffield, Oct. 21st, 1897.

"IMMORALITY AMONG SCHOOL BOYS."

To the Editors of THE LANCET.

SIRS,—Dr. Hime's article in THE LANCET of Sept. 4th has been worthily followed by a letter published on Oct. 2nd from "The Medical Officer to a Public School," who speaks of preparing a pamphlet to be put into the hands of every public schoolboy. This may be one of the best preventives, but is this not a subject which could be authoritatively dealt with by the Society of Medical Officers of Schools? One would not like to think that this society confined its usefulness to merely physical ailments. No other body of men is in such friendly contact with both parents and schoolmasters, and there are many details which might be settled by conjoint wisdom. What, for instance, is the average age when a boy is tempted to put forth his hand and eat of the tree of the knowledge of good and evil? Rev. the Hon. E. Lyttelton tell us in "Mothers and Sons" that the battle begins after the age of fourteen and a half years, and that impurity in a school takes its rise and receives its impetus from boys of fifteen or sixteen years of age who have a constitutional propensity to it and whose wills are feebly developed. Is this the experience of others? The suggestion that meat and alcohol are harmful at supper might be confirmed perhaps. There are many other points on which the utterance of medical experts would be useful, such as cubicles, circumcision, school library books, games, &c.

I am, Sirs, yours faithfully,

Cairo. F. M. SANDWITH, M.D. Durh.

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HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

XIII.—SOUTHAMPTON.[1]

Harmony in the Ranks of the Profession.—A "Free" Hospital where the Patients Pay.—Overwork and Under-pay at the Dispensary.—The Eye Hospitals and the General Hospital.—Cases of Abuse.—Application of a Wage Limit.

THE position of the medical practitioners in the town of Southampton at the present moment is very favourable to the formation of a strong union. The only thing, perhaps, that is wanting is a strong man to take the lead. That, indeed, is one of the main difficulties of all such movements. The two or three practitioners whose position, reputation, and influence are such as to mark them out as the natural local leaders of the profession are very often too much occupied or perhaps too aged to move actively in the matter. Others, it must be confessed, are too comfortable in the enjoyment of a good position to sacrifice their peace of mind and quiet by assuming the responsibilities and encountering the worries that befall organisers and initiators of a movement. But in Southampton these troubles should be comparatively slight, at least at first, for, in contrast to so many other towns, the members of the profession are wonderfully united. There are no feuds between them A grievance has arisen, and it has served the good purpose of showing how closely allied in spirit are the forty or so medical men who practise in Southampton. It is not part of the present subject to deal in full with that grievance. Besides, in THE LANCET of Oct. 20th, 1894, some details are given. They relate to the so-called "Women's Free Hospital for Special Diseases." The number of operations and the result of these operations were unfavourably criticised. The method of electing the committee of the hospital, the absence for a considerable time of a chairman, and many other circumstances all seemed most irregular; but these questions are not intimately connected with the present inquiry. The main point on which I wish to lay stress is not the grievance in itself, but the fact that it brought the members of the profession together and showed that great harmony of feeling existed between them. Nevertheless, there is one phase of this grievance which does concern the present investigation—namely, its economic side. Mr. J. F. Bullar read a paper before the Southampton Medical Society in November, 1894, giving full details concerning the Southampton Women's Free Hospital. From this communication it would appear that though the first report of the hospital acknowledges that the work was commenced in November, 1889, nevertheless no printed report was issued till May, 1892. The earlier reports, that is, up to 1894, make no mention of any meeting of subscribers or of rules for election of the committee of management. Mr. Bullar in his paper says: "It appears, from absence of any statement to the contrary, that the committee originally elected itself and has continued to do so since, and that what is referred to as the 'establishment of the hospital' began and ended in the hiring of a house. The individual members of the committee and of the medical staff appear to be unhindered by any rules from taking what view they please of their responsibilities and of the situation generally, and I was recently assured by a member of the committee that the hospital was the out-patients' department and he utterly repudiated all responsibility for the in-patients." The honorary secretary had admitted that he had not access to the books in a manner that showed a want of responsibility on his part for the in-patients, yet the first report issued by the hospital authorities states that "a ward has been efficiently fitted up at the expense of Miss Pickard with all modern appliances for the reception of in-patients." After describing a futile effort to get a copy of the rules Mr. Bullar expressed the opinion that there were "no rules relating to the constitution and government of the hospital, and that it is even a matter of doubt whether the in-patient department is a public charity or a form of private practice which the committee take upon themselves to recommend to the public."

This last sentence brings us to the economic phase of the question, for it is surely most necessary to see that a charity is not converted into a hunting ground for private patients. Mr. Bullar then went on to say:—

"To understand this arrangement we must turn to the balance-sheets. There we see that the committee derived their income from subscriptions, donations, collections, and such like, and that among other expenses they paid the rent and the taxes of the house used as a hospital. They received no rent from Mr. Eliot on account of the rooms he furnished for his private patients, but paid it for him out of the funds of the charity. There is no mention in the accounts of any payment of £2 2*s.* a week for the in-patients, and therefore as the arrangement 'answered well' it is to be inferred that the patients themselves provided the money for their treatment in the Free Hospital. In the absence of any accounts it is impossible to tell whether Mr. Eliot lost or gained by having the rooms rent free for his private patients and receiving two guineas a week for the hospital patients, but it is quite evident that the term 'free' is inapplicable to the hospital. In the last report the committee state that 'as far as possible patients are encouraged to pay a sum, however small, per week to go towards their actual expenses,' and the medical officer states: 'A good many patients have gladly contributed a small weekly sum.' But in the balance-sheet no mention of the sums or of the 'actual expenses' of the in-patients is made. It appears that when any patient comes to the out-patient rooms in Portland-terrace the medical officer decides whether she ought to be an in-patient, and if he thinks she ought the committee hand her over to the medical officer for treatment at his private house on an understanding that she is to pay to him personally as much as she can up to two guineas per week. They then cease to inquire or trouble themselves about her or to feel any responsibility in the matter, quite ignoring the fact that if they had not written favourable reports of the hospital and called it free the patient would probably never have applied for treatment in Portland-terrace."

Such was the economic side of the grievance which served to rally the medical practitioners of Southampton and triumphantly demonstrated the great unity of feeling that prevailed among them. This agitation brought about some alterations in the management of this so-called free hospital. I have now before me the sixth annual report published in 1896, and here are set forth rules by which the hospital is governed. The first notable change is that the word 'free' has been dropped, for rule No. 1 says: "That the charity be called the 'Women's Hospital.'" The next article deals with the election of medical officers by the committee and their qualifications. Article 5 stipulates that the charity shall be governed by a committee of management consisting of the chairman, treasurer, secretary, medical officers, and fifteen subscribers to be annually elected by all subscribers of 10*s.* 6*d.* and upwards. This committee is to meet quarterly and a general meeting of all subscribers is to be held annually. Patients are to be admitted by letters of recommendation, and subscribers of £1 1*s.* a year are entitled to seven such letters. Subscribers of 10*s.* have three such letters, and one letter is given in exchange for the modest subscription of 5*s.* The position of in-patients, which was formerly so vague as to be almost incomprehensible, is now clearly defined by rule No. 12, and is as follows: "That the committee of management of the hospital shall pay Dr. Eliot £2 2*s.* per week for each bed when occupied, as the hospital has no in-patients' department of its own. Any money that the patient may be able to pay, or that is paid on behalf of a patient, to be put to the credit of the 'Women's Hospital.'" Turning from the rule to the report we find that during the year 1896 there were 107 new cases, giving a total number of 951 attendances treated as out patients. Then it is stated that "the number of in-patients has dropped to fourteen. This is mainly due to lack of funds which prevented us taking in some cases which would have derived great benefit from rest and

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *concluded*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *concluded*) Dec. 12th, 1896, Liverpool; (5) Jan. 2nd, 1897, Manchester; (5 *continued*) Jan. 9th, 1897, Manchester; (5 *concluded*) Jan. 23rd, 1897, Manchester; (6) Feb. 6th, 1897, Leeds; (6 *concluded*) Feb. 13th, 1897, Leeds; (7) April 17th, 1897, Coventry; (8) May 1st, 1897, The Royal London Ophthalmic Hospital; (9) May 8th, 1897, France, United Action and Legislative Action; (10) May 15th, 1897, Leicester; (11) June 5th, 1897, Nottingham; (12) July 31st, 1897, Birmingham; (12 *continued*) Aug. 14th, 1897, Birmingham; (12 *continued*) Sept. 4th, 1897, Birmingham; and 12 (*continued*) Sept. 18th, 1897, Birmingham.

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nursing." The balance-sheet makes no mention of the payments, if any, made by these fourteen patients. Nor on the expenditure side is there any mention made of the £2 2*s.* per week which presumedly were paid for these fourteen patients. Indeed, the income, due mainly to collections and subscriptions, amounted to only £152 17*s.* 2*d.*, and the principal expenditure was £113 0*s.* 2*d.* for drugs and dispensing. Perhaps, however, Rule No. 12 is no longer applied in full, for in another part of the report the following passage occurs: "Owing to an alteration in the management of Rockstone House the committee have made arrangements with the manageress, Sister Hammond, for patients to be received as in-patients to that institution upon very advantageous terms. Owing, however, to lack of funds the committee have been unable at times to send out-patients as in-patients." Thus the fourteen in-patients may have cost less than £2 2*s.* a week. Still, the report does not explain who paid this cost, whatever it may have been.

That abuses may creep in where the accounts given are so vague and incomplete must be obvious to everyone. It is true that there is a passage in the report which says: "We take this opportunity of asking all who give out-patients letters to try, as far as possible, to give them only to deserving poor women who are suffering from some trouble peculiar to their sex." But then if this recommendation was strictly observed, and the patients were really poor, it becomes still more difficult to explain how the cost of their maintenance as in-patients was met. All this surely suggests the necessity of something more than an amateur inquiry, and this is a point on which several medical men at Southampton strongly insisted. What, they asked me, is to be done when the members of the profession in any locality believe that an investigation into the management of a hospital is necessary? There is no authority entitled to make such an inquiry. The English law, the British Government, provides no machinery for this purpose. A few clergymen, a few benevolent ladies, can block the way to any such investigation. If patients are attracted to a hospital under the impression that it is a charity and are then made to pay, is this not an indirect method of advertisement contrary to professional rules? So far as the Women's Hospital of Southampton is concerned I found that the chairman of the committee of management (the Rev. A. F. Forbes) was far from entertaining any suspicion of this commercial aspect of the case. Instead of making any profit out of paying patients he explained that the medical officer, Mr. Eliot, undertook to pay out of his private resources the difference of cost between what was charged for the maintenance of an in-patient and what the hospital committee could afford to pay for that purpose. He was therefore under the impression that the hospital owed a great deal to their medical officer and were financially in his debt. This evidence as to the disinterested conduct of the medical officer does not, however, effect the principle at stake. If the result of the application of Rule 12 quoted above has not been of financial benefit to the medical officer, or to the home where the in-patients are received, this is not the fault of the rule, but of other circumstances. With such a rule, what at first sight appears to be a charity may well be converted into a commercial enterprise. This therefore constitutes a genuine hospital abuse, against which the members of the profession at Southampton, and Mr. Bullar in particular, did well to protest. Mr. Ingalton Saunders, honorary secretary of the committee of management of the Southampton Women's Hospital, seemed to have a clearer perception of the position, for in answer to my questions he very emphatically declared that the home where in-patients were received was absolutely a distinct institution. The connexion between the Women's Hospital and the home had been broken off. If an operation was deemed necessary the committee of the hospital decided whether they could afford to pay for the patient, and, if so, sent her to the home. Doubtless the home and the hospital are now quite separate institutions. This, however, does not prevent the fact that the hospital is still, to some extent at least, a recruiting ground for the home, and yet the hospital and its committee cannot exercise any control over the home, since they repudiate the home and qualify it as a separate institution. The patient, however, is not likely to make these subtle distinctions. The Women's Hospital is recommended to her in preference to the General Hospital because it is a special hospital, and the names of the medical officers, the patrons, and committee of management inspire confidence. The patient therefore obtains a letter of recommendation, but finds she cannot be treated as an out-patient and is therefore recommended to go to the home and is asked to pay for her maintenance. Naturally she concludes that this is quite a normal proceeding and that the home is part and parcel of the hospital to which she has applied. Doubtless the home is admirably managed and the patient is highly gratified by the treatment she there receives; but if the reverse were the case the committee of the hospital would be blamed for that over which they have no control. Besides, why should a hospital recommend one particular home? Such cases could be treated elsewhere. The thing is wrong in principle, though in this particular instance it may in practice work satisfactorily; but still, if the principle is admitted there is no limit to the abuses that may result.

The members of the profession at Southampton having been brought together by the necessity of dealing with the question of this women's hospital, also took action with regard to other matters. In April, 1894, Sir Dyce Duckworth went to Southampton and read a paper on the Relations of Medical Advisers to Provident Clubs and Medical Aid Associations. A circular was then issued, and thirty-seven Southampton practitioners signed a declaration to the effect that: "(1) club doctors are underpaid for their work; (2) that an increase of payment would benefit the club members as well as the doctors." In Southampton and the adjoining districts of Shirley and Portswood there were at that time 38 medical practitioners. Questions were addressed to all these gentlemen, and answers received from 33. These replies showed that there were 2353 members of private clubs organised by the medical men themselves; 7196 members of the Foresters, Oddfellows, and other benefit societies; and 2203 members of medical aid associations, giving a total of 11,752. Then the Southampton Dispensary had 5808 provident members and 1712 recommended, that is to say, charity, patients. The Poor-law medical officers' returns indicate that they had 1065 indoor pauper patients and 3315 outdoor patients. Thus out of a population of about 80,000 no less than 23,644 were shown to be receiving medical attendance either for nothing or at most for an annual subscription that was often less than 4*s.*, and rarely more. It was satisfactorily proved that many of these patients could have paid the usual fees. The committee appointed by the medical profession of Southampton in the year 1894 to inquire into the matter reported that during the course of the year there were 5800 provident—that is, paying—members of the Southampton Dispensary, and they happened between them to be ill no less than 8117 times in the course of the twelve months. In attending these cases the medical officers had to make 4769 visits to the patients at their own homes and there were 12,861 attendances at the surgery of the dispensary. But if we add those patients who went with letters of recommendation, and who therefore did not themselves pay anything, there was a grand total of 10,324 cases of illness among 7512 patients. These patients were seen about 27,000 times, and the medical officers had by night and day to pay some 8000 visits to the homes of the patients. This involved travelling over several thousand miles, and for this immense amount of work they received between them the munificent sum of £575, or about 1*s.* 5*d.* for each case of illness. As the report very truly observed, few of these patients worked so hard for so little pay. Now as subscribers can send seven patients for 1 guinea this amounts to only 3*s.* per case; but there is a rule to the effect that no medical officer shall receive more than 2*s.* per case. Thus the medical men are obliged to attend perhaps for weeks on a patient, and yet cannot receive more than 2*s* unless the illness lasts more than two months. It would perhaps be better if the medical man received nothing at all, for he would then meet with an amount of consideration he does not now enjoy.

Speaking to one of the local practitioners who had taken an active part in this investigation I found that, in his opinion, a strenuous effort ought to be made to revolutionise the British Medical Association. He did not object to forming a local union of medical men, but did not see who could take the lead in such a movement; therefore it might be easier to utilise the British Medical Association as it was an organisation already in existence. Portsmouth was the local centre of the Association, and in this district there were some 300 members, yet at the annual local meeting only about 40 out of the 300 members attended. This annual meeting elected its representative on the General Council of the Association. But how was this done? The same person used to be re elected year after year

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without any inquiry as to his views. The vote was given in a sleepy sort of manner and as a mere matter of form. An alteration had now, however, been effected. Voting papers were sent round and the candidates had to draw up a programme and explain their views. This was a step in the right direction. On the other hand, the Southampton branch of the British Medical Association only meets once a year. It is thought not necessary to meet more frequently because its members are also members of the Southampton Medical Society, which meets every month during the winter season. This purely local society has on several occasions discussed ethical questions and notably the question of club practice. Now as the Southampton Medical Society comprises not only the members of the British Medical Association, but practically all the practitioners of the town, this society seems to be the right centre from which to form a union, a fighting union, whose mission it shall be to defend the economic interests of the profession. Such a union could vigorously take in hand the question of club practice and hospital abuse, and to strengthen its position place itself in communication with the other and similar unions that have been formed in various towns. That there would be plenty of work for such a union to accomplish may be gathered from what has been related above, but more remains to be said.

There is, for instance, the General Hospital known as the Royal South Hants Infirmary. Here already a reform has been accomplished, thanks to the united feeling prevailing in the profession. Formerly all donors to the hospital voted for the election of the members of the medical staff. The majority of these subscribers knew little or nothing concerning the individual merits of the candidates. Now a rule has been passed by which any medical man who canvasses is by that fact alone disqualified to act as a member of the hospital staff. The staff is no longer elected by all the donors; they only elect at the annual meeting a committee of selection composed of five medical men who are out of practice, and therefore less likely to be biased, and ten members of the committee of management, including the chairman and representatives of the medical and surgical staff. A committee thus composed may fairly be considered as competent to judge, for it should possess the necessary personal and technical knowledge to decide judiciously who can best fill any vacancy that occurs on the medical staff.

If the method of selecting the medical staff has thus been reformed, why should not the rules for the admission of patients be also altered and improved? At present, except for cases of urgency and dental cases, all patients must procure a letter of recommendation. This letter contains the terms, "whom I believe to be a fit object of charity," but there is no definition as to what constitutes a fit object of charity. Sometimes a member of the staff may ask the patient himself whether he considers that he is a fit object of charity, and the patient almost invariably answers in the affirmative. There occurred recently, however, a somewhat amusing exception. A young woman presented herself in such a very stylish and elegant dress that the attending physician could not help asking if she thought herself an object for charity. The patient, taken aback by the question, manifested signs of the keenest indignation, protested that she was not an "object" at all, and, deeming that she had been grossly insulted, withdrew with great dignity. Whatever the answer of the patient may be, the medical man has not time, however, to follow up the matter by making investigations at the patient's home, so he is obliged to take for granted all that he is told. Thus there is practically no check, and if a medical officer refuses to take a patient the subscriber who gave a letter of recommendation to the patient will in all probability complain and perhaps refuse to renew his subscription. There can be no question as to the existence of abuse because the subscribers do not themselves make any inquiry before they give recommendations. The fear also of offending the subscribers is so great that on several occasions even incurable cases have been accepted so as not to give offence. One lady recently wanted to withdraw her subscription because the hospital was too full to take in a patient whom she had sent. It has been noticed sometimes that patients who could walk came to the hospital in cabs, thus showing that they were not particularly poor.

Some of the benefit clubs subscribe to the hospital, and therefore conceive that they have the right to send their members as patients even though they may be in very good circumstances. Thus there is a prominent tradesman who belongs to one of these clubs, though he is rich enough to allow his son to keep a cutter yacht. Other well-to-do tradesmen are members of benefit societies and may therefore claim the right to go to the hospital and thus utilise the letters of recommendation which their benefit society obtains in exchange for its subscription. Similar complaints were made at the Eye Hospital. One case was mentioned to me of a man who owns several shops. He went up to the Royal Ophthalmic Hospital at Moorfields, London, but found that he had to wait so long that he transferred his attentions to the Southampton Eye Hospital, where he explained that they had kept him waiting too long in London. It never occurred to this patient that if he could afford to travel backward and forward to London he could afford to pay a fee, and when he was told he ought not to go to a hospital at all, whether in London or Southampton, he replied, "Oh, yes, I ought; they all do it." More than one of the local practitioners told me that several well-to-do people went up from Southampton to the London hospitals. So great, indeed, is the abuse of the hospitals that at a meeting of medical men held some two years ago a "sixpenny doctor" complained that there were more cabs outside the hospital than outside his surgery, and that he had lost many of his patients who, rather than pay him sixpence, had gone to the Eye Hospital, which he thought was as much abused as the General Hospital. Some cases of abuse at the Eye Hospital have, however, been detected and stopped. Thus a little while ago a farmer came. The hospital authorities wrote to the medical man of his village and ascertained that the patient possessed fifty cows, some horses, and several fields. On being told to bring written evidence from his village as to his poverty the patient thought it best not to return to the hospital.

The Southampton Dispensary and Provident Medical Institution does attempt to prevent abuse. According to Rule No. XVII., "no Governor's letter shall be given to a patient the head of whose family is at the time in receipt of more than twenty-one shillings a week, unless the head shall have more than three children under fourteen years of age, or more than four persons dependent upon him, then the limit shall be twenty-five shillings; but the honorary secretaries shall have the power to admit any such case as they may think deserving." This rule of course applies to the charitable work of the dispensaries. The provident members are governed by the following rule: "No member of a family the head of which is in receipt of over thirty shillings per week shall be admitted as a provident member except when the number of children under fourteen years of age exceed three, in which case the limit shall be 35s." Some doubts, however, were expressed to me as to whether this wage-limit was properly applied. It is very difficult to tell when a member has improved his position. A woman the other day confessed that her husband was beyond the limit, so the case was referred to the committee. The practitioner who related this incident to me seemed to doubt whether the committee were well acquainted with their own rule and fully understood its importance. There was a tendency to leave the matter in the hands of the medical men on the ground that it was their business and did not concern anyone else. Though these opinions were expressed by a medical practitioner who had good opportunities of being well informed, they did not harmonise with the views expounded by one of the honorary secretaries of the dispensary on whom I called. He pointed out that the medical men were at liberty to report to the committee any case of abuse that they might observe. Their report remained secret, the committee alone appeared in the matter and it was the committee, and not the medical man which incurred the odium of being accused of hard-heartedness. The committee was very anxious to discover any member whose position had improved, for not only would they strike him off the books as a member, but would press him to become a subscriber. Many members had thus been struck off, but they were unfortunately more prone to write grateful letters for the care they had received in the past than to promise subscriptions for the future. When any complaints were made the committee undertook to institute a full investigation and assumed all the responsibility. If the medical men thought there was still any abuse the honorary secretary earnestly hoped that such cases would at once be brought to the notice of the committee. The wage limit was clearly set forth in the rules, and it was their desire to strictly apply the rule.

Thus it will be seen that at Southampton some good work

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has been done, some improvements have been effected, and the profession is awakening to a sense of its duties, its dangers, its responsibilities, and the necessity of taking action. But all this is vague and disorganised. The good feeling and the good intentions that prevail must be crystallised in a concrete form. The Southampton Medical Society should take the initiative and establish a Medical Union to defend the material interest of the profession.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Important Prosecutions.

AT Lichfield Police-court, on the 20th inst., a so-called dentist was charged with having obtained 7*s.* from a widow by falsely pretending to be a dentist, and with having, contrary to the provisions of the Dentists' Act, unlawfully, wilfully, and falsely taken and used the name of a dentist. This indictment sounds very emphatic, and counsel on either side sought to make their case good with the usual arguments of such occasions. The upshot was that the magistrates dismissed the charge of false pretences at once; on the second charge the defendant was fined two guineas and costs. It was asked that a special case on the point of law should be granted, and to this assent was given. No doubt this practice is very largely followed, and an authoritative decision will go far to clear the ground of a number of those who constantly contravene the Act to the detriment of unsuspecting and uninformed persons.

Ptomaine Poisoning.

In this instance an action for damages, which constitutes an important precedent, was tried at the Birmingham County Court on the 24th inst. A bricklayer brought an action against a butcher to recover £15 15*s.* for injuries sustained through the negligence of the defendant. It was stated that on July 24th the wife of the plaintiff bought a piece of beef at the defendant's shop; it was requested that it should be pickled, which was done; and it was fetched away the next morning. Plaintiff and his family partook of it, and all were very ill afterwards. The brine in which the meat was alleged to have been placed was examined by a medical man, who pronounced it to be like suds and very filthy—it was said to have never contained any meat. Additional evidence was brought as to the nature of the illness suffered from, and the jury gave a verdict for £3 10*s.* In the interests of the poor investigations of this kind will have a salutary effect in checking imposition and fraud.

Orthopædic and Spinal Hospital.

The Marquis of Hertford presided at the annual meeting of this charity on Oct. 22nd, and drew a grave picture of the financial difficulties which beset the institution. Last year the excess of expenditure over income was £467; this year it has risen to £585, and it was stated that unless some prompt action is taken some of the wards will have to be closed. There were 1563 new cases and renewals during the year, a fact which points to a demand on the resources of the charity. With the large contributions given to the public charities of the town during the present year it would be a reflection on the cause of philanthropy if this useful work had to be in any degree curtailed.

Hospital Sunday.

The Hospital Sunday Fund Collection will be made on the 31st inst., when it is hoped that liberal contributions will be available for the deserving charities whose name is legion in our midst.

Sanitary Inspectors' Conference.

The North-Western and Midland Sanitary Inspectors' Association held a conference at the Council House on the 24th inst. Alderman Cook, chairman of the Health Committee, welcomed them. Various subjects were discussed and grievances ventilated and an amount of useful work got through, unity of action being counselled.

Oct. 26th.

BRISTOL MICROSCOPICAL SOCIETY.—At the fifty-fourth annual meeting of this society, which was held last week, Mr. C. King Rudge, M.R.C.S. Eng., was elected president for the session 1897-98.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Culvert v. Filtration.

THE question of sewage treatment is one of such importance to the country as well as to Manchester that perhaps no apology is needed for reverting to it again. A statement of the difficulties attending precipitation and artificial filtration has been given to the papers by Mr. McDougall, chairman of the Purifying Works Sub-Committee of the corporation, and may be considered official. He says that the process for the separation of the solid matters from the sewage at the Davyhulme works has accomplished all that was expected of it. Precipitation is successfully carried out and a clear effluent passes away from the tanks. This effluent it is proposed to take by underground culvert to the tidal waters of the Mersey. It is not offensive or putrescent, and will not become so if mixed with a sufficiently large body of water containing the free oxygen existing in large rivers or sea water, as oxidation takes place and the organic matter it contains becomes converted into harmless compounds. It is not so, however, when it flows "into the still pool of the Ship Canal between Barton and Irlam Locks," which contains sewage from the large districts above Manchester (and Mr. McDougall might have added from Manchester itself), which is already putrid. "All the free oxygen which would be available in ordinary rivers has been absorbed, and has not been sufficient to oxidise the sewage that has come into it on its way to the city." When, therefore, the effluent enters it decomposition of the organic matter it contains rapidly follows, and if possible the condition of the canal is made worse. The problem is to prevent the effluent becoming putrescent. This has been done at Davyhulme by "passing it through land." An area of twenty-six and a half acres under-drained and specially prepared has been in use from the time the works began operations, "and the filtered water is very excellent." But to deal with 26,000,000 gallons daily 1300 acres would be required, and the committee gave up that idea. Then artificial filters—tanks specially constructed and filled with cinders, coke, or burnt clay—were tried, "upon which the effluent is poured, remaining in contact with the filtering material for a stated period, then drawn off, and the filter remains under the action of the air for about double the length of time it had held the effluent." These experiments were successful as regards the effluent, but after lengthened working it was found that the capacity of the filters became constantly less. This fact and its consequence—the periodical refilling of the filters—had to be considered in forming any estimate of the cost of artificial filtration, which was put down at £275,000 capital outlay for fifty acres of filters, while the yearly interest and sinking fund, working expenses, and refilling every five years were estimated to cost £38,000, equal to a rate of over 3*d.* in the £. The capital outlay for the culvert is put down at £258,000, the interest and sinking fund, with yearly working expenses of £200, at £10,520, equal to a rate of less than 1*d.* in the £. The critics of the culvert scheme consider the estimates for artificial filtration extravagantly high and those for the culvert scheme as much too low. Oldham is now using the land purchased for land filtration for the construction of artificial filters. Salford is making preparations for artificial filtration, and Mr. McDougall naïvely asks, "How can the courts permit Manchester to stop at precipitation when other towns agree to do more?" The corporation is very anxious to get beyond the reach of the Joint Irwell and Mersey Committee, notwithstanding the fact that the chairman of the Rivers Committee is vice-chairman of the Joint Committee and that Sir Henry Roscoe is the adviser common to both. Surely the resources of chemical science are not exhausted with the use of lime and copperas, and Sir Henry Roscoe might venture to draw on them a little further. However the poll may result there is a widespread feeling that the culvert scheme is being rushed and that the Rivers Committee should not have issued almost at the last minute a circular stating that the culvert can be made for less than a penny rate, while artificial filtration will require more than a threepenny rate. Corporation estimates are apt to be exceeded. The Victoria Hotel, built by the Corporation, cost £120,000 when it was only to cost £35,000, and many who have gone into the matter consider that the culvert

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with all the incidental expenses will require at least £400,000. Last year Sir Henry Roscoe reported that the Davyhulme filters could purify daily 800,000 gallons of sewage per acre, which means that twenty-seven acres of filters would serve instead of the fifty acres of the Rivers Committee. Moreover, filters now working are said to have been in use from twelve to twenty years without refilling, instead of requiring it every five years according to the committee's estimate. The cost of the filters is also said to be put at almost double a fair estimate. The truth is that a sixteen miles culvert to carry away the sewage of 500,000 or 600,000 people is a fine engineering idea jumped at by the Rivers Committee in their panic-stricken efforts to get beyond the jurisdiction of that terrible bogey, the Joint Committee.

Bad Meat in Manchester.

In any large community there will always be more or less waste of food at the hands of the consumers, but small perhaps when compared with what is wasted before reaching them. In a report to be presented to the Manchester City Council on Wednesday the following figures are given with respect to unsound meat, fish, &c., condemned and destroyed under the Public Health Act, 1875, during the year ending Aug. 28th last: meat, 194 316 lb.; fish, 177,287 lb.; shell-fish, 74,344; venison, 592 lb.; hares, 39; grouse, 3; pheasants, 1000; rooks, 73; fowls, 516; ducks, 121; geese, 149; turkeys, 605; rabbits, 2700; and pigeons, 273. In addition to this large quantities of fruit and vegetables of all kinds have been destroyed, among which may be noted 1414 lb. of cranberries, 17 cwt. of cocoanuts, 39 crates of bananas, and 32 barrels of potatoes.

Vegetarian Jubilee Meeting.

The Vegetarian Society held its jubilee in Manchester yesterday week. Representatives were present from all parts of the country and papers were read at the morning meeting by the Rev. Professor Mayor and for Mr. Edmund Baillie on The Bible and Vegetarianism and A Guild of Good Life. During the year fifty-three members and eighteen associates were added to the society, but many old members have been taken away—Sir Isaac Pitman and Mr. Edward Hare, in their eighty-fifth year; Mr. James Parrott, of Manchester and Southport, in his ninety-fifth year; Mr. William Harrison, of Scarborough, at the age of ninety-two years, &c. The report does not name any deaths below the age of seventy-seven years, but we may scarcely assume that vegetarianism ensures life to that age. It appears that the Kayastha Vegetarian Society, India, the 5,000,000 members of which abstain from fish, flesh, fowl, and eggs, is now affiliated with the English society. Mrs. Besant presided at a large public meeting in the evening, and in the course of her speech based her appeal for the system on "the law of life, in other words, the law of love," rather than on the common arguments that it purified the body, so that we were enabled "to have a body that would form less of an obstacle to intellectual and moral growth." A deeper and more attractive reason to her was "that we ourselves were but parts of the one universal life." Many perplexing questions will arise when the multitude begins to put vegetarianism into practice on a large scale.

National Anti-Vaccination League

The annual conference of the National Anti-Vaccination League was held in Manchester last week. According to the reports given in the papers some members of our profession took part in the proceedings. Dr. E. Haughton (London) is stated to have moved a resolution of no confidence in Mr. Carlile's Bill for providing calf lymph, and to have said that "there was no such thing as calf lymph." At the evening meeting Dr. C. Creighton (London) is reported to have moved a resolution in favour of supporting candidates pledged to oppose compulsory vaccination, which was seconded by Mr. Hadwen (Gloucester). This gentleman appears to have said that vaccination was "nothing but a superstition," and to have informed the meeting that "there was not a greater liar in history" than Dr. Jenner.

Oct. 25th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Professor Macewen and the Glasgow Western Infirmary.

THE fact that the recent re-arrangement of wards consequent upon some change in the staff of the infirmary had caused dissatisfaction in the minds of some of the officials was alluded to in this column last week. It is now public property that Professor Macewen has protested most strongly against the decision of the managers to diminish the number of beds under his care and that the managers have decided to disregard his protest. From obviously inspired statements which have appeared in the press it would seem that for some time there have been differences between Professor Macewen and the managers and that the recent re-arrangements have determined a state of acute conflict. Under the terms of their agreement with the university the managers of the infirmary are bound to provide "reasonable facilities" for the teaching of surgery by the university professor of that subject, and in discharge of their obligations in this respect the managers upon the appointment of Professor Macewen elected him to the staff of the infirmary and placed the wards in his charge. At the same time, they requested him to become responsible for a third ward "as a convenience to the managers," and it is the removal of this ward from his care that has mainly caused the present dispute. The managers at their meeting on the 26th inst. refused to reopen the question, and have issued a statement to this effect to the press. The next step, therefore, rests with Professor Macewen, and it will be awaited with interest. There is a further point at issue between the disputants, which though not immediately urgent will doubtless influence the result of the quarrel. When Professor Macewen was appointed on the staff of the infirmary his dissatisfaction with the existing operating theatre led to his refusal to make use of it. He accordingly has performed all his operations in the corridor from which his wards open, this being specially equipped for the purpose. At the same time he used his influence with the managers to secure the building of three new theatres, which are now rapidly approaching completion. He appears to have considered that one of these theatres was to be reserved for his sole use, and it has been stated that the cost of the erection of one of the theatres was contributed by a Glasgow citizen with this object at Professor Macewen's request. This statement, which has appeared both in the medical and lay press, the managers emphatically deny. They also intimate that whilst no final decision as to the allocation of the theatres has been arrived at, it is hardly reasonable, considering the fact that there are at least six surgeons on the staff, to suppose that they will be able to set aside one of the theatres for the exclusive use of any individual member of the staff. It is thus obvious that there may be serious trouble in the immediate future even should Professor Macewen submit to the decision of the managers to reduce the number of his beds. The unfortunate dispute has to some extent involved the university authorities, as indirectly, if not directly, they have concerned themselves to support Professor Macewen's demands. On the other hand, it must be remembered that the professor of clinical surgery is also a surgeon on the infirmary staff, and as he has taught clinical surgery for many years with only two wards at his disposal he can scarcely be expected to view with favour the contention that for the proper teaching of the subject three wards are required; further, the gentleman who, it is suggested, shall share the operating theatre with Professor Macewen, is also a member of the University Senatus, and no one can be surprised that Professor Macewen's objection has thus given rise to some personal feeling. Altogether the dispute is a very unfortunate one, and is exciting much comment in medical circles. The stage for private conference and mutual concessions seems to have been passed since the disputants have come into the public prints. But it may be hoped for the sake of the school of surgery in Glasgow that some arrangement may yet be arrived at, though the method of this it is at present difficult to perceive.—Two new appointments to the staff of the Glasgow Western Infirmary are intimated—viz., Mr. Ralph Stockman, M.D. Edin., to be visiting physician; Mr. J. Crawford Renton, M.D. Edin., to be visiting surgeon. Dr. Stockman is to have charge of the beds reserved for the "clinical teaching of materia medica and therapeutics."

New Infectious Diseases Hospital for Lanarkshire.

The new hospital for infectious diseases which has been built near Motherwell by the district committee of the middle ward of Lanarkshire was opened on Oct. 25th. This hospital is the fifth which has been provided by the district committee to meet the needs of the middle ward of the county. The site extends to about six acres of elevated ground looking over the Clyde valley. There are beds for 100 adult patients, the ward accommodation being four

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pavilions of twenty beds each, eight private wards of one bed each, one isolation pavilion of six beds, and one observation pavilion of six beds. The resident staff provided for consists of a medical officer, a matron, sixteen nurses, six maid servants, and a male attendant at the lodge. The main wards have their long direction north and south, thus securing exposure to the sun's rays during the whole day. Each pavilion is divided into two wards containing ten beds. The main wards are 60 feet long by 26 feet wide and 13 feet high, giving to each bed 12 feet of linear wall space, 156 square feet of floor space, and 2028 feet of cubic space. The floors are of pitch pine, wax polished, and the walls and ceilings are finished in Keene's cement. The sewage is purified before leaving the hospital grounds, two tanks and filters having been constructed for the purpose. The mortuary has a small room from which relatives can view the dead through a glazed opening. The cost of the hospital, including all fittings, apparatus, machinery, furniture, and fees, will be about £37,000, or £370 per bed.

Oct. 27th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal University of Ireland.

THE annual meeting for conferring degrees of the Royal University was held in the large hall of the institution on the 22nd inst. It was attended with more than usual interest, the Marquis of Dufferin, Chancellor of the University, presiding and the Senate being largely represented. Among the Senators were the Right Hon. Christopher Redington, Vice-Chancellor; the Earl of Kenmare, K.P.; the Earl of Rosse, K.P., LL D., F.R.S.; and the Right Hon. Lord Morris. The President delivered a most interesting and graceful address, at the conclusion of which he complimented certain members of the University on whom honorary degrees were about to be conferred. The list included two medical men—Dr. Whitla, Professor of Materia Medica and Therapeutics in Queen's College, Belfast, who received the degree of M A *honoris causâ*, and Dr. Byers, Professor of Midwifery in the same institution, who obtained the degree of M.A.O. *honoris causâ*. At the same time the degree of D.Sc. *honoris causâ* was conferred upon Dr. Divers, formerly a scholar of Queen's College, Galway, and now Professor of Chemistry in the University of Japan, and upon Mr. W. E. Adeney, F.I.C., F.C.S., the Curator of the Museum of the University, in recognition of the scientific value of their work. Mr. Adeney's doctorate had special reference to his labours with regard to the bacterio-chemistry of sewage.

Funeral of the late Mr. O'Grady.

The funeral of the late Mr. E. Stamer O'Grady, M.A., M.B. Dub., F.R.C.S. Irel., which was strictly private, left Merrion-square on the morning of Oct. 22nd for Kingsbridge terminus, arriving at Limerick junction at 11.30 A.M. From the junction the remains were conveyed to the family burial ground, near Kilballyowen, the ancient seat of "The O'Grady" family.

Typhoid Fever at Ligoniel.

A serious outbreak of typhoid fever has occurred at Ligoniel, a village on the northern outskirts of Belfast. Since Oct. 6 h the dispensary medical officer has had visiting lines presented for 32 cases of typhoid fever, and 21 or 22 have come in since Oct. 18th. A special meeting of the board of guardians was held on Oct. 22nd to consider the matter. The general impression is that the sewerage of the district is defective, and that the water-supply is at fault. Indeed, Dr. Clibborn (Local Government Board inspector) stated at the meeting that "the sewerage—indeed, it could be hardly dignified with the name of a system—system was very bad." It was decided to issue handbills and posters in the district giving the inhabitants simple directions as to keeping the houses strictly clean, keeping articles of food and drink in proper condition, and boiling the milk and seeing that the vessels in which it was kept were scrupulously clean. It was also arranged to supply the inhabitants with disinfectants and to have a bacteriological examination of the water made. On Nov. 25th Ligoniel, according to the new Act, will become part of Belfast and the corporation will have to deal with the sewerage question.

Typhoid Fever in Belfast.

At present (Oct 23rd) there are 17 cases of typhoid fever in the Royal Hospital and 142 in the Union Hospital. During the four weeks ended Oct. 20th 354 cases of typhoid fever (a decrease of 25 on the returns of the previous four weeks) were reported. The epidemic is most prevalent in the Shankhill and Ballymacarrett districts, but there are cases all over the city. The mortality is not high so far.

Ballymena Water supply.

The inhabitants of Ballymena are entitled to have 200 000 gallons of water per day from the Quoile reservoir, but through incrustation of the pipes they now actually only receive 172 000 gallons. As a result the supply is an intermittent one, and they propose to construct a line of 8-in. instead of 5 in. pipes between the River Quoile and the filter-beds, a distance of two and three-quarter miles. For this work £2600 is required, and it is proposed to borrow £3000 from the Local Government Board.

The Cork Medical and Surgical Association.

The annual dinner of the Cork Medical and Surgical Association was held last Saturday night. There were about fifty present, including members and guests. The chair was occupied by Mr. Philip Lee, President of the Association, and Dr. Edward Magner, Vice-President, was in the vice-chair. There were numerous toasts and songs, and a most enjoyable evening was spent. These re-unions tend to bind the members of the profession together, and to establish an *esprit de corps*, especially valuable whilst the club question is before the public.

Outbreak of Diphtheria at Monkstown, County Cork.

There were several cases of diphtheria recently in the neighbourhood of Monkstown, a seaside resort near Cork. The sanitary authorities have gone to work with energy and no new cases have been reported during the past few days. It is suspected that defective sewers may have been the originating cause, and the engineer to the board of guardians has been instructed to make a thorough investigation and to at once adopt any measures he may find requisite.

Oct. 25th.

PARIS

(FROM OUR OWN CORRESPONDENT.)

Medical Practice and Pharmacy in France.

THE law which at present governs the practice of medicine in France forbids the simultaneous practice of medicine and pharmacy even by a person who may be in possession of diplomas in both subjects. As this law expressly prohibits any mutual arrangement between a medical man and a pharmaceutical chemist, as well as any partnership between them for the carrying on of a dispensary or the sale of medicine, it is evident that this prohibition is applicable most of all to the case where the mutual understanding is inevitable—that is, to the case where the medical man and the druggist are one and the same person. Unfortunately the statute does not specify any penalty for infringement, but merely declares that arrangements of the kind already described are of no effect in a legal sense. The consequence is that the criminal courts cannot pass sentence on persons brought before them for practising both medicine and pharmacy, and the culprits have to be discharged although their guilt is manifest, so that the practice in question is to all intents and purposes authorised. This state of things might answer in places where there is no pharmaceutical chemist but would be unsatisfactory in towns, for the medical man is reduced to the position of a dealer in drugs and there is no proper supervision over the dispensing of prescriptions, as the responsible head of the establishment would not be in attendance; moreover, the prescriptions are no longer checked by a druggist who is able in the interests of the patients to correct any error which may have been accidentally made. The medical syndicate of Roubaix has accordingly just presented a petition to the Senate and the Chamber of Deputies praying for an amendment of the law passed three years ago to regulate the practice of medicine and pharmacy in France. This petition sets forth the arguments which I have just been enumerated, and mentions that the courts were formerly able to enforce the law by passing sentences of six months' imprisonment in such cases.

The Trial of a Medical Man.

The sentence upon Dr. Laporte has just been pronounced. Your readers will doubtless remember the course of events which led up to the trial, but to give a short *résumé* they were as follows. Dr. Laporte was called in the middle of

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the night to a woman in labour. He had to perform craniotomy, and not possessing the proper instruments had to make shift with those at hand, among which was a long needle of the kind used by mattress-makers. The woman died two days later, and the experts who made the post-mortem examination gave evidence that they found two perforations in the bladder caused by the needle. The immediate arrest of Dr. Laporte, his imprisonment for three weeks despite all the protests which the medical men of Paris made to the judge, brought about a strong feeling of resentment at the action of the authorities, not only among the medical men of Paris, but also among the general public. The evidence given at the trial was of the most sensational character. That for the prosecution was given by the husband of the victim and two neighbours who were in the room, but whom Dr. Laporte asked to retire at the time of his performing the operation. These, however, said that they left the door ajar, and so could see everything that went on; they testified that Dr. Laporte used the forceps in an altogether wrong manner, and that, in addition, his instruments were defective! It was shown that the husband had left his wife in labour all day long, that all her previous confinements had been difficult and had necessitated the use of instruments, and that he had only waited until night fell so as to be able to send for a medical man belonging to the *service de nuit* because he could get him for nothing. For the defence sundry expert witnesses said that Dr. Laporte was perfectly justified in performing craniotomy and in using such instruments as were at hand. All the trial turned upon the question whether Dr. Laporte in introducing the needle into the vagina had guided it with his finger so as to avoid wounding the neighbouring organs, or whether he had pushed it in haphazard, as the two gossips who were outside the door said he did. In vain did Professor Pinard, the head accoucheur at the Maternity Hospital, give it as his opinion that Dr. Laporte must have guided the needle otherwise he would have perforated the rectum; in vain did he say that the perforations found in the bladder were probably not produced by the needle, but were spontaneous, finally declaring on oath that Dr. Laporte had acted in every way as a thoroughly expert accoucheur, for after having applied the forceps four times the vagina and neighbouring organs exhibited no trace of injury. Despite this important declaration, and despite the affirmation of Dr. Laporte that he had guided the needle with his finger, the court adopted exclusively the view of the two witnesses outside the door and sentenced Dr. Laporte to three months' imprisonment. It took into consideration, however, his former blameless conduct and the humanity he had shown in doing his utmost to save the woman without hesitating on account of the risks he knew he must have been running. The judge gave the accused the benefit of the law of *sursis*, which in France allows sentence to be deferred in the case of a first offender of good antecedents for the space of five years, and at the end of that time the remission of the penalty completely if no new crime has been alleged against the accused during that time. Dr. Laporte has appealed against this judgment, which has aroused a great deal of public feeling. Every medical society of Paris has issued a strongly worded protest, and a subscription has been got up amongst medical men for the purpose of offering Dr. Laporte such a sum as will enable him to buy any instrument he may lack and to better his circumstances all round. Dr. Laporte, however, has obsolutely refused to receive any such thing.

A Modern Werewolf.

The authorities have recently arrested in the provinces a man named Vacher, for whom they had been looking for some time, and who has made a sinister reputation for himself under the name of the "shepherd slaughterer." He is acknowledged to be the author of nineteen murders, accompanied for the most part by violation, and every day new crimes, of which the authors have up to now been unknown, are attributed to him, all of which he acknowledges with a kind of pride, saying that he did them under the impulse of a command from Heaven and while he was in a kind of trance. All his victims were lonely wayfarers, young men, young girls, children, and old women. He often used to open the bellies of his victims in order to glut his lust for blood among the abdominal viscera. Vacher had formerly injured his head in various ways, one of the injuries received being from two revolver bullets, one of which has not yet been extracted. He was for two years in an asylum, but was discharged by the medical superintendent as cured. He was also for some time under vows in a religious house. At the present moment the question of his responsibility is being hotly debated by lawyers and authorities on forensic medicine. It is, however, obvious that Vacher himself supplies the proofs, for the very exaggeration of his monstrous actions would lead one to suppose that he was of unsound mind, and it may well be asked whether the very complacency with which he takes upon himself every unpunished crime is not simply due to braggadocio and a desire to pose as something more than an ordinary murderer.

Oct. 27th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The International Conference on Leprosy.[1]

THE next subject of discussion was the Etiology of Leprosy. Professor Neisser, of Breslau, stated that the bacillus found in leprosy was regarded by the majority of medical men as the cause of the disease, but the attempts that have been made to obtain cultures of the bacilli and to communicate leprosy to animals by inoculation have failed. The bacilli are present in every case of leprosy; in two cases observed by Professor Kaposi they could not be discovered at first, but they appeared before the patient's death. Climate, personal or national habits, food, &c., were only of secondary importance in the production of the disease. The tubercular and anæsthetic forms of leprosy were caused by bacilli of varying degrees of virulence.—Dr. Sticker was of opinion that the primary affection in leprosy consisted in a specific ulceration of the mucous membrane of the nose. This ulceration may be present several years before the first tumours appear. He has discovered the bacilli of leprosy in the secretion of the nose in 128 out of 153 cases. From the primary ulceration in the nose the bacilli make their way by means of the lymphatic vessels into other parts of the body. Infection was due, as a rule, to a direct transference of bacilli from the noses of lepers into those of healthy persons; indirect infection by handkerchiefs, &c., was exceptional.—Dr. Arning, of Hamburg, stated that he had seen primary affections in other parts of the body, as, for instance, on the arm.—Dr. Schaeffer, of Breslau, expressed the opinion that the bacilli were disseminated by patients in the acts of respiration, expectoration, and sneezing, and that disinfection of the mucous membrane of the nose, the pharynx, and the respiratory organs would have the effect of diminishing the number of bacilli spread abroad in this way. These considerations seemed to be of some importance with reference to prophylactic measures.—Dr. Geill, of the Dutch Indies, stated that in 50 per cent. of his cases the first symptom appeared on the feet; he mentioned that the natives who came under his observation were in the habit of walking barefoot, and he also said that in several cases the primary symptom took the form of a pemphigus blister. In almost every case a lesion of the skin of the sole of the foot was found. The virus of leprosy, therefore, seemed to be present on the soil and to enter the organism through these lesions of the foot.—Dr. Peterson gave some statistical details, in the course of which he mentioned that of 1200 cases 783 assumed the tubercular and 315 the macular form of leprosy, whilst 94 were of a mixed character. Men seemed to contract the disease more easily than women. The majority of patients were between twenty and forty years of age, but some were attacked at the ages of sixty and seventy years; there were only thirteen patients aged from two to five years.—At the next meeting Heredity in Relation to Leprosy was discussed; it was obvious that this hypothesis was now abandoned by almost all competent authorities.—On the subject of Treatment Dr. Carrasquilla and Dr. Olaja Lawerda, who had come from South America, explained the results obtained by injections of horse serum. It was generally agreed that amelioration of the symptoms had followed the application of this method, but that an actual cure had not yet been obtained.—The discussion of the necessity of isolation has already been reported in my last letter.—At the final meeting the results arrived at by the

[1] Continued from p. 1084.

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conference were read by the secretaries in German, French, and English. These conclusions were as follows: (1) the bacillus lepræ is the cause of the disease; (2) its life-history and the mode by which it obtains entrance into the body are not yet fully known, but it is very probable that it makes its way through the mucous membrane of the mouth and nose; (3) leprosy is an infectious disease, but not an hereditary one, and there is an increased risk of infection among populations living under unfavourable conditions; and (4) attempts to cure leprosy have not been successful, and the isolation of lepers is necessary, especially when the disease has become prevalent.—Dr. Hansen finally moved the following resolutions, which were unanimously agreed to: (1) in every country where the disease appears to have spread over a considerable area isolation is the best way of preventing an epidemic; (2) a system of compulsory notification and control over isolation as practised in Norway is recommended for adoption by all nations in which there is a sufficient number of medical men; and (3) the authorities of the respective countries in framing regulations with respect to isolation should be guided by the social conditions of each country.

The members of the conference were received on Oct. 14th by the Emperor at the Neue Palais in Potsdam, the journey being made in special trains. A reception was also given by the Chancellor, Prince Hohenlohe, who was present at one of the meetings of the conference.

The late Professor Heidenhain.

Dr. Rudolf Heidenhain, Professor of Physiology in Breslau, who died in that city on Oct. 13th, was one of the most eminent physiologists of Germany. He was born in 1834 and after having completed his curriculum he devoted himself very early to physiological study. His first investigations on the physiology of muscles and nerves brought him so much reputation that he became ordinary professor in Breslau as early as 1858, being then only twenty-four years of age, a fact unprecedented in the annals of German universities. During his long occupation of the chair of physiology in Breslau he greatly improved both the study and the teaching of physiology there, and in conjunction with his pupils published a large number of very important memoirs. His principal works related to the secretion of the glands, pancreas, lacrymal glands, gastric and intestinal glands, the secretion of the kidney, the formation of lymph, the mode of intestinal absorption, and many other questions which would take too long to enumerate. Professor Heidenhain was a fervent advocate of vivisection and one of its most energetic defenders. In his pamphlet "Die Vivisection im Dienste der Heilkunde" he demonstrated the necessity of vivisection as a method of scientific research from which practical medicine has derived enormous benefits. This essay undoubtedly had a large share in maintaining the freedom of scientific research in Germany.

Oct. 24th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Suspected Poisoning of Three Hundred and Fifty Emigrants.

ON the 18th inst. Genoa was witness of a sad spectacle, fortunately culminating in no such tragic result as at one time seemed imminent. The *Agordat*, an emigrant ship of the "Navigazione Generale Italo-Brasiliana," was to have weighed anchor that afternoon for Rio de Janeiro and Santos, having on board 1400 men, women, and children, mostly of the very poor, in quest of the livelihood vainly sought in the Old World and fondly anticipated in the New. About 600 of the expected number, Southern Italians mainly, had been embarked since the night before, and at 11.30 A.M. of the 18th were served with their forenoon rations, consisting of "pasta al brodo" (a thin consommé with little segments of macaroni floating in it), a few drachms of "carne" (meat), a piece of bread, and a little wine. The scanty meal over, the majority of those who had partaken of it began to feel ill. Presently the symptoms assumed the well-known character of irritant poisoning—tenesmus, with severe pains and vomiting. The chief sufferers were the women and children, whose contortions and cries produced a panic, which soon included the men, themselves, too, labouring under the same symptoms. The scene was a harrowing one and speedily drew on board the harbour authorities with all the medical men within immediate hail. Alimentary poisoning on an extensive scale was at once suspected, and with the least possible delay every cab, tram-car, and vehicle available was utilised for the transport of the sufferers to the Spedale di Pammatone. An interminable file of conveyances, each accommodating a group of pale, panic-stricken, agonised "avvelenati" (poisoned subjects), passed through the main arteries of the city, filling the rapidly increasing crowd of bystanders with compassion and dismay till the hospital was reached. By this time the whole clinical staff of the Pammatone, reinforced by practitioners from every quarter, by all the medical students of the Genoa school, and the collective nursing and transport service attached to the hospital, was in attendance, and not a moment was lost in treating each relay of sufferers case by case as they arrived, the stomach pump, and, failing that, emetics, being steadily put in practice, and all the more aggravated cases (mostly children) provided for in the wards, medical and surgical. Late in the afternoon it was ascertained that no fatality had occurred, and that most of the patients, 350 in all, were doing well. Meanwhile, the Prefect, Signor Garroni, accompanied by the provincial medical referee, Dr. Elia, and other authorities, having seen for themselves the symptoms under which the sufferers were labouring at the Pammatone, proceeded on board the *Agordat* and at once instituted inquiries, from which it was surmised that the poisoning was attributable to the excess of lead used in soldering the metal platters placed before the emigrants. Specimens of these were sent for analytical inspection to the Ufficio d'Igiene; all the utensils on board were impounded and replaced by others, and rigorous disinfection was practised throughout every part of the ship. The ship itself was anchored in mid-harbour and none of the crew or anyone found on board was allowed to leave it till the cause of the "avvelenamento" had been put beyond doubt. That result, however, does not seem to have been attained. Dr. Palladino, Director of the Pharmaceutical Department of the "Spedali Civili," to whom the analyses were entrusted, reports that after every test on his own part and that of his assistants had been applied the hypothesis of metallic poisoning by lead, verdigris, or any such irritant could not be established, nor in the food and drink consumed could any ingredients be detected to explain the violence and widespread incidences of the intestinal symptoms. For the present the "misadventure," distressing and well-nigh tragic in its consequences, remains a mystery, but public indignation is so intense that it is not likely that the last has been heard of it or that fresh investigations will not be started. The whole subject of "emigration," "emigrants," and "emigrant ships" will come before Parliament, and the inevitable committee appointed to report on it will have details to reveal about as harrowing as any brought to light in a kingdom rich in abuses of every kind. It is already known that about 150,000 emigrants leave Italy every year for the Brazils, driven from rural hamlet or manufacturing town by hardness of living, and tempted by the prospect of high wages or speedy profits enabling them to return with capital enough to begin life anew. From 100 to 120 lire (£4 to £4 15*s.*) a head are paid by these poor adventurers as passage-money, and the equivalent they get for it in "maintenance" and "comfort" *en voyage* may be inferred from the fact that after providing for these conditions the emigration companies earn enough to make the traffic an eminently paying one. Such a code of regulations as control British emigration does not exist in Italy—indeed, a North Italian contemporary, commenting on the whole subject, avers that whatever shadow of legislation has been passed in protection of the emigrant is practically a dead letter. How fortunate, adds the writer, that the "misadventure" occurred in the port of Genoa within reach of well-appointed hospitals and not on the high seas. In the latter case we should have had none but "official" accounts of it—the reports of the sufferers (most of them "analfabeti" or unlettered) coming home months after date and mainly by hearsay. Italy annually loses, principally from the Venetian communes and the island of Sardinia, thousands of her most capable peasantry to struggle and sink on South American soil, and little or nothing is done to make home life easier for them or lessen the inducement to encounter such a fate. Surely this is a state of things that legislation should lose not a day in reforming. "The nineteenth century omelette," says an eminent sociologist, "demands a great smashing of eggs." True; but Italy seems to smash far more eggs than her sister Powers—certainly more than her "State omelette" can in any way justify.

Oct. 24th.

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VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Chronic Nephritis.

ACCORDING to Dr. Chvostek chronic arthritis does not depend on the presence of micro-organisms in either the joints or the blood. The finding of bacteria in the joints, either after death or when death is impending, proves nothing, and the hypothesis that a specific micro-organism is the cause of arthritis is untenable. The symptoms of the disease are not constant, the only characteristic feature being a swelling of short duration affecting a joint—a condition which may be induced by toxins altogether apart from living bacteria. On the other hand, Dr. Singer, who has examined the blood, the urine, and the articular exudations in ninety-two cases, states that both staphylococci and streptococci are to be found. In three instances post-mortem examination showed the same bacteria as in the living subject; in one case the synovial membrane contained bacteria, but the exudation was free from them; in a third case there were hæmorrhages with numerous streptococci in the peri-articular tissue. These facts explain why in a great many cases the articular exudations are free from bacteria. The inflammation of the synovial membrane is symptomatic, the infiltrations which contain the bacteria being frequently in the peri-articular tissue. Dr. Singer considers that the erythema multiforme which frequently accompanies arthritis is a typical pyæmic affection of the skin; he is opposed to the view that salicylic preparations have a specific action, and he has seen very favourable results produced by intravenous injections of a mercurial salt.

The Murphy Button.

In an article published in the *Medicinische Wochenschrift* Dr. Marwedel has given an account of the results obtained with the Murphy button in fifty-five operations. In thirty-five cases an anastomosis was made between the stomach and the intestine and in three cases between the gall-bladder and the intestine; in twenty-nine cases there was carcinomatous stenosis. Twenty-three of the thirty-five cases of gastro-enterostomy showed an improvement; two of the cases of cholecystenterostomy showed an improvement, and the remaining one died. The button was usually passed after the lapse of two weeks. According to statistics published by Dr. Brentano cicatricial stenosis resulted in only three among 328 button operations.

Compulsory Insurance and Medical Aid Societies.

At the last meeting of the Medical Chambers Dr. Janovsky, of Prague, called attention to the compulsory insurance of workmen—a subject of which I have already given an account in THE LANCET.[1] On the ground of the disastrous effects which this system of insurance produces on the incomes of medical practitioners Dr. Janovsky proposed a resolution the substance of which was that all the Medical Chambers should be invited to declare that the holding of a permanent appointment in connexion with this work constitutes an ethical misdemeanour, and that such practitioners will consequently be brought before the council of honour. The resolution was unanimously adopted, and the meeting also made arrangements for presenting a petition to Parliament praying for the repeal of the compulsory laws. The following gentlemen were then elected on the committee: Dr. Adler, Dr. Klotzberg, Dr. Kohn, Dr. Lerch, Dr. Mucha, and Dr. Witlacil.

Cyclic Albuminuria.

Dr. Ostwalt has published in the *Klinische Rundschau* a highly interesting paper on the pathology of cyclic albuminuria, a subject our knowledge of which is very imperfect, amounting to little more than the recognition of the fact that the upright position of the body causes albumin to make its appearance in the urine, but that it is absent from the urine at night. In two cases of this condition observed by Dr. Ostwalt the patients suffered from intra-ocular hæmorrhages, sometimes before the appearance of the albumin in the urine and sometimes during the cyclic albuminuria. The urine, which was previously normal, then contained 2·75 grammes of albumin per litre, and there was also oxaluria. Perverted metabolism has the effect of rendering the walls of the vessels unfit for the complete performance of their functions, and albumin consequently makes its way into the urine when the renal vessels are under unfavourable hydrostatic conditions—that is, when the body is in the upright posture.

Oct. 24th.

[1] THE LANCET, June 13th, 1896, p. 1681; and Feb. 20th, 1897, p. 558.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of the Insane in Russia.

IN the last number of the Russian journal, *Arkhiv Psikhiatrii*, appears an interesting article by Dr. Yakovenko, throwing much light upon the present state of Russian lunatic asylums, and comparing the provision now made by the *zemstvos* for dealing with lunatics with the State of affairs before the days of *zemstvos*. Like so many other modern institutions and methods in Russia the present system dates from that great epoch of reforms which included the emancipation of the serfs in 1861 and the introduction of the system of local self-government by *zemstvos* in 1863. Before that period the care of the insane in Russia was in the hands of a governmental body known as the *Prikaz*, or Ministry of Social Supervision (*Prikaz obshtchestvennago prizriénia*). When the functions of this body passed over to the *zemstvos* there was asylum accommodation in Russia for 1167 patients; now this number has grown to 9050. Formerly the annual sum expended on each patient was 90 roubles (about £9), now it is 215 roubles (over £21). Consequently the total annual cost of the asylum population of Russia is at the present time not far short of 2,000,000 roubles, instead of only a little over 100 000 as formerly. Great improvements have also been introduced in the methods of treating the insane. Forty years ago there was still a tendency to regard lunatics almost in the light of criminals and to treat them as prisoners rather than as the unfortunate victims of disease. All this has now been altered. The chains and ropes, cages and bars, handcuffs and strait-waistcoats which were formerly found in every asylum in constant use are now things of the past and physical restraint is resorted to only in rare cases where it is absolutely necessary. In brief, the treatment of the insane in Russia is now conducted on the same principles of science, common-sense, and humanity as in other countries. But, writes Dr. Yakovenko, there is still a good deal to be done before the asylum accommodation in Russia can be regarded as adequate. He calculates that the number of insane persons in the "governments" under *zemstvo* rule is somewhere between 127,000 and 191,000. Consequently, at the present time only some 7 per cent. of the total number are now treated in asylums. Comparing Russia in this respect with other countries, he finds that in France the proportion of insane under control in asylums to the total number of insane is 40 per cent.; in Switzerland, 58 per cent.; in America, 66 per cent.; and in Scotland it is as high as 83 per cent. The immediate aim of the *zemstvos*, the article concludes, should be at least to provide accommodation for such cases as absolutely require asylum treatment, and as these may be reckoned at about 20 per cent. of the whole it follows that the present number of available beds should be at least tripled.

King Menelik as a Scientific Observer.

A member of Colonel Leontief's second expedition to Abyssinia, Dr. Theodorof, writes to last week's *Vratch* an interesting note on the use of kousso in Abyssinia as an anthelmintic, and in the course of his letter he throws light upon quite a new side of the many-sided character of King Menelik. Kousso, or *Halgenia Abyssinica*, is, it seems, not only a native product of the country but is in vast demand among the inhabitants on account of its power of expelling intestinal parasites. The first description of the plant was published by the great English traveller, Bruce, who explored the region of the sources of the Nile late in the last century. But it was only in the middle of the present century that it came into general use as an anthelmintic. As such it is a valuable drug, but its action is accompanied by unpleasant symptoms, such as nausea, vomiting, colic, and diarrhœa. The Abyssinians, however, employ it constantly, for, according to Dr. Theodorof, every person in the country is at some time or other the subject of *Tæniæ*. Possibly the male-fern does not grow in this country or its vermifuge properties are

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unknown to the inhabitants; at any rate, kousso is the invariable remedy to which they resort to expel the worm. They take it in the morning, fasting, and in the form of pellets, rubbed up with other herbs. Recently, it appears, the subject engaged the attention of King Menelik, who was struck by the unpleasant complications of the action of the drug already mentioned, and he is said to have argued in the following way. The vermifuge action of kousso resides in the flowers of the plant, and probably the active principle is in the juices of the flower; consequently this active principle probably is absorbed by bees when they suck the juices, and therefore it was possible that it might still be found in the honey secreted by such bees. From theory to experiment was a short step with the king. He summoned his henchman, Takle-Georgis, and commanded him to plant a grove of kousso trees and to establish an apiary hard by, to wait until the kousso had finally ceased to blossom, and then to collect the last honey from the neighbouring hives. This was done, and as the king further argued that the active principle would probably be in more concentrated form in the honey than in the whole flower, he ordered that only a teaspoonful of the honey should be given to the selected patient in a tumbler of water. The experiment is said to have succeeded to perfection. The dose acted as a thorough vermifuge, and there were none of the unpleasant complications associated with the action of the kousso flower. The account of this interesting experiment was taken down by the writer of the letter direct from the lips of Takle-Georgis, and he adds that this method of taking kousso is now general in Abyssinia, at least among those near the king. If the story be true, and there seems no reason to doubt it, it not only shows that King Menelik is possessed of real scientific acumen, but seems to point to a new field of experimentation in practical pharmacology.

Russian Medical Conferences.

It is announced that some time next year a Russian conference of physicians will be held in St. Petersburg to deal with the subject of leprosy in Russia.

The first steps towards preparing for the Balneological Conference, already announced as to be held in Russia next year, have been taken. A preliminary commission has been formed, and at its head is Professor Pasternatzki, the President of the balneological section of the Russian National Health Society.

St. Petersburg, Oct. 11th (23rd).

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Medico-legal Cases.

SEVERAL cases of medico-legal interest have been before the courts lately. The first is what is known as the "Eaglehawk murder," a case that has been going on for some time, the jury at the first trial disagreeing. Briefly the case was as follows. On Feb. 11th the wife of Charles John Hall, of Eaglehawk (Victoria), was found dead in a tub of water by her husband. Dr. Thorn was called and made, as it proved, a somewhat cursory examination of the body. An inquest was held by a police magistrate, no necropsy was made, and Dr. Thorn gave evidence that in his opinion Mrs. Hall had fainted and fallen into the tub, and being advanced in pregnancy was unable to extricate herself and was drowned. The jury returned a verdict of "Accidental death from drowning" and the body was buried. Subsequently, suspicious circumstances coming to the knowledge of the police, Hall was arrested and the body exhumed. Dr. Neild, lecturer on forensic medicine at Melbourne University, made a post-mortem examination of the body and declared that death was not due to drowning, but to suffocation, his chief reason for this opinion being the absence of water from the lungs and pleural cavities. There were also bruises on the body, and the teeth had been displaced and the nose fractured by violence applied before death. Evidence was given that Hall was improperly intimate with a barmaid named Eva Scott and on bad terms with his wife. At the trial in the criminal court the jury disagreed. At the second trial the medical evidence was the same, except that the Crown called additional experts, one of whom, Dr. Mallison, said from the description given by Dr. Neild he was not prepared to say that the signs were inconsistent with drowning. The woman Eva Scott said that she had written to Mrs. Hall informing her that Hall was the father of Scott's child, and had done so to induce Mrs. Hall to leave her husband and get a divorce. Hall had asked Scott to get poison for his wife, and had also said that if he put her head in a tub of water no one would have any suspicion. A wax model of the body of Mrs. Hall, in the position in which it was found, was made and brought into court and placed in the tub. Rigor mortis had set in when the body was found, and it was significant that one leg and thigh were extended, and the position was incompatible with the theory that she had fainted and fallen into the tub. The jury found Hall guilty of murder, and the conviction has been upheld by the executive.—Another case of more special interest to the profession is that of Searle *v.* Gurdon, just concluded in the County Court, Melbourne, before Judge Chomley and a jury. The plaintiff and his wife claimed £500 damages on the ground of alleged unskilful, improper, and negligent treatment of Mrs. Searle by E. J. Gurdon, of Brighton, medical practitioner. The defendant counter-claimed £63 10*s.* 6*d.* for medical attendance on Mrs. Searle. The evidence has not been published, but it would appear that Searle asked Dr. Gurdon to see his wife. He did so, and found that she had some endometritis and trouble in the Fallopian tubes. He advised a consultation with a specialist with a view to operation. Dr. Balls Headley was called in and performed abdominal section. It was agreed that the fee was to be 100 guineas and that Dr. Gurdon was to attend her after the operation. She recovered and went for a trip to a neighbouring colony. She continued to consult Dr. Gurdon, who said that if she was not perfectly well it might be necessary to curette, and if so he would do it without charging any special fee. She continued to improve, however, and in his opinion curetting was not necessary. The Searles then removed to another district and called in the local practitioner, Dr. R. E. Weigall. Shortly after Searle called on Dr. Gurdon and demanded that he should curette his wife free of charge. Dr. Gurdon refused, as he said he did not think it necessary, and also demanded payment of his fees. Searle then said that he did not intend to pay, that he would get Dr. Weigall to operate, and that Dr. Gurdon would have to pay the expenses incurred. Dr. Weigall operated and Searle then sued Dr. Gurdon. The jury found for the plaintiff, awarding one farthing damages and also for the defendant (Searle) on the counter claim. The judge said he took the verdict to mean that the plaintiff had no meritorious claim and that the action should not have been brought, and that the counter claim was merely a consequence of the claim. He accordingly refused to allow costs on either case. The jury added a rider that the first operation was properly performed and that professional etiquette was detrimental to the interests of patients.

Cancer Curers Committed for Manslaughter Again.

Not long ago reference was made to the trial of so-called "Professor" Davis and Dr. Spark for manslaughter in the case of a Mrs. Steele, where Davis and Spark, who are in partnership, had applied a plaster, alleged to contain arsenic, to a cancer of the breast, the case ending fatally. At an inquest concluded on Aug. 27th on the body of a Mrs. Beames the same pair were again committed for manslaughter. In this case the patient had a cancer of the tongue, and a plaster containing black sulphur and 4·6 per cent. of crystalline arsenious acid had been applied. Post mortem, no evidence of arsenical poisoning was found, the cause of death being septic pneumonia. The legal advisers of Davis and Spark maintained that the application of arsenic to cancer of the tongue was a perfectly proper proceeding, and in support of this view referred to an excerpt in the *British Medical Journal* of July 3rd of a paper by Cerny and Trunecek (*Semaine Médicale*), in which this treatment was advocated.

Sept. 14th.

DR A. M. BERGER has found in the Vatican Library (Cod. Vat., 3211) a collection of prescriptions and directions for treating various eye diseases in Michael Angelo's own handwriting, obtained probably from medical friends mainly for his own personal benefit, as it is known that the great sculptor was nearly blind before he died. Dr. Berger has published this in its original Italian with a few notes in German. It appears not to have been previously published, though it is mentioned by Pierre de Nolhac as forming an addition to Michael Angelo's manuscript poems.

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Obituary.

SURGEON-GENERAL WILLIAM ROBERT CORNISH, C.I.E., F.R.C.S. ENG.

BY the death of Surgeon-General William Robert Cornish, which occurred on Oct. 19th at his residence, Corvill, Shelley-road, Worthing, one for long a prominent figure in Indian medical politics has disappeared from the scene. He was born at Corvill, Butleigh, Somersetshire, in 1828, and entered as a student at St. George's Hospital in 1850, where he distinguished himself by gaining several prizes and the William Brown Scholarship. After leaving the hospital he acted for some time as house surgeon at the Royal Sea Bathing Infirmary, Margate. He was successful in obtaining an appointment which the Court of Directors of the East India Company offered to the hospital, and proceeded to Madras in 1854 in the *Roxburgh Castle* in charge of troops. He married the youngest daughter of the late Dr. George Yeates Hunter, of Margate, by whom he had one son, the late Captain William Hunter Cornish, assistant secretary to the Government of India, who died at Simla. The loss of this son, who greatly distinguished himself and promised to have a brilliant career, no doubt greatly affected his health.

In 1858 Surgeon-General Cornish was nominated secretary to the Medical Department in Madras, and was confirmed in the appointment in 1860. Ten years later he vacated this office to become Sanitary Commissioner, and in 1871 he was directed by the Government to draw up the census report of the Madras Presidency for that year. In 1880 he was appointed surgeon-general and retired five years later, when he became honorary physician to the Queen. As the head of his department he gained the respect and affection of all ranks, both European and native. In 1877 an immense amount of labour and responsibility devolved upon him in connexion with the famine of that year. Sir Richard Temple was sent by the Government of India as Famine Delegate and advocated a ration which Surgeon-General Cornish from his professional knowledge considered inadequate for the starving natives. He contended that the Government ration doled out was insufficient to properly support life and that thereby lives were unnecessarily sacrificed. A long discussion took place between Sir Richard Temple and Surgeon-General Cornish, the latter being heartily supported by THE LANCET and the press generally. Eventually the authorities had to give way, the diet recommended by Surgeon-General Cornish was adopted, and the slow starvation ration put a stop to. Thus suffering was mitigated and further loss of life was checked. During this trying time Surgeon-General Cornish received the cordial support of the Government of Madras, represented by the Duke of Buckingham. For all this meritorious work, which resulted in saving countless lives, Surgeon-General Cornish was only rewarded with a Companionship of the Order of the Indian Empire. He was a member of the Legislative Council in Madras, showing how highly he was esteemed by his own Government. Since his retirement he busied himself as a governor of his old hospital, St. George's, and in many other useful directions, taking also an active part in the management of the Institute of Preventive Medicine. He was originally honorary [secretary] and treasurer of the College of State Medicine, and when that body was amalgamated with the British Institute of Preventive Medicine he was one of the members of its council selected to join the council of the Institute. He was a regular attendant at the council meetings and took much interest in the work, and his advice was much sought after and valued in all matters relating to the hygiene of the tropics.

THOMAS BELL FLETCHER, M.D. PARIS, F.R.C.P. LOND.

BY the death of Dr. Bell Fletcher which occurred upon Oct. 21st at Leamington, almost the oldest practitioner in these islands, has passed from our midst. Dr. Fletcher was born in Shifnal in 1806, and graduated at the University of Paris. On his return from that city he resided for some time in London, but early in the thirties he removed to Birmingham where, in 1838, he was appointed physician to the General Dispensary, which post he held for ten years, resigning in 1848 on being elected physician to the General Hospital, and this latter post he held for thirty years, when he resigned and was elected honorary consulting physician, was presented with a piece of plate and, in addition, with his portrait painted by Sir Daniel Macnee. Among other appointments he held were those of consulting physician to the South Salop Infirmary, the West Bromwich Hospital, and the Midland Counties Hospital for Women. He was also a justice of the peace for the borough of Birmingham. He was physician to the Blue-coat School and the Blind Asylum, while the foundation of the Midland Counties Asylum for Idiots at Knowle was due entirely to his efforts and those of his friend, Mr. J. H. Kimbell. In his early days he took great interest in medical education and was instrumental in founding two fully licensed schools of medicine. The first one came to an untimely end owing to the resignation of two colleagues who filled practical chairs, but the second, under the name of Sydenham College, ran a successful course for some seventeen years.

At this institution Dr. Fletcher was both principal and lecturer on Medicine, but when the scheme for its amalgamation with Queen's College was put forward he resigned both offices, being much opposed to the new idea. Eventually, however, he reconsidered his position, and accepted a seat on the council of the united colleges. In 1887 he retired altogether from practice and lived for some months in the South of France, where he partly recovered his old vigour. Returning to England he settled at Leamington and was appointed medical adviser to the visiting justices of licensed houses for the care of the insane in the county of Warwick. In May, 1887, he had an attack of cerebral hæmorrhage accompanied by hemiplegia. He was slowly recovering from this when in October of the same year he had a relapse. After this his strength very slowly but steadily declined until the day of his death. As a physician he was astute and sound in his knowledge. An instance is remembered of an able diagnosis made by him with the stethoscope at a time when it was not so universally used. The case was one of pregnancy, and Dr. Fletcher from his examination of the patient predicted twins from the presence of two fœtal hearts—a diagnosis which was subsequently verified. His opinion was greatly sought after among a large *clientèle*. In the Black Country especially an appeal from his judgment was seldom considered necessary; indeed, many looked upon his presence as a dignity to dissolution and accepted with resignation the fiat he pronounced. When "Mister" Fletcher had been called in it was thought that everything which could be done for the patient had been accomplished. What character Dr. Fletcher bore among those who knew him best is well shown by the following remarks of the *Birmingham Post* appended to the obituary notice which appeared in that journal.

"This brief sketch of Dr. Fletcher represents an energetic physician settling in a large town and attaining a high reputation by sound mental power and sheer force of character; for as a new comer he could command no local influence. His humanity, charity, and full sympathy with the poor are shown throughout the record. His educational proclivities and his constructiveness and fertility in good designs are also strongly illustrated. Dr. Brown, in his 'Horæ Subsecivæ,' has written: 'The prime qualifications of a physician may be summed up in the words capax, perspicax, sagax, efficax: *capax*—there must be room to receive and arrange and keep knowledge; *perspicax*—senses and perceptions keen, accurate, and immediate, to bring in materials from all sensible things; *sagax*—a central power of knowing what is what, and what it is worth; of choosing and rejecting; and, finally, *efficax*—the will and the way, the power to turn all the other three (capacity, perspicacity, sagacity) to account in the performance of the thing in hand, and thus rendering back to the outer world in a new and useful form what you had received from it. These are the intellectual qualities which make up the physician.' These qualities Dr. Fletcher possessed in an eminent degree, and we may add that he was honourable, high-minded, and especially practical. His theological and political views were fixed, but he was free from sectarian narrowness and controversial tendency. Hence he contracted friendships with men of most opposite convictions, and his charity was founded on the broad basis of humanity. His moral courage was equal to every emergency, and as a friend he was constant and

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true. Few men have served the town more faithfully or left more enduring records of their influence and labours."

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The death of the following eminent foreign medical man is announced:—Dr. Rudolf Heidenhain, Professor of Physiology in the University of Breslau, at the age of sixty-three years. After taking his degree in 1854 he worked under Du Bois-Reymond in Berlin, and became *privat docent* in Halle. He was appointed in 1858 to succeed Dr. Purkinjes as professor of physiology and histology in Breslau. During his long tenure of this chair he published many very important researches on physiological topics, including glandular physiology, muscles and nerves, animal heat, the pneumogastric nerve, hypnotism, and an important defence of vivisection, a subject on which he felt very strongly, sending to the Prussian House of Representatives on the occasion of an anti-vivisection debate a copy of a Manual of Physiology in which he had marked with a red pencil all the facts which were only discovered by means of experiments on living animals.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the subjects indicated:—

Surgery.—A. P. Ambrose, Westminster Hospital; C. Basan, Middlesex Hospital; J. L. F. De Gannes, University College Hospital, and C. C. Poole, Guy's Hospital.

Medicine.—J. C. Bell, Guy's Hospital; P. S. Blaker, Calcutta; J. H. Chambers, Manchester; F. E. Feilden, St. Bartholomew's Hospital; T. C. Last, St. George's Hospital; C. H. Maskew, Birmingham; J. Prentice, Liverpool; and J. Spencer, Leeds.

Forensic Medicine.—P. S. Blaker, Calcutta; W. F. Chrispin, Leeds; F. E. Feilden, St. Bartholomew's Hospital; T. C. Last, St. George's Hospital; J. Prentice, Liverpool; and J. Spencer, Leeds.

Midwifery.—J. C. Bell, Guy's Hospital; P. S. Blaker, Calcutta; J. H. Chambers, Manchester; R Holt, Royal College of Surgeons, Ireland; T. C. Last, St. George's Hospital; and J. Prentice, Liverpool.

The diploma of the society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery: Messrs. A. P. Ambrose, C. Basan, P. S. Blaker, J. L. F. de Gannes, C. H. Maskew, and C. C. Poole.

UNIVERSITY OF EDINBURGH.—At the special graduation ceremonial on Oct. 23rd the following degrees were conferred:—

Degree of Doctor of Medicine.—*Roderick Murdoch Matheson, Scotland, M.B, C.M., 1893.

Degrees of Bachelor of Medicine and Master in Surgery.—Frederick William Allkin, England; Ernest Lincoln Borthwick, Australia; David Elliot Dickson, Scotland; Joseph Dominic Doherty, Australia; David Leonard Fisher, Ireland; Frank Strachey Harper, England; William Herbert Joseph Hollinshead, Australia; Neil Thomson Kerr, Scotland; Thomas Campion Lauder, Ireland; Alexander Morison Little, Scotland; John Ewart Martin, England; Sarat Kumar Mullick, India; Samuel Knight Norris, England; George Hearn Parry, England; George William Payne, Barbadoes; Thomas Bullions Shoolbread, England; William Brown Thain, Scotland; John Thomarson, England; Robert Thornton, Scotland; George Ryan Twomey, Ireland; Syed Mohamed Varis, India; and George Fyfe Waterston, Scotland.

Degrees of Bachelor of Medicine and Bachelor of Surgery—Alexander John Travers Allan, Scotland; and James Duff Scott Milln, Scotland.

* Commended for Thesis.

FOREIGN UNIVERSITY INTELLIGENCE.—*Göttingen:* Dr. August Cramer, son of the late Professor of Psychiatry in Marburg, and *privat-docent* of Mental Diseases, has been granted the title of Professor.—*Cracow:* Dr. Obalinski, Extraordinary Professor, has been promoted to the Chair of Surgery in succession to Dr. Rydygier.—*Jena:* Dr. F. Gumprecht, *privat-docent* of Internal Medicine, has been appointed Extraordinary Professor of Forensic Medicine.—*Lemberg:* Dr. H. Schramm has been recognised as *privat-docent* of Surgery.—*Pavia:* Dr. Zoia, of Parma, has been recognised as *privat-docent* of Medicine.—*Prague* (Bohemian University): Dr. Slavik has been recognised as *privat-docent* in Forensic Medicine.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—At the annual stated meeting of the Royal College of Physicians of Ireland, held on St. Luke's Day, Oct. 18th, 1897, the following officers were elected for the ensuing year:—President: Sir George Duffey, M.D. Dub., F.R.C.P. Irel. Vice-President: Wallace Beatty, M.D. Dub., F.R.C P. Irel. Censors: Wallace Beatty, M.D. Dub., F.R.C.P. Irel.; E. E. Lennon, F.R.C.P. Irel.; S. T. Gordon, F.R.C.P. Irel.; and R. A. Flynn, F.R.C.P. Irel. Examiners for the Licence to practise Midwifery: W. J. Smyly, M.D. T.C.D., F.R.C.P. Irel., and Andrew J. Horne, F.R.C.P. Irel. Additional Examiners, to take the place of an absent Censor or Examiner:—Medicine: A. K. F. M'Cutcheon, M.D. Dub., F.R.C.P. Irel. Medical Jurisprudence and Hygiene: H. C. Tweedy, M.D. Dub., F.R.C.P. Irel. Midwifery: Ernest H. Tweedy, F.R C.P. Irel. Additional Examiners under the Conjoint Examination Scheme:—Biology: E. MacDowel Cosgrave, M.D. Dub., F.R C.P. Irel. Chemistry and Physics: Henry T. Bewley, M.D. Dub., F.R.C.P. Irel., and Edwin Lapper, F.R.C.P. Irel. Materia Medica and Pharmacy: Ninian Falkiner, M.B. Dub., F.R.C.P. Irel.; Francis J. B. Quinlan, M.D. Dub., F.R.C.P. Irel. Physiology: John Mallet Purser, M.D. Lond., F.R.C.P. Irel. Pathology: H. T. Bewley, M.D. Dub., F.R.C.P. Irel. Medicine: John Murphy, F.R.C P. Irel.; H. C. Drury, M.D. Dub., F.R.C.P. Irel. Hygiene and Forensic Medicine: Conolly Norman, F.R.C.P. Irel. College Examiners for Conjoint Diploma in State Medicine: Meteorology and Climatology: John William Moore, M.D. Dub, F.R.C.P. Irel. Hygiene: F. J. B. Quinlan, M.D. Dub., F.R.C.P. Irel. Chemistry: Edwin Lapper, F.R.C.P. Irel. Examiners in Preliminary Education: Languages: E. J. Gwynn, F.T.C.D. Science: C. Joly, F.T.C.D. Representative on General Medical Council: Lombe Atthill, M.D., Dub., F.R.C.P. Irel. Representatives on the Committee of Management under the Conjoint Examination Scheme:—John Magee Finny, M.D. Dub., F.R.C.P. Irel.; Sir Christopher J. Nixon, M.D. R.U.I., F.R.C.P. Irel.; and James Craig, M.D. Dub., F.R.C.P. Irel. Treasurer: Lombe Atthill, M.D. Dub., F.R.C.P. Irel. Registrar: James Craig, M.D. Dub., F.R.C.P. Irel. In the evening the annual banquet of the President and Fellows was held in the College Hall. The following Fellows were present: Sir George Duffey (President), the Provost of Trinity College (Honorary Fellow), Sir John Banks, K.C.B., Dr. Gordon, Dr. Little, Dr. Finny, Dr. Walter Smith, Dr. Grimshaw, C.B, Dr. J. W. Moore, Sir C. J. Nixon, Dr. Macan, Dr. Quinlan, Dr. Smyly, Dr. Redmond, Mr. Horne, Dr. Fitzgerald, Dr. Wallace Beatty, Dr. Bewley, Mr. Molony, Dr. O'Carroll, Mr. Lapper, Mr. Norman, Dr. Falkiner, Dr. Craig, Mr. S. T. Gordon, Mr. Lennon, Dr. Drury, Mr. Murphy, Dr. Parsons, Mr. Gray, Mr. Ernest H. Tweedy, Dr. M'Cutcheon, Mr. Flynn, and Mr. Montgomery. The guests were: The Right Hon. Lord Justice Fitzgibbon, the Right Hon. W. E. Lecky, M.P., the President of the Royal College of Surgeons, Sir William Stokes, Sir William Findlater, D.L. (President of the Incorporated Law Society), Surgeon-General Preston, P.M.O., Professor Cunningham, Dr. F. W. Kidd, Dr. Purefoy, Dr. O'Keefe, Mr. J. E. Kenny, Mr. Lentaigne, Dr. A. Smith, Dr. Myles, Dr. Patteson, Mr. Usher, Dr. Lane Joynt, Rev. E. Burke, Dr. Middleton, Mr. J. M. Colles, Mr. F. B. Ormsby, Dr. Lyndon, Mr. J. J. Murphy, Mr. John Tweedy, Mr. Joly, Mr. E. Gwynn, Mr. R. Moore, Mr. George Moore, Mr. J. C. Molony, Dr. Dempsey, Dr. E. H. Taylor, Mr. Symes, Dr. Arthur Duffey, Mr. Furlong, Dr. Glenn, Mr. S. W. Wilson, Dr. S. T. Gordon, Mr. Melfort D'Alton, Mr. E. Harris-Watson, and Mr. C. W. Wilson. Mr. D'Alton, Mr. Harris-Watson, and others contributed to the enjoyment of the evening by numerous songs to which Mr. C. W. Wilson played the accompaniments.

THE NEW MEDICAL DEFENCE ASSOCIATION, LIMITED.—The ordinary general meeting of the New Medical Defence Association, Limited, was held at the offices of the society, 15, King-street, Cheapside, E.C., on Oct. 27th. The report for the year 1896-97 showed that the financial position of the society was satisfactory, the cash available on June 23rd, 1897, being £375, as compared with £312 at the corresponding period in 1896. The total administration expenses for the year 1896-97 were £22 2*s.* 2*d.* The number of members is 149, of whom, however, forty-four have placed themselves out of benefit by being in arrear with their subscriptions. The report states that the experience gained in the past shows that a subscription of 5*s.* a year will be sufficient to provide the necessary funds for pure medical defence work if the membership becomes considerable. One of the instances in which the association took action occurred in the beginning of 1897, when a member was threatened with legal proceedings for alleged malpraxis in connexion with a midwifery case. A letter was accordingly written to the person who threatened proceedings, and nothing further has been heard of the matter.

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LIFEBOAT SATURDAY IN BRISTOL.—Lifeboat Saturday was held in Bristol on Oct. 23rd. This is the fourth annual effort of the kind, the first having taken place in 1894; as a result of the three previous collections £1200 have been forwarded to the institution.

THE SWANSEA MURDER CASE.—Timothy S. Jones, a medical man, who was sentenced in November last to penal servitude for life in respect of the death of a young woman at Swansea upon whom he had performed an illegal operation, has had his sentence reduced by the Home Secretary to twelve years.

THE CHELTENHAM DELANCEY HOSPITAL.—The committee of the Gloucestershire County Council in their report draw attention to the successful results of good hospital treatment as shown by the returns of the Cheltenham Delancey Hospital, where out of 263 cases (in two years) of scarlet fever, small-pox (23 cases), enteric fever, and diphtheria, not a single death had occurred.

INSURANCE FRAUD.—During the hearing of a case at Truro on Oct. 22nd Judge Granger said that the insurance policy had been fraudulently obtained by an agent and was accepted by the medical officer for the Leeds and General Friendly Society. The man insured, represented as being in good health, was an insane paralytic. The judge gave a verdict for the society, but as he thought they should have found out the case earlier costs were not allowed.

UNIVERSITY OF WALES.—The annual meeting of the court of the University of Wales was held at Cardiff on Oct. 22nd under the presidency of Dr. Isambard Owen, the Senior Deputy Chancellor. A vote of condolence was passed with Mrs. Vaughan; Dr. Owen, in proposing this, alluded to the valuable services of their ex-president in the establishment of the educational system of Wales. In the afternoon a congregation of the University was held at the Park Hall for the purpose of admitting graduates to their degrees, this being the first degree day of the Welsh University.

THE ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about $180, will be made on July 14th, 1898, provided that an essay deemed by the committee of award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but must not have been published, and must be received by the secretary of the College on or before May 1st, 1898. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author. It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned upon application within three months after the award. The Alvarenga Prize for 1897 has been awarded to Dr. Joseph Collins, of New York, for his essay entitled "Aphasia."

NORTH-EASTERN HOSPITAL FOR CHILDREN.—The committee of the North-Eastern Hospital for Children, Hackney-road, are making energetic efforts to raise funds for the erection of the additional buildings required for the completion of the original scheme. The new hospital, as designed in 1874, was intended to contain 100 beds, and the freehold of a site sufficiently large for a hospital of that size had been previously acquired, but it was found impossible to obtain sufficient money at once to carry out the plans in their entirety, and the hospital was, therefore, constructed to accommodate fifty-seven beds as at present, the erection of the remainder of the building being deferred. Last year the committee decided, after the most careful deliberation, to take steps as soon as possible to complete the hospital in pursuance of the original scheme so as to cover the whole of the land at the corner of Hackney-road and Goldsmith-row. This will, of course, involve a very heavy expenditure. Mr. Maurice Rüffer, a former member of the committee, has generously offered to head the building fund with a donation of £500 on condition that a sum of £7000 is subscribed during the year. The report for 1896 shows that 705 in-patients were treated in the course of that year; there were also 15,272 out-patients, who made 55,149 attendances.

THE ROYAL ALBERT ASYLUM FOR IDIOTS AND IMBECILES OF THE NORTHERN COUNTIES.—The annual meeting of this institution was held in the town hall of Chester on Oct. 21st, the Duke of Westminster presiding. The report stated that there were 573 patients in the institution—viz, 380 boys and 193 girls. The finances were in a sound condition, but it would be necessary to make a strong appeal for the proposed extension of the asylum and for an increased income to maintain an additional 150 patients. During the year £19,784 7*s*. had been received on maintenance account, on sustentation (endowment) account £5076 17*s*. 11*d*., and for the estate and buildings improvement account £1225 6*s*. The Earl of Derby has been appointed a trustee of the asylum in succession to the late Earl of Sefton.

THE INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The annual general meeting of this society was held at the Holborn Restaurant on Saturday last. Dr. E. Seaton presided. The meeting commenced with an expression of thanks being cordially voted to the retiring president, Dr. G. P. Bate, after which the report of the society for the past session was read. It stated that the society numbered 674 members, and that there were now nine branches in different parts of the kingdom. In his presidential address the chairman dealt with the relation of medical societies to the Public Health Service, urging upon members the desirability of doing their utmost to bring about the amalgamation of the various associations connected with the public health. One of the advantages of amalgamation would be an increase of influence and power in dealing with the questions of public importance with which they were concerned. He instanced the recent Maidstone epidemic as an example of the failure to recognise the full meaning and value of analysis of water-supplies. At the conclusion of his address he called attention to the fact that it was the fiftieth anniversary of the appointment of the first medical officer of health in England—namely, Dr. Duncan, of Liverpool—and he expressed the hope that the society would commemorate the event by a union of the societies over which the interests of public health administration were at present scattered far too widely.

UNIVERSITY OF CAMBRIDGE.—The election of a Professor of Pathology will take place on Saturday, Nov. 6th, at Downing College Lodge. The electors are Dr. Bradbury, Dr. Gaskell, Professor Foster, Dr. J. F. Payne, Dr. Allbutt, Sir J. Paget, Dr. D. MacAlister, and Dr. Latham. Mr. J. Graham Kerr, B.A., of Christ's College, has been appointed Demonstrator in Animal Morphology, in the place of Mr. E. W. Macbride, lately appointed Professor of Zoology in McGill University, Montreal. At the congregation on Oct. 14th the degree of Doctor of Medicine was conferred on A. J. H. Saw, M.B., B.A., Trinity College; W. J. Harris, M.B., B.A., Caius College; and F. M. Rowland, M.B., B.A., Caius College. The degrees of M.B. and B.C. were conferred on E. A. Houseman, B.A., Clare College, and A. M. Barraclough, B.A., Christ's College.—Professor Wiltshire has presented to the Mineralogical Museum his large and precious collection of minerals; it includes a number of beautiful specimens of high scientific value. The zoological museum has also been enriched by the addition of a fine collection of polyzoa presented by Miss E. C. Jelly, and of the skeleton of a fine elephant seal the gift of Sir W. L. Buller. The Registrary announces that the First and Second Examinations for M.B. will begin on Dec. 13th; that Parts I. and II. of the Third Examination will begin on Dec. 14th, and that the examination for the M.C. degree will begin on Dec. 17th. The names of candidates should be sent in by Nov. 30th. The following registered practitioners have been successful in the recent examination for the diploma in Public Health: A. J. Adkins, A. Balfour, P. L. Benson, W. M. Brown, G. H. Cock, W. S. Cook, R. Dick, C. R. Elliott, R. A. Farrar, S. Gillies, C. H. Graham, M. Kelly, A. J. Laird, C. F. Lillie, A. T. McConkey, R. J. Millard, T. B. Stedman, and J. R. Watson. On Oct. 21st the number of freshmen matriculated was 872, an increase of about 40 on last year's figures. The returns as to the number of medical students are not yet complete. The following have been appointed examiners for the first and second M.B. examinations:—Physics: Mr. Wilberforce and Mr. Capstick; Chemistry: Mr. Bell and Mr. Ruhemann; Biology: Mr. Lister and Mr. Seward; Pharmaceutica Chemistry: Mr. Ivatt and Mr. Adie; Anatomy: Dr

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Barclay-Smith and Professor A. M. Paterson; Physiology: Dr. Snore and Dr. A. D. Waller.

MR. THOMAS WEBB FOWLER, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., has been nominated for the Mayoralty of Coventry.

SUPERANNUATION ALLOWANCE. — Mr. Richard Turner, M.R.C.S. Eng., late medical officer of the Lewes Prison, has been awarded by the Treasury a retiring pension of £138 per annum.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, MARYLEBONE-ROAD. N.W.—The Committee of Management of Queen Charlotte's Lying-in Hospital, Marylebone-road, have received a donation of £1000 from Mr. Henry L. Raphael, to name a bed in perpetuity in memory of the late Mrs. H. L. Raphael.

ST. LUKE'S DAY.—Under the ægis of the Guild of St. Luke a service was held in St. Paul's Cathedral on Oct. 19th. The service was the ordinary Evensong, the sermon being preached by the Archbishop of York from the text, "Himself took our infirmities and bore our sufferings," with the object of showing the inter-relation between the medical and clerical callings.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—A meeting of the governors of this college was held on Oct. 20th under the presidency of Lord Tredegar. Lord Windsor and Dr. W. T. Edwards were re-elected vice-presidents and Mr. L. Tylor was reappointed treasurer. The principal stated that the building fund of the college amounted to £39 877, and he anticipated that the total would reach £40,000 before the end of the year.

MEDICAL MAGISTRATES. — Mr. F. Bagshawe, M.D. Cantab., F.R.C.P. Lond., of St. Leonard's-on-Sea, has been placed on the Commission of the Peace. Mr. Thomas B. Belgrave, M.D. Edin., M.R.C.S. Eng., of Silverton, New South Wales, Mr. H. I. Tresidder, L.R.C.P. Lond., M.R.C.S. Eng., of Dubbo, New South Wales, Mr. George E. Rennie, M.D. Lond., M.R.C.S. Eng., of Sydney, New South Wales, and Mr. George L. L. Lawson, M.R.C.P. Edin., M.R.C.S. Eng., of Yalgoo, Western Australia, have been appointed Justices of the Peace.

DEVONSHIRE HOSPITAL AND BUXTON BATH CHARITY.—The quarterly meeting of the Devonshire Hospital and Buxton Bath Charity was held in the hospital buildings at Buxton on Oct. 2nd, Mr. Henry Shaw, J.P., being in the chair. The report stated that 250 patients were on the books at the end of June and that 1044 were admitted during the three months ended Sept. 30th. Of this number 951 were discharged as "improved," 68 as "no better," 4 at their own wish, 2 as "unfit cases," 2 were made out-patients, 1 died, and 266 remained on the books.

THE Governors of the Royal Kepier Grammer School, Houghton-le-Spring, have awarded the Heath Medical Scholarship to Thomas Rowell, a pupil of the school. This scholarship, which is tenable for three years at the University of Durham College of Medicine, Newcastle-on-Tyne, was founded a few years ago at the school in memory of the late George Yeoman Heath, M.B. Lond., F.R.C.S. Eng., Professor of Surgery in the University of Durham. The new scholar is a son of Mr. Rowell, a practitioner of Houghton-le-Spring.

THE NEW INFECTIOUS DISEASES HOSPITAL FOR GLOUCESTER.—Last week the Mayor of Gloucester, accompanied by various members of the corporation, laid the foundation stone of the new infectious diseases hospital for Gloucester. The site is what is known as Vineyards Hill, Over, about two miles from the city, and is an excellent position with a southern exposure. The position of the wards has already been set out in such a manner as to allow of future extension if necessary. The plans provide for two pavilions for fever cases, each containing six beds for males and six for females, in addition to which there will be an observation ward containing four beds for males and four for females. The total number of beds will therefore be thirty-two. The connexion between the pavilions and the administrative block will be by covered ways with open sides, and the roadways will enable the ambulance to approach the wards separately. It is proposed that the buildings shall be of red brick, and the whole of the pavilion and administrative block will be placed on concrete with through ventilation beneath the floors. The architects are Mr. F. Waller and Mr. H. Medland, both of Gloucester. Temporary wards of corrugated iron have been placed upon the site for the reception of the patients during the erection of the permanent buildings.

PRESENTATIONS TO MEDICAL MEN.—On Oct. 21st a numerous meeting of the Leeds police force assembled at the town-hall to receive from the Lord Mayor of the city the certificates gained by them in connexion with the St. John Ambulance Association; at the same time he presented, on behalf of the men, a purse of gold to Mr. G. H. Heald, L.R.C.P. Edin., M.R.C.S. Eng., their instructing surgeon on First Aid.—At a meeting of the aldermen and residents, held in the town-hall, Dubbo, New South Wales, the Mayor presiding, Mr. Edward J. Haynes, L.R.C.P. Lond., M.R.C.S. Eng., was presented with a farewell address on his leaving the town.—Mr. Charles J. Whitby, B.A., M.D. Cantab., who has been for the past seven years resident physician at the Limpley Stoke Hydropathic Establishment, near Bath, has been presented with a purse of gold by his friends and patients upon the occasion of his receiving another appointment.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

AITKEN, W. B., M.B., Ch.M. Glasg., M.R.C.S., has been appointed a Medical Officer for the Destitute Poor and Aborigines in the district of Belalie, South Australia.

ALLWORK, F., L.S.A. Lond., has been appointed a Medical Officer for the Destitute Poor and Aborigines in the districts of Alma Plains, Gilbert, Rhynie, and Stockport, South Australia.

ANGOVE, F. W., M.R.C.S., has been appointed a Medical Officer for the Destitute Poor and Aborigines in the districts of Highercombe and Teatree Gully, South Australia.

BENNETT, A. H., M.B., Ch.M. Aberd., has been appointed a Medical Officer for the Destitute Poor and Aborigines in the district of Crystal Brook, South Australia.

BERKELEY, G. H. A. C., M.B., B.C. Cantab., M.R.C.P., M.R.C.S., has been appointed an Out-patient Physician to the Chelsea Hospital for Women.

BOROUGH, F., M.R.C.S., has been re-appointed a Surgeon to the Derby Provident Dispensary.

BORTHWICK, THOS., M.D. Edin., has been appointed a Medical Officer for the Destitute Poor and Aborigines in the district of Campletown, South Australia.

BOULTON, ARTHUR, D.P.H., M.R.C.S. Eng., L.R.C.P. Lond., has been re-appointed Medical Officer of Health by the Horncastle Rural District Council.

BROOKES, EDWD., M.B. Melb., has been appointed a Medical Officer for the Destitute Poor and Aborigines in the district of Yatala North, South Australia.

BROWN, R. C., M.B. Melb., has been appointed Officer of Health for Wycheproof Shire, vice R. A. P. Forrester.

BRUEHL, S., M.D., Ch.D. Halle, has been appointed a Medical Officer for the Destitute Poor and Aborigines in the district of Hawker, and a radius of fifteen miles from the township, South Australia.

BRYSON, L. H., M.B. Edin., L.R.C.P. Lond., M.R.C.S., has been re-appointed a Surgeon to the Derby Dispensary.

CLEMONS, GEO. E., M.D., Ch.M. Edin., has been appointed an Honorary Medical Officer to the Queen Victoria Maternity Hospital, Launceston, Tasmania.

COLKMAN, THEO., M.D., C.M. Toronto, has been appointed a Clinical Assistant to Out-patients at the Chelsea Hospital for Women.

COOK, F. E., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Destitute Poor and Aborigines in the districts of Laura Corporation, Boogoolie, and Hundred of Appila, South Australia.

COPESTAKE, W. G., M.R.C.S., has been re-appointed a Surgeon to the Derby Provident Dispensary.

COUNTER, F. W., M.B., Ch.M. Aberd., has been appointed a Medical Officer for the Destitute Poor and Aborigines in the district of Adinga, South Australia.

CURGENVEN, W. G., M.D. St. And., M.R.C.S., has been re-appointed a Surgeon to the Derby Provident Dispensary.

DOBIE, H. E. N., L.R.C.S. Edin., has been appointed a Public Vaccinator for Quambatook, Victoria, Australia.

ENGELHART, A., M.D. Giessen, has been appointed a Medical Officer for the Destitute Poor in the district of Lacepede, South Australia.

ESAU, H. C. F., M.D. Gött., has been appointed a Medical Officer for the Destitute Poor and Aborigines in the district of Onkaparinga, South Australia.

FEIGE, K. A. A., M.D. Dresden, has been appointed a Medical Officer for the Destitute Poor and Aborigines in the districts of English and Neales, South Australia.

FETHERSTON, G. H., M.D. Edin. and Melb., L.R.C.S., L.K.Q.C.P. Irel., has been appointed President of the Medical Board of Victoria, Australia.

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FINNISS, J. H. S., M.B., Ch.M. Edin., has been appointed a Medical Officer for the Destitute Poor and Aborigines in the districts of Brighton Corporation, Glenelg Corporation, and Marion, South Australia.

FOULDS, H. F., M.R.C.S., has been re-appointed a Surgeon to the Derby Provident Dispensary.

GANDEVIA, N. B., L.R.C.P. Lond., M.R.C.S., has been appointed a Public Vaccinator for Surrey Hills, Victoria, Australia, vice W. C. C. Muir, resigned.

GLYNN, E., L.K.Q.C.P., L.R.C.S. Irel., has been appointed a Medical Officer for the Destitute Poor and Aborigines in the districts of Belvidere and Kapunda Corporation and district, South Australia.

GOLDSMITH, F., M.B., Ch.B. Adel., has been appointed a Member of the Licensing Bench for Palmerston Licensing district, South Australia, vice L. S. O'Flaherty, resigned.

GREENE, H. M., M.D. Brux., L.S.A. Lond., has been re-appointed a Surgeon to the Derby Provident Dispensary.

GREGERSON, W. I., M.B., Ch.B. Melb., M.R.C.S., has been appointed a Medical Officer for the Destitute Poor and Aborigines in the district of Woodville, South Australia.

GREGORY, T., L.R.C.P. Lond., M.R.C.S., has been appointed Second Assistant Medical Officer to the Crumpsall Workhouse, Manchester Township.

GUTTERIDGE, M. W., M.B., Ch.M. Edin., M.R.C.S., has been appointed an Honorary Medical Officer to the Queen Victoria Maternity Hospital, Launceston, Tasmania.

MACDONALD, WILLIAM, L.R.C.S., L.R.C.P. Edin., has been appointed Senior House Surgeon to the Royal Albert Edward Infirmary and Dispensary, Wigan, vice W. Cunningham, Milroy, resigned.

MAXWELL, K., M.B., Ch.M. Edin., has been re-appointed an Honorary Medical Officer to the Castlemaine Hospital, Victoria, Australia, and also appointed Officer of Health for the borough of Chewton, and Shire of Mount Alexander, Victoria, vice G. M. Reid.

MEDCALF, E. S., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health for Hove.

MURPHY, M. W., L.R.C.P. Edin., M.R.C.S., has been appointed an Honorary Consulting Physician to the Queen Victoria Maternity Hospital, Launceston, Tasmania.

O'NEILL, J., M.D. Edin., has been re-appointed an Honorary Medical Officer to the Castlemaine Hospital, Victoria, Australia.

PHILIPSON, GEORGE HARE, M.D., D.C.L., F.R.C.P., has been appointed Medical Visitor to the Dunston Lunatic Asylum, vice Dennis Embleton, retired.

PIKE, CHAS., J., M.B., Ch.B. Lond., M.R.C.S., has been appointed an Honorary Medical Officer to the Queen Victoria Maternity Hospital, Launceston, Tasmania.

REDFERN, JOHN J., M.A., M.D., M.Ch., M.A.O. Irel., has been appointed an Honorary Medical Officer to the Croydon General Hospital.

REID, W. JAS., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed a Surgeon to the Derby Provident Dispensary.

RICHARDSON, C. S., L.K.Q.C.P. Irel., L.R.C.S., Edin., has been appointed an Honorary Medical Officer to the Queen Victoria Maternity Hospital, Launceston, Tasmania.

ROWANTREE, WILLIAM, L.R.C.P., L.R.C.S. Irel., has been appointed Surgeon to St. Michael's Hospital, Kingstown.

SPROULE, W., M.D. Edin., has been appointed Surgeon to the Normanton Hospital, Queensland.

THOMPSON, L. G., M.D., Ch.M. Aberd., L.R.C.P., L.R.C.S. Edin., has been appointed an Honorary Consulting Physician to the Queen Victoria Maternity Hospital, Launceston, Tasmania.

WADDY, F. H., M.D. Glasg., has been appointed an Assistant Medical Officer for the Workhouse of the Sheffield Union.

WELLS, ROBERT S., L.R.C.P. Edin., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Parish of Kirkcowan, Wigtownshire.

WILSDEN, ALFRED, M.B., C.M. Aberd., has been appointed a Clinical Assistant to Out-patients at the Chelsea Hospital for Women.

WILSON, JOHN T., M.B., Ch.M. Edin., has been appointed an Honorary Medical Officer to the Queen Victoria Maternity Hospital, Launceston, Tasmania.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CAMBRIDGESHIRE, &C., LUNATIC ASYLUM, at Falbourn, near Cambridge.—Assistant Medical Officer, unmarried. Salary £140 per annum, with board, lodgings, and attendance, in the Asylum. Applications to the Clerk to the Visitors, Cambridge.

CARDIFF INFIRMARY.—Assistant Resident Physician for six months. Board, washing, and apartments provided.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Junior House Surgeon and Dispenser. Salary £50 per annum, with board, apartments, and laundress

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Registrar for one year. Honorarium of 20 guineas per annum.

CONSUMPTION HOSPITAL AND ORPHAN HOMES OF SCOTLAND, Bridge of Weir.—Resident Medical Officer. Salary £80 per annum, with furnished apartments, board, &c. Applications to the Hon. Secretary, 194, St. Vincent-street, Glasgow.

CORPORATION OF CALCUTTA, Bengal, India.—Health Officer to the town of Calcutta for five years. Salary of not less than 1200 rupees and not more than 1500 rupees a month, with reasonable horse-allowance for out-door inspection, not exceeding 100 rupees a month. Applications to Mr. W. R. Macdonald, Secretary to the Corporation.

GREENWICH UNION INFIRMARY.—Second Assistant Medical Officer, unmarried. The appointment will terminate on Dec. 25th, 1898. Salary £80 per annum, with board, lodging, washing, and attendance in the Infirmary, and £3 per annum in lieu of beer. Applications to the Clerk to the Guardians, Union Offices, Greenwich, S.E.

MIDDLESEX HOSPITAL, W.—Surgical Registrar.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon for six months. Board, apartments, and washing provided.

PARISH OF BIRMINGHAM.—Resident Assistant Medical Officer at the Workhouse Infirmary for twelve months. Salary £100 per annum, with furnished apartments, rations (which do not include alcoholic liquors), coals, gas, washing, and attendance. Applications to the Clerk to the Guardians, Parish Offices, Birmingham.

PONTEFRACT GENERAL DISPENSARY AND INFIRMARY.—Resident Medical Officer. Salary, £130 per annum, with furnished rooms, fire, lights, and attendance.

RADCLIFFE INFIRMARY, Oxford.—Honorary Physician.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields.—Senior House Surgeon.

SALISBURY INFIRMARY.—Assistant House Surgeon, unmarried. Board, lodging, and washing provided.

SAMARITAN FREE HOSPITAL, Marylebone-road, London, N.W.—Anæsthetist.

SEAMEN'S HOSPITAL SOCIETY, "DREADNOUGHT," Greenwich, S.E.—Surgeon for Dispensary, 51, East India Dock-road. Salary £63. House Surgeon for "Dreadnought" Hospital, Greenwich. Salary £50 per annum, with board and residence. Junior House Surgeon for the Branch Hospital, Royal Albert Dock, E. Salary £50 per annum, with board and residence. Applications to the Secretary, Greenwich.

SOUTHPORT INFIRMARY.—Honorary Surgeons.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston-road, London.—Resident Medical Officer, unmarried. Salary, £105, with residence and attendance. Applications to the Hon. Secretary, 23, Gordon-street, Gordon-square, W.C.

THE HOSPITAL FOR WOMEN, Soho-square, London.—House Physician for six months. Salary £30 for that period.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea.—Assistant Physician to the Out-patients, for two years. Also Physician to the In-patients.

WEST HAM HOSPITAL, Stratford, E.—Junior House Surgeon for one year. Salary £50 per annum, with board, residence, &c.

WESTBOURNE PROVIDENT DISPENSARY AND MATERNITY, 244, Harrow-road, London, W.—Surgeon. Also Dental Surgeon. Applications to the Secretary, 30, Chippenham-road.

Births, Marriages, and Deaths.

BIRTHS.

BOXALL.—On Oct. 21st, at Church Hill, Rudgwick, Sussex, the wife of Frank Boxall, M.R.C.S., L.R.C.P., of a daughter.

BROOKS.—On Oct. 23rd, at Queen-street, Wolverhampton, the wife of J. Pratt Brooks, M.R.C.S., of a son (John Churchill).

FALVEY.—On Oct. 23rd, at Challoner-street, West Kensington, the residence of her mother, Mrs. Falvey, wife of Surgeon-Major Falvey, F.R.C.S.I., A.M.S., of a son.

FERGUSON.—On Oct. 23rd, at Ferncombe, New West-end, Finchley-road, the wife of G. Gunnis Ferguson, M.B., C.M., of a daughter.

ROSS.—On Oct. 20th, at Burslem, Staffordshire, the wife of W. Levingston Ross, L.R.C.S. and L.R.C.P.I., of a son.

THOMPSON.—On Oct. 26th, at 6, West-street, Scarborough, the wife of Geoffrey W. Thompson, M.D. Cantab., M.R.C.S., of a son.

MARRIAGES.

ADAMSON—DRAPER.—On Oct 23rd, at St. George's, Hanover-square, Horace G. Adamson, M.D., of Guildford, to Mabel Amy, younger daughter of the late Henry Valentine Draper.

CROSS—PEACOCK-EDWARDS.—On Oct. 26th, at St. Paul's Church, Valetta, Malta, Horace Edward Firmin Cross, Fleet Surgeon Royal Navy, third son of the late Robert Cross, M.D., Berkeley-square, London, to Florence Mary, fourth daughter of William Peacock-Edwards, of Belgrave-crescent, Edinburgh.

FISHER—TURNER.—On Oct. 25th, at the parish church, Little Oakley, Northamptonshire, Henry Holdrich Fisher, M.D., of Sittingbourne, Kent, to Caroline Maud Irene, second daughter of the Rev. Vaughan Charles Turner, rector of Little Oakley.

HARPER—HEALD.—On Oct. 21st., at All Saints' Church, Southport, Henry Cecil Harper, M.R.C.S. Eng., L.R.C.P. Lond., of Stowmarket, to Margaret Jeannie Heald, youngest daughter of W. N. Heald, Esq., J.P., of Westbank, Southport.

HAYMAN—SANDERS.—On Oct. 21st, at Sutton-on-the-Forest, Yorkshire, Frederick Dell Hayman, M.R.C.S., Victoria, Australia, to May, third daughter of Rev. H. M. Sanders, vicar of Sutton-on-the Forest.

WALKER—DOUGLAS.—On Oct. 21st., at the parish church, St. Mary's, Walmer, Kent, Henry Roe Walker, M.R.C.S., &c., of Walmer, to Evelyn Frances Gordon, third daughter of Admiral Robert Gordon Douglas, of Seafield, Walmer.

DEATHS.

DUNCAN.—On Oct. 22nd, at Westminster Hospital, Brigade-Surgeon James Shand Duncan, L.R.C.S. Edin., late 81st Regt. and A.M.D., aged 61 years.

FLETCHER.—On Oct. 21st, at his residence, Clarendon-crescent, Leamington, Thomas Bell Elcock Fletcher, M.D., F.R.C.P. Lond., in his 91st year.

HINGSTON.—On Oct. 21st, at Liskeard, Cornwall, Andrew Hingston, M.R.C.S. Eng., L.S.A., J.P., aged 76 years.

O'GRADY.—On Oct. 18th, Edward Stamer O'Grady, M.B., Ch.M. T.C.D., F.R.C.S.I., of Merrion-square, Dublin, and Ballybehey, Co. Limerick.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (3rd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), ing's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (4th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (6th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (2nd).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. D'Arcy Power: Empyema of the Antrum in a Child aged eight weeks.—Mr. P. Furnivall: A Pathological Report on a case of Acromegaly, with an Analysis of Thirty-three Post mortem Examinations of Cases of Acromegaly (exhibition of casts, photographs, macro- and microscopic specimens).—Dr. J. Calvert: A specimen of Calcifying Pericarditis.—Mr. W. G. Spencer: (1) Calculous Disease of the Salivary Glands; (2) Nerves from a Case of Chronic Traumatic Neuritis.—Dr. H. Rolleston: Pituitary Body from a Case of Acromegaly.—Mr. C. J. Seligmann will show Live Bilharzia Ova Hatching.

WEDNESDAY (3rd).—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Cullingworth, Dr. Williamson, and others. Paper:—Mr. Bland Sutton: On Abdominal Hysterectomy for Myoma of the Uterus,—Dr. W. Tate: Three Cases of Pyometra complicating Cancer of Cervix Uteri.

THURSDAY (4th).—CHEMICAL SOCIETY (Burlington House, W.).—Prof. J. Dewar: The Properties of Liquid Fluorine: The Liquefaction of Air and the Detection of Impurities: The Absorption of Hydrogen by Palladium at High Temperatures and Pressures.

FRIDAY (5th).—WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, W.).—8.30 P.M. Mr. M. Thompson: A Case of Cerebral Hæmorrhage in a Child aged thirteen years.—Dr. H. J. Davis: Gunshot Injuries in the late Greco-Turkish War.—Mr. G. H. Twynam: Nephrectomy and its Relation to Pregnancy.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

MONDAY (1st).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. G. Stoker: Impaired Movements of the Vocal Cords.

TUESDAY (2nd).—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Delusional Insanity; Paranoia.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Late Syphilides.

HOSPITAL FOR NERVOUS DISEASES (73, Welbeck-street).—4.30 P.M. Mr. H. Cotterell: Cases Illustrating the Surgery of the Brain.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Beevor: On the Examination of the Action of Muscles.

WEDNESDAY (3rd).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: Sources of Water.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Green: Cases in the Wards.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. S. Edwards: Surgical Cases.

EVELINA HOSPITAL (Southwark-bridge-road, S.E.).—4.30 P.M. Mr. A. H. Tubby: Spinal Caries and some Points in its Recent Treatment. (Post-Graduate Course.)

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq.).—5 P.M. Dr. Morgan Dockrell: Eczema.

THURSDAY (4th).—ROYAL COLLEGE OF PHYSICIANS—5 P.M. Dr. E. Markham Skerritt: On Prognosis in Heart Disease. (Bradshaw Lecture.)

LONDON POST-GRADUATE COURSE.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. G. Oliver: The Pulse.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq.).—5 P.M. Dr. Morgan Dockrell: Leprosy.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Barlow.

FRIDAY (5th).—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Tuberculosis and Leprosy.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 28th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Oct. 22	30·46	N.E.	...	62	53	48	49	52	Overcast
,, 23	30·23	E.	...	71	57	51	50	53	Overcast
,, 24	30·21	E.	...	86	57	49	49	52	Cloudy
,, 25	30·20	E	0·10	85	57	44	44	45	Foggy
,, 26	30·29	N.E.	0·07	70	59	45	50	51	Raining
,, 27	30·30	E.	...	62	57	48	49	50	Foggy
,, 28	30·25	E.	...	51	51	49	49	49	Foggy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

GLANDULEN TABLETS.

MESSRS. THOMAS CHRISTY AND CO., 25, Lime-street, E.C., have forwarded to us samples of glandulen, an animal product prepared in tablet form for medicinal use by Dr. Hofmann, manufacturing chemist, Meerane, Saxony. Glandulen is obtained from the bronchial glands of freshly-killed sheep. Having been washed with alcohol, freed from fat, and dried in vacuo at a low temperature, the glands are reduced to powder, to which sugar of milk is added in such proportion that when compressed into tablets weighing 0·25 gramme (3¾ grains), each tablet is equivalent to 0·25 gramme (3¾ grains) of the fresh glandular substance. One tablet is given three times a day at first, the dose being gradually increased to five tablets three times daily. Glandulen is stated to have been tried in cases of tuberculosis of the lungs.

MEDICAL BIOGRAPHIES: A QUERY.

To the Editors of THE LANCET.

SIRS,—Could you or any of your readers tell me where to obtain the biographies of Dr. John Fothergill, Boerhaave by Johnson Abercrombie, and Dr. Stokes, mentioned in the Students' Number of THE LANCET of September, 1896, who is the publisher, and what is the price? I am, Sirs, yours faithfully,

Oct. 14th, 1897. R. W. H.

*** A good account of Dr. John Fothergill, read before the Medical Society of London in 1782, will be found in the third volume of his works, by John Coakley Lettsom. "The Life of Boerhaave," by Dr. Johnson, will be found in Johnson's works. A short account of Dr. Stokes, of Dublin, is given in "Eminent Doctors," by G. J. Bellamy. The life of Abercrombie is also shortly given in encyclopædias.—ED. L.

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MEDICAL DICHOTOMY.

IN an article on this thorny subject which appears in *Le Courrier Médical* the writer, Dr. Cézilly, quotes Dr. Huguenin to the following effect: "1. When a medical practitioner is doubtful about his diagnosis, prognosis, or treatment, or else merely wishes to cover his responsibility, he calls in the consultant of his choice, who may be professor, deputy professor, hospital physician, or even a general practitioner with no other distinction than his knowledge and uprightness. What should he demand by way of honorarium? Twice his usual fee, provided that the amount is in no case less than ten francs. 2. A capricious patient having little confidence in his own medical man, or else desirous of ascertaining whether his cure can be accelerated, calls in a consultant and, as it were, imposes him upon the practitioner in attendance. What fee should the latter receive? A quarter of the amount given to the consultant. 3. Assistance at an operation of any description, but without actual participation in the operative procedure, should be recompensed as follows: Fifty francs if the patient belong to the middle classes, one hundred francs if he be wealthy. 4. When the assistant has taken part in the operation the operating surgeon alone is competent to decide what his remuneration should be, and it is also the duty of this gentleman, not only to apply for the money, but also to indicate its destination. The sum in question should, however, never be less than 150 francs."

COMPETITION IN THE COLONIES.

MR. EDITOR. Gisborne, Sept. 4/97.

DEAR SIR,—I hope you will excuse me for taking the liberty of sending you the enclosed I do not know if such cases comes under your notice I think that different of the Dr's in this Coloney does not understand such cases and it is not in my line to spend time with them being a long way from being a medical man I have only treated a very fue cases.

If you see nothing in the enclosed please comit it to the Wast paper Baket and oblidge—You most obedent servant,

JAMES ROSIE.

Care of Mr. Cecil Lewis, Produce Merchant,
Gisborne, New Zealand.

[ENCLOSURE.]

To the Editor of THE LANCET.

The young Ladie was a little over 16 years her trouble began with felling lonesome (Languid) and soon after a weakness in her limbs she did not feel inclined to do any thing But as the weather was very warm they did not think much about it as she had no pain but when her monthlys stoped the Dr then advised her to take Sea trip they so and got other medical advise he gave her a Tonic and expected she would soon be well short after returnig home they saw she was losing Flesh as well as her appetite the Dr was called he thought he could do some thing for her now as the weather was cool But her skine (Flesh) began to feel cold and she tooked pail yet no pain she soon got so weak that she had to take to bed she soon got so Bad that nothing would stay on her stomach. When I saw her for the first time she scarcly could move her limbs and was just Skine and Bones and felt cold yet she had only a little pain across the fore head. In a fue days under my treatment she could move her limbs and a fue days more we got her out of Bed she is now as well as ever she was. From the first appearne of her trouble to the time she was out of Bed would be over six months.

J. R.

*** We see a great deal in the enclosure, and so have not "comited" it to the "Wast paper Baket." We see that a person "a long way from being a medical man," and also from being a commonly educated man, has calmly taken upon himself medical duties. Mr. Rosie is recommended to understand that if he had had under his care a case which had ended fatally through lack of medical aid, instead of a case the natural and everyday termination of which was perfect recovery, there is no moral reason why he should not be hanged.—ED. L.

"THE TREATMENT OF CORNS."

To the Editors of THE LANCET.

SIRS,—A layman has communicated to me a little "tip" concerning corn-plasters which may prove of service to your correspondent, Mr. J. T. Jones. "Some ten years ago," he writes, "I was a martyr to corns. The putting on of a boot was worse than I imagine the rack would have been. I was advised to try corn-plasters but not to 'apply 'em as you buy 'em,' because that, I was told, might aggravate my trouble. I was instructed to cut the plaster in two across the centre (see diagram) and then to apply the two sections round the base of the corn. This method afforded me relief at once, and in six months I had got rid of corns which had previously crippled me."



It seems to me that a corn-plaster used in this way would often gain in value, as the two sections can be fitted round the base of the corn accurately and tightly in a way that is impossible when dealing with a ring of a fixed circumference. I am, Sirs, yours faithfully,

Oct. 25th, 1897. M.D., &c.

PLAGUE SPAWN.

AMONG the many evils which accompany plagues—we use the word in the sense of epidemic disease generally—is the host of lying scoundrels to which they give birth, who trade upon people's fears, and under the cloak of religion line their pockets with the gold of their dupes. There were plenty of them in the great plague of London, of whom many, we are glad to say, died therefrom. They issued handbills and held meetings, but we doubt whether any such infamous bill as the one here reprinted has ever been issued before.

NOTICE.

SAD FEVER CALAMITY IN MAIDSTONE.

'LIFE OR DEATH.'

On SUNDAY NEXT, Oct. 17th, 1897,

TWO PUBLIC MEETINGS

WILL BE HELD IN THE

Alexandra Hall, Tonbridge Rd., Maidstone,

(By kind permission of the Christian Friend), when

PROFESSOR HOBBS

(Promoter of Electric Communication between Light Ships, Light Houses, and the Shore to Save Life. Also the Mansion House Meeting in London in 1881),

Will address the Audience upon the Sad Fever Calamity to 1670 persons and Awful Deaths of 91, and will prove that the progress of Fever can be arrested within a very short time, the Patient smiling, sleeping, and soon eating. Letters from the Princess of Wales and Lord Rosebery; also Portraits and Letters of Lady Rosebery, and a patient cured at 84 years of age, who died at 92; the gardener of the late Archbishop of Canterbury (his Daughter cured of Consumption and Dropsy); a Patient who was covered with Scarlet Fever in the morning, and running in the bedroom in the evening, the next morning down to breakfast, etc., etc.; "also a Patient cured of Cancer," and one treated for nine Cancers.

A letter will be read by the Chairman from the late John Smedly, who had nearly 50,000 patients treated at his Home, and not one "Fatal Case" of Fever during his life, and not one case transferred to any Ignorant Doctor, Brewer, Publican, Wine or Spirit Merchant, or Licensed Grocer to be cured by cursed alcohol," and who believed with the Professor that the late beloved Prince Consort could have been relieved within an hour.

The Professor will give the particulars of a case of Fever stated to be of seven weeks' standing, who was pronounced beyond hope by the M.D. Two others were requested to see her insensible, grating her teeth, and moaning. Within 15 minutes the brain was relieved of Fever, and the patient soon asleep.

The Correspondence will be produced between the Asylums' Board, London, and Mr. Hobbs in favour of the use of six Beds in the Hospital, London, being allowed him for him to prove to 50 M.D.'s that he can relieve Fever Cases in 15 minutes if taken early. Fifty seats will be reserved for the Doctors and Nurses, who are earnestly and affectionately invited to attend, that they may learn how to prevent Pains, Suffering, and Death.

The Chair to be taken at 3 o'clock prompt, and 8.15 o'clock, by

TWO PHILANTHROPISTS OF MAIDSTONE.

Hundreds of Testimonials, Letters, &c., will be produced, received from supposed dying Patients, who are by now well, *after being* treated *Free* of charge.

A Collection will be made after each Meeting to defray Expenses, and provide a Free National Home (advocated to be built by an eminent London Physician, after proving the great success attending Mr. H.'s treatment of Mild Hydrophy and Medical Botany for 40 years) for the suffering.

The Clergymen and Ministers of the Town will oblige by announcing the Meetings from the various Pulpits on the Morning of the 17th of October, 1897.

The ignorance, the lying, and the nauseating infusion of spurious religion (who is "the Christian friend"?) make this bill a specially bad specimen of its class when we consider the circumstances under which it was issued. We should much like to know if any of the clergymen of the town were weak enough to give notice of the meetings from the pulpit, and if so whether the circumstance has come under the notice of His Grace of Canterbury. If so they will have a bad quarter of an hour, for if ever there was a man who has a hatred of humbug it is the present holder of the See of Canterbury. In that admirable little work "Loimographia" occurs the following sentence: "If God had not made venomous and hurtful creatures as well as others man would have wanted objects whereon to exercise his reason and prudence." Herein we have an explanation of the existence of persons like "Professor" Hobbs.

Mr. Arthur Field is thanked for his communication.

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THE SOLUBILITY OF THE HUMAN BODY.

THE police authorities in Chicago have recently undertaken a series of experiments with a view to determining the innocence or guilt of a wealthy sausage maker, named Adolphus Luetgert, who is accused of having killed his wife and made away with her body by dissolution in a vessel containing a corrosive liquid. One of the experiments, which is said to have been perfectly successful, was performed in the following manner. A corpse having been procured it was stripped entirely naked and placed in a vat filled with a strong solution of caustic potash. After two hours the cover was removed, when it was found that, with the exception of a few fragments of bone and a small quantity of viscid matter having the consistency and appearance of molasses, the body had completely disappeared. In consequence of this conclusive demonstration it is held as established that Luetgert could have got rid of his wife's remains in a similar way, although before the experiment was tried several experts had declared that the thing was impossible. It seems that the only link that was wanting in the chain of evidence against the sausage maker has now been supplied, and according to the district attorney there is every probability of his conviction for murder.

Enquirer.—The circulars are most objectionable, but we doubt if the General Medical Council would consider their dissemination to constitute "infamous conduct in a professional respect."

"A FURTHER IMPROVEMENT IN DISINFECTION BY STEAM."

To the Editors of THE LANCET.

SIRS,—We observe in THE LANCET of the 23rd inst., p. 1058, notes on "A Further Improvement in Disinfection by Steam." The alleged improvement appears to consist in creating a vacuum in the disinfecting chamber by means of a steam jet, and we beg to point out that this is the apparatus known in this country as Alliott and Paton's Patent. We enclose our circular, No. 228, generally illustrating and describing this machine, which has been in use in this country for some years past and is thoroughly well known; it has, in fact, been illustrated and advertised in your columns. We also enclose circular 250 "Instructions for Working," which is, you will see, so far as it goes, identical with that described by you, but the Alliott and Paton's patent machine is in many respects more complete and perfect than the American apparatus you describe. We also enclose circular 256, being a list of places where this Alliott and Paton's patent disinfector has been adopted, from which you will see that it is well known and widely used not only throughout the United Kingdom and Ireland, but in the colonies and foreign countries; and as there are several of these machines at work in Canada it is not unlikely that the American machine you speak of may have been simply copied from one of these. We shall feel obliged if you will, in your next issue, be good enough to correct the statement that the American apparatus described by you is "a further improvement in disinfection by steam," being already widely known and largely used in the Alliott and Paton's patent machines of our manufacture. We are, Sirs, yours truly,

p.pro. MANLOVE ALLIOTT AND CO., Limited.
Nottingham, Oct. 25th, 1897. THOS. CANTRELL, Secretary.

A PROSECUTION UNDER THE NOTIFICATION OF DISEASES ACT.

DR. THOMAS BUCHANAN DUNN was summoned on Wednesday by the sanitary authority of St. Matthew, Bethnal-green, under the Public Health Act, for not having notified to the medical officer of the parish two cases of scarlet fever under his care. No appearance was made for the defence, and a penalty of 20*s.* in each case, with 14*s.* costs was imposed.

Veritas.—The last Calendar is dated July 29th, 1897, and has been issued some weeks. The price is 1*s.*, and the publishers are Messrs. Taylor and Francis, Red Lion-court, Fleet-street, E.C.

VILLAGE NURSES.

A RURAL Nurses' Association for Bedfordshire was recently started at a meeting presided over by the Duchess of Bedford, and in reference to this undertaking Mr. Edwin Ransom, J.P., of Bedford, has written a judicious letter to the *Bedfordshire Standard* of Oct. 8th on the subject of the relations existing between medical practitioners and village nurses. He says: "A village nurse is apt to be asked and even expected to do things which common-sense and a moment's reflection should leave to a doctor. Accident and sudden illness have a claim for 'first aid' on a nurse or anyone else who can render it—until the legally responsible practitioner arrives. At the same time it is too common in some places, and not only among the poorest people, for the nurse to be called in the first instance and thus for her to be sending for the doctor when the doctor ought to be sending for the nurse.'

THE SALARY OF A MEDICAL OFFICER OF HEALTH.

The *Local Government Chronicle* writes:—

"The Local Government Board are not satisfied with the salary the Lowestoft Corporation are paying to their medical officer, Dr. O'Connor, and that gentleman is perfectly in agreement with the Board. The doctor states that his hours of attendance average between eight and nine a day. Out of the £100 a year he receives as medical officer he is this year expending £30 on bacteriological and chemical apparatus, and the £30 he receives as superintendent of the Infectious Diseases Hospital has not paid for the medicines he has supplied. Out of the £90 he gets as net salary he has to pay £63 in rent. The chairman of the corporation declined to make any recommendation on the subject, but the council decided to consider next month the advisableness of giving the doctor a gratuity."

We are not surprised to learn that both the department and the medical officer of health in question find the remuneration scanty.

G. S. P. will find the information which he requires in the last "Student's Number" of THE LANCET, which was published on Aug. 21st, 1897.

"SCARLET FEVER AND THE PRACTICE OF MIDWIFERY."

To the Editors of THE LANCET.

SIRS,—With reference to your note in THE LANCET of Oct. 23rd under the above heading will you allow me to state: I had not been engaged to attend Mrs. Munday in her confinement. Mr. Bilham not only "at first" but still thinks the case was not scarlet fever. Mr. Bilham had not seen me for two days previous to his attendance on Mrs. Munday, and all other confinements attended by him while acting for me did well. Directions as to isolation were given by the medical man who was attending me and were carried out to his satisfaction. No member of my household was infected. Mr. Bilham before leaving the surgery in the morning, and when attending a confinement, disinfected his hands by rinsing them in bichloride solution. It is most imperative when attending midwifery cases to avoid unnecessary contact with persons suffering from contagious complaints and to use efficient means of disinfection, but is it not impracticable for a medical man in general practice to cease attendance on or avoid contact with contagious cases? I am, Sirs, yours faithfully,

Oct. 27th, 1897. E. T. WHITEHEAD.

*** We pointed out in our note that it is not possible for the general practitioner to avoid contact with contagious diseases because he has midwifery cases on his list. He must trust to disinfection and scrupulous care, and that these are sufficient to obviate public risk is proved to the hilt by the rarity of the spread of disease *vid* the medical man. After reading Mr. Whitehead's letter most medical men will agree with us that it is unlikely that Mr. Bilham conveyed the infection to the patient.—ED. L.

"TOE POST" SHOES.

To the Editors of THE LANCET.

SIRS,—Would any of your correspondents inform me of the maker of "Toe Post" shoes for the cure of bunions?

I am, Sirs, yours faithfully,

Oct 12th, 1897. O. TRAFFORD OWEN, M.B. Edin.

*** The makers of "Toe Post" shoes are Messrs. Holden Bros. 223½, Regent-street, W.—ED. L.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received: *Midland Counties Express, Lincoln Gazette, Luton Reporter, Brighton Herald, Bournmouth Observer, Newark Advertiser, Grimsby Chronicle, Hereford Times, Southern Echo, Lowestoft Standard, Leicester Post, Times of India, Pioneer Mail, Batley Reporter, Burton Chronicle, Devon County Standard, Rugby Advertiser, Liverpool Daily Post, Kent Messenger, Builder, Architect, Staffordshire Chronicle, Bedford Times, Wilts Standard, Le Figaro, Birmingham Post, Dundee Advertiser, Yorkshire Post, Glasgow Herald, Manchester Guardian, Western Morning News, Newcastle Chronicle, Leeds Mercury, Scotsman, Mirfield Reporter, Yarmouth Independent, Catholic Times, Cromer Post, Northampton Herald, East Anglian Daily Times, Ampthill News, Bristol Mercury, Dunstable Advertiser, North Wilts Herald, Cheltenham Mercury, Derbyshire Advertiser, Newton Observer, Hampshire Chronicle, Brighton Gazette, Kidderminster Shuttle, Evesham Journal, Carlisle Journal, Sanitary Record, Mining Journal, Reading Mercury, Hertfordshire Mercury, Local Government Chronicle, Kerry Sentinel, City Press, Middlesex Hospital Journal, Weekly Free Press and Aberdeen Herald, Coventry Mercury, Australasian Medical Gazette, Essex Telegraph, Surrey Advertiser, Bolton Daily Chronicle, Local Government Journal, Kerry Weekly Reporter, Eastern Daily Press, Daily Gleaner (Kingston, Jamaica), West Middlesex Herald, Brighouse News, &c., &c.**

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Communications, Letters, &c., have been received from—

A.—Mr. F. Arnold, Bulawayo; Agricultural Guild, Lond., Secretary of; Dr. F. C. Abbott, Lond.; Mr. T. Annandale, Edinburgh; Messrs. Allen and Hanburys, Lond.: Messrs. J. and R. Archibald, Tillicoultry.

B.—Mr. A. S. Barling, Lancaster; Mr. J. T. Bash, Bristol: Messrs. J. Bale, Sons, and Danielsson, Lond.; Mr. A. E Barker, Lond.; *Bazaar, Exchange, and Mart.* Lond., Manager of; *Birmingham Daily Gazette*, Proprietors of; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs Burgoyne, Burbidges, and Co., Lond.; Mrs. S. A. Bennett, Liverpool; Messrs. A. and C. Black, Lond.; B. D., Lond.

C.—Dr. G. Cameron, Lond.; Chelsea Hospital for Women, Lond., Secretary of; Mr. G. L. Cheatle, Lond; Dr. L. Canney, Lond.; Dr. S. Conner, Devonport; Mr. W. F. Cholmeley, Wolverhampton; Messrs. J. & A. Churchill, Lond.; Cicero, Lond.; Cortland Wagon Co., Lond.; Mr. T. Cooke, Lond.; C. T., Lond.; Messrs. Cassell and Co., Lond.; Mr. E. M. Cheatle, Lond.; Confidence, Lond.

D.—Dr. J. W. Davis, Longton; Messrs. Down Bros., Lond.; Mr. L. De Renzi, Lond.; Durham County Hospital, Hon. Secretary of; Mr. E. Delacoste, Lond.

E.—Dr. W. B. Edwards, Monmouth; Eastman Photographic Materials Co., Lond.; Dr. W. McA. Eccles, Lond.; Mr. F. Elvy, Eastbourne; Mr. E. Eyton-Jones, Chester.

F.—Mr. A. G. R. Foulerton, Sutton; Messrs. Fairbairn and Sons, Edinburgh; Messrs. Fenn and Stephenson, Diss; Messrs. Fannin and Co., Dublin; Dr. F. D. Fisher, *Frodsham*; Falona Food Co., Lond.

G.—Dr. W. Gardner, Ottery St. Mary; Messrs. Glaisyer and Kemp, Brighton; Messrs. Gordon and Gotch, Lond.; General Agency, Lond., Secretary of; Sir W. R. Gowers, Lond.; Dr. W. Gordon, Exeter.

H.—Mr. J. J. Hicks, Lond.; Mr. W. Hay, Hull; Mr J. Hawkins, Lond.; Dr. E. Hobhouse, Brighton.

I.—Ings House Nurses' Coöperation, Lond., Matron of.

J.—W. Judd, Ltd., Lond.; J. W. A., Lond.

K.—Dr. N. Kerr, Lond; Mr. M. Khan, Lond.; Mr. B. Kühn, Lond.

L.—Messrs. Lee and Martin, Birmingham; Lux, Lond.

M.—Mr. F. H. Madden, Lond.; Messrs. Merryweather and Sons, Lond.; Messrs. Manlove Alliott, and Co., Nottingham; Dr. E. T. Milner, Manchester; Metropolitan Hospital Sunday Fund, Secretary of; Messrs. Z. P. Maruya and Co., Tokio, Japan; Messrs. J. Maythorn and Son, Biggleswade; Mr. W. B. Morton, Bristol: Miss M. J. Webb, Clifton, M.D., London; Dr. J. Maimer, Hosszu, Palyi, Hungary; Mr. G. Mander, Leamington Spa; Nurse Mary, Lond.; M.R.C.S., Dover; Maltine Manufacturing Co., Lond.

N.—Mr. H. W. *Nott*, Liverpool; North Staffordshire Infirmary, Stoke-on-Trent, Secretary of.

O.—Dr. J. Owen, Lond.; Miss D. Osborn, Taunton; Oxon, Lond.

P.—Mr. G. S. Powell, Lond.; Mr. C. Puzey, Liverpool; Mr. C. Pollard, Worcester: Dr. B. Pitts, Lond.; Messrs Parkins and Gotto, Lond.; Mr. M. G. Proudfoot, Lond.

R.—Dr. J. A. Rigby, Preston; Dr. J. J. Redfern, Croydon; Royal Hospital for Diseases of the Chest, Lond., Secretary of; Radcliffe Infirmary, Oxford, Secretary of: Messrs. Robertson and Scott, Edinburgh; Royal Surrey County Hospital, Guildford, Assistant Secretary of; Messrs. Rebbeck Bros., Bournemouth; Reichenhall Syndicate, Lond., Manager of: Messrs. Rowntree and Co., York; Messrs. Reynolds and Branson, Leeds.

S.—Mr. W. Skinner, Sheffield; Dr. W. Shackleton, Maidstone; Dr. Sheppard, Liverpool; Society of Apothecaries, Lond., Secretary of; *South American Journal* Lond., Editor of; Messrs. A. G. Spalding and Bros., Lond., Manager of; Messrs. Shelley and Co., Lond.; St. John's Hospital for Diseases of the Skin, Lond., Secretary of; Mr. T. Smith, Lond.: Surgeon, Grimsby; Southport Infirmary, Secretary of; Messrs. W. Stent and Sons, Guildford; Mr. C. J. Smiller, Buxton; Messrs. Street and Co., Lond.; Messrs. Street Bros., Lond.; The South African Union, Edinburgh, Secretary of.

T.—Dr. F. W. Thurman, Lond.; Dr. J. W. Taylor, Birmingham; T. S., Lond.; Messrs. Teff and Co., Bristol; Messrs. W. Thacker and Co., Lond.; Mr. S. Tebbutt, Leamington.

U.—University of Edinburgh, Medical Faculty, Dean of.

V.—Van den Berghs, Ltd., Lond.; Victoria Hospital for Sick Children, Chelsea, Secretary of.

W.—Dr. F. M. Willcox, Brechin; Dr. A. A. Warden, Lond.; Dr. J. S. Warrack, Burnley; Mr. R. S. Wells, Isle of Skye; Dr. T. J. Wood, Bradford; Mr. J. H. Webster, Churchdown; Mr. A. T. Wysard. H.M.S. *Wanderer*, Portland; Dr. A. E. Wright, Netley; Mr. T. Woodruff, Withington; Dr. J. T. Wilson, Lanark.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. S. B. Atkins, Axminster; Messrs. Arnold and Sons, Lond.; A. B., Lond.; Anglo Swiss Condensed Milk Co., Lond.: Ashwood House, Kingswinford, Proprietors of; Ajax, Lond.: Mr. C. B. Abbott, Cheltenham; A. B. C., Lond.; Ætas, Lond.; Assistant, Lond.; Alpha, Lond.; Alexander, Wallingford; Aston Hall, Sutton Coldfield, Secretary of.

B.—Dr. G. F. Blandford, Lond.; Bib, Lond.; Messrs. W. Byles and Sons, Bradford; Mr. B. Blatchley, Lond.; Messrs. Brown, Gould, and Co., Lond.; Dr. F. N. Boyd, Lond.; Mr. G. S. M. Baxter, Wincanton; Messrs. A. Bishop and Sons, Lond.; Biceps, Lond.: *Birmingham Daily Post*, Proprietors of: Messrs. Blake, Sandford, and Blake, Lond.; B. B., Rochdale; B. A. T., Lond.; Birmingham and Midland Hospital for Women, Treasurer of; Mr. H. T. Butlin, Lond.; Bota, Lond.; Barnwood House Hospital, Gloucester.

C.—Mr. D. J. Carroll, Ballynattin; County Asylum, Shrewsbury, Clerk of; County of Lanark, Lightburn Hospital, Treasurer of; Messrs. E. Cook and Co., Lond.: Cornwall County Asylum, Bodmin, Clerk of; C. A., Lond.; C. M., Rochdale; Dr. Clarke, Plumstead; Crystal, Lond.; Mr. J. J. Culmer, Nassau, Bahamas; Dr. R. Cox. Theale; Mr. D. Curme, Child Okeford; County Asylum, Whittingham, Treasurer of.

D.—Mr. R Davis, Lond.; Messrs. Dromgoole and Co., St. Helens; Messrs. Deighton, Bell, and Co., Cambridge; Surgeon-Lt.-Col. Dobie, Dunain Park; Dundee Royal Lunatic Asylum, Treasurer of; Delta, Lond.; Messrs. Duncan, Flockhart, and Co., Edinburgh.

E.—Epsilon, Clapham Common.

F.—Dr. F. A. Foy, Lond.; Mr. P. V. Fry, Farnworth; Flower House, Catford, Medical Superintendent of; Mr. H. Faulkner, Exeter; F.R.C.S., London.

G.—Dr. P. Gorrie, Dundee; Messrs. Giles, Schacht, and Co., Clifton; Mr. D. Gilbert, Lond.: Messrs. Gale and Co., Lond.; Gateshead Union, Clerk of; Messrs. H. S. Goulden and Co., Canterbury; Messrs. C. Griffin and Co., Lond.; Glasgow Royal Infirmary, Cashier of; Grove House Private Asylum, Ali Stretton, Proprietors of.

H.—Mr. J. Heywood, Manchester; Mr. J. T. Hislop, Hampathwaite; Dr. J. R. Holmes, Plumstead; Messrs. Hogg and Son, Lond.; Dr. A. W. Hawthorne, Carcoar, N. S. Wales; Mr. A. Hingston, Liskeard; Dr. J. Holmes, Whitefield; Hailey bury, Lond.; Messrs. Hall and Irvin, Lancaster; Dr. T. W. Hay, Newcastle-on-Tyne; Hamilton Association, Lond.; Mr. O. H. Huish, Lond.

L.—Dr. H. Irvine-Jones, Pontypridd.

J.—Mr. D. I Jones, Kenfig Hill; Jeyes' Sanitary Compounds Co., Lond., Secretary of.

K.—Dr. R. Knox, Lond.; Dr. V. R. Kirloaker, Jamkhandi, India; Kurhaus, Lond.

L.—Mr. S. C. Lawrence, Earls Barton; Lor, Lond; Locum Tenens, Leicester; Messrs. Lyde and Roper, Lond.: Mr. R. Lake, Lond.; L, Lond.; London Throat Hosp., Hon. Secretary of; L. P., Lond.

M.—Mr. H. Macpherson, Ascot; Mr. A. W. *Montgomery*, Cardiff; Mr. J. Murray-Smith, Lond.; Manchester Royal Infirmary, Secretary of; M.R.C.S., Exeter; Mr. J. R. MacKinlay, Great Horton; M. L. B, Lond.; Mr. A. Murray, Low Fell; Malta, Lond; Dr. A. Mackay, Crook; M. S., Lond.; Dr. Macrae, Alness; The Medical Officer, Stronsay; Magnus, Lond.

N.—Mr. R. G. Nesbitt, St. Just; Mrs. Newman, South Hayling; Mr. Newsholme, Sheffield.

O.—Owner, West Kensington.

P.—Mr. C. H. Powers, Gosforth; Mr. T. D. Pain, Sembridge; Messrs. Powneeby and Co., Lond.; Partner, Lond.; Mrs F. Piggott, Cambridge; Mr. W. C. C. Pakes, Lond.; Dr. R. Pollok, Johannesburg; P. Q, Lond.

R.—Mr. J. Richard, Lond.; Dr. R. R. Rentoul, Liverpool; Mr. W. Robertson, Littleborough; Dr. R. Richmond, Great Bardfield; R., Lond.; Mr. H. M. Riley, Leicester; Rusticus, Lond.; Rest, Ilfracombe; Messrs. W. A. Ross and Sons, Belfast.

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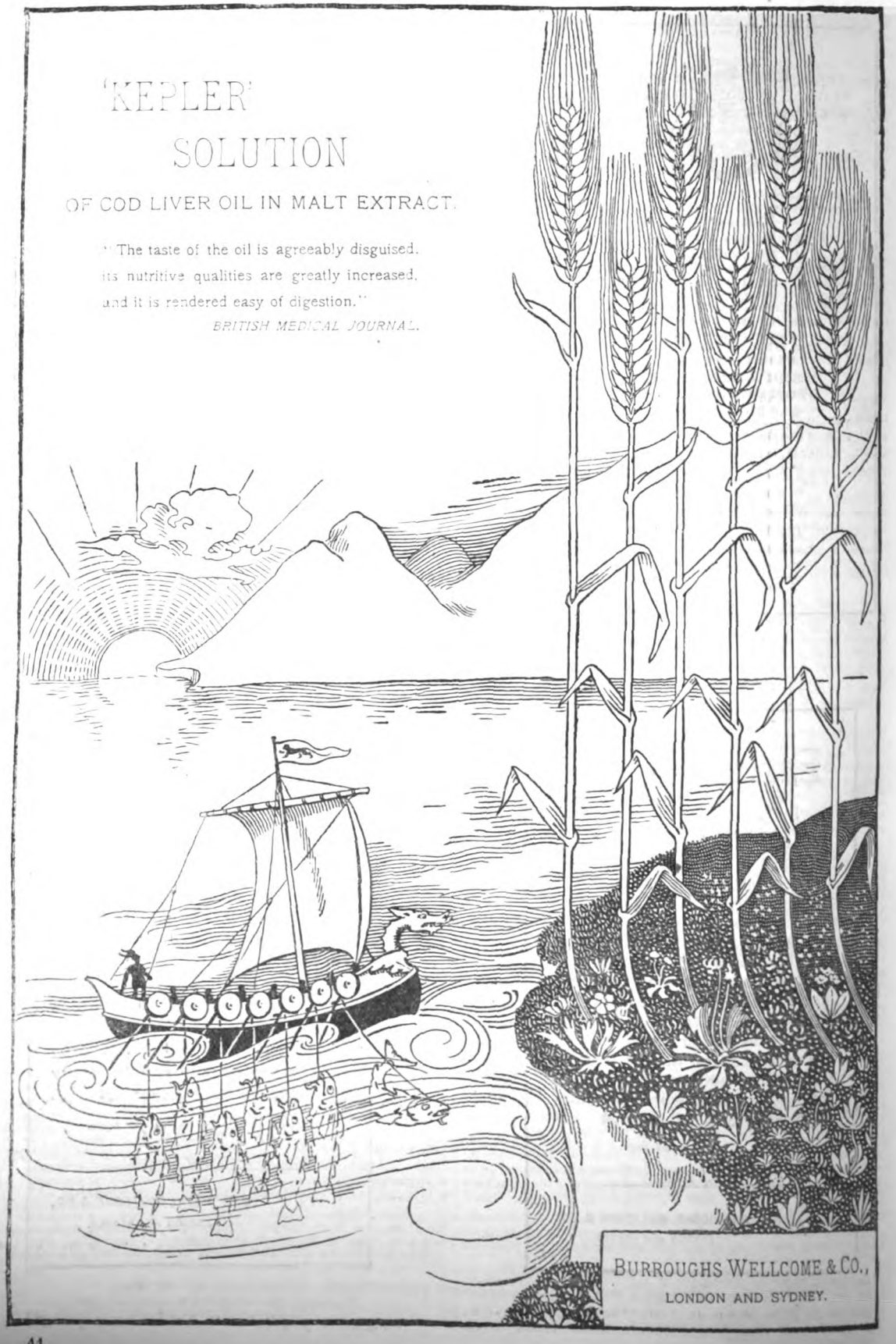
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The Bradshaw Lecture

ON

PROGNOSIS IN HEART DISEASE.

Delivered before the Royal College of Physicians of London on Nov. 4th, 1897,

BY E. MARKHAM SKERRITT, M.D., F.R.C.P. LOND.,

PROFESSOR OF MEDICINE IN UNIVERSITY COLLEGE, BRISTOL; SENIOR PHYSICIAN TO THE BRISTOL GENERAL HOSPITAL; FELLOW OF UNIVERSITY COLLEGE, LONDON.

MR. PRESIDENT AND GENTLEMEN,—It is probably the wont of those upon whom from time to time devolves the responsibility of delivering the lectures associated with this College to select for their discourse matters to which they have devoted special consideration, or which are to them invested with peculiar interest. Therefore when you, Sir, did me the altogether unexpected honour to invite me to deliver the Bradshaw Lecture for the present year it seemed to me that I could but discharge the important duty with which I was entrusted by treating of some subject which had been in the forefront of my observation and thought during my active professional life, and my choice fell upon a theme which has also engaged the attention of those who have spoken with an authority to which it is not for me to aspire—one, however, which in its importance is always fresh, and is constantly present to the practical physician, offering for his solution ever-varying problems.

The Father of Medicine has said, "The art of physic is of great extent, life short, opportunity slippery, experience fallacious, and judgment difficult." Still but too true of our art as a whole, this applies with equal force to one at least of its branches. Who is there that of his own experience cannot say of prognosis in disease that "opportunity is slippery, experience fallacious, and judgment difficult"? And assuredly a full share of difficulty and fallacy surrounds the subject which I have chosen for this lecture, for although in none of the ills which flesh is heir to is a knowledge of what the future has in store of greater moment than in heart disease, yet in few things is the possible margin of error so wide. It is not practicable within the time at my disposal to enter into a detailed consideration of the prognosis of heart disease in its various forms. Nor should I here venture to trespass upon ground which has before been occupied by those with whom I could not presume to compete. I propose rather to treat the subject from a general point of view and to discuss it in certain aspects and phases, having especial regard to the origin and nature of some of the uncertainties by which it is surrounded.

The following factors enter into prognosis in heart disease. First, an accurate estimate of the nature and extent of the changes which have occurred in a given case—that is to say, a complete diagnosis. Next, a knowledge of its past history with special reference to the causation of the cardiac trouble and the length of time that it has existed. Thirdly, an acquaintance with the course that may be run by a lesion such as is present. And lastly, a due weighing of the special features of the case in question.

There is no need to argue at length the dependence of prognosis upon diagnosis. If diagnosis is imperfect or faulty or totally wrong prognosis will be correspondingly erroneous. The foundation of prognosis is an accurate appreciation of the changes produced by disease and of the pathological nature of the processes concerned—a knowledge, that is to say, not only of what alterations have occurred in shape or size or structure or function of an organ or part, but of how they have been caused, and what is the ultimate history of the morbid agencies to which they are due. Where the heart is concerned error in prognosis may arise in connexion with either of these two factors; on the one hand, through mistake as to the actual physical condition of the organ; on the other hand, owing to failure to realise what will be the resultant of the various forces which are rightly recognised as at work. And difficulty in these two directions tends rather to lie towards the extremes of age. In early life the discovery of the lesion is usually easy, but there are wide possibilities as to its future course, while with advancing years comes the time of degeneration, which in its gravest forms often cannot with certainty be recognised. For youth is the period of acute inflammations—of pericarditis and endocarditis—which are commonly discovered with ease by the skilled observer; but no wisdom will avail to surely foretell the future whilst acute endocarditis is running its course. Whether when the inflammation subsides the roughened valve will be smoothed and that unusual event occur, the disappearance of the murmur of acute endocarditis; or the morbid sound persist, but based on so little actual valve change as to remain a murmur and nothing more; or whether the lesion is destined to work havoc with the heart and bring life to a speedy close,—all this is beyond the reach of human foresight. Diagnosis is simple, definite prognosis impossible. Towards the other end of life the opposite tends to obtain. Degeneration has no distinctive physical signs; and it often cannot be said with certainty whether the halting action of the organ is due to change which is organic and will remain or comes from simple and remediable weakness. Upon the view that is taken of the nature of the affection depends the prognosis that is given; on the one hand, a grave forecast of increasingly impending evil; on the other hand, it may be, the prospect of restored powers and lengthened years. But perchance the promise of peace and length of days is made to the man whose heart is changing into fat, while the sword is hung over one whose only need is nourishment and rest.

It is important to recognise what is the position of physical signs in heart disease—how far they can be relied upon as evidence of the nature and extent of existing morbid changes and of their tendencies. Speaking of valvular disease Markham[1] says: "A too curious investigation of physical signs is apt here, as in the case of all other diseases where physical diagnosis is concerned, to make the observer less attentive to the general signs and symptoms than their real importance demands." And Wardrop[2] expresses his views in still stronger terms: "How many examples of erroneous prognosis do we not all meet with? And I am convinced that nothing has contributed more to extend this humiliating catalogue than the introduction of auscultation." It is needless to say that the stethoscope does not merit such sweeping condemnation. And yet it cannot be denied that many of the errors made in the prognosis of heart disease—and especially of valvular lesions—arise from too narrow a reliance upon its indications. The stethoscope will discover the "physical sign proper," the murmurs, and therefore decide to which of the various classes of valvular defect any case belongs, and by placing it in this category or in that determine what are the usual tendencies of the affection. But here its function ends; beyond this it does no indicate what is in store for the particular patient. It is well known that the quality of a murmur is no guide to the amount of valvular mischief which exists. For while the loudest murmur may remain for many years with quite unimportant results the effects of a valvular lesion may sometimes be too grave for the production of a murmur at all. But we cannot adopt Latham's dictum,[3] that "as a very general fact the louder the endocardial murmur the less is the amount of valvular impediment." There is in truth no rule in either direction, but each case stands by itself.

A true estimate of the gravity of a lesion can only be gained by a general survey of the case in the broadest possible light; to determine, first, what has been its effect upon the heart itself, and then how far its influence has extended beyond this organ. If it is found that a murmur is present—no matter at which orifice—and that there is no change in that part of the heart upon which the strain first comes, and if it is also known that this murmur has existed long enough for the effects of increased work to be manifested, then it follows that the lesion is trivial and stationary and may remain so for an indefinite time. On the other hand, if hypertrophy or dilatation, or both, exist, their degree is a test of the actual interference with the heart in its work. Due weight is also given to the character of the pulse and to symptoms such as

[1] Diseases of the Heart, second edition, p. 106.
[2] Diseases of the Heart, p. 283.
[3] Diseases of the Heart (New Sydenham Society), p. 275.

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dyspnœa or palpitation or syncope, and to any evidence of interference with the pulmonary or the systemic circulation or of the presence of associated disease. It is, however, necessary not only thus to check the special physical signs of valvular disease, but also sometimes to estimate the value of symptoms by physical signs. When this happens it is usually in young patients who are far removed from the class to which I shall next refer. A short time since I had under observation a young man who suffered from most alarming cardiac symptoms, of which a very grave view had been taken, frequent attacks of palpitation and dyspnœa with tendency to syncope being associated with a mitral systolic murmur and a moderate amount of dilated hypertrophy. Betweenwhiles, however, the heart was capable of steady and efficient contraction. It appeared to me that the phenomena were serious, out of proportion to the actual degree to which the organ was affected, and that the outlook was therefore favourable as to both the danger of the paroxysms and the prospect of ultimate improvement, and I am informed that time has shown the truth of this conclusion.

I have referred to conditions in which the physical signs may attract more attention than is their due. There is an opposite group, especially associated with advancing years, where they are apt to be by no means proportionate to the gravity of the actual state. In this case an intelligent consideration of the symptoms is essential, since they are of greater importance than the physical signs. For instance, a man beyond middle life, whose general nutrition is failing, suffers from shortness of breath and a tendency to palpitation. The heart's action is found to be somewhat feeble, and that is all. And yet fatty degeneration exists, from which the patient may at any moment die.

The importance of history, the second factor in prognosis, is never underrated by the practical physician. By it are determined the origin of any morbid state, the length of time that it has existed, and its tendency to development in one direction or in another, and an accurate appreciation of the information which it conveys is of the greatest value. Where valvular defect is due to acute endocarditis it is important to know whether there is a liability to a fresh onset of the malady in which it originated. For instance, when endocarditis arises during the course of an acute specific disease such as scarlet fever, which usually makes one attack only, the prospect is better than in the case of acute rheumatism, where recurrence is common, and often lights up fresh endocardial inflammation. Or the history shows that a murmur may be due, not to endocarditis, but to weakness of heart following acute illness or originating in anæmia, in which event there is a reasonable prospect of cure. Or the course is perhaps preventable or more or less removable, as when avoidable muscular strain produces cardiac dilatation. Or it is a diathetic condition, such as gout, which can be kept in check, but not eradicated. Or the affection may originate in a persistent and irremediable condition, as when dilated hypertrophy results from chronic Bright's disease or from the arterial degeneration of age. In every case a recognition of the cause of a cardiac lesion, and therefore of the degree to which it may be influenced or removed, enters into a rational prognosis.

It is difficult to over-estimate the value of a knowledge of the length of time that a heart lesion has existed. I will illustrate this point in the case of acute endocarditis. It has been pointed out that it is impossible to determine during an attack of this inflammation what will be its ultimate outcome. Walsh[4] says: "Viewing all forms of valvular impediment as a single group, it is not possible to make any statement of the least utility on the question of duration. Nay, even if any individual disease of the whole number be selected the extremes of brief and of protracted course are found to lie so widely apart that it becomes practically useless to strike a mean. ..... We must be content to register the unexplained truth that all forms of valvular disease may, on the one hand, prove the main instruments in rapidly killing, or, on the other, remain for a well-nigh indefinite period subjectively latent." And with this Latham's testimony accords[5]: "Such cases as have fallen in my way have taught me that the period to which life may be continued is very various. It may be a few months only, or a few years, or it may be for many years, even ten or twenty or thirty. Of these facts I am certain, but I cannot array them numerically and statistically; and because I cannot I can determine no relative proportion between those who survive months and those who survive years, or those who survive few years and those who survive many, yet the facts are sure." Walsh is unable to account for so wide a divergence, but Latham's explanation is as follows[6]: "When the heart is left in a state of unsoundness from past inflammation two principal consequences are to be expected—either there may be a renewal of inflammation in the unrepaired structure, or this remaining as it was left may become the element of further material changes in the whole organ. ..... The latter consist in alterations of bulk and size and shape and capacity, no other causes being engaged in bringing them about than those which are constantly at work in the healthy heart—namely, its own vital movements; only they are now at work with more or less energy than is either natural or healthy or they are at work without their natural and healthy harmony."

Considered from the point of view of pathological anatomy the result in acute endocarditis may be as follows. First, resolution, with removal of the products of inflammation and consequent disappearance of all abnormal physical signs. I believe this to be one mode of termination although this view is not universally held. Walsh[7] says: "An indubitable endocardial murmur, holding on from the beginning to the end of the acute disease, never, so far as I have known, totally disappears in after life." It will be allowed that murmurs are sometimes met with having all the characters of those due to endocarditis, and that they may disappear with convalescence from the fever or comparatively soon afterwards. I have myself met with what I have believed to be instances of this complete recovery. It has been urged that because the murmur does not persist therefore it cannot be due to inflammation. This important point is well argued by Byrom Bramwell,[8] who arrives at the conclusion in which I have expressed my own belief. Latham,[9] indeed, asserts that out of a series of 63 cases of rheumatic endocarditis "perfect reparation occurred in 17; for in these the murmur ceased entirely." And Gibson[10] records the recoveries from mitral endocarditis as 25 out of 51. This is so large a proportion that the doubt arises whether in some the murmur was not due to a cause other than inflammation of the endocardium. Resolution then being recognised as one mode of termination of acute endocarditis, undoubtedly a more usual result is the subsidence of inflammation but the persistence of its products. The young connective tissue growth in the affected portion of the endocardium goes through the same changes which occur in similar tissue elsewhere; it matures into fibrous tissue, which as it develops tends to contract, and therefore the valve-segments become more or less thickened, and perhaps distorted to such a degree that their function is permanently interfered with.

Pathologically, therefore, the result in all hearts thus affected is the same—the persistence of the matured products of inflammation. But the practical difference between one heart and another is great. In the one, perhaps, "a little ridge on the surface of a valve, a little granulation on its free edge, a little thickening or shortening of a tendinous cord"—possibly so slight a change that, though permanently marked by inflamation, the valve is practically perfect and no murmur exists, anyhow too trivial to give rise to definite interference with the function of the organ. In the other the self-same morbid process results in some valvular deformity, forming an obstacle before which the heart speedily fails. Pathologically identical, the outcome of the same affection, clinically the position of these two hearts is widely different. "The renewal of inflammation in the unrepaired structure" may occur in one of two ways—either by repeated attacks of acute inflammation similar to the first or by the passage of endocarditis from the acute form into the chronic. Latham[11] says: "When acute rheumatism has been once suffered in early life there is a fearful likelihood that it will be oftentimes suffered again. Moreover, the first attack is generally the type of every attack which is to follow; they will all take the same course and involve the same structures. If the first involve the heart, so probably will they all."

[4] Diseases of the Heart, fourth edition, p. 292.
[5] Loc. cit., p. 2411.
[6] Loc. cit., p. 296.
[7] Loc. cit., p. 292.
[8] Diseases of the Heart and Thoracic Aorta, p. 373.
[9] Loc. cit., p. 35.
[10] Reynolds's System of Medicine, vol. iv., p. 662.
[11] Loc. cit., p. 262.

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No one will dispute the liability of acute rheumatism to recur. Yet in my own limited experience it is not very exceptional for this fever to attack a patient in early life and not again, although many years may have elapsed. For instance, the other day I saw a man, aged twenty-seven years, who had suffered from rheumatic fever once only at the age of three years; a loud aortic systolic murmur existed, but without symptoms. And exception may also be taken to Latham's second point—that the first attack involving the heart all the later will probably do so too. For I do not think that it is rare for acute rheumatism to recur without the renewal of endocarditis. This is a point upon which it is not easy to speak dogmatically owing to the difficulty in determining that the heart does remain free from fresh inflammation. But it is fair to infer that this is so when the disturbance of the organ is not out of proportion to the general symptoms of fever, and no changes can be recognised in the cardiac area either during the acute stage or afterwards.

Opinions differ as to the frequency with which acute endocarditis passes into chronic inflammation. Latham [12] says on this point: "This I believe to be a fact which, if not true in every instance, is true in the majority—namely, that after inflammation of the endocardium has ceased, whatever remnant of unsoundness is left it continues ever after without increase in its own kind. After the lapse of years the very appearance of all we find seems to testify that it has long been stationary ..... and when the results of clinical observation are compared with those of morbid anatomy they will be found to testify the same thing." This important question is not adequately discussed by pathologists. You, Sir, point out the reason for this when you say:[13] "Specimens of endocarditis in this early stage are frequent enough. But it is not easy to say what occurs next in the process because we do not have many opportunities of seeing the intermediate conditions between this which is found in cases of death from the acute disease which causes the endocarditis and that advanced state of change in the valves which long afterwards proves fatal by disabling them. It appears to us that in the interval between acute endocarditis of rheumatic fever and the death long after from valvular disease of the heart many frequent repetitions of the inflammation must occur. Sometimes we find inflammatory products of two distinct dates on the valves, some recent, some older. But more usually a chronic state of inflammatory irritation persists, slowly changing the valve." Judging by clinical evidence my own experience points to the view that both these things happen. While in many instances there is only too good reason to conclude that the mischief is progressive, yet in some acute endocarditis comes to a definite end and no further change takes place in the tissue which has been the seat of inflammation. I have met with many cases in which no perceptible alteration either in the character of the murmur or in the general state of the heart could be detected at successive examinations, in some instances extending over a considerable number of years. It is reasonable to conclude that if the condition of the organ is thus stationary from the clinical point of view it only remains structurally unaltered. On the other hand, instances are only too common in which it is plain that the valvular lesion is progressive, and where the obvious inference is that chronic endocarditis has carried on the work begun by the acute inflammation.

It has thus been seen that the results of acute endocarditis, both pathologically and clinically, may vary within the widest extremes, and that no data exist by which it can be foretold during an acute attack what will be the ultimate position of any given case. How, then, will this most important question be answered? The problem will be solved by time alone. Let me remind you of the statement which I have already made, that a knowledge of the length of time that a heart lesion has existed is of the greatest value in prognosis. Endocarditis must be estimated by the results which it produces—the damage which has been done to the heart in a given time is a test of what will happen in the future; and prognosis becomes a problem in proportion. What, then, are the indications that a condition is on the one hand grave in its tendencies and on the other unimportant? The only test is the degree to which the heart has become secondarily affected, the evidence showing that it is hampered in its work. The presence of hypertrophy, the existence of dilatation, and their amount, signs of defect in the conduct of the circulation in the lungs or in the systemic circuit,—these it has before been said are what have to be sought. Let it now be supposed that the patient comes under observation some considerable time after an attack of acute endocarditis—it may be twelve months or two years or longer—and that a murmur is present. Prognosis becomes, as has been said, a problem in proportion. If the heart is in a certain state at the end of a certain time, what will be its condition in six months or twelve months or in five or ten or twenty years? And the longer the interval that has elapsed since the acute inflammation the more certainly can this question be answered. If in the same period one patient has arrived at the stage of dropsical effusion, while another has a much enlarged heart which can still, however, overcome the obstacle to its work; and another is unconscious of disease, and there is but slight increase in cardiac size and strength; and in yet another, no change whatever has occurred, the inference is plain that as it has been in the past, so will it probably be in the future—disease that has advanced will continue to increase—that which has been quiescent will remain so still. And through the whole series the foundation of prognosis is time—time and the changes which it has wrought.

I will conclude the consideration of the position of history by reference to a case which well illustrates its importance. Nearly eight years ago I saw in consultation a patient who had been informed that he was suffering from aortic aneurysm. The existence of disease had been discovered by accident and had not before been suspected, the patient feeling in his usual health. I found a most intelligent man, fully able to grasp the bearings of all that was said respecting his condition. The heart was enormously enlarged and hypertrophied; the impulse was so forcible as to shake the chest-wall and could be plainly felt through the clothes. Although I was of opinion that the physical signs, into which I need not enter, did not justify the diagnosis of aneurysm, yet they were not such as altogether to negative its existence. But I was much struck with the point already mentioned—that the trouble had been discovered by accident and not from symptoms complained of by the patient, who was exceptionally intelligent and observant and had led an active life. It appeared to me that a lesion accompanied by cardiac action differing so markedly from the normal, if of recent origin, could not arise without attracting the attention of the patient; and on careful inquiry it came out that the strong beating of his heart had been noted in his early adult life; and, further, that when he was a little child his father once came into the nursery when the boy was undressed and observed something which led him to bring the family medical adviser, who examined the chest. I therefore concluded that the patient had grown up with the lesion that existed, so that to him it gave no abnormal sign. It followed that aneurysm, which would be a recent development, did not exist. The prognosis attaching to the latter being thus set aside the question arose as to what the future had in store. On the principle which has been already discussed it was argued that if compensation was so complete that the heart, although thus enormously enlarged, had been able through all these years to do its work in such a way that an active man had no suspicion that it was otherwise than normal, there was no reason why it should not long remain equally efficient. As a matter of interest, and as showing how inconclusive were the physical signs, I may add that as opinions so divergent were given upon a subject of such importance the patient was examined in London by two eminent authorities, one of whom came to the conclusion that aneurysm existed, while the other agreed with my view of the case. The patient, after hearing either diagnosis fully argued by its supporter, made up his mind that the balance of evidence was against the existence of aneurysm, and laid his plan of life accordingly. This was nearly eight years ago. I have examined him at intervals since and have been unable to detect any signs of advancing disease; he is not conscious of any trouble; he leads a busy and fairly active life and looks the picture of health. I have gone thus fully into this case because it is a forcible illustration of the value of a knowledge of the past as a guide to the present and the future. A most important decision turned upon the history, and the result has proved that reliance was rightly placed upon its indications.

An acquaintance with the course which is usually run by a given form of heart disease is one of the factors which have

[12] Loc. cit., p. 274.
[13] Wilks and Moxon: Pathological Anatomy, third edition, p. 134.

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been enumerated as entering into prognosis. From what has already been said it will be plain that this knowledge often cannot be applied with sufficient accuracy to be of much value. It has been seen that in acute endocarditis it is practically useless for determining what will arise in a particular instance. Nor, viewing all forms of chronic valvular impediment, in whatever way originated, is it possible to make a statement with regard to any one of them that will necessarily hold good of a given case. A lesion that in one instance may end fatally within a few months may in another be consistent with long life and practically good health. It is, however, recognised that each form of valvular disease has certain general tendencies and that some of these are more serious than others. The relative gravity of valvular derangements is variously estimated by different authorities. Walsh[14] places them in the following descending series: tricuspid regurgitation, mitral regurgitation, aortic regurgitation, pulmonary constriction, and aortic constriction, tricuspid constriction and pulmonary regurgitation being too little known to be placed in position in the list. The worst results follow those lesions which directly obstruct the circulation behind them. Hence tricuspid regurgitation has the first place, hindering as it does the return of blood from the whole of the organs and tissues of the general circulation, the heart itself included. Similarly mitral disease, the two forms of which come next in the series, causes obstruction to the passage of blood from the lungs, and consequently tends to produce the whole series of pulmonary complications which are due to this back-pressure. On the other hand, lesions of the arterial orifices—the aortic and the pulmonary—so long as they exist alone, do not affect the circulations behind them, protected as they are by the auriculo-ventricular valves; and the result turns therefore solely on what effect is produced upon the ventricle itself and how far there is interference with the supply of blood to the artery. Apart from the liability to sudden death aortic regurgitation is much more serious than obstruction at the same orifice because of the tendency to over-distension of the ventricle during diastole. Of all valvular lesions aortic obstruction is the most favourable, the left ventricle frequently undergoing hypertrophy sufficient to overcome the obstacle at the orifice of the aorta. Pulmonary constriction has probably no more serious tendencies than aortic obstruction. It is well known that the sufferer from certain forms of valvular disease is placed in a better position, especially as regards the prolongation of life, by having one or more other forms of affection of the orifices added to that which already exists. For instance, there is less liability to sudden death in aortic regurgitation if it is associated with mitral incompetence. Probably the regurgitation through the mitral orifice during the systole of the ventricle lessens the amount of blood driven into the aorta, and therefore the quantity and force of that which distends the ventricle during the succeeding diastole. Another familiar illustration is afforded by the effect of tricuspid regurgitation in relieving the pressure on the pulmonary circulation caused by mitral disease. It has doubtless fallen to the lot of most to meet with cases in which urgent lung symptoms have been caused by the position of the pulmonary circulation between the obstruction to the onward flow due to affection of the mitral orifice on the one side and the increased *vis a tergo* of the hypertrophied right ventricle on the other. When at last the tricuspid valve gives way part of the force of the hypertrophied ventricle is now expended in returning blood into the auricle, and thus the tension in the pulmonary circuit is lessened and the urgent lung symptoms are relieved, though at great cost as regards the systemic circulation.

I have before pointed out that the prognosis of chronic valvular disease resulting from a non-recurrent specific fever is more favourable than that originating in acute rheumatism, inasmuch as further attacks of the latter may occur, bringing with them fresh risk to the heart But the prospect is better when the valvular change is due to the endocarditis of rheumatic fever than if it results from inflammation that is chronic from the first. For while the former may remain quiescent unless the valve is attacked afresh during a recurrence of the fever the latter is commonly due to some persistent cause leading to progressive inflammation with its increasing valvular deformity. An exemption may be made in the case of endocardial mischief arising in old people. In my experience it is here of little practical moment, slow in progress, and causing but slight disturbance in the function of the affected valve and altogether of secondary importance to the degenerative changes in the vascular system generally, of which it is a part.

Time fails me to dwell upon the cause of chronic degenerative changes occurring in the heart wall. When fatty degeneration—the most important of these—is once established it tends to increase owing to the persistence of its cause. Similarly no prolonged consideration can be devoted to the prognosis of hypertrophy and dilatation. Their fate is bound up with that of their cause As this is usually persistent and often progressive the secondary cardiac enlargement is correspondingly permanent and tends to increase. The greater the hypertrophy in proportion to dilatation the better will the extra work be done and the difficulty be overcome. But only while the nutrition of the heart remains good. If the time comes that degeneration begins in the hypertrophied wall, the balance between work and power is disturbed never to be restored. This is so commonly illustrated in the late history of chronic Bright's disease. When renal inflammation becomes established in a patient whose nutrition is good the increased vascular tension is met by hypertrophy of the left ventricle, and the balance is thus so well maintained that the heart carries on with ease the greater work. But let the patient pass on to the time when the nutrition of the hypertrophied wall tends to fail; the strength of the heart is diminished while the calls upon it remain, and the symptoms of cardiac distress arise.

The liability to sudden death is an important aspect of prognosis. In the minds of the laity heart disease of every kind carries with it this awe-inspiring risk; and to inform a patient that his heart is not sound is to condemn him to a life of miserable uncertainty. The physician, however, knows that this danger attaches chiefly to certain forms of cardiac affection; it is therefore his duty to relieve the patient of the dread of this accident in any case when it is not likely to happen. Sudden death may occur in certain forms of chronic valvular disease, in dilatation, where degenerative changes exist, and from rupture of the heart or an aneurysm of this organ. It is well known that the lesion which carries with it by far the greatest risk of sudden death is aortic regurgitation. It is said by some authorities that this accident is liable to happen even when there is comparatively little regurgitation. Walsh[15] quotes a case in which there were absolutely no symptoms of disease, and there was neither hypertrophy nor dilatation of the ventricle, and yet the patient dropped down dead. He mentions, however, that the superficial pulses were markedly visible. In my own limited experience I have not seen the tendency to fatal syncope unless the regurgitation is considerable and the ventricle is correspondingly enlarged. It will be noted that in Walsh's case, while the ventricle is said to have been normal in size and force, the superficial pulses were markedly visible. I have never met with the characteristic pulse of aortic regurgitation when dilatation of the ventricle was not present, and on theoretical grounds it is not plain how a pulse indicating considerable regurgitation can exist while dilatation is absent, since the ventricle has to contain an increased amount of blood. Short of the existence of distinct secondary dilatation I should regard a patient with aortic regurgitation as safe from fatal syncope. On the other hand, it must be borne in mind that many in whom aortic regurgitation and its accompanying changes are extreme die, not suddenly, but by gradual increase of trouble. And, further, that there is less tendency to this mode of death when mitral regurgitation is added to aortic. One other valvular lesion sometimes ends abruptly, that is, mitral regurgitation. This does not often happen and is not to be feared unless compensation has failed. But that it may occur is impressed on my mind by the memory of an occasion when I discussed with a medical brother and the friends of the patient the course of life that should be followed, and death from syncope ensued within a short time of our leaving the house. The remaining varieties of valvular disease may be regarded as practically free from this risk. The same cannot, however, be said of dilatation, where the weak thinned wall sometimes unexpectedly ceases work.

It is, however, the degenerations which supply the majority of the instances of sudden death. Angina pectoris is notably a malady which tends to terminate in the way under consideration; and in fatal cases some change in

[14] Loc. cit., 392.

[15] Loc. cit., p. 394.

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nutrition is practically always found — usually fatty degeneration of the muscular substance, and especially affection of the coronary arteries interfering with the nutrition of the heart wall. Fatty infiltration, if excessive, may end in sudden syncope; this is much more likely to happen in the weak heart of true fatty metamorphosis. But of all conditions the danger is most imminent when a degenerate heart has to face increased arterial tension. Here the type of cardiac action indicates the peril that threatens. The pulse is quickened; it may be irregular and intermittent or fairly regular, and is often of good value, but its notable feature is high tension. The short and toneless first sound of the heart is hurriedly followed by a ringing aortic sound. This kind of action marks a ventricle that can barely hold its own until the strain is taken off by the closure of the aortic valves, and it is plain that the patient lives on the brink of a precipice over which a trifling extra demand upon the heart may at any time determine his fall.

The last division of prognosis, which takes into consideration the special features of a given case, includes many factors, such as social status, sex, temperament, and general habits, and the condition of other organs; but their influence cannot be discussed in detail. Excepting the state of other viscera, perhaps the most important of these is position in life. If the sufferer from cardiac trouble can be placed in an environment as nearly ideal as is attainable by the lavish expenditure of care and money his prospects differ much from those of another who has to work for his bread in the station in life which he may chance to occupy when the malady overtakes him. This is exemplified in the case of acute endocarditis. I hold strongly that it is of the greatest importance to keep the heart as far as possible at rest for some considerable time after an attack of acute endocardial inflammation. Rest is the first essential to the cure of inflammation and the removal of its products. This is so obvious in the case, for instance, of a joint that it is always recognised, and the surgeon never grudges the time, however long, spent in the endeavour to secure a healthy limb. And it behoves the physician to keep just as clearly in view the state of the recently inflamed valve. When the social position of a child suffering from recent endocarditis will allow it is my practice to enjoin the retention of the recumbent position for from three to six months. After this, if the murmur persists, the gentlest exercise is gradually allowed; but for several years all violent exertion is forbidden. At the same time great attention is paid to the general health. The intelligent coöperation of the friends, and as far as possible of the little patient, is needed to the success of this method. But where it has been practicable I have seen reason to be well satisfied with the result. In the case of older patients the treatment is approximated to the above as closely as circumstances will allow. The prognosis of acute endocarditis much depends upon this one question, whether or no the heart can for some time be saved all but the "irreducible minimum" of work. Any trouble and pains are well expended that will lessen the prospect of valvular disease in after life.

Contrast with this the case of the hospital patient. The child or the young adult is treated for acute rheumatism accompanied by endocarditis, and the fever is quickly subdued. But the affected valve has not recovered its normal condition, even if active inflammation has subsided; it still remains a thickened and softened structure, ill fitted to withstand the pressure of the blood-stream. The whole future life may turn upon what the next few months will bring to this valve. And yet the exigencies of hospital work are such that the patient must be discharged when convalescent from the fever to take his chance with a still damaged valve. He receives excellent advice when he leaves; the boy must not do as boys are wont to do; the older patient is warned against those things which are placed in his way by his lot in life; the wise counsel is not followed, and the still softened valve gives way before the blood-current, or acute endocarditis becomes chronic inflammation, with its progressive increase of mischief. In heart disease there is more truth than is commonly the case in the saying that there is one law for the rich and another for the poor.

In conclusion, I am constrained to put forward a plea for mercy in the prognosis of heart disease. No one is exempt from the human attribute of liability to err. In the case of the physician this imperfection may be viewed in two aspects—as it affects his own reputation and in its influence upon the subject of his error. It is with the latter that I am now concerned. The philosopher Bacon might well have had in view the prognosis of heart disease when he counselled "not to engage a man's self peremptorily in anything, though it seem not liable to accident, but ever to have a window to fly out at or a way to retire." All must be familiar with instances of the occurrence of the unexpected. I remember a man, fifty-nine years of age, who was the subject of most pronounced valvular disease. When twenty years old he was warned that his life was in danger and at the age of forty years was condemned to die within the year. The other day I saw a young man who had a mere suspicion of aortic obstruction; ten years before it was said that he might die at any moment. Some twelve years ago I examined a child with marked mitral stenosis and dilated hypertrophy—such a condition as might well have led to an early catastrophe; she has grown into a well-developed young woman, who would not be suspected of the lesion she carries. A lady, aged eighty-four years, has suffered for nearly twenty years—sometimes in a most alarming form—from all the symptoms of cardiac weakness commonly associated with fatty degeneration, and she still lives.

The wider experience becomes the more does certainty give place to probability, and it is wise to give due weight even to possibilities. And especially should this be the case in dealing with disease of the heart, which carries with it to the sufferer the thought of constantly impending evil. It has been my lot from time to time to meet with those who have been told, as has been proved without sufficient reason, that some grave cardiac lesion existed. To restore hope to life, to give the patient to the full the benefit of such doubt as may attach to the nature of his condition and the uncertainty that too often attends the prediction of his future, surely this is not only justifiable but also right, and the lightening of the depressing influence of fear and dread will in itself tend to avert the danger that may threaten.

For the imperfect and inconsequent manner in which this lecture has been placed before you I crave your indulgence. I have touched only the borders of a subject whose importance deserves far abler treatment than it is mine to bestow.

Inaugural Address

ON

SOIL AND CIRCUMSTANCE IN THEIR CONTROL OF PATHOGENIC ORGANISMS.

Delivered before the Midland Medical Society on Oct. 21st, 1897,

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MR. PRESIDENT AND GENTLEMEN,—It has long been matter of observation amongst those who are accustomed to the investigation of causes of disease that certain infectious diseases tend to recur periodically, after intervals more or less long, in the same localities—whether these be houses, villages, or towns — under circumstances that can hardly be explained except on the assumption that the specific infections with which these diseases are associated have in such localities contrived to retain their vitality during the intervals and to maintain themselves outside the human body. These occurrences stand in striking contrast with other prevalences of the same diseases, often of equal virulence and extent, but which exhibit no tendency to recur; and the question naturally arises how such difference in the behaviour of disease can be explained.

Similarly, there are individuals who, on a single exposure to an infection, do not fail at once to contract the disease in question; whilst in contrast with these persons we know of individuals who are subjected to maintained risk and exposure of precisely the same sort, and who seem from the very first to possess a natural immunity against some

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particular infection. To explain this by saying that in the one case there was a predisposition to the disease and that in the other case the predisposition was lacking is but to re-state the fact and to leave the problem unsolved. Hence here again some explanation of the observed difference has to be sought. Since we have come to learn that the specific infectious diseases are caused by the reception into the system of definite micro-organisms, each of which has its own life-history and physiological properties, and a number of which give evidence that their power of reproduction, their capacity for retaining certain definite characteristics, and even their ability to maintain their existence are dependent on their surroundings, it has become important to ascertain how far this question of surrounding serves to explain differences of behaviour in disease such as those to which I have referred.

The specific organisms of disease must be looked upon as subject to much the same laws as those to which the lower forms of plant life are subject. If they are under the influence of surroundings which supply all their wants they may be expected to flourish and to multiply; if some condition important to their well-being is lacking they may be expected to suffer diminution or even loss of some notable property, and to be modified accordingly; and if their surroundings are inimical in a higher sense of the term they may be unable even to maintain their vitality. The question of environment thus comes to be one of primary importance, and in referring to the influence of soil and circumstance in their control of pathogenic organisms I desire to include consideration of all the surroundings to which such organisms may come to be exposed, and to consider how diversity of soil and circumstance may tend to explain the different behaviour of infectious diseases as regards localities and individuals.

Permit me to be more precise in defining the position which I advance. In the decennium 1871–80 the county of Durham as a whole had a far higher rate of mortality from "fever"—mainly enteric fever—than that prevailing in any other part of England and Wales, and although a large and substantial diminution in this rate took place in that county, as it also did in England and Wales as a whole during the decennium 1881–90, yet Durham continued to maintain her pre-eminence in regard to death from "fever." This position of unenviable notoriety still belongs to the county of Durham; indeed, since the expiration of the last decennium the Registrar-General has drawn especial attention to the habitually recurring and undue prevalence of enteric fever in a tract of country including much of Durham and extending along the east side of northern England. There are counties in proximity to Durham in which during the same twenty years the "fever" death-rate has barely reached half that with which the Registration County of Durham has become identified. What are the characters of the soil—non-living or living—into which the pathogenic organism of enteric fever falls in many districts of Durham, which are lacking when the same disease occurs in neighbouring districts; what, in short, are the circumstances and surroundings which favour its life-processes so much in the one instance and which are only about half as potent in districts near at hand?

So, also, there are towns in different parts of England from which enteric fever is rarely absent and in which it periodically recurs as a somewhat wide prevalence or even in epidemic form; whilst, on the other hand, there are towns and communities of equal size near by, where the conditions by which imported infection is surrounded, and where the soil into which the pathogenic organism is received are inimical to its life-processes and where it soon dies out. It is not that the organism itself differs at the outset. Cases are known in which infection from a town which suffers habitually from enteric fever, but which—by reason perhaps of a wholesome water service—rarely suffers in epidemic form, is imported into another where the disease is rarely known; but gaining access to a public water service the result is a severe but an altogether transient epidemic. And, once more, I have known a house standing in large grounds to be smitten with enteric fever on three different occasions, the disease affecting in succession three different sets of tenants; and although between the second and the third occurrence the dwelling had been untenanted for nearly two years, yet the disease reappeared amongst the new tenants within a few weeks only of their occupation of the dwelling.

Soil, in its ordinary geological sense, has often been credited with having concern with persistence and recurrence of enteric fever, and since the discovery of the Eberth bacillus additional importance has come to be attached to this view. That bacillus, like other pathogenic organisms, is distinctly affected by its surroundings. Light does not favour its life-processes; direct sunlight is distinctly inimical to it; very high or low temperature affects its power of self-multiplication, especially when dryness is combined with the extremes of temperature; and there are some grounds for believing that it is not ordinarily capable of resisting for any long period of time submergence in water. Judging by analogy it must also be assumed that it requires its proper nutriment in order to thrive and to multiply.

Under these circumstances we can easily realise that the question of the maintenance or the destruction of this pathogenic organism outside the human body may largely come to depend upon the condition of the soil on which the excretory matters containing it may find themselves. On the one hand, a hard and somewhat impenetrable surface exposed to the sun and to a dry air as well as a soil which contains but little organic matter have often been assumed to be unfavourable to the extension of enteric fever; whereas, on the other hand, a loose and loamy soil, which is organically polluted and which at the same time permits the penetration of the organism and provides it with means of nourishment and a sufficiency of moisture, has been credited with the power of maintaining the vitality of the organism, of securing its multiplication, and of storing it up without its undergoing any material modification in its physiological properties, pending its entrance into the human subject as the result of its being washed into a well or being forced out of the soil into the surrounding air.

All this, however, had been matter of surmise, and it is only recently that any systematic attempt has been made to study how far conditions of soil are concerned in enhancing or in controlling the operations and properties of the enteric fever bacillus. Under these circumstances I last year procured the sanction of the President of the Local Government Board to commence sustained investigation of this subject. I was largely influenced in seeking this sanction by the consideration that in the Medical Department of the Local Government Board we had already procured valuable evidence in proof of the fact that the organism which in its life-processes in peaty soil is the ultimate cause of lead-poisoning which follows the consumption of certain moorland waters is in a high degree dependent for its vitality and its power for harmfulness upon the condition of the soil whence the waters in question are derived. Already some significant results have been obtained as the outcome of certain investigations which Dr. Sidney Martin has been carrying out for the Medical Department of the Local Government Board. These results will appear in detail in my official report for 1896–97, shortly to be issued, but in the meantime I may give a brief summary of that which has already been ascertained. Dr. Sidney Martin made one set of experiments with soils containing a large quantity of organic matter, some of these being derived from localities where enteric fever was wont to recrudesce from time to time. Having placed samples of these soils in flasks, and having completely sterilised them, he inoculated them with one and another culture of the typhoid bacillus, and examination of soils thus treated at intervals varying from about a fortnight to fifteen weeks showed that the bacilli had invariably retained their vitality, that in some cases the whole, and in others a part only, of the experimental soil had become pervaded by diffused growth of the bacilli; and that the extension of the growth bore relation to the temperature at which soil of this class was incubated, and also to the amount of moisture in the experimental soil. The important conclusion is, however, reached that under the conditions of a laboratory experiment soil such as that described affords, after complete sterilisation and at ordinary temperatures of the atmosphere, not only a medium in which the typhoid bacillus can retain its vitality, but one in which it is capable of multiplication and of spreading abroad. In the official report referred to, Dr. Sidney Martin only records the results of his experiments up to the end of March last, when his experience in this matter was limited to 105 days, or fifteen weeks; but his further investigations into this subject have already shown that in a soil such as that referred to the retention of vitality and the power of spreading abroad of the typhoid bacillus have been maintained at varying temperatures for periods of no less than 214 and 268 days—that is to say, some seven and nine months.

Dr. Martin next proceeded to make similar experiments

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with two soils of quite different sorts. One was a firm, crumbling, peaty soil, and the other a red sandy soil from beneath the peat, both being collected at a distance from human habitations. These so-called "virgin" soils were first sterilised and then they were inoculated with culture of the typhoid bacillus in precisely the same way as had been practised with the organically polluted soils. Some samples were then inoculated at the temperature which had been found in earlier experiments to be most favourable to the growth of the bacillus in soil, other samples being kept at the ordinary temperature of the laboratory. The result was in striking contrast with that of the experiments carried out with the organically contaminated soil. In all the previous testings the typhoid bacillus had retained its vitality from the first, and in most of them there had been spread of the micro-organism from the centre of the soil, where the original inoculation had been made, to the periphery. But with both sets of these virgin soils no sign whatever of vitality could be discovered as the result of testings fourteen, twenty, and twenty-three days after the inoculations.

Thus far these experiments have only been carried out under laboratory conditions; they have had concern only with the vitality of the organism in its vegetative aspects; they have been carried out with sterilised soils, that is to say, soils where the typhoid bacillus was free from the influence—whether favourable or inimical—of other micro-organisms in the soil; therefore they will have to be repeated on a wider scale and under circumstances more nearly resembling those met with in nature, and they must take cognisance, not only of the vegetative properties, but also of the physiological and pathogenic properties of the organism. But in the meantime they are of marked value in connexion with the question to which I am addressing myself and they may serve to teach some useful lessons. Speaking always with a due sense of the restrictions imposed by the artificial character and the limited number of the experiments thus far reported on, I may fairly maintain that we have reason for inferring that whilst one soil and set of circumstances are highly favourable to the vitality and propagation of the typhoid bacillus, another soil and set of circumstances are rapidly destructive to it; and we seem to be upon the border of a territory where some vein of actual knowledge is likely to be discovered which will materially assist, not only in solving the problem of the different behaviour of enteric fever as regards its persistence and recurrence in one and another dwelling, town, or district, but of further emphasising the value of that practice which has now so long been adopted in this country for the prevention of typhoid fever.

In order to give a practical aspect to this question let me recall some of the circumstances of the soil and surroundings which we have learned by experiment to be favourable to the vitality and multiplication of the typhoid bacillus. They are that the soil should be pervious, that it should be permeated with a sufficiency of decaying—preferably animal—organic matters, that it should possess a certain amount of moisture, and that it should be subject to a certain temperature. And then let us consider what means can be adopted to deprive the soil of one or more of these conditions which appear to favour the retention of the vitality and power of multiplication of the typhoid bacillus, and to prevent that organism from gaining access to the soil in the neighbourhood of human dwellings. To this end I would in the first place advocate the paving of open spaces about dwellings where these open spaces are of small area and are liable to become contaminated with excreta. In this way fouling of, as well as penetration by a pathogenic micro-organism into, the underlying soil is practically prevented. Indeed, it is well known not only that the paving of yards about small cottage and tenement property in towns has in its results been shown to be a public health measure of first importance, but also that the value of such a measure has depended largely on the use of a form of pavement which really ensures impermeability. In the next place it will be clear that organic and decaying refuse should be so dealt with as to prevent its contaminating the soil in the neighbourhood either of dwellings or of sources of water-supply. I need hardly point out here in detail what are the points to aim at in securing this end; but I may perhaps usefully approach the matter from the other point of view, and say that the midden-privy which still prevails in so many of our large midland and northern towns presents every feature that should studiously be avoided. Generally sunk below the surface of the ground, often open to rainfall, always storing up decomposing excreta and refuse in close proximity to dwellings, it provides almost every condition favourable to the production of nuisance, to the saturation of soil with filth, and to the setting up and maintenance of those very conditions which seem to be essential to the vitality and multiplication of the typhoid bacillus. The fact that with our present knowledge such a structure as the common midden-privy should not only still exist in our midst, but be clung to with a perverted tenacity, is in my opinion the greatest blot which attaches to English sanitary administration at the close of the nineteenth century. Apart from its sanitary aspect it is a system as degrading and ignoble as it is foul, and I trust the day is not far distant when we shall look back to it as a barbarism of the past. Firstly, then, let our aim be to maintain such a condition of cleanliness about our houses that the soil shall approach as far as practicable to the condition of those virgin soils which are inimical to the growth of the pathogenic organism under consideration.

The next points are to deprive the soil in the immediate proximity of dwellings and of wells, so far as this may be practicable, of those conditions of moisture and temperature which we begin to perceive may tend most to the multiplication of the enteric fever organism. We have as yet but little precise information on these points; but if we may judge by the very partial and as yet incomplete experiments made by Dr. Sidney Martin in this matter we are led to the conclusion that a porous and organically contaminated soil to which moisture in the form of distilled water has been added to the extent of some 35 grammes per cent., and having a temperature of some 37° C. (103° F.), seemed best adapted to the growth and the spreading abroad of the typhoid bacillus. Any material modification in the amount of moisture, and, above all, any reduction of the temperature down to that which may ordinarily be expected in soil, tended at once to retard and to check the growth of this bacillus. In so far, then, as we may be able to control conditions of temperature and moisture in the soil in the immediate neighbourhood of groups of dwellings, to that extent we may be able to acquire some control over recurrences of enteric fever. Here again I would give prominence to the systematic paving of house yards with an impervious material. Where open spaces about dwellings are large, and where organic pollution of surface soil is practically absent, we may rely, as inhibitive of this bacillus, on the influence of sunlight and of alternating weather; but in our towns the conditions have become too artificial and the open area about dwellings has become too restricted for us to hope that under the unnatural conditions which have been inducedby urban aggregations of dwellings, we have any right to expect the full benefit of Nature's remedies.

My reference to the question of soil temperature leads me to make a few remarks on another disease which is periodically very prevalent in some of our large urban centres. I refer to epidemic summer diarrhœa, so fatal to infant life. There is strong presumption since the late Dr. Edward Ballard's researches that the question of "soil" is in this disease a most important factor, and that the essential cause of it is bound up with the life-processes of a micro-organism—not yet definitely differentiated—which exhibits its vital manifestations in the superficial layers of the earth. But here, again, the differing circumstances of the soil would seem to have a most important influence in determining whether the organism is to live and multiply or whether it is to be deprived of its power for mischief. When it gains access to a soil that is sufficiently loose to be permeable to air and water, and which contains a sufficiency of that organic matter which prevails so largely about the densely peopled areas of our large cities and towns, then the maintenance of its vegetative vitality is likely to be ensured; and when, in addition to this, it finds itself in the presence of a suitable temperature and moisture combined, then its power of rapid multiplication and its full pathogenic properties seem to be ensured. Dr. Ballard, as you are aware, has propounded the thesis that these requisites are pre-eminently present when the subsoil water stands sufficiently near the surface to maintain by capillary attraction a slight amount of dampness in the surface soil and when the temperature of the earth at a depth of four feet reaches 56° F. Then it is, in his view, that the organism can undergo most rapid multiplication; and becoming air-borne as the result of physical actions, such as the rise and fall of subsoil water it can gain access to

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food supplies, and, above all, to the milk, which is so commonly stored for infants in miserable pantries opening out on to small confined areas and yard spaces, where emanations from filth accumulations blend with those forced out from the soil itself. In this way the organism finds, according to Dr. Ballard, an appropriate medium for undergoing those life-processes which end in the production of a virulent chemical poison. Milk thus infected may be deemed to constitute a common vehicle for conveying to the infant this poison, the results of which are so terribly fatal in some of our large towns.

As consistent with the view that the influence of soil is a prime factor in this disease I may say that there are instances of towns standing almost side by side which, in density of population, in trade and occupation, in climate and other like conditions, exhibit no appreciable difference, and yet whilst one town is notorious for its ever-recurring autumnal diarrhœa mortality, the other stands out with equal prominence by reason of its maintained comparative freedom from this fatal diarrhœa. The circumstances of soil in one place are to be thought of as responding to the requirements of the micro-organism; in the other as failing to respond to them.

Let us again seek some practical application of the results of this research. First and foremost stands the need of a soil that shall be maintained as free as practicable from organic contamination; and in the narrow and restricted open spaces about our city dwellings this means such disposal of excreta as shall be free from nuisance, such means of storage of all domestic refuse in receptacles of limited capacity as shall prevent contamination of soil and air and shall necessitate frequent, even daily, removal; and, once more, it means the provision of an impervious paving for yards and courts so as to protect the soil, not only from contamination, but also from exposure to that heat which, in combination with moisture, can serve as an incubating chamber for this virulent organism. There is a further practical application. It is this. Feed no infants artificially on milk that has not been quite recently boiled. I say "boiled," because in the houses of the poor sterilisation apart from boiling cannot be expected. But I would add there is no sterilising apparatus that can give results comparable with those provided by nature in the healthy female breast; and I would venture further to maintain that no milk from the mammary gland of its mother ever caused the death of an infant from this specific summer diarrhœa.

Thus far I have restricted my use of the word "soil" to its geological sense. But for the purposes of my subject it should be made to include all the circumstances and surroundings to which a pathogenic organism may be subjected and in which it may find, or fail to find, the necessary conditions for retaining its vitality and for reproducing its kind. It was in this more general sense of the term "soil" that I referred at the commencement of my address to the question of individual predisposition to disease. As regards a number of specific infectious diseases, such, for example, as tuberculosis and diphtheria, we know that many people at the same ages and under similar external conditions are either constantly or at frequently recurring intervals fully and, so far as we can judge, equally exposed to the pathogenic organisms with which these diseases are associated, and yet, whilst some succumb to them at once, others exhibit no susceptibility to them, this immunity extending at times over a long term of years or being even permanent. Such persons as the latter must obviously receive into them the specific organisms in like manner with their less fortunate fellows; indeed, the organisms in question may be actually found in them on precisely the same mucous and other surfaces as those wherein they begin their career of mischief in the so-called susceptible persons; but in the so-called non-susceptible persons the microbes lack some one or more conditions necessary to their disease-producing function. This difference between impotency and virulence in the organism is doubtless very largely a question of surrounding circumstances; indeed, it may be essentially one of the soil on to which it has fallen.

How many thousands of persons must have consumed tuberculous milk without ever having contracted tuberculosis, whilst how many must be the infants who doubtless acquire tuberculosis through the same medium during the very earliest days of their lives. Or, again, how common it is to find the bacillus diphtheriæ on the faucial mucous surfaces of nurses and other attendants in diphtheria wards, whilst these persons not only are, but remain, quite free from disease, whereas, on the other hand, how fatal to others is the reception of these bacilli under apparently similar circumstances. The question is, I believe, mainly a question of soil in the widest sense of that term. In the case of tuberculosis there are grounds for believing that when tubercle bacilli carried aerially impinge on the healthy mucous surfaces of the mouth and, above all, of the nares, they are not only largely arrested where they first impinge, but are also rendered impotent for harm by the physiological and chemical characters of the material with which they come into contact. Such as reach the stomach without such hindrance, whether swallowed with the saliva or received in food, have to contend with the gastric juice, which is probably sufficiently inimical to destroy or at least attenuate them if they are not excessive in number or of superabundant vitality. And, again, it is highly probable that these organisms rarely make their way into the human system through the digestive tract so long as that tract is covered with an unbroken, undamaged surface of normal mucous tissue. In short, the condition of health, in its widest sense, is inimical in its refractory and resistant sense, to pathogenic organisms, because the normal healthy tissues do not afford them the means of retaining their vitality and of facilitating the reproduction of their own kind. In this connexion it is also important to remember that in healthy tissues pathogenic organisms meet with vast numbers of cellular bodies which are normally present in them, that a struggle for existence then ensues, that the pathogenic bacilli are often devoured—by phagocytic action—by the normal phagocytes, leucocytes, &c., and that we largely owe our safety from disease to such antagonistic action of our tissues. Some organs of the body appear to have this work as their primary function. Thus the tonsils, standing as advance guards near the entrance of the respiratory and alimentary tract, must arrest many an organism that is carried to them aerially; and as regards such a disease as diphtheria I feel convinced that the difference between contracting the malady and not contracting it has largely to do with the condition of the surfaces of these organs. If the tonsils are uniformly healthy there is safety; if they are in an abnormal condition, as, for example, abraded, congested, or inflamed, there is risk. But the amount and the vigour of the infective bacilli received has probably also to be taken into account, for even granting the presence on a healthy surface and in a healthy gland of micro-organisms and cells that contend with and are antagonistic to pathogenic organisms, the first set may be overwhelmed by reason of both quantity and quality in the invading organism. It is circumstances such as these that must be regarded as having a very direct bearing in determining predisposition or susceptibility to infection on the one hand and so-called immunity, or absence of predisposition to infection, on the other hand; the two sets of individuals equally exposed to infection being apparently subject to the same risk. It is, in short, a mere matter of soil and circumstance.

My reference to diphtheria leads me to refer to two matters which have a direct bearing on the subject before us. I have been credited with the assertion that faulty sanitary circumstances have no place in the production of diphtheria. I am not aware when or where any such assertion was ever made by me. But I am free to admit that I do hold the opinion that diphtheria is not caused by sanitary circumstances, however faulty they may be, apart from the reception on to the fauces or other susceptible surface of the diphtheria bacillus; and I have a profound conviction that, subject to the limitations just indicated, the diphtheria bacillus does not retain its specific properties or undergo in its life-processes the changes necessary to the production of a specific toxin when it falls on a sound or healthy surface. On the other hand, I have expressed a very definite opinion to the effect that whatever produces an abnormal and unhealthy surface of the tonsils or other parts of the naso-pharyngeal tract tends directly to provide a soil which favours the retention, and perhaps the acquisition, by the diphtheria bacillus of those properties by which it produces disease and death in man. And I have, by way of illustration, specified two forms of throat ailment which, more than any others perhaps, favour an enhanced virulence and power of multiplication in the diphtheria organism—namely, that form of throat which so often follows inhalation of an organically contaminated air, vulgarly known as "drain-throat," and that condition of the fauces and nares which is so constantly found in scarlet fever convalescents and which is regarded as a part of that disease. Allow me to quote a few words from my

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published Milroy Lectures[1] on this subject: "I am inclined very largely to limit the operation of faulty sanitary circumstances to the production of a morbid state of the fauces which induces a local condition favourable to the reception of the specific organism of diphtheria." And referring to a particular prevalence of diphtheria in a midland town I went on to say that given "that form of sore-throat often identified with drain effluvia ..... it needed but a resuscitation of the diphtheria infection in order to the specific inoculation of such throats. In short, I am inclined to regard the influence of a sewage polluted air as operating in much the same way as the scarlet fever poison, in so far as predisposition to diphtheria is concerned." The matter thus becomes one of soil, these two conditions of throat bringing about a localised set of circumstances which are favourable to the reception, to the vitality, and to the various life-processes of the bacillus diphtheriæ.

The other point to which I would advert is that apart from the immediate production of a disease as the result of the impact and lodgment of pathogenic organisms, the essential functional characteristics of those organisms are liable to be affected according to the circumstances in which they find themselves when they have fallen on one or other soil. A property—say the virulence—of the organism may entirely depend on the question of soil and circumstance; in the one case the specific virulence may be enhanced, in the other it may be attenuated or even destroyed. The result that is to ensue must depend on a multitude of circumstances. Concerning many of these we as yet understand but little; concerning many more we are in almost complete ignorance. But we already know that one set of—say pathogenic—organisms coming into conflict with another set of organisms find that their quality of virulence and power of multiplication are favoured and increased; whereas another set from the same source, but reaching another soil, may find themselves in conflict with other organisms that tend to their destruction, the two being mutually inhibitive. I have long maintained that the virulence and even the specific quality of an organism may be a matter of progressive development according to soil and surroundings, and some twenty years ago I compared the process of the evolution of the property of infectiveness to those processes by which definite properties in plant life, such as colour and perfume, can be produced and can be modified or allowed to lapse in the hands of skilled horticulturists or in nature according to the surroundings to which the living matter in question is exposed, "the affair being," as I then said, "essentially one of soil." At one time this view met with but little, if any, encouragement from certain teachers and students of bacteriology. They inclined to the view that the specific qualities of pathogenic organisms were stable and not subject to modification. But much in the epidemiological behaviour of different infections has tended to a quite different conclusion. In 1883 my colleague, Mr. W. H. Power, F.R.S., laid down certain propositions with regard to the cholera microbe—propositions which fell on many an unreceptive ear. He maintained that the cholera organism "has phases in its life-history during some of which it has not and in others it has the power of producing cholera"; and he further expressed the view that when once this exotic organism is no longer liable to the conditions—local or climatic, for example—which in its home were wont to favour the retention or enhancement of its "malignant phase," the general tendency of the organism was towards its non-malignant phase.

At the present moment we seem to be on the high road to an absolute confirmation of these views. Koch's cholera vibrio can be found in abundance in a state in which morphologically, and in most other respects, it is indistinguishable from that which is in direct causal relation to cholera, and yet the organism is impotent to produce that disease. Dr. Cautley, experimenting with the typhoid bacillus, finds that its power of survival in milk is dependent to some extent on the number of organisms normally to be found in milk. Thus in cold weather, when the micro-organisms commonly present in milk are least abundant, the typhoid bacillus survives longer than in warm weather. Here we have another indication of the manner in which a pathogenic organism is influenced according to the qualities of the soil and environment in which it finds itself, and incidentally we may have some explanation of the seasonal behaviour of enteric fever—a disease which is more prevalent in autumn and winter than in the summer.

I referred just now to the antagonism existing between tissue cells and pathogenic organisms. Study of this question has also included that of the influence which micro-organisms of different characters exert upon each other when they come into competition. To a large extent the investigations made have been concerned with pathogenic organisms, and some valuable results have been obtained. Thus Dr. Klein showed some six years ago that whilst with cultures of either the malignant œdema bacillus or of the bacillus of grouse disease fatal results were invariably obtained on the inoculation of mice with each separate infection, yet when cultures of these microbes were mingled together and the mixture was injected into mice, very few of them suffered any illness at all. Here we seem to have mutual inhibition between two sets of organisms, the contrary action of one and the other being brought about by the circumstances under which the one or the other set or both sets of organisms found themselves placed on injection into the body of the mice, the result being determined by the nature of the circumstances and surroundings to which the organisms were severally exposed. In other instances we know that a condition of antagonism is brought about when the inoculation of an animal with a specific and commonly fatal infection follows its inoculation by an antecedent infection. In this latter case it seems clear that the first inoculation has so modified the otherwise receptive soil into which the second infection is received as to modify or even destroy its virulence. On the other hand there are instances in which toxic bacteria or their products used in advance for inoculation purposes make the soil—in this case the body injected—more receptive than it otherwise would be of a second specific infection. The inability to produce disease which different specific micro-organisms often experience when they are received into the human body may well be believed to be in part due to the presence therein, and the antagonistic action, of other organisms which are associated with the condition we call health; whereas, on the other hand, organisms which are either associated with conditions of unhealthiness or are themselves the cause of a condition of ill-health may well be believed to have at times the power of enhancing and of adding to the virulence of specific organisms which come into competition with them. In this way immunity, special susceptibility, and predisposition come to be in each case essentially an affair of the soil and circumstances in which one and another specific organism finds itself placed. If we limit the term soil to its geological sense the same holds good. The natural soil teems with micro-organic life; one thimbleful of ordinary garden soil which has periodically received a manurial dressing will contain from one to three million micro-organisms, and a soil which has long been free from any artificial process of manuring still abounds in micro-organic life. These organisms in their life-processes tend to the modification and often to the destruction of extraneous organic matter. Experience shows how often micro-organisms endowed with mischievous qualities lose the power for harm on reaching certain soils. But the normal and harmless micro-organic constituents of the soil may be overcome by the abundance of extraneous organisms, such as those having pathogenic properties and which on occasion find their way into the soil, and then the latter may not only secure for themselves a medium for their reproduction and periodic activity, but their mischievous qualities may even be enhanced.

It may possibly be thought that in the remarks which I have addressed to you I have dealt too exclusively with considerations bearing upon the duties of those who concern themselves with matters affecting public rather than personal health. I trust this is not so. Whether we limit the use of the term "soil" to its geological sense, or whether we make it include every "circumstance" affecting man and his surroundings through which pathogenic organisms are wont to reach the human body, I know no influence that can better be exercised for good with respect to the protection of the individual and the home than the wise counsel of the habitual medical adviser. He above all others is free from the suspicion of advising merely on some general principles and for the benefit of the community at large rather than for that of the individual. The guidance of those whose counsel is sought and trusted at times of sickness is that which will best ensure for households and individuals that when the

[1] Diphtheria, its Natural History and Prevention; being the Milroy Lectures, 1891, pp. 89, 90.

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struggle with specific infection comes it shall be successfully met; and this can only be when there shall be ready in advance that condition of healthiness in its widest application which would appear to be antagonistic to pathogenic organisms and inimical to those life-processes which conduce to the production of their toxic poisons.

Introductory Address

ON

THE NEURON AND ITS RELATION TO DISEASE.

Delivered at the National Hospital for the Paralysed and Epileptic on Oct. 5th, 1897,

BY SIR WILLIAM R. GOWERS, M.D., F.R.C.P. LOND, F.R.S.,

PHYSICIAN TO THE HOSPITAL; CONSULTING PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL.

GENTLEMEN,—It falls again to my lot to welcome you to the course of lectures by which we endeavour to increase the practical service of this hospital, by enlarging the knowledge and power of those who choose to avail themselves of the opportunity, and take the trouble of coming to receive its gift. We revert, moreover, to the former custom from which last year we departed, and interpose no pecuniary obstacle, except in the case of those whose object is to make it one of the steps by which they gain the portal to the practice of the profession. To all others we leave Nature to give, even from its disorder, such gift of knowledge as it may—with the freedom that is all its own. We strive to follow this example in what we do to help the receiver to receive. But let me remind you that in doing this we cast on you a duty. It is not fit that the institution should be the poorer in making you the richer. The arrangements necessary for you to learn are a constant cost, and the money once devoted to providing the means for teaching which this theatre affords, ought to yield the institution its due—at least, a minimum—interest. This can only be by a response from you by giving to its funds with the same freedom as you must feel in that for which your response is due.

Although the lecture I have the honour of giving you to-day differs from those that will follow it only in being the first, that which begins always seems to possess a certain degree of singularity, even sometimes in a way that involves some vague sense of analogy to greater importance. It is like a capital letter. I avoid saying "initial" letter because this takes our thoughts to the work of the early middle ages, and my only object is to state why I have taken the occasion as an opportunity for endeavouring to expound a general subject rather than explain a special case.

The subject is that which underlies the word "neuron." I do not know what conception you form on hearing the term, but I know what I may safely assume. I shall err only within narrow limits if I assume that, taking you as an aggregate, your conception is a negative one, and that you have no approximately adequate conception of what the word means. Familiar as some of you may be with the subject, it is certain that you have not all an equal knowledge or corresponding knowledge. My only secure course will be to assume the ignorance which Huxley said he had only once dismissed from his thoughts of an audience the most learned, and found he never had made so great a mistake. So bear with me if I thus weary those who do know something of the subject. You cannot know too much, for that which underlies the word is the most important addition to our knowledge of the nervous system, in its physiological and pathological relations, which has been made in the second half of this century—most important in the extent of its application and in the profoundness of its relations.

This revolutionary change in our conceptions is due to the use of silver; to the method of staining which is known as Golgi's method, because first devised in detail by Golgi of Pavia. Although silver has long been used as a stain, this is a method which has not been fully worked out before. It depends on the influence of silver on structure which has been acted on by chromium, and usually also by osmic acid. That which it does is to reveal in hitherto unknown distinctness the course and form of the processes of the nerve cells in the grey matter. These processes, as you know, divide. It has been hitherto believed that they join, and, joining, constitute continuous paths through the grey matter by which the nerve impulses pass from cell to cell, from group to group, and ultimately from one far-reaching fibre to another. And that which this method has shown is that union cannot be traced, but that which is everywhere to be perceived is that these branching processes, "dendrons" or "dendrites," as they are termed, end in the ground-substance or matrix[1] in which the cells lie. In this matrix only the dimmest trace of structure can be seen, and yet there must be an arrangement of its elements.

There is thus discontinuity where there was supposed to be continuity. All nerve fibres, as you know, are prolongations from nerve cells. They belong to the cell and are part of it, so that now there arises before us the vision of a series of discontinuous elements, each consisting of a cell with its processes, and the processes do not join. To each of these elements the term "neuron" has been applied. Yet the nerve impulses pass from one to another; they pass, therefore, by some unseen path through the matrix in which the processes end.

The term "neuron" was first used about eight years ago by Waldeyer, and it has become the universal designation, with a plural not according to the language from which the word arises, but according to the living language of the country in which it is used. We call them "neurons," the Germans call them "neuronen," and the French "neurones." I emphasise this because an attempt has been made to use the word in a more literally accurate sense. You know that there is from each nerve cell an axis-cylinder process as well as many or few branching processes; the branching processes are called "dendrons," and the axis-cylinder process is now termed the "axon." But that is the conspicuous nerve fibre; and since neuron means literally a nerve Professor Schäfer in his books, which are those used in all the elementary schools, uses the word "neuron" for "axon," and he has no other term for the whole cell than "cell." That, as you see, necessarily introduces considerable confusion, and it is an absolutely hopeless attempt to secure literal correspondence—hopeless because the word "neuron" has become established everywhere in a way which makes any attempt to change its use hopeless. I remember Sir William Jenner once saying: "Never attempt to change an established term merely because you can use another a little more accurately." That is wise advice; such attempts are seldom successful, and even if this were successful it is not worth while, for when a definite interpretation has got thoroughly attached to a word it is understood even though it may not be the literal meaning of the term. Where should we be if we were to put into literal language the ordinary terms in use? What a number we should have to discard. We should have to throw away "hysteria" to begin with. A number of other terms have grown up in connexion with the subject which are as yet not firmly settled, so I will give you as few as I can in this outline of the change in our knowledge in order that you may understand its application to disease.

Now, there is in connexion with this, although not directly resulting from it, a second most important fact. The method of staining which I have referred to has also established the truth of an observation made and described thirty years ago by Max Schultze, but ignored almost entirely ever since. You have all learned to regard the axis-cylinder of a nerve fibre as a single thing, a single conducting path. And that great worker whose researches and results have dominated knowledge since those days, Ranvier, did not recognise the truth of Max Schultze's observations, and hence they practically disappeared from current knowledge. But by the study of the axis-cylinder and its divisions by the method of staining to which I have referred, and by other methods which have been elaborated from that, it has been proved that the axis cylinder is a complex structure, each consisting of a number of fibrils. I have searched in vain for any statement of the number of fibrils, but I have been told privately by Obersteiner that in a rather

[1] I do not know that the name "matrix" has hitherto been applied to this ground-substance: some convenient name is needed, and none is yet current.

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large-sized fibre of the sciatic nerve of a frog there are about fifty of these fibrils making up the axis-cylinder. Each of the fibrils is a separate and distinct conducting path. They seem to be composed of a peculiar material, which is separated by another substance, differing a little, but not enough to enable any distinction to be made out by ordinary methods of observation—for instance, by observing it with the highest power in the fresh state. But they differ (and it is a wonderful thing when you come to think of it) just enough to permit the chemical influence of the hardening agents, supplemented by the effect of staining agents, to act upon them in such a different way as to make them ultimately distinguishable. It is a fact of very profound significance that the slightest conceivable difference in nature, utterly invisible to us, responds to the influence of chemical substances so as to be vastly more observable. I say it is significant because it makes us think of the way in which different chemical substances have an action upon special parts of the nervous system, one substance upon one part and another substance upon another part, although the nerve material at the various places seems absolutely identical. You know the way in which strychnine will pick out certain motor structures on which to act and into which to enter, and you are aware of the way in which atropine will select, of all structures in the body, certain nerve structures in the eye; the way in which lead or arsenic will first enter into and be assimilated only by certain nerve-endings of all the nerve-endings of the body, and so produce special palsy. We see that fact in the effect of poisons during life, which can only be by the way in which the living material must possess some chemical difference, more effective through vitality, by which it is able to receive and react upon, to be changed, and ultimately destroyed, by one chemical substance or compound and not by another. This separating material has a more horny aspect and passes on into the matrix in which the cells lie and there constituting a spongy structure, is called "spongioplasm"; and the material which it separates, which forms these continuous lines of fibrils, as they appear to us, is called the "hyaloplasm," and is apparently the conducting element. There is a sufficient difference between these during life to prevent the passage from one fibril to another of whatever may be the marvellous and mysterious change which flashes along with lightning-like rapidity, and which we call a nerve impulse.

When the axis-cylinder was believed to be a single body we described and believed we recognised its nature; but if we ever perceived its utter mystery we never ventured to emphasise it. I mean the mystery that it divides. The division of a single conducting tract cannot subserve any really intelligible use, except to spread over a larger area its connexions—could serve no purpose such as, for instance, differentiation of sensation. And the number of separate axis-cylinders in the sensory nerves of the skin is not enough to explain the way in which the various forms of sensation are differentiated in the small areas in which they can be distinctly localised,—so much so that one writer, a few years ago, perceiving that fact, denied that there was that differentiation. Because there were not enough axis-cylinders he said there was not the differentiation; that we could not explain the differentiation, nor could we understand the good of the division of the axis-cylinder. But this division we now see to be simply separation of its conducting fibrils. In the light of this fact its service at once becomes clear and the localisation is intelligible. But Max Schultze observed also—and, curiously enough figured it so, although he did not thus describe it in the text—the passage of these fibrils through the nerve cells without any interruption. That has also been securely demonstrated and proved by the new method. So that we have this astounding transformation in that which we perceive; we have in every axis-cylinder a bundle of separate conducting fibrils, and we have those fibrils passing uninterruptedly through the nerve cells to the branching processes and ending at the terminations of their branches. Instead of that old conception of the prolongation of a nerve cell passing to the process of another nerve cell and blending with it, we have the nerve cell receiving a number of fibrils which simply lie together in the process. They may be seen merely skirting the cell body, going from one process to another sometimes, or from several processes to the large axis-cylinder process. From that fact there follows a most momentous fact which is of signal importance to us, and yet which seems imperfectly recognised by those who are working at the subject. Those fibrils passing continuously through the cell body can only conduct through the cell body. Our old conception, so simple, so attractive, that the nerve impulses originate in the cells—fascinating from the analogy of the cell body to a tiny battery originating a current—all that entirely disappears. Moreover, if we find this continuity of the fibrils distinct in some cases we feel at once that it is one of those fundamental structural arrangements which must be universal, and we must once for all give up the idea that the nerve cells are sources of nerve impulse.

What, then, is the function of the nerve cells? We know that on the nerve cell depends the life of the processes; we know how the latter degenerate when separated from the cell and when the cell is destroyed. The cell body is the vital centre for the whole, apparently through the nucleus. A great deal of complex arrangement has been made out in it, but we may disregard this for our present object. The cell protoplasm lessens and then apparently disappears as we pass along the processes, and especially in the long axis-cylinder process. But we find at places some protoplasm, with a small nucleus, and, although it has not been proved, structural arrangements have been discerned which permit the conception that there is a continuity of protoplasm along the fibre, too delicate to be seen, by which the life influence of the cell body is conveyed. So that we have to look at each cell as a vital structure, with its processes and fibres consisting chiefly of the fibrils, but with the life of the whole the fibrils are not directly concerned. They are conducting bodies, elements, which pass through the cell, and the impulses which they conduct from the cell must come to the cell by the branching processes, and they must originate at the extremity of those processes.

How, then, do these impulses arise at the extremities of the dendrons? They arise in consequence of some influence which passes through the matrix from other processes which conduct from a cell; but what happens there is a profound mystery. We have no means of conjecturing whether these impulses pass in some way unaltered through the matrix to the extremities of the other dendrons, or whether some influence which is not the same as the conducted impulse is generated in the matrix. But we conceive that this may be a process of excitation of the fresh impulse—a process which is like a stimulation. We can see that the impulse which arises in the extremities of the dendrons may be excited by something which is not the same, just as an impulse is excited at the periphery by the motion of a touch.

We know really nothing whatever of the actual minute structure of the matrix through which some influence must pass. There appear to be in it the two elements, hyaloplasm and spongioplasm, and yet they cannot be identical in nature with that in the dendrons; the staining by silver of the dendrons disposes of such a view; for the matrix remains entirely unstained. There are other mysteries, but we cannot wonder at that, because if such a vast amount of new fact is presented to us, there must be a corresponding difficulty in discerning details, and the more we can see the more there must always be that we cannot see distinctly.

I think those are the leading facts regarding the new discovery. Let me, however, point out one consideration. At first it seems almost incredible that we should have all these impulses originating in the matrix centres at the extremity of the dendron. It seems intelligible that from the bodies of nerve cells we should have those impulses generated, but it is difficult to understand that all these minute extremities of the dendrons should be capable of generating the nerve impulses which pass with such uniformity and effect along the nerve fibres, each fibre so minute, and yet with fifty fibrils in a single axis cylinder. It is one of the new facts which startle us and the lesson of which at first we find it difficult to absorb. But remember how multiplicity neutralises minuteness. We are apt to forget how the mass of sandstone is composed of those tiny grains which on the beach seem to be so destitute of any element of stability, or momentum, or resistance such as we have in the mass. And everywhere we trace the same fact, from the waves of light downwards. That which is considerable is composed of that which is infinitely small; and I think that with the remembrance of it all difficulty in grasping and holding the new knowledge should vanish. Remember, also, that in the nerve during life all processes of vitality go on with absolutely the same precision, whatever their minuteness or their nature, and also

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that all the atomic changes from molecule to molecule, by which materials alter and by which energy is made free or locked up, all the changes we call chemical, depend for their precision in the mass for their precision in the molecule.

Let me glance at a few other points; you will be able to discern many in greater detail for yourselves. Consider how this discontinuity explains the arrest of secondary degeneration in the grey matter. You know, for instance, how the ascending degeneration in the spinal cord goes up to the grey matter of the medulla, and the degeneration which goes down the cord stops short of the motor nerve cell, through which, nevertheless, the impulse passes. That has always been a mystery. We had an impulse going down the fibre; we knew it passed through the motor nerve cell; we knew there must be continuity of path, yet why was that degeneration not traceable to the second nerve cell? We could only conjecture that there was a fresh vitality in the nerve cell, which acted along the process a certain distance, and that then the vitality of the fibre was met by the vitality of the descending fibre; part had degenerated, but the part near the nerve cell was preserved. Now we see that they are not continuous; there is no structural unity between them, and we can understand why the degeneration does not pass on into the dendron of the next cell. There is no doubt that the degeneration which results from the destruction of the cell involves the short dendron as well as the long fibre, although the difficulties have hitherto prevented its early observation.

I spoke just now of chemical changes as an instance of the fact that, as of matter so of energy, that which is discernible in amount depends for all its features on that which is minute beyond discernment. Those of you who attend here have heard me say that the chief progress in pathology in the latter part of this century has consisted in the discovery of the immense extent, importance, and profound influence of chemical substances introduced by the morbid processes. The new nerve pathology of this period is chiefly a chemical pathology. It was largely due to the discovery of multiple neuritis, which was found to be almost always the result of a chemical substance. That has been followed by the discovery that when organisms of disease produce effects on the nervous system which are manifested by symmetrical derangement of special functions many of the effects—it may turn out all of them—are the result, not of the organisms, but of chemical substances produced by their growth. And we are discerning now how many poisonous substances are produced—must be produced—in the body by slight modifications of metabolic disorder. That must be the secret of the way in which, for instance, in gout there is now and then sudden evidence of the existence in the body of some acutely toxic agent which may give rise to the perfectly symmetrical effects such as multiple neuritis. Only ten days ago I saw a severe and fatal case of characteristic intense multiple neuritis, which was a result of rheumatic influences in a gouty and rheumatic individual. Instead of the effect of cold being such as to generate a mild poison, by some modification there had been produced that which was capable of acting in a most virulent way upon the nerves. Again, we have the discovery of the way in which the nerves are acted upon by arsenic and other mineral poisons, and we have learned the way in which many other symmetrical results are produced by such mechanisms; how acute specific diseases are followed by such processes in a way that leads us to conclude that the organisms of those diseases must have generated a poison. We are compelled in the same way to believe that locomotor ataxy is the result of some toxic material produced in the body by the syphilitic organisms. It is characteristic that these poisons have a certain proclivity to certain parts; and in locomotor ataxy we find that the degeneration occurs in two parts—in the fibres which conduct towards the cord and in the posterior median columns. We have the strongest reason to believe that the fibres in the posterior median columns are the continuation upwards of the afferent paths from the muscles. Both of those belong to the nerve cells of the posterior ganglia; they are dependent on those cells for their life, so that those fibres, with the cell, constitute a neuron. Thus we see that tabes is a degeneration of a single neuron, and we know that just the same degeneration is produced by some actual poisons. Hence, that which we call a disease, which we recognise by changes rather widespread in the system, is simply the illustration of the affinity of a poison for one definite nutritional unit. Another most interesting point which we conceive and understand so much better in the light of the new facts is the strange circumstance that in paralysis agitans we never get structural degeneration of the motor path, although we are compelled by all facts to regard it as a senile degeneration of the motor cortex of the brain. I have not time to describe the evidence of that, but senile degenerations when intense tend to go on to decay and death of the parts, and it was a mystery why we do not get such degeneration in paralysis agitans, and why therefore we never get in that disease, in spite of the peculiar spasm, a foot clonus. One would think it was the symptom which, of all others, would be there. It is absent because we do not get degeneration of the pyramidal fibres in the disease. But we see that the spasm and rigidity must be the result of charges at the place at which the impulses arise—namely, in the extremities of the dendrons. When we thought of the motor impulses coming from the nerve cells we thought the degenerating processes must be in the nerve cells, but, you see, all we are justified in doing is to refer the morbid processes to the extremities of the dendrons, and the nutrition and vitality of the dendron depends on the cell body. It ceases to be surprising; and it also ceases to be surprising that all search for morbid changes in the nerve cells has been in vain.

But there is one great test of the truth of our ideas, and by "truth" I mean the correspondence of our thoughts with the facts they represent to our minds. That test is the revelation of correspondence where there seemed to be diversity. Those things that seemed dissimilar and yet ought not to be according to our general knowledge are seen to be alike from our new point of view. What is even more important—so important that I shall have to ask you to note how our subject illustrates it—is that things that are far apart are seen to correspond. I will make this clearer in a moment. I think it would not be easy to find in physiological and pathological science anything more striking than the fact that this origin of the nerve impulses at the extremities of the dendrons brings into harmony the functions of the elements of the nervous system, central and peripheral. We now see in the centre the same isolated, separate, minute multiplicity of origin and subsequent blending that we find and are familiar with in the periphery, in the way in which the sensory nerve impulses originate at the terminations of that which we thought to be the divisions of an axis cylinder and now see to be the extremities of its component parts. Compare this with the quite diverse aspect of such an origin of the nerve impulses at the periphery and in the bodies of nerve cells in the centre. I repeat this because discoveries that involve normal correspondence not only are testimony to truth, but prepare us for perceiving corresponding morbid changes the discernment of which may be to us a revelation. Take this example, not unrelated to our present subject. We have taken a step upwards and onwards when we perceive that primary lateral sclerosis is a degeneration of the fibres of the pyramidal tracts, which begins at their terminations in the grey matter, in the ramifications which terminate the axes of the fibres, and conceive of this as a degenerative process, similar in all essential relations of seat and nature to the degeneration in the peripheral fibres with which we have become familiar as degenerative peripheral neuritis. In each case we have the failure of nutrition in the extremities of the fibres, of the long processes the ends of which are far distant from the vital centres. It is known that the degeneration of the pyramidal fibres in its early stage is greatest below and may even cease a short distance up the cord, precisely as does that of the fibres of the limbs. We see this analogy, and more than analogy, with far more clearness if we perceive also the termination of the branching ends of these fibres in the matrix of the grey substance of the cord, just as those of the peripheral nerves terminate, for instance, in the skin. Here we have another definite extension of that which we must call knowledge in consequence of the discoveries we have been considering.

The difficulty of readjusting our thoughts seems even greater if we look at such diseases as epilepsy in the new light. We have to conceive the sudden energetic discharge with all its simultaneity, with no appreciable interval between that which occurs on the two sides of the brain, to be from this infinite multiplicity of motor dendrons. It is enough to make us recoil from the new conceptions and look back at the old, and at the path we have traversed, to see

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whether, after all, we can have been right in the steps we have taken. But we now perceive in the old conceptions the same difficulties that we have in the new, though we never before realised their existence. We find it no easier to conceive these impulses arising from the nerve molecules of the cells than from those of the dendrons. We have simply the same elements, the minute masses of nerve substance, which are compactly arranged in the cell body, separated at the ends of its processes. It is as hard to think of the action of such groups, simultaneous or successive, combined or disjoined, if they are massed in a nerve cell as if they are at the ends of the short processes, separated by distance that is unimportant and, moreover, accessible far more readily to the nutritional material the molecules of which bear in their mysterious constitution the hidden energy to renew that lost in function. There flashes upon us, as it were, the fact that we had been blinded by ideas which seemed to have in them a capacity of explanation wholly illusory. And it seems as if the perception we have got of the extension of the nerve structures is a symbol of the extension of our thought; we are able to see, at least dimly, through that which was before obstruction, and if we can discern but little more by seeing through, it is nevertheless a real advance to be able to discern light where before there was darkness, though it be only light.

All such facts as these, gentlemen, are not merely general and to some extent theoretical; they are essentially practical. For they enable you to form more clearly and more adequately that visual picture of the disease which is before you, the ability to construct which can be cultivated and increased so much by use and practice, and which enables a man to obtain a much more clear conception of what there is in the individual case before him, to forecast more accurately its future course, and to discern with more precision by what means that future course may possibly be modified. The picture we can form of all the fine diseases of structure and of the way in which function is deranged when molecular nutrition is altered or toxic agents act—arrest, augment, or alter—this is made different by the new view we have to take. To make it useful we must become familiar with its details; we have to become able to recognise old facts under a new aspect. In all that is novel difficulties loom large, and use and wont, with the time they need, alone can enable us to gain in power from the gain in knowledge, and to secure that increased service which lies before us, not altogether hidden, and yet quite inadequately perceived.

An Address
ON
THE ARMY MEDICAL SERVICE.

Delivered to the Students at the Opening of the College Schools on Nov. 1st, 1897,

BY SIR WILLIAM THOMSON, M.D. R.U.I., F.R.C.S. IREL,
PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

LADIES AND GENTLEMEN,—In inaugurating to-day the winter session of your studies I have to repeat on behalf of the council, the professors, and myself our most cordial welcome. If these words are trite I ask you to believe that they are very sincere—for to us who are your seniors it is always a pleasant duty to meet generation after generation of our younger fellow students who are setting out upon the path which we, too, have trod. Days like this may tell us that we are growing older, which is not a pleasant reflection; but they bring back to us the memory that we, too, had a beginning of study as you have; that we were filled with all the hopes and legitimate ambitions which I trust inspire you; and that we made our youthful resolves, as I beg of you to make them to-day, to strive with all our might to do our duty in the world.

The school which you have joined is one to which you may well be proud to belong. It has had a long and illustrious life. Out of these halls have passed crowds of men who have gone into all the corners of the earth doing credit to the fair name of their country, and upholding, as the phrase of the declaration of our Licentiates goes, "the honour and dignity" of our College. Among many others there occur to me at this moment three or four who have become exceptionally distinguished. One is our countryman, Sir William MacCormac, who at the present moment fills the Presidential Chair of the Royal College of Surgeons of England, and on whom Her Majesty has recently conferred a baronetcy, a man known the world over for his splendid attainments. In Australia Sir Thomas N. Fitz-Gerald, the leading surgeon of Melbourne, stands alone in that country as the first medical recipient of a Royal distinction. In India the principal medical officer of the army is Surgeon-General Gore, whom so many of us know and value so highly; and in Ireland to-day the Army Medical Department is presided over by our friend, Surgeon-Major-General Preston, who, like his comrade, bears honourable wounds received on the field of battle. The school to-day is, I am glad to say, full of the energy and vigour which are so necessary to success, and I am very sure that if you will only take advantage of your opportunities there are open to you all the rewards which are to be earned by absolute devotion to the work of your profession.

But let me say that this school has not a monopoly of excellence. The other medical schools of Dublin and of Ireland at large are all animated by the same desire to excel—to turn out the student fully prepared for the labour of his life. Whatever rivalry exists is not a parochial one. I trust we all cling to the school in which we were taught. We like to revert to our early associations with it, to watch the career of our companions of those days, and to rejoice when we see some new glory added to its name. I do not care much for the man who, without some very special cause, does not stand up for his school or college or university. I like him to think it the best. I like to know that his young and generous affections have fastened themselves upon the place where his early thoughts began to develop and were shaped for the career which he has chosen. Therefore I hope you will stick up for your school. But I should like you to remember that for the outside world there is even a higher ground upon which you may stand. You may belong to this college or that University, but you are students above all of the Irish Medical School, and in that fact you may well find a power to evoke your pride. It has a record which is one of the brightest of this land, and it has helped in no small degree in the past, as it does now, to create and to mould the modern teaching of medicine and surgery. I congratulate you on belonging to it, and on holding the belief that you can find at home teachers as zealous and as learned as are to be found in any other part of the whole kingdom.

Last year when I had the honour of addressing you from this chair I endeavoured to impress upon you the advantages which members of our profession must derive from a liberal education, and I tried to interest you in the cultivation of general literature as a relaxation from the severer work in which you will be engaged. To-day I intend to occupy a short time in dealing with one or two matters which more nearly affect the actual study in which you are embarked.

I think I may assume that all of you have already begun to think of what you will do when you have passed your final examination. Some of you will probably pass into the struggle of civil practice with its great possibilities and great uncertainties. Some of you look forward to the public services, which have the advantage at all events of security of income with a fair share of honours. You cannot, therefore, fail to be interested in the agitation, which seems to arise with almost rhythmical regularity, concerning the Army Medical Service. You are, of course, aware that at the examinations held in August last candidates to fill thirty-six places were advertised for, and that only twenty-two presented themselves, and that in February last there were thirty-five vacancies and only twenty-six candidates, of whom but thirteen qualified to enter the service. In the two preceding competitions practically the same state of things existed. The result is that at the present moment there are over eighty places vacant—places which cannot be filled. That is a very startling fact, because in some respects the Army Medical Service offers a splendid career to a young surgeon. It has its risks of course, but a man who enters it must accept them, and we know that they have not in former times prevented some of the best of our Licentiates from joining. In a monetary sense it far exceeds the combatant branches. In addition to better pay it is possible for a man to leave the service after twenty years with a pension of a pound a day, and so on, in proportion

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to time. Compared with the ordinary results in civil life this is a very exceptional position, and therefore the dissatisfaction which has led up to this abstention of candidates must be of a serious character. Several commissions have sat to take evidence as to these grievances, and warrant after warrant has been issued yielding certain claims. But a number still remain unsatisfied. I do not propose to occupy your attention with these in detail, but I shall shortly refer to one or two that stand pre-eminent.

The primary grievance is a question of rank, and here we find the views of the combatants and the surgeons directly at variance. The medical officers declare that although they are styled Surgeon-Captains and Surgeon-Majors, and so on, these titles give them no real rank whatever in their relation to other officers and men of the army, and that they are constantly subjected to humiliations which make their position unbearable. The rank is a departmental rank; that is, they are Surgeon-Captains within their own department, and it is alleged that the other officers make this difference felt in such a way that the example set is followed by the rank and file. Indeed, at the Camperdown Commission of 1890 one very distinguished general officer said he addressed the head of the Army Medical Department as "W. MacKinnon, Esq., C.B., Director-General Army Medical Staff," although the title to which that gentleman was entitled was "Surgeon-General MacKinnon," and he was marked in the Army List as "ranking as Major-General." Now it may be supposed that the army surgeons have only to do with the sick in hospital, and the wounded on the field. But they have actual military duties to perform. They have under their direction a body known as the Medical Staff Corps, which is composed of bearers and male nurses, and, generally, of the men who aid in rescuing the wounded, and carrying all the equipment of hospitals on the field. These men are drilled by medical officers and marched into action by medical officers. The position of civilian Mr. John Smith, Surgeon, then, in command of a disciplined bearer company, would thus be rather an anomalous one.

The case on the opposite side is that medical men in the army have only rank in their own department, and that to give them real rank in the army, or to call them after the form of "Captain Smith, Surgeon," would be to place them in a ridiculous position. It has even been unwisely alleged that if this plan were adopted a case might occur in which a medical officer would take the command of the combatants in the event of the officers above him being disabled. As a matter of fact such a thing has happened, when all the Combatant officers were wounded; and you will be glad to hear that the surgeon, an Irishman, and a Fellow of this college, led his men to victory and was promoted for it. But no one has ever made such an absurd claim as that of combatant command. Moreover, in other corps officers who are given rank have what is called limited command, that is, only over the men in the special body to which they belong. Therefore, there is no force whatever in the objection to which I allude, and it appears to have been made without knowledge of the laws of the service. But we have examples in other countries of how the system works. If we take Switzerland we find a citizen army which is turned out every year for a month's training. It is put on war footing to carry out the manœuvres. I am assured that there are many things in that army which we might copy with advantage. But there we find the private practitioner summoned to his duty as a military surgeon. He at once becomes captain or colonel, as the case may be, and after his labours are over he reverts to his old position and assumes his civilian title once more. His distinguishing mark on the field is the Geneva Cross on his arm, and no one thinks of his being mistaken for a combatant.

But it may be further stated on behalf of the army surgeons that they are the only officers who are denied the simple title of their rank. The captain of Engineers is not called Engineer-Captain, but Captain, Royal Engineers; nor do we hear of Paymaster-Colonel or of Army Service Corps Major. The officers of the Army Service Corps are now Majors, Captains, Lieutenants, and the same titles are extended to the pay department and to some army schoolmasters. There are no prefixes to dilute the rank. As to the Pay Department the answer is made that the officers have already attained rank as combatants. That I admit. But I reply that they have resigned their positions as combatants and can never go back. They have passed into a branch which is purely civil; they certainly have not to discharge their duties under fire; but still they continue not only to hold these titles but to pass on step by step until they receive the title of Colonel. It is true also that some of these are honorary only, but they have a distinct social significance, and they serve to show that there is a liberality in the extension of these advantages to other departments which is refused in the case of the medical department. Let me say at once that I am trying to bring before you some points in the case made by the medical officers. I see certain difficulties in the way, but then I must remember that we are looking at the whole matter from a standpoint outside the army. We cannot understand the thousand and one matters which cause friction as do the men who spend their lives in the service. All we can say is that more than three-fourths of the medical officers claim army instead of departmental rank, that they are in the best position to judge of the importance of this concession, and that the solutions of the difficulty which they propose are based upon experience.

A second claim which is made is that the whole of the medical service should be converted into a Royal corps. The arrangement which at present exists is a curious one. The surgeons form a body which is called officially the Army Medical Staff. All the men who constitute the bearer companies and male nurses, and who are concerned in general hospital work, whether in the field or at stations, are called the Medical Staff Corps. In other words, the officers are in one group and the men are in another, and they do not even wear the same uniform. If this plan were carried out throughout the army we should have an extraordinary condition of things, for the combatant officers would be nominally separated from the soldiers whom they had to command in action. The necessity of having the whole medical apparatus—if I may so call it—of the army formed into one body is obvious. In these days the succour of the wounded is one of the most important obligations which attach to the general conducting a campaign. Organisation and a perfect technique are indispensable if the maimed are to be rescued quickly and successfully treated. The men who have to do this work should be under the sole direction of officers whose training fits them for that position. For really efficient work it is essential that these two bodies should be formed into what is known as a unit. In this way the men know their officers and the officers their men. In a united corps the surgeons would soon judge the quality of their subordinates, their proficiency, how far they could be relied upon in difficulty, and all the advantages which arise from the daily contact of commander and men. If such a body existed it would be possible to improve the internal defects which now exist in the medical department itself and to place it on a higher level of efficiency by a system of continued professional education. But at present the officers and the men are in two separate groups. They are moved about independently of each other; and when an emergency arises so many medical items are suddenly thrown together to settle down as best they may. It is very much as if in the case of a battery of artillery a number of officers, gunners, and drivers who had never met before were sent to take charge of guns that they had never fired, and horses they had never ridden, and were bundled into action at once. If this strange separation is good, why does it not prevail in the Royal Engineers or other departments? But it would be destructive of that pride which every soldier feels in the branch to which he belongs. The medical officer, then, naturally anxious that his department should be kept at the highest standard of efficiency, asks to have the present system of dual bodies abolished, and by the creation of a Royal Medical Corps to establish that cohesion and *esprit* which unity alone will give.

There are other matters of perhaps smaller importance which I will not discuss, but in their aggregate they have served to create a discontent among army medical officers which has culminated in the present condition. I know that the combatant branches of the army declare that they wish to have good surgeons, and that they would be glad to remove any causes of complaint. But they are unanimous on the question of rank, and they will not yield upon that point. I have said already that we are only outsiders, but I think we are able to say from what we see that that demand is crucial. Whatever is done the rank which is given to the medical officers must not be a mere departmental name, but a real rank which will secure them from the petty indignities to which their position subjects them. The present rank means nothing, and the medical officers have learned to understand that they are only civilians in the eye of the army. Nothing, I think,

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could have been more unfortunate than the application of this term. It has been made free use of and it has served to establish many in their hostility to the medical officers. But are they civilians? They hold commissions in Her Majesty's army, they wear a uniform and carry arms, and in an army they are placed in charge of the thousands of armed men and the transport which go to make up a hospital train. In action they are with the fighting line. Of necessity they are where the fire is heaviest, for their duty is to relieve the wounded on the spot where they fall, and for this reason you will realise why it is that the death-rate of army medical men is nearly twice as great as that of the combatant officers. I looked into the Army List the other day and I found that nearly twenty surgeons who are actually serving or are alive and retired have won the Victoria Cross. And I noted also that they are called "military recipients" of this splendid reward "for valour in battle." If they are "military" they are not "civilian." I press my argument further by pointing out that no civilian can win the decoration. The Victoria Cross warrant expressly declares that the Cross is for the naval and military services only, and that no "other circumstances or condition whatsoever, save the merit of conspicuous bravery, shall be held to establish a sufficient claim to the honour." What, then, becomes of the allegation that army medical officers are only civilians? They are not only in the army, but they are of the army. Every circumstance of their official lives proves it, and there will be no contentment until that fact is established by warrant beyond all cavil.

I have brought these matters before you so that you may understand some of the reasons of the outcry which is raised against the Army Medical Service. Even with these drawbacks many will find it to their interest to go forward for appointments. I by no means blame them. The competition of life is very keen, and I do not advise anyone to hold back. Perhaps I shall be condemned for this statement, but who, I ask, will provide an equally secure position for the young men who follow counsels of another kind? I know of none; and it seems to be asking too much of our students to stand back and thereby perhaps sacrifice a life's career. Each knows his own necessities and desires. We will do all in our power, as we have done, to help forward army medical reforms, but we must not speak hardly of those who in spite of disadvantages seek entrance into the service. At the same time the authorities must know that many brilliant men are looking elsewhere for a career, and that it depends upon an enlightened policy whether the medical department of the army will be again largely recruited from among the most promising of our young surgeons.

I pass from this question of the day to congratulate the prize-winners. Mr. D. A. Fitzgerald and Mr. F. J. Palmer have been awarded the Carmichael and the Mayne Scholarship respectively, and having regard to the extent and severity of the course their success is a brilliant one. In the classes Mr. J. S. P. Stewart has won three firsts and a second, and Mr. E. Glenny two firsts and a second, a result which points to still higher distinction in the future. Then Miss Dreaper and Mrs. Hennessy have each carried off a first and a second prize, and thus illustrated the fervour with which our lady students devote themselves to their work. The rest of the list shows that a large proportion of the class has engaged diligently in the studies of the various years, and it is a special gratification to find that in every instance a candidate has qualified for a first rank. Of the number who just failed in the struggle I have no record, but I wish to encourage them and all others to try again. They must not take defeat to heart too keenly and throw down their hands in despair. I have known some distinguished men who never could win a school prize, although later they earned the highest successes in life; and I trust that some of you who miss your names from the returns will yet achieve that which you have lost to-day. There is much that I should like to say to you now, for next year another President will speak to you from this place; but time is running out and I have already trespassed upon your indulgence. But I should like you always to bear in mind in your work that examinations are not the only things for which you should read. To have in your mind constantly that you must only make up what will get you through the portal is demoralising; it begets the worst of all mental processes—cramming. Prepare for your examination by all means, but let your reading be wide and generous. And, next, I sometimes feel that students do not value as they ought the work in the hospital wards. Give to this all the time you can spare, not with your hands in your pockets, as I occasionally see, but with your mind keenly set upon the cases which are before you. For, necessary as all teaching in the schools is, and important as it is that you should be highly informed in the subjects taught here, it is with the living sick you will have to deal when you come to practise. No amount of knowledge will avail you unless you can apply it—unless you are able to recognise disease or injury and use your remedies. In a very few years these classes which I now address will have passed away into the world. You will be scattered here and there; some in large cities, but many in places where you will be isolated from the helping mind and hand of a member of your profession. Then you will realise in its fullest extent what responsibility is—what it means to have in your charge a case which you find difficult to read and which you must deal with alone. Nothing will be more distressing to you than this failure to help if after all the fault is your own. I ask you, therefore, to try to realise that responsibility now before the day of humiliation comes, and by your industry to relieve yourself of the possibility of self-censure.

With these words I draw to a close, only waiting to assure you that your teachers will do their part, that we all wish you the highest success, and that we shall look to you with confidence to uphold the reputation of the medical school of this old city of Dublin.

SOME NOTES ON OVARIAN TUMOURS, WITH A FIRST SERIES OF FIFTY OVARIOTOMIES.[1]

BY WILLIAM JOHN GOW, M.D., M.R.C.P. LOND.,
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THE remarks contained in this paper are mainly founded on a series of fifty cases in which I have performed the operation of ovariotomy. The term "ovariotomy" is used to indicate the operation for the removal through an abdominal incision of cystic and solid tumours of the ovary, and also the operation for the removal of parovarian and other broad ligament cysts. No case is included where the ovaries were removed for the purpose of checking the active growth of fibroid tumours or where the appendages were removed on account of salpingo-oöphoritis.

It is well known, though none the less remarkable, that in many cases no symptoms other than those of enlargement of the abdomen are complained of by women who are the subjects of ovarian or broad ligament tumours, and that it is on account of this enlargement alone that they generally present themselves for treatment. Symptoms are, however, by no means always absent. Among my own series of cases disturbances of menstruation were the commonest of all symptoms and were noted in eleven instances. In three of the cases there was amenorrhœa for a longer or a shorter period, and in eight cases there was menorrhagia or metrorrhagia which appeared in point of time, as far as could be judged, to correspond to the growth of the tumour. It did not seem possible to attribute the alteration in the menstrual function to mere coincidence, but I had previously believed that an ovarian tumour, if it affected the menstrual flow at all, more often led to its cessation than to its increase. The history of the cases here recorded, however, does not support this view.

So far as it is possible to judge there does not appear to be any connexion between the variety of tumour and the nature of the change in the menstrual function. It has been asserted that with fibromatous tumours of the ovary menorrhagia is common, and in the single case of fibroma of the ovary which I have operated on menorrhagia was certainly present. The co-existence of amenorrhœa with the development of an ovarian tumour often leads the patient to believe that she is pregnant and may even mislead the medical attendant unless a careful routine examination is made. One of my patients, who was a single

[1] A paper read before the Harveian Society on Jan. 7th, 1897.

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woman, not only believed that she was pregnant, but had even succeeded in identifying the supposed father, and was up to the time of operation in receipt of a weekly allowance which had been granted to her as the result of legal proceedings. It is probably the only case recorded in which an ovarian cyst has proved to be a source of income. It is much more common for a gravid uterus to be mistaken for an ovarian tumour than for an ovarian tumour to be mistaken for a gravid uterus, and although in many cases it is hardly possible to make such an error, yet in some cases the differential diagnosis is not made without a good deal of trouble. If a well-marked fluid thrill is present the idea of pregnancy may practically be put out of court at once, but it is not uncommon for an ovarian tumour to resemble very closely the consistence of a gravid uterus at the fifth or sixth month, and secondary cysts projecting on the surface may easily be mistaken for fœtal parts. Fœtal parts, however, move away from beneath the fingers of the examining hand, whereas the projecting knobs of the ovarian cyst remain permanently in the same place. Of course, in many cases a careful bimanual examination will reveal the unenlarged uterus lying apart from the tumour, but some broad ligament tumours and tumours which have formed adhesions to the uterus move with the cervix. A careful consideration of the history of the case and a thorough physical examination will rarely leave any real doubt as to the diagnosis. In cases of doubt it is always better to wait for one or two months rather than run the risk of opening a patient's abdomen and finding nothing but a gravid uterus. Menorrhagia and metrorrhagia seem to be about equally common, but it is very rare to see the loss sufficiently profuse to induce any marked degree of anæmia. The removal of the tumour has always led to the disappearance of this trouble, and this supports the view that the occurrence of menorrhagia or metrorrhagia is not a mere matter of coincidence.

Pain is another symptom which is fairly common, and sometimes is very difficult to account for. Twisting of the pedicle or suppuration and inflammation of the cyst, of course, are well-known causes, as is also rapid distension of the cyst from hæmorrhage into it, but in several of the cases recorded very severe pain was complained of and yet at the time of the operation nothing could be discovered to account for it. In one case, a girl, aged twenty-five years (Case 31), who had a parovarian cyst on the right side reaching to two inches above the navel, severe paroxysmal attacks of pain were complained of which were sometimes so acute as to induce fainting, and yet at the time of the operation there were found to be no adhesions nor any evidence that the pedicle had ever undergone torsion. This shows that the occurrence of intense abdominal pain in a woman with an ovarian cyst does not necessarily mean that the pedicle has become twisted, or even that there are necessarily any adhesions between it and adjacent parts. In several other cases symptoms of a very similar nature were observed, for which no very definite cause could be discovered at the time of the operation. It seems probable that these attacks are of a colicky nature, and are due to irregular intestinal contractions caused by the presence of the tumour. Attacks of paroxysmal pain of a similar nature were a prominent symptom in a patient of mine who suffered from fibroid tumours complicating advanced pregnancy, and in her case sickness and some degree of constipation usually accompanied the onset of the pain, thus suggesting its intestinal origin.

Another condition which can hardly be spoken of as a symptom, but which sometimes is associated with the presence of ovarian tumours, is procidentia uteri. Complete procidentia in young virgins is undoubtedly a rare condition, but in six cases of this nature which I have myself seen in three of them ovarian tumours were present. This would certainly seem to indicate that there is some causal relation between ovarian tumours and procidentia, and shows how important it is in all such cases to make a thorough abdominal examination in order to determine if any ovarian new growth exists. In the cases which have come under my own notice the tumours lay above the pelvic brim, so that they could at that time, at any rate, exert no direct pressure on the pelvic floor, although of course when smaller they might have done so. This fact seems to suggest that if the procidentia is more than a coincidence it must be due to altered pressure relations within the abdomen, which would no doubt be more easily produced in young women with firm, resistant abdominal walls than in older women whose abdominal walls had already been stretched by child-bearing or weakened by the use of corsets. My youngest patient in whom procidentia was associated with the development of an ovarian cyst was fifteen years old. When first seen both anterior and posterior vaginal walls were completely everted, the cervix forming the central portion of the mass which lay outside the body. After ovariotomy she still had to wear a small ring to keep the anterior vaginal wall from bulging downwards, but before the operation no instrument could be retained. The tumour in this case lay in the abdominal cavity above the pelvic brim and did not extend into it.

Suppuration of an ovarian cyst is always the result of infection with pyogenic organisms. The infective agent may reach the interior of the cyst by one of three routes: (1) the lymphatics; (2) the Fallopian tubes; and (3) the intestine or vermiform appendix. Among my series of ovariotomies I met with four cases of suppurating cyst. Some authorities hold that by far the commonest route for the pyogenic microbe to take is the Fallopian tube. But in two of my cases the infection had certainly not reached the interior of the cyst by this way because in one of them the corresponding tube was perfectly healthy and in the other it was converted into a hydrosalpinx, which was not adherent by any part of its surface to the ovarian cyst, but was connected with it by a distinct and healthy mesosalpinx. In both of these cases the intestine was closely adherent to the surface of the cyst, and it seems therefore probable that the micro-organisms had passed from the interior of the bowel to the interior of the cyst, although in one case the suppuration dated from childbirth—or, at any rate, since that time the patient had suffered much pain in her tumour and had emaciated very markedly. No bacteriological examination of the pus was made, and therefore no absolute proof can be offered that the intestines were the source from which the infection was derived. In another case (Case 44) the suppuration was induced by a vaginal operation which had been performed six months before, apparently for the purpose of removing a uterine polypus, the operation being followed, according to the patient's account, by high fever and delirium, which lasted many weeks. In this case the pyogenic microbes probably reached the cyst through the lymphatic vessels or Fallopian tube. It is perhaps worth noting, but probably is a mere coincidence, that all the cysts which had suppurated lay on the right side. In three out of the four cases there was no rise of temperature, but in three of them there was marked emaciation. The pus contained in suppurating ovarian cysts is generally found to be sterile—that is to say, it contains no living micro-organisms, although they may be met with in the walls of the cyst; and this fact is one of considerable importance because it explains, what is well known practically, how if some of the pus escapes and soils the peritoneum there is very little real danger of septic peritonitis developing.

In four cases the cyst had ruptured. In two of them the rupture was the result of direct violence, and in the other two it occurred spontaneously. In the first case the patient, who lived in the country and was known to have had an ovarian tumour for eight years, fell out of a cart and alighted upon her abdomen, which was the most prominent part of her body. When seen by her medical man a few hours later she was found to be suffering from symptoms of collapse and complained of considerable abdominal pain, and the tumour, which was previously a very large one, had become much smaller and less well-defined. She remained in bed for six weeks. The tumour, however, soon began once more to increase in size, and four months later she was sent up to the Royal Hospital for Children and Women, and I removed a large very adherent papillomatous cyst of the right ovary. The omentum had to be extensively resected before the tumour could be drawn out.

In the second case (Case 33) the tumour, a dermoid, was ruptured during delivery. The posterior vaginal vault was also torn through, opening up Douglas's pouch, so that most of the greasy contents escaped externally. The collapsed cyst was removed by abdominal section on the fourth day of the puerperium. Spontaneous rupture of an ovarian cyst was observed twice in the same patient (Cases 39 and 50). On the first occasion a large multilocular cyst of the left ovary was removed, and on opening the abdomen the peritoneal cavity was found to contain a quantity of extremely thick gelatinous material which had escaped from one of the locules. The cyst wall was remarkably friable and tore with great ease. The peritoneum covering the intestines was

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found to be deeply reddened and roughened so that it looked like velvet pile. Eight months later a second operation had to be performed owing to the development of a similar tumour in the right ovary, although this organ when examined at the time of the first operation was observed to be in no way enlarged. In this instance also the cyst had ruptured spontaneously and a large quantity of ovarian fluid was present in the peritoneal cavity. On neither occasion were there any special symptoms indicative of the extravasation of the cyst contents. I have already alluded to the question of the differential diagnosis of ovarian tumours from intra-uterine pregnancy, but the diagnosis of ovarian tumours from uterine fibroids, though sometimes easy, is, on the other hand, sometimes impossible, and this illustrates the importance of never undertaking to perform an ovariotomy without being prepared to perform abdominal hysterectomy if the tumour turns out to be uterine instead of ovarian. Until lately I had always thought that the presence of a souffle was distinctive of a uterine tumour of some sort, but in one of my cases (Case 42) on which I operated last summer a very highly-marked souffle, identical in character with that which is heard over a gravid uterus, was audible all over the abdominal tumour, and yet when the abdomen was opened it turned out to be an ovarian cyst occupying the left broad ligament. The tumour was not unusually vascular and no great vessels were seen running across its surface, and the only way in which I could account for the presence of the blowing murmur was by supposing that the sound originated in the aorta or iliac vessels owing to their being pressed upon by the tumour and was thus transmitted to the surface of the abdomen. The error in diagnosis—for I believed it to be a fibroid—was rendered more easy to make by the fact that the tumour filled the whole broad ligament and ran close up to the uterus, so that tumour and cervix moved together as one mass. Soft myomata which project from the surface of the uterus to one or other side of the pelvis, whether sessile or pedunculated, may be mistaken for ovarian cysts, and no amount of examination will sometimes prevent an error in diagnosis.

Another condition which may easily be mistaken for an ovarian tumour is extra-uterine gestation. Only a few days ago I operated on a woman who had what I thought was an adherent ovarian cyst lying in the pelvis behind the uterus but found on opening the abdomen that I had to deal with a tubal pregnancy of three months' development. In this case there was nothing in the previous history to suggest the true nature of the tumour which was felt. On another occasion a middle-aged woman presented herself with a hard irregular tumour in the left iliac fossa which was diagnosed as an ovarian dermoid. At the time of the operation it turned out to be an old six months' extra-uterine gestation which was encapsuled, and had evidently long since ceased to develop. The condition of the fœtus and sac, and the history subsequently obtained from the patient seemed to show that the gestation must have originated some two or three years before. In most instances, however, a careful consideration of the history and physical signs enable a differential diagnosis to be made; but in some exceptional cases like those above alluded to a correct diagnosis is hardly possible. One case at least (Case 39) merits a more detailed consideration because of certain points of unusual interest connected with it. The patient, who was sixty-three years of age, first came under observation in March, 1896, on account of a lump in the abdomen which had been noticed for five or six months. She had suffered, and was still suffering, from well-marked diabetes accompanied by emaciation. This disease seemed to have started about five years before, and at one time the symptoms were extremely serious, but under the influence of a rigid diabetic diet they became considerably less urgent, although she still continued to pass sugar in the urine. The abdominal tumour was very hard and nearly fixed and reached up to the navel; it was not tender and there was no ascites. It was feared that the tumour was malignant, but an exploratory operation was advised, although the existence of the glycosuria obviously increased the risk of such a procedure. At this time the amount of sugar passed was about eight grains to the ounce. The patient, however, did not come up to town for another two months, and during this interval the tumour grew rapidly, and now reached up to the ribs. The abdomen had become much more prominent, and the patient complained of considerable discomfort, and was only able to get about with great difficulty. There was at this time distinct evidence of free fluid in the peritoneal cavity. The urine contained sugar as before. Sir John Williams saw the patient in consultation with me, and it was decided to perform an exploratory operation. A week later I therefore operated upon her, and on opening the abdomen found that the peritoneal cavity contained a large quantity of thick colloid fluid which had been poured out into it as the result of the rupture of one of the compartments of a multilocular cyst of the left ovary. The tumour itself was non-adherent, and consisted of a large number of small cystic cavities containing a jelly-like material. This was scooped out and the tumour removed. The peritoneal cavity was cleansed as thoroughly as possible by means of irrigation with hot water. The right ovary was examined, but as it was quite small it was not removed. The patient made a good recovery. During the first week after the operation the urine passed was of very low specific gravity, and no sugar could be detected, but during the second week the sugar reappeared.

The hardness of the tumour was due partly to the extreme thickness of the fluid and partly to the large number of cavities in which it was contained. About four months after the operation the patient noticed another tumour in the right iliac fossa. It continued to grow, and when seen in February of this year there was a firm mass the size of a man's head occupying the right half of the abdomen, lying well above the pelvic brim. On opening the abdomen for a second time (Case 50) a tumour was found originating in the right ovary of a precisely similar nature to that of the left ovary, which had been removed eight and a half months before. The peritoneal cavity on this occasion also contained a quantity of colloid material which had escaped from the tumour, and it was necessary to again resort to irrigation to get rid of it. The patient once more made a perfectly uneventful recovery. I know of no other recorded case where ovariotomy has been twice successfully performed on a patient who was the subject of diabetes. On the second occasion the urine was tested and showed the same amount of sugar as before.

Dr. Halliday Croom, in the "British Gynæcological Journal," February, 1896, relates the case of a woman on whom he performed ovariotomy who at the time of the operation was the subject of glycosuria. According to him very few cases of ovariotomy in patients with diabetes or glycosuria have been reported, and but little is known as to the risks of operating under such circumstances. In Dr. Croom's case there was no thirst, polyuria, or emaciation, and the glycosuria seemed to have developed since the appearance of the tumour, and certainly disappeared a few weeks after its removal, and Dr. Croom believed that the tumour caused the diabetes, possibly from irritation or pressure upon the pancreas. The case which I have related above is interesting, not only on account of the fact that the patient was suffering from diabetes at the time of the operation, but also as an illustration of the difficulty of being sure whether an ovarian tumour is malignant or not. Hardness, lack of mobility, rapid growth, and the presence of ascitic fluid may all prove misleading, so that in every case in which there is the least room for doubt an exploratory operation should always be undertaken. An incision sufficient to admit two fingers is often all that is necessary, and if on examination there is clear evidence of malignancy it is of great importance to avoid handling the tumour unless it is free from adhesions, when, of course, it should be removed in the ordinary way. If, as is often the case, the growth is found to have infiltrated and formed adhesions to the neighbouring parts it is very undesirable to penetrate it with the finger—a thing which is very easy to do when the growth is soft, because it certainly seems to greatly increase the rapidity with which the disease subsequently spreads.

Ovariotomy has nowadays become such a common operation, and so much has been written about it, that it is not necessary for me to speak of it in any detail. The results of the operation have year by year shown a lessening mortality until at the present day it is quite exceptional for it to be followed by a fatal issue. Among my own series of fifty cases, which represents all the ovariotomies performed by me up to the present time, there has been no death, and in the great majority of the cases the convalescence was free from any exciting incident. The success which attends the operation is undoubtedly dependent on a rigid attention to all the details of antiseptic surgery. It is difficult enough to always attain to the ideal, and there will probably still occur from time to time an occasional death from septic infection,

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TABLE SHOWING PARTICULARS OF FIFTY CASES OF OVARIOTOMY.

No.	Age.	Date of operation.	Place of operation.	Nature of tumour.	Result.	Remarks.
1	58, widow.	1892 Sept. 15th	Royal Hospital for Women and Children	Mainly solid; some cystic spaces, probably sarcomatous; right.	Recovered	Patient died two years later with recurrent growth in abdomen.
2	26, married.	Nov. 5th	Ditto	Papillomatous; right.	Ditto	Suffered from mitral stenosis.
3	42, married.	1893 Jan. 14th	Ditto	Papillomatous; left.	Ditto	—
4	25, married.	Jan. 20th	Ditto	Suppurating; right.	Ditto	Drainage; sinus formed; subsequent removal of silk ligature followed by closure of sinus.
5	26, married.	Jan. 27th	Ditto	Broad ligament cyst; left.	Ditto	Cyst dipped deeply into the pelvis; enucleation was difficult; cavity drained. A few days later fæcal matter came through tube; subsequently healed soundly.
6	50, married.	May 18th	Ditto	Papillomtaous; right.	Ditto	Very adherent to bowel and omentum.
7	33, married.	June 20th	Ditto	Multilocular; left.	Ditto	—
8	48, married.	June 27th	Ditto	Solid; soft and friable; probably malignant; left.	Ditto	No adhesions.
9	38, married.	Dec. 22nd	Ditto	Broad ligament cyst; right.	Ditto	Enucleation; drainage of cavity.
10	29, single.	1894 Feb. 6th	Ditto	Sarcoma; right.	Ditto	Large tumour; adherent to under surface of liver; small portion left behind. Left hospital three weeks after operation; subsequent death from recurrence.
11	36, single.	Feb. 20th	Ditto	Fibroma; right.	Ditto	Extensive attachment to back of broad ligament.
12	51, married.	March 13th	Ditto	Broad ligament cyst; right and left.	Ditto	Patient had a large uterine fibroid, which was left untouched. Cysts enucleated; cavity on right side drained.
13	32, married	July 3rd	Ditto	Papillomatous cyst; left.	Ditto	—
14	24, single.	Aug. 21st	St. Mary's Hospital	Multilocular; right.	Ditto	—
15	45, married.	Sept. 18th	Ditto	Multilocular; right.	Ditto	Twisted pedicle. Tumour contained blood.
16	38, married.	Oct. 9th	Royal Hospital for Women and Children	Multilocular; right.	Ditto	During convalescence had an attack of right lobar pneumonia lasting six days, ending by crisis.
17	29, married.	Oct. 23rd	Ditto	Parovarian; right.	Ditto	—
18	48, married.	Nov. 1st	Ditto	Multilocular.	Ditto	—
19	15½, single.	Dec. 5th	Ditto	Multilocular; right.	Ditto	Suffered from complete procidentia uteri.
20	37, married.	Dec. 14th	Ditto	Multilocular; right.	Ditto	Twisted pedicle very adherent.
21	43, married.	1895 Jan. 17th	Ditto	Unilocular; left.	Ditto	—
22	44, married.	Feb. 22nd	Ditto	Partly solid.	Ditto	Suffers from mitral stenosis.
23	44, married.	Feb. 25th	Ditto	Papillomatous; right.	Ditto	Patient operated on for similar tumour on left side, Jan. 14th, 1893 (see Case 3).
24	21, single.	April 23rd	Ditto	Multilocular; right.	Ditto	Tumour reached to ensiform cartilage.
25	32, married.	May 21st	Ditto	Multilocular; left.	Ditto	—
26	16, single.	June 25th	Paddington Infirmary	Multilocular; right and left.	Ditto	Operated on by request of Dr. Hillier; tumour on left side larger than that on right.
27	41, married.	July 4th	Royal Hospital for Women and Children	Bilateral; right suppurating.	Ditto	Vermiform appendix closely adherent to cyst on right side.
28	29, single.	Aug. 10th	St. Mary's Hospital	Dermoid; right.	Ditto	Procidentia uteri.
29	39, married.	Aug. 23rd	Royal Hospital for Women and Children	Multilocular; right.	Ditto	—
30	32, married.	Aug. 31st	St. Mary's Hospital	Papillomatous cyst; right.	Ditto	—
31	25, single.	Aug. 31st	Royal Hospital for Women and Children	Parovarian; right.	Ditto	—
32	56, married.	Sept. 10th	St. Mary's Hospital	Papillomatous; left.	Ditto	—
33	31, married.	Dec. 21st	Royal Hospital for Women and Children	Dermoid; right.	Ditto	Operation on fourth day of puerperium; tumour ruptured during labour and vagina was lacerated.
34	22, married.	1896 Jan. 7th	Ditto	Multilocular; right.	Ditto	—

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TABLE SHOWING PARTICULARS OF FIFTY CASES OF OVARIOTOMY—*continued*.

No.	Age.	Date of operation.	Place of operation.	Nature of tumour.	Result.	Remarks.
35	31, single.	March 12th	Metropolitan Hospital	Parovarian; left.	Recovered	—
36	64, widow.	March 25th	St. Mary's Hospital	Multilocular; left.	Ditto	—
37	39, married.	April 13th	Royal Hospital for Women and Children	Parovarian; right.	Ditto	—
38	46, married.	June 2nd	Ditto	Bilateral; right suppurating, left dermoid.	Ditto	Much emaciated; tumour on right side, very adherent; drainage for twenty-four hours.
39	63, married.	June 8th	Nursing home	Multilocular; left.	Ditto	Patient suffered from diabetes mellitus; tumour had ruptured, and abdominal cavity contained much colloid material.
40	27, single.	June 29th	Royal Hospital for Women and Children	Multilocular; left.	Ditto	—
41	21, single.	July 14th	Ditto	Parovarian cyst; left.	Ditto	—
42	32, married.	Aug. 24th	St. Mary's Hospital	Papillomatous; left.	Ditto	Cyst was intra-ligamentous.
43	29, single.	Aug. 28th	Metropolitan Hospital	Dermoid; left.	Ditto	—
44	34, married.	Sept. 5th	St. Mary's Hospital	Suppurating cyst; right.	Ditto	Patient very thin and ill; tumour to navel: many adhesions.
45	27, single.	Sept. 8th	Ditto	Multilocular; right.	Ditto	—
46	36, married.	Sept. 29th	Ditto	Multilocular; left.	Ditto	Large amount of ascitic fluid.
47	39, married.	Oct. 27th	Royal Hospital for Women and Children	Broad ligament cyst; right.	Ditto	Tumour very adherent; right Fallopian tube inflamed.
48	56, married.	1897 Jan. 26th	Ditto	Multilocular; left.	Ditto	Twisted pedicle; universally adherent.
49	22, single.	Feb. 9th	Ditto	Parovarian; left.	Ditto	Tumour occupied the whole abdomen.
50	64, married.	Feb. 25th	Nursing home	Multilocular; right.	Ditto	Patient suffers from diabetes; tumour of left ovary removed June 8th, 1896 (see Case 39); tumour had ruptured and abdomen contained much glairy fluid.

but when such a death from such a cause does occur it is somebody's fault and indicates a flaw in the antiseptic precautions adopted. Shock is, perhaps, almost the only cause of death after abdominal operations that we cannot altogether eliminate. There is, however, nothing in the whole range of surgery so difficult as to be consistently clean. Instruments and ligatures are boiled and then transferred to a tray of carbolic lotion, from which the operator takes them as necessity arises, without the intervention of any assistant. Very little time is lost by this arrangement and the risk of infection arising from this source is minimised. The sponges are taken by the operator or his assistant from a bowl of carbolic lotion, and wrung out as required. The operations for the most part were performed in a small theatre which is used for general surgery of all sorts, and the patient was subsequently removed to the general ward.

All operators have their special fads, and personally I lay considerable stress upon a short abdominal incision and the ligature of the pedicle in three or more sections except when it is unusually narrow. A three-inch incision is generally quite long enough unless the abdominal wall is unusually fat or the adhesions are very numerous. Exposure of the intestines is thus avoided and the likelihood of the scar yielding is considerably lessened. By ligaturing the pedicle in more than two sections the chance of secondary hæmorrhage from slipping of ligature is practically eliminated. As to the value of irrigation of the peritoneum with boiled water or saline solution there is much difference of opinion. For my own part I very seldom employ it—only three times in fifty cases of ovariotomy, and in two of these cases it was had recourse to simply as the readiest method of removing large quantities of very tenacious ovarian fluid which had previously escaped into the abdominal cavity from rupture of the cyst. If the peritoneum be soiled by the escape of some of the contents of a suppurating cyst it can be cleansed quite as effectively by sponging as by irrigation, and in such cases it is not by any means always necessary to drain. I have had considerable experience in the operation for the removal of suppurating tubes and ovaries and have never had occasion to regret that irrigation was not employed. If the results obtained by one who does not irrigate the abdomen are as good as those obtained by one who does, then the claims of irrigation fall to the ground. The abdominal incision is closed by means of silkworm gut sutures and no iodoform is used. The application of iodoform is certainly of no use, though it probably does no harm. The wound is dressed for the first time on the eighth day and half the sutures are then removed, the remaining half being left *in situ* for another five or six days. Of the after-treatment of cases of ovariotomy there is but little to say. If the patient is infected at the time of the operation she will almost certainly die, and if she is not she will almost certainly recover. An aperient is given on the third day, and castor-oil is usually the drug administered because of its reliability, and when the bowels have acted the patient is allowed to have solid food. The amount of misapplied energy that has been expended on patients after ovariotomy is enormous and does not appreciably influence the recovery. It is the precautions that are taken during the operation and not those that are taken afterwards that determine the fate of the patient.

Weymouth-street, W.

WEST OF ENGLAND EYE INFIRMARY, EXETER.—The annual meeting of this institution was held on Oct. 29th under the presidency of Mr. G. Franklin, J.P. The treasurer's statement showed that the ordinary receipts amounted to £1257, as against £1272 last year, and the ordinary expenditure was £1317, as compared with £1239 of the preceding year. The medical report stated that there had been 2780 patients under treatment during the year, of whom 2412 had been discharged (being 603 cured and 1758 benefited), leaving 327 out-patients and 41 in-patients under treatment on Sept. 30th. The daily average number of in-patients had been 41. The chairman expressed regret at the continued inability of the committee to proceed with the new buildings owing to lack of funds, the building fund at present being only £433, and added that although everything had been done that could be done the present institution was seriously defective in many respects.

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A CASE OF ANTEVERTED WANDERING LIVER.

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IN his "Treatise on Diseases of the Liver" the late Dr. George Harley wrote: "There is yet another possible source of error, though from its extreme rarity an error is unlikely to be committed. But, as the mistake is said to have once occurred, and it is quite possible it may occur again, it is but right that I should call attention to it—namely, the possibility of mistaking an anteverted small liver for an enlarged one." In the case that I record below, history has repeated itself to my own discomfiture. I have appropriated the term "anteverted" rather than "moveable" liver because the condition was rather one of axial rotation than of excessive mobility of the organ. The case will be seen to be one of peculiar interest, both because of the symptom complex and its post-mortem corroboration, and of the histological condition of the liver.

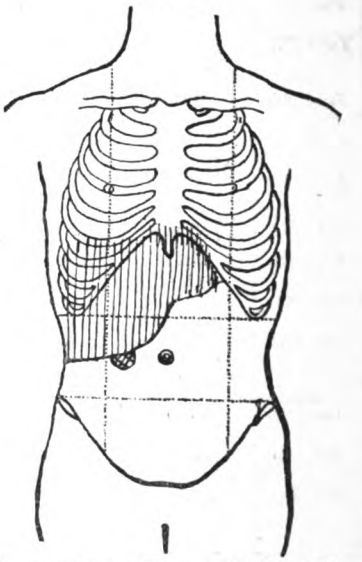
The patient, a woman, aged sixty-five years, attended the out-patient department of the Royal Free Hospital on May, 14th, 1897, and every subsequent week till July 7th, when she was admitted to the wards under my care. The following was the history of the patient when first seen. She complained of progressive weakness and pain all over, and there was yellowness and itching of the skin. The patient was married, but had had only one child, which was stillborn at full term; there was no history of parental tubercle or carcinoma; she had had twelve brothers and sisters, of whom only two were living, one brother having died from phthisis and the rest from unknown causes. When quite a child she had suffered with generalised dropsy; she did not know the cause of it but it was not associated with scarlet fever which she also had in childhood. The patient had had a left inguinal hernia for twenty-three years and hæmorrhoids for some years. Six months previously jaundice had set in insidiously with some abdominal pain but not of any severity. At the time she suffered a good deal from vomiting of a paroxysmal type, and was obliged to call in a medical practitioner, who ordered her to bed. In the course of a week or two the attacks of vomiting gradually subsided, but she lost flesh steadily. The jaundice became more intense; the appetite was completely lost; solids caused immediate nausea, so that only liquids were taken; since the illness commenced she had taken a quartern of gin daily, but prior to that she had never exceeded one and a half pints of ale a day. The bowels were at first constipated and the motions whitish and foul-smelling.

On May 12th she attended the out-patient department and was found to be in the following condition. There was intense obstructive jaundice of four months' duration. Liver dulness commenced at the sixth rib in the right mammary line and at the eighth rib in the mid-axillary line, and the edge could be felt at the level of the umbilicus. The enlargement appeared to be entirely of the right lobe; the surface was smooth; the edge was very hard and blunt; no nodules could be felt; and there was no pain on pressure. The gall-bladder could be clearly felt distended and projecting from beneath the edge of the liver about three inches to the right of the umbilicus.

Cancer of the liver was suspected, although no nodules could be felt and there was no marked tenderness or pain, but a primary seat could not be detected in the uterus or bowel, nor were there any indications of cancer of the stomach or head of the pancreas, so that the distended gall-bladder was fixed upon as the possible primary focus from which the disease had spread directly to the under-surface of the liver. The lungs were emphysematous and dry rhonchi were heard here and there on each side of the chest. For the next two months nothing special occurred beyond gradual emaciation and asthenia, with occasional attacks of acute pain in the right hypochondrium of a colicky nature. The constipation was relieved by a daily morning dose of mistura alba.

On admission to the wards on July 7th the patient was found to be much emaciated, and the conjunctivæ and the skin were a deep yellowish green in colour. The patient expressed herself as much more comfortable in bed than when getting about; she lay chiefly on her back, but could lie in any position. There were complete anorexia and frequent nausea; the mouth was very dry and there was a constantly unpleasant taste; the tongue was coated with a dry and dirty whitish fur; there was no pain and the patient rarely vomited after food. A good deal of troublesome flatulence was present; the bowels were now regular, but the motions were loose and white; the stomach was not distended, and no tumour could be felt there. The superficial abdominal veins on each side were enlarged; there was obvious fulness of the right hypochondriac and lumbar regions, extending into the epigastrium, but the abdomen as a whole was

FIG. 1.



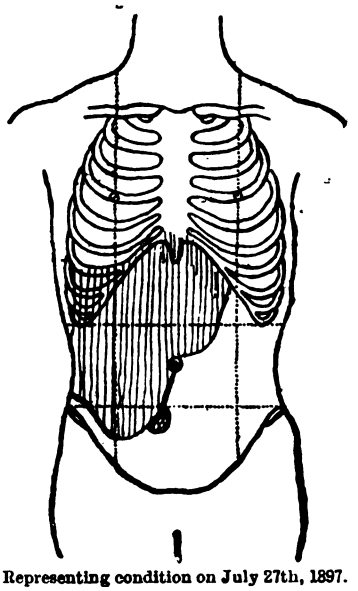
Representing condition on May 12th, 1897.

swagged over to the left, the intestines being apparently pushed *en masse* to this side; there was a large left inguinal hernia. The abdominal walls were very thin and flaccid, and the recti were separated; there was some tenderness on the right side of the epigastrium; a considerable tumour was felt reaching as low as the right iliac region, and entending upwards beneath the ribs. The percussion note was dull from the seventh rib in the mammary line to the lower edge of the tumour, which was felt to be the right lobe of the liver; its features have been already described. The gall-bladder could be felt clearly midway between the pubes and the umbilicus; a little to the right of the median line; the point of the finger could be readily inserted between the gall-bladder and the edge of the liver. The spleen could not be felt and was not enlarged to percussion. There was slight œdema of both legs, and there were some purpuric spots on the shins. The catamenia had ceased at the age of fifty-two years; for three months there had been a yellowish, quite odourless, discharge from the vagina. On examination per vaginam the cervix uteri was found to be atrophied; no induration was present; the fundus could not be felt, and the fornices were free. Per rectum no tumour was felt, but external hæmorrhoids were present. The urine was deep greenish in colour, of specific gravity 1008, and faintly acid; it contained no albumin, sugar, or blood, but bile pigment was abundant. The arteries were slightly thickened; the heart's impulse was feeble, but it was felt in the fifth interspace, just internal to the nipple; and the cardiac area and heart sounds were normal. The pulse was 80. The patient had had a cough for many years on and off; it was especially troublesome in the morning; the expectoration was yellowish and frothy. She was short of breath and her voice was hoarse and weak; the chest wall was much wasted, deeply jaundiced, and moved but little in respiration, though the movements were equal on each side. Behind, the lower ribs on the right side were much more prominent than those on the left; vocal fremitus was normal; there were a few palpable rhonchi. There was general resonance on percussion; the breath sounds were rather harsher over the right side than the left; expiry was

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prolonged all over; there were generalised rhonchi, and the respirations were 16. On July 13th there was a good deal of dragging pain in the lower part of the back and also over the epigastrium and left hypochondriac region, which made the patient feel very faint. On the 16th there was similar pain confined to the right side of the abdomen. On the 20th, for the first time, the left lobe of the liver could be felt distinctly increased in size; the right lobe was steadily descending; the gall-bladder seemed more solid and fluctuation was not now so readily obtained; the abdomen measured 31½ in. at the level of the navel. On the 27th it was noted that during the previous three days the liver had distinctly descended as much as two or three inches, and the right lobe was then only an inch above the middle of Poupart's ligament; the whole edge of both lobes could be plainly felt, and there was a small amount of moveable fluid in the flanks. The intestines were thrust still further over to the left side; the liver was painful on pressure; so was the gall-bladder; the edge could not be pushed up, and the abdomen was 30¾ in. at the umbilicus.

FIG. 2.



Representing condition on July 27th, 1897.

On the 30th there was no more pain, but the irritation of the skin was renewed; rhonchi were present all over the chest behind. The entry of air was not so free at the left base as at the right. The bowels opened regularly. The urine showed a trace of albumin but no casts, and the ascites was increasing. By Aug. 5th the patient had become more and more feeble and emaciated. There were several purpuric spots on the legs; the temperature had undergone slight remissions for two or three days. Until the 16th there was steady progress of the weakness and emaciation; the patient complained of drowsiness and chilliness, but there was no pain. The abdomen then measured 32½ in. at the umbilicus; there was no further enlargement of the liver and no tenderness; the jaundice was deeper. By the 19th diarrhœa had set in and more bronchitis; the patient was given a starch and opium enema, which diminished the diarrhœa, and also some carbonate of ammonia and tincture of squills. By Sept. 3rd no material change had been noted, but there was a steady decline of strength; there was more diarrhœa; the whole abdomen was very tender, and the patient could not bear the lightest touch. On the 10th there was an increase in the diarrhœa; the abdomen was more distended; much bronchitis was present, and the patient was gradually sinking. Death took place on Sept. 11th.

Necropsy.—A post-mortem examination was made eight hours after death. The body was much wasted, the abdomen was distended, the skin and mucous membranes were deeply pigmented. On opening the thorax the left pleural cavity was found to be obliterated behind by old adhesions; a small quantity of serous fluid was discovered in the right pleura; the right lung contained a caseous nodule at the apex, but otherwise it was normal, and the bronchial secretion was bile-stained. In the heart the muscle was pale, flabby, and bile-stained, but the cavities and valves were normal. The abdomen was full of bile-stained serum, the intestines were driven over to the left side, the liver was completely anteverted and lying on the intestines in the long axis of the abdomen, the lower edge of the right lobe was not much more than a hand's breadth below the costal margin in the right mammary line, and the liver surface was smooth, and its consistence firm, especially at the edges. The weight of the organ was 54 oz. and its transverse measurement was 10 in. On section the liver was dripping with bile and deeply bile-stained, and the bile ducts within the liver were distended to the size of the little finger and full of thick, green bile. The liver was not specially mobile apart from the other viscera; there was no mesohepar and no apparent elongation of the ligaments. The gall-bladder was hypertrophied and much distended with deep-green bile, some of which was semi-solid, and its peritoneal sheath was thick and opaque. The cystic duct was distended, the hepatic duct was markedly so, and the common duct was not distended; the walls of the duct were normal; bile papilla was patent. The bile could be expressed readily from the gall-bladder into the intestine and a good-sized catheter could be passed throughout the ducts. There were no glands in the portal fissure or stones or adhesive bands. The spleen was slightly enlarged and firm, and adherent to the parietes by partially organised adhesions; there had been recent perisplenitis also. The stomach was not dilated. The pancreas was normal. Neither kidney was moveable.

Microscopical examination of the liver showed extensive dilatation of the bile ducts, and around these widespreading pericholangeal fibrosis. The greater part of the liver was markedly œdematous—a condition that could also be seen in the cirrhotic areas around the bile ducts. The atrophy of the liver cells was fairly uniform throughout the liver and not specially marked close around the distended bile-ducts. Here and there could be seen a suspicion of unicellular cirrhosis, but only in a few small and isolated areas; there were no pseudo-bile canaliculi and no intra-hepatic calculi could be seen. For the microscopical sections, all of which were admirably cut and stained, I am indebted to Miss Webb, M.B. Lond., curatrix of the museum of the Royal Free Hospital.

Remarks.—In searching through the literature of hepatoptosis I find two cases only in which the signs were almost identical with those in the above case but in each of these there was a great difference in the symptoms. The one is recorded by Peters,[1] in which the liver was found resting on its under surface with its long diameter parallel to the median line of the body, the right lobe being lowest and on a level with the anterior superior spinous process; and the other by Griffiths,[2] in which, in a man, aged fifty-four years, "the liver dulness extended from two fingers' breadth below the nipple to the crest of the ileum and partly into the iliac fossa, eight inches in the perpendicular right nipple line." Yet at the necropsy the organ was found to measure only ten inches transversely and eight inches in the antero-posterior direction, weighing fifty-six ounces. This unusual state of affairs, he says, was due to "the liver lying on its under surface in the lumbar region, the anterior edge of the right lobe being down in the iliac fossa. The organ appeared as if it had been partly rotated upon its own transverse axis—or, in other words, anteverted—so as to allow its upper surface to be felt through the abdominal wall below the ribs."

This was precisely the condition in life in the above case, the liver at first being anteverted and also rotated from right to left so as to bring the right lobe below. In this way the vertical upper limit of liver dulness remained unchanged until the liver descended *en masse*, and it was possible then to feel the edge of the left lobe of the liver. The post-mortem findings suggest that the jaundice that persisted from the very outset must have been due to kinking or torsion of the bile duct—indeed, bearing in mind the limits of distension of the ducts outside the liver, the evidence is almost demonstrative, the site of the kink being at the commencement of the common duct. In the absence of any severe attack of colic the constricting process would presumably have been a slow one. With the final descent of the liver on came ascites, which may reasonably be

[1] New York Medical Gazette, 1882, p. 412.
[2] Harley: Treatise on Diseases of the Liver, p. 54.

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referred to kinking of the portal vein. The œdema of the legs may similarly have been due to a partial occlusion of the inferior vena cava from traction Another point of interest is the position of the liver after death, in no way corresponding to the ante-mortem demarcation. The same circumstances led Wickham Legg[3] to disbelieve the existence of true hepatoptosis, except in mistaken diagnosis. Packard,[4] however, records a case in which before death the liver edge reached from nine to ten centimetres below the costal margin and post mortem it was in its normal position under the diaphragm and almost hidden by the costal cartilages. Landau[5] likewise points out that the diagnosis of hepatoptosis has not been conclusively established by necropsy. Yet the condition is only to be expected with the ascent of the diaphragm that occurs at death; and the reality of hepatoptosis has been confirmed both by abdominal section and post-mortem observation. It is difficult to say whether the descent of the liver was, as Glenard holds, merely a terminal incident of a general enteroptosis. No such condition was discerned either before or after death, but the readiness with which the intestines wandered into the left flank, and the existence of an inguinal hernia on the left side suggest such a possibility; also the liver, though so extensively displaced, was very slightly mobile apart from the intestines. On the other hand the stomach was normally situated and there was no associated mobility of the kidneys. Glenard mentions albuminuria and leucorrhea as conditions associated with hepatoptosis, and both were present in this case, but the albuminuria may well have been a secondary effect of the jaundice, and though leucorrhea may be a sequel of enteroptosis it can hardly be a direct sequel of hepatoptosis.

In any given case it is difficult to assign the exact causation to a moveable liver: in this case the abdominal walls were remarkably pendulous. Landau regards this as the main cause of hepatoptosis, and Graham[6] found a distinct relation to frequent pregnancy at short intervals, nearly all cases of non-traumatic origin occurring in women. The intestines act as a cushion which supports the liver in its position under the diaphragm by the even pressure of healthy abdominal muscles. But obviously flaccid abdominal walls do not alone produce hepatoptosis, as the former condition is very common, the latter very rare. Graham showed in the cadaver that, in the ordinary way, the ligaments were strong enough to carry the whole weight of the liver without the abdominal walls: simple opening of the abdomen seldom induced any descent of the liver. He also found that after opening the abdomen and cutting the suspensory ligament the anterior border of the liver descended about three inches, the right lobe more than the left, while the posterior margin remained fixed. This would necessarily produce anteversion such as occurred in the present case; yet post mortem we were unable to make out any elongation of the suspensory ligament, such as might result from increased traction by loss of the support of the abdominal walls. Winkler[7] supports the theory of elongation of the suspensory ligament, and Wassilief[8] has actually seen such a condition. It must be borne in mind, however, that there is no proof that this ligament is normally tense in the healthy subject. In my case there was no mesohepar, which, according to Hirtz, exists only in Meissner's imagination, and the other ligaments appeared perfectly normal. Faure[9] is disposed to regard the coronary ligaments and the connective tissue investment of the inferior vena cava as the true suspensory ligament of the liver; this would harmonise with the clinical condition of our case, the general descent being due to weakness of the coronary and lateral ligaments, the right lobe by reason of its greater weight descending first and most. Faure attributes the lengthening of the ligaments to a general nutritive defect leading to stretching of the fibrous tissues generally, and so causing both flaccidity of the abdominal walls and weakness of the ligaments. Descent of the liver has been laid to the charge of tight lacing, but this phantom tends to crop up whenever a disorder is specially incident on the female sex. Whatever may have been her habits in the green tree, there was no indication of such a cause in the sere and yellow leaf; moreover, as Graham remarks, tight lacing leads to errors of form rather than of position of the liver.

In most of the recorded cases, as in this, the onset of the symptoms has been insidious; sudden onset is usually, but not always, traumatic, and is marked by the familiar symptoms of severe biliary colic. There has usually been dull aching pain, worse on exertion; my patient referred her most constant pain to the lower part of the back and between the shoulders, and described it as dragging. Pain and tenderness over the liver only became a prominent feature in the late stages, when the œdema present must have exerted a great distending force on the liver. The intense general abdominal pain of the later stages was probably referable to the recent peritonitis, which was found over the spleen. The dragging pain was always worse on exertion, but not completely relieved by recumbency.

The histological characters of the liver are peculiarly definite. The most striking feature is the widespread atrophy of the liver cells; apparently this is not a purely mechanical process, as the atrophy is equally marked away from the distended bile-ducts as in their immediate environment. No doubt the degree of œdema manifested under the microscope would have greatly generalised the pressure, but much of the atrophy is probably due to icteric necrosis. It is surprising that so extensive a cellular atrophy should not have led to some degree of secondary connective tissue overgrowth, but such is conspicuously absent, only the most delicate capillary network being visible between the residual liver cells. Such a condition would suggest a somewhat rapid atrophy of the true liver cells. The limitation of the increased fibrosis to the bile-ducts is in this case indisputable. Respecting the œdema it must be borne in mind that not only was the *vis a tergo* diminished by the assumed constriction of the portal vein, but likewise a block may have existed ahead from traction on the hepatic vein or the inferior vena cava. It is true that much of the lymph drainage of the substance of the liver passes out at the portal fissure, and may have been involved in the local torsion, but obviously there must have been other channels of efflux patent or jaundice could not have occurred. Weber[10] surmises that the fibrosis about the bile ducts is due to organisation of scavenger cells that have been attracted to the part by the necrosed liver cells. This can hardly apply to the present case, as the atrophy is uniform and universal, while the fibrosis is strictly localised to the bile-ducts. Weber quotes some experiments of Nasse to show that the effect of ligature of the hepatic duct is to cause atrophy of the liver cells, and that if the obstruction be removed the liver cells are capable of undergoing some degree of regeneration. Of the former proposition there can be no doubt, but in the present case the persistence of the obstruction precluded a confirmation of the latter.

Wimpole-street, W.

[3] St. Bartholomew's Hospital Reports, 1877.
[4] Transactions of College of Physicians of Philadelphia, 1896.
[5] Deutsches Archiv für Klinische Medicin, 1875, Band xiv., Heft 1.
[6] Transactions of the American Association of Physicians, 1895.
[7] Zur Casuistik und Aetiologie der Wanderleber, Archiv für Gynäkologie, 1872, Band 4, p. 145.
[8] Wiener Medicinische Blätter, 1880, No. 30, p. 785.
[9] Thèse pour le Doctorat en Médecine, Paris, 1892.
[10] Brit. Med. Jour, vol. i., 1896.

ADMINISTRATION OF ANÆSTHETICS THROUGH A TRACHEAL WOUND.

BY THOMAS ANNANDALE, M.D., F.R.C.S., F.R.S.EDIN.,
REGIUS PROFESSOR OF CLINICAL SURGERY, EDINBURGH UNIVERSITY.

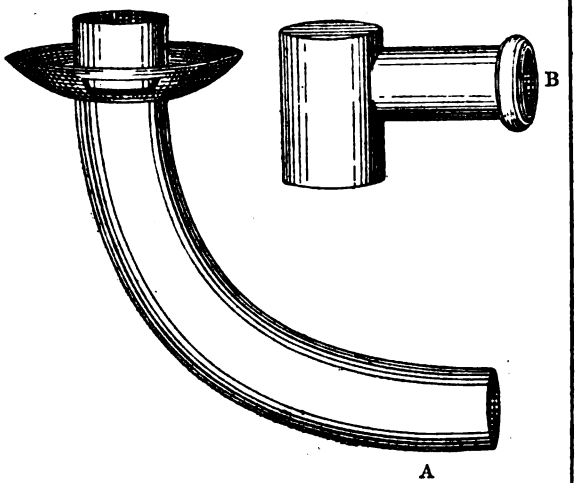
IN March, 1887, I published in the *Edinburgh Medical Journal* a short paper upon Preliminary Tracheotomy as an Aid to Certain Operations. In this communication I described and figured a simple appliance for keeping a patient under the influence of chloroform or ether in connexion with operations which necessitated a previous tracheotomy. Since then I have used this appliance from time to time with success, but having found that the india-rubber tube connected to the tracheotomy tube was sometimes apt to get twisted at its point of connexion and so interfere with respiration, and also that matters coughed up were not readily expelled through the long tube, I have had my apparatus improved so as to lessen these risks. This modified appliance was recently employed with perfect success in a case of excision of the entire larynx and portion of the trachea together with a large and vascular thyroid tumour, the patient being now quite convalescent.

This improved apparatus is as follows:—1. An ordinary full-sized silver tracheotomy tube having its upper end extended

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for about half an inch beyond the shield (see Fig. 1, A); 2. A silver cap (Fig. 1, B), having a short tube of the same metal projecting at right angles from it and to which one end of an indiarubber tube is connected. In Fig. 2 is shown the cap fitted on to the tracheotomy tube. The cap fits easily and can be at once lifted off the tracheotomy tube and also turned round so as to allow the attached indiarubber tube

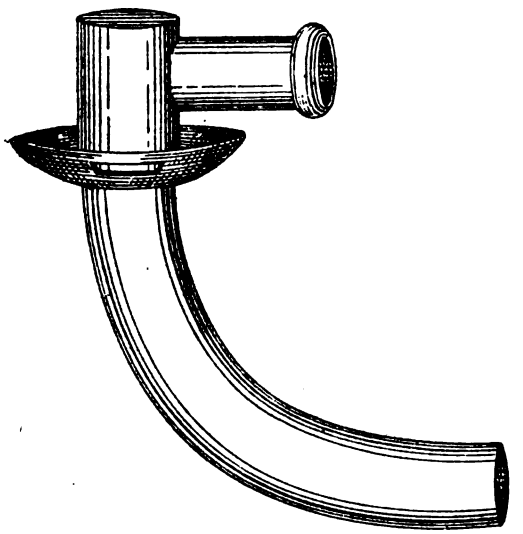
FIG. 1.



Tube with cap disconnected.

to project on either side which ever may be found most convenient for the administration of the anæsthetic. 3. A portion of indiarubber tubing. The length of this should be about two feet, but it may be used shorter or even a little longer, and the diameter I prefer is about half-an-inch. 4. An ordinary glass tumbler or other similar receptacle with a small piece of lint or absorbent wool placed at the

FIG. 2.

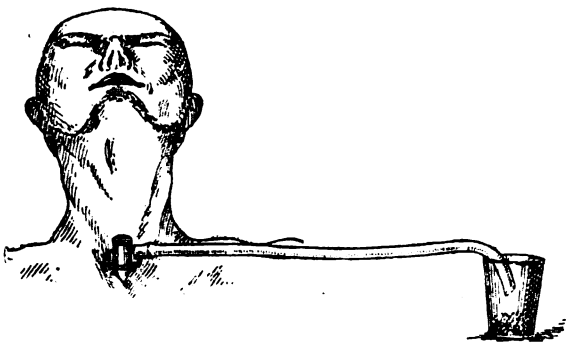


Tube with cap in position.

bottom upon which the chloroform or ether is from time to time sprinkled. In Fig. 3 the whole apparatus is shown in position.

The anæsthetic—I prefer chloroform—may in the first instance be held over the tracheotomy tube with the cap off, and when the time for the operation has come the cap with attached indiarubber tube is put on and the anæsthetic inhaled from the tumbler, the anæsthetist standing or, if he prefers, sitting well away from the operating table, holding the tumbler in one hand and with the other steadying the tube. To prevent blood or vomited matters passing into the air-passages during the operation the introduction of a piece of sponge or other plug into the trachea above the tracheotomy wound is usually satisfactory but in the case of the excision of the entire larynx already referred to I adopted a thoroughly effective and as far as I know original method and I am inclined to think that this plan may be used in other cases. The procedure was to pass round the trachea immediately above the tracheotomy wound an indiarubber cord and by means of it to ligature the canal temporarily so as completely to prevent the entrance of any fluids or other matters into the air-passages. When the ligature was removed at the completion of the operation above referred to the walls of the trachea did not appear to have been injured by it. It is true that the condition of the tracheal rings in some instances might prevent such a ligature being perfectly

FIG. 3.



Cap connected with indiarubber tube dipping into vessel containing wool and anæsthetic.

effectual, but I am of opinion that this means of temporarily closing the trachea is worthy of consideration and trial.

The advantages, then, claimed for the appliance which I have figured are: 1. It is simple and at the same time effectual. 2. The cap being moveable can if necessary be at once disconnected from the tracheotomy tube, so as to allow mucus or other matters to be more easily expelled from the air passages. This mobility also allows the cap and connected indiarubber tube to be turned round to either side. 3. It allows the anæsthetic to be administered at some distance from the patient, and so does not interfere with the operative procedure. 4 The anæsthetic when inhaled through the long tube is not likely to be so irritating to the air passages as when it is more directly inhaled through the tracheotomy tube itself.

Edinburgh.

CHRONIC MENINGITIS AS A SEQUELA OF EPIDEMIC CEREBRO-SPINAL MENINGITIS.

BY EDMUND HOBHOUSE, M.D. OXON., M.R.C.P. LOND.,
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THE following case is probably an example of what Sir William Gowers has described as chronic internal pachymeningitis due to the epidemic disease; it is not described, so far as I can discover, as an ordinary sequela, and must certainly, I think, be rare in such a well-marked form, closely resembling the form of pachymeningitis due to caries and suppuration.

The patient, a man aged twenty-one years, always healthy but for this trouble and with a good family history, had an attack of cerebro-spinal meningitis during a severe epidemic at the Cape in 1877.[1] He had one relapse within three weeks, but otherwise recovered well, though there was a distinct history of impaired vision during convalescence, from which he gradually recovered. After that he was in good health up to fifteen years of age and led an outdoor life, joining in athletics and playing football. At about the age of fifteen years he began to notice pain in the left hip which at first only came by day and after exertion, but latterly was most severe at night. For two years this

[1] Hirsch (Geographical Pathology, vol. iii) asserts that there have been no outbreaks in the southern hemisphere, but I believe there is sufficient evidence as to the occurrence of this one.

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continued to get worse and he took to his bed. The right leg became affected and the muscles of the thighs began to waste. In August, 1887, when nineteen years old, he had measles, and after this what was called intermittent fever for two months. The temperature ran up to 104° F., at times with vomiting and severe pain. The legs became very rigid and the calves began to waste; he was treated by dry-cupping, wet-cupping, and postural extension of the nerves, and owing to the pain was kept under morphia almost continuously from August to January. At one time during this period he had severe pain in the occiput with, he believes, some retraction; pressure on the spot sent the pain down the back. He had some difficulty with both bladder and rectum, and also had priapism. For about a year he had to have enemata. He never had any affection of the arms. He improved after this—in 1888—but had one severe relapse from catching cold. When admitted into St. Thomas's Home, in May, 1890, the legs were very wasted and he could just walk 20 yards with crutches. There was no sign of any vertebral disease, and except for the wasting of the legs, which affected all the muscles evenly, the patient was well nourished. The arms were unaffected. The muscles reacted feebly to both currents and with slight reaction of degeneration. The knee reflexes were exaggerated; the plantar reflexes were brisk, especially the left; and there was no ankle clonus. The legs were very rigid and could only be flexed with great difficulty and pain. There were fairly frequent attacks of severe pains radiating all down the legs. Sensation was not much affected. There was constipation, but no very definite affection of the sphincters. The eyes, which Mr. Lawford kindly examined, showed distinct traces of previous optic neuritis, with narrowing of the vessels and slight pallor. Vision was not seriously impaired, though he had noticed increased defect after his illness in 1887. There was no defect in the movement of the eyes. There was no other paralysis. Massage and the constant current produced no effect apparently, but he began to improve after taking strychnia. Gradually the pains left him, and by January, 1890, he had been walking for four months and was fairly free from pain for three months. The nutrition of the muscles had improved immensely. He still had pains, which were referred to the sciatic nerves, and were worse after exercise; he also had occasional pains in the eyes and head. Subsequently he recovered sufficiently to return to the Cape and resume his life there, and he reported himself in good health six months later.

Remarks.—This case shows how long the effects of cerebro-spinal meningitis may last; it is clear, I think, that the whole trouble dates from the attack as a child, for the pains never really left him though limited to the legs. Probably the special incidence on the lumbar region was due to the gravitation of the inflammatory products to the lower part of the cord, leaving a permanent thickening of the membranes. The entire escape of the arms is interesting, though not very unusual; *a priori* one would have expected that some lodgement of the inflammatory process might have occurred at the cervical enlargement.

It is a question whether the so-called measles in 1887 may not have been a recrudescence of the original disease, as rashes of different kinds are common in its course; but, on the other hand, serious meningeal affections are not very rare after measles and would be specially liable to occur where the meninges were already much damaged. In any case the almost complete recovery after twice-repeated inflammatory attacks, extending apparently from the optic tract to the cauda equina, is noteworthy.

I must express my thanks to Dr. Edmunds for his kindness in allowing me to publish this case, which only came under my care during his short absence.

Brighton.

VACCINATION WITH CALF LYMPH.—At a meeting of the Redruth Board of Guardians, held on Oct. 29th, a communication was read from the Local Government Board recommending that sixpence per case extra for vaccinations performed with calf lymph would be a sufficient remuneration for the medical officers. The Board added that the guardians themselves could not supply calf lymph except in the case of an outbreak of small-pox. It was eventually resolved that sixpence be allowed in each case where calf lymph was used, although one guardian moved that only threepence should be given.

PROFESSOR EDINGER'S THEORY OF THE CAUSATION OF SOME NERVE DISEASES.

BY R. CUNYNGHAM BROWN, M.B., B.S. DURH.

INTERESTING papers on the changes in the spinal cord in pernicious anæmia [1] and in profound anæmia [2] from the pens of Professor J. Michell Clarke, Dr. Taylor, and Dr. Semple, in which the morbid conditions are ascribed: (1) probably to some toxic condition of the blood, and (2) to a tendency to hæmorrhage, justify one—if justification be necessary—in laying before the readers of THE LANCET a short *résumé* of Professor Edinger's beautiful "Theory of the Causation of Some Nerve Diseases, in particular Tabes and Neuritis." [3] In particular, also, a letter by Mr Percy Furnivall [4] on certain affections of the nervous system illustrates and is at the same time elucidated by this theory.

Professor Edinger first discusses the surprising variety in the causes of nerve disease; the fact that any of these diseases may produce at one time one and at another a quite different disease; the difficulty in explaining how so many diseases are progressive, and continue to develop long after the primary injury has passed away; the column degenerations which result in animals after long-continued rotation on a turn-table; the degenerations which accompany pernicious anæmia and Addison's disease; and the question why in Friedreich's disease the posterior and lateral columns gradually degenerate, and why to these are so often added bulbar and other symptoms. To these and many other questions it has been impossible hitherto to give a satisfactory answer, and it is to their adequate explanation that this theory is directed.

The tissues of the body, the separate molecules indeed, which together form the cells, exist together in a condition of equilibrium. When one part becomes damaged it becomes weaker, loses its vitality, and becomes pressed upon and overgrown by its sounder neighbours. That such conditions of disturbed equilibrium obtain continually and in all parts of the body is undoubted. This fact, established first by C. Weigert, [5] and quite independently of him by W. Roux, [6] has been shortly described by the latter as "the struggle of parts of the organism." From Roux's important work we note (1) that this struggle of parts around a cell commences when in that cell the metabolic substance is more quickly consumed than restored; and (2) that Roux believed that the absence of impulses—the term impulses being used merely to designate, not to explain, certain processes—debilitated certain cell substances, and particularly in their power of assimilation. During development this struggle of cells and structures plays no small part. General pathology offers many examples. Weigert has already shown how in interstitial nephritis, in myocarditis, and also in the so-called grey atrophy of the central nervous system, the ground tissues in the first instance degenerate, and then the weakened tissues, pressed upon, overgrown by the connective tissue.—in the last-mentioned case by the neuroglia—become destroyed. As one of the most important phenomena of the struggle Roux specified the influence of entering impulses. Now Weigert has shown that the conception of "impulses" is in no way essential and that the simpler idea of physical pressure is more correct. According to Weigert neither the cell nor the organ are strengthened by impulses.

All diseases which attack the nervous system cause damage only through their influence on nerve cells or their processes. These injuries, whether transitory or permanent, never attack the cells alone or the fibres alone. The neuron, the compound of cell axis cylinder, and terminal branching, is one coherent entity. The degeneration of the fibre which follows destruction of its cell of origin has long been recognised. The

[1] Brit. Med. Jour., Aug. 7th, 1897.
[2] Transactions of the Medico-Chirurgical Society, 1895; and THE LANCET, April 17th, 1897.
[3] Klinische Vorträge, Leipzig, 1894: Eine neue Theorie über die Ursachen einiger Nervenkrankheiten, insbesondere der Neuritis und der Tabes.
[4] THE LANCET, May 29th, 1897.
[5] Eulenburg's Realencyklopädie, 1880 and 1885.
[6] Der Kampf der Theile im Organismus, 1881.

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changes which take place in the fibre as the result, not of destruction, but merely slight injury to the cell, are on account of the inadequacy of our methods less known. Forel, however, first called attention to the fact that the cell itself suffers when separated from its fibre, even to complete atrophy if the division fell close to the cells. Hirsh found changes in the cells of the facial nucleus twenty-four hours after division of the peripheral facial nerve. These, however, are relatively coarse conditions in which the cells or fibres had been seriously damaged. Now during the activity of the nervous system certain bodies become used up which must again be restored. The methods which will be able to demonstrate the purely morphological changes which take place during the activity of a cell are as yet only in the initial stages; but it is known, through the investigations of Daschkiewicz Hodge, and Hirsh, that active cells look essentially different from those which have rested and also that the fibre participates in the change. If the anabolism equals the katabolism the cell will continue to live and perform its functions, but if not the weakened cell, overweighted by its sounder neighbours, will die. If, therefore, such conditions exist as an abnormally great performance of function with merely normal restorative potentiality, or normal function with abnormally low restorative potentiality, one should expect to find signs of degeneration equivalent to those met with as the result of gross mechanical disturbances.

That prolonged, forced exertion in any separate muscle-group can lead to its paralysis, and that the paralysis is atrophic, has long been known. These have always been regarded as cases of muscle atrophy as the result of neuritis. The hammer palsy of young smiths, the paralysis of muscles of the hand in cigar rollers (Cöster), the paralysis of separate extensors of the forearm in young drummers (Nürnberger Bruns) in fact, all the manifold "occupation-paralyses" furnish examples of nerve failure through exhaustion. This nerve failure may happen even in the healthy as the result of extreme over-function, but the majority of cases observed show symptoms of malnutrition. Paralysis in the muscles supplied by the radial nerve has been observed after prolonged crochet-work in an anæmic woman, extensor paralysis in a half-starved cane-plaiter, and many others too numerous to mention. One can understand, therefore, how Oppenheim, Siemerline, and Cöster found in the peripheral nerves of all people who had died from exhausting diseases and in those of very old people degenerated fibres. Now, no single nerve element can degenerate without others becoming indirectly affected. To take an instance from neuro-pathology, consider for a moment atrophy of the facial nucleus. The resulting paralysis of the facial muscles will gradually affect the bony tissues of the skull, and deformities and inequalities are brought about which later will react on the configuration of the brain. The flow of blood and lymph through the affected parts will be altered, and so changes will be initiated which must later be equalised by alteration in other structures. In the cases of "occupation paralysis" this co-relation of parts must take effect, and we should expect some participation of the sensory paths. Ernest Remak reports on many cases of pain and sensory disturbances in these cases.

The participation of the sensory paths will naturally vary with the intensity of the process and the extent to which sensory fibres are mixed with the motor. This condition of deficient restoration causes not only degeneration in the peripheral nerves, but also in the central nervous system. In anæmia, pernicious anæmia, after many fevers, and during many exhausting conditions, changes are observed in the spinal cord. By the term "grey degeneration" one recognises pathological forms originating in the degeneration of nerve elements, and the growth into their place of the interstitial tissue. Examination of the region of the entering posterior roots in cases of fresh tabes shows that long before the proliferation of the interstitial tissue takes place the wasting of the medulla and the degeneration of the axis cylinder have occurred. The degenerated parts, in the cases of pernicious anæmia, anæmia, ergotin poisoning, &c., are found most often in the posterior columns, much less frequently in the pyramidal or cerebellar tracts. Now it is generally accepted that these changes depend on the action of some toxic substance, and it is by no means asserted here that such toxic action may not exist, but it does not explain why in most cases the posterior columns are principally affected, nor why only some of those suffering from pernicious anæmia, &c., become affected in this way and others escape. To explain these matters according to the toxic theory a supplementary hypothesis must be added of "susceptibility of parts." Now it is *a priori* inevitable, according to Professor Edinger's theory, that those parts should first degenerate which suffer the heaviest demands upon their function.

Take tabes as an example. If one leaves out of count those automatic centres, isolated ganglion groups, which stimulate movement and take up sensation and which come into use mainly for the intestine, one finds that there are nerve-structures whose function is continually, or, at any rate, much more frequently, in demand than that of others—those, namely, which coördinate muscle sensation and which are necessary for the maintenance of the equilibrium of the body. The almost perpetual demands upon this apparatus, and particularly from the legs and trunk, are at once apparent. Now, according to this theory, this tract should be among the first to suffer, and disturbance of equilibrium, ataxy should be one of the first symptoms. And that this is so is known by everyone. But the theory also demands that this ataxy should be of more frequent occurrence in the active than in those who lead a sedentary life. This also is borne out by facts. Statistics prove the relatively greater frequency of tabes in men than in women. The proportion in Prussia and Russia is about eight to one. The fact that tabetic symptoms begin almost regularly in the legs and much later affect the arms is only one consequence of the continuous coördination required in progression and the maintenance of equilibrium as contrasted with the intermittent use of the arms. The form called "higher tabes" will probably be found to depend on the occupation of the individual. The greater demands upon those sensory nerves which serve the muscle apparatus than upon nerves of pure sensation explains the relative infrequency of sensory troubles in tabes. The almost constant sensory stimulation of the sole of the foot and the frequent irritation of the skin by the clothes explain the anæsthesia of the sole and the patchy anæsthesia of the skin found in tabes. These patches also preponderate in places where the skin would be subject to more frequent stimulation. But mechanisms which perhaps more than any of those mentioned suffer continued demands are those associated with the light reflex and accommodation. The first-named, that of the light reflex, is during waking moments continually in action, and its early disappearance is what the theory would lead us to expect. A beautiful illustration of this was afforded by a tabetic patient under the care of Professor Edinger, in whom the light reflex was absent only on one side. The patient was a watchmaker, and had used this eye incessantly at his work. The accommodation is, as one would expect, affected if at all much later. The order in which the external muscles of the eye are affected is also explicable by the theory. The occurrence of optic atrophy, bladder trouble, lingual and laryngeal paralyses, the affection of the peroneal muscles (*pied bot tabétique* of Charcot) and many other points in the symptomatology of tabes, all admit of a satisfactory explanation by the theory, but space does not permit of their discussion here. In particular, however, these frequently occurring anomalous cases of tabes, where for a long time, or even through a whole life, only one symptom of tabes is present, are elucidated. The progressive ophthalmoplegia of Westphal also and the various transitionary and compound forms of nerve disease are explained by and illustrate this theory which, though it leaves many questions still unanswered, elucidates many points hitherto obscure.

The application of the theory to Professor Michell Clarke's cases is manifest. The column degeneration as the result of the performance of function in people suffering from malnutrition has already been sufficiently discussed, and the hæmorrhages are explainable by Roux's corollary on "the co-relation of parts," from which under certain conditions vessel changes were to be expected. In this connexion a significant fact is noted in Case 2: "No hæmorrhages were noticed in the other organs post-mortem." This itself would seem to indicate that the hæmorrhages were secondary to changes in the nerve structures of the spinal cord itself. In the two cases mentioned by Mr. Furnivall it is to be noticed, firstly, that in his own case extreme demands upon a normal restorative power produced anæsthesia of the feet and in other cases ataxic gait, which passed off after rest; and secondly, that in the case of Mr. Furnivall, senior, with in all probability a diminished power of restoration, the sensory and motor disturbances ensued upon slighter exertion and passed off much less quickly.

It is to be regretted that in a paper of this length only

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scant justice can be done to Professor Edinger's theory, but it may be hoped that this brief account will show that the theory deserves serious consideration.

Holmfirth, Yorks.

A CASE OF TEDIOUS LABOUR FOLLOWED BY DOUBLE PHLEGMASIA ALBA DOLENS AND GANGRENE.

By FRANK M. WILLCOX, M.B., C.M. EDIN.

THE patient was a primipara and thirty-four years of age, sparely built, weakly, and very anæmic, with feeble circulation, but no organic cardiac change. She suffered intensely with cold feet and hands and was treated during pregnancy for anæmia. The labour was very tedious, lasting forty-eight hours after she was first seen. On abdominal examination occipito-posterior presentation was diagnosed. On vaginal examination the os was found to be about the size of a two-shilling piece, and it dilated very slowly. The labour produced considerable exhaustion and was ultimately finished instrumentally; unfortunately, owing to the rigidity of the parts, the perineum was torn, but it was at once sutured and no blood was lost. After labour the pulse was 84, weak and thready, but regular, and the temperature was slightly subnormal. Stimulants were given and external warmth was applied. During the first fortnight of the puerperium the patient did well; the perineal tear healed, the temperature was never above 99·8° F., and she rose on the twelfth day. On the evening of the sixteenth day she was seized with violent pains in the left leg, and on seeing her next morning it was evident that phlegmasia alba dolens had set in. The leg was swollen, shiny, and white, the superficial veins were much distended, and in Scarpa's triangle and the popliteal space the limb was very tender to the touch. Unfortunately during the night an unskilled nurse had freely rubbed the leg to relieve the pain. There was no rise in temperature or abdominal tenderness, neither was there any evidence of uterine or vaginal sepsis. The usual treatment was adopted The patient was kept absolutely at rest, the foot of the bed was elevated, anodyne applications were used, the limb was enveloped in cotton wool, and external warmth was applied. The child was weaned; cardiac tonics and light nutritious diet were ordered. During the next few days the patient was easier, but complained of pain in her heel and toes. On the twentieth day discolouration was observed over the region of the great and second toes; this gradually deepened and extended, involving the foot as high as the transverse tarsal joint. The patient was fairly comfortable, however, till the evening of the twenty-third day, when there was an acute exacerbation; she was very restless, and the temperature rose to 100·6°. On the following morning the great and second toes and part of the dorsum of the foot seemed benumbed, cold, and insensible to the touch. Gangrene had set in. The pain was very severe from this time until death, necessitating hypodermic injections to procure rest. On the twenty-seventh day the whole abdomen became distended and tympanitic, the breathing was embarrassed, and the pulse was very feeble and irregular. Strophanthus and strychnine were freely exhibited and the patient rallied and improved daily. The tympanites disappeared, the pulse became stronger, the leg gradually became smaller, and the appetite improved, when on the thirty-third day the right foot began to swell and phlegmasia of that leg developed. The patient thereupon rapidly sank and, refusing all form of nourishment, died on the thirty-sixth day after delivery.

The interest of this case was in the rapid onset of gangrene and the development of phlegmasia in the right leg when the patient seemed to be recovering, as the left leg was becoming smaller and the tympanites had disappeared. There was absolutely no sign of sepsis of the pelvic organs, showing clearly that the illness was entirely due to the feebleness of circulation. This case strikingly illustrates the great importance of careful and prolonged treatment of anæmic patients with weak circulation all through pregnancy and especially during the later months.

Brechin, Forfarshire.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum propriis collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SEAMEN'S HOSPITAL, GREENWICH.

A CASE OF PNEUMONIA FOLLOWED BY ABSCESS OF THE LUNG, EMPYEMA, AND DEATH WITH HYPERPYREXIA; NECROPSY.

(Under the care of Dr. J. CURNOW.)

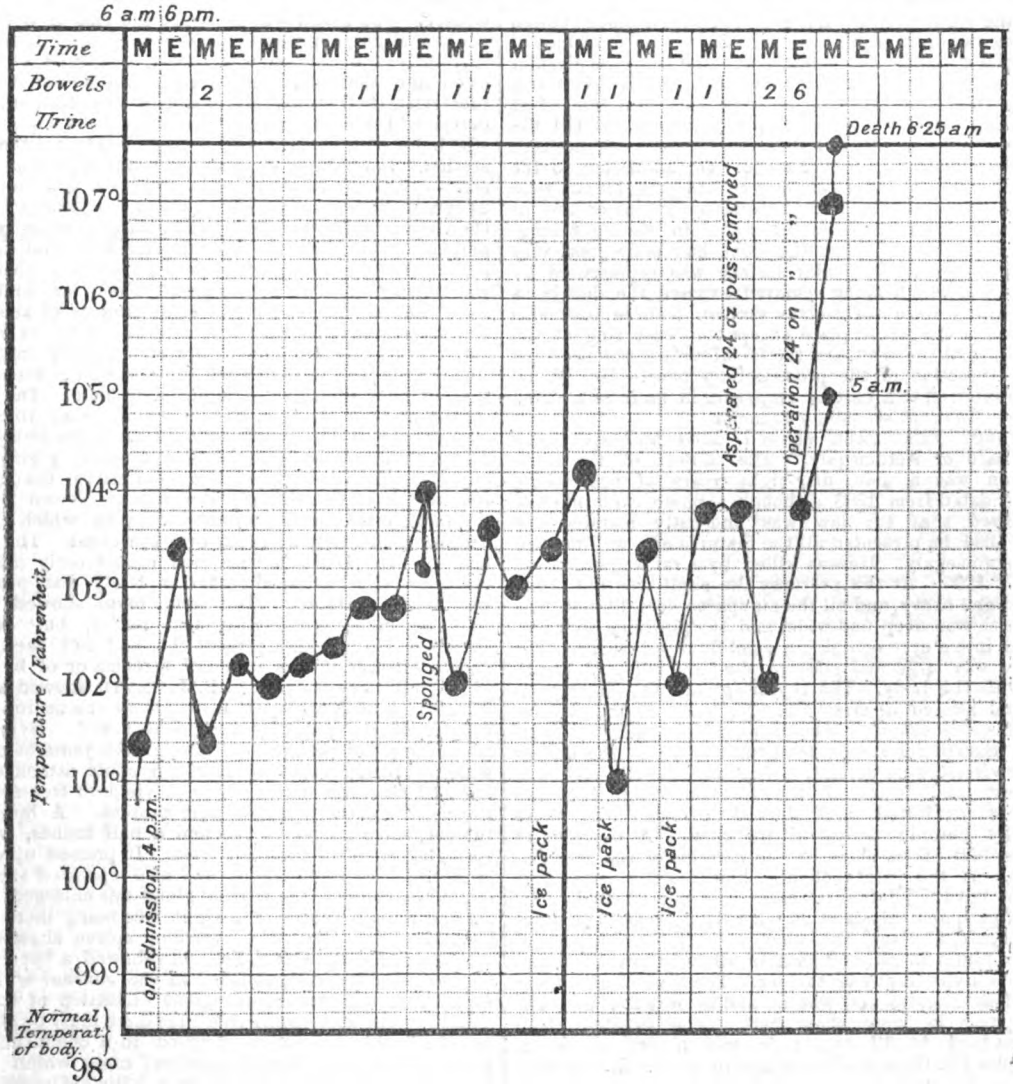
FOR the notes of the case we are indebted to Mr. A. E. Griffin, house physician.

The patient, a man aged thirty-seven years, was admitted into the hospital on Sept. 17th with a two days' history of illness, starting with pains in the back and dyspnœa; there was neither cough nor rigor. The patient was stated to have been drinking heavily for three weeks. On admission the temperature was 101·4° F., the pulse was 114, and the respiration was 36. The tongue was furred and white. As regards the lungs, the percussion note was good on both sides anteriorly and on the right side posteriorly. The breath sounds were harsh, but there were no adventitious sounds; vocal resonance and vocal fremitus were normal. On the left side posteriorly the percussion note was impaired from the angle of the scapula, the breath sounds were weak and accompanied by a little dry friction at the extreme base, and vocal resonance and vocal fremitus were normal. The liver was enlarged. The cardiac dulness was decreased, and the sounds of the heart were normal but feeble. On the 18th the temperature was 103°. The patient complained of pain in the left side; the sputum was viscid and slightly rusty. At the left base the percussion note was dull over the lower lobe, the breath sounds were weak with a few râles, and there was coarser friction at the base, this being heard also in the axilla. The urine was acid and of specific gravity 1020; it contained no albumin. On the 19th it was noted that vocal resonance and vocal fremitus were absent over the left lower lobe; the breath sounds were weak and accompanied by much rhonchus—in fact, rhonchus was universal. On the 20th expectoration was typically pneumonic and more profuse, the temperature still keeping about 102 5°; the respiration was 32. The patient was wandering and trying to get out of bed. On the 21st a small patch of tubular breath sounds was noted at the level of the left angle of the scapula; no râles were noted; below the angle the breath sounds were weak, but audible to the base; no friction was heard. On the 22nd, the eighth day of illness, the patient had been delirious all the previous night. The tongue was dry and red. Tubular breath sounds were noted from the apex of the left lower lobe to the angle of the scapula; below the breath sounds were weak to the base. The temperature dropped to 101·2° at 10 A.M. and the respiration fell from 44 to 38. In the evening the former rose to 103·6° and the latter to 50, the patient being still delirious. The temperature gradually rose to 105° on the 23rd and he became somewhat comatose; the ice pack was given for one hour. On the 24th he was in much the same condition, the physical signs were unaltered, the ice pack was again given, and he improved in it. On the 25th he was more comatose and was ice-packed for three hours. The temperature fell to 101° and the respiration from 54 to 44. He recognised people for the first time for twenty-four hours. The physical signs still remained unaltered. On the 26th he sweated profusely, the skin being moist, the face pallid, and the tongue brown and dry. The temperature was 103·3°, the respiration was 54, and the pulse was 104. There was no alteration in the physical signs posteriorly, but some rough pleuro-pericardial friction was noted anteriorly. After consultation with Mr Duffett, the acting principal medical officer, the patient was aspirated immediately below the angle of the left scapula, and twenty-four ounces of thin puriform, odourless fluid were removed. Under the microscope a stained specimen showed pus cells, with staphylococci and streptococci and also a few pneumococci. The

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condition after aspiration continued to be much the same, the temperature fell from 103·6° to 102° and the respiration from 52 to 44. On the 27th there was much more coma, but the physical signs were unchanged. Mr. Duffett incised the pleura in the eighth interspace in the mid-axillary line, removing twenty-four ounces of pus, and a large drainage-tube was inserted. No anæsthetic was given. The coma increased, and the patient died at 6.25 on the morning of the 28th, the temperature gradually rising to 107·6°, the respiration to 66, and the pulse to 160.

Necropsy.—A post-mortem examination was made on the 29th, when the right lung showed bronchitis and congestion of the lower lobe with some slight recent pleurisy. The left lung showed an adherent pleura in the axilla and posteriorly over the lower lobe. After removal from the body the whole



of the upper half of the left lower lobe was found to be pneumonic. Two inches from the apex posteriorly there was an abscess cavity two inches by one inch communicating freely through a large opening in the pleura with the pleural cavity. The lower part of the lobe was congested, but had not collapsed. No communication could be made out with a large bronchus. The heart showed recent pericarditis with dilatation of the cavities, the liver was fatty and enlarged, the spleen was large and congested, and the kidneys were fibroid. No examination was allowed of the brain.

Remarks by Mr. A. E. GRIFFIN.—Cases of pneumonia followed by abscess of the lung seem to be sufficiently rare to merit reporting. Sturges and Coupland[1] state: "This is a most rare event in the after-history of acute pneumonia; it was found in but one case out of 144 examined after death." The same writers quote Traube[2] as mentioning a case. Wilson Fox[3] also mentions a case reported by Huss. In the case reported above it may be pointed out that though on the fourth day of illness the sputum was pneumonic and on the sixth day typically so, it was not until the seventh day that tubular breath sounds were noted. Again, though on the twelfth day of illness twenty-four ounces of pus were removed, yet even before aspiration breath sounds were heard to the extreme base. The pus removed by aspiration had no odour and at no time was the sputum or breath offensive. The change in the physical signs noted on the seventh day may have been due to the rupture and emptying of the abscess cavity into the pleura, but the physical signs at the base remained unaltered and there were no signs of pneumothorax. That there was some accompanying effusion was recognised, but only after the delay in the crisis, with sweating, coldness of the limbs, and increasing coma, was an empyema suspected.

[1] Pneumonia, second edition, p. 88.

[2] Ges. Beiträge, ii., p. 530.

[3] Diseases of the Lung.

NURSES' HOME AT BARRY.—At a meeting of the Barry Nursing Association and Accident Hospital, held on Oct. 27th, under the presidency of Mr. G. Neale, J.P., L.R.C.P. Edin., the treasurer announced that nearly £1000 had been subscribed by voluntary contributions for providing a Royal Jubilee Nursing Home for the district in connexion with the jubilee celebration movement. The erection of the building will shortly be proceeded with.

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Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Empyema of the Antrum in an Infant.—Acromegaly—Calcifying Pericarditis.—Salivary Calculus.—Traumatic Neuritis.

A MEETING of this society was held on Nov. 2nd, the President, Dr. PAYNE, being in the chair.

Mr. D'ARCY POWER showed a specimen of Empyema of the Antrum in a Child eight weeks old. The child was admitted into the Victoria Hospital on July 29th, 1897, in a very wasted condition with an abscess discharging at the lower part of the right eyelid. Examination with a probe showed that there was an area of dead bone on the upper surface of the superior maxilla. Pus was also exuding from the alveolar border, but no definite opening could be detected. There was a history that both sides of the face had been bruised at birth during delivery by forceps; but it was not till the child was about a month old that the abscess was noticed. It had been discharging ever since. On admission to the hospital the abscess was freely opened and granulations were scraped away, but the child died thirteen days after, and at the necropsy a small abscess was found in the right lung. The specimen showed that the bone had undergone very extensive necrosis. Its malar surface was represented by two sequestra, which being removed exposed the deciduous molars, which were themselves eroded. There was also destruction of the orbital plate except the dense ring at the lower margin of the orbit, and the facial surface was necrosed up to the junction of the pre-maxillary bone.—Mr. W. G. SPENCER referred to a case of empyema in an infant which he had seen to occur secondary to noma.

Mr. PERCY FURNIVALL showed casts and specimens from a case of Acromegaly. The subject of the communication was a man, fifty-eight years of age, whose symptoms dated from 1893, although a photograph taken in 1875 showed that his jaw was unusually massive. In October, 1894, he presented all the features of a well-marked case of acromegaly. He was killed by a railway engine in December, 1894. At the necropsy the skull was uniformly thickened and heavy, and all the air spaces were dilated. The sella turcica was deep and wide, and the pituitary body was converted into a cyst containing semi-fluid substance. The lower jaw was large and massive, the rami being almost in a line with the body. The thyroid gland was slightly enlarged and altered in structure. No trace of the thymus gland was discovered. The sympathetic ganglia were normal. Except for some interstitial fibrosis of the kidney the other viscera were normal. The clavicle, rib, vertebræ, iliac crest, and bones of the forearm, hand, leg, and foot were exhibited and showed changes like those caused by chronic periosteal irritation. A deposit of new bone had taken place at the margins of the articulations and at the points of attachment of muscles and ligaments, but the joints themselves were not affected. Mr. Furnivall gave an analysis of 34 recorded necropsies on cases of acromegaly, and said that changes in the pituitary gland had been found in all, and that in all but three there had been either hypertrophy or tumour. The thyroid gland was examined in 24 cases and was normal in only five, and was hypertrophied in more than half. The thymus gland was examined in 17 cases; it was absent in seven, hypertrophied in three, and persistent in seven. The sympathetic ganglia were examined in ten cases and were reported as hypertrophied in six of the cases. General enlargement of the brain and of the spinal cord had been noticed, and in four cases there had been degeneration in the posterior columns of the spinal cord. The only constant associated changes appeared to be those in the pituitary body, but it would be noted that these changes were not uniform and might occur without acromegaly.—Dr. ROLLESTON showed the Pituitary Body and Sections of the Thymus Gland from a case of Acute Acromegaly due to Sarcoma of the Pituitary Body. The patient was a woman, aged thirty-five years, who had shown symptoms of acromegaly for three years. She suffered from optic atrophy due to the pressure of the tumour, headache, which was intense at times, and transient glycosuria. The skeletal changes were quite characteristic. The patient had been twice in St. George's Hospital and an account of her clinical case had been published in THE LANCET[1] She died after an epileptiform fit on Aug. 16th, 1897, and Dr. Rolleston performed the post-mortem examination, together with Dr. Hollis, of Wellingborough, under whose care she was. The pituitary tumour was a round-celled sarcoma the size of a walnut and had invaded the right optic thalamus and the cavernous sinus. The thyroid gland appeared normal. The thymus gland was persistent and was much in the condition of that of a child before the changes of involution had set in. Dr. Rolleston considered that the case belonged to the group of acute acromegaly, of which Sternberg in a collection of 125 cases with 47 necropsies had found six examples all due to true sarcoma. The duration in these cases was from three to four years.—Mr. PELHAM LAWRENCE showed the pituitary body from a case of Acromegaly which had been under the care of Mr. Godlee. The gland was of about the size of a cherry and showed slight degeneration of the anterior lobe. Microscopically the change was found to consist chiefly in a swelling of the cells, which were definitely swollen, although preserving their normal arrangement.—Dr. NORMAN DALTON described the microscopic appearances of the organs in a case which he had brought before the society in the previous session. It would be remembered that the patient died with some symptoms of myxœdema and with glycosuria as well as symptoms of acromegaly. There was enlargement of all the viscera. Microscopically the central nervous system was normal. The intestine showed some catarrhal changes to the naked eye, and microscopically the sub-epithelial tissue was thickened as in myxœdema. The spleen and pancreas were normal, but there was some fibrosis of the kidneys. The liver capillaries were full, a few of the cells were fatty, and many were enlarged, showing specially large nuclei. The thymus and thyroid were quite normal, except that the thyroid juice appeared to be unusually fluid. The skin presented marked changes, the epidermis being thinned with hypertrophy of the papillæ and of the cutis vera generally. The papillæ contained irregular clumps of pigment, which appeared to be both in the connective tissue and in the vessels. Dr. Gordon Brown had shown a case of acromegaly to the Hunterian Society in which there was definite molluscum fibrosum over the chest. The pituitary body in Dr. Dalton's case was considerably altered, the posterior lobe having almost completely disappeared. It was much softened. The solid parts showed abundant irregular cells, often with two nuclei, but very little stroma. Up to the present he had not been able to decide whether it was a case of sarcoma or of hypertrophy of the pituitary body.—Dr. E. J. SMYTH showed specimens from a case of Acromegaly in which at the necropsy a large tumour of the pituitary body was found. Symptoms of acromegaly had been present for eighteen years before death, which occurred suddenly from an acute attack of vomiting and diarrhœa which did not yield to treatment. All the usual skeletal changes were present. A large oblong tumour, three inches by two and a half inches, was found springing from the pituitary fossa. It pressed upwards and stretched both optic tracts, and also separated the anterior clinoid processes. The thyroid gland was enlarged, weighing six and a half ounces, the right lobe being more enlarged than the left. Both the liver and spleen showed general enlargement.—Mr. CECIL BEADLES showed a specimen from a case which he had published in the *Journal of Pathology* for 1893 in which there was great dilatation of the frontal sinuses.—The PRESIDENT said that there must be many cases in which this condition occurred in a commencing or a partial form, as well as borderland cases which would be very difficult to differentiate from osteitis deformans. As an example of an early case he mentioned the case of a young, robust woman who was sent up to him. The only changes that he could discover were an enlargement of the terminal phalanges and an alteration of the nails which were becoming at the same time broader and shorter, with a tendency to crack longitudinally.—Mr. BUTLIN said there was as yet no knowledge as to the exact relation between the enlargements of the pituitary body, which appeared to be a constant feature, and acromegaly, since in so many cases of similar enlargement of the body symptoms of acromegaly were absent. He thought that light would be thrown on these cases by the careful study of cases of acute acromegaly such as that described by Dr. Rolleston, and he also thought that most

[1] THE LANCET, April 25th, 1896.

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careful investigation should be made for any change whatever in the osseous system in every case of pituitary tumour. He had examined the bone in cases of osteitis deformans, and there could be no doubt that the changes were inflammatory. A good account of the minute changes in the bone in cases of acromegaly was much needed.

Mr. C. G. SELIGMANN showed the living ova of Bilharzia Hæmatobium from the urine of a soldier who had recently returned from Mashonaland. The ova were constantly passed from both the bladder and the rectum. Those from the bladder had terminal spines only, while those from the rectum had also lateral spines. The ova could be hatched in warm urine, although not so quickly as in water at the same temperature. In some cases the anterior end of the ovum began to move vigorously, and a number of granules were discharged, many of them collecting between the ovum and the shell. After a time the embryo would become slowly extruded. In other cases the embryo, after more or less active movements within the shell, escapes suddenly through a lateral rent. After escape the cilia at the oral end come to move more vigorously than those elsewhere. The shape of the embryo is constantly changing in an amœba-like manner.

Dr. CALVERT and Mr. T. STRANGEWAYS PIGG showed a specimen of Calcification of the Pericardium the result of chronic pyo-pericardium. The condition appeared to have existed for five years. Three weeks before death the patient was attacked with pleurisy with effusion and died from cardiac failure. The heart was found to be almost entirely cased in calcareous material and there were several ounces of inspissated pus in the pericardium. Such cases were very rare, but had been described by Murchison, Pearce Gould, Laennec, and others.—Dr. A. F. VOELCKER said that there was a similar condition figured by Matthew Baillie in his "Atlas," published in 1803, as one of "ossification of the heart."—The PRESIDENT said that this specimen confirmed his impression that calcification of the pericardium was almost always due to previous suppuration.

Mr. SPENCER showed microscopic specimens of a Submaxillary Salivary Gland altered by general inflammation, the smaller ducts of which were distended by small calculi formed of inspissated mucus in which carbonates were being deposited. The gland had been excised from a girl aged twenty years who had had recurrent distention of Wharton's duct and inflammation of the gland. On opening the duct ropy mucus and numerous small calculi of the size and shape of rice grains escaped. Similar calculi continued to be discharged or were scraped away until finally the gland had to be excised to avoid suppuration. Mr. Spencer mentioned the case of a young man under the care of Dr. Dundas Grant, from whose duct calculi were being discharged of the same size and shape. In the ordinary way a single almond-shaped calculus forms in and fills the main duct. Here numerous calculi arose in the substance of the gland comparable to the formation of calculi in the liver or kidney.

Mr. SPENCER also showed microscopic specimens of Chronic Traumatic Neuritis taken from an amputated leg. The patient, a woman, aged forty-three years, had sprained her ankle severely four and a half years before. She had been under the care of Dr. Ferris, Mr. Davidson, and Mr. Francis, of Uxbridge, and had been several times in hospital under the care of Mr. Spencer. After the accident she could never put her foot to the ground, although all the bruising and swelling cleared up and there had been no fracture or dislocation. She always complained of great hyperæsthesia, of pain especially at night, and suffered intermittently from œdema. After four years ulceration and necrosis of the toes commenced, and the pain spread up to the external popliteal nerve as it turned round the fibula. After the accident the patient developed many general symptoms of a nervous character, and this taken in connexion with the approaching climacteric tended to support a diagnosis of hysteria until this was negatived by the commencing ulceration and necrosis of the toes. Pathologically the case was an interesting one of chronic spreading traumatic neuritis set up by a subcutaneous injury to the soft parts without the intervention of any of the other recognised causes of peripheral neuritis.—Dr. F. E. BATTEN asked if any other stains than the ordinary hæmatoxylin had been employed, and whether during life there had been any reaction of degeneration in the affected limb.—Mr. SPENCER, in reply, said that several stains had been used and showed the same changes. The electrical reactions had not been tested, partly owing to the extreme hyperæsthesia.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

Exhibition of Cases.

AN ordinary meeting of this society was held at 20, Hanover-square on Oct. 27th, Mr. BUXTON SHILLITOE being in the chair.

Mr. W. T. FREEMAN showed a patient, a middle-aged single woman, who had two patches upon her forehead; the edges were slightly raised and were encroaching very slowly indeed upon the surrounding skin. The centre of each patch was occupied by a quite superficial atrophic scar. Neither patch had ever wept, and there was practically no irritability. One patch had existed for sixteen years and the other for twelve years. Mr. Freeman asked for a diagnosis, and the opinions given were various.—An early form of rodent ulcer was suggested by Mr. PERNET.—A specific origin was also suggested, or that the patches were simple lichenous patches.

Dr. ABRAHAM showed in a man about forty-five years of age an interesting example of Xanthoma Diabeticorum. The individual lesions were of about the size of hemp seeds.—Dr. ABRAHAM also brought forward in a man above middle age a case of Granuloma Fungoides. There were well-marked new growths over the lower abdomen and close by the left nipple. The case was originally believed to be one of seborrhœic eczema.—Dr. STOWERS agreed as to the diagnosis and remarked that they seldom had the opportunity of seeing the disease in such an early stage.—Mr. PERNET remarked on the longevity of the ancestors of such patients and gave examples.

Dr. SAVILL showed a case of Urticaria Factitia and also one of Drug Eruption. The urticarial wheals, both those that were persistent and those that could be mechanically produced at the time, were very exaggerated. The drug eruption was marked and not limited to the acne regions.

Mr. SHILLITOE showed a case of Acute General Dermatitis caused by a mercurial ointment.

Mr. HOPE GRANT showed a case of Tumour of the Hand. It commenced a few months previously as a boil; the tumour had steadily increased in size and a scab had formed. It was evidently a tuberculous growth, probably of the nature of a post-mortem wart. The patient was a clothworker.

Dr. ABRAHAM showed for Mr. WAREN TAY a case of Lichen Ruber Acuminatus.—Mr. PERNET called it lichen planus.

Dr. STOWERS brought forward a woman, aged twenty-four years, for diagnosis. He believed it to be a case of Acne Varioloformis.—This was generally agreed to.

Dr. EDDOWES showed a case of Seborrhœa Corporis in a man aged forty-five years. He remarked on the fact of its having commenced on the scalp and then having spread downwards.—Dr. EDDOWES also showed a case of Lichen Planus Hypertrophicus on the legs in an old man.—Dr. EDDOWES also demonstrated by paper, photographs, and microscope a case of Tinea Circinata contracted from a pet hedgehog.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

Exhibition of Specimens.—"Home made" Artificial Denture.—*Extraction of a Tooth by Means of an Elastic Band.*—*A Mandible showing an Embedded Premolar.*—*Acute Suppuration of the Mandible.*—*Presidential Address.*

THE opening meeting of the session of this society was held on Nov. 1st at 40, Leicester-square, Mr. W. E. HARDING, President, being in the chair.

Mr. H. L. ALBERT exhibited two Deciduous Central Incisors which had been removed from the mouth of a child twelve months of age. The teeth presented an extreme development of the cingulum on the palatal side, and as this led to irritation of the tongue the teeth were removed.

Mr. STORER BENNETT showed for Mr. CHARTERS WHITE a specimen of "Home Made" Artificial Teeth. The two central mandibular incisors had been lost and the patient had carved up somewhat primitively two pieces of bone and had fixed them in position by wire ligatures around the adjacent lateral incisors. The specimen shown included the two artificial teeth with the two natural teeth.

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Mr. G. BRUNTON showed several Instruments of his own design and also recorded a case of Extraction of a Difficult Misplaced Maxillary Bicuspid by means of Elastic Ligatures.

Mr. W. A. MAGGS exhibited a Portion of a Human Mandible showing a first bicuspid embedded in the substance of the bone. The tooth was placed in a horizontal position, the apex being towards the median line the crown being situated just above the mental foramen.

Mr. ROUGHTON read the notes of a case of Acute Suppuration of the Mandible, which was followed by pyæmia and death. The patient was a boy, seven and a half years of age, and on Oct. 1st he sat in a draught at school. The same night he complained of pain in the left side of the face, and on being seen the following day by a medical man was found to have a temperature of 105°F., the gum over the region of the left molar being so swollen and painful that the mouth could not be opened. This condition showed little change for two days, but on the third day rigors occurred, and the following day—namely, Oct. 6th—the swelling had extended into the infra-mandibular region. The patient was also slightly delirious. The next day the swelling having extended further down an anæsthetic was administered and an incision made into the tissues of the neck. No pus was evacuated, but the tissues appeared as if about to slough. The teeth were apparently healthy, but the first permanent molar was quite loose and had pus welling up around it. The tooth was removed and the pus evacuated and the parts rendered as aseptic as possible. The next day signs of peritonitis appeared, the patient dying on the following day. Mr. Roughton considered the case to be one of acute panosteitis. A somewhat similar case was recorded by Mr. Goadby.

The PRESIDENT then delivered his Inaugural Address. He referred to the early history of the society, and remarked that one of the most noticeable features of the period which had lapsed since the foundation was the knowledge which had been obtained of the micro-organisms. After paying a tribute of praise to M. Pasteur and Lord Lister he touched upon the advances made in the knowledge of the micro-organisms of the mouth and their action by Mr. Underwood, Mr. Mills, Mr. Tomes, Mr. Mummery, Mr. Miller, and Dr. Black. He pointed out how our knowledge of the pathology of caries had been advanced by the work of these investigators, and also showed how the adoption of Listerian principles in dental surgery had revolutionised the treatment of septic roots.

At the conclusion of the President's address the meeting adjourned.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

THE annual general meeting of this society was held on Oct. 23rd, Dr. SEATON, President, in the chair.

The PRESIDENT, after a graceful reference to the recent death and services of Dr. F. W. Barry, delivered his presidential address, taking for his subject the Work of the Medical Societies in its Relation to Public Health. Much of the work of the Pathological, Medical, and Clinical Societies and the unremunerated researches of individuals, whether undertaken in a purely scientific spirit or with an immediate utilitarian motive, had contributed greatly to the promotion of the ends which their society more directly or exclusively had in view. But the Epidemiological Society, which occupied a position intermediate between the strictly medical societies and their own, was above all others engaged, as its objects stated in the charter of incorporation showed, in pursuits identical with theirs. Then there were the British Institute of Preventive Medicine, the Sanitary Institute, the Institute of Public Health, the Jennerian Society, and the British Medical Association, which, though primarily a union of medical men, had a public health section at its annual congresses. The Sanitary Institute and one or two others embraced men of all professions more or less interested in public health, and there was no doubt that much advantage accrued from association with architects, engineers, chemists, geologists, &c., as well as from the museums and exhibitions promoted by some of these societies. Their various transactions and journals were of great value, yet members of their own society who belonged also to the Epidemiological Society and the Sanitary Institute could not but feel that the multiplication of associations involved a loss of the power resulting from union and that, as Sir Douglas Galton had said, "the interest of public health and sanitation were frittered away over too many societies." He would therefore earnestly urge every member of the Society of Medical Officers of Health to do his best to bring about an amalgamation of all those engaged in promoting the same cause, believing that, since the medical element would always be the predominant one, the authority and influence on public opinion of one great society would be far greater than that which they could exercise with their present divisions; and he thought that this year, being the fiftieth anniversary of the appointment of the first medical officer of health, Dr. Duncan, at Liverpool and the inauguration of the public health service, would be a fitting occasion for effecting such a union. He next referred to a number of questions that had long engaged the attention of all really interested in public health, such as the tenure of office, the qualifications of medical officers of health, the severance of public work from private practice, and the relation of sanitary inspectors to the medical officers of health in town and country districts, their qualifications, and the constitution of the court of examiners. In this connexion he could not pass over the able services rendered to the cause of medical officers and public health administration by Dr. Orme Dudfield. The Maidstone epidemic had shown how different was the sanitary examination of water-supplies from the merely chemical question of the analysis of adulterated foods and, also, how important was a knowledge of the normal condition of a given water and of the contingent dangers to which it was exposed apart from actual contamination. Chemical analysis, without bacteriological examination and the other considerations to which he had alluded, might tend to a false sense of security, but taken in conjunction with these it should serve as a delicate barometer and an indication of impending danger. But while such catastrophes aroused public attention owing to their suddenness it ought to be known that there was in some districts a constant prevalence of typhoid fever attributable to other causes than the pollution of a certain public water-supply, and the record and publication of the distribution of any local excessive incidence of this and of other preventable diseases, as was done by the Surrey County Council, by stimulating preventive action contributed in an important degree to the averting of such outbreaks and to the saving of life without the supervention of these terrible lessons. Such a society as he had indicated should include all the leading epidemiologists who, without belonging to the public service, had made the subject of communicable diseases their special study, and its inauguration would, he repeated, be a fitting and worthy commemoration of the jubilee of the institution of medical officers of health.

Reviews and Notices of Books.

The Year-book of Treatment for 1897. London: Cassell and Co., Ltd.

THIS admirable publication fully keeps up the high standard of merit and usefulness which has been maintained in the past. The present is the thirteenth year in which it has appeared. A large part of Dr. Coupland's article on Diseases of the Heart and Circulation is devoted to an able account of the Nauheim treatment, in which all sides of the question are usefully discussed. Dr. Schorstein, who is a new contributor to the work, deals very thoroughly with Recent Advances in the Treatment of Pulmonary Disease; while another fresh contributor, Dr. Francis Boyd, treats of Kidney Diseases and Diabetes. In the section on Infectious Fevers Dr. Sidney Phillips has much of value to say on the Antitoxin Treatment of Diphtheria, and on the Serum Test in Typhoid Fever. Mr. Rose and Mr. Carless treat of the Advances in General Surgery. The subject of Deciduoma Malignum is very fully discussed both in the article on Diseases of Women by Dr. Herman and in that on Midwifery by Dr. Handfield-Jones, and in the latter article the use of anti-streptococcic serum in puerperal septicæmia receives full

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consideration. Dr. Willoughby deals with Public Health and Hygiene in a series of short but very valuable criticisms, and Dr. Nestor Tirard with the subject of Therapeutics. We have commented on but a few of the excellent articles; most of the contributors are the same as in previous years. We can most heartily commend the annual to every practitioner as an indispensable means of keeping his knowledge of treatment up to date.

Atlas and Essentials of Bacteriology. By Professor K. B. LEHMANN, of Würzburg, and Dr. RUDOLF NEUMANN, of Würzburg. London: Baillière, Tindall, and Cox. 1897. Price 12*s.* 6*d.*

THE larger portion of this little book consists of sixty-three chromo-lithographic plates illustrating the cultural and morphological characters of the principal pathogenic micro-organisms and of a considerable number of the commoner non-pathogenic ones. In so far as it is possible to give any idea of these by chromo-lithography the attempt is creditable enough. In many cases the illustrations give an excellent representation of the cultural characters, especially in instances where the growth is opaque—e.g., staphylococcus albus, bacillus mesentericus vulgatus, &c. Where, however, the growth is of a semi-transparent or fluorescent nature the results are as a rule poor and of little value, for it is absolutely impossible to represent in opaque tints the appearances of a culture of the pneumococcus or the typhoid bacillus. The illustrations are thus of very unequal value. In many cases the appearances of individual colonies as seen under a low power of the microscope are successfully rendered, and the figures of stained micro-organisms are sometimes good. The utility of such an atlas is probably not very great. It is true that occasionally it may give a clue to correct determination, but the absence of any description of the organisms depicted renders verification impossible. For teaching purposes it may serve a good end, where actual specimens and cultivations are not available. The second and smaller part of the book, on the "essentials" of bacteriology is, in our opinion, of far greater value, and many of the chapters will be read with pleasure and interest by those who wish to acquire some knowledge of bacterial chemistry and have no leisure to peruse the larger works on the subject. The morphology and classification of bacteria and the vital conditions necessary to their growth are well summarised. An account of their effects follows, in which the chemical results of bacterial metabolism are considered at some length, especially in relation to the presence or absence of sugar in the nutrient medium. A short appendix deals, in conclusion, with the preparation of staining fluids, cultural media, and other matters of technique. The chemical part of the work appears to us to have considerable value and is well worthy of attentive study.

LIBRARY TABLE.

Under the Red Crescent: Adventures of an English Surgeon with the Turkish Army at Plevna and Erzeroum, 1877–1878. Related by CHARLES S. RYAN, M.B., C.M. Edin., in association with his friend, JOHN SANDES, B.A. Oxon. London: John Murray. 1897. Price 9*s.*—The title of this delightful book should have been "Phil Fogarty II.," for the adventures which the author relates are even superior to the experiences of the Thackeray-Lever hero. Dr. Ryan is an Australian-Irishman and evidently possesses qualities eminently suitable for an army surgeon: indomitable pluck, cheerfulness under the most depressing conditions, and, above all, the quality of sympathy. This latter gift is apparent in his book, so that the reader feels as if he knew the writer intimately by the time he has got to the end of it. Dr. Ryan finished his medical education at Edinburgh University and was enjoying a holiday when he saw an advertisement from the Turkish Government inviting applications to serve as an army surgeon. He at once applied and was accepted, and the first post to which he was appointed was the camp outside Widdin. Of his work here he gives the following picture, the background of which is like an extract from Theocritus:

τάχα δὲ κράναν ἐνόησεν
ἠμένῳ ἐν χώρῳ· περὶ δὲ θρύα πολλὰ πεφύκη,
κυάνεόν τε χελιδόνιον, χλοερόν τ' ἀδίαντον,
καὶ θάλλοντα σέλινα, καὶ εἰλιτενὴς ἄγρωστις.

"Half a mile from the camp was a large marsh or swamp, where great white arum lilies grew, with jonquils, narcissus, and the different kinds of iris in magnificent profusion, as well as millions of the tiny white snowflakes. I had a trench dug outside my tent, and once a week our two servants ..... brought back barrowfuls of flowers, which I planted in the trench. Here, too, the orderlies made us a great seat of turf, and every morning, from six o'clock till half-past nine, I sat there among the flowers to receive my patients, who used to come up from the various battalions to have their ailments treated. ..... As I sat on my throne of turf I had a sackful of Epsom salts beside me, together with a bucket of water and a pannikin, so that when the patient had swallowed a handful of the salts I presented him with a pannikin of water and he washed the nauseous mouthful down." Dr. Ryan was soon, however, to see very different work. His account of the Siege of Plevna and of the appalling state into which the hospital got towards the end of that magnificently borne time of trial reads like a chapter from the "Inferno." We must not quote any more, but will only say that after getting out of Plevna Dr. Ryan volunteered for service with the Stafford House ambulance for service in Erzeroum. Here things were, if possible, worse than in Plevna. Typhus fever, cold, and starvation added to the misery of wounds made up a terrible tale. We can sympathise with Dr. Ryan's trials on his journey from Erzeroum to Trebizond, for from a personal experience of the country we know what he must have undergone. Everyone should read this book; it is a plain unvarnished tale of what goes on in war, and takes us back to the simplicity of MM. Erckmann-Chatrian, whose war stories are, we think, superior to those of Zola, except perhaps his "Attaque du Moulin." The style is easy and eminently readable; how much of this is due to Mr. Sandes of course we cannot say, but we are sincerely grateful to both the authors.

The Benin Massacre. By Captain ALAN BOISRAGON, one of the two survivors. London: Methuen and Co. 1897. Price 3*s.* 6*d.*—The author graphically describes the terrible massacre in Benin in the beginning of the present year, the news of which startled the civilised world alike by the act of base treachery of the King of Benin by which it was accomplished, and which was described by the surrounding tribes as a "monkey palaver," not a "man palaver"—meaning to show their contempt that a man could be guilty of such treachery—and by the revolting sight of the human sacrifices and "temples" reeking with human blood which the punitive force that later took the shambles (otherwise the city) found in large numbers in all directions. As one of the only two survivors who escaped the massacre—whose sufferings in their retreat to Gwatto Creek, each with innumerable wounds and their flesh covered with thorns picked up in fighting their way through the bush, must indeed have been horrible—Captain Boisragon is eminently qualified to tell the tale of the incidents, which he does admirably. He also appends a description of the surrounding country and of the events which led up to the outbreak. As a letter of a comrade of one of the victims well puts it, "The loss which the British nation has sustained during the last sixty years through the deaths of so many brave soldiers,

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bluejackets, and civilians in the glorious work of rescuing the native races in West Africa from the horrors of human sacrifice, cannibalism, and the tortures of fetish worship, must ever be a matter of deep regret and sadness to all, but it cannot fail to make us proud of our countrymen who have nobly and courageously done their duty with the greatest enthusiasm, undergoing hardship and privation inseparable from the trying climate of the West African coast, and exhibiting in their conduct an entire disregard of personal danger."

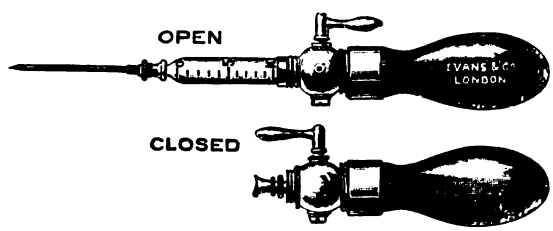
A new edition of *The Guide to South Africa*, for the use of tourists, sportsmen, invalids, and settlers, has been issued by the Castle Mail Packets Company, and the large amount of information which it contains within the covers of its 400 odd pages and its many maps cannot fail to render it an admirable handbook to those whom it concerns.

The weekly board of the Sheffield Royal Infirmary have issued an interesting souvenir volume to commemorate the hundredth anniversary of the opening of that institution. The historical sketch with which the book opens tells the story of its foundation and development, and the recollections of the medical staff as constituted in more recent years are recounted by Mr. Simeon Snell, F.R.C.S. Edin. A short chapter is devoted to recording the growth of the medical work of the infirmary during the century and another chapter to the biographical notes of the physicians and surgeons who have laboured within its walls. A chronology of events and lists of the various officers, with the dates of their appointments, are also given, together with much other information which will doubtless be of interest to those connected with the institution. The volume is embellished with many illustrations by the autotype and other processes, and is handsomely printed with red borders to each page, and has an appropriate inscription, with Scriptural texts, on the front cover. The many interested in the Sheffield Royal Infirmary will doubtless prize this interesting souvenir of the century's work of their institution.

New Inventions.

A MODIFIED PISTONLESS HYPODERMIC SYRINGE.

THIS syringe is a modification of Koch's, which is too bulky for general use. The illustration shows the arrangement, which makes a very compact and convenient little instrument. It is easily carried in the waistcoat pocket, as it does not take up more room than the ordinary pattern. The stopcock is furnished on both sides with a thread, which screws into a ring, upon which is mounted a cylindrically-shaped elastic air-chamber. To close the syringe remove the needle, unscrew and then reverse the stopcock,



passing the barrel into the cavity of the air-chamber, and screw up. The needle can be inserted into the barrel through the stopcock, being kept in place by a thread screwing into it. This stopcock has a double action, so that when turned to cut off the connexion between the barrel and the air-chamber the latter communicates directly with the outside air. This syringe is very easily rendered aseptic; the piston of the usual pattern is the cause of an immense amount of trouble and frequent delay, while the difficulty of thoroughly cleansing the leather usually fitted is obvious.

The ease with which an injection can be administered with this little instrument is remarkable. It can be prepared for use in a few seconds, and being so simple it cannot get out of order. Absolutely no force is required as there is no piston to jam. If care is taken to turn the stopcock as soon as the upper surface of the solution is seen to reach the point of the barrel marked 0, no air can be injected into the tissues. The fact that this can occur is the only objection to a pistonless syringe, while the advantages are many and quite outweigh this solitary disadvantage which, after all, can only occur as the result of carelessness. The makers are Messrs. Evans and Wormull 31, Stamford-street, S.E.

J. W COCKERILL.
Surgeon-Captain, Army Medical Staff.

THE INDIAN FRONTIER RISING.

THE news from India regarding the campaign against the frontier tribes has now assumed a much better aspect, and there is every reason to hope that the punitive expedition is within comparatively easy reach of a successful termination, although a harassing guerilla warfare may still be expected to follow. The Sampegha and Arhanga Passes have been captured with relatively little loss of life; the passes having been forced the gateway to the Afridi country has been opened, and the "purdah" which has hitherto hidden the comparatively open, picturesque, and fertile country of the Afridi Tirah from view has been raised. The Mullah, Said Akbar, has apparently fled to Jellalabad, and the tribes, disheartened by their want of success, are seemingly now convinced of our power to put down the rising, and as a consequence the revolt is fast waning and the tribes have appealed to the Ameer of Afghanistan to intercede with the Indian Government on their behalf. The Ameer, who has expressed no sympathy with their hostile conduct, appears to have given them some sound and salutary advice and has written to the Viceroy of India expressing his loyalty and proffering all the help in his power. Such is, shortly, the situation at the present time. The home of the Afridis seems by all accounts to be fine agricultural well-to-do country, with plentiful supplies of all kinds, in fact, "a land flowing with milk and honey," and our troops are reported to be in excellent health and spirits. The recalcitrant tribesmen proceeding in the Khyber direction will soon find that they can offer no real resistance to the column advancing from Peshawar. The difficulties of the route have been very great, and the expedition has involved much hardship; the days are still hot, but the nights are very cold. The campaign has been, strategically speaking, well designed and brilliantly executed. We can only trust that Sir William Lockhart will succeed in disarming the Afridis and other opposing tribes and securing a fairly permanent peace. The wounded are doing well, and from all we can learn the hospital arrangements have been good. In the interesting account published in the *Standard* of the 3rd inst. of its correspondent with the Malakand field force, a graphic description is given of the night engagement of General Jeffreys' brigade with the tribesmen. Mention is made of an act of great gallantry on the part of Surgeon-Captain Fisher, I.M.S., who was sent with two dhoolies to the assistance of Captain Ryder's company. He escorted them through the village of Badalai and on to the hill under a hot fire from the enemy. The total losses sustained in the campaign against the border tribes since June to Oct. 28th have been large for frontier warfare. The casualties amount to 247 killed and 843 wounded. This includes 24 British officers killed and 52 wounded. The number of British soldiers killed is 34 and of wounded 151. Among the native ranks 177 have been killed and 595 wounded. These numbers do not include, however, the losses at the Sampagha Pass and the Arhanga Pass or those which have taken place since.

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THE LANCET.

LONDON: SATURDAY, NOVEMBER 6, 1897.

THOSE who judge the outlook of the profession of medicine from the side of medical politics may be tempted to take a somewhat gloomy view of the immediate future. The ever multiplying demands of medical education and the ever-increasing torture and uncertainty of the examination processes through which the different medical and surgical qualifications are acquired make the work of the student anxious and exacting beyond all precedent. To practitioners the prospect is little more reassuring. Great judges tell us that the profession has a great future; and certainly their prognosis should be realised. For the scientific basis of all true medical service is being strengthened every day and at every point, and with this the value of medical service should be daily more and more appreciated. Yet experience witnesses almost a daily deterioration in the popular estimate of medical service. To get it charitably or to get it on altogether inadequate terms is the effort of large classes of the community who are not unreasonable in their estimate of other things which they need and for which they are prepared to pay the market price.

It is devoutly to be hoped that this is a temporary state of matters, and that the growth of education amongst us will make the public more intelligent as to the value of true medical service as distinguished from all quack varieties of the same. But how rare is the education that enables men to truly estimate the science and art of medicine. It is notorious that the most cultivated classes have always shown a weakness towards quackery, and the same weakness is not unknown in the more gifted men. No doubt the defects and limitations of medical knowledge have given some excuse in the past for this attitude of mind towards legitimate medicine. But it is daily becoming more and more unreasonable. Of course, medicine still has its limitations. There are whole classes of disease before which we stand very humbly. We are not able to cure them. We can only in a very limited sense control them. Some of them are as yet undefined or unintelligible to the highest medical intelligence. But two considerations are to be urged here. First, that even with regard to those classes of disease medicine and surgery are able occasionally to do wonders in the way of relief of suffering and the prolongation of life, and that with regard to the great mass of human ailment and disease the powers of the medical practitioner are very important and daily becoming more and more so. This much is clear, that on whatever scale the unknown and difficult in matters of disease are in the eyes of the medical man they must loom much larger to him who has not studied medicine or to him who has only studied the arts of deceiving the public with unrealisable pretensions. If the medical man is puzzled by disease and occasionally led into error, how much more must the amateur dabbler in healing go astray.

There are two or three great things for the profession to do to advance its prestige in our ever-advancing civilisation. The first is to complete its own equipment for the contest with disease. The public now are more enamoured of that conception of a medical man which contemplates the warding off or prevention of disease than that which merely removes it. The Chinese idea that medical service consists in preserving health rather than in restoring it has a certain basis of reason in it, and that practitioner will in the long run be most successful who sees in every temporary ailment of his patient the opportunity for advising him against its recurrence as well as the means to strengthen his powers of resistance. Men will be less unwilling to consult their medical adviser if he takes a kindly and yet a scientific interest in the causes which have led to their need of him with a view to such causes being successfully opposed in the future. In other words, the future of the profession is to be advanced by the deepest study of the problems of ailment and disease in all the complicated social conditions in which they arise.

There are, of course, some social or political remedies for the evils which at present depress medical men and destroy medical practice. It is impossible to deny that the profession itself is to blame. It makes itself too cheap. In hospitals it gives itself away too easily to those who could well afford to pay and who would appreciate medicine more if it cost them a reasonable sum per annum as even their beef and their bread—not to say their beer—do. This wholesale treatment of disease in crowds at hospitals has a very injurious effect on medical practice. It compels a reduction in fees which are already inconsistent with justice to the patient or the practitioner. We heard lately of a provincial town in which there was a large outbreak of diphtheria. To the inquiry whether antitoxin was used the ready reply was, "Oh, no, it is out of the question. It could not be paid for."

Even in London, at the very door of the British Institute of Preventive Medicine, the prompt procurement and application of this important medicine are matters which require some ardour and conviction in the practitioner, and if his patient is poor an entire abeyance of the idea of recompense. The recompense of medical service is being so fatally lowered by the competition of hospitals that medical men are discouraged most grievously in the use of the best means. The remedies are largely with the profession itself. The general practitioners of the country have a right to look to their natural leaders, the consultants, for protection from the unfair competition of hospitals, as they have a right to look to all their fellow practitioners in general practice to give no countenance to schemes for sweating medical men and attending the sick in crowds where neither reverence for patients nor attention to their diseases is possible. Another remedy for the low estimate of medical practice is to be looked for in a higher estimate of their disciplinary functions on the part of the qualifying bodies, whether corporations or universities. The medical authorities must often have qualms of conscience when they compare the loose discipline of the medical profession with that of the legal, though life is more than property, and the profession which is meant to cherish and save it should be

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under still more strict discipline than that of the law. We cannot doubt that these views will force themselves on all who are in any position of responsibility either in the medical bodies or in those great voluntary associations of the profession which have virtually the power to impose laws to regulate medical conduct. But the great security for the lasting dignity of the profession in the eye of the public will be in the determination of its individual members to make themselves familiar with every sound device for alleviating suffering and removing disease.

GREAT interest was evinced in the meeting held last week of the Hospitals Association, and the proceedings justified the interest taken, for rarely has a subject of greater interest been submitted for expert discussion, and not often has the discussion of a great problem yielded better promise of useful results. One thing that was made very manifest at the meeting was that there is very great need of the ventilation of questions such as those treated in the papers read by Sir SYDNEY WATERLOW and Mr. ACLAND. So unused are even the inner public, if we may be allowed the phrase, to the discussion of such questions that at one moment there seemed a danger that the meeting would dissolve without any discussion at all, contenting itself with the passing of a ceremonial vote of thanks. Sir HENRY BURDETT performed a real service by interposing at the critical moment with some effective criticism and setting an example which averted the threatened failure and turned the meeting into a success. But the success of the meeting lay chiefly in its demonstrating that there is much good to come out of such conferences, and we hope that it will be followed up by many more at which people who are interested in hospital work will learn to speak without constraint and to offer and receive criticism in a spirit of unconscious goodwill. The meeting on last Thursday week preserved perfect good humour, but there was manifestly a suspicion abroad that anything like trenchant criticism would probably be resented. We do not for a moment suggest that anybody was to blame for this. On the contrary, we are satisfied that it was nobody's fault and due only to the circumstance that, there being no tradition of outspokenness to warrant any unusual frankness in that gathering, every speaker in his turn felt naturally, and indeed quite properly, unwilling to verge towards anything that might be considered to be personality. This feeling speedily disappears among people who are accustomed to meet for the purposes of discussion, and if the gathering that assembled in the board-room at Charing-cross Hospital under Mr. BONSOR'S presidency could be induced to resume the discussion at the point at which it broke off last week we are convinced that valuable results would follow further conference.

The question which mainly occupied the meeting—namely, the relative merits of the Hospital Sunday and the Hospital Saturday schemes of distribution—is a question of great importance, and it was, perhaps, natural that the meeting should feel a preference for the Hospital Sunday Fund scheme. It has, indeed, much to recommend it. It has been elaborated by a committee that had nothing other to consider than the efficiency of hospital administration as an instrument for bringing charity to bear for the relief of the medical necessities of the poor. The Hospital Saturday Fund Committee has had a somewhat more complicated problem to solve. Charity on one hand and necessity on the other have been the main features of their case. But they have not quite emancipated themselves from the idea that to a greater or less extent they ought to obtain a return for their money, and hence they have appropriated a proportion of their funds to the purchase of hospital letters to be at the disposal of the committee. Such a difference in the point of view necessarily involves a difference in the aspect which the problem of distribution presents and a difference also in the resulting practice. No one method should be proclaimed perfection, nor are we yet clear of the danger that in this, as in other matters,

"..... one good custom should corrupt the world."

But there is another question of even greater moment which received very inadequate treatment at the Hospitals Association meeting—namely, the question of distributing the PRINCE OF WALES'S Hospital Fund. It seemed to be in some way taken for granted that when the question of Saturday or Sunday scheme had been settled the question of the principle upon which this Fund should be distributed would be settled also. That we take to be a very serious mistake. The PRINCE OF WALES'S Fund stands on a different footing and ought to be distributed upon a different principle. Indeed, the materials for discussion as to the methods of its distribution do not yet exist. There is some reason for apprehending that when the hospital accounts of the present year come to be made public it will be found that the PRINCE OF WALES'S Fund has caused some diminution of the subscriptions which ordinarily reach the hospitals direct, and if this surmise should unfortunately prove to be correct it will doubtless be found that the burden has fallen more heavily upon some institutions than upon others. In that case the first duty of those who may be charged with the distribution of the Fund will be to see that any deficiencies traceable to this cause be made good, and only in dealing with the surplus will they be free to entertain considerations of a more general character.

It will thus appear that there is much useful work to be accomplished by a continuance of the conference so auspiciously inaugurated in the board-room at Charing-cross Hospital, and we hope that its promoters will renew their invitation and meet with another equally good response.

CRIMINAL abortion where death of the woman ensues is an offence punishable by forfeiture of life. This is the statute law. In its moral aspect it is held in such general abhorrence that all who are found guilty of the crime—save the unfortunate victim, who is sinner and sacrifice at the same time—are rightly considered as being without the pale of sympathy or commiseration. We have on many occasions pointed out that when the perpetrator of the act is a qualified medical man the sin against GOD and his fellow creatures is the more penal, since he acts under the sordid motive of pecuniary gain. It has been argued, and with some force, that the person who illegally procures abortion has every reason to wish that the life of the woman may be spared

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and that, therefore, the deed is not committed with malice aforethought, the prime legal distinction between murder and manslaughter. The majority of our judges lean to the side of mercy and direct juries to return verdicts of guilty of the "minor offence," and that, too, in the face of Lord BRAMWELL'S judgment, which has not been over-ruled. Whether we accept the more rigid reading of the Act of Parliament or the milder interpretation matters but little on the occasion of these comments. Little or nothing can be said in extenuation of the professional turpitude of a medical man who engages himself in such nefarious courses. On the other hand we deem it of paramount necessity that the charge should be supported by such corroborative evidence as to leave no reasonable doubt of guilt. When the accused is a qualified medical practitioner the danger of wrongful conviction is greater, inasmuch as the lawful exercise of his calling may be mistaken for criminal procedure.

At the Central Criminal Court on Oct. 30th Mr. WILLIAM ROBERT HALL HAINS, L.R.C.P. Irel., was put on his trial for conspiring with a married woman to procure abortion. We need not go into the details of the grounds on which the charge was based; suffice it to say that the incriminating evidence was supplied by a servant and a young daughter of the female prisoner. How utterly unworthy of credit their testimony was may be gauged by the fact that the jury, after the case for the prosecution had been put before them, expressed the opinion that it should not be carried further. Mr. Justice RIDLEY concurred, and the legal representative of the Public Prosecutor withdrew his support to the indictment. With this episode at the Old Bailey before them our readers may ask, Why did the magistrate commit the case for trial? We consider the action of the stipendiary as consistent with common-sense as it was justifiable at law. A charge so grave could not have been satisfactorily refuted in any other way than by appearance before a high tribunal. But we deeply sympathise with Mr. HAINS in his protracted suffering, for imagination with difficulty suggests the fearful mental anguish incidental to the occasion. To him it will not seem sufficient balm to his wounds that his friends can with fuller heart and surer mind offer him congratulations on his deliverance because of the unequivocal character of his acquittal. This case was a splendid exhibition of even-handed justice. A fellow creature had been arraigned on a charge of the greatest gravity, and judge, jury, and counsel with one voice proclaimed him innocent; for over and above the fact that the evidence was universally deemed insufficient to substantiate the allegations, Mr. HAINS was acquitted without being called upon for his defence, receiving immediately an unconditional release and an unmistakable certificate of an unstained character. But how will this compensate Mr. HAINS for the horrors of the past weeks? We repeat that he has our deepest sympathy. And his experience, also, is one that is incidental to our calling, and only rigorous punishment of false witnesses and blackmailers will prevent such cases from becoming more numerous.

UNIVERSITY OF CAMBRIDGE.—The number of medical students entered as freshmen during the present term is 131, or about 20 less than in the corresponding term of last year.

Annotations.

"Ne quid nimis."

"WHY SHOULD LONDON WAIT?"

THE following words will be read with deep interest by many of our readers:

"I have a great interest in university work. Though I have not myself studied at a university, and have no claims of that kind to put before you, yet, after all, I hope that if I live I may do something to create a university. I believe in the multiplication of these great teaching establishments. That is one of the results of the democracy to which you referred, and a very good result. I am not afraid of the multiplication of these institutions. I think that the experience of Scotland shows that they are not likely to compete in degrading or depreciating the character of the education which they give, and in the United Kingdom our system will not be complete until there is a University in the Midlands."

These words, greeted with applause, were spoken by the new Lord Rector of Glasgow University at a private gathering on Wednesday evening in the course of an interesting speech in acknowledgment of the toast of his health. We need hardly say that we wish Mr. Chamberlain success in his endeavours, but at the same time it is impossible to avoid contrasting the spirit and intention of these remarks with the somewhat lukewarm assistance hitherto rendered by the Government of which he is an influential member to the cause of a teaching university for London. Indeed, if we mistake not, the earlier efforts to obtain such an university were frustrated by the opposition of the provinces and, we think, by Mr. Chamberlain himself. Perhaps it is not too much to expect that the application of the formula of "simultaneity and similarity" may lead to the creation of a metropolitan as well as of a midland university, for it is inconceivable that the overwhelming claims of London to university organisation can be ignored whilst those of Birmingham are recognised. Unhappily for London it has no Mr. Chamberlain to champion its cause.

ILLEGIBLE PRESCRIPTIONS.

MR. LABOUCHERE says that until lately he has been under the impression that all medical prescriptions were written in recognised hieroglyphics and that although they might not be decipherable by the unlearned public they were nevertheless "thoroughly well understood in the trade.' This belief, we learn, has been quite upset by a lady who has told him that this illegibility of prescriptions is "merely due to the bad penmanship of the doctors." It seems that his fair informant has been making inquiries on the subject, and that "from one chemist she got the alarming answer, 'We can generally make out most of it, and *the rest we have to guess.*'" The terrible state of affairs thus so clearly established has had such a disquieting effect on Mr. Labouchere that it has led him, shrewd and practical man though he is, to make a ridiculous suggestion. "My lady friend thinks that the remedy is to be found in typewriters, and perhaps it might be as well if a short Act requiring all prescriptions to be typed were passed at an early date." The lady friend is, perhaps, a "typist" herself, or may be a loyal lady always on the alert to create employment for her own sex, so many of whom are "typists"; but there are no excuses of that sort to be urged for Mr. Labouchere's attitude, while light talk about proposed legislative enactment comes badly from a serious legislator. It is true that a typewriting machine could be carried in a brougham or dogcart, but many modern practitioners go their rounds on bicycles, to say nothing of the army of humble pedestrians, and the least ponderous typewriting

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machine would be a cumbersome article to carry about by hand or affixed to the framework of a bicycle. Perhaps the fact had struck Mr. Labouchere even in writing, for we notice that in a subjacent paragraph of *Truth* he rather goes back on the proposal that all prescriptions should be type-written by seeing violent virtues in their illegibility. For such is the moral of his next story. Commencing with the reflection that "as a general rule the substitution of one ingredient for another in a prescription is not a matter of any material consequence,"—here the cynical Mr. Labouchere is joking, as he is expected by his readers to joke—he proceeds to relate an anecdote about a valetudinarian of his acquaintance who filed all his prescriptions religiously, and had a most imposing and interesting collection of them. After a time, when he felt in need of medicine he took to using his prescriptions without consulting the practitioner. He prided himself particularly on one of them, which he regarded as an invaluable cure for rheumatism, and as a great favour he one day made a present of it to Mr. Labouchere himself, who speedily discovered that the marvellous specific was simply a mild tonic prescribed by the medical man when his friend was complaining of loss of appetite. Strange to say, the infallible remedy never cured the poor valetudinarian's rheumatism again! "If, however," says Mr. Labouchere, in conclusion, "that prescription had been type-written it would probably never have cured his rheumatism at all, and in that case he would never have had the comfort which he actually derived from it for many years." Observe! not a syllable of regret for so ruthlessly breaking the charm. To some extent we agree with Mr. Labouchere that there are advantages in a patient not being able to read his prescriptions. We are not referring to the possibility of faith-cures, but to the well-known circumstance that many people not necessarily *malades imaginaires* love to develop views concerning their susceptibility to drugs, and to insist that they cannot take this, that, or the other when they know that these particular remedies are being given to them. This playing by the patient at the possession of an interesting idiosyncrasy may seriously hamper the medical man, who is generally driven thereby into Runic characters or Dog Latin.

THE ANTI-TOBACCO SOCIETIES.

ENGLAND is not the only country which fulminates against the use or abuse of tobacco. There is a corresponding French society, and its members have resolved to take time by the forelock, and have already commenced the organisation of a great protest to be put forward at the second congress of the anti-tobacco societies, which will be held in Paris during the exhibition of 1900. The leading spirit of the French society is the President, M. Decroix, from whom we have received the journal of the society containing a preliminary notice of the conference; and without going so far as to endorse his opinion when he says "Tobacco is always useless, often harmful, and sometimes homicidal," we agree with him in so far that we allow tobacco to be sometimes very harmful. It is, of course, a poison; but so is tea, as also coffee—two vegetable products which are consumed by nearly every inhabitant of either England or France. All three can be and very often are abused, but this does not do away with their reasonable use; and, with all deference to M. Decroix, tobacco is not always harmful. On the contrary, in these days of rush and hurry it has often a most soothing and restful effect. The French Society has prepared a series of questions for discussion at the congress, and in the prospectus sent out they invite anyone interested in the question to propose questions upon which they would like the opinion of the meeting. This is a sensible way of going to work, and if we might offer a suggestion it would be that these societies should devote themselves not so much to the getting rid of tobacco altogether, but to seeing that people, however poor, can always obtain pure tobacco. The tobacco sold in France is, to put it mildly, not good, and although in England it is possible to buy fairly good tobacco, it is next door to impossible to get it pure. That is to say, it is nearly always scented or treated in some way so as to give it an artificial flavour. Cigars are beyond the purse of any but a rich man, and as for cigarettes, the filth sold as such is beyond description. A pure tobacco society would be an admirable institution, and as for the traders saying "Customers like scented tobacco," the customer seldom gets the chance of smoking anything else. The truth is that, as in the case of highly-scented tea or soap, it is cheaper to "fake" inferior qualities of stuff than to supply the real thing. To be unsophisticated an article must be of good quality, but the craze for cheapness is ruining everything, and when people buy cigarettes at 1*s.* 11*d.* a hundred it is not to be wondered at that they get—well, an inferior article.

THE CASE OF THE PECULIAR PEOPLE.

MR JUSTICE RIDLEY'S action towards the Peculiar People who were recently convicted in his court was one of great wisdom. While recognising that they had acted for conscience' sake, and therefore refusing to make martyrs of them, he at the same time vindicated the law by requiring them to give sureties for future good behaviour. We congratulate the jury on their verdict of manslaughter, and our congratulations are due not in the least to any savagery in our composition, but to our knowledge that such verdicts are of great use to the public in helping them to distinguish between wholesome independence of opinion and mischievous faddishness entailing misery or worse upon others. If the Peculiar People would confine themselves to dying of their peculiarities it might be logical to say that it was a matter that concerned only themselves; but when their warped and narrow judgment conduces to the death of their helpless children it is time for the law to interfere. Piety is all very well, but when the behaviour which purports to be pious is the outcome of ignorant bumptiousness the would-be pious person must understand that the virtue he aims at will not excuse him for the sins he commits. The Peculiar People neglect their duty towards their neighbour, while their assertion that in so doing they are performing their duties towards God is only their assertion and is authoritatively contradicted by the rest of the world.

ACROMEGALY AT THE PATHOLOGICAL SOCIETY OF LONDON.

THE meeting of the Pathological Society of London on Tuesday last was of a highly interesting character, the main subject being that of acromegaly, to the morbid anatomy of which valuable contributions were made by Mr. Percy Furnivall, Dr. Rolleston, Mr. Pelham Lawrence, Dr. E. J. Smyth, and Dr. Norman Dalton, fully justifying the remark of the President, Dr. Payne, that this was probably the first time that so large a collection of specimens of this rare affection had been exhibited together. Mr. Furnivall, in particular, must be commended not only for the excellent description he gave of his case, but also for the pains he had taken to collect and analyse recorded cases. His statement that in every one of the thirty-four examples he had collected there was some affection of the pituitary body bears out the original observation of Marie, although in the present state of knowledge it is difficult to arrive at a conclusion respecting the relationship existing between the skeletal changes and the somewhat heterogeneous character of the lesions in the

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pituitary gland. In no inconsiderable proportion, too, the thyroid body was also affected. Dr. Rolleston drew attention to the fact that in the more rapidly advancing cases of acromegaly the pituitary disease was of the nature of sarcomatous growth, a fact which, he said, had been pointed out by Sternberg. This author's monograph[1] is perhaps the most recent, as it is the most systematic, survey of the affection yet published. He distinguishes three types—the benign, which may last for fifty years and lead to but slight discomfort; the ordinary chronic acromegaly, lasting from eight to thirty years; and the acute malignant type, of from three to four years' duration. In speaking of its pathogeny Sternberg says that there are many theories current, and collates them under the heads of: (1) the nervous theory, held by von Recklinghausen and others, but now mostly discarded, that observer's case being recognised as syringomyelia; (2) the theory of atavistic perversion of growth, as suggested by Freund and Campbell; (3) the thymus theory of Klebs; and (4) the pituitary theory of Mairie, who contrasted the disease with myxœdema or cachexia strumipriva. Dr. Dalton at the above meeting advanced another theory—namely, that there was a tendency to general tissue hypertrophy, illustrated in his case by evidences of connective tissue hyperphasia, hypertrophy of the cutaneous papillary body, as well as of the viscera. That disease of the pituitary body may occur without any of the characteristic changes of acromegaly being present was mentioned by more than one speaker; but, as Mr. Butlin pointed out, it would be well in future for those who met with such cases to be careful not to overlook any concomitant changes that might suggest acromegaly. Dr. Payne's remark that cases of acromegaly in its incipient stages must occur, although they may pass unrecognised, is worth noting in this connexion. We may take this opportunity of expressing the hope that the new President's vindication of morbid anatomy as an essential part of pathological science in the admirable address he gave at the opening meeting of the session of the Pathological Society of London will be borne in mind by the members, and that the society will in this respect show greater activity than it has done for the past few years.

[1] Die Acromegalie. By Dr. Maximilian Sternberg. Vienna: A. Hölder. 1897. Price 4 marks 20 pf. This essay forms part of the seventh volume of Nothnagel's "Specielle Pathologie und Therapie" now in course of publication.

THE MAN WITH NO NONSENSE ABOUT HIM.

WITH reference to the cheese-paring policy or total neglect too often prevalent in municipal counsels where sanitary matters are in question a correspondent has sent us a vigorous letter in which the following passage occurs:—

"There are, unfortunately, men so constituted mentally that they hold in utter contempt all knowledge of which they themselves are not possessed or whatever subject fails to interest them. Especially abhorrent to them are matters that do not offer any immediate or visible advantage; indeed, with them everything is to be brought to this precious touchstone to be tested. 'The man with no nonsense about him' is a terrible stickler for justice as applied to others, which, indeed, seems to be all he desires, at least in cases where he may derive benefit from its performance. It is true he always stoutly maintains the necessity for being just before being generous, which axiom he administers as a kind of conscience salve after he has been guilty of a more than usually mean action. Shrewd in all matters concerning things in which he is interested, he shoulders his way to the front in most public questions; fluent in speech, his sophistical arguments often, alas, overrule the sounder opinions of less obtrusive men. In council his great aim is to reduce expense; he thinks he can find much better occupation for his time than in fadding about such questions as drains and sewers or in troubling his head as to the source from which he derives his water-supply. When an epidemic occurs he laments the slow advance of medical and sanitary science, which, in his opinion, should have prevented the outbreak. 'The death-rate is normal,' he will say. 'There is nothing the matter with the sewers,' 'the water-supply is all right.' 'Let sleeping dogs lie,' &c. 'Time enough to spend money upon these things when they are known to be out of order,' howbeit he takes no trouble to inquire as to their condition. It is the influence of these wiseacres in municipal matters that frustrates the efforts of those who would avail themselves beforehand of scientific knowledge and who are sneered at as cranks and faddists. With what results full many a town can testify. For the sake of some trumpery present economy a whole district is exposed to the ravages of avoidable disease, with all its attendant misery and desolation."

Our correspondent deprecates any reference in his remarks to persons or to particular and recent calamities, but asks whether the picture he has drawn does not constitute "an easily recognised and all too common type." To this question we have to say that we consider that in "the man with no nonsense about him" he has depicted very accurately a person with whom all medical men are familiar—and disgusted.

THE CERTIFICATE NUISANCE.

THE question of hospital practitioners charging fees for filling up and signing certificates required by patients for making a claim on insurance and other club funds has been raised by a patient at St. Thomas's Hospital. In this instance a fee of 5*s* was claimed and paid. This claim was based on a misapprehension on the part of the medical officer concerned and was not made with the sanction or knowledge of the hospital authorities. Steps have at once been taken for the prevention of such an occurrence in the future. At the same time it should be clearly understood that a printed certificate of attendance at the hospital and of inability to continue his work is of course given to any patient who asks for it. But the question has arisen concerning insurance certificates, some of which are extremely elaborate and demand much time and thought in their preparation. They are increasing in number, length, and complexity. The whole question is one which must receive careful consideration so that some uniform method of dealing with them may be adopted at all the general hospitals.

THE CHEMISTRY OF THE CEREBRO-SPINAL FLUID.

THE composition of the cerebro-spinal fluid has been investigated by various chemists both in man and the lower animals, but without satisfactory results, partly perhaps because it has been examined not in healthy but in diseased conditions. The presence of a cupric-oxide reducing substance has been generally admitted, but whilst Halliburton observes, in the last edition of "Kirkes' Physiology," that it contains besides salts and proteids in solution, a substance which gives Trommer's test for sugar, it is, however, he goes on to say, not sugar, but a substance of the aromatic group called pyrocatechin. Hammarsten, however, in his "Physiological Chemistry," admits a copper oxide reducing substance and describes it as an optically inactive but "fermentable" substance, a statement that is not compatible with its being pyrocatechin. With the object of reconciling these differences Dr. E. Nawratzki, of the Dalldorf Asylum for the Insane, has undertaken an investigation upon the fluid in the lower animals and in man. He adopted the plan of making a Quincke's lumbar puncture, by which means absolutely pure liquor cerebro-spinalis can be obtained, and his first researches were made upon the calf. The mode of slaughter practised on these animals was favourable to the inquiry. Oxen, sheep, and pigs, on the other hand, could not be used because they were killed in a manner which rendered the procurement of the

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pure fluid difficult or impossible. From the calf he obtained from 20 to 60 c.cm. of the fluid contained in the sub-arachnoid space. The fluid was limpid and colourless, of slightly saline taste, and contained neither flocculi nor coagula. Under the microscope isolated red and white blood corpuscles were frequently visible, probably driven in by the needle. The fluid was feebly alkaline and became opalescent on boiling. On the addition of a small quantity of acetic acid a finely flocculent precipitate was thrown down. On the addition of solution of soda and a trace of copper sulphate in seven out of twenty experiments a slight violet coloration was observed; in the remaining thirteen there was none. In all instances a positive result was obtained by the use of Trommer's test. No response was obtained from Nylander's test. In the cases in which the phenyl-hydrazin test was applied the results were positive. The doubtful and conflicting statements of writers in respect to the nature of the reducing substance Dr. Nawratzki believes to be due to the small quantity of fluid at their disposal. He accordingly mixed the fluids obtained from no less than 85 calves, and thus collected more than two litres, which were acidified with acetic acid and mingled with a considerable quantity of alcohol. The mixture was then divided into four portions. These were severally tested for a copper-reducing substance and for pyrocatechin, and the results of his experiments were that in opposition to Hoppe Seyler and Ransom he finds that in health a substance is present which in all its properties agrees with grape sugar. The percentage amount is smaller than that in blood, varying in different classes of the animal kingdom from one-tenth part to two-tenth parts per cent., whilst pyrocatechin is entirely absent.

A NEW LOCAL ANÆSTHETIC.

OF the making of new local anæsthetics there appears to be no end. The latest claimant rejoices in the name "p-amido-m-oxy-benzo-methylic ether." The German chemists, Einhorn and Heinz, who have experimented with this substance have adopted for it the more convenient term "orthoform." It is a white crystalline powder and is without odour or taste; it is but slightly soluble. However, it forms soluble salts with acids which, while they possess distinctly anæsthetic properties, are rather irritating when applied to mucous membranes. The powdered orthoform placed upon the surface of an ulcer or inflamed mucous membrane produces, it is said, insensibility of the part and its anæsthetic action persists for some time. It possesses the advantage of being non-poisonous, and so can be freely applied to the surface of burns and painful cancerous and other ulcers. It has been given internally in gramme doses in cases of gastric carcinoma. Its insolubility appears to be a drawback to its employment as a local anæsthetic for surgical work, but successful results appear to have followed its use at Munich for surgical operations.

FREE SHOOTING.

MATTERS in the County of London are rapidly approaching the happy state of things which used to exist in California and Australia in the "fifties," when the custom of shooting on sight was looked upon as laudable and justifiable. Four cases of shooting came before the courts on Nov. 2nd, another one on Nov. 3rd, and it has become quite a common thing for gangs of boys aged about fifteen years to perambulate the East End and Clerkenwell armed with revolvers. When these gangs meet there is trouble. Statements have appeared in the lay press to the effect that ten cases of shooting have been attended to at the Royal Free Hospital within the last ten months. This is a slight exaggeration, the correct number being eight up to Oct. 31st. Unfortunately education as given in elementary schools where we suppose these enterprising youths have been brought up does not as yet include revolver practice, so that harmless passers-by are often hit and sometimes killed. If only members of the gang suffered no one would object. Seriously though the custom must be put down at all costs. A licence to sell pistols or revolvers should be made to cost a large sum and a licence to carry one still more. The sooner the defunct Pistols Bill is brought in again and passed the better, for it is perfectly intolerable that in the greatest city in the world and after nearly thirty years' working of the Education Act a state of matters should be allowed worthy only of a frontier settlement. The magistrates, also, are much to blame for the ridiculously inadequate penalties they inflict when an offender is brought up for punishment; retribution, heavy and swift, should follow any case of shooting in the streets, except perhaps in the very exceptional case of the use of a revolver by a policeman.

THE EPIDEMIC OF TYPHOID FEVER AT LYNN.

THE outbreak of enteric fever at Lynn still progresses. Already the attacks number about 300, and some ten fresh cases occur daily. There can be but little doubt that the washing of filth into the Gaywood river, whence the corporation derive their water, is the cause of the outbreak, just as it was in 1892. Unfortunately, too, the ratepayers are themselves responsible for the large amount of disease which has occurred, for a majority of them persistently opposed new waterworks, and at last the Local Government Board had to intervene with a peremptory order. The delay occasioned by the townspeople prevented the new works being available before the beginning of this epidemic. Dr. Frederick St. George Mivart, of the Local Government Board, has been for some days past conducting an inquiry into the causes and means of spread of the disease. Our Special Sanitary Commissioner is making a detailed report for our readers, the first instalment of which will be found on page 1218.

THE BACTERIOLOGICAL EXAMINATION OF THE BLOOD.

IN recent years bacteriological examination of the blood during life has become more frequent. The *American Journal of Medical Sciences* for October, 1897, contains a summary of the results obtained by Dr. John Slade Ely. As a diagnostic aid such examinations have proved disappointing; the proportion of cases in which positive results are obtained is very small. As a means of throwing light on pathology, on the contrary, they are very valuable, explaining the occurrence of complications in diseases which usually are localised. Pyogenic germs have been detected in the blood during life in pyæmia, osteomyelitis, puerperal fever, erysipelas, and infective endocarditis; the pneumococcus in pneumonia and infective endocarditis; the bacillus coli communis in cystitis with a pyæmic condition; the gonococcus in infective endocarditis following gonorrhœa; the tubercle bacillus in tuberculosis; and the typhoid bacillus in typhoid fever. Some investigations by Kohn published in the present year are of great interest. In pronounced sepsis a positive result was always obtained, and in some cases the bacteria were present in large numbers. In a case of acute ulcerative endocarditis plate cultures of the blood yielded 200 colonies of streptococci and several of staphylococci. In 32 cases of pneumonia a positive result was obtained in 9. Of the latter 7 were fatal, and the 2 which recovered were complicated respectively with pneumococcus empyema and pneumococcus abscesses. Of the 23 negative cases 18 recovered. Of the remaining 5 the fatal result was due in 2 to secondary

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streptococcus infection (empyema); the patient was alcoholic in 1; and the pneumonia was probably due to the influenza bacillus in a fourth. The high proportion of positive cases—28 per cent.—is very remarkable; so, also, is the prognostic significance of the presence of the pneumococcus in the blood, foreshadowing death usually, or, at any rate, complications, and its absence the opposite at least in cases of pneumococcus infection. In the Johns Hopkins Hospital *Bulletin* for June, 1897, Dr. E. Block relates a fatal case where the typhoid bacillus was obtained twice during life from the blood of the patient. In most cases such attempts fail. As the bacillus can, as a rule, be cultivated from the internal organs after death the writer infers that it must be present in the blood at some period during life in nearly all cases. We pointed out the fallacy of this mode of reasoning a short time ago in dealing with the subject of typhoid cholecystitis[1]—a criticism which the striking difference as regards extent of infection between the fatal and non-fatal cases of pneumonia shown above amply justifies. But the facts now published carry us further, and suggest for the infections in general the question (not to say conclusion)—Are not the cases which show infection of the blood the severe and the fatal ones, and those in which the blood is free milder and more prone to recovery? The usual failure of the blood-examination as a means of diagnosis is explained by this suggestion.

NURSING IN IRISH WORKHOUSES.

IF all that has been revealed during the last year or so stands the test of thorough investigation it is high time that the Irish workhouses were set in order, and we are therefore glad to find that a General Order of the Local Government Board has recently been issued bearing the same provisions as that for England, to which we recently adverted. If it is necessary in the case of the English workhouses it is still more so in the case of the Irish ones that paupers should cease at once and for ever to act in the capacity of nurses, and this necessary reform is made quite clear in the Order. We are glad also to find that paupers cannot be deemed qualified to act even as *attendants* in the sick wards without the previous sanction of the medical officer, and that the nurse is to take her orders directly from the medical officer as to the nursing of the sick and ventilation of the wards and so forth, instead of his orders being subject to the revision of the matron as heretofore. This new order also makes the very useful provision that the medical officer can demand extra nurses in times of stress of work or epidemics, and the master, who in small country workhouses is often only an ex-gate porter, is not allowed to exercise any discretion in the matter, but is to supply the extra nursing demanded. These provisions will certainly be very great gains—that both medical man and nurse shall be less fettered in matters medical and nursing. There are, however, two somewhat serious defects in this as in the English order. In the first place the term "trained nurse" is not clearly defined, or it would perhaps be more correct to say is imperfectly defined. Persons are said to be eligible for the post of superintendent nurse when they have "undergone for three years at least a course of instruction in the wards of a hospital or infirmary being a training school for nurses" (and recognised as such by the Local Government Board). It follows from this that although a person may be deemed by the authorities at the school where she was trained not sufficiently qualified to receive a certificate after examination at the end of her three years' training, she is nevertheless qualified to act as a superintendent nurse! Would it not have been better to word the Order to the effect that the nurse should have obtained a certificate of efficiency at an examination after three years' instruction at a recognised school of training? Again, in accordance with the present phrasing, many of the excellent nurses trained by the Workhouse Infirmary Nursing Association would be ineligible for the post of superintendent nurse, though they have often had much better training than some of those who are eligible for the post under the new Order as it now stands. Another difficulty which is bound to arise under the new Order will be that of procuring sufficient nurses who have been properly trained; and if the association gives up its good work, as seems likely if rumour be true, it is difficult to know where the nurses are to come from. Guardians had sufficient difficulty in former times in procuring trained nurses, but now their difficulty will be tenfold, and the sooner this question receives the consideration of the authorities the better. We fear the new Order will foster the tendency there is for every small workhouse infirmary to multiply its "*assistant* nurses" at the expense of efficient persons, and thus to turn itself into a training school, as it were. We cannot help thinking that this Order, like the English one, has been framed without sufficient advice from experts learned in matters medical and nursing.

[1] THE LANCET, June 12th, 1897.

THE PAYMENT OF CORONERS' JURIES.

IT is in the air that coroners' juries shall be paid at last, which will be glad tidings, not only for persons who are summoned on coroners' juries, but for that wiser section of the public which does not mind paying a trifle in return for valuable services. The Public Control Committee of the London County Council recently reported to the Council that they have come to the conclusion that any scheme which attempted to make class distinctions would be futile, and that they are of opinion that payment of a fixed sum to all jurymen should be made. They considered that 2*s.* for each attendance would meet the case fairly, and they estimated the average attendance of jurors at fifteen, making an annual cost to the County of London of about £7000. The report was referred back to the Public Control Committee to consider the question of raising the fee. The coroner's inquest rightly conducted is a valuable proceeding, and there is no reason why the jurors who are engaged in safeguarding all our lives by sitting on these inquiries should give their time and services for nothing. We hope and believe that the Council will take this view.

EMBOLISM OF THE SUPERIOR MESENTERIC ARTERY.

THE symptoms in the following case recorded by Dr. Karcher, of Basle, and published in the *Journal des Praticiens* of Oct. 23rd, 1897, are very characteristic of embolism of the superior mesenteric artery. A woman, aged forty-one years, with mitral obstruction, dilated heart, and failing circulation, entered a hospital. She improved under rest and digitalis. But on the evening of the third day she was suddenly seized with violent abdominal pain below and to the left of the umbilicus, and a little later with pain in the left leg. At the same time bloody motions came on. There were cyanosis and dyspnœa; the pulse was almost imperceptible; the extremities were cold and covered with clammy perspiration; and the temperature was 35·6° C. However, she revived after injections of caffeine and camphorated oil. On the following days the abdomen remained tender, but no ascites was present. Gangrene occurred of the left leg, which was amputated at the end of five weeks. The popliteal artery was found to be blocked by a thrombus. After eight days the patient succumbed to progressive failure of the circulation. At the necropsy the heart was found to be very dilated with thrombosis of the left auricle, mitral obstruction and insufficiency, aortic obstruction, and tricuspid insufficiency.

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There were infarcts in the lungs, kidneys, spleen, and liver. At its origin the superior mesenteric artery was obstructed by a thrombus with a ramification in a pancreatico-duodenal artery. In the middle the thrombus was softened and suppurating, and communicated by a perforation in the vascular wall with a large pancreatic abscess. Probably the ischæmic pancreas had been infected from the intestine. The survival of the patient for almost two months is exceptional; cases of embolism of the superior mesenteric artery usually succumb in a few days.

THE PLAGUE IN INDIA.

WE are glad to learn from the Indian papers by this mail that there has been a satisfactory improvement in the health of Bombay during the week ending Oct. 16th, but the latest telegraphic intelligence states that there has been an increase of plague at Poona where the deaths are reported to number nearly 100 daily. Outbreaks of the disease have also occurred at Sholapore, Kankhal, and one case is reported at Madras. At Poona, in addition to the patients in the Hindu and Mohammedan plague hospitals, there are many in the cantonment hospitals and several Europeans have been attacked with the disease.

HOURS OF RAILWAY SERVANTS.

IT is with pleasure that we note in an introduction to the Report of the Board of Trade on its work under the Railways Regulation Act, 1893, for the year ending July, 1896–97, that Sir Courtenay Boyle is able to testify to the willingness of the companies to listen to the representations of the Department. The number of complaints also show a marked falling off, the figures for the past three years being as follows: 1894–95, 156; 1895–96, 97; 1897–98, 76. The danger of overworking railway employés, especially signalmen, has been demonstrated practically by many an unfortunate casualty, and it is gratifying to know that the Act is serving as a check to a state of things which was a menace to the lives of the public as well as an injustice to the railway servants. The number of hours worked in some cabins we still consider far too long, and we hope that the next report will show that an improvement in this direction has been made.

THE SPINAL CORD IN PERNICIOUS ANÆMIA.

AN important paper on this subject appeared some time ago in the *Nordeskt Medicinskt Arkiv* by Dr. Petrèn. He had examined the spinal cords in nine cases of pernicious anæmia, and in two of these, besides the usual symptoms of anæmia, there were also symptoms of an affection of the spinal cord. In four of the cases the vessels of the white substance of the spinal cord were affected with hyaline degeneration which could reasonably be regarded as a result of the cachexia. In five cases were found scattered small hæmorrhages in the cord, or sclerotic patches the result of such hæmorrhages; these are comparable to the hæmorrhages found in the retinæ in this disease. In two of the cases in which clinically no symptoms of affection of the spinal-cord existed the posterior columns showed a chronic degenerative change. Of the two cases with symptoms of spinal-cord disease the first was that of a woman, aged thirty-six years, whose anæmia had lasted six months, and in whom the symptoms of affection of the spinal cord had been present for two months. These symptoms consisted of motor and sensory impairment in the limbs, ataxy, loss of knee-jerk, and in the later stages incontinence of urine. In the cord the posterior columns were much affected, the columns of Goll being almost completely degenerated, those of Burdach rather less so, the degeneration becoming less marked from below upwards. In nearly all the dorsal cord and in part of the cervical, the peripheral part of the cord except the zone of Lissauer was much affected, apparently by a somewhat acute destructive process. The second patient presenting spinal symptoms was a man, aged forty-two years, who had paralysis, gradually increasing, of his lower limbs, which began three years before his death. There was a spastic condition of his legs, but the condition of sensibility was not ascertained. In the spinal cord there was found widespread degeneration of the columns of Goll and Burdach. The right crossed pyramidal tract was also degenerated. In all cases of this description Dr. Petrèn says the fibres of Goll are probably first attacked in the cervical region. Later the columns of Burdach suffer, but the zone of Lissauer is spared. After the posterior cords the lateral are next attacked, and the affection may also spread to affect the anterior columns. Dr. Petrèn also examined the spinal cord in two cases of Hodgkin's disease, but found no alteration except that there were a few small hæmorrhages present.

THE LATE SIR RUTHERFORD ALCOCK.

THE distinguished diplomatist who passed away upon Nov. 2nd was, we are proud to say, a member of our own profession, as was also his father, Dr. Thomas Alcock. On completing his medical education he entered the marine brigade of the British auxiliary forces which were fighting in the Carlist and Miguelite wars in Spain and Portugal. After being appointed Deputy-Inspector-General of Hospitals he retired from the medical profession and entered the diplomatic service. Of his long and useful career in China and Japan we need not speak here, except to say that for over thirty years he served his country faithfully and well. No doubt his medical training, a training which braces up the faculties of observation and the power of drawing accurate deductions, stood him in good stead during his after-career; and like that other great medical diplomatist who is still with us, Sir John Kirk, he opened up countries practically unknown to Europe so that his own country was enabled to benefit by fresh fields of commerce, while at the same time neither administrator made the mistake only too common in some parts of the world of trying to alter or do away with harmless customs merely because they were strange to an European eye or mind. Men of this class are very builders of Empire, and happy is the country who has such at her disposal.

NERVE-DEAFNESS IN DIPHTHERIA.

AFFECTION of the labyrinth or auditory nerve in diphtheria is of the greatest rarity; it is unmentioned by almost all authorities. The following case is described by Dr. J. C. Wilson in the *American Journal of Medical Sciences* for October, 1897. A woman, aged thirty-three years, complained of sore-throat. The tonsils were covered by a dense, greyish-white exudation with abruptly margined borders, surrounded with hyperæmia. On the fourth day there were distressing tinnitus and loss of hearing, which latter became total on the next day. Antitoxin was injected, and the membrane disappeared in the course of two days. The tympanic membranes were bright red, but glistening and not bulging. Bacteriological examination failed to show the bacillus. On the ninth day there was loss of power of the muscles of the back of the neck, and later double vision and paresis of accommodation ensued. The patient gradually recovered and the membrana tympani became normal, but the tinnitus continued. Deafness was absolute with all tests. Six months after the attack the deafness, tinnitus, and slight vertigo persisted, as well as paresis of the muscles of the neck. Dr. Wilson suggests that the

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failure of the bacteriological diagnosis may have been due to the previous use of antiseptics. He fairly insists that the condition of the throat, the rapid disappearance of the membrane after the use of antitoxin, leaving superficial erosions, and the pareses justify the diagnosis. The deafness was probably due to labyrinthine lesions. Moos, on examining the bodies of three children who died from diphtheria, found the membranous semicircular canals filled in many places with coagulated lymph, whilst the middle ears showed merely catarrhal changes.

THE LATE PROFESSOR HAUGHTON.

AMONG intellectual Irishmen few were more prominent and typical than Professor Haughton, M D. Dub., D D He was encyclopædic in his knowledge and his conceptions of knowledge. Divinity, mathematics, mechanics, physics, physiology, languages, medicine, all seemed alike easy to him. But it was in his nature and disposition that his chief charm lay. His geniality and humour were constant and sometimes irrepressible, even when subjects of grave moment were under discussion. He was a very familiar and distinguished figure in the General Medical Council on which for a great many years he represented Trinity College, Dublin. On questions of education, especially general education, he spoke with an authority to which no other member could pretend. But on essentially medical subjects, such as midwifery and infectious diseases, he spoke well and was always on the practical side, as one representing a country the social condition of which made medical help at once difficult to get and essential to have. Professor Haughton was for years on the Education Committee of the Council, and in this capacity he did great service. Proud of the great College of which he was so distinguished a representative, and ready as he was to fight for her whenever anything was said which seemed to conflict with her interests or her honour, he yet concerned himself with all the ordinary questions which engaged the attention of the Council both in its educational and its ethical work. And so it happened that when failing health compelled his reluctant resignation the members felt an unusual personal sense of loss and regret and that one would be missing from their midst who imparted to their discussions interest and wit and learning of quite an exceptional kind.

As recently intimated in our columns Sir William Gowers is to be entertained at dinner by the Society of Medical Phonographers. The occasion of the dinner is to congratulate Sir William Gowers on his knighthood, and although the members of the society have felt that the occasion affords them a peculiar opportunity for recognising the services which Sir William Gowers has rendered to the society, it is hoped that it may have a somewhat wider significance as a recognition of the debt which the medical profession in general owes to him. The dinner is to take place at Limmer's Hotel, George-street, Hanover-square, on Nov. 25th, at 7.15 for 7.30 P.M., and Sir William Broadbent is to occupy the chair. Anyone who wishes to be present is requested to apply to Mr. L. E. Creasy, 1, Windsor-road, Ealing, W., or to Dr. James Taylor, 49, Welbeck-street, W., from whom tickets (price 10*s*., exclusive of wine) may be obtained.

AT the meeting of the Clinical Society of London to be held on Friday, Nov. 12th next, a series of cases of Forcible Rectification of the Deformity in Pott's Disease of the Spine will be brought forward by Mr. A. H. Tubby and Mr. Robert Jones. Dr. Calot, the introducer of the method, will be present, and no doubt the cases will be subjected to full discussion.

THE November dinner of the Aberdeen University Club, London, will be held at the Holborn Restaurant on Wednesday, Nov. 17th, at 7 P.M. Dr. Robt. W. Burnet will take the chair, and intending diners should communicate with the honorary secretaries, Mr. J. Gerald Laing and Dr. James Galloway, at 54, Harley-street, W.

THE QUEEN has been pleased to give and grant unto Mr. Philip Demech, M.D Edin., licence and authority to accept and wear the insignia of Chevalier of the Order of Orange-Nassau, which the Queen Regent of the Netherlands, in the name of Her Majesty the Queen of the Netherlands, has conferred upon him in recognition of his services whilst actually and entirely employed beyond her Majesty's dominions as Dutch delegate on the Egyptian Conseil Sanitaire, Maritime et Quarantenaire.

The Lancet Special Commission

ON THE

METROPOLITAN WATER-SUPPLY.

XVIII.[1]

NEW RIVER COMPANY—*Continued.*

PRESENT CONDITION OF THE NEW RIVER—A SURVEY.

THE New River was originally made to convey water from the springs of Chadwell and Amwell to London. The total length of the river when first made was just under forty miles. This distance has been considerably lessened, short cuts in a more direct route having been made over some of the valleys. At first only spring water was conveyed, but after a time the amount proved to be insufficient and an extra supply was taken from the River Lee.[2] Of late years a number of wells have been made near the banks of the river and the water is pumped to augment the quantity which comes from Chadwell spring and from the Lee. In a few instances water is pumped direct from the wells for the supply of customers, but the greater part is pumped into the river and goes to Newington where after passing through the subsiding reservoirs it is filtered before distribution. The width of the New River varies from about 25 ft. in the widest part to 17 ft. in the narrowest.

Before describing the course of the river it may be well to give a brief account of the work which has to be done to keep it in order and of the way in which it is protected. The general work which has constantly to be done is that the banks of the river have to be kept in a good state of repair, the weeds which grow in the stream have to be cut, and trespassers have to be prevented from doing any damage to the water or to the banks. In order that these things may be efficiently carried out the river is divided into twelve divisions or "walks." Each walk is under the care of two men, the senior of whom is called the "walksman," and the assistant the "walksman's mate." It is the duty of these men constantly to perambulate the river to keep off all intruders, man and beast, to repair the banks where necessary, and to cut the grass on the walks which extend on both sides of the greater part of the course of the river. It may be interesting to mention as a curious matter of etiquette which has lasted a long time that it is usual for the walksman to look after the right or "upper bank" of the river as it is called and for the walkman's mate to look after the left or "lower bank." This custom is a constant one. During the

[1] Nos. I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., and XVII. were published in THE LANCET of Feb. 20th and 27th, March 6th, 13th, 20th, and 27th, April 3rd, 17th, and 24th, May 1st, 8th, 15th, 22nd, and 29th, June 19th and 26th, and Oct 23rd respectively

[2] In this article the spelling of the Lee adopted is that given in various Acts of Parliament. Cartographers, including those employed in Her Majesty's Survey Office, usually spell the Lee—Lea.

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summer a good deal of work has to be done in keeping the river free from weeds and for this purpose extra men are employed. From May to September weeds have to be cut about once a fortnight. The river weeds grow much more freely at the upper part of the river—that is, the part distant from London—than they do at the lower part. It may be noted, however, that the American weed grows only in the lower part. Above Hornsey it is hardly to be seen and at the upper part it does not occur at all. The way in which the weeds are cut is as follows. Several scythes, from eight to twelve in number, are shackled to a chain to each end of which a rope is fixed. One man walks on each bank of the river and the weeds are cut by a sawing motion, both men walking slowly forwards and each man alternately pulling his end of the rope towards him for a distance of about a yard. After the weeds are cut they float down and are collected by gratings placed across the river at intervals; they are removed from these and usually taken away to manure the land.

Each walk is provided with a punt, which is used not only when it is necessary to repair the banks of the river, but for carrying any materials which may be required for repairs. The punts are of uniform pattern. They are made of iron, and are 30 ft. in length, 2 ft. in depth, and 6 ft. in breadth.

The walks into which the river is divided are numbered from Clerkenwell upwards to Chadwell, and are as follows: (1) New River Head to Stoke Newington, (2) Stoke Newington to Hornsey, (3) Hornsey to Bowes Park, (4) Bowes Park to Winchmore Hill, (5) Winchmore Hill to Enfield, (6) Enfield to Turkey-street, (7) Turkey-street to Theobald's-lane bridge, (8) Theobald's-lane bridge to Turnford, (9) Turnford to Broxbourne, (10) Broxbourne to Rye House, (11) Rye House to Amwell, and (12) Amwell to Chadwell.

In the present survey of the river it has been found convenient to begin the perambulation at the intake from the River Lee and to give an account of the course of the river from that point to London. In the description which follows the left bank is spoken of as the "lower bank" and the right as the "upper bank." The distances which are given are approximate. They are not the result of accurate measurement, but in each case the distance was judged by observation and the result corrected by reference to the ordnance map. but the figures are always given in round numbers. The maps are taken from the latest ordnance maps, but in all cases corrections have been made in places in wnich changes have taken place since the ordnance survey was made.

Intake from the River Lee (see Map 1).—The water of the New River is taken from the Lee at a point between Hertford and Ware. The present gauge-house is situated quite close to the river and divided from it only by a towing-path. The arrangements which were formerly in use for gauging the quantity of water taken still exist in a building called the balance-house, which is situated a few yards off The arrangement of the intake differs from that of the intakes of all the other metropolitan water companies, and it is the only one which is planned to give accurate results as to the quantity of water taken. The arrangement is simply a floating gauge. The principle on which it works ensures that the size of the inlet through which the water flows is constant, and the gauge is arranged to rise and fall according to the height of the river. The first arrangement of this sort was put up in the balance house. Although it is now no longer used it may be best to describe it first, as it is the simplest, if not the most ancient, form of floating gauge, and is not without historical interest. The house which contains it was built in 1732, when Mill was engineer to the company, and it was re-built in 1770, when Mill and Milne were the engineers. A boat floated up and down according to the height of the water. This boat was suspended from one end of a large oak beam, at the other end of which there was a sluice-gate. The sluice-gate, therefore, necessarily rose and fell according to the rising or falling of the boat. The size of the opening through which the water flowed being constant and the height with reference to the water being also constant it followed that the amount of water which flowed through was constant also. The intake at present used is guarded by a floating boom, and the water passes through an iron grating of which the bars are about 1 in. in width and the meshes 3 in. The boom and gratings keep out pieces of wood and other débris. The amount of water taken from the river daily is said to be 22,500,000 gallons. The sides and edges of the intake opening are formed of bronze, and the sluice-gate through which the water flows is carried by a cross head which rests on a pair of iron boats. In consequence of this arrangement the amount of water remains constant, the depth of the intake being always 16 in. and its width 7 ft. 10 in. The height of the river is recorded by a float of which the index is in the sluice-house. When visited on Jan. 5th, 1897, the water of the Lee was brown and turbid. On that day the height of the water in the river was 2¼ in. above the normal level. Except in very rare instances the water is constantly flowing through this inlet from the Lee down into the New River, but there is an arrangement by which it can be shut off if necessary. The conditions which make it necessary to shut off the water are occasional floods, which cause great turbidity of the water. The supply has also to be cut off when it is necessary to do any work in the course of the stream just below the intake. The way in which water can be shut off is as follows:—There are a number of iron plates 20 in. deep and 8 in. wide; each is provided with a steel "ear" which fits on to a circular iron bar 1½ in. in diameter. By this arrangement practically the whole of the water can be shut off. During the winter of 1896-97 this arrangement was used twice for short periods during flood.

Course of the New River.—From the intake the water is conducted in an open channel which at first passes through open meadows.

50 yards.—Occupation bridge. From this point there is a fence with two bars, 3 ft. in height. The fence is to keep off the cattle from the upper bank.

200 yards.—Here there are the remains of a disused sluice.

270 yards.—Iron bridge. At this point the river is close to the Manifold Ditch.

Manifold Ditch.—This ditch commences at the Hertford Sewage Works and goes into the Lee Navigation Canal at a point below Ware Lock. The length of its course is about a mile and the point at which it discharges into the Lee is about a mile below the intake of the New River Company. For a distance of about half a mile the ditch runs in a direction parallel with the New River and is situated on its upper bank. The ditch has a concrete bottom, the sides forming a segment of a circle. They are lined with bricks laid on edge and set in a concrete bed. The state of the sewage effluent is said to vary considerably. On June 15th it was not particularly offensive. The ditch is conducted under the New River in two 24-in. cast-iron pipes.

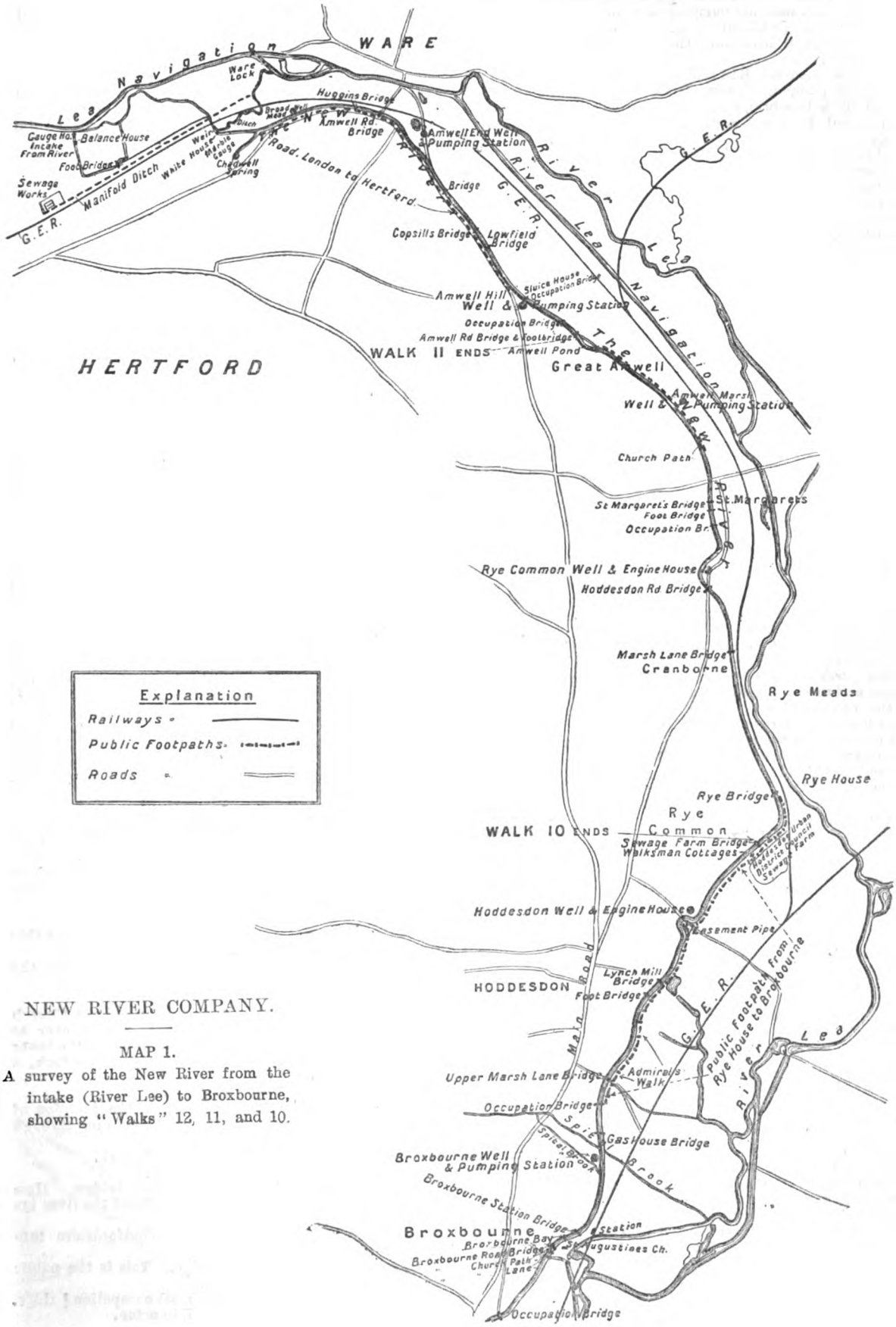
250 yards.—Manifold Ditch passes under the New River, and the river then goes under the Hertford branch of the Great Eastern Railway. Up to this point there is a fence on the lower side of the New River; the part between Manifold Ditch and the New River is not fenced. From the point at which the river passes under the railway the fence begins, and it runs on each side of the river for the greater part of the remainder of its course. The standard fence is 2 ft. 6 in. in height and has two wrought-iron rails.

50 yards.—At this point is the White House sluice, which was put up in the year 1746. Here there is a weir. In case of flood the dam boards are removed, and the water flows down a ditch into the River Lee. During the winter of 1896-97 there was one flood during which the dam boards were taken out. The White House contains a spoke and pocket sluice-gate, which is used in flood time to prevent too much water from passing down the course of the river.

50 yards.—At this point a marble gauge is situated; the base of this is formed of marble. As originally planned the water passed through an opening 6 ft. in width and 2 ft. in depth. At the present time there are easement pipes at each side of the gauge, which is no longer used for its original purpose. The easement pipes are 24 in. in diameter. At a distance of 200 yards from this point across the meadow the Chadwell Spring is situated.

Chadwell Spring.—The spring at Chadwell discharges itself into a circular basin or reservoir, of which the depth at the centre is about 18 ft. The reservoir is about 20 yards in diameter, and except at its outlet is surrounded by turfed walks. The amount of water obtained daily is estimated at 4,000,000 gallons, but the quantity varies greatly. It is much diminished after a dry summer. During part of the years 1892-93-94, little water rose for some days. The amount yielded by the spring is gauged twice a week. The water is usually quite clear, but it is occasionally milky. The water from Chadwell Spring joins the branch of the New River which conveys water from the Lee at a distance of 200 yards from the spring. At a point 100 yards further the New River goes close to the road which leads from London to

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NEW RIVER COMPANY.

MAP 1.

A survey of the New River from the intake (River Lee) to Broxbourne, showing "Walks" 12, 11, and 10.

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Hertford. Here there is a bridge leading to Broad Mead, where there is a well and pumping station.

440 yards from Chadwell Spring is Huggins' Shed bridge. Between the New River and Hertford-road there are high spiked railings.

200 yards.—Amwell End bridge. At Amwell End there is a well and pumping station. Near this point the river is crossed by a foot-bridge for a path which leads from the London-road to Ware Station. Near it is Amwell-road bridge.

300 yards.—Red House bridge.

375 yards.—Copsill's bridge.

150 yards —Lowfield bridge.

440 yards.—Amwell Hill. Here there is a well and pumping station

Amwell Sluice.—Near the pumping station there is a sluice house built of wood and having a slated roof. It extends right across the river. There are three bays. The amount of water which passes down the New River is regulated at this point.

200 yards.—Occupation bridge in private grounds.

150 yards —Foot bridge and Amwell-road bridge close together. Here is the junction of walks 12 and 11.

Amwell Pond.—At Amwell was one of the springs from which water was obtained for the New River. There is now no spring in the place at which it formerly existed. There are two islands in the pond which is near to the public highway, and there is here a place at which the public have a right to water horses.

500 yards.—Amwell Marsh. Here there is a well and pumping station. There is a church path from Amwell to St Margarets, the path passing along the lower bank of the New River for about 1000 yards to St. Margarets-road.

150 yards.—Foot-bridge. St. Margarets Bury House is situated here on the upper bank.

100 yards —Foot-bridge, occupation road, St. Margarets Bury.

250 yards.—Occupation bridge, St. Margarets Bury.

350 yards —Rye Common. Here there is a well and pumping station on the lower bank of the river.

50 yards.—Hoddesdon-road bridge.

440 yards —Marsh-lane occupation bridge. Here the river is close to the Great Eastern Railway, Hertford branch.

1000 yards.—Rye bridge road. This is near Rye House station and to the historic house which has given its name to the neighbourhood. From Rye House station on the lower bank of the river a public path leads to Hoddesdon and Broxbourne; the upper bank is fenced in.

400 yards.—Hoddesdon sewage farm bridge. Here is the junction of walks 11 and 10.

The sewage farm is on the lower bank of the river and covers an area of from twelve to fourteen acres. The sewage effluent from Hoddesdon farm goes into the River Lee.

100 yards.—On the lower bank of the river are two walksmen's cottages

600 yards.—Hoddesdon. Here on the upper bank is a well and pumping station. Near the engine-house a 36-in. easement pipe conveys some of the water under the Essex-road and across a meadow into the river, a distance of about 200 yards The course of the easement pipe is shown in the map.

Here is Essex-road bridge.

440 yards —Lynch Mill bridge. The public path, which begins near Rye House, follows the course of the lower bank of the New River to Broxbourne, a distance of about two miles.

100 yards —Foot-bridge to Hoddesdon.

440 yards.—Admiral's Walk. Occupation bridge opposite Yew House, Hoddesdon, which is on the upper bank.

150 yards.—Upper Marsh-lane bridge, Hoddesdon.

200 yards —Occupation bridge, foot-path.

250 yards —Gas House bridge.

300 yards —Broxbourne. Here there is a well and pumping station, situated on the upper bank. At this point a branch of the Spital Brook comes to the upper bank. This brook arises in the woods about two miles away. There is a spring, and the stream also receives surface water. It has not been used for the supply of the New River for twenty years or so. The water now is conducted by a brick channel under the New River, and flows away into the Lee In the old cut, which was formerly used to augment the supply of the New River, a certain amount of water is still kept because by doing so the appearance of the neighbourhood is improved and this is done for the sake of the people who live in the houses near. When the brook is cleared out, which is done yearly, the water collected in this part of the cut is allowed to pass into the river. There is a 6-in cock between the Spital Brook and the river.

500 yards.—Broxbourne Station bridge.

100 yards.—Broxbourne Bay. Here there is a sluice, worked by cogged gear. There is a fall of about 6 in. The fall varies from 3 in. to 1 ft. according to the state of the river. St. Augustine's Church is here on the lower bank of the river.

60 yards.—Broxbourne Bridge.

30 yards.—Broxbourne Church path bridge.

30 yards —Broxbourne Church-lane bridge.

550 yards.—Occupation bridge.

The description of the survey should now be followed on Map 2.

100 yards.—Broxbourne-road bridge. Here is the junction of walks 9 and 10. (See Map 2.)

100 yards.—Bridge, and occupation bridge.

30 yards —Page's-lane bridge.

440 yards —Brickfield-lane bridge and foot path.

350 yards.—White Horse-lane bridge. This bridge has an easement culvert on each side to convey part of the water of the river. It is therefore called a "three-way bridge." From this bridge to Wormley foot-bridge there is a public foot-path on the upper bank of the river.

300 yards.—Manor Farm (Wormley) occupation bridge.

30 yards.—Wormley foot bridge. Here the public foot-path crosses the river.

880 yards.—Ground water is conducted under the New River from the right to the left There is an aqueduct over Watery-lane, Turnford. Here there was formerly a wooden trough. About 300 yards above this point was the Turnford loop of the New River, which has since been replaced by a straight cut The site of the Turnford loop is given in the map (Map 2).

400 yards.—Turnford. Here there is a well and pumping station on the lower bank. From Turnford Station to Cheshunt there is a public foot path on the lower bank of the river.

600 yards.—Brookfield occupation bridge

Cheshunt.—Here there is a disused well and two ponds having areas of 8 and 13 acres respectively, formerly used as reservoirs This water is not now used for the supply of the New River, and the flood water which collects in the ponds is conducted under the river in a culvert and flows away to the Lee. At Cheshunt there are two cottages, one occupied by a walksman, the other by a "gratesman"—a labourer employed to keep the grate in working order, and who is held responsible for its efficiency. Here is Brookfield-lane bridge. From this point to Clark's-lane bridge there is a public foot-path on the lower bank.

440 yards.—Clark's-lane foot-bridge.

Just beyond this point is Kilsmore Island. It is near the upper bank of the river.

150 yards.—Church-lane bridge, Cheshunt. One gas main here crosses the river. On the upper bank there is a market garden.

300 yards —Church-path bridge.

200 yards.—Pest House bridge. On the upper bank at this point are situated a nursery and Cheshunt College.

600 yards —College-road bridge. Here is a tank for the supply of unfiltered water for the Cheshunt roads.

150 yards —Grove House private foot bridge.

300 yards.—At this point a path from Cheshunt Church comes to the upper bank of the river, crosses over at Theobald's Park foot-bridge, and then passes along the lower bank of the river to the south end of Theobald's Park, a total distance of about a mile and a half.

880 yards —Theobald's Park foot-bridge.

200 yards — Theobald's-lane. Here is the junction of walks 7 and 8. From this point the river runs through Theobald's Park.

30 yards —Occupation bridge, Theobald's Park.

300 yards —Theobald's Pond and Island.

700 yards —Theobald's Park occupation bridge. Here the foot-path crosses the river. Both banks of the river are private from this point.

100 yards.—New River passes from Hertfordshire into Middlesex.

440 yards. — Bullsmore-lane bridge. This is the public road from Bull's Cross to Waltham.

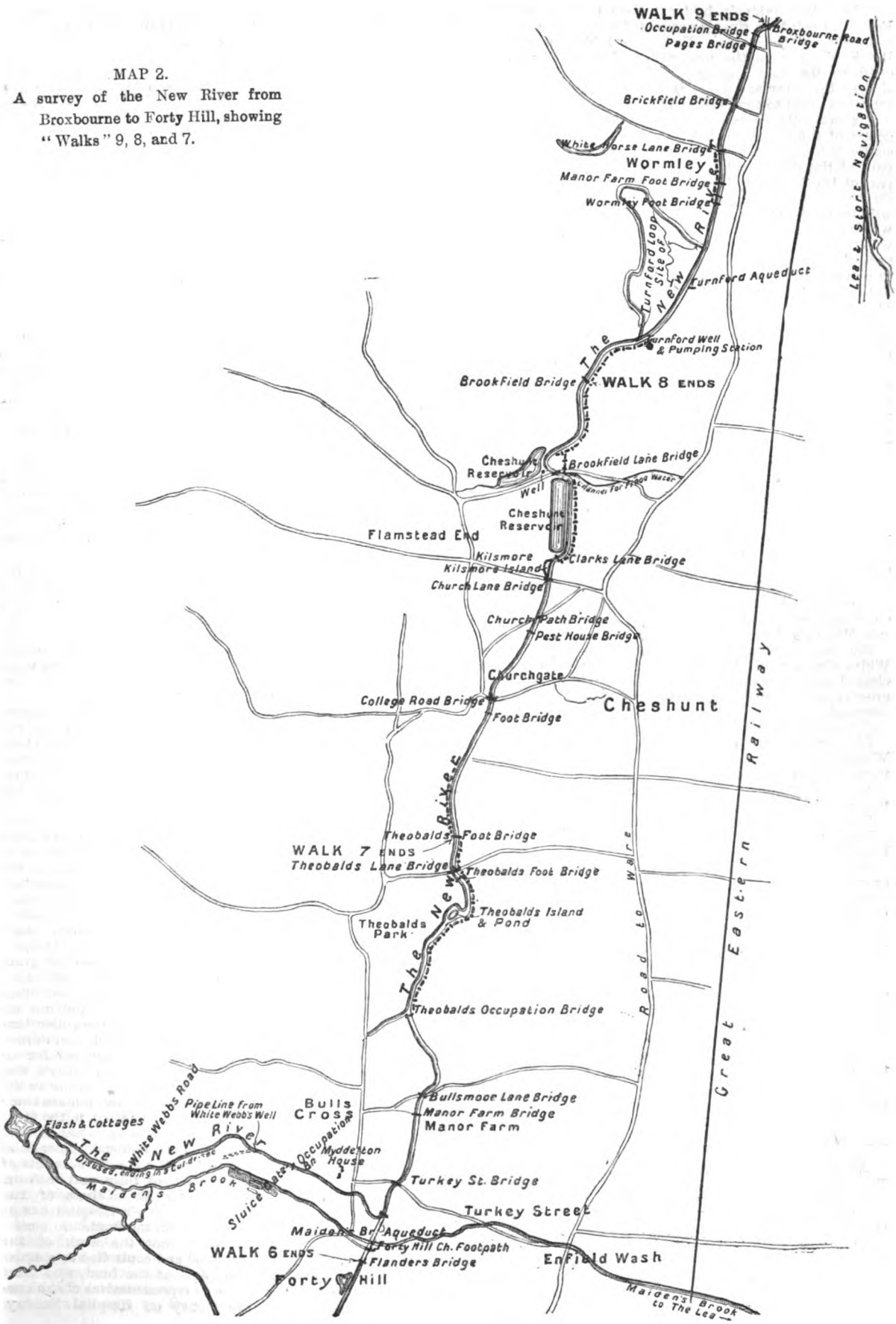
150 yards.—Manor Farm (Bull's Cross) occupation bridge.

440 yards.—Turkey-street bridge, Edmonton.

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MAP 2.

A survey of the New River from Broxbourne to Forty Hill, showing "Walks" 9, 8, and 7.



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300 yards.—Maiden's bridge. Here there is a grating. From this point the river is conducted in two 48-in. pipes for a distance of 350 yards. Under the bridge passes Cuffley Brook, which is in the map called Maiden's Brook. This conducts the land drainage from the country on the west side of the river and takes it into the River Lee crossing from the upper to the lower bank.

A short distance below Turkey-street bridge the original course of the New River has been altered. The water is now conducted across the valley in an aqueduct. The disused part of the river went in a nearly westerly direction, and part of this has lately been restored and the banks have been raised. The part of the river which has lately been repaired will be used for the conveyance of water from a new well which has been dug at White Webbs. The water from this well is to be conveyed in a pipe which will open into this part of the river, and the water will flow in an open course in a direction exactly opposite to that which was taken by the water when this part was used for its conveyance to London before the aqueduct was made. The description which here follows of this part of the New River will be best understood by the study of the accompanying map (Map 2). The water from White Webbs will go into the open course channel of the river at the place marked with an arrow, and from this point the water will flow in an easterly direction and join the New River just before it passes into the aqueduct over Maiden's bridge. The part to the west of the point at which a pipe will enter the river from White Webbs will still be disused. The old course of the river can be easily traced up to Flash-lane Cottage.

The following is a brief description of the course from Maiden's bridge aqueduct to Flash-lane.

300 yards.—Road from Enfield to Cheshunt.

200 yards.—Occupation bridge in the grounds of Myddelton House. A few years ago the water in this part of the river was stagnant. The banks of this part have been raised and turfed over. The banks have been raised to the extent of about 1 ft. to 2 ft. for a distance of about one-third of a mile.

300 yards.—Wooden occupation bridge. Here there is a sluice gate which can be used for allowing the water to pass into Maiden's Brook.

200 yards.—From this point goes the line of pipes to White Webbs well. From this point the river has not been cleared out nor have the banks been raised. Weeds are growing in it. On June 16th the water was clear, but it was stagnant.

880 yards.—White Webbs Road.

200 yards.—Here, near the bank, is the 18-in. pipe from White Webbs. The pipe from the well has already been laid from this point to the well.

440 yards.—Enfield Flash bridge. Here there is an overflow weir to Maiden's Brook.

200 yards.—Above this is Flash foot-bridge. Here the "loop" of the New River ends—i.e., in a *cul-de-sac*. The last 200 yards are next Flash-lane.

The return part of the loop has been filled up and the ground it occupied has been taken by adjoining landowners.

From this necessary digression we return to the new course of the river.

Maiden's Bridge.—There is an aqueduct over Cuffley or Maiden's Brook. It is about 25 yards in length, and the water from the river is conducted in two 48-in. pipes, which are visible in the aqueduct house, which is covered with corrugated iron, and has a walk between the pipes. The pipes are about 20 ft. above the level of the bed of the Cuffley brook.

50 yards.—Forty Hill Church foot-path.

250 yards.—Pipes open into the river again. There are three pipes which open into the river.

The survey will be continued with similar detail and illustration.

(To be continued.)

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—The next general meeting of this association will be held at 11, Chandos-street, London, W., on Wednesday, Nov. 17th, under the presidency of Dr. T. W. McDowall. The Parliamentary Committee will meet at 11.30 A.M. and the Handbook Committee at 12 noon. The council meeting will meet at 2 P.M., and the general meeting will be at 4 P.M., when new members will be elected and papers read. The members will dine together after the meeting at the Café Royal, Regent-street, at 6.30 P.M.

MEETING OF THE HOSPITALS ASSOCIATION.

A LARGELY attended meeting of this Association was held in the board room at Charing-cross Hospital on Oct. 28th to hear from Sir Sydney Waterlow, chairman of the Distribution Committee of the Hospital Sunday Fund, an account of the methods pursued by the Distribution Committee of the fund to which he belonged in making their awards to the various hospitals, and from Mr. R. B. D. Acland, chairman of the Hospital Saturday Fund, an explanation of the method of distribution adopted by his fund.

Mr. H. COSMO O. BONSOR, M.P. (President of the Hospitals Association), acted as chairman.

Sir SYDNEY WATERLOW, Bart., then read the following paper:—

"Several of the friends and warmest supporters of the Hospital Sunday Fund have asked me to attend here to-night to explain to them, and through them to the public generally, the system upon which the money collected on Hospital Sunday is divided between the hospitals, dispensaries, convalescent homes, and other institutions applying for an award. Collections for the benefit of the Fund have now been made for twenty-five years successively, and the total sum collected to July 30th, 1897, was £913,489. It is not surprising that the friends of the movement and the public generally should be desirous of understanding the manner in which this large sum has been divided among the numerous institutions applying for a share of the funds. This desire has been no doubt further stimulated by the fact that probably half a million of money will be raised this year by the Prince of Wales's Hospital Fund for London. When in February last His Royal Highness made his appeal for contributions to this Fund he stated: 'I am aware that the task of distributing the funds when collected will not be without its difficulties. It may be desirable in the future to seek the assistance of representatives chosen by the hospitals, but for the first year we shall rely upon the coöperation of the Distribution Committee of the Hospital Sunday Fund.'

"The Distribution Committee consists of the Lord Mayor, as President, and ten members chosen annually by the Council; some of the members have served upon the Committee for more than twenty years. The Fund was started at the Mansion House in the year 1873. I was the first President and treasurer, and have been chairman of the Distribution Committee from the commencement. I have rarely missed attendance at any of the meetings, and consequently am perhaps more responsible than any other person for the preparation of the laws by which the distribution of the money is governed, and for the interpretation which has been given to those laws from time to time. All the members of the Committee have necessarily gained considerable experience in dealing with the important duties cast upon them. We have upon the Committee a very eminent surgeon, and a physician of high standing in the city of London; the professional knowledge of these two gentlemen has been of great assistance to the Committee. It has also been thought right not to elect upon the Committee any gentleman who held office in connexion with any one of the hospitals applying for a share of the money. For some years after the collections were commenced, none of the three endowed hospitals—St. Bartholomew's, St. Thomas's, or Guy's—applied for or received any award. The first application from Guy's was in the year 1888. No award has hitherto been made to St. Thomas's, as the governors of that hospital did not see their way to deliver copies of their accounts made out in the form prescribed by the hospital authorities and the Council, and certified by a public accountant. It is, however, understood that the treasurer of St. Thomas's will have the accounts of his hospital prepared in the prescribed form, and that an application will be made next year for a share of the Hospital Sunday Fund. St. Bartholomew's Hospital has at present no need for any assistance from the fund.

"It should be borne in mind that the work of the Distribution Committee is governed and controlled by a series of laws passed by the constituents of the fund, who meet annually at the Mansion House as representatives of the congregations contributing the money on Hospital Sunday.

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These laws direct that only those hospitals and dispensaries which are managed by committees duly constituted, shall be allowed to participate in the fund. The awards to hospitals, &c., shall be primarily based on the average total expenditure of each institution for the last three years after deducting therefrom (1) a sum equal to the income derived from endowments and realised property; (2) the amount received in legacies exceeding £100 each, unless such legacies have been necessarily spent to meet the current expenditure of the institution; and (3) the expenses of management.

"In every case the merits and pecuniary needs of the institution concerned shall be fully inquired into and considered by the Distribution Committee, and the award made shall be determined in accordance with the judgment of that Committee upon such merits and needs, provided that in no case shall the grant be reduced below the arithmetical basis, or withheld, until a conference shall have been sought with the managing committee of the hospital affected. The payments made by or on behalf of patients shall be dealt with, in each case, as the Committee of Distribution may see fit. This was found necessary owing to the very great variation in the amounts and in the circumstances under which patients' payments are made. No institution, to the benefits of which admission can only be gained by election from the general body of subscribers, shall be eligible for grants from the fund. The Committee shall have power to set aside 5 per cent. of the total amount of collections for the purpose of surgical appliances. There are several other minor provisions, but they have no material effect on the amount awarded. A careful consideration of these laws clearly indicates that the Distribution Committee are to recommend awards to each hospital, &c., in accordance with its needs and merits, subject to the definite directions for arriving at these important factors. Every institution desirous of applying for an award has to send to the secretary of the Fund, not later than February or March in each year, an application to participate. This must be accompanied by a correct copy of the printed report, and of the receipts and expenditure of the institution, made out upon the prescribed form agreed upon between the council of the Fund and the managers of the leading London hospitals. These accounts are then required to be analysed on a form supplied for the purpose in duplicate. As these forms are all alike, the comparison of the relative pecuniary needs is not difficult.

"The expenditure is divided under two heads—maintenance and management. Maintenance includes provisions, surgery, domestic establishment charges, rates and taxes, rent (if any), salaries and wages (except for those persons engaged in the administration), miscellaneous expenses, with a separate item for extraordinary repairs and new buildings, which is always separately considered. The administration or management includes official salaries and commissions, official printing, postage, telegrams, &c., official advertisements, law charges, incidental management expenses, with a separate item for appeals and festival expenses, separately dealt with. It will be seen that maintenance, in other words, includes all the money spent in the care and cure of patients, while the administration is the cost of the office management controlling the work. The festival expenses I will hereafter refer to. The income is divided under two items—charitable revenue and proprietary revenue. The charitable revenue includes subscriptions, donations, the Sunday and Saturday funds, church collections (if any), festivals, legacies under £100, or exceeding that sum, if absorbed in current expenditure. The proprietary revenue, or secured income, includes interest on legacies exceeding £100 (when not required for current expenditure), dividends, interests, rents, &c., from invested property, fees paid by nurses, and patients' payments.

"In order to arrive approximately at the needs of the hospital, the average of the moneys spent in maintenance and management in each of the three past years is carefully calculated. From the total expenditure in each year we then deduct the proprietary or secured annual income. The money expended on the average of three years in the treatment and support of the patients, less the proprietary revenue and the expenses of management, is regarded as the financial needs of the hospital, which have to be provided from year to year from the public and from uncertain sources. This is called the basis of the award, and is raised or lowered at the discretion of the Committee as soon as they have determined the merits of the particular institution. The task of arriving at the merits is no doubt more difficult than determining the financial needs and rests to a greater extent on the discretion of the Committee. Detailed information, including the number of beds, the average number occupied daily during the last year, the average number of days each in-patient was resident, the average cost of each in-patient per week, and the average cost of each out-patient, as far as this can be calculated, is given for the past year; the average number of in-, out-, and lying-in patients, both counting renewals and without renewals; and also the total number of attendances for the past three years is all laid before the Committee.

"Although the figures thus furnished in no way enter into the arithmetical calculation of the needs of the hospital they have to be most carefully considered when determining the merits; the average cost of each in- and out-patient and the numbers of beds occupied, as compared with those unoccupied, varies so very much in different hospitals. Let me take eight of the large general hospitals, viz., Charing-cross, Guy's, King's College, London, St. Mary's, Middlesex, University, and Westminster, the management in which may be regarded as satisfactory. The cost of each in-patient per week varies from 26*s.* to 36*s.*, while in smaller hospitals and special hospitals it reaches as much as £2 8*s.* In determining whether the amount is or is not excessive, the Committee have naturally to bear in mind the nature of the work carried on—the character of the diseases dealt with, especially in special hospitals, as some classes of patients, if efficiently treated, cost much more than others. The percentage which the money spent on administration bears to the money spent on maintenance is necessarily a very important factor in determining the relative merits of different hospitals. Taking the eight hospitals previously referred to, the percentage of management to maintenance varies from 3·883 per cent. to 13 per cent. This may be to some extent accounted for by slight variations in the manner in which the accounts are stated, but not materially. In the special and smaller hospitals the percentage varies from 2 per cent. to 31 per cent. It must, however, be borne in mind that in smaller hospitals the expenses of management are unavoidably much larger than in the larger hospitals; but there can be no doubt that money contributed to the large, well-conducted hospitals, goes very much farther, and secures the efficient treatment of a larger number of patients than in the smaller hospitals. The Committee have, however, always considered that when comparatively small hospitals are erected in outlying districts at some distance from existing hospitals they ought, if well managed, to have every encouragement. A lithographed abstract analysis of the accounts of each hospital is given to every member of the Committee, attention is called to the particulars I have referred to—no decision is recorded until these points have all been discussed, a vote is then taken in each case.

"It should always be borne in mind that whenever the Committee are of opinion that the information before them does not seem to justify them in recommending an award equal to the natural basis disclosed by the figures, they are required by Rule 5 of the laws of the Constitution to ask for a conference with the managers of the hospital affected. During the present year conferences were invited with the managers of thirty-eight institutions, and in thirty cases deputations were interviewed. In several of these cases the basis was materially reduced, the managers promising that the defects complained of should be remedied in the future, and in two cases the management was so bad that no award was recommended. The item, cost of appeals and festival expenses, is one which gives the Committee much trouble, as it cannot be dealt with upon any hard and fast line. Speaking, however, for myself, I have always held that where these expenses result in bringing into the treasury of the hospital only 50 or 60 per cent. of the sum contributed by the persons present at the festivals they ought not to be encouraged.

"I have endeavoured to make the method adopted by the Distribution Committee as clear as possible. I will now give two illustrations or examples with the view of rendering my statement more intelligible.

"*London Hospital.*—The average total expenditure for 1894, 1895, and 1896, after deducting each year the proprietary revenue, was £44,884. From this sum we deduct the average cost of management for the same years—viz., £2277, leaving £42,607 as the needs of the hospital to be collected annually from the outside. This forms the

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primary basis, to be raised or lowered on the merits, at the discretion of the Committee.

"*St. George's Hospital.*—The average total expenditure for 1894, 1895, and 1896, after deducting each year the proprietary revenue was £18,441. From this sum we deduct the average cost of management (£1481), leaving £16,960 as the needs of the hospital to be collected annually from the outside. This forms the primary basis, to be raised or lowered at the discretion of the Committee.

"The question as to the continually increasing number of out-patients at our large hospitals has been much discussed of late, and these discussions have disclosed a great diversity of opinion, but as I have previously stated the number of out-patients treated at each hospital has hitherto been regarded by the Distribution Committee simply as evidence of the amount of work done in treating the sick poor, and has not been an important factor in determining the amount of the awards to each hospital, I have therefore refrained from dealing with it here.

"The system we are discussing may be very shortly summarised thus: By means of the analyses of the accounts to which I have referred, the Committee are enabled to arrive at the sum of money spent by each hospital on the average of the past three years in the treatment and support of the patients. Deduct from this the proprietary revenue, or ensured income, and you have the figures representing the needs of each hospital. These figures form the primary bases of the awards. The merits are then discussed on reference to the accounts, and from information placed at the disposal of the Committee from various sources. If there is no fault to find with the management, the figures forming the bases are confirmed or raised; if the management is unsatisfactory, a conference is invited with the managers. The money available for distribution is then divided in accordance with the figures of the bases. It has varied during the last twenty-five years from 1*s.* 10*d.* to 2*s.* 2*d.* on each basis, or approximately, on each £ needed for the support of all the hospitals, &c. The variation is governed by the amount collected each year. It should also be remembered that the money is distributed within a few weeks after it has been collected. I have always felt that those who give the money intend it for the relief of the sick poor in the year in which it is contributed.

"I think I am justified in saying that this system of distribution has been thoroughly successful and satisfactory to the public. The awards have for the last twenty-five years been submitted for the approval of the Council, consisting of 100 members, at a meeting in the Mansion House, and published in the London press. On one occasion only has any alteration in the awards recommended by the Committee ever been thought necessary and made. If we take the average for the last twenty-five years of the contribution to the hospitals from the Sunday Fund at 2*s.* in the £ of the needs of each institution applying it will be seen that the Fund provides only one-tenth of the cost of the treatment and support of the sick, leaving the other nine-tenths to be provided by subscriptions, donations, &c., from the public and from legacies or other sources.

"But this is not by any means the only benefit which the hospitals and the public have derived by the action of the Committee of Distribution. With the assistance and full concurrence of the secretaries and officials of the hospitals all the accounts of income and expenditure are now prepared on one uniform plan and certified by a public accountant before they are subjected to the detailed criticism of the Committee. This arrangement has undoubtedly in many cases ensured much greater economy and an improved management of the hospital funds. Again, my experiences of the last twenty-five years has much strengthened my early conviction that an annual sermon in the churches and chapels followed by a collection was the best, and likely to be the most permanent, method of raising money for hospitals, for it is well that on one Sunday in each year all the ministers and the whole population in the churches and chapels should forget for the moment their denominational differences and join hearts in one Christian duty upon which all are agreed—viz., the duty of relieving the sick poor, each one as far as he is able; and I feel sure that a large number of those who contribute small sums at the collection on Hospital Sunday are so impressed with the sermons that they give large donations at a later period or leave legacies for hospital purposes.

"In conclusion I wish it to be distinctly understood that I alone am responsible for the opinions expressed in this paper. It has never been read to my colleagues on the Committee, and therefore I have no authority to speak except for myself."

Mr. R. B. D. ACLAND, chairman of the Hospital Saturday Fund, in opening the discussion said it afforded him great pleasure to address the meeting on the system of distribution adopted by the Hospital Saturday Fund, for it was only by criticism based upon full knowledge of the facts that any advance could be made. A meeting of this sort should have but one result, namely, that the Metropolitan Hospital Sunday Fund, the Hospital Saturday Fund, and now the Prince of Wales's Fund should distribute their money on the same systems. That had long been his ideal and he looked upon this meeting as the greatest step to progress in that direction since the inauguration of the Fund. He wished to call attention to the difficulties which must confront any distribution committee. The first was the extreme difficulty of getting accurate returns of the number of patients from the different hospitals, and he was perfectly certain that anyone who had served on a distribution committee could bear him out in that statement. The second difficulty was peculiar to the Hospital Saturday Fund which was a working man's organisation. For the past twenty-three years the Hospital Saturday Fund had been trying to work out its own salvation in the way of collecting funds. It had received no assistance whatever from people with a particular knowledge of hospital work, and if there were defects in the system it was due to the fact that they had to work it out from paper rather than from an actual knowledge of the inside work of hospitals. Sir Sydney Waterlow's system might be summed up thus. Given the arithmetrical basis it was left to the Distribution Committee to say whether the grant should be made on that basis or not. It might be a very excellent plan where, as in the case of the Hospital Sunday Fund, the committee was composed of men who possessed the fullest knowledge of hospital administration, but it would prove a very bad system in the case of the Hospital Saturday Fund, where no one on the committee possessed such special knowledge. The first thing to be decided was what were the institutions to which awards should be made. They had found from time to time that institutions had applied for grants which were neither hospitals nor dispensaries, and therefore they had thought it necessary to frame a definition restricting grants to such institutions as treated the sick poor only, including convalescent homes and nursing institutions. The latter, he understood, did not participate in the Hospital Sunday Fund distribution. They had had to make this definition so as to exclude medical missions, the Salvation Army, &c. The next thing was to arrive at the amount to be distributed. Certain percentages were first deducted for what he might call the outside working of the Hospital Saturday Fund, which was not a mere collecting and distributing body. It did a great deal of other useful work in connexion with ambulance and first aid, the supplying of necessaries for such work, the supplying of surgical instruments, and the granting of loans to people who wished to obtain the benefits of convalescent homes, but who could not afford to pay ready money. From the total amount collected after payment of expenses 6 per cent. was deducted for surgical appliance work, and 8 per cent. for the purchase of letters of recommendation. A sum not exceeding 1 per cent. was also deducted for the Morley Convalescent Home, which was the outcome of the Hospital Saturday Fund, and they quite naturally desired to give in some way additional support to their own child. Then special grants might be made for certain dispensaries, ambulance work, &c. All that practically came to about 13 or 14 per cent. of the whole collection. The balance was divided amongst hospitals, convalescent homes, and different dispensaries. The basis of award except in one particular resembled very much that of the Metropolitan Hospital Sunday Fund. It was based upon the relief afforded, economy practised, and efficiency shown. They attempted to arrive at the efficiency of the hospitals as far as they could discover it by a series of questions asked with a view to show the probability of the hospitals being properly managed. As an example of the questions he instanced the following: Have you a committee of management? How is it elected? Is there an independent finance committee? By whom elected? Is there an annual meeting of the governors and subscribers? If so, give date and where held, and state whether reporters are admitted? Questions of that sort gave outsiders certain knowledge of the hospital being properly managed. Is there

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efficient control? If so, are the people properly elected to give reasonable guarantee for such control being exercised? Are you willing to give to the Hospital Saturday Fund in return for grants letters in the same proportion as you give to ordinary subscribers? May patients be visited on Sundays, and if so, at what hours? That represented the view of the working man, and it seemed a reasonable one. He (the working man) thought that a guinea subscribed by himself and his shopmates was likely to be as valuable as the rich man's guinea. The use made of the questions was this. A total number of marks of fifteen were given for efficiency. Each question which was answered adversely or which showed that the hospital was not likely to be well managed would cause the hospital to lose a mark. Provisions were also made to try to secure that the small hospital should not get too large a proportion of the funds as compared with the larger institutions. Then with regard to economy, the Metropolitan Hospital Sunday Fund practically left the matter to the Committee of Distribution. The Hospital Saturday Fund tried to work out a series of rules which had the effect of comparing fairly the economy shown between the different hospitals. The system was based upon the cost per bed in the institution and the cost per out-patient as shown by the returns. The cost of a bed varied according to the kind of work which was efficiently done in the hospital. It would not be fair to compare a general hospital with a hospital like Brompton, and so they had tried to group the hospitals in classes and work out averages for the cost per bed and out-patient for each one of the classes. The classes were five in number—namely: (1) general and ophthalmic hospitals; (2) hospitals for diseases of the throat, cancer, chest, epilepsy, fistula, skin, and for diseases of women; (3) children and dental; (4) lock hospitals and orthopædic; and (5) lying-in. The cost per bed was again divided into four classes. If the cost of a bed is £60 no mark is lost at all, but if the cost is £90 four marks are lost. In regard to the cost of management, where it was 10 per cent. one mark was lost; 13 per cent., two marks; 16 per cent., three marks; 19 per cent., four marks; 22 per cent., five marks; and above 22 per cent., six marks; so that it was quite possible under this system that hospitals extremely expensively managed would get no marks at all for economy. The amount distributed was divided so as to bring in these considerations of relief, economy, and efficiency. Of the total amount to be distributed five-sixths was given for relief and efficiency and one-sixth for economy. As regarded relief, the difference between the Hospital Sunday and Saturday Funds, he thought, was smaller than appeared at first sight, for by deducting the proprietary revenue some account must be taken of the work which was done. The Hospital Saturday Fund did it much more directly. They took the number of patients actually treated and a certain number of marks were given, for it was obviously necessary in a proper system that some consideration should be given to the income which was in the possession already of the institution, otherwise a hospital like St. Bartholomew's would get a larger grant than the poorest hospital in the whole of London. For the purpose of relief marks, only those who did not pay for themselves or were paid for out of the proprietary revenue of the hospital were counted. There were certain hospitals in London which were really paying institutions, and a rule had been made that a hospital which received 75 per cent. or upwards of the cost of maintenance from patients should not receive any award. If any of the subscribers to the Funds desired the benefits of such institutions the Fund bought letters for them. Then with regard to the relief marks for in-patients they had been seeking how it would be possible to help hospitals who closed their wards for fear of running into debt by asking for a return of the daily average of beds occupied and the number of beds in the hospital which could be occupied if funds permitted. One mark was given for every two beds not occupied. In the out-patient department marks were awarded according to the number of patients treated. Roughly speaking, one mark was given for every 2000 to 800 patients. It would be clear that at some special hospitals the average number of individual attendances of out-patients would be greater than at a general hospital, and in such cases proportionate amounts were granted.

The Rev. C. H. GRUNDY thought that overlapping of philanthropic movements was one of the curses of the age. He would like to see the two funds amalgamated.

Sir HENRY BURDETT pleaded for full discussion and criticism from the large number of representatives of hospitals who he knew were present. He did not know how Mr. Acland could justify the system, which as he (Sir H. Burdett) understood it worked out in this way. You took off marks for inefficiency up to a maximum of 23 per cent. for management, which entailed a loss of six marks. After that the charity might spend on management 11½*d.* out of every shilling they received from the public, but they would only lose six marks. Before disposing of one single penny to the hospitals 8 per cent. was taken off for letters. He did not see any justification for this. Since Mr. Acland had become chairman of the Hospital Saturday Fund he had devoted a great deal of time to it, and he (Sir H. Burdett) was quite clear that whatever was thought of his system of distribution everyone would be unanimous upon one point, and that was that much that was good in the Hospital Saturday Fund was largely due to the attention to duty which had characterised Mr. Acland's tenure of office.

Canon GRAHAM thought the system adopted by the Mansion House Fund was superior to that of the Hospital Saturday Fund.

Lord STAMFORD said it had been stated and denied that the number of out-patients counted in the allocation of grants. He understood that Sir Sydney Waterlow would say that a small amount of weight would be given to the number of out-patient attendances, and he gathered that Mr. Acland would allow that more weight was given by the Hospital Saturday Fund to these attendances. He thought the public would be much interested in hearing what amount of weight was given by the Funds to this point.

Mr. COHEN asked what was the relative cost per cent. of the distribution of the two Funds. (Mr. CUSTANCE, the secretary of the Metropolitan Hospital Sunday Fund, here interposed with "distribution and collection," which caused the speaker to amend his question.)

The Rev. Prebendary KITTO pointed out that the two Funds approached the matter of distribution from two different points of view. The Hospital Saturday Fund was looked upon as a system of assurance and the Hospital Sunday Fund as a system of charity. Amalgamation he thought absolutely impossible.

Mr. RYAN (St. Mary's Hospital) said that the system adopted by the Hospital Saturday Fund was one which a skilled man would learn to apply in an exceedingly short time. Once the basis was settled it was no more difficult than that adopted by the Metropolitan Hospital Sunday Fund. But a good many objections could be taken to the constituent parts of the system when it was examined point by point. To take an example. Where a bed cost £60 the full number of marks for economy was given; when £70 was reached one mark was taken off, and so on. Now it was clear to him that it did not in the slightest degree follow that the institution whose cost per bed was the cheapest was the most economical. With regard to the working-man's guinea being worth as much as the rich man's guinea, he pointed out that a gentleman who gave a donation of thirty guineas was entitled to three in-patients' letters and a certain number for out-patients. Everyone knew that £30 did not provide for one patient, let alone three, but the greater part of the letters were never used.

Mr. THIES (Royal Free Hospital) suggested that a committee consisting of the secretaries of hospitals might be allowed to examine the two systems of distribution. He thought it most desirable that the two Funds should make themselves more in touch with the institutions by appointing small committees to visit the hospitals.

The Rev. N. BROMLEY (King's College Hospital) said that large general hospitals only received from the Hospital Saturday Fund about a quarter of the sum granted by the Hospital Sunday Fund.

The CHAIRMAN, in closing the discussion, said there was not the slightest doubt that both Funds had done their best and in an impartial way.

Mr. ACLAND, in replying, pointed out the extreme difficulty of getting at the facts with regard to the working of hospitals and especially with regard to the number of patients who attended the hospitals. With regard to the objection that certain deductions were made before any sum was distributed there were certain expenses in training men in ambulance work and supplying the necessary apparatus. Surgical appliances were also supplied. This was also done by the Metropolitan Hospital Sunday Fund and he did not see why the Hospital Saturday Fund should not do the same. He had come to the conclusion that £60 per bed was too low and the figure would be altered. The probable explanation of that amount being taken was that

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some hospital had sent in that estimate. That, again, illustrated the fact that a number of men were trying to distribute without full knowledge of the facts. He hailed with delight the suggestion with regard to a meeting of hospital secretaries. The members of the Fund did their best to visit hospitals, but they were all working men and for the most part had to do their visiting between seven and ten in the evening. A speaker had said that you could not judge of economy by taking the cost per bed and out-patient. Would he suggest a better plan? Referring to the question of the worth of the working man's guinea, he said that about 22,000 letters were issued a year, and of that number perhaps 90 per cent. were used. In return for these they distributed a sum of money which worked out at about 15s. each for all the letters distributed. Speaking with reference to the way in which the merits of an institution were arrived at he quoted from Sir Sydney Waterlow's paper, and remarked that while he (Mr. Acland) had explained how it was done Sir Sydney Waterlow had not. With regard to the cost of distribution and collection he could not deal with the relative cost. The cost of the office expenditure of the Metropolitan Hospital Sunday Fund was some 8 per cent. less than the cost of the office expenditure of the Hospital Saturday Fund. The total amount of the expenditure of the Hospital Saturday Fund included every single penny down to a postage stamp. In the case of the Hospital Sunday Fund a large amount of work was done gratuitously. The large church collections were not the consequence of a single sermon but of an enormous amount of gratuitous work. The work of the Hospital Saturday Fund could not be done that way. He was quite sure that Mr. Cohen did not wish to pit the two Funds against each other, but he was glad that Mr. Custance's remark had given him an opportunity of delivering himself in regard to this matter. Some five or six thousand collections were made for the Hospital Saturday Fund every week. With regard to out-patients, taking Charing Cross Hospital as an example, he said there were 21,000 out-patients last year, and one mark was given for every two thousand. With reference to the loss of marks above 23 per cent. in relation to management there were provisions which prevented unfairness. With regard to 8 per cent. being set aside for letters other funds were not blameless in this respect.

Sir SYDNEY WATERLOW said the cost of collecting and distributing the Hospital Sunday Fund was about 3¼ per cent. He quite agreed that it would be difficult to amalgamate the two Funds, but it did not follow that the two Funds could not be distributed upon the same plan. No one would rejoice more than he to have some kind of conference with reference to that matter. He had no faith in the figures supplied with regard to the out-patient departments, for, as had been pointed out, many patients went to a hospital on from five to eight occasions in a year. He believed the hospitals gave the best information they could. With regard to the question of merit as judged by the Hospital Sunday Fund, which had been described by one speaker as "slap-dash," he said there were men on the committee with a large experience of hospital business. He hoped that the use of letters would be dispensed with. He hoped to see the day when people would be admitted and treated free. It was the letters given to subscribers that really made the most serious abuse of the out-patient department. If the two Funds could meet that question might be discussed with some advantage to both. If the secretaries of hospitals could meet together any recommendation they might make would be listened to with attention and respect.

Votes of thanks to Sir Sydney Waterlow, Mr. Acland, the chairman, and the officers of Charing-cross Hospital for the use of the board room terminated the proceedings.

MANCHESTER MEDICO-ETHICAL ASSOCIATION.—At a general meeting of this association, held on Oct. 29th, in the Queen's Hotel, Manchester, Dr. E. Rayner in the chair, Mr. R. B. Anderson delivered an address on Medical Defence, illustrating the subject by a narration of his own case, a full account of which has already been given in our columns. A motion of thanks to Mr. Anderson for his address, which was unanimously adopted, contained a resolution that the questions of the advisability of supporting Mr. Anderson's appeal to the House of Lords should be referred to the committee of the association "for the consideration of what practical measures could be taken to carry the issues involved to a satisfactory result."

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE quarterly Comitia of the Fellows of the Royal College of Physicians of London was held on Oct. 28th, the President, Sir SAMUEL WILKS, Bart., being in the chair.

There were admitted to the Membership of the College: W. C. Bosanquet, M.A., M.B. Oxon., M. G. Foster, M.A., M.D. Camb., F. J. Poynton, M.D. Lond., H. R. Smith, M.D. Lond., J. P. Stewart, M.A., M.D. Edin., and W. H. B. Stoddart, M.B. Lond.

Licences were granted to 116 candidates who had passed the recent examination (34 being under the new regulations).

A communication was read from the Foreign Office forwarding a medical report and poisoned arrows from Uganda, and requesting an examination of the poison. On the motion of the Senior Censor, seconded by the Registrar, the specimens were directed to be sent to Dr. Woodhead for examination and report.

Communications were read from Mr. Trimmer, reporting the proceedings of the Council of the Royal College of Surgeons of England on July 29th and Oct. 14th.

A request by Mr. W. J. Harvey for permission to consult the Harvey manuscripts in the possession of the College was referred to the Library Committee, and an application from Dr. G. Turner, Medical Officer of Health for Cape Colony, requesting recognition of their laboratories and of the practical courses held there, for the Public Health Diploma of the Royal Colleges was referred to the Committee of Management.

A letter was read from Mr. James Robert Wallace (Editor of the *Indian Medical Record*) respecting a scheme of medical registration for India which he had brought under the notice of the General Medical Council. Sir JOSEPH FAYRER considered the proposal a reasonable one, and thought well of the scheme. Sir DYCE DUCKWORTH said that the scheme had already been before the General Medical Council, and it was understood that if it was again discussed there he would state that it had the support of the College.

A memorial on the subject of medical aid societies from the medical men of Great Yarmouth was read, and the Registrar was requested to reply to it in the same terms as the reply recently sent to a similar memorial from the profession at Norwich.

The secretary to the Senate of the University of Edinburgh reported the award of the Murchison Scholarship to Percy Theodore Herring, M.B., B.C.

Letters were read from Dr. Robert Farquharson resigning the Fellowship of the College, and from Dr. H. Llewellyn Williams resigning the Membership. The resignations were duly accepted.

A communication from his widow notifying the death of Professor Heidenhain, of Breslau (Baly Medallist, 1889), was read, and the Registrar was instructed to express the sympathy of the College with her in her bereavement.

The report of the adjudicators of the Weber-Parkes Prize was read, and permission was granted to Dr. Ransom to publish his work.

A report was received from Dr. Pavy, Sir Dyce Duckworth, and Dr. Lauder Brunton, delegates from the College to the International Medical Congress at Moscow in August last; and the thanks of the College were voted to them.

On the motion of the Registrar, certain alterations in the by-laws relating to the examinations for the Licence were adopted for the second time.

Dr. WASHBOURN then called attention to the course of study required for the First and Second Examinations of the Conjoint Board and asked for the appointment of a committee to report to the College upon the desirability of modifying the regulations with respect to the subject of elementary biology. He pointed out that the introduction of this subject in the extension of the curriculum to five years in 1892 had seriously interfered with the work of the student in anatomy and physiology, an interference not compensated by the amount of biological knowledge gained. He suggested that biology might be withdrawn, but as such a course would derange teaching another alternative might be to modify the schedule and deal with the subject under comparative physiology or else to require that biology should

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be taken before the commencement of anatomical and physiological studies. He moved for the appointment of a committee to inquire into the subject and to suggest a remedy if thought desirable.

Dr. ROSE BRADFORD seconded the motion, stating that his experience as teacher and examiner led him to endorse Dr. Washbourn's remarks: he pointed out that prior to 1892 there was an examination in elementary physiology at the end of the first year.

Dr. NORMAN MOORE admitted the importance of perfecting the scheme of examinations, although he thought it most undesirable to make frequent changes in the curriculum. This scheme had only been tried for five years, and it was certainly hoped that the subjects of chemistry, physics, and biology would come to be part of the secondary education of the country. Already a number of schools had been recognised as giving the necessary instruction, and if only biology could be generally taught in such schools the objections to it as a preliminary science subject would vanish. He supported the motion.

Dr. ORD deprecated too frequent interference with the scheme of examinations; Dr. PAYNE also urged that no change should be made without deliberation and consultation with medical school authorities.

Dr. STARLING said that the introduction of biology was largely due to the belief that the additional (fifth) year of the curriculum was to be given to the preliminary sciences, but instead of that the time devoted to them was deducted from that assigned to anatomy and physiology. He characterised the study of biology by the medical student as being a "pure luxury," and said that it could not be learned properly in the time alloted, which time was therefore wasted. There was no good in trying to mend what was radically bad.

Dr. ISAMBARD OWEN considered it injudicious to lessen the amount of science required of the medical student and did not put much value on the science taught in secondary schools.

The resolution was then put and carried and the President nominated the committee as follows: Dr. Church, Dr. Gee, Dr. Payne, Dr. Norman Moore, Dr. Washbourn, and Dr. Halliburton.

The audited accounts for the year ending Sept. 29th last were presented as well as the quarterly report of the Finance Committee.

Reports were submitted from the Committee of Management and from the Laboratories Committee. Dr. Norman Moore was re-elected a member of the Committee of Management and Dr. Payne of the Laboratories Committee.

The quarterly report of the Examiners for the Licence was received, and also a list of books presented to the library during the last quarter.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

THE members of this association and their guests to the number of 156 dined together on the evening of Nov. 2nd, in the International Hall of the Café Monico, the President of the association, Professor A. MACALISTER, F.R.S., Professor of Anatomy in Cambridge University, being in the chair. The guest of the evening was Field-Marshal Lord Roberts, V.C., G C.B. The other guests included Surgeon-Major Sir George Scott Robertson, K.C.S.I., Dr. Sansom, the Rev. Oliver Inskip (headmaster of Framlingham), Admiral Kinahan, Mr. Robert Anderson, C.B., LL D., Mr. Butcher, Q C., M.P., Dr. Dawson Williams, Mr. Battle, and upwards of thirty ladies.

The loyal toasts having been duly honoured, Sir WALTER FOSTER proposed "The Services," and said that Irishmen took a prominent part wherever there was any fighting to be done—it was one of the glories of their race. He coupled the names of Admiral Kinahan—a genuine "son of the soil"—and Sir George Robertson, whose heroic deeds at Chitral were matters of history. The latter, in responding, paid an eloquent tribute to the bravery and genius for organisation of Irishmen in the army and made special allusion to young Harley who led the decisive sortie from Chitral; to Aylmer who won the Victoria Cross at the gates of Nilt Fort in 1891, and to Fowler's conspicuous bravery at Reshun in 1895.

Sir WM MACCORMAC, in proposing the health of the guest of the evening, said that admiration for Lord Roberts was not confined to his own countrymen, who naturally were very proud of him as an Irishmen, but was felt by every subject of Her Majesty. It was not known to many that during several days of his memorable march to Kandahar his temperature was over 100° F. His pluck in refusing then to give up the splendid task he had set himself was one of the finest things recorded in the annals of the world. The generosity of Lord Roberts in the allusions he makes in his famous book was only surpassed by the modesty with which he referred to his own actions. "No wonder," said Sir William MacCormac, "that Lord Roberts is so much beloved in the army that he is spoken of by Tommy Atkins all over the world as 'Bobs.'"

LORD ROBERTS in reply, said that the ranks, not only of the three learned professions, but of the public services were full of distinguished Irishmen, and his own experience led him to assert that Irishmen were unrivalled as soldiers, and to say from his heart that there were no better fellows in the world than army medical officers, among whom he was proud as an Irishman to recognise that a large number of the most distinguished came from "the old country." He was glad to see so many of the fair sex present and would like to ask them whether it was not the case that Irishmen made the best husbands. He was certain of this, that Irishwomen made the best of wives. It was a source of great gratification to him to know that some of the highest positions in the medical profession in England were at present occupied by such distinguished countrymen of his as Sir Richard Quain, Sir William MacCormac, Sir James Dick, and Professor MacAlister.

Dr. SANSOM proposed "Prosperity to the Association" and hoped that it would succeed in one of its objects—viz., the removal of the disability preventing the holders of Irish diplomas from competing for honorary appointments at some of the English hospitals.—Professor MACALISTER briefly replied.

Dr. PHINEAS ABRAHAM proposed "The Health of the Ladies," a toast which was responded to by Sir CHARLES CAMERON and the Rev. O. INSKIP.

The proceedings were enlivened by some excellent songs rendered by Mr. Reginald Groome and Mr. Franklin Clive.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6516 births and 3716 deaths were registered during the week ending Oct. 30th. The annual rate of mortality in these towns, which had been 16·9 per 1000 in each of the two preceding weeks, rose again last week to 17·6. In London the rate was 17·7 per 1000, while it averaged 17·6 in the thirty-two provincial towns. The lowest rates in these towns were 9·5 in Cardiff, 10·3 in Croydon, 10·5 in Leicester, and 10·7 in Brighton; the highest rates were 21 3 in Liverpool, 22·2 in Sheffield, 24·0 in Bolton, and 25·7 in Wolverhampton. The 3716 deaths included 463 which were referred to the principal zymotic diseases, against 415 and 429 in the two preceding weeks; of these, 117 resulted from measles, 98 from diphtheria, 76 from "fever" (principally enteric), 74 from diarrhœa, 55 from scarlet fever, and 43 from whooping-cough. The lowest death-rates from these diseases were recorded in Croydon, Swansea, Huddersfield, and Bradford; and the highest rates in Burnley, Halifax, Blackburn, and Wolverhampton. The greatest mortality from measles occurred in Wolverhampton, Birmingham, Burnley, Blackburn, and Halifax; from scarlet fever in Derby and Halifax; from "fever" in Blackburn, Sheffield, and Sunderland; and from diarrhœa in Burnley, Blackburn, and Preston. The mortality from whooping-cough showed no marked excess in any of the large towns. The 98 deaths from diphtheria included 65 in London, 5 in Liverpool, 4 in West Ham, 4 in Birmingham, 3 in Cardiff, 3 in Wolverhampton, and 3 in Leicester. No fatal case of small-pox was registered during the week under notice either in London or in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was

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3682, against 3692, 3725 and 3685 on the three preceding Saturdays; 416 new cases were admitted during the week, against 400, 440, and 342 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 268 and 279 in the two preceding weeks, further rose to 326 last week, but were 36 below the corrected average. The causes of 47, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Bradford, Hull, Newcastle-upon-Tyne, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·1 and 20·3 per 1000 in the two preceding weeks, declined again to 19·9 during the week ending Oct. 30th, but exceeded by 2·3 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·6 in Perth and 16·6 in Leith to 23·7 in Aberdeen and 24·2 in Dundee. The 593 deaths in these towns included 35 which were referred to diarrhœa, 15 to whooping-cough, 12 to scarlet fever, 8 to measles, 6 to "fever," and 3 to diphtheria. In all, 79 deaths resulted from these principal zymotic diseases, against 84 and 86 in the two preceding weeks. These 79 deaths were equal to an annual rate of 2·7 per 1000, which was 0·5 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had increased from 12 and 27 in the three preceding weeks, declined again to 15 last week, of which 13 occurred in Glasgow. The deaths referred to scarlet fever, which had been 17 and 4 in the two preceding weeks, rose again to 12 last week, and included 5 in Glasgow, 3 in Aberdeen, and 2 in Edinburgh. The 8 fatal cases of measles showed a slight further increase upon the numbers recorded in recent weeks, and were all registered in Glasgow. The deaths referred to different forms of "fever," which had been 6 and 13 in the two preceding weeks, declined again to 6 last week, of which 2 occurred in Glasgow and 2 in Edinburgh. Of the 3 fatal cases of diphtheria 2 were recorded in Edinburgh. The deaths from diseases of the respiratory organs in these towns, which had been 122 and 144 in the two preceding weeks, declined to 137 last week, and were 15 above the number in the corresponding period of last year. The causes of 37, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·0 and 21·2 per 1000 in the two preceding weeks, rose again to 28·2 during the week ending Oct. 30th. During the past four weeks of the current quarter the death-rate in the city has averaged 23·8 per 1000, the rate during the same period being 16·5 in London and 18·9 in Edinburgh. The 189 deaths registered in Dublin during the week under notice showed an increase of 47 upon the number in the preceding week, and included 8 which were referred to the principal zymotic diseases, against 14 and 13 in the two preceding weeks; of these, 5 resulted from diarrhœa, 2 from scarlet fever, and 1 from diphtheria, but not one either from small-pox, measles, whooping-cough, or "fever." These 8 deaths were equal to an annual rate of 1·2 per 1000, the zymotic death-rate during the same period being 2·4 in London and 2·3 in Edinburgh. The fatal cases of diarrhœa, which had declined from 10 to 2 in the three preceding weeks, rose again to 5 last week. The deaths referred to scarlet fever, which had been 1 and 2 in the two preceding weeks, were again 2 last week. The mortality from diphtheria also corresponded with that recorded in the preceding week. The 189 deaths in Dublin last week included 41 of infants under one year of age and 40 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons considerably exceeded the numbers recorded in the preceding week. Eleven inquest cases and 9 deaths from violence were registered; and 70, or nearly a third, of the deaths occurred in public institutions. The causes of 11, or nearly 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN DILLON assumes Medical Charge of the Departments at Portsmouth. Surgeon-Major Reade has left Woolwich for special duty in India. Surgeon-Captain Edye has taken over Charge of the Station Hospital and Detachment of No. 8 Company, Medical Staff Corps, Newcastle-on-Tyne, vice Surgeon-Major Mitchell. Surgeon-Major Beatty, M.D., has been warned to be in readiness to embark for India.

Surgeon-Colonel Charles A. Atkins retires on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICE.

The services of the under-mentioned officers are placed temporarily at the disposal of the Government of Bombay for employment on plague duty: — Surgeon-Lieutenant Gwyther (Bengal), Surgeon-Lieutenant Clemesha (Bengal), Surgeon-Lieutenant Rainier (Bengal), and Surgeon-Lieutenant Walton (Bengal). The services of the under-mentioned officers are replaced temporarily at the disposal of the Military Department under the Government of the North-Western Provinces and Oudh:—Surgeon-Captain Baker (Bengal), Surgeon-Captain Cadell (Bengal), Surgeon-Captain Morwood (Bengal), Surgeon-Captain Fischer (Bengal), Surgeon-Captain Manifold (Bengal), and Surgeon-Captain Young (Bengal). The services of the under-mentioned officers are replaced at the disposal of the Military Department: — Surgeon-Captain Collins, A.M.S., Surgeon-Lieutenant Morgan, A.M.S., and Surgeon-Lieutenant Howell, A.M.S.

NAVAL MEDICAL SERVICE.

The following appointments have been notified:—Staff-Surgeons: Herbert W. G. Doyne to the *Hawke*, and Octavius S. Fisher to the *Rodney*. Surgeons: Cornelius Bradley to the *Jackal*; Charles S. Bennetts to the *Lion*; Edward Cooper to the *Jaseur*; Charles R. Sheward to the *Excellent*; Eustace Arkwright to the *Alexandra*; Walter K. Hopkins to the *Pembroke*; Philip N. Randall to Ascension Hospital; George Wilson to the *Victory*, additional; Sidney H. Youel to the *Penguin*; and Morris C. Longford to the *Orlando*.

VOLUNTEER CORPS.

Rifle: 2nd (Angus) Volunteer Battalion the Black Watch (Royal Highlanders): Surgeon-Captain R. Grant to be Surgeon-Major. 4th Volunteer Battalion the Devonshire Regiment: Surgeon-Lieutenant C. F. Glinn to be Surgeon-Captain.

DEATHS IN THE SERVICES.

Sir Rutherford Alcock, aged eighty-eight years. He entered as surgeon in the Marine Brigade which took part in the Miguelite and Carlist Wars, and eventually retired as deputy inspector-general.

Surgeon-Major-General Sir William Alexander Mackinnon, F.R.C.S. Edin., LL.D., Honorary Surgeon to Her Majesty the Queen, Knight of Grace of the Order of St. John of Jerusalem in England, at the age of sixty-seven years. He served with the 42nd Regiment in the Crimea, and was present at Alma, Balaclava, and the siege of Sebastopol (Knight of the Legion of Honour). During the Indian Mutiny he was surgeon on the personal staff of Lord Clyde. After acting as Assistant Professor of Clinical and Military Surgery at Netley he accompanied the Ashanti Expedition in 1874 as principal medical officer, and occupied the same post at Malta and Gibraltar in 1880 and the nine following years. He was appointed Director-General of the Army Medical Department in 1889, retiring on a pension in 1896.

Brigade-Surgeon-Lieutenant-Colonel John North, M.R.C.S. Eng., L.S.A., I.M.S., at Bellary, aged fifty years. He was appointed an assistant surgeon in 1869, and surgeon in 1873. He served in the Afghan War of 1879–80, for which services he obtained the medal. In 1881 he was promoted to be surgeon-major, and in 1886–87 served with the Burmese Expedition, for which he obtained a second medal, in 1889 he became surgeon-lieutenant-colonel, and in 1893 brigade-surgeon-lieutenant-colonel.

Surgeon General R. Gilborne, A.M.S. (retired), at Folkestone. He saw much service in both the Crimean War and the Indian Mutiny (Sebastopol medal with clasp and Turkish medal).

Surgeon-Major Edward John Burton (retired), at Hove, on the 31st ult. He was present at the defence of M'Carthy's

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Island from an attack by a force of natives, and assisted to work the guns in action, for which service he was mentioned in despatches. He was in medical charge of a wing of the 25th Regiment during the rebellion in Ceylon in 1848, and served in the Crimean Campaign, being present at the siege and fall of Sebastopol (medal with clasp and Turkish medal).

Army Medical Manœuvres in France.

Under the orders of Surgeon-General Van Merris, principal medical officer of the Saint-Martin Hospital, some advanced manœuvres were recently carried out near Versailles, the base hospital being established in that town and the field hospital at Velizy, close to the scene of operations. The preliminary steps—that is to say, the military phase of the proceedings—bore an elementary character and did not last long, General Treuille de Beaulieu having sounded the "Cease firing" at 11 o'clock in the forenoon. This year the interest chiefly centred in the position of the field hospital. It is feared, and not without good reason, that when the most complete treatment is not immediately available a great many unnecessary deaths must take place during and after an engagement, for naturally the resources of the surgeons who have to administer first aid are limited. The object on the present occasion accordingly was to instal a fully equipped field hospital as close as was practicable to the field of battle, and, theoretically speaking, the results were excellent. A number of dressing stations were quickly organised, and the "wounded men," each of whom was distinguished by a badge whereupon was inscribed the nature of his injury, having received suitable preliminary treatment, were carried on stretchers in the first instance to an ambulance where they were further attended to, and thence, if their cases demanded it, to the field hospital, a very light litter of new pattern on wheels being successfully employed during the latter stage of the journey. For the accommodation of the field hospital a rural restaurant was utilised, the various arbours, grottoes, &c., being transformed into special wards. These bowers, destined for Parisian pic-nic parties, each had a rustic name, which did not at all correspond with the technical labels that were fixed alongside of them. As soon as darkness set in a new lamp, the invention of Dr. Maréchal, was essayed, and by its aid writing could be deciphered at a distance of 100 metres. The manœuvres were attended by a great number of medical and other officers belonging to the territorial army and the reserve, as well as by Inspector-General Dujardin-Beaumetz, Deputy-Inspector-General Dieu and Deputy-Inspector-General Chauvel.

The Nile Campaign.

We have heard uncommonly little of late from the Nile expeditionary force. The Sirdar, Sir H. Kitchener, maintains a studied reticence in regard to his intentions and movements. It is rumoured that the Khedive and the Sirdar are desirous that whatever military operations are designed should be undertaken by the Egyptian army, whereas many influential persons, whilst fully recognising the immense improvement which has taken place in that army, are of opinion that in the event of any unforeseen occurrence or reverse the Egyptian force should be backed by British troops. General Sir Francis Grenfell is now in Egypt, but it seems unlikely that he will take any active part in the advance and future field operations of the expedition. Be this as it may, the troops comprising the Nile force are, we are glad to say, healthy. Five newspaper correspondents are about to leave that force and cross the desert to Suakim, so it does not appear that any military move from Berber is imminent at present.

An Unfortunate Regiment.

The serious outbreak of cholera amongst the 1st Battalion Shropshire Regiment stationed at Sitapur shows, we understand, some signs of abating. It would seem that this regiment is fated to be pursued by the fell hand of disease, for not only have their ranks been thinned in India, but also in Malta, Egypt, and Hong-Kong. At the last-named place they were attacked by the bubonic plague while engaged in the sanitary work of cleansing infected dwellings.

The *Army and Navy Gazette* says:—"By a curious coincidence, at a time when the deficiency of instruction in tropical medicine provided by the navy for its medical officers is being pointed out, notification is made of the approval by their lordships of extensive additions to the Naval Hospital at Haslar. These will include a new zymotic hospital. The surgeons under instruction and the nursing staff are to be provided with quarters, to be erected in the vicinity of the hospital building. A new laboratory for the instruction of surgeons on entry and for bacteriological research in connexion with cases under treatment has been approved of, as well as additions to the present crowded storehouse. There is also to be a new operating theatre and improved accommodation for patients under observation for mental disease."

Correspondence.

"Audi alteram partem."

THE HOSPITALS, THE PROFESSION, AND THE PUBLIC.

To the Editors of THE LANCET.

SIRS,—The first leading article in THE LANCET of Oct. 30th raises an important point in the ethics of modern journalism: How far is the editor of a newspaper, and especially of a scientific journal, justified in making an attack upon the speech of a public man which he does not report at length? How far, too, is it proper to publish, as you do, a strong protest against the supposed views of the speaker by another speaker at the same meeting without publishing the repudiation of the views imputed to him by the speaker attacked; and how far is it justifiable to publish a letter giving at length the impressions of an anonymous writer as to what the speaker said, and then, without further evidence, to attack the speaker and hold him up to professional condemnation for statements which, in fact, he never made? Had you given a full report of my speech, which any of your readers may see if he will turn to the *British Medical Journal*, p. 1274 *et seq*, for Oct 30th, where he will find such a report, I beg leave to say, having a high appreciation from long association of your integrity and honour, that the article in question would never have appeared in the columns of THE LANCET. Circumstances having placed me in a position of authority in regard to certain questions of the first importance to the medical profession and the public—a position thoroughly acquiesced in and endorsed by THE LANCET—I have found it necessary for some years, as a matter of precaution, to have my remarks in public taken down in shorthand, so that my actual words may be forthcoming if and when challenged. I enclose you a transcript of the shorthand writer's notes of my remarks, which, in justice to THE LANCET and myself, you may like to publish.

As you regard my views as so important it may be well that I should now place them on record in your columns. They are briefly:

1. That eleemosynary medical attendance should be abolished as far as possible.

2. That hospital letters should cease to be issued in exchange for monetary contributions by hospital supporters.

3. That no patient should be admitted to the hospitals, except in cases of medical urgency or accident, without due inquiry by a qualified registration officer or almoner into the circumstances of the applicant, so as to secure that no one should receive free medical relief who was not a fit object of charity.

4. That where possible voluntary hospitals should have two sets of buildings, one set to be devoted entirely to the reception and treatment of free in- and out-patients by the medical staff attached to the hospital, and the other constituting a paying annexe (where necessary on a provident basis) to which in- and out-patients should be admitted who can afford to pay something for their medical treatment up to a fixed limit of capacity to pay, and where the in-patients can be attended, if they desire it, by their own medical men, and where the out-patient work shall be done under the direction of the medical staff with the assistance of medical officers selected from general practitioners. This arrangement would give the general practitioner in towns the advantages of hospital practice which the cottage hospitals have conferred upon his colleagues throughout the country. The whole of the patient's payments to be pooled and a certain percentage of them set aside to defray the cost of the medical attendance upon the patients in the provident annexe.

5. I am opposed to the registration fee system, which, as

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the late Mr. Sampson Gamgee showed, tends in practice to exclude the deserving poor, for whom the hospitals are primarily intended, and to admit to treatment the relatively undeserving and prosperous who can pay and ought to be made to pay for their medical treatment when ill.

6. Generally, I desire to see the administration of our hospitals placed upon such a basis that they shall afford the maximum facilities for (*a*) the treatment of the really deserving poor; (*b*) the assistance of the great body of the medical profession by putting at their disposal post-graduate classes, and the adoption of a system by which the general practitioner will be encouraged to send difficult cases for consultative purposes to the hospitals; (*c*) the adoption of measures which will afford guarantees to those who provide the money for the support of hospitals that that money shall be economically administered, and that its expenditure shall be confined to the relief of fit objects of charity; and (*d*) the utilisation of hospitals as medical schools in the best interests of all classes of the people.

These are the principles for which I have worked during thirty years of my life, as my books and public utterances prove. Some may of course think, as you state, that the fact that I am not a registered medical practitioner entitles you to say that these subjects are not my proper study; but I would remind you that not only have I been practically engaged in hospital administration for thirty years, but also that I have long since completed my medical curriculum and have passed all but the final examination; that my schedules are all signed, and that I can become a registered practitioner in a few months, should that step in my judgment tend to help the cause, to the furtherance of which I have devoted all my resources and the best years of my life.

Should you, however, still contend that the principles I hold are such as to render me an unfit associate for medical men on the platform of hospital reform, I may be strongly tempted to pass my final examination, and to challenge you to stand against me at the next election for the General Medical Council, in order to prove whether the principles I advocate, or those which you somewhat nebulously suggest, best represent the opinion of medical men on this subject. I have had too many instances of the appreciation of my humble services in all branches of the medical profession to doubt in such circumstances what that issue would be; but I believe that such a contest is not likely to arise. Our views have been too much in accord to render it possible that any such conflict of opinion should exist. Your article might lead your readers to suppose the contrary, but I now show it to be based upon an entire misapprehension of my speech and views. Finally, I may say it is not my desire or intention to try experiments "on our great hospitals and our great profession," but to render them of the greatest service to each other. I am, Sirs, your obedient servant,

HENRY C. BURDETT.

The Lodge, Porchester-square, W., Nov. 1st, 1897.

*** The *British Medical Journal* reported Sir Henry Burdett as having said:—

"Could any hospital physician or surgeon who saw the cases at the hospitals deny that a very great number of cases came to them at a later period of their disease which were in a condition they ought not to be in if they had had adequate medical treatment from the general practitioner? He thought the cause of so large a number of people flocking to the hospitals was due to a want of full utilisation of the opportunities which hospitals offered not only to the public, but to the medical profession, and that they must go really into the question of the treatment of the patients outside as well as inside the hospitals if they wanted to get the question really faced."

If these words do not distinctly charge the general practitioner with incompetence we fail to see what meaning they have. As to the repudiation we disregarded it because it was no real repudiation. We print it now from the shorthand writer's notes supplied by Sir Henry Burdett.

"All I wanted to bring out is this, that as a matter of fact in the enormous body of men in general practice, especially among the class of men these out-patients go to when they do not attend the hospitals, there are a large number who would be infinitely helped both as to their practice and reputation if they would go to the hospitals and attend post-graduate classes.'

What is this but a repetition of his charge—a charge that cannot fail to damage the general practitioner in the eyes of the public? We do not believe that journalistic ethics, ancient or modern, oblige us to report Sir Henry Burdett's public utterances in full, while we stand by the sentiments expressed in our leading article.—ED. L.

"BERI-BERI AND ERRONEOUS DIAGNOSES."

To the Editors of THE LANCET.

SIRS,—In the interests of tropical medicine I desire to give my experience during my first voyage on the Peninsular and Oriental Steam Navigation Company, though the facts do not tend to throw credit on my diagnostic acumen. During the voyage a lascar came to me complaining of shortness of breath and swelling of the legs. On examination I found the œdema was not limited to the legs but extended also to the back and chest. The patient was also very anæmic. The heart was slightly dilated and the first sound was reduplicated. The lungs showed extensive emphysema, and as I found no evidence of kidney disease either in the examination of the urine or by the symptoms I concluded the œdema was entirely symptomatic of this disease, and treated the case accordingly. The symptoms and signs fluctuated from time to time, nausea and vomiting occurring occasionally, and bronchitis eventually supervening. Suffice it to say, that the patient succumbed during an attack of extreme dyspnœa. The cause of death I certified as being due to emphysema and bronchitis, never for a moment doubting the accuracy of my diagnosis. The text-book of medicine that I took with me was the well-known work of Dr. Frederick Taylor (second edition, 1891). Now the only mention in this work of beri-beri is contained in two short lines, which run thus: "Multiple neuritis also forms a part of leprosy and of the endemic disease of Japan, kak-ké or beri-beri." Taking together the fact of this altogether insufficient description and my previous clinical inexperience of the disease I feel that my error was not altogether unpardonable. Since that time, however, I have read the subject of beri-beri carefully and have also had the opportunity of seeing several cases. I have come to the conclusion that the case I have recorded was a typical case of the disease, and had I had the slightest knowledge concerning it I should have escaped making at least one erroneous diagnosis. I may say that my case is by no means an isolated one, many of a like nature having occurred to my knowledge. I can therefore fully endorse Dr. Patrick Manson's statements as to erroneous diagnosis. I consider it would be to the interest of all concerned should large companies such as the Peninsular and Oriental Steam Navigation Company make a fixed rule not to employ any medical man who could not produce evidence of having attended a course of lectures on tropical medicine.

I am, Sirs, yours faithfully,

WILLIAM BRYCE ORME, M.R.C.S. Eng.,
Late Surgeon P. and O. Steam Navigation Company.

Nov. 2nd, 1897.

To the Editors of THE LANCET.

SIRS,—*Apropos* of Dr. Curnow's letter in THE LANCET of Oct. 30th, my own experience as regards errors in the diagnosis of beri-beri quite coincides with his. Perhaps I may be permitted to cite an amusing instance from my own personal experience. In the year 1887 I was stationed in Hong-kong, and after a residence of a few months in the colony was placed in charge of the Civil Hospital for a short time pending the arrival of a newly appointed civil surgeon. A few days after I took over charge of the hospital a Chinaman was admitted suffering from what I diagnosed as locomotor ataxia; I thought some of the symptoms were anomalous, but on the whole was satisfied with my diagnosis. A few days later I was hastily summoned to find the patient (whom I had seen fairly well the same morning) sitting up in bed, and with suffused face and starting eyes gasping for breath; I had scarcely reached his bedside when he fell back dead. The necropsy showed only dilated heart. I attributed his death primarily to locomotor ataxia and more immediately to paralysis of the right heart. Next morning the old Chinese ward-master, who had worked in the hospital for seventeen years, placed the blank death certificate on my desk for signature. As I filled in the words locomotor ataxia his impassive face lighted up, and with the engaging candour of the Celestial employé he whispered in his

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pidgin English, "*My* tink that peecee man die of beri-beri." In a flash I knew he was right, though, needless to say, I rebuked him for his freedom with portentous gravity.

My medical education had been no better and no worse than that of other young medical men; but at that moment and on many other occasions I had every reason to regret it had not been better. The present movement in favour of special instruction in tropical medicine is one with which every medical officer who has served abroad will be in hearty sympathy. Instances of mistaken diagnosis such as the above are innumerable, and it appears to me to be the duty of the leaders of the profession to take steps to remedy a crying need.—I am, Sirs, yours faithfully,

M. T. YARR,
Surgeon-Captain, A.M.S.

Marlborough Mansions, S.W., Nov. 2nd, 1897.

"PROPOSED AMENDMENTS OF THE NOTIFICATION ACT."

To the Editors of THE LANCET.

SIRS,—I notice in THE LANCET of Oct. 30th a criticism of a report I made to the Crewe Town Council on the above subject, and I beg to thank you for it and to acknowledge its fairness. I shall be glad, however, if you will allow me a few words of self-justification. The first point you raise is one which was modified in the memorial to the Local Government Board which was passed under the seal of this council on the 28th ult. The recommendation now reads:—

"That as one notification brings the infected premises to the notice of the medical officer of health subsequent cases of the same disease occurring in members of the same family resident in the same house, within twenty-eight days of the date of such first notification and notified by the same practitioner should be paid for at a reduced fee of 1*s.* for each case, the fee for any disease included in the Schedule of this Act other than that previously notified or for any case notified by any other practitioner to be paid for at the usual rate of 2*s.* 6*d.* per case."

I am prepared after careful consideration to stand by that as a reasonable and fair arrangement. Naturally, medical practitioners would rebel at this, but as a medical officer of health I have (to say the least) a bias towards the care of the public purse.

With reference to the second point (payment of 1*s.* as fee for notification of the milder infectious diseases) I am afraid your critic takes a wrong view of the matter. The local authority do not pay the medical practitioner for his *diagnosis*—he diagnoses the case for his *own* ends and for the satisfaction of his patient. The local authority ask him when he has made his diagnosis for these ends to acquaint them, in certain specified cases, on a form which they provide for the purpose. Medical officers of health everywhere, I venture to think, know what their reply would be if they endeavoured to persuade their local authorities to include as notifiable diseases, for which a fee of 2*s.* 6*d.* per case would have to be paid, chicken-pox, measles, whooping-cough, &c. There would in 99 per cent. of the cases be absolutely no hope of support, for the local authorities would say, "Is the information as to the existence of these milder diseases of such great value to us at present as that of small-pox, scarlet fever, or typhoid fever? No; then we think we ought not to pay so much for the information." But if we ask them to include the milder diseases at a lower fee, then there is much more hope of their giving in and the medical practitioners would benefit correspondingly.

In short, Sirs, to be perfectly plain, the medical practitioner's views of the matter are necessarily selfish and they are obviously, I think, the views of your critic; the views of the medical officer of health are for the greater part unselfish and are necessarily in conflict with those of private practitioners. There are cases (and it appears to me that this is one) in which the medical officer of health is sorely divided between his duty to his local authority and that to his medical brethren. I have endeavoured to be fair to both, and I feel confident that my brethren who are public officials will see pretty much as I do. In case you care to see it I enclose a copy of the actual memorial which has been sent to the Local Government Board by my town council, and when I tell you that this town council were strongly opposed to the Notification Act for many years and only adopted it on the repeated strong representations of my predecessor, Dr. Herbert Jones, in October, 1896 (exactly one year ago), I think you will admit that Crewe are by their recent action upholding their municipal motto, "Never Behind." I thank you, Sirs, for your anticipated insertion of this letter, and I repeat my thanks for your straightforward criticism.

I am, Sirs, yours faithfully,
MEREDITH YOUNG, M.D. Edin., D.P.H. Vict.,
Medical Officer of Health.

Health Department, Municipal Offices, Earle-street, Crewe, Nov. 2nd, 1897.

A DISCLAIMER.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to say through your journal that I am no relation of, or in any way connected with, the man convicted of fraud at the Central Criminal Court on Oct. 29th, 1897, under the name of Theophilus Turner and described as passing as a surgeon? Theophilus was not his name at all—only one of his many aliases. I beg to say that I am the only Theophilus Bryett Turner in the Medical Register, and was very much surprised that I was not put into the witness-box to state this fact and so protect myself. Apologising for troubling you, I am, Sirs, yours faithfully,

T. B. TURNER.

"Coniston," 7, Warminster-road, South Norwood-park, Nov. 3rd, 1897.

*** We sympathise with Mr. Turner, and beg to add a protest against the loose way in which every scamp who dabbles in drugs or bone-setting to the detriment of the public health is always described on reaching the dock as a "doctor, a "surgeon," or a "medical man."—ED. L.

THE PATHOLOGY OF THE PERNICIOUS MALARIAL FEVERS.

To the Editors of THE LANCET.

SIRS,—In your report of my remarks in the discussion on Dr. Thin's paper at the meeting of the Royal Medical and Chirurgical Society on Tuesday last, I am represented as having spoken of typho-malarial fever, whereas I spoke of the æstivo-autumnal, or irregular, fever of malaria. Dr. Thin's subject was the Pathology of the Pernicious Malarial Fevers, and typho-malarial fever is not one of them.

I am, Sirs, yours truly,
J. ANDERSON.

Nov. 2nd, 1897.

THE LONDON FREE HORSE AMBULANCE SERVICE.

To the Editors of THE LANCET.

SIRS,—Will you kindly aid me in making it known to the profession that in the north, south, and south-west districts of London horse ambulances are stationed and are always available without charge for the vehicle for any case of accident or of disease which is not contagious. The costs, which in the absence of any fund have to be paid by the applicant, come in all to 7*s.*, with cab rate of increase if for over two miles. These are for the horse, 5*s.*, cleaning 1*s.*, driver 1*s.* As private ambulance carriages cost a minimum of 25*s.* to 42*s.*, this provision by the London Horse Ambulance Society will be seen to be of great help to such as are in need of it.

That this need exists has been curiously but fully demonstrated in the history of the organisation. From the time of its completion, and during my absence from England, not a single public announcement, I am told, has been made of its existence yet from an official report from each station kindly supplied to me by Sir Edward Bradford, Chief Commissioner of the Metropolitan Police, it will be seen that whereas in 1884 when the society was organised under the auspices of H.R.H. the Duke of Cambridge the carriages were used by only fourteen persons, in 1895 this number had steadily increased to one hundred and nineteen for that year and in all to nearly five hundred. On a recent inspection in detail I found each carriage to be exquisitely clean, in perfect order and in readiness to start at a moment's notice. At all the stations I found the interest displayed by the police officers in the successful use of these vehicles amounted to enthusiasm, fairly reflecting the admirable spirit of the Chief Commissioner to whose kindly coöperation the good that has been accomplished is so largely due.

The way to obtain one of these carriages is very easy. Anywhere within the metropolitan area any person desiring one has simply to state his wishes at the nearest police

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station. The officer in charge at once telegraphs free of cost and the nearest carriage which is disengaged is sent direct to the spot where it is required on the conditions I have named. It is with much gratitude I am able to state that after careful investigation I have been unable to discover that there has been a single complaint during the thirteen years this organisation has been in operation.

I am, Sirs, yours faithfully,

Nov. 1st, 1897. B. HOWARD, M.D., F.R.C.S. Edin.

A HINT.

To the Editors of THE LANCET.

SIRS,—May I through the columns of THE LANCET ask the medical faculty when sending patients to the Riviera to communicate when possible first with some practitioner abroad with reference to the most suitable hotel for each case? Patients usually on arriving go direct to some hotel which they have heard recommended, often the most unsuitable, however, for them, and afterwards send for a medical man. The bronchitic may thus choose a proverbially cold hotel, the neurasthenic a particularly noisy one, and so on. It is a delicate task for the medical man to remove his patient to a more suitable hotel without straining his relations with the hotel manager who suffers, and the patient is liable to think that the trouble of re packing and moving might have been avoided by a little forethought on the part of his medical adviser before he left England. I venture to call attention to this point as it is often a matter of considerable importance to all concerned.

I am, Sirs, your obedient servant.

Mentone, Oct. 30th, 1897. D. W. S.

"THE HEALTH OF THE NAVY."

To the Editors of THE LANCET.

SIRS,—In reference to the annotation on the Health of the Navy in THE LANCET of Oct. 30th I would suggest, instead of reverting to the old plan of issuing the annual report, in which a few selected cases were included amongst a mass of statistics, that a Naval Medical Annual, separate from the present Statistical Report and compiled from the journals of the naval medical officers, be issued at a reasonable price, say 6*s*. The publication would be self-supporting, for practically every medical officer would subscribe to it, and especially if the subjects of tropical diseases and the hygiene of places visited by Her Majesty's ships be made features of the book a large number of medical men in the colonies and also at home would support it. If papers on the collateral sciences were included in the volume a great stimulus would thus be given to original research. The book would be rendered more valuable if it was illustrated with photographs and drawings and included extracts and translations from the *Archives de Médecine Navale et Coloniale* and other British and foreign journals bearing on the medical service of the navy.

I am, Sirs, yours faithfully,

Nov. 2nd, 1897. R N.

HOSPITAL ABUSE: A SUGGESTION.

To the Editors of THE LANCET.

SIRS,—Will you find space for the following suggestion in the columns of THE LANCET, where it may be subjected to the criticisms of the profession? It is that any person desiring to be treated at a hospital or other institution supported by voluntary contributions, except in cases of emergency, must produce a certificate of fitness signed by a registered medical practitioner. The objects of this proposal are obvious enough; I need not do more than capitulate them. (1) To prevent simple cases from going to the out-patient and casualty departments; (2) to prevent abuse of charities by persons able to pay; (3) to enable general practitioners to obtain quickly and easily special opinion in obscure cases amongst the poor; (4) to spare patients much weary waiting in halls and corridors—delay when they are ill and waste of time when they are not; (5) to give general practitioners opportunities of examining and taking notes upon cases which, owing to their singularity, are otherwise taken at once to hospitals; (6) to foster harmonious relations between general practitioners and hospital staffs; (7) to enable fuller family histories and histories of present disease to be obtained and to facilitate the tracing of cases after operation, &c.; (8) all which would redound to the benefit of patients; and (9) to give general practitioners more paid work to do.

The objections that I foresee will be raised are that general practitioners will take advantage of the powers given them to extract fees from the poor. To which I reply that no man can be treated against his will, and that any medical man who tried to do this systematically would soon be found out by the poor of his district. Another objection is that consultants would loose by it. Well, consultants are already in the hands of the general practitioner and have not suffered much. And also the general practitioner's certificate would only entitle a patient to treatment subject to the approval of the receiving officer of the hospital. At present there is much friction between general practitioners and hospitals because we find that our interesting cases gravitate to the hospitals, where we lose sight of them, for the patients are ashamed to tell us and the hospital authorities have no time.

The certificates might run thus:—

1. "I am of opinion that ——— ——— is a fit and proper person to receive medical (or surgical) treatment at a charitable institution.

(Signed) "———.

2. "I shall be glad of the opinion of a member of the medical (or surgical) staff of ——— Hospital upon the case of ——— ———.

(Signed) "———.

"Remarks on case ....."

There can be no doubt that this would add considerably to the amount of unpaid work that we do, as of course no medical man would charge for signing these certificates, but I think it high time that a stop be put to the ridiculous paradox of laymen forming committees to teach medical men philanthropy.

I am, Sirs, yours truly,

AN EAST-END DOCTOR.

THE EPIDEMIC OF TYPHOID FEVER AT LYNN.

(FROM OUR SPECIAL COMMISSIONER.)

IF the inhabitants of Lynn are suffering at the present moment from a serious epidemic of typhoid fever it can safely be said that they have but themselves to blame for their misfortunes. They have been warned over and over again. Nor has such warning been confined to mere theoretical dissertations; they have had more than one painful object lesson. What is occurring to-day should be all the less a surprise as a similar epidemic afflicted the town in 1892, and the story of the present epidemic seems to be written on parallel lines with that of five years ago. It appears extraordinary that the town should have waited five years and have thus incurred the heavy responsibility of provoking a second and more severe epidemic. Yet there was no lack of warning. What experience had taught was confirmed by the reports of the Local Government Board, and foretold by such local experts as, for instance, Mr. W. Whitaker, F.R.S., of H.M. Geological Survey. As President of the Norwich Geological Society this gentleman delivered an address so far back as Nov. 6th, 1883, which was fully published and reported at the time. In this address there occurs the following prophetic passage in regard to water-supply: "The enterprise of Wisbech is thus in strong contrast to the apathy, and one may say the stupidity, of the larger town, in which I have the misfortune to live, its Norfolk rival, Lynn, the corporation of which treat the inhabitants to one of the worst supplies that I know of. These guardians of the public health allow a set of chalk springs, some pure, but others contaminated, to mix together and to flow along an open channel of six miles or so as the crow flies, receiving on the way the drainage of a fair tract of country, and at the last, close by the borough boundary, some part of the sewage of the village of Gaywood. Notwithstanding that the evil of this course has been pointed out for years, and constant complaints occur, yet our town councillors, in the multitude of whom there is not wisdom,

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have not yet made up their minds to any decided course of action; and a question that really admits of no debate is the subject of apparently endless discussion. Words, not deeds should be the town motto—at least, as far as regards the water-supply."

To these remarks Mr. Whitaker subsequently added: "Since the above paragraph was written the town council of Lynn adopted a scheme for the supply of good water, but I fear in a half-hearted way; at all events, their scheme has been rejected at a meeting of the ratepayers, and I am therefore compelled to transfer the charges above made from the members of the town council to the body of the townsmen, who seem not to be educated up to the pure water pitch. When they have had a serious epidemic perhaps they may acquire more sensible views on this matter."

Thus it will be seen that there were complaints as to the Lynn water-supply previously to 1883. Then nine years later follows a severe epidemic, and even this serious warning had so little effect that new waterworks are only now in course of construction, and the inhabitants are still drinking from the same impure source with which they have for so long been contented. There are thus some 20,000 persons condemned to look upon every drop of water in their houses with suspicion. The census of 1891 set down the population of Lynn at 18,265, but there has been a considerable increase since that date. Lynn is a very ancient town built on the right bank of the Ouse and can be reached by large vessels coming up the Wash. It is not only a seaport town, but a fishing town possessing a hundred or more fishing smacks. Some of the streets are very narrow, many of the houses are so old as to be of interest to the antiquarian, while narrow passages give access to back courts and overcrowded, miserable dwellings that may well be qualified as slums and rookeries. Marsh silt resting on a deep mass of clay forms the ground on which the town is built, and it measures roughly about a mile in length and half a mile in width. The general sanitary conditions are bad, the drainage is defective, and, to make matters worse, the town is water-locked. The sewer outfalls have to be closed except when the tide is up. Under these circumstances a bad water-supply is more than usually dangerous. The conditions likely to create a predisposition to disease are many, and these I hope to describe fully on another occasion. For the moment, however, I will confine myself to the most urgent question, that of the water-supply. The scheme for an improved water-supply, to which Mr. Whitaker alluded in the passage quoted above, had been prepared by Mr. Hawksley, and, according to the law, had to be submitted to a meeting of ratepayers before the sanction of Parliament could be obtained. This meeting was held in 1884, and the ratepayers forthwith vetoed the project. The matter was then dropped and nothing further was done till 1892, when an outbreak of typhoid fever more forcibly attracted public attention to the question of water-supply.

The water comes to-day from the same sources as it did during the last epidemic. No material change has been effected. It is taken from a small river called the Gaywood or Grimston River. It finds its origin in a series of springs that come from the chalk in and around the village of Grimston, some seven miles away. One of these springs arises under the churchyard of Grimston, and the inhabitants of Lynn have been content to drink the water from a cemetery. Of course, there is no accounting for taste, and it often happens that water from cemeteries is, if not wholesome, at least bright and sparkling in appearance. Doubtless, also, it may have a better flavour and be less dangerous than that coming from the privies and manured field with which it is freely mixed lower down. But this Grimston spring, even in dry weather, yields 460,000 gallons daily, and quantity is not infrequently preferred to quality. The best spring, that of Sow Head, yields only 166,000 gallons daily; but that of Well Hall, which, I believe, is also very good, yields 612,000 gallons. It was calculated that these two springs would give, even in the dryest weather, at least 700,000 gallons daily. Had this water been carefully captured at its source and brought to the town in iron mains many lives would have been saved and much sickness prevented. Nor would any injury have been done to the material interests of those who live on the banks of the stream that flows beyond. With the Grimston spring and the many brooklets and other tributary sources there would be water enough in the Gaywood River to satisfy all riparian claims. Nevertheless the springs were not utilised. The water from the Sow Head and the Well Hall springs are allowed to mingle with the water of the Grimston graveyard, and these three sources go to form the Gaywood River. On the banks of this river there are numerous and highly manured market gardens, a number of habitations, and the village of Gaywood. Not only does a part of the drainage from these places find its way into the river, but indirectly it also receives the drainage from the hamlets of Roydon, Bawsey, and Pot-row. Now, it is only after all these impurities have reached the river that we come to the intake for the water-supply of Lynn. This intake is situated within the borough, not at the beginning, but very near to the end of the river; not before the pollution, but after the pollution. In fact, considerable ingenuity seems to have been exercised in securing the most dangerous water that could be found in the neighbourhood; and the sufferers from typhoid fever are even deprived of the satisfaction of attributing their misfortune to the selfish greed of a water company hungering after big dividends. The town of Lynn owns its own water-supply. Then it may be said that the victims will, at all events, be able to revenge themselves upon the Town Council. This solace is, however, also denied them. Of late years, at least, the Town Council has striven hard to get a better water-supply. It is the ratepayers who, by their votes, have rejected scheme after scheme, yet the ratepayers of Lynn should have known better than to thus vote against their own dearest and nearest personal interests. If they would not believe the theories of sanitarians they might at least have admitted the lessons taught by their own experience. They have had the history of the epidemic of 1892–93 set before them. It is sufficiently emphatic in the lessons it conveys.

The compulsory notification of infectious diseases came into force at Lynn on March 1st, 1890, and during that year there were 4 deaths from typhoid fever. In 1891 13 cases of typhoid fever were notified. There had been deaths from typhoid fever during each of the nine preceding years, the total deaths numbering 25 from 1882 to 1890 inclusive, and there had been 75 deaths during the same period from diarrhœa and dysentery. At the end of February, 1892, there were numerous cases of diarrhœa in all parts of the town and among all classes of the community. In all, from January to June, 1892, 226 cases and 16 deaths occurred in 123 houses from what was defined as diarrhœa or fever. Subsequently 135 of these 226 cases were definitely qualified as typhoid fever. Nineteen of these cases occurred at Gaywood—that is, close to, though outside the boundaries of, Lynn. And I have reason for believing that there were many unrecognised cases of typhoid fever, so that the epidemic was in all probability more widespread than is shown by the statistics.

In 1892 there were 2300 water-closets at Lynn and 1600 privies. Out of a total of 66 houses in which there occurred recognised cases of typhoid fever, 33 drained into privies and 33 into water-closets. Thus, though the privy-houses are less numerous, they gave an equal number of cases; therefore it would seem as if privies constituted a predisposing factor. Further, it was noticed that there were a considerable number of cases of fever in the houses that drained into the dock culvert, which has its outfall closed for six hours at spring tides and for four hours at neap tides. Thus the sewage is here dammed up for several hours every day and makes deposits, and the sewer air is forced up into the streets and houses, and according to views which are now very generally held would constitute another predisposing cause. But the epidemic was so generally distributed throughout the town that, though certain predisposing circumstances accentuated its incidence in various localities, still it was evident that the epidemic was due to one distributing medium—in other words, to the water-supply, and what occurred in 1892 has again repeated itself to-day. The only difference is that the effects are worse now than they were five years ago, for the number of notified cases already amounted on Tuesday morning to 297.

(To be continued.)

COUNTY NURSING INSTITUTION FOR DORSETSHIRE.—A largely-attended county meeting was held at Dorchester recently under the presidency of Lord Digby to consider the proposed formation of a County Nursing Institution, towards which the Earl of Ilchester (Lord-Lieutenant of Dorsetshire) has promised £500 and an annual donation of £25. A committee was appointed to draw up a provisional scheme.

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LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Corporate Supply of Diphtheria Antitoxin.

A CIRCULAR has been sent to the local practitioners from the medical officer of health's department intimating that a supply of antitoxin for the treatment of diphtheria has been provided by the Hospitals Committee at each of the five city hospitals, which can be obtained on application to the resident medical officer or matron at one or other of the said hospitals. The object which the Hospitals Committee have in view is primarily to supply antitoxin for use among the poorer class of patients; and under any circumstances the committee will be obliged if a return showing the progress of the case be made upon a form which will be supplied at the respective hospitals. This is a step in the right direction and indicates the desire of the municipal authorities to afford every facility for the reduction of infectious diseases and for placing all classes of the community under the most favourable conditions towards recovery.

Entries at University College, Liverpool.

Fifty-seven students have entered for the full medical curriculum. Eleven have joined for special courses and eleven for a dental course. Twenty-four have joined classes for preliminary instruction, making a total of 103, or 79 excluding those who have entered for the preliminary scientific course.

The Birkenhead Coroner.

Mr. Henry Churton, the octogenarian coroner of Birkenhead, has written to the town clerk intimating that owing to age and ill-health he has asked his deputy to take the Birkenhead inquests for him. The matter was warmly discussed at the recent special meeting of the Birkenhead town council, when the question arose as to the expediency of a coroner when incapacitated by age or infirmity deputing his duties to another. Upon certain members of the council suggesting a reduction of the coroner's salary it was pointed out by Alderman Deakin that although the Council had the power to fix the salary on appointment they had now no power to reduce it. Mr. Churton recently resigned the coronership of West Cheshire, which he held for upwards of fifty years, Birkenhead being included in that division of the county until it was created a borough, when Mr. Churton was appointed its first coroner. A perusal of the Coroners Act, 1892, Chapter 56, makes it doubtful whether a coroner has power to depute his work permanently to another person.

Suicide of Mr. Richard H. D. Johnson.

Mr. R. H. D. Johnson, who formerly enjoyed a moderate practice in Liverpool, but latterly practised in Birkenhead, committed suicide on Oct. 28th under very distressing circumstances. The deceased attended at the Liverpool Police-court on that date in answer to a summons issued on the part of his wife for non-payment of arrears due for her maintenance. The case was fully investigated by two city magistrates, who did their utmost to smooth matters over between the husband and wife. Their praiseworthy efforts at reconciliation proved ineffectual, as Mr. Johnson said he could not or would not pay the amount claimed. Under the circumstances the magistrates had no option but to inflict a legal penalty, which was one of two months' imprisonment in default of payment, which amounted to £142 odd. The deceased had previously suffered short terms of imprisonment for similar defaults. He was being removed to the cells in a very depressed condition, and on his way down the corridor asked the police attendant to allow him to retire as he had pains in his bowels. The request was unsuspectingly assented to by the attendant. After the lapse of a few minutes the deceased came out of the lavatory with a bottle in his hand, and addressing the police constable said, "Officer, take hold of me; I am done." He was about to fall and expired in a few moments. It was afterwards discovered that the bottle contained prussic acid, an ounce of which was sold to him by a druggist on the previous Tuesday. A verdict of suicide whilst temporarily deranged was returned by a coroner's jury. The deceased was about sixty-five years of age.

Death of Mr. William Joseph Ireland.

Mr. William Joseph Ireland died at his residence in Breck-road, where he had practised for some years, on the 22nd ult.

Nov. 3rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Morison Lectures.

THE first of a series of lectures on the Anatomy and Physiology of the Nervous Mechanism of the Viscera in connexion with the above lectureship was delivered by Dr. Alexander Morison at the Royal College of Physicians of Edinburgh on Nov. 1st. The lecturer discussed the methods employed by histologists in investigating the peripheral nervous system, and examined and demonstrated by microscopic preparations and lantern slides the innervation of (1) the secretory cell; (2) of the cell of involuntary muscle; and (3) of blood-vessels, especially in relation to excretion. These anatomical and physiological lectures are preliminary to a consideration of the part played by the nervous system in diseases and disorders of the viscera.

Royal Medical Society, Edinburgh.

At the meeting of this society on Oct. 29th the following were elected annual presidents: Dr. T. A. Ross, Dr. Ernest E. Porritt, Dr. H. S. Ballantyne, and Dr. George L. Chiene.

The New Pavilion for the Edinburgh Royal Infirmary.

The new pavilion, the plans for which have just been passed by the Dean of Guild Court, is expected to cost in all £40,000. It is to be situated upon the ground acquired some time ago by the managers from the directors of the Sick Children's Hospital, so that it will lie immediately to the west of the existing medical pavilions. The pavilion, excluding two four-roomed houses in the basement, will accommodate 97 persons. In its construction it is to be practically fire-proof, the floors will be constructed of iron and concrete, without wood joists, while the walls will have a lining of brick, with a space between the brick and the main wall. For purposes of asepsis there will be as little as possible in the way of door-mouldings and cornices, while all corners are to be rounded off. Ventilation is to be carried out by means of electric fans placed in a specially-designed tower. The lighting is to be by electricity. In outward appearance the pavilion will so far as possible resemble the existing ones. Internally it will consist of a basement, entirely above ground, three floors of wards of twenty-two beds each, and an attic floor. The wards are to be used for the treatment of the diseases peculiar to women, and are to be constructed with that object specially in view. In the basement is to be provided the long-wished-for bathing establishment. It will comprise a Turkish bath with three hot rooms, douche baths, needle baths, sulphur and vapour baths, while cooling rooms, attendants' rooms, lavatories, and dressing-rooms will be amply provided for. On the attic floor there are to be fourteen rooms for nurses and nine rooms for servants, besides bathrooms and lavatories.

The Edinburgh Jubilee Memorial Fund.

This fund has reached £20,000, but this is only about one-half of what is required, and another appeal has been sent out to the citizens by the Lord Provost. As the fund is to go to the extension of the Royal Infirmary and to assist the Victoria Jubilee Nursing Association it is hoped that the new appeal may bear abundant fruit.

Professor Macewen and the Western Infirmary, Glasgow.

The interest in the unfortunate conflict between Professor Macewen and the directors of the Western Infirmary continues unabated, but no progress towards a friendly settlement can at present be reported. The general feeling among the public—and it is expressed in all the local newspapers—is that whatever be the strict technicalities of the question Professor Macewen has probably been treated rather arbitrarily, and that in any case it would be a serious loss, and one not to be borne, to the infirmary and, indeed, to the whole of the Glasgow school were he to resign his position on the Infirmary staff. That such a termination of the dispute is possible is generally admitted, and Professor Macewen has intimated that he has received at least one invitation to accept a surgical appointment elsewhere.

The Faculty of Physicians and Surgeons of Glasgow.

The meeting of this Corporation for the election of office-bearers was held on Monday, the 1st inst. Dr. H. C. Cameron was elected President, and Dr. A. L. Kelly, Visitor. For an Examinership in Midwifery Dr. A. Sloan was re-elected. For the Examinership in Medical Jurisprudence Mr. T. Kennedy

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Dalziel was re-elected. A contest round which much interest centred was for two vacancies in the managership of the Western Infirmary. The out-going managers, Dr. J. B. Russell and Dr. Thomas Laprair, were opposed by Dr. A. Sloan and Dr. A. Wood Smith. Dr. Russell and Dr. Sloan were elected. Dr. J. D. Maclaren was re-appointed treasurer and Dr. James Finlayson librarian.

Nov. 2nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal Academy of Medicine in Ireland.

THE annual meeting of the Royal Academy of Medicine in Ireland for the election by ballot of the officers for the current session took place at the Royal College of Physicians of Ireland on the 29th ult., when Dr. Edward H. Bennett was elected President, in succession to Dr. James Little, whose term of office had expired. There was no other change of importance. A resolution, proposed by Dr. J. W. Moore and seconded by Sir John Banks, was unanimously passed—"That the Royal Academy of Medicine in Ireland has learned with sorrow of the bereavement of the President of the Medical Section in the unexpected death of his eldest son Lieutenant George Duffey. The Academy desires to convey to Sir George and Lady Duffey an expression of deep sympathy with them in their sorrow and of regret that so promising a career has been so sadly cut short." A similar resolution of condolence was passed by the Royal College of Surgeons in Ireland at its last meeting. Much sympathy is felt with Sir George Duffey, who is most highly esteemed by the members of his profession and by his fellow-citizens.

Royal College of Surgeons in Ireland.

The annual distribution of medals and prizes in connexion with the medical school of the Royal College of Surgeons in Ireland took place in the college hall on the 1st inst. The meeting was largely attended, the visitors including many ladies. Sir William Thomson, in his address inaugurating the medical session, took occasion to review again the claims of the officers of the Army Medical Department for improvements in that service. It will be remembered that the learned president made a most interesting speech on this subject at a recent meeting at St. Vincent's Hospital, when he mentioned that he had himself reason to believe that the Secretary of State for War was favourable to many of the claims of the army medical officers.

Death of the Rev. Professor Haughton, M.D., S.F.T.C.D.

The news of the death of Professor Haughton, of Trinity College, which took place on the 31st ult., was received in Dublin with universal regret. The learned professor was in his seventy-fifth year, but until quite recently he displayed all that wonderful energy and versatility which has rendered his name so widely known and so highly honoured. He graduated as M.D. of the University of Dublin in 1862, in 1866 he was elected a Fellow of the Royal College of Physicians of Ireland, and in 1873 a Fellow of the College of Surgeons in Ireland. After filling with much brilliancy and success many important offices in his College he became a Senior Fellow in 1882. Besides numerous purely scientific distinctions he was the recipient of many honorary degrees, that of D.C.L. Oxon. (Hon. Causâ) in 1868; LL.D. Cantab. (Hon. Causâ) in 1880; LL.D. Edin. (Hon. Causâ) in 1884; M.D. Bonon. (Hon. Causâ) in 1888; Hon. Fellow of the Royal College of Surgeons in Ireland, and of the Swedish Society of Physic.

The Typhoid Fever Epidemic at Ligoniel.

A very interesting report as to the outbreak of typhoid fever at Ligoniel, a village situate at the northern environs of Belfast, has just been presented to the board of guardians by their medical officer of health, Dr. E. C. Bigger, who, with Mr. Milligan, the dispensary medical officer of the district, has made a very careful investigation as to the cause of the outbreak. They turned their attention most carefully to two points—the milk and the water-supply. The milk was found to be supplied by about ten different vendors, several of whom came from a distance, and in only one case had there been any sickness recently amongst the family, and this milk vendor had only supplied milk to one patient. Further, very little milk was taken to the dairies, it being nearly all conveyed direct from the fields where the cows were milked to the consumers, so that the chance of its being contaminated was slight except by the water in which the cans, &c., were washed, so that the milk as a source of the infection was excluded. That there must be some common cause for the epidemic seemed likely from its sudden outbreak, for while for the past few months at Ligoniel there have been cases of typhoid fever, in common with Belfast and other places, there was nothing remarkable in the outbreak until Oct. 18th, when Mr. Milligan, the dispensary medical officer of Ligoniel, who has acted with extreme care and promptness, noticed a great increase in the number of cases attending on visiting lines. He then communicated with the sanitary authorities of the board of guardians, and on the very day he did so he received ten or twelve lines to see cases, every one of which turned out to be typhoid fever, and he considered the situation so grave that he went personally to the executive sanitary officer without waiting for a reply to his letter urging that steps should be taken to check the spread of the disease. It is admitted that the district is most defective in sanitary arrangements, but this would not account for the fact of the almost simultaneous illness of so many people. Further, the cases were more numerous in the upper part of Ligoniel where there is little or no accumulation of filth and sewage, and where there is beautiful clear mountain air. Now in Ligoniel, like Maidstone, there are two main sources of water-supply, besides several wells scattered over the district. One source supplies the upper, and the other the lower part of the village. The upper water rises out of the limestone rock from which it is piped into a large well-built underground reservoir. In this reservoir there is a large manhole, level with the adjacent ground, and it is covered over with a good-fitting, but not water-tight iron lid, and from this reservoir the water is conveyed in iron pipes down to the different fountains where the inhabitants get their supply of water for drinking and domestic purposes. Dr. Bigger, in his report, stated that in the ground above the reservoir he and Mr. Milligan proved by personal inquiry that in a house on the border of the same field there were two patients suffering from typhoid fever. One, a boy, who had been ill for a month, was getting better. His mother said she did not know what was the matter with him as no medical man had seen him. The other was a little girl who was very ill and had probably received the infection from her brother, she having been only a short time ill. Then in a house about thirty yards from this one another patient was suffering from typhoid fever. He had been ill about two weeks and his mother attributed his illness to his being a good deal with the first patient mentioned. Now the latter house was situated on the upper margin of the field wherein was the water reservoir, from which it was distant about 120 yards. All the excreta were thrown out at the back and side of the house—that is, into the same field as the reservoir, towards which there was a steep fall; and passing in front of the house there was a stream into which slops were thrown and in which soiled clothes were washed. This stream then passed along the side of a potato patch into the field, over which it flowed in the direction of the head of the spring and reservoir. Where this spring entered the field it was impassable, owing to the bogginess of the ground, but it only went a short distance down the field till it disappeared, thus showing the porous nature of the soil. This was about sixty or seventy yards above the spring which was the origin of the upper water-supply of the village. Both Dr. Bigger and Mr. Milligan think this is the probable cause of the outbreak, which may have occurred in any of the following ways. By the heavy rain which occurred two or three weeks ago washing the excreta from the back of this house and the stream directly into the reservoir through the sides of the lid of the manhole; or by the excreta and moisture from the stream being carried on the feet of the cows on to this iron lid and then being washed through the sides of the lid into the reservoir; or, what is even more probable, by the water percolating through the soil till it came to the rock which is limestone and over the surface of it till it came to the head of the spring, or through a crevice in the limestone into the spring. Up to Oct. 25th sixty cases had occurred in Ligoniel. On Oct. 23rd a sample of water was taken from three of the fountains and sent for bacteriological examination to Dr. Lorrain Smith, of Queen's College, Belfast, and after a most careful and exhaustive research in the pathological laboratory of Queen's College he has found the bacillus of typhoid fever and obtained pure cultures of it with its usual reactions, the

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most recent of Widal's serum test being clearly demonstrated. This epidemic at Ligoniel is of the greatest scientific importance, both from a medical and public health point of view. (1) In a village almost simultaneously a number of people are attacked by typhoid fever in a part of the district with a high altitude and not in a bad sanitary condition, the one common nexus of the cases being that they drank of the same water-supply, which arose in the limestone rock; (2) there is the discovery of cases of typhoid fever above the origin of this water-supply and the excreta from these patients finding its way by a stream into the origin of the water-supply; and finally (3) there is the discovery of the typhoid bacillus in this water-supply (below this point of contamination) in the water coming from the fountains from which the inhabitants of the upper part of the village evidently became infected. This epidemic proves clearly that typhoid fever is in this instance a water-borne disease, and that if the water-supply had not been contaminated there would have been no outbreak; because in the part of the village supplied by another water, although there have been cases, there has been no such phenomenon as a large number suddenly and simultaneously becoming ill with the disease. The latest report is that the outbreak has not materially abated. There have been over-eighty cases, twenty-four new cases having been notified recently.

Inquest at the Cork Lunatic Asylum.

An inquest was recently held at the Cork Lunatic Asylum on an inmate who was found to have several fractured ribs, although no history of injury was forthcoming. The governors very rightly requested the Board of Control to hold a special investigation, and the results of this have now been made public. Dr. E M. Courtney, inspector of lunatics, has reported that the patient was suffering from advanced cerebral disease, and had a peculiar formation of the chest indicating a soft and brittle condition of the bones. This condition was proved to have been present by a microscopical examination made by Dr. Woods, the medical superintendent, who reported that a section of one of the fractured ribs showed an extreme degree of rarefaction of bone tissue, the cancellous spaces being filled with a very vascular and fatty cellular tissue.

Nov. 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Pathology and Treatment of Membranous Colitis.

M. BLONDEL recently read an important communication upon the above subject before the Therapeutical Society. According to him membranous colitis is always symptomatic and secondary. Constipation is not invariably sufficient to explain its appearance, for many who suffer from constipation never have colitis and, in addition, in many cases of colitis a prevailing symptom is acute and very painful diarrhœa. Nor is microbial infection a cause, for in the false membranes the only organism found is the bacillus coli communis. If a woman, the subject of pelvic inflammation, be also attacked by membranous colitis, it is not the microbes from the genital organs which infect the intestine for there are never found in it streptococci, staphylococci, or the characteristic gonococci, but on the other hand the existing lymphatic channels permit free passage of the bacillus coli from the intestine to the genital organs, for these bacilli are often found there. M. Blondel drew a parallel between membranous colitis and certain affections of the stomach, the rectum and sigmoid flexure which are the seats of colitis playing the same part as the stomach in that they form a reservoir with walls possessing both secretory and motor functions. In two cases observed by him there were stasis and hypersecretion accompanied sometimes by painful spasms and sometimes not, according to the type of the complaint. In colitis the hyper-secretion presents itself under a special form—namely, as a membrane—for the poured-out mucus coagulates after a little time owing to the acidity of the intestinal contents and the dehydration which occurs from the mucus remaining for some time in absorbent surroundings. M. Blondel made most of his observations on membranous colitis in women, in whom this disease is very frequent. He considers that there are two classes of causation—direct and indirect. In both classes there is a trophoneurosis both secretory and motor, due to the action of the sympathetic abdominal plexus which is excited by a reflex irritation. The indirect causes comprise all sorts of visceral ptoses which drag on the sympathetic nerves and so irritate the plexus, and the most commonly observed of these is nephroptosis, although both enteroptosis and gastroptosis act in the same way. To these must be added prolapsus of the genital organs in women; particularly retroversion of the uterus, for when this condition is present the uterus drags on the broad ligaments and their nerves and so irritates the distant plexus. It is owing to the stretching of these ligaments that pregnancy is observed as a cause of colitis about the third month, when the uterus ascends out of the true pelvis. The direct causes are the various tumours which compress the bowel and so hinder its free peristalsis, and, lastly, bands and adhesions due to old pelvic peritonitis, which knot up the coils of bowel. This is the most frequent cause of colitis in women and explains its rarity in men, for in them pelvic peritonitis is very uncommon. M. Blondel recounted many instances where the destruction of these bands, either by laparotomy or massage, had brought about the cure of a most persistent colitis. Treatment, he said, must be symptomatic, and it comprises the removal of the causes by rectifying visceral and genital ptoses and the liberation of the intestine from whatever interferes with its functions or compresses it. As to local treatment he recommended the use of large injections of a warm solution of bicarbonate of soda, strength 20 per 1000, or, still more, an injection of a 5 per cent. solution of ichthyol, which had yielded excellent results.

Responsibility for Surgical Operations.

Another remarkable case involving questions of practical surgery has just come before the law courts, but this time there is no death to be deplored. A bicyclist had been run over in the street by a vehicle. When carried to the hospital he was found to have sustained a fracture of the arm which was put up by the surgeon in charge, M. Théophile Anger. In the course of the evening the patient complained of great abdominal pain, suffered from vomiting and syncope, and presented alarming peritoneal symptoms. A surgeon having been sent for M. Hartmann saw the case, diagnosed internal hæmorrhage, and performed laparotomy. He removed from the abdomen a considerable quantity of clot and tied two mesenteric vessels which were bleeding freely. The patient made a good recovery, but as he had remained a long time in the hospital the person who had caused the accident, in order to obtain a reduction in the amount of compensation payable, argued that the laparotomy was unnecessary and that this was the sole cause of the patient's remaining so long in the hospital. M. Anger has just given evidence in favour of this strange claim before the tribunal, and said that the young surgeons of to-day are only too ready to open the abdomen. The medical world is not in favour of this evidence.

Difficulties in the Manufacture of the Alkaloids.

M. Huchard has drawn the attention of the Therapeutical Society to certain inconsistencies in the effects produced by theobromine, an alkaloid which according to him is of the most inconstant composition. It varies according to the source from which it is derived and in various cases disastrous results arise from impurities present in it. M. Bardet called attention to the difficulty which exists in France in the manufacture of really pure alkaloids at a price which permits them to compete with the foreign-made articles, more especially those manufactured in Germany. The chief cause is the extremely high price of pure alcohol in France, so that the French manufacturer has to pay 3 francs a litre while the German only pays 30 centimes, and as the evaporation of the alcohol employed as a solvent cannot be carried on at a temperature which allows it to be recovered the manufacturer necessarily suffers considerable loss. The society decided to ask the Government that all alcohols employed in pharmacy should be duty free, without much hope, however, of success, for the trade in the so-called hygienic wines containing coca, kola, &c., which are really alcoholic drinks sold in great quantities at the present day, brings in such a large revenue that it certainly would not be given up except under pressure. As there is scarcely a druggist in France who does not make these nostrums which favour intemperance under the mask of hygiene and health, it is hardly likely that the trade will renounce this lucrative industry even to gain the benefit of being able to sell pure alkaloids, which they could only sell in infinitesimal quantities and at an extremely small profit.

Nov. 1st.

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BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Serum Treatment of Leprosy.

DR. BUZZI, of Berlin, has had the opportunity of attending one of the rare cases of leprosy which happen to come from foreign countries to this city, and he has described it in the *Deutsche Medicinishe Wochenschrift*. The patient was a boy, fifteen years of age, who came from South America in 1891. He showed marked symptoms of maculo-tubercular leprosy, such as hypertrophy of the skin of the forehead, the nose, the cheeks, the chin, and the ear; on his face there were disseminated tubercles of about the size of a pea. Tubercles were also present on the extremities, and the skin, especially of the trunk, was covered with brown pigmented spots. The usual internal and external remedies proved useless. New tubercles were formed and the patient's general state became worse. Injections of Koch's tuberculin performed in 1892 were very injurious, for new eruptions followed and there was suppuration at the places where the injections were made. In 1897, when Dr. Carrasquilla, of Bogota, advocated the serum treatment of leprosy, Dr. Buzzi obtained a supply of the anti-leprosy serum, and from February to June twenty-six injections of from 0·3 c.c. to 3·25 c.c were given, the whole quantity employed being 42 c.c. The injections were given at first twice a week, then once a week, and afterwards once a fortnight only. The tissues round the place of the injections used to become œdematous; the injections themselves were rather painful, but no suppuration followed. Well-marked collapse ensued twice. Two or three hours after the injection the temperature generally rose and within eight hours reached 39° or 40° C. (102·2° or 104° F.), the commencement of the rise being marked by a rigor. During the night the temperature became normal after free perspiration, but the following day it rose again. The injections were nevertheless continued. Dr. Buzzi observed in the leprous tubercles the same alterations which were described by Dr. Carrasquilla as a sequel of his injections. The tubercles at first became swollen and were then partially absorbed, the hypertrophied tissues of the extremities decreased in size and the skin became smoother, the ulcerations of the palate and uvula healed up and those of the nose improved; the patient's weight also increased from 39½ kilos. to 45½ kilos. (from 87 lb. to 100 lb.). The treatment has now been discontinued for about four months. Some new tubercles which appeared during and after the treatment were spontaneously absorbed. Although it is still uncertain whether the improvement will continue the injections of serum have so far yielded results which are much better than those obtained by any other method of treatment.

Anesin, a Substitute for Cocaine.

In a good many cases the administration of cocaine becomes impossible owing to an idiosyncrasy of the patient. This fact, together with the danger of acute poisoning, has induced Dr. von Vamossy, assistant in the Pharmacological Institute of Budapest, to search for a substitute, and in the *Deutsche Medicinische Wochenschrift* he recommends a compound which in chemical terminology is called trichlorpseudobutyl-alcohol, or aceton-chloroform, whilst its pharmacological name is anesin. The drug itself has been known for a long time, but the difficulty of preparing an aqueous solution has hitherto hindered its practical use. Dr. von Vamossy has, however, succeeded in making a solution which he tried in the first instance on rabbits. He found that a solution of a strength varying from 1 to 2 per cent. when applied for one minute to the cornea of a rabbit produced an anæsthesia lasting from eight to ten minutes, while an application for three minutes caused an anæsthesia of several hours' duration. Subcutaneous injections made the tissues so insensible to pain that the animals endured incisions two or three centimetres (from ¾ in. to 1¼ in.) in depth without uttering cries, and from fifteen to twenty subcutaneous injections produced general anæsthesia. The substance was then tried by several physicians and surgeons who communicated their observations to the author. Professor Froni, who used it in laryngological practice, said that the sensibility of the pharynx and larynx becomes reduced by brushing the mucous membrane, and that the nasal mucosa may easily be made insensitive in this way when operations with the galvano-cautery are to be performed. Dr. Grosz, ophthalmic surgeon, stated that mere dropping of anesin on the conjunctiva was less efficacious than cocaine, but an application continued for one minute produced total superficial anæsthesia. Subcutaneous injection enabled extirpation of the lacrymal gland to be performed without pain. The remedy produces neither mydriasis nor myosis. Dr. Hültl has used it in general surgery, the operations being herniotomy, resection of the mandible, extirpation of carcinoma of the lip, removal of lipoma, extraction of teeth, &c. His opinion is that the application of the drug is very easy; that it acts as an anæsthetic, but only as far as the tissue is permeated by the solution; that the duration of the anæsthesia is equal to that of cocaine; and that no symptoms of poisoning have been observed. In dental practice it was tried by Dr. Bilasko, who found that in 160 extractions of teeth there was no pain at all in 45 cases and only slight pain in 44 cases; whilst in the remaining 71 the pain was somewhat greater. Dr von Vamossy invites medical men to try the new remedy, which, although in some respects less efficacious than cocaine, has undoubtedly some advantages, especially that of absolute freedom from danger.

Immunity against Anthrax.

Dr. Sobernheim, assistant in the hygienic institute of the University of Halle, has published a paper in the *Berliner Klinische Wochenschrift* in which he states that the blood serum of animals immunised after Pasteur's method against virulent cultures of anthrax bacilli as well as that of those which have recovered from a spontaneous infection does not contain any immunising substance. The blood of animals, however, which have been immunised by increasing doses of anthrax cultures for several weeks undergoes certain alterations which make them resistant against anthrax bacilli of strongest virulence. When from 4 c.c. to 10 c.c. of the blood serum were injected into rabbits they survived injections of anthrax culture, which killed other rabbits in from thirty-two to forty hours. This immunity, however, was only a relative one, as the animals died several days afterwards, a fact at variance with the observations of Selass and Marcheux, of the Pasteur Institute, who secured absolute immunity by injections of only 1 c.c. or 2 c.c. The use of serum obtained from sheep which had been immunised against cultures of strongest virulence was also a failure, as no complete immunity could be imparted to rabbits. But the experiments were much more successful in the case of sheep, for all the sheep which were injected with blood serum of immunised animals became immune against infection by the most virulent culture of anthrax bacilli. The only pathological symptom was a transient rise in the temperature and an infiltration round the place of the injections. All the sheep to which the same quantity of anthrax bacilli had been administered without a previous injection of serum died after a few hours. The serum of artificially immunised sheep is therefore a propbylactic against anthrax infection.

Nov. 1st.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Congresses: Medical, Surgical, and Special.

THERE is no keeping pace with Italy's congresses, central and provincial, particularly in the late autumn. I can overtake them only in swallow-fashion, skimming and dipping. The "Congresso della Società Italiana di Medicina Interna" (the eighth of the series) was held at Naples from Oct. 20th to 24th and was chiefly memorable for the theses on "Leukæmia and Pseudo-leukæmia," introduced by Dr. De Renzi and Dr. Marchiafava; on "Chronic Arthritis," introduced by Dr. Fenoglio and Dr. Massalongo; and on the "Cardiac Neuroses," introduced by Dr. Cardarelli and Dr. Silva, the last-named a very important paper, as will appear on its publication in the official "Atti" (proceedings). A feature of these congresses of internal medicine is the "Esposizione" of medicaments and therapeutic appliances annexed to them; and this year's exposition was an improvement on the best of its forerunners. Another and still more comprehensive congress was that held in our University from Oct. 25th to 27th, at which the opening address was delivered by the Senator F. Durante, professor of surgery in the Roman school. "Congresso dell' Ordine dei Medici" (Congress of the Guild of Practitioners) was its title, and an infinite number

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of questions relating to the interests of the profession in Italy was raised and discussed by its members. Prominent among these was Dr. Santini's Bill, "Sull' Esercizio Professionale dei Medici Stranieri in Italia." But as its provisions are known to the readers of THE LANCET and as its discussion at the Congress added no new argument in its support to those already adduced (and, let me say, refuted), I content myself with indicating its place on the agenda-paper. Of the special congresses, that of the "Obstetric and Gynæcological Practitioners" closed on Oct. 21st, and that of "Otology and Laryngology," also held here, under the able presidency of Professor Grazzi, and closed on Oct. 30th, need alone be mentioned. The official reports of all these congresses, containing the more memorable papers (with relative discussions) *in extenso*, are now in the press and will see the light at the close of the present or in the course of the ensuing year.

The English-speaking Practitioner in Italy.

A circular has been addressed by the Minister of the Interior (the Marchese di Rudini, Prime Minister) to the prefects throughout the kingdom. It is neither more nor less than a mandate charging these functionaries to invite all non-Italian dentists to furnish proof that in addition to their home qualifications they possess one from a recognised qualifying body in Italy, failing which these gentlemen are to be held as practising illegally, are therefore to be called upon to desist from practice, and in the event of their being contumacious to be denounced to the judiciary authority.

Oct. 31st.

Obituary.

SURGEON-MAJOR-GENERAL SIR W. A. MACKINNON, K.C.B., F.R.C.S. EDIN., &c.

HONORARY SURGEON TO THE QUEEN, LATE DIRECTOR-GENERAL OF THE ARMY MEDICAL DEPARTMENT.

THE death of Sir William Mackinnon, the late Director-General of the Army Medical Service, on Oct. 28th, at his residence in Evelyn-gardens, S.W., at the age of sixty-seven years, removes a notable personality as well as a distinguished medical officer. The health of Sir William Mackinnon had not for some time past been altogether satisfactory, and especially during the latter part of his service as the head of his department; but he was a man of fine physique and vigorous aspect, and his death must have come as a shock and surprise to his numerous friends. He had occasionally complained of symptoms attributable to kidney trouble and recently of others referable to cardiac affection, with occasional attacks allied to angina; but he was fairly well during the earlier portion of the day of his death, which was at the last sudden and unexpected, pulmonary symptoms having supervened which were partly excited or aggravated by the fog. The late Sir William Mackinnon's record of war service was a long, varied, and distinguished one; he was a strong and very energetic man—a man of action—and always took a leading part in any duty in which he might be engaged. His varied field service in different parts of the world brought him in close and intimate contact with a number of military officers of rank and distinction from the days of Lord Clyde to the present time, with whom he was a general favourite. This was also attributable to his frank and outspoken, but genial manner. He enjoyed a very wide circle of acquaintance and possessed considerable personal interest with the late Commander-in-Chief and other influential people. By temperament he was somewhat impulsive, but that his instincts and impulses were honest and kindly by nature there can be no doubt, otherwise he would not have made so many friends, to whom his loss will be a grief. He was strongly attached to his profession and in his younger days took an active and even ardent part in surgery and in keeping himself *au courant* with all advances in that direction. Sir William Mackinnon was the son of the late Rev. John Mackinnon, of Strath, in the Isle of Skye. He was born on June 27th, 1830, and was educated at Glasgow and Edinburgh Universities, being admitted a Licentiate of the Royal College of Surgeons of Edinburgh in 1851, and elected a Fellow in 1872. Enter ng the Medical Department of the Army in February, 1853, he served throughout the Eastern Campaign of 1854–55 with the 42nd Highlanders (the Black Watch), including the battles of Alma and Balaclava, in medical charge of the regiment, took part in the expedition to Kertch and Yenikale, in the siege of Sebastopol and the assault of the Redan (Sept. 8th) and in the final fall of the fortress, for which he had the medal with three clasps, the Knighthood of the Legion of Honour, and the Turkish medal. He next saw active service in the Indian Mutiny and in the New Zealand War. He took part as principal medical officer in the second phase of the Ashanti War of 1873–4, when he accompanied the force to Coomassie. In 1879–80 he was principal medical officer in China, obtaining the rank of Surgeon-General in May, 1880; serving in Malta from 1880 to 1882; at the War Office from 1882 to 1888, and at Gibraltar in 1888–9. In 1889 he was appointed to succeed Sir Thomas Crawford as Director-General of the Army Medical Department, resigning that position last year. He had been in receipt of a good service reward from 1885, was made a K.C.B. in 1891, and was appointed Honorary Surgeon to the Queen in February, 1893.

We have been favoured with the following note upon Sir William Mackinnon by one who knew him well: "In Sir William Mackinnon passes away a striking personality. His Highland origin and Celtic temperament furnished him with that enthusiasm for all he was interested in and the impetuosity of character, always anxious for the truth and all that was good, which endeared him to so many and which secured for him throughout his career troops of admiring friends. His mind was simple and sympathetic and his actions transparent in their honesty and good intentions. Usually quiet in demeanour, he would flash with excitement at anything which hinted wrong or injustice of any kind to anybody. For everything belonging to his profession he had the keenest interest and enthusiasm, and most especially for the surgical branch of it. The catalogue of his military career does not mention that in the early part of it he abandoned medicine for a short space to enter as a fighting officer in a Highland regiment, but he soon returned to his old allegiance. Whenever opportunity arose, as it oftentimes did in the course of his extraordinarily long period of active military service in the Crimea, the Indian mutiny, and New Zealand, he never failed to do some good operative surgery. He performed several excisions of the elbow in the last-named country when that operation was just being introduced afresh to surgical notice—so well abreast was he of the time. At the storming of the Gate Pah a characteristic incident occurred. The officers were one by one wounded or killed, and none remained unhurt but Mackinnon. He took command of the men, rushed the Pah, captured it, and in so doing necessarily killed and wounded the New Zealanders. Several of these he afterwards dealt with as a surgeon, being obliged to amputate in some cases limbs where he himself was solely accountable for the damage he was engaged in rectifying. He might have had a V.C. at this time, but chose the C.B. instead—a circumstance he often regretted. At the time of the Ashanti War, under Lord Wolseley, he failed to be nominated for a place in the expedition. Yet without orders, or perhaps against orders, he went to Madeira so as to be as near as practicable to the scene of action, and Sir Anthony Home, the principal medical officer, falling sick, Mackinnon at once started for the Coast, reported himself to Lord Wolseley, who was very glad to welcome him, and accompanied the expedition to Coomassie as its chief medical officer. This gives some notion of his resourceful energy. He was essentially a man of action. He loved his strictly professional duties, but administration and office work were distasteful to him."

A memorial service was held at St. Columba's Church, Pont-street, on Tuesday, at which both the Duke of Cambridge and the Duke of Connaught were represented, while Field Marshall Sir Donald Stewart and Sir Frederick Haines were in the church. On the same day the remains were cremated at Woking, the service being conducted by the Rev. G. Kirkwood, Chaplain to the Forces, and the ashes will be deposited in the family burying-ground at Kilchrist. Her Majesty the Queen sent the following gracious message to Sir William Mackinnon's family: "Please convey to the relatives of the late Sir William Mackinnon the expression of the Queen's sympathy in their loss sustained by the death of that distinguished officer and member of Her Majesty's Household.'

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PROFESSOR MARC OLIVET.

NOT since Moritz Schiff died rather more than a year ago[1] has Swiss medicine sustained a severer loss than that of Dr. Marc André Olivet, Professor of Psychiatry in the University of Geneva. Son of the able Genevese surgeon, M. François Olivet, young Marc André gave early proof of aptitude for the medical career, and after the thorough preliminary education so rigorously exacted in Switzerland he pursued his professional studies in the University of Würzburg, where in 1842, when just in his twenty-first year, he graduated with the "summi in medicinâ honores." Thereafter he proceeded to Lyons and to Paris, and at both seats of learning distinguished himself by his assiduous attendance at the cliniques of their most eminent teachers. It was only after some years thus profitably spent that he embarked on general practice, first at Satigny and afterwards at Geneva. In the latter city his predilection for pure medicine soon asserted itself; he was appointed *médecin en-chef* of the Cantonal Hospital, a post he held for four years, and later accepted the eminently responsible duties of *médecin-en-chef* of the Hospice des Vernets, where he had need of all the tact and the administrative as well as clinical powers with which nature had richly endowed him. He held this position for the thirty-two years between 1856 and 1892 during which the transformation of the Genevese Asile d'Aliénés was passing through its successive phases, and his discharge of the complex and often peculiarly trying *rôle* vouchsafed him was in all respects nothing short of exemplary. From this service his appointment to the supplementary chair of Psychiatry in the University of Geneva was almost a "natural transition," and in due course he succeeded to the post of ordinary professor in the same subject. This was in 1882, and when the Federal law imposing increased stringency on the admission of students of medicine to graduation and practice came into force he was chosen a member of the Directing Committee of Examinations throughout the Confederation. In this capacity he insisted on the candidate's possession of practical knowledge, and it is greatly due to his influence that medicine has made itself so beneficially felt in the aggregate life of the Swiss population, commencing at school and extending to every industrial or mercantile employment, demanding the coöperation of many hands. For the eight years during which he sat on the Administrative Council of Geneva he was the advocate, equally persistent and enlightened, of school hygiene, a subject which interested him deeply even in advancing age and declining health, in so much that he did not disdain the onerous if comparatively humble duties of sanitary inspector of the infant schools of the city.

Dr. Olivet has left a high reputation in medical and particularly in hygienic literature, his monographs and more fugitive publications on hygiene as applied to school-life, to pedagogy, to agriculture and such like, amounting to not a few volumes. "Thorough" is the attribute written large over all these compositions, characteristic as they are of his penetrating insight, sound judgment, and mastery of detail. It is, however, as a clinical observer and teacher that his memory will be most warmly cherished in the Geneva school, where he has left behind a record of acute diagnosis and judicious therapeutics rarely surpassed in the difficult and delicate field of medicine he had made his own. Ill-health withdrew him from professional work about a year ago; but, as is often the case, the unwelcome inactivity thus imposed seemed to assist the malady which it was meant to avert. He died on the 24th ult. in his seventy-sixth year.

JOHN HUGHES, F.R.C.S. ENG., L.S.A., J.P.

MR. JOHN HUGHES died at Penrheol, Barry, on Oct. 27th. Mr. Hughes was born in North Wales in March, 1818, and received his medical education at St. Bartholomew's Hospital, London, taking the M.R.C.S. Eng. and L.S.A. Lond. in 1840, and the F.R.C.S. Eng. in 1858. Mr. Hughes spent the greater portion of his life at Carmarthen, where he was for twenty-five years one of the leading practitioners. He was surgeon to the Carmarthen Infirmary, medical officer of health for the Carmarthen district, surgeon to the prison, and was also a magistrate for the borough. Five years ago on his retirement from practice he removed from Carmarthen to Barry and resided with his son, Mr. J. A. Hughes, the town clerk of Barry. The deceased leaves three daughters and another son, the Rev. Hugh Price Hughes, M.A. Mr. Hughes was beloved by all who knew him, and was held in the highest esteem. Much sympathy is felt for the widow and children, the former of whom is in ill health. The funeral took place at Merthyr Dovan Cemetery on Oct. 30th.

[1] Vide THE LANCET, Oct. 24th, 1896, p. 1198.

ANDREW HINGSTON, M.R.C.S. ENG., L.S.A., J.P.

MR. ANDREW HINGSTON died at Liskeard, Cornwall, on Oct. 21st in his seventy-seventh year. The deceased received his medical education at the London Hospital, and took the qualifications of M.R.C.S. Eng. and L.S.A. in 1842. Mr. Hingston was consulting surgeon to the Liskeard Hospital, and had been medical officer of health of the Liskeard urban district. He was also a Justice of the Peace for Liskeard and about thirty-five years ago was mayor of the borough.

Medical News.

H.R.H. THE PRINCE OF WALES, K.G., has been graciously pleased to accept a copy of the print of the Council of the Royal College of Surgeons of England (1884) as a memento of the Jubilee year.

HIGH SHERIFF OF BRISTOL.—Mr. R. F. Richardson Cross, M.B. Lond., F.R.C.S. Eng., surgeon to the Bristol Eye Hospital, has been nominated for the office of High Sheriff of Bristol for 1897-98.

BRISTOL ROYAL INFIRMARY.—The Bristol Royal Infirmary has recently been benefited to the extent of £20,000. This sum was bequeathed by the late Miss Martha Daubeny to Mr. E. Sampson, of Henbury, for life, but upon his death had to revert to the institution.

TYPHOID FEVER IN CLIFTON.—At the meeting of the Bristol Sanitary Authority, held on Oct. 28th, Dr. D. S. Davies, the medical officer of health, reported that in the week ending Oct. 23rd two cases of typhoid fever were notified in Bristol and sixteen in Clifton, and that two deaths had occurred; the notifications in Clifton from Oct. 23rd to Oct. 28th numbered twenty-five. The inhabitants are recommended to boil all milk before use, as observation of the cases indicated a connexion between the disease and milk-supply. Dr. Davies says there is no reason to suspect the public water-supply.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—A meeting of the town-hall committee of the Cardiff town council was held on Oct. 28th, under the presidency of Alderman Carey, to consider the application made by the University College of South Wales and Monmouthshire for a site for the college and museum in Cathays Park. The chairman stated that the corporation had subscribed £10,000 towards the building fund of the college, and the committee would be prepared to recommend that a site should be provided on condition that the college authorities paid for the land at the same proportion as it would cost the corporation. On the motion of Dr. Buist, seconded by the mayor, it was resolved that a site be granted on the terms mentioned by the chairman.

BOURNEMOUTH MEDICAL SOCIETY.—The annual meeting of this society was held at the Imperial Hotel, Bournemouth, on Oct. 27th, Dr. Roberts Thomson, the retiring President, being in the chair. The report and balance-sheet were taken as read and passed. Dr. Thomson then thanked the members for the honour accorded to him in electing him President during the past year and vacated the chair in favour of the President-elect, Mr. A. G. S. Mahomed. The new President proposed a vote of thanks to Dr. Thomson, which was carried with acclamation. Mr. Heygate Vernon was elected as treasurer, Dr. W. H. L. Marriner as librarian, and Dr. Clift as honorary secretary. The following were elected members of the committee: Dr. Masters, Dr. Marriner, Dr. Muspratt, Dr. Ramsay, and Dr. Duncan. Twenty-five members and three guests sat down to the dinner which followed.

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INFIRMARY MEDICAL SUPERINTENDENTS' SOCIETY.—The first meeting of the session was held on Oct. 30th at the St. George's-in-the-East Infirmary. Several matters connected with infirmary administration were discussed. Mr. Burney gave notice that at the next meeting he would move that the society should subscribe to the Royal Medical Benevolent College.

AT a meeting of the British Balneological and Climatological Society (Dr. Snow, of Bournemouth, President), held on the 27th ult. at 20, Hanover-square, Mr. A. H. Haviland proposed, "That the establishment of a chair of Medical Climatology and Geography is desirable." This was seconded by Dr. C. Theodore Williams and carried unanimously. It was then proposed that the subject should be referred to the council, and a committee be formed to consider how best the above resolution should be carried into effect.

DISEASED ANIMALS IN MANCHESTER.—During the year ending Aug. 28th, 1896, there have been four outbreaks of glanders in Manchester. Seven glandered horses have been killed and the carcasses destroyed. At a cowshed at Rusholme, where 35 cows are kept, one became affected with anthrax and died. Four outbreaks of swine-fever have occurred, and the 234 pigs on the different premises were all slaughtered by order of the Board of Agriculture. A special inspection of the cowsheds in the city—112 in number—and also periodical examinations of the milch cows—1182 in number—have been made by the veterinary staff. Of the latter 29 had tuberculosis, and 23 of them were slaughtered by the owners, while the others were dealt with by the medical officer of health.

DIPHTHERIA IN LONDON.—The amount of diphtheria recorded in London during the four-weekly period ended on August 14th—namely, 1111 notified cases, which fell during the succeeding four weeks ended on Sept. 11th to 866 notified cases, has been exceeded by the returns for the like period ended on Oct. 9th when 1169 cases were notified. Whilst the weekly average of the September period was 216 cases, the average in the October period was 292; and all the sanitary districts save one were invaded, three having been free in the September period. Also, whilst four districts in the September period had upwards of 50 cases each, and an aggregate of 246, there were seven such districts in the later period, with a total of 469 attacks. As a set-off against this there were other five districts with only 17 notified cases amongst them. The 117 deaths (29 weekly) in September rose to 182 (45 weekly), in the later period, the respective case-mortality rates being 13·5 and 15·6 per cent. Thus the latter half of September and the first part of the current month furnished not only an excessive amount of diphtheria in London, but also saw the disease in a more fatal form. Matters have not tended to mend in the three weeks ending on Oct. 30th, during which 165 deaths were registered in the county of London, in addition to 57 deaths in the outer ring. In the week ended Oct. 16th, the 45 registered deaths were one below the corrected decennial average, and also a decline on the former weeks with their respective total of 49 and 53; but the cases notified numbered 351. Only 1 death occurred in infancy, and only 1 of a person aged over twenty years, 23 being of children aged from one to five years. Kensington, St. Pancras, and Lambeth sanitary areas had each 4 deaths, and Westminster, Islington, Bethnal Green, Newington, and Plumstead sanitary areas had 3 deaths each. In the suburbs 3 deaths occurred in West Ham, 5 in Hendon, and 4 in Edmonton registration districts. In the week ended on Oct. 23rd, the 55 deaths registered in London were three in excess of the corrected decennial average, 6 being of infants and 2 of persons aged over twenty years. Islington was credited with 6 deaths, Hackney and Battersea each with 5, and Camberwell with 4 deaths. The close of the week found 1057 patients suffering from the disease in London hospitals. In the outer ring, of the 16 deaths, 6 occurred in West Ham, and 4 in Hendon registration districts. Last week the number of deaths registered from diphtheria in London increased to 65, this total being 17 in excess of the corrected decennial average for the particular week. Only one death occurred in an infant, other 43 in children in the next four years of life, and not one in a person aged over twenty years. Seven deaths were credited to Poplar, 6 to St. Pancras, 5 to Bethnal-green, 4 each to Battersea, Camberwell, and Greenwich, and 3 each to Fulham, Hackney, and Plumstead sanitary areas. In the outer ring 21 deaths were registered, of which 7 belonged to West Ham, 5 to Edmonton, and 4 to Hendon Registration Districts.

THE sum received this year in aid of the amalgamated charities by the Birmingham Hospital Sunday Collection amounts to £4010 0*s.* 7½*d.*

MEDICAL DEPUTY-LIEUTENANT.—Mr. William Hamerton Jalland, F.R.C.S. Eng., of York, has been appointed a Deputy-Lieutenant by the Lord-Lieutenant of the West Riding of the county of York.

SIR SQUIRE BANCROFT has promised to give a reading in Cardiff on Dec. 3rd, in aid of the Seamen's Hospital and the Infirmary. He will also give another at Torquay on Jan. 25th, on behalf of the Torbay Hospital.

WE have received from Mr. R. B. Anderson, acting as honorary secretary of the Corporate and Medical Reform Committee, a copy of a letter sent by the committee to Dr. Glover. In this it is stated that Dr. Glover's letter was based on "entire misrepresentation" and "entire misconception" of the circular issued by the committee. We have received from Dr. Glover a letter in which he maintains the justice and accuracy of the reflection contained in his letter published in THE LANCET of Oct. 23rd, and declines further correspondence.

THERAPEUTICAL SOCIETY OF MANCHESTER.—The first meeting for the session 1897-98 was held at the Owens College on Oct. 27th, Professor D. J. Leech, president, being in the chair. Dr. J. S. Bury described a case of Toxic Symptoms following the administration of a large dose of Phenacetine, and a short discussion took place upon the toxic effects of the synthetic antipyretics. Dr. Fothergill gave a short account of the Uses of Senecio Jacobæa, and showed specimens of the plant and preparations made from it. Mr. Kirkby also forwarded an account of the mode of preparing a Liquid Extract of Senecio, which was an effective and convenient form for its administration. Dr. A. T. Wilkinson read an interesting paper upon certain desirable Additions to the Pharmacopœia which would greatly enhance its value to medical practitioners. Dr. Yonge showed a sample of Orthoform, a newly introduced local anæsthetic.

THE ANGLO-INDIAN ASSOCIATIONS.—Dr. James R. Wallace, editor of the *Indian Medical Record*, visited England not long ago for the purpose of bringing the cause of the Anglo-Indian Associations under the notice of the public in the mother country. He returned to India in September, having met with gratifying success in the carrying out of his objects, and on the 27th of that month a large number of ladies and gentlemen of the European and Anglo-Indian community assembled in the Bombay town-hall for the purpose of welcoming him back. After some introductory remarks by the Rev. Isaac F. Row, president of the association, who occupied the chair, Dr. Wallace said that in Great Britain hardly anything was known of the domiciled British community in India, meaning by that term the section of the population consisting of Europeans of every nationality and their descendants, who had made India their home. The various methods by which the condition of this community might be improved were fully explained by him to several members of Parliament in the House of Commons and to members of the Government at the India Office and the War Office. Among the points to which he especially directed attention were the exclusion of the domiciled community from imperial appointments, the raising of local regiments, and the desirability of classifying Europeans and Anglo-Indians as British in the cases where British nationality was a requisite for holding an appointment. In conclusion, four resolutions were adopted, the first of which was as follows: "Resolved that this meeting of the domiciled European and Anglo-Indian community of Bombay, held in the town-hall on Monday, Sept. 27th, 1897, cordially appreciates and approves of the various measures that have been adopted by Dr. James Robert Wallace, as the delegate of the Anglo-Indian Associations, for the advancement of the interests of the resident British community of India, by suitable representations of their cause to Parliament and to the India Office in London, and this meeting records its hearty thanks to Dr. Wallace for his disinterested and praiseworthy labours on behalf of his countrymen during the past six months in London."

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BOOKS, ETC., RECEIVED.

AMERICAN MEDICAL ASSOCIATION PRESS, Chicago.
Transactions of the Chicago Pathological Society from December, 1895, to April, 1897. Vol. II. 1897.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.
Air, Food, and Exercises. By A. Rabagliati, M.A., M.D., F.R.C.S. Edin. Price 5s., net.

BLACKIE AND SON, Old Bailey, London.
The Golden Galleon. By R. Leighton. Illustrated. 1898. Price 5s.
With Crockett and Bowie: A Tale of Texas. By K. Munroe. Illustrated. 1898 Price 5s.

CHAPMAN AND HALL, Henrietta-street, Covent-garden, London, W.C.
Four Poets: Poems from Wordsworth, Coleridge, Shelley, and Keats. Selected by Oswald Crawfurd. 1897. Price 3s. 6d.

CHURCHILL, J. & A., Great Marlborough-street, London.
Year-book of Pharmacy. From July 1st, 1896, to June 30th, 1897. With the Transactions of the British Pharmaceutical Conference, 1897.

COLLINI, C., Florence.
Cinquième Congrès International d'Otologie, Florence, Septembre, 1895. 1897.

GINN AND COMPANY, Boston.
The Living Substance as Such, and as Organism. By G. F. Andrews. Supplement to Journal of Morphology. Vol. XII., No. 2. 1897.

LEWIS, H. K., Gower-street, London.
Transactions of the Dermatological Society of Great Britain and Ireland. 1896-97. Vol. III. 1897. Price 5s.
The New Sydenham Society, London: Selected Essays and Monographs. Translations and Reprints from Various Sources. 1897. Vol. CLXI. Report presented to the Thirty-ninth Annual Meeting of the New Sydenham Society, held July, 1897.

LIPPINCOTT, J. B., COMPY., Henrietta-street, Covent-garden, London.
Cutaneous Medicine: A Systematic Treatise on the Diseases of the Skin. By L. A. Duhring, M.D. Part 2. Classification, Anæmias, Hyperæmias, Inflammations. Illustrated. 1898. Price 12s. 6d.
The Origin of Disease. By A. V. Meigs, M.D. Illustrated. 1897. Price 21s. net.

LIVINGSTONE, E. AND S., Teviot-place, Edinburgh.
Catechism Series. Surgery. Part 5. Price 1s. net.

LONGMANS, GREEN, AND CO., Paternoster-row, London.
Notes on Micro-Organisms Pathogenic to Man. By Surgeon-Captain B. H. S. Leumann, I.M.S. M.B. Lond. 1897. Price 3s.
A Handbook of Midwifery. By W. R. Dakin, M.D., B.S. Lond., F.R.C.P. Illustrated. 1897. Price 18s.

PHILIP, GEO., AND SON, Fleet-street, London.
English Series, No. 1. Scenes of English Life, Book I.: Children's Life. By H. Swan and V. Bétis. With a Preface by Susanna E. Hull. 1897. Price 2s. 6d.

REDWAY, GEO., Hart-street, Bloomsbury, London.
A Catechism of Palmistry. By Ida Ellis. Illustrated. 1898. Price 2s 6d. net.
Human Magnetism; or, How to Hypnotise. By Professor Jas. Coates. Illustrated 1897. Price 5s. net.

RICHARDS, GRANT, Henrietta-street, Covent-garden, London.
The Sub-conscious Self and its relation to Education and Health. By L. Waldstein, M.D. 1897.

SAMPSON LOW, MARSTON, AND CO., Fetter-lane, Fleet-street, London.
The Guide to South Africa. 1897-98 edition. Price 2s. 6d.

SMITH, ELDER, AND CO., Waterloo-place, London, S.W.
Reference-Book of Practical Therapeutics. By various Authors. Edited by F. P. Foster, M.D. In two vol. Vols. I. and II. 1897. Price 52s.

SPOTTISWOODE AND CO., Gracechurch-street, London.
Sick-room Cookery and Hospital Diet. By Maude Earle. With notes on the Feeding of Infants. By F. C. Madden, F.R.C.S. 1897. Price 3s. 6d.

THE SAVOY PRESS, 115, Strand, London.
Stammering, Stuttering, and other Speech Affections: Their Causes and Cure. By W. Abbotts, M.D., M.R.C.P., M.R.C.S. Eighth edition. 1897. Price 1s.

TOWNSEND, W., AND SON, Surrey-street, Sheffield.
1797-1897. Sheffield Royal Infirmary. A brief Sketch of a Century's Work. Compiled by J. D. Leader, F.S.A., and Simeon Snell, F.R.C.S. Edin. 1897.

UNWIN, T. FISHER, Paternoster-square, London.
Hugh Wynne. By S. W. Mitchell, M.D. Illustrated. 1897. Price 6s.

Chemistry for Photographers, by Chas. F. Townsend, F.C.S., F.R.P.S.; illustrated (Dawbarn and Ward, Farringdon-avenue, London). price 1s. net.—The Journal of Mental Science, October, 1897 (J. & A. Churchill, London, 1897), price 5s.—Transactions of the American Pediatric Society, Eighth Session, held in Montreal, May, 1896; edited by F. M. Crandall, M.D.; Vol. VIII., reprint, 1896.—Statistical Tables of the Patients under Treatment in the Wards of St. Bartholomew's Hospital during 1896 (C. Skipper and East, Great Tower-street, London, E.C., 1897).—University of London: the Calendar for the Year 1897-98, and the Revised Regulations for 1899; official copy (Eyre and Spottiswoode, London, 1897), price 5s. net.—Annual Report of the Board of Health of the Health Department of the City of New York for the Year ending Dec. 31st, 1896 (The Martin B. Brown Company, New York, 1897).—The Professional Pocket-book for 1898, containing three parts; leather case (Rudall, Carte, and Co., Berners-street, London, W.)—Atti della R. Accademia delle Scienze Mediche in Palermo, per l'Anno 1896-1897 (Giornale di Sicilia, Palermo). — Magazines, &c., for November: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Sunday Hours, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, English Illustrated Magazine, Knowledge, and Humanitarian.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALDRIDGE, ARTHUR WM., M.B., B.S. Durh., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Obstetric and Ophthalmic House Surgeon to the Queen's Hospital, Birmingham.

ANNESLEY, J. ST. JOHN, M.D., M.Ch. Irel., has been appointed Medical Officer to the Derrylin District, Lisnaskea Union, County Fermanagh.

BUCHAN, J. J., Fifth-year Student, has been appointed a Clinical Clerk to the Woodilee Asylum, Lenzie, near Glasgow.

CARRE, HENRY, JUN., L.R.C.P., L.R.C.S. Irel., has been appointed Junior Assistant Physician, Woodilee Asylum, Lenzie, near Glasgow.

COLLIER, R. S., M.R.C.S., L.R.C.P., has been appointed a House Physician to the General Infirmary, Leeds.

DOBSON, J. F., M.R.C.S., L.R.C.P., has been appointed a House Surgeon to the General Infirmary, Leeds.

FLETCHER, JAMES, M.B., C.M., D.P.H. Aberd., has been appointed Medical Officer for the Lightburn Joint Hospital for Infectious Diseases, Shettlestone, near Glasgow.

GOODWIN, A. G., L.F.P.S. Glasg., has been appointed a Medical Examiner to the Royal Liver Friendly Society, Liverpool, vice W. J. Ireland, deceased.

GREGG, J. L., M.B., B.S. Univ. N.Z., has been appointed a Public Vaccinator at Manuberika, New Zealand.

HARBISON, W. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the district of Georgetown, South Australia.

HARTLEY, J. V., M.R.C.S., L.R.C.P., has been appointed a House Surgeon to the General Infirmary, Leeds.

HONE, F. S., M.B., B.S. Adel., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the Districts of Morphett Vale and Noarlunga, South Australia.

JOHNSON, C. H., M.B., C.M. Edin., has been appointed Officer of Health for North Colac Shire, Victoria, South Australia, vice R. A. A. Manly, resigned.

JOHNSTON, J. C., M.B., Ch.M. Edin., has been appointed a Public Vaccinator for Queenscliff, Victoria, Australia, vice J. H. Browning.

JOSKE, A. S., M.B., Ch.B. Melb., has been appointed a Member of the Medical Board of Victoria, Australia.

JUTTNER, F. J. E., M.B., Ch.B. Melb., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the district of Tanunda, South Australia.

LAIDLAW, D. F., M.B., Ch.M. Edin., has been appointed Medical Superintendent for the Hamilton Hospital, Victoria, Australia.

LEONARD, ROBERT CECIL, M.B., B.S. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon to the Bristol Dispensary.

LORD, CYRIL COURTENAY, B.A. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Queen's Hospital, Birmingham.

MCCREERY, J. V., L.R.C.S. Irel., has been appointed a Member of the Police Medical Board of Victoria, Australia, vice R. Youl.

MACFARLANE, A. M., M.B., Ch.M. Melb., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the district of Robe, South Australia.

MCGOWAN, R., L.F.P.S. Glasg., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the District of Port Gawler, South Australia.

MACLACHLAN, D. A., L.F.P.S. Glasg., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the districts of Crafers and Stirling, South Australia.

MAHER, J. P., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the district of Mount Crawford, South Australia.

MAIN, H. F., M.B., Ch.B. Melb., has been appointed Officer of Health for Metcalfe Shire, Victoria, Australia.

MEADE, N. G., M.R.C.S., L.R.C.P., has been appointed a House Physician to the General Infirmary, Leeds.

MEIKLE, A. J., M.D. Edin., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the Districts of Rapid Bay and Yankalilla, South Australia.

MOORHOUSE, C. H., M.B., Ch.B., has been appointed Resident Obstetric Officer to the General Infirmary, Leeds.

MORIER, C. G. D., L.K.Q.C.P., L.R.C.S. Irel., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the District of Truro, South Australia.

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PHILLIPS, CHARLES MORLEY, M.D. Brux., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon to the Bristol Dispensary

POOLER, E. L., M.D., Ch.M. Dubl., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the Quorn Corporation and radius of fifteen miles, South Australia.

POPHAM, F. W. H., L.R.C.P. Edin., M.R.C.S., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the Districts of Gawler Corporation and Munnopara West, South Australia.

PROCTOR, J. S., L.K.Q.C.P., L.R.C.S. Irel., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the Districts of South Rhine and Tungkillo, South Australia.

ROBINSON, S. VERNON, Fifth-year Student, has been appointed a Clinical Clerk to the Woodilee Asylum, Lenzie, near Glasgow.

ROSSETTI, F., M.D. Pisa, has been appointed a Public Vaccinator at Ross, New Zealand.

SEABROOK, L. L., M.B., Ch.B. Adel., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the Districts of Terowie and Wonna (Hundreds of), South Australia.

SHAND, H. M., M.D. Aberd., L.R.C.S. Edin., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the Districts of Goolwa Corporation and Port Elliott, South Australia.

SHONE, W. V., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the Districts of Onaunga (ex-aborigines) and Strathalbyn, and Strathalbyn Corporation, South Australia.

SIMONS, C. N., L.R.C.S. Irel., L.S.A. Lond., has been appointed Officer of Health for Bright Shire, Victoria, Australia, vice J. F. Wilkinson, resigned.

SMITH, O. W., M.D., Ch.M. Edin., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the Districts of Clare and Stanley, South Australia.

SOUTER, C. H. J., M.B., Ch.M. Aberd., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the Districts of Balaklava and Dalkey, South Australia.

SOUTER, J. F., M.B., Ch.M. Aberd., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the District of East Torrens, South Australia.

STEVENSON, J. R., M.B., Ch.M. Edin., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the Districts of Coglin, Petersburg Corporation, and Yongala, South Australia.

STRANGMAN, C. L., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the Districts of Orroroo, Coomooroo, Erskine, Black Rock Plain, and Pekina, South Australia.

STUART, G. G., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Health Officer for the West Devon District, Tasmania, vice McCall, resigned.

THOMAS, J. T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Camborne Public Dispensary.

TIDSWELL, F., M.B., Ch.M. Syd., has been appointed Principal Assistant Medical Officer to the Government of New South Wales and Microbiologist to the Board of Health.

TOLL, J. T., L.R.C.P. Edin., M.R.C.S., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the Districts of Queenstown and Alberton Rosewater, and Corporation of Semaphore, South Australia.

VEALE, H., L.S.A., has been appointed a Resident Medical Officer at the Ida Hospital, Leeds.

WILLMORE, W. SOUTHWICK, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the Queen's Hospital, Birmingham.

WOODS, G., L.K.Q.C.P., L.R.C.S. Irel., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the District of Kondoparinga, South Australia.

WOOLLEY, G. T., M.R.C.S., has been appointed a Public Vaccinator for Castlemaine, Victoria, Australia, vice G. M. Reid.

YEATMAN, J. W., M.R.C.S., L.S.A. Lond., has been appointed a Medical Officer for the Destitute Poor and Aborigines within the Districts of Hall, Saddleworth, and Waterloo, South Australia.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRITISH GENERAL HOSPITAL.—House Surgeon for three years. Salary £120 per annum. Board, residence, &c., provided in the house.

CAMBRIDGESHIRE, &C., LUNATIC ASYLUM, at Falbourn, near Cambridge.—Assistant Medical Officer, unmarried. Salary £140 per annum, with board, lodgings, and attendance, in the Asylum. Applications to the Clerk to the Visitors, Cambridge.

CATERHAM ASYLUM, Caterham, Surrey.—Assistant Medical Officer. Salary £120, rising, at the discretion of the Committee, to £150, with board, lodging, attendance, and washing, subject to statutory deduction. Applications to the Chief Office of the Board, Norfolk-street, Strand, London.

CORPORATION OF CALCUTTA, Bengal, India.—Health Officer to the town of Calcutta for five years. Salary of not less than 1200 rupees and not more than 1500 rupees a month, with reasonable horse-allowance for out-door inspection, not exceeding 100 rupees a month. Applications to Mr. W. R. Macdonald, Secretary to the Corporation.

COUNTY BOROUGH OF SALFORD.—Medical Officer of Health for Salford. Salary £500 per annum. Applications to the Town Clerk, Town Hall, Salford.

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester-square.—Demonstrator.

GREENWICH UNION INFIRMARY.—Second Assistant Medical Officer, unmarried. The appointment will terminate on Dec. 25th, 1898. Salary £80 per annum, with board, lodging, washing, and attendance in the Infirmary, and £3 per annum in lieu of beer. Applications to the Clerk to the Guardians, Union Offices, Greenwich, S.E.

HARTISMERE UNION, Suffolk.—Medical Officer and Public Vaccinator, Gislingham District. Salary at the rate of £60 per annum, exclusive of vaccination and such other fees as are allowed by the Local Government Board. These average about £25 per annum. Applications to the Clerk, Board-room, Eye, Suffolk.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—House Surgeon to Out-patients (non-resident) for six months. Salary 25 guineas.

HOSPITAL FOR WOMEN, Soho-square, London. — House Physician for six months. Salary £30 for that period.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST AND THROAT, 26, Margaret-street, Cavendish-square, London.—Physician in Ordinary.

KING'S COLLEGE, London. —Assistant Demonstrator in the State Medicine Laboratories. Applications to Professor W. R. Smith, King's College, Strand, W.C.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officers at the Park Fever Hospital, Hither-green, Lewisham, S.E., unmarried. Salary £160 first year, £180 the second year, and £200 the third and subsequent years of service, with board, lodging, attendance, and washing, subject to statutory deductions. Applications to the Clerk to the Board, Norfolk House, Norfolk-street, Strand, W.C.

MIDDLESEX HOSPITAL, W.—Surgical Registrar.

NORTH EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch.—House Physician for six months. Salary at the rate of £60 per annum. Applications to the Secretary, City Office, 27, Clement's-lane, Lombard-street, E.C.

PARISH OF ST. LEONARD, Shoreditch E.—Second Assistant Medical Officer for the Infirmary, Hoxton-street, N., for three months. Salary at the rate of £60 per annum, with rations, washing, and furnished apartments in the infirmary. Applications to the Clerk to the Guardians, Clerk's Office, 213, Kingsland-road.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant House Surgeon for six months. Board and lodging provided, and an honorarium of £10 given conditionally.

ROYAL VICTORIA HOSPITAL, Bournemouth.—House Surgeon. Salary £80 per annum, with board.

UNIVERSITY OF GLASGOW.—Examinership in Anatomy. Applications to the Secretary, 91, West Regent-street, Glasgow.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea.—Assistant Physician to the Out-patients, for two years. Also Physician to the In-patients.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon for six months. Board, lodging, and washing in the hospital provided.

Births, Marriages, and Deaths.

BIRTHS.

CORBIN.—On Nov. 2nd, the wife of E. R. St. Clair Corbin, M.B. Lond., M.R.C.S. Eng., Merivale, Beckenham, of a daughter.

FERGUSON.—On Nov. 2nd, at Elm-grove, Calne, the wife of R. S. Ferguson, M.B., of a son.

HEFFERNAN.—On Oct. 25th, at Grove House, De la Warr-road, Bexhill, the wife of Harold Hilton Heffernan, M.R.C.S. Eng., L.R.C.P. Lond., of a son.

HILLS.—On Oct. 26th, the wife of A. Phillips Hills, M.R.C.S. Eng., F.S.Sc., at Carlton House, Prince of Wales-road, Battersea-park, S.W., of a son (John Fletcher Twycross).

RICKETTS.—On Oct. 27th, at The Warren, Greenhithe, Kent, the wife of Thomas Frank Ricketts, M.D., of a daughter.

STEWART.—On Oct. 25th, at York House, Fulham-road, S.W., the wife of Eland Stewart, L.R.C.P. Lond., M.R.C.S., of a son.

MARRIAGES.

MARTIN—CAMPBELL.—On Oct. 26th, at St. Giles's Cathedral, Edinburgh, John L. Martin, M.B., C.M., Chelmsford, Essex, to Matilda, second daughter of Alex. D. Campbell, Bellevue-crescent.

DEATHS.

BOOTH.—On Oct. 31st, at Westfield-terrace, Aberdeen, Jas. Booth, M.D., M.R.C.S., in his 79th year.

BURTON.—On Oct. 31st, at Salisbury-road, Hove, Brighton, Edward John Burton, M.D., Surgeon-Major, late Army Medical Department.

DUFFEY.—On Oct. 13th, 1897, at Jamaica, of yellow fever, aged 25 years, George Allan, Lieutenant 1st Battalion the West India Regiment, elder son of Sir George Duffey, M.D., President of the Royal College of Physicians of Ireland.

GILBORNE.—On Oct. 28th, at Fairlawn, Folkestone, Surgeon-General R. Gilborne, J.P., late of the 89th Princess Victoria's Regiment and of the 6th Dragoon Guards (the Carabiniers), aged 73.

GILLESPIE.—On Oct. 31st, at Sir George Bowles's Hospital, Butleigh, suddenly, William Henry Gillespie, L.R.C.P., L.R.C.S. Irel., aged 50 years.

MACKINNON.—On Oct. 28th, 1897, at Evelyn-gardens, S.W., aged 67, Surgeon-Major-General W. A. Mackinnon, K.C.B., Hon. Surgeon to the Queen, late Director-General Army Medical Department.

PHILLIPS.—On Oct. 27th, at 2, Spital-square, George Bagster Phillips, M.R.C.S., L.M., L.S.A., aged 63.

SHEPPARD.—On Oct. 29th, at Randolph Lodge, West Worthing, Edgar Sheppard, M.D., D.C.L., late Professor of Psychological Medicine, King's College, London, aged 78 years.

STOCKWELL.—On Nov. 2nd, at 7, Queen's-parade, Bath, Thos. Goldesbrough Stockwell, F.R.C.S., L.R.C.P., L.S.A., aged 74.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (10th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), ing's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (11th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (13th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (8th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Dr. A. E. Sansom (President): Two Cases of Mitral Stenosis.—Dr. W. S. Colman: A Child with Cretinoid Physique without Mental Defect.—Dr. W. Carr: Sporadic Cretinism Cured by Thyroid Extract.—Mr. C. Mansell Moullin: Two Cases in which Inoperable Tumours have almost disappeared under the Administration of Coley's Fluid.—Dr. F. de H. Hall: Case of Obesity.—Mr. G. Templeton: Case of Multiple Subcutaneous Tumours.—Mr. W. H. Battle: Congenital Syphilitic Affection of the Knee in the Adult.

TUESDAY (9th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Papers:—Mr. P. J. Freyer: Obscure Cystic Tumour of the Bladder containing Two Calculi, Successful Removal by Suprapubic Cystotomy.—Mr. F. Eve: On Mesenteric Cysts, with Two Cases in Young Children; Operation.

WEDNESDAY (10th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—Papers:—Dr. Herman: Pruritus Vulvæ.—Dr. F. J. Smith: Medical Hæmorrhage.

SOUTH-WEST LONDON MEDICAL SOCIETY (Wandsworth Town Hall).—8.30 P.M. Paper:—Mr. P. J. Freyer: Stone in the Bladder, Symptoms and Modern Methods of Diagnosis, the Modern Instruments employed in Litholapaxy, being a Review of 900 Operations for Stone by all Methods.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases and Specimens will be shown by Dr. J. Donelan, Dr. J. B. Ball, Mr. W. R. H. Stewart, Mr. M Agar, Dr. J. W. Bond, Mr. W. G. Spencer, Dr. W. Hill, Mr. M. Yearsley, Dr. J. Horne, Dr. S. Spicer, Mr. E. W. Roughton, Dr. H. Tilley, Mr. W. Wingrave, and Dr. Pegler.

THURSDAY (11th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-sq., W.).—8 P.M. Card Specimens. 8.30 P.M. Papers:—Mr. C. Wray: The probable Rôle of Heredity in the Development of Myopia and the way in which it is Modified by Disease.—Surgeon-Capt. H. Herbert: Some Matters of Interest in Cataract Extraction.

BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Specimens will be shown by Mr. Bowerman Jessett and Mr. O'Callaghan. Adjourned discussion on Mr. Keith's paper on Dysmenorrhœa. Paper:—Dr. J. A. Shaw Mackenzie: Hæmorrhagic Endometritis.

FRIDAY (12th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Mr. A. H. Tubby and Mr. R. Jones: Some Cases of Pott's Curvature of the Spine treated by Immediate Reduction of the Deformity (followed by lantern demonstration of the method).—Mr. A. Pearce Gould: A Case of Acute Intestinal Obstruction relieved by Operation, Death from Intestinal Toxæmia on the Ninth Day after Operation.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

MONDAY (8th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. C. Wilkin: Nasal Polypi.

TUESDAY (9th).—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Alcoholic Insanity; Insanity with Syphilis; Insanity with Organic Brain Disease.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Scabies.

HOSPITAL FOR NERVOUS DISEASES (73, Welbeck-street).—4.30 P.M. Dr. T. D. Savill: Cases of Paraplegia.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Tooth: On Spinal Cord Lesions (with lantern demonstration)

WEDNESDAY (10th).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: Sanitary Appliances.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. P. Kidd: Pleurisy.

EVELINA HOSPITAL (Southwark-bridge-road, S.E.).—4.30 P.M. Dr. F. Willcocks: Clinical Cases from the Wards. (Post-Graduate Course)

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. A. Whitfield: Medical Cases.

THURSDAY (11th).—ROYAL COLLEGE OF PHYSICIANS (Examination Hall, Savoy, W.C.).—5 P.M. Dr. Pavy: Points connected with the Pathology and Treatment of Diabetes. (Supplementary to the Croonian Course delivered in 1894)

LONDON POST-GRADUATE COURSE.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. R. Barwell: Clinical Lecture.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Colman: Demonstration of Selected Cases.

FRIDAY (12th).—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Actinomycosis and Glanders.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

THE INFANTS' ASYLUM ON RANDALL'S ISLAND, NEW YORK CITY.

IN *Pediatrics* of Sept. 1st there are some strong remarks on the management of the Infants' Asylum on Randall's Island. The fact that it is unhealthy in a high degree to herd young children together in large numbers has been conclusively proved and emphasised time after time. The foundling hospitals in Italy and some of the children's hospitals in France (notably l'Hôpital Trousseau in Paris) are conspicuous examples of the dangers attending this course, and doubtless there are in England some instances of a similar kind. *Pediatrics* says: "From an investigation of the affairs of the 'Infants' Asylum at Randall's Island,' which until a few months ago was under the control of the city, the truth has been made public that the mortality among the infants reaches the fearful rate of nearly 90 per cent. Before the institution was handed over to the management of the Commissioners of Charities matters were even in a worse state than now, and it was stated on the authority of the medical board that to enter it under the age of six months was certain death." From the foregoing account it will be gathered that the asylum at Randall's Island is in almost as bad a sanitary state as are Italian foundling hospitals. However, it is satisfactory to learn that vigorous efforts towards reform are to be made by the Charity Commissioners, assisted by the mayor, and without doubt now that public opinion has been aroused the institution will be placed on a better sanitary footing.

C. S. J.—Colonial appointments are in the gift of the Colonial Office. Application should be made to the private secretary of that office before the end of the first quarter in any year. The applications for these appointments greatly exceed the vacancies. The posts of medical visitors in lunacy are in the gift of the Lord Chancellor. Certain appointments are also made by the Local Government Board and the Board of Trade, to each of which bodies our correspondent should apply.

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DIGRAPHIC COPY-BOOKS.

WE have received from Dr. Robert B. McVittie, of Dublin, a specimen of a series of copy-books designed with a view of teaching longhand and phonography simultaneously. Shorthand now occupies a prominent place in the learned professions, but as a rule the subject is not taken up by the student until that period of his life when, owing to the multiplicity of the subjects of his professional curriculum, he can ill spare the time. Practically the mental effort required to trace the preliminary characters of the phonographic alphabet is little more than that required for the drawing of pothooks and hangers, and long before a child has gone through the complete series of books he should, with intelligent teaching, be able to use phonography with some degree of utility. The books are published by M'Caw, Stevenson, and Orr, Loopbridge, Belfast, and by Sir Isaac Pitman and Sons, London.

INSTRUCTION IN ETHICS.

To the Editors of THE LANCET.

SIRS,—I have sometimes thought it would be a good thing if a chair of medical ethics could be established in our leading schools of medicine. It seems that at present no teaching of medical morals is provided for the rising generation of practitioners, and yet to most thoughtful minds such an institution would surely commend itself. It may not be out of place at this particular season to consider how much the plain teaching of professional morality would have effect in giving a healthy tone to the eager but undisciplined energies of those entering on the threshold of professional life. Most of us whose lives have been given to the practice of the healing art can look back on the past with very chequered feelings as regards the nobility of our calling; suffice it to say that in spite, or as a natural sequence, of much that has been mooted touching the proprieties of professional conduct the general outlook is decidedly unpromising. I venture to affirm that the professional tone fifty or sixty years ago was higher than it is at present. It may be true that competition was less keen, that life was generally more pleasant and easy, and that the general strain was less severely felt; but still the code of professional honour and integrity was more generally recognised and respected. The rush and struggle of modern times, in which the strong and unprincipled tread down the weak and self-respecting, the gladiatorial combats which make and mar our rising, pushing race, give to the holy calling of medicine a sanguinary hue. As a medical man remarked to me the other day, it is a throat-cutting business. Let me instance a few examples. In the town where I live a medical man had engaged a residence in a favourable locality and some distance from any other practitioner. He had scarcely taken the house before two other professional "brethren" applied to the landlord for it, offering a much higher rent with other pecuniary advantages to secure possession. One of these lives a mile off, and the other half a mile from the spot. Another medical man makes a custom of buying practices for the sole purpose of selling them after a year or two. In a country practice I once held a man in a neighbouring town placed an unqualified assistant, whom he dubbed "doctor," in the village eight miles from his own residence to steal my practice from me. He used to call on my patients, stating I was about to leave and asking for their support. He also canvassed my clubs, offering lower terms. I brought the matter before the General Medical Council and they replied they could take no action as he was not registered. Such instances of unprofessional conduct are perhaps known to most of your readers; I need hardly enlarge upon them. In attacking the abuse of medical charities and club organisations we are making clean the outside of the platter while within it is full of uncleanness and abomination. But I have trespassed too much on your space. Excuse, Sirs, the opinions of. Yours faithfully,

A PRACTITIONER OF OVER FORTY YEARS' STANDING.

Oct. 11th, 1897.

INSTRUCTIONS TO THE PUBLIC ON INFECTIOUS DISEASE.

A DISCUSSION lately took place before the Hexham sanitary authority on the propriety of issuing certain rules for the guidance of those responsible for the management of cases of infectious disease. The medical officer of health disapproved the indiscriminate issue of such instructions in a town where everybody is supposed to have a medical man to guide them in such circumstances, supported—as he should be—by the medical officer of health. The actual rules sent us are defective and would lead in our view to mischief. The chief duty of a parent or guardian with a case possibly infectious is to send immediately for a medical man, on whom should rest the responsibility of instructions as to isolation and disinfection. There is not a word to this effect in the rules, whereas much that would be misunderstood and give the readers a notion that they were doing right is contained in them. We agree that some plain rules, to be drawn up by the medical practitioners and medical officers of health, might with advantage be prepared and distributed by the practitioner in attendance at his discretion; but they should be simple and few, and of such a nature as to assume the presence and supervision of the practitioner. We think the sanitary authority did well to be guided in this matter by their medical officer of health.

THE OVERCROWDING OF THE PROFESSION: A TIME-HONOURED COMPLAINT.

A CORRESPONDENT writes: "Looking through an old volume of the *Spectator* some time ago I came across an article by Addison on the overcrowding of the professions. It is dated March 24th, 1710. I was surprised to find that this supposed modern question is at least nearly 200 years old, and as the paper may not be widely known I give one or two quotations from it:—

"I am sometimes very much troubled, when I reflect upon the three great professions of divinity, law, and physic; how they are each of them overburdened with practitioners, and filled with multitudes of ingenious gentlemen that starve one another. * *

"If we look into the profession of physic, we shall find a most formidable body of men. The sight of them is enough to make a man serious, for we may lay it down as a maxim, that when a nation abounds in physicians it grows thin of people. ..... This body of men may be described like the British army in Cæsar's time. Some of them slay in chariots, and some on foot. If the infantry do less execution than the charioteers, it is because they cannot be carried so soon into all quarters of the town, and dispatch so much business in so short a time. Besides this body of regular troops, there are stragglers, who, without being duly listed and enrolled, do infinite mischief to those who are so unlucky as to fall into their hands.....When I consider how each of these professions are crowded with multitudes that seek their livelihood in them.....I very much wonder at the humour of parents, who will not rather choose to place their sons in a way of life where an honest industry cannot but thrive, than in stations where the greatest probity, learning, and good sense, may miscarry. How many men are country curates, that might have made themselves Aldermen of London, by a right improvement of a smaller sum of money than what is usually laid out upon a learned education? A sober frugal person, of slender parts and a slow apprehension might have thrived in trade, though he starves upon physic; as a man would be well enough pleased to buy silks of one whom he would not venture to feel his pulse..... The misfortune is, that parents take a liking to a particular profession, and therefore desire their sons may be of it: whereas in so great an affair of life, they should consider the genius and abilities of their children more than their own inclinations. It is the great advantage of a trading nation, that there are few in it so dull and heavy, who may not be placed in stations of life, which may give them an opportunity of making their fortunes. A well regulated commerce is not, like law, physic, or divinity, to be overstocked with hands; but on the contrary flourishes by multitudes, and gives employment to all its professors.

"Fleets of merchantmen are so many squadrons of floating sheets, that send our wares and manufactures in all the markets of the world, and find out chapmen under both the tropics."

Mr. L. Moscrop.—We do not recommend individual practitioners or treatment.

THE BURN OF SEALING-WAX: WANTED A REMEDY.

To the Editors of THE LANCET.

SIRS,—Some time ago I read of a French chemist who burned his hand with sealing-wax and found accidentally that some chemical compound, the nature of which I have forgotten, gave him instant relief when applied to the affected part. Having recently had a most aggravated case I would be grateful to any of your correspondents to refresh my memory as to what the remedy was.

I am, Sirs, yours faithfully,

JOHN R. WILLIAMS, M.R. Edin.

Bryn Hyfryd, Penmaenmawr, Oct. 30th, 1897.

THE jury of the Great International Exhibition at Brussels have awarded "Le Grand Prix" to Messrs. J. S. Fry and Sons, Limited, for their pure concentrated cocoa and other specialities.

LUMINOUS LIFE-SAVING APPLIANCES.

A JOURNEYMAN tile-maker of Compiègne named Bouraine, who is an active member of the Oise Humane Society, has invented a system for illuminating life-buoys, rafts, and other appliances for saving life from drowning, which has recently undergone successful trial at Compiègne, Rouen, and also in Paris. The invention consists in the attachment of small incandescent electric lamps to the appliance, one or more according to size, the illumination being maintained by means of an accumulator which is said to be capable of acting for seven or eight hours. As soon as the buoy or raft touches the water an indiarubber bladder moves a lever, and the circuit being thus established the lamps at once become luminous. In concluding his notice the writer in a Parisian medical journal makes the following observation: Steam vessels at the present time are all fitted with the electric light, and it would be easy to keep the small accumulators constantly charged. If only M. Bouraine's ingenious invention had been available in the tragical shipwreck of the *Drummond Castle*, what a number of valuable lives would have been saved.

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REV. J. E. LONDON AND THE MEDICAL PROFESSION IN BRITISH GUIANA.

IT was our duty some six months ago to point out that a Georgetown paper, in referring to the impending presence of the Rev. "Dr." J. E. London at a banquet given to Lord Lister by his junior colleagues, had miscalculated Mr. London's importance. The Georgetown paper seemed to think that to be invited to the dinner was an especial social and scientific honour, whereas all Lord Lister's house surgeons and clinical clerks were bidden to the feast. And inasmuch as such a view would tend to exalt Mr. London, a King's College man, at the expense of other medical men in British Guiana not qualified to be invited, we pointed out that it behoved Mr. London publicly to correct the false impression. Did Mr. London ever do this? We have recently had sent to us a copy of the *British Guiana Congregational Magazine*, which contains under the title of "Echoes from Afar" Mr. London's speech at the "Royal Café, Regent-street, London, W.C.," on the occasion of the dinner in question. Appended to this speech is an address of congratulation to Lord Lister, signed by certain medical men in British Guiana. Of these gentlemen we now desire to ask as follows. Did they know that Mr. London was going to incorporate into his speech, made presumably on their behalf, a eulogy of himself and his "colleagues, Dr. Deane and Dr. Wills, in our Public Dispensary and private practice"? Is this particular Public Dispensary notably the home of Listerian principles and antiseptic surgery?

If *A Subscriber* will consult the Students' Number of THE LANCET, p. 513, published on Aug. 21st, 1897, he will find a list of the benevolent agencies of the profession, together with all necessary particulars.

THE CLIMATE OF SOUTH AFRICA AND PHTHISIS.

To the Editors of THE LANCET.

SIRS,—Will any of your readers inform me if they consider it advisable to send a man suffering from phthisis in the early stage to South Africa, and if so, what place they would recommend in preference? The patient is a middle-aged man and would like to undertake some light employment if his health permitted. Any information on the matter from your readers acquainted with South Africa would be very acceptable. Thanking you in anticipation for publishing this letter, I remain, Sirs, yours faithfully,

C. G. BATTISCOMBE.

Rowlands, St. Mary Cray, Kent, Oct. 21st, 1897.

Dr. Wyckoff.—No such article has appeared in our columns. Rome has undergone no "improvement" from an "improved water-supply," for the water-supply has at all times been superlatively good—a bequest from the ancient Romans, whose fourteen magnificent aqueducts have for centuries been represented by at least five, more than sufficient for the city's wants, and the envy of other cities for the purity of the water they bring. Certain old rookeries, like the Ghetto, have been replaced by better constructed, better ventilated dwelling houses, and hygienic regulations (chiefly re-vaccination) have also contributed to heighten the standard of health. During the sittings of the Eleventh International Congress in 1894 our Special Correspondent contributed a series of articles on how to see Rome, but sanitary indications in them were merely incidental. Our correspondent will perhaps find all the information he wants on a reference to the best authorities bearing on it in Dr. Mendini's "Hygienic Guide to Rome," recently translated by Mr. Eyre, and reviewed in THE LANCET.

E. A. S.—It would be advisable that the family should not reside in the house during the alteration. The risks may be remote, but they are real. These remarks especially apply if any member of the family is of delicate health.

SURGICAL OPERATIONS ON DOGS AND CATS.

IN an interesting paper read at Manchester on Sept. 30th Professor Hobday, F.R.C.V.S., of the Royal Veterinary College, gave an account of the following operations as performed on dogs and cats: excision of the membrana nictitans, the operations for entropion, the operative treatment of hæmatoma of the ear-flap, amputation of everted rectum, amputation of limbs, laparotomy, laparo-enterotomy, ovariotomy and oöphorectomy, hysterectomy and ovaro-hysterectomy. During the last three years amputation of limbs has been performed in the College Clinique fifteen or sixteen times, one of the patients being a valuable whippet dog, both of whose forelegs were removed just below the elbow. He is now kept solely for stud purposes, and when walking has an appearance very like a kangaroo. Creolin in some form is the surgical antiseptic most commonly used in the College Clinique.

ENGLISH AS SHE IS WROTE.

THE following letters were recently addressed to a practitioner in India and have been sent by him to the *Indian Medical Record*:—

I.

To ——— —— Esq. Medl. Practr. Respected Sir,—I am sorry that I am badly suffering by cold fever and therefore cannot come to work for 2, 3, days for which I pray your honor will not cut my pay and will excuse. I am poor man, but if you do, then I must be damn and come to work at once. Reply by bearer my maternal uncle will oblige.—Your obedient servant N. K.

II.

To Mr. Dr.————Esq. My dear doctor saheb,—I am sorry to inform you that I am suffering from fever and coldness coming upon me like hot sun's rays falling upon a man's eyes balls. By this I am cannot attend my duty, feeling very giddy and my headache is too much paining, feeling my body all paining. Vomitions by mouth and private part are too many, and by this I am feeling too much hungry and weakness and cannot take food because every food I take becomes just like a rheumatism. Something is also rising upon my whole body like bowels. Please send effective medicine, etc.—Your, respected sir obedient servant V. V———.

These specimens of Baboo English are not unworthy of addition to the many others that have from time to time appeared in print. Nor do we reproduce them in ridicule, for there is an adventurousness about their use of the English language which commands the respect due to gallant effort.

ICHTHYOL AND GLYCERINE SUPPOSITORIES.

To the Editors of THE LANCET.

SIRS,—It is now an established fact that ichthyol is a most valuable remedy in a large number of uterine diseases, not only taken internally, but applied mixed with glycerine, which is also a valuable therapeutic agent, in the form of a vaginal tampon. There are a great many obvious disadvantages in the use of the tampon, so I have had ichthyol and glycerine suppositories for vaginal application made by Messrs. Wyley, of Coventry. They are more effective and much easier of application than the tampon, they can be used by the patient, and the speculum not being necessary they are particularly adapted for use in disorders occurring in the virgin. There is 10 per cent. of ichthyol in each suppository and they can be had in different sizes. I see no reason why they should not also be valuable for rectal medication.

I am, Sirs, yours faithfully,

J. LESLIE CALLAGHAN, L.R.C.S.Irel., L.R.C.P. Ed., L.M.

Coventry, Oct. 27th, 1897.

*** Mr. Callaghan enclosed samples of well-made suppositories of different sizes.—ED. L.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 4th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Oct. 29	30·13	S.E.	...	86	65	47	47	48	Foggy
,, 30	30·12	E.	...	92	66	48	48	50	Foggy
,, 31	30·30	N.E.	...	73	59	44	46	48	Foggy.
Nov. 1	30·35	E.	...	75	58	45	46	48	Foggy
,, 2	30·29	E.	...	71	52	45	45	47	Overcast
,, 3	30·23	E.	...	72	52	45	45	47	Cloudy
,, 4	30·19	E.	...	48	46	44	43	45	Overcast

During the week marked copies of the following newspapers have been received: *Newport Advertiser, Sussex Daily News, Walsall Advertiser, Bedford Times, Salisbury Journal, Lincolnshire Echo, Sheffield Telegraph, Times of India, Pioneer Mail, Glasgow Herald, Manchester Guardian, Dundee Advertiser, Devon Gazette, Midland Mail, Builder, Bromley Telegraph, Elgin Courant, North British Daily Mail, Yorkshire Post, Times of Africa, Kentish Observer, Bridgwater Independent, Leeds Mercury, West London Observer, Herald of Wales, Hereford Times, Liverpool Daily Post, East Anglian Times, Vegetarian, Bristol Times and Mirror, Worcestershire Chronicle, Hastings Observer, Bristol Mercury, Architect, Luton Reporter, North Wilts Herald, Blackburn Standard, Leicester Post, Birmingham Gazette, Lowestoft Standard, Southport Visitor, Wolverhampton Chronicle, Portsmouth Times, New York Times, Mail and Express (New York), Sanitary Record, Local Government Chronicle, Mining Journal, Reading Mercury, Weekly Free Press and Aberdeen Herald, City Press, Hertfordshire Mercury, Surrey Advertiser, Local Government Journal, St. Bartholomew's Hospital Journal, Yorkshire Herald, Lincoln Gazette, Blackburn Times, West Middlesex Herald, Scotsman, Public Health, Witney Gazette, Strathearn Herald, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Messrs. Allen and Hanburys, Lond.; Mr. F. C. Abbott, Lond.; Argentum, Lond.; Mr. B. D. E. T. Archer, Worthing; Messrs. J. and R. Archibald, Tillicoultry; Mr. T. Annandale, Edinburgh.

B.—Dr. A. O. Bobardt, H.M.S. *Dart*, Cooktown; T. B. Browne, Ltd., Lond.; Surgeon-Capt. W. J. Buchanan, Bhagalpur; Messrs. Burgoyne, Burbidges, and Co., Lond.; Messrs. W. H. Bailey and Son, Lond.; Mr. S. H. Benson, Lond.; Bristol General Hospital, Secretary of; Dr. F. L. Benham, Lond.

C.—Mr. A. E. W. Clarke, Sestri Levante, Italy; Surgeon-Capt. Cockerill, Lydd; *The Canada Lancet*, Toronto, Manager of; Miss M. Canning, Lond.; Messrs. J. and A. Churchill, Lond.; Mr. A. H. Cheatle, Lond.; Messrs. Carnrick and Co., Lond.; Cortland Wagon Co., Lond.; Cymro, Lond.; Dr. R. H. P. Crawfurd, Lond.; Mr. F. S. Carter, Leeds; Mr. W. F. Clay, Edinburgh; Dr. S. T. Champion, Burgess Hill; Mr. T. Cooke, Lond.; Dr. H. Campbell, Lond.

D.—Mr. S. L. Dobie, Dunain Park; Dr. A. V. Davies, Bridgend.

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An Address

ON

EXPLORATION OF THE INGUINAL CANAL, WITH SPECIAL REFERENCE TO LIPOMA OF THE CORD, INGUINAL VARIX, CONGENITAL HYDROCELE, AND RETAINED TESTIS.

Delivered before the Nottingham Medico-Chirurgical Society on Oct. 20th, 1897,

BY C. B. LOCKWOOD, F.R.C.S. ENG.,

ASSISTANT SURGEON AND LECTURER ON ANATOMY, ST. BARTHOLOMEW'S HOSPITAL; SURGEON TO THE GREAT NORTHERN CENTRAL HOSPITAL, ETC.

MR. PRESIDENT AND GENTLEMEN,—Having opened the inguinal canal 180 times it may be easily understood that certain unexpected contents have been encountered. I propose to begin by describing cases in which fatty tumours were found instead of the hernial sac which was supposed to be there. These lipomata are not infrequently mistaken for ruptures and are sometimes treated with trusses. For instance, a postman was declined for promotion until he had had double inguinal ruptures cured. On the right side I found the sac of an incomplete inguinal hernia with some varix of the spermatic veins. On the left side he had an impulse on coughing and a swelling which could be reduced into the abdomen. This was also thought to be an incomplete hernia, but when the inguinal canal was opened a lipoma of the cord with varix of the spermatic veins was found, but no hernial sac. The fat and the veins were excised. For some years this man had worn a double inguinal truss; two years after the operation his right side was perfect; on the left side, where he had had the lipoma, he had occasional pain in the testis, but nothing whatever to account for its existence. Another youth was operated upon, having been rejected for the army because he had a hernial impulse in both inguinal canals. When the inguinal canals were opened I found a small hernial sac in the left and a small lipoma in the right. Eight months afterwards he was quite well. Yet another man had radical cure of hernia performed on each side to enable him to remain in the army. Unlike the other two he had hernial sacs on both sides together with a rather large lipoma in the left. He returned to the army after he had been operated upon. In one of my earlier cases I omitted to remove a fair amount of fat from the inguinal canal of a youth who was operated upon for a left inguinal epiplocele. On reflection this omission caused me much regret. It is obvious that its removal would have involved no danger whatever, whereas its presence would interfere with the valvular closure of the inguinal canal.

Here I will for a moment digress to remark that so far as my own observation goes the mechanism of the inguinal canal is not at all well understood. I confess that I did not myself at all appreciate it until during the course of my operations I had had many opportunities of seeing it in action. If during the operation for the radical cure of hernia a young and vigorous adult coughs, vomits, or struggles when the inguinal canal is open, it is easy to see how the arching fibres of the internal oblique and transversalis muscles descend upon the spermatic cord and squeeze it against Poupart's ligament. The spermatic cord itself is clearly the bar to the complete closure of the canal, and much more so would be a mass of fat or a bunch of dilated veins, or a hernial sac of any kind. The exact relation of these fatty tumours to the causation of hernia is, I believe, unknown. They are often situated at the lowest end of the sac, and it seems reasonable to suppose that by distending the inguinal canal they facilitate the descent of a hernia. As regards their origin there can be little doubt but that they are merely pieces of sub-peritoneal fat which have descended with the testicle. This can easily be seen occurring in any male fœtus at about the ninth month. The not infrequent occurrence of these lipomata seems to me to render it highly desirable to open and explore the inguinal canal when performing the operation for the radical cure of hernia. It is probable that, as a rule, they can only be diagnosed by an operation, and until this has been done the patient is under the impression that he has a rupture, and may perhaps, as in the cases I have mentioned, be in danger of losing an appointment. All of my cases occurred in adults. I have not yet seen a lipoma of the cord in a child apart from hernia. But whilst helping a colleague to operate upon a little boy both a hernial sac and a lipoma were found in the inguinal canal. The lipoma was large enough to form at least a medium-sized bubonocele.

I have already referred to the fact that in some of the foregoing cases of lipoma of the cord the veins of the spermatic cord were also varicose. I now propose to refer to some cases in which the dilatation of the spermatic veins within the inguinal canal was so great as to simulate a hernia. It is easy to understand why this is so when it is known that the varix or varicocele gives rise to a swelling which appears when the patient stands up, disappears when he lies down, and has an impulse on coughing, and which, moreover, causes a pain which closely resembles that of a hernia. Moreover, a scrotal varicocele is nearly always absent, so that it is very hard indeed to tell the inguinal varix from an incomplete hernia. One day I began to operate upon a youth, as was thought for the cure of double inguinal hernia. The right canal contained nothing but a group of enormously dilated spermatic veins exactly like a large scrotal varicocele; the left contained a similar group together with a small empty hernial sac. These veins were excised and the sac was treated in the usual way. I regret to say that this proved to be one of the very few cases of radical cure which have caused me any anxiety. On the third day I found this youth blanched, with a rapid pulse and distended abdomen. As there was much induration about the left inguinal region together with a swelling in the iliac fossa I explored the wound. A huge blood clot was removed from the iliac fossa, and more blood was found in the peritoneal cavity. This intra-peritoneal hæmorrhage was drawn off with a glass drainage-tube above the pubes. The source of the hæmorrhage was not discovered. He made a complete recovery after an anxious illness. The right side healed by first intention, and the left was packed with antiseptic gauze. This is the only case of mine which has been complicated with hæmorrhage, but how far it was related to the varicose veins I do not know. It is quite possible, and not improbable, that I had transfixed one of the deep sub-epigastric veins in passing the sutures. In another case an inguinal varicocele was found under the following circumstances. A youth, aged twenty-one years, who wanted to enlist, had a small reducible hernia of the right side; it was painful and difficult to manage. Upon the left side he had a decided impulse and a bulging of the inguinal canal. We could not, however, satisfy ourselves that he had a rupture there, and the question was discussed as to whether an operation ought to be performed on that side. I decided, however, to explore the canal, first because it is, in my opinion, such a harmless proceeding, and next because I feared to overlook a hernial sac or lipoma or varicocele. On the right side, where we had diagnosed a small reducible hernia a hernial sac was found together with considerable varix of the spermatic veins. As soon as the left inguinal canal was opened a huge bunch of varicose veins bulged out. They looked exactly like a big varicocele in the wrong place. It was quite obvious that they were actually distending the inguinal canal. No hernial sac was discovered. The veins were clamped above and below; excised, and the ends tied with a Staffordshire knot. The patient made an uneventful recovery. Now it is quite clear that had this canal not been opened our doubt would have continued, he might have been rejected for the army, and someone might ultimately have ordered a truss. In another case an inguinal varix was met with in the right inguinal canal of a young man. When he coughed or strained, the inguinal canal being open, the veins swelled up and bulged in an extraordinary manner. It is not unlikely but that varix of the veins of the cord may by distending the inguinal canal and preventing its valve action have some relationship to the causation of inguinal hernia. For instance, another youth was operated upon for the cure of a right epiplocele; a large varix of the cord was likewise found, and whenever he coughed or strained during the operation the veins filled with blood and became so huge that they seemed well calculated not only to distend the inguinal canal but also to prevent its closure during the

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muscular contraction. Varix of the cord was treated in all cases by tying the veins close to the peritoneum above and outside the external abdominal ring below, cutting away the intervening portion. Whenever possible the ligatures were made to transfix the pedicle lest they should slip off. Care was also taken to leave one or two of the healthier-looking veins in order to provide for the return of blood. This operation is performed through the usual inguinal incision made half an inch above, and parallel to, the inner half of Poupart's ligament. It is usually about three inches long. So far no case of atrophy of the testis has been met with in the cases in which these varicose veins have been taken away, nor has the operation ever caused orchitis. Inasmuch as some of the more conservative school of surgeons apply trusses to all who complain of pain about the inguinal canal accompanied with impulse, it is clear that a good many individuals are going about wearing trusses upon inguinal varicoceles or upon fatty tumours of the cord. Perhaps I should add that in women the veins of the round ligament of the uterus are sometimes enlarged in a similar way and may bulge the inguinal canal so as to simulate a hernia.

Having been at special pains to watch the after progress of cases in which the inguinal canal has been opened I do not remember to have met with one in which the aponeurosis of the external oblique muscle has failed to unite again. Indeed a little consideration leads one to suppose that such a failure is not very likely to occur. The aponeurotic fibres are arranged parallel to each other, so that whenever they are pulled upon they merely tend to approximate. In the operation they are split and pulled apart and on no account cut across. Hence it is that I do not hesitate myself to explore the inguinal canal under circumstances in which it has hitherto not been the custom among surgeons to do so, and unhesitatingly follow the spermatic cord into it in case of tubercle of the testicle or of malignant disease. Hitherto very little attention has been given to the subject of inguinal varix or varicocele. I myself should have been unconscious of the existence of such a disease had I not seen it whilst operating. During life an inguinal varix or varicocele is almost certain to be mistaken for a small incomplete inguinal hernia, and after death the veins would, of course, be empty and not at all likely to attract attention. The cases of inguinal varix do not seem to me to be quite alike. In some the veins of the spermatic cord are merely dilated and more conspicuous than usual. Their walls are thin so that the blood shows easily through, and they adhere closely to the cord and its coverings, and to the hernial sac when one exists; also, although they fill the inguinal canal they do not seem so inclined to crowd out when the aponeurosis of the external oblique is cut. Indeed, their presence is not always very obvious until the later stages of the operation of radical cure, when the sac is being taken away and separated from the cord. But in other cases of inguinal varix more than a mere dilatation of the veins of the spermatic cord and of its coverings is in question. The varicose veins have the closest resemblance to a scrotal varicocele. They push forward in a bunch as soon as the inguinal canal is opened. They are easy to separate and have hypertrophied walls, through which the colour of the blood is not easily seen. It is this last variety which so closely simulates an incomplete inguinal hernia. It is possible that this inguinal varicocele differs in one respect from scrotal varicocele in being found about as often upon the right side as upon the left. However, a great deal more information is needed upon this point.

I now propose to refer to another condition in which I have explored the inguinal canal with interesting results. I always look upon congenital hydrocele of the cord in boys with some suspicion, and now unhesitatingly explore the inguinal canal when curing the hydrocele. A youth, twelve years of age, had a considerable hydrocele, which was opened through a small incision in the upper part of the scrotum; the cyst did not communicate with either the tunica vaginalis or with the abdomen. The cord itself felt very hard, but a probe could only be pushed up it for three-quarters of an inch along a little canal which led from the inside of the hydrocele, but when the inguinal canal was explored a large hernial sac was found. There was no evidence whatever of its presence, but the patient said he thought he had worn a truss when an infant. Doubtless some would have looked upon this as a case cured by a truss, but I have long since arrived at the conclusion that oftentimes such a cure is more apparent than real; not a few suddenly relapse, an event which is easily explained when we consider such cases as that which I have just described. Another youth came with a small tense hydrocele of the cord; it was above the tunica vaginalis and just outside the external abdominal ring. He stated that at times another protrusion appeared above the hydrocele. After a few days in bed the hydrocele disappeared. At the operation its sac was opened and found to have a long and narrow tube leading into the abdomen. The inguinal canal was opened and this tube dissected out and its base transfixed and tied with No. 3 or No. 4 twisted silk close to its junction with the peritoneum. Then if the sac is quite slender the silk is divided and the stump allowed to spring back behind the muscular fibres of the internal oblique and transversalis abdominis muscles. Should the peritoneal canal be large and resemble a hernial sac it is fixed beneath the transversalis muscle and fascia by carrying the ends of the ligatures which transfix and encircle the stump through the abdominal wall at a point above and external to the centre of Poupart's ligament. As a rule in these cases it is unnecessary to put any stitches in the back of the inguinal canal. It is only requisite to suture the aponeurosis of the external oblique muscle with interrupted sutures of fine silk, and so close up the canal again, and finally suture the skin incision.

In addition to these cases which I have just described I have operated upon several others of encysted hydrocele of the cord in which a peritoneal canal was found running up the inguinal canal towards the abdomen. It is obvious that had such peritoneal canals or sacs as those which I have just described been left behind in the inguinal canal they would have been in all probability a continual source of danger to the patient. When the intestine descends suddenly into such sacs the symptoms of strangulation are of the most acute and dangerous kind. I have twice at least seen this acutely strangulated intestine become gangrenous within a comparatively short period of time. In one of those cases I was so fortunate as to have a recovery after the removal of the gangrenous intestine with subsequent enterorrhaphy.

Of late years I have treated all cases of encysted hydrocele of the cord by an open incision. In some the hydrocele can be drawn up through the usual incision parallel to the inner half of Poupart's ligament, the scrotum being left untouched. This procedure has the advantage of leaving a wound which is more easy to dress and to which a certain amount of pressure can be applied. Sometimes, however, it is necessary to carry the incision from the inguinal region into the upper part of the scrotum. Then the wound becomes more difficult to dress, and as no real pressure can be applied to it the surgeon should be prepared to put a drainage tube into the scrotal part for the first twenty-four hours to let out any blood. I generally use a scrotal dressing which has an additional prolongation to cover the inguinal region.

I now propose to refer to exploration of the inguinal canal in certain cases of retained testis. About 15 per cent. of the cases of inguinal hernia on which I have operated have been complicated with retained testis. As is well known, the testicle may be arrested during its transition either in the abdomen, in the inguinal canal, or after its exit from the inguinal canal. It is more particularly with the two latter positions that we are at present concerned. It is generally assumed that the exact position of the retained testicle can be easily diagnosed during life, but the results of operations have led me to think that mistakes must not infrequently occur. For instance, a patient was operated upon in whom we all thought that the testicle lay in the inguinal canal, and apparently covered by loose and stretched aponeurosis of the external oblique. When the organ was pressed upon it slipped away from the finger and apparently disappeared within the abdomen. When, however, an incision was made the testicle was not found in the inguinal canal, but lying in a sac upon the aponeurosis of the external oblique exactly over the inguinal canal. This sac had no communication whatever with the abdominal cavity, and the external abdominal ring itself was so small that it was obvious that the testicle could not have entered the inguinal canal, much less the abdomen. Cases in which the testicle has emerged from the inguinal canal and then turned back again to mount upwards upon the aponeurosis of the external oblique are not infrequent, and are particularly favourable, owing to the length of the spermatic cord, for the transplantation of the testicle into its proper place—viz., the scrotum. But when this has been done the question at once arises as to whether the inguinal canal should be let alone

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or explored. That the latter is the proper procedure is exemplified by the case I have just mentioned. When the aponeurosis of the external oblique was cut through a small hernial sac was found communicating with the abdomen by rather a wide mouth. It is obvious that had this been overlooked the patient might at some time after the operation been obliged to burden himself with a truss or have a second operation performed for the cure of the rupture. It also leads one to reflect upon those cases of retained testis and hernia in which, as is commonly done, a truss is applied upon the retained testis, which, as is usually said, is supposed "to take care of itself." It seems unscientific and irrational to attribute so much intelligence to an organ like the testicle and to expect it to undertake duties which ought to be performed by the surgeon. When the testicle lies in the inguinal canal it is of course necessary to open the canal to approach the organ, but even here the question of a further operation arises, because unless the upper part of the inguinal canal is carefully explored by a free division of the fibres of the external oblique aponeurosis the hernial sac or a long serous canal may be easily overlooked. In the case of a man both of whose testicles were retained in the inguinal canal I found on the left side that the organ lay in a capacious sac which did not communicate with the abdominal cavity, but a careful search in the inguinal canal behind the upper end of the testicular sac brought to light another sac which communicated with the abdominal cavity and was exactly like the sac of an infantile hernia. In other cases, as I have just said, the testicular sac communicates with the abdomen by a long, slender canal, which might easily be overlooked unless it was diligently searched for with a probe or by exploring the highest part of the inguinal canal. Although it has no direct bearing upon the question of the propriety or otherwise of exploring the inguinal canal, nevertheless, I may, perhaps, be permitted to remark that much remains to be learned concerning the after-progress of cases in which retained testes have been transplanted into the scrotum. It is now well known that these undescended organs do not, so long as they remain in the inguinal canal or in the abdomen, attain their proper development. So far as I can learn no one has yet seen spermatozoa in undescended testes. Whether this applies also to cases in which the organ has left the inguinal canal and then turned back again so as to lie in the aponeurosis of the external oblique I do not know, but in four or five cases of this kind upon which I have myself operated the testicle has certainly appeared larger than those in which it had not left the canal. By this time there must be a good number of cases in which these undescended testes have been transplanted into the scrotum and some of my hearers may meet with them. It is to be hoped that opportunity will be seized of ascertaining as far as possible the condition of the transplanted organs. I have seen at least ten cases at periods varying from six months to two years after the operation. This much seems to be clear, first, that the testis remains in the scrotum, or if it should ascend at all it is sufficiently low down to be quite out of the way of a truss; second, that the organ does not undergo any further diminution in size; third, that, in one case not only has it not diminished but both myself and the patient are of opinion that it is larger than when it was at first transplanted (if this be true it is a very encouraging circumstance); and fourth, although a matter of less importance, nevertheless it is worthy of note that the patients themselves are extremely gratified to find that the organ has been preserved, and when they know this can be done are much more anxious to have an operation performed. To recapitulate, it is clear that without the exploration of the inguinal canal surgeons who may claim to possess ordinary powers of diagnosis may mistake a lipoma for a hernia, varix of the spermatic veins for a hernia, or may overlook peritoneal canals or actual hernial sacs. These are some of the considerations which have led me gradually to abandon operations for the radical cure of hernia in which the interior of the inguinal canal is not clearly seen; moreover, as I have already explained, these are the conditions which have led me to explore the inguinal canal with greater freedom than has hitherto been the custom.

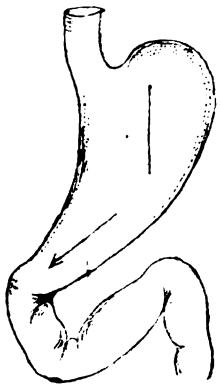
In conclusion, perhaps I ought to say that such operations as these would not be advisable unless the operator takes every pains to attain asepsis. I need hardly detail the precautions which, in my opinion, ought to be taken, but they include the disinfection by heat of all instruments and materials, the thorough disinfection of the skin both of the surgeon and of his assistant and of the patient, and finally the application of a suitable dressing. In conclusion, I will hand you the outside dressing which we find most efficacious and most comfortable in the treatment of these inguinal and scrotal wounds.[1]

A CASE OF PYLORIC STENOSIS TREATED FIRST BY LORETA'S OPERATION AND AFTERWARDS BY POSTERIOR GASTRO-ENTEROSTOMY (DOYEN).

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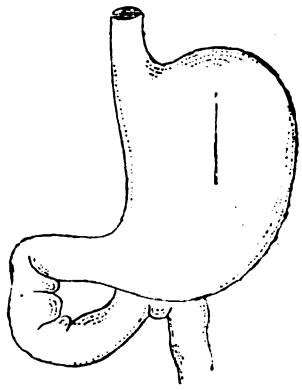
BEFORE narrating the case which is the subject of my paper I should like to draw attention to the fresh knowledge which has invariably been the outcome of surgical effort. Every department of medical science has profited more or less by the surgical interference which has been so much a feature of modern practice. It has undoubtedly been the operative treatment of diseases of the uterus and its appendages, of the liver and gall-bladder, of the kidneys and of the brain, which has opened up to all of us much of our present heritage of facts—facts on which we act—facts which form the foundation of a more successful practice. The region of the stomach will, I think, prove no exception to this general experience. So long as the stomach remained unexplored during life men seemed content to accept the diagrams of their anatomical text-books, and not a few of us to-day may perhaps still regard the stomach as a

FIG. 1.



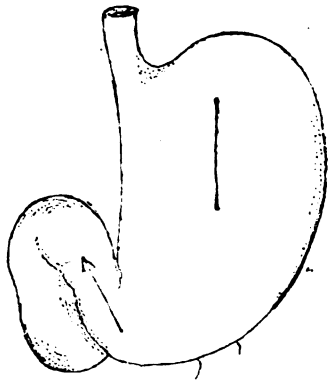
State of vacuity.

FIG. 2.



State of moderate repletion.

FIG. 3.



State of dilatation (Doyen).

[1] This scrotal dressing was described in THE LANCET of Oct. 19th, 1895, p. 970.

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musculo-membranous sac, the long axis of which lies across the upper part of the abdomen. Clinical examination has often tended to perpetuate this idea. The distended transverse colon, closely applied to the stomach, has been unwittingly accepted as a part of it, and careful palpation and percussion have tended to confirm the error, or attention has been confined to dilated and abnormal conditions of the stomach, and what was altogether pathological has been accepted as differing but slightly from the normal position and relations.

Dr. Doyen, of Rheims, in his work on the Surgical Treatment of Diseases of the Stomach[1] has done much to elucidate and explain these points, and I have reproduced a few of his illustrations because it seems to me that a better appreciation of the normal position of the stomach is necessary before we can begin to understand any of its pathology. The long axis of the normal stomach is very nearly vertical, and when empty the pylorus should be its most dependent part (Fig. 1). The latter should lie only very slightly to the right of the middle line, and the pyloric end of the stomach, the entrance to the pylorus or "antre du pylore" of the French, should be exactly central. A rough generalisation which I have ventured to make at once places the salient features of this normal position clearly before the mind—the alimentary tract from the mouth to immediately above the pylorus is nearly direct, broadly vertical, and almost central. There is a dilatation or pouch on the left side formed by the greater curvature of the stomach, but the tract itself is practically direct from the pharynx to the pylorus. This may be seen very well in the first frozen section plates in Braune's Topographical Anatomy; it may often be verified by careful clinical examination and, to some extent at least, by personal experiment. The act of swallowing anything very hot or very cold may sometimes be experimentally followed by corresponding sensation from the mouth to the pylorus. The central position of the sensation throughout, although not absolutely prohibitive, perhaps, of another direction, forms strong presumptive evidence of the truth of this contention. It is mainly because of this that the lesser curvature and pylorus are immediately affected by irritating foods and caustics and become so frequently the seat of ulceration and disease, while the greater curvature, which used to be regarded as the immediate receptacle of food, escapes. The recognition of this appears to me to throw considerable light on all gastric and pyloric disease; it makes so much that was formerly difficult to understand reasonable and clear that I may be pardoned, I think, for having insisted on its importance before proceeding to the consideration of the case I have to report.

A single man, aged thirty-three years, was sent to me in July, 1894, by Dr. Bernays, of Solihull. The patient had been complaining for four or five years of gastric trouble. Attacks of pain and acid vomiting, lasting for a week or so, had occurred at intervals of some months' duration until the latter part of 1893. At this time the pain increased and occurred daily. The pain was felt in the pit of the stomach, a little above the umbilicus and in the back, and was worse three hours after taking food. About three times a week (towards 2 or 3 o'clock in the morning) he vomited four or five pints of brownish acid fluid which became frothy on standing. After this had continued for some eight weeks he became a patient at the Queen's Hospital, under the care of Dr. Foxwell, who diagnosed the case as one of dilatation of the stomach, and, I believe, admitted him into his wards as an in-patient. During his stay here the patient was treated by washing out of the stomach, and from this he derived very considerable benefit. On leaving the hospital he had increased in weight 2 lb., and being a very intelligent patient he was able to continue the washing out of the stomach himself. For a time the improvement continued and appeared to be very materially assisted by a course of medicine and dieting ordered for the patient by Dr. Bernays, who now had charge of the case. The improvement, however, did not last, and before I saw the patient he had been rapidly getting worse. He had to use the stomach tube twice a day in order to get any relief from pain, and had lost 20 lb. in weight during the month preceding my consultation. Latterly Dr. Bernays had ordered nutrient enemata, as very little or nothing appeared to be retained by the stomach. Dr. Bernays sent the patient to me, hoping that something further might be done by surgical means. When I saw the patient on July 20th I found him very emaciated and weak. His rectum was nearly empty in spite of marked and continued constipation. His pulse was quick and rather feeble (108), and palpation and percussion of the abdomen showed very decided signs of dilatation of the stomach, the stomach resonance being increased in all directions and splashing marked on gentle bimanual examination. No tumour could be felt nor could I find evidence of any other disease. A week later (July 28th) I operated. I opened the abdomen in the middle line between the ensiform cartilage and the umbilicus. The stomach was dilated and appeared immediately under the incision, the vessels along the greater curvature looking large and injected. At the pyloric end of the stomach there was very considerable thickening of its walls. In this situation the thickening was "patchy," and wherever it was found it was noticed that the peritoneal coat looked whiter and rather lacking in lustre. Further down, at the pylorus itself, the thickening was general and there appeared to be some folding adhesions of the peritoneal coat. On taking up a fold of the stomach wall over the thickened region the increased substance between the fingers—amounting to several lines—was very perceptible, but nowhere did it amount to anything that could be termed a tumour, and the change appeared to be partly fibrous, very largely inflammatory, and not malignant. I opened the stomach just above the pylorus. The latter seemed to be quite occluded save for a dimple in the mucous membrane which would barely admit a uterine sound. I gradually dilated the pylorus with Sloan's dilators, at first with considerable difficulty. Then it suddenly gave (I believe by the opening out of external fold adhesions, as no rupture could be found), and from this point the dilatation proceeded rapidly until I could pass my forefinger through the pylorus. The mucous membrane of the stomach, pylorus, and duodenum felt healthy. I could find no evidence of ulceration, old or recent, and the changes already noticed appeared to be confined to the serous and subserous tissues. No definite ring of constriction was found at the pylorus, but rather a tubular narrowing for some distance, and a pyloroplastic operation which I had had some intention of performing I found to be hardly applicable to my case. I dilated the pylorus still further by means of Goodell's strong dilator, with parallel blades, until I judged that the limit of safe distension had been reached. In this case the operative dilatation of the pylorus was not carried so far as in some of the reported cases. I could not pass two fingers through the pylorus, but could easily pass the index finger beyond the second knuckle. On bi-digital examination from within and without the intestine it seemed to me that any further stretching must result in rupture; indeed, at this stage something occurred which felt like a little crack in the posterior wall, and I judged it best to desist from any more manipulation. I closed the wound in the stomach with a continuous Lembert suture—that is, a running suture passed in exactly the same way as an interrupted Lembert suture. I have always used this for any intestinal work and am quite satisfied with it. I began the suture a little beyond one end of the incision and after uniting the sides of the incision (taking up serous and muscular coats only) continued it for a similar distance beyond the other end. I then returned, using the same thread, by a similar suture above the first one, and finished the operation by tying the ends of the silk together. The abdominal incision was closed with silkworm gut. The operation lasted an hour. Before I began the patient had himself washed out his stomach, and there was very little leakage from the stomach wound. The latter was carefully guarded by the fingers of my assistant, Mr. Jordan. The patient was fed by nutrient enemata or nutrient suppositories until Aug. 2nd—that is, for five days. After this milk and gruel were given by the mouth, and by Aug. 12th the patient was allowed a very fair dietary of egg, fish, brown bread, and cocoa, in addition to the milk. He left the nursing home on Aug. 16th, his weight being 8 st. 6 lb., or 1 lb. less than at my first consultation.

I have weekly records of his weight since this date, and with but few exceptions there has been a slow and steady increase. The last weight recorded (Feb. 26th, 1895) is 10 st. 6 lb. or almost exactly 2 stones heavier than at the time of operation. With this increase of weight there has been a corresponding improvement in other respects. The patient is much stronger and able to do some work; his appetite is good, and although occasionally subject to some indigestion and

[1] Traitement Chirurgical des Affections de l'Estomac et du Duodenum. Par le Dr. E. Doyen, de Reims. Paris: Rueff et Cie., 1895.

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gastric pain he has never had to use the stomach tube since the operation, and has only been sick about six times since he left the hospital. On examination I think it may be said that although there is marked improvement some signs of dilatation still remain, and on palpation a certain amount of splashing is still usually present. Whether the maximum of improvement has been attained is very doubtful, considering that the highest point of weight was touched so recently. The very gradual and steady change for the better, extending over seven months now, seems certainly ground for hope that the improvement may still continue.

Remarks.—A case of non-malignant stricture of the pylorus, verified during life, affords a special opportunity for study, and I have tried to find, if possible, what cause or causes may have led to the condition found. The patient had always lived in the country, and his usual occupation was that of a gardener or farm labourer. He came of a fairly healthy stock and had no vices. He had no history pointing to any gastric ulcer in the past, no acute history, either of hæmatemesis or otherwise, previously to this closure of the pylorus. He had never been intemperate, had rarely taken spirits, and when he had these had always been diluted. He had never chewed tobacco, but had been a great smoker. So far the history seemed to be an innocent one. But he had always had the character of being a very quick eater—of finishing his meals before other people; and this, when the fare was rough, and but little or no rest could be taken after food, might perhaps be an etiological factor of some importance. The more recent Continental writers (Reichmann and A. Robin) appear to trace this form of pyloric contraction to a hypersthenic dyspepsia in which there is a definite increased secretion of hydrochloric acid, and I notice that Doyen constantly refers to this "hyperchlorhydrie" or "maladie de Reichmann" as a cause of simple pyloric stenosis. Ewald, although treating this hyper-secretion of gastric juice as a functional neurosis only, remarks that "the irritation excited by the acid fluid leads to troubles having the appearance of the symptoms of a chronic inflammatory condition," and, further, "in consequence of this condition atony of the muscular coat and dilatation of the stomach may occur; this is so common in cases of long standing that out of thirty cases in Reigel's wards in twenty-nine there was more or less distinct dilatation."[2] That the acid vomiting so frequently met with from the earliest stages of gastric dilatation is not entirely due to acids of decomposition, but to a true hyper-secretion of acid appears to be now well established, and contraction of the pylorus is very frequently associated with long-continued hyper-secretion of hydrochloric acid, but the chain of cause and effect, if it exist at all, has not as yet been made out, and it appears to me that there must either be a pre-dyspeptic stage which starts the hyper-secretion, or some contemporaneous cause coöperates with the acidity in producing so marked a local manifestation and lesion.

In the case described above the local disease was marked and definite—a peri-pyloric inflammation not dependent on ulcer or extraneous causes, involving the pyloric end of the stomach only and causing local thickening and adhesions. In the history the rapid eating or bolting of the food was the only discoverable cause of irritation. Is it not possible that coarse and imperfectly masticated food passing (more directly than has been supposed) into the pyloric end of the stomach may irritate and at once be seized by the closing action of the pyloric region and for a time at least be kept from participating in those rhythmic movements of the stomach which facilitate digestion? This would excite an increased secretion of hydrochloric acid which, at first intermittent, would gradually become chronic; irritable fissures would easily occur in the neighbourhood of the pylorus, and in this way it is easy to understand how a chronic inflammatory process might arise that would gradually lead to pyloric contraction and finally to closure.

I feel that my own knowledge of the literature of the subject is too imperfect and my experience too small to warrant anything but a tentative suggestion as to the primary causation of non-ulcerative pyloric stenosis. I cannot but believe that so local a disease must have a local cause, and if the history I have been able to elicit is only of value on the negative side of the problem it may still help to clear the ground for further work.

Three operations have been proposed and employed for the treatment of non-malignant stricture of the pylorus—pyloroplasty, Loreta's operation of digital dilatation, and gastro-enterostomy. Pyloroplasty is specially applicable to a sharp, annular constriction, and consists of a longitudinal incision through the stricture followed by transverse suture of the wound. In suitable cases it seems to be an exceedingly neat and useful operation. When the site of constriction is almost linear the operation is an ideal one and should be followed, if successful, by a permanent result. But the field for its use is, I think, much more restricted than many have supposed, and in my own case I had to choose between dilatation or gastro-enterostomy.

Dr. Doyen, whose experience of the latter operation has been remarkably extensive and successful (twenty-one cases with five deaths), has practically given up both pyloroplasty and Loreta's operation in favour of his own method of gastro-enterostomy, and it may be that with increased experience of gastric surgery other surgeons will tend to follow his example. I certainly think his method of operating is much superior to the plans which have hitherto been used, and I would employ Doyen's operation in preference to any other for an early case of cancer of the pylorus.

The objection which has been felt to Loreta's operation and which runs through all the theoretical literature of the subject is the danger of relapse. But theory must be tested by experiment, and after considerable search I cannot find any clear record of relapse in the cases which have been published. On the contrary, there is considerable evidence to show that at intervals varying from several months to one or even two years the benefit obtained by Loreta's operation has been thoroughly maintained. The first two cases operated on by the late Professor Loreta were said to be doing well by Dr. Guido Pedrazzoli ten months after the date of operation.[3] Mr. Hagyard's case was reported as perfectly well nearly two years after operation,[4] and Mr. Treves's case, operated on on Dec. 3rd, 1887, was quite well in December, 1888.[5]

Sequel.—The foregoing account was written in 1895, and the improvement then recorded was maintained during the whole of that year. Early in 1896 symptoms of relapse first showed themselves. Pain and vomiting again set in and the patient again lost weight. I did not see him until May, 1896, his weight then being 9 st. 5 lb. By washing out the stomach once a day he managed to keep about this level for some months, but as all the old symptoms returned—decomposition of the gastric contents, periodical vomiting, and nocturnal pain—it was evident that something more was needed, and I accordingly suggested the formation of a new pylorus towards the most dependent part of the stomach as likely to give fuller and more permanent relief. My intention at this time was to operate by the method of anterior gastro-enterostomy recommended by Dr. Doyen in his book on the surgery of the stomach; but on talking over the matter with Dr. Doyen, both at Rheims and in London, I found that he had practically given up the anterior method, and in his more recent gastro-enterostomies had united the jejunum to the posterior wall of the stomach. His main reason for this change was, if I understood him correctly, that in some of his cases where he had united the first part of the jejunum to the anterior wall of a much-dilated stomach on the lying down of the patient the (dilated) posterior wall "sagged" or pouched into a depending cavity in which the food still collected, decomposing and causing continued gastric trouble, although in every other respect the operation was satisfactory. The objection seemed to me to be a reasonable one, and as I knew that my patient's stomach was much dilated, and found that on the cadaver it seemed to be almost as easy to use one wall as another for the site of anastomosis, I did not hesitate to choose posterior gastro-enterostomy as the better operation. I did this for my patient on Sept. 12th, 1896. I reopened the abdomen in the line of the old incision and found the pylorus and pyloric end of the stomach so universally involved in firm adhesions that I did not trouble to disturb them in order to examine more minutely into the present condition of the pylorus. Pushing up the stomach and great omentum, I passed my fingers deeply into the abdomen, felt for the ligament of Treitz, which marks the end of the duodenum, and immediately pulled up the first part of the jejunum. In the mesentery of this, nearly to its fixed extremity, I passed a double thread

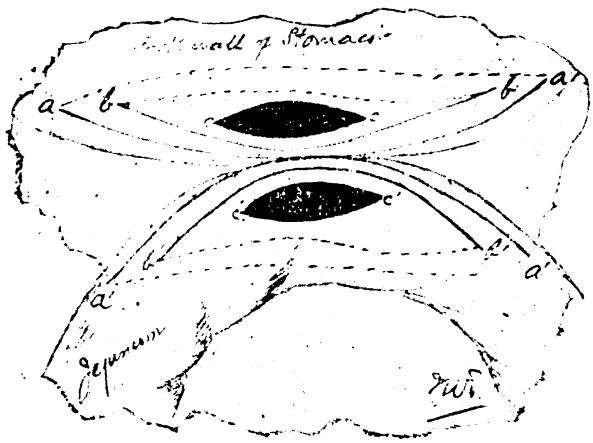
[2] Ewald: Dr. Saundby's Translation, vol. ii., p. 607.

[3] THE LANCET, Aug. 4th, 1883, p. 213.
[4] Brit. Med. Jour., vol. i., 1889, p. 1105.
[5] Ibid., vol. i., 1889, p. 1106.

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of silk for future identification of the loop of jejunum. Then, dropping this into the abdomen, I drew out the great omentum, which in this patient showed no sign of the transverse colon on its anterior aspect. This was held up for me by my assistant, Mr. Jordan, and tearing a hole in its under layer anterior to the transverse colon I came at once on the posterior wall of the stomach. This and the loop of jejunum to which the silk had been attached were now drawn outside the wound, all other exposed abdominal contents were replaced, and the loop of jejunum being disposed from left to right in easy relation to the posterior gastric wall was held in position by Mr. Jordan while I began to join the bowel and stomach by suture. Up to this point I cannot say whether I exactly followed the method of Dr. Doyen or not, as my conversation with him on the subject was hurried and imperfect; but in all the main details of the formation of the ostium and union between the stomach and the bowel I followed the direction in Dr. Doyen's book. These are, briefly, as follows. A somewhat crescentic line of suture, about four inches in length ($a - a$, $a' - a'$), is made with the finest silk to form the

FIG. 4.



Diagrammatic sketch of posterior wall of stomach and jejunum, showing lines of sutures and openings into both viscera.

deepest, or highest, line of union between the convexity of the bowel and wall of the stomach; within, and more or less parallel with this, a second line of suture, about three inches long, is carried ($b - b$, $b' - b'$), the two together forming a broad concave band of union between the two organs. In the hollow of this concavity the openings, about one inch long, are made into the stomach and jejunum, the incisions being united to each other by a very fine continuous circular suture through all the coats, the end being tied to the end when the union is completed so that one fine silk thread unites the whole of the circle without a break ($c - c$, $c' - c'$). While this is being done the stomach and bowel are temporarily clamped to avoid unnecessary soiling of the wound. As soon as the circular suture of the anastomosis or "ostium" is completed the clamps are removed and any stomach contents are allowed to pass into the small intestine by the new opening. (At this stage the junction between the stomach and the bowel is formed by the union of a pouting mouth or ostium on both sides, so that from above it looks as if both viscera were joined by a short intestinal tube.) If the union appears to be quite satisfactory the parts are carefully cleansed, and the circular suture is buried or closed in by a somewhat curved line of suture uniting the ends of the second concave line of suture ($b \ldots b$, $b' \ldots b'$), and finally, by a similar suture joining the ends of the first line of suture ($a \ldots a$, $a' \ldots a'$). In doing this by simply carrying the suture of the jejunum relatively wider on the gastric or upper side a valve or spur may be formed which, while causing no obstruction to the passage of the glandular excretions, prevents any back flow from the stomach. The gastro-intestinal opening is now not only formed and protected all round by an immediate circular suture, but there are two complete (crescentic) rings of suture outside this. The anastomosis is complete, and after replacing the parts within the abdomen and closing the abdominal incision the patient is put back to bed.

The operation lasted about two hours. Beyond the tediousness of it, and the profound anæsthesia induced, from which the patient did not recover for three hours afterwards, the operation does not call for any special notice. From the date of it all vomiting ceased and has not since recurred. I only allowed the patient to have a little milk by the mouth for the first three days, and so long as solid food was denied him he complained somewhat bitterly of pain and restlessness. As soon as he was permitted to take solid food the pain disappeared and his recovery was rapid and uninterrupted. He has regained his usual weight and has remained in excellent health ever since. On inquiry of his medical attendant, Dr. Bernays, I find that he remains to the present day, "perfectly well and is able to eat anything" (Oct. 19th, 1897). The last time I saw him I was interested to notice that there was less evidence of any dilatation of the stomach than at any period since I had known him, and it appeared to me that the organ was recovering, to some extent at least, its normal size and elasticity.

Birmingham.

VITALITY.[1]

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IX.—THE INTERSTITIAL CIRCULATION IN ALL LIVING THINGS (*continued*).

WHETHER the interstitial fluid which circulates in the bioplasm and in the various tissues is derived from the circulating fluid within the organism, as in man and the higher animals, or from the surrounding medium, as in the case of the lowest organisms, the distribution is never equable in all parts of the organism at the same time. In man and the higher animals the supply will be affected by the variation from time to time in the calibre of the vessels which distribute it to the part, and will vary according to the periods of repose and activity. The change in the calibre of the arterioles is effected by a marvellous arrangement which acts automatically. Thus the varying local blood-supply is mainly dependent upon the varying degree of contraction of the muscular fibres encircling the vessels, which is determined by changes in the nerve current effected in the nerve centres, from which the nerves distributed to the arteries emanate. I have done my best to describe and illustrate the arrangement, which is of great interest, in previous memoirs and works.[2]

The bioplasm of those tissues and organs which are necessary to the life of the organism from moment to moment requires a larger proportion of nutrient matter in a given time than the living matter of those which are not constantly in a highly active state. Of the rest some have pretty regular periods of activity and rest, but at all ages the parts which are undergoing renovation are supplied, not only with plenty of interstitial fluid, but very free interchange and admixture of the currents of fluid takes place, so that neither the nutrient matters nor the products of disintegration should form a strong solution. In any given tissue of an animal at different ages there is what may be called a normal rate of vital action of any particular form of bioplasm, and a normal rate at which the conversion of a portion of the bioplasm into formed material takes place, as well as a normal rate at which the interstitial fluid flows to and from the bioplasm. But normal activity varies within certain limits in different organisms and at different ages, and in the same organism at different times under different conditions and in different parts. Living too quickly or too slowly tends to be detrimental, whether the departure from the normal rate affects a minute amount of bioplasm or that of a considerable part or the whole of an organism. A slight departure, however, in either direction from the normal may

[1] Nos. I., II., III., IV., V., VI., VII., and VIII. were published in THE LANCET of Feb. 22nd, April 11th, June 13th, Aug. 29th, Oct. 17th, 1896, Jan. 23rd, July 31st, and Sept. 4th, 1897, respectively.

[2] Bioplasm, p. 328.

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occur without detriment. Indeed, throughout all living nature these several processes are permitted to vary within moderate range and may be automatically corrected, but neither can proceed far from the normal standard of change without derangement or actual damage; and if the divergence persists for longer than a short period of time serious structural and other events follow. Physiological may soon be replaced by pathological phenomena. *The too rapid growth and multiplication of the bioplasts, the too quick production of formed material*, are serious departures from the healthy state, and are changes which as it were lie at the root of many morbid processes. Health as well as longevity seems to depend upon the steady maintenance of the normal changes in the bioplasm of certain parts of the organism at the several periods of life.

Should the interstitial fluid become too concentrated, as it does in some departures from the normal state, it might flow too slowly through the tissues for normal nutrition; or by the undue accumulation in it of matters which ought to be quickly removed there is danger of the deposition of certain substances in the tissue, in which case the action of the latter may be seriously interfered with or checked. In some cases the fluid accumulates interstitially to an extent sufficient to cause visible swelling of the tissues in the neighbourhood, and the increased amount of too rapid growth is followed by multiplication of the bioplasts. This undue accumulation of interstitial fluid is not confined to textures near capillary vessels, but occurs also in those which are separated from the capillaries by a considerable thickness of tissue, as in some forms of cartilage and in many epithelial textures. The change in question may occur very rapidly, but may be followed by the deposit of lymph and the formation of fibres, in which case a considerable time must elapse before the fluid poured out is completely reabsorbed and the deposited matter dissolved so that the tissue may regain its normal state. Indeed, to effect this it is necessary that the interstitial fluid should be in a state of dilution for a long period of time.

The importance of the free interchange of the interstitial fluid and the thorough and continued admixture of its constituents cannot be over-rated, and by the great number, constant movement, excessive minuteness, and varied direction of each little stream this admixture is in the normal condition undoubtedly ensured. In the case of the blood-streams, large and small, thorough admixture of the several constituents of the constantly circulating fluid upon a much larger scale is effected by a special arrangement which cannot but be regarded with great interest, and by which several other conditions of the greatest importance in the physiology of the higher animals and man are fulfilled. The red blood corpuscles, in addition to other offices performed by them, are intimately concerned in the admixture of every portion of blood, so that in the normal condition danger from the accumulation of various substances of a deleterious character is reduced to a minimum. These corpuscles are always changing their relative positions with respect to one another, and in the web of the foot of the young frog the soft flattened discs may be seen continually sliding over one another as the blood is propelled through the capillaries. By no other means could such thorough admixture of the dissolved constituents be so certainly ensured in a considerable body of fluid.

In every part, then, of all living organisms, present and past, and at all periods of life, in and around each little bioplast flow very minute streams in constant motion, some bringing nutrient substances to the living matter, while others take away from it and from the adjacent tissue, matters not adapted for nutrition and products which have resulted in the course of oxidation and disintegration. These streams never cease to flow as long as life lasts. In the case of some fully formed hard textures, such as bone and some vegetable tissues, all the streams are restricted to certain defined channels, but even under these circumstances there is free admixture of the portions of the interstitial fluid, and until the tissue is fully formed there is room for several different streams in the space which at length is to become a narrow canal.[3] In every tissue and organ there are multitudes of streams of interstitial fluid, most of which are probably much less than the one-hundred-thousandth of an inch in diameter, passing to and from the particles of bioplasm, moistening, irrigating, cleansing, and preserving the intervening tissue and other kinds of formed material, and at the same time supplying the bioplasm with everything necessary for its life. Thus every part of the body is kept in a state of healthy activity.

There is another point with reference to the nature and influence of the interstitial fluid which it is well to touch upon. Just as we find multitudes of colourless particles of bioplasm in the blood, so very small that they cannot be demonstrated without great care, so, freely moving in the interstitial fluid are also minute particles probably of similar nature.[4] These, like all other known forms of living matter, take up nutrient material from the surrounding medium and grow; and in certain conditions under which there is much interstitial fluid, increase considerably in size, so that they are to be demonstrated without any difficulty. Such very minute particles of bioplasm easily pass in either direction through the walls of capillary or lymphatic vessels. Whether found in the blood, lymph, or other fluids in serous cavities or in interspaces amongst the tissues, these minute particles of living matter take up any excess of nutrient substances that may be in solution and grow at their expense and, as already stated, also remove certain products of disintegration that may be present, thereby preventing the formation of deposits of various substances in the interstices of tissues, using up and greatly economising nutrient material, and converting it into living matter destined to undergo further changes into substances capable of being assimilated or eliminated directly or in a circuitous manner. This is one of many methods by which steady and uniform vital action is preserved, notwithstanding constant changes tending to disturb the balance.

From some of my remarks it might perhaps be inferred that the streams of fluid constantly flowing to and from the living matter through the moist surrounding formed material or through the fluid medium in which the organism lived, alternated with one another, or that the inward flowing streams were limited to certain paths and the outward flowing ones to others. But the frequent change in the situation of the current as seen in many plant cells render it more probable in my opinion that the streams are not even momentarily restricted either as regards direction or situation. Perhaps these minute streams may be compared with constantly changing fluid columns, the core of which flows in a direction the opposite of that taken by the circumferential portion. That in certain cases the inflowing stream passes very quickly through the surrounding formed material to reach the living matter seems to me certain, because a few seconds suffice for an alkaline coloured fluid to traverse the outer part of certain cells removed very soon after death and for the colouring matter to reach and be precipitated (?) and retained in the living matter and the nucleus or nuclei in the central part, while the outer portion (formed material) just traversed by the coloured fluid remains colourless.

Whichever way the streams of fluid may be flowing they are seldom straight or symmetrical or regular as regards the distance by which they are separated from one another. As in many other cases in living nature, the shortest, straightest and most direct route is not taken by fibres, tubes, vessels, and many cord-like textures. The currents of interstitial fluid hardly ever flow in straight lines. The same remark may be made with respect to the indications left of the course of the interstitial fluid in the tissues of fossil remains. We find the same general arrangement in the highest and lowest living organisms, whether now existing or in past time. Even the nerves do not pursue the shortest and most direct course from centre to periphery, and sometimes their course is most circuitous.

(To be continued.)

[3] In the formation of bone and many hard textures impregnated with calcareous and other mineral substances a soft formed material is first of all produced around the bioplasm, and this becomes the seat of deposition of the particles upon which the future hardness depends. Gradually the spaces between the points of deposition are encroached upon and become canals irregularly converging towards the particle of bioplasm. The bioplasm itself gradually lessens as the diameter of the channels becomes reduced, and at last is reduced to a small particle, which ultimately dies, leaving a *lacuna* or space with communicating tubes, *canaliculi*, which pass outwards to the circumference of what was once the outer part of the so-called cell. When the bone becomes dry, and often before, the lacunæ and canaliculi become filled with air, and, as is well known, this renders their arrangement so distinct in dried sections.

[4] It is probable that bacteria-germs find their way into the interstices suspended in the streams of interstitial fluid. Even fully-formed bacteria and larger organisms suspended in fluid easily pass through the walls of vessels and reach the interspaces between the elementary parts of tissues.

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NOTE UPON A FORM OF ACUTE INFLAMMATION OF THE CONJUNCTIVA ASSOCIATED WITH PUS COCCI.

By SYDNEY STEPHENSON, M.B. EDIN.,
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IN children one now and then observes an acute inflammation of the conjunctiva along with a pustular eruption of the face or scalp, especially when in the form of eczema impetiginoides.[1] It is thought that in these cases the conunctiva has been inoculated by the contents of the pustules upon the skin, which are known to include staphylococci. The transference of contagious particles is brought about, as a rule, by the fingers of the patient, although in other instances purulent matter may run directly into the eye. I have examined bacteriologically several cases of this kind, and in all have succeeded in finding pyococci in the secretion from the inflamed conjunctiva. I am therefore inclined to think that the organisms named may, with fair probability, be looked upon as causing the conjunctivitis. The following case is so typical of the entire series that it may serve to illustrate certain points with regard to diagnosis and treatment.

A female child, two years of age, was brought to the ophthalmic department of the North-Eastern Hospital for Children on Sept. 15th, 1897. The history was that a fortnight before "some yellow humory heads" came out on the skin below the eyelids, especially on the left side of the face. Upon inquiry it was found that an elder sister had lately recovered from a similar eruption affecting the chin and mouth, probably impetiginous in nature. The patient's left eye had been inflamed for seven days. With the exception of measles six months before coming under notice she had suffered no illness of any moment, and her eyes had been well in the interval. On examining the inflamed eye a considerable collection of yellowish-white discharge was seen in the lacus lacrymalis and the conjunctival sinuses. The lids were glossy and swollen, but not in the least tense; the eyeball was reddened; upon the upper and lower palpebral conjunctiva was a thin, greyish membrane, which could be readily detached, leaving the underlying tissues red and thick, with a slight tendency to bleed in a few scattered points. The cornea was bright and clear. The preauricular gland was not enlarged. The temperature of the patient was not raised; constitutional symptoms appeared to be absent. A few scabs were noticed upon the skin below the left lower eyelid. No discharge was present from the genitalia; there was no affection, as swelling or pain, of the joints. There was a negative history of sore-throat both as regards the child herself and those about her.

The diagnosis seemed to lie between an acute inflammation of the conjunctiva due to (1) Klebs-Löffler bacilli; (2) gonococci; (3) Weeks's bacilli; (4) Fraenkel's pneumococci; or (5) pyococci. From a clinical standpoint diphtheritis appeared to be excluded, since the eyelids could be separated without difficulty, the false membrane was easily detachable, the cornea was intact, the preauricular gland was not involved, there were no diphtheritic patches about the skin of the face, and constitutional symptoms were absent. Against purulent ophthalmia due to gonococci were the negative facts that the lids were not tense, that the secretion was not pus-like, that chemosis was not present, and, lastly, that discharge from the vulva or vagina was not present, as is apt to be the case among little girls. The unilateral character of the inflammation, although rather suggestive of pneumococcus infection, could not be regarded as telling much in any direction. Diagnosis, therefore, appeared to be narrowed down to an inflammation produced by Weeks's bacilli of catarrhal ophthalmia, by pneumococci, or by pus-organisms. The probability was that the micro-parasites last-named lay at the root of the mischief.

In order to determine this point a cover-glass preparation was made by lightly smearing a morsel of detached membrane over a glass slip, which was then stained in the usual way. The specimen, when examined with a one-twelfth oil immersion lens, showed merely a few scattered diplococci and cocci, lying upon and between the multinucleated and other cells contained in the preparation. These were found to retain their colour when treated according to Gram's method. This simple experiment was enough to yield valuable practical results, for in the first place it showed that diphtheria bacilli and Weeks's bacilli were absent; and secondly, that the organisms contained in the specimen must be either ordinary pus cocci or pneumococci, inasmuch as gonococci, as is well known, are decolourised by the alcohol employed in Gram's method. With a view to further identifying the organism or organisms known to be present two sloped agar-agar tubes were smeared with a morsel of membrane detached from the conjunctiva and then placed in the incubator at 37·5° C. Two days later each tube showed more or less discrete colonies of two kinds: (1) circular discs of orange hue from 1 to 3 mm. in diameter; and (2) discs looking not unlike dabs of white oil paint from 0·25 to 2 mm. in diameter. From each kind of colony cover-glass preparations were made, some being stained with weak carbolic-fuchsin and others by Gram's method. The colonies in all instances were found to consist of clustered cocci. Accordingly, the presumption was that one was dealing with the staphylococcus pyogenes aureus and albus—that is to say, with the organisms commonly found in styes, boils, carbuncles, and many other of the circumscribed suppurations. As a further proof, some of the water that had condensed in the original agar tubes was distributed in the usual way through three tubes of liquefied peptone-gelatin (10 per cent.), the contents of which were then poured into a similar number of flat-bottomed flasks like those used for the cultivation of bacteria in water. Colonies made their appearance within two days as minute masses visible to the naked eye. After five days' growth some of the colonies were observed to be white and others yellow in colour, while all the superficial ones lay, as it were, in little pits upon the gelatin plate. Later, the medium became liquefied more appreciably around individual colonies, which were found microscopically to respond to the well-known morphological and staining reactions of staphylococcus pyogenes albus and aureus.

As to treatment, a solution of silver nitrate, containing ten grains to the ounce, was applied to the everted conjunctiva of the inflamed eye every other day, and a wash of perchloride of mercury (1 to 5000) used frequently. After ten applications of the silver there was scarcely any discharge from the conjunctiva, which was free from membrane, smooth, and but little swollen. The remedy was therefore discontinued. Upon Oct. 13th the palpebral conjunctiva showed no obvious signs of disease, although some blepharitis, such as often follows an acute inflammation of the conjunctiva, was present. This was treated in the usual way, and the patient was discharged cured on Oct. 27th.

As already stated, the above is typical of several cases in which I have found the two organisms named. This constant association of particular bacteria with a particular clinical type of conjunctivitis tends to indicate that the latter is caused by the former. In further support of this view the fact may be mentioned that upon two occasions I have seen an acute inflammation of the conjunctiva associated with otorrhœa, pus-organisms being present in the discharge both from the ear and from the eye.

Welbeck-street, W.

[1] Vide Dr. George Carpenter's paper on Pus Inoculations and Certain Eye Affections in Children, Archives of Pediatrics, vol. xi., 1894, p. 452.

ON THE FLAGELLATED FORM OF THE MALARIAL PARASITE.

By W. G. MACCALLUM, M.D.,
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MUCH attention has of late been devoted to the flagellated forms of the malarial organism, and many theories as to its significance have been put forward, none of which have met with general credence. These—the theories of Laveran, Danilewsky, Mannaberg, Manson, Sakharoff, and the Italian school—are too well known to require repetition here. My own observations on these forms as seen in the blood of crows, which are very generally infected with the halteridium of Labbé, have led me to quite different conclusions, and are briefly as follows.

Frequently in slides of the blood of infected crows there appear, after standing from twenty to thirty minutes, elongated motile forms such as were described by Danilewsky as vermiculi in his "Parasitologie Comparée du Sang"; and

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in order to trace their origin it is necessary to observe closely the changes in the other forms seen in the same blood. Only the mature forms of the organism are seen to undergo any changes in the fresh slide of blood, the half-grown and younger forms remaining unchanged for a long time. The mature forms become rounded off, and are extruded from the corpuscle, which remains as a shadow lying in the plasma.

Both in the fresh and in the stained specimens of blood there can be seen differences which sharply distinguish two forms of the organisms. The forms are identical in outline, but the protoplasm of one is granular and opaque as compared with the clear hyaline protoplasm of the other. This distinction is well brought out in the stained specimen, in which the hyaline form remains almost entirely unstained, while the other takes on a well-marked blue stain with methylene blue. Of these it can be determined that the hyaline forms alone become flagellated.

These two forms, then, become extruded alike from the corpuscle and lie free in the plasma, but generally only a very short time elapses before the hyaline forms become flagellated, according to the process so often and so accurately described by workers on malaria. The granular forms lie quiet beside the nuclei and shadows of the red blood corpuscles which lately contained them, but are soon seen to be approached by the flagella which, having torn themselves away from the hyaline organism from whose protoplasm they were formed, struggle about among the corpuscles. These flagella, which so concentrate their protoplasm as to form a head, swarm about the granular spheres, and one of them plunges its head into the sphere and finally wriggles its whole body into that organism. Immediately on the entrance of this flagellum it seems to become impossible that another should enter, for they may be watched circling about, vainly beating their heads against the organism. The flagellum which has entered continues its activity for a few moments and the pigment of the organism is violently churned up. Soon it becomes quiet again, and remains so for from fifteen to twenty minutes, when a conical process begins to appear at one side of the organism, the pigment collecting mainly to the opposite side. This process grows larger and the pigment becomes more and more condensed until finally we have a fusiform organism with a small spherical appendage crowded with pigment at one end. The other end is hyaline, and the pigment granules which are not crowded into the small appendage are distributed superficially over the posterior part of the body. This spindle-shaped organism moves forward with a gliding motion, sometimes turning at the same time on its long axis, sometimes going through amœboid contortions. Red corpuscles lying in its path are either punctured by the hyaline anterior end, so that the hæmoglobin is allowed to escape into the plasma, or passed over and dragged along by the adhering posterior extremity.

In an intense infection a great destruction of corpuscles occurs; thus in a fresh slide after standing some time even leucocytes may fall victims to the destructive force of these organisms which have been seen to dash through them, scattering the granules into the plasma. As to the ultimate fate and true significance of these forms nothing definite can as yet be stated. In the slide they keep in motion for a long time but finally quiet down and disintegrate. The idea suggests itself from their great power of penetration that they may be the resistant forms that escape from the body during life into the external world. The whole process described above seems to be a sexual process analogous to the sexual process seen in the lower animals and plants which occurs under unfavourable conditions and results in the formation of a resistant "spore."

Recently I have examined the blood of a woman suffering from an infection with the æstivo-autumnal type of organism in which a great number of crescents were to be seen. These in the freshly-made slide of blood with very few exceptions retained their crescentric shape for only a few minutes (this activity in the change of form varies greatly in specimens of blood from different patients). They soon drew themselves up, thus straightening out the curve of the crescent while shortening themselves into the well-known ovoid form. After the lapse of from ten to twenty minutes most of them were quite round and extracorpuscular, the "bib" lying beside them as a delicate circle or "shadow of the red corpuscle." After from twenty to twenty-five minutes certain of the spherical forms became flagelleted; others, and especially those in which the pigment formed a definite ring and was not diffused throughout the organisms, remained quiet and did not become flagellated. The flagella broke from the flagellated forms and struggled about among the corpuscles, finally approaching the quiet spherical forms. One of them entered, agitating the pigment greatly, sometimes spinning the ring about; the rest were unable to enter, but swarmed about, beating their heads against the wall of the organism. This occured after from thirty-five to forty-five minutes. After the entrance of the flagellum the organism again became quiet and rather swollen; but although in the two instances in which this process was traced the fertilised form was watched for a long time no form analogous to the vermiculus was seen.

Note by Professor WILLIAM OSLER.—These observations of Dr. MacCallum are of very great interest and importance, and illustrate another step in our still scanty knowledge of the life-history of the malarial parasite. During the past two years Dr. MacCallum and Dr. Eugene Opie have been studying the hæmatozoa of birds, particularly with a view of ascertaining points in the life-history which might be suggestive in the study of the hæmatozoa of malaria. Their paper will appear in an early number of the *Journal of Experimental Medicine*.

Baltimore, U.S.A.

CONTRIBUTION TO THE SURGICAL ANATOMY OF THE TYMPANIC ANTRUM.

BY R. LAKE, F.R.C.S. ENG.,

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THOSE who have frequent occasion to open the tympanic antrum must constantly be forcibly reminded of its irregular position, especially as affects its relationship to the lateral sinus; those with the tympanum itself and also the facial nerve being fairly constant and only affected by the size of the antrum, whether that size be the result of disease or not. The results of careful measurements of twenty-eight temporal bones not affected with disease has enabled me to form a series of sketches, each typical of a certain number of sections. This number, whilst sufficiently large to give a fair approximate idea of the relationship of the sinus and antrum, is far too small to enable one to assume with any degree of certainty that it is correct.

The sections are cut horizontally, passing through the suprameatal fossa, which lies immediately above and behind the suprameatal spine, and is probably the best guide and landmark for the antrum which we possess. Each section has been carefully traced, these tracings compared by being superimposed. In this way the groups were formed, and a typical section was drawn for each group. In the figures an asterisk marks the position of the suprameatal fossa. These original groups are six in number, and may advantageously be further reduced into three main divisions—viz., (1) Those in which the groove for the sinus lateralis must be opened and the sinus exposed during the mastoid operation; (2) those cases in which the antrum is operated on—the probabilities are that the sinus will be exposed, yet it may escape; and (3) consists of those cases in which the sinus will not come into view during the operation. The bones used were all from adult skulls, children's and young adults' and diseased bones not being used. Group 1 is illustrated by Fig. 1, which shows the result of two sections; Group 2 is illustrated by Fig. 2, which shows the result of two sections; and Group 3 is illustrated by Fig. 3 (nine sections), Fig. 4 (six sections), Fig. 5 (seven sections), and Fig. 6 (two sections).

From these figures one would expect to expose the sinus about once in six operations, and by reference to my case-book I find that my own give a proportion or ratio of one in six. Besides these types certain exceptional varieties occur, notably those in which as a result of long standing chronic suppurative ostitis media the antrum is almost or entirely obliterated. In such cases the usual advice in text-books is not to pursue our researches to a greater depth than 15 mm.[1] This advice is certainly based on careful anatomical measurements, but apart from the difficulty of such measurements

[1] Politzer's Diseases of the Ear, English edition, 1884, p. 513.

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there is a better guide now that most operators remove the posterior superior bony wall of the meatus, and that is to be careful not to proceed deeper than the level of the internal tympanic wall. Again, in cases of disease of the antrum where the cavity is of such a large size, as in Figs. 5 and 6, the curette must be used with considerable care on the anterior wall of the cavity, for having had a facial paralysis in such a case after operation which took some time to pass away, I examined the anterior wall of several such

FIG. 1.

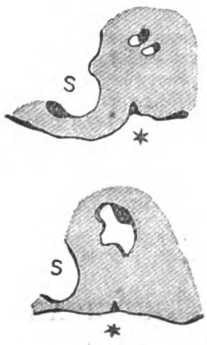


FIG. 2.

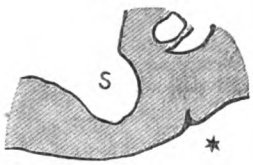


FIG. 3.

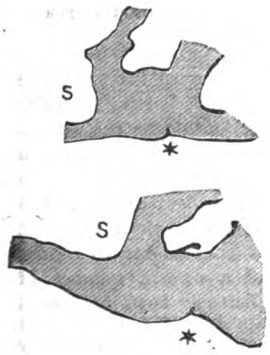


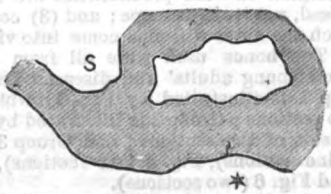
FIG. 4.



FIG. 5.



FIG. 6.



Figs. 1, 2, 3, 4, 5, and 6 represent the six primary groups of mastoid antra subdivided as above. S, Lateral sinus (at posterior end of section). * Suprameatal fossa. The antrum is not complete is Figs. 2, 3, and 5.

specimens and in more than one I found the facial canal imperfect for a certain distance or with an extremely delicate bony wall.

The act alone of exploring the sinus is one which, provided antiseptic precautions are taken, seems to be entirely without danger, and even where the sinus itself is opened careful plugging with iodoform gauze controls the bleeding and in no case has any ill effect been recorded, though the same cannot be said for puncture of the sinus with the drill. The use of the electric or dental burr is likely to reduce the number of times the sinus is exposed, as one can work with a straighter, that is a less funnel-shaped, wound in the bone, and it is usually due to to this alone that such accidents occur if the operator is working with a knowledge of the general position of the cavity. Continuing the relative measurements as far as one can from these sections, maintaining the original reservation that such a number can only give approximate accuracy, one finds the average depth of the attic to be a little over three-tenths of an inch, taken in a direct line from the point of election, and the distance of the nearest point of the sinus 0·48 in. on an average, with 0·2. in. as a minimum and 0·7 in. as a maximum; this last measurement demonstrates clearly that exposing the sinus by a continuation of a previous antrum operation is, as a rule, not only the proper surgical procedure, but the quickest route to the sinus, as the distance of the sinus is often less than a quarter of an inch from the suprameatal fossa.

Harley-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON THREE CASES OF FRACTURE OF THE CORONOID PROCESS OF THE ULNA.[1]

BY W. GIFFORD NASH, F.R.C.S. ENG.

OWING to the influence of Hamilton's writings the occurrence of this fracture is supposed to be extremely rare. Erichsen, in the ninth edition of his "Science and Art of Surgery," says that "it is one of the rarest accidents in surgery." Keating, in his "Cyclopædia of the Diseases of Children," says that he only knows of records of four cases in children—viz., those of Hamilton, Duer, Liston, and Annandale. In Hamilton's case, a boy, aged nine years, had a backward dislocation of the elbow, easily reduced, but recurring as easily. In Duer's case the fragment could be grasped between the thumb and the finger. Liston gives no details of his case. Annandale, whilst excising an old unreduced backward dislocation of the elbow, found the tip of the coronoid process broken off. Sir Astley Cooper, in his work on "Fractures and Dislocations," relates two cases. Case 1 was a man who fell and hurt his elbow; there was a dislocation of the ulna backwards, which recurred whenever the arm was extended. Case 2 was found in a dissecting-room subject and was complicated with fracture of the external condyle. Mitchell[2] records a case of backward dislocation of the ulna, in which he believed the coronoid process to be fractured, as the ulna easily slipped out of place when the elbow was flexed. I have reason to believe that fracture of the coronoid process is not such a very rare condition, as I have seen three cases which could not be diagnosed as anything else.

CASE 1.—A boy, aged twelve years, came to the casualty department at the Middlesex Hospital on Sept. 28th, 1888, having fallen on his outstretched hand and hurt his elbow, which, he said, moved in and out. On examining the elbow there was no dislocation present, but a swelling over the insertion of the brachialis anticus. On flexing the elbow crepitus could be felt, and whilst trying to determine the origin of this both bones suddenly became dislocated backwards. The dislocation was just as easily reduced and reproduced. There was no injury to the condyles or shaft of the humerus or to the olecranon process.

CASE 2.—A boy, aged eleven years, fell off a wall on to his left arm and hurt his elbow. Next day, Oct. 18th, 1890, he was admitted to the South Devon Hospital, Plymouth, where I was house surgeon. When seen the left elbow was much swollen and deformed, there being dislocation of the ulna and radius backwards and outwards. The head of the radius rotated with supination and pronation. The olecranon

[1] Read at a meeting of the Bedford Medical Society on Oct. 28th, 1897.
[2] Brit. Med. Jour., vol. ii., 1894.

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process was uninjured. Both the condyles were sound and continuous with the shaft of the humerus. Crepitus was felt on moving the elbow and during reduction of the dislocation. Whilst flexing and extending the joint the dislocation was easily reproduced just as in the previous case.

CASE 3.—On Sept. 22nd, 1897, a boy, aged ten years, fell from the parallel bars in a gymnasium and, it is supposed, fell on his forearm. When examined there was found a wound over the inner side of the right elbow, through which the internal condyle projected. Both bones of the forearm were dislocated backwards and outwards. Chloroform was given and the dislocation reduced. It was easily reproduced. A finger in the wound explored the joint and found the coronoid process torn off the ulna and attached merely to the brachialis anticus.

These three cases were all produced by falls on the hand or forearm. In each there was dislocation backwards of the ulna and radius, the dislocation on being reduced being easily reproduced. Crepitus was present in the first two cases combined with swelling over the insertion of the brachialis anticus. The other bony prominences of the elbow were uninjured. In the third case, which otherwise exactly resembled the first two, the finger in the joint was able to determine the nature of the injury. These cases I am confident were all examples of this so called rare injury, which I feel sure will more often be diagnosed now that we have the Roentgen rays to help us.

Bedford.

A NOTE ON THE USE OF ANTI-STREPTOCOCCIC SERUM IN PUERPERAL FEVER.

BY C. J. STANSBY, M.D. BRUX.

CASE 1.—On Aug. 20th I was called to see a woman, the mother of nine children, who had been delivered by a midwife eight days previously. Her temperature was 102° F. and her pulse was 110. Milk and discharges were very scanty. There were no lesions of the passage or perineum. The case was clearly one of infection, as the midwife had had other cases in her practice quite recently. I ordered four grains of quinine, $\frac{1}{100}$ gr. of sulphate of atropia, and $\frac{1}{8}$ gr. of sulphate of morphia every four hours, with a vaginal douche. On the 21st the temperature was 103° and the patient became delirious and tried to get out of the window. On the 22nd the temperature was 105° and the pulse was 140. She was quite unconscious with muttering delirium. At 7 P.M. Dr. K. Lawson saw the patient with me and suggested a trial of the anti-streptococcic serum (Burroughs, Wellcome, and Co., dry); 18 c.c. were injected in the gluteal region, and the pills continued. On the 23rd I found that the patient had slept most of the night. The temperature at 9 A.M. was 101° and the pulse was 92; she was quite conscious. At 9 P.M. the temperature was 105·4° and the pulse was 120. A second injection of 10 c.c. was administered. On the 24th at 9 A.M. and 9 P.M. the temperature was 103° and the pulse was 100. A third injection of 10 c.c. was given. On the 25th the temperature at 9 A.M. was 100·5° and at 9 P.M. it was 103·5°; on the 26th at 9 A.M. and 9 P.M. it was 102°; on the 27th it was 100·5°; on the 28th it was 100·5°; and on the 29th it was normal. Convalescence was retarded by the formation of an abscess in the gluteal region. The chief point is that after the first injection the patient slept well, awoke conscious, and although the temperature subsequently rose to 105·4° she never lost consciousness, but always said she felt better.

CASE 2.—On Sept. 16th I was called to see a Kaffir girl, aged nineteen years, who had been delivered nine days previously of her first child. Her temperature was 104° F. She was noisy and delirious. Milk and discharge were entirely suppressed; a vaginal douche and pills, as in the first case, were ordered; and I gave an injection of 20 c.c. of the anti-streptococcic serum. On visiting the patient three days later I found her quite conscious. The temperature was 100° and she has, I hear, quite recovered.

In the first case, in absence of directions, the injection was made deeply into the gluteal region and resulted in an abscess; in the second case the injection was made under the skin between the shoulders without any subsequent trouble. These cases having been so satisfactory I shall on the first opportunity make further trial of the remedy.

Beaconsfield, South Africa.

PNEUMOTHORAX CAUSED BY DIRECT VIOLENCE WITHOUT FRACTURE OF THE RIBS.

BY WALTER KIDD, M.D. LOND.

THE following case seems to be worth recording on account of the rarity of the causation.

On June 2nd, 1897, a man, aged twenty-one years, fell backwards from the footboard of an omnibus to the road with his spine flexed. He must have fallen directly on the left side of his back, striking this part only, no other bruises or injuries being found elsewhere. He felt a sharp pain in the left hypochondriac region and left lower ribs, but was able to proceed a considerable distance to a volunteer drill, in which he took part, but after a few minutes he felt too ill to continue and returned home. That night he suffered great pain in the region mentioned and his breathing was embarrassed.

I saw the patient first sixteen hours after the accident and found him seriously collapsed. His skin was cold and clammy, his pulse was rapid and "running," and the respirations were hurried and painful, the pain being referred chiefly to the region of the spleen. After a full dose of opium he became easier and could be examined. There was no external sign of injury, no fracture of the ribs, and no hæmoptysis. The left side of the chest was hyper-resonant in front up to the clavicle and behind to the spine of the scapula; the heart-sounds were feebly audible in the epigastrium and cardiac impulse was faint; the respiratory murmur was absent except in deep inspiration, when it was markedly amphoric, and occasional metallic tinkling could be heard; tactile and vocal fremitus were barely perceptible. Under opium and stimulants the urgent symptoms passed off, no more pain occurred, and in three days from the date of the accident there was dulness at the base of the left lung posteriorly and marked splashing sound in succussion. It was evident that pneumothorax, with fluid in the pleural cavity, was present.

The patient's recovery was slow, and on July 5th, about a month from the date of the accident, there was still very deficient expansion of the lung and some pleural fluid was present with pyrexia, the temperature ranging from 101° to 102° F., and the apex-beat was with difficulty made out to have come within an inch of the normal position. On Aug. 17th the lung was fully expanded and little or no dyspnœa remained, though the heart was still displaced inwards. On Sept. 15th all symptoms had passed away, the lung was normal as to percussion and auscultation, and the apex-beat was at the usual spot.

This case appears to have been one of injury to the thorax without fracture of the ribs, causing rupture of some vesicle or vesicles of the lung in a healthy subject, and, if so, is one of a class rarer than those in which rupture of vesicles takes place in straining. It may be suggested that a small vomica near the surface had ruptured, but of the existence of such there was no evidence before the accident and none also after recovery had taken place.

Blackheath.

THE NURSES' HOME AT THE SWANSEA HOSPITAL.—The foundation-stone of the Nurses' Home, which is to be erected adjoining the Swansea Hospital in commemoration of the Queen's Jubilee, was laid on Nov. 3rd by the mayor (Councillor Watkins). Mr. E. Davies, the chairman of the hospital board, said that it was estimated that the home would cost £2250, of which at present only £800 had been subscribed, but the building would be completed by means of funds available from the Guesdon bequest.

FALMOUTH WATER-SUPPLY.—The question of the water-supply came before the town council at Falmouth on Nov. 4th. Dr. W. K. Bullmore, the medical officer of health, reported that the closest supervision would have to be exercised to prevent polluted water from finding its way into the reservoir. The manager of the waterworks, replying to the council's demand for efficient filtration, said that it was proposed to promote a Bill enabling the corporation to purchase the waterworks, and under these circumstances the company did not see their way to move in the matter.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

TWO CASES OF INTERSTITIAL HERNIA.

(Under the care of Mr. A. E. BARKER.)

IN 1835 Dance gave a short account of interstitial inguinal hernia, and in the following year a much fuller description of this condition was given by Goyrand.[1] In the form which is by far the most common it is associated, as in the second case recorded below, with an undescended testis. This may be explained by saying that the testis retained in the canal obstructs the downward extension of the processus vaginalis, and allows it to extend upwards and outwards between the two oblique muscles. The connexion of this form of hernia with the retention of the testis was conclusively shown by Tillaux[2] and by Dupuy.[3] Interstitial hernia is decidedly rarer in women than in men. For the notes of these cases we are indebted to Mr. Douglas Drew, surgical registrar.

CASE 1.—A woman, aged fifty-seven years, was admitted into University College Hospital on Feb. 5th, 1897, complaining of swellings in both groins. The patient was a widow, having been married twice. She had never had any children. Her occupation had been ordinary household work, but soon after her first marriage she did a good deal of hard lifting of heavy articles; since that time her work had been light. She had suffered at times from chronic bronchitis, from sciatica, and from influenza. Her family history was unimportant. She had been ruptured on the right side twenty years previously, but did not remember any definite cause for it. The rupture was easily kept up with a truss and gave her no pain until about two years before admission. About three years after the appearance of the rupture on the right side a rupture occurred on the left. This swelling was much harder than the one on the right and gave her much more pain. A double truss sufficed to keep the ruptures up until about a year before admission, when both came down frequently, even when the truss was on, and this was accompanied by a great deal of pain, sometimes necessitating prolonged rest in bed. A month before coming to the hospital both ruptures came down to an unusual extent and had to be reduced by her medical man. Ever since this she had been confined to bed. She had had no sickness but some nausea; her bowels had been made to act regularly by the aid of aperients. On admission a hernia was found in each inguinal region. The right was the larger, and the swelling extended into the right labium; the external ring was enlarged, and the structures superficial to it seemed to be somewhat atrophied by pressure. This hernia on the right side was readily reducible. Besides extending along the inguinal canal into the labium there was an extension upwards and outwards from the internal ring as far as the iliac spine, and this was especially noticeable when pressure was made over the lower part of the inguinal canal so as to prevent the hernia passing downwards. This upward extension of the hernia was seen to be interstitial, and after reduction the border of the internal oblique muscle could easily be felt. The hernia gave a good impulse on coughing, and the contents seemed to be nothing but bowel. On the left side was a smaller inguinal hernia, which also extended into the labium; it was reducible, but after reduction some thickening could be felt at the external ring which was noticeably enlarged.

On Feb. 11th Mr. Barker operated. The patient having been anæsthetised with gas and ether an incision was made over the right inguinal canal, and extended outwards to within an inch or so of the anterior superior iliac spine. The aponeurosis of the external oblique muscle and the external ring were exposed and laid open. The lower portion of the sac was easily shelled out, and the interstitial portion was very evident when the patient coughed. The two portions of the sac were divided by a well-marked groove, caused by the deep epigastric artery and vein crossing the centre. The lower part of the sac was pushed under the artery so that the whole sac was on the outer side of that vessel. The round ligament was divided and the sac, having been separated as far as its neck, was ligatured. The dissection was rather prolonged. The operation proceeded by Bassini's method; six deep sutures were necessary to close the internal oblique muscle and eight to close the external oblique muscle; a continuous suture was applied to the skin. On the next day the patient complained of severe abdominal pain and it was necessary to draw off the urine. No flatus had passed. The temperature was 100° F. The pain gradually diminished and the temperature fell until Feb. 20th, when the stitches were removed, the wound having healed completely. The catheter was needed for a few days longer. On March 4th Mr. Barker performed a radical cure by Bassini's method on the inguinal hernia on the left side. The wound healed by first intention, the temperature barely touching 100° on the 5th. The patient was discharged well on March 27th, 1897.

CASE 2.—A boy, aged twelve years, was admitted into University College Hospital on Oct. 27th, 1896, for a swelling in the right groin. He had always been in good health, though badly nourished. His mother had only noticed the swelling in the groin lately, but the patient said it had been there as long as he could remember. On admission an oval swelling about four inches in length in the right inguinal region was found; its long axis was obliquely placed and lay parallel to, but above, Poupart's ligament. By pressure the swelling was readily reduced through the internal abdominal ring, and after reduction the finger when placed over the internal ring slipped in as though the latter were almost patent, and a small oval mass was felt, probably the testis which was absent from the right side of the scrotum. On coughing the hernia protruded and extended upwards and outwards beneath the aponeurosis of the external oblique; it contained bowel, being resonant on percussion. The hernia did not extend at all downwards towards the scrotum.

On Oct. 29th Mr. Barker operated, the patient being under the influence of chloroform. An incision two and a half inches long was made over the inguinal canal and prolonged upwards and outwards in the direction of the fibres of the external oblique muscle. This muscle was exposed and slit up and the hernial sac was laid bare; its limits were defined and some long muscular filaments, evidently from the cremaster, were dissected off it; the mouth of the sac was large and came out through the internal ring; the sac itself was large and thin-walled and it spread out on every side from the mouth, so that it extended a certain distance towards the external ring and approached still more nearly the anterior superior iliac spine lying between the external and internal oblique muscles. The undescended testis was removed and the neck of the sac was tied in two places, the sac was cut off and the stump returned within the internal ring, which was then closed with five stitches. The incision in the external oblique muscle was sutured and the superficial wound was closed by a continuous stitch. The patient rapidly recovered from the operation, only a slight rise of temperature occurring and the wound healing by first intention. On Nov. 15th he left the hospital.

Remarks by Mr. BARKER.—These are the only cases of interstitial hernia it has fallen to my lot to operate on among some hundreds of operations for hernia. The only difficulty encountered was in the thinness of the sac in each case, which required care. In Case 1 the two portions of the sac separated by the epigastric vessels were long and sausage-shaped, with a common neck. In both cases the result has been excellent, Bassini's operation having in both been the one employed.

[1] Mémoires de l'Académie de Médecine, 1836, p. 14.
[2] Bulletin de Thérapeutique, March, 1871.
[3] Thèse de Paris, 1877.

KENT AND CANTERBURY HOSPITAL.

A CASE OF CATHETER FEVER; DEATH IN TWENTY HOURS; NECROPSY.

(Under the care of Dr. T. WHITEHEAD REID.)

URETHRAL fever is ascribed to two entirely different causes. By some surgeons it is considered to be due to a reflex irritation of a kidney affected with acute or chronic interstitial nephritis, while others attribute it to the absorption of micro-organisms from the urethra. It is probable

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that each of these suggested causes may suffice to give rise to urethral fever, but it has been customary to look upon those cases where death follows in a few hours after some slight urethral procedure, such as the passing of a catheter, as due to reflex action, as it is thought that the fatal result is too rapid for it to be due to sepsis; but Albarran has reported a case of internal urethrotomy in which the bacillus coli communis was found in the blood of the patient, who died twelve hours after the operation. On the whole, it may be said that the majority of the cases are due to septic infection, but that a few may be caused by reflex irritation.

A man, aged forty-seven years, was admitted to the Kent and Canterbury Hospital on Sept. 24th, 1897, for stricture. He first began to have trouble in passing urine ten years ago while in the army in India, where he served for fourteen years, and was several times treated for venereal disease and fever. Two years ago his stricture was dilated up to No. 8, but he neglected to continue the use of the catheter, and the difficulty in passing urine soon recurred. During the previous three months several attempts had been made to pass the catheter without success and without any untoward after-symptoms, until subsequently to an attempt on Sept. 1st he had a somewhat severe rigor, and on the next day commenced with a slight attack of facial erysipelas, which passed off satisfactorily. On admission the patient appeared to be in good general health. His urine was of specific gravity 1018, acid, and contained neither pus nor albumin. On the 25th, at 1 P.M., an attempt to introduce a catheter was made, several varieties of small-sized gum elastic and silver instruments being used, but without any of them reaching the bladder. The attempts were continued in all for about ten minutes, and were followed by no hæmorrhage from the urethra. At 3 P.M. he commenced to shiver and vomited after taking some brandy. At 3.45 P.M. the temperature was 104° F. He again vomited at 4.15 P.M., and passed fæces and urine involuntarily. He now became very restless and the pulse began to fail. At 5 P.M. the temperature had reached 106·6°. He was unconscious, and the pulse was imperceptible at the wrist. A hypodermic injection of strychnine and ether was given and an enema containing two ounces of brandy in six ounces of hot water, and he was cold-packed. He soon recovered consciousness as the temperature fell. The pulse also improved. At 6 P.M. the temperature was again rising and had reached 105 4°. Tepid sponging and cradling were ordered, with a repetition of the hypodermic injection. The temperature now gradually fell and at 11 30 P.M. was 100°. The pulse, however, was still only just perceptible at the wrist; otherwise he seemed to have got over the attack, and it was hoped that no further unpleasant development would arise. During the small hours of the morning, however, the heart again failed and the temperature steadily rose to 103·4°, and in spite of stimulants he died at 7 A.M. The urine after the rigor commenced was all passed involuntarily into the bed, but a specimen obtained from the bladder after death was loaded with albumin and showed 0·5 per cent. of urea.

Necropsy.—At the post-mortem examination (permission for which could unfortunately not be obtained until thirty hours after death) a long stricture in the spongy and membranous portions of the urethra was observed, with dilatation and hypertrophy of the urethra and bladder behind. There was no laceration of the mucous membrane of the urethra or dilatation of the ureters. The kidneys weighed eight ounces and presented no naked-eye changes save slight congestion. Decomposition was too advanced for microscopic examination to be undertaken. The heart weighed twelve ounces; the muscle was pale and flabby and the endocardium was deeply stained. None of the other viscera presented anything abnormal with the exception that there were a few petechiæ under the visceral layer of the pleuræ and some congestion of the bases of the lungs.

BULAWAYO HOSPITAL.

A CASE OF ABSCESS OF THE LIVER; OPERATION; RECOVERY.

(Under the care of Dr. FRANK ARNOLD, Resident Surgeon.)

WE cordially welcome the following communication from so outlying a portion of the British Empire as Bulawayo, and we gladly publish the case, as it is an excellent example of the good results which follow careful operative procedures in abscess of the liver. In THE LANCET of Oct. 2nd, 1897 (p. 858), we printed notes of two cases of hepatic abscess, treated by trans-thoracic hepatotomy, which resemble in many respects Dr. Arnold's case.

A man, aged thirty-four years, suffering from dysentery, was admitted to the Bulawayo Hospital under the care of Dr. F. Arnold on May 23rd. At the time of admission there was nothing peculiar about the attack beyond some slight pain in the right hypochondrium; this pain disappeared after a few days. On June 13th the patient was sufficiently well to be allowed up, and he continued to get up until the 19th. On that date, however, the temperature rose from normal to 101·4° F.; the bowels were loose, but not typical of dysentery; the pulse was frequent, soft, and regular; there was no rigor, the tongue was clean, and he was free from pain of any kind. These symptoms continued up to the 29th, the temperature rising at night to about 101° and falling to normal in the morning. The chest was repeatedly examined, for the patient began to waste rapidly and night sweats were noticed. On the evening of the 29th there was found one tender spot to pressure over a small area about the size of a florin in the ninth intercostal space; the skin here was not reddened, there were no dilated cutaneous veins, no œdema of the skin, and no flattening or bulging of this space; the liver was not enlarged. For the first time the patient complained of pain in the right shoulder, and there was some cough without any appreciable expectoration. Dr. Arnold suspected there might be a small collection of pus in the liver, and on the following day he inserted an aspirating needle in the ninth intercostal space slightly anterior to the line of the posterior axillary fold, and at a depth of one and a quarter inches reached a small collection of pus. All he could succeed in evacuating were about two drachms of curdled matter, looking very much like a mixture of strawberry cream and chocolate. The patient now improved somewhat; the evening rise in temperature became less, the bowels were moved once only instead of from two to four times in the twenty-four hours, the pain and cough were relieved, and Dr. Arnold would have felt disposed to think that he had emptied the abscess cavity had not the pulse still continued too frequent. On July 8th the temperature rose in the evening to 101 8° and continued to rise each evening subsequently to about 100° or 101°. On the 11th the diarrhœa again became prominent, and on the 12th Dr. Arnold aspirated in the same spot as before and drew off seven drachms of precisely similar pus, which, it may be added, was on both occasions quite free from smell. There was still no enlargement of the liver to be detected, but the superficial veins over the right side of the chest were more clearly seen than on the left, otherwise the appearance of the skin was normal. On the 17th it was decided to drain the abscess cavity, and Dr. Ernest Head, of Bulawayo, kindly gave chloroform. In operating in this case Dr. Arnold was guided by a description of a case under the care of Mr. Godlee.[1] Dr. Arnold resected about one and a quarter inches of the tenth right rib immediately anterior to the line of the posterior fold of the axilla, and as soon as he had removed this piece of rib there was a distinct firm bulging into the open space so formed. He divided the succeeding structures carefully until he considered that he had reached a depth which justified him in supposing that he was touching the diaphragm; the pleural cavity was not opened. It was then his intention to suture the diaphragm to the margin of the skin incision before proceeding any further, but the patient's condition did not allow of a prolonged operation, so he satisfied himself by the use of an exploring syringe that he was immediately over the abscess and opened it freely, evacuating about half a pint of pus with characteristics as before. On putting his finger into the abscess cavity he found that it was situated in the posterior part of the right lobe of the liver immediately under the diaphragm, and as far as he could judge was single. A large drainage tube was inserted and the case was treated in the ordinary way, the cavity being douched twice a day with warm boric acid and permanganate of potassium solutions, and wood-wool pads applied as dressing. With the exception of one or two evening rises of temperature, which readily yielded to quinine, and were probably malarial, the temperature afterwards ran a normal course; but the bowels kept loose and the pulse frequent, although the wound was perfectly healthy and the discharge free from smell. It was concluded that the patient was not yet free from dysentery and he was limited to a strictly milk diet and the large bowel was washed out daily with a solution of quinine

[1] Jacobson's Operations of Surgery, p. 946, third edition.

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(1 in 2000), about a couple of pints being used at each irrigation. Five or six days of this treatment removed the last symptom of dysentery and reduced the pulse-rate to normal. Two months after the operation the patient left the hospital in excellent health with merely a scar along the course of his tenth right rib to remind him of his abscess.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Cystic Tumour of the Bladder containing Calculi.—Cases of Mesenteric Cyst in Young Children.

A MEETING of this society was held on Nov. 9th, the President, Dr. HOWSHIP DICKINSON, being in the chair.

Mr. P. J. FREYER read a paper on an Obscure Cystic Tumour of the Bladder containing Two Calculi; successful Removal by Suprapubic Cystotomy. The patient, an Anglo-Indian, aged thirty-six years, had suffered for ten years from obscure urinary symptoms, which he dated from a fall in the cricket-field in 1886, by which he hurt his loins. The injury was followed by pain in the region of the right kidney, intermittent hæmaturia, pyrexia, and cystitis. The most prominent symptom for several years latterly was that the patient could never empty his bladder in the natural way. With much straining he could pass two or three ounces of urine, when the stream stopped, and he could only empty his bladder by passing a catheter or by lying down. High fever accompanied by much pus in the urine periodically occurred. When free from fever his urine was of a pale straw colour and of low specific gravity. The patient was extremely thin, weak, and depressed from long suffering. He was repeatedly sounded by various surgeons, but no stone was felt. Under these circumstances he was sent home in the autumn of last year. Mr. Freyer saw the patient first on Sept. 24th, 1896, and carefully sounded him, but found no stone. He suspected the presence of a tumour of the bladder which obstructed the flow of urine by falling against the neck of that viscus. He arrived at this conclusion through having seven years ago successfully removed, by a perineal opening, a pendulous fibroid tumour of the bladder from a patient who had suffered from this particular symptom. The cystoscope confirmed the suspicions, at once revealing a smooth tumour the size of a walnut, with thick rounded pedicle growing from the right side of the base of the bladder. On Sept. 30th the bladder was opened suprapubically, and a tumour was felt by the finger the size of a walnut, smooth on the surface except at the apex, where a small papilloma was growing from it, slightly bi-lobed, and attached by a round tense pedicle to the bladder wall near the right ureteral opening. On twisting off a portion by forceps and then drawing the tumour into the abdominal wound it proved to be cystic, and contained two uric acid calculi, one the size and shape of a nutmeg, the other the size of a large pea, the two weighing forty-two grains. The tumour had been rendered tense by the calculi and contained urine, but was now lying flaccid, like the finger of a glove, inside the bladder. The tumour was again drawn out into the wound, the pedicle was clamped, the tumour was excised, and the pedicle cauterised. A needle armed with silk was then passed through the pedicle behind the clamp and tied in two parts, taking the ends of the ligature out through the abdominal wound, and dressed as usual. Perfect recovery ensued, the ligatures on the pedicle coming away on the tenth and twelfth days respectively, and the wound completely closing within a month. The patient had had no urinary symptoms since, has put on flesh, and twelve months after the operation was in perfect health. Special attention was directed to the following points. 1. The nature and origin of the tumour and how the calculi got inside it. Microscopically it was found to be a single-walled cyst composed of fibrous tissue, and covered both inside and outside by transitional epithelium such as is found in the bladder and ureters. It was probably formed by the calculi passing down from the kidney as far as that portion of the ureter which passes obliquely through the bladder wall, stopping short of the ureteral opening; that, impelled onwards by the force of the urine, they bulged the bladder and ureteral walls inwards, and that in this way eventually a pendulous cystic tumour containing the calculi, and communicating by a narrow opening with the ureter, was formed. In the operation the cyst and contents were excised, the ureteral wall repaired, and the ureteral opening left untouched and patent. 2. The advantage of the cystoscope for diagnosis in obscure urinary disease. 3. This was, as far as Mr. Freyer was aware, the first instance in which a ligature has been applied to the pedicle of a bladder growth. The result suggests the more extended use of the ligature in tumours of the bladder and prostate for checking hæmorrhage, &c.; but care must be taken to bring the ends of the ligature out through the wound so that eventually they may come away, and not cut them short for fear of a phosphatic concretion forming on their ends.—Mr. A. E. BARKER agreed that the pathology of this case was that given by Mr. Freyer—namely, that the cyst was due to the bulging out of an obstructed ureter. He was familiar with cases in which calculi block the orifice of the ureter and cause a swelling and protrusion of the mucous membrane, giving rise to the appearance of a tumour with a central dimple corresponding to the ureteral orifice. But this was the only case he knew of in which the orifice could not be seen. He remarked on the absence of renal symptoms and asked whether there were any signs of irritation or distension of the kidney such as occur after the ureter has been occluded by a ligature.—Mr. MORGAN thought it unusual that the symptoms should have existed for so long without leading to more disturbance of health. Assuming the explanation of the retention by the blocking of the urethral orifice by the pendulous cyst to be correct, it was difficult to see what happened to the urine from the affected ureter at the periods when clear urine was being passed from the bladder. He was inclined to think that the ligatures were superfluous after clamping and cauterisation. He quoted one case in which a stone became impacted in the posterior wall of the ureter just as it enters the bladder. The stone was buried in exuberant granulations and was not discovered at the first exploration of the bladder, but at a second operation an incision was made into the mass and a stone was found in a cyst just below the orifice of the ureter.—Mr. HURRY FENWICK mentioned a case which had been published by Sir Thomas Smith in which a similar protrusion cyst from the ureter was found post mortem. In that case, however, the cyst did not contain calculi. He did not feel quite certain that the explanation which had been given of the tumour in the present case was the only possible one. It could be seen by the cystoscope that in almost all cases in which there was a calculus in the ureter a prolapse of the ureteral mucous lining took place of a similar character to the prolapse of the rectum in children. This prolapse often attained a considerable size and had a tendency to turn upwards. Was it not possible that Mr. Freyer had removed a cystiform protrusion of this kind? He thought that the ligature of the pedicle involved the grave risks of septic absorption, of hæmorrhage when the ligatures separated, and of leaving a sore which was apt to heal slowly and to become crusted over with phosphates. He preferred to clamp, cut off cleanly, and cauterise.—Mr. FREYER, in reply, said that while the patient was under his care there were no signs of hydronephrosis. Possibly the affected kidney had become totally destroyed at an earlier date. He also would prefer as a rule not to use ligatures, but at the time of the operation he did not know with what cavity the cyst communicated, and so he thought it wiser to ligature it securely off.

Mr. F. S. EVE read a paper on Mesenteric Cysts, with two cases in young children. The first case was that of a male infant, aged eleven weeks, who was admitted with a very freely moveable fluctuating tumour on the right side of the abdomen, which was diagnosed as a mesenteric cyst. He had gradually wasted since birth, and had constantly suffered with diarrhœa and vomiting. On May 1st laparotomy was performed. A cyst the size of a Tangerine orange was found in the free margin of the mesentery, the small intestine coursing over it. Two ounces of turbid serum were removed by aspiration. The cyst was attached to the abdominal wall and was opened a few days later and a drainage-tube inserted. Convalescence was rapid and uneventful, a fistula being left. The child appeared to have recovered, but on June 6th, nearly six weeks after the operation, was suddenly attacked with convulsions and collapse and died in a few hours. No cause for this was discovered at

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the necropsy. There was a slight organic narrowing of the intestine where attached to the cyst, probably due to arrest of development. The second case was that of a male child aged three and a half years, who was admitted with acute intestinal obstruction of four days' duration; the abdomen was distended, and the patient was much exhausted by incessant vomiting. Dulness was noticed in the right lumbar region, but the tumour was obscured by distended coils of intestine. Laparotomy was performed; and a large cyst containing thirty-two ounces of serous fluid occupied the right flank; it was situated in the free margin of the mesentery and compressed the intestine. The cyst was excised and the mesentery sutured. Death occurred from shock and as a result of the previous obstruction nine hours after operation. At the necropsy there was no peritonitis. The cyst was found to be situated seven feet above the ileo-cæcal valve. These two cases illustrate the typical symptoms of mesenteric cyst in the earlier and later stages. The first had symptoms resembling gastro-enteritis with emaciation, the second typical intestinal obstruction without definite premonitory symptoms. In the first case all the physical signs of mesenteric cyst were well marked with the exception of the presence of a band of resonance over the tumour. In the second case the tumour was entirely obscured by coils of distended intestine; dulness on percussion was the only indication of its presence. Reference was made to the various abdominal tumours which may be mistaken for mesenteric cyst and a classification of mesenteric cysts was given, and it was pointed out that these two cases belonged to a group of lymphatic or serous cysts which were supposed to originate in the lymphatic glands of the mesentery. The cyst wall in the first case contained much unstriped muscle tissue. This was also observed in a specimen in the Museum of the Royal College of Surgeons of England. The fluid was albuminous and contained cholesterine. References were also made to more recently reported cases of mesenteric cyst possessing unusual characters. As regards treatment Mr. Eve held that drainage after attaching the cyst wall to the parietes was preferable to excision on account of its greater safety. The former was by no means an ideal operation, and its dangers and drawbacks were pointed out. The literature of the subject showed the rarity of mesenteric cysts in children.—Dr. H. D. ROLLESTON said that in the first case the microscopic appearances suggested that the cysts might have arisen from intestinal diverticula such as were occasionally present in the upper part of the large intestine. He had seen a case in which there were many small diverticular cysts at the upper part of the small intestine, and in a case recorded by a French observer there were 300 of these cysts. He thought this a better explanation than that the cysts were lymphatic retention cysts. Referring to some remarks which had been made about the position of Meckel's diverticulum Dr. Rolleston remarked that that structure did not occur in a constant position. In one case in which it had been present in an adult it was situated seventy-two inches from the cæcum.—Dr. NORMAN MOORE said that there was in the Museum of St. Bartholomew's Hospital a specimen with many small diverticular cysts along the mesenteric attachment of the jejunum. He thought that it was unlikely that a Meckel's diverticulum proper would ever become sealed off at its intestinal end.—Mr. MORGAN asked where the incision was made in operating on these cases.—Dr. R. A. GIBBONS asked for particulars of the mode of transfusion.—Mr. EVE, in reply, said that he admitted that the pathology of the cyst was not satisfactorily explained. The wall of the intestine just opposite to the cyst was quite smooth and showed no sign of any diverticulum. The incision in both cases was made in the middle line near the umbilicus. Intravenous transfusion with normal saline solution was employed.

The PRESIDENT announced that at the next meeting of the society on Nov. 23rd there will be a discussion on the Prevention of Enteric Fever, which will be opened by Dr. Vivian Poore.

MEDICAL SOCIETY OF LONDON.

Mitral Stenosis.—Cretinism.—Inoperable Tumours treated with Injections of Coley's Fluid.—Obesity.—Multiple Subcutaneous Tumours.—Employment of Rectangular Splint after Excision of the Mamma.

A CLINICAL meeting of this society was held on Nov. 8th, the President, Dr. A. E. SANSOM, being in the chair.

The PRESIDENT showed two cases of Mitral Stenosis of definite Rheumatic Origin. The first was that of a girl, ten years of age, who had had recent attacks of rheumatism. She showed marked increase of cardiac dulness both to the right and to the left of the normal area. A heaving impulse was felt with the ventricular systole over the right ventricle and not over the left. A thrill was felt to the right of the apex, but it did not terminate abruptly. There was a systolic murmur at the apex, not obscuring the first sound, which was loud and had the character of a snap or tap. A short presystolic murmur was heard internal to the apex. Dr. Sansom thought that the case illustrated an early period in the pathogenesis of mitral stenosis. He regarded it as probable that rheumatic endocarditis was still in evidence and that there was some mitral regurgitation from this cause; but he considered that the physical signs showed mitral stenosis to be the preponderating lesion. The second case was that of a young woman, aged twenty years, of poor physique, who had had rheumatic fever three times, the first in childhood and the last nine weeks ago. At the present time there was some increase of the cardiac dulness to the right and the apex beat was diffuse. A slapping first apical sound was followed by a prolonged murmur, unmodified by respiration, having its maximum to the right of the apex, fading off to the left, but was still audible at the angle of the left scapula. The aortic second sound could be heard at the apex. She had had several attacks of hæmorrhage from the stomach, not due to gastric ulceration, and there were other signs that the venous circulation was impeded, and that there was as well "starvation of the aorta." It was to this that he attributed the nervous symptoms that the patient frequently presented, as well as the stunted growth and the dyspepsia.—Dr. SEYMOUR TAYLOR expressed his opinion that practically all the cases of mitral stenosis in early life were of rheumatic origin or due to chorea, which he believed to be one of its manifestations. He thought that in the second case in addition to the physical signs which had already been mentioned as indicating the existence he could make out with his finger dilatation of the left auricle. He thought that the "snap" which was described was the relic of a murmur which could probably be reproduced by making the patient exert herself. He thought that dry-cupping was of the greatest service in such conditions, and sometimes wet-cupping or venesection was beneficial.—Dr. DE HAVILLAND HALL remarked that these cases often did not respond to digitalis at first. He usually began treatment by applying half-a-dozen leeches to the hepatic region and administering calomel internally. He agreed with Dr. Taylor as to the nature of the snap in the first case, and that the vast majority of cases of mitral stenosis in the young were of rheumatic causation.—Dr. SANSOM, in reply, said that he quite agreed with previous speakers as to the rheumatic causation of mitral stenosis. French observers were disposed to exclude rheumatism in regard to mitral stenosis and to try to drag in a tuberculous process to bolster up this doctrine; and the case would be found well stated from that point of view in Potain's "Cliniques de la Charité."

Dr. W. S. COLMAN showed a child, nine and a half years of age, who was an example of Partial Cretinism. She was now just 3 ft. high and only weighed 2 st. 2 lb. When she first came under observation, in June, 1897, she showed the following signs of cretinism: stunted growth, absence of any accessible thyroid gland, fat masses in the anterior triangles of the neck, thick lips, and puffy eyelids. There were lordosis and prominence of the abdomen. Although she had not previously been treated with thyroid extract there was an entire absence of the usual train of nervous symptoms associated with cretinism. She was alert and intelligent, being in the second standard at school, and her facial expression was bright. She had been taking three grains of the dry thyroid extract since June, and her appearance now was much less characteristic than at that time. In the four months she had grown two and a half inches. Dr. Colman thought that the escape of the nervous system was probably best to be explained on the assumption that there was an accessory thyroid whose secretion was adequate for the nutrition of the brain, but insufficient for the general nutrition of the body.—Dr. FLETCHER BEACH said that the degree of mental development in this case was very remarkable. He had never seen a case with so little mental defect or such educational capacity even after thyroid treatment, and in this case it appeared that there was no mental impairment even before the case came under treatment.—The PRESIDENT said that

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there must be many of these partial cases going about unrecognised, and it would be well to watch for them and treat them with thyroid glands.

Dr. WALTER CARR showed a case of Sporadic Cretinism treated with thyroid extract. The child was five years old when she first came under observation in February, 1896, and she then presented a typically cretinoid appearance; her height was 30 in. and her weight was 24¼ lb.; her hair was coarse and scanty; the skin was dry; there was no sweating; the hands were broad, the temperature was slightly sub-normal, and the abdomen was very protuberant; she could walk very little, could say only a few words, and took no notice; no thyroid gland could be felt. Development had been very slow, and when two years old she had only four teeth. She was given at first one 5 gr. thyroid tabloid a day, but as this caused a rise of temperature to 102° F. it was reduced to half a tabloid. Gradual improvement set in; she sweated profusely, the pulse got faster, and the temperature became normal; her weight fell at first to 20 lb., and then slowly increased, the cretinoid aspect disappeared, and the intelligence steadily improved. The dose of thyroid extract has been slowly diminished, and for the last four months she has only taken one 1½ gr. tabloid every third day. She now appears to be a healthy, intelligent child and goes to school; her height is 37½ in. and her weight 37 lb.

Mr. MANSELL MOULLIN showed two cases in which Inoperable Tumours had almost disappeared after the repeated injection of Coley's fluid. The first was a man, twenty-eight years of age, who was admitted in November, 1895, for a swelling in the groin, which he had noticed for four weeks. There was a firm, fixed, non-fluctuating swelling lying underneath the right iliac vessels, and there were several enlarged glands over it. The skin was not red or fixed and did not pit on pressure. He looked ill and there was some irregular pyrexia up to 101° F. Treatment was commenced on Oct. 4th with half a minim of Coley's fluid. There was slight reaction. The next day the injection of a larger dose was tried and there was no reaction, and injections of increasing strength were given every three or four days, reaching eight minims in February, when the treatment was discontinued. On one or two occasions he had rigors after the injections. His general condition improved and he gained 7 lb. in weight. The tumour at first increased rapidly, but in January it appeared to be acutely inflamed, and from that date it rapidly shrank, and by March only a trace of it could be felt, and since then it has scarcely altered. The second case was that of a man, forty-eight years of age, who was admitted in November, 1896, for an abdominal tumour. On examination the left flank was found to be occupied with a large swelling of irregular shape, hard, not fluctuating, and not connected with the skin or the abdominal muscles. It descended into the iliac fossa and reached upwards under the false ribs. There was no glandular enlargement and very little pain. When treatment was commenced on Dec. 16th, 1896, the tumour was rapidly growing. The injections, which were gradually increased as in the last case, were not as a rule followed by reaction; but on Dec. 29th and again on Jan. 29th, 1897, there were rigors. At the time of the latter rigor the tumour became acutely inflamed, the skin being red and œdematous, so that there was some fear of suppuration. As this subsided the tumour continued to shrink more and more until at the present time very little of it could be felt. Mr. Mansell Moullin said that there was no actual proof that these tumours were sarcomata, but that was the opinion formed by all those who had an opportunity of examining them carefully. They were certainly not gummata and there was nothing to suggest an inflammatory origin; if they had been they would almost certainly have suppurated under the treatment. He considered that the treatment was not free from danger. He had seen one case in which a feeble patient died after the second injection. Coley had published twenty cases in which the treatment had been applied successfully. He himself had tried it in nine cases altogether, and in three the growths practically disappeared, and in two the size underwent considerable diminution.—Mr. WATSON CHEYNE said that he had seen two cases in which the treatment had been employed, and in neither was there any definite good result. It was curious that the treatment appeared to benefit only cases of spindle-celled sarcomata.—Dr. COLMAN said that he had had the opportunity of examining two tumours post mortem, in one case ten days and in the other ten months after the injection of Coley's fluid. In the first there was a cavity at the site of the injections containing two drachms of yellow fluid composed of broken-down cells, and in the older case there was an ordinary cicatrix at the sites of injection. The injection had not arrested the growth of the tumour.—The PRESIDENT asked how the fluid was diluted for the administration of the smaller doses.—Mr. MANSELL MOULLIN, in reply, said that he used sterilised distilled water as a diluent. He had never had the opportunity of inspecting a tumour after injection, but in one case now under treatment a part of the tumour had sloughed out.

Dr. DE HAVILLAND HALL exhibited a man, aged forty-two years, as an example of obesity relieved by thyroid medication. The patient was admitted into the Westminster Hospital on Aug. 17th, 1896, suffering from Partial Hemiplegia with a previous history of sciatica and gout. He stated that he weighed 28 st. On Aug. 29th he was found to weigh 24 st. 11 lb. 8 oz. He was put on nitrogenous diet and given iodide of potassium. On Sept. 8th a thyroid tabloid was ordered daily. On Sept. 11th he had two daily and on Oct. 3rd three a day. His weight steadily went down to 21 st. 10 lb. 3 oz on Oct. 30th. Since his discharge from the hospital he had continued the same diet as far as possible, and had had one thyroid tabloid daily for most of the time. His weight at the present time is 19 st. 5 lb. While under treatment there was marked diuresis up to 90 oz. per diem, and the urea varied from 2·2 per cent. to 3·8 per cent.

Dr. GEORGE TEMPLETON showed a case of Multiple Subcutaneous Tumours, probably Fibro-lipomata, occurring in a healthy single woman, twenty-nine years of age. Seven years ago she noticed a small, hard, moveable swelling under the skin of the right loin, her attention being directed thither by slight pain. Since then several others had made their appearance, commencing as small, round, hard nodules, and gradually increasing, the largest now being one and a half inches across. Some twenty-four of them were scattered over the trunk and limbs, but not on the face. They were free from pain except when irritated by the clothing; the pain was then of a dull, aching character. When manipulated the smaller ones were fairly hard and moveable; the larger ones were rather more fixed and appeared to contain more soft fibrous tissue and fat than did the others. She did not know of a similar condition ever having existed in any of her relatives. Up to the present she had not consented to have any of them removed for microscopic purposes.—Dr. DE HAVILLAND HALL referred to a similar case which he had seen in a man of advanced years who ultimately developed fibroid phthisis. They gave rise to no serious symptoms and persisted for many years. He employed many remedies, including arsenic in large doses, without any result. He thought that the tumours in Mr. Templeton's case were fibro-lipomata.—Mr. F. C. WALLIS thought that sarcoma was excluded by the duration and by the condition of the patient, and he agreed that they were fibro-lipomata.—Dr. SYMONS ECCLES asked whether the hard or the soft tumours were the older.—Dr. TEMPLETON, in reply, said that the tumours were hard at first, and then appeared to undergo a fatty metamorphosis.

Mr. COTTERELL showed a patient treated with an Axillary Rectangular Splint after Excision of the Mamma, with free removal of the pectoral muscle. The arm was placed at a right angle to the trunk, instead of being bound to the side. The idea was suggested to him by Dr. Heaton, and the result in this case appeared to be most successful. He agreed that it was too early, fifteen days after the operation, to be certain that there would be no cicatricial contraction, but the patient could already use her arm to do her hair, and he thought that if she used the arm regularly there would be little risk of contraction. There had been no pain after the operation, although there was usually discomfort or cramp when the arm was bound tightly to the side.

OBSTETRICAL SOCIETY OF LONDON.

Abdominal Hysterectomy for Myoma of the Uterus.—Exhibition of Specimens.

A MEETING of this society was held on Nov. 3rd, the President, Dr. C. J. CULLINGWORTH, being in the chair.

Mr. BLAND SUTTON read a paper on Abdominal Hysterectomy for Myoma of the Uterus, with Brief Notes of Twenty-eight Cases. He said that recent improvements in the methods

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of performing hysterectomy had been followed by such good consequences that abdominal hysterectomy for myomata of the uterus too large to admit of vaginal myomectomy was now rapidly gaining favour, and it was becoming a plain duty to point out to patients with uterine myomata, as was done when they had ovarian tumours, that the earlier the tumours were removed the less the operative dangers and therefore a diminished peril to life. It was for the purpose of showing how safely uncomplicated myomata of the uterus could be dealt with that he ventured to place before the society brief records of twenty-eight cases operated upon at the Chelsea Hospital for Women and the Middlesex Hospital. Whenever possible, especially when operative interference was necessary during the menstrual period of life, he reversed the conditions of oöphorectomy, so that instead of removing the ovaries and Fallopian tubes and leaving the uterus and tumour he removed the uterus and tumour and left one or both ovaries with the corresponding Fallopian tube. This happened in fourteen cases in the subjoined list. The immediate results of this method were admirable, and spared the patient at least the inconvenience of an acute menopause.

Under 30	1
Between 30 and 40	10
Between 40 and 50	13
Above 50	4
	28

Only one patient had ceased to menstruate previously to the operation.

Mr. ALBAN DORAN insisted that whilst an ovarian cyst nearly always caused death if not removed, a large number of uterine fibroids remained stationary and harmless. Others, however, entailed discomfort and danger, and then the surgeon must consider which was the safest operation. Altogether the retro-peritoneal method seemed the best. He found that in cases where the tumour was large but the cervix free the operation was especially satisfactory. The arteries were easily reached or felt and secured, the cervix could then be divided, and the healthy mucus which it contained was free from germs. The patient was saved from the inevitable direct and secondary evils of the serre-nœud. This advantage was marked in six very anæmic cases where he had successfully operated; in one there was a sloughing sub-mucous growth which caused no trouble after the operation. He had lost two cases where the operation had certainly been deferred far too long; unhealthy mucus in the cervix was a source of peril in sickly subjects. No operation for burrowing and cervical fibroids could be free from danger; enlarged branches of the uterine arteries were here a source of peril. Mr. Doran objected to leaving the Fallopian tubes behind, and always endeavoured to take them away with the uterus undivided. Their contents were often unhealthy. As to the abdominal sutures no method was perfect. The numerous reports sent in at the Geneva Congress in 1896 tended to show that in every case the last method adopted by each authority was the best insurance against hernia. The fallacies in such evidence were obvious.

Dr. PLAYFAIR said that he agreed as to the great practical interest of Mr. Sutton's paper, but first he must take exception to the sweeping conclusion that had been arrived at that removal of the appendages was not to be performed in any case of fibromyoma. In his experience in properly selected cases it was one of the most valuable operations, and the results were occasionally most brilliant. He was aware that this was not the opinion of the most forward school of hysterectomists either in America or England, who seemed to hold that the mere existence of a fibromyoma, whether it produced symptoms or not, was a sufficient ground for hysterectomy. He held this theory to be most dangerous and untenable. Dr. Duncan had shown that evening quite a small fibroid not bigger than a large orange which he had removed by hysterectomy. Some of the Fellows had criticised this procedure and said he should have removed it by vaginal enucleation. He contended, however, that if Dr. Duncan had performed oöphorectomy he would have subjected the patient to infinitely less risk and have obtained quite as good a result. The small mortality, which was practically *nil*, following oöphorectomy was one of the chief grounds for selecting it in suitable cases. Even in Mr. Sutton's cases there had been a mortality of 7 or 8 per cent.; conceive what it would be in less experienced and skilful hands. It seemed to him absurd to compare the risks to which the patient was subjected in performing oöphorectomy and hysterectomy. Another point he might remark on was the operation to be selected. He felt sure that the extra-peritoneal method and clamp were doomed. The long painful convalescence was most terrible, and no fact seemed to him more certain than that the intra-peritoneal plan had come to stay. He strongly advocated suture of the parietes by three separate layers.

Dr. HORROCKS was surprised that no mention was made of Baer, who first described the operation. Dr. Galabin published a paper on it, and later Mr. Harrison Cripps brought forward some cases before the society. At the discussion on that paper he (Dr. Horrocks) had ventured to describe the operation with the serre-nœud as a barbarous one; and although exception was taken to the word at the time opinion was now largely against this so-called old operation. In one case, after using the serre-nœud, the patient had so much pain from the dragging of the pedicle that he opened the abdomen the second time and completed the operation by Baer's method, and the patient had been well ever since. One thing surprised him very much and that was the large number of cases operated upon by certain operators. He could not but think that in many of these cases no operation whatever was required, for it was a well-known fact that fibroid tumours were in the majority of cases innocent tumours. They stood on quite a different footing from ovarian cysts, which almost invariably proved fatal when left alone. This point had a bearing on the mortality of Mr. Sutton's cases, for if all the twenty-eight cases were severe cases of fibroids, causing grave symptoms of hæmorrhage and such like, the loss of two, or a mortality of 7 or 6 per cent., could not be called great. He had performed the operation twelve times with one death in a case complicated with albuminuria. Each of these cases was most serious, and none of them so small as some of those in Mr. Sutton's list. He could not agree that the mortality of the operation was as low as that of ovariotomy. He thought 7 per cent. a high mortality in ovariotomy in these days of asepsis. He entirely agreed on one point—viz., the importance of leaving the patient one or both ovaries when they were healthy. He himself had done this in several instances and considered it a far greater mutilation to remove the ovaries than to remove the uterus.

Dr. C. H. ROBERTS thought it was a pity that the history of the cases had not been fully given, particularly as regarded the symptoms which had rendered the operations described necessary. He could not agree with Mr. Sutton in many points; surely a very large number of fibroids seen did not require operation at all. He thought the sweeping assertions as to clamp and belt made by Mr. Sutton were undeserved.

Mr. MEREDITH expressed his entire dissent from the views held by Mr. Sutton regarding the duty of recommending early operation in cases of uterine fibromyoma, a course rightly adopted in the case of ovarian tumours. The two diseases are not comparable as regards the necessity for operative interference since the great majority of fibromyomatous growths do not tend to imperil life and may never require surgical treatment, while ovarian tumours, on the other hand, inevitably prove fatal unless removed. It should be borne in mind that the fact of recovery after an operation by no means absolutely implies that the treatment adopted was a necessary procedure. Mr. Sutton's views on the value of the intra-peritoneal treatment of the uterine stump would appear to be founded upon somewhat insufficient data—viz., the results of only twenty-six operations, of which two proved fatal. The speaker's experience with the serre-nœud had given him eighty-three recoveries out of a succession of ninety abdominal hysterectomies, including a run of thirty cases without a fatality and two series of forty and forty-seven respectively with but two deaths in each, results which had not as yet, so far as he knew, been equalled by advocates of the intra peritoneal method. At the same time, however, he fully recognised the advantages of the shorter convalescence required by this latter plan of treatment, and he had therefore now adopted it for some six months past with very satisfactory results. Mr. Sutton did not hesitate to say that the operation of oöphorectomy had now been entirely superseded by intra-peritoneal hysterectomy; but he (Mr. Meredith) still considered the operation in question to be a most valuable and efficient method of treatment in suitable instances, giving a mortality in his experience of something under 3 per cent. A considerable proportion of cases of abdominal hysterectomy, especially where the lower segment of the uterus is tolerably

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free from growth, will recover easily whether the stump is secured by the serre-nœud or by ligature; but, on the other hand, many tumours are to be met with which will tax to the utmost the knowledge and skill of the operator, and the wise surgeon will reserve to himself the power of selecting in any given instance the method of treatment which from his own experience he deems most likely to secure the best result for his patient.

Dr. WILLIAM DUNCAN quite agreed with Mr. Sutton that the intra-peritoneal method of performing hysterectomy was far superior to the extra-peritoneal method in which a clamp had to be used and the stump left to slough away. He published in THE LANCET about six months ago a list of eighteen consecutive cases which comprised every case (hospital and private) he had performed in which only one death occurred, and that took place on the eighteenth day from pulmonary embolism when the patient was considered convalescent. He quite agreed with Mr. Doran that the appendages should be removed as well as the tumour, for in not a few cases of fibroids of the uterus it is well known that the tubes contain pus, hence a source of danger if these are left. Seeing the remarkable success that attended this operation he was strongly of opinion that oöphorectomy for fibroids should be allowed to lapse into oblivion even in cases of small tumours, for oöphorectomy in these cases has a mortality of at least 5 per cent.

Mr. BUTLER-SMYTHE thought credit was due to Mr. Sutton for so clearly pointing out the additional risks attending the performance of the so-called pan-hysterectomy. These risks were not imaginary, but there was a real danger to the ureters, one or both of which might easily be cut across or included in the lowest ligature. His (Mr. Butler-Smythe's) ideas on the subject under discussion were so absolutely opposed to the views held by Mr. Sutton that he would like to ask him what the signs and symptoms were which would lead him to perform hysterectomy. In his opinion not one fibroid in twenty required removal, and he was now speaking of large tumours and not of those similar to the one exhibited that evening.

Dr. GRIFFITH entirely agreed with those who held that the intra-peritoneal method was the preferable operation. No one who had followed the progress of many cases operated upon by the two methods would hesitate to admit the greater freedom from suffering during convalescence and the general well-doing exhibited by patients after the intra-peritoneal operation. His conviction was that the operation of enucleation of fibroids in suitable cases with proper antiseptic methods was a very safe and preferable operation, leaving the patient with a perfect uterus as well as ovaries.

Dr. HEYWOOD SMITH said that in 1892 he read a paper elsewhere on Sub-peritoneal Hysterectomy, which he contended described the operation better than intra-peritoneal. In it he brought forward cases by Goffe (New York) and Milton (Cairo), as well as some by himself, and he was glad to find the most advanced operators were pursuing that method to the exclusion of the serre-nœud oöphorectomy and so-called pan-hysterectomy.

The PRESIDENT said he had had an opportunity of declaring his views on the subject before them so recently—namely, in the discussion which took place last year upon Mr. Harrison Cripps's paper—that he would not occupy more than a few minutes with his remarks on the present occasion. He agreed with Mr. Sutton in regarding the operation he had described as superior to that of so-called pan-hysterectomy. He also agreed as to the desirability of leaving if possible one or both ovaries. The trend of modern surgery was in the direction of removing nothing that could be avoided and in sparing wherever possible, both in male and female, one or both of the essential organs of reproduction in operating for diseases in which those organs were involved.

Mr. BLAND SUTTON, in reply, expressed amazement at the singular course the discussion had taken. He never for a moment anticipated that the horrid clamp would find a single supporter. The clamp in the treatment of hysterectomy was doomed, and he ventured to predict that in five years' time no operator would be found unwise enough to advocate its use. In regard to the wound he said a yielding cicatrix after any form of abdominal operation in which the wound was secured by a single row of sutures was in a certain proportion of cases inevitable.

The following specimens were exhibited:—

The PRESIDENT: (1) Fibroma of the Ovary; (2) Gangrene of an Interstitial Fibromyoma of the Uterus; (3) Fibromyomata of the Uterus causing Intestinal Obstruction and Death after the Menopause; and (4) Early Ectopic Gestation complicated by Fibromyomata of the Uterus.

Mr. TARGETT (for Dr. WILLIAMSON): Sarcoma of the Uterus causing Inversion; and (2) Intra-pubic Joint producing Diminution of the Pelvic Inlet.

Dr. PLAYFAIR: Carcinoma of the Cervix Uteri; removed by Total Extirpation, the ovaries and tubes having been removed two years previously.

Dr. WILLIAM DUNCAN: (1) Large Myoma of the Uterus and Tumour of the Left Ovary; and (2) Small Interstitial Fibroid of the Uterus removed by Abdominal Hysterectomy.

Dr. JOHN PHILLIPS related the subsequent history of "A Case of Ruptured Uterus."

HARVEIAN SOCIETY OF LONDON.

The Treatment of Lateral Curvature of the Spine.

A MEETING of this society was held on Nov. 4th, Dr. MILSON, President, being in the chair.

Mr. NOBLE SMITH read a paper on the Treatment of Lateral Curvature of the Spine and gave a demonstration. He pointed out the advantages that were to be derived from mechanical assistance in addition to other methods of treatment. It was stated by the advocates of exercise treatment alone that deformity in the bones could not be remedied, and it was remarked that a test of this deformity was the existence of "rotation." Mr. Noble Smith had found that it was quite possible by means of the hands alone to hold a patient in a straight position although slight rotation had commenced, and it was possible to maintain that position by means of apparatus until the bones had readjusted themselves. He demonstrated the action of the apparatus upon several patients whom he exhibited, showing that the chest was left perfectly free from pressure, that there was no interference with development or with the use of the muscles, and that the pressure was so gentle that it acted rather by encouraging the patients to hold themselves erect than by force alone. Mr. Noble Smith stated that children quickly realised the comfort and benefit of wearing the apparatus. If there was pain or aching or a sense of weakness these symptoms were quickly removed. In older patients in cases of severe deformity the necessity of such treatment was, he thought, obvious, as it was almost the only way of relieving pain, a result which could always be attained. A few useful exercises were then demonstrated, and especially one which tended to counteract "rotation." Treatment by exercises alone only acted temporarily, the spine falling back towards the old position, whereas by means of apparatus the results were kept up in the intervals. The difficulty of forming a correct diagnosis between caries and lateral curvature in the early stages was referred to, and it was urged that great caution should be observed with regard to exercises during this uncertain stage. Mr. Noble Smith then proceeded to demonstrate the application of the treatment by forced reduction of the deformity. He stated that the application of this plan of treatment, which had recently attracted so much attention in France (especially in reference to cases of caries), was well shown in the case of the patient exhibited. This was of course a case of lateral curvature, for which deformity he considered the forced reduction quite safe, whereas in caries it was a dangerous remedy. A photograph had been taken of the back before treatment was commenced and another after an interval of three weeks. Three operations had been performed during these three weeks, at each of which something was felt to give way like the breaking down of adhesions, and after each operation great improvement was found to have taken place. The patient's back showed a marked improvement upon the photograph taken before treatment.

Mr. JACKSON CLARKE said that there was much misunderstanding as to the various methods of treating lateral curvature. In the lateral curvature of rickety infants instrumental treatment was absolutely necessary. A moulded leather back splint which left the chest and limbs free was the best form of support in such cases. Some surgeons were under the impression that they used exercises alone in the treatment of lateral curvature. Mr. Roth's plan consisted in placing the patient for three-quarters of an hour every day on a firm table and then putting the patient through a series of exercises. In this method the table was an instrument which the weight of the patient brought into play. And, further,

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this plan required the patient in the intervals between the exercises to recline on a special couch, which was also an instrument having the same action as the upright part of a Chance's splint as modified by Mr. Noble Smith. The lateral arms of a Chance's splint had the same action as the "lateral sling" recommended by Mr. Barwell. Thus there was less difference between the methods of various surgeons than at first sight appeared. He (Mr. Clarke) had under his care a great number of patients wearing Chance's splint with the best results. Instruments such as felt corsets or mechanical contrivances that surrounded and cramped the chest were to be avoided. Young men with strong muscles and good muscular instincts could be sometimes successfully treated without wearing an instrument.

Dr. HARE expressed himself as convinced of the value of the treatment by apparatus as carried out by Mr. Noble Smith, whose methods he had watched with great interest in patients whom he (Dr. Hare) had sent to him.

Dr. BOWLES remarked that having at one time been opposed to treatment by apparatus he had become converted to this plan of dealing with lateral curvature from having seen the benefits derived by patients under the care of Mr. Noble Smith. In elderly patients, especially those suffering from complications of the chest, he had seen excellent results.

Mr. DODSWORTH spoke in favour of this treatment. He had submitted members of his own family to Mr. Noble Smith's care with the most gratifying results, and he had also many of his patients under his treatment with equally good effects.

Mr. ROB CARTER (Anerley) had seen the results of Mr. Noble Smith's treatment in quite twenty cases, and he could say that in every one the benefits had been very decided. Some of these patients had previously undergone treatment by exercises, but with unfavourable results, and several of them who were severely deformed were eventually perfectly cured by means of the apparatus. One great point in favour of this treatment was, he thought, that the patients were able from the first to continue their ordinary avocations and were not laid up for a single day.

Dr. SCANES SPICER related a case which had been treated by Mr. Noble Smith, in which there was very considerable deformity. The patient was so perfectly cured after four months' treatment that an eminent physician who was subsequently consulted stated that he could then find nothing whatever the matter with the spine.

Mr. GAY asked to what extent the pelvis was affected in cases of scoliosis, and the PRESIDENT inquired as to the length of time required for treatment.

Mr. NOBLE SMITH, in reply, stated that the time required varied according to the case.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Cerebral Hæmorrhage in a Child.—Gunshot Injuries in the late Greco-Turkish War.

A MEETING of this society was held on Nov. 5th, Dr. H. P. POTTER, President, being in the chair.

Mr. MAITLAND THOMPSON read the history of a case of Cerebral Hæmorrhage in a Child. A boy, aged thirteen years, was at school, and had just passed through an attack of chicken-pox, and while quiet during convalescence he one day in the morning complained of headache and vomited. An hour later he was unconscious. There was no strabismus. Both legs were extended, but there was no voluntary movement in them. Convulsions soon afterwards set in and the temperature rose, and the patient died ten and a half hours after becoming unconscious. At the necropsy the vessels of the meninges were found to be much congested and the brain substance of the right temporo-sphenoidal lobe was ploughed up by blood. Mr. Thompson alluded to the rarity of such cases and to the difficulty of diagnosis.—Dr. S. BONTOR mentioned a similar case, that of a female child who on rising in the morning felt giddy. When seen shortly afterwards she was dull and had vomited. There was no evidence of paralysis or of cerebral irritation. The patient died the same evening. Post mortem there was found a large hæmorrhage on the right side of the brain which had opened into the ventricle.—Mr. BRINDLEY JAMES also alluded to a like case in a boy.—Dr. W. COLMAN said cerebral hæmorrhage in early life was very rare, and the records of the Children's Hospital in Great Ormond-street had scarcely any cases in them. He had, however, seen one case associated with ulcerative endocarditis.—Dr. J. D. MORTIMER said he knew of one specimen in the Great Ormond-street Museum. He mentioned various causes of cerebral hæmorrhage which might occur in children—viz., asphyxia, purpura, miliary aneurysms, and chronic nephritis.—The PRESIDENT mentioned some details of three cases which had been brought before the Pathological Society, in two of which the hæmorrhage appeared to have been venous in origin, while the third was a case of infantile scurvy.

Dr. H. J. DAVIS next read a paper on Gunshot Injuries in the late Greco-Turkish War, and illustrated it by a description of cases and by specimens of projectiles. Having alluded to the various forms of bullets used on both sides in the recent war he proceeded to describe the characteristics of the wounds formed by each. There was but little damage done in many cases by the rifle bullets of the Mauser type owing to their great velocity. Shell wounds were likely to be the most lacerated. He averred that there was great difficulty in diagnosing the presence of a fracture in many cases, probably owing to the fact that such was only partial in most instances, the bullets passing clean through. Wounds of the upper extremity seemed to cause much less trouble than those of the lower limb. Wounds of the joints with care and antisepsis by no means always did badly. He mentioned "seton" wounds in which the bullet traversed an extent of tissue close beneath the surface, and advocated that these should be freely opened up and cleansed. Thoracic and abdominal injuries were severe in most cases, and only one soldier was operated on by laparotomy, he being alive when brought in. One case of acute emphysematous gangrene was prevented from infecting other wounds by careful isolation. He had to thank Mr. F. C. Abbott for allowing him to mention the details of some of the cases under his care.[1]—Dr. THUDICHUM gave recollections of three campaigns through which he had been. He thought modern bullet wounds showed much less contusion than former ones, but that artillery wounds were more serious than they used to be.—Dr. SYMONS ECCLES had been through the Russo-Turkish War, and alluded to the fact that the wounds of that campaign appeared to differ but little from those of the recent war. He would like to know the proportion which the dead bore to the wounded and what influence malaria had upon wounds.—Dr. DAVIS, in reply, said it was impossible to find out accurately the proportion of dead to wounded, but thought that the latter were more numerous. Nearly every man who was injured had a rise of temperature afterwards and many showed signs of malaria.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

Presidential Address.

THE first general meeting of this society was held on Oct. 27th at 20, Hanover-square, London, W., the President, Dr. ANDREW S. MYRTLE (Harrogate), being in the chair.

The report of the treasurer was read and adopted, the success of the society's "Journal," which is now almost self-supporting, being especially noted.—Dr. MYRTLE moved that the President-elect, Dr. Wm. Vicary Snow, of Bournemouth), take the chair.—A vote of thanks to the retiring President was moved by Dr. THEODORE WILLIAMS and seconded by Sir RICHARD DOUGLAS-POWELL, Bart.—In his reply Dr. MYRTLE emphasised the fact that practitioners at health resorts were not antagonistic to the general practitioner, but were desirous of working with him, or rather under him and after him.—A vote of thanks to Dr. Hyde, the editor of the "Journal," was moved by Mr. BLAKER (Bognor), supported by Dr. LEWIS (Folkestone), and acknowledged by Dr. HYDE.—Dr. MYRTLE, jun., moved, and Dr. GAGE BROWN seconded, a vote of thanks to the treasurer, the council, the secretaries, and auditors, which was acknowledged by Mr. KEETLEY, Mr. WARD-HUMPHREYS (Cheltenham), Mr. MACFARLANE (Brighton), and Dr. SUNDERLAND.

The first ordinary meeting of the session was then held, the President, Dr. W. VICARY SNOW, being in the chair. Sixteen candidates were elected fellows of the society.

[1] Mr. Abbott's cases will shortly be published in THE LANCET.

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Dr. SNOW delivered his Presidential Address, in which he described the climatic features of Bournemouth, with special reference to the effect of the pine woods on diseases of the lungs.

Dr. BAGSHAWE (St. Leonard's) moved, Dr. IVOR MURRAY (Scarborough) seconded, and Dr. MYRTLE supported a vote of thanks to the President for his address.

A motion was then submitted by Mr. ALFRED HAVILAND advocating the establishment of a chair of Medical Climatology and Geography. This having been seconded by Dr. THEODORE WILLIAMS and supported by Dr. CLIPPINGDALE was carried, and the Council was instructed to consider the matter and take such steps as seemed desirable.

HUNTERIAN SOCIETY.

Exhibition of Cases.

A CLINICAL meeting of this society was held at the London Institution on Oct. 27th, Dr. G. E. HERMAN, the President, being in the chair.

Sir HUGH BEVOR showed a case of Congenital Heart Disease in a youth aged twenty-one years, in which he considered the physical signs as indicative of a patent ductus arteriosus.

Dr. J. H. SEQUEIRA showed a case of Congenital Heart Disease in a child aged ten years who exhibited signs of arrested physical development. He also showed a case of Chronic Hydrocephalus in a girl aged eleven and a half years with marked arrest of mental and physical development.

Dr. F. J. SMITH brought forward a case of Proptosis in a woman who had been under observation for two years. There was also congestion of the conjunctiva on the outer side of both eyes, with œdema of the eyelids and enlargement of the veins.

Mr. A. H. TUBBY exhibited a case showing the Removal of the Left Half of the Tongue, Left Submaxillary Gland, and Left Anterior Pillar of the Fauces for epithelioma of four months' duration. The patient was a man aged fifty years and he had made an excellent recovery.

Mr. COTMAN exhibited the Radiograph of a case of Disease of the Left Ankle-joint; the patient also was present.

Remarks on the cases were made by the PRESIDENT, Dr. HINGSTON FOX, Mr. TUBBY, Dr. F. J. SMITH, Dr. GLOVER LYON, Mr. RAWES, and Mr. GROGONO.

LIVERPOOL MEDICAL INSTITUTION.

Dissecting Aortic Aneurysm. — Thyroidectomy. — Sporadic Cretinism.—The Immediate Correction of Deformity in Pott's Disease.

A MEETING of this society was held on Nov. 4th, Dr. RICHARD CATON, President, being in the chair.

Dr. GLYNN narrated a case of Dissecting Aortic Aneurysm. The patient, a man aged thirty-four years, died from dissecting aneurysm of the aorta. Dr. Glynn also exhibited the specimen, which showed that the whole of the thoracic and abdominal aorta was involved. The patient had suffered from infective endocarditis at the age of fourteen years, and had since been the subject of aortic regurgitation. During life the symptoms of mitral stenosis were present, but post mortem no mitral stenosis was found. The man died from dissecting aneurysm rupturing into the pericardium.—Dr. A. C. E. HARRIS and Dr. CARTER made comments on the case.

Mr. F. T. PAUL read notes of a case of Partial Thyroidectomy for Parenchymatous Goitre, which ended fatally two and a half days after operation from thyroidism. From this and other cases he concluded that the symptoms described were due to the absorption of an excessive amount of thyroid secretion through the wound. He advised that the gland should be handled gently during the operation and that the isthmus should be ligatured before being severed. If the symptoms still supervened the wound should be laid entirely open, irrigated, and filled with antiseptic gauze, which must be changed as often as it became moist.—Dr. ALEXANDER and Mr. RUSHTON PARKER made some remarks.

Dr. ABRAM read notes of a case of Sporadic Cretinism with a Note on the Nitrogen Excretion. The patient, a girl aged fourteen years, had suffered from cretinism for about two years. He administered thyroid extract for six weeks, in which time the patient increased one and a quarter inches in height. He considered that the administration of thyroid extract increased metabolism as shown by the larger excretion of nitrogen.—Dr. CARTER remarked that if waste from any cause occurred, such as excessive labour, &c., the output of nitrogen was immediately increased. This child, like all myxœdematous patients taking thyroid, lost weight; but he was unable to see that the determination of the total nitrogen proved that the action of the thyroid on metabolism was direct any more than the mere fact of the loss of weight proved it.—Dr. STANLEY GILL, Dr. GLYNN, and Dr. P. DAVIDSON made comments upon the case.

Mr. ROBERT JONES read a paper on the Immediate Correction of Deformity in Pott's Disease, illustrated by lantern slides. He had operated on a very large number of cases since July with results which had exceeded his expectations. Sufficient time had not elapsed to allow him to advocate so bold a procedure with any degree of dogmatism. However, with ordinary precautions no immediate ill-effects followed He had no case of abscess, no case of disseminated tubercle, and none of paraplegia. Where paraplegia had existed the extension and pressure had either improved or cured it. He pointed out the tendency to bony ankylosis in caries of the spine which was not found in tubercle of other joints. This inspired the hope that the separated vertebræ would become firmly united and that the danger of the so-called gap might prove illusory. The cases showed the disease in various regions and some of them exhibited great deformity. The duration of some extended over several years. After describing Calot's method of reduction Mr. Jones adversely criticised the plaster corset and advocated a splint so constructed as to keep the spine in lordosis. He found that the curves best suited to obliteration were those occurring in the young where the disease was active and where the angle of deformity was changing. The curves most easily reduced were those involving several rather than few vertebræ and those situated in the dorsal region.—Mr. R. W. MURRAY said that he had operated upon fourteen children, whose ages varied from two and a half to nine years. They were all selected cases, the children, apart from the spinal trouble, being in good health. The immediate results had been entirely satisfactory, but in one case where the disease was in the upper dorsal region weakness of the upper limbs and exaggerated knee-jerks appeared one month after operation. He drew attention to the high mortality of tuberculous disease of the spine amongst the poor and also to the remarkable absence of the formation of new bone. This being the case he feared that the gap formed between the bodies of the diseased vertebræ after the forcible correction would not be filled up by bone sufficiently strong to bear weight. Should this prove to be the case the patient would have to rely indefinitely upon instrumental report or have a return of the "hump-back." While this method of operating was still in the experimental stage he intended to rest content with what he had already done and to await further results. In the immediate future he would operate only on cases in which paralysis existed.—Mr. RUSHTON PARKER said that he had performed this operation both with and without an anæsthetic; in the latter case there did not appear to be much pain caused by the proceeding. He considered the Thomas's double hip splint a great improvement upon the plaster jacket. He looked forward with hopeful interest to the application of Calot's method. — Mr. THELWALL THOMAS drew attention to the fact that forcible interference with tuberculous bone disease did not produce paralysis, abscess, or dissemination of tubercle—three theoretical "bogies" which had been handed down from text-book to text-book. Recent experience in forcible dealings with joint disease gave surprisingly good results, and he felt sure that permanent success would follow a large number of cases treated by Calot's method.—Mr. GEORGE HAMILTON pointed out that in estimating the amount of improvement in paralysed cases after Calot's method had been used it was important to recognise that many such cases recovered from the paralysis under the classical methods of treatment. He could quote many such in his own practice.—Mr. A. DAVIES thought that the operation was not justifiable except in carefully selected cases.—Dr. GLYNN, Dr. STANLEY GILL, Mr. NEWBOLT, and Mr. SHELDON also took part in the discussion.—Mr. R. JONES replied.

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SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Intradural Tumour of the Spinal Cord.

A MEETING of this society was held on Oct. 26th, Dr. SINCLAIR WHITE, the President, being in the chair.

Mr. PYE-SMITH called attention to a valuable method of Using the Electro-magnet for the Detection of Steel or Iron Foreign Bodies, whether small enough to be extracted by it or not. The method consists in attaching the magnet by means of a transformer to the wires for the supply of electric light by an alternating current. When thus used a vibratory sound is heard when the magnet comes in contact with the foreign body, continuing as long as the contact lasts.

Mr. DALE JAMES showed (1) a case of Pityriasis Rubra (Hebra) which had improved greatly under his treatment; and (2) an Anomalous Case of Ichthyosis.

Mr. HERBERT HALLAM showed (1) a Photograph of a case of Bilateral Herpes Zoster Faciei; and (2) a Large Perinephritic Sarcoma.

Dr. WILKINSON gave particulars of a successful case of Suprapubic Cystotomy with immediate Suture of the Bladder.

Mr. ARCHIBALD CUFF showed a patient on whom he had performed Intestinal Resection and End-to-end Anastomosis for Sarcoma two months ago. The man was subjected to two operations. The first included the cutting away of the growth which was found in a hernia and the formation of an artificial anus. The second, performed some months later, consisted of opening the abdomen, resecting the two ends of the bowel, and end-to-end apposition. The anastomosis was performed with the help of Mayo Robson's bone button.

Dr. BURGESS read notes of a case of Intradural Tumour of the Spinal Cord. The growth, a sarcoma, ovoid in shape, with diameters of 1 inch and ¾ inch, was situated in front of the cord about the level of the attachments of the roots of the fourth dorsal nerve to the cord. The chief symptoms were burning pains in the legs, which gradually extended up the abdomen, loss of power beginning in one leg, extending in the course of three or four weeks to the other and ultimately becoming complete in both, rectal and bladder trouble with signs of cystitis and pyelo-nephritis. The most striking feature of the case, however, was marked dissociation of sensations of heat, pain, and touch which began in and was most pronounced in the legs, but extended up to the fourth costal interspace. The sensation of touch was not much impaired, that of pain was greatly impaired, whilst thermic sensibility was absolutely lost in the legs.

MIDLAND MEDICAL SOCIETY.

Exhibition of Cases.—Pasteur Anti-rabic Treatment.

THE first ordinary meeting of this society was held on Nov. 3rd at the Medical Institute, Birmingham, Mr. J. W. TAYLOR, President, being in the chair.

Dr. HAZELWOOD CLAYTON showed five members of a family of Hæmophiliacs—viz., two boys, their mother, their uncle, and their maternal grandmother. The family history exemplified the law governing the inheritance of hæmophilia—viz., that the disease is transmitted through the female line to the male children although the females themselves escape. In other words, the sons of the daughters suffer. The great-great-grandmother had seventeen children, seven of whom were boys, and all bled to death; her daughter (the great-grandmother) had sixteen children eight of whom were boys, all bleeders, and seven bled to death; the grandmother (daughter of the above) had sixteen children, six of whom were boys, all bleeders, and only two are living; the mother (daughter of the above) had five children, three of whom were boys, all bleeders. The above history also shows the extreme fecundity of the female members of hæmophiliac families.

Dr. DOUGLAS STANLEY showed a specimen of Tumour of the Middle Lobe of the Cerebellum. The patient was a girl, aged twenty-three years, who had suffered from occipital headache and vomiting for ten weeks. There was no optic neuritis. There was some giddiness at times, but no paralysis of any kind, and the reflexes were unaltered. Breathing failed suddenly, and artificial respiration was kept up for twelve hours, after which the heart's action ceased.

Professor ALLEN read a paper entitled "Personal Experience of the Pasteur Anti-rabic Treatment." He recounted his impressions of the Pasteur Institute in Paris. He gave details of the treatment, including the method of preparing the immunising fluids. He described the constitutional effects of the inoculations and gave the latest statistics of the results of the treatment.

Reviews and Notices of Books.

Archiv für Pathologische Anatomie und Physiologie und für Klinische Medicin. Herausgegeben von RUDOLF VIRCHOW. Band CL., Heft 1. (*Virchow's Archives.* Vol. CL. Part 1.) Berlin: G. Reimer. October, 1897.

THE commencement of the 150th volume of his world-known *Archiv* must be a source of great pride and pleasure to the eminent founder of this famous journal; and very fittingly his portrait is placed as a frontispiece to the volume. Professor Virchow himself contributes the opening article, "Unser Jubelband," in which he states that the prospectus of the first number is dated April, 1847, and since 1852, when his original co-editor, Professor B. Reinhardt, died, he has himself been solely responsible for the conduct of the journal. How well he has acquitted himself of his task the series of volumes, which contain many of the most noteworthy contributions to medical science during these fifty years, eloquently testifies. He claims, and with justice, that the guiding principle of his work has been the introduction into pathological study of biological methods and the dethronement of all so-called "systems." To one whose retrospect goes back for half a century it may well seem that pathology has been revolutionised; and undoubtedly the leader of this changed method of the study of pathology is Rudolf Virchow himself, who we trust may long be spared to guide and control the work of building up the science of medicine on the firm and broad foundations which he had so great a share in laying. The number of the *Archiv* before us contains: (1) The text of Professor Virchow's address at the Moscow Congress on the Continuity of Life as the Basis of Modern Biological Doctrine; (2) An interesting paper on the Experimental Production of Amyloid Degeneration, by Dr. Carl Davidsohn, the agency used being injections of cultures of staphylococcus pyogenes aureus; (3) Fungi and Fungus-poisons in the Brain and Spinal Cord, by Dr. J. Seitz; (4) the Pathological Anatomy of the Malpighian Bodies of the Kidney, by Dr. A Böhm; (5) Tumours of the Submaxillary Gland, by Dr. G. Löwenbach; (6) the Mechanism of Closure of the Urinary Bladder, and Urination, by Dr. E. Rehfisch; (7) a further contribution to the study of Pneumothorax, by Dr. Sackur; (8) the Connexion of Section of the Vagus with Degeneration and Inflammatory Changes in the Heart-muscle, by Dr. A. Hofmann; and (9) the Quantitative Estimation of Glycogen in the Liver, by Dr. A. E. Austin, of Boston, U.S.A.

Sleep; its Physiology, Pathology, Hygiene, and Psychology. By MARIE DE MANACÉINE (St. Petersburg). London: Walter Scott, Limited. (The Contemporary Science Series.) 1897. Pp. 341. Price 3*s.* 6*d.*

THE problems of sleep have exercised many minds, but have perhaps received more attention from the public than from medical men. The book now under consideration is written in rather a popular style but yet in a truly scientific spirit, and will doubtless be read with interest by all who enjoy the study of an enticing subject. The authoress has evidently given much time and attention to the compilation of this volume and is certainly to be congratulated on the

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success of her endeavours. That she is much in earnest is shown by her opening words: "It would be difficult to find any aspect of life towards which so much injustice and ingratitude have been shown as towards sleep, for not only do we profit continually by all the benefits of sleep, but even above them; yet we pay no attention to its phenomena and do not even include it among the questions deserving of serious study."

The Physiology of Sleep is fully dealt with, all the principal theories with regard to its causation being fully examined. The authoress, however, is not satisfied with any of those hitherto propounded and prefers to evolve one of her own. She states: "We have already seen that an arrest of consciousness may always be observed in the sleeper, and if we wish to understand the nature and causation of sleep on the psychic side we must study consciousness itself. From this point of view the cause of sleep may be stated in the formula: Sleep is the resting-time of consciousness." Many interesting facts are brought forward in favour of this theory, both from observations in animals and in human beings.

The chapter on the Pathology of Sleep is also well written, showing a considerable amount of original study. The subject is roughly divided into two sections; in the first sleep is "weakened," that is to say, there is insufficient sleep, and in the second we have the condition of "narcolepsy" or prolonged and abnormal sleep. Such sleep for the most part only occurs in isolated cases, but it is sometimes found in various countries as an endemic disease, being there known as the sleeping sickness, hypnosia (Dangain), and by various other names. Automatism and Somnambulism naturally receive their share of attention; likewise hysterical somnolence and double personality.

The Hygiene of Sleep is also well thought out. One theory contained therein strikes us as being rather novel—namely, that anæmia in young girls is due to albuminuria caused by prolonged sleep, so that in the treatment of that condition it is desirable to diminish the time devoted to sleep, and also to avoid too prolonged retention of the urine during the night. We should have preferred the view that drowsiness is a symptom rather than a cause of anæmia. The final division of the book deals with the Psychology of Sleep. The care which has been bestowed on the writing of the book is shown by the copious bibliography given at the end of each of the chapters.

LIBRARY TABLE.

Transactions of the Reading Pathological Society. Vol. I. Fifty-fourth Session, 1895-6. Edited by the President and Honorary Secretaries. 1896 Reading: Beecroft and Alexander. Pp. xxx. and 124.—When on Oct. 20th, 1896, the Pathological Society of London celebrated the Jubilee of its formation an address of congratulation was received from the only pathological society in England which was older than itself, and that was the Pathological Society of Reading. Founded on July 13th, 1841, it has maintained a vigorous existence for more than fifty years, and at last has determined to issue a volume of Transactions. Very much good work must have been done in those fifty years, if we may judge of it by a *résumé* which is prefixed to the present volume, though naturally some of the treatment advised in the papers read in the earlier years of the society is somewhat out of date; thus in one paper free bleeding was recommended before and after ligaturing the innominate artery for aneurysm so as "to prevent the disturbance of the circulation which follows on tying so large a vessel." The [illegible] are held at the Royal Berkshire Hospital, where the [illegible] a museum and a library. The meetings take place monthly, except in August, on the Wednesday nearest the full moon—we presume in order that the members may have the benefit of the moonlight in returning to their homes. Living specimens and "card specimens" are exhibited at each meeting and papers are read. In this volume of Transactions are many papers of great interest, and we will refer to some of those which appear to us to be of most importance. Dr. A. Ashby has an article on the Relation of the Public Health Service to Pulmonary Consumption, in which he discusses the question, "Should Consumption be made Notifiable?" Dr. Ashby as medical officer of health for the Reading Urban District had been asked to advise the sanitary authority on this point, and in his reply he stated that he did not advise the compulsory notification of the disease, but thought it would be of great value if rooms and bedding were disinfected after deaths from phthisis. In his paper he urges that there should be inspection of slaughtering, so that diseased carcasses might be recognised before the viscera have been removed. The value of tuberculin in the diagnosis of tuberculosis in dairy cows is acknowledged, and Dr. Ashby considers that in many ways the Public Health Service may do much to restrict the prevalence of tubercle in the human race. Mr. Hastings Gilford contributes a paper in which he strongly advocates the earlier getting up of patients after labour; in fact, he objects to the name "patients" as erroneous and points out that the quickened circulation which results from sitting and standing is in favour of the early involution of the uterus, and he quotes the opinion of Dr. Charles White, of Manchester, who wrote at the end of the last century in support of his contention. Dr. C. W. Marriott describes five cases of Nerve Lesion which he had under his care in the Royal Berks Hospital; the first case was one of paralysis of both musculo-spinal nerves apparently due to cold; paralysis of this nerve on both sides is rare, except when due to the use of crutches. Another case was one of facial paralysis apparently due to syphilis and disappearing rapidly under the administration of potassium iodide. Dr. J. B. Hurry describes a case of Addison's Keloid occurring in a young man, nineteen years of age. Two papers on Anæsthetics are in the volume. In one Mr. J. H. Walters describes two cases of death from chloroform and one in which recovery occurred; in one of the fatal cases and in the non-fatal case the failure of the pulse was markedly earlier than the failure of respiration. In the other paper Dr. G. Stewart Abram endeavours to discover the safest anæsthetic, and decides that ether is unquestionably safer than chloroform. Mr. Gilford gives notes of eight cases of Dwarfdom (we must acknowledge that we have never met with this word before); one of the cases he had observed himself, and the accounts of the others are culled from other writers. He suggests that certain dwarfs are the subjects of a definite disease, characterised by the partial atrophy of those structures which are hypertrophied in acromegaly; one valuable argument advanced is found in the case of a dwarf named "Princess Josepha," whose sister was 6 ft. 8 in. high, and was the subject of acromegaly. It is a little confusing in this paper to find some of the measurements given in centimetres and some in inches; it would be much better to give both forms. Dr. J. A. P. Price contributes an interesting case of Chronic Intestinal Obstruction due to Constriction of the Small Intestine by Meckel's Diverticulum, the obstruction due to this cause being nearly always of the acute variety. The volume concludes with a paper by Mr. Treves, on the Surgery of the Peritoneum, which was read before the society in October, 1896. We have dealt somewhat fully with the contents of this book as it is the first attempt at publication made by a society which has existed so many years and done so much good work. We hope to see the volumes of Transactions appearing regularly every year.

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Official Reports of the Republic of Costa Rica.—Among the official reports recently presented to the members of Congress of the Republic of Costa Rica there are two relating to the National Institute of Hygiene in San José, the metropolis. The work of this establishment during the past year included a considerable number of chemical analyses as well as many histological and bacteriological examinations of urine, fæces, sputum, tumours, &c. Larvæ and ova of the ankylostoma duodenalis were discovered in five out of sixteen samples of fæces. The institute is amply provided with apparatus for the production of the Roentgen rays and for micro-photography. Dr. Emilio Echeverria, the director, mentions incidentally in his report that at the ordinary pressure at San José water boils at 95° C. (203° F.), a circumstance which of course shows that the town is situated at a great elevation. In connexion with the institute there is a department, presided over by Dr. Bojas, for the preparation and inoculation of anti-leprous serum.

Proceedings of the Society for Psychical Research. Part 32, Vol. XIII. July, 1897. London: Kegan Paul, Trench, Trübner, and Co. Pp. 282. Price 3*s.* 6*d.*—This book is an elaborate treatise on the use of the divining rod as a means of discovering underground water. The author, Mr. W. F. Barrett, Professor of Experimental Physics in the Royal College of Science for Ireland, states (p. 2) that it was with great reluctance that some six years ago he began to investigate the matter. Ultimately, however, he arrived at the conclusion (p. 24) that "the movement of the rod is not due to trickery nor any conscious voluntary effort, but is a more or less violent automatic action that occurs under certain conditions in certain individuals," and he became so convinced of the utility of the practice that if he had to sink a well he would (p. 240) "prefer to have the spot selected by a good dowser rather than general advice given by a geologist, provided that the depth of the well did not exceed, say, fifty feet." About 200 pages of the book are occupied with reports of the proceedings of various water diviners, dating for the most part since 1880. By far the greater number of the predictions were verified by subsequent digging or boring, but several failures as well as much adverse criticism by geologists are recorded. The very copious data collected by Professor Barrett will no doubt be appreciated by those who take an interest in this mysterious question.

Messrs. Raphael Tuck and Son's greeting and other cards and booklets for the forthcoming Christmas season are again up to the high standard of excellence for which their productions have been deservedly famed in the past. The interchange of pleasurable compliments is rendered the more delightful when they can be accompanied by souvenirs which may justly be termed works of art, and which will themselves be prized for their intrinsic worth apart from their sentimental value. Amongst so much which is so good it is difficult to single out any particular pieces for special mention, but the panel pictures, the Woodland Studies by Frank Hines, the Turner Portfolio, the Ryland Portfolio, and Yeend King's Four Studies by Brook and Meadow are especially worthy of mention. Nor are the children forgotten: there are many enjoyable pictures to amuse them.

JOURNALS AND REVIEWS.

Practitioner.—In the November number Dr. H. D. Rolleston describes a puzzling case in which latent ulcer of the pylorus with jaundice simulated malignant disease. The patient was a man, aged twenty-seven years, who died ten days after admission to St. George's Hospital. Mr. Henry Strachan, senior medical officer of the Public Hospital, Jamaica, has an interesting paper on a form of Multiple Neuritis prevalent in the West Indies. The symptoms complained of are numbness and cramps in the hands and feet, dimness of sight, a tightness round the waist, and occasionally impaired power of hearing. The main nerves to the extremities are very tender on pressure especially the ulnar nerve, and along the distribution of their terminal filaments they may be tracked by lines of fine herpetic vesicles. Some of the nerves of special sense are also involved, principally the optic nerve, the affection of which is most frequently retro-bulbar. The muscles of the limbs will waste until the "claw" hand and foot are marked features. Recovery from all the symptoms is the rule. Mr. Strachan considers that the disease is due to the poison of malaria. There are three other original communications. The "Hero of Medicine" this month is Theodor Schwann.

Caledonian Medical Journal.—Dr. Alastair MacGregor, of Shepley, Huddersfield, continues in the October number his remarkable paper on Second Sight, the first part of which has already been noticed in THE LANCET of July 31st, page 258. He describes six cases, four of which were instances of death that came under the observation of his father, a clergyman in the island of Skye, the antecedent phenomena being as follows: (1) a woman saw a vision of her son falling over a rock; (2) a man heard an unearthly cry, twice repeated, proceeding from the direction of his neighbour's house; (3) three men in a coasting vessel were cursed by an old woman, after which as the vessel sailed away a peculiar, black-looking cloud was seen hovering in the air over it and was recognised by fisherpeople on shore as presaging disaster, which seems to have taken the form of an unaccountable murder; and (4) a woman saw a very brilliant light on a funeral pall, which was spread on a table, and in the middle of the light the image of her niece's face. Two of the other articles in the journal, entitled respectively the "Macbeths of Islay" and "Medical Heroes of the 'Forty-five," are historical and biographical.

The Monist.—Professor Ernst Mach, of Vienna, contributes an important physiological paper on the sensations experienced during rapid movement and change of position. It is headed "On Sensations of Orientation" and describes numerous observations made by Professor Mach on himself whilst seated in a rotating chair or lying on a board rotating in a horizontal plane. He considers that all the parts of the labyrinth are not auditory in their functions, but that the cochlea is reserved for sensations of tone and the semicircular canals for the sensation of rotation or angular acceleration, the nerves of the ampullæ being excited by the pressure of the fluid contents of the canal under the influence of inertia; he makes the further suggestion that the vestibule, particularly the portion of it known as the sacculus, is the organ of sensation of forward acceleration or of the position of the head. There are five other original articles.

WE are requested by the publishers, Messrs. Dawbarn and Ward, 6, Farringdon-avenue, E.C., to call attention to the fact that typographical inaccuracies appear in a book recently sent out by them for review entitled *Chemistry for Photographers*, by Mr. C. F. Townsend. The errors are being corrected. All persons who have obtained copies before Nov. 4th and who return them at once will receive revised copies in their place.

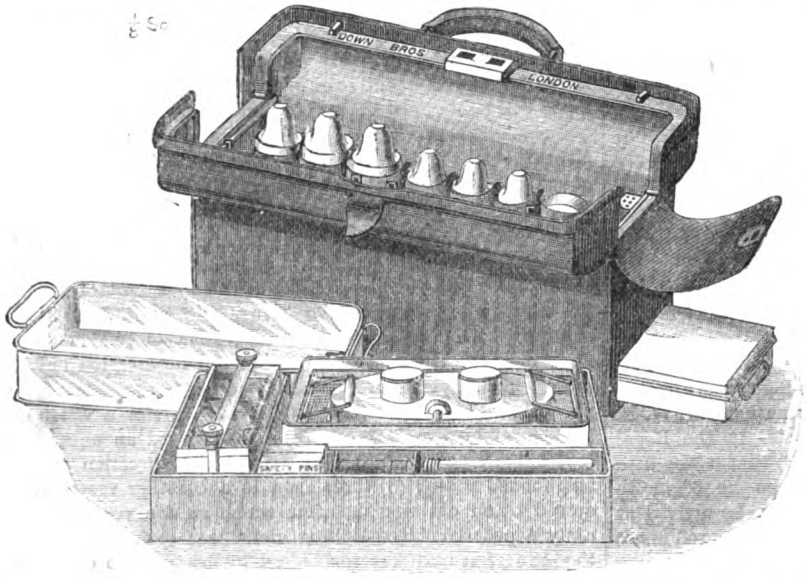
THE BRITISH ASSOCIATION.—At a meeting of the general committee of the British Association held in London on Nov. 5th Sir W. Crookes, F.R.S., was elected President for 1898, the vice-presidents being the Mayor of Bristol, the Bishop of Bristol, the Earl of Ducie, Sir E Fry, Sir F. Bramwell, Mr. J. Beddoe, M D. Edin., F.R.C.P. Lond., Professor Bonney, and Professor Lloyd Morgan. It was decided that the meeting in Bristol should be held on Sept. 7th, 1898.

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New Inventions.

A SURGICAL BAG.

To the surgeon whose operative skill is in constant demand few things are of greater usefulness than a thoroughly well-made and serviceable bag in which to carry his instruments, dressings, sterilising apparatus, and ligatures.



The essentials of such a bag are: (*a*) strength and durability of material throughout; (*b*) simplicity of construction, especially avoidance of too numerous and complicated fittings; and (*c*) portability consistent with the two former essentials. Messrs. Down Bros. have given this subject much attention, and with a few suggestions from myself and others a bag has been evolved which admirably answers the purpose. The main features of this bag are: (*a*) on opening, an easily removeable tray with sterilising apparatus, a glass-covered and aseptic ligature-holder, drainage-tubes, iodoform dredger, and safety pins; (*b*) nail-brush and soap in metal boxes, and a few stoppered bottles in boxwood cases; and (*c*) a large space below for instruments, &c., with pocket inside, and at one end a small outside pocket with metal receptacle for dressings. Neatness and tidiness, scrupulous cleanliness, and minute attention to all details are invaluable qualities in a good surgeon, and to those who wish to foster and enlarge these qualities the surgical bag will be found an additional impulse for doing so.

N. HAY FORBES, F.R.C.S.Edin. (Exam.).
Drumminor, Tunbridge Wells.

REVERSIBLE CATHETER AND BOUGIE IN ONE.

WE have received from Messrs. Mayer and Meltzer, of Great Portland-street, a specimen of a new form of catheter. Each end of the instrument having an eye enables it to be used as a catheter or bougie. At will each instrument may thus comprise either two catheters or two bougies of the same form and size, and if the surgeon introduces either end alternately the instrument will last much longer than one of the ordinary non-reversible description. Again, each instrument may be a combination: one end of the instrument may be a catheter *à boule* or a bougie *à boule* and the other end may be a catheter or a bougie of the blunt-ended form. Two different sizes (as well as forms) may also be combined in one catheter or one bougie. The "reversible" instruments are made of rather greater length than those in general use, which provides for the contingency of one end of the instrument being rendered unserviceable through the eye becoming rough; and, moreover, if the reversible catheter is to be employed for washing out the bladder the surgeon has merely to remove one end with a knife and he then has an ordinary catheter of the usual length to which to attach tubing, &c. The instruments have the advantages that space is economised and that, as the catheters are solid-tipped, they are more readily dried internally after use, and are therefore less likely to deteriorate.

FIG. 1.

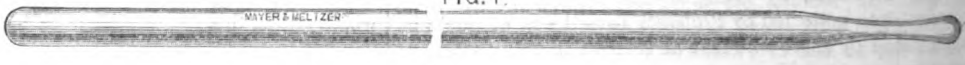


FIG. 2.

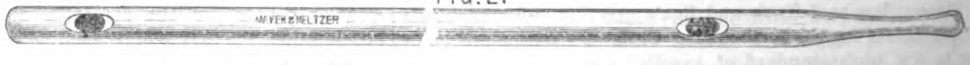
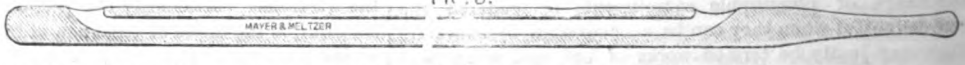
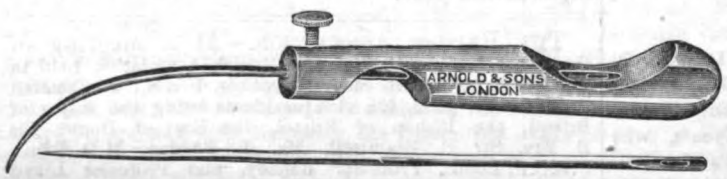


FIG. 3.



A NEW NEEDLE HOLDER.

I WISH to bring to the notice of the profession through the columns of THE LANCET a new needle-holder devised by Dr. Christian Branch and myself and manufactured by Messrs. Arnold and Sons. The advantages claimed for this pattern of holder are:—1. It can carry with equal facility a small suture needle or the long abdominal one. 2. Needles can be threaded with ease after being fixed in the holder before the introduction of the needle through the tissues. 3. It dispenses with the necessity, consequent on the use of a long needle with a handle, of being passed by one movement through the tissues, then threaded at the point, and, thirdly, drawn back; for one has only to loosen the screw and the needle, already threaded, can be drawn onwards by the other hand.



W. J. BRANCH, M.D., Edin.
Basseterre, St. Kitts.

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THE LANCET.

LONDON: SATURDAY, NOVEMBER 13, 1897.

WE have had an opportunity of reading the report of the Sub-committee appointed by the British Medical Association to consider the question of advancing Army medical reform, together with its appendix. These documents have been prepared for the Parliamentary Bills Committee of the British Medical Association, and they not only furnish a comprehensive summary of the causes which have led to the present condition of the Army Medical Staff, but state the case of the medical officers very ably and lucidly. To discuss the whole subject fully would be tantamount to reprinting much of the report itself with a running commentary thereon, and that we cannot do. Nor is it necessary, for all who are interested in the matter are already familiar with the facts, while many of our readers have also studied the report itself and would not require to peruse its text again. It seems fitting and pertinent to the occasion that we should briefly allude here to the part which THE LANCET has taken in army medical reform. Very many years ago, when the so-called scheme of "unification" was in the air and its merits were being weighed in the scales with those of the regimental system, THE LANCET suggested and advocated the formation of a Royal Corps of Surgeons or Royal Medical Staff Corps, which should take its place with the other scientific branches of the service and be organised on lines analogous to those of the Royal Engineers, the medical officers retaining, of course, their then existing ranks and titles. The powers and functions of such a medical corps were to be strictly circumscribed within the limits of its legitimate duties and responsibilities. All that appertained to the care of the sick and wounded soldier and to the whole hospital service were to belong to it, while it formed no necessary part of the scheme that medical officers should not continue to do duty with their regiments. To a certain extent, of course, a medical journal holds a brief for the medical side of every question, but it should claim to advocate what will work for the dignity and well-being of the profession as a whole, and not of any particular section of it. We have always maintained that what is best for the public and the public services is best for the profession, and that every honestly contentious question should be frankly and fairly considered on its merits and not merely in the spirit of the advocate sympathetically and exclusively influenced in one direction.

With the greater number of suggestions in this report we are in cordial accord, and that they are reasonable—indeed, unanswerable—is attested by the fact that the War Office authorities have, we believe, already conceded a good many of them. It is ridiculous to suppose that young and highly qualified medical men of the present day will be content with what obtained in the past under very different conditions. The cost of the medical curriculum has greatly increased, and the medical profession is recruited from men of higher literary and scientific culture and a superior social plane than was formerly the case. The army should, it would be thought, attract its share of men of this higher stamp into its ranks, but it fails to do so—indeed, it fails to attract enough men for its bare needs in a time of comparative calm. The army medical service is seriously discontented, and as a consequence candidates for its ranks are few. It is not a question of pay, for medical officers are satisfied with their present rates of pay and pension. But man does not live by bread alone; and here we approach the crux of the matter. Medical officers urge, among other reforms, that the grant of army rank and military titles in a consolidated army medical corps is the most pressing need at the present time for the restoration of confidence and contentment. When the suggested organisation of a Royal Medical Corps was originally put forward, this question of purely military titles for medical officers had never arisen and would have been repudiated by the medical officers of that day. Great changes have taken place, however, since then, and there can be no doubt that a considerable majority of the medical service are in favour of welding together the Army Medical Staff and the Medical Staff Corps into a consolidated Royal Medical Corps to be officered by themselves under purely military titles. They maintain that this would be at once a reasonable and a comprehensive plan, and they allege a number of reasons why this should be done. Without attempting to enumerate them all, let us take some of them. Their real military rank and status, never altogether certain, were rendered most unsatisfactory by their having been some years ago deprived of relative rank, which was authoritatively stated to have had no real existence and to be a myth, while their present compound titles are confessedly cumbrous and complicated. A department carries less weight and meets with less consideration in the army than a corps. The only rank universally recognised in the army is army rank, and purely military titles have been conferred upon, and are used by, the Army Service Corps and the Pay Department. Medical officers are under discipline and amenable to the regulations and liable to be tried by court-martial; they serve in the field, accompany corps into action, and are exposed to an enemy's fire and to all the risks and dangers of war, in addition to encountering special ones of their own; hence they are and must be considered as soldiers and not as civilians: their functions and duties are composite, often very arduous and very responsible, and not by any means purely medical: and, lastly, it is urged that their experience both in garrison and in the field, and especially on war service, has taught them the essential need, if they are to carry out their work properly and satisfactorily, of having assured military rank and purely military titles, which are the only titles recognised in the army.

These points might be amplified, but such, briefly stated, is the ground taken up by medical officers. On the other hand, combatant officers make out a case something as follows:—If army surgeons desire to be designated by purely

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military titles they have entered the army at the wrong portal and their titular distinctions are in reality false and misleading and somewhat inconsistent with the dignity and functions of the profession to which they belong. Their going under fire and sharing all our dangers unquestionably entitles them to share, as they do, in all the military honours and distinctions open to us, but there is a confusion of ideas in their reasoning. Going under fire in the fulfilment of duty and having a right to combatant rank are not by any means conterminous expressions. The whole *raison d'être* of the combatant officer is to command, fight, and kill, in order to defeat the enemy, whereas the *rôle* of the medical officer is to save life and succour the sick and wounded; it is for this that he has been educated, and for this he is specially paid. It is only occasionally and under exceptional circumstances that he has to depart from this *rôle*, and when he does so depart his combatant work is not his sole and special duty, as it is the sole and special duty of a general, captain, or subaltern officer. By all means give him military rank and power commensurate with his grave responsibilities and make his office and position as good and respected as possible, but this will never be done by conferring upon him titles which rightly designate our calling and not his. As regards the army surgeon's position, social standing, and the amount of consideration and respect and the personal regard in which he is held, he occupies exactly the same position in these respects that other officers do. If he is a gentleman and a pleasant fellow and interested in his work he is sure of every consideration, while it is not to be supposed that officers as a body are so oblivious of the interests of themselves, their families, and the soldiers under them as not to prize highly the advantage of having a good reliable man to look after them.

A good deal has been written and said on both sides of the question which was either irrelevant or had better not have been written or said. We have tried to put the two aspects of the case as fairly and dispassionately as we can in order that those of our readers who are not army medical officers may understand the respective views. It is obviously of the greatest importance that the army and navy should possess good medical officers and gentlemen, and that the army should offer such attractions as to secure a number of highly qualified men who are proud of their profession and desirous of succeeding in it by the exercise of their professional skill and attainments. Their duties in military life are, and must be, mixed—those of a soldier as well as those of a surgeon. The past traditions of the medical department are such as the whole profession may be proud of, and illustrations of zeal, bravery, and devotion within its ranks are constantly occurring in the present. We can only repeat that medical officers allege that the time has come when the possession of titular army rank is necessary for their position and the proper discharge of their duties. They ought to know best, and the reason is not clear why they should not be styled captain, major, or colonel of the Royal Medical Staff Corps. We trust that the War Minister will thoroughly consider all they have to say in regard to this and other matters in any action he may take. Lastly, the sooner some action is taken the better for the good of all concerned.

AMONG the many interesting and important subjects which were discussed at the recent meeting of the Association Française d'Urologie under the presidency of M. GUYON, there was none of more interest or of more importance than the modern treatment of hypertrophy of the prostate gland. The consequences of an enlarged prostate, such as retention of urine and consecutive disease of the kidney, may be so grave that for many years surgeons have been seeking for some method by which the hypertrophied prostate could be reduced in size. Urethral prostatectomy was first tried and elaborate instruments, built on the plan of a lithotrite, were invented, and these were intended to seize and tear off a portion of the gland and remove it by the urethra; but they were uncertain and of little value and were soon disused even by their inventors. The suprapubic operation then followed, in which the bladder was opened above the pubes, and portions of the prostate were removed by cutting or by gouging instruments; the results in some cases were fairly satisfactory, but the operation was by no means simple and the hæmorrhage was occasionally very profuse, so that the method was only employed in a comparatively few cases. The next attempt came from a new source. Pathologists have often compared the fibrous hypertrophy of the prostate to the fibromata of the uterus, and though the analogy is an entirely mistaken one, yet it has led to important results. It has long been the custom in certain cases to attempt to prevent the further growth of uterine fibromata by removal of the ovaries; then it was said, Why should we not endeavour to modify the growth of the prostrate by the analogous operation of removal of the testes? RAMM, of Christiania, and WHITE, of Philadelphia, almost at the same time and apparently quite independently of each other, proposed to perform castration as a mode of treating prostatic hypertrophy. They soon acted on the suggestion and found that after removal of the testes the prostate rapidly diminishes in size, voluntary power over the bladder is regained, and the patients are often much improved in health. Sometimes the improvement in micturition is exceedingly rapid, much too rapid for it to be due to organic changes in the substance of the prostate; in these cases it is probable that the relief is due to a shrinking of the prostate from a contraction of its vessels; but atrophy of the gland also takes place even to a remarkable extent in some instances. Yet in all cases the result is not equally favourable. In some the patient is rapidly restored to almost perfect health; these unfortunately form only a comparatively small portion of the cases; in others the improvement is slight at first, but as time goes on the power of micturition increases, though it may never be quite complete; in others the relief is only small, even after the lapse of many months, and in a large number the failure has been absolute. The mortality also after castration for prostatic hypertrophy is by no means small; it has been found to amount to 19 per cent., and though doubtlessly a large portion of this death-rate is to be attributed to causes other than the operation itself, as the patients are often in an extremely bad state of health, yet when full allowance has been made for this the mortality is remarkably

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high. A form of violent delirium, sometimes permanent, has also been found to follow the operation in a few cases. CARLIER, of Lille, mentioned at the congress that the operation had been performed in more than five hundred cases; yet we have, unfortunately, no power of saying which case will be benefited by castration and which will not. Vasotomy, or division of the vas deferens for prostatic hypertrophy, was probably first performed by REGINALD HARRISON; certainly in some cases atrophy of the prostate follows the operation, but in very many cases it is an utter failure. It is by no means improbable, and the theory is supported by some experiments on the dog by ALBARRAN and MOTZ, that the atrophy of the prostate which follows vasotomy is really due not to the division of the vas, but to the division of the nerves and vessels of the cord, and "angio-neurectomy" of the cord with preservation of the vas deferens, has been suggested, and has been shown experimentally to be followed by as much atrophy of the prostate as occurs in cases where the whole cord has been divided. It cannot be said that either castration or vasotomy has been established as a perfectly satisfactory method of the treatment of enlarged prostate which is interfering with the outflow of urine. Each method in certain cases gives excellent results, but the failures are many, and with castration at least untoward results are by no means rarely met with. We must come to the conclusion that these methods which have been discovered for the treatment of a most obstinate and troublesome disease are valuable, but that we have yet to learn what are the indications for their employment with certainty of success. At the meeting of the Association Française d'Urology eleven papers were read on castration or vasotomy, and this fact shows how much attention is being directed to this subject at the present time.

IN THE LANCET of Oct. 9th (p. 928) we published a short annotation respecting an inquest that had recently been held at Twerton, near Bath, and we took occasion to compliment the coroner upon the way in which he conducted the investigation and to express the opinion that the verdict of the jury would receive general commendation. In our issue of Oct. 16th (p. 1008) will be found letters from Dr. PRESTON KING and Dr. WILLIAM H. COOKE reflecting on the course we had taken. We think these gentlemen have assumed more than the language we employed would warrant, and hence their strictures appear too severe. As, however, both letters contain most reasonable views on a topic of great interest to the medical profession and the public we think that it will be well to refer to them, even though to do so now has a somewhat belated air. As a matter of fact it can never be a belated action to discuss the subject of medical evidence at coroners' inquests, for it is one of abiding importance.

Dr. KING addressed himself in the main to two propositions: (1) that a second medical man who has not the advantage of having directly possessed himself of the facts of the case but has learned them from the testimony of others is fully competent to give scientific evidence as an expert; and (2) that cross-examination of medical witnesses should be allowed at the coroner's inquisition, as it is in the superior courts. We give an unqualified assent to each of these presentments, but as regards the first we would say that whilst the opinion of an expert witness founded upon facts related by others receives full recognition in proportion to the special knowledge and skill of the deponent, judges are ever and justly cautious in directing juries not to be misled, since there are two factors which tend to vitiate the formation and formulation of a judgment on facts procured in this manner. In the first place, the narration of facts may be faulty; and, secondly, there is the possibility of misinterpretation of what a witness conveyed or intended to convey. We would remind Dr. KING that the coroner's court is one of first instance; that hearsay evidence is to a great extent admissible; and that consequently procedure is not governed strictly by the "laws of evidence" as in the magisterial and superior tribunals. Consequently a special or expert witness is to some extent in the difficulty of not knowing the exact limitation of the facts upon which he has to direct his powers of reasoning. Moreover, the law relating to coroners' inquests does not provide for the cross-examination of witnesses by counsel; in fact, it is entirely within the discretion of the coroner to allow or disallow such method of investigation. This is a salutary provision, in our opinion, for many witnesses would fail to give full testimony of their knowledge if hampered by technicalities incidental to what must be considered as "hostile" examination by counsel.

Dr. COOKE'S communication is to some extent on the same lines as that of Dr. KING, but it touches upon important matters of forensic interest beyond the question of legal investigation. It may be remembered that the person upon whose body the inquest was held was found in a semi-conscious state near his own dwelling. He had a wound at the back of the head and less important ones upon the forehead, the pocket of his flap trousers was exposed, and his keys were found at some little distance from him. At the post-mortem examination made by Dr. HEATHCOTE the heart was found to be dilated and fatty and the organs generally congested. There can be no doubt, as Dr. HEATHCOTE said, that the deceased died from syncope, but another question of the highest importance was whether the cardiac failure had been determined by a blow or injury previously to the fall. Dr. HEATHCOTE, whilst not denying this, was of opinion that the facts on the whole were against this theory. The man stated before becoming unconscious that he had been assaulted. Dr. HEATHCOTE explained this by supposing that a sudden and unexpected pain in the head, or a cardiac pang coeval with cerebral anæmia and faintness, may have been wrongly believed by the deceased to be the result of external violence, and that therefore his statement was not worthy of credit. Dr. COOKE asks, If this were so would he almost in the same breath have accurately told the bystanders where his keys were to be found? We allow that this is both pertinent and relative to the issue. It fully warranted the jury in returning an open verdict as regards the incidence of a blow prior to the proximate cause of death. The fact that a £5 note known to have been in the possession of the deceased has not been traced is, moreover, suggestive of foul play. Clearly there is ample

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reason for further police investigation. Whilst regretting that the coroner's inquiry should have led to a difference of opinion between the medical men, we see no reason to alter our previous statement—that the coroner is to be thanked for his painstaking care as are the jury for their logical verdict.

Annotations.

"Ne quid nimis."

IRRITABLE HEART AND TRANSIENT MURMURS AS A CAUSE OF REJECTION OF CANDIDATES FOR THE ARMY AND PUBLIC SERVICES.

IN the annual address to the North-West London Clinical Society delivered on Oct. 20th Sir William Broadbent dealt mainly with this subject. He alluded to the hardship which rejection on medical grounds entails upon the young man who has gained a place on the list for admission to Woolwich or Sandhurst and added, "In my judgment this has sometimes taken place on totally inadequate grounds." In illustration he mentioned cases of so-called "irritable heart," cases of bruits heard over various cardiac and pulmonary areas, and also cases of intermittent or cyclic albuminuria, on account of which candidates may be refused their commissions. The candidate with irritable heart has usually been spending long and late hours in study, with restricted exercise and limited fresh air, and with possibly unlimited tobacco. He presents himself for medical examination in a state of extreme nervous excitement. His pulse is rapid and perhaps irregular, his cardiac impulse is violent and may be diffused, even beyond the right sternal border. Murmurs may be heard at one or more orifices and his respiration is short and hurried. He is referred for three or six months, but on again presenting himself before the same examiner the ordeal reproduces symptoms which have been absent in the interim, and he fails to pass. Sir William Broadbent pointed out the importance in such cases of considering the personal history, saying: "It would take a great deal to make me reject the captain of a football team of a large school. ..... Such disturbance of the action of the heart, however exaggerated, is not inconsistent with perfect soundness and efficiency." "A fair test" would be to make the man run a mile round one of the cinder paths at his own pace, noting his time, but especially the period at which he got his second wind, and how he finished up. Sometimes, he added, "a run up two flights of stairs would bring the heart to its senses." A more common cause of rejection is the presence of a murmur which may be perfectly innocent of significance. Such murmurs may simulate closely a soft systolic mitral, but are heard only during inspiration or when the chest is full, and are due to compression of the overlapping lung by the heart during systole. Pulmonary murmurs may depend on bulging of the conus arteriosus against the chest wall; they disappear when the lung is interposed on deep inspiration. Sometimes bruits are heard, not only in the course of the ordinary mitral regurgitant, but over the greater part of the lung. In such cases there is usually pleural adhesion. "I have known such bruits," said Sir William Broadbent, "to be looked upon as indicative of valvular disease, requiring treatment by digitalis and demanding all sorts of precautions in the matter of exercise," and he mentioned the case of an athlete, aged twenty years, who presented a murmur resembling the mitral regurgitant, and also one over the pulmonary area. Apart from the bruits the heart sounds were normal, and in particular there was no accentuation of the pulmonic second sound. The left side of the chest was narrower than the right and moved less on respiration. The condition was probably due to pleuro-pericardial adhesion, and after five months' very vigorous exercise the patient was none the worse. The criterion of pseudo-mitral disease is absence of displacement of the apex beat and of accentuation of the pulmonic second sound, or undue right ventricular impulse, together with absence of symptoms. Restrictions as to games in such cases, except with regard to football, house runs, and training for races, are often needlessly imposed. Other murmurs are heard in the tricuspid area which are perfectly harmless. And such tricuspid bruits are rarely constant. Sir William Broadbent also alluded to dilatation of the heart and intermittent albuminuria. Sir William Broadbent's address should be of great practical value, not only to the authorities on whose fiat appointments to our public services depend, but also to all practitioners who meet with the difficulty of diagnosing organic and permanent from functional and temporary disease.

SANITATION FOR HOPPERS.

THE Maidstone epidemic has, at any rate, had one good result—namely, that of calling attention to the grossly insanitary conditions under which hoppers are compelled to live during the ingathering of the hops. A special correspondent of the *Times* has been investigating the circumstances, and his letter on the subject reveals a state of things which we can only describe as disgraceful. With all our boasted and ruinously expensive system of education, our sanitary organisation, county councils, health boards, and the like, it appears that hops are gathered by a process which for total disregard of decency, sanitation, and cleanliness, to say nothing of the first principles of Christian charity, carries us back to the most immoral period of the eighteenth century. This being so, for a district to put up with the gathering ground of a hop-garden for its water-supply is to invite disaster. To begin with, hops are a very exhausting crop and the ground therefore requires constant manuring. Neither is the manure solely that of animals. Every kind of filth is employed—fish-offal, old woollen rags and waste, street sweepings, and the like are used; and water running off a gathering ground polluted with this sort of stuff is almost sure to be contaminated. But this is only the minor evil, it is the herding together of a mass of human beings, some of them of the very lowest class, under such circumstances as preclude the observance of the most ordinary laws of health which, does the mischief. It must be said that all the hopper houses are not equally bad, for the newer ones are built of wood with iron roofs and are portable; but even these are grossly overcrowded. There is absolutely no sanitary accommodation whatever, and this being so, says the *Times* correspondent, "the most dangerous of all pollutions takes place on the ground." The hop-garden itself is generally used for this purpose; and where part of the Farleigh supply arose the collecting pipes were only 2 ft. below the surface of the ground used by the hoppers. It must not be supposed that we object to house refuse, offal, or excrement being deposited in the fields. The fields are the best and most suitable place for such materials, and earth purification the cheapest and most thorough. What we do object to is the fact that such substances are deposited close to the gathering pipes of a water-supply which is sure to get fouled by these waste products before the kindly earth has had time to render them innocuous. Again, there is no water laid on to the hopper houses, the hoppers are not allowed to get it from the farmhouses, but have to do so where they can. And yet water is laid on to nearly all the hop-gardens themselves. It would be easy to put up

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a stand-pipe and so ensure a clean water-supply, but this is not done. It would appear that the primary cause of these horrible abuses is, as in so many other commercial enterprises, the high-pressure race for wealth. In some of the hop-gardens the gathering of the hop-crop is a kind of village festival, there are no imported hoppers, and the result is a small return to the farmer. But in the neighbourhood of Maidstone "it is a great money-making concern, in which the imported hop-pickers are but part of the machinery and of somewhat less account than the rest." Epidemics are hard masters, but possibly the sufferings through which Maidstone is passing will bring about a sincere reform of the present system of hop-gathering. If it is impossible to carry out the harvest on the lines on which it is worked in some places it should be made absolutely compulsory upon the grower to provide a proper supply of water, proper sanitary accommodation of the nature of a latrine, and housing at least as good as that of a stable or a kennel for hounds, and overcrowding should be absolutely forbidden. We suppose we shall be accused of interfering with legal commercial pursuits, but the wholesale poisoning of a neighbourhood is of more importance than the price of beer, and as at present excellent beer can be obtained from Maidstone for something under 2*d*. a pint it would hurt no one to pay 3*d*. for it, and no one would object if he had an assurance that by so doing he was furthering the cause of sanitation, to say nothing of that of humanity. It is right to say that in the *Times* of Nov. 9th appear two letters, one from the Principal of the Agricultural College at Wye, Mr. A. D. Hall, traversing every statement of the special correspondent, and the other signed "Spectator," which avers "that he is strictly within the limits of the truth." After this we may well ask, "What is truth?" and, unlike jesting Pilate, would stay for the answer. The *Times* correspondent maintains his attitude, and his words bear the stamp of accuracy.

BRAIN DESUETUDE.

SPEAKING at Selkirk on the 8th instant, Sir James Crichton-Browne dwelt on the dangers to health involved in indolence and disuse of the brain. The medical profession, he said, adapting itself to the needs of the times, had felt it incumbent upon it during the last decade to insist mainly on the evils of misuse of the brain, on the excessive strain not seldom imposed on it in these days in the fierce struggle of the race to be rich, and more especially on the over-pressure imposed on it in the name of education when in an immature state, but they were not less keenly alive to the correlative evils of the disuse of the brain. Elderly persons who gave up business and professional men who laid aside their avocations without having other interests or pursuits to which to turn were in many cases plunged in despondency or hurried into premature dotage. He did not know any surer way of inducing premature mental decay than for a man of active habits to retire and do nothing when just past the zenith of life, and, on the other hand, he did not know any surer way of enjoying a green old age than to keep on working at something till the close. It had been said that one of the rewards of philosophy was length of days, and a striking list might be presented of men distinguished for their intellectual labours which they had never laid aside, who had far exceeded the alloted span of human life. Galileo lived to seventy-eight, Newton to eighty-five, Franklin to eighty-five, Buffon to eighty, Farraday to seventy-six, and Brewster to eighty-four years. Sir James Crichton-Browne drew special attention to the great age generally attained by our judges. Our judges were, he said, men who could never fall into routine, but were called upon, as long as they held office, for mental effort in considering and deciding on the new points and cases which were constantly submitted to them. For the most part they had at one period of their lives undergone some over-strain in the active practice of an exacting profession, and yet they lived to a ripe old age, and were, he believed—notwithstanding the jokes and jibes of hungry aspirants at the bar—more exempt from dotage than any other class of the community. The sustained brain-friction in their case kept that organ bright and polished. These facts, he thought, ought to inspire us with some doubt as to the wisdom of the compulsory retirement and pension *régime* under which we lived. He had known several cases of mental disease induced solely by enforced idleness in men turned out of the public service, and more particularly the army, in conformity with a fixed rule, while still in the prime of life and capable of useful work. On entering the public service a man had to ascend by graduated steps of increasing work and responsibility. Was it not possible to arrange graduated steps of diminishing work and responsibility by which he might descend on leaving it? Much waste and wretchedness might thus be saved. The physiological notion of life was not cruel over-pressure at the beginning, penal servitude in the middle, and silly superannuation at the end, but the timely, continuous, orderly, well-balanced exercise of all the functions and faculties with which the being is endowed.

IMPORTANT DECISION AS TO AIR-SPACE IN COWSHEDS.

A VERY important case bearing on the question whether a regulation under the Dairies, Cowsheds, and Milkshops Order of 1885 enables an authority to specify a definite amount of air-space per cow in a cowshed has just been decided. The case is that of Baker *v.* Williams, and it was an appeal from the decision of the magistrates of Southport, which came before the court of Queen's Bench on Nov. 1st. The appellant, a dairyman, contended that a regulation as to air-space could not be made by the town council; that the word "ventilation" in the thirteenth section of the Order did not authorise any requirement as to air-space; that the provisions of no Act of Parliament authorised the Privy Council—now the Local Government Board—to make a regulation as to air-space; and that therefore the Dairies and Cowsheds Order was, in so far as the requirement as to air-space is concerned, invalid. The appellant's strongest point was that whilst in Sections 7 and 8 of the Order the words are "ventilation, including air-space," Section 13, under which the authority make their regulations, omitted the words "including air-space." But both Mr. Justice Wright and Mr. Justice Kennedy decided that in such cases the Order was in effect an Act of Parliament, that the Order and the statute must be read concurrently, and that consequently the authority had power to include the question of air-space when making a regulation in the matter of ventilation. It may be admitted that it would have been more satisfactory if the words relating to air-space had not been omitted from Section 13 of the Order, but it is most satisfactory that the decision is in the direction both of common sense and of the protection of public health. In cowsheds ventilation in its health aspect could not be obtained apart from a regulation as to a minimum amount of air-space; the two go necessarily hand in hand. And in so far as public health is concerned, it is notorious that the want of cubic space per cow, with its consequent crowding of cows together, is one of the most potent factors in conducing to bovine tuberculosis and to spreading that disease from cow to cow. The public as yet hardly realise the danger which children incur from tuberculous milk owing to overcrowding in cowsheds, but we hope some definite pronouncement on this point will be made by the Royal Commission on Tuberculosis, and that the report will contain a distinct condemnation of some of the regulations sanctioning insufficient cubic

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space which some authorities have made. The amount of air-space upheld by the Court of Queen's Bench is 800 cubic feet in the present case, and this is the space which the Local Government Board recommend as a minimum. Unhappily, they cannot enforce it.

A GALLANT DEED.

IT is gratifying to learn that Major-General Yeatman Biggs has brought to the notice of the military authorities in India the gallantry of several of the medical officers who distinguished themselves in the action of Uhlan Pass on Aug. 27th last. Among them Surgeon-Captain Beyts has been signalled out for special mention, and his heroic conduct will add still another name to the list of those who at the call of duty have not hesitated to face almost certain death. After attending to the wounded under a heavy fire Surgeon-Captain Beyts, regardless of all consequences to himself, carried the body of Lieutenant North, who had been wounded, down a hill track too steep for a dhoolie, saving the life of the young officer who had become faint and powerless from loss of blood.

THE PAYMENT OF CORONERS' JURIES.

THE debate upon this subject having its origin in the report of the Public Control Committee of the London County Council, to which we referred last week, was resumed on Tuesday last. Sir Henry Poland pointed out that as it was usual to summon twenty-three jurors, and as the payment of only fifteen was provided for under the scheme of the committee, it would be better that the committee should take the matter back for consideration. Mr. Cornwall coincided in this view, on the ground that the suggested payment was inadequate. He said that it was a curious fact that those who could really afford to give their time were usually asked to serve on juries to which a fee was attached, while working men, of whom coroners' juries were largely composed and who should be fairly recouped for consequent loss, received no fee. The report was withdrawn for further consideration, but we hope that the matter will not be allowed to rest.

THE RINDERPEST.

APART from its economic importance, which is great, rinderpest, the extensive epidemic amongst cattle in South Africa, is of extreme interest to the pathologist; and at the Cape a very determined attempt is being made to control the spread of, and the mortality from, the disease by the very latest methods of bacteriology. Attempts to fence off the contagion by forming immense "belts," though for a time successful, ultimately failed to prevent the introduction of the disease. Destroying infected animals was of no more value, and then other methods were employed. The serum method, the bile method, and the glycerinated bile method have all been tried in turn. The objection to the serum method was the large amount required to ensure permanent immunity. The bile treatment certainly conferred immunity for a time; but it was accused of conveying the disease in some cases, and only certain biles could be used. Dr. Edington's glycerinated bile was introduced to obviate these objections, and it was to a very large extent successful, but the immunity conferred, though complete while it lasts, is very short-lived. It may last only twenty days or, as some say, two or three months, but after the lapse of that time the animal is very liable to be attacked if in an infected area. Other expedients are almost daily being suggested and tried. One of the latest methods is that advocated by Dr. Danysz and Dr. Bordet. They consider that true permanent immunity can only result from an attack of the disease; they inject into the animal some "salted" serum and then allow the beast to mingle with infected cattle. Immediately after the injection the immunity is complete, but in a few days the efficacy of the serum injection has diminished sufficiently to allow the animal to take the disease, but the attack will be very mild because of the remaining protective influence of the serum. The method is ingenious and deserves thorough trial, and we may hope that one outcome of this severe epidemic will be that a satisfactory method will be devised of preventing such direful results in the future. In the present number of THE LANCET we publish an article from a correspondent in South Africa which gives a very clear account of the disease and the means employed to combat it. One other point of interest we may mention, namely, that the flesh of oxen dead from rinderpest is said to be perfectly harmless to human beings when taken as food, even if not thoroughly cooked.

THE SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT the meeting of the Fellows and Members of the Royal College of Surgeons of England which will be held at the College on Thursday afternoon, Nov. 18th, a resolution will be proposed on behalf of the Society of Members to the effect that the meeting repudiates the claim put forward by the Council in their resolution of March, 1896, to represent "the Members as well as the Fellows," and again calls upon the Council to accord the franchise to the Members. A second resolution will ask the meeting, "in view of the widespread public and professional evils induced by medical aid associations and other companies trading in medical attendance," to call upon the Council "to make a clear pronouncement for the information of Fellows and Members that the acting as paid servant of any persons who tout and canvass for patients or who allow the well-to-do classes to take advantage of rates of payment arranged to meet the necessities of the poor is 'disgraceful in a professional sense' and deserving of censure."

MR. PICTON ON THE VACCINATION QUESTION.

WE have never understood Mr. Picton when writing on the vaccination question, and he has now become more unintelligible than ever. Thus he wrote to the *Times* on Nov. 4th to make two assertions. One is a definite declaration to the effect that he entered on the inquiry made by the Royal Commission on Vaccination "with a belief in Jenner's alleged discovery." All we have to say on this point is that his questions at one of the first sittings of the Commission were directed to show that because in years where there i an increase in the number of vaccinations there is an increase in the number of cases of small-pox (a statement which requires qualification), therefore vaccination may be assumed to cause small-pox. It does not seem to have occurred to him that he was putting the cart before the horse, and that, as at Gloucester, the anti-vaccinationists get afraid of their neglect when small-pox becomes epidemic and rush to the vaccination stations, and so increase the number of vaccinations. Other people have been puzzled besides ourselves by Mr. Picton's assertion that he had been a true believer. M.D. reminds us in the *Times* of the 9th inst. that Mr. Picton wrote in 1889, the very year when the Royal Commission was appointed, to say that he "was rapidly approaching" the conclusion "that vaccination is of no use." So much for his declaration of his faith when he became a member of the Royal Commission in 1889. His second assertion is more astounding; it is that "seven years' study" on that Commission "at once" convinced him that "vaccination is absolutely futile." And yet at the end of those seven years Mr. Picton, not content to sign the general report, made announcements, together with Dr. Collins, in a separate report, in exactly the opposite

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sense. Thus he put his signature to sentences such as these: "While shortly after vaccination there may be a certain amount of immunity or antagonism to the influence of renewed vaccination, *or inoculation with small-pox*,[1] ..... this soon wears off, perhaps more rapidly in some than in others." Then, again, Mr. Picton, once more associating himself with Dr. Collins's views, writes in the report of the Royal Commission: "Even if vaccination were a more effective and trustworthy prophylactic than we hold it to be ....." Here after seven years of study is a complete admission that Mr. Picton did believe vaccination to be of some value, and that he did not believe it to be "absolutely futile." It has been suggested before this that Mr. Picton has never yet mastered the elements of this subject of vaccination in relation to small-pox, and this is the most charitable view to take of his recent assertions.

A DEATH FROM CIGARETTE SMOKING.

WE extract the following paragraph from the lay press:—

"At Felling, near Gateshead, yesterday, at an inquest on the body of James Francis Duffy, aged sixteen years, the jury found that the lad died from syncope, due to nicotine poisoning, caused by the excessive smoking of cigarettes. Mr. Graham, the coroner, said there seemed to be quite an epidemic of such cases. It was time the attention of parents was called to the danger of their children smoking at so early an age."

We quite agree with the coroner, and would add, having regard to some remarks on the quality of cheap cigarettes which we were moved to make last week, that it would be very interesting to have an analysis made of the tobacco which formed the favourite smoking of this unfortunate boy.

A WELL-KNOWN POLICE SURGEON.

WE regret to have to record the death of Mr. George Bagster Phillips, M.R.C.S. Eng., L.S.A., who has been surgeon to the Whitechapel or H Division of Police for over thirty years, and who died on Monday, Oct. 27th, from apoplexy. A personal friend of Mr. Phillips, who was for some time his assistant, sends us the following brief communication concerning him: "The old proverb that a straw can tell the way the wind is blowing holds good if we look for Mr. Phillips's name in the Medical Directory. We there find exactly two lines about him, setting down simply his address, and his qualifications with their dates. This was typical of the man, for anything of the nature of self-advertisement was utterly abhorrent to his nature. Though he was one of the leading police surgeons in London, and was greatly trusted and respected by all the police authorities, he did not even mention his connexion with Scotland-yard, while he makes no allusion to the clubs of which he was medical officer and the members of which trusted him implicitly and regarded him with veneration. I was one of his assistants and learned a lesson that all my predecessors and successors could have learned, and doubtless did learn, from him in his quiet house in Spital-square—the lesson of doing all that had to be done to the very best of our ability without expecting any recognition of our efforts, the work to be done for the love of our profession and for its own sake. ..... Under a brusque, quick manner, engendered by his busy life, there was a warm, kind heart, and a large number of men and women of all classes are feeling that by his death they have lost a very real friend." Mr. Phillips's name became prominent in connexion with the series of crimes which took place in the Whitechapel district some years ago, and which are now popularly known as the "Ripper Murders," having conducted the necropsies on the mutilated bodies of the victims in conjunction with Mr. Bond. In this connexion it is well to remember that the crimes committed by people afflicted with what is technically known as "sadism" are at the present time affording particular danger to the community, several recent tragedies having probably had their origin in sadistic impulses. The individual thus afflicted may be in other respects perfectly sane, and when the desire for lust and cruelty comes upon him he commits his terrible crimes with so much secrecy and ingenuity that he frequently escapes detection altogether. The victims of sadism perform acts which vary in their monstrosity, but they generally proceed upon the same lines, and on inquiry into their antecedents they will nearly all be found to spring from a neurotic stock; in various members of the family will be found some pronounced insanity, hysteria, or other neuropathic condition, while the patients themselves frequently present some obvious cranial defect in formation, and many of them from youth upwards have exhibited a taste for cruelty to animals. This propensity in children should be carefully watched, and if the tendency persists in spite of every endeavour to turn the mind into healthy and humane channels some strong and early control should be placed over them or they may become a great danger to those about them—and not only, as is generally supposed, to those of the opposite sex. In a recent case in Islington the victims, for example, were of the same sex as the perpetrator.

[1] The italics are ours.

SEPTIC IMPETIGO.

A CASE recently communicated to the Société de Biologie in Paris by Dr. Triboulet[1] is interesting as affording an example of rapidly fatal impetigo due to the bacillus pyocyaneus. The patient, an infant aged ten months, was also the subject of acute miliary tuberculosis. Which of these diseases was chiefly accountable for the fatal result is, of course, uncertain. Dr. Triboulet considers that it was the former, and he alleges in support of this opinion the fact that sudden death is not exceptional in generalised impetigo, while tuberculosis as a rule does not kill with the same rapidity. In his case the bacillus was discovered in the fluid exuding from small ecthymatous ulcerations in the skin, and also in the blood of the heart, and in the liver and kidneys. Its identity was confirmed by cultures in beef-tea, &c., and by experiment on living animals. It was found, moreover, to exist as a saprophyte in the neighbourhood of the Trousseau Hospital, where this case occurred, having been discovered by one of the resident physicians on the bark of an adjacent tree. The facts of this case are obviously suggestive in relation to the occasionally surprising virulence of some skin eruptions.

[1] Journal de Clinique et de Thérapeutique Infantile, Oct. 28th, 1897.

THE CHAIRMAN OF THE LIVERPOOL HEALTH COMMITTEE ON THE HEALTH OF LIVERPOOL.

AT the final meeting of the Liverpool Health Committee for the municipal year the chairman (Alderman Cookson) gave an interesting review of the work of the Health Department during the past year. He instanced how greatly the work of the Health Department had increased of late years, as shown by the number of houses erected in 1897, which amounted to 1814, as compared with 474 houses erected in 1894. The general sanitary condition of the city during the first six months of the year was very satisfactory, the rate of mortality having been during that period 22 per 1000, indicating that the improved condition of the previous year had been fully maintained, each district in the city sharing in the general improvement. The sanitary horizon was, however, darkened during the third quarter of the year by the large amount of diarrhœa occurring amongst the children of the poorer classes, more especially in the case

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of very young infants, a large number of which cases were due to the carelessness of parents in the neglect of the sanitary precautions persistently impressed upon them by the officials of the Health Department in the matter of feeding and attention to general cleanliness. With the single exception of this disease all the zymotic diseases had shown a satisfactory diminution. Typhus fever still lingered in squalid areas of the city, the deaths due to which amounted to 17, against 26 during the previous year. Not a single death was due to small-pox. A remarkable diminution in the number of deaths from typhoid fever occurred during the first nine months of the present year, which reached 76, as compared with 107 during a similar period in the previous year. With regard to this disease it had again been proved that food had been the medium of infection, close upon 30 patients having been infected by eating ice-cream which it was found had been manufactured under conditions which admitted of no doubt as to the source of contamination. The proposed clause in the Liverpool Improvement Act for licensing itinerant vendors and registering premises where food disposed of by them was manufactured or stored would be of unquestionable benefit. Great benefit had accrued by the amount of street-washing which was constantly taking place, and stress was laid on the injury to public health caused by rubbish and litter being thrown into the public thoroughfares, which under the Liverpool Improvement Act was a punishable offence. The birth-rate of the city had continued to be high, and in the older parts of the city reached 37 7 per 1000, while in the added and more aristocratic areas a lower rate prevailed—viz , 24·9 per 1000.

BOARD SCHOOLS AND MEASLES.

MEASLES is a disease which is apt to be thought lightly of, but it is making its importance felt very unpleasantly in two ways—first by its fatality and secondly by its interference with attendance at board schools. The latter inconvenience has been brought almost accidentally to the notice of the medical officer of health of Islington. Not being a notifiable disease he does not receive information of it as he would of other diseases from medical men. But he is disappointed at not getting information of it from school authorities. He has narrated to his public health committee the way in which he came to find out quite casually that up to Friday, Oct. 22nd, no less than 99 children had been excluded from school either because they were attacked or lived in homes where there were cases. The regulations of the School Board require the medical officer of health of the district to be informed of the child's exclusion on account of symptoms of infectious disease. But they seem rather vague as to the particular officer who is to convey this information. Apparently the duty devolves upon the head teacher. This doubt ought not to exist a single day longer, and we feel sure that the medical officer of the School Board will be glad to see that more precise instructions are given. Undoubtedly, as the medical officer of health of Islington says, the sanitary authorities do much for the health of board schools, and it is but fit that the authorities of the board schools should facilitate the efforts of the medical officers of health in minimising the evil of the spread of infection which seems so much to attach to the board school system. Apart from the mere local incidence of measles, its gravity as a cause of infantile death is becoming more and more serious. In London in the week before last the deaths from measles, which had been 19, 41, and 48 in the preceding three weeks, further rose to 58, or 20 above the average, and far exceeded the deaths (39) from both scarlet fever and whooping-cough. This is a state of matters that calls for the serious consideration of the Local Government Board. In well-ordered private practice measles in this country is scarcely ever a fatal disease. Its fatality among the poorer classes is a matter of grave significance. The first step to any efficient remedy of the evil must be in early information being supplied to the health officers. The Board has its rules and it is for the Board to insist upon these rules being obeyed.

MAYORAL HONOURS FOR MEDICAL MEN.

UP to the time of going to press we have received the following names of medical practitioners who have been elected to the office of Mayor: *Bootle:* John McMurray, M.D., M.S., M.A O., R.U.I. *Carnarvon:* Robert Parry, M.B., L.R.C.P. Lond., M R.C.S. Eng., L S.A. *Coventry:* T. Webb Fowler, M.R.C.S. Eng., L.R C.P. Lond., L.S.A. *Hastings:* Frederic Bagshawe, M.D. Camb., F.R.C P. Lond. *Hedon (Hull):* James Soutter, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A. *Henley-on-Thames:* James Lidderdale, M.R.C.S. Eng., L.S.A. *Marlborough:* James Blake Maurice, M.D. St. And., F.R C.S. Eng. *Ruthin:* Job Medwyn Hughes, M.B., C.M. Edin. *Saltash:* Robert Thornton Meadows, M.D., M.S. Edin.

MOTOR CARS AND HEALTH.

AS we have before pointed out, if motor cars should supplant vehicular traffic in our crowded towns the innovation would have an important bearing upon sanitation. Other and important possibilities of good from a health point of view suggest themselves if the experiment reported by the *Engineer* should prove successful. Says that journal:—

"A member of the Automobile Club de France has just had a steam house constructed to his order ..... in Paris. ..... The vehicle is in the form of a railway car, drawn by a Dion steam tractor of 30 horse power. It has a length of 7·70 metres and is 2·60 metres in width and height. ..... Entrance may be gained either by the folding doors at the side or by a door at the rear. Down the side of the car runs a corridor, with doors opening into the different rooms. The first room is used during the day as a salon, and at night as a sleeping-room, the transformation being effected by a couple of divans which may be turned down to form a bed 1·80 metre long and 70 centimetres wide. ..... Another room of the same size adjoining is to be used as a dining-room, and when not employed for this purpose the wooden partitions at the back and side may be folded up, thus making a large salon. There is also a lavatory and bath-room which will be fitted up with all the necessary accessories, and behind this is the kitchen, containing a cooking range, a cupboard for the utensils, and under the floor is a safe for the provisions. On the top of the car seats are provided for three or four persons, while here also are carried the supplies of water and coke. Enough combustible can be stored away, it is said, to last for a run of 500 kilometres."

THE SERUM DIAGNOSIS OF TYPHOID FEVER.

THE simple technique for the serum diagnosis of typhoid fever recommended by the Laboratory of the Board of Health for the Province of Quebec, which was started at Montreal and is under the bacteriological management of Dr. Wyatt Johnston, has been found after a year's trial to be quite satisfactory from a practical point of view. Dr. Wyatt Johnston has recently reported to the President of the Board of Health that he does not find quantitative work necessary for routine diagnosis, although for recording scientific observations quantitative methods must be selected. For the routine of official work he states that he prefers to employ cultures having a sensitiveness so low as to give no reaction at all with non-typhoid blood. Dr. Johnston wishes further to call attention to the importance of paying special care to the reaction of the test culture media. "Bouillon cultures," he writes, "showing after twenty-four hours' growth of typhoid at 37° C. a slight uniform cloudiness only and quite free from scum or sediment offer the greatest security against pseudo reactions. I find that

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such cultures can be obtained by using bouillon just on the verge of litmus acidity, giving no blue whatever to the red paper. From 5 per cent. to 6 per cent. of normal alkali are required to make this bouillon neutral to phenol phthalein. Cultures which give a heavy bouillon growth are the ones which are most liable to give pseudo-reactions—i.e., to clump in a deceptive manner spontaneously or with non-typhoid blood. If the culture is too acid the reaction may be defective. With a proper culture I have never met with the typical reaction apart from typhoid fever."

A TESTIMONIAL TO DR. JOHN T. ARLIDGE.

SOME friends of Dr. Arlidge have proposed to form a committee for the purpose of presenting him with a testimonial of the high estimation in which he has been held for so many years by the profession and his friends generally as a practical philanthropist and sanitarian and as a literary man. The following have consented to have their names placed on the committee:—The Duke of Sutherland, Sir Samuel Wilks, Bart., F.R.S., Sir C. H. Gage-Brown, K.C.M.G., Sir Peter Eade, Dr. J. W. Ogle, Dr. Matthew Baines, M.D., Mr. W. H. Folker, Mr. T. W. Nunn, Dr. Lionel Beale, F.R.S., Dr. J. W. Moore, and Dr. Charles F. Moore, hon. secretary, 10, Upper Merrion-street, Dublin, by whom subscriptions will be received. Dr. Arlidge has ever taken a warm and active interest in factory operatives and has through a long life endeavoured to better the condition of the working classes. His services to medicine as editor of the *British and Foreign Medico-Chirurgical Review* also merit the recognition of the profession. We regret to learn that Dr. Arlidge is in failing health.

SOME OF THE RECENT SERVICES OF MEDICAL OFFICERS DURING THE BORDER CAMPAIGN.

WE need no apology for calling attention to the military despatches connected with the late operations at Malakand and the Swat Valley, for it is a source of real gratification and pride to notice the way in which the labours of the medical services generally and the devotion and gallantry manifested by several officers of those services have been specially recognised. In General Meiklejohn's despatch we read that Surgeon-Lieutenant J. Hugo, attached to the 31st Punjab Infantry, saved Lieutenant H. B. Ford from bleeding to death under exceptionally trying circumstances. Lieutenant Ford was wounded in a night attack and the wound involved an artery and gave rise to serious hæmorrhage. There were no means at the time of securing the vessel and Lieutenant-Surgeon Hugo had to compress the artery with his fingers for two hours, and subsequently on the following morning, while still compressing the vessel with one hand, managed to pick up the wounded officer with the other and carry him to a place of safety. Surgeon-Captain H. F. Whitchurch, V.C., is spoken of by General Sir Bindon Blood as having attended to the wounded under fire throughout the fighting during the relief and defence of Chakdara. General Meiklejohn, in his despatch dealing with the attacks from July 26th to Aug. 1st, in mentioning the medical staff says:—

Brigade-Surgeon-Lieutenant-Colonel F. A. Smyth was most zealous and performed his duties to my satisfaction. He volunteered to perform the duties of Provost-Marshal, and did so for a short time during the illness of Lieutenant H. E. Cotterill. The arrangements made by Surgeon-Major S. Hassan, senior medical officer, 38th Native Field Hospital, and the indefatigable attention and care with which he devoted himself to the wounded deserve great praise. The list of casualties is large, and Surgeon-Major Hassan has been untiring in his exertions for their relief. I hope his Excellency will think fit to consider his services favourably. Surgeon-Captain T. A. O. Langston, 38th Native Field Hospital, rendered valuable assistance in attending to the wounded under a heavy fire on the night of the 26th and each following night, and behaved with courage and devotion in carrying out his duties under very exceptional circumstances. Surgeon-Lieutenant W. Corr has worked night and day in the hospitals in trying to alleviate the sufferings of the wounded, and has most ably and efficiently aided Surgeon-Major Hassan.

We have already alluded to the gallantry exhibited by Surgeon-Captain Fisher in escorting two dhoolies to the assistance of Captain Ryder's company under a hot fire from the enemy when it was attacked near Badalai.

DISCUSSION ON THE PREVENTION OF ENTERIC FEVER AT THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

IN view of the recent disastrous epidemics of typhoid fever in Worthing, Maidstone, and other towns, much interest is likely to be taken in the discussion on the Prevention of Enteric Fever which has been arranged to take place at the next meeting of the Royal Medical and Chirurgical Society on Nov. 23rd. The council have made an excellent selection in asking Dr. Poore to open the discussion; and it is hoped that Dr. Seaton, Dr. Sims Woodhead, Dr. Macfadyen, Dr. Kanthack, and others will take part.

VACCINATION IN CYPRUS.

THE annotation which appeared in THE LANCET of Oct. 9th on "Small-pox in Cyprus," and which states that we had no information as to the condition of the population as regards vaccination, has been regarded by some as implying that vaccination is neglected in that island. We learn, however, from an authoritative source that this is by no means the case. A system of public vaccination was instituted in the island under the organisation of the late Dr. Barry, and it is believed that, taking the population as a whole, there are few people who are better protected against small-pox. Indeed, during the last fifteen years the average number of vaccinations performed annually has exceeded 5000 and most of these have been primary ones. The High Commissioner of the island, Sir Walter Sendall, K.C.M.G., was formerly associated with the Local Government Board in London, and we feel certain he may be trusted to see that in times of special risk every facility will be afforded to secure the re-vaccination of all persons needing such further protection.

LOCAL ANÆSTHESIA BY SCHLEICH'S METHOD.

THE endermic followed by hypodermic injections of weak solutions of sodium chloride were found by Schleich in 1891 to produce a certain amount of anæsthesia in the tissues treated.[1] He subsequently added to his solutions extremely minute quantities of various substances—e.g., cocaine, antipyrin, &c.—and found that he was thus enabled to produce a local anæsthesia sufficient for the performance of minor and even some major operations, without the infliction of more pain than resulted from the initial puncture of the needle of the injecting syringe. This he obviated by freezing the cuticle by means of an ether spray or chloride of ethyl. Since then Schleich has elaborated a careful system whereby his method of anæsthetic infiltration has been safeguarded from its first transparent dangers. He rightly insists that only a rigid following of the details of his instructions can ensure success. Dr. Simonson and Dr. S. Cohn, of Schöneberg, have recently published a paper in the *Berliner Klinische Wochenschrift* in which they say that they have employed Schleich's method in 102 operations with great success. They use ethyl chloride for the purpose of freezing the skin before the needle is

[1] See THE LANCET, Dec. 12th, 1891, p. 1338.

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inserted. The painlessness thus induced gives courage to the patient, and even children will then allow cutting operations to be undertaken without difficulty. Dr. Brieglieb, also, writing in the *Zeitschrift für Praktische Aerzte*, is quite enthusiastic over the advantages of Schleich's plan, especially for country practitioners far from their professional brethren. He himself has performed many operations in this way, amongst others one in which he removed half the tongue for cancer. As soon as the operation was over the patient began to speak with the remaining portion of the organ, and got down from the operating table and into bed without assistance. In addition to the use of these injections or "infiltrations" for surgical purposes they are often most valuable in cases where pain from neuralgia, &c., has to be relieved. Cases are mentioned by Dr. Simonson and Dr. Cohn of both acute and chronic character in which the relief afforded has been most remarkable Success seems only obtained when the details of Schleich's plan are followed out with the utmost exactness.

INSTRUCTION IN TROPICAL DISEASES.

SINCE the delivery of Dr. Manson's address upon the necessity for improved teaching in tropical diseases sundry letters bearing on the matter have appeared in our columns and also in the lay press. The subject is no doubt of the greatest importance to a country like our own whose troops both naval and military, to say nothing of innumerable civilians, are employed all over the world, and we must allow that it would be an admirable thing if the other metropolitan hospitals and the great extra-metropolitan schools of medicine were to follow the example of St. George's Hospital and St. Mary's Hospital and institute a course of lectures upon tropical diseases. As regards the army we are not so badly off as, judging by the correspondence which has already appeared upon the matter, many people seem to think. For thirty-seven years tropical medicine has been taught at the Army Medical School, first at Chatham and afterwards at Netley, clinical material being afforded by invalided soldiers from India, China, and other tropical and sub-tropical stations in all parts of the world. All surgeons on probation for both the Army and Indian Medical Departments have to go through this course of Tropical Medicine, which lasts for four months, two or three lectures being given per week. The plasmodia of malaria are demonstrated to the surgeons, who are also taught how to search for, stain, and identify them. The amœbæ of dysentery are also studied as well as the bacteriology of plague and other tropical diseases. The first professor of military medicine was Dr. Morehead, I.M.S. and he was followed by Maclean, Boyes, Smith, Capley, and McLeod the present occupant of the chair. It is evident from this that the military and medical authorities at the War Office have not been so unmindful of their obligations with regard to this important subject as recent remarks upon the matter would suggest. With regard to the Medical Department of the Navy we see no reason why surgeons on probation for that branch of Her Majesty's forces should not be allowed, or perhaps we ought to say compelled, to attend the classes at Netley before, during, or after their time at Haslar, for although a knowledge of tropical medicine may be of slightly less importance to naval medical men than to those serving with troops on land they still see enough of the diseases in question to render instruction in them very desirable.

AT the opening meeting of the Epidemiological Society of London, which will be held on Friday, Nov. 19th, at 11, Chandos-street, Cavendish-square, the President of the society, Professor J. Lane Notter, will deliver an address on the International Sanitary Conferences of the Victorian Era.

A SESSIONAL meeting of the Sanitary Institute will be held at the Parkes Museum, Margaret-street, on Wednesday, Nov. 17th, at 8 P.M., Sir Douglas Galton, F.R.S., in the chair, when a discussion will take place on the Pollution of Water-supplies by Encampments of Hop-pickers, Casual Workers, and Tramps. The discussion will be opened by Professor W. H. Corfield, who will speak in reference to the dangers of pollution of municipal water-supplies, and Miss M. A. Chreiman, who will discuss the sanitary control of hop-pickers.

SIR WILLIAM BROADBENT, Bart., M.D. Lond., F.R.S., will preside at Sir Squire Bancroft's reading of Dickens's "Christmas Carol" at Portman Rooms on Nov. 22nd in aid of St. Mary's Hospital. This is the first of the series which Sir Squire Bancroft will give in London during the coming winter. Sir Squire Bancroft will also give a reading of the "Christmas Carol" in Bath on Jan. 4th in aid of the new chapel for the Royal United Hospital.

MR. WALTER SPENCER ANDERSON GRIFFITH, M.D. Cantab., F.R.C.P. Lond., F.R.C.S. Eng., Assistant Physician Accoucheur to St. Bartholomew's Hospital, has been elected President of the Medical Defence Union in place of Mr. Victor Horsley, F.R.S., F.R.C.S., Eng., who has resigned owing to his election upon the General Medical Council as one of the Direct Representatives.

THE Harveian Society of London will hold its annual dinner at the Café Monico, Regent-street, on Thursday, Nov. 25th, at 6.30 for 7 P.M. Members desiring to dine should communicate with the senior secretary, Dr. Cock, 1, Porchester Houses, W.

THE HOSPITAL REFORM QUESTION IN NEW YORK.

DR. FREDERICK HOLME WIGGIN recently read a paper before the New York State Medical Association entitled "The Abuse of Medical Charity," which proves that the abuses complained of in Great Britain have their counterpart on the other side of the Atlantic. He said that it was easy to demonstrate conclusively that as at present administered medical charity is demoralising to both the recipients and to the donor. Some idea of the alarming growth and extent of this evil might be obtained from the carefully prepared report of Dr. Stephen Smith to the State Board of Charity. Here it was shown that during the year 1895 837,971 persons applied for and received free medical treatment at 105 dispensaries in New York, that 1,418,847 free visits were made by these applicants to these dispensaries, and that 78,000 persons received free board, lodging, nursing, drugs, surgical dressings, and treatment. In other words, that something more than 49 per cent. of all the inhabitants of New York had claimed in one year to be unable to care for themselves. This should be contrasted with another statement by Dr. Smith to the effect that during the period from 1791, when the first dispensary was established in New York, to about 1870, the applicants for charity bore a ratio to the total population of 1·5 per cent. Dr. Wiggin then went on to quote from an editorial article in the *New York Herald* to show that Greater New York spent fifty millions of dollars every year on charities, and that, according to a conservative estimate, fully 50 per cent. of the donors' money was diverted from the purpose for which it was intended and was practically filched from the poor to whom it rightfully belonged. Again, according to one writer, Dr. J. B. Huber, there might be found in large numbers at dispensaries such people as actors, opera singers, gamblers, bar-tenders, policemen, farmers, prosperous business men and those owning houses, lawyers, and perhaps even a street railway president. According to another writer,

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Dr. George F. Shrady, fully 50 per cent. of the applicants in the reception room of a well-known institution (which he dubs "the diamond dispensary") were well dressed, 10 per cent. were finely dressed, more than half the men bore no evidences of poverty, and among the women there was an attractive display of fine millinery, yet all obtained the free treatment supposed to be given only to poor persons. A reporter of one of the daily papers, in describing what he saw at a well known "clinic," stated that not more than one person in fifty was at all shabbily dressed, a large majority were fairly well dressed, one third of them were quite presentably dressed, and perhaps one-fifth were positively well dressed. Dr. Wiggin referred to the case of a man who paid an enormous rent in a fashionable apartment house near Central Park, and who spent many thousand dollars a year on living expenses, yet he went to what Dr. Shrady had so aptly termed "the diamond dispensary" on the plea that his expenses were so heavy that he could not afford to pay a fee to a medical man. "Surely," Dr. Shrady continues, these instances "show the spirit in which charity is asked for and accepted; it is largely a desire to save money without apparently thinking that self-respect is lost in the effort or that a wrong is done to the really poor and to the physician, who is certainly as much entitled to his hire as the clergyman or other members of the community, as he, too, has social obligations to fulfil." More than this, as Dr. Schweck had well said in the *Philadelphia Press:* "People of means who go to charity dispensaries and receive treatment free of charge, representing themselves to be too poor to pay for medical services, commit a criminal act, for they obtain what they are not entitled to, and do it under false pretences." Another and important aspect of this subject has been revealed in a communication from Dr. G. M. Roe, medical superintendent of the Boston City Hospital, to the *Boston Herald*. He says: "It is a generally accepted fact among people who have had large experience in doing charitable work that the first thing that a man or woman will accept as charity is medical attendance. They will accept free service of the doctor when you could not prevail upon them to accept rent or fuel or anything of the kind as a gift. The acceptance of gratuitous medical attendance is the first step towards pauperism. There is already a tendency towards what is generally known as 'nationalism,' a belief among the common people that the city and the State owe them a living, and that medical attendance, among other things, should be furnished them by common taxation regardless of their financial standing as individuals." Again, as Dr. J. J. Stevenson had expressed it in the *Mail and Express:* "If recovery from disease be secured at the expense of self-denial, the memory of the cost will lead in ordinary cases to care that a recurrence of disease and attendant expenses may be prevented. But if the careless feel that treatment, medicine, and even diet can be had simply for the asking, there can be no reason for resisting the natural tendency to neglect the laws of health. ..... It is not surprising that the reckless poor see in such careless giving an acknowledgment of the unequal distribution of wealth and believe that it is founded on injustice; nor is it strange that the anarchist's cry is not for opportunity to earn by labour, but for such distribution of wealth as may enable all to enjoy the luxury of idleness." The following are the conclusions arrived at by Dr. Wiggin after a critical review of the subject: (1) that medical charity as at present administered is an unqualified evil and is seriously menacing existing social conditions; (2) that the application for free treatment of those able to pay the physician a moderate fee for his services robs the really poor; (3) that all medical charitable institutions should be under the direction and control of State and local boards of charities, who should have the power to enforce their rules; (4) that all applicants for medical charity should be investigated by local charity boards, and the unworthy excluded; (5) that no medical charitable institution should be allowed to charge nominal sums for medical or surgical service, nor should they be allowed to charge for medicines or appliances; (6) that all physicians connected with charitable institutions should be paid for the service which they render; (7) that it should be made a misdemeanour, punishable by fine, for any person to receive free medical treatment by reason of false representations as to financial condition; and (8) that State or city aid should not be granted to private medical charities.

The Lancet Special Commission

ON THE

METROPOLITAN WATER-SUPPLY.

XIX.[1]

NEW RIVER COMPANY—*Continued.*

PRESENT CONDITION OF THE NEW RIVER.—A SURVEY (*continued*).

880 yards.—Hoe-lane. Here is a well and pumping station on the upper bank. Close to the Station is Hoe-lane Bridge.

440 yards.—Carter Hatch-lane bridge.

300 yards.—From this point for a distance of about a quarter of a mile the bottom and sides of the river are concreted, and the sides slope as 1 in 5. The river is about 5 ft. in depth at this point.

400 yards.—There is here a public foot-path on the lower bank for a distance of about 250 yards. The path goes from Enfield highway to Enfield town. Here, on the upper side of the river, pipes are being put to convey the surface drainage from the land. This work is being very efficiently carried out, and there are a large number of manholes to facilitate the cleansing of the drains. The course of the surface drain is shown in the map by a dotted line, the water is conducted in an 18-in. pipe under the New River at the point marked A 1 (Map 3).

200 yards.—Highway Fields foot-bridge. A new one is now being erected. At the part of the river which has been concreted an arrangement has been made to enable anyone who by chance should fall into the river to get out. At a distance of every 100 yards on each side there are three ladder irons, one above the other, placed in a recess. At points where public footpaths come next the river galvanised iron chains are to be suspended along the concrete walls, and this will be done in all those parts of the river which have concrete walls and which have also public footpaths adjacent. It is worthy of note that the New River is a private property, and that no one has any right to get into it. The Company is not under any obligation whatever to put up the iron chains or the ladders.

700 yards.—Enfield grate bridge.

50 yards.—From this point two 48 in. pipes take the water beyond Bush Hill sluice the course of the pipes being across gardens, under the Great Eastern Railway line, and then through fields. The river passes round the Enfield loop for a distance of about two and a half miles. Roughly speaking, half the water is conducted through the 48-in. pipes and the other half passes along the course of the river. The course of the pipes is shown in the map by a dotted line A 2 to A 3 (Map 3).

30 yards.—Station-road Farm bridge, Enfield. On the upper bank of the river here are market gardens. The river passes next Nag's Head-lane, which is a public road.

250 yards.—Enfield Station bridge.

200 yards.—Cherry Orchard-lane bridge. This part is fenced in on both sides except the last 40 yards, along which there is a path leading to the back entrances of some houses on the river bank. There is an occupation foot-bridge in the garden of a house in Baker-street.

200 yards.—Baker-street bridge. The river here has Enfield Court grounds on the upper bank.

450 yards.—Foot-bridge in Enfield Court grounds.

200 yards.—Occupation foot-bridge. Here a surface-water culvert passes under the river, going in the direction from the upper to the lower bank—that is, from the north to the south.

Pennefather's field.—Here there is a public foot-path.

300 yards.—Pennefather's foot-bridge; the public foot-path here comes from the upper to the lower side of the river.

60 yards.—Horseshoe bridge path. The public foot-path is here on the upper bank.

25 yards.—Occupation foot-bridge.

[1] Nos. I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., XVII., and XVIII. were published in THE LANCET of Feb. 20th and 27th, March 6th, 13th, 20th, and 27th, April 3rd, 17th, and 24th, May 1st, 8th, 15th, 22nd, and 29th, June 19th and 26th, Oct. 23rd, and Nov. 6th respectively.

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20 yards.—Occupation foot-bridge.

40 yards.—Public foot-path from Chase Side to Enfield.

150 yards.—Chase Side foot-bridge.

130 yards.—Chase Side-road bridge. There is here a public foot-path on the lower bank as far as the foot-bridge at Carr's Basin. On the upper bank is Chase Park.

400 yards.—Carr's Basin and Carr's Island. Carr's Basin foot-bridge. Here the foot-path ends.

440 yards.—Seven Sisters grate bridge. Just at this point (7, Map 3) for a few yards the banks of the river are concreted in order to prevent any possible contamination from the weeds which are here taken out and left in heaps to decay.

200 yards.—Occupation foot-bridge.

120 yards.—London-road bridge. This is the high road from London to Enfield.

Waste Gate.—There is here a cogged sluice-gate 2 ft. 6 in. in width.

50 yards.—Occupation bridge. Manor House, Bush Hill.

200 yards.—Bush Hill Basin.

400 yards.—Bush Hill sluice house. Just below this house the water from the pipes returns to the river. It does not go through the sluice house, but enters the river just below the sluice. The sluice house is built across the river. Here there is an iron gate fixed in a cogged wheel and arranged with a balance weight. The gate is used to regulate the amount of water which is sent down the New River and instructions as to the amount required are received from the head offices of the Company. In this sluice house there are two gauge plates which record the height of the water above and below the sluice. The fall of the river at this point varies from 10 in. to about 2 ft. Just below the sluice house is Edmonton-road bridge, Bush Hill. Under the Edmonton-road there is an easement for the river—that is to say, it passes into two channels.

50 yards.—Foot-bridge, Bush Hill House.

220 yards.—Bush Hill House foot-bridge. It was here that the river was formerly carried over a valley in a wooden aqueduct supported on piles; later an embankment was made. This part of the river is now lined with concrete (Map 3, C C'). The channel is 24 ft. in width, 6 ft. in depth and the concrete extends for about half a mile. In Bush Hill Park the river passes over a brick arch. The arch was rebuilt in 1682 and under it there is a culvert which conveys surface water and an iron pipe for the sewage of Winchmore Hill, which goes to the Tottenham sewage works.

400 yards.—Bush Hill House occupation bridge.

250 yards.—River-bank Cottage bridge.

150 yards.—At this point an easement pipe 36 in. in diameter conveys the water to a point in the river 100 yds. lower down. This cuts off a loop (Map 3, D). Just opposite this point on the upper bank there is the beginning of another easement pipe. A pipe 6 ft. in diameter conducts the water for a distance of 60 yards; then for 300 yards the water is conveyed in a 4-ft. 6-in. pipe; then for a distance of 50 yards again in a 6-ft. pipe. The course of this easement is shown in the map. (Map 3, E E'.)

550 yards.—Occupation bridge, Ford's-grove.

3 yards.—Ford's-grove-road bridge.

50 yards.—Ford's-grove Farm bridge.

300 yards.—Highfield-row bridge.

150 yards.—Highfield. Here there is a well and pumping station on the lower bank of the river.

200 yards.—Barrowell-lane bridge. The bed of the river is concreted under the bridge and for a distance of about 10 yards above and below it.

550 yards.—Hedge-lane. From a point in the river about 20 yards above this bridge to a quarter of a mile below it the bed and sides of the river are concreted.

700 yards.—Hazelwood-lane.

100 yards.—Foot-bridge to Edmonton and Palmer's-green.

150 yards.—Here a culvert passes under the New River to convey the surface water from the western to the eastern side whence it flows into the Lee.

300 yards.—Starkey's-lane bridge.

200 yards.—King's Arms bridge. Here there is an easement. From King's Arms bridge the river runs on an embankment raised about 30 ft. above the surface of the land.

300 yards.—Arch above Pymme's Brook which takes surface water from Southgate, and discharges it into the Lee.

250 yards.—Cock-lane bridge.

350 yards.—Bowes Park bridge. Church path.

300 yards.—Bowes Manor foot-bridge (disused).

400 yards.—At this point the river enters Wood Green tunnel. Here is the junction of walks 3 and 4. The tunnel is built of bricks set in cement, the upper part is arched, the lower part is slightly inverted. The width is 12 ft., the depth 9 ft. For the greater part of a mile (1100 yards) the river flows in this tunnel.

The course of the Wood Green tunnel is under gardens between Myddelton-road, Bowes Park, and Truro-road, Wood Green, under Truro-road, Wood Green Urban District Council Gardens, then under Nightingale-road and the gardens of houses in Finsbury-road, under Commerce-road and a piece of land which formerly belonged to the New River Company but which has been lately given up to the Wood Green Urban District Council with a view to its being made into a public garden. From this point the canal passes under Trinity-road, a few yards of common land, Bounds Green-road, under another piece of land which it is hoped will be made into a public garden by the Wood Green local authorities, then under the Palace Gate branch of the Great Eastern Railway, across a public garden, under Park-avenue and for a few yards under another public garden, where the tunnel ceases and the water again becomes visible.

40 yards.—Station-road bridge, Wood Green. At this point the Wood Green Urban District Council public sewer crosses under the river in a 2 ft. pipe.

70 yards.—The river here passes under an arch of the Great Northern Railway main line. Close to the railway bridge is Hornsey grate bridge. The meshes of the grate are 4 in. and the bars 1 in. in diameter. A little below this point is Hornsey Basin. Hornsey Basin has an area of about an acre. It is 16 ft. deep in the centre. From it the Hornsey reservoir is fed through a 48-in. pipe guarded by a screw cock. Here are the Hornsey filter-beds and pumping station; and near by is the Campsbourne well and pumping station.

At Hornsey there is a floating boom and a sluice house across the river. The sluice-gate is 5 ft. in width and 8 ft. in depth. It is arranged with balance weights and worked by cogged gear. The house contains floating dial gauges, which, however, are not now used. Rack gauges are now in general use. A rack gauge, it may be stated, is an iron rod marked with notches 1 in. apart, and the rod is fastened to an oak pile which is fixed in the river. At this sluice there is a fall of about 3 ft. The amount of fall varies from a minimum of 7 in. to a maximum of a little over 3 ft. Formerly water was pumped from this station to Maiden-lane by a three-throw pump worked by an under-shot water-wheel. The wheel is not now in working order and the fall here is not at present used.

440 yards.—Tottenham lane bridge.

40 yards.—Great Northern foot-bridge.

300 yards.—Hampden-lane bridge. Here the Great Northern Railway is on the upper bank. This piece of the river for about a quarter of a mile is called the New Cut. It was made by the Great Northern Railway Company when their line was widened about twenty years ago.

400 yards.—Hornsey Urban District Council sewer passes under the river at a level of 20 ft. below the bottom of the river.

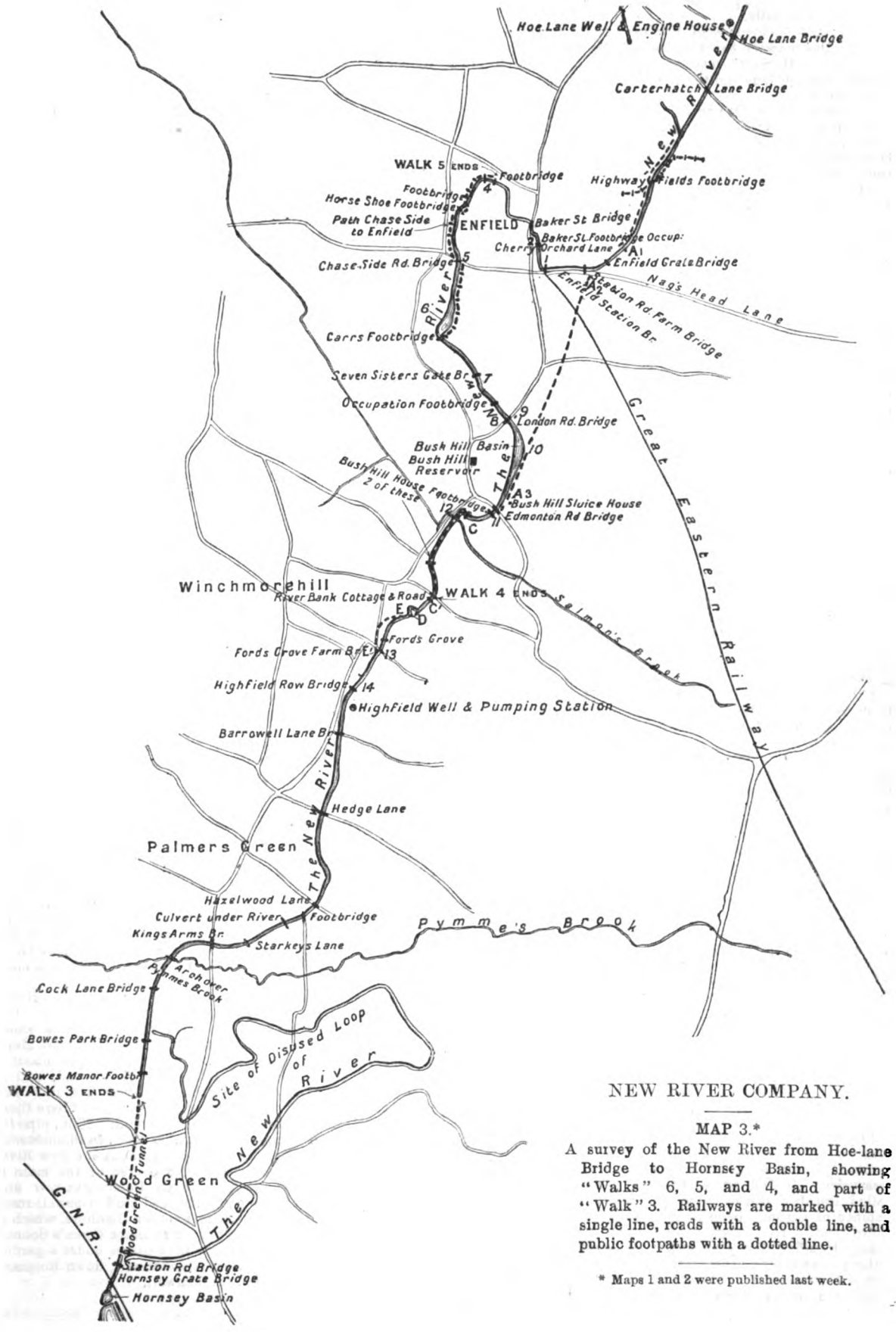
100 yards.—Here there is a shed for storing dam boards. These boards are 9 in. by 4 in. and are dipped in creasote.

15 yards.—Commencement of Harringay tunnel. This is guarded by a grating. Behind the grating there are two slots in the brick work; into these the dam boards can be fixed. The distance between the slots is 18 in., and this space can be filled with puddle. By this means all the water can be dammed back and the work can be very quickly done. This arrangement is used only when it is necessary to clean out the tunnel, an emergency which rarely occurs. The tunnel was made in the year 1891 and it has only been necessary to cleanse it once since that date. For emptying the tunnel of the water which it contains there is a cock pit made to receive it, and from this pit it is discharged into the sewers. The tunnel passes under the road which connects this part of the New River with Wightman-road. It then passes under the Wightman-road and under the gardens belonging to houses in Wightman-road and Hewitt-road. The course of the tunnel is then under Seymour-road, and it ends immediately after passing it.

100 yards.—Warham-road bridge. Here the river passes through a newly-developed residential neighbourhood and is skirted by back-gardens.

80 yards.—Pemberton-road bridge. There are gardens

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NEW RIVER COMPANY.

MAP 3.*

A survey of the New River from Hoe-lane Bridge to Hornsey Basin, showing "Walks" 6, 5, and 4, and part of "Walk" 3. Railways are marked with a single line, roads with a double line, and public footpaths with a dotted line.

* Maps 1 and 2 were published last week.

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down to the river on each side. Just beyond Pemberton-road the gardens are guarded on both sides by an iron fence which has four rails.

80 yards.—Mattison-road bridge. Here there are open iron hurdles between the gardens and the river.

90 yards.—Duckett's-road bridge. There are iron hurdles between the gardens and the river. One part is protected by a wooden fence.

90 yards.—Cavendish-road bridge. On the upper bank there are iron hurdles and a piece of spiked rail.

90 yards.—Burgoyne-road bridge. On one side the river is protected by a piece of oak fence and on the other by iron hurdles.

90 yards.—Umfreville-road bridge. Here the river is fenced by hurdles and wooden railing pointed at the top. There is also remaining a piece of the standard fencing which was formerly used all along the river.

150 yards.—Midland Railway. This is a branch from Tottenham to Hampstead. On the day before this part was visited there was a severe thunderstorm in the afternoon, and it rained very heavily for some time. The surface water from the sides of the railway collected in considerable quantity and covered the line, so that the traffic was for a time stopped. The water also overflowed a garden which is by the side of the railway and washed large quantities of ballast from the line on to it, and the water overflowed and ran into the New River. The man who had this piece of garden said that more than one such flood had occurred there during the last nine years. He stated, also, that at the early part of the flood the water which came down was much discoloured and had an evil smell; that it came from the surface water sewers at Crouch Hill which were liable to overflow after a heavy storm. The arrangement at present in existence for conducting away the surface water at this point is a 9-in. iron pipe which passes under the river, and this pipe is certainly of insufficient size to conduct away the surface water which collects after a heavy storm. The man whose garden was inundated during the storm said that during the period of heavy rain forty 9-in. pipes would not have been sufficient. This may possibly be an exaggeration, but be this as it may the present arrangement for the conveyance of surface water is obviously inadequate.

Midland Railway bridge.—Here is the junction of walks 3 and 2. Here the lower bank is open; the upper is guarded by a standard fence.

150 yards.—Endymion-road bridge. Here, on the lower bank, is Finsbury Park. This is the part which is used for playing cricket. It is divided from the New River path by a high fence.

100 yards.—Finsbury Park bridge. At this point the entrance of the path by the river is guarded from the road only by a low oak fence, so low that children can get on to it and sit on it without any trouble. Between the path and the cricket-ground there is a high wire fence, and on the upper path the standard fence between the path and the river. The day before this was visited after the thunderstorm the New River here overflowed into the cricket-ground. This is said to be a rare accident.

300 yards.—Northumberland bridge, Green Lanes. Here, on the upper bank, is situated Northumberland House Lunatic Asylum, the grounds of which extend for 500 yards along the bank of the river.

100 yards.—Northumberland House foot-bridge. This bit of the river goes along the hillside, the upper bank sloping gradually down to the river, and there are here some very good gardens which go down to it.

800 yards.—Seven Sisters-road bridge.

300 yards.—Woodberry Down bridge. There is here a foot-path which is public, but the bridge is made for carriages and there is a bar at the end which is kept by the New River Company. The public drive to the houses is from Seven Sisters-road.

30 yards.—Stoke Newington grate.

40 yards.—Here is the Stoke Newington Station, which consists of reservoirs, filter-beds, and pumping arrangements. The river now flows along the north side of the reservoirs. It first passes through a disused sluice house called the Ivy House. On the upper bank there are a number of gardens belonging to houses in the Woodberry Down-road. The water in this part of the river is only changed sufficiently often to keep it sweet. Almost all the water passes through the reservoirs. The distance along the first or east reservoir is about a quarter of a mile. From this point the water flows from the western end of the reservoir and is conducted for a distance of about twenty yards in the river, which passes under Lordship-lane bridge. Most of the water goes into the west reservoir, which is situated on the lower bank, and the sluice which admits it is situated at a distance of about 100 yards from the road. The river now flows along to the north of the west reservoir, and at a distance of 600 yards lower down the water which has been in this reservoir comes again into the river. Into this piece of the river, like that next the east reservoir, only enough water is allowed to pass to keep the river sweet. Almost all the water passes through the reservoir.

30 yards.—Newington grate bridge. Here is the pumping station.

50 yards.—The river passes into a 54-in. pipe and goes down the course of the Green Lanes.

700 yards.—Here is a sluice house, to which the workmen of the New River Company have given the name of the Coffee Pot. It is so called because the water comes out of the pipe through a bell-mouthed opening. Here is the junction of walks 1 and 2. At this point the river again continues its course, passing into Clissold Park under a foot-bridge. This part of the river is protected on both sides by an iron spiked railing which has been put up and is kept in repair by the London County Council. There is a public footpath next to the upper bank.

350 yards.—Foot-bridge.

250 yards.—Foot-bridge.

300 yards.—Paradise-road. The river passes under this road and then through a garden.

60 yards.—Park-lane bridge. From this point there is a public footpath on the lower bank separated from the river by a high, spiked railing. On the upper side gardens go down to the river. The path passes by Aden Terrace.

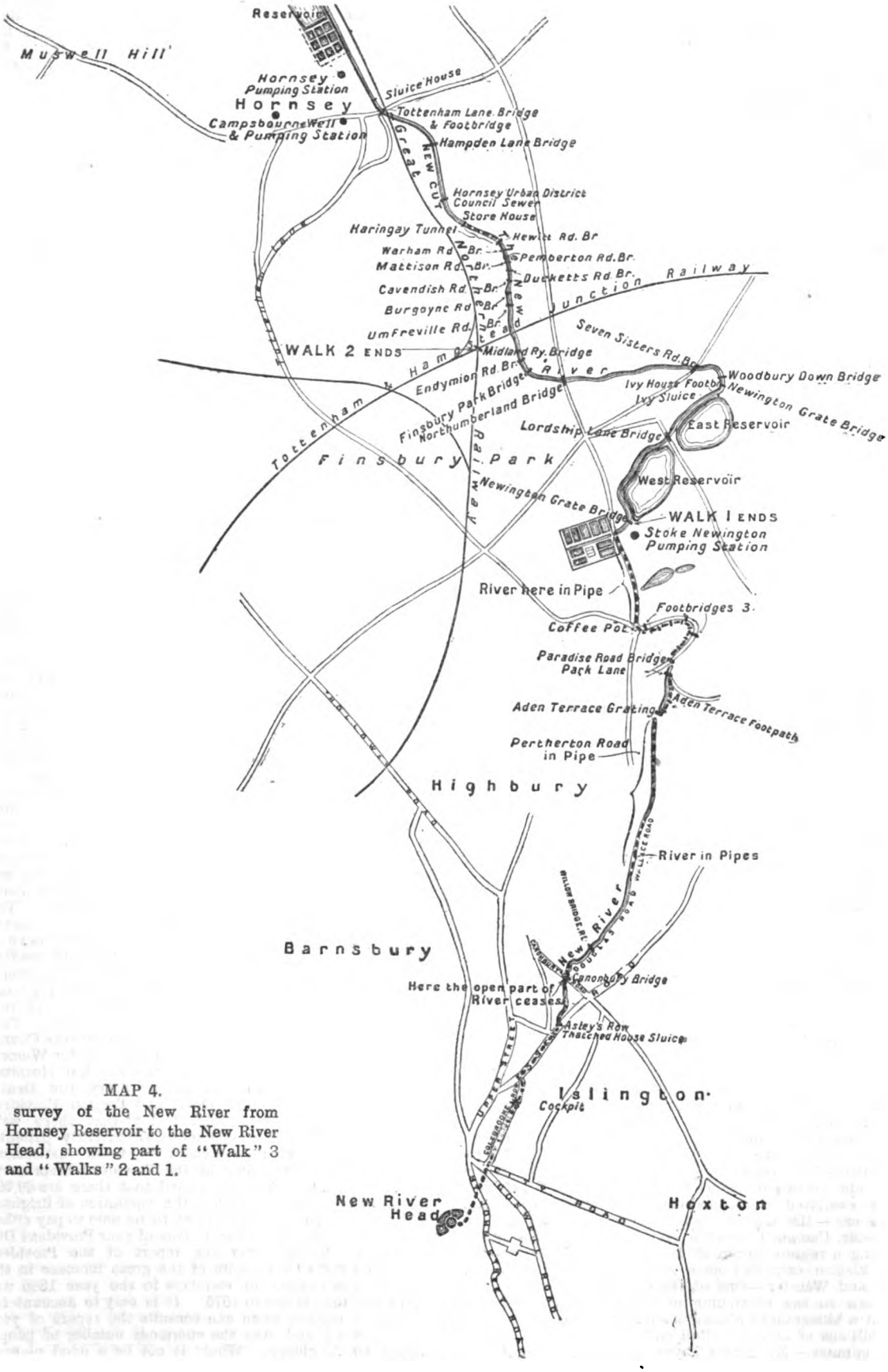
350 yards.—Here there is a grating. This grating is of a new type. It is made entirely of iron, the meshes are ½ in. in width, and the pieces of iron which form the grating are also ½ in. in width and about 2 in. from before backwards. The pieces of iron which form the grating are fixed on to an iron rod, and all the meshes are of exactly the same size. Here the open part of the river ceases for a time. The water is conducted in a 48-in. iron pipe, which passes for a distance of about half a mile under Petherton-road, thirty yards along Grosvenor-road, and over the North London Railway at Canonbury Station and then along Wallace-road, at which point the pipe discharges itself again into an open channel. Wallace-road is on the upper bank for a distance of 600 yards, and then the river is crossed by Willow Bridge-road, Canonbury. Here Canonbury-grove is at the lower bank. At this point is a house which was once the ice house of Canonbury House, a place not without historic interest.

300 yards.—Canonbury bridge. The part of the river next Wallace-road is protected from trespassers by a 6 ft. cast-iron fence which extends along Paul's-road, Douglas-road, and Canonbury-road. At Canonbury bridge the river passes into a 54-in. pipe, which is at this point 2 ft. below the surface of the ground. The pipe passes along Astey's-row. Here there is a space covered with grass between an iron fence and the lower side and a wooden fence on the upper side. The width of this space varies from 40 ft. to 100 ft. It is the property of the Company, and is kept more or less private by the policemen on the beat.

At the end of this open space is the "Thatched House sluice." The house is now tiled and there is no sluice. The cottage is occupied by a caretaker and there is a small garden and a cockpit. From this point the pipe passes along the middle of the Essex-road. At a distance of about a quarter of a mile the pipe leaves the Essex-road, and is conducted down Colebrooke-row in a channel 6 ft. in height and 4 ft. in breadth for a distance of 30 yards, and here there is a cockpit, from which water is conveyed in a 36-in. pipe for a distance of 100 yards, then in a pipe 48 in. in diameter for the rest of the distance to the round pond at the New River Company's works at Islington. The course of the main is along Colebrooke-row, then between Colebrooke-row and Duncan Terrace, across the City-road and Goswell-road. After passing this road there is another manhole, which is situated in the playground belonging to Dame Owen's School, close to the iron fence. The pipe then passes under a garden at the corner of St. John-street, Clerkenwell, down Rosebery Avenue to New River Head, Clerkenwell.

(To be continued.)

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MAP 4.

A survey of the New River from Hornsey Reservoir to the New River Head, showing part of "Walk" 3 and "Walks" 2 and 1.

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THE ROENTGEN SOCIETY.

A HIGHLY successful inaugural meeting of the above recently-formed society was held at St. Martin's Town-hall, London, on Nov. 5th. Professor SILVANUS THOMPSON delivered the presidential address to a crowded audience. After a review of the antecedents and the circumstances under which Roentgen made his famous discovery in November, 1895, he announced that the learned professor had accepted the honorary membership of the new society. With the exception of anæsthetics and Lister's antiseptic system no discovery in the present century had done so much for operative surgery as that of the Roentgen rays. The first great application had been to the diagnosis of dislocations and fractures, the study of bone disease, and the detection of foreign bodies in various parts of the human frame. Dr. McKenzie Davidson had devised an ingenious apparatus by means of which a foreign body could be localised to within one-hundredth of an inch, the complicated geometry of oblique projection being simplified to the use of a callipers and a divided scale. The physiological effects had suggested that the rays might by nerve stimulation be made useful in some cases of blindness. Under some circumstances the normal retina possessed a faint perception for the rays. The matter had been fully discussed by their secretary, Dr. Walsh, in a book on the medical aspects of the rays. As regarded the physical problems presented by the rays there was a large field of problems awaiting solution. The rays had been found to possess a dissociating or, more strictly, an ionising effect on the molecules of gases through which they passed, with the result that electrified bodies in an atmosphere thus affected became discharged. Many theories had been advanced as to the exact nature of the rays; Crookes, Tesla, and others held them to consist of flights of atoms or sub-atoms; others that they were made up of transverse waves of excessively minute wave-length; others, again, regarded them as longitudinal; while Sir George Stokes thought they might be transverse waves, not in regular trains, but consisting of innumerable solitary waves. Another wide field of research lay in the investigation of analogous kinds of rays that affected photographic plates, such as those of the salts of uranium, fire-flies, glow-worms, and sticks of phosphorus. It was clear that their little society had an abundant field. Already three special journals existed—namely, in England, in America, and in Germany. In conclusion he appealed for the foundation of a London institution where earnest investigators might pursue the study of the physical sciences.

At the close of the address a vote of thanks was moved by Sir WILLIAM CROOKES and seconded by Professor GLADSTONE.

The rest of the evening was devoted to lantern demonstrations (Mr. Greenhill), screens (Mr. T. Moore), and an exhibition of apparatus and photographs.—The President showed Tesla's new coil, in which the primary was wound round the secondary and gave high frequency oscillatory discharges direct from any ordinary supply with little expenditure of energy.—Professor Gladstone showed photographs of metals in order of absorption of the rays, by which he proved that the process was governed by weight rather than by density.—Dr. Davidson and Mr. Hall Edwards each demonstrated a localising apparatus.—A good collection of coils and tubes was shown by Messrs. Newton, Cossor, Schall, Binko, Miller and Woods, and others.—Among the photographs were skiagrams of bullets taken by Mr. F. C. Abbott in the Turco-Greek War.—An interesting number of natural history specimens and Dr. Macintyre's cinematographic apparatus adapted to the rays were shown by Dr. Norris Wolfenden.—Dr. Walsh showed an interesting comparison of anæmic and turgid hands on the same plate.—Mr. Griffith Wilkin exhibited skiagrams of the temporal bone and middle ear.—Mr. Gifford brought some early and modern work.—Mr. Campbell Swinton sent an admirable collection, including a representation of Lord Salisbury's hand.—Dr. Barry Blacker exhibited some good work, as did Messrs. Moore and Webster.—One of the chief practical advances has been in the shortening of exposures.—Mr. Webster showed a skiagram of a hand taken in one second, and Mr. Greenhill one of an adult skull and of a pelvis each taken in five minutes.—Mr. Ernest Payne contributed photographs of mercurial contact breaks, and a number of interesting photographs were sent by Dr. Cotton (Bristol), Dr. Low, Dr. Newman, Dr. Nathan Raw (Liverpool), Dr. Coke Squance (Newcastle), Mr. Gerard Smith, Mr. Hinton Bateman, and others.—This branch of the exhibition was managed by Mr. Snowden Ward, while Mr. Webster organised a musical entertainment.

THE HOSPITAL REFORM ASSOCIATION.

A MEETING of this association was held at the Athenæum Hall, North-street, Brighton, on Friday last, Nov. 5th, under the presidency of Sir JOSEPH EWART.

Sir JOSEPH EWART made a spirited introductory speech. He referred to the statement of Sir William Broadbent to the effect that the present system was practically the misappropriation of charitable money, and that a good deal of that money if saved could be better utilised in further perfecting the arrangements for the treatment of those who were really deserving and really required relief.

Mr. GARRETT HORDER, the honorary secretary of the association, then gave a short address, in which he said: "The question we have met to discuss this evening is one that may fairly be said to affect all classes of society, and it would be a great mistake to discuss it from a professional point of view only. The aim of the Hospital Reform Association has been to convince the public that the present system of administering medical relief in our hospitals and dispensaries is neither fair to the philanthropists who support them, to the deserving sick poor who seek relief in them, nor to the medical profession, without whose aid they could not be carried on. I have mentioned these points because it has been stated from time to time that the association with which I am connected was established for the sole purpose of looking after the interests of the medical profession. That this is not the case is, I think, proved by the fact that we have invited laymen to become members, and have invariably at all our meetings sent invitations not only to the managers of hospitals, but to all persons taking an interest in the organisation of charities. That reforms are wanted will hardly be denied, but if there are any who are sceptical about it I would refer them to the pages of THE LANCET and the *British Medical Journal*, to the proceedings of the Charity Organisation Society, and locally to one of your esteemed practitioners, Dr. Francis Waring. To Dr. Waring must be given the credit for pointing out the necessity that exists for reform in the administration of the Brighton medical charities. Hospital abuse may be divided into two distinct parts, one part—and, in the opinion of many, the most important part—being the attendance of people who do not stand in need of hospital treatment; and the other being the attendance of persons who could afford to pay for the treatment of their complaints. This form of abuse is not confined to the working-classes. Evidence has been forthcoming proving that tradesmen of all classes have sought and obtained relief in our medical charities. Subscribers themselves often abuse their privileges by recommending members of their own household for treatment. Reform is also required in other directions. There is nowadays an undue multiplication of hospitals. Take your own town, for instance. You have the Sussex County Hospital, the Sussex Eye Hospital, the Hospital for Women, the Hospital for Sick Children, the Throat and Ear Hospital, the Brighton, Hove, and Preston Dispensary, the Dental Hospital, and the Brighton, Hove, and Preston Provident Dispensary. In the year 1895 I find that there were 2392 in-patients, 35,522 out-patients, 3476 casualty patients, and 1172 maternity cases treated at these institutions exclusive of the cases treated at the Provident Dispensary. It will, however, hardly be contended that there are 40,000 persons—or more than a fourth of the population of Brighton and Hove combined—so poor as not to be able to pay either private practitioners or the small fees of your Provident Dispensary. On looking over the report of the Provident Dispensary I find that in spite of the great increase in the population the number of members in the year 1895 was actually less than it was in 1876. It is easy to account for this want of support when one consults the report of your Free Dispensary and sees the enormous number of people attended by its officers. Would it not be a good plan to

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amalgamate the two institutions and thus encourage the growth of thrifty habits?"

Dr. FRANCIS WARING then moved:—

"That this meeting is of opinion that the time has arrived when an investigation should be held into the mode of administering medical relief in the hospitals and dispensaries of Brighton and Hove, and it is further of opinion that this investigation should be conducted by a committee which should be representative of all interests concerned."

In moving the resolution he disclaimed all unfriendly spirit to the institutions of the town, but he believed that some step should be taken to safeguard their charities against abuse.

Mr. S. COWELL who supported the resolution, claimed that the abuse at the Sussex County Hospital was next to *nil*.

Mr. R. P. HOOPER, Dr. DILL, Mr. DENNANT, Mr. DODD, and the Rev. C. W. BOND also spoke in favour of the resolution, which was carried amid applause.

Mr. Hooper, Dr. Waring, Mr. Dodd, and Dr. Marsh were appointed a provisional committee.

The meeting closed with a vote of thanks to the chair.

INTERNATIONAL LEPROSY CONFERENCE, BERLIN, 1897.

THE following is a condensed report of the conclusions of the Conference:—

"At the close of the debates of the International Leprosy Conference, Berlin, 1897, the secretaries have the honour to present the following short report of the general conclusions of the Conference. They believe that such a *résumé* will be especially desirable for those members who have been delegated by their respective Governments and who have to make reports on the results of the Conference.

"As might be expected, a considerable portion of the discussion has related to the bacillus lepræ, which the Conference accepts as the virus of leprosy, and which for upwards of twenty-five years has been known to the scientific world through the important discovery of Hansen and the able investigations of Neisser.

"The conditions under which the bacillus grows and develops are still unknown, as well as the way of its invasion into the human system; but from the discussions of the conference it seems probable that an unanimity of opinion will soon prevail in reference to its modes of subsequent dissemination within the human body. Very interesting observations have been brought forward in connexion with the elimination of the bacilli in large quantities by means of the skin and nasal and buccal mucous membranes of lepers; it is desired that such observations be confirmed where opportunities occur. The question is of very great importance to those who are entrusted with the care of the public health, as leprosy is now acknowledged to be a contagious disease.

"Every leper is a danger to his surroundings, the danger varying with the nature and extent of his relations therewith and also with the sanitary conditions under which he lives. Although among the lower classes every leper is especially dangerous to his family and fellow workers, cases of leprosy frequently appear in the higher social circles. The theory of heredity of leprosy is now further shown to have lost ground in comparison with the at present generally accepted theory of its contagiousness. The treatment of leprosy has only had palliative results up to the present time. Serum therapy has so far been unsuccessful.

"In view of the virtual incurability of leprosy and the serious and detrimental effects which its existence in a community causes, and considering the good results which have followed the adoption of legal measures of isolation in Norway, the Leprosy Conference, as a logical issue of the theory that the disease is contagious, has adopted the following resolution proposed by Dr. Hansen and amended by Dr. Besnier: '1. In such countries where leprosy forms foci or has a great extension we have in isolation the best means of preventing the spread of the disease. 2. The system of obligatory notification, of observation and isolation as carried out in Norway, is recommended to all nations with local self-government and a sufficient number of physicians. 3. It should be left to the legal authorities after consultation with the medical authorities to take such measures as are applicable to the special social conditions of the districts.'

"Secretaries of the Conference:
PHIN. S. ABRAHAM, London.
ED. ARNING, Hamburg.
A. VON BERGMANN, Riga.
E. DUBOIS HAVENITH, Bruxelles.
J. J KINYOUN, Washington.
G. THIBIERGE, Paris.
EDV. EHLERS, Copenhagen (Gen. Secretary)."

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Dumbartonshire County District.—The general death-rate of the landward portion of this county (14·91) for 1896 was the lowest on record, and fewer cases of infectious disease were notified than in any year since notification came into force. There were no outbreaks of note during the year, but one case of typhus fever was notified. Dr. McVail reports that a site for two isolation hospitals has now been decided upon, one for the western district of the county and the other for two parishes in the eastern district. In the former district a good scheme has been arranged, after apparently considerable difficulty, with the burgh of Dumbarton. Some progress has been made in the matter of river pollution, but, as Dr. McVail observes, the amount is not commensurate with the energy expended upon the subject. Attempts are, it appears, being made to prevent vessels anchoring in, or plying on, the Garelock from discharging excrement or refuse into the water. As regards water-supply Dr. McVail reports that the proposed supply for two villages had to be given up owing to the peaty nature of the water. It was proposed by certain analysts to treat the water by placing blocks of sulphate of alumina in its course and allowing the peaty matter to precipitate in the reservoir. Dr. McVail, however, after due consideration, did not feel himself justified in recommending this supply.

Stirling County District.—Stirlingshire, like unto Dumbartonshire Dr. McVail's other county, had for 1896 a death-rate lower than any yet recorded—i.e., one of 13·94 per 1000 as compared with a rate of 16·0 for the whole of Scotland; the lowest experienced since the operations of the Registration Act commenced in 1855 Complaints of the poisoning of fish in the River Boney gave rise to some interesting revelations. It seems that in a certain pool in the river, which was a suitable spot for fishing, there has been deposited a considerable quantity of lime. This lime has, it appears, been placed in the pool in order to sicken the fish and render their capture more easy. Caustic soda is, Dr. McVail says, sometimes used for the same purpose, its solubility rendering its detection more difficult than is the case with lime. It is clear, as Dr. McVail remarks, that where such practices as these obtain the prevention of pollution from other sources will be of but little avail in the matter of the protection of fish. The eastern district of Stirlingshire has been provided with good hospital accommodation, and the western district is in a fair way to be similarly equipped.

Lanark County District.—Four new isolation hospitals were occupied in this county during 1896, and in the present year two others will be completed. The Rivers Pollution Acts are being vigorously administered throughout the county by the public health committee of the county council. The worst offenders, however, appear to be the burghs, and the committee of the special drainage district have decided to take the matter in hand resolutely. Apart from the question of pollution by sewage it appears that there are between fifty and sixty collieries carrying on the process of coal dross washing, a process which is apt to cause very great inconvenience to manufacturers. Dr. J. T. Wilson has made a very interesting report upon this subject of coal washing, and it seems that the effluent from the coal washing process contains suspended solids to the extent of from 1 grain per gallon to as much as 29,985 grains. Seven collieries were reported to the Secretary for Scotland with a view to obtaining power for prosecution, but it appears from the

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special attention which has been devoted to these cases much improvement has in the meantime resulted. Dr. Wilson has submitted to the executive committee of the county council an instructive report upon tuberculosis in the county of Lanark, and he has communicated with the county veterinary inspectors in reference to the extent of bovine tuberculosis. One officer reports that as a result of superintending the disposal of some 3000 carcasses, chiefly of dairy stock, he found that fully 25 per cent. were tuberculous. Another reports that, in his opinion, the disease exists to the extent of about 20 per cent. A third inspector reports that in some of the large dairies one-third to a half, and at times the whole of the herd, are affected. The experience of Mr. John Spier, of Newton Farm, Cambuslang, is extremely interesting. He supplies milk from such cows only as have stood the tuberculin test. During the past two years he has tested some 200 cows for his own use, the cows ranging from three to seven years of age; and although he purchases the very best class of cows he finds fully 30 per cent. react to the tuberculin test. Mr. Spier has tested stock for other persons, and he has found a few stocks almost free, while a good many have almost the whole number affected. Dr. Wilson gives an interesting account of the methods of testing and the process of exclusion practised in Paris, and of Professor Bang's experience with a Danish herd. From an account by Mr. James Wilson of the Castlecraig herd of the Aberdeen Angus cattle, it seems that "the spread of the disease has been completely arrested," the only alteration in the management of the herd being the annual testing and the separation of the unsound from the sound. As Dr. Wilson observes, these tests are most encouraging provided tuberculin can be absolutely relied upon as a test.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6829 births and 3822 deaths were registered during the week ending Nov. 6th. The annual rate of mortality in these towns, which had been 16·9 and 17·6 per 1000 in the two preceding weeks, further rose last week to 18·1. In London the rate was 18·5 per 1000, while it averaged 17·9 in the thirty-two provincial towns. The lowest rates in these towns were 11·2 in Croydon, 11·5 in Leicester, 12·1 in Derby, and 13·9 in Bristol; the highest rates were 21·5 in Wolverhampton, 21·8 in Oldham, 22·1 in Burnley, and 23·4 in Liverpool. The 3822 deaths included 412 which were referred to the principal zymotic diseases, against 429 and 463 in the two preceding weeks; of these, 128 resulted from measles, 82 from diphtheria, 64 from diarrhœa, 51 from "fever" (principally enteric), 46 from scarlet fever, and 41 from whooping-cough. The lowest death-rates from these diseases were recorded in Birkenhead, Salford, Croydon, Brighton and Nottingham, and the highest rates in Preston, Halifax, Burnley, and Wolverhampton. The greatest mortality from measles occurred in Gateshead, Manchester, Blackburn, Halifax, and Wolverhampton; from "fever" in Huddersfield and Gateshead; and from diarrhœa in Oldham, Blackburn, and Preston. The mortality from scarlet fever and from whooping-cough showed no marked excess in any of the large towns. The 82 deaths from diphtheria included 59 in London, 5 in Cardiff, 3 in Wolverhampton, and 3 in Birmingham. No fatal case of small-pox was registered during the week under notice either in London or in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals on Saturday last, the 6th inst. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on the same date was 3680, against 3725, 3685, and 3682 at the end of the three preceding weeks; 339 new cases were admitted during the week, against 440, 342, and 416 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 279 and 326 in the two preceding weeks, further rose to 363 last week, but were 37 below the corrected average. The causes of 42, or 1·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Nottingham, Oldham, Bradford, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in Swansea, Liverpool, Blackburn, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·3 and 19·9 per 1000 in the two preceding weeks, further declined to 18·8 during the week ending Nov. 6th, but exceeded by 0·7 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 10·4 in Leith and 11·9 in Perth to 21·7 in Paisley and 26·2 in Greenock. The 560 deaths in these towns included 18 which were referred to scarlet fever, 16 to whooping-cough, 14 to diarrhœa, 12 to measles, 5 to "fever," and 5 to diphtheria. In all, 70 deaths resulted from these principal zymotic diseases, against 86 and 79 in the two preceding weeks. These 70 deaths were equal to an annual rate of 2·3 per 1000, which was slightly above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of scarlet fever, which had been 4 and 12 in the two preceding weeks, further rose to 18 last week, of which 10 occurred in Edinburgh and 5 in Glasgow. The 16 deaths referred to whooping-cough exceeded by 1 the number in the preceding week, and included 12 in Glasgow and 3 in Aberdeen. The fatal cases of measles, which had increased from 3 to 8 in the four preceding weeks, further rose to 12 last week, of which 6 occurred in Glasgow and 6 in Greenock. The 5 deaths referred to different forms of "fever," showed a slight further decline from those registered in recent weeks, and included 3 in Glasgow, where 4 of the 5 fatal cases of diphtheria were also recorded. The deaths from diseases of the respiratory organs in these towns, which had been 144 and 137 in the two preceding weeks, rose again to 142 last week, and were 12 above the number in the corresponding period of last year. The causes of 27, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 21·2 and 28·2 per 1000 in the two preceding weeks, declined again to 21·5 during the week ending Nov. 7th. During the past five weeks of the current quarter the death-rate in the city has averaged 23·4 per 1000, the rate during the same period being 16·9 in London and 18·6 in Edinburgh. The 144 deaths registered in Dublin during the week under notice showed a decline of 45 from the number in the preceding week, and included 12 which were referred to the principal zymotic diseases, against numbers declining from 39 to 8 in the six preceding weeks; of these, 8 resulted from "fever," 2 from diphtheria, 1 from whooping-cough, and 1 from diarrhœa. These 12 deaths were equal to an annual rate of 1·8 per 1000, the zymotic death-rate during the same period being 2·5 both in London and in Edinburgh. The deaths referred to different forms of "fever," which had been 7, 6, and 0 in the three preceding weeks, rose again to 8 last week. The fatal cases of diphtheria, which had been 1 in each of the two preceding weeks, rose to 2 last week. The mortality from diarrhœa was below that recorded in any recent week. The 144 deaths in Dublin last week included 21 of infants under one year of age and 30 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked decline from the numbers recorded in the preceding week. Five inquest cases and 3 deaths from violence were registered; and 51, or more than a third, of the deaths occurred in public institutions. The causes of 5, or more than 3 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING OCTOBER, 1897.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during October in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 16·0 per 1000 of the population, estimated at 4,463,169 persons in the middle of this year. In the three preceding months the rates had been 11·2, 10·2, and 13·3 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Paddington, Hammersmith, Chelsea, St. George Hanover-square, Westminster, Holborn, and Lewisham; while they showed the largest excess in Clerkenwell, Limehouse, Poplar, St. Olave Southwark, Rotherhithe, Battersea, and

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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS OF LONDON—OCTOBER, 1897.

(Specially compiled for THE LANCET.)

Sanitary Areas.	Estimated population in the middle of 1897.	Notified Cases of Infectious Disease.											Deaths from Principal Infectious Diseases.													
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
LONDON...	4,463,169	1	2980	1370	1	506	6	27	591	—	5483	16·0	—	166	76	216	84	1	79	1	100	723	2·1	5518	16·1	132
West Districts.																										
Paddington	126,161	—	60	19	—	9	—	—	10	—	98	10·1	—	—	1	1	1	—	—	—	3	6	0·6	113	11·7	105
Kensington	171,427	—	103	40	—	22	—	1	19	—	185	14·1	—	10	5	11	1	—	5	—	1	33	2·5	205	15·6	160
Hammersmith	105,959	—	55	10	—	4	1	—	13	—	83	10·2	—	—	1	—	—	—	3	1	—	5	0·6	104	12·8	96
Fulham	120,040	—	101	37	—	8	—	2	12	—	160	17·4	—	4	1	6	4	—	1	—	3	19	2·1	139	15·1	96
Chelsea	96,692	—	32	29	—	5	—	2	11	—	79	10·7	—	1	1	6	2	—	2	—	3	15	2·0	100	13·5	120
St. George Hanover-square	80,330	—	20	18	—	8	—	—	10	—	56	9·1	—	—	—	5	3	—	—	—	—	8	1·4	75	12·2	121
Westminster	53,027	—	22	8	—	3	—	1	5	—	39	9·6	—	5	1	4	3	—	—	—	—	15	3·7	88	21·6	154
St. James Westminster	22,576	—	10	6	—	3	—	—	2	—	21	12·1	—	4	3	—	1	—	1	—	—	9	5·2	39	22·5	186
North Districts.																										
Marylebone	140,808	—	67	30	—	15	—	2	22	—	136	12·6	—	1	1	3	2	—	2	—	2	11	1·0	169	15·6	104
Hampstead	77,276	—	42	11	—	7	1	—	3	—	64	10·8	—	—	—	2	1	—	1	—	2	6	1·0	66	9·4	97
St. Pancras	242,255	—	125	96	—	54	3	2	54	—	333	17·9	—	9	1	12	4	—	6	—	5	37	2·0	331	17·8	150
Islington	341,134	—	228	64	—	37	—	1	23	—	353	13·5	—	7	6	12	5	—	4	—	4	38	1·5	402	15·4	122
Stoke Newington	34,136	—	15	9	—	8	—	—	2	—	34	13·0	—	—	—	2	—	—	1	—	—	3	1·1	25	9·5	66
Hackney	216,698	—	197	83	—	37	1	—	33	—	351	21·1	—	9	4	16	4	—	4	—	—	37	2·2	255	15·3	120
Central Districts.																										
St. Giles	37,840	—	29	9	—	6	—	—	11	—	55	18·9	—	—	—	1	—	—	—	—	1	2	0·7	54	18·6	108
St. Martin-in-the-Fields	12,711	—	6	3	—	—	—	—	4	—	13	13·3	—	—	—	1	—	—	—	—	—	1	1·0	10	10·3	100
Strand	23,552	—	15	8	—	7	—	—	—	—	30	16·6	—	—	1	—	—	—	—	—	—	1	0·6	43	23·8	158
Holborn	30,493	—	8	8	—	2	—	—	4	—	22	9·4	—	1	1	2	1	—	1	—	1	7	3·0	66	28·2	125
Clerkenwell	66,162	—	45	49	—	5	—	—	14	—	113	22·3	—	4	1	8	3	—	—	—	4	20	3·9	118	23·3	207
St. Luke	41,279	—	32	21	—	5	—	1	7	—	66	20·8	—	2	—	1	4	—	—	—	3	10	3·2	67	21·2	93
City of London	30,228	—	14	2	—	7	—	—	2	—	25	10·8	—	—	—	1	1	—	3	—	1	6	2·6	34	14·7	23
East Districts.																										
Shoreditch	121,883	—	70	26	—	16	—	—	23	—	134	14·3	—	4	2	9	—	—	3	—	6	24	2·6	172	18·4	126
Bethnal Green	129,098	1	72	67	1	18	—	—	44	—	203	20·5	—	5	—	13	6	1	2	—	1	28	2·8	224	22·6	197
Whitechapel	79,724	—	32	20	—	6	—	—	12	—	70	11·4	—	3	1	1	2	—	2	—	4	12	2·0	151	24·7	162
St. George-in-the-East	47,917	—	32	25	—	9	—	—	6	—	72	19·6	—	10	1	3	2	—	5	—	1	22	6·0	85	23·1	134
Limehouse	58,508	—	93	26	—	9	—	1	12	—	141	31·4	—	1	3	5	4	—	—	—	1	14	3·1	102	22·7	165
Mile End Old Town	111,883	—	85	41	—	8	—	—	19	—	153	17·8	—	2	—	3	3	—	4	—	—	12	1·4	133	15·6	144
Poplar	169,811	—	128	75	—	45	—	2	26	—	276	21·2	—	5	4	13	6	—	4	—	12	43	3·3	232	17·8	157
South Districts.																										
St. Saviour Southwark	24,919	—	6	13	—	—	—	—	2	—	21	11·0	—	4	1	3	1	—	—	—	—	9	4·7	41	21·4	141
St. George Southwark	60,388	—	42	24	—	5	—	—	13	—	84	18·1	—	6	—	—	1	—	—	—	3	10	2·2	77	16·6	198
Newington	122,191	—	135	35	—	5	—	4	11	—	190	20·3	—	11	3	5	2	—	1	—	2	24	2·6	176	18·8	174
St. Olave Southwark	11,480	—	26	3	—	1	—	—	—	—	30	34·1	—	—	1	—	1	—	—	—	1	3	3·4	23	26·1	138
Bermondsey	85,629	—	81	20	—	3	—	—	15	—	119	18·1	—	7	5	1	2	—	1	—	5	21	3·2	144	21·9	168
Rotherhithe	40,643	—	44	13	—	3	—	—	13	—	73	23·4	—	—	3	1	1	—	2	—	—	7	2·2	60	19·2	200
Lambeth	300,048	—	195	76	—	23	—	4	31	—	328	14·3	—	8	3	14	1	—	—	—	10	36	1·6	307	13·3	115
Battersea	168,877	—	230	76	—	23	—	—	17	—	345	26·6	—	8	7	10	4	—	6	—	5	40	3·1	198	15·3	118
Wandsworth	195,612	—	94	62	—	10	—	1	18	—	185	12·3	—	—	1	8	2	—	1	—	6	17	1·1	172	11·5	99
Camberwell	257,575	—	121	89	—	38	—	—	27	—	275	13·9	—	34	4	5	4	—	6	—	5	58	2·9	328	16·5	142
Greenwich	178,367	—	90	53	—	21	—	1	19	—	184	13·4	—	1	8	8	2	—	4	—	1	24	1·8	196	14·3	128
Lewisham (excluding Penge)	86,152	—	44	10	—	3	—	—	11	—	68	10·3	—	—	1	2	1	—	—	—	1	5	0·8	75	11·3	75
Woolwich...	41,409	—	34	15	—	1	—	—	3	—	53	16·7	—	—	—	6	—	—	1	—	2	9	2·8	47	14·8	124
Lee	39,215	—	29	18	—	1	—	—	3	—	52	17·3	—	—	—	1	—	—	1	—	1	3	1·0	32	10·6	36
Plumstead	61,057	—	71	27	—	6	—	2	5	—	111	23·7	—	—	—	11	1	—	—	—	1	13	2·8	53	11·3	79
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 34 cases of membranous croup.

† Including deaths from membranous croup.

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Plumstead. One case of small-pox was notified in London during October, corresponding with the number in each of the two preceding months; this case belonged to Bethnal Green sanitary area. No small-pox case was admitted into any of the Metropolitan Asylum Hospitals during October, and no patients remained under treatment at the end of the month. The prevalence of scarlet fever in London showed a further marked increase upon that recorded in recent months; this disease was proportionally most prevalent in Fulham, Hackney, St. Giles, St. Luke, Limehouse, St. Olave Southwark, Rotherhithe, Battersea, and Plumstead sanitary areas. The Metropolitan Asylum Hospitals contained 3571 scarlet fever patients at the end of October, against 3064, 3390, and 3585 at the end of the three preceding months; the weekly admissions averaged 387, against 364, 346, and 350 in the three preceding months. The prevalence of diphtheria in London showed a considerable further increase upon that recorded in the two preceding months; among the various sanitary areas this disease showed the highest proportional prevalence in Clerkenwell, St. Luke, Bethnal Green, St. George-in-the-East, Limehouse, St. Saviour Southwark, Battersea and Lee. There were 1029 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of October, against 957, 1006 and 1033 at the end of the three preceding months; the weekly admissions averaged 155 against 139, 131, and 150 in the three preceding months. The prevalence of enteric fever in London during the month under notice showed a marked further increase upon that recorded in recent months; this disease was proportionately most prevalent in St. Pancras, Stoke Newington, Strand, City of London, St. George-in-the-East, and Limehouse sanitary areas. The Metropolitan Asylum Hospitals contained 175 enteric fever patients at the end of October, against 82, 133, and 173 at the end of the three preceding months; the weekly admissions averaged 26 against 20, 26, and 28 in the three preceding months. Erysipelas showed the highest proportional prevalence in St. Pancras, St. Giles, St. Martin-in-the-Fields, Bethnal Green, St. George Southwark, and Rotherhithe sanitary areas. The 27 cases of puerperal fever notified in London during October included 4 in Newington, 4 in Lambeth, and 2 each in Fulham, Chelsea, Marylebone, St. Pancras, Poplar, and Plumstead sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas of the metropolis, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, October 30th, the deaths of 5518 persons belonging to London were registered, equal to an annual rate of 16·1 per 1000, against 18 3, 23 7, and 15·6 in the three preceding months. The lowest death-rates during October in the various sanitary areas were 9 4 in Hampstead, 9 5 in Stoke Newington, 10 3 in St. Martin-in-the-Fields, 10·6 in Lee, 11 3 in Lewisham and in Plumstead, and 11 5 in Wandsworth; the highest rates were 22·7 in Limehouse, 23 1 in St. George-in-the-East, 23 3 in Clerkenwell, 23 8 in Strand, 24 7 in Whitechapel, 26 1 in St. Olave Southwark, and 28·2 in Holborn. During the four weeks of October 723 deaths were referred to the principal zymotic diseases in London; of these, 216 resulted from diphtheria, 166 from measles, 100 from diarrhœa, 84 from whooping-cough, 79 from enteric fever, 76 from scarlet fever, 1 from typhus, and 1 from an ill-defined form of continued fever. These 723 deaths were equal to an annual rate of 2·1 per 1000; in the various sanitary areas the lowest zymotic death-rates were recorded in Paddington, Hammersmith, St. Giles, Strand, and Lewisham; and the highest rates in Westminster, St. James Westminster, Clerkenwell, St. Luke, St. George-in-the-East, Poplar, St. Saviour Southwark, and St. Olave Southwark. The 166 fatal cases of measles were 54 above the corrected average number in the corresponding periods of the ten preceding years; this disease showed the highest proportional fatality in Westminster, St. George-in-the-East, St. Saviour Southwark, St. George Southwark, Newington, Bermondsey, and Camberwell sanitary areas. The 76 deaths referred to scarlet fever were 34 below the corrected average number; among the various sanitary areas this disease was proportionally most fatal in St. James Westminster, Limehouse, Bermondsey, and Greenwich. The 216 fatal cases of diphtheria were 22 above the corrected average number; the mortality from this disease was highest in Clerkenwell, Shoreditch, Bethnal Green, Limehouse, Poplar, St. Saviour Southwark, Woolwich, and Plumstead sanitary areas. The 84 deaths from whooping-cough were 4 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Clerkenwell, St. Luke, Bethnal Green, and Limehouse. The fatal case of typhus was of a person belonging to Bethnal Green sanitary area. The 79 deaths referred to enteric fever were 9 above the corrected average number; this disease was proportionally most fatal in City of London, St George-in-the-East, Mile End Old Town, and Rotherhithe sanitary areas. The 100 fatal cases of diarrhœa were 76 below the corrected average number. In conclusion, it may be stated that the mortality in London from these principal zymotic diseases during October was nearly 4 per cent. below the average.

Infant mortality in London, measured by the proportion of deaths of children under one year of age to registered births, was equal to 132 per 1000. Among the various sanitary areas the lowest rates of infant mortality were recorded in Stoke Newington, St. Luke, City of London, Lewisham, Lee, and Plumstead; and the highest rates in St. James Westminster, Clerkenwell, Bethnal Green, St. George Southwark, Newington, and Rotherhithe.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN C. A. YOUNG has been placed under orders to embark for India shortly. Surgeon-Majors Coutts, Lilly, and Johnson, and Surgeon-Captains Pearse, Dalton, Tyrrell, and Mansfield have arrived home from India in the transport *Nubia*.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Colonel D. E. Hughes, M.D., having applied to retire on pension, Surgeon-Colonel G. Bainbridge, M.D., has been appointed Surgeon-General with the Government of Bombay, vice Surgeon-Major-General H. Cook, M.D., deceased.

NAVAL MEDICAL SERVICE.

Fleet-Surgeon James Thomas William Stenteford Kellard has been placed on the retired list of his rank.

The following appointments have been announced:—Staff-Surgeons: John Ottley to the *Venus*, and William H. Norman to the *Rupert*, additional, for Gibraltar Hospital. Surgeon A. E. Merewether to the *Venus*.

VOLUNTEER CORPS.

Artillery: 1st Norfolk (Eastern Division, Royal Artillery): Surgeon-Lieutenant-Colonel T. H. Moxon resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the corps on his retirement. 4th Lancashire: Surgeon-Major T. F. Young, M.D., to be Surgeon-Lieutenant-Colonel. *Rifle:* 4th Volunteer Battalion the Queen's (Royal West Surrey Regiment): Surgeon-Captain T. Lyndon, M.D., resigns his commission. 2nd (Prince of Wales's) Volunteer Battalion the Devonshire Regiment: Surgeon-Lieutenant E. P. A. Mariette, M.B., to be Surgeon-Captain. 2nd Volunteer Battalion the York and Lancaster Regiment: Brigade-Surgeon-Lieutenant-Colonel J. Blackburne resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the battalion on his retirement, vacating at the same time his appointment as Senior Medical Officer to the East Yorkshire Volunteer Infantry Brigade.

THE VOLUNTEER OFFICERS' DECORATION.

The Queen has conferred the Volunteer Officers' Decoration upon the under-mentioned officers of the Volunteer Force:—*North-Eastern District: Artillery:* 2nd East Riding of Yorkshire (Western Division, Royal Artillery): Surgeon-Lieutenant-Colonel John Sherburn, M.B. *Western District: Rifle:* 4th Volunteer Battalion the Devonshire Regiment: Brigade-Surgeon-Lieutenant-Colonel John Raglan Thomas, M.D.

THE CONVEYANCE OF INVALIDS BY SEA.

Surgeon-in-Chief Bonnafy is the author of the leading paper in the *Archives de Médecine Navale et Coloniale* for

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October, his theme being the comparative merits as invalid carriers of Government transports and chartered steamers. When Cochin China was first occupied by the French invalids used to be conveyed home in ordinary transports, but the unsuitability of this class of vessel for such a purpose soon came to be acknowledged, thanks mainly to the representations of Dr. Lalluyeaux d'Ormay, who was the principal medical officer of the colony. Admiral La Grandière, the governor, having adopted his adviser's views, an engineer named Cazelles was deputed to make a study of our late Anglo-Indian troopships, and the result was a fleet of seven specially designed hospital transports at a cost of about a million and a quarter sterling, the first only, *l'Annamite*, being constructed of wood and the others of iron. These vessels commenced to run in 1878, and continued to be more or less actively employed until the end of 1895, when they were immobilised. In 1885, however, it was found necessary to hire supplementary transports from private sources, and, curiously enough, during the next ten years, from 1886 to 1895 inclusive, the number of invalids carried in each class was almost identical, the totals having been 11 322 and 11,343 respectively. During these voyages 214 deaths took place in the Government vessels and 302 in those that had been chartered, and it is upon these figures that Dr. Bonnafy relies to prove the superiority of the hospital transports. He has no fault to find with the way in which the invalids were treated on board the private steamers. The utmost goodwill was invariably manifested by captains and *personnel*; but even apart from statistics he thinks it stands to reason that a specially constructed vessel under military discipline is bound to yield the best results.

Literature for Army Hospitals.

The Government of India has issued an appeal for gifts of literature for the use of sick and wounded soldiers in military hospitals attached to the forces operating upon the Indian frontier. Light packets of books, periodicals, and newspapers will be conveyed free of charge for the use of hospitals by the Post Office in India. Packets should be addressed to "the Principal Medical Officer, Tochi Field Force," "Malakand Field Force," or "Tirah Expeditionary Force," as the case may be, and should be very clearly superscribed, "For sick soldiers." Why should not the proprietors of some of the illustrated papers published in London and large library book firms, like Mudie and W. H. Smith and Sons, put themselves in communication with the India Office in this country and offer some of their old, spare, and surplus papers and copies of light literature for the use of the sick and wounded in hospital provided that the Government would undertake to forward them?

Deaths in the Services.

Staff-Surgeon John Noble, R N. (retired), at York, on the 8th inst. He was born in 1832, and entered the navy shortly after the commencement of the Russian War, in 1855, being appointed to serve in the ship *Majestic*, under Captain James Hope, ordered to the Baltic with the fleet under the command of Admiral Dundas. During a period of nearly twenty years he served on various ships in every quarter of the globe, being in the Chinese War of 1857, the Mexican Expedition of 1861, and in the Abyssinian Expedition of 1868. During the Chinese War he suffered so severely from fever that his life was despaired of, and he felt the effects as long as he lived. (Baltic medal for the Russian Campaign of 1854-55, the Canton medal and clasp for the Chinese War of 1857, and the Abyssinian medal for the campaign under Napier in 1868.)

Volunteer Medical Association.

The Council of the above association are now prepared to provide the instruction necessary for passing the examination for the proficiency certificate. The course will be confined to members of the Association, and will be free, a small charge being made to cover necessary expenses only. Instruction will be carried out either by correspondence, or, in the case of those who are resident in London or sufficiently near it, by lectures. The instructors are selected by the Council from among their members. Officers desiring to avail themselves of this course are asked to give notice to Surgeon-Major Watson, Hay Tor, Dennington-park, N.W. It is intended to commence the first course on Nov. 23rd.

The Gallant Conduct of Surgeon-Captain W. G. Beyts.

Surgeon-Captain W. G. Beyts has been specially brought to the notice of the military authorities in India for his gallant conduct in saving the life of Lieutenant North. We refer in more detail to the matter in another column.

Lieutenant E. W. Costello, V.C., on whom Her Majesty recently conferred the Victoria Cross for valour in connexion with the present Indian Frontier Campaign is a son of Surgeon-Colonel C. P. Costello, Indian Medical Service (retired), himself an officer of very distinguished service in the field.

Her Majesty the Queen has granted the Jubilee Medal to Surgeon-Major-General J. B. Hamilton, Principal Medical Officer of the Western District.

Correspondence.

"Audi alteram partem."

"THE MECHANISM OF DEATH FROM CHLOROFORM."

To the Editors of THE LANCET.

SIRS,—I would ask for space in your journal to offer criticism on Mr. Alexander Wilson's article on the above subject, published in THE LANCET of Sept. 11th, 1897, p. 656. In publicly describing cases of this sort, on which a theory as to the cause of death from chloroform poisoning is built up, it is essential that the observation should be of the most accurate and the report of the fullest description, and that for two reasons — first, that the reader may determine how far he may trust the accuracy of the observer, and, secondly, that he may determine for himself the cause of death—that he may determine, that is, whether death was the result of chloroform poisoning or not, and if it were, in what manner it occurred. It cannot be too strongly urged that in building up from the symptoms of certain cases a theory as to the mechanism of death from chloroform it is of absolute importance to prove that these symptoms were caused by the drug. No one will deny that death under chloroform may result, and does result, from causes quite apart from poisoning, such as, to give a single instance, from mechanical obstruction of the air passages. Anyone who wishes to build up a theory as to the mechanism of death from chloroform poisoning, must first take the trouble to show that the deaths on the symptoms of which he depends for the facts on which his theory is built are the result of chloroform poisoning.

In considering the cases given by Mr. Wilson let us first take Case 3 and see how far it fulfils these essentials. The report of it could scarcely give less information. Let it be noted that a failure of circulation so great that when the skin was incised no blood flowed passed entirely unnoticed. The administrator's observation cannot, then, be relied upon as correct, for it was manifestly imperfect. There is no evidence that he ascertained that the free respiration going on was accompanied by any entry of air into the chest. Indeed, no attempt is made to show that the death was the result of chloroform poisoning it is simply taken for granted. Of Case 2 the same may be said. The description is entirely inadequate. "Some peculiarity" was noticed about the colour of the face, and that by the operator and not by the anæsthetist. It may have been the pallor of shock or the duskiness of suffocation; we are not told. Nor do we know whether air was entering the chest or not. Blood or a portion of an adenoid growth in the air passage would be clinically shown by deep respiratory movements and a "peculiarity" in the colour of the face. As to failure of circulation its state is not even mentioned. In reading Case 1 the first thing which strikes one is that the whole series of dangerous events followed the beginning of the operation. They are symptoms such as are found associated, quite apart from chloroform, with painful shock; and they are those which occur from the powerful stimulus of a cut when the patient is not fully under the influence of the anæsthetic. In a word they are the symptoms not of danger from chloroform poisoning, but of shock from the operation due to insufficiency of chloroform. Nothing can be clearer from the description than that the shock immediately followed and presumably resulted from the intense stimulus of thrusting a gouge in the antrum. Then why lay it at the door of the chloroform? In Case 6, given as an illustration of a previously stated theory that failure of the circulation taking place at an early stage in the

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administration of chloroform leads to convulsions, there is not the slightest evidence offered of any failure of circulation occurring previously to the convulsions. That cerebral anæmia will cause convulsions is one matter, but to say that because there were convulsions in this case, therefore there was antecedent failure of circulation is begging the question. We are told that the man "appeared as if about to vomit" but we are not told whether or not a post-mortem examination was made and vomited matter found in the trachea; nor are we even told whether or not he was the subject of epileptic fits. Indeed, no attempt is made to prove that there was either failure of circulation previously to the convulsions or, indeed, that the death was due to chloroform poisoning. In Case 7 there is the same want of detail and apparent lack of observation. The description is so worded that it reads as if it was only on the operator's wishing to begin his work that the patient's critical condition was noticed. Such a description is one to be avoided if one wishes to build up a theory on it. Still, the clinical picture is familiar enough. It is that of a man whose air passage is obstructed, say, by the root of his tongue. His respiratory movements are marked, his face becomes congested, but his pulse rapidly fails, and then his respirations do the same, and finally cease. I do not say that this is what occurred in this case; but it is absurd to ignore the fact that the symptoms are capable of being explained without the question of chloroform poisoning being considered, that no attempt is made to show that this is not the case, and that according to that explanation the failure of circulation is secondary.

On studying these cases one is driven to the following conclusions: That in none of these cases is the report sufficiently full to make it of value; that in none is an attempt made to show that the deaths occurred from chloroform poisoning; that in none is it proved that there was primary failure of circulation (indeed in Case 2 the state of the circulation is never referred to!); and that all can be explained readily as due to some well recognised cause apart from chloroform poisoning. This is not the foundation on which to build up a theory as to the cause of death from this drug. The chloroform controversy can only be settled by careful and minute clinical observation and record, made by men who are determined to ascertain in the case of every death under chloroform in which they are the administrators whether death resulted from chloroform poisoning or not. When the administrator has made this decision he will then, and not till then, be able to give his opinion as to the way in which the poison killed, but let me repeat, his first duty is to prove that the cases he is describing are cases of chloroform poisoning, and that Mr. Alexander Wilson has entirely omitted to do.—I am, Sirs, yours truly,

CLAYTON A LANE, M.D. Lond.,
Surgeon-Lieutenant, I.M.S.

Camp Shinowrie, Oct. 15th, 1897.

THE HOSPITAL SATURDAY FUND AND THE DISTRIBUTION OF AWARDS.

To the Editors of THE LANCET.

SIRS,—Your leading article on the recent meeting of the Hospitals Association emboldens me to ask for a little space in your columns. I agree, as I said at that meeting, that effective criticism is required, but, of course, to be effective it must be based on knowledge of the facts. You seem to fall into the common mistake that the Hospital Saturday Fund system of distribution is somehow based on its supposed inordinate desire for letters of recommendation. This is an entire mistake. If a hospital answers in reply to our question whether it will allow letters in the same proportion as to other subscribers, that it will not, it looses one mark, which will affect the award to the extent of from £1 15*s.* to £2; for the rest the award proceeds according to rule, and the question of letters is not even considered. It is true that we find that our subscribers do make demands on us for letters of recommendation which cannot be satisfied out of the letters which they give us, as they give them to the Hospital Sunday Fund, in return for our grants. We therefore, before deciding what amount is to be distributed, deduct an amount sufficient to enable us to meet these demands and purchase the letters on the terms agreed on between ourselves and the hospital. But the matter is really a very small one. At our last distribution we paid away strictly according to our published system £16,059 10*s.* to different medical charities and reserved £950. Last year, when the amount reserved was £900 (the figures for this year are not, of course, yet complete), we spent £543 1*s.* in the purchase of hospital letters and £584 1*s.* 6*d.* in sending patients to convalescent homes, towards which the patients themselves paid £293 14*s.* 6*d.* Of course, with regard to letters sent in return for our grants we are in the same position as the Hospital Sunday Fund, which receives letters practically in the case of the in-patient hospitals in the same proportion as we do, and distributes them among the ministers of religion. I do not wish to defend the alleged demerits of the Hospital Saturday Fund in this respect, and will only ask your readers to remember that if we sin we sin in company with the Hospital Sunday Fund, and that any contribution we make to the funds of the hospitals is gathered in the main from those who would in any case find their way to the hospitals.

I should like, if I am not trespassing too much on your space, to add a few words on the discussion which took place, as I am in cordial agreement with you as to the advantage which would be obtained by further discussion. I am extremely grateful to our critics, and hope I have learnt a good deal which will be useful to us; but I was "unwilling to verge towards anything which might be considered to be personality." Your leading article has to some extent removed that unwillingness, so I venture to point out that apart from the letter question all the criticisms were aimed at that part of our system which deals with the awarding for economy and efficiency marks. Not a word was said by any speaker about our main principle of awarding marks for relief which corresponds very nearly to the "arithmetical basis" of the Hospital Sunday Fund. This "arithmetical basis," according to Sir Sydney Waterlow, is "raised or lowered at the discretion of the committee," but the meeting was left in complete ignorance as to the principles upon which the committee act in raising or lowering the basis beyond the statement that the data which we consider in the manner I described were considered by them also. That the power exercised by the committee is very great is obvious from the following example. The arithmetical basis of Guy's Hospital ascertained according to the method described cannot have been very different in 1896 and 1897, but I find that the award in 1896 was £814 11*s.* 8*d.* out of a total of £41,829, while in 1897 it was £1312 10*s* out of £39,705 15*s.* 6*d.*, an increase on a smaller total to be distributed of not less than 62 per cent., or, in other words, while in 1896 rather less than 2 per cent. of the total amount to be distributed was awarded to Guy's Hospital, in 1897 rather more than 3½ per cent. is given to that hospital. I have no doubt that this is in accordance with the principles adopted by the distribution committee, but some information as to the principles which permit so great a variation would be useful and instructive. Had I on behalf of the Hospital Saturday Fund maintained the same silence on this part of our system, apparently not even the energy of my friend Sir Henry Burdett could have galvanised the discussion into life.

I am, Sirs, your obedient servant,

R. B. ACLAND,
Chairman, Hospital Saturday Fund.

Hare-court, Temple, Nov. 8th, 1897.

"THE HOSPITALS, THE PROFESSION, AND THE PUBLIC."

To the Editors of THE LANCET.

SIRS,—I cannot think that the general practitioners will welcome with any heartiness Sir Henry Burdett's proposal for paying annexes to our hospitals. They would in my humble opinion pauperise the public, who would pay inadequate fees, and ruin the general practitioner; and while accomplishing their undesigned ends would not supply any better clinical treatment for the poorer sick of all grades than can now be obtained. If Sir Henry Burdett, having satisfied the exigencies of the examiners, becomes a medical man, and then aspires to occupy a seat on the General Medical Council as a Direct Representative, it is clear to me that he must alter his attitude towards the general practitioner or he will not obtain the necessary votes. He has possibly damaged the general practitioner already by his words, whatever interpretation he may wish to have set upon them. The *World* of Oct. 27th says with reference to his speech that "Sir Henry Burdett acutely implied that were the poorer medical men better educated their patients would not go to hospitals." So that

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whatever Sir Henry Burdett's views may be he has contrived to cast a slur on the rank and file of the profession. For it cannot be good for us general practitioners that a journal of good repute and very large lay circulation should say such things of us, even on Sir Henry Burdett's authority.

I am, Sirs, yours faithfully,

Tillingham, Nov. 7th, 1897. F. S. D. HOGG.

A NOTE ON CYCLING.

To the Editors of THE LANCET.

SIRS,—One of the advantages of cycling is that it renders possible a great deal of outdoor exercise without fatigue. How are we to explain the wide difference in this respect between it and the natural modes of progression? There are, I suggest, two chief reasons. In cycling (1) the legs have not to support the body; and (2) the vascular column is shortened. 1. The legs having no work of support can devote themselves entirely to that of propulsion, whereas in walking and running much of the energy expended by the muscles of the lower extremities is spent in supporting and balancing the body. Even the mere act of standing involves a considerable expenditure of muscle energy both by the leg and trunk muscles, while in cycling not only are the leg muscles wholly freed from the work of support and balance, but the trunk muscles are largely relieved from the latter function if the proper sitting posture be assumed. What do I mean by the proper sitting posture? If a person sits so as to ride at ease he should hunch the back somewhat, since this involves the expenditure of much less muscle energy than the bolt-upright position. This is one reason why the back should be well arched in cycling. 2. Man is distinguished from all other mammals by his erect posture. This, while securing him great advantages by enabling him to devote the upper extremities for independent purposes, places him at many disadvantages. If an intelligent extramundane being were to see man for the first time in the horizontal posture it would surely never occur to him that it is natural for man to be erect. There is something incongruous in an animal built on the horizontal plan standing and progressing upon one end of its long axis. Yet this is what man is, and what he does, and it places him at a twofold disadvantage. First, in the matter of progression it leaves him with but two legs to walk with, and the muscles of these two, as already observed, have to expend a great deal of their energy in balancing the body, which from its upright posture is much more difficult to balance than in the case of the quadrupeds. Secondly, the height of the blood column is increased, the influence of gravity on the circulation being correspondingly increased. In particular, as Leonard Hill has so ably shown, there is a tendency for the blood to gravitate into the splanchnic area when the erect posture is assumed, and I cannot but think that the fatigue of standing and walking is largely due to this tendency. It is normally counteracted by the contraction of the splanchnic arteries, by the pressure of the firmly-contracted abdominal muscles on the splanchnic veins, and by the negative intrathoracic pressure, and in cycling it is much reduced and for at least three reasons: (1) the mean distance between the head and the feet is much reduced, and here we have an additional reason why the body and head should incline well forward; (2) the splanchnic veins are compressed by the rhythmic flexion of the thighs on the abdomen, the pressure being increased by the forward attitude; and (3) the aspiratory action of the thorax is increased owing to its increase in mean size, this occurring in all active exercises. That the forward attitude tends to contract the chest is an altogether fallacious notion.

It will thus be seen that there are several reasons why the body should be bent forward in cycling. It may be argued that this attitude, even though physiological, is inelegant. I do not hold this view. An expert rider, properly clad, looks far better bending somewhat forward than sitting rigidly upright, the bend falling in harmony with the curves of the wheels; it suggests ease, grace, and perfect command of the machine. Women pride themselves upon sitting more upright than men, but then few of them have yet learned to ride gracefully; moreover, they have not yet discovered a suitable cycling costume.

I am, Sirs, yours faithfully,

HARRY CAMPBELL, M.D. Lond.

Wimpole-street, W., Nov. 8th, 1897.

A PLEA FOR STRICT CHRONOLOGY.

To the Editors of THE LANCET.

SIRS,—I have recently received the current volumes of the Transactions of various medical societies to which I belong, and I should like to call attention to the way in which their editors confound all historical truth by adding titles retrospectively to past presidents and other worthies. Thus in the list of presidents of the Clinical Society I find under 1869 Sir James Paget, Bart., but he did not receive his title till 1871; under 1871 Sir William Gull, Bart., whereas he was then Dr. Gull; under 1873 Sir Prescott Hewett, who became a baronet many years later; and then under 1881 *Lord* Lister! But the editor of the Medico-Chirurgical Transactions confounds history still more, for he makes Astley Cooper a baronet in 1819 and William Lawrence in 1831 instead of thirty-six years later! Let the societies take example by the College of Surgeons, in whose Calendar no titles are given unless actually existing at the time of election. I am, Sirs, yours obediently,

Nov. 8th, 1897. HISTORICUS.

OVERCROWDING IN FACTORIES AND WORKSHOPS.

To the Editors of THE LANCET.

SIRS,—Would any of your readers be so good as to inform me whether or no a London medical officer of health is bound, legally, by the definition of the term "overcrowding" as laid down under Section I. of the Factory and Workshop Act, 1895—namely, less than 250 cubic feet per person during ordinary working hours, and 400 cubic feet during overtime. If not so bound, what minimum standard of floor and air space—with a nearer approach to the actual physiological needs of the individual—might be adopted (with a fair prospect of success before a magistrate) in the case of toilers in (1) factories; (2) workshops (other than "domestic" workshops which clearly come under the provisions of the Public Health Act); and (3) other workplaces—e.g., laundries.

My reason for raising this vexed question of overcrowding is the noticeable fact that the death-rate from lung diseases amongst indoor workers and other dwellers in densely-crowded (and often ill-drained) districts is in excess of that which obtains in more sparsely populated neighbourhoods.

I am, Sirs, yours faithfully,

Nov. 7th, 1897. M.O.H.

THE EPIDEMIC OF TYPHOID FEVER AT LYNN.

(FROM OUR SPECIAL COMMISSIONER.)

(Continued from p. 1219.)

To continue the story of the past sanitary history of Lynn, previously to the outbreak at Lynn in 1892 there had been cases of typhoid fever at Gaywood above the intake of the Lynn water. The house where these cases occurred had a box privy, and the contents of the box were emptied in a garden that slopes down to the river, which is only at a distance of fifty yards. Later, during the course of the illness, the dejecta from the patients were emptied into a shallow pit dug at only thirty-five yards distance from the river. This pit was but two feet deep and two feet square. From February 14th to 21st there fell 1·24 inches of rain and snow. It was at the latter date, when the thaw occurred, that the greater part of this water was able to run down into the river, and seven days later the diarrhœa patients at Lynn began to manifest symptoms of enteric fever. By analysis it was also shown that the water of the river is much more polluted after a heavy fall of rain. Naturally a heavy flow of water brings down to the river the manure from the fields, the contents of shallow privies, and the human excrement which is spread out over the gardens. The connexion between the water-supply and the typhoid fever epidemic of 1892 was thus clearly established, and the inhabitants of the town of Lynn had these facts set before them in a masterly manner by Dr. Bruce Low, who reported on the subject to the Local

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Government Board. After such an experience it would be natural to conclude that the one end and aim of the citizens of Lynn would be to secure at once a proper and safe water-supply.

The town council, acting upon this supposition, commissioned the borough surveyor, Mr. E. J. Silcock, Assoc. M.Inst C E., to draw up a scheme, and this was done with great promptitude. Experiments were made to ascertain whether the yield at Sow Head springs could be increased and it was proposed to take the water at its source in the chalk and bring it direct to Lynn in iron mains. In 1893 the Corporation prepared a Bill, which they hoped to pass in Parliament during the session of 1894, that would give them full powers to deal with the whole question. But, as in 1884, it was necessary according to the law to convoke a meeting of ratepayers. After the lesson taught by the recent epidemic, and after all that has been said and written during the previous years, it was thought the ratepayers would have learnt that it was a matter of humanity, of duty, and even a wise economy to incur the expense of securing a proper water-supply. Nevertheless, the fear of increased rates blinded them to any such considerations. By a large majority the ratepayers voted against the proposed scheme. This seemed so preposterous that a poll was demanded, but the results of the poll were even more disastrous, and by their votes the inhabitants of Lynn clearly showed that they preferred drinking sewage and graveyard water rather than augment the rates so as to procure a pure supply. Thus matters came to a deadlock. The town council was defeated by its own electors, and certainly if the question had been left exclusively in the hands of the majority of the ratepayers nothing whatsoever would have been done. Fortunately Mr. Silcock discovered a way out of the difficulty. If water is to be taken from a river on which riparian rights have been acquired the sanction of Parliament must be obtained; but if water can be abstracted from undefined channels now underground without interfering with any existing water rights, then an Act of Parliament is not necessary, and, what was more important in this case, the ratepayers need not be called upon to approve the project. The Local Government Board was consulted and agreed with this view of the situation.

Under these circumstances it became necessary only to secure a provisional order for the compulsory purchase of two plots of land. On one it was proposed to sink wells and on the other to establish a reservoir. Then it was also necessary to obtain the sanction of the Local Government Board to borrow the required money. Before this was granted in full the Local Government Board held three inquiries. The first took place in March, 1894, and a partial loan was sanctioned in the following September. The money thus obtained only sufficed to sink a well and prove the existence of the water. This work was commenced in November, 1894. At this point the town council made a serious mistake. Instead of entrusting the work to the most competent person they gave the preference to the contractor who made the lowest tender. This is a very common but a fatal failing. The result was that the contractor, instead of completing the work in nine months, had not finished at the end of a year. The contractor then failed and the town had to take up the work where he had left it and complete the wells themselves. They were therefore not terminated till April, 1896, and thus precious time had been lost. But this was not the only difficulty. To get the money it was necessary for the town council to vote in favour of the loans. The councillors individually approved the scheme, but it had been rendered very manifest that it was opposed by their electors, so they hardly dared to vote in its favour. Still, somehow or another, narrow majorities were obtained as detail after detail was brought forward, though on one occasion the situation was only saved by the casting vote of the chairman.

The wells having been dug, the yield of water proved satisfactory, and the next stage was to obtain sanction for the rest of the loan. Application for this was made in April, 1896, and then followed another disappointment. For some unaccountable reason the sanction was not obtained before November 13th following. Though the wells had been completed in April the Local Government Board did not begin their investigation till the following August. Every detail had been previously supplied, yet they were still making inquiries in September. The sanction for the balance of the loan having been finally obtained in November it was necessary to get out the tenders, and the actual work could not be begun before January of this year. Now if no accidents occur, and if the engineers' strike does not interfere with the undertaking, the new water-supply will be ready for distribution in about six months. In the meanwhile there has been a repetition, almost identical in its details though more serious in its effects, of the epidemic of 1892. In February of that year as has been seen there was a fall of 1·24 in. of "rain" in the course of eight days, which brought filth to the Gaywood River and was followed by an outbreak of typhoid fever at Lynn. This year on Sept. 29th a great storm occurred, and in a few hours there was a fall of 2·50 in. of rain. Again a great scouring took place, and the surface storm water brought a large amount of filth to the Gaywood River. Twenty-three days afterwards twenty-six cases of typhoid fever were notified, and it was evident that a serious epidemic had commenced. Surely this second lesson ought to convince the ratepayers of Lynn that it is necessary to have a supply of clean water. Those who were most opposed to the scheme are now seeking to make out that the water is not properly filtered. But it has been explained over and over again that there is no filtering process at Lynn. The water is simply passed through some gravel, which acts as a strainer, not as a filter. Then it is said that the filters, which do not exist, have not been cleaned for many years. The strainers, which do exist, are cleaned every week by forcing water in the contrary direction—that is to say, upwards—so that the mud, &c., is lifted off the surface of the gravel and carried away by an overflow pipe. This straining process does not affect the impurity of the water, but only its appearance. To establish temporary filters of a really effective character would cost some £5000 and require six months' time. By that time the waterworks now in course of construction will, it is anticipated, be finished.

There can be no doubt but that the persistency with which the ratepayers of Lynn have so consistently rejected all proposals to provide a new water-supply was based on the desire to keep down the rates. At the same time, though this was the main motive, it could not be publicly proclaimed. To condemn a town to recurring epidemics so as to save the ratepayers' pockets does not constitute a very good electioneering cry. Other reasons had to be found and were found. In all fairness I am bound to cite these reasons in so far as I have been able to ascertain them. Of course, there is the old familiar argument of people who have lived a number of years under certain conditions, who imagine that they are none the worse and therefore object to expensive alterations. People who speak in this manner ignore those who have not continued to live, but have been brought prematurely to the grave, and they are blind to the dangers which the future may have in store for those who have survived. The argument also that what was endured in the past can be endured in the future has also the fundamental defect that it is not based on fact. The present and the future are not similar to the past. There were formerly fewer habitations on the banks of the Gaywood River, and the water above the intake was not so frequently polluted. Also, the number of inhabitants of Lynn was not so great; therefore, as less water was required a slower process of filtration could be applied. Now the only approach to a serious argument which the opponents of the water-supply schemes could adduce is that the river was kept cleaner and that the methods of filtration were more perfect. As to the condition of the river, doubtless it was somewhat cleaner. Perhaps it was more carefully watched. Assertions to this effect are frequently made, but it is as difficult to prove their accuracy as it is to deny them. In any case there are now more sources of contamination than in the times gone by. As for the processes of filtration, it may without hesitation be affirmed that what was done in the past and what is done now are in both instances absolutely inefficacious. The principal difference is that to-day no pretence at filtration is made. It is emphatically and distinctly stated that there are no filters; there are only some strainers just to keep the dead dogs, the big pieces of wood, leaves, and heavy particles of floating mud out of the water-pipes. This is not filtering, but merely a rough method of clarifying the water. It might well be urged that water ought not to be clarified, as this does not purify it, but only helps to deceive the consumer. If the water was delivered in its natural dirty condition it would not be more dangerous, and the population would more readily understand the necessity of boiling the water and of getting a better supply. Indeed, and in spite of the continued use of

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the strainers to clarify the water, the opponents of the new water-supply scheme accuse the waterworks committee of striving to render the actual water-supply as foul as possible so as to compel the inhabitants of the town to approve of their scheme.

It is stated that formerly there were filter-beds which consisted of shingle, fine shingle, sand, and charcoal, all resting on some gratings. The water came from underneath and was forced upwards. The filtering material was cleansed and renewed from time to time. This description is accurate except for the all-important fact that the word filter is applied. Then, as now, the water was not filtered, but merely strained. Even if the strainers were then capable of filtering their action would have been destroyed by the constant cleaning which is justifiable for a strainer, but renders a filter inefficacious. The Lynn ratepayers who ignorantly clamour for the cleaning of filters forget, or do not know, that when a filter is cleaned the water must be allowed to run to waste for several days till a film has been formed on the surface of the filter, and it is only when thus dirty that the filter arrests the passage of pathogenic bacteria. The process of upwards clarification was altered because it was found so inefficacious that eels got through and frequently blocked the delivery pipes. Needless to say that a so-called filter which allows eels to go through is scarcely likely to stop the passage of micro-organisms. Therefore, downward clarification was adopted and gravel only employed which was found sufficient for the purpose. That a filter is not intended is proved by the fact that these strainers are cleaned every week. By the present method eels do not get through so easily, but there are complaints about small fish and water-bugs. On one occasion the former borough surveyor, Mr. E. G. Mawbey, Assoc.Inst.C.E., did make an attempt to filter the water and placed in one of the two strainers all the necessary material. But these strainers were much too small for such a purpose, and the amount of water that came through was so limited that it was necessary to promptly remove the filtering material or there would have been a water famine in Lynn.

Finally, it is argued that if the strainers are too small to act as filters large filtering beds could be constructed. If London is satisfied to drink polluted river water, why should not Lynn do the same? The filtering process employed in London has proved satisfactory, why should not the same process be employed for Lynn? Those who thus argue forget that Londoners are not at all satisfied at having to drink river water, that there is always the fear of the filters getting out of order, and that had it been possible to obtain a sufficient water-supply direct from the chalk Londoners would certainly have been much better pleased. This has been done for many great capitals—Vienna, Paris, Rome, &c.; and the Lynn ratepayer who would urge the inhabitants of these cities to drink the water of the Danube, the Seine, or the Tiber would meet with a sorry reception. It is astonishing with what tenacity some of the Lynn ratepayers cling to the idea that the River Gaywood does not merit the aspersions which have been showered upon it by technicians. If, indeed, it is foul, this, they urge, is because it has not been cleaned, or, when cleaned, because the herbs that were cut out of it, have been left on the banks to rot, and the foulness of this decomposing vegetation has flowed back into the stream As a matter of fact, the authorities have not dared to clean the river for many years because they know that impurities are constantly flowing into the water, and they feared that an epidemic would result if the filth in the bed of the river was stirred up. Thus the adversaries of the new water scheme argue that if the river is foul it is all the fault of the waterworks committee, who should have cleaned out the river and shown more energy in proceeding against those persons or villages and hamlets who let their drainage flow into it. Then they also ask whether, after all, the pollution does not take place in the mains rather than in the river.

This latter question is of importance. The subsoil of Lynn is likely to be highly contaminated on account of its porous character, its damp condition, and because the streets, the courts, and alleys are very badly paved or not paved at all, and because there are still many privies in the town, probably as many as a thousand. Then the sewers are badly constructed, leak, and are water-locked twice a day. The pipes that convey the drinking-water through such a soil should be exceptionally sound and should be the subject of constant attention and watchful care. Certainly it will be argued that the pressure in water-pipes is from within. But on this point a great divergence of opinion exists. It is said that when there is a leak in the pipe, though the water from the inside flows outwards, still there may be, as it were, eddies by which some slight quantity of the water outside gets into the pipe. Also the pressure from within the pipes varies considerably, and sometimes the water is turned off altogether, then the foulness surrounding the pipe can easily penetrate. It would be a great misfortune, if when pure water is brought to the town that water became contaminated in passing through the streets. Certainly it would be prudent to examine the mains and branch pipes before introducing the new supply. It does seem like putting new wine into old bottles to bring down from the hills and the chalk through seven miles of new pipes a fresh and pure supply which will be poured under high pressure in the old pipes that are laying in the unstable and dirty subsoil of the streets of Lynn. If some accident should occur the opponents of the new water-supply would appear to have the argument on their side.

With regard to the typhoid fever epidemic of 1892, which should have constituted a sufficient warning to the inhabitants of Lynn, the counter argument is that this epidemic was greatly exaggerated and due to bad sanitation rather than to the water-supply. First it is said we should bear in mind that the town was then suffering from a very severe epidemic of influenza. Cases of intestinal influenza were magnified into typhoid fever and a scare was created so as to promote the new water-supply scheme. The intestinal influenza could be distinguished from typhoid fever by the absence of mortality. Nevertheless, it is not denied that ultimately true typhoid fever was manifest, but still doubts as to its being due to the contamination of the River Gaywood were loudly expressed in 1892 as they are again repeated to-day. There is one useful feature in this opposition to the water scheme. It has helped to draw attention to other sanitary defects in the town. In this respect Lynn is the very opposite to Maidstone. In the latter town no one could speak or think of anything else than the water-supply. To suggest that there might be other contributive causes was certain to evoke expressions of incredulity. In Lynn there are, on the contrary, so many persons anxious to defend the water-supply that some ingenuity is displayed in attributing the blame to all manner of other circumstances. And these other circumstances undoubtedly do exist For instance, the one medical practitioner in the town who has not joined his colleagues in their crusade against the water-supply pointed out to me a house where in 1892 he had attended a case of typhoid fever. At the back there was a privy on ground a yard higher than the patient's room. During the two preceding years complaints had been made concerning this privy, but no measure had been taken to abate the nuisance. On the same day the occupier of the house to which the privy belonged was also attacked by typhoid fever. Several other cases occurred in the immediate neighbourhood of this privy. Further, my informant insisted that the cases of typhoid fever were not evenly distributed over the town, but appeared in clusters as if surrounding some particular local source of infection. If the water had been the cause it is maintained that such clusters would not have occurred. This is an assertion I am not able to verify, as I cannot find a spotted map of the 1892 epidemic. But there is such a map of the present epidemic, and though this map shows that the disease prevails all over the town it is not evenly distributed. For instance, there are more cases at the extreme north and south of the town. The central portion facing the River Ouse has the fewest number of cases, but there are here many business premises and the population is not so dense. It is south of the Mill fleet, one of the four brooks which divide the town, that the greatest number of cases have occurred. Giving off the Windsor-road a number of small streets have greatly suffered. This part of the town was flooded during the great storm of Sept. 29th last. The sewers overflowed and inundated the cellars or basements of these houses. When the water was drained away there remained a foul, thick mud, so that the inhabitants might have been contaminated, not only by the water they drank, but also by the sewage that was brought into their houses. Close by, in the London-road, the main sewer comes from opposite directions and meets at the head of the Windsor-road, and should here take a different course. During the storm, when the two currents met, the force of the shock was so great that the water burst out of the sewer and inundated all the

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neighbourhood, therefore the opponents of the water scheme urge that it was the flood of sewage and not the drinking-water which caused the epidemic. But inasmuch as there are many cases of fever where there has been no flood, all that can be said is that the fouling of the houses rendered their inhabitants more susceptible.

All this disputation might easily have been set at rest by obtaining a bacteriological analysis of the water. For some unaccountable reason this has not been done. The adversaries of the new water-supply, therefore, have not failed to suggest that if the water was not analysed it was because the authorities knew full well that it was not polluted. The tenacity with which some people in Lynn still maintain that the water is not polluted, though they can see the filth flowing into it daily, is really quite amazing. This persistence becomes amusing when, as another argument in favour of the purity of the water, the inquiring visitor is further informed that Lynn is one of the highest rated towns in the kingdom. The inhabitants of Lynn do not seem to realise that the Freebridge Lynn rural sanitary district, which consists of thirty-three parishes spread over 69,299 acres and had a population of 12,366 at the 1891 census, is in a great measure drained into the Gaywood River. There are constantly cases of typhoid fever in this rural district, and at Grimstead a man died from typhoid fever last July. It will be remembered that one of the three springs that originate the Gaywood River starts from the Grimstead Cemetery. In looking up the records of the Grimstead Church it will be found that in the year 1832 there were 48 burials in this cemetery, of which 26 are entered as due to "blue oriental cholera." It has been argued that the water must be pure because there was no cholera at Lynn in 1849, 1853, and 1865 or 1866. As a matter of fact there were in those years two deaths, seven deaths, and one death respectively from cholera, but there was no epidemic; at the same time there were no cases of cholera on the river bank. In 1832, however, Lynn suffered more severely, but there were cases up the river above the water intake. Yet every precaution was taken. In November, 1831, a committee was formed, including the magistrates and medical men of the town. It was arranged that medicaments should be distributed gratuitously and a building set aside for the reception of cholera cases. The town was divided into districts and committee men visited all the houses to remedy insanitary conditions and report cases of diarrhœa. In spite of all these precautions the cholera invaded the town the following year; but the first death occurred at Grimstead, not at Lynn. It occurred on June 29th, 1832, and the last death was on July 29th, whilst the first death recorded at Lynn was on July 2nd, and the last on Aug. 22nd. Then at Pot Row, which drains into the Gaywood River, there were 26 deaths from cholera in fourteen days. This is a water-logged village beyond the village of Gaywood. There is a sandy subsoil with water four feet below the surface. Every well in the district can be easily polluted, and the inhabitants in their turn pollute the Gaywood River. In the Freebridge rural sanitary district there have been 17 cases of typhoid fever since the month of October, and there was a case at Gaywood before the present epidemic broke out at Lynn. The patient lived within a hundred yards of the river, where there is an old privy attached to the house, and its contents were put on the garden between the house and the river. Last year there were eight cases of typhoid fever in this same rural sanitary district. Thus it will be seen that the Gaywood River, which supplies the drinking water of Lynn, has ample opportunities of being contaminated.

(To be continued.)

THE EPIDEMIC OF TYPHOID FEVER AT CLIFTON.

IT is a very long time since Clifton has been visited by such a severe epidemic of typhoid fever as the one that is now progressing, if, indeed, it ever has; and never, we believe, have the authorities been better able to recognise the seriousness of the outbreak or deal with it in a more energetic manner than on the present occasion. Though there had been cases of typhoid fever notified in Bristol during August, September, and October, they were not more in number than the average, and no suspicion was entertained that an outbreak like the present was likely to take place; in fact, during the week ending Oct. 9th no cases were notified, while only 6 were reported in the week ending the 16th, 3 of these cases being at Clifton. During the next week (ending Oct. 23rd) 18 cases were notified, 16 of these being at Clifton. It was during this week that the blood of some patients suffering from certain indefinite symptoms was sent to the medical officer of health for examination by Widal's test, and in his reply he stated that he believed the disease to be typhoid fever. Within a very short time a considerable number of specimens were sent to him, all coming from cases which presented some difficulty in diagnosis, and in a large majority Widal's phenomenon was observed. The accuracy of the diagnosis was subsequently fully confirmed by the clinical developments of the cases and by a post-mortem examination made on a case which, unfortunately, proved fatal. A large number of notification returns followed, so that in the week ending Oct. 30th 109 cases were reported in Bristol, 100 coming from Clifton, and it is certain that not only have some cases not yet been notified, but that a few mild cases have recovered and so escaped being reported. The notification returns, however, do not show accurately the outbreak of the epidemic in point of time, and by the courtesy of the medical officer of health we are able to give the actual onset of the attacks as reported on the notification returns. The following figures are for the whole of Bristol for the month of October:—Oct. 1st to 3rd, 4 cases; Oct. 3rd to 9th, 15 cases; Oct. 10th to 16th, 38 cases; Oct. 17th to 23rd, 51 cases; Oct. 24th to 30th, 21 cases.

This accounts for 129 cases, in addition to which there are 12 doubtful and obscure cases. As the returns came in and were examined it became evident that only a very small area of Clifton was affected, which fact pointed so clearly to a contaminated milk-supply that the medical officer of health at once endeavoured to discover the farm and the distributor supplying the infected houses, with the following results.

A certain milk distributor (A) in the employ of a dairy company supplied milk from a farm situated near a village a short distance out of Bristol. In this man's round he supplied eighteen houses in which typhoid fever appeared. Previously to Sept. 30th he had taken milk to a lower part of Clifton, and it was in this round that the earliest cases occurred. After that date he supplied milk in the upper part of Clifton, and left the milk at numerous private houses, at a boarding-house at Clifton College (S), and at the house where the bachelor masters live. On Oct. 18th he began to supply another boarding-house at the college (M), and it is in this house that the most recent cases have appeared. A visit to the dairy farm showed a state of things which, to say the least, is scandalous. A stream runs through the village and receives all the sewage of the inhabitants, and after passing the farm runs into the Avon. On the farm was a pump about five yards from the stream, supplying water identical in constituents with that of the stream, and consequently highly contaminated with sewage and swarming with micro-organisms of great variety. This water, which the farmer professed to boil, was used for all dairy purposes, and was quite sufficient to account for the infected milk-supply.

The supply from A did not, however, account for the outbreak in at least eight other houses, but on pressure being brought to bear on another distributor (B) he admitted that he supplemented his supply with milk from A, although this was contrary to regulations. This source of infection was suspected because both A and B entered Clifton by the same route—i.e., over the suspension bridge—but it certainly was the duty of the district council to see that the drainage was conveyed away in such a manner as not to pollute streams which run near dairy farms.

As might be expected, a few cases have occurred in houses not supplied by A or B, but it is quite possible—in fact, it is known in some instances—that the infection was taken at tea parties and other special entertainments, and that occasionally supplies were taken from the infected milk. The disease has largely attacked young people and servants, though adults have not escaped. In the boarding-house at the college (S) 26 cases have occurred and in the other boarding-house (M) 5; in fact, Clifton College has been severely attacked, several masters, a master's wife, boys, and servants suffering from the disease. We are glad, however, to hear that no new cases have been reported recently. The authorities have been put to great anxiety and have taken every measure in their power to prevent the spread

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of the epidemic, and it is satisfactory to learn that the patients are progressing favourably.

In such an epidemic there is naturally a variety in the severity of the disease; but in most cases the early symptoms were by no means characteristic, the temperature was very erratic, and diarrhœa was often conspicuous by its absence. Testimony must be borne to the great assistance which practitioners have received from the medical officer of health, who on the first intimation that typhoid fever had occurred and that obscure cases of continued fever were prevalent was prepared to examine the blood by Widal's reaction. The blood of over eighty patients has been examined in the laboratory of the medical department of the sanitary authorities, and the reports have in many instances materially assisted in correctly diagnosing obscure cases. We are informed that the primary case—i.e., the one that infected the stream—has not been discovered, but that as soon as the source of infection was found to be the milk from A's farm the supply was stopped.

The notifications during the week ending Nov. 6th were 67, but a large number of these were what may be described as old ones—that is, cases that should have been reported in the previous weeks. The corrected table of onsets is as follows:—

	Cases.		Notifications.
Oct. 1st and 2nd	6	.....	0
Week ending Oct. 9th	23	.....	0
,, ,, ,, 16th	46	.....	6
,, ,, ,, 23rd	68	.....	18
,, ,, ,, 30th	50	.....	109
,, ,, Nov. 6th	2	.....	67
Totals.....	195	.....	200

There are several cases which are known to exist that have not yet been notified. The latest notification returns are up to Nov. 8th, on which day 3 were reported, the same number as on the two preceding days. Twelve cases have proved fatal. The medical officer of health further says that at each point of the inquiry confirmatory evidence as to the original suspected milk has been forthcoming, and it is now quite established that this has been the actual cause of the Clifton outbreak, and the only cause.

THE RINDERPEST IN SOUTH AFRICA.

(FROM A CORRESPONDENT.)

IN spite of all the precautions taken by the Cape Government during the last twelve months, and the indefatigable efforts of the Minister of Agriculture and the veterinary staff under Mr. Hutcheon to check its progress, rinderpest is steadily advancing in the Cape Colony, and almost each day brings news of fresh centres of infection. It is practically certain that the disease will eventually spread through the whole of the colony. Those who have passed through districts which rinderpest has ravaged unchecked are never likely to think lightly of its appalling effects or to be indifferent in their endeavours to carry out any measures which promise a fair amount of success in diminishing its results.

An Object Lesson from the Protectorate.

Some idea of what a terrible scourge this disease is may be gathered from a comparison of the condition of the Protectorate in the beginning of 1896 with that six months later. In January of that year the country was teeming with cattle, and hundreds of ox transport wagons were to be seen toiling along the road between Mafeking and Bulawayo, a distance of over 500 miles, carrying loads at the rate of about 14*s.* per cwt. In July the country did not contain sufficient cattle for even ploughing purposes, and transport had risen to £6 per cwt. over the same distance, and was almost entirely dependent on mules, donkeys, and horses, and the price of transport oxen had risen from about £6 to as high in some cases as £60 for salted cattle. The veld along the road was strewn with putrefying carcasses of dead oxen, and in many parts littered with the contents of stranded wagons—hundreds of wagons standing useless, exposed to the elements and the tender mercy of any passer-by, with no animals to drag them even to the nearest wayside station.

The Origin of the Epidemic.

The plague, according to Captain Lugard in his work on the "Rise of Our East African Empire," appears to have started on the east coast, opposite Aden, and to have spread inland about the end of 1889, probably having been brought there through the medium of infected cattle imported from India, in some portions of the north of which country rinderpest appears to be endemic. It spread through Central Africa till, in March, 1896, it appeared in Bulawayo, whence it was carried rapidly along the southern transport roads to Tuli, on the northern borders of the Transvaal, and to Mafeking, on the north-western border of the colony, reaching the latter place about the middle of April, having travelled the distance of over 500 miles in less than six weeks. The disease soon passed the Limpopo River, on the north of the Transvaal, and steadily continued its deadly march through the Transvaal, and appears now to have traversed the whole of that State from the Limpopo on the north and west to Natal and Swaziland on the east, and has crossed the Vaal River in the Free State, the whole of which State is now suffering from its ravages.

The Story of the Fences.

As soon as the plague reached Mafeking in April, 1896, every effort was made by the authorities to stay the spread of the disease. The officials of the Agricultural Department and the whole available veterinary staff concentrated their efforts in endeavours to confine it, if possible, to that portion of the country. Herds of cattle were shot and compensation paid to the owners, two lines of fences were erected, and cordons of police placed at various points to prevent the movements of infected cattle into non-infected areas. But in spite of all precautions the infection was spread, chiefly by cattle from infected areas in the Transvaal and Free State crossing the border behind the line of defence, and on Oct. 3rd, 1896, it appeared in the Kimberley district and gradually spread through Griqualand West.

The Stand at the Orange River.

A last determined effort to check the inroads of the disease was made at the Orange River. Here a barbed wire fence was erected 1000 yards on the southern side of the river, extending from the south-west boundary of Bechuanaland right along the border of the colony and Free State as far as the Basutoland border, thence along the boundary of Basutoland and the colony as far as the Natal border, and from this point along the Natal and colony border to the coast. Police were placed along the whole line, and all communication between the infected areas on the north of this line and the non-infected areas to the south or colonial side carefully guarded for a distance of about 980 miles. The precautions succeeded for about four months in keeping the plague out of Cape Colony proper, but on March 24th, 1897, an outbreak of the disease occurred in the Herschel district south of the line of defence. The way in which this occurred is interesting as showing how extremely difficult it is to exclude all sources of infection in a country like South Africa. The leader of a transport waggon travelling on the main road south of Aliwal North on the colonial side of the Orange River fence picked up an old sack containing among other things some dried meat and a pair of trousers stained with blood, probably from contact with the meat. The boy put on the trousers without washing them, and the result was that his two leading oxen became sick with rinderpest a few days afterwards and spread the infection to other cattle. The contents of the sack indicated that the Kafir to whom the sack belonged had been working in mines, probably in the Transvaal; and that this sack was the source of infection seems sufficiently probable from the fact that the transport oxen had not been within many miles of the infected area, from which they were separated by the Orange River, at this time in flood. The hope that the disease would be kept out of the colony by the means described had at last to be reluctantly abandoned, and it became evident that all further idea of confining the plague by means of rivers, fences, or cordons of police was futile. The various districts were then placed under the control of committees, who are now endeavouring with varied success to confine as much as possible the spread of the disease. These measures to some extent retarded its progress, but the disease having once succeeded in passing the more efficient barriers that were opposed to its progress, such as the Orange River and its fence, it could no longer be expected that the less efficient means at disposal would long succeed in preventing its advance into the rest of the colony. During the end of 1896 the Cape Government, seeing the appalling spread of the disease in spite of their precautions, and the

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uselessness of all known remedies, decided to obtain the assistance of Professor Koch, the noted German bacteriologist, and were fortunate in securing his services for investigating the disease and trying to discover some method of combating its frightful results. Thanks to the brilliant discoveries of this investigator, means were placed at the disposal of the Government which promised to a very great extent to reduce to reasonable limits what at one time appeared likely to become a national calamity as far as this colony was concerned. Before, however, proceeding to discuss what these measures were it will be well to describe the disease itself and the symptoms to which it gives rise. The following description of rinderpest is taken from the report by the colonial veterinary surgeon (Mr. D. Hutcheon).

The Rinderpest.

Rinderpest is a specific, malignant, and highly contagious fever, characterised by acute inflammation of the mucous surfaces. It is spread only by communication, directly or indirectly, from sick to healthy animals. It is essentially a bovine disease, though it may be communicated to other ruminants, especially the buffalo and some of the antelopes in South Africa, particularly the koodoo, eland, bushbuck, and duiker; sheep and goats are also affected by the disease, but as a rule suffer very little beyond a slight rise of temperature, although occasionally they die from it. It is characterised by a period of incubation of from three to ten days, and its most prominent symptoms are a rise of temperature and a low typhoid form of fever, which is ushered in by trembling or shivering and twitching of the muscles behind the shoulders and flanks. There is a discharge from the eyes and nose, at first watery, but soon becoming mucous. There is constipation at first, which in a day or two is followed by diarrhœa. The mucous membranes of the eyes, mouth, nostrils, and vagina of the cow are red and inflamed-looking. There is congestion of the skin, and in numerous cases an eruption of pustules on it.

The First Symptom.

The first symptom of rinderpest is a rise of temperature which in inoculated animals generally occurs about the fourth day, often a little earlier. In those animals that contract the disease by infection in the ordinary way the period of incubation is probably longer. The temperature rises from normal (102° F.) to from 104° to 108° or even higher. At the first characteristic sudden rise of temperature there are no visible symptoms indicating that the animal is sick except that close observation will detect that it does not eat so vigorously and appears less lively than usual. By the fifth day the animal will look a little dull, the coat will appear rough, and the appetite will be visibly affected, although it may still feed a little. A rough but comparatively mild cough is very often one of the first indications. The external symptoms appear about the sixth day, when the ears are observed to droop when the animal is standing quiet and undisturbed. A little watery discharge begins to flow from the eyes, turning to thick mucus later, and the eyes appear red and inflamed. There is a slight dribbling of saliva from the mouth and a little mucous discharge from the nostrils. These symptoms gradually become intensified as the disease advances, and the animal stands with its head hanging down and its ears drawn backwards and drooping. The coat is rough, and a twitching and trembling of the muscles behind the shoulders and about the flanks and hindquarters will be observed. The discharge from the eyes, nostrils, and mouth becomes increased; that from the nostrils is sometimes discoloured with blood; and the muzzle presents an excoriated appearance. The mucous membrane lining the mouth shows a bright salmon colour, and a few ulcers may be visible about the dental pad and on the under surface of the tongue; the bran-like eruption on the palate which is described in most works on the subject is rarely met with; the breath has invariably a very fœtid odour. Diarrhœa commences about the seventh or eighth day after infection, or from about the second to the third day after the outward signs become visible. The colour of the fæces may be at first natural, but they generally become of a dirty brownish-yellow colour, as if mixed with bile and mucus, and contain little or no fæcal matter. In some instances the fluid fæces will be discharged involuntarily, soiling the tail and hind legs, the anus being relaxed and inflamed, in some cases even ulcerated; in other cases there is straining and great uneasiness, the animal moving its hind legs and whisking its tail as if suffering abdominal pain. The prostration of strength in serious cases is very marked. The animal walks with a staggering gait when made to move, and when standing its back is arched, with the hind legs drawn under the body. If left at liberty in the open undisturbed the animal seeks the shelter of the trees, where it will lie persistently. The thirst is very great, and when allowed to get to the water the animal will stand and sip away continuously and very frequently die in the water. In many cases the breathing becomes quick and laboured, accompanied by a moaning grunt. In milch cows the flow of milk begins to fall off immediately. The pulse is much increased, and as the disease advances becomes very quick and feeble. Some hours before death the temperature suddenly falls below normal. The extremities and surface of the body become cold and the animal dies in a semi-comatose condition. Death takes place from two to six, or even ten, days after the visible symptoms appear. In many cases after apparent recovery the animal suffers a relapse and dies.

The Diagnosis.

Although typical cases of rinderpest are comparatively easy to diagnose after the external symptoms have become fully developed, still there are a great many other cases in which the symptoms are not very clearly defined, especially in the early stages. The temperature is usually an excellent guide, but even that cannot always be relied upon, as we get a high temperature in other diseases involving the digestive organs. For instance, there are many cases in which the running from the eyes is not very marked and the discharge from the nostrils barely discernible. There is invariably a flow more or less of saliva about the mouth, but we get that associated with congestion of the liver and other derangements of the digestive organs, while a violent diarrhœa mixed with blood and mucus is often the accompaniment of inflammation of the bowels caused by the animal eating certain irritating bulbous plants. In such cases there will frequently be a pinkish colour of the mucous membrane lining the mouth, with the fœtid breath so common in rinderpest. Again, we meet with a great many cases of catarrh which simulate rinderpest very closely except in the colour and character of the fæces. In all outbreaks, in which only one or two animals are affected, it is necessary to make a post-mortem examination, and even then, unless the case is well advanced, the typical appearances presented by the fourth stomach and bowels may not be sufficiently developed to justify one in giving a decided opinion. There is also a large number of very mild cases in which the characteristic symptoms of the disease never became developed, and if it were not that rinderpest is in the herd, or near it, one would not suspect them of having the disease by external examination only.

The Post-mortem Appearances.

The body is generally much emaciated and the orifices are soiled with a dirty discharge, and the carcass exhales a very fœtid odour. The principal and pathognomonic lesions of rinderpest have their seat in the mucous membranes of the digestive passages, the respiratory organs, and the urinary apparatus. The mucous lining of the mouth is congested and covered over with a slimy mucus. It presents a bright salmon colour, but if the beast has been killed and bled before examination this bright pinkish colour disappears. The epithelium is frequently found detached in places, leaving small ulcerated-looking spots. These are met with most frequently on the under surface of the tongue and on the dental pad. The mucous membrane of the fauces and pharynx is the seat of catarrhal inflammation and is covered with a thickened mucous, but sometimes purulent, discharge. The nasal mucous membrane is likewise the seat of catarrhal inflammation, its surface being covered with a muco-purulent exudation, and towards the openings of the nostrils small ulcers are frequently met with. There is very little change to be observed in either the trachea or œsophagus. Slight catarrhal inflammation is sometimes met with in the bronchial tubes with collapse of some of the smaller lobules. Pulmonary emphysema may also be present. The changes in the lungs are neither constant nor pathognomonic, and are secondary as a rule. There are sometimes ecchymotic patches on the endocardium of the heart, and similar spots are met with occasionally on the pericardium, with a little fluid in the pericardial sac. On opening the abdomen the peritoneum is congested and frequently spotted, and there is a variable quantity of yellow serous fluid in the peritoneal cavity. It is comparatively rare to find any pathological changes in the first and second stomachs

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although a little serous infiltration is sometimes met with under the epithelial lining. The third stomach is generally hard, and the food between the leaves dry and caked. But very frequently, more especially if the sick animal has been allowed to drink large quantities of water, the contents of the stomach are found quite fluid. It is in the fourth stomach and the intestines where the most marked and characteristic changes are met with. The mucous membrane of this stomach is the seat of acute catarrhal inflammation, the submucous tissue is swollen and infiltrated with a serous effusion, especially the rugæ or folds. The mucous membrane is also swollen and its epithelium detached in patches of various sizes, leaving ulcerated sores, more particularly near the pylorus, where these ulcers present the appearance of dark eroded sores with the yellow degenerated tissue remaining in their centres. In the small intestines is found a muco-purulent greyish yellow exudation, in some cases covering innumerable small spots scattered over the mucous membrane of the bowels. In other cases this exudation is found covering almost the whole of the mucous membrane. In more severe cases this presents the appearance of a thick, membrane-like exudation, which in parts forms a complete cast of the bowel. In such cases the epithelium is thickened, softened, and is found detached over small patches throughout the small intestines, leaving the membrane red and granular-looking. Peyer's patches are generally swollen and denuded of epithelium. The changes in the large intestines are not usually so well marked or so uniform. In many cases the inflammation is more in patches, and in the rectum the mucous membrane presents a blood-streaked appearance. The epithelium is swollen and covered over with a muco-purulent exudation, while there is more or less infiltration of the submucous tissue. In many severe cases, however, the large intestines are just as seriously affected as the small with numerous small patches of desquamated epithelium. It is a very curious fact, also, that many of the cases which manifest the most severe external symptoms do not show the most characteristic post-mortem lesions. The liver very often appears congested, and presents a yellowish colour of various tints. In many of the cases, however, the liver is perfectly normal in character and appearance and the bile apparently healthy. The mucous lining of the gall-bladder is sometimes inflamed, especially about the base of the sac, and the bile is thick and curdy looking. The mucous lining of the urinary bladder is sometimes affected also in patches with a little submucous infiltration, and similar appearances present themselves in the vagina of the female. It is not necessary to go minutely into all the post-mortem changes which may be observed in individual cases. The most marked and characteristic post-mortem appearances are those seen in the mouth and upper-air passages and in the fourth stomach and intestines.

The Treatment.

The treatment of rinderpest up to the time of Dr. Koch's discoveries had not been followed by any satisfactory results, although an immense number of remedies had been tried. Mild laxatives, such as two or three ounces of sulphur in two quarts of gruel during the early stage, followed by catechu and opium when the diarrhœa stage is reached, and the keeping of the animals as quiet as possible, sheltered from the sun, and on a limited supply of water, with a little nourishing gruel to drink, is the form of treatment which probably gives a higher percentage of recoveries than any other.

The Mortality.

The various rates of mortality which have occurred appear to depend upon the degree of virulence of the outbreaks. There can be little doubt that during the hot summer weather the disease in many instances assumes a milder form than in the colder winter months. During the progress of the disease through the Protectorate and in the Mafeking district 5 per cent. of recoveries was considered a very high average during the winter months. About the beginning of September, however, when the weather became warmer, 10 and 15 per cent. of recoveries were reported. There was also a great difference between the recoveries on individual farms, varying from 2 per cent. to 10, and even 20, per cent. in exceptional cases. Similar results as regards the effect of dry, warm atmosphere have been recorded in India.

The Modes by which Rinderpest is Spread.

The principal modes by which the disease is spread are: (1) immediate contact of healthy with affected cattle; (2) healthy cattle grazing on the veld where infected ones have recently been or drinking at stagnant pools already poisoned by the secretions and excretions of affected cattle; (3) the conveyance of the infection by wild animals susceptible to the disease into healthy districts; (4) the conveyance of the poison by means of soiled clothes and hands of human beings, and also by animals not susceptible to the disease, who have been in contact with diseased animals or their excretions or secretions; and (5) portions of diseased meat.

(To be continued.)

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Clinical Society.

THE Manchester Clinical Society was established several years ago, and its career shows that it has supplied a want. It is not antagonistic to the Medical Society of Manchester, which, though no longer youthful, still retains the vigour and energy of its earliest prime, but it serves as a useful supplement and possibly as a gentle stimulus to the older institution. The population of Manchester, Salford, and the district round is considerably over a million and implies the presence of a proportionate number of our own profession. It is therefore evident that abundant scope exists for two societies, and that with only one much interesting clinical work must go unnoticed for want of opportunity to bring it forward. The meetings are held in a large room at the Victoria Hotel, where also another room is permanently retained for reading and business purposes. The annual subscription has hitherto been a guinea, which has entitled a member not only to attend the meetings, but also to take out books, an arrangement having been made with Lewis for a large and constant supply. At the recent annual meeting considerable changes were made in the rules and some novel features introduced. The annual subscription is reduced to half a guinea, not to include the use of the lending library. Those who wish to have books from Lewis's Library will pay an extra fee, which is not likely to be more than 7*s.* 6*d.* per member. Tea, coffee, or cocoa may be obtained during the meetings, at which also smoking is to be allowed. It will be interesting to watch the working of this arrangement. Some may doubt the wisdom of these concessions to human weakness, but the busy practitioner just able to "drop in" to a meeting may often find it a convenience and comfort to obtain simultaneously pleasant and, it may be, much-needed refreshment for body and mind, while the soothing influence of tobacco may help to soften down sharp differences of opinion or personal feeling, while its smoke wreaths with their subtle cloud may perhaps veil asperities of manner. Twice a year visitors will be invited to open discussions on given subjects, to facilitate which short abstracts of the papers to be read will be distributed among the members four days before the meetings. After eight years of devoted work Dr. Hill Griffith resigns the honorary secretaryship and is succeeded by Dr. Helme.

Rejection of the Culvert Scheme.

The counting of the voting-papers issued to owners and ratepayers of Manchester in connexion with the resolution of the City Council to seek powers for the provision of a culvert to convey the Manchester sewage effluent to the tidal waters of the Mersey took place on the 30th ult. The result was as follows: against the resolution of the council, 49,069; in favour of the resolution, 20,528; majority against, 28,541—a very decided vote, in consequence of which members of the rivers committee of the corporation have resigned. They may, however, be re-elected. The position is a difficult one for the Council, but it may lead to a more earnest endeavour to solve the problem of artificial filtration. Various schemes will of course be suggested, one of which has indeed been already put forth for a gigantic culvert to go out to sea at the mouth of the River Dee. It is to be big enough to carry off the filthy water from all the towns and villages in its course, and if carried out will no doubt increase the attractions of several favourite resorts, such as West Kirby, Hoylake, and New Brighton. This scheme emanates from the fertile brain of Mr. Marshall Stevens, well known in connexion with the Ship Canal and the Trafford Park Syndicate. But, alas, for any efforts at

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originality nowadays. One writer in the *Manchester Guardian* says that perhaps Mr. Stevens is not aware that he "proposed the same scheme over twelve months ago," and another seems to imagine that with the aid, in some way or other, of all this sewage the Dee may be deepened and ships floated up to Chester. The march of severe science does not seem to have crippled imagination.

The Cleansing Department.

It is difficult to realise the enormous quantity of refuse that has to be dealt with in a large community. From the report of the cleansing committee of the City Council it appears that during the year ending March 31st the quantity collected and disposed of amounted to 354,364 tons, more than 1000 tons for every working day; while the area of street surface swept and cleansed was 556,472,760 square yards. A considerable part of this refuse is cremated and mortar is manufactured from the clinkers from the destructors and lime ashes. If not utilised they would have to be carted away at considerable cost, whereas there was a profit on the mortar-making of over £1678. During the year 49,342 tons of material were sent to Carrington, but in future a great part of such refuse will be sent to Chat Moss. The farm at Carrington consists of about 400 acres, and the amount charged as rent during the year was £933 1*s.*; all other expenses in connexion with the farm have been debited to the farm account and credit has been given for all revenue derived purely from the farm. It is satisfactory to note that a profit has been made, but as the amount is not stated it may be but a modest one. Next year it is expected that about £4500 will be received in rents from the estate, and the year's expenses correspondingly reduced. At present the outgoings of the committee far exceed the receipts. During the year £99,334 were paid in wages alone, while the sale of concentrated manure, night-soil, street-sweepings, mortar, &c., has brought in £41,080.

Nov. 9th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

John Redhead Wing of the Ingham Infirmary, South Shields.

ON Nov. 6th the foundation-stone of this extension was laid by the Earl of Durham. The wing will provide for an addition of forty-eight beds, which are to be used for the treatment of medical cases and the wing is added in memory of the late Alderman Redhead, who was a warm supporter of the charity. The new wing will necessitate an increased annual expenditure of £1000, but it is anticipated that in so rich a community as South Shields so popular an institution as the Ingham Infirmary will have no difficulty whatever in raising this amount.

Increase of a Poor-law Medical Officer's Salary.

The Tynemouth board of guardians at their meeting on Nov. 4th increased the salary of their medical officer, Dr. E. Brumwell, from £110 to £160 per annum. Dr. Brumwell has filled the post of medical officer to the Tynemouth Workhouse for twelve years, and is to be congratulated upon this appreciation of his services.

Site for the New Infirmary, Newcastle-upon-Tyne.

This question has advanced another, and it is to be hoped has reached its final stage. The corporation, influenced by Mr. John Hall's gift of £100,000, has given to the governor of the Royal Infirmary ten acres of ground on the cattle leazes. It is a magnificent area, and is situated where the building committee and the governor of the infirmary asked the corporation to give them a site. The consent of Parliament has to be obtained in order that the land may be used for the purpose of building. Seeing that the freemen, the corporation, and the infirmary authorities are at one, it is to be hoped that no opposition will be raised before a Parliamentary committee to the transfer of this land. It is now nearly 150 years ago that the present infirmary was founded and built upon land given by the corporation for the purpose. It speaks well for the popularity of the institution that the present corporation should see its way to better the example of its predecessor 150 years ago.

Nov. 10th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Morison Lectures.

ON Wednesday and Friday of last week the second and third of the Morison Lectures were delivered at the Royal College of Physicians of Edinburgh by Dr. Alexander Morison. The second and part of the third lecture were again devoted to an erudite *résumé* of investigations into the anatomy of the nervous mechanism of the viscera. The greater part of the third lecture was, however, devoted to the physiology of the subject. This gave the lecturer more freedom and allowed both his reasoning and his imaginative faculties fuller scope, the result being that the lecture was much more interesting to listen to and made many of those who heard it wish that they had not to wait for twelve months to have the clinical aspects of the questions discussed submitted to them.

The Medico-Chirurgical Society, Edinburgh.

The first meeting of this society for the winter was held on Nov. 3rd in the rooms of the Royal Scottish Society of Arts. The President, Dr. Argyll Robertson, occupied the chair, and there was a good attendance of members.

Glasgow Obstetrical and Gynæcological Society.

The first meeting of this society was held on Oct. 27th, Mr. Alexander Miller presiding. The following office-bearers were elected for the session: Honorary President, Professor A. R. Simpson; President, Dr. Malcolm Black; Vice-presidents, Mr. Miller and Dr. Oliphant; treasurer, Dr. Lindsay; secretary, Dr. Jardine; reporting secretary, Dr. Russell; pathologist, Dr. Kerr; members of council, Dr. Reid, Dr. Alice MacLaren, Mr. Richmond, Dr. Balfour Marshall, Dr Edgar, and Dr. Thomson. Dr. Jardine showed skiagrams and a pen-and-ink sketch of a Deformity of the Forearm and Hand. Dr. J. K. Kelly showed (1) the Pelvic Organs and Sections of Lung from a case of Deciduoma Malignum; (2) a Left Ovarian Cyst growing into the Ligamentum Latum and a Right Ovarian Cyst growing free; and (3) a Left Tubo-ovarian Cyst which formed a tumour reaching above the umbilicus and a smaller Right Ovarian Cyst. Dr. Edgar showed—(1) Two Ovaries removed by Vaginal Section; and (2) Ovary and Tube removed by Abdominal Section. A discussion afterwards took place on Extra-uterine Pregnancy based on a paper read by Dr. Edgar on April 28th. Dr. W. L. Reid, Dr. J. K. Kelly, Dr. Stark, and Professor Murdoch Cameron took part in the discussion.

The Aboyne Fever Hospital Difficulty.

By a majority of 8 to 4 the Deeside District Committee have decided to refuse an offer by Sir W. Cunliffe Brooks, Bart., of Glen Tana, to relieve the committee of the fee duty connected with the hospital in course of erection, to defray the cost of building already incurred, and to pay the sum of £1000 on condition that the committee keep away from Aboyne water area. The majority held that this offer did not comply with the conditions laid down by the committee and the Local Government Board. The hospital is ready to be roofed in, but some people believe a guarantee in the required form may yet be given.

University of Aberdeen.

Professor Johnston, whose case in reference to Biblical Criticism was mentioned in the leading columns of THE LANCET, ignoring the decision of the Privy Council and the appointment by the University Court of Very Rev. Dr. Gloag as lecturer on the subject mentioned, proposed to give a course of lectures of his own as though nothing had occurred to disturb his position. Professor Johnston, at the end of last month, accordingly endeavoured to deliver an opening lecture in one of the class-rooms in Marischal College, but owing to the uproarious conduct of the medical and other students the attempt was an abortive one. Since then Professor Johnston has attended at King's College with the object of lecturing, but no divinity student has put in an appearance, and Professor Johnston has been left to do nothing but converse for a short time with the amused pressman or two who went in search of a "scene" or anything to make good "copy" of.—The Aberdeen University Court has resolved by a majority to disclaim any idea of repudiating its obligations as to the erection of a new Greyfriars Church in connexion with the extension of the university buildings, and has requested a conference with

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the town council of Aberdeen on the subject. In consequence of this decision Principal Sir W. D. Geddes has resigned his position as a member and chairman of the Sites and Plans Committee.—A bust of the late Dr. C. Mitchell, Jesmond Towers, is to be placed in the Mitchell Hall, being a gift from his son.

Professor Macewen and the Western Infirmary, Glasgow.

A most important contribution has been made to this controversy in the form of a statement issued by Dr. J. B. Russell, one of the representatives of the Faculty of Physicians and Surgeons on the infirmary board of managers. Dr. Russell does not allude to particular incidents of the dispute, nor does he concern himself with its merely personal aspects. Indeed, his purpose is rather to raise the whole question of the position which the infirmary occupies towards the university professors. With this in view he describes the effect of the agreement under which the infirmary is bound to make "reasonable provision for professors of the university engaged in clinical instruction," and shows that the minimum effect of this is to transfer the patronage of two physicianships and two surgeonships from the managers to the corresponding university chairs. He admits the necessity of some arrangement with the university, but insists upon certain drawbacks inherent in the present plan. By it the available patronage of the managers is seriously lessened, the visiting staff is divided into university and non-university clinical teachers, with the "assumption always existent in the university mind that the university physicians and surgeons can do something in the way of clinical teaching that the other men cannot do," and as the professors are appointed to their chairs *ad vitam aut culpam* the managers are unable to put a time limit to their appointments at the infirmary. These conditions necessarily mean a serious limitation of the power of the managers to secure promotion for the younger members of their staff, and Dr. Russell is evidently opposed to further encroachments of the university on the patronage of the managers. He recalls an attempt made many years ago by the professors of clinical medicine and clinical surgery "to absorb the entire function of clinical teaching for university purposes," and the defeat of this by the joint action of their colleagues and the infirmary board; he also alludes to the attempt of the university to monopolise the gynæcological clinique for the professor of midwifery at the expense of a gentleman older in the service of the infirmary; and he states that the recent appointment of the professor of materia medica and therapeutics to the charge of beds was urged upon the managers by a "strong letter from the principal." Against the allotment of beds "for the elucidation of materia medica and therapeutics" Dr. Russell enters a strong protest. He regards such a decision as "an insult to the existing staff; it put forward a most painful suggestion to the minds of subscribers, and it virtually alienated for ever from the patronage of the managers a physicianship and two wards." It is in the light of these occurrences, Dr. Russell contends, that the attempt of the senate to secure a third ward for the professor of surgery must be viewed. As he phrases it, the senate have overdrawn their account. If the professors of midwifery and therapeutics are to be provided with wards it must be in part at least at the expense of the professor of surgery. In dealing with the question of operating theatres Dr. Russell describes in a somewhat satirical tone the extreme demands made on "structure and administration" by a perfect system of aseptic surgery. Pushed to their extreme limit the infirmary would become a "mere federation of cliniques designated and denominated by autonomous physicians and surgeons." The demands which are being made on the managers are, he considers, in some respects beyond the possibilities at their disposal. Dr. Russell's statement has excited much interest, and whilst the feeling in favour of granting to Professor Macewen every facility for carrying on the work of which Glasgow is so justly proud remains unchanged, there is much sympathy with Dr. Russell's opposition to the attempts of the university to still further invade the patronage of the infirmary managers. His contention that a place on the visiting staff ought to be within the possible attainment of those who, in the dispensary and other subordinate positions, do the drudgery of the institution is recognised as sound policy. If such a result is not possible it is manifest that the infirmary will cease to attract to its staff those who are willing by years of subordinate service to qualify themselves for clinical command and instruction. To proclaim to the junior staff that a record of many years of hard and unremunerated work forms no effective argument against the pretensions of an outsider who happens to be a university professor is a proceeding very unlikely indeed to ensure an abundant supply of capable candidates anxious to enter on the service of the hospital. That university professors are necessarily superior to all other candidates is, of course, a pious belief of their "sisters and their cousins and their aunts," but it scarcely commands the unqualified assent of a more virile constituency. The only other piece of news in connexion with the dispute is the appointment of the Rev. Professor Hastie and Professor Adamson to represent the senate on the infirmary board. These gentlemen replace Professor Cleland and Professor Moir, who presumably in the judgment of the senate failed to urge the university claims with sufficient vigour.

Medical Appointments.

Mr. Peter Paterson, M.B., C.M. Glasg., has been appointed one of the surgeons to the dispensary of the Glasgow Royal Infirmary; his promotion makes a vacancy in the extra-dispensing staff. Mr. A. W. Russell, M.B. Aberd., has resigned his position as physician to the dispensary of the Glasgow Western Infirmary. The term of office of Mr. J. Nigel Stark, M.B. Edin., as assistant obstetric physician to the Glasgow Maternity Hospital having expired the post is advertised as vacant.

Nov. 9th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Proposed Hospital for Infectious Disease at Blackrock.

AT the meeting of the guardians of the South Dublin Union on the 4th inst. the proposal to establish an infectious disease hospital at Blackrock House was strongly opposed by Mr. James H. North, a well-known house and estate agent, on the grounds that the place is situated in the midst of occupied houses which closely surround it on all sides, making isolation entirely impossible, while the injury to the letting value of the neighbouring property would obviously be very great, the Blackrock township, situated on the seashore five miles from the General Post Office, Dublin, being largely made use of by the citizens as a health resort during the summer months. The situation offers no special advantages for the purpose proposed, while, on the other hand, anyone familiar with Dublin will recognise the fact that there are many sparsely populated districts in its suburbs where a suitable site for such a hospital could be easily obtained. The Local Government Board will doubtless recognise this and prevent further trouble to the residents and owners of property at Blackrock.

Trinity College, Dublin.

The opening meeting of the 128th session of the College Historical Society will take place on the 10th inst., when the auditor, Mr. G. F. Irwin, will deliver an address on "Edmund Burke," one of the early founders of the society. The President, the Right Hon. Lord Ashbourne, Lord Chancellor of Ireland, will occupy the chair, and amongst other speakers Sir William Thomson, the President of the Royal College of Surgeons in Ireland, and Sir Christopher Nixon will address the meeting.

The late Mr. Stamer O'Grady.

An influential meeting of the friends of the late Mr. O'Grady was held at the Hibernian Hotel on the 8th inst., Sir George Duffey, the President of the Royal College of Physicians of Ireland, occupying the chair. Resolutions were proposed or seconded by Sir Charles Cameron, Dr. Grimshaw, C.B., the Rev. Chancellor Tisdall, and others. A committee was ultimately elected and a subscription list opened with a view to perpetuate the memory of the late distinguished surgeon by means of some suitable memorial.

The Belfast Water-supply.

Owing to the prevalence of typhoid fever in Belfast and the criticisms made in reference to the water-supply the Belfast Water Commissioners have very wisely decided to request Dr. Frankland to take samples of the water as supplied by the Commissioners to the consumers and to examine and report on the same. His previous report,

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referred to in THE LANCET,[1] was with special reference to the water in the various reservoirs.

The Forster Green Hospital for Consumption.

On Oct. 30th, on the invitation of Mr. and Mrs. Forster Green, an immense number of the citizens of Belfast had an opportunity of inspecting this new hospital prior to its being opened for the reception of patients. Situated on the south side of Belfast, in a beautiful district with a southern aspect, this most commodious hospital, towards which for the payment of the land and buildings Mr. Forster Green has contributed £13,150, at present is adapted for forty intern patients, but the administration buildings are so constructed that they would serve for a much larger number in the future. The building is lighted with electric light, and the motor has been utilised to pump up the water-supply for the building. There is a good elevator, and the heating and ventilating on the Kleinson system has been carried out by the Stourtevent Engineering Company, and they have contracted to supply a minimum of 5000 cubic feet of air per hour for each patient. In this admirable hospital, which will be a great advantage to Belfast, the most modern appliances have been adapted to ensure the comfort of the patients. It is hoped that the debt of £5000 against the hospital will soon be wiped out.

The Health of Belfast.

It was reported at the monthly meeting of the City Corporation, held on Nov. 1st, that the health of the city of Belfast is improving and that the death-rate during the previous fortnight was lower than it has been for months past. During the past three weeks the death-rate was 20·6, 18·9, and 18·0 per 1000 respectively. The death-rate from zymotic diseases has also decreased, and last week was only 1·9 per 1000, while the deaths from typhoid fever had fallen from 13 in the first week of October to 4 last week. During the four weeks (Sept. 23rd to Oct. 20th) 354 cases of typhoid fever were notified, 45 of scarlet fever, 42 of simple continued fever, 1 of typhus fever, and 13 of diphtheria. The number of cases of typhoid fever, though still too many, are fewer than in the preceding month and they are not confined to any particular district. From the reports presented by the dispensary medical officers at a meeting of their committee held on Nov. 1st it would also appear that the typhoid fever outbreak is on the decline and is not so prevalent amongst the poor as in the middle-classes.

The Ulster Medical Society.

The first meeting of the present session was held on Nov. 4th, when Professor Symington (the out-going president) resigned the chair to Dr. J. A. Lindsay, President for 1897-98, who delivered his inaugural address on the Problem of the Consumptive Poor. After a few preliminary observations Dr. Lindsay proceeded to make a calculation based on the Registrar-General's returns, the mortality tables of insurance companies, and the experience in other countries, of the probable amount of phthisis existing in the British Islands. He concluded that the number of phthisical patients exceeded a quarter of a million, and that of these at least 200 000 were cases which might in the ordinary course require and seek hospital treatment. The hospitals for phthisical patients and chest hospitals in the kingdom were enumerated and their total number of beds computed at about 1160. As cases of heart disease, bronchitis, &c., are admitted into many of these he did not think the number of beds available for phthisis exceeded 1000, or about 1 for every 200 patients. He thought this lamentable deficiency in accommodation was due to a general feeling of hopelessness regarding this problem and the lack of definite medical teaching and guidance with regard to it. A lucid account was then given of the progress made in other countries in providing accommodation for phthisis. The hospitals for phthisical patients in Germany, France, Switzerland, Austria, Norway, Russia, and the United States were enumerated, and the principles of treatment adopted in Germany by Dr. Brehmer and Dr. Dettweiler were detailed and highly commended. Dr. Lindsay believed that similar methods of treatment were practicable in properly equipped sanatoria in the British Islands, and that such institutions held out a good hope of cure or complete arrest for a certain proportion of cases, and restoration to comparative health and capability for work for a much larger number. He also thought these institutions would be a great service in educating patients in the principles of hygiene and in the best methods of preventing the spread of phthisis. The question of the contagiousness of phthisis was fully considered and the opinion expressed that while the direct transmission of the disease from one individual to another was probably a rare event, yet the malady was infective and usually contracted by the inhalation of pulverised sputum. Special institutions would be of great service in limiting the dissemination of the virus. The prevention of phthisis became more hopeful when the history of the gradual stamping-out of leprosy was considered. This subject was fully gone into, and Dr. Lindsay showed a map giving side by side the leper asylums of the British Islands in the middle ages and the hospitals for phthisical patients of to-day. The contrast told heavily against the present age. Encouragement might be obtained in the fight against phthisis from the fact that the disease was already on the decline, the decrease in twenty years having been at least 20 per cent. The duty of the medical profession was to point out clearly the line of advance which future progress must take. At the conclusion of his address a hearty vote of thanks was given to Dr. Lindsay.

Death of Francis Turnly Gage, M.B. T.C.D.

Great regret is felt in Ballycastle, county Antrim, at the death of Dr. Gage, which occurred at that place on Nov. 4th from hæmoptysis. Dr. Gage, who was the third son of General Gage, studied in Dublin and graduated M.B. of Trinity College in 1890. He had been in practice only a few years in Ballycastle, where, by his skill, kindness, and straightforward character, he won the esteem of all who came in contact with him. He was medical attendant of the coastguards. Dr. Gage, who leaves behind a widow and three young children, was buried on Nov. 6th.

The Belfast Asylum.

At the meeting of the board of governors of the above asylum on Nov. 8th the resident medical superintendent in his report pointed out that it was a matter of regret that when persons became actually insane they were frequently taken to the union workhouse prior to being brought to the asylum, much valuable time being thereby lost. To facilitate the early admission of such cases he proposed to supply the relieving officers of the dispensary districts with admission forms, so that when application was made the patients could be sent direct to the asylum. The medical superintendent thought the proper policy was to facilitate the admission and discharge of patients. The chairman (Professor Cuming, M.D.) said the policy suggested by the medical superintendent was a very wise one generally, but in the case of overcrowding it was desirable not to admit any patients who could be treated in the union infirmary.

Nov. 7th.

[1] THE LANCET, Oct. 23rd, 1897, p. 1032.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Case of Dr. Laporte.

DR. LAPORTE has decided, at the instance of his medical brethren, to enter an appeal against the judgment on which he was sentenced. He has also agreed that the subscription which he at first refused should be opened on his behalf, and all the medical journals have signified their willingness to receive subscriptions, the maximum being fixed at 5 francs. The obstetricians of Paris continue to agitate in his favour; among others M. Pinard opened his course of lectures at the Faculty of Medicine with a discourse which has been a good deal talked about and in which he severely criticised the attitude of the magistrates throughout this affair. Professor Varnier has published in the *Revue d'Obstetrique* the text of the report of the experts MM. Socquet and Maygrier—the report, that is to say, upon which the judge caused Dr. Laporte to be arrested. Professor Varnier discusses this report phrase by phrase, although the publication of evidence in a law case is forbidden by French law. He alleges that the post-mortem examination was made very carelessly and clumsily ("dans des conditions de maladresse extrême") so much so that the experts might well be asked whether the perforations exhibited were not made by their own instruments. Professor Varnier concludes by saying that if a specimen of such a kind had been brought to him as a specimen of traumatic perforation to place in a museum he would have refused it. Up to the present Professor

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Varnier has not been prosecuted for his infraction of the law.

The Treatment of Tuberculosis by Euphorbia Resin.

M. Pénières, of Toulouse, has just laid before the Academy of Medicine the results of some interesting work with regard to a new treatment of tuberculous lesions which are amenable to surgical treatment. His plan is to treat tuberculous foci by means of injections of euphorbia resin, the strength being under one milligramme. By this treatment he has cured the masses of tuberculous glands in the neck which are so common in young children, and one great advantage of this plan is that it leaves no unsightly scars and is available for the treatment of tuberculous affections of both bones and joints. M. Pénières cited the case of a young man who was affected with tuberculous disease of both wrist joints. Suppuration had occurred in both the bones and the soft parts. The patient had been condemned to amputation, or at least to a resection, but he is to-day perfectly well. M. Pénières exhibited in support of his statements a series of x ray photographs of the affected parts, before, during, and after treatment. In the first set the bones of the wrist joint were seen to be sewn with little black points just like those in worm-eaten wood; then the holes were seen to be filling up, and finally the bones exhibited normal characters. All the sinuses have healed and the patient, who formerly could not hold a fork or even blow his nose, is now able to resume his occupation as a wood-carver. The action of the euphorbia resin must not be pressed by repeating the injections too often. One injection every eight days or even every fifteen days is generally quite often enough. The best preparation is a very fine emulsion in alcohol of such a strength that one cubic centimetre of the fluid contains one-fourth of a milligramme of euphorbia resin.

The Etiology of Cirrhosis in the Intemperate.

At the Academy of Medicine the discussion on this subject between M. Lancereaux and his opponents still continues. M. Laborde, of the Faculty of Medicine, in a communication the reading of which occupied two meetings, maintained in opposition to M. Lancereaux that the cirrhosis of the intemperate is caused by alcohol and not by the potassium sulphate in "plastered" wines. M. Laborde pointed out that it was almost impossible to find tipplers who confined themselves to wine and that in the countries where wine is either not used at all or only used very sparingly, as in some States in North America, the alcoholic origin of cirrhosis was unquestionable. In Normandy, where the people were far from temperate, M. Laborde had had the opportunity of closely observing forty-five individuals who drank only spirits, and he found by percussion that the livers of all of them showed an enlargement which was the first stage of impending cirrhosis. He was therefore convinced, in like manner with MM. Dujardin-Beaumetz and Audigé, that cirrhosis of the liver is the direct consequence of chronic alcoholic poisoning. The question of "plastering" still remained for consideration. The experiments of M. Lancereaux involved an essential fallacy, for he did not know what amount of potassium salt was really absorbed by the rabbits which he used. M. Laborde believed that this amount was very large. It is well known that potassium salts are rapidly eliminated, that they are not injurious except in very large doses, and that such deleterious action as they have is exerted, not on the liver, but on the heart. M. Laborde believed that rabbits were unsuitable for such experiments, as they were extremely sensitive to mineral poisons, and in making an investigation of the subject, on which he has been for a long time engaged, he followed a course which promised more reliable results. He gave wine to two dogs—wine containing 2 grammes of "plaster" per litre to one of them and natural wine to the other. These two dogs had as much as 500 grammes (17 oz) of wine every day, and this large quantity was continued for from fifteen to twenty days, when their appetite was completely lost, and the experiment was stopped for fear that they might die. No symptoms were observed beyond those of the ordinary inebriety due to wine; there was no apparent action of the potassium salts. M. Laborde then varied the experiment by omitting the wine and giving to a dog in fifteen days a total quantity of potassium bisulphate equivalent to 80 grammes (nearly 3 oz.) for an average adult man. The dog's health continued perfectly good. It must also be borne in mind that everybody took in his daily food from 5 to 7 grammes (from 75 to 105 grains) of potassium salts, and at this rate cirrhosis ought to be universal. In M. Laborde's opinion M. Lancereaux erred when he asserted that alcohol was not the cause of cirrhosis of the liver in the intemperate, and his views were not only at variance with the results of careful observation and experiment, but, more than this, they constituted a real danger by encouraging the belief that wine was more injurious than spirits. The enemy which ought to be always and everywhere guarded against was not "plaster" and was not wine, but was spirituous liquor. M. Lancereaux, in reply, confined himself to repeating the statement that all cirrhotic patients in Paris were wine drinkers. By giving potassium bisulphate to rabbits he had produced nothing but very well-marked cirrhotic lesions. The cirrhosis of the intemperate existed long before the modern development of spirit drinking. Alcohol caused various lesions, but these lesions never had cirrhosis as their fundamental process.

Nov. 9th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Dr. Giuseppe Levis.

THIS eminent consultant, who died at Udine on Sunday morning, the 24th ult., will be greatly missed in Milan, where he was for years the Medico Primario of the Ospedale Maggiore and presided over the Istituto Antirabbico. In the cholera epidemic of 1884 his efforts in concert with Dr. Todeschini to mitigate the scourge and to guard the city against future attacks are still gratefully remembered by the Milanese. Besides his merits as a practitioner he had rare gifts as a lecturer, and attracted to his clinique not only students but graduates by his power of luminous exposition and vivid and impressive statement. Since 1895 he had suffered from diffused arterial sclerosis aggravated by aneurysm of the external iliac artery, and latterly by hepatic dropsy due to cirrhosis. For this paracentesis was three times practised with only temporary relief. Last summer he was under Professor Grocco's care at Montecatini, but was found in too hopeless a condition to offer any chance of recovery. In fact, Professor Grocco, shortly after seeing him, sent him back, escorted by an assistant, to Udine, where in the house of his daughter he died.

The English-speaking Practitioner in Italy.

At the last General Medical Congress held here it was moved and unanimously carried that foreign medical practitioners professionally engaged in Italy should undergo a State examination or qualify at one or other of the Italian schools in order to legalise their practice. In consequence of this step a deputation of the English-speaking practitioners has just waited on Signor Serena, Under Secretary of State for the Home Department, to protest against such action. His Excellency announced in reply that arrangements in the direction proposed by the Italian Medical Congress had not yet been taken, but that in any case the Government before giving legal effect to the innovation contemplated by the Congress would put itself in diplomatic communication with the Governments of the other Powers (Great Britain included), with a view to obtaining for Italian practitioners in those countries the same privileges enjoyed in Italy by foreigners. The matter will probably rest there. It is said that foreign dentists, against whom the edict referred to in my last letter has now gone forth, in the event of their being "contumacious," are to be denounced to the judiciary authority. This is a very hard measure for the practitioners of a sister profession and singularly ill-advised as regards the interests of Italy herself. The presence of an English-speaking dentist in her chief centres of foreign sojourn is one of several attractions for the Anglo-American world, without which these places would in great measure cease to be resorted to. Italy, of course, must be credited with knowing what is best for her own advantage and to "order her house" accordingly; but the exclusion of the English-speaking dentists from her cities cannot but strike the outer world as in more ways than one a suicidal step. By the admission of Italians themselves these practitioners possess in their home qualifications an even higher guarantee of professional training and efficiency than any to be found in Italy, while it is an open secret that no Italian when he can afford the choice prefers a compatriot dentist to one imported from America or the British Isles. There

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is, however, another feature in the circular to which I alluded affecting a still more considerable public than that professionally interested in dentistry—I mean the practitioners of medicine. The Marchese di Rudini, in his address to the prefects, sets out by reminding them that Article 23 of the "Legge sulla Sanità" at present in force forbids the foreign medical graduate from practising unless, in addition to his home qualification, he possesses an equivalent one of some recognised Italian school. Article 140 of the "Legge" of Nov. 14th, 1859, he proceeds, confirms the above, but—the words that follow must be given textually—"eccettua da tale divieto i medici ed i chirurghi stranieri espressamente chiamati per casi speciali e quelli che esercitano la professione presso i soli forestieri" (it excepts from such prohibition the physicians and surgeons of foreign nationality who are expressly called in for special cases and those who exercise their calling among foreigners only). It is primarily on the ground that this second "Legge" makes no mention of "dentists" that the Minister of the Interior would exclude those of foreign nationality from practice, thus falling back on the letter of the law to the ignoring of its spirit. Conscious apparently that this is not a high-minded or statesmanlike proceeding His Excellency goes on to justify his mandate by the argument that "degrees" for special departments of medicine and surgery being now compulsory in Italy, and that "dentistry" being a department of surgery, the foreign dentist, not being a medical graduate, cannot avail himself of the privilege of the foreign physician or surgeon and must take an Italian degree or forfeit the right to practise even among his compatriots. This looks very like quibbling, to say nothing of the fact already noted that qualifications in dentistry are commonly held by Anglo-American practitioners in that department implying as good a preliminary training in medicine as that of any holder of an Italian dental degree. British and American odontology, however, may be trusted to vindicate its own rights, and its medical sister can only wish it Godspeed. Meanwhile it is satisfactory to have the Marchese di Rudini's re-affirmation in so recent a document of the right of the English-speaking physician and surgeon resident in Italy to form a *clientèle* among his compatriots in that country, strengthening as it does our impression derived from Signor Serena's answers to Dr. Santini last summer that the Italian Government has no immediate desire to legislate in Dr. Santini's sense, and, by passing sentence of banishment on the English-speaking practitioner, to deter from sojourning in Italy that Anglo-American world from which her needy and sorely taxed population derives so essential a part of its income.

Report of the Italian Commission on the Pestis Bubonica.

Dr. Alessandro Lustig, Professor of General Pathology in the Florentina Istituto di Studi Superiori, in concert with Dr. Malenchini, Dr. Galeotti, and Dr. Levi, experts in pathology and bacteriology, also of the Tuscan school, was deputed by the Italian Government to conduct a series of experiments, first at home and then in the Bombay Presidency, with a view to discover a "vaccino contro la peste bubbonica," as the terms of their mandate express it. Since their return from India in September Professor Lustig has been engaged in drawing up a report of their work; and now that it has appeared it will interest your readers to have a brief, but adequate, summary of its tenour. The British authorities, says Professor Lustig, were most liberal in their endeavour to facilitate the object of the Commission. Their assistance was all the more welcome, for, says Professor Lustig, the natives put every difficulty in the way of his procuring the "materia prima" of the pathologist—the dead subject. A strange rumour, credited by the poorer classes, came to the rescue. During the epidemic a fanatic had besmirched the statue of the Empress-Queen and, by a coincidence which profoundly impressed the popular imagination, from that day the "pestis bubonica" raged with increased destructiveness. It was then declared that the only check to its ravages would be the "sending to London of a thousand Hindoo livers"—a placebo to the indignant British which multiplied the number of necropsies! Professor Lustig and his colleagues availed themselves of the opportunities thus presented. They obtained the "cadavera" required and were not long in coming upon the bacillus of the disease. This, he says, opposes (fortunately) a feeble resistance to the action of disinfectants; and following up his experiments, mainly on rats and apes, he found its mode of entrance into the organism was by the skin and by the mucosa of the respiratory and alimentary apparatus. Often it stops there; but oftener still it passes directly into the circulation. The "bubonic form" is not necessarily that which it most frequently assumes; the "pestis" itself, indeed, is one of those maladies which may be combated by cleanliness, disinfection, energetic and radical, and, above all, by isolation of the patient, real or suspected. Professor Lustig proceeds to describe his first experiments in the direction of "vaccination." A Russian colleague sent him some cultures of noteworthy virulence. With these he began his investigations in concert with Dr. Galeotti. He reproduced the various pathological forms which he had obtained, inoculating milligrammes of the culture by different channels, either subcutaneously or into the veins or into the abdominal cavity of animals highly responsive to the morbid agent, especially sewer rats. Finally, he succeeded in immunising these rats and other animals so as to render them wholly and persistently proof against the most virulent plague-inducing bacillus. In doses of 8·35 milligrammes the vaccine proved fatal to the rat; injected, however, in smaller doses under the skin and dissolved in alkaline water the vaccine produced only a slight malaise for a day or two. "It is," says Professor Lustig, "innocuous for man. Neither I nor Dr. Galeotti, nor the others who underwent its influence, after an injection of two milligrammes of the vaccine under the skin felt any serious disturbance except a mild febricula for two days and a slight redness of the inoculated part. The most robust persons responded feebly to the vaccination, the less robust somewhat more energetically. The vaccine does not contain 'bacilli pestiferi,' living or dead, and may be preserved dry even for months." But the object of Professor Lustig's inquiries was to ascertain what action both the "vaccine" and the serum exerted on man and on the animals most akin to him. It was, therefore, necessary to repair to the regions infected by the plague. At the end of May accordingly Professor Lustig, Dr. Malenchini, Dr. Galeotti, and Dr. Levi set out for India, and of the tenour of their experiments there and the results yielded I will give some account in my next letter.

Nov. 7th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Legal Sanction of an Unqualified Practitioner.

A CELEBRATED statesman once characterised Austria as the country of impossibilities, and the description is to some extent justified by a recent occurrence. In Upper Austria there are a great many persons of the peasant class who, although they have not studied medicine, nevertheless take on themselves to attend patients, and the provincial government, consisting of adherents of the clerical party, has just addressed a petition to the Emperor praying that permission to practise (*venia practicandi*) might be granted to one of these unqualified individuals. Incredible as it may appear, the request has been complied with, the consequence being that a peasant who never studied either anatomy or any other branch of medicine is now a legally recognised medical practitioner. The President of the Upper Austrian Medical Chamber has energetically protested against this disregard of the law, and many other medical chambers will also do so, but the present political situation makes it impossible to hope that these protests can be successful, for the permission has been granted at the instance of Dr. Ebenhoch, who is one of the most influential supporters of the present Government and is president designate of Parliament.

Streptococcic Toxin and Anti-streptococcic Serum.

Dr. Schenk has published in the *Klinische Wochenschrift* an interesting account of experiments made by him with streptococcus cultures. He found that the effects produced on rabbits by identical quantities of such cultures were far from being uniform. He also made a series of experiments in which virulent injections were given twenty hours after injections of serum, the result being that of sixty rabbits so treated twenty-three survived. These experiments might be called prophylactic; in curative experiments, on the other hand, only two animals survived out of twenty-one. Dr. Schenk also investigated the relation of the streptococcus to erysipelas. As intra-peritoneal and subcutaneous injections of virulent fluids caused only trifling

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local changes he experimented on the ears of rabbits and came to the conclusion that it was not possible to produce erysipelas with Marmorek's streptococcus, although it may be produced by the streptococci obtained from a phlegmon. In the experiments on the prophylactic or protective power of anti-streptococcic serum 1 c.c. of it was injected into the ear of a rabbit, and this was followed by an injection of 1 c.c. of streptococcus fluid in from sixteen to twenty-four hours; the result was a slight erysipelas; and the same was the case with a second rabbit which was injected with 2 c.c. of serum and 1 c.c. of streptococcus fluid. In a further series of similar experiments there were three deaths in cases in which the quantities of serum injected were respectively 1 c.c., 2 c.c., and 2 c.c, the quantity of streptococcus fluid being 1 c.c., so that the serum obviously failed to prevent infection. According to Bordet there is a morphological property of streptococci which deserves attention, some that are found in the cardiac blood of rabbits having a capsule and being larger than those which have no capsule.

Treatment of Glaucoma.

The *Klinische Wochenschrift* recently contained a short report on the treatment of glaucoma by resection of the superior cervical ganglion as practised by Dr. Jonnesco. He performed this operation on a man, fifty years of age, who had been suffering from glaucoma for six years, and had lost his sight two years previously. The result was that the high intra-ocular pressure immediately became subnormal, and on the second day vision was so far recovered that the patient could count fingers at a distance of two metres (6½ ft.) and could see to walk about by himself. Dr. Jonnesco has obtained equal success in two other cases.

The Goldberger Prize.

The Vienna Medical Society has awarded the Goldberger Prize of 1000 gulden (about £82) to Dr. Ruhemann, of Berlin, for his pamphlet on the question, "Is Catching Cold a Cause of Disease?"

University Intelligence.

A monument to that renowned surgeon, the late Professor Billroth, will be unveiled on Nov. 7th; the principal speaker on this occasion will be Professor Gussenbauer, who was formerly an assistant to Professor Billroth. — Professor Gruber, the famous otologist, celebrated his seventieth birthday on Oct. 16th.

Nov. 6th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

A New Test for Typhoid Fever.

THE Health Board of New York claims that a medium has been found in which the typhoid bacillus will thrive, but in which the colon bacillus will not. Typhoid germs are to be found only in the intestines, if at all. Unfortunately the colon bacillus haunts the same region and resembles the typhoid bacillus very closely in appearance, but is absolutely harmless. If, therefore, in matter thrown off from a patient's digestive tract either species is found it is very difficult to tell of which sort it is. Dr. Hiss thinks that he has discovered a test, and the Health Board is going to adopt it officially. The test consists of a culture medium in which typhoid germs will multiply and the colon bacillus will not. The culture is composed of gelatin, agar, glucose (to make the mixture ferment), salt, and Liebig's food. Typhoid germs grow in it and the colon bacillus does not. In actual practice a minute quantity of the semi-fluid matter sent for examination is taken off on a loop and is placed in a small vial containing the culture. Eighteen hours is sufficient time for the bacilli to grow, and a statement of results will reach the medical man in thirty-six hours after he has sent a specimen to the laboratory. At the end of eighteen hours a small portion of the culture is spread on a glass plate which has a glass cover. In a short time the appearance of this plate will give the information sought in showing if there has been any growth. If there is growth it is a case of typhoid fever; if not probably no typhoid fever exists.

The Increase of Suicide.

It appears from a recent paper that the suicide record of the United States since 1890, according to recent statistics, stands as follows: 1890, 2040; 1891. 3531; 1892, 3860; 1893, 4436; 1894, 4912; 1895, 5750; and 1896, 6520. The census of 1880 furnishes us with the number of suicides in that year—2511; but the census of 1890 contains no information upon the subject, the word "suicide" having been omitted. It appears certain that in each 100 000 deaths from specified causes 253 in 1860 were due to suicide, 273 in 1870, and 331 in 1880. These figures, however, give no idea of the actual number of persons who voluntarily ended their existence during the years named; they merely tell us of the number of cases of suicide which were discovered.

Hot Weather and Crime.

Officers of the Weather Bureau have undertaken an investigation of the relation of the weather to crime. Taking the whole country during January, February, and March there were in even numbers 1200 suicides reported in the United States, while in July, August, and September there were 1600. In the same period there were 1700 murders in the cold term, as compared with 2500 in the three hot months. There were 50 persons hanged or lynched in the three cold months, and 113 hanged or lynched in the three hot months.

The Causes of the Decline in the Average Income of General Practitioners of Medicine.

Dr. Charles Phelps, President of the New York State Medical Association, states that the earnest effort made before the last legislature to obtain relief from certain abuses of medical charity was proof of the general diminution in the incomes of physicians, particularly in this city. But this was only one cause; there were others, and it should be remembered that medical practice, like other things, was largely regulated by the well-known principle of supply and demand. It was also easily demonstrable that the amount of sickness in our community had notably diminished. This increased healthfulness even the public was now willing to admit was largely due to the advances made in the bacteriological and pathological laboratories and to a better control over disease by the proper sanitary authorities. Thus, epidemic dysentery had become unknown here and variola was practically unknown. The maintenance of a reasonable standard of purity for milk and proper supervision of plumbing had done much to diminish gastro-intestinal disorders. The effect of the improved cleanliness of the streets on the public health was, in his opinion, problematical. Among other causes mentioned were the general depression, the want of proper adjustment of fees to the income of the patients, the business methods in vogue at the present time, the more complicated mechanism for the treatment of disease, and the increasing custom of sending patients to sanatoriums and hospitals.

Vacation Schools.

These schools minister to the all-round development of the children, for the large playrooms are utilised for calisthenics; the morning half-hour devoted to dancing is sure to find light hearts and feet. One summer all the children were taken, on successive days, under the care of their science teachers, to the ocean homes of the association, where the day was spent in collecting various objects incident to the seashore. Another year they were taken, under competent guidance, to the Museum of Natural History. There is no reason why this side of the work should not be immensely extended in order to make more available the resource of museum and art gallery, because we are only beginning to utilise the social and educational resources of our cities. There is no reason why the very school buildings should not be used more in the evenings, under proper restrictions, because there are many kinds of meetings and entertainments for which they would be available.

Cruel Treatment of Animals in Transportation.

The New York State Society for the Prevention of Cruelty to Animals states that during the past year at Buffalo 16,000 sheep and hogs had been taken out of the cars dead, and more than 8000 had been removed at the same place in a diseased or disabled condition; moreover, these animals were sold for public food and consumption. The coöperation of the association is asked in preventing the cruelties now imposed on these animals while in transit.

Nov. 2nd.

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AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Curative Value of Calmette's Anti-venomous Serum in the Treatment of Poisoning by Australian Snakes.

AT a recent meeting of the Medical Society of Victoria Dr. C. J. Martin read a very able and interesting paper on the above subject based on a number of very careful experiments. He showed that the venoms of all Australian snakes contain at least two proteids; one is coagulated and rendered inert by heating to 85° C., and the other is not coagulated even on boiling. It is, however, sensitive to heat, and even momentarily boiling it diminishes its toxic property and prolonged heating destroys it. The two constituents can be isolated by filtration through a film of gelatin supported in the pores of a porcelain filter. The coagulable proteid destroys the blood corpuscles and the continuity of the capillary walls, produces intra-vascular clotting if reaching the circulation with sufficient rapidity, and is a powerful poison to cardiac muscle. The non-coagulable constituent has none of these properties, but affects particularly nerve cells, those of the respiratory centre being especially susceptible. Cobra venom consists very largely (98·25 per cent.) of an uncoagulable proteid similar in action to the one in Australian snakes, consequently it would be expected that Calmette's serum from an animal immunised against cobra venom would have a diminished value against the mixed venom of Australian snakes, although Calmette affirmed that it was equally valuable as a remedy against the poison of all snakes. The result of Dr. Martin's experiments showed that the serum possesses some slight immunising power against the venom of the tiger snake when administered intravenously and one hour before the inoculation of the poison. Injected hypodermically before or coincidently with the venom the animals (rabbits) died. The effect on the different constituents separately was then tried and he found that against the uncoagulable element the serum has a decided protective influence when injected in considerable quantity directly into the circulation just before the poison is inoculated. This power is so slight that the serum is practically valueless as a remedial agent. Dr. Martin also suggests that antitoxin remedies of all kinds, as diphtheritic antitoxin, should be introduced directly into the circulation instead of under the skin, whence they may not be wholly absorbed for twenty-four hours.

The Tuberculin Test for Cattle.

Tuberculin has been used in New South Wales for about two years to detect tuberculosis in cattle, and in the opinion of the President of the Board of Health with great advantage. It is not infallible, but the percentage of errors when properly used is small. Many of the unsatisfactory results arise from disregard of details in its use. The Board of Health has issued a number of rules to be observed in using tuberculin and also a form of record. It is hoped that uniformity in method will thus be secured, and after a time it will be possible to ascertain from the records precise results as to the value of the method.

Food Standards.

The Board of Health of New South Wales has recommended the adoption of certain standards for milk, butter, tea, vinegar, and spirits, with a view of simplifying conviction in cases of adulteration. The following are the standards recommended:—

"Milk shall contain not less than 12½ per cent. of genuine milk solids, of which at least 3½ per cent. shall be butter fat; the milk solids to be obtained by drying any convenient quantity of the sample on a water bath for three hours until constant in weight. Then upon subtraction of 3½ per cent. of fat the remainder shall be taken as the coefficient of 'solids not fat,' and shall be at least 9 per cent.

"Butter shall contain not less than 83 per cent. of genuine butter fat.

"Tea shall not contain more than 8 per cent. of mineral matter calculated on the tea dried at 100° Centigrade, of which at least 3 per cent shall be soluble in water, and the tea as sold shall yield at least 28 per cent. of extract.

"Vinegar shall contain not less than 3 per cent. of acetic acid ($C_2H_4O_2$) and not more than one-thousandth part by weight of sulphuric acid.

"Spirituous liquors, brandy, whisky, and rum shall not be more than 25 per cent. underproof. Gin shall not be more than 35 per cent. underproof."

New Offices for the Board of Health of New South Wales.

On Sept. 20th the Board of Health of New South Wales moved into their new premises recently erected at the corner of Macquarie-street and Albert-street, Sydney. The building is very complete. On the basement is an open way by which ambulance waggons can be brought into a courtyard, into which open isolation rooms for infectious cases and the rooms where patients are seen prior to admission and removal to the Coast Hospital for such cases. On the ground floor are the offices of the Board. The first floor is devoted to the Government analyst, who is provided with a large laboratory. The veterinary staff is also located on this floor. The Government bacteriologist has a very complete laboratory on the second floor, with rooms above for experiments on animals. The building was erected under the direction of the Government architect, assisted by the Board of Health, and has cost about £10,000.

River Pollution in Melbourne.

A deputation waited on the Board of Public Health of Kalma on Sept. 22nd to ask the Board to take some steps to remedy the pollution of the Saltwater River. A number of noxious trades were carried on along its banks and much blood and offal found their way into the river. The chairman replied that little could be done until the underground sewerage was completed, and a Bill was being drafted to deal with slaughter-houses.

Peculiar Action against a Medical Man.

On Sept. 8th a medical man, of Sydney, was sued for £500 compensation by a publican for having, as was alleged, used his hotel for immoral purposes. The statement of the plaintiff was that the gentleman brought a woman to his hotel and engaged a room there. For the defence the doctor denied having engaged the room, and said that the woman was a patient and only seen professionally. The plaintiff admitted that he was an uncertificated insolvent, and that his licence at a previous hotel had been opposed by the police. The jury found for the plaintiff and awarded 20*s.* damages.

Action against a Medical Man for Reporting a Case as Typhoid Fever.

At the Sydney District Court, on Sept. 9th, a dairyman sued Dr. Gwynne-Hughes for £200 damages for alleged unskilful, improper, and negligent treatment. The plaintiff stated that Dr. Gwynne-Hughes was called in to see his daughter, and that he diagnosed the case as typhoid fever and caused her removal to the Coast Fever Hospital, reporting the case as such. The Board of Health thereupon cancelled his registration as a dairyman and his dairy was closed, causing him considerable loss. The medical officer at the Coast Fever Hospital diagnosed the case as one of congenital heart disease, and on the patient's death two days afterwards signed a certificate that she died from heart disease. In his evidence the medical officer said that he would not swear that the child might not have had typhoid fever in an early stage. No post-mortem examination was made. A verdict with costs was awarded in favour of Dr. Gwynne-Hughes.

Sympathy with Dr. E. J. Gurdon.

A well-attended meeting of the medical profession was held in Melbourne on Sept. 23rd to express sympathy with Dr. E. J. Gurdon, who was recently subjected to a vexatious and expensive action at law (as mentioned in THE LANCET of Oct. 30th). Unanimous resolutions were passed sympathising with Dr. Gurdon. A subscription list was opened and all medical practitioners in Australia were asked to contribute towards defraying Dr. Gurdon's expenses.

Sept. 25th.

Obituary.

THOMAS GOLDESBROUGH STOCKWELL, F.R.C.S. ENG.

BY the death of Mr. Stockwell on Nov. 2nd an honoured name is removed from the roll of the medical profession of Bath, in which city he was born in 1823, his father being a medical man who had settled there the previous year. Mr. Stockwell was entered as a student of medicine at the Royal United Hospital, Bath, in 1842, and there received his first lessons in surgery from such capable surgeons as Norman and Brown. Thence he proceeded to St. George's Hospital, London, and became a Member of the Royal College of

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Surgeons of England and Licentiate of the Society of Apothecaries in 1845. After qualifying he returned to Bath, joining his father, and eventually succeeding him in practice. In 1855 he passed the examination for the diploma of F.R.C.S. Eng. Mr. Stockwell was appointed medical officer to the Eastern Dispensary and in 1860 surgeon to the Royal Mineral Water Hospital. Five years later he became surgeon to the Royal United Hospital. This appointment he held until his death, and for many years he had a large practice in Bath and the country round. His sound common sense and his ready resource eminently fitted him for surgery in the days when instruments and apparatus were not so perfect as they are now. Dexterity without showiness characterised his operations, and his results were good. The storm and strife of public affairs had no attractions for him, but in the family circle he was genial and hospitable, and his kindly presence will long be missed by rich and poor alike in his native city.

CHARLES WETHERED, M.R.C.S. ENG., L.S.A.

THE news of the death of Mr. Charles Wethered will be received with regret by many of the inhabitants of Stroud, where he was in practice for many years. He was born in the year 1827, and received his medical education at University College, and qualified in 1848. He passed most of his life at Stroud, where he was surgeon to the General Hospital, and when he retired from practice he carried with him the general respect and esteem of his many friends and patients. The last few years of his life he spent on his estate near Moreton Hampstead in South Devon. His great relaxation was the study of architecture and archæology. He was an intimate friend of Viollet le Duc, and his book, "The Works of Viollet le Duc in Connexion with the Historical Monuments of France," attracted much attention. He was made an Honorary Associate of the Royal Institute of British Architects, and published some contributions in the Transactions of that society.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Gadaud, formerly in the French Cabinet.—Dr. Paul Güterbock, *privat-docent* of Surgery in Berlin with the rank of Professor, at the age of fifty-four years. His chief work was connected with the surgery of the urinary organs. He was also much interested in the History of Medical cience.—Dr. Aurelio Silvestri, Lecturer on Ophthalmology in the Florence School of Medicine.—Dr. Arthur Scheffer, formerly Professor of Chemistry and Medical Physics in the University of Kieff.—Dr. St. Danillo, *privat-docent* of Psychiatry in St. Petersburg.—Dr. Shukoff, a St. Petersburg neurologist.—Dr. Alphonse Albert, a much-respected Liége practitioner, at the age of ninety years.

BEDFORD MEDICAL SOCIETY.—The quarterly meeting of this society was held at the Bedford General Infirmary on Oct. 28th, Dr. G. P. Goldsmith being in the chair.—Dr. Goldsmith showed a Uterine Myoma which he had removed.—Mr. Nash showed (1) a boy with Macrodactylism affecting the Second and Third Toes and also a Skiagraph of the same; (2) an infant with Arrested Development of the Right Eye and Congenital Fissure of the Right Nostril; and (3) a boy on whom he had performed Tarsectomy for Severe Talipes Varus.—Dr. Hartley opened a discussion on the Use of Antipyretics in Reducing Fevers, which was carried on by Dr. Goldsmith, Mr. Philips, Mr. Sharpin, Dr. Waugh, Mr. Cock, Dr. Ross, and Mr. Nash.—Dr. Ross read notes of a case of Laminectomy for Cervical Paraplegia. The patient fell on to his head and immediately lost power in his arms and legs. He was admitted into the Bedford General Infirmary, and as he showed no improvement at the end of a month Mr. Nash operated and found no fracture, dislocation, or hæmorrhage outside the cord. Some slight improvement occurred both in sensation and motion. Six weeks after the operation the patient died worn out by bed-sores and urinary complications. As no necropsy could be obtained the cause of the paralysis could not be ascertained.—Mr. Nash read a paper on Three Cases of Fracture of the Coronoid Process of the Ulna, which will be found in another column of this issue.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND AND ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following have passed the Conjoint Examination for the diploma in State Medicine:—

W. A. Chapple, M.B., Ch.B, Univ. New Zealand.
H. L. Clare, M.B., B.Ch., Univ. Dub.
A. Greenwood, M.B., Ch.B., Vict. Univ.
Surgeon-Major Mulvany, L.R.C.P. & S. Edin.

A MEDICAL DEPUTY-LIEUTENANT IN IRELAND.—The Earl of Dunraven, K.P., Her Majesty's Lieutenant and Custos Rotulorum for the County of the City of Limerick, has, by commission bearing date Oct. 11th, appointed Mr. James O'Shaughnessy, M.R.C.S. Eng., L.A.H. Dub., J.P., of 7, Glentworth-street, in the City of Limerick, to be a Deputy-Lieutenant for the County of the City of Limerick.

SOCIETY OF ARTS.—The Society of Arts will commence its session (the 144th from its foundation in 1754) on the 17th inst. with an address on the Colonies, their Arts, Manufactures, and Commerce, by Major-General Sir Owen Tudor Burne, G.C.I.E., K.C.S.I., the chairman of the society's council. There will be four meetings on successive Wednesdays before Christmas, at which papers will be read by Professor James Douglas, Dr. Leonard Waldo, D.Sc., Mr. Bennett H. Brough, and Dr. Samuel Rideal, the last of whom will discuss a subject of much interest to medical men—namel, the Purification of Sewage by Bacteria.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—At the monthly meeting of the Fellows of the Royal College of Physicians of Ireland held on Friday, the 5th inst., the following resolutions were unanimously adopted:—1 "The College have heard with great regret of the death of Lieutenant George Duffey, and beg to express their deepest sympathy with Sir George and Lady Duffey and the other members of the family in their sad bereavement." 2 "That the President and Fellows desire to place upon record their regretful sense of the loss which has befallen the Royal College of Physicians of Ireland in the death of their distinguished colleague, the Rev. Dr. Samuel Haughton, Senior Fellow of Trinity College, Dublin; and they take this early opportunity of conveying an expression of their sympathy to the members of Dr. Haughton's family."

UNIVERSITY OF CAMBRIDGE.—Dr. A. A. Kanthack, M.A., of St. John's College, F.R.C.P. Lond., F.R.C.S. Eng., has been elected to the chair of Pathology, vacant by the death of Professor C. S. Roy.—The University Lectureship in Midwifery is vacant by the resignation of Mr. E. H. Douty, M.B. Camb. The appointment is for five years from Christmas, 1897, and the stipend is £50 a year. Candidates must send in applications and testimonials to the Vice-Chancellor by Nov. 15th.—Mr. H. K. Anderson, M.B. Camb., Demonstrator in Physiology, has been elected to a Fellowship at Caius College; and Mr. W. McDougall, M.B., house physician to St. Thomas's Hospital, to a Fellowship at St. John's College. Both gentlemen gained high distinction in the Natural Sciences Tripos.—For the examination in State Medicine in April and October of the present year seventy candidates presented themselves, and thirty-four were successful in satisfying the examiners and obtaining the University diploma in Public Health.—The degree of M.A., *honoris causâ*, was on Nov. 11th conferred on Mr. C. R. Marshall, M.B. Camb., Ch.M. Victoria, Assistant to the Downing Professor of Medicine.—Dr. A. Macalister, Mr. E. G. Browne, M.B. Camb., and Mr. F. V. Dickins, M.B. Lond., have been appointed Electors to the new Professorship of Chinese.—The Examiners in Medicine and Surgery at Cambridge University have issued a corrected plan for the Michaelmas Term Examinations. The examination in Human Anatomy and Physiology (Second Examination, Part II.) will commence on Wednesday, Dec. 15th, on which day and on Thursday, Dec. 16th, there will be written examinations, both in the morning and the afternoon. On the mornings of Friday, Dec. 17th, Saturday, Dec. 18th, Monday, Dec. 20th, and Tuesday, Dec. 21st, there will be Practical and Oral Examinations in Anatomy and Physiology in the Anatomical School and the Physiological Laboratory.

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UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—The Cardiff Football Club has given £90 for the purpose of establishing a scholarship to be held for three years.

SIR JOHN WILLIAMS, Bart., M.D. Lond., has been elected a member of the Council of the University College of Wales.

DORSETSHIRE COUNTY ASYLUM.—At the quarterly meeting of the Dorset County Council, held on Nov. 2nd, Lord Digby stated that during the past six months the County Asylum had made a profit on private and out-county patients of £1500, which amount had been handed over to the county treasurer.

PTOMAINE POISONING.—An inquest was held last week at Swansea upon the body of a little child who died after partaking of some roast goose, and a verdict of "Death from ptomaine poisoning the result of misadventure" was returned.

BRIDGWATER INFIRMARY.—The eighty-fourth annual general meeting of this institution was held on Nov. 4th, under the presidency of Mr. W. Holland. The annual report and the financial statement were of a satisfactory character. Mr. W. Bruce was elected President for the ensuing year.

ROYAL UNITED HOSPITAL, BATH.—The fourth annual amateur week on behalf of the Royal United Hospital was held last week at the Theatre Royal, Bath, under the direction of Dr. Lionel Weatherly, when highly successful performances were given of *The Mikado*, *A Soldier's Silence*, and *The Passport*.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The second meeting of the forty-second session was held on Nov. 5th at the Royal Kent Dispensary, Greenwich-road, Mr. W. Arbuthnot Lane, the President, being in the chair. There were sixteen members and two visitors present. Mr. C. J. Parke showed a girl, aged thirteen years, the subject of Hæmorrhagic Diathesis.—Dr. F. S. Toogood showed the following cases from the wards of the Lewisham Infirmary: (*a*) a case of Exophthalmic Goitre which had been benefited by thyroid tabloids; (*b*) a case of Spondylitis Deformans in a man; (*c*) a case of Dropped Wrist from Lead Poisoning in which there had been absolutely no recovery; and (*d*) a case of Thrombosis of the Lateral Sinus which had been operated upon with success.—Mr. C. H. Hartt exhibited a case of Molluscum Contagiosum in a woman and a case of Bronzing of the Skin resembling Addison's Disease.—Mr. Mayo Collier read notes of a fatal case of Severe Punctured Wound of the Vertebral Artery.—Dr. Ernest Clarke showed an Eye Specimen embedded in Canada Balsam.—Dr. Scholefield exhibited Diagrams of a case of Symmetrical Scotoma.—Dr. Herschell demonstrated a new arrangement of Apparatus for Washing out the Stomach.—The President, Dr. Morgan Dockrell, Dr. Scholefield, Mr. Collier, Dr. P. C. Scott, Dr. Toogood, Mr. Hartt, and Mr. Parke joined in the discussions on the various cases.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALCOCK, N. H., B.A., M.D. Dubl., has been appointed Assistant to the Professor of Physiology, Trinity College, Dublin.

ANDERSON, H. K., M.A., M.B., B.C. Camb., has been appointed to a Drosier Fellowship at Caius College, Cambridge.

ARNOLD, W., M.R.C.S., has been appointed Medical Officer for the Waltham Sanitary District of the Melton Mowbray Union.

BARCLAY-SMITH, E., M.D., has been appointed Examiner in Human Anatomy to the University of Cambridge.

BARKER, C., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer for the Haxey Sanitary District of the Gainsborough Union.

BROWN, WM., M.B., C.M. Glasg., has been appointed Medical Officer for the Saltcoats part of the parish of Stevenston.

BURNETT, E. J., M.B., C.M. Edin., has been appointed Medical Officer and Public Vaccinator for the district of Marske, Saltburn, and Upleatham of the Guisborough Union, vice H. G. C. Collett.

CARWARDINE, T., M.B., B.S. F.R.C.S., L.R.C.P. Lond., has been appointed an Assistant Surgeon to th Bristol Infirmary.

CHAMBERLAIN, W. W., M.B., C.M. Edin., has been appointed Medical Officer of Health by the Rawden Urban District Council.

DAWSON, R., M.B. Lond., M.R.C.S., has been appointed Honorary Consulting Physician to the Brighton, Hove, and Preston Dispensary.

DINGWALL, A., M.B., M.S., has been appointed Medical Officer of Health by the Presteigne Urban District Council.

DOBBIN, E. J., L.R.C.P., Lond, M.R.C.S., has been appointed an Assistant Medical Officer for the Infirmary and the St. John's-road Workhouse of the Parish of St. Mary, Islington, vice W. B. Stanford.

FULTON, W., M.B., C.M. Glasg., has been re-appointed Parochial Medical Officer for Stevenston.

GERVIS, HARCOURT, M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Paddington Green Children's Hospital, London.

GUY, J., M.B., M.S. Glasg., has been appointed an Assistant Medical Officer for the Workhouse of the Bradford Union.

HAMPTON, T., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer to the Royal Hospital for Diseases of the Chest, City-road, London.

HARPER, H. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 5 Sanitary District of the Stow Union.

KERR, JAMES, M.A., M.D. Cantab., D.P.H., has been appointed Honorary Surgeon to the Bradford Eye and Ear Hospital, vice J. H. Bell appointed Consulting Surgeon.

MAXWELL, J. B., B.A. Cantab., M.R.C.S., L.R.C.P., has been appointed House Physician to the Royal Hospital for Diseases of the Chest.

MOORHOUSE, J. E., M.D., C.M. Edin., has been appointed a Medical Officer for the Combination Poorhouse, Stirling.

PEVERLEY, WALTER A., M.B., B.S. Durh., has been appointed Junior House Surgeon to the Ingham Infirmary and South Shields and Westoe Dispensary.

PIM, F. E. DE B., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer of Health by the Barrowford Urban District Council.

PROSSER, T. G., M.R.C.S., has been appointed Certifying Surgeon for Factories in the district of Monmouth, vice M. Poignand.

RAWLINGS, J. A., M.R.C.P. Edin., M.R.C.S., has been appointed a Consulting Physician to the Swansea Hospital.

RENTON, J. C., M.D. Edin., L.R.C.P., L.R.C.S. Edin., F.F.P.S. Glasg., has been appointed Surgeon to the Western Infirmary, Glasgow.

RICHARDSON, F. W., has been appointed Public Analyst for the Borough of Dewsbury, vice F. M. Rimmington.

SATCHELL, H. PERCY, M.B., B.S. Durh., has been appointed Surgical Casualty Officer to the General Hospital, Birmingham.

SAVAGE, W. G., L.R.C.P. Lond., M.R.C.S., has been appointed a Resident Medical Officer to the Sussex County Hospital, Brighton.

STOCKMAN, R., M.D. Edin., F.R.C.P. Edin., F.R.S.E., has been appointed a Physician to the Western Infirmary, Glasgow.

TRIPP, C. L. H., M.R.C.S., has been appointed a Medical Officer for the Dawlish District of the Newton Abbot Union.

WADE, R., M.R.C.S., has been appointed Medical Officer of Health by the Highbridge Urban District Council.

WATSON, D. C., M.B., C.M. Edin., has been appointed a non-resident Clinical Clerk to the Observation Ward, Royal Infirmary, Edinburgh.

WHITE, ARTHUR HAMILTON, L.R.C.P. and S. Irel., has been appointed Professor of Pathology at the Royal College of Surgeons in Ireland.

WILSON, G. R., M.B., C.M. Edin., has been appointed Medical Officer for the No. 1 Sanitary District of the Blackburn Union, vice T. W. Gregson.

WOODHOUSE, CECIL, B.A., M.B., B.C., has been appointed House Physician to the Paddington Green Children's Hospital, London.

WOODWARD, A., L.R.C.P. Lond, M.R.C.S., has been appointed a House Surgeon to the Metropolitan Hospital.

WILLIAMS, G. E., L.S.A., has been appointed a District Medical Officer for the Carnarvon Union.

WITHAM, H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Kirton Sanitary District of the Boston Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BLACKFRIARS PROVIDENT DISPENSARY, London.—Lady Medical Officer. Salary equal to £120. Apply to the Secretary, Miss Fowler, 45, Nelson-square, S.E.

BRADFORD ROYAL INFIRMARY.—Junior House Surgeon, unmarried. Salary £50 per annum, with board and residence.

BRISTOL GENERAL HOSPITAL.—House Surgeon for three years. Salary £120 per annum. Board, residence, &c., provided in the house.

CARMARTHENSHIRE INFIRMARY.—Resident Medical Officer, unmarried. Salary £100 per annum, with furnished apartments, board, attendance, fire, gas, and washing. Applications to the Secretary, 3, Morley-street, Carmarthen.

CATERHAM ASYLUM, Caterham, Surrey.—Assistant Medical Officer. Salary £120, rising, at the discretion of the Committee, to £150, with board, lodging, attendance, and washing, subject to statutory deduction. Applications to the Chief Office of the Board, Norfolk-street, Strand, London.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's Inn-road, Clinical Assistants, for six months at least. Fee 3 guineas.

CORPORATION OF CALCUTTA, Bengal, India.—Health Officer to the town of Calcutta for five years. Salary of not less than 1200 rupees and not more than 1500 rupees a month, with reasonable horse-allowance for out-door inspection, not exceeding 100 rupees a month. Applications to Mr. W. R. Macdonald, Secretary to the Corporation.

DURHAM COUNTY ASYLUM.—Third Assistant Medical Officer. Salary to commence at £100 per annum, with board, lodging, &c. Applications to Dr. Smith, Superintendent, Winterton, Ferryhill.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—House Surgeon to Out-patients (non-resident) for six months. Salary 25 guineas.

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HOSPITAL FOR WOMEN, Soho-square, London. — House Physician for six months. Salary £30 for that period.

HUDDERSFIELD INFIRMARY.—Junior Assistant House Surgeon. Salary £40 per annum, with board, lodging, and washing.

LONDON SCHOOL OF MEDICINE FOR WOMEN, 30, Handel-street, Brunswick-square, W.C.—Lectureship of Physiology. Salary £200 a year.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, Soho-square, London.—Resident Medical Officer. An honorarium at the rate of £40 per annum, with board, residence, and laundry.

NEW HOSPITAL FOR WOMEN, 144, Euston-road, London.—Two fully qualified Medical Women as House Surgeons.

NORTH EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch.—House Physician for six months. Salary at the rate of £60 per annum. Applications to the Secretary, City Office, 27, Clement's-lane, Lombard-street, E.C.

OWENS COLLEGE, Manchester.—Junior Demonstrator in Anatomy. Salary £100, rising by yearly increments to £150.

PARISH OF ST. PANCRAS, London.—Second Assistant Medical Superintendent for the Infirmary, Dartmouth-park-hill, N., for one year. Salary at the rate of £75 per annum, and residential allowances. Applications to the Clerk to the Guardians, Vestry Hall, Pancras-road, N.W.

POPLAR UNION.—Assistant Medical Officer for the workhouse. Salary £100, with furnished apartments and rations in the workhouse, High-street, Poplar. Applications to the Clerk, Guardians' Offices, Upper North-street, Poplar, E.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant House Surgeon for six months. Board and lodging provided, and an honorarium of £10 given conditionally.

ROYAL VICTORIA HOSPITAL, Bournemouth.—House Surgeon. Salary £80 per annum, with board.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, Strand.—Clinical Assistants for six months.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King-street, Regent-street, London —Dentist.

TAUNTON AND SOMERSET HOSPITAL, Taunton.—Honorary Physician.

TUNBRIDGE WELLS EYE AND EAR HOSPITAL.—Lady House Surgeon for twelve months. Salary £60, with board, lodging, and washing.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea, S.W.—Assistant Physician to the Out-patients, for three years. Also Physician to the In-patients.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon for six months. Board, lodging, and washing in the hospital provided.

WESTERN GENERAL DISPENSARY, Marylebone-road, London.—Honorary Physician.

Births, Marriages, and Deaths.

BIRTHS.

BAKER.—On Nov. 6th, at Bedford-square, W.C., the wife of J. H. Baker, M.D., of a son.

BEEVOR.—On Nov. 8th, at Harley-street, W., the wife of Charles E. Beevor, M.D., F.R.C.P., of a daughter.

MACLENNAN.—On Nov. 6th, at Lerwick, Shetland, the wife of A. A. Maclennan, M.B. Aberd., of a daughter.

PARRY.—On Nov. 6th, at Youlgreave, Derbyshire, the wife of T. Wilson Parry, M.A., M.B. Cantab., of a daughter.

MARRIAGES.

ARTHUR—ROSS.—On Nov. 2nd, at Abbotsville, Cults, Aberdeen, Alexander T. Arthur, M.B. Aberd., to Margaret King, daughter of Rev. Adam Ross, M.A., Senior Minister of the Free Church, Rattray, Blairgowrie.

DOWNES—AKERS.—On Nov. 4th, at St. Peter's Church, East Blatchington, Seaford, by the Rev. A. J. Richardson, M.A., Godkin Downes, M.R.C.S., L.R.C.P., L.S.A., of Keston, 47, Beckenham-road, Beckenham, Kent, to Mary Ethelreda, widow of the late Charles Akers, Esq., 1, Clapton-common, N.E., and 11, Abchurch-lane, E.C., and youngest daughter of Henry Brown, Esq., and the late Mrs. Brown of Pendilo, 73, Cazenove-road, Stamford-hill, N. No cards.

O'BRIEN—SHAW.—On Sept. 28th, at St. David's Cathedral, Hobart, Tasmania, Philip Kennedy O'Brien, L.R.C.P. Lond., M.R.C.S. Eng., son of the late W. Creagh O'Brien, M.D., &c., of Maidstone, to Margaret Beryl Fenton, elder daughter of the late James Fenton Shaw, of Swansea, Tasmania.

RAW—STRONG.—On Nov. 6th, at the Pro-Cathedral, Liverpool, by the Rev. George Raw, M.A., brother of the bridegroom, Nathan Raw, M.D., B.S., F.R.C.S., of Liverpool, to Annie Louisa, fourth daughter of the late Charles East Strong, Solicitor, of Union-court, Old Broad-street, and Lordship-park, London.

DEATHS.

CARTER.—On Nov. 4th, at 45, Great Cumberland-place, W., suddenly, Hannah, the wife of Charles H. Carter, M.D.

HAZELL.—On Oct. 9th, at 1, Bouquet street, Cape Town, South Africa, Robert William Hazell, M.R.C.S., L.R.C.P., L.S.A., aged 49 years.

SCOTT.—On Nov. 8th, at Cramond House, Sandwich, John Scott, M.D., aged 63 years. Friends will kindly accept this intimation.

WETHERED.—On Nov. 4th, at Gratnar, near Moreton-Hampstead, Devon, Charles Wethered, M.R.C.S., Hon. Assoc. Royal Inst. Brit. Architects, late of West Grange, Stroud, Gloucestershire, aged 70 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (17th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (18th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (20th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (16th).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Papers:—Dr. H. Rolleston: Spontaneous Fracture of Gall-stones.—Dr. J. Calvert: Spontaneous Fracture of Gall-stones.—Dr. L. Freyberger: (1) Intrapericardial Rupture of Aortic Aneurysm; (2) An Anomalous Heart.—Mr. C. G. Seligmann: Two Malformations in Fish. Card Specimens:—Mr. H. F. Waterhouse: Intussusception of the Vermiform Appendix.—Mr. P. Furnivall: Symmetrical Rodent Ulcer.—Dr. H. Rolleston: Rodent Ulcer from the Abdomen.—Mr. W. G. Spencer: A Squamous-celled Carcinoma of the Upper Jaw from a man aged twenty years.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN (17, Bloomsbury-square, W.C.).—8 P.M. Papers:—Mr. J. Reynolds Green: Pharmacy at some of the American Universities.—Mr. E. White and Mr. J. O. Braithwaite: Suppositories.

WEDNESDAY (17th).—ROYAL METEOROLOGICAL SOCIETY (Institution of Civil Engineers, Gt. George-street, Westminster, S.W.).—7.30 P.M. Paper:—Mr. R. H. Curtis: Results of a Comparision between the Sunshine Records obtained simultaneously from a Campbell-Stokes burning Recorder and from a Jordan Photographic Recorder.

ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Meeting.

NORTH-WEST LONDON CLINICAL SOCIETY (North-West London Hospital).—8.30 P.M. Demonstration of Clinical Cases.

THURSDAY (18th).—HARVEIAN SOCIETY.—Mr. Doran: Ventral Hernia after Operation.—Mr. Roughton: Empyema of the Antrum of Highmore.

FRIDAY (19th).—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Meeting.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

MONDAY (15th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. Woakes: Nasal Neurosis.

TUESDAY (16th).—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: General Paralysis.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Neoplasms.

HOSPITAL FOR NERVOUS DISEASES (73, Welbeck-street).—4.30 P.M. Dr. T. D. Savill: Cases of Paraplegia.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Sir F. Semon: On the Diagnostic Significance of Laryngeal Abductor Paralysis.

WEDNESDAY (17th).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: Air.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Biss: Hæmoptysis, its Causes and Treatment.

EVELINA HOSPITAL (Southwark-bridge-road, S.E.).—4.30 P.M. Mr. F. S. Eve: Hernia in Infants and Young Children and its Treatment. (Post-Graduate Course.)

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. C. B. Keetley; Fractures into Joints.

THURSDAY (18th).—LONDON POST-GRADUATE COURSE.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. Patrick Manson: Recent Advances in our Knowledge of Malaria.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Barlow.

FRIDAY (19th).—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Typhoid Fever and Diphtheria.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 11th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Nov. 5	30·29	N.E.	...	49	48	42	41	43	Overcast
,, 6	30·31	N.E.	...	59	51	43	46	47	Overcast
,, 7	30·33	N.E.	0·05	56	51	44	44	45	Cloudy
,, 8	30·12	S.E.	0·14	57	56	45	50	51	Raining
,, 9	30·27	S.E.	0·01	57	57	50	54	55	Foggy
,, 10	30·24	E.	...	67	52	48	47	49	Cloudy
,, 11	30·20	W.	...	41	40	37	37	38	Foggy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

WANTED A REMEDY IN SEVERE LUMBAGO.

L.R.C.P. writes that he will be grateful to his brother practitioners for advice with a view to relief from severe lumbago of four months' standing. His age is thirty-nine years, and he has tried colchicum, potassium, salicylates, guaiacum, sodium, and sulphur and hot-water bags and mustard leaves. He has tried all kind of aperients. He wears flannel and eats little meat. He cannot take iodide of potassium though he is gouty.

M. K. Q. C. P. I.—It would be wiser to make a change.

AN ORIGINAL REMEDY FOR HEADACHE IN TYPHOID FEVER.

To the Editors of THE LANCET.

SIRS,—On the evening of Oct. 19th I was called to visit a Roumanian boy, six years old, suffering from typhoid fever. I found him *in extremis*, almost pulseless. The child's head was completely wrapped over with a large white sheet, and as I looked at it this enormous white envelope seemed to be on the move. Whilst I was surveying this covering there crept from under it a small frog which quietly sat over the child's left eye. It seemed quite content. I immediately called the mother's attention to it, and requested her to take the beast away, thinking that it had crept there as an intruder. "Oh, no!" said the old lady, "a doctor recommended that a lot of them should be kept to the head to keep it cool." Seeing the head covering still on the move I raised it for curiosity, and in a second out jumped about twenty other frogs, and away they hopped in all directions. I have often heard the expression "as cold as a frog," but this was the first time I had seen a frog applied as a head-cooler.

I am, Sirs, yours faithfully,

A. IRWIN BOLTON, M.B. Dub.

Constanta, Roumania, Oct. 26th, 1897.

"THE CHRISTIAN."

THIS stupid book has received very severe handling in the press, but to our mind no paper has treated it more fitly than our bright little contemporary, the *Guyoscope*. The reviewer in the *Guyoscope* made no parade of wide literary reading; he did not discuss with the author the ethics of the sensational novel or the trend of modern religious thought; he simply "rotted" Mr. Hall Caine for having written absurdly, mendaciously, and (which is worse) unfairly about hospitals, house-surgeons, and nurses. The *Guyoscope* returns to the attack in the current issue, and in view of the persistent manner in which "The Christian" has been puffed we see nothing malevolent in a little persistence on the other side. In a short article called "Hospital Hoppings," the scene of the famous ball at St. Bartimœus is happily ridiculed. At this ball, it will be remembered, the President of the College of Surgeons, a fashionable lordling, the students and the nurses abandoned themselves to the dance together. The students pulled down the nurses' hair, and a gentleman in a Government Office accompanied the heroine (a probationer) back to her hospital in the early dawn. To this restrained and accurate picture of hospital life the *Guyoscope* adds a touch or two of local colour deserving of quotation:—

"HOSPITAL HOPPINGS."

"Last Tuesday the first students' ball of the season took place in the operating theatre of St. Bartimœus' Hospital. ..... The arrangements generally reflected great credit on the members of the dance committee, who, by the way, were distinguished by wearing Murphy's buttonholes in their coats. ..... The floor had been carefully scrubbed with soft soap and lysol, and would have made an admirable dancing surface had there been room to dance. As it was the majority of the guests preferred to take advantage of the magnificent promenade afforded by the spacious corridors of the hospital. ..... The proceedings opened with a solo clog-dance on the operating table by Sir William McCormac, who was attired in mackintosh and sterilised overall. Next, in response to vociferous appeals, the matron of the hospital obliged with a serpentine dance, all first year's students having been previously anæsthetised. After these two superb displays of Terpsichorean skill, a general move was made for the supper room, a delightfully airy apartment, used on more prosaic occasions as a dissecting-room. Boyish students might be seen pledging their laughing-eyed partners in foaming beakers of hyd. perchlor. (1 in 2000, 1897), while their staider elders fortified themselves with modest injections of brandy and strychnine. We can personally testify to the exhilarating qualities of the Formalin Cup, which was much appreciated by those privileged to partake. If a criticism can be permitted us, we venture to think that the conduct of the surgical instrument keeper in boiling the spoons between every course was somewhat unnecessary and certainly inconvenient."

We think this excellent fooling, and ridicule is what pretentious rubbish like "The Christian" wants.

E. M. G. is thanked for the communication. We doubt if public exposure does much good, but we are always glad to learn of these people that we may be prepared to advise our correspondents concerning them.

IMMOBILITY IN FRACTURE OF THE LOWER THIRD OF THE FEMUR.

To the Editors of THE LANCET.

SIRS,—Some years ago when resident pupil at a general infirmary I, in the absence of the house surgeon, admitted a man who had sustained a compound fracture of the left tibia and a simple fracture of the right femur in its lower third. The lower fragment was displaced upward and backward, requiring some force to reduce the deformity. When the visiting surgeon and the house surgeon came I described the injuries. They both declared that there was no fracture of the femur and desired me to examine it again. I then failed to get any mobility or crepitus. I was of course gravely reprimanded for having committed such an error. In a few days the man died, and to justify myself I took the senior surgeon to the mortuary and in his presence exposed the bone. There was the fracture just above the condyles. The old gentleman observed: "Ah! just so, sir, very satisfactory, but at any rate you had no business to contradict me." The other night I was called to the station to see a man who had been severely tumbled about amongst some goods trucks. I examined him carefully, as well as one could in a dark shed by the light of railway lamps, looking out for a fractured femur, but could not get evidence of it. He was sent to the neighbouring hospital and after being placed in bed and relaxation of his muscles had taken place a fracture of the lower third of the femur was easily made out. In the first case, had the patient not died he would have kept his bed for six weeks or so, thus allowing time for the consolidation of the fractured femur while the opposite tibia was receiving attention, and I should have remained under the stigma of a gross error in diagnosis.—I am, Sirs, yours faithfully,

J. G. CARRUTHERS, M.R.C.P. Edin., &c.,

Selhurst-road, S.E., Nov. 9th, 1897. Divisional Surgeon.

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A NEW FLOWER-POT COVER AND LIFTER.

Mr. H. ADEANE, of 51, Edbrooke-road, St. Peter's-park, W., has introduced a new ornamental flower-pot cover, lifter, drainer, and vase guard which will be a convenience to those who keep flowers indoors for decorative purposes. The usual practice is to place the coarse earthenware flower-pot inside an ornamental vase an inch deeper than the pot, so that the latter is concealed, a system which renders cleaning difficult, because there is seldom room for the fingers to pass between the pot and the vase. The consequence is that decaying vegetable matter accumulates inside the vase, and is apt to become offensive and unwholesome through being kept damp by the water used for the plant. Mr. Adeane's invention is intended to remedy this defect by enabling the flower-pots to be easily kept clean.

A Country Cousin.—The Jubilee medals are awarded for no "special service." They are a Royal recognition of general service, personal or public, rendered to the Crown. The Victoria Cross is awarded to persons displaying conspicuous bravery ("For Valour") on the field of battle. It is obvious that these are seldom civilians, but one of the awards announced in this weeks' *Gazette* conferred a decoration on Lord Fincastle, a soldier whose presence, however, on the scenes of war was due to other than military reasons.

"A POINT IN THE WORKING OF THE 'INFECTIOUS DISEASES NOTIFICATION ACT.'"

To the Editors of THE LANCET.

SIRS,—Fearing my letter of Oct. 4th (which you so kindly answered in THE LANCET of Oct. 23rd) was not very clearly expressed, I am again troubling you to answer "Yes" or "No" to the following question:—Has the port medical officer any jurisdiction over a ship upon which after it has been declared by the sanitary inspector "all well" on board and the captain and crew have been ashore infectious disease breaks out, we will say for argument, twenty-four hours after? The nearest general practitioner is called in and removes the patient to the hospital. Does the general pratitioner act rightly, or should he send a report to the medical officer of the port or the medical officer of health?

I am, Sirs, yours faithfully,

Fowey, Cornwall, Oct. 29th, 1897. W. H. BOGER.

*** Our correspondent speaks of a question, but there appear to be two questions. 1. The port medical officer has jurisdiction over every vessel within his district, and over any case of infectious disease occurring on any such vessel at any time. (See Duties of Port Medical Officers under Order of the Local Government Board, July, 1883). 2. If notification has been adopted both by the port sanitary authority and by the district council adjacent to the port the occurrence of a case of infectious disease on a ship must be notified to the port medical officer of health, so that he may disinfect the ship, &c., and when the case is removed ashore a notification must be sent to the authority on shore.—ED. L.

POND'S ARCH SUPPORT FOR FLAT-FOOT.

THE natural arch of the foot is supported in part by the ligaments of the sole and in part by muscles and tendons. When these structures are no longer able to hold up the arch flat-foot is produced. When it is possible to restore the healthy tone of these natural supports of the arch so that they may take up again the function which they have resigned no artificial support is desirable; but in very many cases this is not possible, and then it is necessary to provide a mechanical support for the arch to relieve the pain and discomfort to which the flat-foot gives rise. We have examined and made use of Pond's arch support which was sent for our inspection. It consists of a "sock" containing a piece of steel fitted to the under-surface of the whole arch of the foot. It affords a wide-spread comfortable support, and is very suitable for the cases we have indicated above. It may be obtained from Mr. J. Pond, 23, Castle Meadow, Norwich; or from the London Shoe Company, 123, Queen Victoria-street, E.C.

Dr. T. Granville Hockridge.—We have only one side of the case before us. From the facts submitted to us we think it would have been polite if B had asked A to be present at the post-mortem examination, but we do not think A should take offence at the omission.

A PHYSICAL SIGN IN TYPHOID FEVER.

To the Editors of THE LANCET.

SIRS,—I have noticed in cases of typhoid fever a yellow discolouration of the palms of the hands which is usually noticeable in the second week and gets darker till the crisis, then gradually disappears as the temperature regains the normal. Is this a definite symptom? It is not mentioned in books. The Maidstone epidemic is a good opportunity for confirming this if it should be the case.

I am, Sirs, yours faithfully,

Nov. 3rd, 1897. J. W. S.

MENTAL DISTURBANCE AFTER GYNÆCOLOGICAL OPERATIONS.

THE American *Medical and Surgical Reporter* publishes a paper in which Dr. John A. Lyons gives an account of two cases where plastic operations were followed by mental disturbance. The first patient was thirty-four years of age and the mother of three children, the last one being two and a half years old. She seemed very much above the average in intelligence, of exceedingly good physique, and not naturally of a nervous temperament. She suffered from leucorrhœa and dysmenorrhœa; the uterus was enlarged, "evidently sub-involuted and endometric, because of an exceedingly large bilateral laceration of the cervix, the os admitting an index finger with but little force, but with considerable pain." The operation consisted in thorough curettage of the uterine canal and trachelorrhaphy. The uterus was well packed with iodoform gauze, which was removed at the end of forty-eight hours. The sutures were removed from the cervix eight days later, as perfect primary union had taken place. After the operation her mental faculties were impaired, she was often oblivious of her surroundings, and her children disturbed her so much that they had not unfrequently to be removed from her presence. This state of affairs continued for about four months, when she was seized with acute mania in consequence of the death of a brother, but within two months from this date she entirely recovered, not a trace of dementia being left. The second patient was thirty-one years of age; she had two children, aged ten and twelve years respectively, and had not been pregnant since the birth ten years previously. She suffered from a complete perineal laceration extending up the rectum almost to the vaginal vault, so that she had incontinence of gas and fæces, but a plastic operation was performed with such success that she obtained perfect control of the rectum. In less than two months, however, her mind was completely unbalanced; she became morose, gloomy, indifferent to her family, and sleepless. "When upon the street she imagined all men she happened to see were following her with evil intent, so that it became necessary to have an escort with her while taking her morning and evening walks." After having continued some five months these mental symptoms disappeared and the patient has since been delivered of an unusually large child without experiencing any perineal injury.

WHAT IS THE MEDICAL MAN TO DO?

To the Editors of THE LANCET.

SIRS,—I should esteem it a favour if you would give me your opinion as to the duty of a medical man under the following circumstances:—A young man consulted me at my house and upon examination I found him to be desquamating freely; this together with his history led me to diagnose scarlet fever, and I ordered the patient home and notified accordingly. I have since ascertained that I have infringed the 126th section of the Public Health Act and thereby made myself liable to a penalty of £5. Now, as general practitioners must be frequently doing the same thing—viz., "exposing or causing to be exposed, a person suffering from infectious disease" you will be conferring a favour upon others besides myself by advising us how to act.

I am, Sirs, yours faithfully,

Oct. 8th, 1897. INQUIRER.

WANTED, A HOME FOR A FEMALE DIPSOMANIAC.

To the Editors of THE LANCET.

SIRS,—Can any of your readers refer me through your columns to an institution or home for female dipsomaniacs charging not more than 30s. weekly inclusive?—I am, Sirs, yours faithfully,

Nov. 8th, 1897. M.R.C.S.

During the week marked copies of the following newspapers have been received: *Hull Daily News, Sun, Stirling Observer, Salisbury Journal, Yorkshire Herald, Newcastle Journal, Times of India, Pioneer Mail, New York Herald, Wiltshire County Mirror, Evesham Journal, Thanet Guardian, Architect, Liverpool Daily Post, Cambs Times, Manchester Guardian, Kidderminster Shuttle, Lincolnshire Echo, Grimsby Mail, Builder, Leeds Mercury, Scotsman, Hereford Times, Elgin Courant, Luton Reporter, Sussex Express, Walsall Advertiser, Bristol Mercury, Dundee Advertiser, North British Daily Mail, Bradford Observer, Somerset County Herald, Birmingham Gazette, Isle of Wight Herald, Bridgwater Independent, Yorkshire Post, Hinckley Times, East Anglian Times, Eastern Press, Burnley Express, Brighton Gazette, Sanitary Record, Wolverhampton Chronicle, Bath Chronicle, Scottish Guardian, City Press, Reading Mercury, Hertfordshire Mercury, Lincolnshire Echo, Mining Journal, Local Government Chronicle, Worthing Gazette, Weekly Free Press and Aberdeen Herald, Lincoln Gazette, Surrey Advertiser, People's Journal, Inverness Courier, Perth Constitutional, La Gazette de France, Leicester Post, Loughborough Monitor, Banffshire Journal, Liverpool Courier, Family Herald and Weekly Star (Montreal), West Middlesex Herald, North Wilts Guardian, Manx Sun, East Grinstead Observer, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Dr. J. M. Atkinson, Hong Kong; Messrs. Arnold and Sons, Lond.; Mr. F. C. Abbott, Lond.;

B.—Dr. J. M. Barbour, Lond.; Bradford Infirmary, Secretary of; Blackfriars Provident Dispensary, Secretary of; Dr. J. E. Begg, Hither Green; Mons. O. Berthier, Paris; Mrs. Bennett, Lond.; Mrs. L. A. Brooks, Grays; Messrs. Burgoyne, Burbidges, and Co., Lond.; Mr. E. Brown, Essex; Mr. W. M. Beaumont, Bath; Dr. A. S. Barling, Lancaster; Mr. C. Birchall, Liverpool.

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E.—Mr. McAdam Eccles, Lond.; Messrs Eason and Son, Dublin.

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J.—Jenner Institution for Calf Lymph, Lond., Secretary of; Surgeon A. H. Jeremy, H.M.S. *Rambler*, Bermudas; Mr. Jones, Ruabon.

K.—Dr. W. Kidd, Blackheath; Mr. R. C. B. Keriu, Lond.; Kurhaus, Lond.

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V.—Victoria Hospital for Children, Secretary of.

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Letters, each with enclosure, are also acknowledged from—

A.—Mr. B. Allen, Hawes; Agricola, Lond.; Dr. J. Althaus, Lond.; Argentum, Lond.; Messrs. Allen and Hanburys, Lond.; Æsculap, Lond.; Assistant, Lond.; Alveolar, Lond.

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E.—Herr H. Englehardt, Brunswick; Epsilon, Clapham Common.

F.—Mr. P. V. Fry, Farnworth; Dr. J. Fleming, Stockton-on-Tees; Facilis, Lond.; Ford Park House, Plymouth, Secretary of; Miss Fowler, Lond.

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I.—Messrs. Irving, Sons, and Jones, Liverpool.

K.—Mr. B. C. Kendall, Helstone.

L.—Mr. S. C. Lawrence, Barls Barton; Messrs. Lowe and Brydone, Lond.; Mrs. Leech, Lond.; Mr. E. J. Lumsdon, Irthlingborough.

M.—Mr. M. O. Morton, Mussoorie, India; Manchester Hospital for Consumption, Secretary of; Milk Preparations Co., Brentwood; M.D. Bolton; Medicus, Sheffield; Macclesfield General Infirmary, Secretary of; Messrs. Morris and Edwards, Nantile Vale; Mr. J. Miller, Glasgow; Manchester Clinical, &c., Association, Secretary of; Mason College, Birmingham, Secretary of; *Mexborough and Swinton Times*, Managing Director of; M. S. M., Lond.; M. S, Lond.; Mr. C. A. Molony, Mitchelstown, Ireland; Medicus, Edinburgh.

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O.—Mr. A. H. Olman, Penarth.

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U.—University College, Sheffield, Secretary of.

W.—Mr. G. Wemyss, Lond.; Mr. T. Woodruff, Withington; Dr. J. Wilson, Glasgow; Messrs. Widemann, Broicher, and Co., Lond.; Dr. N. C. Ward, Chichester; W. H. H., Lond.

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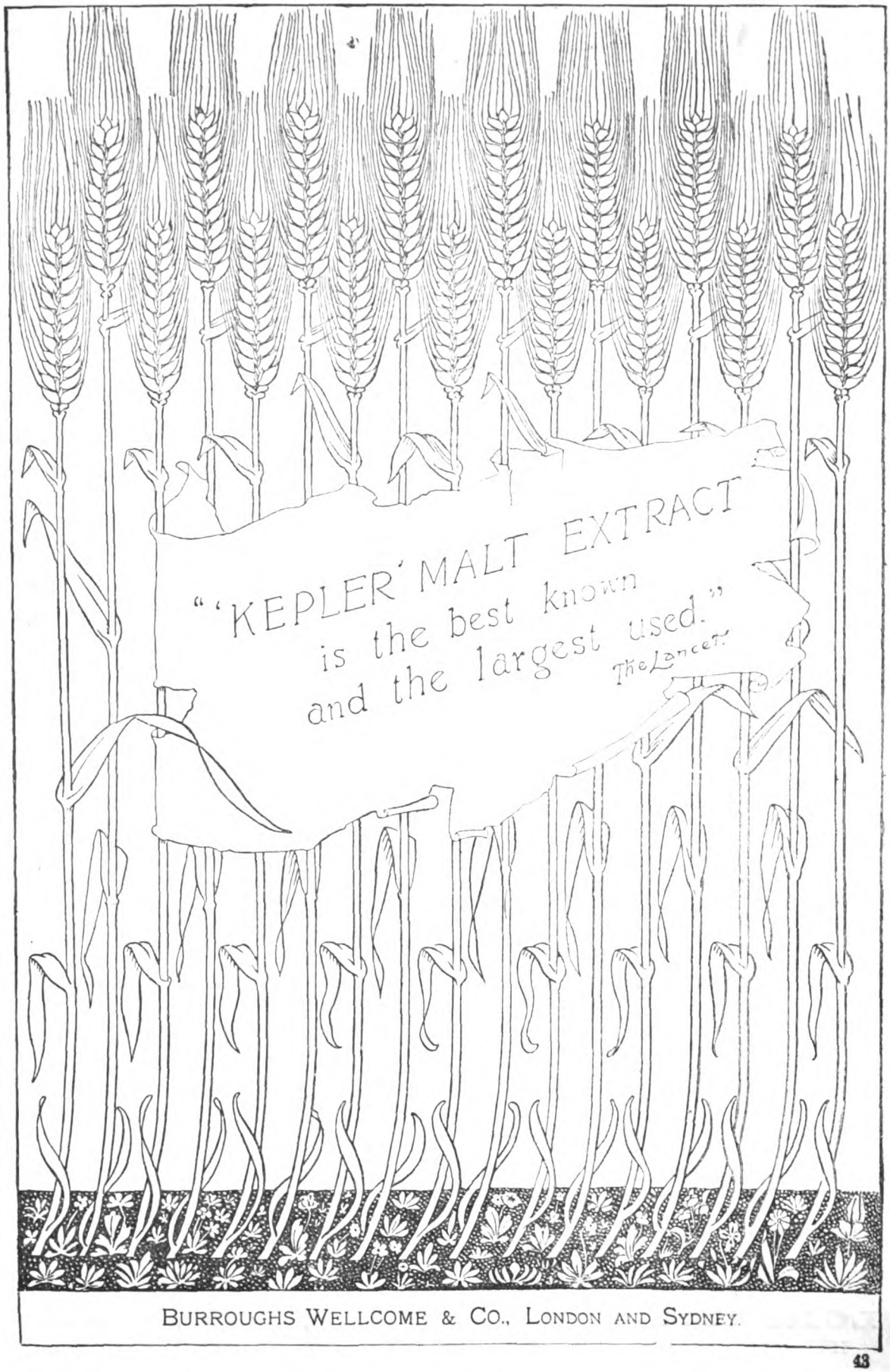
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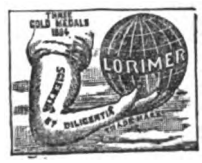
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Supplementary Croonian Lecture

ON

POINTS CONNECTED WITH THE PATHOLOGY AND TREATMENT OF DIABETES.

Delivered before the Royal College of Physicians of London on Nov. 13th, 1897,

BY F. W. PAVY, M.D LOND., LL.D, F.R.S.,
CONSULTING PHYSICIAN TO GUY'S HOSPITAL.

MR PRESIDENT, COLLEAGUES, AND GENTLEMEN,—I appear before you to-day to draw your attention to points connected with the pathology and treatment of diabetes. They constitute the outcome of the study which formed the basis of the Croonian Lectures delivered by me in 1894 and of the study I have since conducted. Disease is a deviation from health, and for its proper comprehension we require to have a knowledge of the conditions belonging to health. It is just this in the case of diabetes that it has been difficult to obtain and the complaint has stood as one of the most inscrutable of diseases. The question first presented for solution is, How does carbohydrate normally become disposed of in the system? Next follows the question, What is it that gives rise to its unnatural escape with the urine?

Briefly stated, diabetes may be said to consist of a malapplication of the carbohydrate principles of food. Common observation teaches us that when the various forms of carbohydrate matter are taken by a healthy person with the food they become lost sight of and contribute to the benefit of the system. The system has the power of placing them in a position to be susceptible of utilisation, and they thus disappear from view with resultant good. In the case of the diabetic, however, the carbohydrate matter that is ingested fails to undergo proper application, and passes, instead, as sugar through the system to the urine, with which it is discharged as waste material. This is the plain statement of fact regarding the difference between health and diabetes, and what is wanted is a right understanding of the details concerned.

It has been hitherto assumed, without any positive evidence as a basis, that the carbohydrates undergo oxidation in a direct manner in the system. Liebig placed them in his group of calorifacient food principles. In his time physiology and chemistry were not sufficiently advanced to permit of carbohydrate matter being followed after being taken as food so as to obtain information of the phenomena occurring. The first step in this direction was the renowned work of Bernard. Bernard, accepting the view that the carbohydrates are destined for the purpose of oxidation within the system, enunciated the doctrine that the liver is endowed with a glycogenic function which provides a supply of sugar to be conveyed to the tissues for oxidation when carbohydrate matter is lacking in the food. I need not give attention here to the faulty groundwork upon which the glycogenic doctrine was raised. This matter has in times past been amply dealt with. Notwithstanding, however, that it is recognised that the experimental groundwork is fallacious the doctrine has become so firmly implanted in the mind as to render effacement difficult. Apart from other considerations, what it implies affords its condemnation. In order that sugar may reach the tissues for oxidation it must enter the general circulation. Now it happens that the stream of blood alleged to convey sugar to the tissues for destruction in part goes to the kidney. It was formerly taught that the capacity existed of tolerating a certain amount of sugar in the blood without its passing off with the urine, and this tolerating capacity was asserted to have been found in the dog to stand good for a proportion of 2·50 per 1000; in other words, when sugar amounted to 2·50 per 1000 in the blood sugar escaped with the urine, but not when a less proportion existed.

At that time neither for blood nor for urine were the analytical methods for the recognition and determination of sugar in the satisfactory position in which they stand now. Modern physiologists are agreed that the amount of sugar normally present in blood is about, or a little under, 1 per 1000; and in association with this it can be definitely stated that sugar passes into the urine. It can also be definitely stated that in association with 2·5 per 1000 of sugar in the blood such an amount passes into the urine as to give it a pronounced saccharine character. The question of the presence of sugar in normal urine long stood, or was considered to stand, as a debatable point. The discussion on the subject that took place in the pages of THE LANCET a few years back, in which I took part, will probably be remembered. The method formerly adopted for separating the sugar from the urine and obtaining it in sufficient quantity for its satisfactory identification was by precipitation with lead acetate and ammonia. Operating upon the product yielded by this process I obtained information which left no doubt in my own mind that sugar constitutes an ingredient of healthy urine. More recently Baisch and others have operated with benzoyl-chloride. By this reagent sugar may be precipitated and can afterwards be recovered in a pure form. From the evidence that has been obtained the matter may be considered to have been thoroughly set at rest. Not only, indeed, can it be said that sugar has been found, but likewise that its nature has been defined.

The point to which we are led is that no tolerating capacity exists against elimination by the kidney of sugar present in the blood. As it is present so it escapes, and the urine thus becomes a delicate indicator of the condition of the blood. By experiment it can be shown that sugar introduced into the circulation is at once revealed by the urine. I have found that even as small a quantity as a quarter of a gramme per kilo. body weight—that is, a four-thousandth of the weight of the animal—intravenously injected has given evidence of influence upon the urine. Where larger quantities are used a more or less pronounced elimination occurs, and the blood even an hour afterwards has not regained its normal constitution, but still retains a surplus of sugar. This tells against the assumed destruction in the systemic capillaries being the natural mode of application of sugar in the animal economy. It is sufficiently evident that the kidneys constitute the channel through which the sugar permitted to reach the circulation in diabetes is discharged from the system. The action of the kidney in relation to sugar is not different in health from that in diabetes. The only difference is one of degree determined by the difference in the amount of sugar existing in the blood. It is not surprising that in former times healthy urine was regarded as being free from sugar. The quantity is too minute for the chemical methods then at command to reveal. With the improved methods of the present day the sugar which is present in healthy urine, and is derived from the small amount naturally existing in the blood, is readily susceptible of demonstration.

From the considerations that I have mentioned it is permissible to look to the urine for the supply of knowledge regarding the entry of sugar into the blood of the general circulation, and to reason as follows in relation to the glycogenic doctrine. Under natural circumstances the blood contains a certain small amount of sugar which may be considered as constitutionally belonging to it, just as is noticeable with the other constituents of the body. Physiologists are agreed that the amount of sugar in the blood is not altered by the amount of carbohydrate ingested. Within ordinary limits both the blood and the urine remain uninfluenced by the character of the food with respect to carbohydrate. It matters not whether the comparatively insignificant amount of carbohydrate existing in an animal diet or the large amount contained in many articles of food from the vegetable kingdom be ingested the result is the same. But could this be the case if the ingested carbohydrate had to be conveyed as sugar through the general circulation to the systemic capillaries to be there disposed of? It would mean that, notwithstanding the demonstrable fact that whilst the introduction of an exceedingly small amount of sugar into the circulation gets revealed by the urine, a surpassingly large amount can reach it from the food without evidence being afforded of its doing so. The circumstances are such that whatever presumably passes to the tissues for destruction would equally pass to the kidney for elimination. If the kidneys were placed on the other side of the systemic capillaries there might be destruction without elimination. But it is the same stream that goes to the systemic and to the renal capillaries, and for the teaching to hold good it would have to be assumed that destruction could proceed and elimination remain in abeyance. By the ingested carbohydrate being temporarily stopped

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by the liver and stored as glycogen the difficulty is not removed. Within a given time the transit would have to be made, and the amount transported under a free carbohydrate diet would be infinitely greater than could be derived in any way from animal food, and yet it escapes being revealed by the urine. What the quantity is that would have to pass may be judged of by the difference in the amount of sugar eliminated by a diabetic patient partaking freely of carbohydrate materials on the one hand and upon animal food only on the other. Everyone knows the immense difference existing, but I may mention in illustration the figures drawn from a case in which many years ago I specially studied the effect of different kinds of food on the elimination of sugar. The sugar voided during a twenty-four hours' period on a diet exclusively of animal food stood at thirty-seven grammes, whilst for a similar period with a diet containing a plentiful supply of carbohydrate material it reached 685 grammes. This gives an idea of the amount of sugar that would have to traverse the circulation if the carbohydrate matter of our food had to be conveyed as sugar to the tissues for destruction. And yet in the healthy state the urine escapes without any effect being produced upon it. If in reality the functional transit did take place it could not fail to be rendered conspicuously evident by the urine. The transit, indeed, is just what belongs to diabetes, and I submit that this consideration is fatal to the glycogenic doctrine. For freedom from diabetes, carbohydrate matter must be prevented reaching the general circulation as sugar instead of being thrown into it as such for conveyance to the tissues for destruction. And now the problem that presents itself for our consideration is, In what way does the carbohydrate matter of our food become disposed of so as to be prevented reaching the general circulation as sugar. Any explanatory proposition that is offered must necessarily locate the seat of the disposal as standing between the alimentary canal and the point where the portal blood-stream obtains entrance into the general circulation. If it were located beyond this point, unless the capacity existed, which may be confidently said not to be the case, for effecting an instant removal of sugar directly the general circulation is reached, the conditions would be supplied for the urine to be influenced as it is found to be in the diabetic state.

What I have to say with reference to the mode of application of carbohydrate matter within our system fits in with what is observed to occur throughout living nature. The operations of animal and vegetable life are brought into harmony with each other. In one of the simplest of organisms—namely, in the yeast cell—a demonstration is afforded of the occurrence of the operations which I submit lead to the carbohydrate matter of our food being disposed of in our system without the opportunity being given of its reaching the general circulation as sugar and thence escaping as waste material with the urine. It is only gradually and as the result of life-long attention devoted to the subject, in association with unceasing laboratory work, that the knowledge has been acquired upon which the new doctrine is based. Much help has been afforded by the teachings of experience in connexion with diabetes, and whilst these are absolutely irreconcilable with the old doctrine upon which physiologists have been relying, they in the most complete manner fall in with, and give support to, the new one. The subject is fully considered in my work on "The Physiology of the Carbohydrates," published in 1894, and it will only be requisite here to enter into sufficient detail for the comprehension of what is being spoken of. The carbohydrates, as we know, are susceptible of being transmuted from one to the other by increased and decreased hydration. Ferments and chemical agents move them in the former direction, and the operation is one that we have the power of inducing at will. Transformation in the latter takes place to an unbounded extent in the living world, but if we exclude a few special instances of laboratory achievement we have not the power ourselves of bringing it about. The first influence exerted on ingested carbohydrate is by the ferments of the alimentary canal, which hydrolise and carry the insoluble into a soluble form, and thus prepare for absorption. On being absorbed the carbohydrate is brought within the sphere of influence of living matter. In the villi, which constitute the seat of absorption, there are active cells with which the absorbed carbohydrate falls into close relation, and subsequently it permeates the cellular structure of the liver, which thus, as it were, stands in a position to exert a supplementary action, and to complete before the general circulation is reached whatever may have escaped completion in the villi.

Now, by the agency of protoplasmic action or the power possessed by living matter, carbohydrate is (1) transmuted to a lower form of hydration, (2) transformed into fat, and (3) synthesised into proteid. All these operations can be definitely shown to take place in the simple cell organism of yeast as the result of the power with which its protoplasm is endowed, and the power here represented is nothing more than the common property possessed by protoplasm in general of both kingdoms of nature. Whilst ferment action hydrates and breaks down, protoplasmic action dehydrates and builds up, and it is by the influence of this latter power, I contend, that carbohydrate naturally becomes disposed of in the system instead of by ferment action leading to the production of sugar that is fictitiously assumed to undergo oxidation whilst traversing the systemic capillaries.

Between the seat of absorption and a point short of the general circulation being reached by the portal stream of blood, I say, we have to look for the disposal of the carbohydrate derived from our food, and it is by the exercise of protoplasmic power that what occurs is brought about. Ferment action has performed its office within the alimentary canal, in putting the carbohydrate matter, if it should be in a form to require it, into a fit state for absorption. If the disposal is completely accomplished no sugar is left to reach the general circulation, and if none reaches the general circulation there is none to reach the urine. This represents the natural order of things. If, on the other hand, the disposal of carbohydrate by the exercise of protoplasmic power should not be properly effected—if, in other words, the circumstances should be such as to lead to the faulty accomplishment of protoplasmic action, or if, even with a natural state existing as far as the system is concerned, it should happen that the function is unduly taxed by the ingestion of an exceptionally large amount of carbohydrate in a readily absorbable form, especially at a period of fasting, sugar will be permitted to reach the general circulation, and in proportion as this occurs sugar will be found in the urine.

The process of transmutation into the lower state of hydration is exemplified by the production of glycogen in the liver. Carbohydrate which escapes being transformed into fat or synthesised into proteid passes on to the liver and here, according to the evidence presented, it may be looked upon as undergoing, in the first instance, the change of state referred to. It is well known to physiologists that the liver becomes charged with glycogen in proportion to the largeness of supply of carbohydrate with the food. Possessing the colloidal property that belongs to it, it forms a serviceable storage material, which, placed in the position it is, is favourably situated for being gradually utilised by transformation into fat and possibly synthesis into proteid. That it should be destined to come back into sugar to be discharged into the general circulation and conveyed as such to the tissues for oxidation is incompatible with the condition in which healthy urine is found.

It was a subject of dispute in former times whether animals possessed the power of forming fat from carbohydrate. The matter is not now open to question. The power, indeed, is largely turned to account by those engaged in husbandry for the fattening of animals for the table. In the practice of our own profession if we want to reduce obesity we advise the restriction of the carbohydrate articles of food, and conversely we recommend that they should be freely taken if we wish to fatten. For many years the state of the lacteals of the rabbit after a meal of oats has been fixed on my mind. Formerly it stood unintelligibly before me, but now I think the meaning is to be read off. It is common knowledge that after fatty food the lacteals of the dog, for instance, are to be found conspicuously injected with milky chyle. In the rabbit, when in a vigorous but not when in a poor or sickly state, fed on oats and taken at the proper time afterwards, I have seen the lacteals about as fully injected with milky chyle as in the dog after fatty food. Oats in their dry state contain about 5 per cent. of fat, which I am convinced upon full consideration of the matter is altogether inadequate to account for what is observed. The extent to which the villi under the circumstances are charged with fat globules I have represented by photo-engravings from micro photographs in my work on "The Physiology of the Carbohydrates." It is admitted that animals are fat producers from carbohydrate, and with its

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production in the villi it reaches the system and subsequently passes on in precisely the same way as fat derived from without. In the one case we have to deal with fat emanating from a ready formed supply and in the other with fat formed by the protoplasmic agency of the cells of the villi, for it is not for a moment contended that what occurs is of the nature of a mere chemical transformation. As carbohydrate may happen here to be applied to fat production, so have we a provision in the direction wanted for preventing its reaching the general circulation as sugar. There are grounds also for believing that a further formation of fat is effected by the protoplasmic agency of the cells of the liver.

That carbohydrate can be turned to account in contributing to proteid production is demonstrated by the growth of the yeast cell in a medium containing no other source than sugar for the carbon constituent of its protoplasm. Further, carbohydrate is susceptible of being cleaved off from the proteid molecule. The proteids entering into our constitution do not enter the system in a ready formed state. The proteid matter of food is as a first step towards its application to the purposes of life broken up by the ferment agency of digestion. The absorbed products of digestion then fall into relation with the living protoplasm of the cells of the villi. Peptone, which is recognisable previously to the occurrence of absorption, now becomes lost sight of, and in view of all the circumstances existing it may be taken as reasonably permissible to conclude that through the instrumentality of protoplasmic action an extensive building up of proteid goes on in the villi.

By synthesis into proteid carbohydrate matter is placed in a position to be susceptible of transport through the system without running off with the urine. At the same time it is evident that its liberation from the locked-up state into a free form can be most easily effected in the presence of suitable conditions. The lactose of milk cannot reconcilably with our collateral knowledge be conveyed as such to the mammary gland, but must constitute a cleavage product resulting from the effect of—may it not be said?—ferment agency existing within. In the grave form of human diabetes, as well as in the experimentally induced phloridzin and pancreatic diabetes, sugar is drawn from a source other than the food, and the large quantity that can be eliminated testifies to the abundant store of locked-up carbohydrate that must exist ready to be set free when the requisite agent for effecting the purpose is present, just as the sugar in amygdalin is set free in the presence of emulsion.

What has been said of the villi gives them a position of great importance in relation to the assimilation of food, a process that may be naturally looked for to immediately follow absorption. At a period of fasting the amount of sugar in the portal blood practically stands in accord with that in the blood of the general circulation. After the copious ingestion of carbohydrate food the amount of sugar in the portal blood rises, and I have known it reach as high as between 4 and 5 per 1000. The circumstances are such as to lead to sugar being absorbed in too large a quantity to be fully assimilated or disposed of in the villi, and the portion that has failed to be assimilated reaches the portal blood and gives to it a fluctuating condition dependent upon the food. If there were no further provision existing for the purpose of assimilating this sugar and checking its passage into the general circulation we should be thrown into a more or less pronounced glycosuric state after every meal in precisely the same way as, in fact, occurs with the subject of alimentary diabetes. The liver, however, intervenes between the portal vein and the general circulation, and here a supplementary action is performed which, if complete in checking the flow of sugar onwards, protects the contents of the general circulation, and hence the urine, from being influenced in relation to sugar by the food ingested. If the supplementary action is incomplete the blood and urine become influenced, and in proportion to the incompleteness so is the extent of glycosuria. The entry of sugar into the general circulation constitutes the unnatural and not the natural occurrence. In order that we may be kept free from glycosuria sugar must be kept out of and not thrown into the general circulation.

(To be concluded.)

MEASLES AT SWANSEA.—Three of the schools of the Swansea School Board have been temporarily closed owing to an outbreak of measles in several districts of the borough.

ON SOME POINTS IN CONNEXION WITH CARCINOMA UTERI.[1]

BY MAY DICKINSON BERRY, M.D., B.S. LOND.,
LATE PATHOLOGIST TO THE NEW HOSPITAL FOR WOMEN.

THE points I have specially tried to investigate are (1) the conditions under which carcinoma uteri arises; (2) the course and duration of the disease where no radical operation has been performed; and (3) the results of vaginal hysterectomy. I have consulted notes of cases in the Middlesex Hospital cancer wards, the Royal Free Hospital, the Chelsea Hospital for Women, and St. George's Hospital, thanks to the kindness of Dr. Duncan, Dr. Hayes, and Dr. Dakin. Mrs. Scharlieb and Mrs. Boyd have allowed me to make full use of their cases of operation at the New Hospital for Women, for which I tender many thanks. The mass of material is considerable, but when we have to depend largely on notes taken by others, especially by students, it is often difficult to obtain systematic information. I have collected notes of 143 cases of inoperable carcinoma uteri from the cancer wards of the Middlesex Hospital, and 75 cases from other hospitals, and have endeavoured to investigate the subject on somewhat the same lines as Oscar Müller, of Breslau,[2] and Albrecht Tanner, of Berlin,[3] in the papers they published dealing with all the cases of carcinoma uteri, operable and inoperable, seen at their respective clinics during a period of some years.

Influence of age.—First, as regards the age at which the disease is likely to commence. In Table I. are shown the ages at which the symptoms appeared in the cases I have collected and in those of the German writers above mentioned; the latter are given for comparison.

TABLE I.

Ages.	Cancer wards, Middlesex Hospital.		Cases from other hospitals.		Tanner (Breslau).		Müller (Berlin).	
	Cases	Per cent.	Cases.	Per cent.	Cases.	Per cent.	Cases.	Per cent.
20 to 25 years ...	1	0·7	—	—	2	0·4	5	0·8
25 to 30 ,, ...	4	2·8	2	2·6	13	2·5	19	3·3
30 to 35 ,, ...	9	6·3	9	12·0	34	6·5	66	11·4
35 to 40 ,, ...	27	18·2	10	13·3	72	13·7	110	18·3
40 to 45 ,, ...	30	21·0	15	2·0	118	22·5	111	18·5
45 to 50 ,, ...	28	18·1	13	17·3	114	21·7	116	21·0
50 to 55 ,, ...	13	9·1	11	14·3	74	14·0	71	13·3
55 to 60 ,, ...	14	9 8	10	13·6	58	11·0	41	7·0
60 to 65 ,, ...	13	9 1	3	4·0	28	5·3	22	3·8
65 to 70 ,, ...	4	2·8	2	2·6	10	2·0	11	1·8
70 to 75 ,, ...	3	2·1	—	—	5	1·0	5	0·8
75 to 80 ,, ...	—	—	—	—	1	0·2	—	—
Totals	144	—	75	—	529	—	577	—

The figures from the different sources in the foregoing table correspond very fairly with one another. In the first three groups the maximum number of cases occur between the ages of forty and forty-five years, but both the preceding and the following five years show very large numbers also. In Müller's cases the maximum is between the ages of forty-five and fifty years, and the fifteen years between the ages of forty and fifty-five years show slightly more cases than does the period between thirty-five and fifty years—the fifteen years containing the maximum in the first three groups. Before the age of thirty years all agree in showing very few cases; after thirty-five years of age there is a rapid increase. After fifty-five years all show diminution, but the descent is not so rapid as the ascent, the ages from sixty-five to seventy years being equal to those from

[1] A paper read at the Registered Medical Women's Association on July 6th, 1897.

[2] Zur Lehre von Carcinoma Uteri, Charité Annalen, vol. xviii.

[3] Prognose und Behandlung des Gebärmutterkrebses, Archiv für Gynäkologie, 1890, p. 20.

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twenty-five to thirty years. That this does not represent equal liability to the disease is evident from the fact that there are far fewer people alive at sixty-five than at twenty-five years of age and therefore the diminution in liability to carcinoma as age increases is far less than would appear from the figures in the table. Between the ages of twenty and twenty-five years I found only one case. The patient was a nurse, a single woman aged twenty-two years. There was a history of six weeks' hæmorrhage, but no other symptom. When seen a "warty, tuberous condition of the cervix" was found widely infiltrating the vagina and quite inoperable. She died only two months later, apparently from uræmia. The condition described sounds more like carcinoma than sarcoma, but the case is certainly an unusual one both as regards the age of the patient and its duration.

Duration of the disease.—The next table (Table II.) shows the duration of the disease according to the ages of the patients. The last four columns in the table represent the same cases arranged in two groups—viz., those under and those over forty-five years of age. This table shows that the commonest time for the disease to last is from one to two years, about half as many cases lasting under one year and from two to three years respectively. A considerable number lasted from three to four years; above four years very few. It will be seen that to some extent the younger cases are the more rapid—i.e., there is a larger percentage of short cases among the younger and of long cases among the older patients, but this is not very marked. Two out of the six cases where the disease lasted six years were under thirty-five and forty years respectively. In these tables I have only taken those cases with a definite date for the onset of symptoms. In nearly all the cases this was hæmorrhage. Cases of old uterine disease with history of bleeding for many years have not been included. I have included one case where the symptoms lasted for nine years. Here there was history of bloody leucorrhœa beginning at the age of fifty-five years with apparently no previous uterine trouble, but there was no distinct evidence that the carcinoma existed during all these years. Of course, in most of these cases there is no definite evidence that the onset of the symptoms corresponded with the beginning of the carcinoma; it is quite possible that in many cases the disease may have existed considerably longer. I have attempted to trace the subsequent history of the patients with inoperable carcinoma uteri who had been in the New Hospital for Women—most of them for curetting. Of these I have only been able to obtain tidings of seventeen. Thirteen out of the seventeen are dead—eight died within one year, three between one and two years, and two nearly three years after leaving the hospital. Four are still living at periods of nine months, twenty-one months, two years, and four and a half years since they were discharged. The first of these is fairly comfortable, the next two are in the last stage of the disease and very ill. The remaining case is an interesting one. The patient was thirty-seven years of age when the symptoms began; when admitted she had had bloody leucorrhœa eight months, the uterus was fixed, and there was considerable infiltration of the left parametrium. Carcinoma uteri was diagnosed, but the case was considered too advanced for operation. This was four and a half years ago; since then she has had comparatively little trouble and has been able to do her housework as usual, she has no pain except at her menstrual periods, which she says continue regular, but are profuse. Constipation is her chief trouble. Per vaginam there is a large infiltrating mass quite fixed and apparently filling the whole pelvis. It is surprising that this should have caused so little inconvenience. The duration of the disease in this case is the more remarkable as occurring in a comparatively young woman. Dr. Sinclair records a case the converse of this—i.e., a rapid case in a patient over sixty years of age.[4] When seen by him there was a distinct ulcerating nodule on the cervix; six weeks before this another practitioner had found a doubtful nodule. Vaginal hysterectomy was recommended, but the patient took six weeks to make up her mind. When she returned after this interval the vagina was filled by an ulcerating mass and the case was much too advanced for operation. It is evident from these and other cases that the duration of carcinoma uteri is extremely variable. Unfortunately there are not enough records of the pathology in the notes I have collected to enable us to examine the relationship between this and the duration of the cases.

Influence of previous health.—Another question which suggests itself is, Are there any points worth remarking in the previous history of the patient? As regards the general health there appears to be nothing special. There is history of old uterine disease in twenty-two cases—i.e., 10 per cent. In many of these the history is vague, mostly of leucorrhœa of many years' standing; four were previously treated for endometritis and "erosion"; two had had polypi removed fourteen and sixteen years previously, one, a woman of sixty-three years of age, had worn a pessary for prolapse for eight years. Considering the prevalence of uterine trouble, such as chronic leucorrhœa, especially among the class from which these patients are drawn, this number does not seem large—scarcely enough to suggest any causal relation to the subsequent carcinoma. Association with pregnancy was found in nine cases out of the 143 from the cancer wards of the Middlesex Hospital. In four cases the symptoms appeared during pregnancy in patients of the ages of thirty-five, thirty-seven, thirty-eight, and thirty-nine years. In three of these cases labour was difficult but terminated naturally, in the fourth Cæsarean section was performed, and the patient died after the operation. In the other three

TABLE II.—*Showing the Duration of the Disease in the Cases from the Cancer Wards of the Middlesex Hospital and in those from other Hospitals.*

Duration.	Age 20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	Total.	Under 45 years.	Percentage.	Over 45 years.	Percentage.
Under 1 year	1	—	3	1	7	2	1	3	1	—	—	19	12	25·0	7	13·0
1 to 2 years	—	1	3	8	6	8	3	2	4	4	1	40	18	37·0	22	40·0
2 to 3 ,, ...	—	—	—	6	5	3	1	3	3	—	—	21	11	20·0	10	18·0
3 to 4 ,, ...	—	—	—	3	3	—	4	2	1	—	3	16	6	12·0	10	18·0
4 to 5 ,, ...	—	—	—	—	—	—	1	—	1	—	—	2	0	—	2	3·5
5 to 6 ,, ...	—	—	1	1	—	2	—	—	1	1	—	6	2	1·0	4	7·0
6 to 7 ,, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7 to 8 ,, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8 to 9 ,, ...	—	—	—	—	—	—	—	1	—	—	—	1	—	1·0	—	0·2

TABLE III.—*Age at which Symptoms of Carcinoma Uteri occurred in Nulliparæ.*

Age.	Single.	Married.	Percentage.
20 to 25 years	1	—	6 (nearly)
25 to 30 ,, ...	—	2	12
30 to 40 ,, ...	—	3	18
40 to 50 ,, ...	4	1	30
50 to 60 ,, ...	1	3	24
Over 60 ,, ...	2	—	12

[4] A System of Medicine, edited by Dr. T. Clifford Allbutt; the volume on Gynæcology, edited by Dr. W. S. Playfair.

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cases the duration of the disease was for periods of eighteen months, two years, and three and a half years respectively. In three cases, one forty and two forty-one years of age, the symptoms came on immediately after confinement. One patient died three years later; the end of the others is not recorded. In two cases the symptoms dated from a miscarriage. One of these, a patient aged twenty-six years, when seen six months later was found to have too advanced disease for operation. The other, aged forty-three years, had had bleeding for two years when first seen. This gives a percentage of rather under seven of cases associated with pregnancy. Müller finds a much larger number among his cases—viz., forty-six, or 14 per cent. Of these nineteen were over thirty-eight years of age, which he mentions as possibly supporting Cohnheim's theory that early carcinoma uteri is favourable to conception. He considers that the disease is likely to make rapid progress during the lying-in period, and instances a striking case as evidence of this. The cases I have cited do not show any marked rapidity of the disease, on the contrary many of them are of more than average duration, and those patients who left the hospital and were lost sight of probably lived a considerable time, as none of them appeared to be in the last stage of the disease.

Influence of fertility.—It is often stated that carcinoma uteri is prone to attack those who have borne a large number of children. Most of the patients who developed carcinoma in connexion with pregnancy had had fairly large families—i.e., from six to twelve children; in one case there had been a previous confinement within ten months. As regards fertility in the cases in general, in 141 instances where particulars on this head are given I find 133 married patients with history of 622 children and 135 abortions, giving an average of 5·7 pregnancies to each. Eight single patients, all nulliparæ, are left out of account. Among these cases are 41 with but one or two pregnancies each; but, on the other hand, there are several with a very large number; 19 patients had had twelve or more, 4 of these from fifteen to nineteen. It is noticeable that some of the largest families were found among the patients who were attacked by cancer when over sixty years of age, the average number of pregnancies among those patients being 7·6. Müller obtained an average of 5·37 pregnancies in 528 cases, which is almost the same as that given above. This, he points out, is by no means a very high figure. In Prussia the general average is said to be 4·6 children; what the average is in England I do not know. Sinclair in 100 cases of carcinoma uteri examined in Manchester found a somewhat higher average—viz., 5·8 children per head. Among these cases there were no barren women. In the 141 cases I have referred to there were 17 nulliparæ—i.e., 13 per cent. Eight of these were single and nine married. The percentage of single women is just under 6, which is low, as, according to the Registrar-General's return, about 16 per cent. of women over thirty-five years of age are single. Müller found only 28 nulliparæ, or only 5·3 per cent.; he does not say how many of these were single. Compared with the statistics of carcinoma of the breast these numbers are very low. Bryant found in 600 cases 20 per cent. single women, and 28 per cent. of the married women were nulliparæ.[5] The ages at which the nulliparæ were attacked show no marked deviation from the general tables; the maximum was between forty and fifty years; two of the single women were over sixty years; and one, the case already referred to, was under twenty-five years. These statistics do not show any special preponderance of nulliparæ in the post-climacteric cases, but of course the number is too small to be of much value. Unfortunately, evidence as to how many, if any, cases of carcinoma corporis there were among them is wanting.

Influence of the menopause.—Müller divides his cases into three classes—those attacked before, those attacked during, and those attacked after the menopause. He draws attention to the fact that his tables show a decidedly late average for the occurrence of the menopause, especially when taking into account the class from which the patients were drawn, for he considers that the menopause occurs earlier in the poor than in the more prosperous classes. In 60 per cent. of Müller's cases the menopause did not take place till after forty-eight, and in 35 per cent. not till after fifty. I find a note of the occurrence of the menopause in 54 cases, as in Table IV.:—

[5] Erichsen's Science and Art of Surgery, vol. ii., p. 800.

TABLE IV.—*Age at which the Menopause occurred.*

In 54 patients with carcinoma uteri.		In 200 other out-patients.	
Age.	Number of patients.	Age.	Number of patients.
Under 30 years	1	Under 30 years	—
30 - 40 ,,	2	30 - 40 ,,	10
40 - 45 ,,	8	40 - 45 ,,	45
45 - 50 ,,	24	45 - 50 ,,	81
50 years and over	19	50 years and over	70
Average a little under 48.		Average a little over 48.	

The average age at which the menopause occurs is given variously by different writers, some putting it at forty-five years, others a few years later. By way of investigating this point I noted the date of the menopause in 200 out-patients taken at random, excluding those with uterine diseases as much as possible. The result of this is shown in the second part of Table IV. The two parts of the table correspond almost exactly. In both the average age is forty-eight years; in the first there were 35 per cent. and in the second 34 per cent. of cases of menopause at the age of fifty years and over. In these cases therefore there is no evidence that the menopause tended to occur later than usual. Müller notes among his cases two of exceptionally late menopause—viz., over sixty years, one case certain and the other rather doubtful. In the cancer wards of the Middlesex Hospital there was one case of menopause at fifty-eight years apparently, and another where the patient was positive that the catamenia did not cease till the age of seventy years, the symptoms of carcinoma appearing four years later. There are several questions which arise in connexion with the menopause. First, what length of time elapsed between this and the onset of the cancer, and is there evidence of anything approaching a constant relation between the two? In the fifty-four cases under discussion the interval was as follows: under one year, 3 cases; from one to two years, 6; from two to five years, 14; from five to ten years, 12; from ten to twenty years, 14; and over twenty years, 5 cases. It may be asked further, Are the cases of late carcinoma also cases of late menopause? Taking the thirteen cases of cancer arising in patients over sixty years of age there were six cases of menopause before and seven after the age of forty-eight years, which corresponds with the proportion in the general tables. Conversely, taking the cases of menopause after fifty years of age, the interval nearly corresponds to the general average, but in no case is it under one year and in only two under five years. In the cases of early menopause—i.e., before the age of forty-one years—the interval was as follows. In two cases of the menopause occurring at thirty-one years of age the intervals were one year and thirteen years; in one at thirty-two years of age the interval was eleven years; at thirty-nine years of age it was a few months; in two cases at forty years it was twenty-four and twenty-six years respectively. In so far as any conclusions may be drawn from such a small number of cases it would appear that both in cases of early and late menopause there is a considerable and very variable interval; this is greater on the average in the early cases, implying that the age has more to do with the etiology of the disease than the menopause, and pointing to the conclusion that when once the menopause is established it ceases to be a predisposing cause—if, indeed, it ever is one. As regards the cases where carcinoma arises during the menopause it seems to me very difficult to decide which they are unless the patient has been examined before the disease appeared as the irregular hæmorrhage may be due to either cause.

Influence of heredity.—The question of the influence of heredity upon the occurrence of carcinoma is one that deserves brief mention and is a point which appears to have been carefully investigated in the cases in the Middlesex Hospital. Among 150 cases there are 28 with some family history of cancer. In 2 cases three members of the family had been affected, in 6 two members, and in the remainder only one member. There were 16 cases of carcinoma uteri in the family history of 13 patients. In 5 of these the mother was affected, in 6 sisters, in 2 a grandmother, in 3 aunts. The double histories were mother and sister, two sisters, and two aunts. There were 12 cases with a family history of

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carcinoma in other parts of the body; breast: 6 cases, two sisters, one grandmother, and three aunts; liver: 2 cases, father and sister; tongue: 1 case, an uncle; throat: 1 case, a father; nose: 1 case, a grandfather; and stomach: 1 case, relationship unknown. In 10 cases the locality of the disease is not given—it occurred in 2 mothers, a grandmother, a brother, a sister, an uncle, and 4 aunts. The preponderance of females to males in this series is very large, being as 31 to 7. The number of cases of carcinoma uteri is also remarkable and suggests more than accidental coincidence, but the total number of cases with family history of cancer is not large, being under 19 per cent. It is worth noting that in all these patients the existence of a family history of phthisis has also been inquired into and has been found in 27 per cent.

The value of hysterectomy.—With regard to this point it is still necessary to go to the Continent for statistics of any magnitude. The number of cases in many London hospitals where the operation has been performed sufficiently long ago to be of value as regards ultimate result is comparatively small, and many patients seem to have been lost sight of. In published records I have found no larger series than twenty cases, and in many of them several were only recent operations when recorded. On the other hand, as is well known, many French and German surgeons have published series of cases extending over many years where nearly all the patients have been kept in view after their operation. Krukenberg[6] has published 235 cases, Münchmeyer 80,[7] Richelot 68,[8] and many others equally large numbers. At the New Hospital for Women there have been 18 cases of vaginal hysterectomy for malignant disease of the uterus up to March, 1896; these were mostly cases under the care of Mrs. Scharlieb. In 1893 there were 5 cases; 2 died after the operation, 2 remain cured (a case of carcinoma cervicis involving both lips and a case of carcinoma corporis), and 1 recurred (a case of carcinoma cervicis with slight infiltration of the vaginal wall). In 1894 there were 5 cases; of these 2 were for sarcoma, 1 died (an advanced case with considerable infiltration), 2 remain cured (a case of spindle-celled sarcoma and a case of early epithelioma cervicis), and 2 recurred (a case of sarcoma and one of epithelioma with slight infiltration of the vaginal wall). In 1895 and 1896 there were 8 cases; one was sarcoma, 5 remained cured (carcinoma corporis; nodular growth on the cervix with another nodule at the internal os; squamous epithelioma with moderately deep ulceration; carcinoma of the cervical canal; and early carcinoma of the cervix); and 2 recurred (a case of sarcoma and one of advanced squamous epithelioma). In this series, therefore, there are three deaths, five recurrences, and ten cures up to the present date. In the cases of recurrence the disease reappeared in all the cases within a year, and in all but one within seven months. Both the patients in the cases of sarcoma were dead within a year; the three patients suffering from carcinoma lived one and a half, two, and three years respectively. In 1894 Dr. Gow[9] published a series of 8 cases of vaginal hysterectomy with no death, and he has kindly inquired into their subsequent history at my request. Of these 8 two have been lost sight of; they were probably cases of recurrence. Three cases recurred (the first immediately—a case of lympho-sarcoma who died in five months; the other two were cases of advanced carcinoma cervicis recurring at a few weeks and eighteen months respectively; one is a case of probable recurrence (this was a case of carcinoma affecting the whole canal; the patient remained quite well for three and a half years; then a suspicious nodule was found over the sacrum, which showed a tendency to grow). Two remain cured (one certainly a case of carcinoma of the whole canal; the other a case of carcinoma corporis, was well when last heard of. Both were operated on four years ago). In this series nearly all the cases are of columnar celled carcinoma; in the former there were a considerable number of squamous-celled epithelioma—viz., two among the cures and two among the recurrences. The case of sarcoma showed the same rapid course as in two of Mrs. Scharlieb's patients.

[6] Zeitschrift für Geburtshülfe und Gynäkologie, vol. xxiii., p. 94.
[7] Ueber die weite Verwerthung und die Endresultate der totalen Extirpation des Uterus an der Königlichen Frauen-Klinik zu Dresden. Archiv für Gynäkologie, 1889, p. 424.
[8] L'Hystéretomie Vaginale (Paris, 1894). Derniers Résultats de l'Hystéretomie Vaginale. Union Médicale, 1895, p. 541.
[9] The Practitioner, 1894, p. 161.

With regard to the degree of malignancy of the different varieties of carcinoma of the cervix Krukenberg gives the following returns. Of cases of early carcinoma of the cervical canal, 66 per cent. cures; superficial squamous epithelioma of the portio vaginalis, 63 per cent. cures; small cauliflower growth from portio vaginalis, 57 per cent. cures; advanced carcinoma of the cervical mucous membrane, 41 per cent. cures; carcinoma of the cervical wall (? glandular), 40 per cent. cures; large cauliflower growth from portio vaginalis, 37 per cent. cures; and deeply ulcerating squamous epithelioma, 20 per cent. cures. This is certainly a high percentage of cures. The proportion of cures to recurrences recorded by various surgeons is as follows: Fritsch, 60 cases, 47 per cent. cures; Leopold, 80 cases, 56 per cent.; Mangiagalli, 83 cases—advanced carcinoma 20 per cent., and early carcinoma 50 per cent.; Krukenberg, 197 cases, 41 per cent.; Hofmeier, 60 per cent.; Schauta, 47 per cent.; Schroeder, 20 per cent.; Olshausen, 41 per cent.; and Richelot, 40 per cent. The number of cases from which these latter percentages are drawn is not given.

In these statistics only cases operated on over a year previously are included; cases of death from operation are left out of account. The general average amounts to 41 per cent. cures. The percentage of cures must vary considerably, as is shown in these figures, according to what different operators consider the limits of operation. Some of the surgeons mentioned above regard fixation of the uterus as a contra-indication in all cases; a good many operate in spite of some degree of fixation, and this on two grounds: some because they maintain that the fixation may be due to inflammatory thickening, and that it is impossible to diagnose this with certainty before operation, and others because even if the disease has spread beyond the uterus they still aim at removing it entirely. But there are few among the names cited who operate under the latter condition, at least if it is known beforehand, and none, I believe, who favour the wider operations of Kraske, Mackenrodt, and Zuckerkandl.

Table V. shows the date at which recurrence occurred in 189 cases gathered from different sources. It will be seen that 140 cases recurred during the first year—that is, 74 per cent. nearly; during the second year 25 cases, or 13 per cent.; during the next three years the number is small, but remains nearly equal, and even between five and six years after operation there are three cases of recurrence. It is evident, therefore, that when the first year has passed the chance of recurrence very much diminishes, but it is impossible to say when it disappears, if, indeed, it ever does so. These tables include many cases which had only been operated on one or two years before publication, so it is evident that the true percentage of late recurrences is not given. The cases of late recurrence are certainly very curious and are not a pleasant fact as regards the prognosis after vaginal hysterectomy. Among Dr. Gow's cases there

TABLE V.—*Showing Date of Recurrences after Vaginal Hysterectomy.*

Cases cited by	Total.	Under 6 months.	½ to 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 6 years.
Duhrssen	18	9	4	1	—	2	—	2
	23	17	2	—	—	—	4	—
Richelot	11	3	4	2	1	—	—	1
Terrier and Haltmann	14	7	2	2	1	2	—	—
Tanner	40	16	11	10	1	1	1	—
Krukenberg ...	83	65		10	5	2	1	—
Totals	189	140		25	8	7	6	3

TABLE VI.—*Date of Recurrence in 57 Cases of Supra-vaginal Amputation.*

Total.	Under.	1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 6 years.
57	—	29	10	5	5	3	—

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is probably one—the patient who remained well for nearly four years and then developed a nodule in the hollow of the sacrum. Among a series of four cases which Dr. Cullingworth published in 1890, and in all of which the subsequent history has been followed,[10] there is one that is interesting from this point of view. The patient was forty-seven years of age; vaginal hysterectomy was performed for columnar-celled carcinoma of the cervix. She had perfect health for nearly two years and then developed symptoms of intestinal obstruction. Colotomy was performed, but the patient died two weeks later. Post mortem two inches of small intestine were found embedded in the scar, and one gland was found to be infiltrated with carcinoma. This case is interesting for two reasons: first, as showing a condition which would have doubtless made it ultimately one of recurrence; and, secondly, as illustrating a possible danger as an after result of vaginal hysterectomy, which is sometimes overlooked.

It will be seen that in the preceding paper an attempt has been made to bring forward certain facts concerning carcinoma uteri. Some of the points investigated have given negative results, in others the data are scarcely large enough to justify any definite conclusion, but each year will produce better material and more evidence as to the value of hysterectomy in malignant disease, and I hope to continue the study of this interesting subject.

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REMARKS AND SUGGESTIONS WITH REGARD TO DISINFECTION OF CLOTHES BY HEAT.

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PROBABLY anyone connected with public health work will readily admit that the sanitary control over an infectious disease such as scarlet fever in rural and the smaller urban districts is in the highest degree unsatisfactory. There are obvious difficulties in the way of compulsory removal under a magistrate's order to the cottage isolation hospital probably several miles distant, and in a labourer's cottage or small farmhouse isolation during desquamation is never carried out. When desquamation has ceased the most obvious factors in the dissemination of the disease are (1) the house; (2) the person; and (3) the patient's clothes.

To artificially disinfect a house may be theoretically possible, but from a working point of view the thing is an impossibility. Complete personal disinfection is probably quite attainable, but seldom or never attempted, outside the walls of a well-organised fever hospital, and it is a matter worthy of consideration whether a sanitary authority ought to allow a child to resume school attendance unless the naso-pharynx and auditory meatus have been sprayed or irrigated with some antiseptic solution. Complete sterilisation of clothes can be made an absolute certainty, but we are usually content to advise people to boil and wash infected clothes and our advice is hardly ever honestly carried out. If the disease spreads we tell our district councils that they must expect dissemination in the absence of a portable steam disinfector, the price of which is generally quite sufficient to check any budding enthusiasm on their part. We attempt to eliminate factor No. 1 for the sake of appearances, I suppose, but Nos. 2 and 3 we leave entirely to chance.

My object in this paper is to point out a cheap and easily attainable method of disinfecting clothes by steam, and before doing so I venture to think that a few observations on dry and moist heat will not be out of place. The following facts are probably already well known to the majority of the profession, but have not, I believe, been digested to the extent of their general application to every-day efficient use.

Dry heat.—"For the complete destruction of organisms in the absence of spores exposure to dry heat at a temperature of 120° C. for at least an hour and a half is necessary. Koch found that spores of anthrax required for their destruction dry heat at 140° C. maintained for three hours" (Pearmain and Moor). Ransom's dry heat apparatus is usually worked at 124° C. for two, four, or eight hours; any higher temperature than this gives rise to the danger of scorching cotton and woollen goods. Dr. Whitelegge experimenting with this temperature found that a thermometer placed beneath only two layers of blankets after eight hours registered 110° C., which is 10° C. below what is necessary to destroy organisms without spores and 30° C. below what Koch found necessary to destroy spores of anthrax. Dry heat acts by conduction and therefore makes its way through an object very slowly; consequently, the temperature of the inner portions of a woollen fabric may be comparatively low, while the outer portions are scorching, Stoves and hot ovens are therefore not only injurious but useless for the purpose of disinfecting clothes.

Moist heat.—"All pathogenic organisms as yet isolated are killed, when free from spores, by moist heat at 60° C." "Spores of most of the pathogenic bacteria are quickly killed by a very short exposure to moist heat at 100° C." (Pearmain and Moor). Under the ordinary pressure of the atmosphere water boils at 100° C., and the steam given off is at the same temperature. On meeting with an object a fraction of a degree cooler than itself this saturated steam is condensed, and the water which is formed remains at 100° C. so long as there is any uncondensed steam present. If water is boiled under pressure—e.g., of 10 lb.—boiling does not take place until the temperature has reached 115° C. The steam given off is then at 115° C. and is saturated at that temperature, and condenses when it comes into contact with an object a fraction of a degree cooler than itself, the water of condensation remaining at 115° C. "Saturated steam, when it penetrates into the interstices of a body at a lower temperature than itself, such as a blanket or coat, undergoes condensation into water, then occupying only a very small fraction of its former volume. To fill the vacuum thus formed more steam presses forward in its turn, yielding up its latent heat, and becomes condensed, and so on until the whole mass is penetrated" (Parsons). Condensation, therefore, of steam at 100° C. is the essential point in the disinfection of clothes by this method. If, on the other hand, saturated steam—e.g., at 100° C.—is conducted into a chamber heated up to a higher temperature—e.g., 115° C.—it rapidly runs up to that temperature, that is to say, it becomes superheated, and before condensation can occur it must meet with an object a fraction of a degree below the temperature of the boiling water from which it originated, in this case 100° C. Superheated steam is therefore practically the same as dry hot air at the same temperature; and dry heat, we have already seen, is not only useless but injurious.

The inefficiency of superheated steam depends upon the following fact. If ordinary steam at 100° C. is admitted into a chamber (containing clothes) heated up to 115° C. no condensation occurs on the outer layers of these clothes, for the simple reason that the outer layers have become heated above 100° C. Therefore, no germicidal action takes place. When, however, the steam penetrates further into the fabric it meets with a temperature below 100° C., and then condenses. Consequently the inside is sterilised while the outside is not. Esmarch was the first to clearly demonstrate this. In his experiments with superheated steam he found that anthrax spores were destroyed in one minute and a half inside the folds of a blanket where the temperature was 100° C., while those on the outside of the same blanket were not destroyed in twenty-two minutes, although the temperature had reached 140° C. Dr. Parsons found that anthrax spores were destroyed by exposure to steam at 100° C. We may therefore conclude that the greater uniformity of temperature of steam under pressure in all parts of the disinfecting chamber causing increased rapidity of penetration, and not the fact of the temperature being over 100° C., must be the reason for the greater efficiency of the expensive high pressure apparatus for purely disinfecting purposes; at the same time the higher temperature in the fabric operated on would cause more rapid re-evaporation of the condensed steam on the removal of the material from the chamber, and hence greater rapidity in drying.

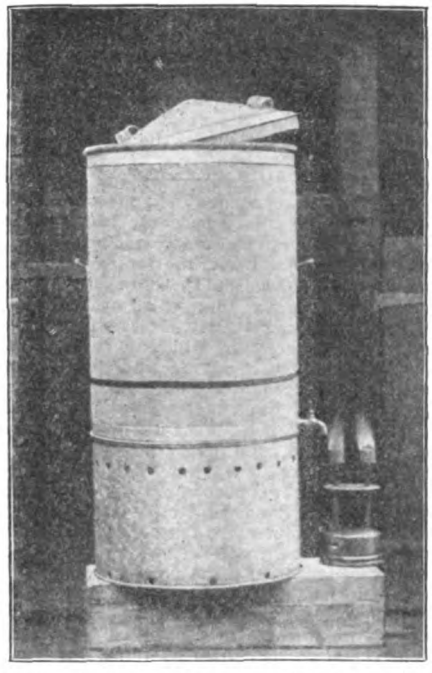
Koch concluded from the result of his experiments that exposure to a current of steam at 100° C. was the most satisfactory method of disinfection, and Dr. Parsons, in his report to the Local Government Board on "Disinfection by Heat," after giving in detail the results of his experiments on sterilisation of anthrax spores and tuberculous pus by steam at 100° C. states that it may be considered to be established that

[10] Transactions of the Obstetrical Society, 1893, p. 25.

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the complete penetration of an object by steam heat for more than five minutes is sufficient for its thorough disinfection.

The apparatus which I have designed and which has been admirably constructed by Messrs. Bailey Brothers, of Epworth and Bawtry, will be easily understood by a glance at the accompanying illustration. Circular in shape and



made of galvanised iron it measures 4 ft. in height, with a diameter of 21 in. A portion of the height (2 ft. 10 in.) is taken up by the chamber and the lid, which are separated from the pedestal immediately below the level of the tap. Six inches above the tap will be seen a black line which corresponds with a removeable perforated false bottom in the interior. Above the false bottom is the disinfecting chamber; the space below is the boiler. The pedestal is 14 in. high. The chamber and the lid are covered with felt, and the lid is perforated at the top to allow of the slinging of a thermometer and the escape of steam, and by means of a simple contrivance the junction of the lid and chamber is made almost completely steam-tight. The heating power within the circle of the pedestal is derived from an "intensive oil furnace," which throws out an immense heat by means of volatilised petroleum. This heating arrangement (for the suggestion of which I have to thank Mr. Alfred Bailey) does away with all difficulty connected with the construction of a light, portable disinfecting apparatus. The whole thing, lamp and all, weighs only 54 lb. and costs less than a penny to work for one hour; and even when it is full of blankets and clothes the temperature in the middle of them reaches 100° C. in half an hour from the time of the water in the boiler being cold. I find that an inch and a half of water in the boiler is more than enough for one disinfection.

When the clothes are removed they ought to be immediately shaken in the open air and then freely exposed on a clothes line for half an hour, at the end of which time they will be found to be practically dry. This apparatus, which has been adopted by my sanitary authority, can be carried about in a trap with perfect ease, and can of course be enlarged to any extent on the same model with a corresponding increase of heating power.

Epworth, Doncaster.

BUILTH COTTAGE HOSPITAL.—The new cottage hospital for Builth was opened on Nov. 3rd. The chairman of the building committee stated that the late Mr. John Davies, of Wyeside, had bequeathed £6000 to build and endow the institution, and added that the committee had expended £2600 upon the hospital, leaving an endowment of over £3000, but as this was insufficient they appealed for further funds from the inhabitants.

ON POOR-LAW MEDICAL ECONOMICS.[1]

BY THOMAS M. DOLAN, M.D., F.R.C.S. EDIN., J.P.,
MEDICAL OFFICER, ST. LUKE'S HOSPITAL, HALIFAX.

THE title of my paper will, I hope, be justified when I have read the paper. It was suggested that I should write on Poor-law Medical Adminisratiton; but the medical officer is only an adviser, and I have always steered clear of attempting to usurp the position which belongs to you. You will therefore understand that I confine myself still to the same *rôle*, that I simply throw out suggestions or ideas (or shall I say ideals?) on Poor-law medical requirements, while dwelling strongly on general principles which strike me, as a medical man, as applicable to the great problems you have to deal with. I draw, too, on my experience—a ripe one, extending to nearly thirty years in the service.

You all recognise the grave responsibilities and serious duties which fall upon you as guardians in the matter of medical relief—duties and responsibilities which are increasing rather than diminishing. You are discharging in this country duties which in my travels in Germany, France, Austria, and Russia I find are undertaken by the municipalities or corporations. You have medical charge of infants and children, you have hospitals for the sick poor suffering from acute diseases, whilst you also make provision for the incurable, the infirm, the dying, and the aged. And you have also lying-in wards, so that your medical field is all-embracing. You have a large staff of medical officers, nurses, as well as other necessary officials, and your expenses are great, so that economics are worth consideration. It is an old electioneering cry, "Economy with efficiency." Nothing can be truer when applied even to medical relief. For the effective relief of sickness it appears to me that the only true economy is to provide adequate medical aid. If you accept this principle, as it has been accepted by the Bradford guardians, by the Leeds guardians, by the Halifax guardians, my task will be simpler. It is because you believe that the sick poor for whom you are responsible are entitled to fresh air, good baths, skilled nursing, sufficient and unfettered medical attendance—just as the sick poor have in your noble charities depending on voluntary aid—that you have erected hospitals, built nursing homes, increased your hospital medical staff, and generally increased your first expenditure. Effectual medical aid for grave diseases can only be given under suitable conditions.

How does my paper apply? I will come to the heart of the question. Is it economical to supply trained nurses, give good food, increase the staff of medical men, and generally carry on your hospitals on the most improved principles? I will try to answer this, briefly dwelling on a few principles of economy in relation to labour and the working classes.

We have in England, as they have in other countries, a large number called the proletariat—viz., those who give to the State only children and their work. Their economic conditions are such that, provided work be found for them, they are able to live, saving something; but if sickness comes on, bringing with it loss of work and the expenses which sickness entails, this class is at once plunged into poverty. Disease does come, owing to the environment and nature of the work. The unskilled labourer who works in the open air is liable to pleurisy, pneumonia, bronchitis, rheumatism, heart-strain, and many other diseases, whilst he is also liable to injury and to ulcers of the legs from collision with fragments of stone, wood, &c. Now, neglect in many cases of sickness will convert a simple injury into a serious one, and acute disease into a chronic one, with a corresponding drain upon any revenues supplied by private beneficence or public charity.

Early help in sickness is invaluable. This does not merely consist in sending a medical man who gives a bottle of medicine; we now understand that medical relief comprises more than this. I do not undervalue medicine, but other things than medicine are wanted in every case of sickness. What are the requirements? Pure air, pure surroundings, food to build up tissue, and, above all, intelligent application of medical principles which the nurse gives. The consequence is that

[1] A paper read at a Conference of Yorkshire Guardians at Leeds on Nov. 12th, 1897.

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under such conditions disease is cut short, the period of absence from work is lessened, and the expense of maintenance is diminished. I know this from experience. I have had this economic subject under my eye for the last five years, and I have no hesitation in saying that, at the Halifax Union Hospital, the period of sickness or detention in hospital has been materially cut short in all those diseases which are curable, and in that special class of diseases from which the outdoor worker suffers. Time will not allow me to dwell too long on this point, but I give you three classes of cases:—1. *Ulcers of the legs:* You will find in all your union hospitals numbers of cases of ulcers of the legs which incapitate men from working. These men may remain in hospital for years, but under efficient nursing they are quickly cured. 2. *Pulmonary affections:* This class also gives us patients at all times of the year who are improved by treatment and discharged to work again. 3. *Cardiopaths:* A large number come annually under treatment who are much benefited.

The duration of stay in hospital will afford a valuable index as to the efficiency of your hospitals, and especially cases by our nurses. They are disappointed if the patient remains in a long time—it is a kind of personal reflection; and this is the spirit we desire to encourage in the interest of the patient and of the ratepayer.

Now another economical question comes in here. If you want your nurse to do her work efficiently it is necessary to provide for her suitable accommodation, good food, regular work but relieved from monotomy, and an annual holiday, for nursing work is exhausting. The food of the nurses may be economically managed, even though you do not adhere to a rigid dietary of "beef and mutton" varied by "mutton and beef."

I pass on to the question of hospital dieting. Your medical officer may very materially increase your annual expenditure, and hospital economics are well worth his consideration. Hospital dietaries vary; there is no uniformity; it may not be desirable. I think we do owe to the ratepayers and to our boards some regard to the expense. I believe we do recognise it. I submit to you two sets of diet tables—one from Halifax, the other from Cardiff:—

I.—DIET TABLE, ST. LUKE'S HOSPITAL, HALIFAX.

THOMAS M. DOLAN, M.D., *Medical Officer.*

Cost per week.	No. 1. 2s. 3d.	No. 2. 3s. 5¾d.	No. 3. 1s. 11½d.	No. 4. 2s 5d.	No. 5. 2s. 5½d. 2s. 3½d. 2s. 2½d.	No. 6. 3s. 9½d.	Remarks.
Breakfast ...	6 oz. bread ½ oz. butter 1 pint coffee	6 oz. bread ½ oz. butter 1 pint milk	6 oz. bread ½ oz. butter 1 pint coffee	6 oz. bread ½ oz. butter 1 pint tea	6 oz. bread ½ oz. butter ½ pint cocoa	6 oz. bread 1 pint milk	—
Dinner	3 oz. meat 4 oz. rice 2 oz. bread 4 oz. potatoes	4 oz. cooked meat 8 oz. potatoes	8 oz. pudding ½ pint beef-tea 2 oz. bread	4 oz. cooked meat 8 oz. potatoes	8 oz. fish 4 oz. bread or 8 oz. potatoes 4 oz. chop or 2 eggs 8 oz. rice pudding	4 oz. bread 1 pint beef-tea	Green vegetables occasionally when in season.
Tea	6 oz. bread ½ oz. butter 1 pint coffee	6 oz. bread ½ oz. butter 1 pint milk	4 oz. bread ½ oz. butter 1 pint tea	6 oz. bread ½ oz. butter 1 pint tea	6 oz. bread ½ oz. butter ½ pint tea	6 oz. bread 1 pint milk	—

II.—DIET TABLE, CARDIFF UNION HOSPITAL.

ALFRED SHEEN, M.D., *Medical Officer.*

Cost per week.	No. 2. 2s. 9d.	No. 3. 2s. 7½d.	No. 4. 2s. 2d.	No. 5. 2s. 5d.	No. 6. *	No. 7. 2s.	Remarks.
Breakfast, 8 A.M.	6 oz. bread ½ oz. butter 1 pint tea	8 oz. bread ½ pint milk	—	4 oz. bread ½ oz. butter ½ pint cocoa	6 oz. bread ½ oz. butter 1 pint tea	6 oz bread 1 pint gruel ½ pint milk	—
Dinner, 12.30 P.M.	6 days. 4 oz. cooked meat 12 oz. potatoes Tuesday. ½ pint pea soup 4 oz. bread	2 oz. bread 1 pint beef-tea	Daily. 8 oz. bread 2½ pints milk	3 oz. cooked meat 8 oz. potatoes	8 oz. potatoes 6 oz. fish or 8 oz. potatoes 4 oz. chop 4 oz. bread or 2 eggs rice pudding	Same as house diet	—
Supper, 6 P.M.	6 oz. bread ½ oz. butter 1 pint tea	3 oz. bread 1 pint milk porridge	—	1 pint milk porridge 4 oz. bread	6 oz. bread ½ oz. butter 1 pint tea	—	—

* Cost with beef-tea, 3s. 9d.; with chop, 2s. 10d.; fish, 3s.; eggs, 2s. 8d.

if you confine your observations to acute diseases. The chronic cases are also much ameliorated by efficient nursing and liberal dietary, and a large number are sent out recruited for summer, spring, autumn; probably some come in again during the winter months. The trained nurse will not allow "loafers," of whom there are so many to be found in union hospitals. She is anxious to get her patients well, and nothing can equal the painstaking work done at St. Luke's Hospital, Halifax, in regard to acute disease and surgical

I have estimated, as you see, the cost of these dietaries per week, and one cannot go very far wrong with those dietaries which are made by me the basis of food-treatment.

The sick are placed on one of these scales, but this has to be supplemented and varied, and does not adequately represent all the cost per week. Herein comes waste. The patient is by right entitled to some form of diet, representing so much bread, so much meat, so many potatoes, so much milk, which is drawn each day whether the patient can eat

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it or not. Here there is room for reform, but I am not prepared with a definite scheme. We have recognised it, and our superintendent has tried to grapple with it in one or two ways. Extra bread is given to those who can eat it between meals from what is left, but it is made more appetising by a little jam or marmalade. Meat left over is made into little hashes, whilst spare potatoes are always used in some little dish. You know from your experience of your union hospitals that the sick cannot eat each day the diet on their bed-cards, but you must have a diet scale, and this must be drawn daily, otherwise the patient will complain. This is one part of Poor-law economics upon which collective wisdom may throw a light.

The dietetic question presents another aspect in reference to the use of stimulants. My rule is the same that I employ with my private patients. I order stimulants, but not in a routine way. Beer is rarely given, never *pro formâ*. Other stimulants are given in medicinal doses, in *ounces*—so many tablespoonfuls so many times a day. I have fully considered this question in all its bearings. I admit that there are many who are brought to the union hospital through drink and improvidence therefrom, but they do not amount to 18 per cent. My statistics on this point agree with those of one of the greatest observers of the habits of the very poor—viz, Mr. Charles Booth—who, inquiring into the condition of 4000 of the submerged, found that of those reduced to poverty 4 per cent. were loafers, 14 per cent. were addicted to drink, 27 per cent. were poor through illness or had been the victims of misfortune, and 55 per cent. were thrown out of employment. So that this reason cannot be legitimately urged—viz., that for the benefit of the 18 per cent. we should penalise the 82 per cent. whose illness may be due to legitimate causes. I admit that the medical officer should exercise vigilance over the use of stimulants, but his hands should not be absolutely tied.

Before passing from the environment of the hospital, where nowadays the sick poor are humanely treated, where dietaries and nursing are ample and where medical aid is of the most effective kind, I might add one or two words on the humanising influence of the nurses, on the healthy influence they exercise on their patients—influences which have to my knowledge extended in many cases outside the hospital walls, leading to a return to better ways on the part of many men and women. We cannot measure in money weight human sympathy or the kindness or devotion to work on the part of the nurses, but yet I venture to say it has to be reckoned with as a great economic force. I also cannot but think that the personal visits of the guardian who disinterestedly and kindly interests himself in hospital work, visiting the wards, encouraging all by his words, lifting the fallen, reproving maybe, but sympathising with deserving objects of charity, must also have a high economic value.

The sick poor who are admitted to the modern union hospital are more fortunate than those who remain outside in their own homes, and my final words will be briefly devoted to outdoor medical relief. The same principles are applicable. Effectual aid is equally desirable. Is it available? You have a large staff of medical officers who are engaged to attend the outdoor poor at their own homes, to give not only first aid, but to attend in prolonged and serious cases of illness. If we look at the economical conditions of this staff we shall find that the principle of economy is very manifest. Medical officers are appointed who have large, sometimes enormous, districts, who find their own medicines and appliances, and who are paid at such a scale that each visit is remunerated at a very low rate.

The old argument is used. The law of supply and demand comes in. If guardians can obtain medical men at such a price, why should they pay more? The answer is not for me to give; but I am anxious to direct your attention to some aspects of these appointments. Efficient aid is what is wanted. Neglect may convert a common cold into a serious illness. The medical officer who is called in ought, in order to complete his work, to be able to prescribe for his patient and also to order any necessary food. It appears to me that it must hamper the medical officer to find all necessaries out of his salary, and certainly as he deals with disease in the most unfavourable surroundings he requires other help. His medicine alone can do very little good unless supplemented by nursing in the houses of the poor. The outdoor Poor-law nurse seems to me a fitting complement to perfect the system. This nurse should visit all cases attended by the Poor-law medical officer, and give force to all the medical directions. She should supervise all removals to hospital, and she should assist in many other ways. I am not in favour of increasing the work of the outdoor medical officer by this—viz., by keeping cases out of the hospital under his care. No, I think that it is better to send into the hospitals all cases that require prolonged or careful nursing and good food. I very much regret to note that there is such repugnance to the workhouse hospitals, that patients remain out as long as they can, often without medical aid, and sometimes only enter to die, swelling the death-rate in our hospitals. The guardians also know that a number of patients are sent in who are approaching their end. It is difficult to know how to deal with this class of cases. In many instances it would be more economical to increase the outdoor relief for the few days such patients may live, besides being more humane. With outdoor nurses this would be possible. We cannot disguise from ourselves that there is, too, a repugnance to apply to the parochial medical officer. This feeling is laudable, but is a reflection on the system which ought not to exist at the present day when guardians are humanising their work. I do not want you to break down the barriers or to make it any easier to obtain *free* medical advice. No, but I do want to convince you that you ought not to give simply *cheap* medical advice; that as you are entrusted by the State with the relief of suffering amongst the poor, you should give effectual medical aid, and and that you cannot give effective aid without the best machinery.

Gentlemen, in conclusion I can only repeat that I am not a *doctrinaire*. I give you my views and suggestions for what they are worth. It needs great care in administering your Poor-law funds, avoiding parsimony as well as extravagance. There never was a time when the needs of the deserving poor were more carefully considered and relieved, and there is no country like England where the sick poor are so tenderly and devotedly nursed. Medical advice in sickness is the great question of the day agitating the philanthropists from one end of England to the other. All kinds of schemes have been formulated to grapple with sickness amongst the labouring poor; but I hold that with an efficiently organised Poor-law system no poor person should dread the approach of sickness, and that for medical aid in sickness there should be no stigma in accepting such aid from the Poor-law.

Halifax

PUERPERAL SEPTICÆMIA TREATED WITHOUT STREPTOCOCCIC SERUM; RECOVERY.

BY EUSTACE M. SWANWICK, L.R.C.P. LOND., M.R.C.S. ENG.,
PHYSICIAN TO HARTLEPOOLS HOSPITAL.

THE above title is used to compare the case with the very full and interesting account of a case of puerperal septicæmia given by Dr. Rawlings in THE LANCET of Aug. 7th last. As in Dr. Rawlings's case, so in mine, there is no account to offer in the way of bacteriological examination.

A primipara, aged twenty-three years, whom I was engaged to attend at the end of July, sent for me on the morning of July 14th, 1897. The labour began about 1 A.M. The head presenting in the third cranial position made the labour slightly less normal than otherwise it might have been. A small quantity of a mixture of chloroform and rectified spirit relieved the urgency of the pain and the child was born at 5.25 A.M. There was a slight perineal tear, hardly to be dignified by the name of rupture, as it did not seem to involve any muscle. Before each infrequent examination my hands were rinsed in a 1 in 1000 solution of perchloride of mercury and lubricated with carbolised vaseline. On completion of the third stage a soluble pessary containing ten grains of iodoform was passed high up into the vagina, a binder applied, and the patient was left feeling comfortable. About 10 A.M. the temperature was 99° F. and the pulse was 84; there was no pain or malaise. In the evening the urine was drawn off with a catheter, well washed in disinfectant. During the 15th the patient seemed to be going on well. On the 16th, at 12.30 P.M., the temperature was 100 8°; at 2.30 P.M. there were pains all over the head, back, and limbs, and a feeling of cold water down the back, but no full rigor; the

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pulse was 124 and the temperature was 104·6°. I gave a powder of fourteen grains of phenacetin and ordered seven grains to be given every four hours, a mixture containing acetate of potash and tincture of aconite, and an iodoform pessary to be introduced. There was no marked abdominal tenderness, but some tenderness of the fundus was present. Vaginal examination showed a slightly retroflected uterus with puffy cervix. There was no difficulty in reducing the flexion. No malodour was apparent in the scanty discharge. I called on the district professional nurse and asked her to administer night and morning an injection of *hot* solution of Condy's fluid and an enema of one pint of plain water, also hot. I diagnosed the case as puerperal influenza.[1] The tongue was of the influenza variety, moist and slightly furred. On July 16th, at 12.30 P.M., the temperature was 100·8°, at 2·30 P.M. it was 104·6°, and in the evening it was 103°. Subsequently the temperature was as follows:—

Date.	Morning.	Evening.	Date.	Morning.	Evening.
July 17th	101·0°	98·6°	July 22nd	99·8°	100·2°
,, 18th	100·0°	99·0°	,, 23rd	99·8°	98·8°
,, 19th	101·4°	103·4°	,, 24th	98·4°	99·0°
,, 20th	100·2°	102·2°	,, 25th	98·4°	—
,, 21st	100·2°	101·4°	,, 28th	98·6°*	—

* Became subnormal.

On the 17th and 18th she had nocturnal delirium and I prescribed 30 grains of bromide of potassium and one drachm of ammoniated tincture of valerian in two ounces of water; this was to be repeated night and morning when the restlessness was extreme. On the 19th she had diurnal as well as nocturnal delirium. On the 21st I gave her a sulphate of quinine and hydrobromic acid mixture. From the 16th to the 21st the pulse varied from 110 at first to 140; it was generally about 132. On the 22nd I reduced my visits to one each day and the nurse took the evening temperature. On the night of Aug. 26th–27th the patient had chills and pains all over. The temperature was 100·8°. No puerperal condition could be made out. I ordered the mixture of acetate of potash and aconite together with the phenacetin powders. On the 27th, at 10 A.M., the pulse was 108 and the temperature was 99·6°; at 10 P.M. the temperature was 102°. On the 28th, at 10 A.M., the pulse was 108 and the temperature was 99·4°; at 9 P.M. the temperature was 98·4°. On the 29th, at 11 A.M., the pulse was 72 and the temperature was 98°.

Remarks.—Owing to the preliminary diagnosis of influenza I was led to make inquiries about previous illness. The hypothesis is that if there is no influenza at the time of labour or delivery the puerperal trouble begins at the end of the fifth day; if the patient has influenza at the time of labour there is a respite for two and a half days, and the influenza then reappears, generally in a different form, and frequently in a puerperal form.[2] I found that the patient had had chills and pains all over on July 9th, and she had noticed that her feet were swollen on the 7th. The labour was before the expected time, a common occurrence in influenza, and began about 1 A.M. on the 14th. The temperature chart shows on the 16th the rise beginning about 12.30 noon and a high temperature by 2.30 P.M. Except for absence of streptococcic serum treatment I treated the case on general puerperal fever principles, keeping the parts disinfected by Condy's washes and iodoform, while I treated the fever as an influenzal condition, avoiding stimulants and narcotics at first. When the patient was nearly out of danger, and her sister was congratulating herself and me on her recovery, I told her they must look out for a recurrence of the attack in seventeen, thirty-five, or fifty-one days from the commencement,[3] but that if they let me know at once on its recurrence we should probably be able to cut it short in three days. The tongue at that period was of a distinctly influenzal character. Now seventeen days from the 7th, when she noticed her feet swell, brings us to July 24th, when the patient was weak but convalescent in bed; thirty-five days, to Aug. 11th, on which date no new symptoms occurred; and fifty-one days to Aug. 27th. On the night of the 26th the temperature rose to 100·8° and the case ran as described above. As these cases occur so frequently in a more or less distinct form one is disposed to look upon them as a puerperal catarrh of an influenzal nature. The deaths from them are rare if treated as a catarrh. Out of a very considerable number of such cases I can remember only once losing a patient, and I believe that was a case of true "puerperal" fever engrafted on the influenzal catarrh, due to want of cleanliness on the very unprofessional nurse's part and general inattention to directions, the patient from the beginning having to attend to most of her wants as best she could. I cannot call to mind any similar cases anterior to the influenza of 1889, when they became frequent. The milk-supply also is generally unaffected, and if there is any malodour about the discharge it is of a peculiar mousey nature, which I cannot call to mind as occurring in any other complaint. I saw my patient on Sept. 11th and sent her into the country. She nursed the flourishing infant until the middle of October. At this time the child was taken from the breast owing to the nervous condition of the mother, who is to-day (Nov. 16th, 1897) doing well.

There are so many points in common between Dr. Rawlings's case and the above, and the injections of anti-streptococcic serum were in his case, so ineffectual, that it is suggested that we have a catarrhal germ infection not of a streptococcic nature. If the relation of these cases make us all more careful in future to look for the streptococcus it will be the means of our learning to distinguish between the various forms of puerperal fever.[4]

West Hartlepool.

[1] Vide Dr. Gray's Influenza (H. K. Lewis), pp. 37 to 44.
[2] Op. cit.
[3] Op. cit.

A CASE OF ABSCESS OF THE LIVER; RUPTURE INTO THE LUNG; RECOVERY.

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FOR the notes of the following case I am indebted to Mr. Charles Lamplough, resident medical officer.

A man, aged thirty-five years, costermonger, was admitted to the City of London Hospital for Diseases of the Chest on Aug. 5th, 1897, complaining of diarrhœa and pain in the right side. He had never been out of England. His bowels had acted two or three times daily for two years, but with little or no abdominal pain or tenesmus, nor had he noticed any blood in the evacuations. He had had a slight cough for twelve months, and during the three months prior to admission he suffered from "shooting" pains down the front of the right chest, with shortness of breath on exertion. On examination the patient was found to be a well-developed man, though emaciated and anæmic. No jaundice was noted. He had a slight cough with scanty mucoid expectoration and complained of a sharp pain over the right lower ribs in front. The chest was of good shape and expanded fairly well and equally. Anteriorly there was comparative dulness from the lower border of the fourth right rib in the nipple line to two inches below the costal margin; behind, the percussion note was comparatively dull below the inferior angle of the right scapula. Over the dull area the breath sounds, vocal resonance, and fremitus were much diminished, though not entirely lost, but no moist sounds were audible, nor was the voice of ægophonic quality. The heart's apex beat was in the fourth left interspace half an inch "inside" the nipple line. The sounds were free from murmur, the pulmonic second sound being accentuated. The pulse was 92, regular, and of fair tension and volume. The abdomen was slightly distended and tympanitic, not tender, but very resistant. The lower edge of the liver could be indistinctly felt about two inches below the costal margin. The spleen was not palpable. The bowels acted two or three times daily, the stools being large, fluid, and very pale, containing no blood or mucus. The temperature varied from 99° to 101° F. daily. The diarrhœa, pain over the upper part of the hepatic area, the enlarged liver with great abdominal resistance, the diminution of breath sounds, and the slight elevation of the heart without lateral displacement towards the right, together with the remittent temperature, suggested the diagnosis of abscess of the liver. Three exploratory punctures were made into the lower part of the right chest over the painful area, but nothing excepting a little blood was withdrawn. The patient gradually became worse until Aug. 16th, when suddenly at about 3 A.M. he had a fit of coughing, lasting on and off for about two hours, during which he expectorated about six ounces of dark fluid,

[4] Compare also Dr. Groth's case in THE LANCET, Aug. 14th, 1897.

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of the typical anchovy-paste appearance; this was carefully examined by Dr. J. J. Perkins with a negative result, except that numerous torulæ were found. For the next ten days the man continued to bring up blood-stained purulent liquid, measuring about fifteen ounces daily and of a faint pinkish colour. During this period the temperature fell to subnormal, varying diurnally from 97° to 98°; the diarrhœa continued in spite of careful dieting and the administration of intestinal astringents and antiseptics. It was noticed also that the muscles of the right loin were much smaller than the corresponding muscles on the left side of the spine, though the former reacted equally with the latter to the faradaic current. This condition of the muscles, strange to say, seemed to give the patient no inconvenience in raising himself in bed.

After this the patient began to recover slowly, the expectoration diminished in amount, the cough became less troublesome, and the appetite began to improve. On examination of the chest the physical signs had also notably altered; the upper limit of dulness extended only to the sixth rib in the nipple line, though it remained high in the mid-axillary line, but again descended as it reached the spine, and the lower edge could now be felt just below the costal margin. On auscultation loud friction sounds with râles and rhonchi were heard over the fourth and fifth right ribs anteriorly. On Sept. 8th the patient had another sudden attack of coughing, and this time he expectorated several ounces of bile-stained fluid; excepting that his cough was rather more troublesome for the following fortnight, with an increase of moist sounds over the right lung, his condition was not materially altered. By Sept. 22nd the patient had ceased to expectorate bile-stained fluid, and from this time until his discharge, a fortnight later, his recovery was rapid and uninterrupted, his temperature again reached the normal level, the diarrhœa entirely ceased, the lumbar muscles recovered their normal size, and the patient gained 9 lb. in weight. The man left the hospital apparently quite well nine weeks after his admission and seven weeks after the date of the rupture of the hepatic abscess into the lung.

Remarks.—This very complete case is a good instance of a hepatic abscess occurring without any assignable cause. It also illustrates the fact that cases of abscess of the liver usually terminate favourably after rupture into the lung.

ON THE CLIMATIC TREATMENT OF PHTHISIS.

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A MAN who is phthisical, or in danger of becoming so, is sure to be recommended a change of climate; but the diversity of climates reputed to be useful to such a patient is at first sight very puzzling. He may be sent for a sea voyage or to an Alpine health resort, to a high and dry tableland or to a low-lying seaside place; and bracing and relaxing, hot and cold places alike, are said to be useful in this same disease. How, then, are we to account for this diversity? Probably in part by corresponding differences in the form of the disease and the constitution of the sufferers, but mainly by the essential climatic factors being comparatively few in number and climate itself but one out of many matters of importance.

We may disregard for the moment the actively inflammatory stages of the disease, which, being usually treated indoors, will do almost equally well in any climate. We may also disregard the advanced incurable forms, in which the utmost that can be done is to prolong life or to render it more supportable. Confining our attention to the places with an established reputation for the *cure* of phthisis we find that with much diversity of minor details they all agree in the possession of certain common characters which we are justified in regarding as the really essential features. 1. In the first place, all such health resorts have a pure air, unvitiated by decaying organic matter or by the impurities inseparable from a large and crowded population. 2. Their atmosphere is free from dust and smoke. Dusty occupations are a fruitful source of lung disease. The dust and smoke of towns are highly injurious to phthisical patients, both from their mineral and organic particles and from the pyogenic and other bacteria which they contain. Even country dust is hurtful, and the most successful health resorts for phthisical patients have a large proportion of grass land or large sheets of water which help to purify the air. 3. These health resorts have a fresh and bracing as well as a pure atmosphere. In the Alpine and hill sanatoria the air is cool even with a hot sun; in the high tablelands the dryness of the air makes it more bracing, while the mornings and evenings are cool and refreshing; by the seashore or on the ocean there is always a cool breeze to temper the noonday heat; so that they all agree in being more or less bracing. 4. But if these health resorts are breezy they must have abundant shelter, for strong winds are very bad for phthisical subjects, exhausting their strength, interfering with respiration, and increasing the risk of chills. Many of the more favoured places are protected against the colder and more boisterous winds by surrounding hills or mountains; in others the necessary protection is obtained by means of forests. 5. These health resorts are also alike in having sufficient fine weather to make it possible to live almost entirely out-of-doors. "If pure fresh air and plenty of it" be the best prescription for phthisical patients, an indoor life should be absolutely forbidden them. Many people are only out-of-doors for two or three hours out of every twenty-four, and spend the former in the vitiated air of towns and the remainder in close and ill-ventilated rooms. A scarcely perceptible breeze out-of-doors supplies a hundred times as much fresh air as enters an ordinarily well-ventilated room. It can therefore be readily understood what a powerful curative agent we have in an out-of-door life in a favoured country or seaside place, and how much depends on the manner of life. Sunshine is very helpful to the phthisical patient, not only because of its anti-bacillary properties, but also (and mainly) because of its stimulating influence on nutrition generally. On the other hand, if rain does not keep people indoors it is also advantageous, as it cleanses the air and lays the dust. Moderate atmospheric moisture is useful in soothing irritable mucous membranes, but it is apt to render warm places relaxing and cold and windy ones depressing. Some of the health resorts for phthisical patients are extremely dry, but others have a moist, cool, still atmosphere, while some are foggy and damp at certain seasons of the year without any very obvious injury to the patients. We may therefore safely conclude that a moderate proportion of wet weather is no serious disadvantage provided that it does not interfere with an outdoor life. Much may also be done by the provision of shelters in the open air to overcome such drawbacks. 6. Prevailing temperatures of themselves have probably only a secondary importance in the treatment of phthisis, as we find a great diversity in this respect among the different health resorts. Very cold places are depressing unless dry and free from wind. Very hot places are relaxing unless dry and breezy. The more robust patients do best where the air is cool and dry, with a fair range of temperature, while more delicate patients require a warmer air and greater equability, which is intelligible in the light of hydropathic analogies. The temperature to be chosen will depend in part on the original home of the patient. French soldiers from the north have been found to be especially liable to contract rapid forms of phthisis when brought to the warmer regions of the south.[1] According to Meissen, North German patients seldom do well at the Riviera; and English authorities agree that the records for English patients are not so good there as at some colder health resorts. Warm sunny lands are extremely pleasant and are very useful in tempting people out-of-doors; but where there are sufficient powers of reaction a colder climate is more likely to cure. There is a mistaken impression in certain quarters that an equable climate is essential to the cure of phthisis. But some of the most useful climates—such as those of the elevated tablelands of South Africa—are far from equable, owing to the extreme dryness of the air; while phthisis abounds in some which have a very small range of temperature. 7. But if a warm and equable atmosphere is not often advisable it is quite otherwise with warmth of soil. A warm, dry soil is essential to a health resort for phthisical patients. It has been clearly proved that phthisis is more common on damp soils and that efficient drainage has lowered the phthisical death-rate. A

[1] Colin: Phthisie Galopante, Paris, 1874.

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damp soil renders a place less bracing in warm weather, chills the patient in cold weather, and shortens the hours which he can spend out-of-doors. A dry soil, on the other hand, radiates warmth during the cooler hours of the day and helps to cure catarrh. The best soils for phthisical patients are well-drained rock, sand, or gravel. With rock, as with other impervious soils, it is of great importance to have a rapid slope and an efficient outlet for subsoil water. 6. The question of altitude depends on a somewhat different consideration. That it is not essential to cure is shown by the almost equally good results obtained from sea voyages. But there is no doubt that in a certain class of cases great elevation above the sea-level is invaluable in promoting the expansion of sound parts of the chest. Still, we should remember that altitude is only one of the factors of treatment at high levels, which also benefit by their pure bracing atmosphere, their freedom from dust and wind, their abundance of warm sunshine, and in many cases the numerous advantages arising out of systematic treatment in sanatoria. Where these other factors are present we may reasonably expect a large measure of success, even without the advantage of high altitude.

If these, then, are the essential features of a successful health resort for the cure of phthisis, the question arises whether it is necessary, as a rule, to send patients out of this country, and whether we might not find a number of suitable places within our borders which with proper management would do admirably for such a purpose. We cannot, it is true, find Alps on elevated tablelands within our borders; but all the other essential features are to be found in many parts of England, while there are many important advantages in treating the patient in this country. There are many places in these islands with an admirable soil and climate which if suitably arranged would do extremely well for the fresh-air treatment of phthisis. Nor is this merely my own opinion, for many of our leading specialists adopt the same view. The main drawback to the British climate is its large proportion of cloudy and rainy weather. But this is of comparatively little importance if suitable shelters are erected, as in most of the continental sanatoria. We have, on the other hand, a more equable climate than the continental health resorts, while the somewhat greater atmospheric moisture of our drier neighbourhoods would be an advantage in many cases. Some of the best continental resorts have by no means perfect climates. According to Hermann Weber, "There are no perfect climates for invalids A climate with constant moderate variations in its principal factors is the best for the maintenance of health. ..... Such are the climates of England all the year round, and they belong to the most health-giving in the world. ..... They are, it is true, not the most agreeable or exhilarating, but the brightest and most exhilarating climates—such as those of Egypt, Spain, Italy, Greece, Asia Minor—are not the best for health and longevity; they are in many respects inferior to those of England."[2]

If, then, our climate is not unsuitable, it may be asked why our results in the treatment of phthisis are apparently inferior to those of the foreign health resorts. Partly I believe because up to the present many of the best districts have been neglected, partly because we have not taken the trouble (as they do abroad) to correct the natural disadvantages of each place for this purpose, and mainly because our treatment has been adopted too late, has been too short and too much interrupted, and entirely wanting in that systematic attention to details which is found in continental sanatoria. It is, in fact, not so much our climate that is at fault as the use we have made of it. Our bracing places have been left without sufficient shelter against winds, our sheltered places are during part of the year too relaxing, many of our health resorts are too dusty in dry weather, while others are being spoilt by the growth of population and by unregulated building operations. We have, in fact, made no serious attempt to develop our country's resources in this respect and to treat the disease with the continuity which is essential to success. There is no place within these islands where adequate shelter has been provided in the open air for rest and exercise during rainy weather, so that the open-air treatment degenerates into the indoor treatment of phthisis. Although it is admitted that in no other disease does attention to details answer so well as in phthisis, we exercise no continuous supervision over the patient's food, his clothing, attention to the skin, rest and exercise, the ventilation of his rooms, and other hygienic matters which are at least as important as medicinal measures. And this is largely because of the absence of sanatoria for phthisis in this country, and the prohibitive cost, not to say the impossibility, of thoroughly treating the disease on a small scale. There is no place yet in England where the phthisical patient can live for a year or two, with specially arranged grounds and gardens, specially constructed rooms and shelters, and a dietary specially prepared to suit his needs and fancies, while his symptoms are watched from day to day and promptly treated by experienced specialist physicians. And if he does get these advantages under our continental brethren, what wonder if their results seem better than our own? It has been too long the fashion amongst the laity to regard a climate for phthisical patients as a thing mysterious and altogether unattainable in our own land, while they totally disregard the many incidental matters which contribute so largely to the result. If, then, we wish to make a fair comparison between English and foreign climates let us make the other conditions the same. Until this has been done we have no right to conclude that our climate is not adapted for the cure of phthisis. In some other respects the patient who is treated in England already has important advantages which would be sure to tell if more systematic treatment were adopted. He is saved a long and risky journey, remains within easy reach of friends and relatives, and is spared the home-sickness which so often affects the Englishman in a foreign sanatorium. He has the advantage of English nurses—far superior as a rule to the foreign ones—English sanitation, English feeding, and English medical men who understand English ways. At one far-famed sanatorium on the continent there are just two baths in the basement of an annexe which are considered amply sufficient for the cleansing of over 100 patients and a staff of 60, besides other equally striking examples of unsuitability to English ways. If, then, we were to combine the advantages of treatment in England with the systematic methods of the Germans, and transplant a sort of Brehmer-Dettweiler system with suitable modifications on to our own soil, there is little doubt that the results would be at least as striking as they have been on the continent. Owing to fever and other complications it is often undesirable even in an early stage of phthisis to send the patient far from home; the ordinary middle-class household is by no means an ideal place for such a patient and seaside lodgings are still less satisfactory. Even in the homes of the rich it is unusual to find suitable arrangements for such cases, while ordinary hydropathic establishments, being intended for widely different ailments, are quite unsuitable in many ways. A timely resort to a special establishment without the need for a long and fatiguing journey would very often preserve a threatened life, while it would in no way injure the family adviser. The need for such a sanatorium, especially amongst the middle classes, has been so often brought home to me in my professional work that I have for some time past been making preparations to start such an establishment in one of our southern counties if my professional brethren give me the necessary support; and with this end in view I have recently paid a visit to some of the continental sanatoria of the same kind.[3]

What should be the main features of an English sanatorium for phthisis and the methods of treatment I propose to discuss in a future paper.

Welbeck-street, W.

[2] Allbutt's System of Medicine, "Climate in the Treatment of Disease," by Hermann Weber and Michael G. Foster.

[3] See THE LANCET, Aug. 14th, 1897, "On Some German Sanatoria for Phthisis."

CHIPPENHAM COTTAGE HOSPITAL.—On Nov. 8th the foundation-stone of the Chippenham Cottage Hospital was laid by Lady Dickson Poynder. The hospital, which will supply a greatly felt want in the district, has been liberally subscribed to by the inhabitants of Chippenham. The gifts include £500 from Sir John Dickson Poynder, and the land for the site from Mr. Carrick Moore.

BRISTOL CONVALESCENT HOME.—At the meeting of the committee of the Jubilee Convalescent Home Fund, held in Bristol on Nov. 11th, it was announced that Mr. E. P. Wills had increased the value of his gift to the proposed institution from £10 000 to £20,000. Sir Greville Smith has also subscribed £2000. This will bring up the fund to nearly £80.000. Mr. Wills believes that in a city like Bristol the collection of £100,000 for such a purpose ought not to be a very difficult task.

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THE SEASONS AT THE SWISS ALTITUDES, AND WHEN TO SEND OUT PATIENTS.

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THE Alpine cure for phthisis, regarded not many years ago with incredulity or distrust by untravelled physicians, and hardly known to the great body of practitioners, is now generally accepted in this country; but a practical knowledge of its details has not yet extended for the majority beyond the initial stage in which it was first introduced to our notice. Meanwhile the subject has moved beyond a mere recognition of the fact that an Alpine winter is good for phthisis, and progress has been made both in the selection and management of cases. All cases are not suitable, and in a given proportion of them the responsibility of giving advice must remain an anxious one. It is probably exceptional in this country for phthisical subjects to take the decision into their own hands, as not infrequently happens abroad, and to proceed to Davos without medical advice or even in spite of it. Most patients sent out from England are fit subjects, but too often they do not avail themselves of their opportunity to the full extent under a mistaken idea that it must be winter before phthisis can gain any good in the Alps. This lessens the chances of recovery of so many that it is perhaps less of a presumption than of a duty to mention the impressions gathered during thirteen yearly visits to the Alps in winter.

If health were always the chief and only consideration a long unbroken residence in the high altitude would be the best form of treatment for nearly all sufferers from phthisis. It is, however, the smaller number only who choose to avoid the risk of losing ground again, which too often attends a return to England for the summer months. Still, the colony of permanent residents is a growing one, and it is among them that the most remarkable results are to be seen. They have experience of all the Alpine seasons, and are naturally, therefore, the persons best qualified to form an opinion as to their relative value.

Unfortunately home-sickness and the monotony of hotel life—from which those who occupy their own private homes in Davos are exempt—are important factors bearing upon the advisability of change; and they cannot be disregarded entirely, though some variety might be found within the Swiss altitudes themselves. The summer visit to England will therefore probably continue to be the rule rather than the exception for those who have wintered in the Alps.

It is for those whose illness comes under observation after the close of the winter season that a question arises which is not always answered in a sense conducive to their best interests. Ought they to be made to wait until the following winter? Such a course would mean for them the loss of a golden opportunity, that of applying the remedy at an early period of the disease. A moment's consideration will show that the influence of pure air and high elevation, which are the principal agents of cure, is not limited to the winter. If a summer spent in the Alps is the best of tonics for the overworked and jaded, could it possibly be detrimental to the phthisical? Experience shows that it is good for them; why, therefore, should they be deprived of this help?

As a fact, a climatic advantage is to be gained *at all seasons*, more marked it is true in winter, chiefly on account of the evils attending a winter residence in England, but not on account of any essential therapeutic inferiority of the Alpine summer. It cannot be too widely known that all seasons in the Alps are good for phthisis, and that as soon as a patient has been found fit to travel he cannot defer his journey without incurring a positive loss. A summer in the Alps is the best of all preparations for an Alpine winter. This is also the season of least risk for the invalid, when the journey can easily be so arranged as to break the suddenness of the change to a high elevation, which is always a source of some anxiety. In the depth of winter, too, the sudden change to an intensely cold atmosphere is not in itself desirable or always favourable. These risks are avoided by patients who take up their winter quarters before the weather hardens.

Cases must of course be dealt with on their individual merits and with due regard to all their circumstances, but it may be stated in general terms that the benefits of a residence in the high altitude are largely independent of the season of the year, and that the best time for each patient to start is the earliest that can be safely managed. The melting of the snow in spring and the uncertain and snowy days in the late autumn are the least desirable periods, but the newly arrived patient who spends them with open windows in his room or even, according to the rest-cure now in vogue, in his bed is better off than he would be in England and is turning time to the best account. I have sent patients to the high altitude at various periods in the year irrespectively of seasons without any cause for regret. As regards the flitting of the winter contingent I am in favour of an early rather than a late start, and of acclimatisation rather than of abrupt change in elevation and in temperature. What may be gained by patients going out early is best described in the words of a recent correspondent of mine, an old Davoser who in describing a patient says: "He like others was sent out late last year (the end of November) and thinks he never gained real good all the winter because he arrived so late. This year he asked no advice as to the date, but came early in September, and rejoices daily that he did so, as he has got on steadily and has come in for all this most perfect weather. We are having a record autumn. Our autumn is always lovely, though rarely so lovely as this. This is the thirty-first day of fine weather—days not to be described, sun ablaze all day, not a particle of moisture, no clouds, no wind, about 8 to 15 degrees of frost at night, making the days deliciously bracing, and yet they are warm, almost like summer at midday. Of these thirty-one fine days only three or four have been cloudy, but none bad. All this time in the lowlands, even up to two stations above Landquart, and almost everywhere in England, a damp raw mist prevails; and yet we hear from people in England that they are coming out here the end of November, but that they are advised not to come till then."

Curzon-street, W.

MEDICAL HÆMORRHAGE.[1]

BY FREDERICK J. SMITH, M.D. OXON., F.R.C.P. LOND.,
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THE term "medical hæmorrhage" is one which does not require much explanation. Bleeding is usually thought of, perhaps, as peculiarly the province of the surgeon but the instances are by no means few in which it forms a very important feature in strictly medical cases; and when it does thus occur it is so terrifying to the patient and causes such anxiety to the attendant medical practitioner that no excuse is needed for bringing the subject forward; it is imperative on us all to be as sure as possible of the ground on which we stand when attempting to control it. To give a clear idea of my meaning of the term I offer the following list of cases to which it is applicable. All intracranial hæmorrhages not due to violence; hæmorrhages appearing from the mouth or nose, as "spitting or bringing up of blood"; epistaxis of youth or old age; bleeding from spongy gums or pharyngeal varicose veins; aneurysm of the aorta; hæmorrhage from the lungs in bronchitis, pneumonia, phthisis, emphysema, malignant disease, &c.; hæmorrhage from the stomach or duodenum; hæmorrhages appearing from the anus either as blood or melæna, or in typhoid fever and other forms of ulceration—e.g., tuberculous or dysenteric; gastric hæmorrhage if not vomited; hæmorrhage from piles internal and external; hæmorrhages appearing from the urethra as blood in the urine; from bladder or kidney, from the vagina in women, metrorrhagia, menorrhagia, or post partum hæmorrhage; and subcutaneously—purpura, idiopathic or rheumatic, &c., and scurvy. A mixed class of cases is due to serious disease—leucocythæmia, acute yellow atrophy of liver, some other forms of blood poisoning, and hæmophilia. This list, probably incomplete, is sufficient to show how important and frequent is that loss of blood which may be termed medical and concerning the treatment of which I wish to mention a few points.

[1] A paper read before the Hunterian Society on Nov. 10th, 1897.

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The cases divide themselves very naturally into two groups—(1) those with some severe, perhaps even necessarily fatal, constitutional or general dyscrasia or diathesis; and (2) those without such concomitant. The first group, containing purpura, scurvy, hæmophilia, leucocythæmia, blood poisoning, &c., is perhaps the most interesting from the great obscurity of the pathology of any member of it, but to discuss it at all fully would occupy too much space. Suffice it to say briefly that in scurvy good and proper food is all important; in purpura, if of rheumatic origin, Dr. S. Mackenzie swears by turpentine; if due, as so many cases of mild purpura are, to a chronic lack of good nourishment, especially of vegetable origin, the remedy is tolerably obvious — to supply this want — and the cases get well as a rule; in severe purpura (so-called hæmorrhagica) and leucocythæmia treatment is of little avail, though the most hopeful would appear to be large doses of calcium chloride both internally and applied as a styptic; Professor Wright has shown that this, at any rate in hæmophilia, is of considerable service. But in all these diseases and others of the first class we are trying as far as possible to cure a tendency to bleed; it is comparatively seldom (and then the principles laid down below will apply) that the external appearance of blood is of such character or amount that we are called upon to check the bleeding itself, and it is to the immediate treatment of actual hæmorrhage that I wish to direct attention, commencing with the assumption that both the blood and the vessels are healthy in general with merely a local lesion of the latter, and proceeding more especially to the inquiry, what place, if any, have ergot and astringents in the treatment of the condition. My attention has been particularly drawn to the subject in consulting practice—the cases are of such a startling character as to naturally suggest a second opinion—and my almost invariable experience is that ergot has been freely administered directly any severe hæmoptysis or hæmatemesis has appeared. Now underlying this routine practice I am convinced that there is a serious fallacy.

The following is perhaps the most marked example I can produce, but it does not stand alone. I was called to see a man in consultation on a Thursday and found that he was suffering from a severe loss of blood by the mouth, he was so blanched and weak that I dared not make any careful examination to definitely determine the source of the blood, and for immediate treatment I do not consider this very important. The history given me by his medical man was that the hæmorrhage had begun on the previous Friday; ergotin had been injected subcutaneously on Friday, on Saturday, and on Sunday; on Monday the hæmorrhage had been more profuse and, notwithstanding the injections, had reached its acme on the Wednesday evening; when I saw him on Thursday morning he had brought up about an ounce of blood; in the evening of that day he brought up a little more; after this he had no return of bleeding and steadily improved—got well, in fact, as far as my present purpose is concerned. On talking over the case we agreed to omit the ergot and substitute for it a little morphia. So far and were this all the case against ergot would seem to be almost too simple, but there is a sequel to the event which complicates matters and which was, in fact, the cause of my determination to try to get the question discussed. The sequel was this: I wrote, as is my custom, to the medical man to inquire how the case had progressed. In his reply he mentioned the hæmorrhage on the Thursday subsequent to our consultation, but confessed that he had again administered an injection of ergotin, and wound up his letter: "I trust you will not be offended, as not even you will convince me that ergot will not stop bleeding from lung or stomach if it be given sufficiently boldly." I was certainly not offended, but I was led to think very seriously of our present problem.

The points in the argument stood and stand thus: Did ergot finally check the hæmorrhage? If so, why did it not check it sooner? Did it really increase the hæmorrhage in the first two or three days? or had it no real influence whatever? In any case, was it a matter of dosage? Modern pharmacology, as represented by Dr. Lauder Brunton (and, I might say, by all other authorities, for there is no serious discrepancy between them in the physiological action of the drug), asserts of ergot that it (1) stimulates the vaso-motor centre in the medulla and any other subsidiary centres controlling blood pressure, and thereby causes an increase in this pressure; (2) depresses the motor ganglia of the heart bringing about a slower and less powerful pulsation; (3) acts on unstriped muscular fibres causing their contraction and thus a diminution in the calibre of the arterioles; (4) has no effect in producing a coagulum in a blood-vessel; (5) is a direct emmenagogue and ecbolic; and (6) markedly increases the peristalsis of the bowel. There seems to be only one point of dispute amongst experimenters—viz., whether the universally admitted increase of blood pressure is brought about by direct action of the drug on the unstriped muscle of arteries, or whether it is indirectly due to stimulation of spinal and other vaso-motor centres, a point which I venture to think is immaterial for clinical purposes.

We are now in a position, so far as ergot is concerned, to discuss the second group of medical hæmorrhages, viz., those in which except for the local damage the blood and the vessels are in general fairly healthy, and where the arrest of bleeding is the immediate object of our therapeutical measures, which by assumption cannot include surgical ligatures or forcipressure. It is obvious at once that the blood must come from (1) an artery, (2) a vein, or (3) capillaries, and it seems to me that here in a nutshell lies the possible, if not probable, explanation of the variable effects of ergot and the real scientific clue to the principles which should guide us in attempting to control a hæmorrhage which is beyond the reach of strictly topical applications. If the bleeding be arterial I cannot understand how the effect of ergot can be other than to increase it; blood pressure is increased throughout the arterial system, the damaged artery must therefore feel it equally with the others for we have not even a suggestion that ergot can exert a selective action on particular arteries; if it does thus feel it, then from the very fact of its damage and laceration it must be less capable than before of restraining the outflow of blood from its lacerated extremity—the stream may not be so large but the force of current is greater, and hence the greater liability to wash away any clot that nature has formed; it must be remembered in this connexion that it is distinctly stated that ergot has no tendency whatever by its presence to promote clotting at the end of the vessel or in the extravasated blood. If, on the other hand, the blood comes from a vein or from capillaries it is easy to understand why ergot might be expected to act beneficially, by diminishing the flow of blood through arterioles to the damaged spot. If my steps in the argument are sound, it follows that we ought to try to determine whether it is arterial, venous or capillary hæmorrhage which we are attempting to arrest before we administer ergot. This we cannot expect to determine by the intermittence and jerkiness of the flow; we must judge by other considerations gleaned from clinical study and the facts of the post-mortem room. These help us materially, and I shall say a few words about them in connexion with one or two varieties of our second group of medical hæmorrhages. Before I do so I would like to consider what are the means other than ergot at our disposal in the treatment of the condition under discussion.

Rest.—Rest, complete and absolute, bodily and mental, must occupy the place of foremost importance. The need for rest of body by lying in bed is obvious to all; it requires no argument, nor need I mention the means for obtaining it. To secure mental rest and allay the terrible fright into which the sight of copious bleeding throws the patient is even more important; it is fright that depresses vitality and tends to kill its victim. We must first of all hide our own anxiety, for patients are quick to read the faces of those attending them, and, indeed, we usually need have none, for cases of hæmorrhage are either from the first obviously and hopelessly fatal, as ruptured aneurysm, for instance, when we have no time to show anxiety, or they are rarely fatal directly from the loss of blood. As for drugs, none that I am aware of, unless it be cannabis indica, can come near to opium in efficacy for the relief of mental terror. It has no specific effect on heart or vessels when given in moderate medicinal doses, but its value is incalculable, and when we see its soporific effect stealing over the patient we may confidently assume that danger has passed.

Cold and heat.—It is the fashion to place an ice-bag on the chest or abdomen when severe bleeding has taken place, but I have not seen the slightest reason for believing that it has any effect whatever in checking the hæmorrhage. It hinders sleep and rest and constantly reminds the patient of his peril, and should therefore be avoided.

Styptics and astringents.—Of these I would mention sulphuric acid, bismuth, chalk, lead acetate, iron perchloride,

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and tannic acid with the vegetable preparations that contain it, such as catechu, kino, hamamelis, &c. Any of them are extremely useful if they can be applied directly to the bleeding vessel—e.g., in gastric or intestinal hæmorrhage, but as indirect—i.e., after absorption—controllers of bleeding I believe them to be as useless or even harmful as ergot itself. Turpentine, too, must not be omitted, as from its volatility it may reach the affected area by inhalation, while iodide of potassium and purgatives are very useful adjuvants. Accepting this list as fairly representive of our armamentarium I will bring this paper to a close by a very brief sketch of the means I would propose to adopt in treating the individual cases of Group 2, mentioning the reasons deducted from post-mortem experience.

Cerebral hæmorrhage is almost invariably arterial, consequently I believe that ergot and its allies are contraindicated, rest is strongly indicated, and possibly purgatives and iodide of potassium may be given if further treatment seems desirable. The epistaxis of youth rarely requires more than the application of cold to the nose or sniffing up of powdered alum; that of age should not be too early interfered with as it forms a safety valve against intracranial arterial rupture; should it be too prolonged the local measures will again be useful, if also the patient be placed sitting upright with the feet and legs in very hot water, then plugging of the nares will be but rarely required. Pharyngeal hæmorrhage rarely requires any treatment, but the electric cautery may be applied if necessary. In hæmorrhage from the lung I believe that all our active efforts will have but little real effect. In bronchitis, pneumonia, and in the early stages of phthisis, the bleeding is rarely more than slight and will usually stop by itself if the patient be kept quiet in bed and his mind put at rest as to his danger; should it prove more profuse, in my opinion, opium must be pushed and iodide of potassium freely administered. It is in rare cases of emphysema and in the advanced cases of phthisis that we feel so anxious to employ more active measures. But post mortem we find that in such cases the bleeding is almost invariably arterial, and I must confess myself feeling very sceptical as to the value of any more active treatment which has been hitherto advocated. I feel that to bring and keep the patient well under the influence of opium with perhaps the inhalation of turpentine is as much as we can do, however distressing it may be to us to stand by and feel so helpless. I wonder whether artificial pneumothorax would be of any use.

In hæmatemesis we are more favourably situated and can adopt measures more actively and with greater hope because our drugs can reach the bleeding spot. In the young an ulceration into an artery is the almost universal causation of such trouble, and here the swallowing of ice or ice-cold water in small quantities or per contra (and better, I believe) hot water at 110° F. is very likely to be of use, while bismuth, chalk or strong solutions of tannin will very rapidly cause the formation of a plugging clot. Ergot in such cases I think worse than useless. In the hæmatemeses of older people there are two probable or possible sources for free bleeding: (1) an ulcer, chronic or malignant, in which the treatment just suggested is the best; and (2) a ruptured vein or capillary oozing from a cirrhotic liver. Here, in addition to the foregoing, ergot may perhaps be useful, though I would prefer to try free purgation.

In the hæmorrhages of typhoid fever, if profuse and accompanied by collapse and subnormal temperature, morbid anatomy has shown that an artery has always been ruptured. Such are I fear almost invariably fatal, but I believe that even here opium freely administered may save some lives. I would also give bismuth and liquid preparations of lead, though I doubt if they can reach the spot in time; ergot I feel sure must make bad worse. Slight hæmorrhage in typhoid fever I have been led to look upon as a favourable sign and one that does not require any active treatment beyond a little extra care in withholding food and seeing that the bowel is kept open. It is in all forms of uterine hæmorrhage that ergot finds its best and most correct application. On the grounds, firstly, that such hæmorrhage is almost invariably venous or capillary; secondly, that the mass of unstriped muscle in the organ is so large relatively to that in an arteriole as easily to overcome any extra arterial blood pressure.

To conclude a somewhat rambling and yet very condensed article, I would make four propositions for discussion:—1. That most cases of medical hæmorrhage cease spontaneously and are essentially not dangerous to life from loss of blood. 2. That active treatment by ice-bags and ergot frequently defeats its own purpose; if the bleeding ceases it does so in spite of treatment. 3. That where experience of morbid anatomy or the profuseness of the blood loss makes an arterial source certain ergot is distinctly contraindicated. 4. That complete rest, opium, and iodide of potassium are our most powerful and most trustworthy agents for the emergency, except in certain special cases—e.g., from stomach—where additional treatment by astringents should be applied.

Christopher-street, Finsbury-square, E.C.

CONCERNING THE ACTION OF X RAYS ON CULTIVATIONS OF TUBERCLE BACILLUS.[1]

BY FRANCIS POTT, M.D. BRUX.

THE treatment of pulmonary tuberculosis in man by means of x rays has been described by several experimentalists.[2] In the cases thus treated improvement in the state of the patient was ascribed to the curative agency of the x rays, but no sufficient proof of this action has been given, nor is there any indication of the manner in which the rays affect either the tubercle bacilli or the surrounding tissues. The experiments detailed below were undertaken with a view to ascertaining whether x rays inhibit the growth of or kill the tubercle bacillus. Preliminary experiments with x rays and glass test-tubes showed that different makes of glass were opaque to x rays in very different degrees. Soda-glass test-tubes with sensitive paper beneath them were exposed to x rays of the same intensity as those used in the subsequent experiments. Objects such as pins, keys, and chains were placed inside and underneath the test-tubes. The resulting skiagrams gave perfect pictures of those objects opaque to the rays which were inside and underneath the test-tubes, whilst the soda-glass test-tubes themselves were but faintly outlined at those points where the x rays had had to pass through the greatest thickness of glass. The slight resistance offered to x rays by thin soda-glass test-tubes was not considered to be sufficient to mar the value of the inference drawn from the following experiments.

Into twenty-five sterilised test-tubes glycerine agar-agar peptone was run and allowed to solidify in the position used for streak culture, so as to give a large flat surface. On April 21st, 1897, the agar in the tubes was sown with tubercle bacilli taken from a cultivation belonging to Dr. Arthur Ransome which had been obtained from University College Hospital and been shown to be pure and vigorous. The laboratory work was carried out by Mr. F. J. Tanner at Bournemouth. The twenty-five inoculated test-tubes were incubated at 37° C. for a month. By this time characteristic colonies of tubercle bacillus had developed in each of the tubes either as films, small colonies, or heaped-up masses. No growths other than tubercle appeared in the agar. The test-tubes were divided into sets of three and one set of four, numbered and lettered. One tube from each set was reserved as a "control," the remaining seventeen being exposed to the x rays. To ensure an equal distribution of x rays over each inoculated surface of agar the test-tubes were laid flat upon a horizontal rotary table with their closed ends converging to the centre of the table. This arrangement placed all the test-tubes well within the focal area of the Crookes's tube which hung above them, whilst it allowed the table and its load to be shifted around from time to time. Beneath the rotary table there was a space for the admission of a sensitive plate. To demonstrate that the x ray apparatus was working well at any moment during the lengthy exposure a sensitive plate was slipped into its place, exposed, and developed at once, producing a picture of the pins and metallic trifles which had been scattered amongst the test-tubes. The apparatus used for producing the x rays consisted of an induction coil giving a 5" spark, a ten volt accumulator, and several Crookes's tubes of modern pattern. These tubes were occasionally interchanged to rest them. At the

[1] A paper read before the Bournemouth Medical Society on Nov. 10th, 1897.

[2] Chapteloube and Descomptes: Archives d'Electricité Médicale, vol. v., 1897. Bergonié and Mongour: Académie de Médecine, &c.

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suggestion of Mr. Howlett, of Hull, damped wool was successfully used on the vacuum tubes to prevent sparking.

On May 23rd, 1897, the seventeen test-tubes containing the cultivations of tubercle bacilli were exposed to the x rays. The series of cultivations received exposures varying from half-an-hour to eleven hours. Two tubes were withdrawn from the area of the x rays at intervals of half an hour, one, two, four, six, eight, and ten hours, the remaining three tubes receiving the full exposure of eleven hours. During these eleven hours the control cultivations were taken out of the incubator and placed in a protected place at ordinary room temperature similar to that in which the experiments were carried out. At the conclusion of the experiments the whole number of cultivations was returned to the incubator.

During the first week of September, 1897, the cultivations were examined, a period of over three months having elapsed since they were exposed to the x rays. All the colonies of tubercle bacillus were found to be thriving. Differences in the rate of growth of the colonies were perceptible, both in those which had been exposed to the x rays and those which had been used as controls. These differences were only such as are usual in a series of agar cultivations of tubercle bacillus. In tube No. 16, which had been exposed to the rays for eight hours, the activity of the growth was remarkable, the colony of tubercle bacillus taking the shape of an acuminated corrugated mound with a base area somewhat larger than a threepenny piece. From this largest growth the colonies graduated downwards in size to that of a pin's head. The development of the colonies during the three months between the exposures and the final examinations was in accord with that of any large series of tubercle bacillus cultivations.

A comparison of the colonies exposed to the x rays with those used as controls showed no variation in colour, size, or manner of development which could be attributed to the different treatments which the colonies had undergone. These experiments point to the conclusion that x rays do not affect the tubercle bacillus, and lead us to believe that the improved condition of tuberculous patients who have been submitted to the influence of x rays was due to causes other than the action of the rays.

Bournemouth.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF TETANUS SUCCESSFULLY TREATED BY TETANUS ANTITOXIN.

BY W. H. SMART, M.A., M.B. CANTAB., M.R.C.S. ENG.

A MAN, aged about forty years, came to me on July 4th, 1897, with the last phalanx of one finger crushed; the nail was removed, but the bone was uninjured. The wound was cleansed and dressed with cold water applications. All went well until July 13th, when his jaw felt stiff. During the night of the 14th he had pain in the legs, and the next day he sent for me in the afternoon, when I found him suffering from tetanic spasms of the legs occurring, I was told, about every half-hour. The jaws would open about an inch with pain, the corners of the mouth were drawn up, the eyebrows were raised, and the forehead was wrinkled transversely. There were no spasms of the arms or opisthotonos. The bowels had not been opened for four days. He was given five grains of calomel and a mixture containing two drachms of bromide of potassium and one drachm of chloral hydrate, an eighth part of which was taken every three hours. He slept during the night, avoiding spasm of the legs by keeping them drawn up, but the spasm came on again immediately any attempt was made to straighten the legs. On the 16th the jaw appeared to be a little less stiff, but the spasms were still very severe. I amputated the injured joint under chloroform and injected 10 c.c. of antitoxin at 12 mid-day. At 6 P.M. the spasms were less frequent, the jaw was still stiff, and the finger was painful. He could put the legs down and draw them up again, but it caused trembling and some stiffness. There was no spasm of the back, and the muscles of the face and forehead were in the same condition; 10 c.c. of antitoxin were injected. On the 17th I was told he had had a quiet night, but that the spasms had come on again at 10 30 A.M. The finger was dressed with chlorinated soda lotion, 10 c.c. of antitoxin were injected, and five grains of calomel were administered; the mixture to be taken as before. At 9 P.M. the patient was better, but the jaw was stiff. The spasms commenced when I came, perhaps owing to nervousness; 10 c.c. of antitoxin were injected. On the 19th he complained that he could not micturate except when out of bed, while he had pain in the right side and leg. I made him straighten and draw up the leg, which caused much trembling, but the spasms were evidently much less, and so he was reassured. On the 20th he felt better; he could open the jaws wider, and could lie with the legs stretched out. On the 26th the mouth could be opened wide; the legs were weak and inclined to get hard in the calves, but were otherwise much better. This day a carbuncle was found to be developing in the neck; this ran its normal course and the patient made a complete recovery. In all, 50 c.c. of antitoxin were injected; and though the sedatives may have assisted in the successful treatment (the bromide was continued almost until the man went to his work), I think that the symptoms were much alleviated after each dose of the serum was injected.

Polesworth, near Tamworth.

NOTE ON AN UNUSUAL ATTACHMENT OF THE FUNIS.

BY W. F. GARDENER, M.R.C.S. ENG., L.R.C.P. LOND.

ON Oct. 25th last I attended a primipara who was within a fortnight of her full time. The labour was normal and she was delivered of a small fœtus. The cord was then seen to be expanded at its fœtal attachment into a keel-shaped mass, with long diameter running from above downwards in the fœtus. The "fault" in the abdomen measured 3¼ in. in length, 2¼ in. in breadth, and stood up from the abdominal surface 1⅛ in. The mass consisted entirely of Wharton's jelly. The fœtus lived thirty-six hours.

I was unable to obtain permission to make a full post-mortem examination, but an incision into the tumour revealed beneath a layer of Wharton's jelly an inch and a quarter in depth the liver and transverse colon, so that a very large umbilical hernia would have resulted if the child had lived. I believe this to be a very uncommon condition.

Sydenham.

ARTERIAL OBSTRUCTION IN AN OLD MAN; EMBOLISM; ENDOCARDITIS; RECOVERY.

BY ERNEST MABERLY, M.R.C.S. ENG.

THE patient, a man over seventy years of age, who, with the exception of an attack of influenza, had as far as he could remember always enjoyed the best of health, came under my care on April 9th, 1897. Just two months previously he had received a severe bite from a dog on the left leg. No medical man was at first called in to the case, the patient treating the wound himself with an ointment of soap and honey and eventually applying sticking plaster. The wound appears to have partially scabbed over under this treatment, but it became very offensive and there was great congestion and swelling around it. When seen by his medical man nine days later a Goulard lotion was applied four times a day for a week. On Feb. 25th the wound was dressed with zinc ointment and bathed with warm water four times a day for a week and the leg was bandaged; the patient remained in bed most of the time. Before he left home on April 5th he began to walk about a little. On April 9th I was called in for the first time. He complained then of great constipation and flatulence and of considerable pain over the hepatic region. On examination I found the liver very congested; the tongue was white and thickly furred; the motions were clay-coloured; hardly any action of the bowels had taken place for a week. One tablespoonful of castor oil was given, and a mustard leaf was applied over the hepatic region. No action of the bowels was obtained until five grain

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of calomel were administered at bedtime and half-ounce doses of sulphate of magnesium in the morning. After continuing this treatment for four days, the bowels began to act well. The motions were still hard and clay-coloured. On the 14th the patient's general condition was very little improved. He still complained of flatulence and pain in the hepatic region. The tongue was white and thickly coated, and he still had a bitter taste in the mouth. The heart and lungs were normal. There was no albumin in the urine. On the 15th the patient was confined to bed and he had a restless night. On listening to the heart a distinct soft systolic murmur could be heard at the apex. There was no thrill. The respirations were 26, the pulse was 100, and the temperature was 99·4°. There was no albumin. Large doses of quinine and iron were given with sulphate of magnesia every four hours. As to diet, milk, eggs, and beaf tea were ordered. At 6 P.M. the respirations were 28, the pulse was 96, and the temperature was 99·8°. There was no trouble with the urine, which was free from albumin. At 2 A.M. no pulse could be felt in the left wrist. Hot fomentations were applied to the forearm. The nails were very blue. On the 16th, at 11 A.M., the respirations were 18, the pulse was 84, and the temperature was 98·5°. The radial left pulse was scarcely perceptible. On listening to the heart a very loud systolic murmur could be heard. The whole of the left forearm was painful; it was very blue and congested. The hot fomentations were still continued and at 2 P.M. the pulse of the left radial artery was stronger. On the 17th, at 10 P.M., the pulse of the same vessel was very thready. The respirations were 28. The mitral murmur had gone. On the 19th the forearm was resuming its natural colour. There had been a great deal of pain in the left leg all night. Hot fomentations were ordered. On the 20th, at 12 noon, the pulse was 78 and the respirations were 24. The patient still complained of great pain in the left knee-joint. There were no cardiac murmurs. No pulse could be felt in the foot. The hot fomentations were continued. On the 21st, at 10 A.M., the pulse was 72, the respirations were 18, and the temperature was 98·4°. The pulse returned in the foot. There was no pain. The fomentations were discontinued. From this date up to April 29th the patient made an uninterrupted recovery.

Throughout the illness, although there was great constipation, the patient perspired freely, and this no doubt accounted for the comparatively low temperature. Stimulants were freely given during the illness. When convalescent the patient went to the seaside for a couple of months. Swelling of the foot and leg continued for some time, but this was reduced by careful bandaging and massage and at the end of two months he wrote to me saying that he was well enough to return to his ordinary duties.

Eversley, Hants.

MANCHESTER CHILDREN'S HOSPITAL.—On Nov. 13th Sir William Agnew formally opened a new convalescent home which he has built and equipped and presented to the Manchester Children's Hospital. The home will accommodate twenty-five patients, and it is expected that the resident officials will be a matron, two nurses, and two servants. It stands about a mile from St. Anne's railway station on the road to Blackpool and has a fine view of the sea. Mr. J. Francis Richardson, chairman of the board of governors, presided at the ceremony and received the deed of gift from Sir William Agnew who said that there was no incident in his career that he would refer to with greater pleasure than the transaction of that day.

LUXOR HOSPITAL FOR THE NATIVES OF UPPER EGYPT.—An appeal is being made by Mr. Thomas Cook for contributions towards the support of this hospital which was opened by His Excellency the late Khedive at the commencement of the year 1891. In order to show the necessity for such an institution it is stated that on the day of opening fifty natives were waiting for the medical officer's attention and up to the spring of the present year medical and surgical treatment was afforded to 25,820 cases, for whom about 493 operations were performed, and no less than 28 781 out-patients had been relieved, of whom about 5178 were females. During last year 327 in-patients were treated, the daily average of in-patients being seventeen. 6240 diets were issued and 107 operations performed. Each ward is isolated from the others, and there are twenty-six beds available for in-patients.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum propias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

A CASE OF ANEURYSM OF THE ABDOMINAL AORTA, WITH SYMPTOMS OF RENAL COLIC; NECROPSY.

(Under the care of Dr. CHEADLE.)

THE following case derives its interest from the great similarity of the symptoms in the early stages to those of renal calculus, and later to those of perinephritic abscess. Aneurysms of the abdominal aorta may attain no inconsiderable size without giving rise to any painful symptom, but this is only possible when the aneurysm arises from the anterior aspect of the vessel, for when the aneurysm grows backwards from the artery and presses on and erodes the vertebræ pain, violent and lancinating, is generally present. For the notes of the case we are indebted to Dr. F. John Poynton, Medical Registrar, and Dr. Arnold F. Bill, Demonstrator of Pathology.

The patient, a man aged forty years, was admitted to St. Mary's Hospital on June 2nd, 1897, on account of paroxysmal pain in the abdomen shooting down to the left testicle. This had occurred in paroxysms sometimes once a week and sometimes once a month for the last four years, but during the last six weeks they had become more frequent and more severe; he had, in addition, suffered from headache, hæmaturia, and hæmoptysis. He was of middle height and emaciated, and his face was pale and worn with pain. The temperature was 101° F., the pulse was 84, and the respiration was 20. He said that the pain was situated on the left side of the abdomen and in the left lumbar region, and that when a paroxysm came on it shot down to the left testicle and was so severe that he was compelled to hold his scrotum with his hand. He had never vomited with the pain nor was it increased on movement. Examination of the abdomen showed slight retraction of the parietes with marked hyperæsthesia over the left kidney, both in front and behind, but revealed nothing further. The bowels were constipated. The urine contained a trace of albumin but no blood. The cardiac impulse was forcible and was felt in the fifth space just outside the nipple. No adventitious sounds were heard. The lungs were apparently normal. On June 4th, at 2 A.M., after micturition, a severe paroxysm of pain occurred, commencing in the left testicle and passing up the left side of the abdomen, without vomiting or blood in the urine. A dull, aching pain remained after the attack. Several more severe attacks of pain occurred during the week, but on June 11th the symptoms changed. There was violent heaving over the left side of the chest, pulsation was present in the epigastrium, and a loud systolic bruit was heard over the upper part of the abdominal aorta. The twelfth rib was moved by pulsation in the left flank and over it the heart-sounds could be counted. There was an impaired note in the left lateral region of the chest reaching to the tenth rib. On the 25th the patient felt pain down the front of the left leg to the foot and the pulsation in the epigastrium had extended to the right of the middle line. On July 5th he was blanched. The dulness in the left side of the thorax had reached to midway between the spine and angle of the scapula. At the upper limit there was ægophony and over the dull area the breath sounds were faint. There was fulness in the left renal region, which was very tender on pressure and gave a dull note on percussion. Since June 25th the temperature had varied between 99° and 100°. On July 8th the patient became unconscious and died. During the last few days the bruit in the epigastrium had disappeared.

Necropsy.—A post-mortem examination was made by Dr. Poynton, and a detailed dissection by Dr. Bill after removal of the aneurysm and surrounding structures from the body. The body was found to be much emaciated. In

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the left pleural cavity there was a considerable quantity of clear fluid. Centrally and to the left the diaphragm bulged upwards displacing the heart. The descending colon was remarkably small, and was superficial to a large purple sac, which occupied the left hypochondriac, lumbar, and iliac regions. Removal of the stomach, spleen, pancreas, and intestines exposed a large aneurysm of the lowest part of the thoracic and upper part of the abdominal aorta. The upper limit was at the level of the disc between the ninth and tenth dorsal vertebræ and the lower at the lower edge of the first lumbar vertebræ; the upper part of the aneurysm was covered by the upward displaced diaphragm. The superior mesenteric artery came off about half an inch above the lower limit, and the cœliac axis about an inch higher. There was no interference with the circulation in these vessels. The posterior boundary was formed by the partially eroded vertebræ of the tenth, eleventh, and twelfth dorsal and the first lumbar vertebræ. The twelfth rib on the left side was also eroded for about an inch. There were masses of clot to the right and left outside the true sac of the aneurysm of two different dates. The earlier lay to the right and behind the aorta, and was much decolourised, and where it touched the aorta partly organised. This was continuous behind the aorta, with a second mass consisting of currant jelly clot and liquid blood, which lay to the left, forming the purple sac above mentioned. The boundaries of this second mass were the peritoneum with the descending colon in front, the posterior wall of the abdomen behind, the left suprarenal and kidney with the left ilium externally, and the vertebral column, mesenteric attachments, and third part of the duodenum toward the middle line. Below these were prolongations under Poupart's ligament and into the left spermatic cord. The aneurysm was compressed between these masses into a cavity whose horizontal section was roughly S-shaped. The only opening in the neighbourhood of the old clot was in the posterior wall of the aneurysm, in its lower part, slightly to the left of the middle line, but the whole of the left wall was very friable. No trace of the sympathetic could be detected around the aneurysm or in the clot. The eleventh and twelth dorsal and first lumbar nerves were exposed, but there was no evidence of gross lesion to their structures.

BURTON-ON-TRENT INFIRMARY.

A CASE OF CÆSAREAN SECTION.

(Under the care of Mr. P. B. MASON.)

THE mortality after Cæsarean section varies greatly in different sets of statistics, and this may be in part at least attributable to the fact that while some gynæcologists employ the method before the commencement of labour others use it only after determined attempts have been made to extract the child *per vias naturales*. When Cæsarean section is undertaken before or shortly after the commencement of labour, with full antiseptic precautions and with adequate assistance, the mortality should be very low—not exceeding 5 per cent.—and the results of the operation are then comparable with those following alternative methods of treatment. For the notes of the case we are indebted to Dr. J. P. Sparks, house surgeon.

A woman, forty years of age, was admitted to the Burton Infirmary on Aug. 9th, 1897, suffering from cancer of the vagina and the os uteri, complicated by pregnancy. The patient stated that for about a year she had suffered from repeated losses of blood at intermittent periods, and on being examined by her medical attendant she had been found to be suffering from an epithelioma in the region of the urethra which extended up the anterior vaginal wall and involved the anterior lip of the os uteri. Becoming pregnant soon afterwards, she was seen by Mr. Mason in consultation and it was decided to wait till labour came on and then to perform Cæsarean section. Labour commenced on Sept. 26th, and the operation was performed in the afternoon by Mr. Mason. A long incision was made from a point one inch above the umbilicus to the pubes, and the uterus immediately presented in the wound. The placental site having been ascertained to be on the posterior wall, the uterus was opened by an incision about five inches long commencing at the fundus. The uterus was well pressed forward and the broad ligaments were compressed on each side by assistants. The child and placenta were then rapidly extracted, the uterus was closed with deep and superficial sutures of silk, and the wound of the abdominal wall was sewn up. The operation lasted one and a quarter hours and the patient did not lose more than four ounces of blood. Convalescence was uninterrupted and the patient left the hospital on Oct. 17th. The child is alive and well.

ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE.

A CASE OF HÆMATOSALPINX.

(Under the care of Dr. THOMAS OLIVER.)

THOUGH it is extremely probable that a large number of cases that have been described as examples of hæmatosalpinx have really been instances of tubal pregnancy, yet there can be no doubt that cases do occur, as in the one recorded below, in which the collection of blood in the Fallopian tube is in no way connected with impregnation. It is true that there is some difficulty in accounting for the accumulation of blood in the tube though it is very probable that during menstruation there is effusion of blood from the mucous membrane of the tube as well as from the wall of the uterus, and possibly some cases are explicable as due to reflux from the uterus. In practically all cases of hæmatosalpinx the blood remains fluid for a very long time.

An unmarried woman, aged twenty-one years, who resided at home, was admitted into the Royal Infirmary, Newcastle-upon-Tyne, under the care of Dr. Oliver, on May 25th, 1897, complaining of severe pain in the right iliac region and lower half of the abdomen of four years' duration. There was nothing in her family or previous history that calls for comment beyond the fact that she first menstruated at the age of sixteen years, that she had since been very irregular, occasionally passing six or seven months without becoming unwell, and that when she did menstruate the flow continued for four or five days, but was scanty and always very painful. She remembered well her first menstruation, for it was attended by much pain, which radiated outwards towards the right iliac region and down the right thigh, lasting for several hours. She was unable to pass urine. With each recurrence of menstruation there had been both difficult and painful micturition. So severe was the dysmenorrhœa that she was completely unfitted at her menstrual periods for domestic work. During her intermenstrual periods she had frequently noticed, if she lifted anything heavy or strained herself in any way, that the abdominal pain was intensified.

The patient was sparely built, but when free from pain she took her food well and was apparently of a cheerful disposition. On examination the heart and lungs were found to be healthy. The abdomen was somewhat retracted, but with gentle palpation there could be felt a hard and somewhat resistant swelling situated a little above, and to the right of, the pubes and extending for a short distance outwards along Poupart's ligament. It was painful on pressure. Examining her under chloroform Dr. Oliver found that the vagina was small and narrow, the hymen intact, the cervix uteri small, and that the sound readily passed into the uterus in a distinctly left direction. Lying to the right of the uterus, occupying the whole of the *cul-de-sac* and projecting into the vagina, could be felt a rounded, smooth, tense swelling which gave a distinct sense of fluctuation when caught between the hand placed on the abdomen and the fingers in the vagina. The cyst was not very moveable; it lay close up to the uterus, but was evidently not a part of it. Dr. Oliver considered it to be a small ovarian cyst or a distended tube. On June 11th his surgical colleague, Mr. Williamson, opened the abdomen, and after separating the omentum, which at places was adherent to the wall of the abdomen, he found in the right iliac region close to the uterus a large elongated mass which was very adherent. The adhesions were separated, but as some of them were very vascular they had to be ligatured. The cyst, which proved to be a large Fallopian tube, was ligatured close to the uterus and divided. Several adhesions around the ovary were similarly dealt with and the ovary itself was removed. The Fallopian tube thus removed was in shape and size not unlike an ordinary sheep's horn; it tapered to a fine point towards its uterine extremity and was round and blunted at its fimbriated end. It was greatly distended and on section

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was found to be filled with blood, grumous and chocolate in colour, not coagulated, and exactly resembling the fluid that escapes from the uterus in a case of suppressed menstruation when an imperforate hymen is incised. Careful examination of the interior of the tube and of its contained blood failed to reveal anything of the nature of old or recent clot, embryo, membranes, or anything suggesting the probability of the case being one of tubal gestation. The walls of the Fallopian tube were thickened, hard, and resistant, while the mucous membrane, instead of being thinned and atrophied as might have been expected, was swollen.

Remarks by Dr. OLIVER.—I am inclined to agree with Cullingworth[1] both when he says that the majority of cases of hæmatosalpinx are tubal pregnancies and also that there is a considerable number of cases where the Fallopian tube is found distended with blood, forming a sausage-shaped tumour, and where the evidence of it having originated as a tubal pregnancy is inconclusive. The most careful search frequently fails to detect an embryo, chorionic villi, or any other indisputable product of conception. In the tube removed from my patient there is not the slightest indication of there having been a tubal pregnancy. There was apparently a congenital narrowing of its uterine end which had caused retention, and as the character of the fluid was exactly the same as that observed in retained menses it seems to me that at her periods the girl had also menstruated into her right Fallopian tube, and the reason why she had been able to continue doing this for such a length of time was the irregularity and lengthened absence of the flow. I offer no opinion as to how far Bandl is correct when he says that normally the uterine end of the Fallopian tube is patulous during menstruation. If the statement is really one of fact then abnormal constriction would favour hæmatosalpinx. The distal extremity of the tube in my patient was rounded, occluded, and adherent. Formerly patent it is more than likely that blood escaped from the tube by this orifice and set up peritonitis, hence the explanation of the extensive adhesions of this end of the tube and the ovary. I admit, with Lawson Tait, Bandl, and others, that during menstruation blood oozes from the tubal mucous membrane and finds its way into the uterus. If it cannot escape as in the case just recorded on account of congenital narrowing of the uterine end and the distal extremity has become occluded, the blood must accumulate in and distend the tube, causing considerable pain owing to peristaltic contraction of the tube and stretching of the peritubal inflammatory adhesions. The physical signs of hæmatosalpinx can scarcely be differentiated from those of pyosalpinx. It is only after abdominal exploration and section of the tube that an accurate diagnosis in most cases can be made, but if the uterine end of the Fallopian tube is not completely occluded, then just as in similar cases of pyosalpinx where the physician is aided in his diagnosis by the history of sudden discharges of quantities of fœtid pus shortly after menstruation, so in hæmatosalpinx the sudden discharge of a quantity of disintegrated blood after a menstrual period would suggest, but would not be absolutely conclusive of, the existence of hæmatosalpinx. Where hæmatosalpinx is suspected and the tube is enlarged and adherent, where the patient is the subject of severe and recurrent pain, medicinal treatment can be of no avail beyond being palliative. The proper treatment is abdominal section and removal of the occluded tube.

[1] THE LANCET, June 19th, 1897.

ROYAL INSTITUTION.—Professor Oliver Lodge, F.R.S., will deliver the first of a course of six Christmas lectures (specially adapted to young people) on the Principles of the Electric Telegraph at the Royal Institution on Dec. 28th. The remaining lectures will be given on Dec. 30th, 1897, and Jan. 1st, 4th, 6th, and 8th, 1898.

ADULTERATION PROSECUTIONS.—At Pontypridd Police Court on Nov. 10th a grocer was fined £2, including costs, for selling half a pint of cotton seed oil as olive oil.—At Exeter Police Court on Nov. 12th a dairyman was fined £12, including costs, for selling adulterated milk. The inspector found three cans in the man's cart, one of which contained scalded milk, another raw milk, and the third water with a little milk added. Two samples of milk purchased by a customer proved to be diluted, one having 13 per cent. and the other 16 per cent. of added water.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Spontaneous Fracture of Gall stones.—Congenital Malformations of the Heart and Thoracic Veins.—Developmental Malformation in Fishes.—Intussusception of the Vermiform Process.—Exhibition of Specimens.

A MEETING of this society was held on Nov. 16th, the President Dr. PAYNE, being in the chair.

Dr. ROLLESTON exhibited a specimen of Spontaneous Fracture of a Gall-stone in the Gall-bladder. The specimen was taken from the gall-bladder of a woman, aged forty-six years, who died from spheroidal-celled carcinoma of the gall-bladder. The gall-bladder was enlarged and contained mucus unstained by bile, numerous small (cholesterin) calculi, and three larger calculi. The largest resembled in size and shape the terminal phalanx of the thumb, the two ends appearing to have been broken across; of the other two larger calculi one was smooth and like a pebble, the other showed a surface which might have fitted one of the ends of the largest calculi, but owing to attrition the surfaces did not fit accurately. Fracture had evidently taken place a considerable time before death. There was no history either of a blow or of violent contractions during biliary colic. The cause of spontaneous fracture of gall-stones might be explained on the same lines as spontaneous fracture of vesical calculi, as expounded by Dr. Ord, Dr. Plowright, and Mr. Hurry Fenwick. Dr. Ord first suggested expansion of the nucleus which led to bursting of the calculus like a bomb; in another case he found it due to mycelial growth passing between the layers and levering off the outer zones. Naunyn pointed out that biliary calculi are normally penetrated by cholesterin which re-crystallises inside the calculi and Chauffard showed that calculi may be invaded by micro-organisms. The possibility of cancerous invasion of the gall-bladder as a direct cause was considered but hardly appeared probable. In a case of spontaneous fracture of a gall-stone recorded by the late Dr. Hadden there was no growth in the liver or gall-bladder.

Dr. JAMES CALVERT also showed a specimen of Spontaneous Fracture of a Gall-stone taken from a man who died at the age of sixty-seven years from carcinoma of the prostate with secondary growths in the liver. There were no symptoms of the presence of gall-stones during life. The gall-bladder was not enlarged but its walls were thickened by chronic inflammation and it was full of broken gall-stones. The gall-bladder contained no bile or even mucus. With hardly an exception the gall-stones were in fragments, showing yellow crusts of cholesterin, and they were drier than usual. The fractures had evidently occurred at different times, the edges of some fragments being sharp, while those of others were worn smooth. Some of the stones showed fissures preliminary to fracture. Dr. Calvert thought that the fractures had been brought about by cicatricial contraction of the inflamed gall-bladder and that the stones had probably become unusually brittle owing to the absence of bile and mucus from the gall-bladder just as they become brittle and are apt to crack spontaneously when they are allowed to dry in the air.—Dr. WILLIAM HUNTER said that he had no personal experience of these cases. He asked whether the breaking up of the calculi might have been caused by the scaling off of the superficial layers of cholesterin.—Mr. SHATTOCK said that the view of Dr. Ord appeared to be correct that breaking down of a calculus was due to alteration of the colloid material distributed throughout the substance of the stone. He asked whether in Dr. Rolleston's case there was any admission of bile into the gall-bladder. If bile were excluded, and mucus, which had a different specific gravity, alone bathed the stone, alterations would be produced in the colloid material which would favour disintegration of the calculus. He did not agree with Dr. Plowright's views which had been quoted that the fissures were caused by the invasion of salts. He thought that the fissures occurred first and that the salts were deposited in them afterwards.—Dr. VOELCKER did not feel convinced that the specimen shown by Dr. Rolleston was actually one of spontaneous fracture. There was no satisfactory explanation of the frequent occurrence of many small calculi, sometimes faceted, sometimes not, along with one or two large ones;

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but unless they were definitely fractured and the surfaces could be shown to fit he would hesitate to put them down to spontaneous fracture. There was an undoubted specimen of spontaneous fracture in the Museum of the Middlesex Hospital. The portions were passed per rectum, having evidently escaped from the gall-bladder by ulceration into the large intestine. When fitted together they formed a perfect cast of the gall-bladder.—Dr. ROLLESTON, in reply, said that in his case the gall-bladder contained mucus but no bile. He thought that there could be no doubt that there had been fracture.

Dr. FREYBERGER read notes and exhibited specimens and drawings from a boy, eleven months old, in whom the following Congenital Anomalies of the Heart and Thoracic Veins were present: (1) two descending venæ cavæ each with an azygos vein of its own, the left cava entering the coronary sinus; (2) congenital stenosis of the pulmonary artery; (3) absence of the membranous part of the intraventricular septum; (4) origin of the aorta from both ventricles; (5) patent foramen ovale; and (6) patent ductus arteriosus. Death occurred from meningitis. There was no trace of any fœtal endocarditis and there was no clubbing of the fingers. The lungs were well developed. The following conclusions must be drawn: 1. The absence of any signs of fœtal endocarditis shows that the malformation of the heart is due to an arrest of development at some time during the second month of fœtal life, a view which is further supported by the concomitant anomaly of the thoracic veins. 2. The full development of the lungs and the slight cyanosis during life shows that there must have been a sufficient circulation of blood in them although the pulmonary orifice is almost impassable. 3. This circulation of blood has taken place through the stenosed pulmonary orifice, the Botallian duct, and the anterior and posterior bronchial arteries. These arteries form more or less wide anastomoses with the capillaries of the pulmonary artery, and might in this case have helped to supplement the pulmonary circulation.—The PRESIDENT remarked that one of the commonest of all abnormalities of the heart was the perforate septum ventriculorum. It was just possible that this was known to the early anatomists such as Galen who believed that the blood in adults passed through the septum ventriculorum to get from the right side of the heart to the left.

Dr. FREYBERGER also exhibited a specimen of Rupture of an Aortic Aneurysm into the pericardial sac. The patient, a man aged forty-two years, was admitted in a moribund state into the Great Northern Central Hospital on Oct 27th, 1897. He had never been ill before, was a total abstainer, and had never had syphilis. He had been shovelling coal when he gave a cry and fainted. He was at once taken to the hospital where he arrived perfectly unconscious, deathly pale, and covered with clammy perspiration. His respiration was frequent and shallow, the heart sounds were feeble, and the pulse was not perceptible. Death occurred an hour after the accident. At the necropsy the pericardium was found to contain ten ounces of fluid blood and eleven ounces of dark blood-clot, completely concealing the heart. The heart was small and flabby; there was much sub-pericardial fat. The ventricles were empty; there were patches of atheroma on the aortic and mitral valves; the valves were competent. Above the left coronary orifice there was an irregular oval opening in the wall of the aorta three-quarters of an inch by half an inch which lead into an aneurysmal sac of the size of a walnut. The sac was situated at the insertion of the aorta into the left ventricle and was adherent to the left auricle. The hæmorrhage had occurred through an irregular opening in the sac of the aneurysm at a place near this adhesion. All the other organs were natural.

Mr. C. G. SELIGMANN showed a specimen of Arrest of Development in the Upper Jaw of a Pike. Instead of being almost as long as the lower, and slightly concave upwards, the upper jaw was short and markedly convex from the crown of the head to the tip of the nose. The ethmo-vomerine plate, although somewhat shortened and bent downwards, was well formed for the greater part of its length and bore the usual array of teeth. The maxillæ were normal, but the pre-maxillæ, which should bear the whole series of lateral teeth, were small and bore only a few diminutive teeth. The prefrontal bones were also much reduced in size. There were similar specimens in the Museum of the Royal College of Surgeons of England. They were examples of different stages of the same defect, arrest of development of the elements corresponding to the fronto-nasal process. The slighter cases, such as that exhibited, probably correspond to the defective development of the pre-maxillæ which in man gives rise to hare-lip.

Mr. SELIGMANN also showed a specimen of Supernumerary Fin in a Trout caught in the River Itchen. The fin was composed of ten soft fin rays, and was situated in the mid-dorsal line, just behind the head, and 5 cm. in front of the dorsal fin. All the other fins were present and normal. Mr. Seligmann described the development of the fin in other fishes, and thought it probable that in the specimen shown the supernumerary fin represented an anterior part of an originally longer dorsal fin and that the extra fin was homologous with the spiny rays of the gastrosteidæ, the tentacles of lophius, and the anterior spiny fin of many other fishes.

Mr. HERBERT WATERHOUSE showed a specimen of Intussusception of the Vermiform Process. Several days before the child was admitted to the Victoria Hospital for Children signs of intussusception were present and the child was examined under an anæsthetic. While being manipulated the tumour suddenly disappeared. A few days after the symptoms again became urgent, and an enema having failed to give relief Mr. Waterhouse performed laparotomy. He at once came on an intussusception, which was easily reduced, and then found another which was in the region of the cæcum. Part of it was reduced with some difficulty, but there was a residue which could not be replaced which proved to be the everted appendix. The cæcum was excised and anastomosis effected with the aid of Murphy's button but the child did not recover from the shock. At the necropsy the appendix was found everted into the lumen of the cæcum, only five-eighths of an inch being left outside. It formed a mass the size of a cherry, which could not be reduced. It was not cut into, but he passed a needle through it and could not find any evidence of a concretion.—Mr. D'ARCY POWER said that in the last operation which he had performed for intussusception he had found on unravelling the bowel a commencing invagination of the base of the appendix, which was probably antecedent in his case and in that under the care of Mr. Waterhouse to the invagination of the ileum.

The following card specimens were exhibited:—

Mr. P. FURNIVALL: Symmetrical Rodent Ulcer of the Face.

Dr. ROLLESTON: Rodent Ulcer of the Umbilicus.

Mr. W. G. SPENCER: Squamous Epithelial Cancer of the Upper Jaw from a young man twenty years of age.

Mr. T. STRANGEWAYS PIGG: (1) Symmetrical Rodent Ulcer from the Groins; and (2) Lymphatic Glands and Infarct of the Spleen from a case of Plague.

Dr. HECTOR MACKENZIE: (1) Cystic Kidney from a man fifty-two years of age; and (2) Perforating Ulcer at the Pylorus, associated with great hypertrophy of the gastric wall.

Dr. VOELCKER: Chronic Interstitial Nephritis with formation of cysts.

Mr. CECIL BEADLES: (1) Ulcerative Colitis; and (2) Fibrous Laminæ on the Pleura.

Dr. W. HUNTER: Gumma of the Liver.

CLINICAL SOCIETY OF LONDON.

Calot's Operation for the Immediate Reduction of Angular Deformity of the Spine.

A MEETING of this society was held on Nov. 12th, the President, Mr. LANGTON, being in the chair.

Mr. A. H. TUBBY and Mr. ROBERT JONES (Liverpool) read a paper communicating the results of a first series of twenty-five cases of Angular Curvature of the Spine treated by Immediate Reduction after Calot's method. Although at first they were sceptical as to the safety of the operation, since it seemed to contravene all received ideas about the treatment of the condition, the results witnessed by them at the cliniques of Calot and Rédard induced them to give the method a trial. The present series contained the cases operated on by them up to the end of September, 1897. They said that the examination of many cases under anæsthetics had led them to believe that cases of angular deformity could be grouped into three classes. 1 Those in which little or no ankylosis has taken place and reduction can be effected with great ease. These are most commonly met with in the young. 2. Those in which more or less union has taken place. These require

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extension to be maintained for several minutes with firm pressure on the curvature. 3. Those in which firm bony ankylosis has taken place. Interference with the cases in the last group was unjustifiable, but those in the first two were suitable for immediate reduction. They considered that the procedure had the following advantages: the greater ease of fixing the spine in a good position after it had been straightened; the avoidance of deformity of the chest with compression of the thoracic and abdominal viscera; and lastly, æsthetic reasons as to appearance. The probable dangers were discussed, and it was shown that although paralysis would naturally be dreaded as a result it had not occurred in any of their cases, but that, on the contrary, five of their cases affected with varying degrees of paralysis had commenced to recover immediately after the operation and had steadily improved. Another risk was the dissemination of tubercle, and this they thought was less likely to occur than in such operations as erasion and excision of the large joints, in which more or less healthy bony surfaces were apt to be inoculated with tubercle. In no case did the formation of an abscess follow the operation. As to the permanency of the reduction, they stated that in some it remained permanent, but that in others slight relapse took place requiring a repetition of the operation. The duration of the necessary after-treatment was from two to three years, a greater time than had been recommended by French surgeons. The details of the operation were described and illustrated by lantern slides. Extension might be applied by having several assistants to hold the child face downwards while extension was made from the legs and the head, which latter might be grasped by the head-piece of Sayre's suspension apparatus. It was very necessary that the extension should be equable and not jerky. Mr. Tubby and Mr. Jones had devised a form of rack which acted very well but took some time to adjust. After the operation the patient was placed on a modified double Thomas's splint with a very full curve, so as to over-extend the spine. This was preferable to the cumbersome plaster cuirass which was recommended by Calot. The cases operated on had not been specially selected, all cases being taken unless there were strong reasons to the contrary. In the series of twenty-five cases operated on there had been one death, six days after the operation. Death occurred unexpectedly with acute abdominal symptoms, but at the necropsy these symptoms were not satisfactorily accounted for, nothing being found in the abdomen abnormal except tuberculous lymphatic glands. Of the twenty-five cases nine were males and sixteen females, and their ages ranged from eighteen months to twenty-two years. The deformity had been present from six months to six years. Five had paralysis, and all improved, apparently as a direct result of the operation. One had a discharging sinus in the groin at the time of the operation. As to the position of the curves, two were cervico-dorsal, eighteen were dorsal, and five were dorso-lumbar. Ten cases were reduced at the first sitting and fifteen partially. Of the ten complete reductions two remained so for from three to four months afterwards, and the slight recurrence which took place in eight was speedily overcome by a second operation. Of the fifteen partial reductions two required two subsequent operations and one three. The remainder were greatly improved, and the prominences were reduced to about one-third or less of their original size. The cases which Mr. Tubby and Mr. Jones deemed unsuitable for the method of treatment were those where the disease was of long standing, where ankylosis had occurred, and where there was considerable deformity of the chest; those in which active tuberculous disease was present elsewhere; and those in which abscesses had occurred. The cases which were held to be suitable were (1) those occurring in young subjects in which the angle was a changing one, the disease of short duration, and firm ankylosis absent; (2) those in which the disease was locally active; (3) those in which no visceral complications were present; and (4) cases of paraplegia unrelieved by ordinary treatment, as a more reasonable proceeding than laminectomy, which often fails to relieve the pressure point. With the reservations mentioned Mr. Tubby and Mr. Jones thought that an angle which is increasing more rapidly than the growth rate will explain can with tolerable facility and without undue risk be rectified. They felt, however, that the method was one which, if care was not taken to select suitable cases, might lead to disastrous results.

Dr. CALOT (Berck-sur-Mer), speaking in French, said that he did not admit any other ground for intervention in cases of Pott's disease than that of correcting the deformity. To endeavour to treat the paralysis or abscess by ordinary surgical measures meant the transforming of a "closed" disease into an open one, changing it, in other words, from a condition in which there are 95 per cent. of cures into one in which the mortality is very high. The attitude of a prudent surgeon should be the same as in overcoming deformities in the hip or knee. Dr. Calot said that in his first series of 37 cases there was not a single instance of any untoward symptom after the operation. Rédard read notes of 32 cases without an accident before the Moscow Congress; Hoffe, of Strassburg, 36 without any mishap; and Jones, of Liverpool, has now performed the operation 60 times with only 1 death. On the other hand, Brun and Jenesco lost a child under chloroform, Malherbe 1 from respiratory embarrassment, and from the same cause Bilhaut lost 3 out of 50 cases, and Dr. Calot himself 2 out of close upon 300 cases. Out of 600 cases of which notes had been forwarded to him by various surgeons paralysis followed the operation in 3. But it must be borne in mind that in Pott's disease paralytic complications occur in about one-fifth of the cases. As a set-off against this eight cases of paraplegia existing at the time of the operation were relieved by it. Dr. Calot considered that these results were as favourable as the results of any other surgical operation had been at the time of its introduction, and no doubt future statistics would show even better results, as it seemed likely that it would be possible to dispense with an anæsthetic, thus materially diminishing the risks. The cases must be selected. Unsuitable cases are cachectic children, those with active chest mischief, those with spinal abscesses or sinuses, and those with a hump of long standing which does not yield to a traction of from 50 to 80 kilogrammes. Dr. Calot then passed on to consider the treatment of long-standing cases in which there was ankylosed deformity. Scharr had taught twenty-three years ago that consolidation in cases of Pott's disease left to themselves takes place either by simple union of the posterior parts of the column (false ankylosis), or by union of the healthy bodies of the vertebræ as well as of the posterior parts (true ankylosis). It may occasionally happen that union of the bodies takes place without union of the posterior parts, but this must be exceptional. As a rule the resistance to reduction in the more severe cases is in the posterior bony union. In such as are reduced by strong traction (80 kilogrammes) a large number of bony bands are broken through, as shown by the crepitus, which is sometimes felt during reduction. He rarely used greater traction than 80 kilogrammes, but had done so in exceptional cases, such as that of a Swedish girl aged thirteen years. He was convinced that it was possible, however, to reduce even old-standing curvatures, but he thought that it was better to lay the bony adhesions bare before breaking them down. If they were only posterior they could be broken down by a trifling operation. If bony union also existed anteriorly the surgeon might begin by breaking down the posterior adhesions, and then, except in persons over twenty, traction alone would suffice to reduce the deformity. Should this prove fruitless he would know that true bony ankylosis had taken place. Even then, however, he thought that the resources of surgery were not exhausted. It would still be possible to break down these anterior adhesions by a second operation, attacking them laterally, taking care not to enter the spinal canal. It would suffice to weaken the resistance of the anterior callus, which would then yield to firm manipulation. In very old curvatures interference was perhaps undesirable. The formation of abscess, generalised tuberculosis, and meningitis which would be expected to follow this treatment, Dr. Calot considered less to be feared than after operations on tuberculous knees. In the latter operation it is impossible to avoid breaking down bony processes themselves infiltrated with tubercle, whereas in the extension of the spine the anterior segments are raised without rupture of the trabeculæ and the pressure resulting from the replacement of the posterior parts bears on bony structures which are themselves quite healthy. Out of upwards of 300 cases he had only seen four instances of tuberculous broncho-pneumonia or meningitis occurring in the six months following reduction. Since tuberculous processes favour destruction rather than repair it would be thought that relapse would be certain to occur, but experience showed that the objection had no practical value, and that the spine undergoes

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consolidation after reduction just as it does when left to itself. Skiagraphs show clearly that union in some cases takes place by anterior union, and this may give rise to some protuberance. Or, as Dr. Calot had observed twice after death and in ten instances in the living subject, it may take place by posterior union. In four out of twelve cases this has appeared to be sufficient, but in seven it was insufficient in the sense that an insufficient number of vertebræ were joined together. In default of union it is always in the power of the surgeon to bring it about artificially by denuding the laminæ at the parts where they are in contact, and uniting the periosteum over the site of the proposed junction. When dealing with a very pronounced curvature the reduction may be attempted in stages at several weeks' interval, being careful not to wait so long that firm union has occurred in a partially corrected attitude. His rule was to provoke union between at least two vertebræ more than appear necessary to ensure the stability of the union. He had performed this operation on ten occasions, and his cases showed that posterior union alone was sufficient to maintain the proper position of the vertebral column. Dr. Calot described the plaster apparatus which he employs. It includes the whole of the trunk, along with the neck, the base of the head, chin, and occiput. In applying the cervical part he makes use of a suspension apparatus. The application of the plaster casing does not take more than a few minutes. At the Moscow Congress Dr. Calot reduced the deformity and applied the plaster support in six cases without occupying more than seventy-five minutes. If the child is not inconvenienced, and there is no rise of temperature, the jacket is left on for from three to five months, and it may be renewed several times. It may be necessary to make a window in the case opposite the curvature in order to dress any sore that may have formed there. The duration of the treatment when in an active stage is that of the disease itself—several years; but otherwise the treatment need not take more than three or four months. Should any recurrence of the deformity take place he would advise artificial union and, indeed, was almost disposed to recommend this procedure as a routine or prophylactic measure.

Mr. R. W. MURRAY (Liverpool) said that since August, 1897, he had operated on fourteen patients whose ages varied from two and a half to nine years. The duration of the deformity varied from a few months to four years. Most were in good general health, but one had a small psoas abscess and another was paraplegic. Three had the curvature in the cervical region, nine in the dorsal, and two in the lumbar. The operations were uneventful except in the case of the paraplegic child, whose breathing was seriously embarrassed for a time. His paralysis now, two months later, is improving. The immediate results, on the whole, have been satisfactory, but in one of the cervical cases weakness of the lower limbs has supervened, probably owing to the operation, and in one of the first cases operated on the child has developed general tuberculosis. One patient died a short time after the operation from broncho-pneumonia, which a necropsy showed to be non-tuberculous and probably quite unconnected with the operation. It was true that the expected dangers did not occur, but what was the prospect as to the future of these cases both as to the correction of the deformity and the cure of the disease? Mr. Murray doubted very much whether this operation would effect complete and permanent cure of the deformity. The vertebræ are many of them destroyed and the interval left required to be filled by something strong enough to bear the pressure, but in tuberculous bones there was very little tendency to repair. Failing this bony formation there must be either a return of the hump or a life-long recourse to instrumental support. If the hump were filled by ligamentous tissue there would not only be a hump, but a "wobbly" hump, which would entirely incapacitate a mechanic from work, which is not the case with a rigid hump. He intended to wait to see the ultimate result in these cases before he performed the operation again, but at present he was inclined to take a somewhat unfavourable view of their future. Mr. Murray showed the spine from the patient who died from pneumonia two months after the operation, which exhibited well the great gap left to be filled up anteriorly.

The discussion was adjourned to the next meeting of the society.

OPHTHALMOLOGICAL SOCIETY.

Heredity and the Development of Myopia.—Potassium Permanganate in Ophthalmia.—Cataract Extraction.—Pseudo-Glioma due to Choroido-Retinitis Secondary to Meningitis.—Case of Albuminuric Retinitis.

AN ordinary meeting of this society was held on Nov. 11th, Mr. G. A. BERRY, Vice-president, being in the chair.

Mr. WRAY read a paper on Heredity and the Development of Myopia. He began by stating that some observers found a family history in as many as 60 per cent. of their cases of myopia. On the assumption that one-fourth of the hereditary tendencies are from each parent, and one-sixteenth from each grandparent, it was plain that heredity predisposition would appear more and more in the etiology of myopia. Mr. Wray questioned the expediency of using the term "acquired myopia" lightly, as no case could legitimately be called "acquired" unless ancestral myopia could be disproved, which he contended was impossible. He next submitted that authorities repudiated the possibility of the transmission of acquired structural peculiarities, and experimental evidence was quoted to the effect that the removal of an eye in rabbits during many successive generations failed to cause the birth of one-eyed offspring. He conceded the transmissibility of ordinary myopia, and then stated that there was no relation between the sum of the myopia of myopic parents and the amount that would appear in the offspring, and when the highest grades had been found the parental myopia was invariably confined to one parent. Since Fukala's operation had come into vogue Mr. Wray had given special care to the investigation of the antecedents of such patients, and found in a considerable number of cases that the child with very high myopia had suffered from protracted infantile marasmus, whilst the brothers and sisters who escaped had not. He further stated that out of 126 cases of myopia over 10 D he had not found one instance in which parent and child were both subject to an equal or approximately equal amount. The existence of the highest grade of myopia in one eye only made it exceedingly probable that other influences acted as powerfully as marasmus in the predisposed. Since such grave disproportions never arose in the limbs during their development, it was necessary to consider the difference in their development, and this was to be found in the way in which the vitreous was formed by the passage of mesoblastic elements into the secondary optic vesicle. Mr. Wray suggested the possibility of hypo-inclusion being the basis of hypermetropia and excessive inclusion the cause of myopia. He thought that this theory would explain the variation in the age at which myopia appears, and the phenomena of stationary and progressive hypermetropia and myopia, as well as numerous other points in the pathology of myopia

Mr. SYDNEY STEPHENSON communicated particulars of a case of Purulent Ophthalmia in an infant where the frequent use of a strong solution of potassium permanganate had given rise to a deposition of manganese dioxide upon the cornea. The mark, which was of coal-black colour, disappeared a few days after the use of the solution had been discontinued.

Surgeon-Captain HERBERT, I.M.S., communicated a paper on Cataract Extraction, in which he said that the conditions of operating were unfavourable in India, and he had found it impossible to exclude infection till he employed strong perchloride (1 in 2300) as a routine antiseptic. The lotion was used freely to the face, lids, and conjunctiva, then cocaine was instilled, the lids being kept closed to prevent the drying of the epithelium, and during the operation the surface of the eyeball was kept moist by the constant dropping of boiled saline solution. Since the adoption of this method he had performed 281 extractions; there had been no suppurations and no iritis severe enough to affect vision.—A discussion on the value of asepsis as opposed to antisepsis followed, in which Mr. BERRY, Mr. NETTLESHIP, Mr. HILL, Mr. J. GRIFFITH, Mr. LAWFORD, and Mr. CARGILL took part.

Mr. L. V. CARGILL described a case of Pseudo-glioma due to Choroido-retinitis Secondary to Meningitis in a male infant, with good family history and born at full term, who was perfectly healthy until three months old, when he suddenly developed meningitis. A fortnight later the left eye was noticed to be affected with pseudo-glioma. Two months afterwards hydrocephalus was developing and was

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associated with retraction of the head. Right optic papillitis was discovered, whilst the left membrana tympani was found to be perforated, there having previously been slight purulent discharges from the left ear. The hydrocephalus increased, the left eye underwent shrinking, whilst the right eye remained unaffected except for atrophy of the optic disc. The child died about ten months after the first onset of illness. A post-mortem examination was not obtained.—Mr. TREACHER COLLINS had observed from pathological examination that these cases were more often retinitis than choroiditis. The course of the affection was from the throat by the Eustachian tube, middle ear, meninges, and optic nerve to the eye.

Dr. ARNOLD LAWSON and Dr. G. A. SUTHERLAND described a case of Albuminuric Retinitis. A girl, aged twelve years, was brought to the hospital on Oct. 29th suffering from headache and vomiting. Examination showed the presence of albumin in the urine and albuminuric retinitis in both eyes. The history of her illness consisted of intermittent attacks of headache during the last ten months. These had recently become much worse and were frequently accompanied by vomiting and great prostration. The past history was excellent. She had never had scarlet fever or any cardiac affection. She was always a ravenous eater and especially fond of meat. The family history was good except for phthisis on the mother's side. The patient was bright and intelligent and showed no lethargy. There was a diffused heaving impulse over the precordial region. The apex beat was three-quarters of an inch outside the nipple line in the fifth space. The heart's first sound at the apex was rough and accompanied by a short blowing murmur. The second sound was accentuated at the base; the sounds were clear and ringing, the second being accentuated. Arterial pulsation was visible in the large vessels of the neck. The pulse was small, regular, and of high tension, and there appeared to be some thickening of the vessel walls. The urine was acid and cloudy and its specific gravity was 1010. Albumin was present in considerable quantities. Microscopically, casts, for the most part hyaline, but also a few epithelial or fatty, were found. The fundus in each eye presented the usual changes due to albuminuric retinitis in a typical and advanced form. The case appeared to be one of primary chronic interstitial nephritis occurring at an unusually early age. The symptoms were precisely similar to those met with in adults suffering from this disease. The cause was obscure. Possibly a long course of over-feeding might have so affected the blood as to induce irritative changes in the kidney. No record of any case of albuminuric retinitis occurring at so early an age could be found. One case at fifteen years had been recorded by Mr. Benson in 1883.—Mr. NETTLESHIP called to mind two cases of albuminuric retinitis in children. One was in a boy, the details of whose case he could not recall, but who was under observation for a year; the other was in a little girl, who was said to have recently had Bright's disease. In the latter case there was great pallor of the optic nerve and old retinal changes with much impairment of vision.—Dr. BREUER said that Dr. Bull had published a series of cases, one of which was in a boy aged five years. In every case in which a post-mortem examination had been made interstitial and not glomerular nephritis had been found.—Mr. LAWFORD had recently seen a boy, aged seventeen years, with albuminuric retinitis; he also had chronic interstitial nephritis; he improved materially.—Mr. HOLMES SPICER had recently been asked to see a child at the Children's Hospital who had all the signs of acute nephritis; on examining the eyes there were a few small retinal hæmorrhages, but no large masses of exudation.

HUNTERIAN SOCIETY.

Medical Hæmorrhage.—Pruritus Vulvæ.

AN ordinary meeting of this society was held at the London Institution on Nov. 10th, the President, Dr. G. E. HERMAN, being in the chair.

Dr. F. J SMITH read a paper on Medical Hæmorrhage which is published in another part of our present issue.—Mr. COTMAN referred to the value of a large dose of sulphate of magnesia given at the commencement of a case of hæmoptysis and spoke of the value of rest as procured by opium.—Mr. GEORGE B. STEVENS said that in treatment it was often necessary to be empirical, and referred to the importance of diagnosis as a guide to treatment. He instanced a case where it was difficult to diagnose the source of the hæmorrhage which turned out to be due to a polypus nasi. He considered the old method of treatment by pilula plumbi cum opio as still the best, but he generally gave an acid mixture with ergot and digitalis.—Mr. BOWKETT said he had found benefit from ergot in large doses. In gastric hæmorrhages rest and ice were useful, whilst in most hæmorrhages turpentine by the mouth was valuable. Antimony often succeeds in pulmonary hæmorrhages when other remedies fail.—Dr. RUTTER stated that he considered the ice-bag of no use and spoke highly of the value of calcium chloride as a hæmostatic.—Dr. FORTESCUE FOX believed that the ice-bag in hæmorrhages from the stomach or intestine allayed vascular excitement. Hazeline in large doses was also useful in his experience, and he advocated venesection in cerebral hæmorrhage.—Mr. A. H. TUBBY inquired as to the reason for giving iodide of potassium and agreed with Dr. Smith's remarks on the use of ergot.—Dr. HINGSTON FOX did not use ergot for medical hæmorrhages, but used, not only iodide of potassium, but alkalies to quiet the circulation, and quoted a case of copious hæmorrhage due apparently to simple increased arterial tension without evidence of kidney lesion, and said the man was still alive.—Dr. WICKHAM still believed in the value of large doses of ergot.—Dr. ARTHUR DAVIES stated his belief in the administration of ergot in sufficiently large doses. He also referred to the value of sulphate of magnesia given frequently. He emphasised the extreme value of position in severe hæmorrhages, whether pulmonary or cerebral, and the importance of turning the patient on the affected side, as pointed out by Dr. Bowles.—Dr. SMITH replied.

Dr. HERMAN then read a paper on Pruritus Vulvæ. He first stated that though pruritus is a common complaint, yet it is important, as it causes great local suffering and indirectly, by preventing sleep, injury to health. The causes of pruritus were divided into five classes. 1. Adventitious, due to pediculi, dirt, worms, and pessaries. 2. Skin diseases—eczema, herpes, furuncle, follicular urticaria, and diabetic dermatitis, which has been shown to be due to neither saccharine urine nor sweat. 3. Irritating discharges—gonorrhœa, cancer, and senile endometritis—and also cases where no visible change is seen. 4. Venous congestion, due to heart, lung, or liver disease. 5. Nervous. In Class 1 he advised unguentum hydrargyri ammoniatum for pediculi, absolute cleanliness, and changing of material of pessary. Class 2: Eczema usually affects fat elderly women and those who are pregnant; possibly it depends on a parasitic micro-organism; in diabetes it is especially frequent. Treatment in the former consists in warm hip-baths with liquor carbonis detergens added and powdering the parts with boric acid. In the latter general treatment is required. Herpes zoster is not amenable to any kind of treatment. Follicular pruritus is best treated by squeezing out the contents of the follicles and applying a germicide lotion such as corrosive sublimate, 1 in 2000. Urticaria is very rare. Class 3: Irritating discharges should be treated by sedative and antiseptic washes to the vagina, followed by sedative powders to the vulva, such as a saturated solution of borax and dermatol powder and boric acid. When these fail to give success a strong carbolic acid lotion, 1 in 7, will in some cases completely cure or give great relief. Class 4: Pruritus is found in pregnancy and in corpulent persons with varicose veins, and those suffering from heart, lung, or liver disease. The treatment is practically the same as in Class 3. In Class 5 pruritus in aged women is sometimes a symptom of degenerative changes in the nervous system, and treatment usually fails.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—Adjourned Discussion on Dysmenorrhœa.

A MEETING of this society was held on Nov. 11th Mr. MAYO ROBSON, President, being in the chair.

Mr. TENISON COLLINS (Cardiff) showed a Myomatous Uterus removed by pan-hysterectomy four days previously. The patient had so far made good progress.—

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Mr. F. BOWREMAN JESSETT showed two Myomatous Uteri removed by pan-hysterectomy. In one of them an interstitial myoma had caused such absorption of uterine tissue over it as to have burst into the abdominal cavity. This specimen also illustrated a method of preserving specimens by which their colour was retained, introduced by Mr. H. G. Plimmer, pathologist to the Cancer Hospital. The fluid was made up as follows: Formalin six parts, sodium chloride one part, sodium sulphate two parts, magnesium sulphate two parts, water one hundred parts.—Mr. O'CALLAGHAN showed a Myomatous Uterus removed by the clamp method.—In the discussion on these specimens, the PRESIDENT said there were two important questions in dealing with every case of myoma: (1) Should they operate at all? and (2) if so, by what method? Many cases of hard fibroid did not require operation; but in those of rapid growth, with serious symptoms and in those that grew after the menopause removal was the only course. As to method, he was quite satisfied with a form of intra-peritoneal hysterectomy in which, after securing the vessels and suturing the peritoneum, the stump was brought up to the wound and fixed there, shut off from the peritoneal cavity, and covered by the skin.—Dr. GRANVILLE BANTOCK observed that he was not wedded to any one method; but most of his experience had been with the serre-nœud, and this had given him the best results. When there was malignant disease involving the cervix and when it was not possible to form a pedicle he removed the whole uterus. In the case of small fibroids it was a mistake to remove the uterus; many of them could be enucleated. Moreover, fibroids did not interfere with concept on, pregnancy, or labour. In a recent gynæcological text-book hysterectomy was described as an easy and safe operation. He wished to protest against such teaching; in all cases it was an operation of some difficulty, and should only be undertaken by a skilled and experienced operator.—Dr. C. H. F. ROUTH had seen many cases in which an operation had been advised by men of eminence and in which he had successfully counselled non-interference; these patients were alive now. Even when pregnancy was associated with fibroids the child would displace the tumour and delivery would be safely accomplished. He had seen many cases of fibroids, but in not one, as far as he could remember, had there been any growth after the menopause.—Dr. PURCELL said that there were cases in which it was imperative that the whole organ should be removed—viz., in cases where the myoma presented malignant characters, and for these pan-hysterectomy was the only possible operation.—Mr. BOWREMAN JESSETT, in his reply, laid stress on the disadvantages of the clamp method. On the question of myoma with pregnancy he did not at all agree with Dr. Routh; there were many cases in which it would be very negligent not to operate. Péan had shown that cases not operated upon had a very high mortality, and when abortion occurred the mortality was even higher.—Mr. COLLINS and Mr. O'CALLAGHAN also replied.

Dr. SHAW MACKENZIE showed some slides prepared from Curettings in cases of Suspected Malignant Disease. He regarded them as instances of hæmorrhagic endometritis.

In the adjourned discussion on Dysmenorrhœa Dr. MACNAUGHTON-JONES briefly reviewed the Causes of Dysmenorrhœa, and said he would confine himself to the "congestive" variety, described by Matthews Duncan as "obstructive." It was associated with flexions and under-development of the uterus, and neurasthenia. But even there there was often a difficulty, as the patient had violent dysmenorrhœa evidently attributable to the uterus, yet on examination the uterus sometimes appeared normal, while the patient's general health was good. He did not believe in simple dilatation for dysmenorrhœa; it might relieve, but it would not cure; nor did he believe in tents. He had not tried Dudley's operation, but he had had very good results from the kind of treatment mentioned by Dr. Heywood Smith at the last meeting—viz., division of the cervix with scissors; incision of the internal os with a Sims's knife; dilatation; and the introduction of a small glass stem for a few days.—Dr. HERBERT SNOW regarded dysmenorrhœa as due simply to imperfect development. A course of massage, shower-baths, and proper feeding would do a great deal; whilst he believed that if women left off the wearing of stays, or used only such as were of suitable form, much less would be heard about dysmenorrhœa.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Removal of the Scapula for Sarcoma.—Acute Diffuse Myelitis.—Chronic Intestinal Obstruction.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Nov. 5th, Dr. BRAITHWAITE, President, being in the chair.

Mr. LITTLEWOOD read the notes of a case of Removal of the Scapula for Sarcoma, in which he had operated by placing the patient in the prone position and turning inwards a large semilunar flap. The patient, a man, aged fifty-two years, who was operated upon on Aug. 16th, was shown. He had a fair amount of movement in the new joint, and could get his hand up to his mouth and to the opposite shoulder. The specimen was shown. The growth involved nearly all the bone and infiltrated some of the muscles. The whole of the bone was removed with the exception of the acromion. The growth was a fibro-sarcoma in which some of the cells were arranged in alveolar spaces.—Mr. MOYNIHAN remarked that he had lately had to excise a scapula for malignant disease in which there was only two months' history of growth; recurrence took place in a few weeks and the clavicle was removed; the disease then spread internally and the patient died in six weeks.

Dr. CAMPBELL, of Bradford, read notes of two cases of Acute Diffuse Myelitis. They both presented a fairly definite train of symptoms which, although in many respects they corresponded with those met with in the closely allied Landry's paralysis, yet in other respects were quite characteristic of acute diffuse myelitis. In both cases there was a rapidly spreading loss of power, of sensation, of both superficial and deep reflexes, and of control of the sphincters. In one the temperature was considerably raised and the course was rapid, whilst in the other (except when rigors occurred) the temperature was not materially raised and the course was somewhat protracted. After describing the cases in detail Dr. Campbell discussed the pathology of the disease and its relationship to Landry's paralysis and to acute disseminated myelitis, especially referring to the probable causal connexion of micro-organisms with all three diseases.—Dr. BRAITHWAITE, Dr. CHURTON, Dr. LEECH, Dr. GRIFFITH, Dr. BARRS, Dr. BAMPTON, Dr. EDDISON, Dr. WRIGHT, and Mr. LAWFORD KNAGGS took part in the discussion, and Dr. CAMPBELL replied.

Mr. LITTLEWOOD showed: 1. A patient on whom he had operated for Poplitial Aneurysm by removal of the aneurysmal portion of the vessel. The patient, a man aged twenty-five years, was operated on June 15th, 1897. The wound was quite healed when dressed on June 25th. He got up on June 29th, left the infirmary eighteen days after the operation, and has since been doing his usual work. He had a great deal of pain before the operation necessitating the administration of morphia, but has had no pain since. The specimen was shown. 2. A specimen of a Testicle removed from an adult. The testicle had never descended into the scrotum and the spermatic cord was completely twisted.

Mr. E. W. SELBY read a paper on a case of Chronic Intestinal Obstruction due to a Tumour of the Ileum. The patient, who was forty-five years of age, was suddenly attacked with epigastric pain and vomiting in December, 1895, and from that date until May, 1897, the symptoms recurred with increasing frequency, abdominal distension and almost complete constipation succeeding. Her weight declined from 11 st. to 7 st. On June 21st a special distension of an intestinal coil in the left iliac region was visible where peristalsis of the gut appeared to cease. She was admitted into the Doncaster Infirmary, and on July 6th an incision was made in the left iliac region and the abdominal cavity explored with the hand. The small intestine being followed upwards from its juncture with the cæcum, a firm substance could be felt a few feet up the ileum. The suspicious coil was drawn out of the wound and incised longitudinally, when a tumour was discovered attached to the mesenteric border by a short, broad pedicle. This was transfixed and ligatured, and the tumour, an ovoid mass of uniform consistence, measuring in various diameters 2 in., 1½ in., and ⅞ in., was removed. The growth was a fibroma or a fibro-myoma.—Dr. BARRS considered that in a large number of cases of intestinal obstruction abdominal percussion was useless, and in some cases absolutely misleading. He believed that visible

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peristalsis always meant chronic obstruction and persistent vomiting severe disease.—Mr. LITTLEWOOD disagreed with Dr. Barrs as to the chronicity of disease where visible peristalsis was present, and spoke of two acute cases where this symptom was noticed.—Dr. EDDISON agreed with the last speaker, believing that peristalsis is frequently seen in acute cases where the amount of fat in the abdominal walls is small.

The following cases, pathological specimens, &c., were exhibited:—

Dr. GORDON SHARP: Specimens of the Mescal Button.

Dr. BARRS: (1) Ophthalmoplegia Externa, with proptosis; (2) Abdominal Aneurysm; and (3) Perforation of Intestine (enteric).

Dr. TREVELYAN: (1) A case of supposed Syphilitic Spastic Paralysis, and (2) a specimen of Multiple Tuberculous Tumour of the Brain.

Dr. HELLIER: (1) Adeno-fibroma Mammæ, with interesting secondary changes; (2) Ovarian Cyst, strangulated by twisted pedicle; and (3) Congenital Defect in Hand (patient shown).

Mr. H. S. WALKER showed a Child, nine months old, with a Malformation of the Right Auricle and Temporal Bone. The auricle was shrivelled and deformed in the usual manner but there was no meatus. The ear was dissected forwards, and there was not a mark or a depression in the temporal bone indicating any attempt at the formation of an auditory meatus. The pharyngeal end of the Eustachian tube was normal. The child was too young to notice a tuning fork. Probably as the Eustachian tube was normal there would be a more or less perfectly formed middle ear.

Mr. MOYNIHAN: (1) Endarteritis Obliterans, Subclavian Aneurysm on the Right Side; and (2) Sarcoma of the Scapula.

Mr. WARD: (1) Urinary Organs from a patient who was four times cut for stone; (2) A Case of Gastrostomy by Franks' Method; and (3) Renal Calculus removed by Lumbar Nephrectomy.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Specimens.—Midwifery.—Club-foot.

A MEETING of the above society was held on Nov. 2nd, Dr. ARNOLD EVANS, President, being in the chair.

Dr. CRAWFORD and Dr. ROBSON gave a microscopical demonstration of Living Typhoid Bacilli, and showed the changes which occur in Widal's reaction; they also exhibited Cultures of the Organism on Various Media.

Mr. FARROW showed the Heart of an Infant the victim of Congenital Heart Disease.

Dr. METCALFE read notes on 100 cases of Midwifery. Adverting to the paper of Dr. Sinclair at the Montreal meeting of the British Medical Association on "Injuries of Parturition" Dr. Metcalfe expressed the opinion that Dr. Sinclair had exaggerated the frequency of injuries arising from the more extended use of forceps by modern practitioners, and asserted that in large numbers of cases much needless suffering is avoided by the early use of forceps, and that in the hands of educated practitioners there is no corresponding tale of injury inflicted by such interference. He showed that he applied the forceps in 30 per cent. of the cases he related, that no mother had died, and only two children were born dead, and further that neither in the case of mothers nor children was there any serious injury the result of parturition.—A considerable amount of discussion followed, in which Mr. MERCER, Dr. BELL, Dr. KERR, Dr. GOYDER, Mr. HORROCKS, and Dr. RABAGLIATI took part, the general opinion being that 30 per cent. was too high a proportion for instrumental interference in midwifery cases.

Mr. HORROCKS read a paper on Club-foot, its Causation, Pathology, and Treatment. He first urged the importance of an accurate knowledge of the anatomy of the parts and showed a dissection of a child's foot the subject of Talipes Equino-varus. Mr. Horrocks limited his remarks to the condition of congenital equino-varus. Under the heading of causation Mr. Horrocks disagreed with the views that changes in the nerves or spinal cord or arrested development of the bones of the foot are in any considerable proportion of cases the prime factors in producing the deformity, but adhered to the oldest explanation—viz.: the mechanical one of the assumption of faulty or constrained positions of the limbs during intra-uterine life. Faulty positions and limitations of movement may be brought about in several ways: (1) by abdominal or pelvic growths outside the uterus; (2) by tumours of the uterine walls; (3) by limited growth of the uterus itself during pregnancy; (4) by deficient liquor amnii; (5) by some tumour of the child itself—e.g., spina bifida; and (6) by locking of the fœtal limbs. When from any of these causes the limbs assume a faulty or fixed position *in utero* the joints tend to become stiff by the formation of fibrous tissue around them and also by alteration of the cartilage, which is not in proper apposition with the corresponding articular surface. Mr. Horrocks then described in detail the anatomical changes which occur in talipes equino-varus, drawing particular attention to the displacement of the scaphoid bone, which is thrown inwards, and articulates with only the inner part of the head of the astragalus. It may articulate with the internal malleolus of the tibia. He thought that the radiograph was not of much service in estimating the degree of alteration of the bones, as there is so much cartilage present which gives only an indistinct outline. As to treatment, in mild cases the deformity can be remedied by simple manipulation and subsequent retention in good position by means of a plaster bandage or splint. The manipulations should be long-continued and systematic, care being taken to move one joint while the others are fixed. A wrench may be used to give greater power in manipulations. In the more severe cases in which the deformity cannot be reduced by hand division of the tendons and ligaments concerned or removal of portions of bone may be required before the foot can be brought into a proper position and retained there by suitable apparatus. Tenotomy is required when the foot cannot be flexed to a right angle and the inner ankle is not prominent. The tibiales anticus and posticus are first divided and then after further manipulation the tendo Achillis. If the adduction is marked the adductor pollicis and plantar fascia are to be divided, but the greatest result is given by division of the calcaneo-scaphoid ligaments. The foot is then fixed in the best possible position by plaster-of-Paris. Removal of the cuboid was practised in two cases with good results. In one case where there was very marked shortening of the inner border of the foot the metatarsal bone of the great toe was partly excised and this was followed by improvement. Mr. Horrocks insisted again that the treatment must be continuous until the child can walk in order that relapse may be prevented.—Dr. WOOD, Dr. RABAGLIATI, Mr. MIALL, and Mr. MORTON offered remarks, and Mr. HORROCKS replied.

LIVERPOOL MEDICAL INSTITUTION.

Malignancy of Villous Tumours.—Exhibition of Specimens.

A MEETING of the Pathological and Microscopical Sections was held on Nov. 11th, Mr. F. T. PAUL being in the chair.

Dr. ABRAM showed Cultures obtained from a case of Mouse Favus. He considered the parasite to be identical with that of human favus, and suggested that to multiply favus varieties alike clinically and bacteriologically was unnecessary.

Mr. PAUL read a short paper on the Relative Malignancy of Villous Tumours of the Bladder and Rectum. He quoted several cases tending to show that this growth had an amount of malignancy about equivalent to that of the recurrent fibroid and that its natural tendency was ultimately to end in carcinoma. He thought better results would be obtained clinically if the surgeon had in mind that he was dealing with a mildly malignant and not a simple papilloma.

Dr. R. BUCHANAN showed specimens and contributed a note, illustrated by lantern slides, on a Peculiar Growth in the Submucous Layer of the Walls of the Vas Deferens in the Human Adult. The exact nature of the structure was doubtful and opinions were requested from members present. The growth was about the size of a pin's head, lobulated, and microscopically showed a capsule of fine fibrous tissue and a dense collection of round cells. The structure within the capsule was tubular in character, the tubules being lined by more or less cubical cells. Within the tubules large epithelioid cells were present showing signs of degeneration.

Professor SHERRINGTON showed specimens to illustrate the Modes of Ending of Sensorial Nerves in Voluntary Muscle. He had in 1893 succeeded in demonstrating that the voluntary muscles receive a large number of sensory nerve-

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fibres. In the nerve trunks supplying most of the limb-muscles about one-third of the nerve fibres are sensory. He now brought forward specimens to demonstrate the actual modes of termination of these sensory nerve fibres in muscles. He stated that, as the microscopic specimens laid before the meeting clearly showed, there are at least three different kinds of sensorial end organs in the muscles. The first of these is the *muscle spindle*, which had now been proved to be sensorial, although at first supposed to be an embryonic focus or a pathological new formation. Specimens were demonstrated which showed (1) that nerve fibres from the spinal root ganglia enter and end in these spindles; and (2) that the terminal arborisations of these nerve fibres are much larger than, and quite different from, motor end plates, and are distributed to the peculiar intrafusal muscle fibres at the equator of each muscle spindle. The second form of sensorial ending is the Golgi tendon organ. Preparations exhibiting the terminal arborisations of the nerve fibres in these end organs were exhibited confirming the original description by Golgi. The third form is the Pacinian corpuscle. These, as previously described by Professor Sherrington, are found in two situations in muscle—(1) near septa or aponeuroses; and (2) embedded in the thickness of the muscle thickness proper. Some are large, others small, and possess few lamellæ in their capsule. The nerve fibre to the Pacinian corpuscle is always a large myelinate fibre. Muscles in which they are observed are muscles of the limbs and larynx. Search for them in the eye muscles has not discovered them there. Professor Sherrington drew attention to the interesting fact that the muscle fibres inside the spindles, unlike the ordinary fibres of the muscle, do not undergo degeneration after section of the whole nerve of the muscle. Specimens were shown in which the muscle fibres inside the spindles were not shrunken in size or degenerate after the nerve of the muscle had been severed for nearly three years, no regeneration or reunion of the nerve having been allowed. The capsule of the spindle appeared a little thickened and the periaxial space a little reduced, but the intrafusal muscle fibres were undegenerate, although the muscle elsewhere was highly degenerate. Professor Sherrington found in this support for a view he had previously urged—namely, that the intrafusal muscle fibres belong to the "red" variety of muscle, which it is well known atrophies on section much more slowly than does the large "white" variety of muscle fibre. Every muscle, as Grützner and others have shown, is composed of both white and red fibres, and the latter remain comparatively unatrophied for a long time after nerve section. The communication was illustrated by micro-photograms.

The following specimens were exhibited:—

Mr. NEWBOLT: Sarcoma of the Femur.

Dr. BARENDT: Rodent Ulcer and Cirrhosis of the Liver in a Young Child.

Mr. SKELLETT SMITH: (1) Symmetrical Affection of the Finger Nails; (2) Large Hernia reaching down to the Knees; and (3) Exudation from Plastic Bronchitis.

Dr. GIVEN: Skiagrams of a Bullet in the Finger.

Dr. ABRAM: Plasmodium Malariæ, Crescent Form.

Mr. R. W. MURRAY: Spinal Column Two Months after Forcible Straightening for Pott's Caries.

Mr. THELWALL THOMAS: Trichocephalus Dispar found in the Vermiform Appendix removed for Recurring Appendicitis.

Professor BOYCE, Mr. NEWBOLT, Mr. PAUL, Dr. LESLIE ROBERTS, Dr. WARRINGTON, Dr. CAMPBELL, Dr. ABRAM, and Dr. BUCHANAN discussed some points raised.

PATHOLOGICAL SOCIETY OF MANCHESTER.

The Means by which Milk becomes Pathogenic.—Suppuration occurring in a Simple Fracture.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Nov. 10th, Mr. C. E. RICHMOND, President, being in the chair.

Professor SHERIDAN DELÉPINE read an interesting paper on the Means by which Milk becomes Pathogenic. He first referred to the influence of keeping and of temperature.[1] The influence of time he considered to be well shown by the number of specimens remaining good even at high temperature when the milk had been kept only half a day. The powerful influence of temperature on milk was still more evident, for in every category the number of good specimens was almost inversely proportional to the height of the temperature. When the clear relation existing between time of keeping *plus* temperature and the noxious properties of a certain number of samples of milk was contrasted with the ambiguous results obtained when an attempt was made to connect these noxious properties with disease of the udder it was difficult not to feel convinced that infection of the milk outside the udder and the conditions under which it is kept are the most important factors causing it to acquire at times pathogenic properties. By comparing the results of the bacteriological examination of milk which had produced outbreaks of diarrhœa and the results of his investigations, Professor Delépine found that the same bacillus was present in both cases—a bacillus resembling closely the bacillus coli communis, if not identical with it.

Mr. W. P. STOCKS related the case of a girl, aged two years and nine months, who sustained a simple greenstick fracture of the ulna which followed the usual course for two weeks and then took on acute suppurative inflammatory action leading to infection of the lower epiphysis about two weeks later and slight necrosis at the seat of fracture. No source could be found for the pyogenic cocci. Mr. Stocks referred to Kocher's experiments on the production of osteomyelitis in injured bones when the animals were fed on large quantities of putrid material, but in his case the intestinal tract appeared healthy.

Dr. JUDSON BURY showed a specimen of Aneurysm Involving the Upper Part of the Abdominal Aorta taken from a man aged thirty-nine years. Anteriorly it consisted of two rounded swellings, both above the cœliac axis; posteriorly it had ruptured behind the peritoneum, and the boundaries of the rupture consisted of eroded vertebræ (the last dorsal and first three lumbar) and retro-peritoneal tissue which was infiltrated with blood and laminated clot. The chief symptoms of the case had been rigidity of the spinal muscles in the lumbar region and severe pain and cutaneous hyperæsthesia in the back and along the distribution of the twelfth dorsal and first three lumbar roots. Pain in the back was probably the earliest symptom and began about four years before death. The patient was under observation during the last four months of his life, and in addition to the symptoms already mentioned there was a pulsating swelling in the left hypochondrium, and the pulsation could be felt behind, below, and over the last two ribs.

Mr. WESTMACOTT exhibited a specimen of Spinal Meningocele which he had removed from a child three months old. The tumour, measuring nine inches in circumference, was pedunculated and issued from the spinal column through the incomplete posterior arch of the atlas. There was no hydrocephalus before or after the operation. With Roentgen rays and a fluorescent screen the aperture in the arch of the atlas could be distinctly seen after the wound was healed.

Dr. FOTHERGILL referred to the Alleged Origin of Malignant New Growths from the Products of Conception.

The following card specimens were exhibited:—

Dr. ALCOCK: specimens of Fractured Bones in Camelus Dromedarius.

Dr. ARTHUR HELME: Uteri extirpated for (1) Fibromata; (2) Carcinoma of the Cervix; (3) Malignant Tumour of the Body; and (4) Hypertrophy and Procidentia.

Dr. KELYNACK: Carcinoma of the Gall-bladder.

Mr. HERBERT LUND: Murphy's Button *in situ* forty-eight hours after operation.

Dr. RAY: Drawings of Dissections of the Prostate Gland and the Base of the Bladder.

Mr. RICHMOND: Tumour of the Œsophagus.

Mr. PERCY STOCKS: (1) Ovarian Hernia; and (2) Hydrocele of Canal of Nuck.

Dr. E. S. YONGE: Micro preparations of Nasal and Laryngeal Specimens.

Mr. WOLSTENHOLME: Cysticercus Cellulosæ in Measly Pork.

[1] For a full account of this investigation see the Journal of Comparative Pathology, June and September, 1897.

MANCHESTER MEDICAL SOCIETY.

Amputation of the Upper Extremity.—The Appendices Epiploicæ.—Exhibition of Cases.

A MEETING of this society was held on Nov. 3rd, Dr. H. G. BROOKE, Vice-President, being in the chair.

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Mr. WHITEHEAD related the particulars of two successful cases of Amputation of the entire Upper Extremity.

Mr. MONTGOMERY made a communication on the Relations of the Appendices Epiploicæ of the Sigmoid Flexure. It was shown that in the upper six or eight inches of the gut the appendices are always very much more developed on the right or mesial border of the untwisted bowel. With this fact in view the upper end of a loop drawn out in colotomy could always be distinguished from the lower, even though a twist existed. It was suggested that in colotomy for malignant disease the gut should be twisted on itself before fixation and the lower opening made the acting one. At the same time the mesenteric stitch should be passed through the abdominal wall well in the upper angle of the wound. This course would diminish the tendency to prolapse, and would give a better permanent opening with a minimum of exposed mucous surface.

Dr. GARDNER read a paper on Vomiting.

Mr. STANMORE BISHOP showed two male patients, aged respectively fifteen years and two years and ten months, upon whom Suprapubic Lithotomy with immediate Union of the Bladder and Abdominal Wall had been performed without drainage. He drew attention to the advantages of this method by which greater safety to the patient and immense decrease in the work required from the nurse are obtained.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Exhibition of Cases and Specimens.—Glandular Enlargements in the Neck.—President's Valedictory Address.—Election of Officers.

THE first meeting of this society for the winter was held on Nov. 3rd in the rooms of the Royal Scottish Society of Arts. The President, Dr. ARGYLL ROBERTSON, occupied the chair.

Professor ANNANDALE showed a male patient from whom he had removed the Larynx along with the Thyroid Gland and part of the Œsophagus. The larynx was almost stenosed by a malignant growth. He performed a preliminary tracheotomy, which required to be very low in position owing to the enlargement of the thyroid gland. He showed an ingenious arrangement for administering chloroform through the cannula a description of which appeared in THE LANCET of Nov. 6th, 1897, p. 1185. The patient seemed to be in remarkably good condition and was able himself to manipulate both the tracheotomy tube and an œsophageal tube, which had been used for feeding purposes.

Mr. A. G. MILLER showed a patient after Resection of the Ulnar Nerve. A portion of the nerve had been removed after a recurrent tumour of the arm had been excised on account of the nerve showing signs of being implicated. The gap thus left between the cut ends of the nerve was filled by splitting the end of the severed nerve longitudinally and turning one half of the nerve down and half of the lower segment of the nerve upwards. The operation was so successful that both sensation and motion had entirely returned. There was, however, a recurrence of the tumour growth.

Dr. ALLAN JAMIESON showed two cases of Lupus Vulgaris treated with Koch's new tuberculin with considerable benefit, a case of Lupus Erythematosus, and one of Dermatitis Herpetiformis.

Dr. ARGYLL ROBERTSON showed specimens under the microscope of Filaria Loa taken from the conjunctiva and other parts of the body.

Mr. CATHCART showed Fluid which had been removed from what had been diagnosed as an abscess close to the crest of the ilium, but which turned out to be a hydatid cyst.

Mr. A. G. MILLER read a paper on the Etiology and Treatment of Glandular Enlargements in the Neck. The object of this paper was to point out the importance of discovering and, if possible, removing the primary causes of glandular enlargement. He thought there were many varieties of glandular enlargement, but referred only to the simple, chronic, and the tuberculous form. He considered that it was only in the early stage that there was any difficulty in distinguishing between these conditions. He considered that simple adenitis might become tuberculous, and he spoke of this as the pre-tuberculous stage. Believing this he considered that many cases of tuberculous glands might have been prevented by a timely removal of a source of irritation. He then referred to the course of the lymphatics to various groups of glands and gave examples of some of these. Discussing causation he referred to predisposing causes such as age and constitution and exciting causes. Under the latter heading he considered the various points where organisms or their products could be absorbed. He considered that the maintenance of glandular affections was the result of the persistence of the exciting cause. He laid great stress upon the importance of shutting the door through which the infection entered. When glandular enlargements persisted after all apparent cause had disappeared or been removed the explanation was to be found in the existence of an irritating factor in the gland, which the gland could not destroy or expel, and that irritant he believed to be always tuberculous. In fact, he considered that if in these persistent glandular enlargements there was any doubt or difficulty as to their nature the probabilities were that they were tuberculous. His treatment was based upon these principles—the discovery and treatment of the primary seat of irritation—and if after that the glands continued to be enlarged he removed them.—Several of the members made remarks on the paper, and it was suggested that all cases of so-called chronic adenitis were tuberculous and showed giant-cells even if there were no areas of caseation.

The retiring PRESIDENT then delivered a valedictory oration in which he reviewed the work of the society during the time that he had occupied the chair, and made various suggestions regarding the future conduct of the society's meetings.

Dr. Batty Tuke was elected President and Dr. P. A. Young a Vice-President. Dr. Argyll Robertson, Dr. John Thomson, Dr. Michael Dewar, and Dr. Shaw McLaren were appointed to the council in place of four members whose time had expired. The treasurer, secretaries, and editor of the Transactions were reappointed.

FORFARSHIRE MEDICAL ASSOCIATION.

Hemiplegia—Simple Manœuvres for General Gynæcological Practice.—Chronic Stenosis of the Large Intestine.—Exhibition of Specimens.

A MEETING of this society was held in University College, Dundee, on Nov. 4th, Dr. ALEXANDER CAMPBELL, President, being in the chair.

Dr. STALKER communicated a case of Hemiplegia with Atrophy of the Affected Side. The case was one in which some cerebral affection of an obscure kind had existed before the hemiplegic attack, and on the apparently sound side there was evidence of descending degeneration of the cord. The theory was advanced that the nutrition of the muscles may be associated with a certain amount of intact cerebral connexion—an amount that may be supplied in an ordinary hemiplegia through supplementary aid from the sound side of the brain. When this cannot be turned to account owing to previous lesion of the side atrophy may follow.—Dr. MCVICAR suggested that an explanation of the case might be found in a diagnosis of amyotrophic lateral sclerosis.

Dr. BUIST read a paper on Some Simple Manœuvres for General Gynæcological Practice.—Dr. GREIG and Dr. KYNOCH made some comments.

Dr. MACEWAN gave notes of the case of a woman who had had symptoms of Chronic Stenosis of the Large Intestine. On the occurrence of acute obstruction an exploratory abdominal incision had shown its site to be at the hepatic flexure. In the exhausted state of the patient it was deemed advisable simply to fix some bowel at the wound with a view to an artificial anus later, but an unexpected relief to the bowels which had followed had led him to return the bowel. Some months later a recurring obstruction was treated by the excision of from four to five inches of bowel at the hepatic flexure with the use of Murphy's button. The stricture was annular and was formed by a columnar-celled epithelioma.—Dr. GREIG asked whether it was not the case that with subsequent cœliotomies there was a greater tolerance of any handling. He condemned the use of Murphy's button or any like means, and advocated end-to-end suture.—Dr. MILLER, Dr. WHYTE, and Dr. HALLEY also took part in the discussion.—Dr. MACEWAN, in reply, said that the Murphy's

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button, though not without its disadvantages, might be used where rapidity of operation was required.

Dr. MCGILLIVRAY showed a patient with a Congenital Subluxation and Coloboma of the Lens.

The following pathological specimens were also exhibited:—

Dr. MACEWAN: (1) Sarcoma of the Ovary, and (2) Bronchocoeles.

Dr. FRASER: (1) Tuberculous Spleen, Liver, and Lung; (2) Atheroma of the Aorta; and (3) Carcinoma of the Œsophagus, Stomach, and Liver.

Dr. KYNOCH: Compressed Fœtus.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Opening Address — Suppurating Kidney. — Genito-urinary Organs from a Case of Imperforate Anus. — Osteo-arthropathy.

A MEETING of this section was held on Nov. 5th, Dr. J. M. PURSER the President, being in the chair.

The PRESIDENT delivered his opening address.

The Secretary (Dr. MCWEENEY), in the absence of Mr. J. S. M'ARDLE exhibited an enormous Suppurating Kidney which had been removed by Mr. M'Ardle some eight days previously by nephrectomy. It was riddled with abscesses, which differed in many respects from those met with in tuberculous disease, and microscopical examination of the material which came from them did not reveal the presence of tubercle bacilli; it did, however, reveal a considerable number of organisms, plate-cultivations of which on sugar-agar showed the cylinder of substratum quite broken up by the development of gas, which is exceedingly characteristic of bacillus coli, and as the result of this gas development, and the appearance on gelatin there could be no doubt that the micro-organism contained in the pus, and probably responsible for the condition of the kidney, was bacillus coli. Bacillus coli has a tendency to invade the organs of the body post mortem, but this kidney was removed during the life of the patient and bacillus coli was the only organism found in the pus. The patient (a female) was making a good recovery.

Dr. MCWEENEY, in the absence of Mr. A. J. THORNE exhibited the Genito-urinary Organs from a case of Imperforate Anus, showing persistent cloacal arrangement, bicornate uterus, and unilateral cystic degeneration of the kidney. The fœtus (a female) was rather small and appeared to be at about the end of the eighth or commencement of the ninth month. The left kidney possessed a ureter which was at first very thin and narrow, and then becoming swollen out into a tube as wide as the small intestine was lost upon the side of the left cornu of the uterus; the right kidney was reduced to a small hydronephrotic sac and its ureter was completely obliterated. The cloaca received the orifices of the bladder, rectum, and two uterine cornua, and was continued as a narrow tube directly into the vagina, opening externally between the two labia minora. Of the proctodæum there appeared to be no trace. The previous child had been born with the left hand amputated at the carpus.

Dr. O'CARROLL showed casts and microscopical sections from a case of mixed Tuberculosis and Carcinoma of one Lung in which pulmonary osteo-arthropathy was an early and well-marked phenomenon. The patient, aged forty-nine years at death, had been a year under observation in the Whitworth Hospital. The increase in the size of the extremities was easily distinguished from that of acromegaly by the characteristic shape and by the presence of bulbar terminal phalanges.—Dr. MCWEENEY, in referring to the microscopical sections of the lung, said that he had not been able to see anything which seemed to him to give evidence of tuberculosis.

NEW WORKHOUSE INFIRMARY FOR BATH.—At the meeting of the Bath board of guardians held on Nov. 10th it was resolved that a new workhouse infirmary should be erected in accordance with plans prepared which will be sent to the Local Government Board for approval. It is estimated that the cost will be £40,000.

Reviews and Notices of Books.

A System of Medicine. By Many Writers. Edited by THOMAS CLIFFORD ALLBUTT, M.A., M.D., F.R.S., F.L.S., Regius Professor of Physic in the University of Cambridge. Vol. IV. London: Macmillan and Co. 1897. Demy 8vo, pp. 880. Thirty-one Illustrations, one Coloured Plate. Price 25*s*.

THIS volume is the fourth of the System of Medicine—or the fifth if the System of Gynæcology which appeared last year be included—and is the third that Professor Clifford Allbutt has already brought out in the present year. The rapidity with which this authoritative system is now coming out speaks highly for the energy of the editor and for the collaboration of his many writers. The leaps and bounds by which medicine is advancing and the natural desire that the reader has for the most up-to-date expression of opinion make it highly desirable that as little delay as possible should take place between the writing and the publication of contributions; it would be a lamentable thing for an author to find his article *passé* on the day that it sees the light. The life of a system of medicine can therefore be but a short one, and one of its chief functions is to mark the extent of contemporary knowledge in articles written by representative authorities on the special subjects. On having most satisfactorily achieved this consummation Professor Clifford Allbutt is to be warmly congratulated.

The present volume deals with the diseases of the liver, kidneys, and ductless glands, and enters on the consideration of the respiratory tract, the greater part of the latter section appearing here being devoted to the throat and nose. Dr. William Hunter has been entrusted with a large share of the section on Hepatic Disease and has done his work admirably. After giving in outline the salient points of its normal anatomy he proceeds to an account of the functions of the liver and their disorders; in in his systematic description of the bile and the factors influencing its excretion he prepares the ground for what he has to say later with regard to jaundice. He criticises Murchison's well-known views on lithæmia, and concludes that this condition is not due primarily to hepatic derangement, but is the result of functional disturbance or disease elsewhere. Active and passive congestion of the liver are satisfactorily dealt with, and then the much-discussed subject of jaundice is expounded in a lucid and remarkably able manner. As the outcome of an exhaustive essay on the general pathology of jaundice he concludes that all jaundice is hepatogenous and may be divided into: (1) jaundice with obstruction of a manifest character, and (2) toxæmic jaundice due to increased viscidity of the bile from intrahepatic catarrh. Obstructive jaundice is described under various heads by other authors, but Dr. Hunter deals fully with toxæmic jaundice and with the allied diseases—Weil's disease and acute yellow atrophy, &c.

Tropical Abscess is from the pen of Dr. Andrew Davidson and is a valuable source of reference, his remarks on its etiology and relation to dysentery being fully supported by statistics. In this article, which is entitled "Suppurative Hepatitis," other forms of suppuration such as pylephlebitis are included. There is a thoroughly standard article on Amœbic Abscess of the Liver by Dr. Lafleur, which is full of the results of clinical experience and original investigation. In his account of Cirrhosis Dr. Herbert Hawkins has provided a compact and practical description of the disease and has not attempted to enter into all the numerous subdivisions of cirrhosis that have been differentiated from a pathologist's standpoint; it is not so much an encyclopædic source of reference as an article that will appeal to men busy in the practice of their profession. Dr. Hale White is the

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author of useful contributions on Perihepatitis and Tumours of the Liver.

The diseases of the gall-bladder and bile-ducts are appropriately described by Mr. Mayo Robson under the headings of Cholangitis and Cholecystitis, Tumours, and Gall-stones. The pathology, symptoms, and treatment are described in a masterly fashion, the section of Cholelithiasis being especially valuable and authoritative. Dr. John Thomson collects into a compact form what is known of congenital obliteration of the bile-ducts and icterus of the newly born. In these articles on the biliary apparatus the editor has been successful in obtaining the collaboration of workers who have largely added to and systematised our knowledge on the subject. This is also the case with regard to the essay on Diseases of the Pancreas, by Dr. Reginald Fitz, of Boston, whose Middleton-Goldsmith lecture in 1889 on the various forms of acute pancreatitis is so well known. He describes acute and chronic pancreatitis, pancreatic hæmorrhage, calculi, cysts, and malignant disease in a way that renders his article a most valuable source of reference.

The section on Renal Diseases begins with a clear and useful excursus on the physiology and general pathology of the kidneys by Dr. J. Rose Bradford. The accounts of dropsy and uræmia are thoughtful and philosophic, pleasantly written, and, it need hardly be added, well abreast of contemporary science. Nephroptosis, by Professor Alexander Macalister, is an exhaustive description of floating kidney and is supplied with numerous bibliographical references. The medical diseases of the kidney, under the title of "Diseases of the Kidney characterised by Albuminuria," have been very successfully handled by Dr. W. H. Dickinson. This article is freely illustrated by statistics from St. George's Hospital and is rendered more complete by an account of albuminuric retinitis from the hand of Mr. R. Brudenell Carter. Three groups of kidney disease are described; the first includes tubal, diffuse, and glomerular nephritis, the second granular kidney, and the third lardaceous kidney. Written in scholarly and charming style this article is full of practical experience and research. The "Other Diseases of the Kidney" are surgical in nature and are discussed by Mr. Henry Morris.

The next division of this volume deals with the Ductless Glands and contains several valuable articles from Dr. W. M. Ord and Dr. Hector Mackenzie. These authors, in the first place, give a summary of the present position of physiological knowledge with regard to the thyroid gland, in which the recent researches on the parathyroid glands and on the chemistry of the thyroid are clearly set forth. Dr. W. M. Ord, whose name is so closely associated with the recognition of myxœdema, gives an account of this disease and in association with his son, Dr. W. W. Ord, deals with Sporadic Cretinism. Certainly one of the best and most interesting articles in the volume is that on Graves Disease, by Dr. W. M. Ord and Dr. Hector Mackenzie; it would be hard to over-estimate the amount of research and investigation that has contributed to the production of this encyclopædic and standard article.

Dr. H. D. Rolleston's article on Diseases of the Spleen demonstrates the trend of scientific inquiry and the progress it is making in unravelling the pathology of the organs concerned in hæmatopoiesis. Indeed, his is perhaps the first systematic exposition of splenic pathology that has been attempted, and it is almost entirely owing to the work of recent years. His contribution is highly interesting and instructive, the questions raised being discussed with impartiality, but in a critical spirit. He deals first with the effects of splenectomy in man, which he shows vary in the amount of disturbance exhibited according as to whether it be a healthy spleen that is removed—e.g., on account of injury—or whether the organ be more or less impared in its function by displacement or disease. In the latter case the disturbance is slight or *nil* owing to compensatory changes having already been established; in the former the effects may be marked and severe. Dr. Rolleston gives an excellent account of the spleen in bacterial infection and toxæmia, and shows that as regards the first-named it probably has no special protective power which "cannot be vicariously assumed by other organs such as the lymphatic glands." In discussing the part played by the spleen in anæmia he expresses the opinion that splenic anæmia is rather the result of a toxæmic condition than of splenic inadequacy. He shows that the spleen has no share in chlorosis, but that it may take part in the hæmolysis of pernicious anæmia. The general disquisition is followed by a description of the special pathology of the organ.

Dr. Rolleston also writes upon Addison's Disease, the pathology of which he discusses with marked ability and knowledge. He does full justice to the views advanced by others to explain the phenomena of this affection, and gradually leads up to the conclusion that the hypothesis of suprarenal inadequacy best accords with the facts. Thus the original surmise of Addison that the symptoms are to be accounted for by derangement of the suprarenal function finds confirmation in the latest teachings of science which attribute them to the effects of deficient production of the internal secretion of these glands, either by inducing a toxic state of the blood or by the general atony and apathy due to the absence of the stimulating influence of this secretion. The symptomatology, diagnosis, and treatment of Addison's disease are well described, considerable attention being paid under the last head to the recorded results of treatment by suprarenal extract.

Lymphadenoma or Hodgkin's Disease is carefully described by Dr. G. R. Murray who gives numerous references to the results and opinions of other writers on this difficult and rather confused subject.

It must be regretted that the only article which the editor has allowed himself to write is a very short one, viz., that on Scrofula; the surgical aspect of tuberculous adenitis of the neck is treated by his former colleague Mr. T. Pridgin Teale.

Sir Dyce Duckworth gives a dignified account of Obesity, in which he enters fully into the physiological and pathological aspects of the question. Heredity is an important factor in its causation so that there is a special diathetic condition at work, as definite in its course as a gouty or strumous disposition; the various forms of treatment are dealt with in well considered terms.

The number of the respiratory diseases included in this volume is comparatively small, being limited to those of the nose, pharynx and larynx. But there are three introductory articles, the first on the General Pathology of Respiratory Diseases by Dr. Ransome, F.R.S., is well illustrated by charts showing the movements of the chest wall under various conditions. The same author describes the treatment of asphyxia. The physical signs of pulmonary disease and the problems of the conduction of sound are elucidated by Dr. Hector Mackenzie.

Sir Felix Semon has arranged the valuable section on the Diseases of the Nose, Pharynx, and Larynx, which really forms a little system in itself. The other contributors are Dr. de Havilland Hall, who brings his experience as a general physician to bear on the throat affections of the specific fevers and has in addition given useful summaries of a number of diseases of the nose and throat, and Dr. Greville MacDonald, who writes on new growths, bone affections, and diseases of the accessory cavities of the nose. Sir Felix Semon and Dr. Watson Williams have together borne the brunt of the labour in this department, and we are indebted to them for authoritative articles on nasal neuroses, adenoid vegetations, syphilis, stenosis, and new growths, &c., of the

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larynx and most of the important sections on the pharynx, including the diseases of the tonsil.

This brings to a conclusion the fourth volume of Professor Clifford Allbutt's System of Medicine and we have again to congratulate him on the continued success that has attended his arduous labours as editor.

Dictionary of National Biography. Edited by SIDNEY LEE. Vol. L.: Ruszen—Scobell. Pp. 456. Vol. LI.: Scoffin—Sheares. Pp. 463 London: Smith, Elder, and Co. 1897. Price 15*s.* each.

SHAKESPEARE is, no doubt, the most important figure in these two volumes. The biography of him is by Mr. Sidney Lee, the editor, and occupies fifty pages. Next in order of literary eminence comes Sir Walter Scott, the article on whom is by Mr. Leslie Stephen, and extends to twenty-six pages.

The biographies of medical men in the two volumes are fifty in number, not including, however, in this total the first Marquis of Hertford (1588–1660), who graduated B.A. at Oxford University in 1607, was created M.A. in 1636, and D.Med. in 1645. He was Chancellor of the University from 1643 to 1647, and again in 1660. William Rutty was born in London in 1687, graduated as M.D. at Cambridge University in 1719, was elected a Fellow of the College of Physicians of London in 1720, and delivered the Gulstonian Lectures in 1722. He held three of the lectureships at the Barber Surgeons' Hall—namely, the Osteology Lectureship in 1721, the Viscera Lectureship in 1724, and the Muscular Lectureship in 1728. He became second secretary of the Royal Society in 1727, and died in 1730. William Saunders was born in Banff in 1743 and graduated as M.D. at Edinburgh University in 1765, after which he removed to London. He was admitted a Licentiate of the College of Physicians of London in 1769, was elected a Fellow in 1790, was a Censor on four occasions, and delivered the Gulstonian Lectures in 1792. "He was probably the first English physician to observe that in some forms of cirrhosis, then called scirrhosity, the liver became enlarged and afterwards contracted." He delivered the Harveian Oration in 1796, in which he praises the recent discovery of the cause of Devonshire colic (a form of lead poisoning) by Sir George Baker. From 1770 to 1802 he was a physician to Guy's Hospital. In 1793 he was elected a Fellow of the Royal Society, and in 1807 was appointed physician to the Prince Regent. In 1805 he was chairman of a meeting which led to the formation of the existing Royal Medical and Chirurgical Society, and he was its first President. He retired from practice in 1814 and died at Enfield in 1817. Isaac Schomberg was born in Germany in 1714, his father being a medical man who removed to London about 1720. He commenced to practise medicine at an early age, not having any English qualification, and was consequently in 1746–47 summoned before the President and Censors of the College of Physicians to present himself for examination as a Licentiate, but declined the invitation. In 1747 he was entered at Trinity College, Cambridge, and in 1749 he obtained by Royal mandate the degree of M.D. from the University. In 1747 he was by order of the College of Physicians of London interdicted from practice and a protracted and expensive litigation ensued. He was, however, admitted as a Licentiate in 1765, was dated a Fellow in 1771, and was Censor in 1773 and 1778. He died in 1780. Edward James Seymour was born in 1796, graduated as M.D. at Cambridge University in 1826, and was admitted a Fellow of the College of Physicians of London in 1827. At the College he subsequently held the posts of Gulstonian Lecturer in 1829, Censor in 1830, Croonian Lecturer in 1831, and Consiliarius in 1836. From 1831 to 1839 he was a metropolitan commissioner in lunacy. He published several works and died in 1866. Charles Scarburgh was born in London in 1616, graduated as M.D. at Oxford University in 1646 and at Cambridge in 1660, was elected a Fellow of the College of Physicians of London in 1650, and was Censor three times. He was a friend of Harvey, who bequeathed to him some articles, and whom he succeeded as Lumleian Lecturer in 1656. He was physician to Charles II., James II., and Queen Mary. He was knighted in 1669 and was one of the original members of the Royal Society. He died in February, 1693–4. John Rutherford was born in Selkirkshire in 1695, studied medicine in London, Leyden, and Paris, and graduated as M.D. at Rheims in 1719. In 1721 he settled in Edinburgh, and in 1726 was appointed to the chair of Practice of Medicine in the University, where he delivered lectures in Latin until 1765, when he resigned. In 1748 he was granted permission to give a course of clinical lectures in the Royal Infirmary, and in this way was laid the foundation of the clinical teaching for which Edinburgh afterwards became so celebrated. His eldest daughter was the mother of Sir Walter Scott. He died in 1779. His son, Daniel Rutherford, born in 1749, took the degree of M.D. at Edinburgh University in 1772, his inaugural dissertation being, "De aere fixo dicto aut mephitico." This tract owed its importance to the distinction, clearly established in it, between carbonic acid gas and nitrogen. Joseph Priestley had published a memoir on the same subject six months previously, but his exposition is less methodical and precise. Rutherford became a Fellow of the Royal College of Physicians of Edinburgh in 1777, and was President of the College from 1796 to 1798. He was appointed Professor of Botany in the university in 1786, and died in 1819. Nathanael St. André (1680–1776), a native of Switzerland, came to England and was placed with a surgeon of eminence, who made him an anatomist. He practised as a surgeon, and his knowledge of German induced George I. to appoint him "Anatomist to the Royal Household," but it is probable that he was an unqualified practitioner. In 1726 he became involved in the imposture of Mary Tofts, of Godalming, who professed to be delivered of rabbits. St. André avowed his belief in the woman's statements, but the fraud was exposed by Dr. Douglas and Sir Richard Manningham, M.D.

William Rutherford Sanders was born in 1828, received his early education in Edinburgh, subsequently studied medicine there and graduated M.D. at the university in 1849, obtaining a gold medal for his thesis on the Anatomy of the Spleen. After two years spent in Paris and Heidelberg he returned to Edinburgh, and while temporarily occupying the position of pathologist in the Royal Infirmary in 1852 he studied certain degenerations (afterwards called amyloid), particularly as affecting the liver and spleen. In 1853 he was appointed conservator of the Museum of the Royal College of Surgeons of Edinburgh. From 1855 onwards he lectured in the extra-academical school on physiology and histology, and in 1861 he was appointed physician to the Royal Infirmary. His first literary contributions to clinical medicine were papers on Pseudo-Paralysis Agitans and on Facial Hemiplegia. He afterwards took up the subject of aphasia, and furnished articles on Nervous Disease to Reynolds's System of Medicine. In 1869 he was appointed to the chair of Pathology in the University. In 1880 he had an attack of right hemiplegia, together with aphasia, amounting to almost absolute inability to make use of either speech or writing. He died in 1881. Humphry Sandwith was born in Yorkshire in 1822, studied medicine in London, and in 1846 passed the examinations of London University and of the Royal College of Surgeons of England. In 1849 he went to the East, first to Constantinople and then to Nineveh with Sir Austen Henry Layard. He held an appointment as surgeon in the Turkish army during the Russian war, serving on the Danube in 1854 and in Kars in 1855. When Kars surrendered to the Russians Sandwith

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was set free by General Mouravieff in consideration of his humane treatment of the Russian prisoners. When Servia declared war against Turkey in 1876 he went to Belgrade to join the Servians, also collecting money for them in England and writing in the English newspapers against intervention in favour of Turkey. Sandwith was the author of several books relating chiefly to Turkish affairs. He died in Paris in 1881. William Scovell Savory was born in London in 1826, graduated as M.B. at London University in 1848, became a Fellow of the Royal College of Surgeons of England in 1852, and in 1859 was appointed lecturer on general anatomy and physiology at St. Bartholomew's Hospital. In 1861 he became assistant surgeon to the hospital and was surgeon from 1867 to 1891. He was appointed lecturer on surgery in 1869 and held the office for twenty years. In 1885 he was elected President of the Royal College of Surgeons, and held the office for four years, the longest tenure in the history of the College. He was Hunterian Professor of Comparative Anatomy and Physiology from 1859 to 1861, Bradshaw Lecturer in 1884, and Hunterian Orator in 1887. In 1879 he delivered at Cork an address which was a declaration against the antiseptic method of Lister and was "the last public expression by a prominent surgeon of opposition to the now universal method of modern surgery." He was created a baronet in 1890 and died in 1895. John Scouler was born in Glasgow in 1804, studied medicine at the university there, and entered the service of the Hudson's Bay Company as surgeon and naturalist. Returning to Glasgow he graduated as M.D. in 1827, and in 1829 was appointed Professor of Geology and Natural History and Mineralogy in the Andersonian University (now part of the Glasgow and West of Scotland Technical College). He was the author of many papers on natural history subjects, and, in conjunction with two medical colleagues, established the *Glasgow Medical Journal*. He died in 1871. Charles Scudamore was born in Kent in 1779, studied medicine in London and Edinburgh graduated as M.D. at Glasgow University in 1814, and then settled in London. He went to Ireland in 1829 in attendance on the Duke of Northumberland, then appointed lord-lieutenant, who knighted him the same year. He was the author of several works on mineral waters, rheumatism, &c. He died in 1849. Edward Cator Seaton was born at Rochester in 1815, graduated as M.D. at Edinburgh University in 1837, and settled in London in 1841. He was connected with the Epidemiological Society from its foundation in 1850. A report on small-pox and vaccination, drawn up by him on behalf of the society, was presented to Parliament and led to an inquiry which resulted in the passing of the Compulsory Vaccination Act in 1853. In 1858 he was appointed an inspector under the General Board of Health, from 1871 he acted as assistant medical officer to the Local Government Board, and in 1876 succeeded Sir John Simon as medical officer. He was the author of numerous memoirs and reports on small-pox and vaccination. He died in 1880. William Sharp was born near Leeds in 1805 and was admitted a Member of the Royal College of Surgeons of England in 1827. He was elected a surgeon to the Bradford Infirmary in 1829 and became its senior surgeon in 1837. He left Bradford in 1843, proceeding first to Hull and then to Rugby, where he was the means of establishing science teaching as part of the curriculum of Rugby School. Dr. Sharp died in Wales in 1896. In 1856 the degree of M.D. was conferred on him by the Archbishop of Canterbury, a method of graduation which formed the subject of an article in THE LANCET on the occasion of his death.[1] William Sharpey was born at Arbroath, in Forfarshire, in 1802, studied medicine in Edinburgh and Paris, and graduated as M.D. at Edinburgh University in 1823. He then spent some years on the continent, and returning to Edinburgh commenced to lecture on anatomy in the Extra-mural School in 1831–32. In 1836 he was appointed to the chair of anatomy and physiology at University College, London. His biographer, Mr. D'Arcy Power, says that "his lectures proved of the greatest importance; they were models both in matter and form. They were continued for the long period of thirty-eight years and were always largely attended." Sharpey died in 1880. He was one of the secretaries of the Royal Society from 1853 to about 1871.

[1] THE LANCET, April 25th, 1896, p. 1146.

Clinical Diagnosis: the Bacteriological, Chemical, and Microscopical Evidence of Disease. By Dr. RUDOLF V. JAKSCH. Translated from the Fourth German Edition and Enlarged by JAMES CAGNEY, M.A., M.D. Third Edition. London: C. Griffin and Co. 1897. Price 28*s*.

THERE is no need to say anything here in commendation of Dr. von Jaksch's manual. On its first appearance it was warmly received on all sides for its thoroughness, accuracy, and practical teaching, and the success which it has attained, not only in Germany, but in the various countries where translations of it have appeared, proves that the reception it had was well warranted. Each successive edition has been carefully amended by its author, and this English edition has received many valuable additions by the translator, Dr. Cagney. The chapters on the Blood and on the Urine are perhaps the best in the book, which is a mine of information upon everything connected with the work of the clinical laboratory. To those engaged in original research in the wider range of subjects which it comprises such a work as this is well-nigh indispensable, supplemented as it is by a most compendious bibliography. But it is also of great value to the teacher and to the advanced student, and is an evidence of the remarkable extent to which the collateral sciences come to the aid of medicine. We have already on previous occasions dwelt at length upon the salient features of the work, and may content ourselves with welcoming the appearance of this third English edition, which in typography and illustration is most excellent.

Mitteilungen aus den Hamburgischen Staatskrankenanstalten. Band I., Hefte 2 und 3. (*Reports of the State Hospitals of Hamburg*, Vol. I., Parts 2 and 3.) Hamburg. 1897.

THESE publications form the second and third divisions of the first volume of the Hamburg Medical Reports. In the second division are eleven communications on various subjects. The first is by Dr. Gustav Zuschlag, on the Use of the Continuous Bath in the new hospital at Hamburg-Eppendorf. The author gives details of several conditions in which he has found this treatment useful, and mentions more particularly multiple tuberculous joint affections, and septic wounds. Amongst the other communications are some papers on surgical operations, which will be read with interest, notably the one on Surgical Treatment of the Cerebellum, by Dr. Janz. In the third division are no less than seventeen communications, many of them of the greatest interest. Professor Lenhartz contributes an article on the diagnosis of small-pox from chicken-pox, which is accompanied by well-executed illustrations; so also is the paper by Dr. Th. Lochte on a Case of General Neurosis of the Vessels with Peripheral Gangrene (so-called Raynaud's disease). One of the best articles is that by Dr. Karl Küstermann on Investigations on Beri-beri. A post-mortem examination on a case is described in which rather unusual changes were found, more particularly degeneration of the vagi about the level of the carotid vessels, which probably had a causal relationship with the severe cardiac attacks from which the patient suffered. The fibres of the external popliteal nerve were also found to be degenerated. Certain changes hitherto undescribed were

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found in the muscles. Another article worthy of note is by Dr. M. Simmonds on Changes of Form Observed in the Trachea. Dr. Erich Wille writes a paper on the Morbid Anatomy of the Pancreas in Diabetes, illustrated by drawings of microscopic specimens. Another important communication is by Dr. H. Wilbrand and Dr. A. Staelin on Pathological Changes in the Eye Occurring in the Early Stages of Syphilis.

JOURNALS AND REVIEWS.

The Phonographic Record.—Two Cases of Malignant Abdominal Tumour, by Dr. H. Couper Patrick, is the title of the opening paper in the *Phonographic Record* for November. Mr. Herbert Caiger, F.R.C.S. Eng., has an interesting note on an Obscure Case. A male Kaffir child, aged seven years, was found lying unconscious. There were clonic convulsive movements of the face, especially of the right side of the mouth. The right arm was very soon afterwards affected with similar movements, which a few minutes later spread to the right leg. The left arm and leg were flaccid and motionless. The convulsions subsided after lasting several minutes. The pupils were equal and of medium size. After a short interval the convulsive movements recommenced. The march of the spasms was very definite. Horizontal movements of both eyes occurred, then up and down movements of both eyebrows. Movements of the nostrils and mouth occurred. The clonic spasms were much more marked on the right side, the arm and shoulder, and finally the leg became affected, while the left limbs remained unaffected. After two or three of the spasms had been observed it was found that compression of the left carotid artery checked the spasms as long as it was efficiently kept up. The diagnosis first made was intracranial hæmorrhage. The case was first seen about 6.30 P.M., and the next morning the patient was found to be perfectly conscious, with no apparent paralysis. An examination of the heart revealed a "to-and-fro" movement, and the diagnosis was changed to mitral stenosis with embolism of one of the smaller cerebral arteries. The interesting points in the case are: (1) that embolism may produce such convulsions, and (2) that compression of the carotid artery checked these convulsions. Dr. A. Hill Joseph writes some interesting notes of cases illustrating the influence of one disease upon another.

The Westminster Review.—Dr. H. Baptist Crofts has an interesting paper entitled "Victorian Medicine," in which he pleads for the further cultivation of a school of medicine considered as pure science, and argues that most of the real advances made in medicine during the Victorian era have arisen from the study of biology. In the "Independent Section" Mr. W. T. Freeman, F.R.C.S. Eng., argues against the Darwinian theory of evolution as he considers that there are "countless original forms which always have been and always will be." We do not say that we agree with him, but his paper is worth reading.

Pearson's Magazine.—This popular monthly has a story in it which we can only characterise as quite unfit to appear in a lay journal while it is written by one ignorant of what he is writing about. It is called "The Microbe of Death," and the teller is a medical man called by the author Sutherland Huntingdon. His moral point of view may be gathered from the following: "What is remorse? Fear of detection. I can never be found out. Why, then, should I feel remorse?" Dr. Huntingdon's remarks are a gross plagiarism from those of George De Barnwell, who, it will be remembered, said on the night before his execution: "It may be an error of judgment, but it is no crime. Were it crime I should feel Remorse. Where there is no remorse Crime cannot exist. I am not sorry; therefore I am innocent." Dr. Huntingdon's views on the subject of anthrax poisoning are peculiar. His victim died from inoculating his finger by a scratch from a bone during a post mortem examination on a man who had been inoculated with anthrax just before his death. In such a case a pustule would almost certainly have appeared at the site of the puncture by the bone, yet it is specially mentioned that there were no local symptoms. Stories of this sort are not pleasant reading for the public and give a grossly unfair description of the medical profession while they disseminate extraordinary pathological errors.

The Strand Magazine has a remarkable story of human endurance entitled the Greatest Athletic Feat on Earth (?). The story is told with the air of probability that the old stories in *Blackwood* were wont to wear, and with strict attention to detail and statistical adnexa, so that the writer convinces us against our wish of the truth of the narrative. Dr. Conan Doyle's serial story, The Tragedy of the *Korosko*, has reached a very exciting point.

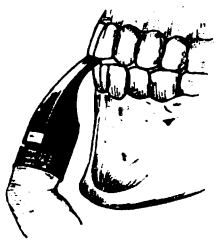
The Contemporary Review.—Sir Edmund Verney contributes a popularly written but sound article on the Bacteriology of Milk, a very important subject, not only from the point of view which regards milk as a carrier of infection, but also on account of the influence which certain bacteria have upon the flavour and keeping qualities of butter and cheese.

Knowledge.—The literary supplement of the November issue of this magazine is prefaced by a signed article by Mr. R. Lydekker dealing with the study and use of scientific literature. The keynote of the article is found in the opening paragraph, in which the author says: "The great difficulty that besets both the professional and the amateur student of natural science at the present day is to find out what has already been written on the subject he may have in hand." This applies as much to medical literature as it does to the literature of other branches of science. In Neale's Digest we have an indispensable aid, but for reasons best known to themselves members of the profession do not consult the work regularly.

New Inventions.

A MOUTH-OPENER.

MESSRS. WEISS AND SON, of 287, Oxford-street, W., have just brought out a little appliance which is intended for the use of anæsthetists. It has been designed by Dr. Frederic Hewitt with the object of affording a ready and rapid means of opening the mouth of the semi-anæsthetised or anæsthetised patient. Owing to the frequency with which the upper teeth overlap the lower it is often impossible to relieve obstructed breathing by the customary plan of pushing the lower jaw forwards, and it therefore becomes necessary to open the mouth. If the teeth are tightly clenched, and more especially if there are no vacant spaces between them, it is by no means an easy matter to do this. The difficulty reaches its acme in the case of powerfully built men whose upper teeth considerably overlap the lower. The little appliance here figured is made of brass and is in reality a curved finger shield, more or less wedge-shaped, which can be introduced, as shown, beneath the overlapping upper teeth. When the thin end of the wedge has gained admission the mouth-opener is pushed onwards till the teeth are separated by the large end, at which two slots are cut, one through the upper and the other through the lower wall. When once the teeth have fixed themselves in these slots the finger may be taken out of the instrument and the mouth will remain open without further assistance.



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THE LANCET.

LONDON: SATURDAY, NOVEMBER 20, 1897.

THE General Medical Council will on Tuesday next, Nov. 23rd, assemble for its Sixty-third Session. The President's health will not, unfortunately, admit of his attendance. Nevertheless, he takes great interest in the business of the Council and exercises a keen supervision over it, but he will, it is understood, ask some other member of the Council—probably Sir WILLIAM TURNER—to act for him as President. It is long since the General Medical Council met without Sir RICHARD QUAIN'S presence, and his absence from their midst will be a regrettable event to all the members. Three other changes in the constitution of the Council will be noticeable. Sir JOHN BANKS, the Representative of the Royal University of Ireland, whose genial nature and courtly manners have made him a personality in the Council since 1883, has resigned, and he will be replaced by Sir CHRISTOPHER JOHN NIXON. Dr. WILLIAM MOORE, the Crown Representative for Ireland, has also resigned and his successor has not yet been appointed. Mr. VICTOR HORSLEY will appear for the first time at the table of the Council in the honourable position of a Direct Representative for England and Wales, where he may be expected to increase the liveliness of the Council's discussions while inviting it to take a more extended view of its own functions and powers.

It is not easy in the absence of a set programme to forecast the nature of the subjects which will mainly occupy the attention of the Council. But it is not altogether impossible to do so, and some of them are to be of exceptional importance to the profession. A reference to the minutes of the last meeting will suggest that preliminary education will be one of these. We gather that the Education Committee is entrusted with the duty of reporting on the best means by which the standard of preliminary education in the various educational bodies can be raised. The Council is unanimous in its determination to raise the standard. The only differences of opinion that can arise between members will have reference to the extent to which this change should be carried and to the amount of time requisite in which to give due notice to educational bodies at home and in the Colonies and India. The step is most reasonable. The standard of general education is being raised, and it is obvious that a sound scientific education in medicine needs for its basis a more sound general education than was thought necessary a generation since. A second feature of the November meeting will be the appearance in a practically complete form of the new edition of the British Pharmacopœia. It is an open secret that the President, as chairman of the Pharmacopœia Committee, has watched the preparation of this work with parental interest. We can only express the hope that it will prove to be constructed on such views as will meet the wants of the practitioners of an empire under whose skies may be found every variety of climate and disease and whose soil possesses and nourishes every form of drug, whether mineral or organic. The question of midwives may be expected to come on the *tapis*. The Bill before the Parliament of last session was sent down by the Lords of the Privy Council for the consideration of the General Medical Council and, as our readers will remember, it was referred to a Committee. A report from this Committee may be expected. It will doubtless be of such a nature as will reflect the gravity of the subject, and it may be expected to recognise that a lying-in woman in poverty is entitled to the peculiar consideration of the State. The delay in disposing of this subject is not creditable. Its periodical reappearance in the Council is a source of enormous expense to the Council, and the Government cannot much longer have any doubt as to the general principles on which such legislation as is demanded should be based. The great object of the Council should be to secure that in some practical way or other the supervision of the profession is ensured to every lying-in woman who needs it. Yet another subject of almost greater interest and of quite equal difficulty to be brought before the Council is that of medical aid associations in their ethical rather than their medical aspects. It will be remembered that various memorials from Norwich, Yarmouth, and other places were referred by the Council to the consideration of a Committee. The report of this Committee may be expected at the approaching meeting, when it is most sincerely to be hoped that the profession will receive some luminous suggestions for guiding the action of individual practitioners in accepting medical office in such institutions, especially under conditions which do not allow of efficient medical service or which violate the decent rules which regulate medical practice.

Various subjects of moment were referred to the Executive Committee for further consideration. One of these was the question whether the Council's position towards unqualified assistants might not with advantage be made more clear and stringent. The coming session will be curiously unlike its predecessors for several years if it does not supply instances of practitioners being compromised or put into a very unfortunate position by the employment of unqualified assistants. Many such practitioners plead ignorance of, or inability to understand, the Council's attitude. But apart from the question of clearness it is undeniable that both in the profession and in the Council there is a growing feeling that the time has come for curtailing greatly the functions of the unqualified assistant. The Executive Committee will also have before it—and not for the first time—the subject of the disciplinary powers of the various medical authorities over their ill-behaving diplomates or graduates. It is gratifying to see in most of these authorities a desire to possess disciplinary powers corresponding to their powers of granting a licence to practise medicine, whether in the form of a degree or a diploma. But in some quarters whence better things might be expected there is a strange reluctance to use such powers where they exist or to acquire them where they are not possessed. This is not as it should be.

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On the contrary, we feel very strongly that distinctions given by universities and corporations should be capable of withdrawal for sufficient reasons by the bodies which granted them and that all self-respecting educational authorities should strive to be placed in this position. But we have said enough to show that the Council has ample material for several days' business.

ON Friday, Nov. 12th, Mr. TUBBY and Mr. ROBERT JONES read two papers at the Clinical Society of London on a method of treatment that has already been described and illustrated in the lay press as a "modern miracle." Several months ago we first heard of the re-introduction under an altered form of an old and discarded treatment of Pott's disease of the spine, which aimed at nothing less than the immediate straightening of angularly curved spines by the application of a combination of longitudinal extension and vertical pressure over the gibbosity. About sixty years ago an English surgeon—Mr. HARE—published a small work on the treatment of this disease in which he advocated the forcible straightening out of bent spines, and in which is figured an apparatus differing but little from the one used for the forcible extension practised in Liverpool, but he does not seem to have supplemented this by the application of vertical pressure to directly open out the curve. He, however, figures a case before and after treatment in which he obtained a result fully equal to any claimed by the more recent surgeons in their successful cases. It would be wholly wrong to use the abandonment of Mr. HARE'S treatment as an argument against the use of M. CALOT'S treatment, for the conditions are not the same. M. CALOT, who was present and spoke at the meeting, uses an anæsthetic, which not only renders the process of extension painless, but nullifies the resistance of the muscles to the extension. Then the method of extension by six strong assistants is obviously more powerful than was Mr. HARE'S, and the addition of direct vertical pressure over the convexity of the curve adds considerably to the efficiency of the straightening process. And, again, the subsequent fixation and support of the spine in the corrected position in a plaster-of-Paris casing is an entirely new element in the treatment. We may therefore say that while the motive of the treatment is not new, yet the mode of carrying it out is so altered and improved that it may fairly claim to be a "new" treatment.

It was evidently in accord with the fitness of things that this new treatment should come up for discussion at the Clinical Society of London, which was founded solely for the purpose of investigating the clinical features of disease and especially the effects of treatment. At the discussion the papers and also the photographs displayed by a lantern demonstration of patients before and during treatment clearly showed (1) that angular curves of the spine can very generally be straightened out at once or in two or three sittings by the exhibition of an amount of force well within the limits of safety; (2) that this treatment is not attended with grave immediate danger if carried out with due care; and (3) that curves of long duration and great extent may yield to this treatment. But, strange to say, neither Mr. TUBBY nor Mr. JONES showed the result of this treatment in even a single instance, and the demonstration was of value and interest solely as indicating the method adopted and the extent to which curves of the spine will yield to force. We feel sure that these gentlemen appreciated and regretted this defect in their demonstration as much as the other members of the society did and that they will take steps to make it good. Sufficient time has not yet elapsed to allow of their showing the final results obtained. But this being so we can only regard the demonstration as altogether premature and not fitted to initiate a useful discussion. *A priori* arguments may be ingenious, but they are neither scientific nor convincing. Facts are what we want, and the Clinical Society exists for the collection and sifting of facts, and until the surgeons who have practised this treatment for spinal caries have completed their cases and can not only tell us but *show us* their final results, to discuss the treatment is a barren pursuit. Who cannot see the initial charm of the treatment? But who also cannot see the possible—nay, probable—evils that beset it? But neither the charm nor the fear would weigh against proved results, and until we have these results there is really nothing to discuss.

We feel it our duty to enter this protest. Incomplete publication of methods of treatment is always mischievous, and never so mischievous as when the publication takes place in the lay press. We can all remember as a terrible warning the premature publication of KOCH'S "cure" for tubercle, the cry of *à Berlin* and the widespread disappointment which followed and which has left behind it a serious distrust of medical innovation. Already some of the same photographs as were shown by M. CALOT at the Clinical Society have found their way into a lay journal and the public have been excited by a partial description of a "miracle." This is not creditable to the profession, and the Clinical Society will do well to call to mind the rules which its founders laid down for the investigation of disease and not to accept without demur a merely partial account of a procedure in surgical treatment which is either a great boon or a great mistake.

SEVERAL suggestions have recently reached us as to the need for an amendment of the Infectious Disease (Notification) Act, 1889. On Nov. 6th we published a letter from Dr. YOUNG, the Medical Officer of Health for Crewe, with reference to the action of Crewe Town Council in memorialising the Local Government Board and pointing out that a change in existing law is necessary. The subject is again referred to in a letter in our issue of to-day from Mr. GARSTANG, the Medical Officer of Health for the Bucklow Rural District, explaining the similar action which has been taken by his sanitary authority. Mr. GARSTANG urges the importance of fresh legislation and also makes certain suggestions as to points that are somewhat in dispute. We may state at once that we are entirely in agreement with those who press for amending legislation, and that we believe the time has come for making the Act compulsory throughout England and Wales. The total population of England and Wales was estimated in March, 1896, to be 29,002,525, and notification of infectious

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disease is already in force in districts having an aggregate population of 26,985 852, as well as in 40 port sanitary districts. Surely the time has come when the country as a whole should no longer be deprived of the full advantages of the system of notification of infectious diseases merely because two millions out of thirty millions of people do not want to know the extent to which such disease exists in their districts. We are further in agreement with those who urge that the time has come for abolishing dual notification of the same case of disease—that it is to say, by householder and medical practitioner. As a matter of fact the requirement is a dead letter. But a householder who does not call in a medical practitioner until late in the disease should not be allowed to escape the penalty for having failed to notify as soon as he became aware of the nature of the disease merely because he has called in a medical notifier at a later stage. Such points as this will have to be guarded against.

Notification is now made compulsory on "becoming aware" that the patient is suffering from a notifiable disease, and it is suggested that the proof of not being "aware" should rest on the person who fails to notify. This is a provision that would be much resented in its application to the medical profession as a whole, however convenient it might be to some medical officers of health. It rests on the assumption that medical practitioners will wilfully conceal the existence of infectious disease in their patients, and whatever disinclination there may have been as to revealing such matters some years ago we believe it no longer prevails to any conspicuous extent, so that it is quite unnecessary to place medical practitioners in a legal position which would reflect in an unbecoming—nay, a degrading—manner upon their honour as well as their intelligence. But where concealment can be proved we admit that the penalty should be heavy—indeed, a fine can hardly be too heavy where such concealment has been attempted by the owners of laundries, bakeries, and dairies, the persons to whom Mr. GARSTANG has referred in his suggestions for legal amendment, and who are obviously liable to temptation in a special degree, and in the same degree are potent for mischief. Another suggestion which has been made is that when one certificate has been given in a case no further certificate should be paid for the same case. We see no objection to this provided the second medical practitioner who may be called in sees the patient together with, or in association with, the medical man who has already notified the disease, and provided the diagnosis of the second comer is the same as that of the first practitioner. But if a separate medical practitioner is called in independently then he should notify quite apart from there having been a previous medical visit, of which he may know little or nothing. Indeed, in populous districts patients have been deliberately removed from one address to another to avoid the medical officer of health and his staff, and this has only been discovered when it has been found necessary to call in a second medical practitioner who has notified the disease a second time. Again, in towns where measles is notifiable, a second practitioner has discovered the case to be one either of typhus fever or commencing small-pox; such cases should obviously be notified a second time.

We still find some medical officers of health desirous of reducing the fee for notification in those instances in which a second case of infectious disease occurs in a house where a previous one has been notified within a given time—some say a month. This proposal is based on the assumption that the medical officer of health has the premises under supervision by reason of the first notification. We are convinced that this reasonable view is quite inapplicable to a very large portion of England and Wales, and even where such supervision is maintained it is done by a sanitary inspector, who is quite incompetent to judge whether the second case occurring, say, two or three weeks after the first one is a case of the same disease or whether the same or different remedial measures are called for. We have so recently dealt with this proposal that we need only now refer to one other aspect of it. Since notification of infectious disease came into operation this country has taken a first step towards a national registration of disease, and from 1892 onwards use has been made of the information thus procured to study the relation of season both to the occurrence of certain specified diseases and to their fatality, the necessary data being annually compiled from the notification returns by the medical officer of the Local Government Board. But if the proposal here suggested were carried out the aim of those interested in preventive medicine would in this respect at once receive its death blow. A fatally retrograde step would be taken by the country which has always hitherto been foremost in the desire to place public health measures on a scientific footing, the object being to save a certain number of half-crowns. On this point alone, we believe, promoters of future legislation must be prepared for much opposition. It is also curious that this demand for a very mischievous little piece of economy should come from medical officers of health, for it is on their behalf that a weekly distribution of the amount of infectious diseases in a large number of districts of England and Wales is made. It was inferred that they wanted actual facts, not garbled ones; and the system was inaugurated by Dr. TATHAM because it was held to concern every district to know whether an adjacent one had five or fifty cases of a certain infectious disease.

Annotations.

"Ne quid nimis."

SCHOOL HYGIENE.

SCARCELY more than two hundred years have elapsed since the first efforts were made—and to their praise be it said, by the Scotch—to provide a public school for the education of children in every parish. A hundred years later England awakened to the necessity of supplying the means of elementary education, which up to that time had been limited to the grammar schools maintained by the endowments of pious benefactors. Successive acts of the legislature by limiting the age at which work was allowed to be commenced facilitated the spread of knowledge by affording time for instruction, but it was not till 1870 that through the institution of school boards, as effected by Mr. Forster's Education Act, education became truly general. In 1880 attendance was made compulsory, in 1891 education became free by the institution of the fee grant, in 1893 special education was decreed for the blind and deaf, and in the

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same year, with very few exceptions, the age of exemption, below which no child is allowed to work, was raised to eleven. The Moral and Physical Aspects of School Hygiene, to which every child is now subjected, is the title of the Howard Medal Prize Essay of the Royal Statistical Society the author of which, Dr. James Kerr, is the medical superintendent of the Bradford School Board, and it is here shown how important in every point of view are the conditions of their environment to children during their school life. The accumulation of large numbers of children in limited spaces of course predisposes to trouble of various kinds. Infectious diseases are more likely to spread unless preventive measures are adopted, whilst the want of exercise and deficiency of pure air which exist might be expected to cause children to be an easy prey to such diseases in spite of being well fed and warmly clothed. The average attendances at the Poor-law schools in 1894 had risen to the high number of 4,225,000. The death-rates for each period of five years amongst girls, especially in the later years of school life (10–15 and 15–20), are found to be greater than amongst boys. With increased attendance at school deaths from accidents have decreased amongst boys, and in regard to infectious diseases, including measles, whooping cough, scarlet fever, and diphtheria, the statistics that Dr. Kerr has collected show that there has been no obvious bad effect but rather a good protective effect from school attendance. Small-pox, owing to the girls being more exposed by school attendance to the communication of infection, has somewhat increased, and so too has phthisis, and Dr. Kerr asks whether this effect can be owing to the atmosphere of the school being fouler than that of their own homes. Skin diseases, parasites, and infectious ophthalmia may be regarded as due to home influences. The greatest difficulty that presents itself at the present time in school hygiene is the question of warming and ventilation, and a curious calculation shows that greater efficiency is obtained when these conditions are good, since more grant is earned, and better work is done, as tested by examination results, by the well-nourished brains of the children in the mechanically ventilated schools. Dr. Kerr's dicta are that for the artificial ventilation of a school by warmed air 1000 cubic feet per hour per child should be the lowest estimate, the accommodation being reckoned at 10 square feet per child or 8 square feet for infants; that the velocity of the incoming air should not exceed 5 feet per second, entering through inlets allowing 13 square inches per child; and that the temperature of the room should be 60° F. and the differences between a wet and a dry bulb thermometer should not exceed 4° or 5°. From Dr. Reid's and Dr. Bailey's investigations it is certain that the ventilation of the schools is in a lamentable condition. In the rural district of Stafford Dr. Reid found that in thirteen of the eighteen schools the carbon dioxide exceeded 20 volumes in 10,000, and in four it was as much as 30 volumes, one school showing 37 volumes, the average proportion present in fresh air being, it will be remembered, 4 volumes in 10,000. It must not be overlooked that whilst the carbon dioxide is a serious impurity it is only an indication of the still worse contamination of the air by other emanations from the skin, lungs, and clothes of the children. Some interesting facts in regard to the hearing and the vision of school children are recorded by Dr. Kerr. In his concluding remarks, with the tenour of which every practitioner of medicine will agree, Dr. Kerr remarks that the hygienic study of ordinary school children is only beginning. The evil effects of the home, uninfluenced and too often neglected by other agencies, could, he thinks, to some extent be influenced by the medical inspector for good. Morally and physically the homes will be improved as the school children are accustomed and educated to clean, beautiful, and well-ordered schools and inspired with an abhorrence of hot, foul air and stuffy rooms, intolerance of diseased conditions and vermin, and, above all, a sense of powers that require mastery, a confident self-control, and a feeling of citizenship in this world, beyond which there is no other good to be desired by the State from its schools.

CENTRAL HOSPITAL COUNCIL FOR LONDON.

THE desirability of the existence of some body which should connect all the hospitals of London has long been recognised by all who have considered the subject of hospital administration. In the early part of the year the Charity Organisation Society suggested the formation of a central hospital board for London, and a committee was formed consisting of 168 members interested in hospital work, but it was felt that in such a matter as this the hospitals were chiefly concerned, and that it was very desirable that such a board should consist of representatives from the various hospitals. A meeting was accordingly held at Westminster Hospital of representatives from all the London hospitals to which medical schools are attached, and a committee was appointed to draw up provisional rules for the "Central Hospital Council for London." Each hospital was requested to nominate three representatives, one of whom must be a member of the managing body of the hospital and one a member of the medical staff; and as there are in London twelve hospitals with medical schools the new Council consists of thirty-six members. The first meeting was held on Nov. 16th at St. Thomas's Hospital, and the constitution and rules of the Council were arranged. The following are the representatives already appointed:—St. Bartholomew's Hospital: Sir Trevor Lawrence, Bart., Mr. Alfred Willett, F.R.C.S. Eng., and Mr. W. H. Cross. St. Thomas's Hospital: Mr. J. G. Wainwright and Mr. Henry Hugh Clutton, F.R.C.S. Eng. Guy's Hospital: Mr. Alfred Cohen and Mr. A. J. Lawrence, C.I.E. Charing-cross Hospital: Mr. T. P. Borrett, Mr. J. H. Hale, and Dr. Green. King's College Hospital: Viscount Dillon, the Rev. Prebendary Wace, D.D., and Dr. A. B. Duffin. London Hospital: Hon. Sydney Holland, Mr. J. H. Hale, and Dr. Stephen Mackenzie. Middlesex Hospital: Sir Arthur Watson, Bart., Q.C., Dr. Fowler, and Mr. F. Clare Melhado. Royal Free Hospital: Mr. Charles Burt, Mr. G. F. Sheppard, and Mr. Willmott H. Evans, F.R.C.S. Eng. St. George's Hospital: Mr. Timothy Holmes, F.R.C.S. Eng., Dr. Isambard Owen, and Mr. C. L. Todd. St. Mary's Hospital: Colonel Stanley G. Bird, Mr. Malcolm Morris, F.R.C.S. Edin., and Mr. Thomas Ryan. University College Hospital: Mr. Henry Lucas and Dr. J. Rose Bradford. Westminster Hospital: Dr. Allchin, the Rev. Dr. Troutbeck, and Mr. G. G. Tremlett.

THE PARISH NURSE DIFFICULTY.

JUDGING from the character of the correspondence now taking place in the columns of the *Newbury News* the subject of parish nursing is receiving much attention in Berkshire. In a recent letter certain views are expressed which are not likely to receive either the approval of the medical profession or of those who are most genuinely interested in the provision of nurses for rural districts. The writer, Miss Thoyts, of Suthampstead Park, recognises the fact that the labouring poor prefer the services of women taken from the same rank of life and who have received the requisite training. But, says Miss Thoyts, "what our poor people need are not merely parish nurses as the term nurse is now understood, but clever midwives capable of undertaking such cases solely on their own responsibility—in fact, women doctors, duly qualified and recognised as such, who will practice from rural centres, attending the women for a fixed fee, and working as professional nurses, not as paid charity servants." Not only, however, are the duly qualified women-doctors to act as parish nurses, "working among

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their own sex," but they are to "tend both soul and body simultaneously and spread true religion both at home and abroad." The chief objection to such an arrangement is said to be the "doctor's jealousy of encroachment." After this we are not surprised to read an eulogy upon the prescribing druggist who "knows each person," who is "consulted as a friend," "explains what is in his medicine and why it is given," and last, but not least, "charges nothing for his advice." We are also informed that where parish nurses are engaged they are fast taking the place of the chemist. The change, however, in this respect is not considered to be for the best, for "the chemist is a man of experience," &c. This kind of advocacy is not likely to assist in promoting the interest taken by the profession in the provision of nurses for the deserving poor. If there is really a demand for lady-doctors in rural districts doubtless in time the demand will be met, but to expect the same person to act as medical attendant and as nurse, and to put up with "cottage fare and cottage furniture," is, to say the least unreasonable and absurd. The family washing is not referred to; possibly whilie residing in the cottages this will not be considered any part of the woman-doctor's duty. Whatever may be the case in Berkshire other counties are finding practical means of overcoming the difficulties Miss Thoyts refers to. In Essex the County Cottage Nursing Association has done such good work that, at the suggestion of Lord Rayleigh, the Lord-Lieutenant of the County, a Jubilee Fund was raised to still further increase its usefulness, and over £2000 have been raised and handed over to the association. In this county the cottage nurses are taught to consider themselves the handmaids of the medical practitioners, and are warned against taking any unnecessary responsibility. Were any of them to attempt to compete with the prescribing druggist doubtless their names would speedily be removed from the rolls of the association. Before attempting to commence work on the lines laid down by Miss Thoyts and courting certain failure Berkshire had better make itself acquainted with what is being done elsewhere. The problem is admittedly a difficult one, but the difficulties should not be insurmountable. The way to overcome them, however, is by acting in harmony with the wishes of the profession and not in attempting to set up a class of nurses who are at one and the same time to act as doctor, nurse, and district visitor.

MEDICAL OFFICERS OF HEALTH AND THE WATER-SUPPLIES OF THEIR DISTRICTS.

THE unfortunate experience of Maidstone has taught us many lessons, and not the least important of them has been that which shows the necessity for a constant supervision of the sources from which water-supplies are derived. This Maidstone catastrophe should have the effect of inducing medical officers of health throughout the country to inspect, or at least to attempt to inspect, the water-supplies of their districts and to report thereon to their sanitary authorities. In some cases there may obviously be considerable difficulties in carrying this out, but it is only in this way that a medical officer of health can relieve himself of responsibility with regard to the future and place such responsibility upon the shoulders of the district councillors. It may be that certain medical officers of health will have their proposals for reform and control disregarded, but in such cases the officer has done his duty; he has placed on record the actual condition of affairs, and with those to whom is entrusted sanitary administration rests the moral responsibility. As an example of the attitude which we suggest a recent special report upon the water-supply of Chatteris, which has just reached us, may be mentioned. Mr. Ronald Daniel, the medical officer of health of the district, discusses the water-supply from the chemical and bacteriological, as well as from the topographical standpoint, and from whichever view the subject is approached there would seem to be ground for anxiety. Chatteris, like many other towns of its size, draws its water from shallow wells situated in a pervious formation overlying clay which is also riddled with other holes for the deposition of excremental matters. The history of Chatteris shows, as also does the history of many another place, that it has in no wise been remarkable in the past for the prevalence of water-borne diseases, but Mr. Daniel points out how that the conditions which obtain are such that an explosion might occur at any moment. Polluted water might, he tells the district councillors, be consumed for years with impunity, but on the other hand disastrous results might at any moment follow. The report concludes thus, "The public safety, gentlemen, lies in your hands and, having placed the several facts of the matter before you, it is for you to decide whether you will augment such safety or in the future run those risks which so far have happily been evaded." There is a healthy and vigorous ring about these words, and many other medical officers of health will do well to approach their sanitary authorities in a similar strain. Let the facts be placed on record so that they may be referred to if a day of reckoning comes.

MEDICO-LEGAL ENTOMOLOGY.

DR. WYATT JOHNSTON and Dr. George Villeneuve have published in the August number of the *Montreal Medical Journal* some valuable researches on the entomology of dead bodies, a branch of scientific inquiry originated a few years ago by M. P. Mégnin, of Paris, whose book, "La Faune des Cadavres," was reviewed in THE LANCET of Oct. 24th, 1896, p. 1157. The result of M. Mégnin's work is of considerable interest and importance in a medico-legal sense from the fact that the date at which death occurred may be estimated from the insects and the insect débris found in a decomposing body. The greater part of the available evidence has naturally been collected in Paris, but it is obvious that the circumstances will vary in different countries. The observations of Dr. Johnston and Dr. Villeneuve were made in the vicinity of Montreal, where the temperature from the beginning of October to the end of April is much lower than in Paris. According to M. Mégnin the fauna of bodies exposed to the air is as follows: While the body is still fresh it attracts the diptera Musca, Cyrtoneura, and Calliphora. After decomposition has set in the flesh flies Lucilia and Sarcophaga are attracted. Later (from the third to the sixth month), when fatty acids are formed, the body is invaded by the beetle Dermestes and by the moth Aglossa (this latter was never met with in the Canadian observations, but is apparently very common in France). Later, Pyophila of the diptera and Necrobia of the coleoptera appear as the condition becomes caseous. After this (from the fourth to the eighth month) comes a period of ammoniacal decomposition marked by liquefaction of the tissues into a blackish pulp, during which stage a group of coleoptera, Necrophorus, Silpha, Hister, and Saprinus are met with, as well as the diptera Ophira, Thyreophora, Phora, and Lonchea. In the next stage (from the sixth to the twelfth month) the tissues dry up and are invaded by acari, the débris and excrement of which form a powdery deposit. Subsequently (from one year to three years), with the progressive drying of the the tissues, Aglossa (second generation) reappears, together with the moth Tineola and the coleoptera Attagenus and Anthrenus. Finally (over three years), when nothing but the dried ligaments remain on the bones, two forms of coleoptera, Tenebrio, and Ptinus appear and devour these. In the case of buried bodies the fauna are said to be much

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less varied and to consist mainly of Phora and Ophira in the diptera, and Philonthus and Rhizophagus of the coleoptera, together with any diptera which may have gained access to the body before burial. This list shows that only a small number of genera are represented out of the total diptera, coleoptera, acari, and lepidoptera occurring in France, so that in practice their recognition becomes comparatively easy. Dr. Johnston and Dr. Villeneuve found in their observations that the order of the successions of the different insect forms followed the rules laid down by M. Mégnin, but they occurred on exposed bodies in a shorter time than he stated. Of the twenty-three genera indicated by him as characteristic of exposures up to one year they met with eleven, and five of the twelve remaining are rare on the American continent. They only encountered two which he did not mention. These were Trox and Omosita, both rare in France, although necrophagous. A knowledge of the period of the year at which breeding of the different insect forms takes place is of the utmost importance in determining the dates. A deduction not mentioned by M. Mégnin, but which the Canadian observers repeatedly found of practical use, is that if empty dipterous puparia are present the date of exposure may be reckoned as not less than one month, while the absence of empty puparia indicates an exposure of not over one month in warm weather. Their observations agreed with those of M. Mégnin as to the order of the successions. Thus, wherever acari were found it was evident that Silpha and Hister had preceded them. Pyophila was only seen when saponification of the fat was well marked. Dermestes was seen earlier in the saponification period, but never in the preliminary decomposition. Calliphora and Lucilia were the forms met with up to the end of the first month in cases where the dates were accurately established. Where the exposure lasted for only a few days Lucilia was absent. Dr. Johnston and Dr. Villeneuve give particulars of two cases of discovery of decomposed bodies in which the entomological method was confirmatory of other evidence as to the date of death; there was a third case, however, in which the body of an infant hidden over a kitchen ceiling—for five weeks as was supposed—nevertheless contained insects which are not usually found under a period of three months. The material facts were not established and the prisoner was acquitted. In conclusion, the authors recommend that observations and experiments upon exposed human bodies should be made in the particular locality before the present entomological data are applied to legal medicine. Experiments with animal bodies other than human are apt to be misleading, and results obtained by such means have not very much significance.

THE MICROSCOPE IN EXAMINATION OF PLEURITIC EFFUSIONS.

THE microscopic examination of pleural and peritoneal effusions for the purpose of establishing the diagnosis of new growths of these membranes before a clinical diagnosis can be determined is a diagnostic measure but rarely instituted. Much has been done with the chemistry of these fluids, but few careful investigations have been reported of the cellular constituents in those cases in which malignant tumours of the pleura or peritoneum were present. A paper by Dr. Aldred Scott Warthin in the *Medical News* (Philadelphia) for Oct. 16th is a valuable addition to our knowledge on this subject. He asks one question, "To what extent is it possible for the examination of the cellular elements of effusions to establish the diagnosis of new growth of pleura or peritoneum?" As an answer he gives his own experiences and methods of procedures and several illustrations of the varieties of cells met with in serous effusions. The fluid should, of course, be placed in a centrifugating machine and the deposit be examined under a fairly high power of the microscope. Dr. Warthin sums up his conclusions thus: 1. In all doubtful cases, when fluid can be obtained by exploratory puncture, cover-glass preparations should be made by fixing in absolute alcohol and ether. This should be done immediately after the withdrawal of the fluid in order that the mitoses may be preserved. 2. In early cases of simple pleurisy the sediment contains endothelial cells and no fibroblasts. The endothelial cells may be desquamated in large pieces. 3. In fibrinous pleurisy, tuberculous or septic, the sediment contains, in addition to endothelial cells, numerous fibroblastic forms. In later stages, when adhesions are forming, the endothelial cells may be entirely absent and only fibroblasts may be found. 4. In the diagnosis of sarcoma of serous cavities the character and number of the cells and the presence of numerous mitoses are the points upon which the diagnosis must be based. It is, of course, evident that the quickly-growing soft forms of sarcomata are the ones most apt to lead to the presence of cells in the fluid. The tendency of all sarcomata to break down after reaching a certain growth makes it extremely likely that in most cases free cells will be found. The diagnosis of spindle-celled sarcoma is easy from the occurrence of large numbers of spindle cells of similar size and shape, showing fewer branching processes than fibroblasts and containing more mitoses. In the round-cell forms the tumour cells are to be distinguished from the endothelial cells by their size, the character of the nucleus, and the relation of the nucleus to the protoplasm. The presence of mitotic forms will again be the most important point; in the small round-celled sarcoma these are not so easily seen. The greatest difficulty will be in the differentiation of the cells of a polymorphous-celled sarcoma from the fibroblastic forms found in fibrinous exudates. And from the general character of cell and nucleus the presence of division forms must in all cases be looked upon as being the most important point. In conclusion, therefore, the presence of numerous cell-division forms in the cells of the sediment of serous exudates may be taken as strong (perhaps conclusive) evidence that the effusion is due to the presence of a new growth, inasmuch as mitoses are but rarely found in the cells of purely inflammatory exudates.

A HOSPITAL MASONIC LODGE.

THE Masons of St. Mary's Hospital, London, are to be congratulated upon the way in which the consecration of their new Lodge, No. 2668, passed off at the Freemasons' Hall last Monday. The consecration was performed in an impressive manner by the Pro-Grand Master, the Earl of Lathom, by the authority of, and under the warrant issued by, H.R.H. the Prince of Wales, who has graciously consented to act as Worshipful Master of the Lodge, the "Sancta Maria," during the coming year, appointing the senior surgeon of the hospital, Mr. Edmund Owen, P.M., to act as his deputy. In the course of the ceremony the Rev. Studholme Brownrigg, past grand chaplain, gave an interesting address upon the close affinity which has always existed between members of the medical profession and the craft of Masonry, and paid a high tribute to the zeal and unselfish kindness with which medical men, whether Masons or not, were always ready to help in the relief of human suffering. After the consecration Brother Owen was installed deputy master of the "Sancta Maria" by the Earl of Euston, assisted by Viscount Dungarvan. A telegram addressed to the Deputy Master, and signed "Albert Edward," was read wishing a successful career to the Lodge. After the closing of the Lodge the brethren adjourned to a banquet, at which 120 covers were laid. In the course of an eloquent speech

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by Lord Lathom wishing success to the "Sancta Maria," he said that he was a firm supporter of "class-lodges" in that they brought the young and the old together and helped to consolidate them in good work and in spreading amongst those just entering a profession a knowledge of the interesting and beneficent craft of Masonry. We hope to give on a future occasion, when pressure on our space is not so great, a list of the first officers of the Lodge. Meanwhile we offer to the Deputy Master, the Wardens, and the Brethren of the "Sancta Maria" our congratulations on the success of the inauguration of their Lodge.

PORTAL THROMBOSIS WITH SYMPTOMS OF INTESTINAL OBSTRUCTION.

PORTAL thrombosis is difficult of diagnosis, the symptoms being usually like those of cirrhosis of the liver, of which, indeed, it is often only a complication. The following case—in which they were acute and of a very different type, resembling at first those of biliary colic and then those of acute intestinal obstruction—is exceptional. It is published by Dr. Barth in the Proceedings of the Socié é Médicale des Hôpitaux of Oct. 28th, 1897. A robust man, aged forty-seven years, of intemperate habits, was suddenly seized with violent epigastric pain and vomiting. The symptoms recurred in crises lasting several hours every day, which yielded only momentarily to morphine. Examination showed slight tenderness in the epigastric and right hypochondriac regions. The bowels acted regularly. Suddenly, on the seventeenth day, a change took place. The abdomen became tympanitic, hiccough and abundant vomiting of green porraceous matter occurred, the patient became feverish, and his expression altered. On the next day the temperature was 104·5° F., the pulse 140 and thready, and the vomiting continual; the abdomen was uniformly distended tight and very tender; the eyes were sunken, the voice was broken, and the expression was hippocratic. There had been no passage of fæces or flatus for twenty-four hours. Internal strangulation complicated by acute peritonitis was diagnosed, and laparotomy was proposed; but the patient became rapidly weaker and died in a state of collapse. A necropsy was made. The abdomen contained some reddish serum. The intestines were uniformly distended and the peritoneum was injected, of a bright red colour, but without exudation, except at a loop about the middle of the jejunum, which was purple, almost blackish, like a strangulated intestine, and covered with false membranes. The mesenteric veins not only of the diseased, but of the healthy, intestine were thrombosed throughout. In the portal vein thrombosis was more marked, the clot was greyish-red, firm, elastic, and manifestly older than the mesenteric. The thrombosis was not prolonged into the intra-hepatic divisions. The liver was diminished in volume and flabby; it was not cirrhosed or otherwise diseased. The question arises—Was the thrombosis the cause of the intestinal lesions, or were the latter the primary? Might there not have been a temporary strangulation of the intestine which caused incipient gangrene, then mesenteric thrombosis, and, finally, peritonitis by permitting migration of colon bacilli through the disorganised intestine? To this view there are several objections. No trace of constriction or mesenteric torsion was found. Above the diseased loop were analogous lesions less advanced and becoming slighter from below up. The intestinal lesions were too recent to explain the preliminary symptoms. Finally, the portal thrombosis was evidently much older than the mesenteric. Again, why was there gangrene of only a limited portion of intestine from this generalised portal thrombosis? Dr. Barth cites a number of such cases in which the thrombosis extended to the whole length of the intestine, in which only a limited lesion—cyanosis with sanguineous infiltration or gangrene, was found. In all the symptoms simulated acute obstruction and a similar part was affected—near the middle of the jejunum. He suggests an anatomical explanation—probably there is complete absence of anastomotic communications in this part which is situated in the centre of the mesenteric system, but above and below some collateral circulation by means of parietal veins is possible. In the Transactions of the Pathological Society of 1876, page 124, the late Dr. Hilton Fagge published a very similar case to Dr. Barth's, in which even the same doubt as to intestinal strangulation arose at the necropsy. But as a type, pathological and clinical, this condition has not been described.

THE GENERAL INFIRMARY AT LEEDS.

THE new operating department has been completed and is now being used regularly. There are two theatres, and each theatre has its separate waiting- and anæsthetic-rooms communicating by double doors. On either side of the entrance-hall are two rooms, one a recovery-room, the other a private room for the surgeons. The whole is lighted by electricity and supplied with warmth and washed air on the "Plenum" system. The floors throughout are constructed of terrazzo, and slope towards a gully so as to allow of easy flushing. The walls of the theatres and instrument-room are of opaline of a light green colour, fixed in large slabs to avoid joints as much as possible. A novel feature is the continuous supply of hot and cold distilled water in addition to the ordinary service. The instrument cupboards which are placed in a room connecting the two theatres are of the newest available pattern, and made of glass and gun-metal. The operating-tables are of metal enamelled white. The dressers' and sisters' tables are of white metal and glass. All the windows are fixed and cannot be opened. For warmth and ventilation full reliance is placed upon the "Plenum" system. The temperature in the two theatres is easily maintained at 65° F. The heating of the whole department takes twenty minutes. The arrangements for sterilising instruments consist of copper "fish-kettles," electricity being employed for the heating of the water. The woodwork, students' galleries, &c., are of polished teak.

THE VALUE OF HYDROCHLORIC ACID IN SCIATICA DISCOVERED BY ACCIDENT.

A SOMEWHAT remarkable instance is recounted in the *Semaine Médicale* of a patient having arrived at a successful method of treatment for himself by the merest accident—an accident, too, which was founded on a blundering ignorance of chemistry. A man who had suffered for many years from sciatica was treated in an Algerian hospital by means of hypodermic injections of salt and water, but without much success. After he had left he bethought him that perhaps the salt was not strong enough and that a stronger preparation of salt might be more successful. He therefore procured some "spirit of salt" (hydrochloric acid) and painted it on the skin, getting rid of his long-standing trouble in a few days. Having occasion shortly afterwards to attend the hospital for some other affection he confided in Dr. Bourlier, professor of therapeutics, whom he saw, how he had managed to get rid of his sciatica. This gentleman thought the plan worthy of trial, and employed it in several cases with invariable success. He then told his son, Dr. Maurice Bourlier, who was house physician, and he treated a number of cases with great satisfaction to himself and to his patients. A thesis has recently been published on the subject by Dr. C. Gennatas, of Montpellier, on the basis of a dozen cases of neuralgia of the sciatic nerve, all of which were completely relieved by this means. The procedure is simple enough. Half an ounce of strong hydrochloric acid is put in a small

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cup and a brush is dipped in it and applied over the painful part of the nerve, three or four coats being painted on. The limb is then enveloped in a cotton-wool dressing. Of course, the application causes a somewhat severe smarting sensation, but this is quite bearable. A few minutes afterwards the skin becomes reddened and hot, and sometimes bullæ are formed which fill with fluid. These even if they occur disappear in two or three days. Usually the patient feels better even after a single sitting. The application can be repeated in from twenty-four to forty-eight hours, but not again for several days for fear of producing sloughs. Of course, too, where there are bullæ they must be avoided in subsequent applications. No serious inconvenience is caused by the hydrochloric acid such as was experienced when a similar procedure was attempted some years ago by Dr. Legroux with strong sulphuric acid, which was found to be liable to cause extensive sloughing of the skin. The twelve patients referred to were all reported as cured in from three to five sittings extending over from a week to twenty-five days. It may be well to say that the hydrochloric acid of the French Codex is very slightly stronger than that of our own Pharmacopœia.

THE JUBILEE MEMORIAL AND THE CITY OF BRISTOL.

THE city of Bristol is to be heartily congratulated on the success of its scheme for worthily commemorating the Diamond Jubilee of Her Majesty Queen Victoria. In February last the inhabitants resolved to provide a convalescent home chiefly for the use of the patients of the Royal Infirmary and the General Hospital, but partly also for the use of other convalescents. The original proposal was to raise £50,000—£20,000 for the building and £30,000 as a nest egg in the form of endowment. This generous conception has been exceeded, thanks chiefly to the cordial and munificent gifts of some of the leading citizens, especially Messrs. Fry and Messrs. Wills and Co. The subscriptions from gentlemen connected with the latter firm include £5000 from Sir William Henry Wills, £10,000 from Mr. H. O. Wills, and the promise from Mr. E. P. Wills to provide a building in concert with the committee of the value of £20,000. Mr. Joseph Storrs Fry gives £10,000. In spite of the competition of numerous other Jubilee objects the total amount promised up to the present date is £80,000. It will be gratifying to Her Majesty to know that the sentiments of her grateful subjects in Bristol have taken such admirable shape. A convalescent home for generations to come is a form of gift which for grace and usefulness cannot be exceeded. Bristol has done well.

WOUND OF THE BRACHIAL PLEXUS: SUCCESSFUL SECONDARY SUTURE.

THE following case is recorded in the *Intercolonial Medical Journal of Australasia* of Sept. 20th, 1897, by Dr. Humphrey Martin. A man was cut with an axe along the posterior border of the left sterno mastoid muscle. The wound commenced one and a half inches above the clavicle and ran upwards and backwards for two inches. The surgeon who was called said that it was one and a half inches deep and had divided the nerves, but he only sutured the margins of the wound. Sensation was lost over the lower left side of the occiput, the lower anterior triangle of the neck, and the area supplied by the descending cervical nerves, the outer side of the arm and of the extensor surface of the forearm, and the thumb and index fingers. At first the arm was useless, but a month afterwards the patient could flex and extend his fingers and move his thumb, but the muscles of the forearm were wasted. There was complete paralysis of the deltoid, biceps, coraco-brachialis, brachialis anticus, triceps, and scapular muscles. The pectorals were very weak. Supination and pronation of the forearm were very defective. The flexors and extensors of the wrist and fingers acted well to faradaisation, as did also the serratus magnus, infra-spinatus, and rhomboidei. The deltoid, supra-spinatus, pectoralis major, biceps, triceps, coraco-brachialis, brachialis anticus, and supinator radii longus gave no response. To the constant current the muscles supplied by the median nerve reacted when one rheophore was placed over the scar and one on the muscles, but not those supplied by the supra-scapular, circumflex, musculo-cutaneous or musculo-spiral nerve to the triceps. It was concluded that the cord formed by the union of the fifth, sixth, and seventh cervical nerves, just above where the supra-scapular nerve comes off, must have been divided. On the fortieth day after the injury a three-inch incision down to the posterior border of the sterno-mastoid was made, dividing the platysma and the deep cervical fascia. Some small nerves, probably the descending cervical, were seen. These were pulled backwards and by carefully deepening the wound the distal end of the cord mentioned was found. The proximal end which was slightly bulbous was found half an inch above this. The ends were trimmed and united by kangaroo sutures. Some recovery of motion and sensation was evident soon after the operation, and this steadily increased until the patient had a useful arm. When last heard of he had recovered power in all his muscles except the deltoid which was improving, and he had regained sensation except in the area supplied by the circumflex nerve.

ACUTE AORTITIS AS A COMPLICATION OF FACIAL ERYSIPELAS.

THOUGH infective endocarditis is one of the recognised complications of erysipelas the very similar lesion, acute arteritis, is almost unmentioned in medical literature. Moreover, our present knowledge that the former complication is due to infection of the endocardium would lead us to regard the latter as a possible result of the same process. As long ago as 1867 Ponfick called attention to endarteritis, principally of the aorta and of the circle of Willis, in erysipelas; he considered it almost constant and described the lesions, especially histologically. His views appear to have been unconfirmed and forgotten until quite recently, when MM. Thoinot and Griffon brought the subject before the Société Médicale des Hôpitaux and read notes of the following case. A woman, aged fifty-three years, entered hospital about a month after an attack of facial erysipelas, from which she had not properly convalesced. General weakness, difficulty of breathing, insomnia, and constant headache remained. On the second day a relapse of the erysipelas occurred, but only in the form of a small patch on the face. But the dyspnœa increased and became even agonising, and the temperature rose to 104·4°F. There were no signs of pulmonary disease to account for this, but a diastolic aortic murmur was heard. She became convalescent a second time, but soon the symptoms again appeared and also albuminuria, œdema of the legs, and lancinating pains in the sternal region. The symptoms increased in severity, the urine became suppressed, and finally she died, about two months after the onset of the relapse of the erysipelas. A necropsy showed considerable dilatation of the aorta and two kinds of lesions—recent acute arteritis of the arch engrafted on old atheroma. The former was characterised by rounded fibrinous deposits of variable size, more elevated in the centre than at the margins, of an amber colour. Microscopic examination showed all the appearances of acute inflammation of the aorta, in addition to those of atheroma. There was a sero-fibrinous effusion in the right pleura. The kidneys

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showed signs of acute inflammation. MM. Thoinot and Griffon point out that the diagnosis of acute aortitis might have been made clinically from the murmur, the agonising presternal pain, and the dyspnœa which was unexplained by any signs of disease in the lungs. No doubt the atheroma was a predisposing cause of the acute inflammation, just as old cardiac disease predisposes to infective endocarditis, as was shown in THE LANCET of Sept. 25th, 1897.

MIDWIVES IN ALGERIA.

MADAME CHELLIER, to whose good work as a medical pioneer in Algeria we recently alluded,[1] has succeeded in establishing three French midwives in different parts of that country, and already their services are said to be highly appreciated by the native population. Of course three midwives are but as a drop in the ocean; but small beginnings often make big endings, and it is Madame Chellier's intention to found seven more midwifery posts in the province of Constantine, four in that of Algiers, and two in Oran. As a writer in a Parisian medical journal observes: "The unanimity with which the natives of all ranks have accepted the introduction in their midst of foreign residents and given them the *entrée* of their most private apartments is the best guarantee for the success of this philanthropic enterprise."

CITY COMPANIES AND HOSPITALS.

A LETTER appeared in the *Morning Post* of Nov. 15th which ran as follows:—

To the Editor of the Morning Post.

SIR,—I think it is not generally known that four of the twelve chief City Companies have agreed to open and endow a ward of thirty beds at St. Thomas's Hospital in memory of the Queen's Diamond Jubilee. As this means an expenditure of at least £2500 a year I think these City guilds have done well, besides the thousands a year they grant to all London hospitals.—Yours, &c.,

Nov. 13th. CITIZEN.

We are sorry to say, however, that the authorities of St. Thomas's Hospital inform us, in reply to our inquiries as to the matter, that no such action has been reported to them. We sincerely hope that at no very distant date the treasurer of St. Thomas's Hospital may be advised of such action which would not only be a worthy memorial of the Diamond Jubilee but also in thorough accordance with the traditions of the great City companies.

FACIAL NEURALGIA.

AT the recent meeting of the Association of German Naturalists and Physicians reported in the *Neurologishes Centralblatt*, an important discussion took place on this subject. Dr. Böttiger, of Hamburg, read a paper, in which he divided pains occurring in the region of distribution of the fifth nerve into four varieties, neuralgic, neuritic, psychical (or hysterical), and rheumatic. He insisted especially upon the clear distinction between the first two varieties, more particularly in reference to their etiology. Whilst neuritic pains were the result of toxic conditions or infective disease, neuralgic conditions were most frequently the result of local conditions, especially local chills. Treatment for such neuralgic conditions must as a rule be symptomatic. But in certain cases no doubt general hygienic and dietetic conditions—treatment by drugs and by mechanical and physical measures and also by electricity—were effective. He recommended in recent cases, especially occurring in young children, treatment by such means, but was of opinion that old-standing cases, especially in patients of advanced years, were only amenable to surgical measures. In the discussion which followed Dr. Bruns, of Hanover, said that he regarded the distinction between neuritic pain and neuralgic pain as an artificial one, for many of the severest neuralgias were determined by sclerosis of the blood-vessels of the nerves. He thought that there were certain cases in which the pain came in the second and third divisions of the fifth nerve in old people and was especially excited by eating and speaking, in which any treatment except surgical was useless. Dr. Rump, of Hamburg, agreed to some extent with Dr. Bruns. He had, however, known of one case in which operation failed to cure, but which was permanently relieved by the use of galvanism.

[1] THE LANCET, Sept. 18th, 1897, p. 734.

A NEW RESEARCH INTO THE MUSCLES OF RESPIRATION.

RUDOLPH FICK publishes in his *Archives of Anatomy and Physiology* a paper on the Muscles of Respiration which well repays perusal. In the first part of his paper he refers to the results of other investigators especially in relation to the intercostal muscles, but the latter part is an account of his own original investigations. The observations of other investigators have all been made with the internal intercostal muscles dissected, and their action determined by direct inspection. In those of Dr. Fick all the costal muscles were left intact. He first examined the auxiliary muscles of respiration in the neck and proved that they were absolutely inactive in normal quiet respiration and only came into action in isolated extraordinary, deep, sighing respirations, the result of their action being to elevate the thorax *in toto*. Next the auxiliary muscles of respiration and the diaphragm were paralysed by severing their nerves in the neck, and the action of the abdominal muscles eliminated by dividing them. It was then found that the respirations continued in normal rhythmic manner, the difference between inspiration and expiration (apparently active) measured through a tracheal cannula being 66 mm. of water. These experiments taken in connexion with the geometrical deductions contained in the early part of the communication proved that normal quiet inspiration is the effect of the contraction of the external intercostal and intercartilaginous muscles, and that expiration is effected by the internal intercostal muscles. Bergerdal and Bergmann in Stockholm have arrived at the same results by similar experiments.

THE annual dinner of the staff and past and present students of the Dental Hospital of London will be held on Saturday, Dec. 4th, at the Hôtel Métropole (Whitehall Salon), under the presidency of Mr. A. S. Underwood, M.R.C.S. Eng., L.D.S. Gentlemen either now or formerly connected with the hospital or medical school who may through inadvertence not have received special notice and who may desire to be present are requested to communicate with the Dean at the Dental Hospital, 40, Leicester-square.

A BREAKFAST meeting of the British Medical Temperance Association was held at the Cannon-street Hotel at 8 o'clock on Thursday morning, Nov. 18th, 1897. Dr. Barlow and Mr. Victor Horsley addressed the meeting.

DR. J. BEAN BRADFORD, the Brown Professor, will deliver two lectures on Atrophy and Hypertrophy of the Kidneys at the University of London on Nov. 23rd and 30th.

THE Buchanan Medal of the Royal Society has been awarded this year to Sir John Simon, and the Davy Medal to Dr. J. H. Gladstone.

THE first lecture in connexion with the Jacksonian Lectureship, founded by the Neurological Society in honour of Dr. Hughlings Jackson, will be delivered by him at

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11, Chandos-street, W., on Wednesday, Dec. 8th, 1897, at 8.45 p.m.

WE deeply regret to announce the death of Dr. James Cagney, which took place yesterday (Thursday) morning. Dr. Cagney was suffering from typhoid fever and succumbed to sudden cardiac failure.

LEICESTER AND SMALL-POX.

IN connexion with small-pox and vaccination so much has been heard of Leicester and the "Leicester method" that the publication of Dr. Sidney Coupland's report to the Royal Commission on Small-pox in that town ought to be welcome alike to medical men and to politicians. Up till now the main sources of information regarding Leicester and its doings have been anti-vaccinationist. A large number of witnesses were sent up by Leicester to the Royal Commission, and one of these, Mr. J. T. Biggs, was in the witness-box for many days. The *Vaccination Inquirer*, also, has for years past dealt very freely in statements regarding Leicester, and the country has been stumped by orators proclaiming the virtues of the Leicester method. The present report by a thoroughly competent recorder of observed facts, appointed specially by the Commission to make an inquiry into the Leicester outbreak of 1892–93, affords the first opportunity of checking some of the statements and is of great value notwithstanding that the facts recorded occurred five or six years ago. Needless to say the report is not newly written though it is newly published.

In the first place it is necessary to be quite clear, or as clear as may be, regarding what is, and what is not, the Leicester method of dealing with small-pox, and here, to avoid if possible charges of misrepresentation, it will be well to take as our authority leading supporters of the method. Mr. Biggs stated[1] that when a case of small-pox is reported an inspector immediately visits the infected house, endeavours to ascertain where the disease was contracted, where the patient has been working and visiting, and his movements generally for ten or twelve days previously. All persons who have visited the infected house are seen and all factories and workshops where other members of the family have been employed are visited. Immediately on removal of the patient the house is fumigated with sulphur, liquid disinfectants are freely used in the drains and about the yard, and the ashpit is emptied and disinfected. Next day the bedding is treated by the hot-air process in a disinfecting chamber. An endeavour is made to prevail on all persons who have been connected with the infected house to go into quarantine, but "compensation for loss of time is *not* offered." Quarantine is carried out at the hospital in a building near the small-pox wards, and "this period of rest is made to be of so pleasant and agreeable a character that at its expiration many have been reluctant to leave the hospital." But, above all, there is no compulsion. A considerable number have refused quarantine and have taken their own way. Also it is strenuously denied that vaccination forms any part of the method. Mr. Biggs says: "During the sixteen years from 1874 to 1889 inclusive no fewer than thirty-three importations—mostly from well-vaccinated districts—and a large number of successive outbreaks of small-pox were successfully STAMPED OUT. The town was thus saved from the further spread of the disease, with its possible ravages, by the LEICESTER METHOD of treatment *without recourse to vaccination*, and also without the slightest appeal to arbitrariness on the part of the authorities or any infringement of personal liberty."

A Special Commissioner who reported to THE LANCET in 1886 had stated otherwise as regards vaccination being a part of the method. He wrote that "all the persons in the house of the patient are vaccinated or re-vaccinated." In justice to Mr. Biggs we quote his reply, at the same time noting that our Commissioner visited Leicester in the earlier part of 1886, and that he was writing not of the future but of the past. Mr. Biggs said "Of fifty-five persons who voluntarily went into quarantine during the three years 1886–88, only twelve were vaccinated or re-vaccinated whilst in quarantine. If to these twelve we add three others who underwent the operation immediately before entering the hospital, there remain forty persons, or 72·7 per cent. of the above fifty-five who were neither vaccinated or re-vaccinated during the quarantine period." Now it happens that of these fifty-five, two, and two only, had been quarantined *previously* to our Commissioner's visit, and that both of these had been also re-vaccinated. That was in 1886. In 1887, of fourteen persons quarantined, it appears from a table submitted by Mr. Biggs to the Vaccination Commission, that seven were vaccinated in connexion with their quarantine. In 1888, however, only six of thirty-nine were so vaccinated. Mr. Biggs gave no information as to how many of the persons who were not vaccinated at the time of their quarantine had previously had small-pox, nor how many consisted of vaccinated children or re-vaccinated adults. At the time in question, be it remembered, vaccination of infants was not neglected in Leicester as it is now. In the fourteen years 1872–85, the average rate of neglect (children "not accounted for") was under 21 per cent. Almost certainly, therefore, many of the quarantined did not require vaccination and, needless to say, our Commissioner would have that in view in making his statement as to the practice previously to his visit in 1886. Very likely, however, some of those who were quarantined in 1887 and 1888 did require vaccination and were not vaccinated. But what has that to do with our Commissioner's statement?

It was *after* he had made his report, *after* public attention had been called to this feature in the dealings of Leicester with small-pox, *after* the Leicester anti-vaccinationists (some of whom, including Mr. Biggs, were also members of the sanitary authority) had been put on the defensive, that these persons were quarantined without being also vaccinated. Our Commissioner was not prophesying as to what course would be taken with regard to the vaccination of quarantined persons after his report had been published. The medical officer of health, who would naturally be acquainted with the Leicester practice both of his own time and of his predecessor's, wrote as follows in his report for 1886:—"Small-pox: The one case met with was in the person of an artisan. ..... The usual prompt measures were adopted; the patient was removed to the small-pox wards, and two other persons who had been in contact with him were subjected to fourteen days' quarantine and were re-vaccinated. ....." These were, it would appear, "the usual prompt measures." What then has Mr. Biggs's statement regarding 1887 and 1888 to do with the statement made by our Commissioner in 1886? Obviously nothing. Yet a connexion had to be established and here is how the Leicester anti-vaccinationist forges the bond of union. The italics are ours. "*Applying the same percentage to the 128 persons quarantined before 1886*, we find a further number of 35 persons who voluntarily submitted to the operation, who, when added to the other 15, make only 50 for the extended period. Thus, out of a total of 183 persons who had passed through the quarantine wards since the introduction of this system in 1877, *no fewer than 133 were neither vaccinated nor re-vaccinated whilst in hospital.*"

Here, then, Mr. Biggs discloses the origin of his statement regarding the 133. The disclosure was published in November, 1892. But what had he previously told the Royal Commission? After having dilated on the iniquity of THE LANCET and its Commissioner he says (June 10th, 1891): "The total number of persons who have been placed in quarantine since this method was introduced in 1877 is 183, and of this number 133 were neither vaccinated nor re-vaccinated either immediately before entering or whilst in the hospital. I think that this fact thoroughly disposes of the statement which has been made in regard to the compulsory vaccination and re-vaccination of all persons taken into our quarantine wards." Passing by the fact that our Commissioner, instead of speaking of compulsory vaccination and re-vaccination, had distinctly said, "Actual legal powers do not exist," and had explained that pressure could be applied without such powers,—passing by this fact, let us note what Mr. Biggs gave as the origin of his statistics, 183 and 133: (Q. 16,443) "That statement is based upon private information from the medical officer? *Yes; upon private information from the medical officer and from the sanitary inspector.*" (The italics are ours.)

It was in this manner that Mr. Biggs endeavoured to discredit before the Royal Commission THE LANCET Commission of 1886. But in the end of 1892 he states, not to

[1] Vaccination Inquirer, November, 1892.

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the Commission, but in the pages of the *Vaccination Inquirer*, that his figures were obtained as we have above quoted—by a calculation based on the experience of only the last three years of the period, all but two of the cases having occurred after our Commissioner had written his article in our pages. We think it best to state these facts without comment of any kind. Comment, indeed, would be superfluous.

Mr. Biggs also fell foul of THE LANCET Commissioner with regard to the vaccination of the sanitary and hospital staff. He said: "The assertion that on the occurrence of small-pox the officials brought into contact with the case—the medical officer of health, the inspectors, the matron, and nurses at the hospital—are all vaccinated or re-vaccinated, applies to ten persons. They were in office when THE LANCET agent visited the town. Four of these not having been vaccinated since infancy and one not for nineteen years, the term of their 'protection' has theoretically expired." Needless to say, our Commissioner neither said nor suggested that these officials were vaccinated or re-vaccinated "on the occurrence of small-pox'—sometimes repeatedly in a single year in Leicester—and Mr Biggs knows perfectly well that neither THE LANCET nor any other responsible authority has suggested such frequency of repetition of vaccination Without attempting to judge between our Commissioner and Mr. Biggs, we will assume that an interval much too long for safety really had elapsed since the vaccination of five of the staff. Indeed, Mr Biggs is rather supported here by what Dr. Coupland ascertained regarding the hospital staff at the time of the outbreak of small-pox in 1892-3. At that time there were six members of the staff who had refused re-vaccination, and thirty-four who were looked on as already protected against small-pox, a few of them by having had small-pox, but all the others by re-vaccination. How did it fare with these? Of the thirty-four, one who had been re-vaccinated ten years before had a mild attack. The other thirty-three escaped. Of the six, "the only one ..... who escaped attack was the matron, who visited the wards occasionally but took no part in the actual nursing of the cases."[2] The other five took small-pox, and one of them died. What better control experiment could be thought of than this?

In connexion with these cases of small-pox among nurses, however, a curious light is thrown on Mr. Biggs's mental attitude towards vaccination. Reverting to his criticism of our Commissioner's statement as to the vaccinal condition of the officials we call attention to the following: "Four of these not having been vaccinated since infancy and one not for nineteen years, the term of their 'protection' has theoretically expired." Coming now to the hospital staff in the 1892-93 outbreak and to the six who "although they had not previously been re vaccinated refused to submit to the operation"[3] we find, as already mentioned, that five of the six were attacked and one died. One of the five had ultimately consented to the operation, "but it was only performed on the day that she showed premonitory symptoms of small-pox" We know not whether the six in 1892-93 included the five spoken of by Mr. Biggs in the above quoted passage referring to 1886 but it matters not, as they belonged to the same class as to whom Mr. Biggs insisted that "the term of their protection had theoretically expired." Will it be believed that when five of the six in 1892-3 had been attacked by small-pox, Mr. Biggs wrote thus regarding them to the London *Star?* "During the present outbreak, which began in September last, five of the nurses and attendants at the hospital, all well vaccinated (one of the nurses being re-vaccinated), have been attacked with small-pox. One of these, a very bad case, died of confluent small-pox." The letter in which Mr. Biggs asserted that after nineteen years protection had theoretically expired was printed in the *Times* of Oct. 15th, 1887, and the letter in which he described the cases of 1892-93 as well vaccinated and one of them as re-vaccinated, is to be found in the *Star* of March 1st, 1893.

In order that our readers may have before them the full facts regarding these nurses we turn to Dr. Coupland's Report, p. 33. The ages of the five were forty three, forty-five, twenty-five, twenty, and twenty-three years. All had been vaccinated in infancy. The three younger patients had mild attacks. The two older had severe attacks, and one of them who had been intemperate died. It was one of the younger patients who was re-vaccinated during the premonitory symptoms of the attack, and who was described in Mr. Biggs's letter to the *Star* simply as "re-vaccinated." The others, in spite of their protection having "theoretically expired," he described as "well vaccinated."

In the same line of things it may be noted in passing that to a conference of anti-vaccinationists held in February, 1893, Mr. Biggs declared that the tramp with whom the Leicester outbreak began "was well vaccinated." Dr. Coupland's description (p. 26) is that he had "a smooth, small cicatrix on the arm where he said that he had been vaccinated in infancy." He was thirty-five years old—far more than "nineteen years" from infancy—and there was no evidence that he had ever been well vaccinated.

(To be continued.)

[2] Dr. Coupland's Report p 33.
[3] Royal Commission's Final Report, p. 82.

ANNUAL REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD, 1895-96.

THE supplement of the medical officer to the twenty fifth annual report of the Local Government Board is, as its predecessors have been, full of interest not only to the medical profession but to all who concern themselves with the progress made in our knowledge of the means of combating disease. The student of the volumes which are annually issued by the medical department cannot fail to be impressed with the great strides which this knowledge has made in the quarter of a century which has passed, and of the immense gain it has been to this country to have so much reliable scientific knowledge made available by the medical department for the guidance of the administrations of the Local Government Board and of the sanitary authorities which act under its supervision. The immensity of the work which the medical department has done during the year cannot be appreciated by any reader of the volume under notice who is not himself familiar with the amount of labour which each item referred to involves. Thus the long lists of local inquiries held in connexion with proposals of local authorities as to hospital provision, as to whether orders should be issued in respect of the removal of excrement and refuse removal, as to the incidence of disease in particular places and to their sanitary administration, as to the sanitary condition and administration of a number of districts, and as to river pollution and water-supplies, have only passing notice. Sir Richard Thorne gives account in the main only of inquiries from which some lesson of general application can be learned, but of these there are many which bear ample evidence of the ability with which the work of the department is directed and of the value of its investigations.

In the matter of vaccination Sir Richard Thorne has to record that the marked and almost continuous increase in the amount of default which has been in progress during the last seven years received in London a slight check in respect of 1893, but in the provinces it underwent still further augmentation. This regrettable circumstance is no doubt due to the delay in the presentation of the report of the Royal Commission on Vaccination, boards of guardians in numerous instances regarding the appointment of this Commission as sufficient reason for suspending the operation of the vaccination law. Indeed, the report of this Commission itself contains evidence of this neglect of many of the boards, and as a result some 16·4 per cent. of the children born in England and Wales in 1893 are left susceptible to small-pox It is deserving of note that the number of children returned as insusceptible to vaccination has now reached so high a figure as to represent in England and Wales more than one child in every 300 born, and in London more than one child in every 200 born. The explanation of this extraordinary result is not obvious, but the subject deserves the serious attention of the profession Sir Richard Thorne has abundant material before him to show that "true insusceptibility to vaccination is very rare," for the Local Government Board's own vaccinators, who during the last fifteen years have performed no less than 95 677 primary vaccinations, have not met with a single case of insusceptibility; and further, Sir Richard Thorne points out

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that the experiences of these officers does not stand alone, "the same result has followed on the vaccination of many thousands of infants in the hands of other public vaccinators." A record, therefore, of 3394 cases of insusceptibility to vaccination in 1893 cannot fail to engage the attention of Parliament in the next session, when it may be presumed the subject of vaccination will be under discussion.

Of the investigations of the cause of disease prevalence, of which the report gives account, perhaps the most interesting is that conducted by Dr. Buchanan into an outbreak of enteric fever in the village of Wycombe Marsh. High Wycombe had been found by Dr. Wheaton to abound with the conditions which foster enteric fever and with the result that might be expected, but the interest of the etiologist centres less in High Wycombe itself than in the opportunity which the sewage farm was found by Dr. Buchanan to give for the production of enteric fever in Wycombe Marsh. The inquiry was in no sense an easy one, and, indeed, unless undertaken by an officer having in high degree the ability to solve a complex problem, the actual circumstances in which the inhabitants of Wycombe Marsh suffered from the High Wycombe sewage-farm would not have been appreciated. The sewage of High Wycombe is chemically treated, and the sludge is pumped on to the land to dry, the more liquid sewage being made to flow on to the sewage-farm, whence, after percolation through the soil, it passes by deep pipes into the back river, a tributary of the River Wye. This back river passes through the farm and is dammed at a mill lower down. This damming of the back river led it to overflow its banks and flood a meadow, which had thus been under water during some weeks at the end of 1895. Subsequently to September of that year cases of enteric fever occurred in Wycombe Marsh, the houses of which are supplied with water from wells in their gardens. Leaky cesspools exposed some of these wells to pollution, but the distribution of the cases of disease did not coincide with that which might have been expected if this had been the cause of enteric fever, indeed no hypothesis met the required conditions other than that the subsoil water supplying the wells had been polluted by the soakage of the back river water through the meadow which it flooded. That there was intimate relation between the back river and some of these wells was shown by the fact that the water in these wells rose when the water in the back river was high. But the circumstance that made the connexion between the flooding of the meadow and the pollution of the Wycombe Marsh wells a practical certainty was the coincidence in point of time between the occurrence of the cases of enteric fever and the damming of the back river. Before September the mill had been disused and hence the water flowed readily away, but in September the mill again came into operation, the river was dammed, and the results described followed. Sir Richard Thorne points to the fact that especial interest attaches to this outbreak because it illustrates a danger which may devolve on one community as the result of works carried out solely in the interests of another community. Dr. Buchanan's inquiry leads the reader of his report to speculate upon the question whether other sewage schemes have been adopted which may in their turn be similar causes of danger. The circumstances of the Wycombe Marsh outbreak undoubtedly suggest the need for careful examination of sewage works which have not hitherto been thought of as possible sources of risk. In his observations on the prevalence of enteric fever in High Wycombe Sir Richard Thorne observes that "accurate knowledge as to the extent of any prevailing preventable disease was so far a matter of indifference to the town council who constitute the sanitary authority of the district that they had not cared to adopt the Act for the Compulsory Notification of Infectious Diseases." The censure implied in these words is well deserved, but we may not unreasonably ask if there is so strong a moral obligation upon a sanitary authority to require notification, whether the time has not arrived when Parliament should impose a Statutory obligation on all such bodies. The very large extent to which this Act has been adopted, the fact that the system of notification was imposed upon London without question and without a murmur from its inhabitants, appears to us to indicate that the time has fully arrived when Parliament might and should take this step.

Sir Richard Thorne includes in his volume two reports illustrating the spread of diphtheria by elementary schools. The first of these, by Dr. Sweeting, relates to a severe outbreak of the disease at Llanfynydd, in Carmarthenshire. This village is evidently an example of sanitary neglect. Dampness of houses, water-supplies exposed to constant risk of pollution, privy accommodation wanting and when existing serving to pollute soil, air, and water; such is the record of Llanfynydd. The beginnings of diphtheria remind the reader of this report of Sir Richard Thorne's early observations as to the manner in which this disease increases in intensity. Undefined throat illness first occurred among the children attending the national school, until at last well-defined diphtheria was recognised, with the result that the school was closed; but the mischief which the villagers suffered had not come to an end when fifty-two persons had been attacked and seventeen had lost their lives. Here, again, the absence of any requirement as to notification of infectious diseases tended to keep the sanitary authority in ignorance of the need for their intervention. The story of this village, Sir Richard Thorne says, is by no means an uncommon one in the experience of the department. "It is one of persistent sanitary neglect, in which preventable disease, getting a foothold on the population before it is recognised, finds everything at hand to favour its fatal diffusion." The second outbreak of diphtheria, investigated by Dr. Reece, occurred in the borough of Flint. Between February and mid-July, 1894, fourteen cases of diphtheria were notified in a population of 5000. Then there was a lull for some two months, followed by a steady increase in the number of cases. At this time the disease had obtained a footing in the schools, and Sir Richard Thorne tells us that at the time of Dr. Reece's visit, 288 children were in actual attendance at one of the five elementary schools in the district of which no less than 113 admitted that they had suffered from "sore-throat" or glandular swellings styled "mumps" during the previous five months, 84 of whom had been absent from school by reason of these ailments, "but no system of exclusion or school closure had been adopted by the town council, and this notwithstanding the fact that at one stage of the outbreak the medical officer of health advocated the closure of the schools." Several cases of inflamed throats were, indeed, on the same occasion, found amongst scholars and teachers. "Under circumstances such as these," says Dr. Reece, "it can scarcely be wondered at that school attendance has been the means of spreading diphtheria in Flint."

(To be continued.)

THE INDIAN FRONTIER.

As we, in common with most people, supposed would be the case, the opposition of the frontier tribes has assumed the character of a harassing guerilla warfare. Night attacks on camps and attacks on convoys and small or detached bodies of troops, on foraging parties, or on the rear of brigades have been, and are likely to continue to be, of frequent occurrence. The native tribes, with their intimate knowledge of the country and with every mountain pass, defile, and, in short, with every nook and corner in it, are at a great tactical advantage in this respect; it is quite easy for them to conceal themselves and attack our troops and convoys at various points most advantageous to themselves, and the so-called "sniping," besides its disturbing effect on the occupants of camps, causes in the aggregate much loss of life and many wounded. The late massacre of an officer and men of the Kapurthala Sikhs is much to be deplored. The circumstances attending this occurrence, with the blazing grass and jungle on one side and the foe on the other, and the Kapurthala Sikhs at bay fighting for their lives, make up a stirring and tragic picture of Eastern warfare. The Sikhs and Goorkhas are the best of soldiers, and it is much to be regretted that the source from which they are supplied is far from being an unlimited one. The weather is much colder—especially the nights and early mornings—but the force, generally speaking, enjoys excellent health The sick and wounded are doing well, the hospital service is full of work, and all concerned are full of zeal and energy.

The latest news from India is, on the whole, of a more satisfactory character. The Orakzais have ascertained the terms of submission required and it is believed that

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recognising the futility of further opposition they will accede to them, in which case the Afridi tribes may probably come in and make their submission. From a purely military point of view the campaign has so far been successful, but the occupation of Tirah will be attended with great difficulties. The Bara Valley, fertile as it is, cannot furnish the food and forage supplies required by such a large force and foraging parties sent out to collect these usually have to confront attacks from the tribes who have adopted the policy of guerilla tactics. Moreover, the cold will soon become severe with probably ice and falls of snow. Additional accommodation for housing the troops will then be required and the transport of stores and commissariat supplies to the front will become more and more difficult, and diseases of the respiratory organs among the native troops may be expected to prevail. The future policy to be adopted will be greatly influenced, no doubt, by these considerations and by the events that are now taking place. India most probably cannot support the cost of the large force that will be required for the occupation of the conquered country and it is not likely that the Afridis will become reconciled to our presence there—at any rate not for a long time. If they come in, proffer their submission, and sue for terms, it seems probable that, having already read them a severe lesson, the "politicals" will not lose the opportunity of settling the matter on the best practicable terms they can. The expeditionary force will in that case march through the country and retire from it rather than incur the present and future expense of remaining. According to the latest telegraphic intelligence General Kempster's brigade has captured at Mullah Akbar's fort compromising correspondence which is alleged to implicate certain Afghan officials. The situation as it stands at present has many grave political considerations to be taken into account.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Nov. 11th, the President, Sir WILLIAM MACCORMAC, Bart., being in the chair.

The Museum Committee, in their report, recommended that in future the Museum should be open from 10 o'clock to 6 o'clock between March 1st and August 31st, and during October, and from 10 o'clock to 4 o'clock between Nov. 1st and the last day of February. The recommendation was adopted.

Felstead School and Watford Endowed Schools were added to the list of recognised places of instruction in Chemistry, Physics, and Practical Chemistry; and the South-West Polytechnic Institute, which was already recognised for instruction in these subjects, was added to the recognised places of instruction in Elementary Biology.

The PRESIDENT stated that the Bradshaw Lecture would be delivered by Mr. Alfred Willett on Wednesday, Dec. 8th, at 5 P.M., and that the subject of the lecture would be the Correction of Certain Deformities by Operative Measures upon Bones.

The SECRETARY reported that notices of resolutions for the meeting of Fellows and Members on Nov. 18th had been sent in. (These have already been reported in THE LANCET of Nov. 13th, p. 1262.)

A letter was read from the Registrar of the Mason Science College, Birmingham, requesting the Council to appoint a governor in accordance with the provisions of the Mason University College Act, 1897. Sir William MacCormac was appointed for five years.

The Council, after discussion, decided to defer the further consideration of the letter from the Parliamentary Bills Committee of the British Medical Association asking the Council to join a deputation to the Secretary of State for War on the subject of the Army Medical Service.

Mr. MACNAMARA moved, and Dr. WARD COUSINS seconded, the following resolution: "That the President of the Royal College of Surgeons of England be empowered to arrange with the President of the Royal College of Physicians of London to approach the Secretary of State for War to impress upon him the necessity which exists for granting medical officers of the British army substantive army rank and military titles in a consolidated army corps."

The resolution was carried.

THE POLLUTION OF WATER-SUPPLIES BY ENCAMPMENTS OF HOP-PICKERS, CASUAL WORKERS, TRAMPS, ETC.

SIR DOUGLAS GALTON, F.R.S., presided over a well-attended meeting of the Sanitary Institute at the Parkes Museum on Wednesday last, Nov. 17th, when Professor W. H. Corfield opened a discussion in reference to the Dangers of Pollution of Municipal Water-supplies and Miss Chreiman read a paper in reference to the Sanitary Control of Hop-pickers.

Professor W. H. CORFIELD, after referring to some lines of Virgil to show that the danger of polluted water was recognised even in Vigil's time, said there was no doubt whatever that diarrhœa could be communicated by means of polluted drinking-water, but he did not know nor was he aware that anybody knew of any serious outbreak which could be attributed to that cause. He felt strongly that summer diarrhœa in many instances was closely connected with this cause. Serious outbreaks of scarlet fever and diphtheria were not traceable to drinking-water either on a large or small scale. Diphtheria might be communicated by a deliberately contaminated water-supply. Cholera could be distinctly shown to be communicated by contaminated water-supplies. Professor Corfield then quoted a case which had come under his own observation which showed that a person might have enteric fever and go about his work until the third week and then die almost immediately. People might thus spread the poison unknowingly. In the old days of Millbank Prison it was undoubtedly a hotbed of typhoid fever. There were constant cases of abdominal disorders; but when the authorities ceased to use the water which they baled out of the Thames and obtained a supply from the artesian wells which serve the Trafalgar-square fountains these diseases at once disappeared. It was generally assumed that enteric fever and cholera poisons were distributed in the same way; but while it was true that both were conveyed by water there was a difference between the two which was not yet understood. Lyons, for example, was a hotbed of typhoid fever, but had never had a case of cholera; the outbreaks that had occurred outside had never spread into that city. So well was this known that during cholera epidemics people went to Lyons, knowing it would not spread there. Professor Corfield concluded by reading the following letter, which he had received from a medical gentleman in Kent: "The hop-growing extends from a little west of this place (Hildenborough) eastwards to beyond Maidstone, and during the season of hop-picking the country is covered with encampments of people of the least sanitary class, frequenting by preference the proximity of streams and rivers for the convenience of obtaining water and of washing their clothes. It is a confirmed belief amongst this class of people that the hop fields are very health-restoring to the feeble, the sick, and the convalescent, and no doubt that many a convalescent from typhoid is taken to the hop fields, and their linen, which may not have seen the tub for weeks, is washed in the adjacent stream. Should any of the streams become polluted during the present outbreak at Maidstone by cases removed from that town during convalescence it might spread the disease into the villages and amongst the rural population. I have not seen this state of things alluded to in any of the correspondence in the medical or lay press and I think that it is not known what a large number of people are dependent for their water for daily use on the streams and rivers of this county."

Miss M. A. CHREIMAN in her paper described the condition of the hop-pickers and their surroundings which had come under her notice. She described the state of things as being most unsanitary and pleaded for increased sanitary control by the local authorities and better provision for the hop-pickers by their employers. Referring to a reservoir at Farleigh she said she had been told that it had not been cleaned out for eighteen years and when it was being cleaned dead babies were found in it.

Mr. G. H. FOSBROKE (Worcester) spoke of the utility of Section 314 of the Public Health Act, 1875, which gave local authorities the power to make by-laws, but said that it failed in some cases because it left the matter optional. The word

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"may" in the clause ought to be changed to "shall." The many outbreaks of scarlet fever and diphtheria which occurred in his district after the hop-picking season was over would lead him to believe that disease was imported by these casual workers.

Dr. TEW (Tonbridge), Mr. ADAMS (Maidstone), Dr. THRESH, Dr. PORTER (Stockport), the Rev. EMBLETON THOMAS, and Major L. FLOWER took part in the discussion.

THE PLAGUE IN INDIA.

ALTOGETHER apart from the frontier war the Government of India and the authorities of the India Office at home are confronted with a very grave and anxious duty in having to deal with the plague the spread and progress of which in India is a really serious matter. As was confidently expected there has been a recrudescence of bubonic plague in Western India with the advent of the cold weather, and the disease has, moreover, manifested itself in other and distant provinces and districts, cases having occurred in the Madras Presidency, in the North-West Provinces, in the Punjab, and in Central India and Rajputana. At Poona and in the towns and villages thereabout there has been an alarming increase in the number of cases during the past month; the number of patients admitted to hospital and under treatment is double what it was and the mortality is very large. According to the latest telegram (Nov. 15th) the epidemic in the city and cantonments shows no abatement. There were 630 plague patients in the Poona hospitals, and there had been 134 cases and 94 deaths during the preceding forty-eight hours. The city is completely deserted and several of the principal streets are closed. At Sholapore, Nasik, and other towns and villages there have been numerous attacks. Nasik is not very far from Deolalie, the military depôt through which our troops have to pass in their railway journey on arriving at, and leaving, India.

It will be remembered that an outbreak of plague occurred some time ago at Hurdwar, but owing to the prompt and energetic action of the local authorities the disease did not spread. Still, it is believed that it was carried into the Jullundur district of the Punjab where some cases of plague have recently occurred. The Punjab Government have taken stringent measures in regard to this outbreak. The *Standard* of the 15th inst. contains an interesting communication from its own correspondent on the plague in India and the spread of the infection in which it is stated among other things that at Hurdwar the disease was communicated to the monkeys which always congregate in large numbers on such occasions. The Government of India and the local governments are, it is needless to say, using all vigilance in their efforts to limit the spread of the disease.

Lord Sandhurst, the Governor of Bombay, visited Poona on the 29th ult., inspected the plague hospitals and camp, and expressed himself satisfied at the way in which everything was being conducted. Lord Sandhurst also visited Sholapore on Oct. 21st and inspected the hospitals and segregation sheds at that station. The exodus of people from these places has, as might be expected, been very great and much inconvenience has resulted from the want of native labour. Surgeon-General Cleghorn, C.S.I., was expected at Bombay with the view of making special inquiries into the plague.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6324 births and 4009 deaths were registered during the week ending Nov. 13th. The annual rate of mortality in these towns, which had increased in the three preceding weeks from 16·9 to 18·1 per 1000, further rose last week to 19·0. In London the rate was 19·4 per 1000, while it averaged 18·8 in the thirty-two provincial towns. The lowest death-rates in these towns were 10·7 in Cardiff, 11·7 in Plymouth, 13·3 in West Ham, and 13·9 in Gateshead; the highest rates were 23·1 in Liverpool, 24·7 in Sheffield, 25·4 in Preston, and 26·5 in Burnley. The 4009 deaths in these towns included 461 which were referred to the principal zymotic diseases, against 463 and 412 in the two preceding weeks; of these, 157 resulted from measles, 70 from diphtheria, 68 from diarrhœa 61 from whooping-cough, 59 from "fever" (principally enteric), and 46 from scarlet fever. No fatal case of any of these diseases was recorded last week in Birkenhead; in the other towns they caused the lowest death-rates in Brighton, Newcastle-upon-Tyne, Portsmouth, and Hull, and the highest rates in Bolton, Bristol, Gateshead, and Blackburn. The greatest mortality from measles occurred in Huddersfield, Sunderland, Gateshead, Swansea, Croydon, Oldham and Blackburn; from scarlet fever in Gateshead; from "fever" in Bristol; and from diarrhœa in Wolverhampton and in Bolton. The mortality from whooping-cough showed no marked excess in any of the large towns. The 70 deaths from diphtheria included 46 in London, 5 in Birmingham, 4 Liverpool, 3 in Cardiff, and 3 in Leicester. No fatal case of small-pox was registered last week in any of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospitals at the end of the week was 3777, against 3685, 3682, and 3680 on the three preceding Saturdays; 460 new cases were admitted during the week, against 342, 416, and 339 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 326 and 363 in the two preceding weeks, further rose to 420 last week, and were 14 above the corrected average. The causes of 50, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Bradford, Leeds, and in fourteen other smaller towns; the largest proportions of uncertified deaths were registered in Swansea, Leicester, Liverpool, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 20·3 to 18 8 per 1000, rose again to 20·1 during the week ending Nov. 13th, and exceeded by 1·1 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16·1 in Paisley and 16·6 in Aberdeen to 21·4 in Glasgow and 23·7 in Greenock. The 599 deaths in these towns included 23 which were referred to diarrhœa, 12 to whooping-cough, 11 to scarlet fever, 7 to measles, 6 to diphtheria, 4 to "fever," and 1 to small-pox. In all, 64 deaths resulted from these principal zymotic diseases, against 79 and 70 in the two preceding weeks. These 64 deaths were equal to an annual rate of 2·1 per 1000, which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 15 and 16 in the two preceding weeks, declined to 12 last week, and included 8 in Glasgow and 3 in Greenock. The deaths referred to scarlet fever, which had increased from 4 to 18 in the three preceding weeks, fell to 11 last week, of which 6 occurred in Glasgow and 4 in Dundee. The 7 fatal cases of measles also showed a decline from those recorded in recent weeks, and included 5 in Greenock. The deaths from diphtheria, which had been 3 and 5 in the two preceding weeks, further rose to 6 last week, of which 2 occurred in Glasgow and 2 in Edinburgh. The 4 fatal cases of "fever" included 2 in Glasgow and 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 137 and 142 in the two preceding weeks, further rose to 161 last week, but were slightly below the number in the corresponding period of last year. The causes of 35, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 28·2 and 21·5 per 1000 in the two preceding weeks, further declined to 19·8 during the week ending Nov. 13th. During the past six weeks of the current quarter the death-rate in the city has averaged 22·8 per 1000, the rate during the same period being 17·3 in London and 18·7 in Edinburgh. The 133 deaths registered in Dublin during the week under notice showed a decline of 11 from the number in the preceding week, and included 24 which were referred to the principal

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zymotic diseases, against 8 and 12 in the two preceding weeks; of these, 10 resulted from "fever" (principally enteric), 8 from scarlet fever, 3 from diarrhœa, 2 from diphtheria, and 1 from scarlet fever. These 24 deaths were equal to an annual rate of 3·6 per 1000, the zymotic death-rate during the same period being 2·5 in London and 1·4 in Edinburgh. The deaths referred to different forms of "fever," which had been 6, 0, and 8 in the three preceding weeks, rose to 10 last week, a higher number than in any week during the past four years. The fatal cases of scarlet fever, which had been 2 and 0 in the two preceding weeks, rose to 8 last week, and exceeded the number recorded in any week during the current year. The 133 deaths registered in Dublin last week included 17 of infants under one year of age and 38 of persons aged upwards of sixty years; the deaths of infants showed a further decline, while those of elderly persons exceeded the numbers recorded in the preceding week. No deaths from violence, and only 1 inquest case were registered; and 50, or more than a third, of the deaths occurred in public institutions. The causes of 7, or more than 5 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR MULVANY has embarked for Bombay. Surgeon-Captain Robinson proceeds to the Cork District for duty. Surgeon-Major A. F. Russell is posted to Fort George as Medical Officer in Charge of the Station Hospital.

Supernumerary Surgeon-Colonel Robert C. Eaton to be Surgeon-Colonel, vice C. A. Atkins, retired.

Her Majesty the Queen has been graciously pleased to confer the Jubilee Commemoration Medal on Surgeon-Major-General A. F. Preston, M.B. Dub., Principal Medical Officer in Ireland.

Her Majesty has also been graciously pleased to confer the Jubilee Commemoration Medal on Surgeon-Major-General Thomas Maunsell, A.M.S., Principal Medical Officer, Malta.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of the under-mentioned officers (Bengal) are replaced temporarily at the disposal of the Military Department:—Surgeon-Major Cunningham, Surgeon-Lieutenant Milne, and Surgeon-Captain Smith. The undermentioned officers to be Magistrates of the Second Class in the District of Satara:—Surgeon-Captain Smith, medical officer in charge of Plague Flying Column No. 2, Karad, and Surgeon-Lieutenant Robertson, on plague duty, Karad villages. Surgeon-Major T. H. Sweeney, Civil Surgeon, Benares, is appointed to officiate as Superintendent, Central Prison, Benares. Surgeon-Captain L. G. Fischer is appointed to the civil medical charge of the Almora district. Surgeon-Major Tuohy, Civil Surgeon, Agra, is appointed to the visiting medical charge of the Etawah district. Surgeon-Major Smith, Civil Surgeon, Shahjahanpur, is appointed to the visiting medical charge of the Hardoi district. Surgeon-Major Hawkins, Civil Surgeon, Moradabad, is appointed to the visiting medical charge of the Budaun and Bijnor districts.

Brigade-Surgeon-Lieutenant-Colonel Caldecott vacates his appointment in Central India on promotion to the administrative grade in the Indian Medical Service, Surgeon-Lieutenant-Colonel Dane succeeds him as civil administrative medical officer in the Central India Agency, and has his headquarters at Bhopal, Surgeon-Major Gimlette, of Rewah, going to Indore as Residency Surgeon.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Lieutenant Stuart Oliver, from the London Companies Volunteer Medical Staff Corps, to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment): Surgeon-Major J. Knox to be Surgeon-Lieutenant-Colonel; Surgeon-Captain W. S. Symes to be Surgeon-Major. 1st Volunteer Battalion the Royal Scots Fusiliers: Surgeon-Captain W. Sneddon, M.D., to be Surgeon-Major. 4th (Stirlingshire) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders): James Hay Murray, M.B., to be Surgeon-Lieutenant.

VOLUNTEER MEDICAL STAFF CORPS.

The London Companies: Surgeon-Captain H. W. G. Macleod, M.D., resigns his commission.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

The following officers who have been under instruction from the staff of the school have recently passed the proficiency examination conducted by the Army Medical Staff, thereby earning the higher grant for their corps and becoming entitled to promotion after completing the necessary period of service:—*Colonial Forces:* Brigade-Surgeon-Lieutenant-Colonel H. A. de Lautour, V.D., New Zealand Defence Forces; and Surgeon-Captain F. A. Foy, M.B., 1st Bombay Rifles. *Volunteers:* Surgeon-Major R. Grant, M.A., M.D., 2nd Volunteer Battalion the Black Watch; Surgeon-Captain T. C. Bailey, 2nd Cheshire Royal Engineer Volunteers; Surgeon-Captain F. C. Rogers, 4th Volunteer Battalion Cheshire Regiment; Surgeon-Lieutenant M. A. Cooke, 2nd Volunteer Battalion Gloucester Regiment; Surgeon-Lieutenant J. Robinson, 1st Volunteer Battalion Worcester Regiment; Surgeon-Lieutenant M. Richards, North London Volunteer Brigade Bearer Company; Surgeon-Lieutenant W. H. Forsbrooke, M.D., 1st Volunteer Battalion Royal Fusiliers; Surgeon-Lieutenant H. Allport, 1st City of London Volunteer Artillery; Surgeon-Lieutenant R. A. Johnston, 1st Volunteer Battalion Derbyshire Regiment; Surgeon-Lieutenant C. Rigby, 1st Volunteer Battalion the Loyal North Lancashire Regiment; Surgeon-Lieutenant J. W. Jessop, 1st Volunteer Battalion Lincolnshire Regiment; Surgeon-Lieutenant A. Whitton, M.B., 6th Volunteer Battalion the Gordon Highlanders; Surgeon-Lieutenant R. B. Sidebottom, 4th Volunteer Battalion Cheshire Regiment; Surgeon-Lieutenant F. H. Thompson, 1st Volunteer Battalion Shropshire Light Infantry; Surgeon-Lieutenant T. A. Sellar, M.D., 6th Volunteer Battalion the Gordon Highlanders; Surgeon-Lieutenant J. Kyffin, 1st Hants Royal Engineer Volunteers; Surgeon-Lieutenant F. A. Brooks, M.D., 1st Essex Volunteer Artillery; Surgeon-Lieutenant T. C. Ticehurst, 3rd D.C.O. Volunteer Battalion Hampshire Regiment; Surgeon-Lieutenant A. H. Vernon, F.R.C.S., 4th Volunteer Battalion Hampshire Regiment; Surgeon-Lieutenant V. J. Blake, M.B., 5th Volunteer Battalion Hampshire Regiment; Surgeon-Lieutenant D. Smart, M.B., 2nd Volunteer Battalion The King's Liverpool Regiment; Surgeon-Lieutenant H. Dickie, M.D., 1st Volunteer Battalion Northumberland Fusiliers; Surgeon-Lieutenant H. Legh de Legh, 1st Volunteer Battalion Prince of Wales's Own Yorkshire Regiment; Surgeon-Lieutenant W. P. Peake, 1st Volunteer Battalion Leicestershire Regiment.

Surgeon-Captain R. R. Sleman, "Artists" Rifle Volunteers, has obtained a certificate of proficiency with special mention at an examination conducted by a Board of Army Medical Officers at Aldershot.

TROOPSHIPS AND HIRED TRANSPORTS.

Last May Mr. Labouchere alluded in *Truth* to the overcrowding of the hired transport *Britannia*, stating that she had arrived in England carrying about 1200 persons, whereas according to the Board of Trade certificate she had only accommodation for 692; and recently a correspondent of the *Daily Mail* instanced the case of the *Dunera*, which sailed for India with 1395 officers, men, women, and children on board in addition to the ship's company, in spite of the fact that if she were engaged in private trade her certificate would not permit her to carry more than about 680 passengers. No doubt when a private vessel is taken up for the conveyance of troops the alterations effected in her internal arrangements enable her to carry a larger number of soldiers, who do not require separate cabins, than would be possible under Board of Trade rules, but it is, nevertheless, difficult to understand how her carrying capacity could be more than doubled without entailing overcrowding. According to a note which we published last week[1] Dr. Bonnafy, of the French colonial service, found that for a period of ten years the proportion of deaths among invalids on board Government troopships and hired transports during the voyage from Saigon to Toulon, was eighteen and twenty-six respectively per thousand embarked, and yet there was no more overcrowding in one class of vessel than in the other, and the conditions of life in both were as nearly as possible alike. It would be interesting if similar

[1] THE LANCET, Nov. 13th, 1897, p. 1276.

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statistics could be published regarding our own transports. The Indian troopers may have been expensive, but if it should turn out that their employment conduced to the saving of life, then most certainly their re-establishment cannot be undertaken too soon. Overcrowding at sea is one of the most fertile sources of disease and death, and should that alleged to have occurred on board the *Britannia* and *Dunera* be a fact it is impossible to believe that no harm resulted therefrom.

THE LATE SURGEON-GENERAL RICHARD GILBORNE.

A correspondent writes to the *Army and Navy Gazette*:—"The intelligence of Surgeon-General Richard Gilborne's death has been received with wide feelings of regret. He was held in high esteem by those with whom he was associated, both officially and socially. He was noted for urbanity and a quiet unassuming mien. Never has an unkind word been said of Dickie Gilborne, nor indeed did any person ever hear "Dickie" say an unkind word of anyone. A large part of the deceased officer's service was passed as a regimental surgeon in the Carabiniers; while in the administrative ranks of the Army Medical Staff he was Principal Medical Officer at Aldershot, Bombay, Colchester, and Hong-Kong. He was a justice of the peace of Folkestone, where he resided since his retirement and there became popular owing to his excellent qualities."

Her Majesty has conferred the Jubilee Commemoration Medal on Surgeon-Captain Charles Pye Oliver, M.D., Commanding the Maidstone Company, Volunteer Medical Staff Corps, in recognition of the services of the Company on Jubilee Day, when about ninety men were on duty near the Horse Guards and rendered first aid in an efficient manner to 150 cases.

Surgeon-Major A. M. Davies has been attached to the office of the Principal Medical Officer with Her Majesty's Forces in India for one year for the purpose of carrying out bacteriological and sanitary investigations in cantonments.

Brigade-Surgeon-Lieutenant-Colonel K. McLeod, M.D., retired, I.M.S., has been granted the temporary rank of Surgeon-Colonel whilst acting as a Professor at the Army Medical School, Netley.

Correspondence.

"Audi alteram partem."

PROPOSED AMENDMENTS OF THE NOTIFICATION ACT.

To the Editors of THE LANCET.

SIRS,—As this question appears to be arousing some attention owing to the action of Dr. Meredith Young and the Crewe town council, I beg to offer you the following further information. In March last I prepared a circular (of which a copy is appended) for the Bucklow rural district council, and it was issued as a *ballon d'essai* to 4 municipal boroughs, 31 urban districts, and 12 rural districts in Cheshire. Out of 47 authorities 26 made no reply whatever, 3 were neutral, and 18 were in favour of attempting to procure an Amending Act. These latter are the municipal boroughs of Crewe and Stalybridge, the urban districts of Alderley Edge, Biddulph, Hoole, Knutsford, Middlewich, Northwich, Runcorn, Sale, Tarporley, Wilmslow, and Winsford, and the rural districts of Bucklow, Congleton, Macclesfield, Northwich, and Runcorn. Here the matter rested until Crewe took the lead and petitioned the Local Government Board. The Bucklow rural district council has now sent up a letter in support of the Crewe petition (in principle, but not binding itself to every detail); and has written to the other authorities named asking them to do the same.

If you, Sirs, would support this suggestion, no doubt medical officers of health all over the country could induce their councils to communicate briefly to the Local Government Board their desire to have an Amending Act. It is now universally admitted, and therefore needs no argument, that the existing Act is very defective. I suggest that details can be left for discussion till the Bill is drafted. What is really wanted first is that the Government shall recognise the justice of our demand and shall prepare a Bill.

I note that Dr. Woodforde made this question the subject of his inaugural address to the Home Counties Branch of the Incorporated Society of Medical Officers of Health, and is in very close agreement with my views. We differ on one or two points from Dr. Meredith Young, but this is not the time to discuss differences; rather let us all be united in pressing for the preparation and production of a Government Bill, and then we can air our respective views on matters of detail.

I am, Sirs, your obedient servant,

Knutsford, Cheshire, Nov. 7th, 1897. T. W. H. GABSTANG.

CIRCULAR.

SUGGESTIONS BY THE MEDICAL OFFICER OF HEALTH TO THE BUCKLOW AND NORTHWICH RURAL DISTRICT COUNCILS, ETC., FOR DESIRABLE AMENDMENTS IN THE "INFECTIOUS DISEASE (NOTIFICATION) ACT 1889," ETC.;

To be laid before the Councils for consideration, with a view to securing the coöperation of other Councils in obtaining an Amending act.

1. FAULT.—(Section 3 (I.) (*b*).)—Every medical practitioner called in must send in a certificate.

REMEDY.—One certificate being sufficient for each case, further certificates ought not to be required or received, more particularly where the second attendant is called in as a consultant, or is related to the first attendant as partner, principal, or assistant.

2. FAULT.—(Section 4 (2).)—Fee for every case in private practice half-a-crown.

REMEDY.—Seeing that one notification brings the infected premises to the notice of the medical officer of health, subsequent cases occurring in one house and during one illness might be paid for at a reduced fee.

3. FAULT.—(Section 6.)—Erysipelas included in list of notifiable diseases.

REMEDY.—Erysipelas to be excluded; or retained only in special cases, as (1) after childbirth, (2) after injuries, or (3) where dangerous to life.

4. FAULT.—(Section 3 (I.) (*a*) and (*b*).)—*Dual Notification.* Head of family and medical practitioner both required to notify.

REMEDY.—The duty should rest upon the medical practitioner alone, being extended to the head of the family only in those cases where no medical attendant is called in.

Note.—The head of the family who subsequently calls in a medical attendant should not thereby be relieved from responsibility for the period of illness preceding such action.

5. FAULT.—(Section 3 (I.) (*a*) and (*b*).)—Notification to be made upon "becoming aware" of existence of infectious disease.

Note.—Any unscrupulous person prepared to assert that he had "not been aware" would have an unassailable defence to any prosecution, and could therefore set the Act at defiance in absolute safety.

REMEDY.—The principle already adopted in Section 116 of the "Public Health Act, 1875," viz., that "proof of innocence shall rest with the party charged," must be introduced, in some shape or other. The onus of proving "knowledge" should be removed from the complainant Council, and proof of bonâ fide "ignorance" should instead be required from the defendant.

6. FAULT.—(Section 3 (2).)—Penalty limited to fine of forty shillings.

Note.—Quite insufficient to prevent deliberate concealment of cases where strong private reasons exist for such a course—e.g., laundries, bakeries, dairies, &c., whose trade would be affected by publicity.

REMEDY.—Amount of penalty to be increased, or nature varied, for cases of proved wilful infraction of the Act.

7. Sundry minor suggestions:

(*a*) (Section 2 (*b*).)—The Act is only permissive. It might well now be made universally applicable.

(*b*) The same remark applies to the "Infectious Disease (Prevention) Act, 1890."

(*c*) If (*a*) were carried out Section 5 would become unnecessary.

(*d*) If the fee paid covers and includes all necessary postages, let it be so stated, to avoid possibility of dispute.

8. "The Public Health Act, 1875."—Section 126—*Penalties on exposure*—This requires extending, to cover the cases of infection carried about by "third persons." At present there appears to be no power under any Act to deal with a midwife spreading puerperal fever; or with casual visitors to scarlet fever cases carrying away the seeds of the disease for communication to fresh victims.

RESPONSIBILITY FOR SURGICAL OPERATIONS.

To the Editors of THE LANCET.

SIRS,—THE LANCET of Nov. 6th published an article in which my name is mentioned in referring to a surgeon's responsibility in surgical operations. The case you mention took place in the practice of Dr. Benjamin Anger and not in that of Dr. Theophilus Anger. We are two surgeons bearing the same name at the Hôpital Beaujon, but are not related to each other. It is Benjamin Anger and not Theophilus Anger that you speak of, and I beg of you to correct your mistake in your next number.—I am, Sirs, yours truly,

THEOPHILE ANGER.
Chirurgien de l'hôpital Beaujon.

105 Bd. Haussmann, Paris, Nov. 11th, 1897.

"THE HOSPITALS, THE PROFESSION, AND THE PUBLIC."

To the Editors of THE LANCET.

SIRS,—I have to thank you for publishing in THE LANCET of Nov. 6th the letter I addressed to you giving my views on

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certain points of hospital management. I notice, however, that in your editorial comment, instead of dealing with these points you reiterate an accusation which you made against me in a leading article in THE LANCET of Oct. 30th, to the effect that I charged the private practitioner with inefficiency. Now, in my letter to you I took no notice of this because it seemed to me such a ridiculous affair. I was concerned for matters touching hospital management, not for mere personal attacks upon myself. But if you intend seriously to maintain the position taken up in your leading article that in matters of hospital reform a man is to be boycotted by the medical profession if he do but venture to suggest that all the error is not on the side of the hospitals, the effect must be, so far as you have any influence with the medical profession, to indefinitely postpone the proper consideration of hospital reform. It is perfectly notorious that people are not attracted to hospitals solely by motives of economy, but go there because they believe that they get something better in the way of treatment than they can obtain from some medical practitioners to whom they would otherwise have to go. Moreover, this feeling has grown up not altogether as a mere sentiment, but sometimes as the result of experience among people who have had plenty of opportunity of trying both kinds of treatment.

Anyone, then, who would deal fully and completely even with that side of the hospital problem which is included in the term "hospital abuse" must recognise both sides of the question. Perhaps the competition of the hospitals may be to some extent responsible for the starving of some classes of medical practice, but whatever the cause it is impossible not to see that in the cheaper practices, which are the alternative open to many who now go to the hospitals, there are sometimes second-rate medical attendance and medical appliances. It is idle to shut one's eyes to the fact that the hospital problem involves a consideration of the existing conditions of practice not only within but outside the hospital doors; and knowing what I do on the subject I have suggested that it is not enough merely to refuse admission to certain out-patients, but that steps should also be taken to ensure that the outside practitioner should have access to the scientific advantages offered by the hospitals as educational centres, and thus should be enabled to give to his patients the same treatment that is current at the time in the most advanced centres of medical knowledge.

I believe that the mass of the very practitioners on whose behalf you write so indignantly will be the first to recognise the advantage of being allowed free access to especially arranged post-graduate courses, recognising, as I know they do, the progressive nature of medical science and the difficulties which exist in keeping abreast of the times amid the turmoil of general practice. I consider that you are not only misrepresenting the sentiments of the medical profession, which are always in favour of progress, but are putting a great obstacle in the way of hospital reform when you say (because I have ventured to put this matter into precise words), "It will become a serious question, if these are really Sir Henry Burdett's views, whether medical men should be asked to appear on the same platform with him again for the promotion of hospital reform." Medical men are not so fond, Sirs, as you would appear from this suggestion to think they are, of being placed in a false position and of being made ridiculous.—I am, Sirs, your obedient servant,

HENRY C. BURDETT.

The Lodge, Porchester-square, W., Nov. 9th, 1897.

*** Sir Henry Burdett repeats himself. He also misrepresents our position. We insert his letter but see no reason therein to cause us to change our previously expressed opinion.—ED. L.

"THE PREHENSILE POWER OF THE HANDS OF THE HUMAN INFANT."

To the Editors of THE LANCET.

SIRS,—I have read Dr. Walter Kidd's letter upon "The Prehensile Power of the Hands of the Human Infant" with a great amount of interest. I agree with his line of argument, and particularly when he remarks that if man had any genetic connexion with the ape the "vestige" of prehension of his foot ought to be a more marked character than the corresponding "vestige" pertaining to his hand. I have read also with interest Dr. Reid's reply in THE LANCET of Oct. 23rd. To oppose Dr. Kidd's theory he introduces embryological lore; he discusses as vestiges (or rather in their relation to vestiges) the branchial arches, an embryological thirteenth rib, and the os centrale. But I fail to understand why the finding of evidence of the os centrale in the human embryo or similar discoveries in connexion with a thirteenth rib or the branchial arches should help to establish any other theory than that of the inter-relation of species. Embryological study shows us a human tail of which we should be much prouder than we should be of our developed coccygeal apparatus, but does this point to a simian ancestry? I think as far as tails are concerned we should be more nearly related to certain varieties of dogs. There is a variety of Yorkshire sheep dogs which is as tailless as is man. Does not embryology really point to a general ground plan rather than to the more generally accepted idea of evolution. Take for another example the attributes of sex: there is the stage of embryonic life when the sexual apparatus cannot be differentiated; we cannot say whether a given embryo would have developed a penis or a clitoris, a scrotum or labia majora, or a uterus masculinus, or a uterus. These appearances surely do not mean that man was evolved from a woman or a woman from a man, or that either or both were ever sexless. Of course it may be said that is not fair analogy, but I will give my reasons for asserting that it is. We know that man will have, and has always had, twelve ribs in spite of the embryological thirteenth rib. We know also that we can often find in the adult man the "rudiments" of the embryological structure, but nevertheless he has twelve ribs only, even when we go as far back as palæontology will permit. Similar repetition of fact and sequence occurs with the sexual attributes.

I am, Sirs, yours faithfully,

Reading, Nov. 14th, 1897. W. T. FREEMAN.

P.S.—The early embryological sexual attributes to which I have drawn attention most probably point to an hermaphroditic ancestry, but such a deduction may also be applied to the rest of the animal and plant world. The evidences of this in plant life are, of course, more apparent than they are in animal life.

THE BRITISH MEDICAL ASSOCIATION AND MEDICAL DEFENCE.

To the Editors of THE LANCET.

SIRS,—It was decided at the annual meeting of the British Medical Association last July that voting cards should be issued to the British and Colonial branches, asking for a simple answer whether we should undertake medical defence or not. In a few weeks these cards will be in our hands, and it is to be earnestly hoped that every member will vote. There is no excuse for anyone not having formed an opinion, or for being too careless to fill in a reply post-card.

It may be of value to recapitulate the argument in favour of the adoption of defence. The invasion of the functions and livelihood of general practitioners by illegal practice and drug-selling increases steadily, and there is no organised body to withstand it, except the present private defence unions. The chartered corporations, in defiance of their charters, refuse to attempt to protect their members, and have resolved themselves into purely examining bodies. Only the expenditure of large sums could force the Colleges to reassume their functions of protection; it would therefore be more practical for the members of the Association (which includes the bulk of the profession) to subscribe for this provision of protection to be administered by their own nominees. As to the necessity for or advisability of collective defence many members are doubtful, but none deny that without the safe-guard of some coöperative union for defence of individuals, practice is quite impossible. The only question is whether the Association or existing private unions can best administer this office. It is obvious that the larger and richer the administrative body is the better for its members. The existing societies need wider membership and larger reserve funds, both of which the existing organisation of the Association can supply. We already need a court of arbitration among our own colleagues to decide questions of libel and professional conduct. Such questions are often incapable of proper solution by ordinary courts of law; they are too frequent already and they will become more frequent as the present competition and pressure increase in the ranks

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of a profession the members of which are becoming less and less regardful of the etiquette of professional life.

Such a board of arbitration will be afforded by the Association Defence Committee or committees, and it will be a great advantage to have for further reference (if necessary) of doubtful inter-professional cases, the Council of the Association appointed not for defence but for general purposes. We have ready made an organisation which has trained its committees in varied legal and Parliamentary work; we should have no difficulty in training another one, while we know that most of the skilled executives of the principal defence societies will be placed at our disposal if required. The scientific work of the Association will be no more injured by this departure than it has been by the other political work.

I am, Sirs, yours faithfully,

Westerham, Nov. 15th, 1897. A. MAUDE.

THE HOSPITAL REFORM ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—May I be allowed once more to appeal to the profession for financial help to enable the Hospital Reform Association to carry on its work? Men as a rule have short memories, and I may therefore be pardoned for reminding them that since our establishment in October of last year we have held meetings in London, Liverpool, Birmingham, Manchester, Brighton, and Bristol; that we have communicated with the authorities of every hospital in England and Wales; that we have petitioned the Royal College of Physicians of London; and that we have made an investigation into and published a report on the special hospitals of the metropolis. Whether we have succeeded in arousing public opinion I will leave others to judge. I may, however, be excused for mentioning one or two facts which may or may not have some connexion with the work of propagandism that we have undertaken. In the first place, the authorities of the general hospitals with medical schools have drawn up a series of recommendations for the better administration of the out-patient and casualty departments. In the second place, the Council of the Hospital Sunday Fund has recommended the London hospitals to appoint inquiry officers. And, in the third place, the Duke of Devonshire has spoken of the question of hospital abuse as one that deserves investigation. Considering our youth and the very small number (150) of members who have associated themselves with the work, we may be pardoned for saying that our record is not a bad one.

I am, Sirs, your obedient servant,

Cardiff, Nov. 15th, 1897. T. GARRETT HORDER.

ATHLETES AND LARGE-SIZED HEARTS.

To the Editors of THE LANCET.

SIRS,—I read in the *Sportsman* of to-day that F. E. Bacon in his three-quarters-of-a-mile race on Saturday at Catford Athletic Grounds with E. C. Bredin, "again proved what a remarkable athlete he is, for he finished almost as fresh as when he started." The three-quarters of a mile was raced in 3 min. 22½ sec. I cannot help thinking that it would be worth recording the result of an expert professional examination of F. E. Bacon's heart. I bear in mind that Eclipse, the racehorse, and Master McGrath, the champion greyhound, were found post mortem to have very large hearts, so carrying off the great pressure of the increased circulation during the times of racing. It has been said that neither of these animals required much training for their races. I do not know if this is equally the case with Mr. Bacon.

I am, Sirs, yours faithfully,

Canterbury, Nov. 15th, 1897. PUGIN THORNTON.

THE LATE SIR W. MACKINNON, K.C.B.

To the Editors of THE LANCET.

SIRS,—Although extremely reluctant to appear in print where my own services are concerned I feel constrained to correct some singular inaccuracies in the latter portion of your obituary notice of my distinguished friend Sir William Mackinnon. For instance, at the Gate Pah you state: "The officers were one by one wounded or killed and none remained unhurt but Mackinnon. He took command of the men, rushed the Pah, captured it ....." This is so absurd and ridiculous an assertion that it scarcely needs contradiction; but as I was present on the occasion referred to, and Dr. Mackinnon was serving under my orders, I had better state what actually occurred. At the assault on the Gate Pah owing to the paucity of medical officers available for this duty Dr. Mackinnon and myself accompanied the troops into action, taking up a position in rear of the supports, attended by two orderlies to carry our "field companions." When the attacking party and the supports who rushed in with them were driven out of the Pah we found ourselves and a number of wounded men isolated and absolutely unprotected, a panic having seized the retreating troops. At that moment a body of natives emerged from the Pah and were making direct for us. We never for a moment thought of abandoning our helpless charge and I directed the two men who so manfully stood by us to fire. Dr. Makinnon, hastily snatching a rifle from one of the fugitives, also fired and wounded the leading chief in the heel. This and the fire of the two men caused them to hesitate and pause, evidently suspecting an ambuscade, for we were partially concealed by high ferns. Our perilous position having been perceived by the General a hundred men of the Naval Brigade were hastily dispatched to our assistance, the General himself and his staff speedily following. Sir Duncan Cameron, with the nobleness of character so characteristic of him, addressed some handsome remarks to us, describing our conduct as an example to the troops. The next morning he sent for me to elicit full particulars of the occurrence, and informed me of his intention of recommending us, as well as another medical officer (Dr. Manley) who accompanied the storming party into the Pah, for the Victoria Cross. I pointed out that I already possessed it, and did not feel justified in accepting further distinction merely for doing my duty in not deserting my post. He replied, "But what about Mackinnon—do you think he would be satisfied with the Order of the Bath?" When I mentioned this to Dr. Mackinnon he at once acquiesced. The General wished what took place to be considered confidential, but as he afterwards alluded to it in an official memorandum to the Military Secretary in the following terms I feel justified in quoting it. The incident is thus referred to:—

"Dr. Mouat invariably accompanied the force operating in the field under my command, and I wish to mention an act of conspicuous bravery performed by him at the assault on the Gate Pah, when Dr. Mackinnon and himself remained (after the retreat of the troops), attending the wounded men who had fallen near the entrenchments, exposed all the time to a close fire from the enemy's works, and in so dangerous a position that Dr. Mackinnon at one time was obliged to snatch a rifle and fire to keep back the enemy, mortally wounding a well-known leading chief. For his gallantry on this occasion Dr. Mackinnon was appointed a Companion of the Bath."

The statement regarding operations on the elbow-joint is not quite correct. It was not the elbow-joint, but excisions of the head of the humerus of which he was justly proud, as there were eight successful cases of this class, some of which were performed by him, but others by Sir A. Home and myself.

In conclusion, I wish to bear testimony as an old friend of thirty years' standing to his many excellent qualities both as a friend, a soldier, and a surgeon. With regard to his views on the question of military rank he held the same opinions as myself: that soldiers only understand one kind of rank—that is, military rank expressed by military titles; and if the medical department is in future to be anything more than a mere cypher and a sham in the military hierarchy it will have to come, and the sooner it comes the better.

I am, Sirs, yours faithfully,

J. MOUAT,

Nov. 10th, 1897. Surgeon-General (Retired).

*** The passage in the obituary notice was written by a distinguished surgeon. We are glad to publish Sir James Mouat's interesting account of the stirring episode of the Gate Pah.—ED. L.

THE ATTENDANCE AT HOSPITALS OF THE HONORARY STAFF.

To the Editors of THE LANCET.

SIRS,—The question of an attendance-book to be signed by the honorary medical staff having been under consideration at this hospital I have ascertained the practice in this respect at other metropolitan hospitals and the results of my inquiry appear so interesting that they are submitted to you for publication.

Although but at few institutions the hour of departure is

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noted, its adoption was recommended to our committee, since the record demonstrates the amount of time which is devoted to the patients by the honorary staff, a point hardly appreciated by the general public. The figures include twenty-one general and fifty-one special hospitals. At seventeen general and at thirty-nine special hospitals an attendance book is employed; at one it was employed but fell into disuse, while at two others the subject is now under discussion; at ten only is there no registration. Two institutions did not reply to my inquiry. At thirty-nine institutions the medical staff are required to register their names and the hour of arrival, at nine both the hour of arrival and departure, and at the remaining eight the registration is carried out by an attendant. All the hospitals for phthisis and diseases of the chest have an attendance-book, and at two of them the staff sign both the time of arrival and departure; at all the ophthalmic hospitals an attendance-book is in force, at one of them the staff signing both in and out. At nine out of the ten hospitals for women—including lying-in—the attendance-book is employed. At six of the nine children's hospitals it is in use, and at one of them the question of its introduction is now being discussed. In two of these hospitals the rules on the subject of signing are very stringent. Of the four hospitals for diseases of the throat and ear the staff sign their names, together with the hour of arrival and departure at three of them, and in one case the arrival only.

I am, Sirs, your obedient servant,

RICHARD KERSHAW,

Secretary, Central London Throat and Ear Hospital.

Gray's Inn-road, Nov. 16th, 1897.

"A TESTIMONIAL TO DR. JOHN T. ARLIDGE."

To the Editors of THE LANCET.

SIRS,—I will feel much obliged if you will insert in THE LANCET the following list of subscribers to the testimonial to Dr. J. T. Arlidge to present date.

I am, Sirs, yours faithfully,

CHAS. F. MOORE.

10, Upper Merrion-street, Dublin, Nov. 16th, 1897.

	£	s.	d.
Mr. J. W. Ogle, M.D. Oxon., F.R.C.P. Lond.	2	2	0
Sir Charles Gage-Brown, K.C.M.G., M.D. Edin.	2	2	0
Mr. M. Baines, V.D., M.D. Lond.	1	1	0
Mr. Charles F. Moore, M.D. Glasg.	2	2	0
Sir Peter Eade, M.D. Lond.	2	2	0
Mr. W. D. Stone, M.D. St. And., F.R.C.S. Eng. ...	1	1	0
Mrs. M. H. Ashwell ...	1	0	0
Mr. Henry S. Purdon, M.D. Glasg.	0	10	6

DR. R. R. RENTOUL'S RESIGNATION OF MEMBERSHIP OF THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—When I resigned my position of Direct Representative upon the Medical Council I promised privately and publicly to give my reasons for so doing. Before doing so let me try to correct a strange idea which seems to possess the minds of some practitioners to the effect that they conferred upon me some marked honour when they voted for my election to the Council. I have never and shall never consider any such election an honour. In 1891 I was asked to stand; my expenses guaranteed, but I refused. In 1896 I publicly stated I would withdraw my candidature if Mr. Wheelhouse and Sir W. Foster agreed to stand again, and in 1897 I resigned as I came to the finding that I could not accomplish any of my work as member of the Council constituted and worked as it now is. Every honest practitioner must recognise that a practitioner—and especially a practitioner in general practice—must do great injury to his practice if he not only leaves it three or four times each year, but what is more, if he gives a very great share of his time to preparing and working up business to bring before Sessions and Committees of the Council. To attend meetings of the Council simply for the "honour" of sitting at the Council's meetings is not to my liking.

My first reason for resigning is that the 6646 practitioners who voted for me practically deserted me immediately afterwards. I think most sane persons will agree that to put a man in a position to fight and carry out a forward policy he must be thoroughly supported morally and financially. As to the want of moral support, I may mention one case only. Early this year, after prolonged work, I drafted a Bill for the Registration of Midwifery and other Nurses. I sent a copy of this to about 129 Medical Societies in the United Kingdom and to about 46 Branches of the British Medical Association, with a request that each should refer this Draft Bill to a committee and ask their M.P.'s to support it and to let me know. Other than practitioners will have difficulty in believing me when I state that only three of these Societies and Branches had even the common courtesy to acknowledge the receipt of either the Draft Bill or letter. The same shabby and unbusinesslike treatment has practically been given to my efforts in favour of increased Direct Representation, the better management of Medical Charities, and my proposed Fund for the Widows and Orphans of Medical Practitioners. Such facts are truly heart-breaking and fearfully discouraging. But among practitioners competition is now so keen and degrading that there seems to be a secret feeling of satisfaction when another practitioner fails; while not a few place one man in an open position and leave him to fight *their* battles as well as he may. Such a "system" must always fail. However, so long as practitioners think it pays them better to be disorganised so long will they agree to accept failure and to appear ridiculous. Again I complain—and, I feel, with just cause—that practitioners have refused to back up my efforts on their behalf financially. No public question to-day can go ahead unless backed up financially. In May, 1896, I sent a circular letter to over 4000 practitioners stating that since 1890 I had advanced money out of my own pocket to the extent of £378 13*s.* 8*d*, and asking that this money should be repaid. Since February, 1896, I have also expended £75 7*s.* 4*d*; or a total of £449 1*s.* Of this total expenditure £81 15*s.* is still unpaid, most of it having been expended in defeating the many Midwives Bills which have since 1890 been introduced into Parliament. From the 4000 practitioners applied to only forty-five replied, these refunding £26 6*s* 6*d*. Now I ask any practical man, Is it fair, is it businesslike, or is it even honest, to allow one practitioner to advance funds required to fight a public Medical question of great moment? I distinctly feel that it is neither fair, business-like, or honest. With other Public questions or in events affecting the interests of a class of persons, a fund for organising and working is always provided. All along I have worked willingly without reward of any kind. But I would urge that if practitioners wish to be considered really in earnest in their demands for improvements they must not be so markedly dilatory in supplying the funds. When it falls upon one to do, not only most of the uphill fighting, but to beg for money to carry out work, the position is little short of personally humiliating while it degrades the cause.

My second reason for resigning is—that so long as there are only 5 Direct Representatives in a Medical Council of 30 Members we shall fail to obtain our just requests. I recognised this as far back as 1890, when I brought this proposed increase up before the annual meeting of the British Medical Association, and when Sir W. Foster and Mr. Wheelhouse took the question before the Medical Council. Five votes against 25 must for ever fail to carry the question of increased Direct Representation. Every person will recognise this except Medical Practitioners. My only regret now is, that Mr. Wheelhouse and Sir W. Foster, and the three other Direct Representatives did not then resign and go to the Profession again and again for re-election, thus putting the Medical Council to the cost and trouble of repeated half-yearly elections, and until the other 25 Representatives recognised the just nature of our request.

My third reason for resigning is that the funds of the Medical Council are much too small to allow the Council to administer the Medical Acts, the Dental Act, and the other Acts relating to Medicine. The average annual income of the Medical Council is about £8000, while the income of the Branch Councils of Scotland and Ireland are so small that these Branch Councils are debarred from doing any practical work. The income of the Medical Council in 1896 was £8746 and its expenditure £10,273. Now what does this mean? It means that practitioners must lay aside their traditional policy of meanness in refusing financial help. My proposal has been, and is, that the Medical Registration fee be made an *annual* one and that each practitioner must pay an annual fee of £1. In 1896 there were 34,478 practitioners, names upon the British Medical Register. Here is a wise and just method of raising over £34,000 per annum—a by no means too small a sum when we consider the vast amount of

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work which the Medical Council, and more especially its 3 Branch Councils, may and could perform. Even the one item of Inspecting and visiting all of the Examinations held by the 18 Medical Examining Bodies could not be efficiently carried out at a less cost of about £8000 per annum. At present about £500 per annum is expended, and up to now some of these examinations have never been inspected at all! Yet practitioners growl at a policy which is directly due to them. I do not exaggerate when I say that if the Council met 4 times yearly it would on, its present income, be bankrupt in a few years. Will practitioners work out this proposal? It is for them to decide. Finally, I deeply regret the above conditions, which have driven me to resign my position upon the Medical Council. But if my resignation does some little good by calling practitioners to the reasons why, to my mind, efficient work can not now be carried out, then this resignation will not have been thrown away. Many years of close work have given me a fair grasp of the chief Medico-Political and Medico-Ethical questions which now stand in our way. It was my intention from time to time to publish pamphlets upon these questions—but practitioners by their stingy support have ruled it otherwise.

Since 1884 I have carefully prepared pamphlets in manuscript upon following leading questions:—

Name of Subject.	No. of Foolscap Paper.
(a) The better management of our Voluntary Medical Charities ...	94
(b) Proposed Public Medical Services of England	28
(c) Home Hospitals	6
(d) Hospital Management in New Zealand, France, &c.	22
(e) Should workhouse infirmaries be open for Clinical Instruction of Students?	10
(f) Resident Halls for Medical Students	8
(g) Proposed increase in the number of Direct Representatives ...	45
(h) Reforms in the British Medical Association	50
(i) Registration of Stillborn Infants in Denmark, Holland, Switzerland, Sweden, Norway, Russia, Greece, Italy, Spain, France, Belgium, Germany, Austria, America, and Canada	16
(j) Proposed registration of Still-born infants in the United Kingdom	28
(k) Some of the Systems in Force in Foreign Countries relating to the Certification of the Fact and Cause of Death and of the Identity of the Dead	23
(l) Proposed amendment of the Births' and Deaths' Acts in the United Kingdom	56
(m) Proposed amendment of the Births' Acts	9
(n) Proposed Fund for the Widows and Orphans of Medical Practitioners	97
(o) Rules relating to Public Meetings, Parliamentary Debate, and Procedure at Meetings	53
(p) The unrestricted sale of Poisons and dangerous drugs by Chemists	28
(q) Continental laws against prescribing Chemists and dispensing Medical Practitioners	20
(r) Proposed amendment of the Medicine Stamp Acts	23
(s) Penal Powers possessed by Medical Authorities in the United Kingdom against those who practise medicine without being lawfully qualified	95
(t) Similar Penal Powers possessed by Foreign Countries	31
(u) Penalties against those who illegally act as Clergy, Barristers, Solicitors, Chemists, Veterinary Surgeons, Pilots, Mercantile Marine Masters, Engineers, &c.	22
(v) Translation and Collection of the Medical Acts of Italy, Ontario, Manitoba, Nova Scotia, France, Switzerland, and of the United States, Cape of Good Hope	90
(w) The last important work which I have just had translated for me is "The Prussian Tariff of Fees for Physicians, Surgeons, and Dentists established by the German Law of May 15th, 1896," by Dr. A. Forster, Privy Councillor of the Prussian Minister of Medical Affairs	70
(x) Proposed Amendments to the British Medical Acts	...(Unfinished)

I would here state that I shall be glad if practitioners will refund me the above £81 15s. (I was advised to remain upon the Council until the fees repaid this sum. As this would have taken about two years useless time I refused.) Further, I am willing to have any of the above manuscripts published if practitioners will agree to pay further publication. I often regret we have not a society similar to the Sydenham Society and which would publish from time to time original works and transactions bearing upon Medico-Political and Medico-Ethical Subjects. The two I should like published just now are (a) Proposed increase in the number of Direct Representatives, with the provision for an annual Registration fee of £1; and (b) my proposed Widows and Orphans Fund.

Liverpool, Nov. 14th, 1897. ROBERT R. RENTOUL.

"A NOTE ON CYCLING."

To the Editors of THE LANCET.

SIRS,—The able letter of Mr. Harry Campbell, M.D. Lond., in reference to the proper position to be assumed by riders when cycling raises a question of considerable importance. It is directly opposed to the statements in your columns on March 2nd, 1895, of Dr. Herschell, who said: "The stooping posture so habitual to the modern cyclist by contracting the chest prevents the proper expansion of the lungs, and by interfering with the proper aeration of the blood causes the condition of breathlessness to come on quicker." My object in writing to you is to say that my opinion, after considerable experience with riders of both sexes, is that what is needed upon a cycle is a rest for the back attached to the rear of the saddle, which would enable riders who agree with Dr. Herschell, or who find for other reasons, or medical advice, that a stooping posture is injurious to them, to ride perfectly upright, because of the support to the back, and yet avoid some of the objections suggested by Dr. Campbell; also it would make it possible for any rider to adopt the upright position at intervals without injury, which plan, to my mind, presents the true solution of the problem. A rest of this description has been designed and applied and was recently exhibited to the military cyclists at Woolwich. It is called the "Paraclete Back-rest," and when not used as a support to the body can be turned down to form a mud-guard. On the Continent almost all cyclists, male and female, adopt the stooping posture, but whether this is with the consent of their medical advisers I cannot say. I am, Sirs, yours faithfully,

JOSEPH OFFORD.

Gloucester-road, South Kensington, Nov. 15th, 1897.

"MEDICAL EVIDENCE AT CORONERS' INQUESTS."

To the Editors of THE LANCET.

SIRS,—In the leading article in THE LANCET of Nov. 13th and in the previous references to the recent inquest at Twerton, Bath, one point, I think, has not been touched upon—namely, the desirability or not of resident officers of hospitals being allowed to give private advice and evidence in cases that have no connexion with their hospitals. In the present instance it does not appear that the deceased had anything to do with the hospital either as an in- or out-patient. There is, I believe, a rule in most hospitals to the effect that resident officers must not engage in private practice but devote their whole time to the interests of the hospital. If such were not the case what is to prevent them from practically competing with their own staff if asked by some outsider to give expert evidence which certainly seems to be reversing the order of things and, I should think, is a very exceptional occurrence. I am, Sirs, yours faithfully,

Nov. 16th, 1897. G. P.

"THE ARMY MEDICAL STAFF."

To the Editors of THE LANCET.

SIRS,—Your admirable article on the Army Medical Staff should earn the thanks of everyone. There is, however, one statement quoted therein which is so often put forward by the opponents of reform that I should like to emphasise its fallacy. It is this: "The whole *raison d'être* of the combatant officer is to command, fight, and kill in order to defeat the enemy, whereas the *rôle* of the medical officer is to save life and to succour the sick and wounded. Consequently simple military titles for medical officers would be false and misleading and somewhat inconsistent with the dignity of the medical profession." This statement is as much out of date as bows and arrows. In the first place, Army Service Corps officers, whose functions are those of commissariat and transport, are now "combatant officers," and Army paymasters, who remain at home and keep the accounts, have military titles and fighting and killing have no part whatever in their *raison d'être*. Secondly, the medical officer's *rôle* is by no means so purely humanitarian as is here represented. One of his chief functions is to remove sick, wounded, and non-effectives from the front in order that fighting and killing may be more expeditiously proceeded with; and the succouring of sick and wounded is largely for the purpose of restoring them as soon as possible to their places in the fighting line. There is nothing more false or misleading about Captain A, Army Medical Corps, than there is about Captain B, Royal Engineers; Captain C, Army Service Corps; Captain D, Army Pay Corps; Captain E, Army Schoolmaster; Captain F, Army Riding-master; or

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Captain G, Quartermaster, Army Medical Staff; the latter by the way, actually commanded by the medical officer.

With regard to the dignity of the medical profession it is amusing to observe the solicitude manifested by certain military writers on that score. Although we can assure our friends that they need not be the least concerned about the dignity of our profession we may point out that that dignity is scarcely likely to suffer in asking for reforms which are necessary for the well-being of the army, and that there is no other way than that which we propose of giving the medical officer "the rank and power" which his grave responsibilities necessitate. It cannot be too strongly emphasised that the army medical officer is a soldier as well as a doctor, and in order to carry out his medical duties properly he must have his military position fixed and defined. Combatant officers are fast coming to see the fairness of the claims put forward. The real opponents to reform are the "military advisers" of the War Office.

I am, Sirs, yours faithfully,

Nov. 16th, 1897. M.D.

THE EPIDEMIC OF TYPHOID FEVER AT LYNN.

(FROM OUR SPECIAL COMMISSIONER.)

(Concluded from p. 1282.)

THE drainage of Lynn has from time immemorial been the fundamental problem on which the very existence of the town depended. According to ancient records there is reason to believe that Lynn was founded by the Romans in the reign of Nero. They brought over a number of Belgic or Batavian colonists and set them to work to drain the land on the banks of the Ouse. The spot where the majority of these colonists established a settlement was called Len or Lyn, which is the Celtic word for fen or marsh. From the time of Edward the Confessor to the reign of Henry VIII. the town was dominated and exploited by ecclesiastical authorities, but with the advent of the Reformation the commercial element became predominant and Bishop's Lynn was converted into King's Lynn. This change was favourable to the material interests of the town. For instance, it was paved all over in 1546. In spite, however, of various improvements Lynn suffered severely from plague in 1574 and 1584. There was another terrible epidemic in 1598, when 320 persons were buried in St. James's Churchyard. In 1636 there was again a great plague and no market could be held. So it seems that in the past, as in the present, the inhabitants of Lynn had their full share of sickness. The town became renowned for the manufacture of agricultural implements and of oil-cake, but the want of drinking water caused great distress till the year 1423. Henry VI. then gave powers to cut a canal to the Gaywood River at "Kettle Mills." In the fifteenth century the water of this river was considered to be very pure, and doubtless with the sparse population of those days there was no great risk of pollution. Under Cromwell the water canal was carefully cleaned out and a larger supply provided. Strange to say, the keepers of alehouses alone were made to pay the cost of this improved water-supply; thus it was the consumption of alcohol that helped to promote the cause of temperance. But the water came in an open ditch, which was very objectionable, and a great progress was achieved in 1699 when wooden pipes were introduced. Subsequently a water-wheel was constructed as were three pumps to raise the water to a reservoir, so that it might be delivered by gravitation. Horse-power was also utilised, and this continued till 1829, when a water-tower and tank were erected, and a steam-engine (instead of water and horse-power) was employed. At the same time iron pipes were substituted for the wooden pipes. The water, however, was only delivered in cisterns at the basement of the houses and had to be raised by hand-power to the upper floors. There were also many persons who still took their water from wells or from open ditches.

Though there have been constant difficulties with regard to the supply of water fit for drinking, this was not due to a mere want of water. On the contrary, up to the year 1821 Lynn had constantly suffered from disastrous floods. At that date, fortunately, the channel of the river was deepened for a distance of several miles. These excavations were called the "Eau Brink," and when they were terminated it was possible to lower such sewers as existed, and the basements of many houses thus became somewhat dryer. Some thirty years later a vast surrounding tract of land was redeemed from the sea. As these general drainage works progressed ague or malaria which was endemic in the town and surrounding country gradually disappeared, though it generally showed a marked increase just at the moment when the soil was disturbed by the digging of fresh trenches or drains. Apart from the general drainage of the soil, which is a problem affecting the entire fen district, there is the question of dealing with the Lynn sewage. A scheme for this purpose was prepared in 1887 by the former borough surveyor (Mr. E. G. Mawbey, Assoc. Inst., C.E.), which, by proposing one single outfall, made it very difficult to obtain sufficient gradients in so flat a town as Lynn. At present there are short sections of brick sewers discharging at the nearest point in the River Ouse or in its four "fleets," the little tributaries that pass through the town. For the northern and eastern part of the town a large egg-shaped brick sewer was built which, having its outfall near the old dock, is known as the "dock culvert." It is ventilated by openings on the street level and by a few shafts carried up to the roofs of houses. Though there are several automatic flushing tanks at the heads of branch sewers it cannot be said that these sewers are self-cleansing. Then when the tide comes up, there is no out-flow, and the sewage remaining stationary for several hours must make deposits. It is noticed also that when the wind is from the west, and therefore blows into the mouth of the dock culvert, very unpleasant odours escape from the ventilators. Fortunately, many of the sinks and the closets are not inside the houses, but in outer buildings, and there has been much improvement of late in respect to the ventilation of private drains. It is quite a common sight at Lynn to see the soil-pipes continued above the roofs of the houses. This is a most necessary precaution, for the sewers certainly constitute a grave danger to the health of the inhabitants. The worst sewer is the dock culvert. It is a large and dirty sewer, and it receives half the drainage of the town. Dr. Bruce Low, in his report to the Local Government Board on the typhoid fever epidemic of 1892, relates that out of forty-one of the earliest houses invaded twenty-seven were in the area served by the dock culvert. This area had a population of 10,300 inhabitants, but only twelve of the houses where there were cases of typhoid fever drained direct into the culvert, the remaining fifteen houses had privies. In the area not drained by the dock culvert there were seven houses with water-closets and eight houses with privies where typhoid fever occurred. As the population of the latter area was 8800 this makes a proportion of 1·7 per 1000 houses in which cases of typhoid fever were notified. This calculation of course deals only with the forty-one first houses that suffered. On the other hand, the proportion of houses per 1000 in the dock culvert district was equal to 2·6 per 1000. It is true the houses with privies supplied the greatest number of cases. But whether a house has a privy or not it still feels the effects of the sewer that passes close by. There are the street ventilators and also the drainage of the yard, the rain from the roof and the sinks, which does not go into the privy but into the sewer. The houses with privies do not escape sewer contamination; they only add to it by a little private contamination of their own which arises from their privy and which helps to accentuate the evils due to the sewer.

After the epidemic of 1892 the borough engineer, Mr. E. J. Silcock, C.E., was instructed to examine all the sewers of the borough; and out of 140 streets he found that the sewers were defective in no less than 72 streets. These sewers possessed one or several of the following defects: they were either insufficiently large in sectional area or not sufficiently deep to drain properly the surrounding property, or they were not laid to proper lines and gradients, or they were brick sewers in bad condition and did not possess suitable manholes for inspection, or they were deficient in ventilation and in flushing arrangements. Finally, there were so many outfalls that it was impossible to describe the arrangement as a "system." Mr. Silcock was then invited to prepare a scheme, and this he has done on the principle that the first object is to drain the town properly and that the outfall is a matter of secondary importance. When a town is flat and not prepared to incur the expense of raising the sewage by artificial means there

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is but one method of obtaining sufficient gradients in the sewers, and that is to have, not one system, but several systems; not one outfall, but several outfalls. This is, indeed, what nature itself has done in Lynn. The town is divided by four little rivulets, or "fleets" as they are called by the inhabitants, and the natural drainage is towards these streams. Mr. Silcock proposes to convert the four streams into four main collectors. The four districts thus drained being small the sewers would be short, and therefore it would be possible to dig deep enough to give them the required gradient. The only objection is that there would be four outfalls discharging the sewage into the river abreast of the town. As the river is a tidal river, does not pass before another town, but at a short distance from Lynn falls into a broad arm of the sea—namely, the Wash—it is thought that there is no need to purify the sewage. In any case, if such a necessity should ultimately arise a deep intercepting sewer could be constructed parallel with the river, which would receive the sewage from the four outfalls and convey it to a sewage farm or to purification works.

The necessity of dividing the town into four drainage areas is due, not merely to the flatness, but also to the nature of the soil. The soil is so unstable that it would be difficult to build large and deep-laid sewers. Near the gasworks to find a solid foundation for a chimney four borings were made twenty feet from each other and thirty-six feet deep. The result was different for each boring, though they were so near one to the other. Sometimes it is necessary to go down as far as forty feet to reach a really stiff clay. The clay that is near the surface is a silting or greasy clay and it is constantly varying in thickness. Most of the buildings in Lynn have settled through a partial subsidence of the foundations. Then there is the great difficulty of dealing with the rain-water, for the sewers must not only drain the water away but provide a sufficient storage capacity when the outfalls are blocked by the rising tide. In deciding what should be the size of the sewers it does not suffice to know the maximum rainfall noted in twenty-four hours, but rather the maximum noted in less than an hour. Thus it has rarely happened that more than two inches have fallen in a day, and this, if evenly divided, would only mean one-twelfth of an inch in an hour, a quantity that could be easily disposed of by small sewers. But it often happens that during a storm an inch of rain falls in less than an hour, and even that has at times been largely exceeded. Thus on Sept. 27th, 1893, no less than 1·45 in. of rain fell at Lynn in twenty-five minutes, which is equal to a rate of 3·5 in. per hour. Nevertheless, a consultation of the existing records indicate that it is very rare indeed that more than one and a half inches fall in an hour. The present scheme of drainage is based on this supposition. Further, observations made in numerous towns show that on closely built and paved areas only 50 per cent. of the rain which falls finds its way into the sewers while the rain is falling. Therefore the sewers will be planned to take three-quarters of an inch of rain per hour, and this will be equal to an actual rainfall of one and a half inches in the hour.

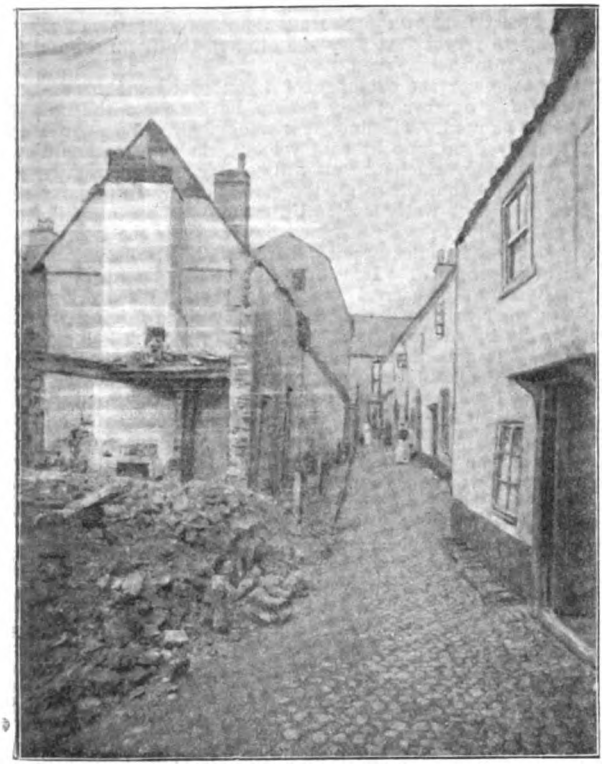
Storm overflows, which, according to the above calculation, would rarely come into use, will be constructed so as to communicate with agricultural drains that are outside Lynn and under the control of the Norfolk Court of Sewers Some difficulty has been experienced in prevailing upon this latter authority to assent to this scheme. Their purpose is to prevent floods, and now it was proposed to flood them with the overflow from the Lynn sewers. In answer to these objections it was pointed out that by the time the storm overflows began to act the sewage would be so diluted as to be fit to be thrown even into a stream containing fish. Secondly, that the Lynn overflow would occur immediately and while the storm was at its height. Agricultural and marshland drains which are connected with a very extensive rural district do not feel the effect of a storm at their outlet till many hours after the storm is over. Consequently, even if the tide was rising when the storm occurred there would be time for the overflow from the Lynn sewers to escape before the water from the agricultural districts came down. Nevertheless, before the Norfolk Court of Sewers would consent to the proposal the Lynn Town Council had to promise to pay damages if a flood was occasioned by their storm overflows, but the onus of proof would lay with the Norfolk Court of Sewers. The only chance of an accident of this sort would be if two very violent storms occurred in succession. In that case the water from the first storm might have reached the outfall of the drains under the Court of Sewers at the moment when the overflows from the Lynn sewers were bringing the waters of the second storm. If, also, just at this moment the tide was rising and the outfalls were consequently blocked, then the Norfolk Court of Sewers might have cause to regret that they had allowed the Lynn sewers to overflow into their system.

The scheme for the drainage of Lynn involves the construction of a number of new sewers, but some of the old ones could be used. The flow, it is calculated, will be equal to 3 ft. per second, and at that velocity the sewers should be self-cleansing. Such a result will be very good, especially in a town like Lynn, where all the sewers must of necessity be below the high-water level. Unfortunately this principle cannot be applied in every instance, but it will be the general rule, and where it is not applied there will be special means of flushing provided. It is also promised that an effort will be made to compel property owners to relay and ventilate their private drains wherever these are defective. Such, in its broad lines, is the scheme for the redrainage of Lynn. It was first submitted to the sub-committee of the Town Council Sanitary Committee. When it had been approved by the sub-committee they converted the Sanitary Committee, and the latter in turn appealed to the whole council, which ultimately and unanimously endorsed the scheme. At the same time it was decided to apply for a paving as well as a sewage loan. In response to this demand the Local Government Board opened an inquiry on both proposals at Lynn on Dec. 19th, 1894. It was soon evident that there was strong opposition on the part of the ratepayers and that they could not all be heard on the same day. The curious point was that several of the ratepayers who had fought against the new water-supply scheme and argued that the old water-supply was good but that the sewers were bad, now came forward to protest against the new drainage scheme. The Local Government Board, on its side, insisted that every detail should be settled before sanctioning the scheme, and there was the difficulty with the Norfolk Court of Sewers described above. Their land is below high-water mark; they are also tide-locked and subject to floods; and now it seemed as if the town of Lynn, by its proposed storm overflows, wanted to increase their floods. In exchange for this threatening prospect the town of Lynn had nothing to offer. Such an unequal bargain could not be negotiated in a day, and that the matter has been satisfactorily settled according to the terms already mentioned is in itself a good enough result, and it is hardly fair under such difficult circumstances to complain of the time it took to bring it about. It must be borne in mind that in these rural districts there is a tendency on the part of country people to look upon a town as an infringement upon their rights. In fact, to judge from the attitude of some rural magnates, it would seem as if they thought that a town ought not to exist at all, and if it does exist it should keep itself very quiet. In this instance not only did the town of Lynn fail to keep quiet, but it persisted in having unwelcome epidemics, and now actually wanted to pour out its foul and contaminated sewage upon the sacred precincts of a purely rural district. Then, to further embarrass the rapid progress of negotiations, which, under the above conditions, gave so little promise of success, the Norfolk Court of Sewers only meet twice a year. Fortunately they appointed a sub-committee with which it was possible to negotiate, but the committee had no authority to act.

In view of these obstacles the Local Government Board inquiry was adjourned. The Local Government Board at first raised some objections to the many outfalls, and finally contented itself by insisting on the prolongation of one of these outfalls, though this will involve an extra expenditure of £5000. The Lynn Town Council made fresh applications for a sewage loan in May, 1895; but this could not be granted because the drainage scheme involved the covering over of one of the fleets, which cannot be done without an Act of Parliament; and it also required the consent of the Norfolk Court of Sewers for the storm overflows which were to communicate with their system of drains. It took two years to secure these objects. The Bill in Parliament was carried in 1896 and received the Royal consent in the middle of that same year. The negotiations with the Norfolk Court of Sewers were not terminated till May, 1897. The Local Government Board was now able to sanction the loan, and this was done in the following July. The estimated cost of the drainage scheme, which is now at last sanctioned, is £27,500. The repaving

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FIG. 1.



Entrance to Desolation-court.

of the town will cost £17,690, and the new water-supply, which should be ready for distribution in six months, is estimated at £30,000. The town has thus to incur an outlay of £75,190.

It is a great pity that no effort is made to profit by the stress of the present epidemic to raise the loans for sanitary improvements from the £75,190 now sanctioned to a round sum of £100,000. Something might then be done to deal with the slums of Lynn and a public abattoir could be constructed. Here, as in so many other towns, the private slaughter houses are a danger and a nuisance. Then there are some very melancholy courts and alleys in Lynn. A scheme for dealing with two such areas has been prepared, but nothing came of it. One of the areas has been nicknamed Desolation-court. It is bounded by Bridge-street, All Saints-street, Union-street, and Crooked-lane. The houses are so old as to be very dilapidated, but not old enough to be picturesque. There are in Lynn many mediæval houses, which, though in a sorry condition, it would be an act of vandalism to destroy. No amount of money could rebuild these interesting and picturesque mementoes of a past era; therefore no pains or expense should be spared to clean, repair, and fortify them so that they may long continue to render the town interesting, to attract visitors, and to bear witness to the sound work of our forefathers who lived in the days when jerry-building was unknown. But in Desolation-court the cottages are not picturesque—they are simply extremely unhealthy. Many of them have no back windows at all. If the owners were to pull some of these cottages down the courts are so crowded and cramped for room that they could not, in rebuilding the cottages, comply with the by-laws fixing the minimum amount of space that must be given both in the front and at the back of all newly constructed dwellings. On the other hand, some of the cottages are so dilapidated that it has been impossible to patch them up. Therefore there are houses in this area that cannot be inhabited such is their ruinous condition. In some instances the cottages have completely collapsed and a mound of bricks alone indicates the spot where they formerly stood. In other instances the outer walls are still standing, but the roofs and floors have gone. It is these melancholy ruins and the rickety appearance of such houses as still remain standing which gives to the area the appropriate appellation of Desolation-court.

One of the accompanying illustrations from photographs (Fig. 1) shows an entrance to this area. On the right side it will be seen how the wall of a cottage bulges out in the lower portion, while the cottage facing it has completely collapsed. In the other illustration (Fig. 2) there are more ruins in the foreground, and we see a front view of two cottages. It will be observed that the roofs are not straight, but are beginning to curve inwards, and that one window especially is totally out of line. It will also be seen how the staircase abuts right on to the street or alley. There is neither landing stage nor entrance passage. The steps have given way and are not straight or level. These illustrations, though reproduced from photographs taken under the adverse influence of November fogs, may help to illustrate the dilapidated and worthless condition of this property. After visiting such localities is it difficult to avoid

Fig. 2.



View in Desolation-court.

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smiling sadly at the posters issued by the town council earnestly inviting all the inhabitants to boil their water. The dwellers in these slums are too often without the means of making a fire to cook their dinners, let alone the boiling of their milk and their water. Anything like effective precautions seems impossible in the midst of such misery, and these courts and alleys have paid their full tribute of victims to the epidemic. Fortunately, the collapse of some of the houses has given more air-space, and this improves the condition of the dwellers in those houses that are still standing. The second area of the town which it was proposed to condemn is at the opposite extremity—namely, the north end. Here the houses are not so dilapidated. Probably they are not so old, but they are small, overcrowded, and cramped together. In the absence of ruins there is less breathing space, and their general appearance conveys an impression of wretchedness and squalor. Such spots may well become hotbeds of disease.

In conclusion, it is necessary to insist that the work of sanitation is complex and that the causes of typhoid fever are numerous. The securing of a pure water-supply is the first and the most necessary of all sanitary measures, but it is not the only indispensable reform urgently needed at Lynn. Seeing that the water-supply of Lynn is exceptionally foul and liable to contamination the water question should come first; but it would be a fatal error to suppose that the town will be safe when once a pure water-supply has been provided. The drainage of the town is at least second in importance, and this question of drainage should comprise not only the removal of sewage, but the purification of the subsoil on which the town stands. The courts and alleys must be so repaved as to prevent any foulness reaching the subsoil. Then some of the worst slums have to be demolished, and energetic measures taken to secure the wholesome rehousing of the poor. Nor is this all; the health of Lynn will depend in a measure on the health of the surrounding agricultural districts. Already there have been within the last few weeks three cases of typhoid fever in neighbouring farms which supply milk and butter to the town. Measures were taken to prevent mischief arising from this source of contamination; but the danger may arise before proper precautions can be enforced. In the larger farms and dairies that send milk to London the organisation is more perfect, the sense of responsibility greater, and a strict surveillance is more easy to establish. It is in small, petty farms that the principal risk arises. In many of these rural districts the water-supply is most defective, but there is no money to procure a better supply. Yet something should be done, and the question arises whether the distant consumers of the produce of these poor rural localities might not contribute something towards the expense of measures which will protect them from the danger of infection. It is a very difficult but also a very urgent question. If as a result of the present epidemic these matters are taken earnestly in hand the victims will not have suffered in vain.

THE RINDERPEST IN SOUTH AFRICA.

(FROM A CORRESPONDENT.)

(*Concluded from p. 1285.*)

Professor Koch's Researches.

WE now come to the consideration of Professor Koch's work on rinderpest. An experimental station was established about two miles out of Kimberley, the floors and buildings of the old Victoria Diamond Mining Company having been placed at the disposal of the Government by the De Beers Company. Here Professor Koch commenced his valuable investigations on the disease on Dec. 5th, 1896. The results of his labours may be conveniently divided into two heads: (1) those referring to the etiology or causes and general characteristics of the poison; and (2) the methods of rendering cattle proof against its effects.

We will consider first that portion of his work which comes under the first heading. (*a*) The most careful and advanced microscopic and bacteriological methods of examining the blood and tissues failed entirely to detect any specific organism as the cause of the disease such as is present in the blood and tissues of animals suffering, for instance, from anthrax. (*b*) Other experiments were instituted to endeavour to discover how long the blood and tissues retained their infective properties. From these it appeared that any form of infected material taken from an ox which had died from rinderpest lost its power of communicating the disease to healthy animals if kept in a dry atmosphere at the ordinary temperature for about fourteen days. Putrefaction was also proved to destroy the poison. The conditions that obtain in the veld are not exactly similar to those under which these results were obtained. Experience, however, in affected areas shows that the poison is very soon destroyed, especially in dry weather. In damp weather or in places where the infected material is protected from being thoroughly dried it retains its poisonous properties for a longer period. Cattle kraals retain the poison longer than the open veld, and on this account when it is desired to destroy all infection rapidly it has been found wisest to burn the kraals down. We still need further evidence before being able to state definitely when an area which has once become infected will be again safe for ordinary healthy cattle. A few months at the outside is, however, the probable limit. (*c*) As to the distance through which the poison can be carried in the atmosphere the experiments of both Professor Koch and Dr. Edington, with those of other investigators, conclusively prove that the poison is carried but a very limited distance, if at all, in the atmosphere. Professor Koch had his experimental animals standing about twenty feet apart, separated merely by two sheets of galvanised iron, and in no instance did he find that the infection was communicated from affected to healthy animals provided that the attendants and utensils were kept entirely separate. Mr. Hutcheon's own experience on the Molopo River indicated strongly that the disease was not conveyed very far in running water. (*d*) Another important point in regard to the poison was the extreme virulence of rinderpest blood in conveying the disease. Professor Koch found that the hypodermic injection of $\frac{1}{10}\frac{1}{0}$th cubic centimetre of rinderpest blood, roughly about $\frac{1}{3}\frac{1}{0}$th of a drop, was sufficient to produce the disease in a healthy ox, and Dr. Kohlstock, by later experiments, proved that half this quantity—i.e., about $\frac{1}{6}\frac{1}{0}$th part of a drop—of rinderpest blood when injected into a healthy ox produced a violent attack of the disease. (*e*) As to the effect of the poison on sheep and goats, by passing the poison through successive series of sheep it was found that the poison became more powerful, although these animals did not appear themselves to suffer from marked symptoms of the disease with the exception of a rise of temperature. Blood, however, taken (after the virus had been passed through five series of sheep) from them and injected into healthy oxen produced a very violent and fatal form of rinderpest, leading to the conclusion that the poison by passing through these animals becomes more powerful. This fact possibly helps to explain why on some farms in close proximity to one another the percentage of recoveries varies so greatly. It would also account for the fact that in some few cases the sheep and goats have died from the effects of the disease. In the case of goats the virus appeared to become weakened. (*f*) The mixture of glycerine or phenol with rinderpest blood destroyed its infective properties. To recapitulate, the results of Professor Koch's experiments may be thus summarised: (*a*) That no specific organism has been proved to be present in rinderpest; (*b*) that this poison is rapidly destroyed when exposed to a dry atmosphere at a moderate temperature; (*c*) that it is only conveyed a very short distance, if at all, by the atmosphere; (*d*) that $\frac{1}{10}\frac{1}{0}\frac{1}{0}$th cubic centimetre, or about $\frac{1}{6}\frac{1}{0}$th of a drop of rinderpest blood, is sufficient to communicate the disease when injected in a normal saline solution (6 per cent.) into a healthy ox; (*e*) that the virus appears to be rendered more powerful by passing through successive sheep, but weakened when passed through successive generations of goats; and (*f*) that phenol (carbolic acid) in weak dilution destroys the poison and glycerine has the same effect.

We now come to a second division of Professor Koch's work—viz., the methods which he discovered for rendering cattle proof against the poison. Two methods for rendering cattle immune against the disease were discovered by Professor Koch, and it is as well to point out that the whole of the subsequent work which has been reported by various observers is little more than either a repetition of his original experiments or consists in improvements which experience and further experiments have added to the methods of preparing the materials or in applying them. The two methods of rendering cattle immune discovered by Professor Koch are known as (1) the serum treatment and

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(2) the bile treatment. First, as regards the serum treatment. Professor Koch proved that the serum of cattle which had recovered from an attack of the disease (salted cattle) when injected under the skin of healthy cattle protected them from the poison of rinderpest for a short time, the immunity probably not lasting more than twelve, or at the most twenty, days. He then mixed ninety-nine parts of serum from salted cattle with one part of blood taken from rinderpest cattle and kept this mixture in an ice-closet for one night, and then injected 20 c.c. into healthy cattle, with the result that in a fortnight he immunised several cattle to such an extent that they were able to withstand an injection of 20 c.c. of rinderpest blood, and $\frac{1}{100}$th part of this is a fatal dose to ordinary healthy cattle. The immunity thus produced is probably equal to that of an animal which had contracted, and recovered from, the disease. With regard to the serum treatment, it appears that other observers in Russia had stated that serum from salted animals was protective, but Professor Koch was the first to put it to any practical use and to publish the methods. Secondly, the bile treatment. This was an entirely original discovery by Professor Koch, and promises to be an incalculable boon to the cattle-owners of the colony and other parts if only properly carried out. He injected 10 c.c. of bile (taken from cattle which had just died from rinderpest, or which had been killed about six days after they had been purposely given the disease) into healthy cattle, and discovered that after fourteen days a quantity of rinderpest blood (sufficient to have given the disease to any number of healthy cattle) could be injected into them without any injurious result. Subsequent experiments proved that this immunity, or power of resisting the poison, was established at latest on the sixth day after the injection of the bile. Animals which became infected with the disease four days after the injection of bile, although contracting the disease, recovered from it after a mild attack, thus showing that the immunity commenced about the fourth day after the bile injection. Cattle which had been infected with rinderpest before the injection of bile, or at any period before the fourth day after the injection, died from the disease, thus proving that, in order to obtain good results, it is necessary that cattle should receive the bile treatment before the disease has broken out amongst them. This fact cannot too strongly be insisted upon, and has been amply proved by subsequent experience. The local result of an injection of bile from a rinderpest ox into a healthy ox is a hard, somewhat painful swelling of the size of a man's fist, which gradually disappears in the course of a few weeks. The development of this swelling is a fairly certain sign that the inoculation has been successful provided it does not suppurate, in which latter case the result is uncertain, the process of suppuration being liable to destroy the immunising properties of the bile. Subsequent experiments by Professor Koch, and also by Dr. Kohlstock, proved that the bile used by them was absolutely incapable of giving the disease. The experience, however, of Mr. Hutcheon and his staff appears to prove that some biles are actually capable of communicating the disease. As to the duration of the immunity thus produced no definite time can be at present stated. Dr. Kohlstock proved that it is as powerful at the end of three months as it is a fortnight after the injection, and it appears that the immunity lasts for a period long enough for all practical purposes.

Dr. Edington's Glycerinated Bile.

Next may be discussed the improvements which subsequent observers have added to Professor Koch's original methods. One of the chief obstacles in the application of Koch's bile treatment is the difficulty experienced in preserving the immunising properties of the bile when once it had been removed from the bodies of the rinderpest oxen. Dr. Edington has now proved that by mixing one part of glycerine with two parts of rinderpest bile its immunising properties are preserved for some time under ordinary conditions, so that it can now be sent any distance that is required in properly sealed vessels. The addition of glycerine has the further advantage that it affords an extra security against the bile being the medium by which infection is conveyed, for we have already seen that Professor Koch's experiments proved that glycerine is very destructive to the rinderpest poison. It appears, however, to weaken the immunising power of the bile, and it has been found necessary in order to get good results to inoculate the animals about ten days after the injection of bile with virulent blood. This is a distinct advantage, for the experience gained during the last six months in the preventive treatment of rinderpest goes to prove that it is advisable in actual practice, in order to obtain reliable results, that the cattle treated should if possible have a modified attack of the disease. Another point in favour of the glycerinated bile is that all except very watery and putrid biles can be used in its preparation, and consequently a much smaller percentage of cattle have to be sacrificed in its production than under Koch's original method, in which only selected galls can be used.

The following telegraphic report furnished by Mr. Hutcheon gives in a concise form his experience of the methods and results of inoculation in the colony from March to the end of July, 1897: "Since the beginning of March last we have carried out Koch's method of bile inoculation as carefully as practicable in accordance with his directions, but experience has shown that however carefully the bile may be selected and the operation of inoculation performed the results are very irregular and in not a few instances intensely disappointing. The fact is that we are not in possession of a simple practical test to enable us to distinguish between a bile which is both safe to use and permanent in its immunising effects and biles which are either too strong and communicate the disease to the animals inoculated or too weak and do not confer immunity for any length of time. In order to obviate this irregularity we have adopted the method of mixing the biles before sending them out, and in this way hope to secure more uniform results. We have recently, relying upon the experiments conducted by Dr. Edington, adopted his method of inoculating with glycerinated bile, which briefly consists in mixing all clear biles of whatever colour with glycerine in the proportion of one part of glycerine to two parts of bile. This mixture is then kept for eight days before being used, and twenty cubic centimetres are injected in each full-grown animal. It is claimed for this glycerinated bile that it does not communicate the disease as Koch's bile is liable to do, and although we have no means at present of judging of the length of the immunity conferred, as it has only been practised for a very limited time, yet a number of tests appear to show that the immunity which exists on the tenth day is as complete as the immunity conferred by Koch's bile at the same period. Hence it is recommended that in every instance in which the glycerinated bile is used it should be followed on the tenth day by an injection of $\frac{1}{10}$th of a cubic centimetre of virulent blood. In a number of herds experimented on $\frac{2}{10}$ths of a cubic centimetre of rinderpest blood were used for this second inoculation with satisfactory results; less than 2 per cent. succumbed to the test, but a considerable number were somewhat seriously affected. For that reason I have recommended that $\frac{1}{10}$th only should be used, as this dose can be followed at later stage by a larger dose with perfect safety. But while recognising the value of this bile inoculation, that it is the only practical method of carrying out inoculation on such an extensive scale as has now been forced upon us, we are at the same time cognisant of the superiority of what is called the serum treatment, and we are making provision to deal with all infected herds by that method and hope to be able to extend it to all clean herds as the number of highly immunised animals at our disposal increases. Respecting the measures which we have adopted for carrying out the bile inoculation, one or more stations are established in each district for the production of bile. To these stations all cattle-owners are required to bring a percentage of their cattle sufficient to produce bile for the remainder. These cattle are inoculated with rinderpest blood on their arrival at the station, and are kept there until they either die or are killed at the proper time, when the bile is extracted and prepared, and then distributed amongst the farmers for the inoculation of their cattle."

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Annual Report of the Medical Officer of Health of the County of Lancaster.

THE report of the medical officer of health for the county of Lancaster (Mr. Edward Sergeant) shows that the health of the county for the year 1896 has been satisfactory. The number of births registered in the county districts under review for that year were 52,318, corresponding to 28·73 per

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1000 of the population. There was a marked reduction in the number of deaths as compared with the previous year, the total of which amounted to 31,653. In both urban and rural districts the births of males exceeded those of females. In the urban districts the disproportion in numbers between the two sexes was further increased by a greater female mortality, the reverse being the case in the rural districts. The corrected death-rate for 1896 was 16·61 per 1000, as compared with 18·3 per 1000 in the previous year; while for the seven years 1889–95 the average death-rate was 18·7 per 1000 of the population. Infant mortality shows a considerable reduction, which is mainly due to climatic conditions. In the matter of dairies, cowsheds, and milk-shops the report states that inspections under the Local Government Board order were very unsuccessfully carried out, the conditions of cowsheds in a large number of districts being insanitary. Childwall appears to be a very healthy urban district. Five births and only one death, and that of an infant six weeks old, who died from whooping-cough, were registered there during the year. The birth-rate in Garston was 31·5 per 1000 of the population and the death-rate 14·1 per 1000, a reduction of mortality as compared with the figures of 1895. In this district there was a zymotic death-rate of 2·31 per 1000, whilst the hospital accommodation is complained of as being too limited. The report deals most favourably with the districts of Great Crosby and Little Crosby, not a single case of infectious disease occurring in the latter district in 1896. The death-rate of Prescot was 19·7 per 1000, which, although lower than that of the previous year, might be regarded as much above the average of urban districts, the zymotic death-rate being 3·57 per 1000. In Skelmersdale the birth- and death-rates both show a reduction as compared with the previous year equal to 4·7 and 2·5 per 1000 respectively. There was an increase in the zymotic death-rate and the proportion of infant deaths to births rose considerably. The birth-rate of Southport was a little lower than in 1895, whilst the death-rate was the lowest ever recorded in that borough—viz., 14·46 per 1000. The zymotic death-rate was slightly higher than in the previous year, and the great preponderance of zymotic diseases in the rural as compared with the urban wards is regarded as most unsatisfactory. Mr. Sergeant points out that in the rural districts the habits of the people in the matter of "unrestrained and reckless inter-communication" greatly favour the spread of infection. In Warrington the birth-rate was 36·8 per 1000, the same as the previous year. The death-rate, 19 per 1000, showed a decided improvement. Measles was very prevalent, causing 63 deaths, against 111 in the previous year. The health of Widnes was, on the whole, favourable, the statistics of mortality showing an improvement on the previous year. Similar reference is made to the two rural divisions of Wigan.

The Hospital Sunday Fund.

The Hospital Sunday Committee, in their twenty-seventh annual report, deplore a falling-off in the Hospital Sunday Fund as compared with last year. On the other hand, the Hospital Saturday Fund showed a steady increase and more than counterbalanced the loss of £330 on the former fund. By the addition of the two funds the grand total was brought up to £11,871 8*s.* 11*d.*, leaving the sum of £11,400, which was distributed among the various medical charities. The Lord Mayor questioned the policy of fixing the Sunday collections for the month of January and felt that the date should be made to approximate more closely to that of the Saturday collection. A difference of opinion, however, prevails on this point. Sunday last was observed in Bootle as Hospital Sunday, and collections were made at the various churches and chapels in the borough and neighbourhood in aid of the funds of the Bootle Borough Hospital. The new mayor (Dr. J. McMurray) attended in his official capacity the morning service at Trinity Presbyterian Church and the evening service at St. Mary's Parish Church. The mayor's procession was one of the largest seen in Bootle for some years past.

Work at the Medical School of University College, Liverpool.

The winter session is now in full swing, the total number of students being about the same as last year. The numbers in the anatomical department are well maintained and the rooms are crowded. The students are working well and there is a plentiful supply of anatomical material. Great progress has been made with the formation of the anatomical collection and a new museum is among the urgent needs of the department. The new outbuildings and macerating accommodation have been of great use, especially during the past four months. Professor A. M. Paterson has been engaged on the dissection and maceration of an Indian elephant, the bones of which have been macerated completely (in sand) in the very short period of four months. Professor Paterson exhibited them on Friday night at the Biological Society. The new laboratories in course of erection are approaching completion and part of the physiological department will be in use after the Christmas holidays. The medical students' annual dinner will take place on the 27th inst.; the chair will be taken by Mr. Rushton Parker, the Professor of Surgery in University College.

Liverpool Medical Institution.

The biennial dinner of the Liverpool Medical Institution was held on Nov. 6th. The chair was occupied by Dr. Caton (the President), who was supported by the Lord Mayor and other prominent citizens. About 140 gentlemen sat down to dinner.

Police Horse Ambulance Service.

The offer of the Watch Committee to provide a horse ambulance day service for the Royal Infirmary, the Northern, Royal Southern, and Stanley Hospitals has been accepted. The hospitals are to provide the stabling. The Watch Committee will also provide a horse ambulance at the central fire station for the night service of all four hospitals and a second at Old Swan for the service of the outlying districts. When this service is completed Liverpool will be in an unique position with regard to its ambulance arrangements, no other town in the United Kingdom being similarly equipped. It will be necessary for the police to purchase three ambulances and six horses. No addition to the police force will be required.

Nov. 15th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Medical Society, Edinburgh.

THIS society was formally opened on Friday of last week, by an address from Dr. T. Barlow of London. The lecturer discoursed on Infantile Scurvy to a large audience of senior students and a representative body of professors and lecturers. He described the clinical features of the condition and the anatomical changes which occurred in various parts, but more especially in connexion with the bones. He pointed out the association of these. He then argued from the phenomena present and from the effect of treatment that the condition was scurvy and not rickets. He thought that the condition was on the increase, and that it was attributable to the feeding of children on patent foods and on sterilised milk too much diluted. The address was illustrated by a number of diagrams and coloured drawings as well as by preparations in spirit. It was listened to with marked attention and was much appreciated. The vote of thanks was proposed by Dr. Carmichael, the president of the society, and seconded in a very felicitous speech by Professor Fraser.

Aberdeen University.

Mr. George Dean, M.A., M.B. Aberd., has been appointed Bacteriologist to the Antitoxin Department of the British Institute of Preventive Medicine, Sudbury, in succession to Dr. Wm. Bulloch. After graduation Dr. Dean spent some time in Berlin and Vienna, devoting himself mainly to the study of pathology and bacteriology. Since 1891 he has held the posts of assistant to the Professor of Pathology in Aberdeen University and assistant pathologist to the Aberdeen Royal Infirmary; more recently he was also appointed pathologist to the Royal Hospital for Sick Children. As university assistant in pathology he has conducted classes in morbid anatomy and histology and on advanced bacteriology, besides assisting Professor Hamilton in the general work of the department, including the research work in experimental pathology and bacteriology. Dr. Dean has taken a great interest in local medical societies and is secretary of the Aberdeen Medico-Chirurgical Society. His departure from Aberdeen will be a great loss to the medical school and to the profession generally in the north of Scotland. Fitting expression was given by his medical brethren to their high appreciation of his services when they met in large numbers in the Palace Hotel on the evening of the 9th inst., under the genial presidency of Professor Hamilton, to

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congratulate him on his promotion to a new sphere of work and to present him with a handsome testimonial.

A Complimentary Dinner to Dr. C. O. Hawthorne.

On Nov. 12th, in the Windsor Hotel, Glasgow, a complimentary dinner was given to Dr. C. O. Hawthorne on the occasion of his leaving Glasgow. The attendance numbered about ninety, and was of a representative nature, among those present being Professor McCall Anderson, Professor Murdoch Cameron, Dr. Yellowlees, Dr. Wallace Anderson, Dr. Alexander Robertson, Dr. Lindsay Steven, Mr. Henry Clark, Dr. Middleton, Dr. Newman, Dr. Allan, and Mr. Henry Rutherfurd. Over forty apologised for their inability to attend, including Professor Cleland, Professor McKendrick, Professor Coats, Professor Ferguson, Professor Bower, and Dr. Hector Cameron. In their letters, and especially in the speech of Professor W. T. Gairdner, who was in the chair, there was evident a feeling of very sincere regret that Dr. Hawthorne was about to leave Glasgow, and that his valuable and untiring services to the medical profession, and particularly to the University, should be lost to the city. Dr. Hawthorne, in reply, referred to the regret with which he left the service of the University and Queen Margaret College, and advocated the equalisation of the conditions of examination in the medical faculty of the two bodies. He paid a warm tribute to the inspiring influence in the school of Professor Gairdner, who had done so much for the advancement of its name and fame. Dr. Hawthorne received a most enthusiastic welcome, and carries with him the warmest good wishes of the profession in Glasgow.

The Disciplinary Powers of the Scottish Universities.

I am glad to note that at a meeting of the Edinburgh University Court on Tuesday last a proposal was under consideration to obtain penal and disciplinary powers over graduates so as to empower a university to remove from its roll of graduates any graduate who may have been found guilty of a criminal offence or other misconduct. The Court while alive to the difficulties of the proposal agreed to confer with other universities on the whole matter and with that view to appoint representatives to a joint committee. This action on the part of the University of Edinburgh is very satisfactory. There had been some reason to think that the University of Edinburgh was behind the other universities in its desire to acquire such powers as are obviously needed in bodies which qualify so large a number of medical practitioners. But its action on Tuesday leads to the hope that this feeling has been changed. Considering its position as a school of medicine and its great influence over the other Scottish Universities, it is gratifying to have to report such a change. It is especially so in view of the near approach of the meeting of the General Medical Council, to which, doubtless, the action of the leading university of Scotland will be duly reported.

Nov. 17th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The University of Dublin.

THE opening meeting of the Dublin University Biological Association will be held in Trinity College on the evening of the 25th inst., when the President, Mr. Robert Woods, will deliver an inaugural address dealing with the subject of "Suppurative Middle-ear Disease and its Relation to the Exanthemata." The speakers will include Dr. Dundas Grant, President of the British Laryngological Association, Dr. Henry Swanzy, Dr. Joseph O'Carroll, and Professor J. Mallett Purser.

The Richmond Asylum.

The medical superintendent of the Richmond District Lunatic Asylum, Mr. Conolly Norman, at the fortnightly meeting of the governors which took place on the 16th inst. reported the death of one male patient from beri-beri and the occurrence of no less than fourteen fresh cases in the female house.

The Jubilee Medal.

Her Majesty has been graciously pleased to confer the Jubilee Commemoration Medal on Surgeon-Major-General A. F. Preston, M.B. Dub., Principal Medical Officer in Ireland.

Municipal Honours to Medical Men.

Sir R. Jackson, C.B, F.R.C.S.I., and Dr. John J. Cranny were elected Commissioners for the Pembroke Township of Dublin on the 15th inst.

The Typhoid Fever Epidemic at Ligoniel.

Thirteen new cases have occurred up to Nov. 9th, which shows a distinct decline in the epidemic. Since Oct. 6th there have been six deaths. The question of the water-supply is a most difficult problem. The Water Commissioners only recently came into possession of the springs supplying the upper portion of Ligoniel (these are the contaminated ones), which before this belonged to the board of guardians, who were the water authority of the district. The Commissioners say that the springs were under the control and in custody of the guardians and the whole surroundings with the possibilities of contamination were fully known to them. They say that no steps were taken to guard against pollution and that the tank containing the water seemed never to have been cleaned out since it was made. The Commissioners cannot, they say, without the fullest investigation and for the strongest reason consent to abandon any of the waters supplying the village. Ligoniel is 600 ft. or 700 ft. above sea level; the Commissioners' filters are only 200 ft. above sea level. Hence it will require from nine to twelve months to provide steam engines, a reservoir, and mains for the purpose of raising filtered water from the filters to Ligoniel. The Commissioners having no means of providing a temporary supply decline to take the responsibility of cutting off the water. They will take any steps possible which the guardians may suggest to remove or remedy the causes of danger, but they throw on the guardians the responsibility of cutting off the water-supply. Last week the Commissioners ran off all the water in the pipes, the fountain, and the reservoir, which they cleaned out. The inhabitants of Ligoniel have wisely been advised under present circumstances to boil all the water used.

Serious Condition of Omagh Asylum.

At the meeting of the governors of the Omagh Asylum held on Nov. 11th, Dr. George P. O'Farrell, Inspector of Lunatics, presented a report, the result of a very careful inspection of the asylum by himself, his colleague, Dr. Courtney, and the consulting architect of the Board of Control. He thinks greater efforts should have been made to remedy defects in connexion with the old system of drainage and sanitary appliances which were to be removed on the completion of the new works. In regard to the percentage of deaths on the average number resident in 1896 it gave a high average for an Irish asylum—viz., 9·8. But this average had been largely exceeded in the current year, as since Jan. 1st last there has been an unusual amount of serious sickness and a heavy mortality. From Jan. 1st until Oct. 1st there had been 388 cases of sickness, with 79 deaths, the majority of which were due to phthisis or other respiratory diseases. Throughout the present year there had been an epidemic presenting in many cases symptoms of typhoid fever but which in the asylum books were described as influenza in accordance with the opinion of the consulting and visiting physician of the institution who stated that in his large practice in the surrounding country he had seen many similar cases which were undoubtedly of an influenza nature. On the male side there had been 83 such cases with 18 deaths, and on the female side 40 with 5 deaths. There were five cases of erysipelas among the patients, and one man was attacked with unmistakeable typhoid fever. Apart from the question of overcrowding and sanitation Dr. O'Farrell reports that the condition of the asylum is not quite satisfactory. There is a relatively large number of excitable patients in certain divisions, and many express frequent complaints of violence or discontent with their treatment. The number of such cases was greater in the Omagh Asylum than in the neighbouring asylums. The changes among the attendants by resignation and dismissal were frequent, and there were numerous charges of intemperance amongst them brought before the board. An institution was improved by raising the knowledge and status of those in immediate and constant charge of the patients. Sufficient attention was not devoted to the recreation of the patients; the food was not satisfactory, and a more liberal and varied dietary might be introduced. Dr. O'Farrell did not blame the management of the institution, which had been thrown into confusion by the structural works in progress. He recommended the formation of a visiting committee to

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go carefully through the different divisions, and the sick and infirm should be placed in charge of a trained hospital nurse. Mr. Parry, C.E. (Dublin), reported that the existing drainage plans were found by him in many respects to be incomplete and unreliable; the general arrangement of water-closets was imperfect and antiquated, and there was a cesspool which was a source of danger to the inmates. In one of the tanks the water was quite unfit for drinking and it was not a little remarkable that this water supplied the divisions in which by far the largest number of cases occurred, and this water was condemned by the analyst. In another tank the water was in an exceedingly dirty condition. He thought this evidence in regard to the water (bad storage arrangements and uncleanliness of the tanks) appeared to show that they were the most probable and immediate causes of the epidemic of typhoid fever, although the defects in the old drains might be regarded as one of the predisposing factors. The governors, looking on these reports as disclosing such a serious state of affairs, appointed a committee to consider them and they also decided to print and circulate these reports amongst the members of the Board of Control and to consider the recommendations of the committee at the January meeting.

The Belfast Royal Hospital.

At the annual meeting, held on Nov. 15th, it was reported that during the past year (ending Aug. 31st) 2101 new cases were treated in the wards, which with 143 remaining from the previous year made a total of 2244 intern patients. Of these 1279 were surgical and 965 medical. There were 21,819 new extern cases, so that if intern and extern patients be added together there is found in Belfast, a city with a population of 300,000, the large number of 23,920 persons receiving treatment at the Royal Hospital. 138 students attended the hospital during the winter and 98 during the summer session. The receipts from all sources for the year were £7355 11*s.* 4*d*, and the expenditure was £8095 3*s.* 5*d.*, consequently there is a balance against the hospital of £739 12*s.* 1*d.* The year commenced with a debt of £1068 1*s.* 2*d.*, and it ends with a deficit of £349 1*s.* 11*d.* Reference was made at the meeting to the very important and encouraging fact that during the year a sum of upwards of £100,000 has been collected or promised for a building on a new site, a fact which shows plainly that the claims of the hospital were never more fully recognised by the public than at present.

Medical Candidates for the City Council.

The municipal elections consequent on the enlarged area of the City of Belfast are now in full progress, and amongst the candidates for the posts of aldermen and councillors are eleven members of the medical profession.

Nov. 16th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Over-Expenditure in Hospitals.

DR. NAVAARE has presented to the Municipal Council a report upon the financial statement of the Assistance Publique for the year 1895. The increase in expenses had appeared to the council so extraordinary that further inquiry was necessary. The total sum spent by the Assistance Publique was 36,600,856 francs, being 441,242 francs in excess of the sum spent in 1894. One of the most extraordinary items in the expenditure is the sum set down for milk, and one can only wonder where all the milk has gone to, seeing that there has been no proportionate diminution in the consumption of wine and beer. Dr. Navarre attributes this state of affairs to gross negligence in the administrators of hospitals, who have exercised no proper control over the resident staffs, &c. At Bicêtre it appears that 100 litres of milk have been used in the preparation of *bœuf à la mode* and 27 litres in the due cooking of some rabbits, while several patients were entered as the recipients of milk which they were not getting. During 1895 the price of charcoal dropped, but under the item of *chauffage* 150,514 francs have been expended, or 80 francs in excess of what was spent the previous year. The sums spent upon instruments and hospital fittings have been enormous, and designed, it is suggested, to attract wealthy patients and not to minister to the poor. From Cochin a requisition was made at the Central Pharmacy for 20,000 metres of silk ligature and 10,000 metres of catgut. This fantastic demand represented only the needs of three months and at the time it was made the hospital was in possession of 1800 metres of silk ligature sterilised and 8000 metres unprepared and 800 metres of catgut ligature sterilised and 1000 metres unprepared. A very good case for an investigation would seem to have been made out.

The Bacteriology of Acute Articular Rheumatism.

M. Thiroloix reports that since March last year he has found five times in the blood of persons suffering from acute muscular rheumatism the pathogenic bacillus. The bacillus appears in the first culture at variable intervals. Upon each occasion when he has made intravenous injections he has obtained cardiac and pleuro-pulmonary lesions as well as articular troubles, which have only made their appearance after the symptoms of affected heart. He gives it as his opinion, therefore, that cardiac lesions precede articular lesions or exist without them.

The Return of M. Raoul's Expedition in Malaita.

On Monday last M. Raoul, Pharmacien-en-Chef des Colonies, accompanied by M. Mary, Pharmacien-principal, arrived in the *Laos*. M. Raoul had been engaged upon a Government mission to make researches in Malaita into the indigenous plants with a view of seeing if any existed that might be turned to account scientifically or commercially. A number of natives took part in the expedition and several of M. Raoul's party were bitten by snakes of different sorts. They are stated to owe their lives to injections of Dr. Calmette's serum with which the expedition was amply provided.

An Accusation against a Graduate of the Faculty of Medicine.

For some days past a serious charge has been hanging over the head of M. Heim, a young graduate in Natural History. The newly-appointed professor in this subject, Professor Blanchard, upon taking up his department and the laboratory connected, asked M. Heim to make an inventory of the various specimens and apparatus belonging to this laboratory of which M. Heim had been in charge pending the election of the new professor. M. Heim, who was travelling, asked that the taking of the inventory might be put off, and when he returned, as he was then taking his holiday away from Paris, asked for a still further delay. As upon being asked a third time M. Heim still did not appear Professor Blanchard proceeded to make the inventory. He found in a box with M. Heim's name upon it various instruments and specimens labeled as M. Heim's personal property which belonged to the Natural History Museum of the Physiological Laboratory at the Faculty of Medicine and to sundry other laboratories where M. Heim had worked, objects which had been given up for lost though much sought after. Professor Blanchard accordingly drew up a report against M. Heim, and the latter, when at last he did come back, protested vehemently against the breaking open of his chest in his absence and further affirmed that he had no intention of appropriating these instruments of which he had made legal use in his researches before he went away and that he had put them all away in a hurry before his departure, putting them all together that he might know where to find them when he came back. The Rector of the Academy of Paris, M. Gréard, took the advice of the University which had already nominated a disciplinary committee according to its own laws and regulations. So the matter has been submitted to this committee for inquiry. Some doubt arose as to whether the University had power to take up a case of this sort but it was finally decided, upon a careful report drawn up by Professor Glasson of the Faculty of Law, that it had power. When all the formalities have been complied with the inquiry will proceed as rapidly as possible for a matter of this kind needs to be settled one way or the other as soon as possible. It is hardly likely, however, that a decision will be given before the end of the week. The Commission sat for the first time on Friday, Nov. 12th, to hear the reading of the report of Professor Blanchard. M. Heim appeared before it on Saturday, and on Monday the hearing of the witnesses, who are thirty-two in number, was commenced.

The late Dr. T. W. Evans.

Dr. Thomas William Evans, the well-known American dentist, died on Nov. 14th at his house in the Avenue du

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Bois de Boulogne. When the Empress Eugénie quitted the Tuileries on Sept. 4th, 1870, she went in a cab to his house where she stayed the night and next day he travelled with her in a carriage to the coast. She then succeeded in escaping from France in a small vessel which landed her at Ryde. Dr. Evans's practice was very select and several crowned heads availed themselves of his skill. He was the proprietor of the *American Register*.

Nov. 16th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Virchow's Jubilee.

THE fiftieth anniversary of Professor Virchow's joining the teaching staff of the Berlin University was celebrated on Nov. 6th. In 1847 Professor Virchow, who had previously belonged to the Army Medical Staff, was appointed a *privat-docent* at the University, but political considerations were all-powerful after the revolutionary troubles of 1848, and as he was known to hold democratic opinions he was under the necessity of leaving Berlin and accepting a professorship at Würzburg, in Bavaria. His exile, however, did not last very long, for as far back as 1856 he was elected Ordinary Professor of Pathological Anatomy in Berlin, an appointment which he still retains. On account of Professor Virchow's infirm state of health the jubilee proceedings were of a more private character than would have otherwise been the case, being limited to addresses of congratulation delivered by the rector of the University and the dean and professor of the medical faculty. The rector, Professor Schmoller, referred to Professor Virchow's achievements not only as a physician and a pathologist, but also as a biologist and as a savant whose methods of research had influenced every branch of human knowledge. The dean, Professor Heubner, eulogised him as a *privat-docent* of an altogether superior order—a teacher not only of students but also of professors. At an age when young men were, as a rule, far from having mastered what had been already discovered he had succeeded in solving the most difficult problems of biology. Professor Virchow in his reply pointed out that he was happy in the knowledge that a body of men now existed in German universities strong enough not only to maintain the principles laid down by him but also to continue the work in the light of modern developments. He felt that his work was done and that he was now entitled to retire from his academical position, especially after having succeeded in obtaining a promise from the Government that a new and modern pathological institute and museum would be constructed after his designs. A great number of telegrams, letters, and other marks of Professor Virchow's great popularity were received by him during the day.

The Training of Nurses and the Removal of Hospital Patients in London.

In the "Verein für Innere Medicin," a paper has been read by Dr. George Meyer on the Medical Institutions of London. The author, who had spent several weeks in the English metropolis at the time of Queen Victoria's Diamond Jubilee, first mentioned the display of nursing appliances in connexion with the Victorian Era Exhibition at Earls Court, which, he said, offered an opportunity of realising the high standard of nursing in England. In his opinion nurses were very well trained in England, the length of service required from probationers enabling them to get a more perfect knowledge of their duties than in other countries. He gave particulars of the different training schools, spoke of hospital nurses, private nurses, and district nurses, and showed specimens of the rules and regulations of several nursing institutions. He then passed on to the First Aid and ambulance arrangements made by the St. John Ambulance Association, which he had seen at work on the occasion of the Jubilee procession. The principal feature of Dr. Meyer's paper was an account of the mode of removing infectious cases. He had for a long time urged the necessity of reform in the ambulance arrangements in Berlin, and he now described the ambulance vehicles belonging to the different London hospitals and showed photographs of some of them. He also described the mode of notification of infectious disease and the duties of the medical officers of health in connexion with the disinfection of dwellings. He specially commended the mode of conveying patients to hospital and the consideration with which their friends were informed both of their condition and of the appearance of dangerous symptoms; the printed forms used for this purpose were also shown to the society. Dr. Meyer concluded his remarks by expressing his thanks to the hospital managers, and to the medical officers who had kindly assisted him in his inquiries.

Dr. Calot's Treatment of Spondylitis.

Dr. Calot's method of treating spondylitis by "brisement forcé" of the vertebral column has been tried by some German surgeons and orthopædists, and in the *Deutsche Medicinische Wochenschrift* Professor Lorenz, of Vienna, discusses the subject from a theoretical point of view. He says that the risks of this method are very great, for not only may the spinal cord be injured, but prævertebral abscesses may burst and discharge their tuberculous contents into the surrounding tissues. But even if these apprehensions are unfounded (as they are, in fact, in Dr. Calot's opinion) the success of the treatment must obviously depend upon the regenerative power of the broken vertebra. The question is whether this power is strong enough to form so much new osseous substance that the cavity in the vertebra produced by the tuberculous process may be filled up for without a sufficient formation of new osseous substance a relapse must of course occur sooner or later. Professor Lorenz therefore warns patients and medical men not to entertain too great expectations, especially as little more than a year has elapsed since Dr. Calot began his treatment, and this time is too short for the formation of a decided opinion. The procedure described by Dr. Calot consists in forced traction of the vertebral column by two assistants who seize both ends of the trunk whilst the surgeon himself produces a "brisement" of the deformity by making firm pressure on the prominent point of the vertebral column. This procedure is rather rough, and will undoubtedly be replaced by the use of instruments which will allow the force exerted in traction and pressure to be graduated according to the individual case. Professor Lorenz has hitherto treated only one case after the new method, the patient being a boy, ten years of age, who had suffered from spondylitis for three years. A year ago a slight paresis of both legs developed, sensibility and the control of the bladder and rectum remaining normal. There was no pain and the boy's general state was comparatively good. The "redressement" was performed strictly in accordance with Dr. Calot's directions, chloroform being administered during the operation. Professor Lorenz found it easy to straighten the curvature and to apply the plaster bandage; but when the patient recovered from the anæsthesia there was total paralysis of the lower extremities, together with anuria and paralysis of the rectum. Control of the bowels and bladder was regained after a fortnight, but the paraplegia still persists. The plaster bandage was, of course, at once removed, and the curvature is now, two months after the operation, nearly the same as before. Professor Lorenz is far from judging the method by the result of only one case, but obviously the operation is not so harmless as its author alleges.—The same subject was recently discussed at a meeting of the Medical Society of Hamburg. Professor Krause mentioned that Dr. Calot in thirty-seven cases had only once observed a slight paresis following the operation, and he suggested some modifications of the plaster bandage, by which it might be made less irksome to the patient. He allows patients to leave their beds very soon, a matter which is very important for their general health. Two cases were shown. One of these patients was a girl, six years of age, with lumbar spondylitis and a chronic pelvic abscess on the left side. The abscess was treated by puncture and injections of iodoform. The "redressement" required fifty minutes, considerable force being necessary to overcome the deformity, and the application of the bandage occupied nearly the same time. The patient could leave her bed after three days. The other patient was a boy, aged ten years, and the operation was finished in twenty minutes. Both patients were shown to the society and were able to walk freely with the bandage. In the discussion Dr. Kümmel stated that one of his cases, a child, was insensible for three days after the operation, but eventually recovered and now felt quite well. He proposed the adjournment of the discussion for a few months till more ample experience should be accumulated.

Nov. 15th.

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ROME.

(FROM OUR OWN CORRESPONDENT.)

The Italian Commission on the Pestis Bubonica (concluded).

PROFESSOR LUSTIG and his colleagues arrived in Bombay on June 12th to find an exacerbation of the epidemic owing to the monsoon and torrential rains, and, loyally aided by the British authorities, they lost no time in utilising their opportunities. Besides attending assiduously at the hospitals they put their services to the test at the Veterinary College, and the experiments conducted there by Dr. Galeotti and Dr. Malenchini yielded satisfactory results. "Only the apes not treated with the serum died after three or four days from the plague," according to Professor Lustig. The distrust of serotherapy on the part of the natives, both professional and lay, restricted its application only to typical cases in the foci of recent infection and in those forms held by the local physicians to be especially grave; and here, again, Professor Lustig claims to have "scored a distinct success." The effects of the serum, he says, revealed themselves after six hours; the high fever subsided, the "smania" (excessive agitation of the body) ceased, the delirium disappeared, and a general improvement set in. "The bubbone" after the second or third injection gave no more pain, a condition of "benessere" (well-being) ensued, and convalescence was less protracted and debilitating than in the cases, not frequent, in which the patient made a natural recovery. Out of thirty typical cases of the pestis bubonica subjected to his serum treatment, only four, says Professor Lustig, died. The serum, moreover, produced of itself no malady whatever. It is, he admits, inefficacious when the bacilli of the pestis have in millions penetrated the torrent of the circulation—this latter taking place between the fifth and seventh day of the disease. So much for the cure. As to the prophylaxis, "the preservative vaccinations," he says, "could not be executed in a crucial manner in a country like India, with a population rootedly prejudiced against it; and from operations among persons like Europeans, Neo-Christians, and Parsees, who are much less liable to the pestis than the Hindoos, no certain or decisive data could be obtained. And even when numerous vaccinations were affected, how could we know whether they had been efficacious or for how long a time? ..... I thought that if we wanted to assure ourselves of the efficacy of our preventive vaccine and to bring it home to the mind of others we ought to try it on man in such circumstances only as admitted of our 'vaccinating' all the individuals who were in contact, direct or indirect, with the plague-stricken in the most virulent period of the infection. This opportunity I had at Poona, where the pestis having broken out in a native regiment, they were all, together with their families, isolated in a place of observation. But of this opportunity I could not avail myself because the military authorities did not think it prudent to oblige, contrary to custom, Hindoos and Mahometans to undergo operations which excited their misgiving and discontent. The biological affinities between the ape and man and the identity of the *forma morbosa* between them counselled our resolving the problem of immunisation by utilising apes. My two colleagues, Dr. Galeotti and Dr. Malenchini, to whom the experiments were entrusted, with the help of the assistants of the British School, succeeded in demonstrating that our vaccinal practice preserves those animals in an absolute manner from the pestis even when most virulent, while the same apes concurrently infected with the same quantity of pestiferous matter and through the same channels, but not vaccinated, died without exception. How long," continues Professor Lustig, "does the immunity remain effective? Certainly a month. Whether longer, and how much longer, our experiments now proceeding will determine. Having demonstrated," he adds, "the curative efficacy, even in man, of the serum prepared by us we would gladly have extended the use of it on a larger scale; but for us life in India was costly, as also was the preparation of the serum, and our sojourn had to close in two months. The object of our mission was, however, attained." Professor Lustig concludes his report by illustrating the uphill fight maintained by medical science in India against native obstruction. England has to combat self-styled "reformers" who ostensibly adopt her innovations but secretly neutralise them, using for their purpose the immense leverage provided them by religious superstition. This vindication of our efforts by Professor Lustig will be read with interest at a time when representatives of other continental powers are the reverse of charitable in criticising our methods.

Nov. 14th.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the First Examination of the Board under the "Four Years Regulations":—

Materia Medica:

Beasley, Ernest Cecil Watkins.
Braidwood, Thomas Lithgow.
Claridge, William Walton.
Courtenay, Frederick William Edward.
Hughes, John Worthington.
Jones, Thomas.
McCarthy, Thomas.
Morris, Richard Clayton.
Williams, Penry Garnons.

The following gentlemen passed the necessary examination of the Board in the subjects indicated under the "Five Years Regulations":—

Part I., Chemistry and Physics:—

Ashton, John Hilton.
Bent, Sidney Charles Henry.
Bradley, Charles Reginald.
Browne, William Walker.
Butcher, Harry Hendy.
Cauper, James.
Cowper, Claude Marriott Lovell.
Crofts, Arthur Douglas.
Dix, Charles.
Elwood, William Henry.
Ferguson, Lionel Cecil.
Goldie, Walter Leigh Mackinnon.
Harvey, Arthur George.
Higgins, James Gilkinson.
Hollist, Gerald Wethereli Capron.
Ide, Harry.
Jacques, Harold.
Keir, John Duncan.
Latham, Thomas Jones.
Lawry, Richard Coger.
Lemon, Charles John.
Margetts, Horace Palmer.
Martin, William.
Mummery, Norman Howard.
Murdoch, Horace Thomas Thorne.
Oades, Geoffry Smith.
Paget, Walter Gray.
Pallant, Santiago Luis.
Paterson, Edward Haldane.
Poyser, Richard Cruikshank.
Smith, Frank Wybourn.
Spalding, Archibald Denize.
Van Dyk, Adriaan Francois.
Waddell, Hugh.
Wallis, Harold Wishaw.
Wilmot, Reginald Cameron.

Part II., Practical Pharmacy:

Baker, Dodington George Richard Sherston.
Bannerman, Charles Harold.
Barnes, George.
Blake, Percy Ryall.
Boyle, Henry Edmond Gaskin.
Butler, Archibald.
Cheese, Frederick William.
Clark, John Wilders Hambly.
Crowther, Sydney Nelson.
Ekins, Charles Maxwell.
Elworthy, Henry Herbert.
Evans, Edward.
Gauld, Reginald.
Griffith, Idwal.
Grimwade, Alfred Sheppard.
Harris, Henry Arthur Clifton.
Higgins, Alexander George.
Hobbs, Albert Remington.
Hope-Simpson, Adam Pearson.
Hutchinson, George Arnold.
Kennard, Douglas Frederick.
Latham, Godfrey Holland.
Nourse, Arthur William.
Pinker, Henry George.
Randolph, William Henry.
Roche, Nelson Joseph.
Ross, Hugh Campbell.
Samuel, David.
Smith, Francis Maylett.
Soper, George Bertram Spencer.
Stolterfoth, Charles Sigismund.
Thompson, Reginald.
Turtle, Godfrey de Bec.
Vores, Cyril Preston.
Wells, John.
Wood, Frederick Joseph.

Part III., Elementary Biology:

Arnould, Loris Arthur.
Beadel, Algernon James.
Crampton, Walter.
Fullagar, Walter Swainson.
Hughes, Geoffrey Wallace Grainger.
James, Reginald Valpy.
Jones, Alfred Lancelot.
Keed, Charles Russell.
McCowen, William Terrance.
Oakeley, Arthur Eckley.
Paterson, Edward Haldane.
Sansom, Bertram Eli.
Snell, John Percy Brooking.
Tatchell, William Arthur.
Thornton, Edward Newbury.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following are the arrangements for the Final Examination for the Fellowship, for which forty-five candidates have entered their names, viz.:—

Monday, Nov. 22nd.—Written Examination, 1.30 to 5.30 at Examination Hall.

Tuesday, Nov. 23rd.—Clinical Examination, 2.30 to about 5.30 P.M. at Examination Hall.

Wednesday, Nov. 24th.—Operations, 1.30 to about 6 P.M. at Examination Hall.

Thursday, Nov. 25th.—Surgical Anatomy, 2 to 4.15 p.m. at Examination Hall.

Friday, Nov. 26th.—Pathology, 5 to 7.30 P.M. at Royal College of Surgeons.

Saturday, Nov. 27th.—Pathology, 5 to 7 P.M. at Royal College of Surgeons.

All candidates will be required to attend on Monday, Tuesday, Wednesday, and Thursday, and on Friday or Saturday.

FOREIGN UNIVERSITY INTELLIGENCE. — *Berlin:* Dr. Hermann Munk, Extraordinary Professor of Physiology, has been promoted to the rank of Honorary Ordinary Professor.—*Cracow:* Dr. Léon Wachholz, Extraordinary Professor of Forensic Medicine, has been promoted to an

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Ordinary Professorship.—*Gratz:* Dr. Alfred Kossler has been recognised as *privat-docent* of Internal Medicine.—*Lemberg:* Dr. Oscar Widmann has been recognised as *privat-docent* of Internal Medicine, and Dr. Gustav Piotrowski as *privat-docent* of Physiology.—*Prague (Bohemian University):* Dr. Wenzel Rubeska, *privat-docent* of Midwifery and Gynæcology, has been promoted to an Extraordinary Professorship.—*Utrecht:* Dr. H. Zwaardemaker has been appointed Professor of Physiology in succession to Dr. Engelmann.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—An examination for the certificates in psychological medicine issued by this association will be held in London, Edinburgh, Glasgow, Aberdeen, and Dublin in December. The exact date has not yet been fixed, but will be duly notified in our columns. At least fourteen days' notice must be given by intending candidates to Dr. Spence, Burntwood Asylum, Lichfield, who is the registrar of the association.

FREEMASONRY.—*The Rahere Lodge, No. 2546.*—An emergency meeting of the Rahere Lodge, No. 2546, was held at Frascati's Restaurant on the evening of Nov. 9th, Bro. W. J. Walsham, W.M., being in the chair. Messrs. Cripps Lawrence, John Adams, Trechmann, and Westbrook were initiated into Freemasonry by Bro. Godson. Bro. Surgeon-Major J. G. Harwood, M.S., and Bro. Dr. M. A. Haviland, of Penang, Straits Settlements, were elected joining members. Bros. McLean, Haines, Sargant, Matthews, and Shewell were admitted to the third degree by the W.M. Thirty-four members with their guests afterwards dined together.

LITERARY INTELLIGENCE.—Commencing with the New Year, Messrs. John Wright and Co., Bristol, will be the European publishers of *The Laryngoscope*, a monthly journal of sixty-four pages devoted to diseases of the nose, throat, and ear. It is the official organ of the New York Academy of Medicine, laryngological section; the American Laryngological, Rhinological and Otological Society, southern section; and the Western Otological, Laryngological and Rhinological Association. In the new volume it is intended that the British contributions shall form a more prominent feature than heretofore. The price is 1*s.* per month, or 10*s.* per annum, post free.—The Rebman Publishing Company have ready for early publication a small book by Mr. D'Arcy Power entitled "Some Points in the Anatomy, Pathology, and Surgery of Intussusception," being the Hunterian Lectures for 1897 delivered at the Royal College of Surgeons. They will also issue next week Dr. Alexander Morison's new book on "Cardiac Failure and its Treatment, with especial reference to Baths and Exercises," which has been unavoidably delayed in the press.

PRESENTATIONS TO MEDICAL MEN.—In the medical officer's room at the Plymouth municipal buildings, on Oct. 29th, Mr. F. M. Williams, L.R.C.P. Edin., M.R.C.S. Eng., D.P.H. (the medical officer of health), in the presence of the staff of the Sanitary Committee, presented Mr. J. H. S. May, M.R.C.S. Eng., L.S.A., J.P., who has been for several years chairman of the Sanitary Committee, with an illuminated address and a silver bowl bearing the following inscription: "Presented to J. H. S. May, Esq., J.P., by the staff of the Sanitary Committee on his retirement from the Plymouth County Council, October 31st, 1897."—Mr. James Fletcher, M.B., C.M., D.P.H. Aberd., has been presented with a silver-mounted dressing-bag by the members of the nursing and working staff of the City Hospital, Aberdeen, as a mark of their appreciation of his services for two years as resident physician and lecturer.—A complimentary dinner was given at Weston-super-Mare on Oct. 27th to Mr. G. B. Fraser, M.R.C.S. Eng., L.S.A., who is relinquishing the captaincy of the volunteer fire brigade after having held the appointment for a considerable period. During the evening Mr. Fraser was presented with a pair of silver candlesticks.—At a meeting on the 5th instant of the Dunston Colliery Ambulance Classes in the board schools, Dunston, for the purpose of presenting the successful candidates with medallions or certificates, Mr. A. A. Abraham, L.R.C.S. Irel., of Gateshead, was the recipient of a meerschaum pipe from the members of the classes.—At the Conservative Club, in Cardiff, on the 9th inst., a presentation was made to Mr. Edward Treharne, L.R.C.P. and S. Edin., J.P., in recognition of his services as chairman of the Cardiff Conservative Association for eight years, from 1889 to 1897. The presentation consisted of three silver fruit and flower bowls, candle-sticks, and a pair of entrée dishes.

HENSHAW'S BLIND ASYLUM.—Some changes are proposed in the scope and management of this old and important institution for the blind. At the quarterly meeting of the trustees and board of governors held on the 3rd inst. it was mentioned that there were now 202 inmates, the largest number ever reached, and the asylum "was taxed to its utmost capacity in housing and instructing them." Of these 92 were children. The board considered it of the utmost importance to admit children to be educated and all applications for them had been granted. Men are kept in the asylum for a few years only until they have learned a trade when they go out and earn their own living. The benefits of the asylum are not confined to Manchester, for of seven applicants elected at the meeting two were from Macclesfield. All these were children, the eldest not being more than sixteen. The board considered several additions and alterations in the scheme of the charity for which it was decided to ask the sanction of the Charity Commissioners. One was that the age for admission "be not less than five years instead of nine." Another was that the board of governors should have power to grant pensions or subsidies to blind persons. It was pointed out that this was done in Yorkshire institutions, in York, Leeds, and Bradford, and the pensions granted were received by about 2000 persons. This has, indeed, virtually been done at the Old Trafford institution, and the board "were now going to the Charity Commissioners to legalise what they had been doing and ask at the same time for some scheme more comprehensive and elastic" than the present one. We may hope that their beneficent illegality will be pardoned. Cases occur where persons become blind in following their avocations and if they wished to live with their friends it would be a hardship for them to be kept in the asylum. It appears, also, that elderly people can be boarded out for less than they cost in the institution and the space gained by the removal of the old people can be utilised for children for educational purposes. The pensions and subsidies are frequently before the board for supervision and can be cancelled or continued at discretion. The meeting also approved of an application for investing the board of governors with "power to purchase land or buildings for the extension or development of the objects of the charity."

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—At a meeting of this society held on Oct. 29th Dr. Dundas Grant, the President, showed three cases of Frontal Headache of Nasal Origin. The first was dependent on frontal sinus disease. The patient was a man, aged twenty-eight years, who complained of left frontal headache and discharge from the left nostril. Exploration of the maxillary antrum yielding a negative result the anterior part of the middle turbinal was removed, a Hartman's tube was introduced into the frontal sinus through the natural orifice, and a 1 per cent. solution of menthol was injected by means of a syringe. The headache had diminished but not yet disappeared. The second case was dependent on sphenoidal sinus disease. The patient was a woman aged twenty-nine years. A slight degree of relief was obtained by an incomplete removal of polypoid outgrowths from the middle turbinal. Complete relief had been obtained on a later occasion, when during syringing a mass of polypoid growth detached itself from the interior of the nose and was found to be growing from a plate of bone which came away with it. A large opening was then found leading into the sphenoidal sinus and the plate of bone was obviously the anterior wall of this cavity. The third case was due to suppuration in the antrum of Highmore. The patient was a woman aged fifty-one years. Mr. Lennox Browne and Mr. Marsh made some remarks on these cases.—Mr. Wyatt Wingrave showed a case of Aphonia with Paralysis of the Tensors of the Vocal Cords in a man, aged twenty-five years, who suffered from sudden loss of voice for four weeks and huskiness for twelve months, with slight cough, but no expectoration; in other respects he expressed himself as being in perfect health. Laryngoscopic examination showed slight peri-arytenoid swelling extending to the ventricular bands. The interrupted current with vocal drill quickly restored the voice, which was now strong but deep in tone and somewhat uncertain. Mr. Bark, Dr. Whistler, and others took part in the discussion.—The Presidential address on Some Lines of Progress in Laryngology, Rhinology, and Otology was delivered by Dr. Dundas Grant, who then showed a series of four cases of mastoid operation.—Mr. Wyatt Wingrave showed a case of Tuberculous Disease of the Middle-ear complicated by Optic Neuritis

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occurring in a woman, aged twenty-five years, who had suffered from a painless discharge with deafness from both ears since infancy, and whose family history was strongly tuberculous. On Aug. 30th last she noticed dimness of vision in the right eye, and in three days became totally blind in that eye.

SUPERANNUATION OF A MEDICAL OFFICER.—At the meeting of the Bath Board of Guardians held on Nov. 3rd it was decided to grant a superannuation allowance of £36 per annum to Mr. Frederick W. Hanham, L.R.C.P. Edin., L.F.P.S. Glasg., who has just resigned the post of medical officer to the fourth district of the Bath Union, after having held the appointment for twenty-seven years.

MUNICIPAL MATTERS IN BRISTOL.—At the meeting of the enlarged Bristol Town Council, held on Nov. 9th, Mr. F. Richardson Cross, M.B. Lond., F.R.C.S. Eng., whose nomination we have already announced was unanimously elected High Sheriff; Mr. J. Hancocke Wathen, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., was elected an Alderman of the city; and Mr. Colston Wintle, L.R.C.P. Lond., M.R.C.S. Eng., was appointed on the new Health Committee of the council.

UNIVERSITY OF CAMBRIDGE.—At the Congregation on Nov. 11th, when the Archbishop of Canterbury and the Lord Chief Justice were admitted to honorary degrees, the following medical degrees were conferred:—Doctor of Medicine: G. J. K. Martyn, B.A., and J. R. Carver, M.A. Bachelor of Medicine and Bachelor of Surgery: A. E Porter, B A.—By the will of the late Dr. Joseph Gedge, who died in 1870 while with Sir Samuel Baker at Khartoum, a sum of £1000 has at length come to the University for the establishment of a biennial prize for original research in physiology, open to graduates of the University.—Mr. Hubert Higgins, B.A., M.R.C.S. Eng., L.R.C.P. Lond., one of the demonstrators of human anatomy in the University Medical School, was on Tuesday elected assistant-surgeon to Addenbrooke's Hospital in the room of Mr. Douty, resigned.

DIPHTHERIA IN LONDON.—During the week ended Nov. 6th there were registered 59 deaths from diphtheria in the county of London, against 45, 55, and 65 in the three preceding weeks. The 59 deaths were 11 in excess of the average of the corresponding weeks of the decennium 1887-96, and with one exception were of persons under twenty years of age. Between the ages of one and five years 37 deaths occurred. Seven deaths were of persons residing in Battersea; Mile End Old Town and Poplar were each credited with 5 deaths; St. Pancras and Newington each with 4; and Hackney, Lambeth, and Camberwell sanitary areas each with 3 deaths. There were 1056 cases of diphtheria in hospital at the close of the week, and 164 fresh admissions during the week. In the outer ring there were 17 deaths registered from diphtheria, of which 6 occurred in West Ham and 4 in Dartford registration districts. In the week ended Nov. 13th the registered deaths from diphtheria in London further fell to 46, the corrected decennial average being 51. Five deaths belonged to Poplar; Kensington, St. Pancras, Camberwell, and Wandsworth were each credited with 4 deaths; and Fulham, Clerkenwell, and Battersea sanitary areas each with 3 deaths. All the 46 deaths were of persons aged under twenty years, and 28 occurred in children aged from one to five years. The admissions to hospital during the week numbered 149, and 1066 persons remained under treatment at the close of the week. In the outer ring the registered deaths rose to 26, of which 10 occurred in Edmonton, 4 in Dartford, 3 in Hendon, and 3 in West Ham registration districts.

BOOKS, ETC., RECEIVED.

APPLETON, D., AND COMPANY, New York.
Lectures on Angina Pectoris and Allied States. By W. Osler, M.D. 1897.

BALE, J. AND SONS, Great Titchfield-street, London, W
Anatomical Lecture Diagrams. Price 2s. 6d. and 5s.

BAUERMEISTER, F., West Nile-street, Glasgow.
Neue Untersuchungen zur Pocken- und Impf-frage. Von Dr. H. Bömg. 1897.

BIGGS AND CO., Salisbury-court, Fleet-street, London, E.C.
House Drainage Manual: A Guide to the Design and Construction of Systems of Drainage and Sewage Disposal from Houses. By William Spinks. Illustrated. 1897. Price 5s.

CARRÉ, G., ET C. NAUD, Paris.
Le Torticolis et son Traitement. Par Dr. P. Rédard. 1898.

CLAY, W. F., Teviot-place, Edinburgh.
Medical Diagnosis: A Manual of Clinical Methods. By J. J. G. Brown, M.D. Fourth Edition. Illustrated. 1897. Price 9s.

DORNAN, WM. J., Philadelphia.
Transactions of the American Gynæcological Society for the year 1897. Vol. XXII. 1897.

HOGG, JOHN, Paternoster-row, London.
Cookery for Invalids and Others. By Lizzie Heritage. Price 2s. 6d.

IDEAL PUBLISHING UNION, Farringdon-street, London.
Vegetarian Jubilee Library, edited by C. W. Forward. Vol. VI. The Gospel of Humaneness. 1897. Price 1s.

INNES, A. D., AND CO., Bedford-street, London.
Inspector-General Sir James Ranald Martin, C.B., F.R.S. By Surgeon-General Sir Joseph Fayrer, Bart., M.D. 1897. Price 6s.

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., Charing-cross-road, London.
Studies in Psychical Research. By Frank Podmore, M.A. 1897.
The Elements of Hypnotism: the Induction, the Phenomena, and the Physiology of Hypnosis. By Ralph H. Vincent. Second Edition. Illustrated. 1897.

LEWIS, H. K., Gower-street, London.
The Principles of Bacteriology. By A. C. Abbott, M.D. Fourth Edition. Illustrated. 1897. Price 12s. 6d. net.
Mastoid Abscesses and Their Treatment. By A. Broca, M.D., and F. Lubet-Barbon, M.D. Translated and edited from the French by H. J. Curtis, B.S., M.D. Lond., F.R.C.S. Illustrated. 1897. Price 6s.

LONGMANS, GREEN, AND CO., London.
Transactions of the Clinical Society of London. Vol. XXX. 1897.

MACMILLAN AND CO., London.
Constipation in Adults and Children. By H. Illoway, M.D. 1897. Price 17s. net.
A System of Medicine. By Many Writers. Edited by T. C. Allbutt. Vol. IV. 1897. Price 25s. net.
A Text-book of Physiology. By M. Foster, M.A., M.D., assisted by C. S. Sherrington, M.A., M.D. Seventh Edition. Illustrated. Part III. 1897. Price 10s. 6d.
Mediterranean, Malta, or Undulant Fever. By M. L. Hughes. 1897. Price 7s. 6d.

PRINTED FOR THE ASSOCIATION, Philadelphia.
Transactions of the Association of American Physicians. Twelfth Session. May, 1897. Vol. XII. 1897.

REBMAN PUBLISHING COMPANY, Adam-street, Strand, London.
A Pictorial Atlas of Skin Diseases and Syphilitic Affections in the Museum of Saint Louis Hospital, Paris. Edited by J. J. Pringle, M.B., F.R.C.P. Part XII. 1897. Price 10s. 6d.

SANITARY PUBLISHING COMPANY, Fetter-lane, Fleet-street, London.
The Purification of Sewage and Water. By W. J. Dibdin, F.I.C., F.C.S. 1897. Price 21s.

SCIENTIFIC PRESS, Southampton-street, Strand, London.
Burdett's Official Nursing Directory for 1898: a Directory of Nurses. By Sir Henry Burdett, K.C.B. First year. Price 5s.

UNWIN, T. FISHER, Paternoster-buildings, London.
Masters of Medicine: William Harvey. By D'Arcy Power, F.S.A., F.R.C.S. Eng. 1897. Price 3s. 6d.

VOSS, L., Hamburg und Leipzig.
Atlas der Syphilis und Syphilisahnlichen Hautkrankheiten, für Studirende und Aerzte. Von Dr. M. Chotzen. Hefte 3 and 4. 1897.

The Every Hour Diary, 1898: a full week visible at once; and Eason's Penny Diaries, indexed, for the year 1898 (Eason and Son, Middle Abbey-street, Dublin). — Christmas and New Year's Cards and Calendars, Booklets, &c., for 1898 (Raphael Tuck and Sons, Coleman-street, London, E.C.).—Report of an Investigation of the Epidemic of Malarial Fever in Assam, or Kala-azar; by L. Rogers, M.B., B.S. Lond., F.R.C.S. Eng. (printed at the Assam Secretariat Printing Office, Shillong, 1897).—The Journal of Anatomy and Physiology; October, 1897; Part I., Vol. 32; New Series, vol. 12; illustrated (Chas. Griffin and Company, Exeter-street, Strand); price 6s.—Letts's Diaries and Almanacks for 1898; Office Diaries, two editions; Medical Diaries, two editions; Pocket Diary and an Almanac; and One Day Pocket Diary and an Almanac (Cassell and Company, London).

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BARKER, GORDON C., M.D. Brux., M.R.C.S., has been appointed Anæsthetist to the Brighton and Hove Hospital for Women.
BEDDARD, A. P., M.A., M.B., B.C., M.R.C.P., has been appointed Assistant Physician to the West London Hospital.
BOND, F. T., M.D. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Thornbury Rural District Council.

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BUTLER, C., M.D. Brux., M.R.C.S., L.R.C.P., has been appointed Anæsthetist to the Samaritan Free Hospital for Women and Children, Marylebone-road, London.

BYERS, W. GORDON M., M.D., C.M., has been appointed Junior House Surgeon to the Royal London Ophthalmic Hospital, Moorfields, E.C.

CAIRNS, W. M., M.B., C.M. Edin., has been appointed an Honorary District Medical Officer to the Ladies' Charity and Lying-in Hospital, Brownlow Hill, Liverpool.

CALDERWOOD, GEORGE, M.D. Glasg., has been re-appointed Medical Officer of Health by the Egremont Urban District Council.

CONDON, F. W., F.R.C.S. Irel., has been appointed a Visiting Surgeon to the Sheil Hospital, Ballyshannon.

CRRIGHTON, R. H., B.A., M.B., M.A.O.R.U.I., has been appointed a Visiting Surgeon to the Sheil Hospital, Ballyshannon.

CROWTHER, THOS., M.D. Aberd., M.R.C.S., has been re-appointed Medical Officer of Health by the Midgley Urban District Council.

DARBY, H. C., L.R.C.P., L.R.C.S. Edin., has been appointed a Medical Officer by the Lye Urban District Council.

DIXON, T., M.B., B.S. Durh., has been appointed Medical Officer of Health by the Barndon Urban District Council.

DONALD, HUGH CALLIGAN, M.B., C.M., F.R.C.S. Edin., has been appointed Acting Surgeon to the Infirmary, Paisley.

FALLOWS, J., L.R.C.S. Edin., has been re-appointed House Surgeon to the Royal Ear Hospital, Soho, London.

GLASSON, C. J., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer by the Joint Committee of the Ellesmere Urban and Rural District Councils.

HOPE, GEO., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed Medical Officer of Health for the Greenford Urban Sanitary District.

KELLY, DANIEL, L.R.C.S. Irel., L.R.C.S. Edin., has been appointed a Resident Medical Officer to the Sheil Hospital, Ballyshannon.

KNAPP, E. M. M., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Hereford District Council.

LATHAM, ARTHUR, M.A., M.B., B.Ch. Oxon., M.A. Cantab., has been appointed Assistant Physician to the Victoria Hospital for Sick Children, Chelsea.

LATTER, CECIL, M.D., B.C., B.A. Cantab., has been appointed Honorary Medical Officer to the St. Andrew's Convalescent Home, Folkestone.

LITTLE, JAMES, M.D. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Maryport Urban District Council.

MACLENNAN, D. N., M.D. Canada, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Senior House Surgeon to the Royal London Ophthalmic Hospital, Moorfields, E.C.

MACLEOD, HAROLD H. B., F.R.C.S. Edin., L.R.C.P. Lond., has been appointed Surgeon to the Salop Infirmary, vice William Eddowes.

MORETON, REGINALD, L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer to the Chester Infirmary.

MORGAN, A. LUCAS, L.R.C.P. Edin., M.R.C.S. Eng., has been appointed Medical Officer for Out-door Patients to the Swansea General and Eye Hospital, vice J. S. H. Roberts.

PATON, J. H. P., M.B., C.M. Edin., has been appointed a Medical Officer to the Ayr County Hospital.

PEARCE, ARTHUR, M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health for the Salcombe (Devonshire) Urban District.

PEARCE, J. P., M.R.C.S., has been re-appointed Medical Officer of Health for Lewes.

PITT, C. WIGHTWICK, M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health for Malmesbury.

POOLE, C. C., M.R.C.S. & L.S.A. Lond., has been appointed Resident Medical Officer of the General Dispensary and Infirmary, Pontefract.

ROBERTS, J. S. H., L.R.C.P. Lond., M.R.C.S., has been appointed a Physician to the Swansea General and Eye Hospital vice J. A. Rawlings.

ROBINSON, C. A., B.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., has been appointed Assistant House Surgeon to the Royal Portsmouth Hospital, vice W. H. Farmer.

SEARLE, G. P., has been appointed a House Surgeon to the Wrexham Infirmary, vice C. E. Salt, resigned.

SHEPERD, R. J., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer of Health by the Hay Urban District Council.

SILVESTER, W. G., L.R.C.S., L.R.C.P. Edin., has been appointed an Assistant House Surgeon to the Sussex County Hospital, Brighton.

STIRK, P. H., L.R.C.P. Lond., M.R.C.S., has been appointed a House Surgeon to the Exeter Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRADFORD ROYAL INFIRMARY.—Junior House Surgeon, unmarried. Salary £50 per annum, with board and residence.

CARDIFF INFIRMARY.—Assistant House Surgeon for six months. Board, washing, and apartments provided.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Registrar for one year. Honorarium 20 guineas.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Assistant House Surgeon for six months. Board, residence, and washing provided, and an honorarium of £10 given conditionally.

DURHAM COUNTY ASYLUM.—Third Assistant Medical Officer. Salary to commence at £100 per annum, with board, lodging, &c. Applications to Dr. Smith, Superintendent, Winterton, Ferryhill.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—House Physician for six months. Board, residence, &c., provided, and an honorarium of £15 15s. given conditionally.

HUDDERSFIELD INFIRMARY.—Junior Assistant House Surgeon. Salary £40 per annum, with board, lodging, and washing.

NORTH EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch.—House Physician for six months. Salary at the rate of £80 per annum. Applications to the Secretary, City Office, 27, Clement's-lane, Lombard-street, E.C.

OWENS COLLEGE, Manchester.—Junior Demonstrator in Anatomy Salary £100, rising by yearly increments to £150.

PARISH OF LAMBETH.—Assistant Medical Officer and Dispenser for the Workhouse, Renfrew-road, Lower Kennington. Salary £100 per year, rising after two years' service to a maximum of £125 per year, with board, apartments, and washing, subject to statutory deductions. Applications to the Clerk, Guardians' Board Room and Offices, Brook-street, Kennington-road, S.E.

PARISH OF ROUSAY AND OGILSHAY, Orkney.—Resident Medical Officer. Salary £51 sterling per annum. Apply to the Clerk of the Parish Council, Rousay, Orkney.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, London.—Assistant Resident Medical Officer for four months. Salary at the rate of £50 per annum, with board, residence, and washing.

ROYAL BERKS HOSPITAL, Reading.—House Physician for six months. Salary £60 per annum, with board, lodging, and washing. Also Assistant Medical Officer for six months. Board, lodging, and washing provided, and an honorarium of 10 guineas given conditionally.

ROYAL EAR HOSPITAL, Frith-street, Soho-square, London.—Assistant Surgeon.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Non-resident Assistant House Surgeon to Out-patient Department. Salary £15 a year. Also Secretary. Salary £250 per annum.

ROYAL VICTORIA HOSPITAL, Bournemouth.—Ophthalmic Surgeon.

ST. GEORGE'S UNION, London.—Medical Officer for the Workhouse in Wallis-yard, Buckingham Palace-road, S.W., and for the No. 4 Medical Relief District of the Union. Salary as Medical Officer of the Workhouse, £50 per annum, and for the No. 4 District £150 per annum, with such extra medical fees as allowed by the Local Government Board, subject to statutory deductions. Applications to the Clerk, Clerk's Offices, St. George's Vestry Hall, Mount-street, W.

TAUNTON AND SOMERSET HOSPITAL, Taunton.—Honorary Physician.

TUNBRIDGE WELLS EYE AND EAR HOSPITAL.—Lady House Surgeon for twelve months. Salary £60, with board, lodging, and washing.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea, S.W.—Assistant Physician to the Out-patients, for three years. Also Physician to the In-patients.

UNIVERSITY COLLEGE, Liverpool.—Senior Demonstrator of Physiology. Salary £125.

WALLASEY DISPENSARY.—House Surgeon, unmarried. Applications to Mr. Wm. Heap, Mim Mount, Penkett-road, Liscard, Cheshire.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon for six months. Board, lodging, and washing in the hospital provided.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Ophthalmic Surgeon. Also Assistant Anæsthetist (honorary and non-resident). Also House Physician and House Surgeon, for six months.

WESTERN GENERAL DISPENSARY, Marylebone-road, London.—Honorary Physician.

Births, Marriages, and Deaths.

BIRTHS.

JAMESON.—On Nov. 3rd, at Titusville, Penn., U.S.A., the wife of Dr. Hugh Jameson, of a daughter.

KENT.—On Nov. 13th, at Lilliesleaf, Lenzie, Dumbartonshire, the wife of R. T. Kent, M.A. Oxon., F.R.C.S. Eng., of a daughter.

LOWE.—On Nov. 13th, at Horninglow-street, Burton-on-Trent, the wife of Walter G. Lowe, M.D., of a daughter.

REES.—On Nov. 12th, at Devonshire-street, Portland-place, the wife of Milsom Rees, F.R.C.S., of a daughter.

TAYLOR.—On Nov. 15th, at the Cottage, Cullingworth, the wife of Tom Taylor, L.R.C.P., L.R.C.S. Irel., of a daughter.

TWEEDY.—On Nov. 15th, at Abbey House, Kenilworth, the wife of Reginald Carlyon Tweedy, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

CARRUTHERS—DICKSON.—On Nov. 11th, at St. John's Church, Burton, by the Rev. C. C. Nation, M.A., Vicar, and the Rev. G. T. Carruthers, M.A., father of the bridegroom, H. J. W. Carruthers, M.D., Moody Hall, Congleton, to Mary I. K. Dickson, elder daughter of F. K. Dickson, J.P., F.R.C.P. E., Wye House, Burton. No cards.

JAMES—RICHARDS.—On Nov. 10th, at Llanstephen, Carmarthen, Gwilym Prosser James, M.R.C.S., of Pencastell, Llanelly, to Amy, eldest surviving daughter of James Richards, of Pantyrathro, Carmarthen.

WADDELOW—HARDING.—On Nov. 11th, at St. Mary's Church, Whittlesey, by the Rev. G. H. Griffiths, John Joseph Waddelow, F.R.C.S. Eng., L.R.C.P. Lond., L.S.A., A.K.C., only son of the late John Waddelow, J.P., to Laura Mary, eldest daughter of the late C. F. Harding, M.D.

DEATHS.

ARMITAGE.—On Oct. 23rd, on board s.s. *Armand Behic*, Joseph Armitage, M.B. Oxon., F.L.S., late of Emu Bay, Tasmania, aged 44 years.

INGLIS.—On Nov. 13th, in London, Alexander Inglis, M.D., M.R.C.S. Eng., L.R.C.S. Edin., of Redball and Auchendinny, Midlothian, and of Montpellier Lawn, Cheltenham, late of Worcester, aged 64 years.

KING.—On Nov. 12th, at his residence, Welford House, Hampstead, Joseph King, M.R.C.S., in his 84th year.

REYNOLDS.—On Nov. 13th, at Douglas-road, Surbiton, Robert Hewetson Reynolds, M.R.C.S., L.R.C.P. Lond., aged 30 years.

SHEPPARD.—On Nov. 13th, at Bognor, Walter George Sheppard, M.R.C.S.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (24th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (25th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (27th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (22nd).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr S. West: Case of Pyopneumothorax of Five Months' Duration Cured by Free Incision, with remarks on the General Treatment of Pneumothorax.—Dr. S. Eccles: The Mechano-therapy of Moveable Kidney.

TUESDAY (23rd).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Discussion (opened by Dr. G. V. Poore): The Prevention of Enteric Fever.

WEDNESDAY (24th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—Papers:—Dr. D Grant: The Diagnosis and Treatment of the Varieties of Dry Cancrum of the Middle Ear.—Mr. J. H. Targett: The Value of the Microscopical Examination of Uterine Curettings.

SOCIETY OF ARTS.—8 P.M. Prof. J. Douglas: Progress of Metallurgy and Metal Mining in America during the Last Half Century.

THURSDAY (25th).—HARVEIAN SOCIETY.—6.30 for 7 P.M. Annual Dinner at the Café Monico.

FRIDAY (26th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Adjourned Discussion on the paper by Mr. A. H. Tubby and Mr R. Jones on Some Cases of Pott's Curvature of the Spine treated by Immediate Reduction of the Deformity. A paper by Dr. Redard will be read and Mr W. Watson Cheyne, Mr. J. Jackson Clarke, and others will speak. Paper:—Mr. C. B. Lockwood: A Case of Radical Cure of Inguinal Hernia, Injury to the Bladder, Formation of Phosphatic Calculi, Lithotrity, Recovery.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

MONDAY (22nd).—LONDON POST-GRADUATE COURSE.—London Throat Hospital (Gt Portland-st., W.), 8 P.M., Mr. G. C. Wilkin: Syphilis as it may affect the Pharynx and Larynx.

TUESDAY (23rd).—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr Craig: Puerperal, Lactational, and Climacteric Insanities.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Drug Eruptions.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. M. Gunn: On Paralysis of the Ocular Muscles.

WEDNESDAY (24th).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: Infectious Diseases.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Fowler: The Treatment of Bronchiectasis.

EVELINA HOSPITAL (Southwark Bridge-road, S.E.).—4.30 P.M. Dr. S Fenwick: Marasmus, its Pathology and Treatment (Post-Graduate Course).

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. A. Whitfield: Medical Cases.

THURSDAY (25th).—LONDON POST-GRADUATE COURSE.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. G. Oliver: The Blood.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street W.C.).—4 P.M. Dr. L. Dickinson: Demonstration on Selected Cases.

FRIDAY (26th).—LONDON POST-GRADUATE COURSE.—King's College, 5 to 6 P.M., Prof. Crookshank: Erysipelas and Suppuration.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 18th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Nov. 12	30·00	S.W.	...	61	58	38	53	54	Cloudy
,, 13	29·69	S.W.	...	63	60	54	57	58	Raining
,, 14	29·65	S.W.	0·24	76	60	54	54	57	Cloudy
,, 15	29·95	N.E.	...	53	47	43	44	45	Overcast
,, 16	30·38	N.E.	0·15	65	55	40	42	44	Overcast
,, 17	30·11	S.W.	...	61	57	44	54	55	Raining
,, 18	30·10	S.W.	...	82	60	54	54	57	Cloudy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

ARE SECOND ATTACKS OF MEASLES INFECTIOUS?

To the Editors of THE LANCET.

SIRS,—I am inclined to believe that second attacks of measles are not infectious. My attention was first drawn to the subject by a case which occurred in my practice some fourteen years ago.

CASE 1.—A middle-aged farmer with a large family of children had what was diagnosed as a well-marked attack of measles. I quite expected that some others of the family would be attacked, but to my surprise no one else took it and I concluded I had made a wrong diagnosis. I am not certain that he had had it before, but from the cases I have seen since I am of opinion that he had.

CASE 2.—In 1895 a farmer, middle-aged, had a well-marked attack of measles. He had had measles before. He had five children, and, his being a small house, no effort was made to isolate the case, but no other member of the family took it. In 1896 there was an epidemic of measles in the village; all his five children were attacked, and he again took it in a severe form

CASE 3.—A boy, aged fourteen years, was ill in the same epidemic with his second attack and a child, aged six years, played with him, but did not take it; but six weeks after she contracted it from another child.

CASE 4.—This occurred in my practice in September last. A labourer had a well-marked second attack of measles. He had five children; two of them had not had measles, and although no extra precautions were taken neither was attacked.

I am not aware that this subject has been noticed before, but if my surmise should be correct it would be very satisfactory to be able to assure patients with second attacks that no isolation would be necessary and that there would be no risk to any other persons.

I am, Sirs, yours faithfully,

ALFRED KEBBELL, M.R.C.S. Eng.

Flaxton, York, Nov. 15th, 1897.

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"SCARLET FEVER AND THE PRACTICE OF MIDWIFERY."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 23rd it is recorded that a coroner's jury expressed their opinion "that no medical man should attend midwifery cases while he has contagious complaints in hand." They were investigating the cause of death in a puerperal woman who was thought to have contracted scarlet fever, the infection of which they supposed to be conveyed to her by the medical man who attended her. It is surely advisable that a strong protest should be made against this opinion, for it only requires to be a little fuller grown to lead to a verdict of manslaughter against some unfortunate member of our profession. In the first place, it is utterly impossible for a man in general practice to decline attending confinements or infectious or any other diseases occurring amongst his patients. If the public wishes for such extraordinary protection they must provide each family their own medical attendant, or at the public expense with medical men to attend only scarlet fever or measles or diphtheria, &c. And since all wounds and injuries, as well as diseases, accompanied by suppuration are "contagious" and liable to infect others, they also would be attended by men specially reserved for such duty—a man for each kind of bacillus in fact. Here is a *reductio ad absurdum*. It is counsel of perfection, utterly impracticable and impossible. Amongst the consultants and specialists—who should set an example to the profession and exhibit to the public the very highest excellence in practice attainable—what do we see? What physician gives up all other practice because he has seen a case of infectious disease? What surgeon refuses operations because he has a case of septicæmia? And does the gynæcologist never perform ovariotomy or consult with the practitioner who has a bad confinement until days after he has examined a cancer of the uterus? All their experience teaches them that there is practically no risk if proper measures of cleansing and disinfection are carried out. And so they teach their students and set an example to the profession. Your remark in THE LANCET of Oct. 30th is quite in accord with universal experience. "We must trust to disinfection and scrupulous care, and that these are sufficient to obviate public risk is proved to the hilt by the rarity of the spread of disease viâ the medical man." But to discuss the matter in a more thorough and careful way let us ask a few questions and see if we can find answers. In Twickenham, all the medical men are general practitioners; medical, surgical, obstetric, and infectious cases, all alike they attend. The Infectious Diseases Notification Act has been in force since 1890, so that all cases of infectious disease have presumably been known to our medical officer of health and investigated by him. He has very kindly taken some pains to look up his books and official returns to give me the following facts and figures.

Is scarlet fever often carried by medical men to other patients? During the seven years Mr. W. Marston Clark assures me that in not a single instance has he had reason to think that scarlet fever was due to infection carried by a medical man, not even to a puerperal woman.

Are puerperal women more prone to take scarlet fever than others? We used to be taught that they were, but the above answer certainly affords a strong argument for the negative. And how many cases one remembers to have read in the medical papers when puerperal women were exposed to the infection of scarlet fever in the most concentrated form and neither took the disease nor suffered in any way.

Can the infection of scarlet fever produce any other disease in puerperal women? We used to be taught that it caused often puerperal fever. Rashes are known to occur in septic disease closely resembling those of scarlet fever, measles, &c., and indeed indistinguishable from them, and no doubt many cases of septicæmia and pyæmia (not in puerperal women only) have therefore been called scarlet fever. If scarlet fever produces puerperal fever we should certainly expect to find the notifications of the latter particularly numerous when the former is epidemic. Mr. Marston Clark has given me the following figures:—

Year.	Scarlet fever.		Puerperal fever.	
	Cases.	Prevalent in month of	Cases.	—
1890	43	March	2	1 each in January and August.
1891	38	September and October	3	1 each in January, February, and March.
1892	59	July and October	4	1 each in January, April, July, and August.
1893	187	Epidemic from June to September, 114 cases	3	2 in January and 1 in August.
1894	43	No time prevalent	3	1 each in February, March, and September.
1895	28	Ditto	2	1 each in March and December.
1896	44	None in first quarter, mostly in third	4	1 each in February, March, September, and December.

From this it will be seen that puerperal fever has no obvious connexion with scarlet fever. What does cause puerperal fever? That is a very disputed and unsettled question. Is it merely septic fever due to pyogenic bacteria or sewer gas? Has bacteriology helped to settle it? I cannot find any satisfactory account in any book I have, but the British Institute of Preventive Medicine recommends strongly the injection of antistreptococcic serum, and hence we may conclude that the authorities there are satisfied that many cases are of pyogenic origin. If this is the case, the great danger of the puerperal woman is from the surgical and not from the medical part of practice. It points to the necessity of extra vigilance and care in maintaining aseptic and antiseptic surgery, and in thorough disinfection wherever pus in any form is liable to contaminate the hands or clothes on the part of all those who are likely to be called to a confinement.

I hope that others will add arguments or facts in proof of these contentions—that no practical way of escaping from attending confinements or infectious or any other class of cases by the general practitioner has been proposed or is possible; that medical men rarely carry infectious disease; and that they should not be liable to actions or criminal charges if they have shown proper care and taken reasonable precautions in infectious illness any more than they are when signing lunacy certificates. I am, Sirs, yours faithfully,

Nov. 16th, 1897. H. HOWARD MURPHY, M.D. Cantab.

Mr. L. F. Dods.—The name of the person referred to is not to be found in either the current Medical Register or Medical Directory. He is probably the owner of the name which was removed from the Register some little time since.

COUNTY COUNCILS AND SEWAGE.

WE take the following from the *Leeds Mercury* of Nov. 11th:

> "At the meeting of Barnsley Rural District Council yesterday reference was made to the fact that Staincross police-station was without a supply of water, and it was stated that the County Council had built police-stations at Cudworth and Staincross, totally ignoring the levels of drains and the provision of water-supply, so that the former could not be drained, whilst at the latter station the people had to fetch water a distance of half a mile. A sewage scheme for Carlton township was approved, and plans ordered to be prepared. A scheme on the septic (*sic*) system, to cost about £4000, exclusive of the land, was approved."

LEAD POISONING AND "DR. PRIESTLEY'S COMPOUND."

To the Editors of THE LANCET.

SIRS,—I beg to call your attention to two cases of lead-poisoning which have come under my notice, and which were due, in my opinion, to the partaking of the above proprietary mixture. The first case was that of a woman, aged thirty-one years, whom I saw on Sept. 14th, 1897. She complained of loss of appetite, severe pains in the stomach and in the calves of the legs, and of sickness, headache, and constipation. On examination I found she had a well-marked "wrist-drop," and a prominent blue line on the gums at their junction with the teeth. I further noticed that the pains referred by the patient to the stomach were really at the umbilicus, and were relieved by pressure. On inquiry I found the water-supply was above reproach, and I could not detect any likely source of lead in my patient's diet. She, however, told me that prior to consulting me she suffered from indigestion and had taken two bottles of "Dr. Priestley's Compound," obtained from a local druggist. Under treatment with opium, sulphate of soda, and iodide of potash she recovered completely. My second case is under my treatment at the present time. She is a girl aged nineteen years, who consulted me on Nov. 2nd for the same symptoms as my other case, but the loss of appetite was more marked and the debility greater. I found the "wrist-drop" absent, but the girl complained of a weakness in the wrist-joints. The blue line was very prominent on the gums. This patient informed me that she had taken, before she saw me, a bottle and a half of "Priestley's compound." This case I am treating like the last and the patient is progressing favourably. I brought the remaining half bottle of the mixture home with me and tested it qualitatively, and found it contained *lead*, bismuth, magnesia, soda, and ammonia. Hoping that these facts may be of interest to you and to the profession.—I remain, Sirs, yours faithfully,

WILLIAM SCOTT, M.B. R.U.I.

Kimberley and Eastwood, Notts., Nov. 13th, 1897.

Mr. F. Treece should consult his medical man.

THE PINCESI SAFETY PIN.

WE have received specimens of a modified form of safety pin known as the Pincesi Safety Pin, and consider that the alterations from the usual shape of pin constitute decided improvements. The pin is curved instead of straight, the fastening being on the convexity of the curve, so that a thicker stratum of substances can be impaled with ease than when the pin is straight. The fastening is ingeniously made to enable the point to be received into its shield from openings on both sides of the pin, thereby obviating a little annoyance that many of our readers have doubtless before now felt. For it is a common experience with medical men and nurses to find that when the ordinary safety pin has been nicely brought together and is just going to be pinned the point has not got to the side where the fastening is, and when the operator has only one hand free this occurrence is very troublesome.

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AN ENTERPRISING MALINGERER.

To the Editors of THE LANCET.

SIRS,—A man, aged about forty years, calling himself a telegraph operator and signal-fitter, has been discharged from this infirmary as an impostor. He has visited Paddington Infirmary, I know, and probably many other institutions in London are already acquainted with his history. He gives a history of having undergone an operation for ruptured bladder at Montreal, shows a linear scar from the umbilicus downwards, and does his best to simulate peritonitis with hæmorrhage from the bladder. He has learned the trick of registering tall temperatures, but during the four days he was in the infirmary he was usually content with a temperature somewhere about 102° F. It was only once 104°. I have reason to believe that he found his spectacles useful in producing his hæmaturia. There was a remarkably tender spot in the urethra about three inches from the meatus. My object in writing to you is to warn other institutions against this man. It is possible that he has nearly finished with London institutions, and that he will shortly appear in the provinces.—I am, Sirs, yours faithfully,

W. PEMBERTON FOOKS.

Brentford Union Infirmary, Isleworth, W., Nov. 15th, 1897.

P.S.—He was Alfred Waller, aged forty years, at Paddington in August last; John Goeball, aged thirty-eight years, at Isleworth.

THE OWENS COLLEGE DEBATING SOCIETY.

AT the first meeting for the session of the Owens College Debating Society the subject for discussion was Vivisection. Mr. R. A. Needham, who introduced it, dealt with the character of the opposition, and pointed out numerous cases in which vivisection had been of use both to men and animals, and argued that "the superiority of man was sufficient to justify its practice morally." He moved: "That in the opinion of this house experiments on living animals are scientifically useful, morally justifiable, and have proved of very great service in the alleviation of human and animal suffering." A full discussion took place, and an amendment was proposed and seconded, but the resolution was carried by 36 votes to 8.

W.R.—"Lectures on Medicine to Nurses." By Herbert Cuff, M.D. Lond. (London: J. & A. Churchill, 1896). "Notes on Medical Nursing." By the late James Anderson, M.D. Aberd. (London: H. K. Lewis, 1897).

A HARD CASE.

To the Editors of THE LANCET.

SIRS,—Having been a subscriber to your valuable columns I take the liberty of sending you these few lines, in which I state my case. I have been a medical practitioner in this place for more than twenty-eight years, during which period I have held most of the principal appointments. When the Settle and Carlisle railway was in construction I was appointed contract surgeon for the entire period (namely, seven years). At its completion I applied to the Midland Railway Company for the post of surgeon in this district—which I got, and held for twenty years—and had to resign this and other appointments on account of failing eyesight. I may also add that I was medical officer and public vaccinator for this district for eight years, during which period I received two grants from the Local Government Board for having given most satisfaction out of four other local medical officers. I have been totally blind for the last two years. I still hold the office of medical referee for the Prudential Assurance Company, which one year with another for the last twenty years has brought me in £3 per annum. Could you kindly inform me if there is any fund in the medical profession from which a little pecuniary assistance might be obtained under the circumstances? Apologising for the space I have taken,

I am, Sirs, yours faithfully,

REGINALD R. DUDLEY.

Kirkoswald R.S.O., Cumberland, Nov. 15th, 1897.

"SIGHT-TESTING FOR THE GENERAL PRACTITIONER."

MR. F. DAVIDSON, of 120, Great Portland-street, asks us to state that the work bearing the above title, of which he is the author, and which was noticed in THE LANCET of Oct. 23rd, is to be had only from him, and *not* from the printer, whose name we accidentally inserted as the publisher. Mr. Davidson is desirous that this announcement should be made, as his book is intended for medical men only, and not for the general public.

"WANTED A REMEDY IN SEVERE LUMBAGO."

To the Editors of THE LANCET.

SIRS,—In reply to "L.R.C.P." in THE LANCET of Nov. 13th, I can strongly recommend a mixture composed of tinctura hyoscyami, liquor potassæ and potassii nitras (say half a drachm, forty minims, fifteen grains to the ounce), to be administered every four hours for twenty-four hours and then three times a day. Locally, flannels wrung out of *boiling* water and laid on a folded sheet in bed; then *freely* sprinkled with turpentine; patient to place the lumbar region on the flannel and be well covered up. This application may be repeated every ten or fifteen minutes till the parts assume the colour of a boiled lobster. I have found these remedies to be very successful.

I am, Sirs, yours faithfully,

Nov. 16th, 1897. W. B. H.

"A DEATH FROM CIGARETTE SMOKING."

To the Editors of THE LANCET.

SIRS,—Noticing your remarks on this subject in THE LANCET of Nov. 13th we beg to call your attention to the fact that we recently tested for arsenic some cigarettes which a friend assured us had made him ill, and we found an appreciable quantity of arsenic in the tobacco. The paper was free from arsenic. We have had considerable experience in testing our colours and wall-papers for arsenic, and having for our own protection, not without great trouble, obtained a supply of reagents of absolute purity, the accuracy of our test may be implicitly relied upon. We are, Sirs, yours faithfully,

Nov. 13th, 1897. WM. WOOLLAMS AND CO.

"INVERSUS" WOOLLEN UNDERCLOTHING.

MR. D. GILBERT, of 7, Buckingham Palace-road, S.W., who submitted to us summer substances for vests and drawers which were referred to in THE LANCET of June 12th last, page 1649, has now sent to us similar garments made up in the thicker or winter substance of the same material. It may be useful to repeat that the special feature of the "Inversus" material is its exceptional smoothness and entire absence of the knots and teazles usually associated with woollen underclothing, thus meeting the difficulty of those whose skins are so sensitive as to preclude their wearing the ordinary woollen garment by reason of its irritating effect.

GOVERNMENT MEDICAL APPOINTMENTS.

To the Editors of THE LANCET.

SIRS,—I should feel obliged if you or some of your readers would inform me if there is any published book or pamphlet where one can ascertain the medical appointments which are at the disposal of the Government in its various departments. I am told that such information in a printed form exists, but my informant cannot recollect where he has seen it. I am, Sirs, yours faithfully,

Nov. 9th, 1897. AN OLD SUBSCRIBER.

*** The Medical Directory (on p. 20 of the current issue) publishes this information under the heading, "Principal Appointments held by Medical Men." Whitaker's Almanac gives supplementary information concerning some of the appointments. We do not know the book to which our correspondent alludes, but think that such a work would be very useful.—ED. L.

Edina.—Our correspondent must supply us with a more detailed account of the incident to which he refers. There is a University of Chicago which grants the degree of M.D. after a four or, at least, a three years' course.

A BREACH OF MEDICAL MANNERS.

THE *Bethnal Green News* of Nov. 13th has been sent to us by four local practitioners, and our attention has been called to an article therein which describes the virtues and capabilities of "Dr." Alfred H. Parker, who has recently, it appears, acquired a practice in the Roman-road. The article in question is illustrated by a reproduction from a photograph of its subject's "genial features" and its contents form a very fulsome advertisement of Mr. Parker, so much so that we have no hesitation in saying that if Mr. Parker supplied the *Bethnal Green News* with the necessary materials for its composition he has committed a grave breach of medical manners. It is necessary for his good name's sake that he should at once repudiate any knowledge of this article in which a distinct attempt is made to dower him with extraordinary talents to the manifest prejudice of his professional brethren whose honour, not to say whose good taste, prevents them from making similar degrading bids for public support.

During the week marked copies of the following newspapers have been received: *Wellingborough News, Devon Gazette, Accrington Observer, Bradford Observer, Scotsman, Glasgow Herald, Times of India, Pioneer Mail, Newcastle Leader, Dundee Advertiser, Colchester Mercury, Essex Telegraph, Liverpool Daily Post, Preston Guardian, Hereford Times, Eastern Morning News, Cambridge Express, West Briton Advertiser, Worcester Herald, Architect, Builder, Birmingham Gazette, Sussex Daily News, Leicester Post, Warwickshire Times, Walsall Advertiser, Yorkshire Post, Poole Herald, Northampton Herald, Isle of Wight Observer, Bridgwater Independent, Grimsby News, Bristol Mercury, Westminster Gazette, Lincoln Mercury, Western Morning News, Portsmouth Times, Leeds Mercury, Brighton Gazette, Sanitary Record, Dumfries and Galloway Standard, Local Government Chronicle, The Surveyor, City Press, Mining Journal, Norwich Mercury, Reading Mercury, Hertfordshire Mercury, Public Health, Engineer, Surrey Advertiser, Local Government Journal, Weekly Free Press and Aberdeen Herald, Guernsey Star, Hastings and St. Leonards Observer, Lynn Advertiser, Manchester Guardian, Loughborough Monitor Shrewsbury Chronicle, Waterford Chronicle, Cambridge Daily News, West Middlesex Herald, Northwich Guardian, Salcombe Times, Tadcaster News, Mid-Counties Express, &c. &c.*

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Communications, Letters, &c., have been received from—

A.—Mr. A. Doran, Lond.; Messrs. Allen and Hanburys, Lond; *Annales de Dermatologie et de Syphilographie*, Paris; Messrs. Arnold and Son, Lond.; Mr. C. Adams, Milford on-Lea; Mons. J. Astier, Paris; *Archives Provinciales de Chirurgie*, Paris, Editor of; Argentum, Lond.; Agram, Lond.

B.—Mr. H. Brown, Buckhurst Hill; Messrs. Bates, Hendy, and Co., Reading; Miss F. Barrow, Woking; T. B. Browne, Ltd., Lond; Messrs. Adam and Charles Black, Lond.; Mr. W. H. Brown, Leeds; Mr. W. H. Bennett, Lond.; Sir H. C. Burdett, Lond; Dr. W. C. Bailey, New Mexico; Dr. J. S. Bolton, Birmingham; Messrs. Burroughs, Wellcome, and Co., Lond.; *Berliner Wissenschaftliche Correspondenz*, Berlin; Mr. W. Bryce, Edinburgh; Dr. W. F. Brook, Swansea; Mr. H. Blau, Lond; Messrs. Blondeau et Cie, Lond.; Mr. R. Browne, Lond.

C.—Messrs. Cassell and Co., Lond.; Messrs. S. Clark and Co., Lond.; Cortland Wagon Co., Lond.; Cardiff Infirmary, Secretary of; Chelsea Hospital for Women, Secretary of; *Correspondenz-Blatt für Schweizer Aerzte*, Basle, Editor of; Dr. F. H. Carlyon, Truro; Mr. G. Cowell, Lond; *The Critic*, Editor of; Mr. F. W. Clarke, Manchester; Messrs. J. A. Carveth and Co., Toronto.

D.—Mr. F. Davidson, Lond.; Mr. L. F. Dods, Lond.; Surgeon-Capt. C. C. Duer, Rangoon; Dental Hospital of London, Secretary of; Derbyshire Royal Infirmary, Derby, Secretary of; Messrs. A. De St. Dalmas and Co., Leicester.

E.—Herr H. Engelhardt, Brunswick; Edina Lond.

F.—Dr. W. W. E. Foggie, Dundee; Miss Lucy P. Fowler, Lond.; Dr. H. Fraser, Harpenden.

G.—Mr. B. Gittins, Lond.; Miss M. McGill, Edinburgh; Messrs. T. Grant and Sons, Maidstone; Messrs. W. Gaymer and Son, Attleborough; Messrs. R. W. Greeff and Co., Lond.; General Medical Council, Lond., Registrar of; Dr. W. Gordon, Exeter.

H.—Mr. O. H. Huish, Lond.; Mr. W. Heap, Liscard; Dr. T. Hopkins, Chester; Hove, Medical Officer of Health of; Dr. J. M. Hughes, Ruthin; Hospital for Sick Children, Lond., Assistant Secretary of; Harveian Society of London, Secretary of; Mr. H. Howard, Lond; Mrs. B. Henry, Lond.; Mr. J. Heywood, Manchester; Harlech, Lond.; Hospital Reform Association, Cardiff, Hon. Secretary of; Mr. B. Henry, Ealing; Mr. H. Holman, Lond.; Dr. L. Hart, Lond.

I.—Mr. J. A. Inglis, Edinburgh.

J.—Mr. E. Jackson, Lond; Jenner Institute for Calf Lymph, Lond.; Dr. W. R. Jack, Glasgow.

K.—Mr. F. Keene, Cambridge; Mr. A. Kebbell, York; Mr. J. B. C. Kershaw, Lond.; Messrs. C. Kinloch and Co., Lond; Kronand Metal Co., Lond.; Surgeon R. A. Kirby, H.M.S. *Royal Arthur*, Portsmouth, Mr. W. H. Kesteven, Hendon; Mr. E. Kershaw, Manchester.

L.—Mr. H. A. Lane, Withington; Dr. W. Leask, Birkenhead; Dr. Glover Lyon, Lond.; Las Vegas Hot Springs, New Mexico, Medical Superintendent of; Mr. H. K. Lewis, Lond.; Messrs. Lorimer and Co., Lond.

M.—Mr. V. C. Mallan, Lond.; Mrs. Morris, Matlock; Maltine Manufacturing Co., Lond.; Messrs. Mather and Crowther, Lond.; Medical, Halifax; M.D., Lond.; Messrs. Macmillan and Co., Lond.; Members' Rights Defence Committee, Lond., Secretary of; Mr. W. L. W. Marshall, Huddersfield; Manchester Clinical, &c., Association, Secretary of; Messrs. J. T. Milliken and Co., St. Louis U.S.A.

N.—Messrs. Nicholls and Nettleton Lond.; N., Lond; National Provident Institution, Lond., Secretary of.

P.—Dr. S. Phillips, Lond; Dr. O'F. Paget, Western Australia, Pure Medic. Chem. Institut Thalkirchen, Münich; Mr. J. Pond, Norwich; Paris Fashion Co., New York, Publisher of; Messrs. Parke, Davis, and Co., Lond.; Price's Patent Candle Co., Lond., Managing Director of; Pertussis, Lond.; Mr. T. F. Pearse, Lond.

R.—Dr. R. R. Rentoul, Liverpool, Messrs. Reep, Lane, and Co., Lond; Royal Meteorological Society, Lond., Assistant Secretary of; Royal Medical Benevolent College, Lond., Secretary of, Royal Victoria Hospital, Bournemouth, Secretary of; Messrs. Robertson and Scott, Edinburgh.

S.—Mr. E. M. Swanwick, West Hartlepool; Mr. T. Smith, Lond.; Messrs. Street and Co., Piccadilly; Sanitary Institute, Lond., Council of, Dr. H. Snow, Lond.; Surgeon-Major Stokes, Lond.; Dr. R. Sevestre, Lond. Dr. F. J. Smith, Lond; Mr. W. R. H. Stewart, Lond.; Mr. W. P. Stocks, Salford; St. John Ambulance Association, Invalid Transport Corps, Chief Superintendent of; Dr. J. B. Spence, Burntwood.

T.—Dr. J. C. Taylor, Grouville; Messrs. Tebb and Co., Bristol; Miss Thoyts, Theale; Miss Turning, Rochester; Mr. F. Treece, Lond.

U.—University College, Liverpool, Secretary of.

W.—Dr. F. R. Walters, Lond.; Messrs. Witty and Wyatt, Lond.; Western General Dispensary, Lond., Hon. Secretary of; Messrs. Wm. Woollams and Co., Lond.; Messrs. John Weiss and Son, Lond.; Dr. R. T. Williamson, Manchester; Messrs. Wyckoff, Seamans, and Benedict, Lond.; Mrs. Wiseman, Lond.; *The Welshman*, Carmarthen, Proprietor of; Mr. W. W. Walter, Somerset; Mr. J. Willing, jun., Lond.

Z.—Zygoma, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Aberdeen Royal Infirmary, Clerk of; Apollinaris Co., Lond., Manager of; Assistant, Lond.; A. B., Woking.

B.—Mr. C. Butler, Retford; Mr. T. R. Baker, Walthamstow; Messrs. A. Bishop and Sons, Lond.; Bell's, Lond.; Birmingham City Asylum, Clerk of; Mrs. L. A. Brooks, Grays; *Buxton Advertiser*, Proprietor of; Messrs. Bullock and Co., Lond.; B. F., Lond.; Dr. F. C. Brodie, Sandown; Messrs. Burgoyne, Burbidges, and Co., Lond; Mr. W. S. Battiss, Dorking; Mr. E. S. Bishop, Manchester.

C.—Mr. E. J. Carter, Tunbridge Wells; Messrs. J. W. Cooke and Co., Lond.; Messrs. Curry and Paxton, Lond; Cellular Clothing Co., Lond.; Children's Hospital, Nottingham; Dr. W. S. Carroll, Hafod; Cheveron, Lond.; Messrs. T. Christy and Co., Lond.; Confidence, Lond.; Mrs. A. E. W. Clarke, Sestri Levante; Mr. H. E. Counsell, Oxford; Confidence, Ottery St. Mary; Mr. C. Crowden, Wisbech; Charing-cross Hospital Medical School, Secretary of; Messrs. Condy and Mitchell, Lond.

D.—Mr. G. Downes, Torquay; Dr. G. H. Drury, Halifax; Mr. N. Daly, Kingston Bagpuze; Dispenser, Canterbury; Doctor, Lond.; Digamma, Lond; Durham County Asylum, Winterton, Steward of; Dunstan, Lond.; Dr. Dodd, Dufftown; Delta, Lond.; Messrs. Down Bros., Lond.

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An Oration

ON

EMPIRICISM OR SCIENCE?—ANÆSTHETICS, 1847–1897.

Delivered before the Society of Anæsthetists on Nov. 18th, 1897,

BY DUDLEY W. BUXTON, M.D., B.S., M.R.C.P. LOND.,

ANÆSTHETIST IN UNIVERSITY COLLEGE HOSPITAL AND TO THE DENTAL HOSPITAL OF LONDON AND THE HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN-SQUARE, BLOOMSBURY.

LADIES AND GENTLEMEN,—No great scientific discovery has been made without bloodless battles having been fought and adverse champions drawn up in army array. The discovery of anæsthesia is no exception to this statement. Even now the clarion notes of the fierce fight ring clear through the air and men's minds grow warm with angry despite as they hear the cry of battle from opposing ranks. Man is a fighting animal, and while he strives to assuage the sufferings of poor humanity he finds solace in pointing out the folly of those whose opinions he traverses and whose positions in argument he assails, crying, "No quarter; No surrender." Nor has the fight been one of individuals; there has been a contention of nations. We meet to-night to celebrate the fiftieth anniversary of the introduction of chloroform, to do honour to its champions, to range in line the growing wealth of knowledge which for half a century has accumulated about the practice of anæsthesia. As an outcome of this the question rises into prominence and presses for an answer—Is the whole art and science of the medical man who practises in anæsthetics a matter of empiricism, or has he the right to claim for his calling the proud distinction of a science and for his practice the equally aspiring title of a precise art? Dr. Robert Davis,[1] speaking on the interesting occasion of the semi-centenary of the first public demonstration of the use of sulphuric ether as an anæsthetic, insisted upon the point that the discovery of anæsthesia was no accident. Yet the history is fraught with many strange things which show how near many men came to the bourne of discovery but returned unenlightened, and how nearly did those who eventually won the laurels awarded to discovery turn aside and relinquish the quest. Davy, Horace Wells, Faraday, Crawford Long, are names which leap into the mind. Davy, who actually inhaled nitrous oxide gas and realised its anæsthetic properties at the close of the last century; Faraday, who actually suggested that sulphuric ether should be employed for the assuaging of pain in 1818, as Davy had done for nitrous oxide; Samuel Guthrie, of Brimfield, Massachusetts,[2] prepared chloroform but left its discovery as an anæsthetic to Sir James Y. Simpson. Long used ether in 1842 and even placed patients under its influence for surgical operation, but as he failed to communicate his experience to the world the public proclamation of ether was left to Morton. Claimants to a knowledge of the properties of the various anæsthetics have been many. There is no doubt that all great discoveries are in the air—if I may be allowed the expression—even before the man of the hour comes forth and fearlessly takes the world into his confidence and announces his discovery. That man is the true benefactor of his day and generation and whatever may have been the assistance he has derived from those who went before he still remains the centre figure and justly is placed in a niche in Fame's temple.

It has been well said that to realise to the full the benefits of anæsthesia we must recall the days of surgery before 1846. A vivid enough picture is given in Professor Miller's "Surgical Experiences of Chloroform." He recalls how Abernethy before an operation had exclaimed. "I feel as if I was going to be hanged"; while Cheselden turned sick at the thought of the pain he was about to inflict and Liston lay awake in mental anxiety on the eve of his operation days. If surgeons grew faint, alas for the patients! Speaking of the patient it is said, "His progress might be traced by frightful yellings or at least by sobs of deep distress, and occasionally a number of stout assistants scarcely sufficed to prevent on the way a self-effected rescue and escape. All this was bad, painful, injurious, unseemly. All such scenes are now unknown."[3]

The wife of a distinguished surgeon recalls how terrible were the sounds with which her ears were assailed as seated in the rooms of her residence within the precincts of a large London Hospital she heard the cries of the unanæsthetised patients on the one hand and the moans of the no longer dumb beasts passing into Smithfield upon the other—sounds, too dreadful to be recalled without a shudder. Simpson, like many another, quailed before the ordeal of carrying on surgery under such conditions and decided against medicine as a profession. However, he found law still less to his taste, and in 1836 while house-surgeon to the lying-in hospital at Leith he sought means whereby the pangs of suffering humanity could be alleviated. Mesmer had been born a hundred years before this, and although the fraud of his pretensions had been exposed by the celebrated commissions appointed in France to investigate animal magnetism, yet Cloquet, Loysel, and other surgeons had actually performed surgical operations on hypnotised subjects. Herbert Mayo, surgeon to the Middlesex Hospital, and Elliotson, some time physician to St. Thomas's and University College Hospital, both of whom, alas, paid with their professional ruin for their enthusiasm for hypnotism, wrote on the mesmeric sleep about this time (1837). Braid and others contended that in the mesmeric trance was to be found the panacea for surgical suffering, if not a universal therapeutic armamentarium. Simpson employed the mystic passes of Braid's neurohypnology. He never, as far as I know, employed hypnotism for surgical anæsthesia. However, with Morton's successful demonstration before Warren, Bigelow, Gould, Parkman, Hayward, Townsend and the younger Warren, ether was flashed forth upon the world as the desideratum hoped for so long. Oliver Wendell Holmes invented the word and "anæsthesia" was an accomplished fact. It would be as tedious as it is unnecessary for me to attempt to describe the various causes which very rapidly led surgeons to regard ether with some disfavour. The methods of giving it were very inexact, many failures occurred; anæsthesia was too often an interchangeable term for wild maniacal excitement, and the operator had to use his knife with much deftness to avoid doing his patient a mortal injury as he struggled and fought under the exhilarating effects of an inadequate amount of ether vapour. Majendie[4] spoke contemptuously of it, alleging that the operation done under ether "was an experiment performed on intoxicated subjects, some of whom were rendered unconscious of pain while some were not"; a patient, he alleged, sprang from his couch while an operation was in progress and shook his gory hand in the face of the surgeon and his assistants. Some persons recommended a sort of full dress rehearsal of the proceedings. The patient was to inhale ether to see how it affected him, and if the result was satisfactory the process was repeated and the operation performed. Three deaths had been reported by March, 1847,[5] and while many surgeons declared the use of ether a dangerous innovation the Canton of Zurich actually promulgated an order that its use should be discontinued. "In fact," says a writer at this date, "it is a question in all men's minds—Is not the use of ether in operations too uncertain and dangerous a resource surgically to be had recourse to?" Many of the rules and precautions then suggested would surprise members of this society. Let me mention two. On no account, we are told, should an inhalation of ether be continued for more than a quarter of an hour or should more than two ounces be inhaled! Simpson, however, hailed with acclaim the new anæsthetic and gave ether to a lying-in patient on Jan. 19th, 1847 and with his usual promptitude communicated his experience on the following day to the Obstetrical Society of Edinburgh.[6] He at once commenced his experiments upon various drugs

[1] Reminiscences of 1846 Anæsthesia Semi-Centenary, Boston, 1897, p. 22.

[2] See Chicago Medical Recorder, August, 1897, and the Life of Samuel Guthrie, by his Son; also Silliman's American Journal of Sciences and Arts, vol. xxxi., January, 1832, in which appears an article wherein Guthrie describes his method of preparing chloroform (chloric ether).

[3] Life of Sir J. Y. Simpson, by Miss Simpson, Famous Scots Series, p. 66.

[4] Medical Times and Gazette, vol. xv., p. 383.

[5] Op. cit., p. 107.

[6] Edinburgh Monthly Journal of Medical Science, February, 1847

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which might prove possible anæsthetics. Simpson, George Keith and Matthews Duncan met after dinner at Simpson's house and inhaled the anæsthetic and were in due time rendered more or less insensible.[7] Thus were tried "chloride of hydrocarbon, perchloride of formyle, acetone, nitrate of oxide of ethyl, benzin, and other vapours."

An incident of what may be called an accidental character was the use by Jacob Bell and Mr. Lawrence in London and by Bigelow in America of chloric ether or chloroform dissolved in spirits of wine. Had Bell only gone one step further chloroform would have been an accepted anæsthetic. One of Morton's first essays had been with this substance and possibly he suggested its employment to the surgeon. However, the results obtained were uncertain and little attention was attracted to the substance, so little indeed that when Simpson asked Waldie what substances were worth experimenting with from the point of view of anæsthesia he appears not to have heard of Bell's trials of chloric ether. Now happened another "chance occurrence." Waldie failed to supply the promised sample of chloroform, and but for Mr. Hunter, of Messrs. Duncan and Flockhart's, Simpson's inhalation of chloroform might have been indefinitely delayed or even not made at all. As it was the experiment was made, and Simpson thus describes it: "I had the chloroform for several days in the house before trying it, as after seeing it such a heavy, unvolatile-like liquid, I despaired of it, and went on dreaming about others."[8]

Simpson was from the first firmly impressed with the view that in chloroform he had found the crowning height of anæsthesia, although his mind was too free from bigotry not to look for and hope for a still more perfect anodyne. Beyond the experiments made upon the bodies of himself and his friends Simpson appears to have felt no call for physiological inquiry into the properties of this wonderful discovery. He collected statistics and studied his cases but there the matter ended. His teaching, however, was very definite and derived from his personal experience, and as it is seldom quoted correctly I may here give his own words: "When used for surgical purposes perhaps it will be found to be most easily given upon a handkerchief gathered up into a cup-like form in the hand of the exhibiter and with the open end of the cup placed over the nose and mouth of the patient. For the first inspiration or two it should be held at a distance of half an inch or so from the face and then more and more closely applied to it. To ensure a rapid and perfect anæsthetic effect, more especially where the operation is to be severe, one or more teaspoonfuls of the chloroform should be at once placed upon the hollow of the handkerchief and immediately held to the face of the patient. Generally a snoring sleep speedily supervenes and when it does so it is a perfect test of the superinduction of complete insensibility. But a patient may be quite anæsthetic without these symptoms supervening."[9]

Syme, whose dicta upon this subject have been accepted as the rallying point of the Edinburgh school, has not given any account of any scientific explanation of the action of chloroform, nor have I been able to ascertain that that illustrious surgeon did more than epitomise his views of chloroform in a clinical lecture delivered during the winter session of 1854-55 in his class in the University of Edinburgh. After dealing somewhat severely with the methods of giving chloroform in vogue in London he goes on to say: "I am very far from taking any credit to myself. All I have done has been to follow the example of Dr. Simpson." Syme insisted that the London method failed because it did not carry out Simpson's directions. He says: "The points that we consider are of the greatest importance in the administration of chloroform are, first, a free admixture of air with the vapour of chloroform, to ensure which a soft porous material such as a folded towel or handkerchief is employed, presenting a pretty large surface, instead of a small piece of lint or any other apparatus held to the nose; secondarily, if this is attended to the more rapidly the chloroform is given the better till the effect is produced; and hence we do not stint the quantity of chloroform. Then—and this is a most important point we are guided as to the effect not by the circulation but entirely by the respiration; you never see anybody here with his finger on the pulse while chloroform is given. So soon as the breathing becomes stertorous we cease the administration; from what I have learned it is sometimes pushed further elsewhere, but this we consider in the highest degree dangerous. Attention to the tongue is another point which we find of great consequence. When respiration becomes difficult or ceases we open the mouth, seize the tip of the tongue with artery forceps and pull it well forward; and there can be little doubt that death would have occurred in some cases if it had not been for the use of this expedient. We also always give the chloroform in the horizontal position and take care that there is no article of clothing constricting the neck. There are thus considerable differences between our practice and that which prevailed more or less elsewhere. We use no apparatus whatever, take the respiration for our guide, attend to the condition of the tongue, and never continue beyond the point when the patient is fully under the influence of the anæsthetic."[10]

Syme's success in the use of chloroform is a matter of history, but his method was empiricism. Although he taught that the respiration rather than the circulation was the guide to be followed I gather from Professor Buchanan that Syme never expressed himself upon the subject of heart failure under chloroform. Simpson, however, did this, and did it very emphatically. In his first paper, 1847, he said that chloroform "if given in too great or too long continued doses would doubtless produce serious consequences and even death," and writing in February, 1870, Simpson narrated a case of death under chloroform when he gave the anæsthetic with his own hands. The death was that of a young woman and it occurred in the small village hospital at Alloa. He says: "I chloroformed the patient. In doing so I placed a single layer of towel over the nose and mouth leaving the eyes exposed, and dropped chloroform upon the towel." During the first incision "the patient moved so much that he [the surgeon] stopped for a brief time till I put the patient more deeply under the effects of the anæsthetic." The patient vomited suddenly and profusely during the operation. "Immediately the eyes opened the pupils were preternaturally dilated, the face looked pallid, and the respiration which had never been affected by the chloroform so as to have the least noise or stertor in it seemed arrested. Immediately artificial respiration was set on foot and the tongue pulled forward. Deep, spontaneous respiration then occurred several times in succession and I deemed at the moment that the patient was hence out of danger, but a second collapse occurred which terminated in death, all means of resuscitation proving unavailing." Remarking upon this occurrence Simpson said: "According to all the experimental and clinical observations which have been made chloroform appears capable of destroying life in two ways, namely (1) by asphyxia and (2) by syncope. Death by asphyxia can generally, if not always, be avoided by at once arresting the inhalation of the drug whenever the breathing becomes noisy or stertorous, states which, as already mentioned, never occurred with the preceding patient. Syncope or sudden stoppage of the action of the heart is doubtless far less under control and has apparently formed the principal cause of fatal issues in almost all cases in which patients have perished when under the use of chloroform."[11] The courage and honesty of the man are wonderfully brought out by the prompt publication of this death under his hands, and Simpson's claim to our unstinted admiration is certainly strengthened when we look at him not only as a discoverer, as a patient and conscientious observer, but as one who felt that to suppress facts averse to any theories of safety which he might have held would be a departure from that high standard which he had always set before himself in his professional career. When I say "discoverer" it must be clearly understood that I claim for Simpson not the discovery of chloroform, for that was made by Samuel Guthrie an American, by Soubeiran a Frenchman, but the discovery of its anæsthetic powers and its introduction into the practice of surgery. Simpson contended that syncope occurred under chloroform and had occurred in pre-anæsthetic days, and although he did not waver in his adhesion to his first method of giving the anæsthetic he yet cautioned his followers against a foolhardy belief in the extreme safety of this powerful drug which he had been the means of bringing into use.

On Nov. 10th, 1847, the famous paper, "Notice of a New Anæsthetic Agent as a Substitute for Sulphuric Ether in Surgery and Midwifery," was read before the Obstetrical Society of Edinburgh and chloroform made its bow before

[7] See Anæsthesia, p. 165 of Simpson's Works.
[8] Life of Sir James Young Simpson, p. 57.
[9] Simpson's Collected Works, p. 159.
[10] THE LANCET, Jan. 20th, 1895.
[11] Simpson's Anæsthesia, p. 149.

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the world. To us it is almost incomprehensible that chloroform should have called forth the most rancorous opposition and acrimonious criticism from those who undertook in the words of the most sacred of writings to prove that at best chloroform was a snare of the arch enemy of mankind. We can now afford to smile at such well-meant twaddle, for even yet at the end of the nineteenth century we have to show patience towards and wish that greater enlightenment should come upon those persons who in the name of religion seek to check experimentation and sap the tree of knowledge by peddling appeals to an hysterical and ill-informed coterie of sentimentalists. The powerful advocacy of Simpson and the Edinburgh surgeons soon carried chloroform beyond the shallows of its period of trial and the new anæsthetic became an accepted agent. At this time there were no very clear views entertained about its physiological properties and Flourens in France and Snow in England undertook careful research into its mode of action. The classical researches of Flourens and Longet had early in the "forties" shown the order in which the component parts of the nervous system yielded before death occurred. So long as the medulla remained guarded the organism was held to be safe. With the advent of anæsthesia came a host of theorisers who spent valuable time in elaborating hypotheses designed to explain the mechanism of narcosis. Thus we find the observers Lallemand, Perrin, and Duroy teaching that chloroform possessed an elective affinity for the nervous tissues. Flourens, indeed, regarded chloroform as a most dangerous body and inveighed against its use in surgery. He had, however, employed a vapour with a very high percentage of chloroform with a very fatal result.

Various theories more or less beside the truth were started connecting anæsthesia with blood changes. In 1848 Snow commenced his papers on Narcotism by the Inhalation of Vapours, and with his work a nearer approach to physiological investigation of the action of anæsthetics was inaugurated. He sought to show that chloroform acted according to the dose administered and according to the dilution practised. Simpson's rules as far as they went laid down a safe basis for administration, but the *rationale* underlying that safety was only elucidated by the work of Snow and his successors. While Simpson found experience from his practice upon his fellow human beings, courageously placing himself first in all such experiments, Snow adopted a safer and more satisfactory plan of using the lower animals—more satisfactory because test conditions could be imposed. His experiments are fully set forth in his classical work on Anæsthetics, a monumental book written by one of the world's great men. Snow's experiments, which were made upon small mammals and birds, led him to the following conclusions. He used the term "narcosis" as designating the entire effects of the chloroform upon the nervous system, restricting that of "anæsthesia" to mere deprivation of feeling. He taught that various *degrees* of narcotism were produced by certain definite quantities of the anæsthetic. "The division into degrees is made according to symptoms which I believe depend entirely on the state of the nervous centres and not according to the amount of anæsthesia, which there is good reason to conclude depends to a great measure on the local action of the chloroform on the nerves."

This was a distinct advance in our knowledge and was derived entirely from experimental data. The animals experimented upon were placed in chambers which contained enough air for their vital requirements and were subjected to various strengths of chloroform vapour, and the symptoms they evinced were carefully noted. With such facts before him Snow attempted to show that, given the weight of the animal and the vital capacity of its lungs, the temperature of the air and its moisture, it was possible to predicate that a definite series of phenomena would ensue upon the inhalation of a given quantity of the anæsthetic. This was perfectly true as far as it went. The fallacy arose from a disregard of the personal equation of the individual as regards power of respiring, predisposition to syncope, &c. This fallacy, as we shall see, Snow was fully aware of. He further taught that "when inhaled the local effect of chloroform must be greatest when it has had time to exude through the coats of the vessels into the extravascular liquor sanguinis and come into immediate contact with the nervous fibrillæ. As the brain is without lymph and lymphatics it is possible by a large dose of chloroform to produce complete anæsthesia very suddenly before there is time for the nerves to be acted upon locally to any extent." Snow found that when the dose was sufficient the patient passed from his fourth degree into the fifth, in which respiration failed and the heart continued to beat, until it also ceased owing to stoppage of breathing. However, Snow went further, for he adds: "Although the respiration may be suspended by an amount of chloroform which has very little direct effect on the motion of the heart, it is quite possible to stop the heart's action by the immediate effect of this drug." When warm-blooded animals breathe air containing as much as 8 to 10 per cent of the vapour of chloroform the blood which is passing through the lungs becomes so charged with it as to stop the action of the heart when it reaches that organ through the coronary arteries." He also noted that injection of chloroform in water produced loss of muscular irritability and finally post mortem rigidity.

Snow spoke with no uncertain voice in dealing with the action which chloroform exerted upon the circulation. The pulse, he says, "affords no criterion of the amount of narcotism," for even under formidable operations its volume and force remain unaltered. One is struck here, as whenever studying the work of this remarkable man, that his conclusions have in most cases anticipated those of the later and most accomplished experimentalists, and if some of his experiments were crude and his instruments lacking in precision his breadth of reasoning and intuitive grasp of results always placed him on the level of those who with the modern and perfected apparatus of the physiolcgical laboratory have attacked the subject with appliances so exact as to render error almost an impossibility. Snow conducted some experiments with Sibson which led him to believe that section of the vagi made no alteration in the procession of phenomena observed when chloroform was inhaled. Reverting to his experiments undertaken to discover the amount of chloroform requisite to plunge the patient into the various degrees of narcotism we may note that while between one and two grains of chloroform in each 100 cubic inches of air induced surgical anæsthesia, two grains plunged the patient into the fourth or paralytic degree and led to gradual failure first of the respiration and subsequently of the circulation, while three grains caused respiratory failure. He acutely perceived that in warm-blooded animals the problem became a much more complicated one. Not only does Nature safeguard us by lessening the force of respiration and the rapidity of circulation and so stays the intake and deportation of chloroform from the lungs to the heart and the tissues but also exercises a species of check action through the nervous mechanism of the medulla oblongata which tell for the safety of the individual and the diminished intake of the poison. Allowing as far as he could for these controlling and overriding conditions Snow showed that 12 minims of chloroform equally distributed in the circulation of an individual of average weight led to the second degree of narcotism, 18 minims to the third and 24 minims to the fourth, while 36 minims caused respiration to stop. Snow pointed out the obvious disadvantage of Simpson's recommendation of a handkerchief for giving the anæsthetic since he urges that it is impossible by such a method to regulate the proportion of vapour to air which the patient breathes. To Simpson and his school who did not appreciate these facts it was of no moment what quantity of anæsthetic was used provided sufficient air was allowed to enter the lungs to maintain the respiration and sufficient vapour inhaled to obtain anæsthesia. With Snow it was a first principle that you should be able to regulate to a nicety the dose you gave and to limit it exactly in every case. To effect this Snow carefully devised his chloroform inhaler. With it he achieved at least as great a success as did those who, failing to grasp Snow's science, sneered at his inhaler. I may here allude to more recent experiments undertaken by one whose name has been identified with chloroform and whose fame has alike honoured him and the profession he has adorned—I mean Lord Lister. Lord Lister, then Mr. Joseph Lister, in 1861 undertook some very clear experiments [12] and found that the rate of evaporation from a cloth under the test conditions was in point of fact below the danger limit fixed by Snow. Ingenious, however, as are these experiments they are inconclusive, since, although they show the gradual evaporation of a known quantity of the anæsthetic maintained under test conditions as regards temperature, moisture, &c., they do not allow for the sometimes reckless "spilling of two or three drachms" on the handkerchief referred to by

[12] Anæsthetics, in Holmes's System of Surgery, p. 601.

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Miller in his "Experiences of Chloroform." The regular and philosophic breathing of the experimentalist who respires beneath a chloroformed cloth in such a way that his inspirations are carefully guarded against taking in the narcotic vapour are hardly quite comparable with those of the average patient about to undergo a mortal operation and who inhales into his lungs a vapour which at first is pungent but grows less so until the person in charge of the "handkerchief, towel, piece of lint, worsted glove, nightcap, or sponge" (I quote Professor Miller again) deems it right to again "spill" another two or three drachms upon the extemporised inhaler. Snow's science taught him that the less you left to the caprice or individual ability of the person giving the chloroform the safer would it be for the patient. He showed that 18 minims of chloroform in the lungs meant not quite 300 cubic inches of vapour in combination with air, the whole of which would be inhaled in twelve breaths. If the inhalation of this strength of vapour were continued until insensibility a large quantity of vapour would remain unabsorbed in the lungs. The 250 cubic inches of air contained in the lungs if saturated with chloroform at 60° F. would contain 30 minims of chloroform. Even if only half of this was saturated the patient would fall into deadly peril. Although the pulmonary air would in practice seldom become so saturated it is evident that the degree of saturation of a towel and the vigour of respiration—as for example a deep breath following a period of apnœa—would expose a patient to danger which would be avoided were the method of giving the narcotic one which limited the supply within the physiological requirements of the patient. The dangers of struggling, the immense importance of watching the respiration, and the deepening of narcosis for twenty seconds after inhalation of chloroform has ceased were all taught by Snow. Sedillot[13] appears to have made an almost simultaneous discovery of this last fact. Snow again made careful notes on the condition of the eyes and the pupils, although his conclusions were more vague than most of his utterances.

Snow recognised various forms of death as resulting from chloroform inhalation and reproduced them in the lower animals. Thus (1) he induced death by *gradual* absorption of a quantity of chloroform (36 minims) given in a low percentage vapour (below 6 per cent.) sufficient to paralyse the nervous control mechanism of respiration, while (2) he found that if a higher percentage of vapour (8 to 10 per cent.) were suddenly caused to enter the pulmonary circulation this excessive strength would upon entering the coronary vessels paralyse the heart itself before the nerve centres were subjected to the influence of the anæsthetic. Under such circumstances very few respirations were sufficient to cause enough vapour to enter the pulmonary air cells for the lethal 36 minims to be pumped into the circulation. Working upon cats and rabbits with low percentage vapours (3 to 6 per cent.) the respiration failed before the circulation; with vapours of 8 to 10 per cent. a simultaneous cessation occurred of respiration and circulation or the heart stopped before the breathing. In the first class of cases the animals were restored by access to air; in the last artificial respiration failed to resuscitate them.[14]

Snow proved that this heart failure took place wholly without impediment to the pulmonary circulation and was associated with a dilatation of the heart which at a certain point became paralytic. In his experiment he showed that when an excessively high percentage vapour (10 per cent.) is inhaled from the first death from cardiac paralysis may and does ensue before anæsthesia is ever attained. This, he says, is an example of many cases of deaths of human beings. Again, death may occur after inhalation has been left off, and this point he again illustrates by experiments.

Perhaps no feature of Snow's work is more remarkable than his criticism of the fatalities, the reports of which he collected. He brought them into line with his experiments and showed with consummate mastery of his subject the factors which in each case determined the fatal result. In 1848 Sibson did much valuable clinical work upon the subject of chloroform and performed a number of experiments upon the lower animals which throw much light upon the mechanism of death under chloroform.[15] Sibson's views were in accord with those of Snow: Sibson devised the facepiece which Snow adopted for his chloroform inhaler and which allowed free respiration through its valves and was a pronounced improvement of many of the apparatus then in use.[16]

The review of the cases of death led Snow, as it had led Sibson,[17] to believe that most if not all such fatalities were due to paralysis of the heart. In death from asphyxia the heart beats for from one to three minutes after the breathing has come to a standstill, and as he pertinently remarked: "It is extremely improbable that anyone would go on giving the vapour after the breathing became stertorous and laboured."[18] In 1855 a Chloroform Commission was instituted in Paris and published[19] a conclusion that in the lower animals the heart always goes on beating after respiratory paralysis. Thus they agreed with the experiments undertaken by Mr. Thomas Wakley, of THE LANCET, who upheld that cardiac failure under chloroform was not met with in the lower animals. Snow, however, had encountered it and he impugned the results above referred to. He based his opposition firstly upon his experiments on the lower animals which had convinced him that all deaths due to chloroform inhaled when the vapour was over 5 per cent. resulted from circulatory failure. However you might alter the conditions, provided the strength of the chloroform vapour remained constant, syncope occurred without interference with respiration or signs of asphyxial complications, death even occurring before insensibility had shown signs of appearing. When, however, a low percentage vapour was employed—that is, one below 5 per cent.—the various degrees of narcosis always and regularly showed themselves. He asserted that only when chloroform gradually accumulated in the blood to such an extent that the total quantity reached more than his lethal dose of 36 minims, death followed from what he called narcosis of the brain with failure of respiration through poisoning of the medullary centres. Furthermore, he analysed all the cases of death of which particulars had been accessible, and in his review of them he showed conclusively that with four exceptions they were deaths from cardiac failure and not from respiratory paresis. In other words, the symptoms were those of circulatory failure and not of pulmonary engorgement. To put the whole matter briefly, Snow's position was this: if you introduced a certain dose into the organism uniformly diffusing it throughout the circulation you produced given phenomena which eventually poisoned the various vital controlling systems of the animal, respiration and then circulation being the last to go. If, on the other hand, you introduced a large dose into the lungs in such a way that it was absorbed and passed directly to the heart, that dose conveyed through the coronary arteries paralysed the heart and so the animal died at once. In the first case—the asphyxial death—the employment of forced respiration may eliminate the poison; in the second the tissues of the heart actually being killed no restorative measures are from the first destined to be of the slightest good.

Patrick Black, who wrote a pamphet in 1855 and who was, I believe, one of the first anæsthetists appointed to a London hospital, contended that chloroform did not kill even when presented in overwhelming doses, for he said "we have only to attend to the breathing, we may disregard all considerations affecting the relative proportion of chloroform and of air which is breathed ..... if the patient breathes easily he is in safety whatever be the amount of chloroform which is passing in his lungs." His argument was that the patient was strangled by the strength of the vapour which prevented his inhaling and prevented his breathing. This position Snow at once showed was untenable because the actual experiment revealed that animals could breathe a high percentage of chloroform and that it was impossible for an individual to hold his breath even against an irritant, and further it was inconceivable that such a mistake could be made as to imagine a patient voluntarily holding his breath against an unpleasant vapour when he was dying from the effect of that vapour. Black, who was assistant physician to St. Bartholomew's Hospital, was a distinguished man who upon his appointment to the full office of physician appears to have left the turmoils of anæsthetic warfare. Unfortunately a death occurred in his practice in which it was shown that the source of danger

[13] Gazette Médicale, Jan. 15th, 1848.
[14] Snow: Anæsthesia, Exp. 28, p. 117.
[15] Medical Gazette, vol. xlii., p. 109.
[16] I learn from Mr. Bertram Richardson that his father, Sir B. W. Richardson, designed the first facepiece and Sibson modified it.
[17] London Medical Gazette, 1848.
[18] Anæsthetics, p. 90.
[19] See Report of the Society of Emulation, l'Union Medicale, 1855, No. 13.

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was that which he pointed out could not have arisen and so the *argumentum ad hominem* applied. Nor did Snow admit the various theories which were invented, such as special idiosyncrasy, theories of the fear of the surgeon's knife, and so on which were brought forward to explain chloroform fatalities. It will be impossible in the time at my disposal to do justice to the amazing amount of experimental and careful clinical work which was accomplished by Snow; perhaps the most pronounced compliment that can be paid to his memory lies in the fact that all the modern researches which have been made and which have stood the test of criticism have been based upon, if not forestalled by, Snow's earlier labours. To him was the initiation though to others the full fruition of his researches and conclusions.

Among the early workers in the field of anæsthetics was Thomas Nunneley, of Leeds, who experimented with benzine, carbon disulphide, carbonic acid gas, carbonic oxide, but whose name is perhaps best known in connexion with his advocacy of bromide of ethyl as an anæsthetic. He also tried olefiant gas (ethene), ethyl chloride, turpentine and contributed to the literature of the subject of anæsthesia. In June, 1864, a committee composed of T. B. Curling, Thomas Bryant, Samuel Cartwright, Arthur Farre, George G. Gascoyen, George Harley, Prescott Hewett, F. W. Mackenzie, William Marcet, Charles H. Moore, James Paget, William O. Priestley, Richard Quain, Francis Sibson, R. Dundas Thomson, Charles West, Septimus Sibley, George W. Callender, and John Birkett was appointed by the Royal Medical and Chirurgical Society to inquire into "the uses and physiological therapeutical and toxical effects of chloroform as well as into the best mode of administering it and of obviating any ill consequences resulting from its administration." Experiments were made upon the lower animals and different percentages of vapour employed. The conclusions arrived at were that for moderate and small doses little difference was observed whether the chloroform was inhaled above or below the glottis.

Under such circumstances respiration stopped first, although not always, and though in the majority of cases the pulse ceased before the respiration the actual heart beat could be felt for some time longer. The importance of this lies in the fact that they appear to have recognised that the heart becomes enfeebled before the circulation comes to a standstill; in other words, it is a poisoning of the heart muscle as opposed to the poisoning of the medullary centre. This committee worked with a hæmo-dynamometer, but the readings were taken by the eye and not by the sensitised plate. They further noticed that incoördinate movements of the heart occurred even after effective contraction had ceased, a condition which later MacWilliam noticed and explained. However, in one important particular the Committee took a line at variance with Snow's findings and equally at variance with more recent but more exact research. They thought that the effect upon the heart of a strong vapour of chloroform was not materially different from that produced by a milder form of the agent. But what appeared to have been their meaning was that the accumulation of a small dose tells upon the myocardium eventually in quite as deletrious a manner as a large dose taken by a few deep inspirations, and this no doubt is true when working in the lower ranges of chloroform vapour. They arrived at the result which I believe has been uniformly found by all observers who have investigated the effect of chloroform upon the respiration, that when inhaled sufficiently long and insufficiently diluted the respiration failed and was finally extinguished. That is always assuming that the dilution is sufficient not to tell initially upon the heart. Their conclusions as to the physiological effects of chloroform are summarised as follows: "The sequence of the phenomena produced by chloroform inhalation in animals is similar to that observed in man; and if the same percentage of the agent be administered the results produced are nearly uniform. Chloroform at first increases the force of the heart's action; this effect is slight and transient. When complete anæsthesia is produced by chloroform the heart in all cases acts with less than its natural force. The strongest doses of chloroform vapour, when admitted freely into the lungs, destroy animal life by arresting the action of the heart. By moderate doses of chloroform the heart's action is much weakened for some time before death ensues; respiration generally, but not invariably, ceases before the action of the heart and death is due both to the failure of the heart's action and to that of the respiratory function. The danger attending the use of chloroform increases with the degree of stupor it induces. Apparent irregularities in the action of chloroform mainly depend on the varying strength of the vapours employed, on the quality of the chloroform, and on the constitution of the patient." The report further contained the account of some experiments as to the best means of resuscitation as well as statistics and an account of chloroform in midwifery practice. While they regarded chloroform as a dangerous and somewhat unmanageable agent, they placed it before ether, since ether as then given was a slow and uncertain anæsthetic, and they adopted as a middle course the well-known A.C.E. mixture, which they regarded with great favour—a mixture which was suggested by the late Dr. Harley.[20] With regard to ether, although they thought that its action was similar to that of chloroform they asserted that they never succeeded in producing failure of circulation by its use except in cases where respiration had been brought to a standstill. They appear to have overlooked that the methods employed not only lead to the inhalation of ether, but also cut off an adequate supply of air. Snow, who had conducted similar experiments, had found that the lower animals would inhale almost pure ether vapour without syncope occurring, and that even if respiration failed through narcotisation of the medullary centre the forced entrance of a breath or two at once restored the vital processes in every case. It is a curious reflection that even as late as the date of this report it was necessary to gravely consider whether or not chloroform interfered with the healing of amputation wounds and increased or lessened the after-mortality of operations. The teaching of Arnott and other distinguished surgeons had been strongly adverse to the use of anæsthetics and that teaching still lingered. The report, I need hardly say, went dead against any theory that chloroform interfered with the after success of surgical procedure. Associated with this report was the name of the late Mr. Joseph Thomas Clover, who in 1848 had been appointed resident medical officer at University College Hospital. His work, good as it was, was rather upon the side of practice than of experimentation. Perhaps no man has done more to remove the slur passed upon ether by the report which we have just considered. If ether was a slow and uncertain drug before Mr. Clover's ingenious brain devised his inhalers and perfected his methods no such stigma could be attached to it afterwards. These drawbacks were wholly removed by Clover. Snow had given up ether for chloroform, but gave up chloroform for amylene, and after having the misfortune of two deaths under that reagent he again reverted to chloroform. Benjamin Ward Richardson, then a young man full of enthusiasm and eager to follow in the lines Snow had laid down, was working upon the subject of anæsthesia, and it was he who pointed out to Snow that amylene was a most dangerous form of narcotic. "I ventured," said Richardson, "to show him separation of amylene in the blood, a separation which looked like the formation of minute plugs. He fully realised the danger."[21] A glance at the *Æsculapiad* for July, 1884, will serve to show the amount of work which Richardson did in the field of general anæsthetics. His overmastering idea was that general anæsthetics were doomed sooner or later to give way to a more perfected form of local anæsthesia, and although he experimented and published the results of his experiments with chloroform, ether, bromide of ethyl, amyl chloride, amyl hydride, butyl chloride, carbon bisulphide, and other agents, his most known work is rather in the field of local anæsthesia and so need not be dealt with in the present connexion.

In 1866 Robert Ellis suggested his plan of giving a mixture of the vapours of alcohol, chloroform, and ether. In 1879[22] were published the first instalments of the report of a committee of the British Medical Association dealing with the action of anæsthetics. This committee consisted of Joseph Coates, William Ramsay, and John McKendrick, and thus comprised a pathologist, a chemist, and a physiologist, and is commonly spoken of as the Glasgow Committee. They dealt with a large number of substances, they were able to employ more exact methods and more reliable physiological instruments, and I believe for the first time adopted the graphic method of recording their results. It may be said in passing that although to describe their experiments in detail is beyond the scope of our present purpose, yet they were most carefully performed and as far as they went were accurate. They may be

[20] Proceedings of the Royal Society, p. 159, 1864.
[21] Vita Medica, p. 284.
[22] Brit. Med. Jour., 1879, vol. i., pp. 1, 108, and 921.

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summarised in the following way. The blood-pressure under chloroform is reduced while unaffected under ether. "Chloroform has sometimes an unexpected and capricious effect on the heart's action, the pressure being reduced with great rapidity almost to *nil*, whilst the pulsations are greatly retarded or even stopped. The occurrence of these sudden and unlooked-for effects on the heart's action seems to be a source of serious danger all the more that in the two instances they occurred more than a minute after the chloroform had ceased to be administered and after the recovery of blood-pressure." I have quoted the passage because it seems to me to be the least satisfactory portion of the report. It is inconceivable that any physiological action can be termed capricious or at least can be accurately termed capricious. Chloroform they found killed dogs either by stopping respiration or circulation, but as far as I can gather the effect to which they refer is upon the medullary centres rather than to the direct action upon the heart muscle, and they seem to assume that the individual peculiarity of the animal is responsible for cardiac failure occurring in some instances and respiratory in others. A great deal of their report is occupied with the consideration of ethidene dichloride, a drug which Snow had introduced and of which he thought highly. It cannot be said that the report of the Glasgow Committee carried the work of Snow much further. It would appear that they lost sight of to a great extent the all-important question of dosage and did not bring out with sufficient prominence the different physiological consequences of vapours of various strengths. However, the work was to be carried forward by others with equal enthusiasm.

The final epoch of the scientific work of the fifty years of chloroform now completed is grouped about the Hyderabad Commissions and much of the splendid research owes its origin directly both to the munificence of the Nizam of Hyderabad and the enthusiasm of Surgeon-Lieutenant-Colonel Lawrie, while owing indirectly to the same source very much of the later and valuable work of the past few years has been called forth by the Commissions. MacWilliam's research on Paralytic Distension of the Heart,[23] Gaskell and Shore's report on the Physiological Action of Chloroform (1893), Hare and Thornton's Study of the Influence of Chloroform upon the Respiration and Circulation, and Leonard Hill's research upon the Influence of the Force of Gravity on the Circulation of the Blood[24] and the same worker's brilliant address delivered before this society early in the present year[25] and Waller's ingenious investigation into the Action of Narcotic Vapours on Nerve Tissue have advanced our knowledge of the physiological action of chloroform by leaps and bounds. The excellent clinical work which had been done and recorded by Snow, Sibson, Nunneley, Richardson, Clover, Sansom, and more recently by the British Medical Association and THE LANCET Commissions had enabled us to guess at the behaviour of this potent narcotic while the research work, a rapid glance at which has been attempted in the earlier portion of this address, confirmed the conclusions of clinicians, yet as these authorities differed it was difficult to reconcile the results. With the more recent experimental work, although a certain variation in conclusions exists the actual facts are all automatically recorded and are open books for all to read and form an opinion upon. It is impossible to attempt a detailed account of the methods adopted in the research undertaken at Hyderabad. Suffice it to say the animals subjected to chloroform were placed in as nearly a parity of circumstances with human patients as possible. Briefly, the position assumed by the Commission was—(1) that chloroform always produced a fall of blood-pressure, and (2) that under sufficiently diluted vapour the respiration, the action of the heart, and the rhythm and force of the pulse remain unaltered. When variations in the gradual fall of blood-pressure, the performance of respiration, and in the action of the heart take place they are due to direct overdosing or to overdosing through abnormal or irregular respiration. While overdosage cannot occur it was contended that if certain simple rules were followed and the state of respiration be accepted as the one and only criterion of the degree of chloroformisation, it was advanced that when an overdose was intentionally given the animal died but never through any circulatory disaster. In all their experiments in which the animals died the respiration failed before the heart. They were led to believe that surgical shock was completely abrogated by the use of chloroform, nor did they admit that accumulation of chloroform ever took place in the blood so long as the respiration remained free. Lastly, they denied that the muscular tissues were directly affected by chloroform but only through gradual and progressive narcotisation of the nervous centres.

The theory of the action of chloroform thus built up becomes attractive and simple. Give chloroform highly diluted with air it will gradually lessen blood-pressure so that the circulatory system becomes an automatic check system, lessening and lessening the rate at which the narcotic is carried to the central nervous system and so safeguarding the organism from harmful over-narcotisation. As the nervous centres pass under the influence of the chloroform the various phenomena of paralysis occur in the order described by Majendie, Flourens, and Longet and the medullary centre presiding over respiration at length is put to sleep When breathing stops the blood fails to circulate through the lungs, the heart becomes affected, its intrinsic vessels empty, and as it grows more and more anæmic its action grows more and more feeble and at last fails. If, however, the necessary condition of free respiration is non-existent this procession of events does not take place. Permit anything to occur which causes asphyxial phenomena, says the Commission, and you at once bring about vagal action. The heart stops, the blood-pressure lowers. This state of affairs is, however, a blessing in disguise. It is, in fact, a series of protective reflexes which prevents the excessive dose of chloroform entering the nervous centres; when it passes off, which it will always do, this inhibition will be found to have saved the patient's life.

The theory thus perhaps somewhat baldly expressed has been severely criticised, has been tried in the balance by some and found wanting. No doubt if the Commission's premises are admitted their conclusions remain sound enough. It is upon the question of fact and not of theory that issue has been joined. Starting with the blood-pressure, all admit that it is lowered by chloroform. The Commission believe that this is due not to heart failure or to vaso-motor paralysis, and is of its nature pre-eminently protective. The lowering of blood-pressure, if not due to vagal stimulation or dulling of the medullary centres, must arise from vaso-motor paralysis leading to emptying of the arteries into the veins—"the loss of arterial tone" of Snow—or to failure of the heart itself. Recent observers have asserted that one or other or even both these are contributory causes which bring about the result and base their assertions upon experimental evidence. Chloroform has certainly been shown to depress the vitality of protoplasm in weak vapour while a strong vapour will destroy it totally. The blood corpuscles and the muscular tissue both striated and non-striated are also affected by chloroform. The work of Lorraine Smith seems to lend colour to the suggestion that the corpuscles are so influenced as to lessen their power of conveying oxygen to the tissues. Ringer and others have shown that the frog's heart removed from all nervous influence is gradually paralysed by very weak chloroform solution perfused through it and that eventually it loses all contractility. MacWilliam in a most striking series of experiments has striven to prove that, quite independently of all complicating circumstances such as asphyxia, partial or complete, all strengths of chloroform act directly upon the heart muscle causing paralytic dilatation. At a certain point this dilatation becomes incapable of correction, the heart then no longer contracts, and the circulation fails. This cardiac dilatation further occurs independently of vaso-motor action and determines a gradual failure in the force of the heart beat from quite the commencement of the inhalation. This must lead to impoverished blood-supply not only to the heart muscle itself, but to the various nerve centres concerned in the mechanisms of life. It must be remembered that section of the vagi makes no difference to this dilatation, nor can the old theory of pulmonary engorgement due to vaso-constriction explain the condition. Professor Dastre states, but without experimental evidence, in his work on Anæsthetics that a constriction of the pulmonary veins occurs when chloroform is inhaled leading to distension of the right heart. Were such a theory even proved it would fall short of explaining the phenomena, as all the cavities of both sides of the heart are dilated under chloroformisation only those of the right side. MacWilliam found, as [illegible] had previously pointed out, that the relation of the time occupied in inhaling any given amount of chloroform is

[24] Ibid., 1890.

[25] Journal of Physiology, vol. xviii., p. 15 (1895), and with Barnard, [illegible] Soc., June, 1897, vol. i., p. 957.

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of great moment. The even distribution of a considerable quantity of chloroform in the blood is far less dangerous than a much smaller dose suddenly introduced. His experiments show most conclusively the danger arising from irregular breathing, which means an unequal intake of the vapour. In natural respiration about 20 cubic inches might be inhaled and during a very deep breath 100 cubic inches, so that a dilution adequate for natural breathing would be about five times too potent for the deeper form of respiration. Nor is this a matter of slight importance, for MacWilliam's experiments proved how small a quantity of chloroform would prove a lethal dose if rapidly taken. A similar unequal rhythm of respiration was also found to occur, thus adding a further liability to the intake of an overdose.

The most original research of Gaskell and Shore, who pursued another method, that of cross circulation, brings still further evidence in the same direction. They were able to show that so far from the lowering of blood-pressure being due to the action of chloroform upon the vaso-motor centre it arose entirely from the weakening effect which the chloroform exerted upon the heart muscle. The vaso-motor centre was always in their experiments stimulated by chloroform to produce vaso-constriction with a consequent increase in blood-pressure. Again, although the research of Hare and Thornton[26] supports the findings of preceding workers in some respects it adopts a middle course in the main questions at issue. They think their experiments prove that in the lower animals respiratory failure is always the cause of death when the heart is sound. They, however, found "injection into the jugular veins of more than 2 to 4 c cm. of chloroform caused arrest of inspiration rapidly followed by cardiac arrest, which was not secondary to the respiratory failure but to a primary action of chloroform upon the heart muscle." But they find there is always a fall of blood-pressure under chloroform, which they regard as being as great a source of danger as is respiratory narcosis. There is, they contend, always a distinct depression of the cardiac muscle with dilatation of the organ such as MacWilliam described. And although they consider this depression is not sufficient in itself to cause death, yet they add: "We believe that gradual asphyxia with the direct depression of the circulation may do much towards producing a fatal result, for vaso-motor integrity is always as necessary to life as an intact cardiac mechanism." Although Dr. Lauder Brunton, it may be presumed, holds in the main the views of the Hyderabad Report, which he signed, yet his more recent contributions to the discussion appear to show that he with Hare and Thornton considers that when any asphyxial phenomena are developed such as would ensue upon weakening of the respiratory centre the animal may die from circulatory failure before true respiratory narcosis supervenes. The weak point in this position is that while everyone from Snow downward has conceded the necessity for free dilution of chloroform vapour and the avoidance of any asphyxial phenomena the crux has always been how to avoid the vascular depression. The Hyderabad Commission frankly accepts the position by denying that vascular depression ever entails danger; but Hare and Thornton, Gaskell and Shore, and all recent workers not only hold the opposite view, but actually point to the Hyderabad tracings in support of their assertions. It is the clinician, who is not always a *persona grata* to the physiologist, who now steps in and assures us that it is practically impossible to say who has a healthy heart or shall we say who has a resistive heart. Abuse of living, hard living, scanty diet, terror, wasting disease, are factors in the problem which face the anæsthetist, but, like Gallio, the physiologist cares for none of these things. Hare and Thornton in their report say: "The variation in the action of a drug on a diseased individual from its effect on the normal one is notorious, and we have no right to dogmatically assert that there is no danger of circulatory depression in man even if we found no evidence of failure in dogs, because there may be many idiosyncrasies or variations, through disease in the human being which may completely reverse the results of experiments on healthy animals." They find from a long series of experiments that "gradual cardiac failure never occurs without producing respiratory changes from the very first." But of course all who have experimented upon the lower animals and have given chloroform to the higher readily admit this. It is not the gradual but the rapid cardiac failure which is to be feared. Leonard Hill,[27] however, has been led to modify the view that respiration fails initially while circulation is subsequently and consequently paralysed in chloroform death. His experiments go to show that when chloroform is inhaled the arterial pressure falls rapidly and as it touches a certain point near the zero line respiration ceases. On removing the chloroform the arterial pressure slowly rises from the excitation of the asphyxial blood and respiration starts again. It is the fall of blood-pressure due to circulatory depression which leads to respiratory failure, since the medullary centres no longer supplied with blood cease to perform their work and breathing ceases. In this view artificial respiration, our sheet-anchor in chloroform emergencies, is valuable not so much by virtue of its power to aerate the lungs, but because it pumps the blood from the lungs into the left heart and so into the coronary vessels. Hill concludes that spinal bulb anæmia from lowered arterial pressure is the cause of respiratory failure as is shown by the fact that raising the arterial pressure always leads to return of respiration. He makes this important point: "The depth of anæsthesia depends as does the paralysis of the respiratory centre on the primary fall of the arterial tension."

"There are two forms of chloroform syncope: (*a*) During primary anæsthetisation the patient struggles, holds his breath, raises the intrathoracic pressure congests his venous system, lowers his arterial tension, and finally takes deep inspirations and surcharges his lungs with chloroform. In the first stage the heart becomes impoverished, in the second stage it is suddenly filled with blood. This is drawn from the lungs and is full of chloroform. The chloroform passes into the coronary arteries and the heart is thrown into paralytic dilatation. Respiration and the pulse either cease simultaneously or the pulse before respiration. (*b*) During prolonged anæsthetisation this arises from gradually giving chloroform to too great an extent. The arterial pressure falls lower and lower, and secondarily the respiration ceases because of the anæmia of the spinal bulb. The heart is not in this case paralysed by chloroform because the drug is taken in gradually by the shallow respirations and distributed slowly by the feeble circulation." Waller has further shown in a series of very beautiful experiments, many of which I have had the advantage of seeing, that chloroform acts powerfully upon nervous tissue. It not only reveals a strength of action seven times that of ether, but very rapidly destroys the irritability of the structure. It is interesting to see from these experiments that chloroform stands forth declared the most potent and therefore most lethal of anæsthetics. As Simpson had almost prophetically said in 1847 chloroform combined within itself almost infinite powers for good and evil. All the work of fifty years has but taught us that in spite of the advertisements of instrument makers and the assured utterances of doctrinaires chloroform is in all hands a dangerous anæsthetic. The teaching of fifty years, the teaching, I would say, rather of Snow than of Syme, still remains unshaken. To give chloroform safely we have to first dilute our vapour and then observe that even the diluted vapour is not inhaled too rapidly. Lawrie has said: "The Hyderabad Commission's work proves that, while Syme's principles are right, there is no such thing as a safe method of chloroform administration. It is no longer a question of the superiority of the London method or of the Edinburgh method; absolute safety can be obtained neither by watching the respiration nor the pulse for signs of danger, which are in either case proof of improper administration or of overdosing. Moreover, overdosing may take place whether the anæsthetic is given on lint or on a towel or on a cap such as we use, or with Junker's or Skinner's or any other form of apparatus. The all-important point is that the breathing shall never be interfered with in any way. Safety under chloroform can unquestionably be ensured, but it can only be so by attending to regular natural breathing; and whatever method is employed no one can deny that it is the bounden duty of the chloroformist to maintain natural breathing throughout the whole period of administration. To maintain natural breathing requires careful training and considerable experience; but if these conditions be fulfilled it is impossible to produce anything with chloroform but anæsthesia, and the Hyderabad Commission has shown that anæsthesia alone is

[26] A Study of the Influence of Chloroform upon the Respiration and Circulation, by H. A. Hare, M.D., and E. O. Thornton, M.D., being a report to Surgeon-Lieutenant-Colonel Lawrie and the Government of H.H. the Nizam of Hyderabad. Detroit, Mich.: G. S. Davis. 1893.

[27] Chloroform Syncope: Brit. Med. Jour., April 17th, 1897.

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entirely free from risk,"—and his utterance is in the main correct. If it were possible to ensure this natural breathing the safety of chloroform would indeed be assured, but as MacWilliam, Gaskell, and Hill have now proved a fall of blood-pressure may jeopardise the patient and bring about the respiratory failure which every anæsthetist strives to avoid. I am fully aware that very many important researches, such as those of Bernard, Best, Anstey, and the names of many workers have found no place in this address. My excuse must be that the literature of chloroform has become so enormous within the semi-centenary now completed that it is impossible even to catalogue them in name much less to describe in detail the works themselves or the results arrived at. I have attempted to group our thoughts around the most striking figures—the men of the hour which these fifty years have brought forth. It has been my aim to deal with the strictly scientific rather than the clinical side of the question and to place before you the physiology rather than the practice of giving chloroform.

What, then, ladies and gentlemen, have we to show for these fifty years of work? Are deaths less frequent from chloroform? Do we understand its physiological action better? Are we mere blind leaders of the blind working empirically with a drug of which we know little, inhaled into and acting upon the organism in a way of which we know less? I venture to say the answers to all such questions are at least re-assuring. Unhappily we cannot say the mortality as a whole is less. Many circumstances account for this. In the first place a regrettable familiarity with the stoppered bottle and the always accessible towel or handkerchief has relaxed the sense of responsibility which once the giving of chloroform entailed. It has been wittily said that even the youngest of us make mistakes and certainly very many fatalities under chloroform would be prevented if only experienced persons were called upon to use chloroform to produce surgical anæsthesia. Again, the methods in vogue are usually faulty. The accomplished chloroformist will use the rudest means of bringing about chloroform sleep with impunity, but to leave the dose of anæsthetic and the degree of dilution to the judgement of the inexperienced house surgeon or dresser is to court disaster. No doubt the teaching of Syme and the practice of Lawrie are absolutely sound—their results prove it; but so did the results of Snow support his teaching that the sitting posture was as safe for chloroform inhalation as the recumbent; so did the results of Clover, who at one time gave chloroform from lint and covered the patient's head and shoulders with a towel, a procedure which Snow did not hesitate to condemn. But all these methods depend upon the individual who pursues them. To the average equestrian the performances of the circus rider are feats of danger and bristle with endless chances of accident and death. So is it with chloroform. Unless I have failed utterly in my endeavour to place before you the light and leading of the past fifty years you have realised that chloroform has been proved beyond dispute, alike by its friends and its foes, to be a most powerful and therefore most perilous drug. Therefore, unless you can make all chloroformists as expert and as conscientious as Simpson, Snow, Syme, Clover, and Lawrie, you must either restrict the use of the drug to those who at least have such responsibility as engenders care or supply better methods than those which leave so much to the personal intelligence of the chloroformist.

Perhaps the strongest feeling caused by the annals of these fifty years are those of gratitude to the great men who introduced chloroform and of gratitude to those whose patient toil and untiring energy have taught us the physiology of the action of chloroform on the organism. Knowledge casteth out fear. The empiric trusts to rule of thumb, scorns to learn the possible results of his actions, and possesses a courage born of ignorance. To the man of science—and I venture to say that no man should more emphatically make himself a man of science than he who undertakes to administer anæsthetics—knowledge means the power to avoid recognised dangers, to guard against their coming and be ready to counteract them when they arise and to guide his patient through safe paths to anæsthesia. He should be fearless because forewarned and only fearful lest through carelessness or loss of that professional conscience—his sense of responsibility—he sins against knowledge, placing a slavish adhesion to precedent before the all-important necessity of studying each case as it comes and before adapting his measures to the ever-varying conditions of that ever-changing problem—the human body.

Supplementary Croonian Lecture

ON

POINTS CONNECTED WITH THE PATHOLOGY AND TREATMENT OF DIABETES.

Delivered before the Royal College of Physicians of London on Nov. 11th, 1897,

BY F. W. PAVY, M.D. LOND., LL.D., F.R.S.,
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(*Concluded from p. 1301.*)

WHATEVER may be the means by which it is effected it may be regarded as certain that to keep the sugar proceeding from the food out of the urine it must be kept out of the general circulation. The power by which this is accomplished falls within what we understand to be meant by the term assimilative power and it is through this power being at fault that in diabetes sugar gets into the urine from the food. In proportion as the power in question is diminished so is there a diminution in the amount of carbohydrate that can be taken without influencing the urine. The position of things may be exemplified by a vertical column representative of the power under consideration with the maximum degree, or that belonging to health, standing at the top and successive stages of decrease, corresponding with what may be found to exist in different cases of diabetes, following on below until we arrive at the bottom where the power is *nil*. The maximum power is such as to be sufficient for providing for the disposal of the carbohydrate that is taken within ordinary limits, and thus it happens that under these circumstances no influence is exerted upon the urine. If carbohydrate, however, should be taken to an undue extent, and especially if introduced into the stomach in a soluble form and at a period of fasting, the tax upon the assimilative power surpasses the capacity to meet it, and as a result, notwithstanding we are in the presence of a healthy system, a portion escapes being disposed of and is permitted to reach the general circulation as sugar and in this state to find its way into the urine. This may be looked upon as the explanation of the saccharine urine which it is known can be induced in both man and the lower animals by excessive ingestion of carbohydrate.

With rather less assimilative power existing than is normal a given amount of carbohydrate that can be taken by a healthy person without producing any noticeable effect gives rise to glycosuria. Cases of this nature are not unfrequently met with in practice and prove perplexing to the medical man and to the patient. By one practitioner the patient is told that there is sugar in his urine and for a while he may be inspired with gloomy forebodings. He possibly later seeks the opinion of another practitioner who pronounces his urine to be perfectly right, and by this he is consoled till it arrives that he is afterwards told again that there is sugar in it. This apparently puzzling state is entirely due to the carbohydrate that may happen to have been ingested just previously to the urine being examined. When in excess of a certain limit sugar is voided; when, on the other hand, below it no sugar is found, the assimilative work to be performed being within the capacity existing for performing it. Like to what has been said with regard to the healthy person, saccharine and non-saccharine urine follow in response to the particular amount of carbohydrate ingested. The only difference between the two cases is that an amount of carbohydrate that suffices to lead to the production of saccharine urine in the glycosuric does not suffice for doing so in the healthy person. It is to be remarked that the effect is noticeable within two or three hours after the food has been taken. Before the meal there may be no sugar in the urine and a short time afterwards a more or less notable amount may be discoverable. These are the cases that are frequently referred to as cases of intermittent diabetes. The intermittent character noticeable is due to variations that may happen to occur in connexion with the food.

So it runs on. Different grades of power are met with in different cases and it is found that an amount of carbohydrate that one glycosuric may be able to take without its

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leading to the passage of sugar suffices to determine its escape in another. The person has his fixed limit of power just as we as healthy subjects have, but the limit of power stands lower and is of varying degree in different cases. In each instance, as long as the carbohydrate taken is within the capacity existing of assimilating or properly disposing of it, the urine remains uninfluenced; whilst when the capacity has been exceeded sugar becomes discoverable, the quantity standing in relation to the extent to which the capacity has been surpassed. A case at a given time may be advancing in the direction of loss or in the direction of gain of power, but taken at other times the steadiness that is noticeable from day to day, week to week, month to month, or even year to year, is most striking. The patient has his fixed point of assimilative power. In addition to the restricted diet for the diabetic he may be able to take a certain weighed quantity of ordinary wheaten bread without sugar appearing in the urine. In other cases the quantity that can thus be taken may be larger and larger. The limit belonging to the case is ascertainable by observation and subsequently the state of the urine will depend upon whether carbohydrate is taken to a greater or to a less extent than the equivalent of that contained in the specific quantity of bread found to be permissible. When the patient is living close up to his boundary line sugar is apt upon occasions to be met with. This, from the variation that is liable to occur in his daily food looked at in its entirety, is only what may be reasonably expected. When, however, thoroughly below his boundary line there is sufficient assimilative capacity to spare to cover any little variation and prevent the urine being influenced.

It is not for a moment to be understood that in the restricted diet there is a complete exclusion of carbohydrate matter. Even purely animal food contains a certain amount, and in the substitutes for bread variable quantities according to circumstances exist. All that can be accomplished is to carry the exclusion as far as is practically consistent with the provision of a supply of food that the patient can satisfactorily eat and subsist on. As the object of the restricted diet is to reduce the supply of carbohydrate matter so that if possible it may fall within the assimilative capacity existing, it is of paramount importance that we should be able to rely upon the articles that are sold to take the place of bread. Without security in this matter the dietetic treatment of diabetes may not merely prove fruitless but at the same time absolutely misleading to the medical practitioner. Unfortunately, either from ignorance or unscrupulousness, articles are put into the market for sale as appropriate food for the diabetic which are literally no more suitable for the purpose than the food they are designed to replace. Both medical man and patient require to be vigilantly on guard to escape from the infliction of grievous physical harm and subjection to vexatious disappointment. Even with foods of the better class character considerable variation exists in the produce (particularly the gluten flour and thence what is derived from it) of different makers, and want of success in treatment may result from the article employed not being of the degree of purity looked for. Fortunately the high-class makers of diabetic foods in this country are fully alive to the importance of conscientiously attending to the question of purity, and the more this is realised and acted up to the better the position in which the medical practitioner is placed. It must be acknowledged that the matter is not devoid of difficulty. Palatableness has to be looked to and ordinarily palatableness suffers at the expense of purity. The art called for is to produce food which is palatable and at the same time suitably constituted to meet the requirements of the complaint. The producer has at one and the same time to use his endeavours to please the patient and satisfy the physician, and amongst those who have exerted themselves in a right way to attain the object desired I consider Mr. Callard deserves to be mentioned.

The state of the urine constitutes a tell-tale in relation to the food that has been taken, and errors in diet in whatsoever way occurring are unfailingly revealed. A reliable quantitative determination of the sugar is of course required for the purpose, and with a specimen of urine taken for examination from that passed on going to bed at night and another from that passed on rising in the morning, the one being under the influence of the food of the day and the other under that of fasting during the night, we obtain a disclosure, if there is any to be made, of the effect of what has been ingested. The night specimen is under the influence especially of the food taken in the latter part of the afternoon and the early part of the evening, and from this circumstance it is not unfrequently found to contain sugar whilst the morning specimen may be free. On the other hand, should food be taken shortly before bedtime—in other words, should the last meal be a supper at the end of the evening instead of a dinner at the early part of it—the position may be reversed through sufficient time not having elapsed for the night specimen to be influenced and the effect of the food being thrown instead on the morning specimen. Under such circumstances sugar may be found in marked amount in the morning urine and less or none in that passed at bedtime. So sensitive is the urine to the influence of food that in the case of a glycosuric requiring a strict observance of the restricted diet for maintaining the urine in a sugar-free state the starchy matter contained in a thin water biscuit may suffice to impart to it a distinctly saccharine character. Whatever the nature of the article containing the carbohydrate it equally tells upon the urine, but on account of the solubility of sugar in contra-distinction to starch articles containing the former produce a more speedy effect than those containing the latter. I need not dwell upon the delusion so extensively prevalent that toast from bread is allowable when bread itself is not, or that the starchy matter of the potato stands in a different position from that from other sources.

Removal of sugar from the urine by reducing the carbohydrate taken does not mean cure of the disease. What is wanted for cure is restoration of the assimilative power, and in proportion as this is brought about so can more and more carbohydrate be taken without leading to the passage of sugar. If, indeed, in a diabetic case the power should become fully restored the patient would be placed in a position to be able to take the ordinary diet without its influencing his urine, and he might then be truly told that he had shaken off his complaint.

But control of the elimination of sugar by diet is of paramount importance in promoting improvement, and may be looked upon as an indispensable measure of treatment. It is not the mere fact of the waste of food occurring with the discharge of sugar that constitutes the great source of trouble in diabetes. It is the state of system which stands as a preliminary factor to the elimination that occurs. The blood forms the connecting link between the urine and the food. The sugar present in the urine has previously passed to it through the blood, and in doing so has created in this fluid a deviation from the natural state which tells injuriously throughout the entire system. It is not natural for the blood of the general circulation to contain more than a certain small amount of sugar, an amount varying but little under healthy circumstances. With the presence of an increased quantity as a result of the faulty assimilation of the carbohydrates of the food it is thrown into an unnatural state and its constitution altered in such a way as to interfere with its fitness for ministering to the proper performance of the nutritive and various other processes of life. All the symptoms and results of the complaint depend upon the unnatural presence of sugar in the contents of the circulatory system, and on this condition being altered, as it is shown to be by the disappearance of sugar from the urine, the symptoms and ill-effects immediately subside. It may then be said that so long as this state can be maintained the patient has nothing to fear from diabetes. Diabetic coma is the condition most to be dreaded as an issue of the disease. With the sugar in an uncontrolled state the condition is liable at any time to supervene and speedily carry off the patient. If any other complaint of an acute nature, as influenza, pneumonia, &c., should set in, great danger is incurred of a fatal termination through the supervention of diabetic coma. A diabetic in the great majority of instances does not die in a direct manner from the superadded complaint, but from the development of diabetic coma. Not so, however, when the elimination of sugar is thoroughly under control. Such a patient is to all intents and purposes except in relation to food in the same position as an ordinary person. In all my experience I have never come across the supervention of diabetic coma in a case where the urine has previously been in a sugar-free state.

To control the escape of sugar by adaptation of the diet is only a rational procedure and cannot be otherwise than right. There is a diminished assimilative power existing, and to bring the conditions to a properly balanced state there should be a corresponding diminution in the class of food

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calling for the exercise of the power. When the amount of carbohydrate matter of the food is shaped so as to be properly adapted to the power existing of disposing of it there is no disturbance of the required harmony between the two, and the system escapes being prejudicially influenced by the effect of the deficient power that has to be dealt with—escapes, in other words, being thrown into an unnatural state by the presence within it of sugar which ought not to be there. The passage of sugar that can be controlled by reduction of ingested carbohydrate means neither more nor less than the unnecessary infliction of harm, and the harm inflicted stands in proportion to the amount of sugar that is allowed to reach the system and thence to escape with the urine. The fact of voidance of sugar affords evidence that the system is already overburdened with carbohydrate and any addition will have the effect of increasing the abnormal condition existing. If the case is one in which the sugar in the urine is not susceptible of removal its reduction in quantity does good by establishing within the body a closer approach to the natural state.

As I have asserted, what is to be sought for by treatment is the restoration of assimilative power over the carbohydrates and this is often demonstrably attainable. Let me give an illustration of the kind of case I am not unfrequently meeting with in my experience. A patient, say, above middle age has become diabetic, but from some cause or other does not happen to fall under proper treatment till he has reached a very bad state. His symptoms have been persistently growing more and more marked, and at the time of falling under observation he may be suffering from great thirst, passing an enormous quantity of urine, and having become much reduced in weight and strength. We will suppose that he is placed on the restricted diet, which is loyally attended to, and that codeine, opium, or morphia is administered. Even within a few days a marked change is produced. The thirst and excess of urine subside and the patient picks up in weight and strength. The sugar falls and ultimately disappears. In some instances this happens with surprising rapidity, but in others it may not be till after the lapse of some days or even of a longer time than this, that the urine is found to have lost its saccharine character. The satisfactory progress continues. The patient feels as though he had shaken off his complaint and perhaps wonders why he should have to keep to his measures of treatment. Any relaxation in diet, however, would immediately lead to a return of sugar. The power of disposing of carbohydrate matter has not yet become restored. For a while the improvement is well maintained, the weight, which in the first place underwent increase, being afterwards kept up. Later, but when cannot be foretold, a change may set in which is not unlikely to excite gloomy forebodings by leading to the apprehension that a relapse has occurred. It may be at the end of some weeks, or more likely months, a decrease of weight may set in and the patient may feel weaker and be reminded of the state that existed before the treatment was commenced. If with this alteration the urine continues free from sugar it may be read off as a sure sign that a restoration of assimilative power has commenced to take place. A return to ordinary food would indubitably bring back the sugar. The improvement of power that has occurred is only likely to be slight and requires to be met by a correspondingly slight allowance of carbohydrate matter. It appears to me that bread is the article most missed from the ordinary dietary, and this therefore I am in the habit of suggesting for employment as a representative of carbohydrate food. I begin with 3 oz. per diem in portions of 1 oz. at each of the three principal meals. Under the circumstances depicted it may reasonably be expected that no sugar will be made to appear in the urine, and, such being the case, in the course of ten days or a fortnight a trial is made of 1½ oz. in place of 1 oz. three times daily. This also is ordinarily found to be tolerated, the indication of toleration being that the carbohydrate does not pass off as sugar. Interesting to note, with the administration of the bread the patient immediately begins to recover his lost weight and to feel himself again. Later another drop in weight may occur, and it is to be taken as an indication for a further increase of bread. In this way I frequently work up during a space of, it may be, two or three months to 7 oz. or 8 oz. of bread per diem. I sometimes find that the capacity exists for the quantity to be raised to 9 oz. or 10 oz., and I have known cases where I have been able to proceed as far as 12 oz., and upon rare occasions a greater latitude of diet than even this involves has been unattended with the passage of sugar. If sugar should reappear in the urine it must be looked upon as meaning that the mark has been overstepped and that a retrogression must be made to the quantity found to be tolerated.

Let us for a moment pause and give thought to what the return of the capacity of taking carbohydrate matter without its escaping as sugar implies. To begin with, for awhile there may be a passage of sugar with the limited supply of carbohydrate associated with the restricted diet. Then this sugar disappears, and, next, more and more carbohydrate can be taken without running off from the system as sugar with the urine. Surely this must indisputably mean that the system has regained a power that it had previously lost.

An important principle is involved in connexion with what I have just set forth, and all the facts stand in harmony with what may be rationally looked for. It is certainly a notable point that everything should work out as harmoniously as it does. The effect of carbohydrate food in health is diametrically opposed to its effect in diabetes. In health, as we well know, it contributes to the increase or to the maintenance of weight. In diabetes when sugar is being voided it does exactly the reverse. If it runs off as waste material with the urine it naturally cannot be expected to go towards maintaining or increasing weight. As a matter of fact it leads to decrease of weight through waste occurring and the wrong state of system induced by the abnormal presence of sugar that is in transit from the food to the urine. Who has not noticed the marked decline of weight that occurs in a diabetic before subjection to dietetic management and the rise that immediately follows its adoption? The circumstances in diabetes then are such as to lead to the supply of carbohydrate producing a loss, and restriction from it a gain of weight. The healthy person, on the other hand, gains weight upon its full supply and loses weight if the supply is restricted. Now in proportion as his assimilative power becomes raised so is the position of the diabetic brought into conformity with that of the healthy person and so is the necessity created for his being similarly dealt with. As long as carbohydrate food fails to be utilised its supply does harm. Directly the system regains the power of utilising it, it is found, as in the case of the healthy person, that it is wanted and that if it is not supplied the want is betokened by a decrease in weight and a decline of strength. The principle to put into force is to give it short of producing saccharine urine, and decreasing weight with sugar-free urine may be taken as meaning that the supply is not equal to what is permissible and moreover wanted.

In cases where the assimilative power is not recovered observation shows that the restricted diet is borne without the occurrence of loss of weight and it is permissible for me to state that the circumstance may be safely taken as a guide in practice. I know of patients who have gone on for years with the restricted diet with a thorough maintenance of weight. They are not the patients to bear the supply of bread. The system cannot want or be benefited by that which it has not the power of properly disposing of and allows to run off as waste material with the urine. It is only that which can be properly disposed of that can render service to the system.

The loss of weight attendant upon unneeded restriction from carbohydrate food may afford assistance from a diagnostic point of view. If at starting the case has not been properly diagnosed, and it should prove to be one where, from simply undue concentration of urine and the high specific gravity and the slight indication of reaction with the copper test often met with under the circumstances, an erroneous inference has been drawn and the patient has been unnecessarily put on the dietetic management for diabetes, a loss of weight, sometimes of a marked nature, will ensue. Equally also loss of weight will ensue if the case is one of mild glycosuria and it is treated as one of ordinary diabetes. Rightly appreciated the result noticeable will be suggestive that curtailment of the supply of carbohydrate matter is being carried to an uncalled-for extent.

From the remarks I have made it will be gleaned that food stands as the great factor in the treatment of diabetes. As I have stated the object really before us for attainment is restoration of assimilative power. My experience leads me in an explicit manner to say that I believe this is promoted by the medicinal employment of opium or its alkaloids, and I think the view accords with the result of the general experience of others. The older physicians, before the dietetic management of diabetes stood in the position it

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now does, empirically arrived at the conclusion that an amelioration accrued from the administration of opium.

Although the great factor in relation to the amount of sugar eliminated, food is evidently not the only one. The pathological condition which stands at the foundation of the action constituting the immediate source of the elimination is presumably influenced by incidental circumstances. In many cases, it is true, it may be noticed that the assimilative power stands with remarkable constancy at a fixed point for a prolonged period, but in others evidence is presented pointing to the patient being liable to be influenced by collateral conditions, especially of a mental nature, having the effect of altering to a greater or less extent the amount of sugar eliminated upon a given quantity of carbohydrate when sugar is being passed, and of leading to a certain amount of elimination when the urine has previously been in a non-saccharine state.

The phenomena I have hitherto been speaking of belong to what is appropriately styled the alimentary form of diabetes, which I would certainly say from my own experience is far more common than the other, but at the same time is not the form that most frequently finds its way into the wards of the hospital. Besides the cases controllable by attention to food we meet with others in which no amount of dieting will remove the sugar from the urine. These present us with the classical type of the disease and may be grouped into what may be called the grave form of diabetes, a form belonging especially to the period of life below middle age. A superadded condition exists which leads to sugar being derived from the tissues as well as from the food. The glucoside constitution of the nitrogenous principles of the body supplies an intelligible source for sugar, all that is wanted being a pathologically developed ferment possessing the power of breaking them up with the liberation of their sugar molecule just as occurs with amygdalin in presence of emulsin.

Cases progress from the alimentary form into the grave form and it is upon the extent to which the progressive tendency exists that the issue depends. Amongst persons above the middle period of life the progressive tendency is usually susceptible of being held in check, and often, as I have shown, progress even in the opposite or right direction is to be brought about. I think it may be definitely said that allowing the complaint to run on in an uncontrolled state promotes the passage from the alimentary into the grave form, but undoubtedly there is nothing like the same proneness for the occurrence of the passage amongst elderly that there is amongst young people. It is indeed the strongly marked progressive tendency that gives the formidable nature to diabetes in young subjects. A striking analogy is presented to the progressive diseases of the nervous system; and (but this is a point that time precludes my entering into here) may we not have at the foundation of diabetes a wrong nerve condition implicating and operating through the vaso-motor system? In its early stage the complaint may be just as controllable in a young as in an elderly person, but as time goes on the difference becomes manifest and it is found in the former that through the advance that has insidiously taken place the measures that before produced a satisfactory state no longer succeed in doing so. The rate of progress may vary considerably. In some cases with an inherited history I have known it extend over many years.

And now, Mr. President and Gentlemen, let me in concluding this lecture express the hope that I have succeeded in clearly placing before you what is in my own mind as the outcome of the life-long attention I have given to the subject upon which I have addressed you. The views I have set forth have sprung entirely from experimental physiological work on the one hand, and from practical experience in connexion with diabetes on the other. With this foundation they harmonise with the assemblage of facts to be dealt with belonging alike to physiology and pathology, and at one and the same time they bring the whole matter into a state of great simplicity and supply a working basis upon which the treatment of diabetes may be rationally and reliably conducted. With the glycogenic doctrine the teachings of diabetes are absolutely irreconcilable, and it may, moreover, be said that modern research has removed the support upon which it was originally based. And yet the doctrine still lingers in the mind, influencing its conceptions and shaping its views, for persons seem unable to look at the points belonging to the subject otherwise than through the prepossessions that have been engendered thereby. The chapter, however, will have, sooner or later, not simply to be revised but completely rewritten; and the sooner this is done the better, I feel I am justified in saying, will it be for the right comprehension of diabetes by the medical profession.

HERNIA OF THE ABDOMINAL CICATRIX AND OPERATIONS FOR ITS CURE.[1]

BY ALBAN DORAN, F.R.C.S. ENG.,
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HERNIA of the cicatrix after abdominal section is unfortunately an accident of no great rarity. A mere digital protrusion may be kept back by pressure skilfully applied. If, however, it is suffered to attain a large size it may prove more troublesome than the disease for which the operation was performed. It may also become in itself a direct source of danger demanding surgical steps for its relief. The late Mr. Greig Smith, the loss of whom we all regret, clearly refers to the less advanced type of ventral hernia when he lays down his principles of treatment in his well-known work.[2] Indeed, it would at first seem as though he referred to primary ventral hernia independent of any surgical wound, but he distinctly states that "ventral hernia so-called is simply a stretching of scar-tissue which permits the abdominal contents to escape through the parietes and to bulge outwardly under the skin." Further,[3] in his paragraphs on hernia after operation, he distinctly refers back to the same passage. Hence he is clearly speaking of surgical ventral hernia. Mr. Greig Smith continues:[4] "There is no narrow neck as in umbilical hernia and no dissection of skin from parietes by burrowing omentum or intestine as in umbilical hernia. The hernial sac is simply stretched peritoneum; the coverings are stretched cicatricial tissue with a little fat and stretched skin. To cure this condition it is necessary to remove or push aside the redundant and attenuated tissues and bring into contact and keep in contact the thick and non-yielding parietes. To do this satisfactorily it is rarely necessary to enter the abdominal cavity." Here follows a description of his operation where the cavity is not opened.

Deeply regretting that Mr. Greig Smith, who was living when I began to prepare these notes last autumn, is no longer amongst us, I must be allowed to respectfully observe, in the interest of patients and operators, that the deceased surgeon's description of surgical ventral hernia can only apply to a very early stage of that troublesome complication. Even at that stage I should hesitate to operate without opening the peritoneum. When the hernia has developed further, so far from there being "no narrow neck" there may be a very tense narrow neck as in two of the four severe cases presently to be described.[5] Secondary sacs and burrowing of omentum and intestine are observed in this form of rupture just as in umbilical hernia. Firm adhesion of intestine to the cicatrix is frequent. I will now give the notes of four particularly severe cases in my own practice where all the above noted complications were detected. An operation was demanded on account of those complications which were successfully relieved. I must add that I am not sanguine about the ultimate result as far as complete immunity from recurrence is concerned. The four cases simply show that hernia of the cicatrix is a serious condition.

CASE 1. *Hernia of ovariotomy-wound two years; large sac; secondary pouch; circular sharp edged neck with intimate adhesion of the transverse colon in the middle of cicatrix.*—A single woman, aged fifty-one years, was admitted into my wards at the Samaritan Hospital in June, 1895. On April 10th, 1893, the late Mr. Hulke removed an ovarian tumour. The incision, Mr. Bland Sutton kindly informed me, was closed by a single series of waxed silk sutures. She remained six weeks in bed after the operation and wore strapping all that time. She did not have a belt till a month

[1] A paper read at a meeting of the Harveian Society of London on Nov. 18th, 1897.
[2] Abdominal Surgery, vol. i., fifth edition, 1896, p. 114.
[3] Ibid., p. 147. [4] Ibid., p. 114.
[5] Dr. Benno Schmidt in speaking of hernia of the abdominal cicatrix rightly observes that "as a rule the neck of the sac has not a sharp border" ("Die Unterleibsbrüche," Billroth und Luecke, Deutsche Chirurgie, 1896, p. 357).

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after her discharge from the Middlesex Hospital, but went to work with a linen binder round her abdomen. The belt was not made to measure and did not fit. The patient told me that she first noticed a swelling in the abdominal scar eight months before admission—that is, in November, 1894, or over one and a half years after the ovariotomy. It caused her extreme inconvenience and she could not earn her living. She declared that otherwise her health was good; unfortunately she concealed the fact that in April, 1895, she had been seized with a slight convulsion which lasted for a few minutes. The abdominal walls were found to be very relaxed. The cicatrix was about four inches long and S-shaped. In the middle and nearer its upper than its lower limit was a circular hernial aperture nearly two inches wide. The edge felt sharp excepting above, where a soft body which I at once recognised as intestine adhered to it. When the patient coughed intestine escaped freely. On June 25th, 1895, I operated. I mapped out an incision carried all round the redundant skin and then dissected deeper on the right of the cicatrix proceeding cautiously till the peritoneum was opened. Then a deep secondary pouch was found, passing to the left under the left rectus and full of adherent omentum which I set free. The sharp circular neck of the hernia was now reached. The peritoneum was reflected over it, passing on to the sac, and half an inch of the transverse colon was firmly incorporated with the upper part of the neck. I cut into the peritoneum all round the ring, passing in front of the adherent colon, dissected away the pouch which extended far to the left under the skin, and then cut away the redundant integument. Then I trimmed the sharp aponeurotic border of the neck of the sac and dissected off the adherent colon, a difficult process as the fibrous tissue was incorporated with the wall of the intestine and there was much bleeding. The liberated colon slipped up high above the wound. I sewed together the cut edges of the peritoneum with stout catgut. Then I closed the aponeurotic layer, which had been freely trimmed so as to destroy the abdominal aperture, with the same material. The integuments were united with interrupted silkworm-gut sutures. All the silkworm-gut sutures were removed by July 3rd. On the 18th the patient had an attack of hemiplegia; spastic contraction of the right hand was marked. I sent her to St. Mary's Hospital in August, where she remained under the care of Dr. Maguire for a few weeks. The new wound healed well. The patient tried to do a little work in the autumn and admitted that the operation had given her great relief. No longer did a mass of intestine come out of the abdominal cavity on the least exertion. A fatal attack of paralysis occurred in December, 1895. The wound was quite strong when she died.

CASE 2. *Hernia of hysterectomy-wound four years; large sac with large secondary pouch; circular sharp-edged neck in the lower extremity of the cicatrix; firm adhesion of the small intestine and omentum to the fundus of the sac.*—The patient, a single woman, aged fifty-two years, had undergone varied treatment for uterine fibroid. Four years before I saw her an exploratory incision was made and six months later Dr. Remfry removed the uterus by supravaginal hysterectomy using the serre-nœud.[6] Soon after leaving the hospital a rupture developed. The patient left off her belt at the end of two years. The rupture grew larger and caused attacks of severe pain. The patient was referred to me by Dr. Frederick McCann and came under my care on March 9th, 1896. There was a hernial protrusion at the lower end of a cicatrix nearly five inches long. On reducing a mass of bowel I could feel the sharp neck of the sac about one and a half inches in diameter, and as the edge was soft and blunt on the right side I concluded that intestine must be adherent there. The fundus of the bladder rose in the groin completely to the right of the hernia and below it. On March 13th I operated, managing the integuments as in Case 1. I found the omentum strongly adherent to the sac when I dissected up the skin to the right of the cicatrix. After tying and dividing the omentum I explored the left side of the sac from within. I came upon a long coil of small intestine firmly adherent to the peritoneum close to the skin incision which I had mapped out on the left side of the much-stretched cicatrix. A small piece of the serous coat of the intestine was torn before I could set the gut free; the adhesions extended to the left iliac fossa far beyond the hernia. Then I found very firm omental adhesions to the under side of the upper part of the scar; one indeed lay above it, whilst another lay in a secondary pouch of peritoneum which ran under the rectus muscle an inch beyond the left limits of the main hernial sac. The omentum was hard to draw out of this secondary pouch. I now completed the excision of the sac by cutting through all the tissues on the left. The excised parietes were pyriform in outline. I found some moderately firm adhesions of the ascending colon to the parietal peritoneum on the right, to the neck in fact. Most of the neck had already been trimmed away during the separation of the complicated adhesions. I applied deep interrupted silkworm gut sutures through all the tissues including the peritoneum; then sewed up the aponeurotic layer with a continuous No. 3 silk suture, after which the silkworm gut threads were tied. The interrupted sutures were removed on the tenth day. In the course of the above operation I found that the stump of the uterus amputated four years previously was reduced to a broad, flat ligament which ran over the left side of the bladder and was lost above in the lower angle of the wound immediately below the hernial sac. The patient made a rapid recovery, but I enjoined long rest and she attended to my advice. In the summer she was in excellent health; the new cicatrix was firm and all the discomfort which she felt before operation had passed away.

CASE 3.—*Hernia of cicatrix of incision on the outer border of the right rectus for two years; enormous sac; no true neck; elongated secondary pouch with narrow neck almost strangulating the omentum; intimate adhesion of the omentum to the fundus of the sac; removal of the appendages for papillomatous disease.*—A woman, aged twenty-eight years, married eleven years, two children, the youngest eight years old, was sent into my wards in the Samaritan Hospital on March 21st, 1896. There was a large hernia of a cicatrix which extended along the outer border of the right rectus from the level of the umbilicus to the pubes. On coughing a large protrusion developed and the greater part of the intestines slipped into the sac when the patient walked about. There was also a tender swelling to the right of the uterus. The original mischief, as I learned from Mr. Lunn, was a neglected miscarriage, and she was so ill afterwards, in February, 1894, that she was unconscious when her friends took her into the Marylebone Infirmary. A large pelvic abscess was opened through the parietes and the peritoneal cavity was irrigated and drained. The patient made a good recovery but did not take care of herself. Severe pelvic pain and the constantly enlarging hernia made her seek for operative relief. On April 7th, 1896, I operated with the assistance of Mr. Corrie Keep. I made an elliptical incision around the distended integument, and dissected up the skin to the right. There was very dense cicatricial tissue beneath it, including, so to speak, a large mass of omentum. This was divided and then I explored the pelvis. The left as well as the right appendages were extensively diseased. After aspirating the right tube there was no difficulty in removing the diseased parts and securing the pedicles. The tubes were cystic and papillomatous degeneration was detected in both. I then turned once more to the hernia. Much thickened peritoneum was trimmed away, including a secondary pouch with a very narrow neck full of adherent omentum running under the skin in the lowest part of the wound. The cut edges were dissected up from the muscular layer in front (a matter of some difficulty) and united with a continuous suture of No. 1 silk. Silkworm-gut sutures, interrupted, were passed through the skin, muscle and aponeurosis and tied. The patient made a good recovery. The sutures were removed on the tenth day. The patient remained perfectly comfortable. Unfortunately, in March, 1897, a small digital protrusion developed in the lower angle of the wound. This is a hernia of the milder form such as will presently be described. It gives no inconvenience and is held back by a bandage. Of course, if neglected it would become as serious as before.

CASE 4. *Double hernia of median abdominal wound; exploratory incision three years; large sac with two secondary pouches and long, narrow neck; small sac with narrow circular neck lower down; strong adhesion of small intestine and omentum to fundus of large sac.*—A woman, aged twenty-seven years, married six years, last confinement five years and three months previously, was sent to my wards by Mr. Corrie Keep on July 5th, 1896, for the relief of a large hernia of the abdominal cicatrix. The history was remarkable. Her mother stated that she had several fits when a child.

[6] The period was never seen after this operation.

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Dr. Findlater, of Edgware, and Mr. Sutton kindly sent me particulars of the operation where the wound was made. She was admitted into the London Infirmary in November, 1893, as a mental case. Her bowels were very stubborn from the date of her admission. On April 16th, 1894, they had not been opened for three weeks. She believed that she had swallowed a cork. The abdomen was greatly distended and the integuments were red, as though there was an abscess. The breath smelt fæcal and grumous liquid came away after enemata-like motion in cases of obstruction. At 8.30 P.M. on April 16th Mr. Bland Sutton operated and found no mechanical obstruction and nothing remarkable. The bowels except the sigmoid flexure were quite empty. At 10 P.M. she got out of bed, tore off all her dressings, and passed an enormous stool. During convalescence she was restless, but not more so than before the operation. About nine months before I saw her the scar began to bulge. Mr. Keep had kept her under observation for some time and found that the hernia was steadily increasing in size. The patient suffered badly from dragging pains and earnestly begged for operative relief. The hernial pouch was pear-shaped and nearly five inches long, including the entire cicatrix. It was deeply pigmented, as though the brown line which probably developed after the patient's only pregnancy had increased in width by deposit of fresh pigment during cicatrisation. On further examination I found that the hernia was double, as I could feel an elliptical gap one inch long in the aponeurotic layer near the upper part of the wound and another admitting the tip of the forefinger at the lower angle. On coughing intestine could be felt issuing from both gaps and the whole cicatrix bulged forwards as a large sac. On July 8th, 1896, I operated with the assistance of Mr. Targett. I mapped out a pyriform incision in the skin around the sac and cautiously dissected up the integuments on the left. I came at once upon a coil of ileum which adhered rather firmly to the sac which issued from the upper gap; it could not be detached without damage to its serous coat, which was repaired. The ileum then fell back into the abdominal cavity. There were several omental adhesions on the upper part of the sac and even higher on the parietes above the hernia. The omentum was set free, including a long and tough band which turned upwards and adhered to the transverse colon, drawing it down below the level of the umbilicus. Two secondary pouches existed in the sac wall, burrowing to the left under the skin, but they were empty. The peritoneum after the excision of its two sacs was separated from the aponeurotic tissues and its edges united with fine catgut and the two gaps in the aponeurosis carefully trimmed and united with stout catgut. The lower or circular gap in the wound was occupied by a short process of peritoneum containing no adherent intestine or omentum; it was readily trimmed away. The integuments were brought together with interrupted silkworm-gut sutures.

During convalescence the patient had symptoms of hystero-epilepsy and was very violent from the first, yet there was absolutely no trouble due to flatulence or any difficulty in getting the bowels open. All the skin sutures were removed on the eleventh day and the patient was discharged on the twentieth day. A month later she was reported as quite free from any of the trouble due to the hernia; she was under treatment for her nerve symptoms in the Marylebone Infirmary.

It is clear that the above cases were forms of ventral hernia which could not have been treated after the fashion recommended by Mr. Greig Smith, and they displayed conditions which he seemed to consider as rare or non-existent in this kind of rupture. Operations of the kind just described are not without risk. I know of two fatal cases, in one of which inflammation of the parotid occurred.

In analysing these four cases the first thing to note is the apparent cause of the hernia in each. In none could either the operator or his method be blamed. Thus the patient in Case 4 was half insane and considering her behaviour directly after the first operation it is remarkable that she did not suffer from worse complications than hernia. In Case 1 the patient chose to wear an ill-fitting belt from the first without acquainting Mr. Hulke of the fact. How far her cerebral disease was the cause of carelessness on her part I cannot say. Case 3 is easily understood the incision was made through inflamed tissues for the relief of suppuration and drainage was necessary. There remains Case 2. Here the operator had to cut through an old cicatrix made for exploratory purposes and he found it best to use the serre-nœud. Under such conditions hernia may develop notwithstanding the greatest care. As with these four cases so it is as a rule with most other instances of hernia of abdominal cicatrices, save where there has been manifestly undue hurry in removing the sutures or where the peritoneum has been taken up too far from its cut edge or where the operator has evidently been careless in regard to the bandaging or strapping of the wound. In all four cases the patient eagerly solicited an operation for the relief of her condition. In Case 3 an operation was urgent, the discomfort was extreme, and the hernia very large. The patient in Case 2 also suffered badly, the neck of the sac was very sharp, and, as in Case 3, the patient was perfectly competent to decide for herself. In the latter respect the matter was somewhat different in the first and last cases. In Case 1 the patient concealed from us the fact that she had suffered from disease. Her friends admitted that she dreaded to let the truth be known lest she might lose a situation. I fancy that I should not have operated had I known about the fit; hemiplegia is a much more serious matter than ventral hernia, and the attack after the operation gave me great anxiety. Still, there was a dangerous hernia with a narrow neck causing extreme discomfort which the operation entirely relieved. The patient in Case 4 also had serious nerve disorder, but the hernia was causing her misery and by means of vigilant nursing the patient recovered from the operation with complete relief from all abdominal trouble. The nerve disease was of a much less grave character than in Case 1 and the hernia had undoubtedly aggravated it. In all, the peritoneum of the main sac was closely incorporated with the skin so that it could not be dissected off. On the other hand, the secondary sacs did not in any case adhere to the skin or aponeurotic tissues; indeed, in Cases 2 and 3 I discovered the secondary sac by inverting it when dragging an omentum which proved to be adherent to its inner wall. Strictly speaking, a secondary sac is only a lateral offshoot of the main sac which not being pressed firmly forwards against the cicatrised integuments does not rapidly contract adhesions.

The neck of the sac was a narrow ring with sharp edges in Cases 1 and 2. In Case 4 there were two sacs; the larger had a neck consisting of a gap between the recti. The neck of the lesser sac was a more circular space near the lower angle of the wound. The upper sac was clearly the older. The lower admitted intestine and omentum but was free from adhesions, it represented an earlier degree of rupture as in cases which will presently be related. The diagnosis of intestinal adhesions to the sharp ring in Cases 1 and 2 was easily made. In Case 3 there was no true neck; in this case there was a secondary pouch with a very narrow neck almost strangulating the omentum. In Case 1 the neck of the sac was nearer the upper than the lower extremity of the wound. In Cases 1, 2, and 4 no drainage-tube had been inserted at the first operation, but in Case 2 the lower end of the wound had been filled by the stump of a uterine fibroid. Case 3 was drained; the wound was lateral. The tendency to adhesion of omentum and intestine to the parietes behind the neck of the sac was marked in these cases. It is very usual to find adhesions behind a normal cicatrix when a second ovariotomy is performed long after the first.

Turning to the steps of the operation it is self evident that the operator should map out his incision through the protruding skin and then cut through the skin at a point which seems safe. Complete excision cannot be safely effected till towards the end of the operation. If the peritoneum be not closely adherent to the integuments at the selected point so much the better, but the knife often comes on omentum (Cases 2 and 3) or intestine (Case 4) at once. Thus the above cases show that, as I have before remarked, a neglected hernia of the cicatrix is a serious condition and involves complications that demand operative relief. Yet when they are relieved it is not certain that the hernial protrusion will not recur (Case 3). The aponeurosis and muscle are too often irretrievably damaged; the operation is rather for the liberation of intestine and omentum than for complete restoration of the parietes to their previous normal condition.

I will now turn to the consideration of hernia of the cicatrix in its earlier stages when no operation is required. I have seen a very large number of ruptures of this kind, but I think that it is only fair that I should confine myself at present to cases where I was the original operator. I have taken considerable pains to search for after-histories and shall be glad of any further information.

CASE 5.—In February, 1891, I operated on a woman, aged

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thirty-five years, who was fairly nourished, and removed two ovarian cysts. The incision, two and a half inches in length, was closed with five deep silkworm-gut sutures and a continuous horsehair suture was applied to the integuments along its lower half. These were removed on the seventh day. Fourteen months later the wound was strong. In August, 1894, I felt a small gap in the aponeurotic layer large enough to admit the point of my little finger. In May, 1897, I found that the gap had not grown larger and that there was distinct impulse over it on coughing. This was one of Mr. Greig Smith's type of ventral hernia, I suspect. It caused the patient no inconvenience. I never remove all the sutures on the seventh day now but I doubt if their early removal caused the hernia. No drainage-tube was used in this or in the next two cases.

CASE 6.—In November, 1891, I removed a large tubo-ovarian cyst from a rather thin woman, aged forty-six years (II-para). The incision, three inches long, was closed with six deep silkworm-gut and three superficial horsehair sutures. Half the deep sutures were removed on the seventh day, the rest on the tenth. I often saw this patient afterwards. In October, 1894, I detected a minute hernia in the middle of the cicatrix; on coughing it formed a protrusion as large as a cob-nut. This case is almost identical with the last. Let it be noted that here as in the next case the hernia was not in the lower angle of the scar.

CASE 7.—The patient in this case was a multipara, aged forty-three years. She was rather fat. In July, 1893, I removed the appendages for chronic disease through an incision not quite three inches in length. I closed the wound with five deep and one superficial silkworm-gut sutures. By the eighth day they were all removed. A year later the cicatrix was strong. I saw the patient this spring. There was a small hernial protrusion in the middle of the cicatrix admitting the tip of the forefinger.

In a case of ruptured tubal pregnancy where I drained a slight hernial protrusion developed five years afterwards. Lastly remains a curious case where I removed both ovaries six years ago for checking the growth of a moderately large fibroid in a rather stout subject, aged thirty-nine years. The tumour diminished steadily in size. It happened, however, that a small pedunculated growth of the shape and size of a large brass button lay in front of the tumour in the median line so that it pressed against the scar. No doubt the pressure of the belt acted prejudicially under these exceptional circumstances. The pedunculated outgrowth pressed the cicatricial tissue apart and has come to lie under the skin. It gives no inconvenience though it may prove troublesome when the uterus becomes much smaller from dragging on the scar.

It is remarkable that though I at one time used the drainage-tube very freely I have only once seen a hernia form in its track and that was in one of the cases above noted. Thus an incipient hernia of a cicatrix is not very serious provided that it be carefully watched, the patient being intelligent and prompt to carry out the advice of her medical attendent. No operation is demanded in this form of hernia. Were it necessary I should hesitate to follow Mr. Greig Smith's advice, leaving the sac unopened. In the smallest protrusion there might be an omental or even intestinal adhesion. Experience shows that a small hernia may be kept back indefinitely by careful bandaging so as to remain in a stationary condition. The patient must be warned to be particularly cautious if she finds that she is growing stouter, for in a corpulent subject scar-tissue is apt to grow weak, whilst fat omentum tends to push its way into the sac to which it soon becomes adherent.

The cause of hernia is manifestly non-union of the cicatrix in one of the layers or stretching of the cicatrix. Hence the best method of ensuring union, in other words, the best kind of suture, is a matter of great importance. Unfortunately this question is by no means settled. According to my own experience I am no believer in the superiority of any method. I have known hernia to occur where the wound had been closed by a row of interrupted sutures passing through all the layers. I have seen just as bad hernia when the aponeurotic layer had been united by a separate continuous catgut suture. Deep interrupted sutures, whatever has been said to the contrary, must surely allow of the normal union of each layer as a rule, for I have examined many scars of wounds so treated ten or more years earlier by Spencer Wells and found them sound, though I have detected hernia in similar cases once under that surgeon. Separate union of the aponeurosis is no guarantee against the development of a hernia. Many operators (Martin, Winckel, and Chrobak) admit this fact. Mr. Cripps goes so far as to declare that a continuous catgut or other suture applied to the aponeurosis actually weakens the wound, being a foreign body.

In operations such as those which I have described for the cure of a hernia separate union of the aponeurosis is absolutely necessary as the edges of that layer gape widely and have to be trimmed and brought together. The peritoneal layer may also in these cases need separate suture. When on the other hand a wound through normal tissues is closed the structures on each side are healthy, free from atrophic changes, and easily brought into apposition by deep interrupted sutures. Statistics about the relative merits of sutures are untrustworthy for several reasons. I spoke on this subject at the Geneva meeting of the International Gynæcological Congress in 1896,[7] and noted that when an operator published better results after a change of treatment it often implied that he had become a better and more experienced surgeon. There was a more serious fallacy, for some of the same speakers who issued these records laid stress on the fact that a hernia did not always develop until many years after the operation. Here they were quite correct; yet with that knowledge they published the results of five, ten, or twenty years' experience with an older method and compared them with what they are pleased to call the more satisfactory results of two or three later years' experience of a newer method. This grave source of fallacy is prominent in the "Report of the Discussion on Abdominal Sutures and Abdominal Hernia at the Vienna Meeting of the Deutsche Gesellschaft für Gynäkologie, June, 1895."[8] All manners of suture seemed to answer in the practice of different authorities who at the same time admitted that none guaranteed against hernia. Since I prepared these notes early last autumn Professor La Torre's important essay on the same subject has been published. I agree with him that up to the present day we lack precise knowledge on many questions relating to hernia and sutures. The sixty-three opinions which he has collected since the German Congress are very conflicting and in many cases seem based on insecure foundations such as I have just indicated.[9]

Bossi of Genoa represents the extreme school which advocates suture of each layer separately. He unites the peritoneum in this manner, and there are British[10] and other operators who agree with him. In cases of hernia like Cases 1, 3, and 4 in this paper where much peritoneum is trimmed away separate suture of the cut edges of that membrane may be necessary else apposition will be imperfect. I strongly object to this practice, however, after an ordinary abdominal section, for I know well that union of the serous layer begins very early even when a single set of deep interrupted and not very close sutures are applied. Nearly twenty years ago I found complete union of the peritoneum in necropsies on patients who had died with septic or other bad symptoms within a few days after ovariotomy.[11] No doubt the wound often gapes when sepsis has lasted for several days, but not through the fault of the suture.[12] On the other hand, Martin and Mr. Greig Smith represent the school diametrically opposed to Bossi. Martin holds that complicated methods appear doubtful. He passes silk threads through all the layers. It is true that he applies a few superficial sutures to the skin, but more to ensure speedy healing of a cutaneous wound than to avoid hernia. Mr. Greig Smith advocated the deep suture ("mass-suture," as he called it) on good theoretical grounds, though he gave directions for the application of continuous sutures in separate layers. He looked on "the separate suturing of

[7] La Gynécologie, vol. i., 1896, p. 623.

[8] Centralblatt für Gynäkologie, 1896, p. 780.

[9] "Quel est le Mode de Fermeture de l'Abdomen qui paraît garantir le mieux contre les Abcès, les Éventrations et les Hernies?" La Gynécologie, vol. ii., 1897, passim. The sixty-three opinions will be found on pp. 213 to 244. See also Dr. Currier's Suggestions Concerning Ventral Hernia Resulting from Abdominal Section and its Treatment, with Discussion, Transactions of the American Gynæcological Society, vol. xxii., 1897, p. 106.

[10] Blaud Sutton and Giles: The Diseases of Women, 1897, p. 333.

[11] Clinical and Pathological Observations on Tumours of the Ovary, &c., p. 129. Case 1.—Death on sixth day; peritoneal edges adherent. Case 2.—Death on eighth day (tetanus); peritoneum united very closely throughout.

[12] Ibid., p. 130. Very fat subject; pyæmia; death on twelfth day. "The peritoneal borders of the wound were so feebly united by lymph that they came apart in gentle traction at the necropsy." Thus at least they were united. Of course, the union was weak in these early and fatal cases. What I endeavoured to demonstrate above is that the union of the peritoneum is speedy without separate sutures.

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each parietal layer as a refinement always, and as a superfluity usually, provided that the single group suture is properly placed."[13]

I myself always apply deep interrupted sutures and take up not more than one-eighth of an inch of the peritoneum. If too much serous membrane be taken up it will become everted and prevent the aponeurotic layer from uniting; thus a hernial pouch is actually manufactured by the operator. On the other hand I disapprove of the practice of leaving the serous layers out of the stitching altogether. When sutured the peritoneum unites rapidly and thus cuts off its great cavity from the wound—an aim we all desire. The suture track surrounded by lymph never seems to endanger the peritoneal cavity. The fibres of the rectus muscles must be included in the sutures else they will retreat inside their sutured sheath. When ordinary precautions are taken there will be no fear of suppuration of the sutured muscle. The same management is necessary for the closure of muscle in an incision away from the middle line. I often apply a few superficial sutures to the integument, after Spencer Wells's and Martin's practice, so as to make a sightly scar. In some very thin and in most very stout subjects I unite the sheath of the rectus with a continuous buried suture. In a very thin subject this prevents all danger of imperfect union from eversion of the sutured line of peritoneum. In a very stout patient I think that it is advisable to suture the sheath separately. Mr. Greig Smith when arguing against separate suture of each layer as an absolute necessity rightly observes that as young cicatricial tissue is the same for all the layers, and as each layer will certainly appropriate its own bundle of fibres from the common stock, little harm can be done if apposition be not accurate. Unfortunately this apposition may be very inaccurate in a fat wound, the subcutaneous and subserous adipose tissue being likely to form a junction at one or more points, and healing is relatively slow. The separate suture neutralises these dangers. I need hardly say that it must be gently applied, for one of the evils of the separate layer system of suturing is that it takes up time and each layer is exposed to much handling. On the other hand, the application of the deep sutures in a very fat wound may involve rough handling. The nozzle of most needle-holders is apt to bruise the fat. Hence I prefer to pass a large Péan's pedicle needle through the wound, then to thread it, and lastly to withdraw it. In an average or a thin wound it is handier to pass a curved or straight suture needle ready threaded through the tissues; Wells's well-known method, though not essential, as he believed, is the best, as the layers are the least disturbed if the needle be pushed through the serous layer outwards on each side. The deep sutures should be removed in part about the ninth day. It is best to take out the remainder within the end of the first fortnight. Still, better too late than too early is the rule for the removal of sutures. I need hardly say that sutures must be clean when applied and not tightened too much, and that the wound must be carefully supported by strapping and bandages. The operator must further remember that the most dangerous enemy to the wound is the steady pressure of flatulent intestine behind it.

The material for suture is not a matter of primary importance as far as our present subject is concerned. I much prefer silkworm-gut to silk, but the latter material is used and commended by many experienced operators. For the aponeurosis, where a continuous suture is applied, stout catgut or No. 1 or 2 silk is the best material. Fine catgut answers best to unite muscular tissue in abdominal wounds away from the median line.

In conclusion, I must admit that I feel sceptical about perfect success even with all the precautions which I practise. Martin rightly pointed out at Vienna in 1895 that the entire discussion on hernia of the abdominal wound was not on a sound basis, for different abdominal wounds healed very variously. Secondly, reports on the value of any one method are open to fallacies as I have already demonstrated. Lastly, the patient is often to blame for the complication. She is apt to discard the proper supports very early and in other ways to disregard advice. Hence it is the duty of the surgeon to warn her very strongly. For, as we have seen, a hernia of the abdominal wound may develop into a very ugly complication demanding surgical treatment which however necessary and justifiable is seldom in every respect satisfactory.

Granville-place, W.

[13] Loc. cit., p. 110.

ON THE VALUE OF OLIVE OIL IN THE TREATMENT OF TYPHOID FEVER.

BY OWEN F. PAGET, M.B., B.C. CANTAB.

DURING my residence in Fremantle, Western Australi, it has been my lot to attend a large number of patients suffering from typhoid fever (well over 100) who were placed under the most disadvantageous circumstances, many of them living in tents and many of them unable to obtain any form of fresh milk. Yet my percentage of death is *nil*, and this is the more remarkable seeing that among patients removed to the hospital, where they are properly attended to and receive suitable nourishment, the percentage was as high as 20 in 1896 and 11 in 1897 with better accommodation.

Now this success, though undoubtedly to some extent due to good fortune, I attribute very largely to the use of salad oil in this disease. Nearly all typhoid fever patients when they first come under observation are suffering from constipation or diarrhœa; during constipation the "typhoid bacillus" acquires its power of developing—it is rare indeed for a patient not to have suffered from fæcal accumulation either before or during the commencement of the disease, for though accumulation may not always have been apparent, irritative diarrhœa having masked its presence, yet I am fully convinced of its occurrence in nearly all, if not all, cases. This constipation is followed by diarrhœa and a gradual solution of the fæcal accumulations caused by the pouring out of mucous and other fluids from the intestine. These fæcal solutions being intensely irritating help to inflame the already infected Peyer's patches and, in addition, give rise to violent peristalsis, preventing rest which is so important to inflamed regions. Added to this there is the enormous drain of fluid from the intestinal mucous surface. Now the fluid poured out is of course to a certain extent reabsorbed, but not before it is saturated with ptomaines; this necessarily causes violent constitutional disturbances in the patient, as high temperatures, cardiac paralysis, and intestinal paralysis with tympanites, exhaustion, delirium, and insomnia (with its accompanying uses of depressing drugs), sapræmia, septicæmia, pyæmia, secondary infection of glands, abscesses in bones, and death.

Now typhoid fever is merely an inflammation of Peyer's patches usually followed by ulceration. It will be a long time (if ever) before we can prevent this taking place. The onset is so insidious that even were we able, patients would not come early enough to the physician to give him the opportunity. The problem therefore resolves itself into treating an inflamed and possibly ulcerated surface, and the same laws hold good here as in any other part of the body—namely, rest and protection from irritating substances and collection of discharges. As a proviso it is necessary to remember that the patient must not starve. Now to keep these ulcers at rest and to remove irritating substances all that is needed is salad oil. This is given as an injection by the bowel, a large breakfast-cupful (from a quarter to half a pint) being used for the first four or five days at intervals of from twelve to twenty-four hours. Its benefits are distinct from the first, the temperature almost always falls 1° F., and the patient, instead of being irritable and restless, becomes calm and composed. After the fifth day it may be given every second day or left off entirely if the patient is having natural motions at least every twenty-four hours and if the temperature is steadily falling. There are, however, a certain proportion of cases which do not respond to injections; nothing comes away and the bowel is apparently empty, but it is in these very cases that the accumulation is worst. Suddenly the temperature runs up and the patient is seriously ill. Now it is the very virulence of the accumulation which, paralysing the gut, prevents its coming away. The remedy is simple. Give salad oil by the mouth, a large breakfast-cupful at a time; there is no need to be frightened, no harm will result, but the bowels will almost certainly respond, and injections are now able to manage the rest. If the first dose is without effect repeat after twelve hours.

Salad oil in typhoid fever is a perfect boon to the general practitioner. He can leave his patient fearing neither high temperature, delirium, insomnia, heart failure, or tymparites. I have never used the wet pack or other appliances for lowering the temperature (except sponging with vinegar and

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lukewarm water), nor have I ever used any of the vaunted intestinal antiseptics, never having had a high temperature or other complications which did not respond to salad oil except in two cases. The first was that of a boy with hæmorrhage whose father and mother were always drunk and neglected him disgracefully. The second was a case of mitral stenosis which came under my care in a late stage of the disease. The patients in both cases ultimately recovered.

Lastly I would say that there seems to be no danger in conscientiously palpating and percussing the abdomen for the first week of the disease, and it is a valuable aid in estimating the disappearance of accumulations, though the temperature and general *bien-être* of the patient are now my usual guides.

Salad oil, one pint by the mouth and half a pint per rectum, has also given the most gratifying results in two cases of typhlitis under my care.

Fremantle, Western Australia.

SYPHILIS AS A CURE.

BY J. ROSS MACMAHON, M.B., C.M. ABERD.

THE above heading is somewhat paradoxical. We are accustomed to see and hear of syphilis in any other light than that of a cure. The following extraordinary and interesting case, however, manifests syphilis as a beneficent evil and although the curative element is dearly bought and the practical value little such is its academic interest that it is well worthy of record.

The case was that of a young man who had suffered from a patch of lupus vulgaris non-exedens since his eighteenth year. He had resorted to various methods of treatment under different medical men, but receiving no lasting benefit he substituted nonchalance for remedies. In his twenty-seventh year he contracted syphilis, developing in turn Hunterian chancre, bubo, sore throat, slight roseola, &c., and underwent mercurial treatment for two months. With the exception of occasional sores inside the mouth and slight debility nothing further accrued from the syphilis until the time I saw him. He came to me in March of this year and complained of sores on his left cheek spreading towards the lupus patch and slightly encroaching on the same. Towards the middle of the left cheek an irregularly oval patch of lupus vulgaris was to be seen with its long axis more or less parallel with the horizontal ramus of the lower jaw; it measured about 2½ in. in long diameter and 1½ in. in short diameter, with a small outstanding patch on either side stationed abreast. The patch was of a uniformly pinkish-red colour studded all over with apple-jelly nodules, but more especially so at the margin. There was no sign of breaking down or ulceration, but at one end was a small area in which the disease had disappeared and left some uneven scarring. Spreading over this in a fan-shaped fashion was the advancing crescentic ulcerating edge of a deep serpiginous syphilide. The syphilide appeared to have commenced in a broken-down nodule on the skin over the middle of the horizontal ramus and to have spread in a generally circular manner down the neck and over the cheek, leaving a pinkish white faintly pigmented scar. The pigmentation was more of a light brown mottling, the cicatrix was dense and tolerably even. When seen it had just invaded the lupus area and appeared likely to travel right over it.

On my advice the patient refrained from general treatment and I contented myself with applying mercurial plaster to the advancing edge on the neck. Cheekwards the disease advanced with some rapidity, mingling with the tissue of the lupus patch, the two combining to form ulceration which involved the whole depth of skin well down to the subcutaneous tissue. The skin on the lupus area broke down very readily on the approach of the syphilide, forming extensive ulceration. The edge of the ulcer was irregular and shreddy, not characterised by the punched-out steep edge of the syphilide *per se*, but marked by an unmethodical eroding; the base was foul, sloughing, reddish-grey in colour, and discharging freely a thin dirty liquid.

In the course of a week or ten days the ulceration had run over the greater extent of the patch, travelling most rapidly towards the left nostril. With the local application of iodoform ointment I now prescribed mercury internally, whereat the ulcerating process at once began to abate its fury, slowly at first, and only stopped when it had involved the whole lupus area, save the upper of the two small patches. Gradually increasing the mercury and after a few days adding small doses of iodide of potassium the base of the ulcer sloughed away, a healing edge began to encroach on the raw surface, granulation sprang up, and repair slowly went on to a close. In about eight or nine weeks a large purplish-brown cicatrix formed almost level with the surrounding skin, uniform and tolerably regular, and nothing remained of the lupus area except the small outstanding patch composed of a few lupomata and one or two nodules of the upper edge of the large patch which had escaped the ravages of the syphilide. To these I applied the galvano-cautery very thoroughly and dressed with a mild mercurial ointment. Shortly afterwards the patient went to sea.

In about three months I saw him again. The cicatrix over the lupus area had lost much of its pigmentation and had begun to assume a more purplish-white colour. Only one or two nodules of lupus were visible on the patch I burnt and to these I again applied the cautery. As a whole the scar is not very disfiguring, and to the patient is much less objectionable than the lupus with the risk of its progressive increase and disfigurement.

Blackheath.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

"CONGENITAL ABSENCE OR DELAYED DEVELOPMENT OF THE PATELLA."

BY HAROLD N. MAYER, M.D. CHICAGO.

IN an article in THE LANCET under the above heading Mr. E. Muirhead Little[1] gave a summary of the recorded cases of absence of the patella with the extraordinary signs of degeneracy commonly associated with this condition. Dr. A. H. Burgess[2] has also described a case in which this bone was congenitally absent and which was associated with marked signs of degeneracy. There is at present in the infirmary on the poor farm in Chicago an individual who has congenital absence of the patella associated with most extraordinary stigmata of degeneration. His head, which is large, is decidedly asymmetrical, the left half of the face being somewhat larger than the right. The skull is exceedingly irregular in its osseous conformation. Both ears are very small and irregular and the ordinary auricular markings are not very apparent. There is microphthalmus of the right eye with apparently congenital haziness of the cornea. Most of the teeth have been lost but the dental arches are well formed. The arm and forearm are fairly well developed but each thumb is broad and both thumb-nails have a central groove. There is a rudimentary finger on each hand. Over the lower end of the sacrum is a fold of skin which rises somewhat above the surrounding level and conceals a slight opening in which a probe can be passed for about a depth of one-fourth of an inch. The testicles are undescended. The thighs are well formed with the exception of the absence of the patella. The knees are not in the position of hyperextension figured in Mr. Muirhead Little's article, but there is a certain amount of permanent flexion and the patient walks with them at nearly a right angle with the thigh. The feet are turned inward, so that if the leg were extended and he were standing upright pressure would be made directly upon the outer side of the foot. In the position in which he commonly moves, with the body bent upon the thighs and the legs flexed upon the thighs, he brings the soles of the feet in this position nearly parallel with a flat surface.

The individual is an imbecile and was exhibited at one time as part of a show under the title of the "Bear-Man,"

[1] THE LANCET, Sept. 25th, 1897, p. 781.
[2] THE LANCET, Oct. 2nd, 1897, p. 880.

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due to his peculiar method of locomotion. Later he developed delusions of suspicion, became somewhat unmanageable, and was finally brought to the almshouse.

Chicago, Illinois.

A CAUTION AGAINST THE USE OF KEROSENE IN THE TREATMENT OF PEDICULOSIS CAPITIS.

BY MAURICE EDEN PAUL, M.D. BRUX., M.R.C.S. ENG., L.R.C.P. LOND.

ONE of the most convenient methods of treating pediculosis capitis is by rubbing the scalp and hair with kerosene. It instantly destroys the lice, it loosens the nits, and it soothes the cutaneous irritation. The recent death from burns consequent on the spontaneous ignition of hair that was being rubbed after the application of a hair-wash consisting principally of kerosene makes it necessary, however, to reject the use of kerosene as a parasiticide lotion to the hair. It appeared from the inquest in the above-mentioned case that the ignition of the hair was unquestionably not brought about by any naked light; and Lord Kelvin suggested (in a letter to the *Times*) that an explosive mixture of air and kerosene vapour having formed in the interstices of the hair this mixture was then ignited by an electric spark formed by friction of the hair. It is evident that no amount of care could guard against the repetition of this accident when kerosene was being applied to the hair.

Nagasaki, Japan.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON TEMPERANCE HOSPITAL.

A CASE OF RUPTURED PYOSALPINX CLOSELY SIMULATING PERFORATION OF THE APPENDIX; NECROPSY.

(Under the care of Dr. SOLTAU FENWICK.)

THE difficulties of diagnosis in cases of localised peritonitis are very great, not with regard to the fact of peritonitis but with regard to the cause, and in the following case the pain situated in the hypogastric and right iliac regions was very suggestive of perforation of the vermiform appendix, but the pelvic signs pointed strongly to a pelvic origin of the disease. From the post-mortem examination it was obvious that there had been an attempt to localise the peritonitis, but this had failed and a general infection of the peritoneum had resulted. The commencement of the pyosalpinx probably occurred at the parturition twenty-one months before admission to the hospital.

A woman, aged thirty-nine years, was admitted into the London Temperance Hospital on Oct. 6th suffering from abdominal pain. The patient stated that she had been in good health until her second confinement twenty-one months previously, after which she was laid up for five weeks with "inflammation of the bowels." Since her recovery from that complaint the catamenia had appeared every fortnight, but she had never suffered from constipation, abdominal pain, or dyspepsia. Ten days before admission, while apparently in perfect health, she was seized with vomiting, which continued throughout the night and part of the next day. Under the impression that she was bilious she took a couple of pills which acted freely on the bowels. In the evening, however, she was suddenly attacked by severe pain in the abdomen. For the first few hours the umbilical and right iliac regions were the chief seat of the suffering, but subsequently the pain became diffused over the whole abdomen, and at the same time she felt feverish and thirsty. When admitted to the hospital the patient had the appearance of being extremely ill. The face was flushed and the tongue was furred; the pulse-rate was 112 and the temperature was 102·8° F. A liquid and offensive motion was passed soon afterwards, and several ounces of yellow bile were vomited. The tongue was moderately furred but moist, and the urine, which was voided without pain, contained a trace both of sugar and of albumin. On examination the lower half of the abdomen was found to be slightly distended and somewhat tender on pressure. The pain was chiefly referred to the hypogastric and right iliac regions, but neither tumour nor sense of resistance could be detected, while the percussion note was uniformly tympanitic. On vaginal examination the uterus was found to be rather low in the pelvis, and firmly fixed in the median line as though set in plaster-of-Paris. The finger inserted into the rectum encountered the same sense of resistance when pressure was made in a lateral direction, but no bulging or tumour could be felt, nor did the examination cause the patient undue pain. The other organs of the body were apparently normal. In view of these physical signs pelvic peritonitis was diagnosed, and the patient was ordered small doses of opium, while the abdomen was frequently fomented. On the following morning (the 7th) she appeared to be considerably better. The temperature had fallen to a point slightly over 101, the pulse and respiration had diminished in frequency, and little complaint was made of abdominal pain. On the 8th the temperature had fallen another degree, the pain was less troublesome, while in response to an enema a considerable quantity of fæcal material had been evacuated. The abdomen was still somewhat distended inferiorly, and pain was experienced on deep palpation over the region of the cæcum. There was no dulness on percussion over this part, nor could any localised fulness or tumour be detected by the finger in the rectum. After remaining in about the same state for two days the patient became markedly worse. The vomiting recurred and an access of pain in the lower part of the abdomen was complained of. The temperature rose to 103·4° and the pulse varied between 112 and 120. The abdomen was now found to be uniformly distended, and pressure over the right iliac region gave rise to pain and nausea. Comparative dulness on percussion was detected over the position of the cæcum, but there was neither swelling nor sense of resistance there or in the loin. Taking into consideration the gravity of the general symptoms, with the increased distension of the abdomen and the development of comparative dulness on percussion over the cæcum, it seemed probable that there was a collection of pus in the right side of the pelvis which was making its way behind the cæcum and coming forwards between that organ and the abdominal parietes like an ordinary perityphlitic abscess. A consultation was consequently arranged with Dr. W. J. Collins, who agreed to perform an exploratory operation early the following morning. Unfortunately, however, a few hours later the patient was attacked with collapse and rapidly succumbed.

Necropsy.—The small intestines were found to be greatly congested and spotted with flakes of lymph. On lifting the integuments covering the right iliac fossa and drawing the cæcum inwards a quantity of pus made its escape from beneath the bowel. On further examination a cavity containing about five ounces of pus was found to occupy the upper part of the right half of the pelvis, the internal wall of the sac being formed by the uterus and numerous old adhesions existing between that organ and the other pelvic viscera; while its upper boundary consisted of several adherent coils of small gut. Hanging in the middle of the abscess cavity was a well developed and perfectly healthy vermiform appendix. In close proximity to it was a pyosalpinx of the right Fallopian tube resembling a small walnut in size and shape, the rupture of which was responsible for the pelvic inflammation.

LIVERPOOL NORTHERN HOSPITAL.

A CASE OF ACUTE GENERAL SUPPURATIVE PERITONITIS TREATED BY LAPAROTOMY; RECOVERY.

(Under the care of Mr. CHAUNCY PUZEY.)

IN THE LANCET of Oct. 9th, 1897, p. 916, we published a case of acute general peritonitis under the care of Mr. Leonard Gamgee in which recovery followed the washing out of the abdominal cavity, and a fair number of cases are now on record in which this treatment has proved successful; but the mortality mus always remain high for many of the

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patients do not come under treatment until the peritonitis has lasted several days. Of twenty-five cases in the Berlin Charité only five recovered.[1] Quite recently Dr. J. M. T. Finney,[2] in the "Johns Hopkins Hospital Bulletin," has advocated the thorough and systematic wiping out of the whole peritoneal cavity with large pledgets of gauze after allowing all or as much as is necessary of the small intestine to escape from the abdominal cavity, then each loop of the small intestine is to be wiped carefully while still outside the abdomen; his method has proved successful in five consecutive cases and so is deserving of consideration. Others are opposed to anything more than simple incision with free evacuation of the infected effusion and the results are certainly remarkable. It is highly desirable that in all cases of acute suppurative peritonitis a careful bacteriological examination should be made of the pus.

A boy, aged fifteen years, was on May 31st, 1897, sent into the Liverpool Northern Hospital as a case of intestinal obstruction. The patient presented a wasted and collapsed appearance and was too ill to give any satisfactory history of his illness, and his parents appeared to know little about him. Later, it was ascertained that three weeks before admission he had been bathing in a dirty canal and, on returning home, "began shivering." On the next day he went to work feeling pretty well. A week later he "felt a dreadful pain" in his abdomen but went to work in pain all the next week. Then he went to a "doctor" (? druggist) who gave him a black draught, which did him no good. So he went to bed, and lay there for a week, suffering from pain and sickness, but without medical attendance. Then a medical man was sent for, who ordered his immediate removal to hospital.

The patient's symptoms on his admission, in addition to the general appearance before mentioned (a most marked facies abdominalis), were tenderness and moderate distension of the abdomen, with rigid muscles; the knees were only slightly drawn up; the tenderness was most marked in the left loin and pelvis, where there seemed to be most feeling of resistance on pressure, and where there was also dulness on percussion. The bowels had been slightly moved twenty-four hours previously; but since then, neither fæces nor flatus had been passed. There was occasional vomiting of offensive, but hardly fæculent fluid. The tongue was dry down the middle and furred; the pulse was 120 and the temperature was 100° F. Rectal examination discovered a soft mass somewhat resembling an intussusception; and on this supposition, an indiarubber tube was passed up the bowel as far as practicable, a glass funnel attached, and the pelvis being raised and the anus firmly occluded, about two pints of hot water were gradually poured into the bowel, until the patient complained of pain. On removing the tube, and passing the finger into the rectum, the obstruction had disappeared, and the rectum felt widely distended. Very little of the fluid returned. It must have been absorbed; for he passed large quantities of highly coloured urine, although he was taking no fluid by the mouth. One-sixth of a grain of morphia was given subcutaneously, and he seemed easier; the pulse was stronger and the fulness in the left flank was less marked. On the next day (June 1st) the patient's condition was much the same, and on examination the obstruction in the rectum was again found, but was less marked. The irrigation was repeated and again the obstruction disappeared. The boy's parents had refused consent to anything more being done, but on the next day, his condition being decidedly worse and the vomiting more distressing, they consented to an operation; and it was decided to explore the abdomen without further loss of time.

This operation was performed under ether after the usual preliminary cleansing of the abdominal wall. An incision three and a half inches long was made in the middle line between the umbilicus and pubes. On opening the peritoneum, which was partly adherent to the intestine, a drachm or two of thin fœtid fluid escaped. The intestines were moderately distended and were matted together by thick lymph. On separating the adhesions the masses of lymph peeled off like rotten wash-leather, leaving freely oozing intestinal walls. Working down with the fingers towards the left brim of the pelvis several ounces (probably about half a pint) of intensely foul, purulent fluid escaped. In one part of the cavity thus opened up two or three small purplish lumps like squeezed-out grapes were noticed, and it was suggested that these were mesenteric glands which had suppurated and burst on to the peritoneal surface and had thus set up the mischief. The abdominal cavity was next flushed out as thoroughly as possible with hot boracic acid solution and afterwards with izal lotion (half an ounce to the pint), the edges of the wound being occasionally held together and the abdominal cavity distended with the solution, the funnel being raised two or three feet. The abdominal wound was now closed in the usual manner for the upper three-fourths, the lower fourth being left open, and a large glass drainage-tube fixed in, reaching to the deepest part of the pelvis. The dressing used then and throughout the subsequent treatment of the case was iodoform powder, cyanide gauze, and salicylic wool, fixed on with a wide muslin bandage, so as to exert moderate compression of the abdomen.

From this time the patient's progress towards recovery was slow but continuous with one exception. Eight days after the operation, the temperature, which had been subnormal, rose to 101° F., the tongue which had been clean and moist, again became dry and furred, and the discharge from the tube became fœtid. The tube was removed, the flushing apparatus was adjusted, and the abdominal cavity was once more thoroughly washed out with izal solution; after this, the left flank which had always remained rather full and tender, soon became softer and free from pain; and subsequently, there was very little discharge from the wound, and that was serous and odourless. The bowels were moved naturally on the third day, and with an enema on the sixth and seventh days after operation. After that with an occasional enema they acted regularly. Before the operation and for several days after alimentation was principally by means of rectal suppositories; but for brevity's sake, details on this and other points are omitted. In consequence of the boy's feeble condition union of the wound was very weak, so that the stitches were left in until they threatened to ulcerate out, and it was necessary to remove them and to support the edges of the wound with strapping. Fortunately the peritoneum had been stitched up separately with a continuous buried suture, so that there was no actual re-opening of the wound. The sinus resulting from the drainage-tube was not completely closed for two months. At that time it was noticed that there was a slight tendency to hernia at the upper part of the cicatrix, so a pad was applied over that part and the abdomen supported with an elastic bandage. The boy was sent to Woolton Convalescent Institution early in September. He was fat and well and free from any abdominal trouble. He came to the hospital on his return from Woolton to be examined. The hernial protrusion was no longer to be observed, but when he coughed the two recti muscles stood out separately from each other; so he will continue to wear the elastic bandage, which he himself applies every morning before getting out of bed. It should be noted that he has been carefully examined and that no trace of tuberculosis can be found, so the case was not one of tuberculous peritonitis.

Remarks by Mr. CHAUNCY PUZEY.—The subject of operative treatment of suppurative peritonitis having been brought forward somewhat prominently of late this case may prove of interest, especially as it presents some unusual features. Most of the cases published have been probably due to mischief about the cæcum or appendix; but in this instance the trouble must have arisen from some other cause, although the meagre history obtainable gave but little clue to its real origin. Still, the successful result of exploratory operation and of thorough flushing of the peritoneum furnishes an additional instance of this comparatively modern method of treatment.

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[1] Herrhold: Deutsche Medicinische Wochenschrift, Sept. 27th, 1894.
[2] THE LANCET, Oct. 16th, 1897, p. 1000.

SANITARY CONDITION OF ST. COLUMB MINOR, CORNWALL.—At the meeting of the St. Columb Major District Council, held on Nov. 18th, Dr. J C. Mackay, the medical officer of health, in reporting upon the village of St. Columb Minor stated "that the sanitary condition of this village is something awful; nothing approaching it exists anywhere else in the district. So far back as 1884 I made a special report, in 1889 reported that the place was only to be compared with a sewage farm, and in 1892 a special complaint was made against the Highway Board for permitting their roads to be converted into a common sewer. The only comment made by your board was, "Query, where"? I have reported adversely on St. Columb Minor at least a score of times, but it still constitutes a danger."

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Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Discussion on the Prevention of Enteric Fever.

A MEETING of this society was held on Nov. 23rd, the President, Dr. HOWSHIP DICKINSON, being in the chair.

The discussion was opened by Dr. G. V. POORE, who commenced by stating that the contagion of enteric fever is contained in the excreta and may gain access to the bodies of the healthy in drink or food or air. When enteric fever becomes suddenly epidemic it is most often through contamination of the drinking water and sometimes through the water of the milk or other beverages. Short records were given of forty-six instances within the last thirty years of contamination of public water-supplies, and in twenty-nine instances where the figures were given the number of cases amounts to 16,486. These public water-supplies were contaminated either at the source, in their course, or at the periphery. Of the contaminated sources eight were streams and rivers, eleven were wells, and three were upland gathering grounds. Of the polluted wells seven were deep wells in the chalk. These chalk wells were polluted by leakage from a sewer (2), by accidental defilement of an adit (1), by the tricklings from the surface of an adjacent sewage farm (1), by back flow from a river (1), and by leakages from foul ponds and cesspools (2). Those sources of water which are farthest removed from dense populations are probably safest, but moorland waters are not free from risks; some of them act unduly upon lead; and it is interesting that Glasgow in 1881–90 had a mortality from enteric fever slightly higher than the average for England and Wales. Given the fact of contamination, wells and springs are dangerous because there is no escape for the polluting matter except into the supply-pipes. Water from uplands has undergone no filtration before reaching reservoirs. In rivers we get the advantage of oxidisation and sunlight, and only a small proportion of polluting matter at most is likely to be taken up. With regard to pollution in the course, the most common cause is the insuction of foul air or liquid by leaking water-pipes during intermissions in the supply. This insuction is especially apt to occur where there is an intermittent supply and the fouling of the water pipes is facilitated by the insanitary practice of laying the sewers and water-pipes side by side inaccessible to observation. Both should be laid in subways so that they could be easily inspected. Pollution at the periphery—i.e., through the taps—is most important. It is liable to occur whenever a tap is left turned on and a vacuum is produced in the supply-pipe by intermission of supply, so that foul gas or liquid or even solids are sucked back into the house pipe or main. An instance of this had been described by the late Sir G. Buchanan. When investigating an outbreak at Croydon he was told that in one house the water tap on certain days yielded blood. This was found to be due to the existence of a slaughter-house next door. At a recent outbreak of enteric fever among the staff of University College Hospital it was found to be due to such aspiration. Alterations had necessitated the fitting up of a temporary dining-room for the nurses and water was required for a sink. The water-supply was taken by the plumber from the nearest pipe, which also supplied the tank in which the linen from some cases of enteric fever had been washed, and some of the infectious material must have been drawn back from this tank and have contaminated the drinking water. This peripheral pollution is well understood and its frequent occurrence raises a doubt whether the abolition of the house cistern does not endanger the purity of the water flowing in the mains. The maintenance of constant pressure in the pipes, although theoretically desirable, is not practically attainable at all times. The liability to peripheral pollution raises the question whether all public supplies are not liable to a certain small extent to automatic pollution. It must be remembered that in big towns there are many foul places other than water-closets over which there may be open taps. A common source of peripheral pollution is the leakage of standpipes (as occurred at Worthing), and the flooding of the street with sewage, as often happens when drains are flooded out by storm water. Public water-supplies must be regarded as causes of the epidemicity of enteric fever. They diffuse the poison with a completeness which is absolute, and ensure that it is "laid on" as it were to our very mouths through being used not only for drinking but also for washing dairy cans, oysters, salads, &c. These epidemics show the danger of "putting too many eggs in the basket," and the necessity of arranging water supplies with as many independent subdivisions as may be feasible and of never mingling supplies from different sources. A staff of chemists and bacteriologists should be maintained by the water companies just as by the large dairies. Water-pipes and sewer-pipes should be placed in subways if possible so as to be open to ready inspection, or one set of pipes should enter at the front of a house and the other leave by the back. To have them running in close proximity and out of sight is attended with obvious danger. Water companies should be made answerable for damage just as are other trading companies and the householder ought to have the right of being supplied by meter. It is impossible to see much increase of safety in handing over water-supplies to the care of public bodies where individual responsibility is non-existent. Our safety lies in vigilance. The notifications of enteric fever should be forwarded at once to the water authorities and the sewer authorities, and the companies should guard their supplies with a constant vigilance such as is exercised by the great dairy companies. Careless or wilful waste of water (when not supplied by meter) should be punishable by fine. Plumbers who attend to drains and sewers ought not to touch water-pipes and cisterns without a complete washing and change of raiment. In the treatment of excreta chemical disinfection is untrustworthy. Burning is the most certain mode of destruction. Enteric excreta should never be mixed with water because it is pre-eminently a water-borne disease and the property of water is to return to its source. This is illustrated by familiar examples, thus: water-closet, sewer, sea, oyster. It is said that sewage is good for our fisheries. At present we have distinct evidence of evil and none of good. Again: water-closet, leaking sewer, chalk well, drinking-water; or water-closet, sewer, river, watercress, drinking-water; or water-closet, leaking sewer, leaking water-pipe, drinking-water; or water-closet, cesspool, shallow well, milk; or (as at Caius College) fæces may be sucked directly from the water-closet into the water-pipes. The great cause of the increase and wide epidemicity of enteric fever in recent years has been the water-closet which was invented by Bramah at the end of the last century. The year 1849, in which the non-identity of typhus fever and typhoid fever was settled by Sir William Jenner, was the year of cholera, the year of the Broad-street pump, the year in which the great fact of water-borne disease was established. The conditions which gave us the great outburst of cholera in 1849, when the Thames was at once our cesspool and our source of water, were eminently calculated to furnish sufficient enteric fever to establish its identity. Dr. William Farr fully recognised that the cholera epidemic of 1849 was attributable to the water-closet, but he hoped that by better management our drinking-water might escape pollution. When water leaks incessantly from one spot (whether it be cesspool or sewer) it soon begins to exercise pressure and may trickle any distance. A drain-pipe or sewer is quite as dangerous for the water-supply as a cesspool. It is probable that the dry privy of our ancestors had a very slight polluting effect upon the soil. In old arrangements each house had its own well in the neighbourhood, and with all its advantages this must have tended to keep the subsoil dry; but the present system of water-supply had, if anything, an opposite effect, and this increased dampness of the soil round houses must not be lost sight of as a factor in the production of disease. Enteric stools in country places may quite safely be applied to the surface of well-tilled soil. They must not be mixed with antiseptics and must not be buried deeply. There is no evidence that fæces treated in this way have ever been productive of harm. Dr. Poore, speaking with an experience of fourteen years, was convinced that fæces cannot be washed out of well-tilled humus by any amount of rain. In such a position the bacilli are almost certainly destroyed, for in tillage they are exposed to air and sunshine. In such a position they are not likely to be eaten or drunk, and there is very little likelihood of their being raised as dust, for they are very hygroscopic. In such a position fæces disappear in a few weeks. A well-tilled humus is probably the most perfect protection to our water-supplies conceivable, as he had set forth at length in his published works. The fact

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that the enteric bacillus will live in sterilised soil does not prove that the soil is dangerous when properly managed. The fact that microbes will live in gelatin has merely taught us how to avoid the dangers of gelatinous food, which is as popular as ever. The pollution of the soil in our great towns is due to the incessant soaking, from spilling excess of water and dirty fluids, and from the leakage of subterranean receptacles of liquid filth of all kinds. A thick layer of well-tilled humus was a great protection for deep water-supply. There can be no purity of soil without tillage and organic filth must be placed upon the humus to increase our food-supply and not beneath it to endanger our water-supply. Dr. Poore did not think it at all likely that town populations would hastily abandon their water-closets (in London it seems impossible), but he considered it was time that the people were taught that excreta properly used might be a source of health, wealth, and beauty. This important matter holds no place in our national education. There are no municipal gardens for demonstrating how excreta may increase the attractiveness and prosperity of a district. On the contrary, our populations are silently taught that the only decent (!) way of treating fæces is to mix them with water, to brew sewer gas, and ensure the aerial as well as the aquatic convection of enteric fever. A man who has a house with a quarter of an acre of ground may be perfectly independent of the sanitary authority and may get good water from a private well. But such persons who really try to keep their houses clean and wholesome receive no encouragement in the present state of the sanitary laws.

Professor GAIRDNER (Glasgow) said that his connexion with sanitary duties had been interrupted many years ago and that he had little recent experience. He well remembered an occasion when Murchison brought before that society a paper in which was the germ of the classical treatise on Continued Fevers. The current doctrine at that time was that enteric fever was due to sewer gas. In Glasgow many epidemics had been traced to the milk-supply, and it was found that the milk was brought in from a distance and that the contamination occurred there and not in the city, and therefore Dr. Poore should not contend that the death-rate from enteric fever in Glasgow was associated with the fact that they drew their supply from the moors. He wished to testify, as Dr. Poore had done, to the industry and ability which had been displayed both by the local medical men and the officers of the Local Government Board in tracing the actual cause of the various epidemics. Under the old arrangements the local medical men were afraid to point out insanitary dairies because they would have been liable to troublesome litigation. Now the public official, the medical officer of health, could do so without that risk to the great advantage of the community. Professor Gairdner concluded by mentioning an epidemic which occurred among the students which was at once stopped when the supply of milk at the restaurant within the university was forbidden.

Sir RICHARD THORNE said that he gathered that broadly Dr. Poore regarded as the principal evils our sewers, water-closets, and our system of water-supply, and that the remedies that he would suggest were the general use of dry closets, a return to shallow wells, and the deposition of the excrement on well-tilled soil. It would be gathered from Dr. Poore's remarks that the system of water-supply was fraught with danger to the country. But was this borne out by facts? Since 1875 millions had been spent in this country on works for providing the towns with a water-supply. At the beginning of that period the death-rate from enteric fever was 0·37, and at the present time was only 0·17, showing a great saving of life. Though enteric fever now assumed an epidemic form the total death-rate was much lower than when it was endemic. Dr. Poore had spoken of the death-rate from enteric fever in Glasgow as being somewhat higher than that of other large towns, and had been inclined to attribute it to the fact that Glasgow derived its water-supply from uplands. But the present death-rate should be compared not with that of other large towns but with that of Glasgow before the drawing of water from this source. It then appeared that the annual death-rate from 1865 to 1879 was 510 per 1,000,000, and that during the last ten years it had fallen to 193 per 1,000,000. Dr. Poore had also referred incidentally to the spread of cholera through the water-supply, and no doubt it had occurred. But taking the mortality as a whole, while in old epidemics there were as many as 50,000 deaths, in one under the new conditions there were only 135 deaths. Many of the faults attributed to the system of water-supply were due to defective work, leaky sewers, and badly jointed water-pipes. But it was not just to condemn the whole system because it was imperfectly carried out. He (the speaker) most emphatically agreed that the water companies should be made responsible for the quality of the water that they supplied. But the fault lay with the public, who through their Parliamentary representatives allowed clauses to be inserted into Acts of Parliament which protected the companies. As regards Dr. Poore's remedies he did not see how in the existing state of affairs in urban districts it was possible to adopt the use of dry closets with daily removal of excreta to be used on well-tilled soil in the sight of all, although it might be an ideal arrangement in an Adamic stage of civilisation. Except in certain conditions in country districts he thought that the return to the use of shallow wells, which he understood Dr. Poore to advocate, would be infinitely more dangerous than the present system. It was with such wells that the disease was formerly endemic with a much higher total death-rate than now. As regarded the effect of putting excreta on land he admitted that with thorough tillage there was little risk of water contamination; but how was this to be carried out as a universal system especially in the face of the increasing scarcity of agricultural labour? Besides, although the method might be safe with ordinary dejecta it was yet to be proved that it would be so in the case of specific excreta. Experiments had been made by Dr. Martin for the Local Government Board to try to find the reason for the occasional persistence of enteric fever in a particular locality. He found that typhoid bacilli would only grow for a few days in sterlised virgin soil, but that in soil containing sewage which had been sterilised in a similar manner growth went on for 200 days. It had also been shown by others that in soil containing sewage typhoid bacilli would remain quiescent during the winter and begin to grow rapidly when the warm weather returned. He fully agreed that burning was a safer method than burial for dealing with the excreta. The best plan was to mix them with saw-dust and paraffin and burn them. There were two sides to the question, and while Dr. Poore's suggestions might be carried out in some rural districts he did not think that they were applicable to our present conditions in large towns.

Professor RUBERT BOYCE (Liverpool) desired to put in a strong plea for systematic bacteriological examination as a most important means of preventing epidemics of enteric fever. During the last three years he had been making bacteriological examinations of the various vehicles by which the contagion was conveyed. 1. A sewage bacteriological station was now being arranged for the systematic examination of the contents of the drains. Examinations of the intake and output of the sewage farm were systematically made and compared, and in this way a "flora" of the organisms ordinarily found in sewage was being prepared. Pupils in the engineering department were sent to a course of bacteriology so that they might undertake this work. 2. Constant bacterioscopic investigation of the drinking water. This will lead to the abolition of wells and cisterns for private use. The water must be examined at different points, before and after filtration, in the supply pipes and as it issues from the taps. Systematic observations of this kind would enable any bacterial impurity to be traced and its mode of entrance into the water discovered. 3. Bacterioscopic examination of the milk and milk products such as cream, butter, ice-cream, and cheese. 4. Bacteriological examination of shellfish, oysters, &c. In from one-half to one-third of these the colon bacillus was found in abundance. Dr. Newsholme and others had started bacteriological laboratories in connexion with the department of the medical officer of health, and he hoped that this example would be generally followed.

Dr. D. S. DAVIES (Bristol) gave an interesting account of an epidemic which recently broke out in Clifton. Both Clifton and Bristol had previously enjoyed remarkable immunity from enteric fever, but on Oct. 21st, 1897, the occurrence of some definite cases of enteric fever led Dr. Davies to suspect that the "influenza" which was currently reported to be prevalent might prove to be enteric fever, and on examining many of these cases their blood was found to give the Widal-Grünbaum reaction. Four days' investigation showed that milk was the vehicle of infection and when the milk-supply was cut off the epidemic rapidly

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subsided. During the last five weeks the number of notifications were 16, 100, 60, 19, and 10. Charts were shown illustrating the milk-supply. It was clearly shown that most of the cases occurred in houses supplied by one particular dairy. The others occurred in houses supplied from dairies which were in perfect order, but it was found that the distributors from these two dairies were in the habit of supplementing their supply by buying some from the man who was delivering the infected milk. Fifty-seven houses were supplied from the infected dairy and thirty-one of these were attacked. In the case of the other two milk-supplies there was a comparatively small quantity of infected milk and the proportion of houses attacked was smaller. One school in which sixty-three persons lived was supplied with the infected milk, but the milk was always scalded and not a single case of enteric fever occurred. In another house a woman attacked was the only one who drank unboiled milk. It was found that the infected milk came from a farm in a village where the brook was utilised as the main sewer. This brook ran through the chief dairy farms and no doubt was the cause of the pollution. The remedy suggested by Dr. Davies for this state of things was an arrangement by which each urban authority might be empowered to inspect, register and license outside dairy farms and farmers who furnish their supplies to the exclusion of unlicensed places and persons. In default of some enactment such as this there ought to be a voluntary association of the contractors themselves to coöperate with the sanitary authorities and submit to certain regulations and frequent analyses of the milk and inspection of the dairies.

The further discussion was adjourned until the next meeting of the society.

MEDICAL SOCIETY OF LONDON.

Treatment of Pyo-pneumothorax.—Mechano-therapy of Moveable Kidney.

A MEETING of this society was held on Nov. 22nd, the President, Dr. SANSOM, being in the chair.

Dr. SAMUEL WEST read a paper on a case of Pyo-pneumothorax of some months' duration cured by free incision. The patient, a man, thirty-four years of age, came under observation with left pneumothorax and sero-purulent effusion of four or five months' standing. The patient, who had already been under other treatment for some time, being very ill, incapacitated from work, and getting worse, it was decided to incise the chest rather than perform paracentesis, on the ground that in such cases the results of paracentesis were discouraging, that the patient would evidently die if nothing was done, and that on general principles free incision seemed indicated. The side was opened by a simple incision, about four pints of sero-purulent fluid were removed, and a drainage-tube was inserted. The next day the lung had expanded and was in contact with the chest-walls everywhere except round the incision. The discharge was profuse for a few days and then became very scanty. Within a few days nothing of the pleural cavity was left except the track in which the tube lay. The patient rapidly improved, but the tube could not be got rid of until seven months from the time of the operation. The case had been previously dismissed from another hospital as incurable. As a rule these cases are left alone owing to a belief that the lung is bound down and cannot expand. Cases were quoted and reasons given for not accepting this as the rule or even as frequent. Another false notion is that pneumothorax is generally associated with tuberculous disease of the lung and that it is good for a tuberculous lung to be compressed by air or fluid because the progress of tubercle in it is arrested. This reason, often given, was shown to be an opinion only and not supported by facts. Dr. West reminded the society that the same reasons were formerly also given for leaving serous effusions and empyemata alone; they are not now regarded as valid against the removal of the effusion in these cases and are therefore not valid in pneumothorax. It has also been held that incision does no good but rather hastens the inevitable death. Statistics are often quoted in support of this statement, but they are old statistics and should no more settle the question in pyo-pneumothorax than they would be allowed to settle it in empyema. If empyema were neglected nowadays as long as pyo-pneumothorax usually is the results would be no better; *per contra*, if pyo-pneumothorax comes to be treated on the same general principles as empyema a similar improvement in results may be naturally anticipated. Dr. West considered that incision might become necessary (1) in the early stage if the dyspnœa and symptoms were urgent and not relieved permanently by paracentesis (in this stage the necessity would rarely arise); and (2) in the later stages—(*a*) if no fluid formed incision would never be necessary; (*b*) if the effusion were purulent incision would be the proper mode of treatment and the only one which would offer hope of success; and (*c*) if the effusion were serous incision might become the right mode of treatment as in certain cases of obstinate serous pleurisy. In conclusion pneumothorax should be treated on general common-sense principles, the presence of air not affecting the general principles in any way, but only introducing certain modifications in carrying them into effect.—Dr. DE HAVILLAND HALL said that he was very much interested in the proposal that Dr. West had supported with so much ability to subject cases of pyo-pneumothorax to the same treatment as those of empyema, but he thought that the view taken of the result would prove too sanguine in those cases in which the lung did become firmly bound down and would not re-expand. He mentioned one case of empyema in which this was the case, and although extensive resection of ribs was resorted to the patient ultimately died unrelieved. Such cases were fortunately rare, and he thought that the majority of cases would do well if treated with free incision. One very important factor would be the condition of the lung prior to the occurrence of the pneumothorax and the chances would be very much better for a patient whose lung was fairly healthy, and he did not suppose that Dr. West would suggest operation in cases where the lungs were riddled with cavities. He quoted cases of this kind in which the necropsy showed that operation could not have benefited the patient. He mentioned a case quoted by the late Sir Andrew Clark of a man who for some years came up periodically to have the signs of pyo-pneumothorax demonstrated. During Sir Andrew Clark's absence a colleague had the chest incised, but the result was unsatisfactory and the patient died.—Dr. THOROWGOOD agreed in the main with the proposal to treat these cases on the same lines as cases of empyema, but did not think that there was the same indication for immediate operation, and thought that each must be considered by itself and he would only advise operation if the symptoms were urgent. He was glad that Dr. West had scouted the ridiculous theory that tuberculous disease of the lungs was checked by compression through the presence of fluid in the pleural cavity.—Mr. MARMADUKE SHEILD said that at the request of Dr. Ewart he had operated on a case of pyo-pneumothorax complicating gangrene of the lung. The patient was apparently moribund and the operation was performed as expeditiously as possible and a rapid, unexpected recovery took place. He had also operated in a case in which signs of the presence of fluid and air in the chest had existed for six months. The lung was found to be firmly bound down and a cavity was left which would not close. He did not perform Estlander's operation as he was not favourably impressed with the results. The patient died from exhaustion. Special care was required in these cases in giving the anæsthetic. The unaffected side should be left free and a minimum of anæsthetic used. He made a "trap-door" incision, which enabled him to deal rapidly if necessary with several ribs, and after the operation he preferred not to use a fixed dressing but to employ moveable pads of wood-wool and iodoform gauze on which the patient lay with the incision dependent. The pad could be frequently changed by the nurse and the position of the patient and the absence of a bandage allowed the unaffected lung to have free play. In cases of pneumothorax from traumatism nothing should be done, as the air was almost always absorbed naturally.—Dr. R. L. BOWLES said that the position of the patient during the administration of the anæsthetic was of very great importance. The sound side should be uppermost. Two cases had been recorded by different observers during the last few weeks in THE LANCET in which death occurred in cases of this kind while an anæsthetic was being given. The patient was turned on his sound side to facilitate the operation; dyspnœa suddenly occurred and the patient died, pus having found its way from the pleural cavity through the bronchi and gravitated into the bronchi of the sound lung.—Dr. WEST, in reply, said that in the cases he had referred to the condition had existed for some time and the

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symptoms were not urgent. He thought that the moral to be drawn from the result of the operation on Sir Andrew Clark's case was that it should have been performed earlier. He wished to insist that in cases of pleural effusion the lung was not collapsed as often as had been represented and could often be felt to expand when paracentesis was performed.

Dr. SYMONS ECCLES read a paper on the Mechano-therapy of Moveable Kidney. Since the year 1892 twenty-one cases of moveable kidney with local pain and tenderness had come under observation and treatment. Of these, sixteen had been treated by the "rest cure" with special attention to abdominal massage and exercises for periods varying from fourteen days to eight weeks, and of these eight were recorded in detail; seven were lost sight of within four months of treatment. Of these one was a complete failure, out was the only one in which immediate benefit did not follow. Five were greatly improved by abdominal massage, exercises, and the application of a pad and belt; one of these had been free at the present time from all discomfort for five years and another for two years, whereas both had previously suffered from pain and general malaise for prolonged periods. The results obtained in the majority of these cases were so satisfactory that they bore favourable comparison with records of those treated by operation, and in view of certain cases which have occurred there was something left in favour of employing milder means for the relief of nephroptosis than surgical interference involving either nephrorrhaphy or nephrectomy. Early diagnosis, reposition, and the maintenance of the organ in its normal position by methods which also conduce to the improvement of general health would appear to go far towards the relief of a patient from the necessity of having the kidney stitched into its place or removed from the body as the advocates of early operation advised. Sufferers from floating kidney should first be treated by rest, massage, and exercises before they were exposed to risks, which certainly existed, however small they might be rendered by the skill of the operator. The cases for detailed description were selected as typical of the conditions under which nephroptosis occurred in males and females. Most of them were very thin and there was associated ptosis of the stomach and other viscera. As they regained subcutaneous fat the symptoms disappeared and in nearly all the relief was permanent.—The PRESIDENT said that many of the patients in whom a moveable kidney was discovered on palpating the abdomen were quite unaware of the condition, and he thought that it was unwise for the physician to communicate his opinion to the patient as they at once became hypochondriac and the floating kidney became a fixed idea. He thought that it was unusual for marked symptoms to occur if the patient was unaware that his organ was dislocated. If there were severe symptoms Dr. Eccles's plan of treatment offered the least disagreeable way of getting rid of the trouble with which he was acquainted and would be well worth trying.—Dr. DE HAVILLAND HALL said that the patients were not always made neurasthenic by being told the nature of their complaint and mentioned a case in which the converse happened. The patient complained of indefinite abdominal symptoms and was much distressed because none of her advisers could account for them. When told that she had a moveable kidney the mere knowledge that her symptoms were explained gave her so much gratification and so thoroughly set her mind at rest that, although no treatment was adopted beyond the application of a simple pad, her symptoms ceased to be obtrusive and she resumed an active life. — Mr. P. J. FREYER said that he would have liked to have had more details of the mechanical appliances used and of the method of massage employed. He had not seen any cases in which permanent benefit resulted from massage. In one case the patient had been through a severe course of massage before coming to him, but instead of its having favoured the deposit of fat around the kidney he found when operating that there was complete absence of fat.—Dr. ECCLES, in reply, said that he quite agreed with what had been said about keeping the knowledge of the nature of the complaint from the patient. Several of his patients were even now unaware that they had been treated for a moveable kidney. In replacing the kidney the position should be that which many patients instinctively assumed to relieve pain—viz., the patient should lie on the opposite side, flexing the thigh of the same side as the moveable organ acutely on the abdomen and extending the arm of that side above the head.

ÆSCULAPIAN SOCIETY OF LONDON.

Exhibition of Cases and Specimens.—Hypodermic Injection of Cocaine.—Notes on Cases of Traumatic Fracture of the Thigh.—Fatal Secondary Hæmorrhage from the Liver and Perforation of the Gall bladder.

A MEETING of this society was held on Nov. 5th, Dr. B. G. MORISON, President, being in the chair.

Mr. G. ANGUS HUNT showed a man, twenty-seven years of age, who was the subject of Right-sided Enlargement of the Thyroid Gland with marked proptosis and a systolic mitral murmur. The thyroid enlargement had diminished after taking liquor sodii arseniatis in doses increasing up to ten minims three times a day.

The PRESIDENT read a short note on the Hypodermic Injection of Cocaine for the Relief of Pain. The dose employed was one-third of a grain guarded by three minims of liquor strychniæ. He had found this method useful in neuralgia, though generally less effectual than morphia.

Mr. STEPHEN PAGET read notes of the following cases. Case 1. Traumatic Fracture of the Thigh in its Middle Third. A huge extravasation of blood occupied the thigh from the ischium to the knee and the limb was pulseless and distended. The common femoral artery was tied and the thigh was amputated at the hip. A post-mortem examination showed that the superficial femoral artery and its vein were both torn across, the upper and lower ends being widely separated. Case 2. Fatal Secondary Hæmorrhage from the Liver in a boy who had been run over by a van. The primary shock having been recovered from he seemed fairly well. A rise of temperature (103° F.) on the fifth day subsided rapidly. Signs of hæmorrhage appeared on the tenth day and he died. It was afterwards found that the liver was ruptured and extensive effusion of bile had taken place beneath the capsule posteriorly. Case 3. Perforation of the Gall Bladder in a woman, aged sixty-six years, with effusion of bile into the abdominal cavity. The calculi were successfully removed by laparotomy, but the patient succumbed to exhaustion five days later.

The PRESIDENT, for Dr. J. W. HUNT, showed a specimen of Hepatic Abscess. The patient had been invalided home from Brazil on account of diarrhœa which continued to trouble him afterwards. The liver extended as low as the umbilicus. The temperature was never above 100° F. The liver was aspirated on two occasions and a considerable quantity of pus was removed. The abscess subsequently invaded the right lung and proved fatal soon afterwards.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on Nov. 11th, the President, Dr. SINCLAIR WHITE, being in the chair.

Mr. ARCHIBALD YOUNG showed for Mr. PYE-SMITH: (1) an infant with Syphilitic Chancre of the Eyelid; and (2) a large Sarcoma of the Kidney removed by a successful operation.

Mr. SIMEON SNELL introduced the following cases:—Case 1. Double Papillitis following Influenza. The patient was a girl, aged eighteen years. The attack six weeks previously appeared to have been severe and she had been confined to bed for fourteen days. The dimness of sight was noticed whilst she was in bed. Now in each eye the vision equalled $\frac{6}{36}$. Case 2. Conical Cornea in each Eye. The patient, a man, was introduced to illustrate the reflections occasioned by Placido's disc and the exhibitor's disc of radiating lines. Case 3. Embolism of the Central Artery of the Retina. Current was restored by massage. Loss of sight in a middle-aged man occurred suddenly on the 9th inst. at 7 A.M. At 11.30 A.M., when first seen, the retina was bloodless and the arteries were empty. Massage of the globe was adopted and a change in the appearance of the retina was quickly observed. The next day the retinal circulation was apparently re-established; the arteries and veins in all parts carried blood; he could detect fingers.—Mr. SNELL also made some remarks on the Surgical Treatment of High Degrees of Myopia. He had recently operated on eight cases by removal of the crystalline lens. In three instances the patients had undergone operation on both eyes

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with most satisfactory results. In each case the patient had returned after the first operation and asked to have the other eye treated in a similar manner. The patient shown was an example. To use his own words, he now saw better than he had ever done before. Myopia of 26 D. in the right and 25 D. in the left eye was after operation reduced to 2·5 D. and 2 D. respectively and vision had risen from $\frac{1}{24}$ to $\frac{6}{6}$.

Dr. GRAY NEWTON related and made remarks upon two anomalous cases of Antipyrin Poisoning which had recently occurred in his practice.

Dr. HUNT showed specimens of Aneurysm of the Innominate Artery, Sarcoma of the Lung and Cancer of the Liver, and read notes of the cases.

Dr. WILKINSON demonstrated a striking case of Associated Movements of the Hands.

Mr. PRIESTLEY showed a child with Congenital Absence of certain Toes and of both Fibulæ.

Mr. ARCHIBALD CUFF showed Surgical instruments.

The PRESIDENT, Mr. SNELL, Dr. SWEETEN, Dr. WILKINSON, Dr. MARTIN, Dr. HUSBAND, Dr. ADDISON, Dr. WADDY, and Dr. BURGESS made remarks on the specimens and cases.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

President's Address.

A MEETING of this society was held on Nov. 3rd, Dr. CATTLE, President, being in the chair.

The PRESIDENT delivered an address on Medicine during the past Twenty-five Years. He said the great leading characteristic of medicine during this period was its advance by means of the experimental method. The discovery of the antiseptic treatment and the rapid progress of bacteriology were noticed at length. In the injection of the serum of immunised animals it seemed as if there had been found a method full of hope in the treatment of diphtheria and other infective diseases. The discovery of the nature of myxœdema and its treatment by means of thyroid extract had been a brilliant piece of scientific and practical work. The effects of extracts of the other ductless glands were undergoing investigation. The greatest number of new drugs belonged to the classes of hypnotics and antipyretics, but very few of these were of first importance. The tendency to prescribe alcohol in the treatment of disease was certainly declining. In the definition of disease the greatest progress had been made in the differentiation of diseases of the nervous system. The progress in all branches of surgery had been most remarkable, but chiefly in regard to the cavities of the head, the spine, and the abdomen. The modern knowledge of extra-uterine gestation and its relations with pelvic hæmatocele was one of the greatest results of abdominal surgery. Cerebral and spinal tumours and abscesses were not only better diagnosed but could now be cured by surgical interference.

A vote of thanks, proposed by Dr. W. RANSOM and seconded by Dr. POWELL, was carried unanimously.

Infantile Cerebral Degeneration.

A meeting was held on Nov. 17th, Dr. CATTLE, President, being in the chair.

Dr. E. C. KINGDON and Dr. J. S. RISIEN RUSSELL brought forward a paper illustrated by lantern slides on Infantile Cerebral Degeneration with Symmetrical Changes at the Macula. The disease was stated to be rare and often attacked more than one member of the family. Commencing in the early months of infant life by muscular enfeeblement, especially of the neck and back, it progresses to almost complete paralysis and terminates in the death of the patient about the end of the second year. The ophthalmoscopic appearances which are seen early in the disease and persist unchanged during the remainder of life consist of a whitish-grey patch at each macula with a red centre; later optic atrophy supervenes. Microscopic examination of the brain and spinal cord in two cases of the four seen by Dr. Kingdon and Dr. Russell showed marked degeneration of the large pyramidal cells of the cortex of the whole brain with descending degeneration of the cord.

EDINBURGH OBSTETRICAL SOCIETY.

Valedictory Address on the History of Ovariotomy and the Law of Professional Secrecy.—Natural Parturition.—Election of Officers.

A MEETING of this society was held on Nov. 10th, Dr. ALEXANDER BALLANTYNE, the retiring President, being in the chair.

Dr. BALLANTYNE gave his Valedictory Address and referred to the loss the society had sustained by the death of several corresponding and ordinary Fellows, among whom was Dr. George Battey, of Georgia. The extirpation of the ovaries for otherwise incurable disease apparently suggested itself to his mind after the prolonged study of a case of amenorrhœa from absence of the uterus with intense suffering at the menstrual periods, ultimately exhausting the patient and causing death. Hence he conceived the idea that by removing the ovaries he would produce an artificial menopause and by its production relieve or cure the patient. In August, 1872, Dr. Battey removed both ovaries successfully by abdominal section with the result of complete restoration to health. Others established the safety and utility of the operation beyond a doubt. Perhaps now ovaries are removed on comparatively slender pretexts but Dr. Battey emphatically stated that it should only be done as a last resort. "This much," he says, "is due to the dignity of our calling; this much is due to humanity, to decency, and to public morality." In referring to the death of Sir Spencer Wells Dr. Ballantyne gave some account of the development of ovariotomy. A series of cases had been operated upon by the "Father of Ovariotomy," Ephraim McDowell, in the early part of the century. Clay in England began in 1842, and the two Atlees in America—John in 1843 and his more famous brother Washington in 1844. These had continued in the face of all opposition and fought for the existence of the operation before the time Wells began to operate. The American writer Parslee in 1872 stated that of the first three the credit belongs to Clay of having placed the operation of ovariotomy upon a sure foundation. Two years before Wells began Clay had performed the operation 71 times with 75 per cent. of recoveries in his last 31 cases. With this average he ended his career as an ovariotomist after performing the operation 400 times. In 1854 Wells, previously an assistant surgeon in the Royal Navy, was appointed to the Samaritan Hospital and had assisted Baker Brown in his eighth case of ovariotomy. When the Crimean war broke out he was attached to the army and there learned "that a man's abdominal walls might be lacerated with fragments of shell, his intestines protruding and covered with mud, so remaining for several hours, and yet after careful cleansing and accurate closure of the wounds complete recovery was possible." This made him much less afraid of abdominal wounds. This probably led him to visit Clay at Manchester and to be present at one of his operations. He made many inquiries and subsequently corresponded about the operation. He began an operation at the end of 1857, but was apparently dissuaded from going on with it by Baker Brown. In February, 1858, he completed his first ovariotomy. He had plentiful material in London, had the whole field to himself, and was well-known to a professional circle. Like most epoch-making men he was energetic, decided, and combative, ready to grapple with difficulty and to meet opposition. He invited spectators and courted criticism; everything he acquired from observation or got from others he used for perfecting his results. His early cases were not more successful than the early cases of Clay, yet such publicity did he give them and with such power did he advocate the claims of the operation that he compelled men to listen and converted them to his views. It was this rather than any exceptional brilliancy of operating or its results that carried him to the foremost rank of ovariotomists and made him even more than Clay the great apostle of ovariotomy. In his first 150 cases he had 47 deaths. It was, however, for Keith to verify "that this long-despised operation is now the safest of all the great surgical operations." He began in 1866, and in his first 48 cases had only 11 deaths, a result which in some measure prepared the profession for the astounding record of 73 ovariotomies without a death and 97 recoveries out of 100. This attested his marvellous skill as an operator and made his results, according to Sims,

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"the wonder and admiration of surgeons all over the world." In referring to one of the meetings held *in camerâ* Dr. Ballantyne discussed the relation of obstetricians and gynæcologists to the law chiefly on the question of professional secrecy. Theoretically, of course, the medical man is constantly under the Hippocratic oath—that facts, medical or otherwise, which he learns from his patient during professional attendance should not be divulged, and the law of this country seems clearly to hold that a secret acquired by a medical man during his attendance upon a patient is the secret of the patient, and therefore that she has a *primâ-facie* right in law to require that her secret should be kept unless it can be shown that there is some paramount reason setting aside that right. The law then so far upholds our old professional rule. Some judges have gone further and have indicated that medical men should *legally* be under this ancient rule with certain exceptions. Thus Judge Buller expressed his regret that the information got from medical men was not privileged. Lord Brougham expressed himself in much the same way, and Chief Justice Best said that the law was hard in itself, of questionable policy, and contrary to that of America and France; while Justice Hawkins in the comparatively recent case of Kitson *v.* Playfair and wife said that there were criminal cases, and he instanced one—that of self-inflicted criminal abortion—where it would be "monstrous cruelty" for the medical man to inform the police; and with regard to those when it was said the medical man should inform the judge might himself in some cases refuse to commit a medical man for contempt in refusing to reveal confidences. The practitioner is therefore evidently in a position of serious doubt. In America and France the law differs from that of this country in so far that it binds the medical man to keep his patient's secret. In America the law binds the professions of the Church, law, and medicine equally. According to this code "the clergyman is prevented from disclosing confessions made to him in his professional character in the course of discipline enjoined by the rules of practice of the religious body to which he belongs. The attorney or counsellor-at-law is not allowed to disclose a communication made by his client to him or his advice given thereon in the course of his professional employment. And a person qualified to practise physic or surgery is not allowed to disclose any information which he acquired in attending a patient in a professional capacity and which was necessary to enable him to act in that capacity." This law recognises that the community needs help for its suffering from these three professions and that it would be wrong to put any obstacle in the way of obtaining it whether guilty or innocent. The revisers of the American law went further by stating that the necessity of the law is even stronger in the case of medical men than with legal advisers. But this law is broken in its administration. Thus Judge Bartlett speaking on the subject of criminal abortion at a meeting of a medical society said: "The rule may be regarded as pretty well settled in this state that the physician is compelled by law to disclose (in the witness box, not voluntarily) what he knows indicating the commission of criminal abortion where the victim of that abortion is dead. Where the patient, however, survives and does not waive her privilege the medical practitioner must keep silent." District-Attorney Backus at the same meeting gave the opinion that a self-attempted abortion should not be disclosed whether the person lived or died, but where it is done by another the medical man should endeavour to procure the consent of the patient to inform even though she survives. In this country the medical man is not privileged, and this opinion has been again confirmed by the answer of counsel to the question of the Royal College of Physicians of London, "Has a medical practitioner any privilege with regard to secrets confided to him in the course of his practice analogous to the privilege as between a solicitor and client or otherwise?" Answer: "We are of opinion that there is no privilege attaching to statements made to a medical practitioner by his patient." Yet we know that should a medical practitioner disclose any fact to a third party which may affect the character of, or cause injury to, the patient he would be liable to an action for defamation of character. In cases of concealment of pregnancy the presumption is that the medical practitioner should inform, and yet why should the law or we be less careful to protect a poor woman who, in the agonies of labour and great distress of mind, allows her child to die than she who has destroyed her child in utero? Then in those cases of pregnancy with abortion in women out of wedlock, or where the wife has been separated for some time, here it is most necessary for the medical man to keep silent in the interest of the patient and for his own protection. Again, in the case of servants about whom the employer is suspicious and thus has sent for the practitioner to tell what is the matter, it has been said that the medical man is the agent of the employer and receives his fee from her and therefore must divulge the condition. But according to law the medical man must have the full permission of the patient to see and prescribe for her and also her permission to tell her employer what she suffers from. In the case of gonorrhœa and syphilis it must not always be taken for granted that a married woman has obtained the disease from her husband, and if not so it would be wrong to expose him to the risk just as much as when the husband is suffering from such a complaint we protect the wife. It is also very difficult to know how to act when such diseases occur in servants and employés, as in these cases the medical man runs the risk of an action at law. In obstetrics the opinion of counsel is "that the law does not forbid the procurement of abortion during pregnancy or the destruction of the child during labour where such destruction is necessary to save the mother." But this is only the opinion of counsel—the law remains; and though the illegality of these operations may not be entertained in the law courts, still "in the event of the death of the mother the medical man exposes himself to a prosecution for a criminal offence." Why, then, should the law not be amended to run as it does in the penal code of the State of New York? "A person who with intent thereby to procure the miscarriage of a woman, unless the same is necessary to preserve the life of the woman or of the child with whom she is pregnant, is guilty of abortion," &c. The alteration of our law should be made a matter for serious consideration; the law should emphasise in a decided way a patient's legal right of privileges which she only can waive except in certain cases and these the law should carefully define.

The SECRETARY, on behalf of Dr. C. F. PONDER, of Kalimpong, read a paper on Natural Parturition with a description of a new instrument the Vector.

The following office-bearers were elected for the ensuing session: — President: Dr. J. Halliday Croom. Vice-Presidents—Senior: Dr. R. Milne Murray; Junior: Dr. N. T. Brewis. Treasurer: Dr. W. Craig. Secretaries: Dr. J. Haig Ferguson and Dr. W. Fordyce. Librarian: Dr. R. Milne Murray. Editor of Transactions: Dr. J. W. Ballantyne. Members of Council: Dr. J. B. Buist, Dr. W. N. Elder, Dr. J. R. Hamilton (Hawick), Dr. Fraser Wright, Professor A. R. Simpson, Dr. Melville Dunlop, Dr. F. W. N. Haultain, and Dr. Alexander Ballantyne (Dalkeith).

BIRKENHEAD MEDICAL SOCIETY. — The first meeting of the current session was held on Nov. 12th, Dr. R. Sydney Marsden, President, in the chair. Mr. Wm. Dalzell, M.A., M.B., C.M. Edin., was elected a member of the society. The President delivered the inaugural address, entitled, "Preventive Medicine in Relation to the Psychical and Hereditary Elements in Disease." Dr. A. C. E Harris, J.P., moved, and Dr. James Lambert seconded, a vote of thanks to the President for his address. Dr. Marsden replied, and the society adjourned. There was a large attendance of members.

UNIVERSITY COLLEGE, BRISTOL.—The annual meeting of the Governors of University College, Bristol, was held on Nov. 17th under the presidency of the Bishop of Hereford. The report alluded to the loss which the College had sustained by the death of Professor Greig Smith and recorded their appreciation of his able services in the medical department. Professor J. E. Shaw has been appointed a representative of the Faculty of Medicine upon the council. There were 583 students during the session, an increase of 60 over the previous year. The financial statement showed that the total expenditure of the College was £6290 and the income £5272, leaving a deficiency of £1018.—The Company of Cloth workers have offered to contribute the sum of £100 per annum towards the funds of the College for a further period of five years.—In addition to the Science Scholarship of the annual value of £150, given by H.M. Commissioners, tenable for two years, Mr. George Brebner has given a botanical research scholarship of £20 per annum and the Bristol Chamber of Commerce one of the value of £20 for the encouragement of the study of the metric system. An engineering works' scholarship has also been offered.

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Reviews and Notices of Books.

The Practitioner's Handbook of Treatment. By the late J. MILNER FOTHERGILL, M.D., M.R.C.P. Fourth edition. Edited and in great part re-written by WILLIAM MURRELL, M.D. Brux., F.R.C.P. Lond., Physician to and Lecturer on Pharmacology and Therapeutics at the Westminster Hospital. London: Macmillan and Co. 1897. Pp. 683. Price 15*s*.

THE first edition of this work appeared in 1876 and in its three editions was well known throughout the whole medical world. In bringing out a fourth edition Dr. Murrell has retained very successfully Dr. Fothergill's original design and his characteristic style, although the enormous progress in all departments of medicine during the ten years that have elapsed since the third edition was published has necessitated considerable additions and a thorough revision of the work. This is well shown in the first chapter, where an interesting review of the more recent advances in the methods of treatment and diagnosis will be found.

The first subject considered is Assimilation, and under this head we find the physiology of food and digestion considered in so far as is necessary for the complete comprehension of the *rationale* of therapeutic measures. Amongst other classes of drugs hæmatinics receive a large share of attention, and we would especially draw the reader's notice to the remarks on the administration of iron, which is regarded as "rather a food than as a medicine." Chapter III. deals with Excretion. The portion devoted to physiology is here again well worth perusal teeming as it is with therapeutic hints. In this chapter uræmia and its treatment are considered, the compensatory action of organs are pointed out, and an important class of drugs is described, the alteratives. "Their action may be silent and imperceptible, their mode of influence may be unknown, but their therapeutic effects are among the most assured of clinical facts." In Chapter IV. Body Heat and Fever are discussed and we naturally find described the effects of high temperature on tissues and on the brain, and the various means for reducing temperatures. Inflammation and its varieties are described in Chapter V., and Anæmia, Plethora, and Congestion in Chapter VI.

Growth and Decay form an interesting section, Dr. Fothergill's charming style of writing being particularly noticeable in the paragraphs on Decay, and the indications for treatment in the ailments of advanced life.

There may be found some who will not altogether agree with the remarks found in Chapter VIII. — Abnormal Growths; some of the expressions used may at first sound strange, but further thought will show that there is much sound reasoning in them. For instance, in speaking of tubercle the following sentence is employed: "The greatest danger for the majority of consumptives is that they are apt to become tuberculous," the meaning of which is that although the writer fully acknowledges the tubercle bacillus as an essential part of the tuberculous process, yet there is a second etiological factor with which as yet we are imperfectly acquainted. Chapter IX. deals with Blood Poisons and Specific Poisons—namely, septicæmia, sapræmia, pyæmia, and the specific fevers. This section is quite up to date, all the more recent scientific discoveries being introduced. Acute and Chronic Disease is the subject of the next chapter, giving, amongst other forms requiring treatment, those of hæmorrhage, syncope, and asphyxia. The theory of stimulants also receives considerable attention. In Chapter XI. the treatment of Diabetes, Rheumatism, and Gout is found. The remarks on diabetes are particularly instructive. The matter of diet is shown to be all important, but the writer sounds a warning note against too rigid rules. "The dietary of diabetic patients is not to be laid down by rule of thumb. If the patient wastes on any dietary, then that dietary should be altered. Wasting is the index for treatment rather than the amount of sugar in the urine."

"Great importance has ever been attached to that acquaintance with families and individuals which is summed up as 'knowing their constitution.'" Such are the opening words of the chapter on Diatheses and Cachexiæ, in which much interesting reading will be found. Action and Inaction is the heading of the next chapter and the various forms of narcotics occupy its greater portion. Chapter XIV. deals with the various methods employed in the treatment of disorders of the Circulatory System, and Chapter XV. with those of the Respiratory System, but this latter seems to us to scarcely reach the high standard of the rest of the work. The treatment of Disorders of the Digestive System, however, is excellently set forth and will be read with advantage both by practitioners and students. We consider Chapter XVII., on the Urinary System, one of the best in the book, the remarks on albuminuria and chronic renal changes being especially noteworthy. Chapters XVIII. and XIX. deal with the Reproductive System and the Cutaneous System respectively. The Lymphatic and Nervous Systems are considered subsequently.

The remaining chapters are devoted to Public and Private Hygiene, Food in Health and in Ill-health, the Dietary in Acute Disease and Mal-assimilation, the Management of Convalescence, and finally, the Medical Man at the Bedside. The last named we strongly recommend to the notice of the young practitioner. In it he will find most useful hints as to the management of patients as indlviduals, instruction on which point is so often neglected in the ordinary curriculum. Taking the book as a whole we cordially recommend its perusal to the student and busy practitioner, to the one as a text-book and to the other as a work of reference.

A Treatise on Obstetrics for Students and Practitioners. By EDWARD E. DAVIS, A.M., M.D., Professor of Obstetrics and Diseases of Infancy in the Philadelphia Polyclinic, &c. Illustrated with 217 Engravings and 30 Plates in colours and monochrome. Edinburgh and London: Young J. Pentland. 1897.

THE author's aim in preparing the volume before us has been "to furnish to the student a text-book and to the practitioner a work of reference in which both the science and the art of obstetrics should be fully set forth in accordance with the most modern results of investigation and experience." We think that on the whole the author has succeeded in accomplishing his purpose. On the all-important subject of antiseptics nothing could be better than the following direction for disinfecting the hands prior to making a vaginal examination: "The attendant must scrub his hands thoroughly with soap and hot water, using a nailbrush; then rinse them thoroughly in hot water, and then scrub them in bichloride of mercury solution 1 in 1000." We quite agree, too, with the author's view that "no lubricant is required in normal cases for the finger, for the increased secretion of mucus renders this unnecessary." We notice that in describing normal labour, speaking of the removal of the placenta, he says, "It may then be grasped by the fingers and gently removed, care being taken not to tear the membranes." But we see no direction to twist the membranes into a rope which is a precaution usually adopted to attain the end in view. Curiously, there appears to be no mention of accidental hæmorrhage under that name either in the chapter on Hæmorrhage or in the Index; concealed hæmorrhage is described, also post-partum hæmorrhage and hæmorrhage due

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to placenta prævia, in one chapter. We think that students would have a clearer idea of the matter if these hæmorrhages were described in separate sections. As regards the treatment of post-partum hæmorrhage, which is for the most part clearly given, we think the statement that "the uterine and ovarian arteries may also be ligated by abdominal section, followed by hysterectomy at the junction of the fundus and cervix" should for the benefit of the student be qualified by saying that such a measure can hardly ever be necessary, as we venture to think there is no obstetrician of eminence in this country who has ever found it requisite to perform the operation. There are many good illustrations, the least successful from the point of view of teaching being, as usual in matters of the kind, those derived from actual photographs. Thus on p. 226 there is a photograph showing the patient's buttocks and the shirtsleeves and hands of the obstetrician and his assistant the inspection of which, in our opinion, really teaches nothing. There is a section on Infancy in Health and Disease and one on the Jurisprudence of Obstetrics; there is also a good account of Symphysiotomy. The work is well worthy of careful perusal.

Ringworm and Alopecia Areata: their Pathology, Diagnosis, and Treatment. By H. ALDERSMITH, M.B Lond., F.R.C.S. Fourth edition. London: H. K. Lewis. 1897. Price 10*s.* 6*d.*

THIS edition, the author tells us, has been re-written, but unfortunately it has also been enlarged by one-half as much again as the third edition, and now forms an octavo volume of 327 pages. Although no doubt the researches of Sabouraud and those who have worked on the same lines required that the work should be recast the subject scarcely necessitated so much enlargement, and in future editions by compression and avoiding repetitions which are somewhat numerous a reduction in the amount of print could easily be made without sacrificing valuable matter. The work contains a clear and succinct account of the new observations on the plurality of the fungi which produce the clinical groups of affections classed under the term "ringworm," and the author sets forth impartially the views of others and shows how far Sabouraud's work has been confirmed by the English workers—Adamson, Fox and Blaxall, Leslie Roberts, &c.—and in what points his deductions must be refuted or modified. Much work has also been done in Germany and Italy on the subject, but of this we do not hear from the author; his own views, however, founded on clinical and microscopical observations are rightly and clearly given.

On various points of treatment Dr. Aldersmith's wide experience enables him to speak with authority, and his trials of the latest specifics will save others from wasting valuable time in going over the same ground. Thus of formalin he tells us that in three-fourths of the cases in which he has used it he has had to give it up either from its being a failure after from six to nine applications or because the parents would not allow it to be continued on account of the pain produced by it. He justly remarks that more rapid cures are not to be expected from new parasiticides, but from improved methods of their application.

On the subject of Alopecia Areata the author is strongly in favour of a neurotic theory to explain all the cases, a view which is losing rather than gaining ground. He quotes freely, however, from authors on both sides. We must protest against his frequent use of the generic term "alopecia" for baldness from all causes as if it were synonymous with "alopecia areata." Possibly this may be due only to carelessness but it is an inaccuracy which should be avoided.

Whilst dermatologists will not find in the work information with which they are not already familiar those who are less expert may rely upon its being a clear and readable exposition of the present knowledge of the subject. The new illustrations and other portions of the publisher's task are well done.

LIBRARY TABLE.

St. Thomas's Hospital Reports. New Series. Edited by Dr. T. D. ACLAND and Mr. BERNARD PITTS. Vol. XXIV. London: J. & A. Churchill. 1897. Price 8*s.* 6*d.*—We are pleased to see the reports of this large hospital, as these volumes always contain much of interest to the profession. The first part of this volume which consists of papers on various subjects is perhaps less full than usual; we miss the names of many who generally supply contributions. There are, however, some papers which will repay perusal and be useful for reference. Amongst these we may mention one by Mr. Makins on Three Cases of Injury to the Abdominal Viscera; on Treatment of Fracture of the Patella (both early and late) by Operation, by Mr. H. H. Clutton; on Some of the Rarer Forms of Tuberculous Disease of the Knee-joint, by Mr. H. B. Robinson; on the Displacements which occur after Tuberculous Disease of the Knee-joint in Children, by Mr. T. H. Kellock; and on the Occurrence of Relapse in the Specific Fevers, by Dr. F. F. Caiger. There are also contributions from Dr. F. R. Walters, on Osteo-arthropathy and its Relationships, and a Case of Hyperplastic Osteo-arthritis or Pulmonary Hypertrophic Osteo-arthropathy of Marie; and another one from Dr. Cory—Notes on the Examination of the Bodies of Fifty-eight Children Born Dead or Shortly Dying (third series). A reprint is also made of a paper by the late George Rainey on the Artificial Production of Certain Organic Forms and the Manner in which they are Produced, and to this there is an introduction by Mr. W. W. Wagstaffe. There is much valuable information in the carefully compiled medical report for which Dr. C. R. Box is responsible, especially in the tables appended to the body of the report. During the year 1895, the antitoxin treatment of diphtheria was adopted in every case and was commenced immediately after admission. The result is shown as follows: 111 patients of all ages show a mortality of 23·42 per cent. In 1894 the mortality-rate of the cases not treated with antitoxin was 40·56 per cent. and the average rate of mortality for the ten years preceding 1895 equalled 49·8 per. cent., whilst the percentage requiring tracheotomy was 87·93 in 1895 and 91·37 in 1894—of these the percentage of deaths was 37·25 in 1895 and 66·03 in 1894. Another point which is brought out by these tables is that the diminution of mortality in 1895 was accompanied by a considerable increase in the incidence of complications—albuminuria, nephritis, paralysis, and broncho-pneumonia. There were 64 cases of typhoid fever under treatment with a mortality of 12·5 per cent., the deaths being the result of exhaustion and cardiac failure in seven out of the eight cases. The surgical report, written by Mr. C. S. Wallace, shows also proofs of careful compilation. We are struck with the amount of space devoted to a consideration of cases of disease of the digestive tract in the special tables. They are, however, interesting and their value amply compensates for the amount of space taken up, more especially as the table of radical cure of hernia no longer appears. The other reports are as follows: that of the Obstetrical Department, by Dr. Cory; of the In-patient Department for Diseases of Women, by Dr. W. H. Tate; of the Ophthalmic Department, by Mr. H. G. Toombs; of the Department for Diseases of the Skin, by Mr. A. H. Payan Dawnay; of the Department for Diseases of the Throat, by Mr. Stabb; and of the Electrical Department, by Dr. H. G. Turney.

The Nurse's Handbook of Cookery. By E. M. WORSNOP, assisted by M. C. BLAIR. London: Adam and Charles Black. 1897. Pp. 108. Price 1*s.* 6*d.*—In this little work there will be found plain and clear directions for the

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preparation of a great variety of foods suitable for both sick persons and convalescents, the dishes varying from beef-tea, mutton-tea, and peptonised articles, to such delicacies as roast pheasants, baked sweetbreads, boiled tongue, omelettes, &c. There is an introduction in which the ability of the author is vouched for by the superintendent of cookery to the London School Board.

The Surgical Diseases of Children. By EDMUND OWEN, M.B. Lond., F.R.C.S. Eng., Senior Surgeon to the Hospital for Sick Children, Great Ormond-street; Senior Surgeon to, and Lecturer on Surgery at, St. Mary's Hospital, London. Illustrated with 5 Chromo-lithographs and 120 Engravings. Third Edition, revised and enlarged. London, Paris, and Melbourne: Cassell and Co. 1897. Pp. 504 Price 21*s.*—This new edition is an improvement in several ways on the first and second editions, and in its present state the work is a good introduction to the study of surgical diseases as they appear in children; but it is not, and is probably not intended to be, a complete treatise on the surgery of childhood. In the description of the treatment of a case of diphtheria we find the following sentences: "The fumes of burning sulphur with steam are the best general disinfectant for rooms and clothing. Indeed, the periodical burning of sulphur in the sick-room is expedient; children are but little irritated by the fumes." From the first half of this extract we do not dissent, but the second half is surely erroneous. Will sulphurous fumes which do not irritate the child prove very destructive to the bacillus diphtheriæ? The practice can have no real value and is on a par with the popular custom of placing in the sick-room saucers containing Condy's fluid. With Mr. Owen's remarks on craniotomy for microcephalic idiots we cordially agree. The operation was, indeed, a failure; in many cases it was rapidly fatal, and in those in which the patient survived the operation the mental improvement was extremely doubtful. A very good skiagram is given of a tuberculous hip (p. 424); it was taken by Dr. Macintyre, of Glasgow.

JOURNALS.

Heilstätten-Korrespondenz (Sanatorium News). Organ of the German Central Committee for the Providing of Establishments for the Treatment of Diseases of the Lungs. Under the direction of Dr. GOTTHOLD PANNWITZ, Business Manager of the Central Committee. No. 2. Berlin, Nov. 1st, 1897. First year of publication.—The following is from the current number of this journal: "Ever-widening circles take a lively interest in the systematic struggle against phthisis as it is carried on in Germany by the providing of adequate sanatoria for pulmonary cases, more particularly in connexion with institutions for invalids and for the insurance of old age pensions. In order to make the experience that has been gained in this department accessible to the public at large as well as in order to obtain due appreciation of the literature that has been collected on the subject the German Central Committee for the providing of Establishments for the Treatment of Diseases of the Lungs has determined to issue a *Heilstätten-Korrespondenz (Sanatorium News)*, reprints from which are on request willingly sent to newspaper offices free of charge. Application should be made to the business manager, 19 and 20, Klopstockstrasse, Berlin, N.W."

The Journal of Balneology and Climatology. Vol. I., Part 4. London: John Bale, Sons, and Danielsson, Limited. Price 2*s.*—This part marks the completion of the first volume of the official journal of the British Balneological and Climatological Society, a society which is doing good work in calling attention to our own health resorts, in furthering their improvement, and in establishing intercommunication between British medical men generally and the practitioners who reside at the various British health resorts. "The Climate of the Dwelling House," by Dr. Poore, sounds a very necessary note of warning as to the futility of sending persons abroad to climates other than their own where, although the right conditions as to altitude, soil, sunlight, temperature, humidity, &c., may prevail, the air is impure. In this case "climatic treatment becomes a solemn and expensive farce." "Which of us," says Dr. Poore, "has not experienced the pleasure after a long day's tramp of descending through some valley of exquisite beauty to the village containing the hotel which is to afford dinner and a night's rest? We see our earthly paradise nestling far below—a dream of loveliness—but 'tis distance lends enchantment to the view,' and arrived at our destination the eyes have been quickly disillusioned by the nose." Pure air is, we know, an important factor in health, and an active cause in producing impurity is overcrowding whether in cities, towns, or individual places of residence. Hotels are especially liable to this cause, and in addition the elaborate decorations of the interiors in many cases while pleasing to the eye act as dust traps which accumulate germs of all kinds. Dr. Poore instances the mediæval colleges as seen at Oxford and Cambridge as excellent models which the modern hotel architect might adopt. "They have as a rule ample curtilage, the public rooms are big and often in a building distinct from the living rooms, while the living rooms are quiet and connected with the public rooms by cloisters and covered ways." The article concludes with a plea for better food for invalids at some of the table d'hôtes. "In many hotels, especially in cheap 'pensions,' the feeding is execrable. It is meretricious rather than nutritious, and consists of dabs of disguised garbage to which absurd names are given by ignorant 'chefs' whose only knowledge of cooking consists of opening 'tins.'" Dr. Prosser James contributes an academic paper on the Earliest Recorded Discovery of Thermal Springs. Articles on Helouan-les-Bains, on the Claims of British Resorts with some remarks on Malvern as a Health Resort, and on the Royal Baths at Harrogate will be perused with interest.

Scottish Medical and Surgical Journal.—Four of the articles this month are highly instructive clinical records—namely, the contributions by Dr. Alexander Patterson (Glasgow), on Surgical Reminiscences, including Eighteen Years' Work in the Western Infirmary; by Dr. Byrom Bramwell (Edinburgh), on Cerebral Cases of Unusual Interest; by Dr. A. H. Freeland Barbour (Edinburgh), on Vaginal Hysterectomy by Doyen's Method, with Six Successful Cases; and by Dr. James Carmichael (Edinburgh), on Basal Meningitis. Dr. J. A. Kynoch (Dundee) describes a case of Tuberculosis of the Placenta, and Dr. J. W. Ballantyne writes on Transposition of the Viscera and collects the literature on the subject from 1894 to 1897 inclusive.

Edinburgh Medical Journal.—The opening paper deals with the Hepatic Complications of Typhoid Fever, the author being Professor William Osler, of Johns Hopkins University, Baltimore. The complications described are focal neuroses, jaundice, abscess, the presence of typhoid bacilli in the gall-bladder, the occurrence of acute cholecystitis and cholangitis, and the relation of typhoid fever to gall-stones. He records a case in which Eberth's bacillus was found at a cholecystotomy, although there were no symptoms of typhoid fever. Mr. W. Roger Williams brings forward arguments against the view that cancer is a "morbus miseriæ." The "Medico-legal Notes," by Mr. H. Nelson Hardy and Mr. F. W. Lowndes, contain much salutary advice in reference to the examination of unwilling persons, especially in cases of suspected pregnancy. Altogether there are nine original articles.

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THE LANCET.

LONDON: SATURDAY, NOVEMBER 27, 1897.

THE General Medical Council has done one very considerable piece of business during the session which commenced last Tuesday. It resolved with practical unanimity to make a departure in the statement of its objections to the employment of unqualified assistants. The departure consisted in stating clearly that henceforth the employment of an unqualified assistant, except in the form of a pupil, will be apt to be considered by the Council as "infamous conduct in a professional respect," to be punished by removal from the Register. Perhaps a little more time might have been given with advantage to the shape in which the future intentions of the Council were announced and to making clearer the precise nature of the offence which it is proposed in the future to regard so seriously. The language of the new notice makes of it an amplification of the resolutions passed on several occasions already by the Council in condemnation of the employment of unqualified assistants, and it practically makes it an offence to use the services of any unqualified person save such as may be rendered by a pupil to a general practitioner or in a hospital by dressers and clerks to the members of the senior or junior staffs. But the position of the pupil towards the general practitioner is different to his position towards the hospital officer. In the view of the General Medical Council, a body made up predominantly of medical teachers and examiners or of gentlemen representing the teaching and examining bodies of the profession, a general practitioner can only be allowed to have as assistant a pupil for a period of six months in the last or fifth year of his medical curriculum. A junior student is not eligible to assist the general practitioner, nor is the senior student eligible, we suppose, for a longer period than six months. These restrictions may be taken to reflect upon teachers and examiners as much as upon the general practitioner, for they would seem to imply that those who teach and examine medical men have but a small faith in their work, so that they cannot trust (except in a very limited manner) their former charges to transmit to others the lessons they have learnt. Be this as it may, it is not clear from the language of the Council whether a medical man will be allowed to keep a pupil for a longer period than six months without incurring the risk of employing an unqualified assistant.

We do not labour this point for it is quite clear that abuse might arise—nay, it is well known that it has arisen—from the employment of senior students as assistants, but the position of the Council requires exact definition in the interest of employer and employé alike, and this brings us to a point that will be likely, judging from the discussion in the Council, to influence the Council in ...nating whether a person employed by a registered practitioner in connexion with his professional practice is an assistant or a pupil. It seems that if the principal pays, the individual employed will be apt to be regarded as an unqualified assistant; while if the payment is the other way round, he will be regarded as a *bonâ fide* pupil. This is a question which is not settled by the language of the Council and which we would urge must and should be settled. For if such points are left in dubiety the profession will be harassed on a large scale by prosecutions which will often end in failure and the funds of the Council will be drained to no purpose. We are no apologists for the employment of unqualified assistants—we are too well aware of the evil that has in some places arisen in this way—but the practice is too old and has been too much connived at by the General Medical Council for it to be abolished with a stroke of the pen. In particular is it necessary that the stroke be unmistakable in meaning. The past action of the Council has only touched the surface of the evil. It has had reference to gross covering or gross misuse of unqualified assistants. The practitioners offending or found guilty of "infamous conduct" for such offences have been comparatively few; probably not fifty in all. The offence created by the action of the Council this week is practised by hundreds of medical men, probably by thousands. Before a sense of ill-doing can be effectually brought home to them the intentions of the Council must be stated with much more detail and precision than as yet they have been.

Of the main decision of the Council we entirely approve. It is a complete anachronism that half or a third of the work of the medical profession should be done by persons who are not in any sense of the word medical practitioners. Such an arrangement is deceptive as regards the public who think they are getting the advice of qualified persons, and it is grossly unjust towards young practitioners who should find their first and most valuable work in the field of private practice under the supervision of an intelligent and experienced principal. The General Medical Council is doing its duty by legislating for the suppression of all inferior and unqualified forms of practice and all who have the interests of the medical profession at heart will recognise this and applaud its action. But we would beg the Council to make its views very clear indeed, otherwise not only will much irritation be caused but actual injustice will be done.

THE mere mention of the Muzzling Order at the present time seems to excite general attention and bring out a variety of suggestions, so that when the subject was alluded to before a political meeting by the Right Hon. WALTER LONG, who holds the important and responsible post of Minister of Agriculture, it was to be expected that the daily press and the public would freely comment upon his words. Both have done so and the views elicited have been many and divergent, but there can be only one opinion for sensible citizens as to the value of the Muzzling Order as a whole, however open certain details in its working may be to criticism. In the course of his speech before a Conservative meeting at Bournemouth last week Mr. LONG mentioned certain facts which prove incontestably the beneficial effect which has

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already followed the measures recently adopted for the stamping-out of rabies. The right honourable gentleman stated that in Lancashire and the West Riding of Yorkshire there were 446 outbreaks for the year ending Nov. 19th, 1894, whilst during the same time in 1897 (when the Muzzling Order was in force) there were only 37; of these 24 were in the early part of the year, as since July the West Riding had been quite free and Lancashire had only reported 3 cases. These figures tally with London figures. In London, for the year ending Nov. 15th, 1896, there were 161 outbreaks, and during the same period of time this year, since the Order has been in force, there have been only 29; in fact, only one outbreak has occurred since August. In the Midland district only 6 cases were reported this year, as against 34 during 1896. In the whole of England the number of cases in 1895 was 608, whereas this year they have been reduced to 141. Again, the Board of Agriculture statistics for the week ending Nov. 13th, 1897, show that not a single outbreak was recorded. These facts speak for themselves, and we seem at the present time to be nearer the desired object of getting rid of rabies than we have been for many years. It is to be hoped that the adverse opinions uttered by the dog-loving public will not in any way influence Mr. LONG in his determination to free us from the risks of such a terrible disease.

Under the intermittent muzzling system there can be no doubt that we should never have got rid of the disease, while as far as the dogs themselves were concerned the objections to the wearing of a muzzle were more marked than they are under present regulations. For under the intermittent system just as the animals had adapted themselves to their altered circumstances the Order was removed and freedom restored; but in a few weeks a fresh outbreak of rabies would cause the re-enforcement of the Order and the dogs would again have to undergo the ordeal of becoming accustomed to their restraint. Intermittent muzzling can only end in failure, and it seems incredible that the lesson has never been learnt before. The rigorous application of the muzzle to a wide area around an infected district, or better still to the whole of Great Britain, for a period of not less than twelve months and stringent rules regarding quarantine and supervision of all imported dogs are the only means by which success can hope to be attained. Having once freed the country it would be necessary that the rules regarding quarantine and supervision of imported animals should be strictly adhered to. In this respect it seems curious that dogs coming from Ireland and the Isle of Man should be exempted; much greater safety would be attained if these two islands were not excepted. That six months is not a sufficient length of time for the continuous application of the muzzle or of quarantine has been demonstrated upon more than one occasion. The period of incubation of the virus in the system is at present known to be indefinite and the order ought to be enforced for at least twelve consecutive months. *One year's strict and universal muzzling might see us free from a terrible pestilence.*

Now that the public have had their outburst of feeling at the indignities put upon their pets, and that the latter have got used to their wire cages, it would be a matter of regret if Mr. LONG returned (and it is quite evident he does not intend so to do) to the half-hearted measures adopted by previous administrators when attempting to grapple with this disease. We sympathise with the troubles of dogs and dog-owners and in particular we dislike the partial working of the Order, but the good that it has done is unquestionably immense. Surely from a humane and common-sense point of view the saving of human lives, even if only comparatively speaking a few, is to be considered as being far more important than the inconvenience caused to the whole canine race, especially as a number of the latter are also saved from a horrible death. Prolonged isolation of a wide ring around infected districts, the compulsory notification and slaughter of all diseased or suspected animals, together with stringent measures regarding the importation of dogs from all parts outside Great Britain are the only means by which the Government can hope to attain complete success in an attempt to stamp out rabies and to keep the country free from the disease. The example of the treatment of cattle plague, and in recent times of pleuro pneumonia, cannot be too closely followed. These diseases are now practically stamped out and if proper measures are adopted there is reason to hope that rabies may be stamped out in the same manner.

ANÆSTHESIA of a sort has been practised from times immemorial, certainly from that convenient legal period "beyond the memory of living man." It was taught by HUMPHRY DAVY in 1799 and again by FARADAY in 1818. The properties of ether were well known to toxicologists and those learned in drugs and ether was inhaled long before MORTON gave his historic demonstration at Boston. HORACE WELLS'S claim to priority—and indeed his use of nitrous oxide gas in 1844 appears to have been the first public demonstration of an anæsthetic—cannot be overlooked. Even in the case of ether it appears that Dr. CRAWFORD LONG employed it as an anæsthetic in 1842. And if MORTON'S name is more prominently associated with ether as being the first to publicly demonstrate its effects SIMPSON'S advocacy of chloroform is at least as interesting. We refrain from entering into the miserable stories of JACKSON, MORTON, and the luckless WELLS; but with SIMPSON we find no self-seeking; all is enthusiasm and eagerness to get ahead with his "wonderful discovery." The long correspondence which he held with BIGELOW when that illustrious man sought to uphold his country's claim to the discovery of anæsthesia—a perfectly legitimate claim and one which SIMPSON had always conceded—never reveals lack of dignity or self-respect.

Dr. DUDLEY BUXTON in his oration to the Society of Anæsthetists, which we print in another column, had other matters to deal with besides chatty disquisitions on the history of his subject. The commanding presence of Dr. JOHN SNOW as a scientific explorer in the field of anæsthesia calls for more than passing comment. It is justly pointed out that no man, not even excepting SNOW'S pupil, friend, and biographer, the late Sir BENJAMIN WARD RICHARDSON, has done so much to make the study of anæsthetics a science as did SNOW. When his lectures on Narcotic Vapours were published men

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began to realise that SIMPSON'S simple rules and equally simple physiological knowledge of chloroform left much to be desired. SNOW adopted the experimental method and soon elaborated his theory that the phenomena shown by animals under chloroform are the direct effects of different quantities of the narcotic contained in their blood. He analysed all the cases of death he could lay his hands upon and classed them according to his experimental results. The teaching of SYME appears to have been founded solely upon the practice of SIMPSON, nor does it appear at all certain that beyond a rough and ready plan of using large quantities of the anæsthetic and watching the state of the respiration SYME held any very definite views of his own. Certainly his practice was very successful and probably this fortunate circumstance has led his pupils to invest the surgeon with the credit of a method which undoubtedly belonged, as SYME himself averred, "to Dr. SIMPSON." The importance of the subject and the prominent place it has held in men's minds for the past half century are fully attested by the wealth of research and the mass of literature with which Dr. BUXTON had to deal in making his interesting oration as far as possible exhaustive. The general teaching of the oration may be summed up by saying that chloroform has been proved both by the light of physiological experiment and clinical research to be a highly dangerous body—a drug necessary for the equipment of the surgeon but one demanding the careful handling of responsible and skilled persons. While the earlier labours of BERNARD, BEST, SNOW, and SIBSON carry great weight, yet there can be no doubt that more recent methods have introduced far more exactitude into our knowledge of chloroform.

Whatever views, however, are entertained upon the action of drugs in the schools there is no doubt that the general public care far less about the science than the art. It is, according to Dr. BUXTON, even yet hopeless to expect that any method of giving chloroform will constitute the middle path of safety, "in spite of advertisements of instrument-makers and the assured utterances of doctrinaires"—to give his words. It is no doubt true, as was emphasised in the oration, that the large mass of evidence which has now been collected about the action of anæsthetics has been derived to a great extent from experiments upon the lower animals. And certainly "knowledge casteth out fear," so that we should expect the management of the chloroformed patient to be more exact and more safe now than it was formerly. If the death-rate does not appear to justify such a statement it is, in Dr. BUXTON'S opinion, because the practice of anæsthetics is in too many cases merely a matter of routine and the methods in vogue are too often faulty. If a fuller knowledge of the subject leads to a lessening of empiricism and a recognition of the importance of the scientific study of anæsthesia this celebration of the introduction of chloroform as an anæsthetic will not have caused time and energy to be spent in vain.

RIPON WORKHOUSE INFIRMARY.—The foundation stone of an infirmary in connexion with Ripon workhouse was laid by the Marquis of Ripon on Nov. 11th. The building will accommodate about forty patients.

Annotations.

"Ne quid nimis."

THE ANNUAL MEETING OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE result of the ballot of the Fellows taken in January of this year was so disappointing to those Members of the College of Surgeons who were desirous of direct representation on the Council that an explanation was naturally sought. It may be remembered that at a meeting of the Fellows in January, 1896, a resolution was carried by a very large majority of the Fellows present to the effect that it was desirable to give the Members direct representation on the Council. A not improbable explanation of the antagonistic result of the poll was offered—namely, that the "elucidatory statement" which accompanied the questions to the Fellows was misleading and was not impartially drawn up. This view was expressed in a resolution brought forward at the recent annual meeting of the Fellows and Members; it was introduced by Dr. Thomas Morton in a speech which was at once able and moderate in tone—a very agreeable contrast to the speeches of many Members, who unfortunately employ a vehemence which cannot but be regretted by the best friends of the Members' claims. Dr. Morton pointed out several items of the elucidatory statement in which the arguments advanced by the Members were not correctly represented. Mr. Henry Morris mentioned that on the committee of the Council which drew up the statement were two members of the Council who have always been consistent advocates of the claims of the Members. It was almost too much to expect that an elucidatory statement could be drawn up which should be satisfactory to both parties. At present the adverse vote of the Fellows, although there were more than 400 Fellows who did not vote, bars the way of any extension of the Franchise to Members, and we cannot help thinking that it will be long before any active progress in reform is made. The second resolution before the meeting referred to the claim put forward by the Council in March, 1896, that it represented the Members as well as the Fellows. It was obvious at the time that in the Council's resolution the word "represent" was used in two different meanings, and therefore the resolution could hardly be taken seriously, and the fact that it was carried in the Council by only 11 votes to 8 deprived it of much of the importance it might otherwise have had. The burning question of medical aid associations formed the subject of the third resolution. Of the harm done to general practitioners by these associations no one acquainted with the facts can have any doubt, and they increase in number and extent every day. The Royal College of Physicians of Ireland has uttered a distinct protest against any of its *alumni* associating themselves with such trading bodies, and pronouncements less forcible in tone have been put forth by some other colleges; but the Royal College of Surgeons of England has hitherto contented itself with expressing its willingness to consider any individual case if brought before its notice. The resolution carried at the meeting at the College of Surgeons last week asked the Council to declare that acting as the paid official of one of these associations is "disgraceful in a professional respect." This the Council decline to do, but they reiterate their willingness to investigate particular instances, and we should advise the Society of Members to collect evidence of canvassing for patients by an association employing a

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Member of the College. The action of the Council in such a case will be awaited with great interest.

THE LACK OF ACCOMMODATION FOR LUNATICS IN LIVERPOOL WORKHOUSES.

ON more than one occasion attention has been drawn in the columns of THE LANCET to the deficiency of accommodation for pauper lunatics in the Lancashire county asylums as well as in the workhouses of the parish of Liverpool and the West Derby and Toxteth unions, and to the consequent refusal of the workhouses' authorities to receive from the hands of the police persons mentally deranged Last week Mr. T. E. Sampson, the coroner for Liverpool, acting in a magisterial capacity had occasion to allude to the subject from the bench and to deplore this unfortunate state of things. He said that frequently persons were found wandering at large apparently insane and unable to give a coherent account of themselves. The police in the exercise of their duty conveyed such persons to the bridewell, where they were examined by a medical man who, if satisfied of their mental aberration, gave a certificate recommending their admission to the workhouse. Up to a recent period no serious difficulty had arisen, but latterly the authorities of the Mill-road Infirmary of the West Derby Union had declined to receive such cases, stating that they were already full and had no further accommodation. The result was that the unfortunate individuals had to be taken back to the bridewell and dealt with by a magistrate who was thereby placed in a position of great difficulty and perplexity. It appeared to him that something ought to be done by the proper authorities to end this lamentable deadlock, fraught with much danger to the public as well as to the persons afflicted, and to avoid what he feared might develop into a public scandal. Mr. Sampson's prognostications had not long to wait for verification. A few days subsequently, on the 22nd inst., an inquest was held by him touching the death of Alfred Rigby, aged twenty-two years, who died through being run over by a railway train at Sandhills station on the 19th inst. The evidence showed that Rigby, who had been temperate and steady in his habits, had latterly become mentally deranged and that he was taken on the 13th inst. to the Mill-road Infirmary on the recommendation of a medical man to be temporarily detained there with a view to his subsequent removal to an asylum, but owing to lack of accommodation he could not be admitted. Rigby went to see his uncle on the following Friday, nothing further being heard of him until news was received of his having been killed at the station. The evidence of two witnesses pointed to suicide and a verdict to that effect was returned by the jury. The coroner, in his address to the jury, said that he did not blame the workhouse authorities, but that one could not help thinking that if there had been room in the workhouse this young man would probably have been cured of his trouble and his life saved. Mr. Cleaver (the clerk of the West Derby Union, who attended at the inquest on behalf of the guardians) said that the workhouse was considerably overcrowded, lunatics who had been certified for removal to asylums by order of magistrates being compulsorily detained (thereby straining the Act of Parliament) for want of accommodation in the county asylums. If the twenty acute cases had been removed to asylums there would have been a margin for accommodating sixteen cases, so that the deceased would not have been refused admission. He also stated that for the past six or seven years the guardians had been calling attention to the lack of accommodation in the county asylums. All these circumstances truly call for the interference of the Home Office and the Local Government Board to insure against a recurrence of such a lamentable instance as that recorded above.

THE STATE OF THE STREETS.

WE desire to call the attention of the London vestries, and more especially the vestry of St. Martin, the London County Council, and the Society for the Prevention of Cruelty to Animals, to the disgraceful state of the streets. We are not alluding now to the curse of newsboys, piano organists, and other disturbers of the public peace, but to the sufferings and struggles of horses trying in vain to drag heavy loads over pavements which are abominably greasy and afford no foothold whatever. We have only too frequent opportunities of observing this state of affairs from the windows of this office, and we have no hesitation in saying that the condition of Bedford-street is a disgrace to any civilised city and more than a disgrace to a city which prides herself upon being the first city of the world. Is it a question of money? Rates, as every ratepayer knows, are very high; but if a quarter of the money expended upon free libraries, other than reference libraries, which are chiefly used for those out of work to sit in and consult the advertising columns of the daily press for work and upon the School Board for erecting ridiculously expensive buildings upon the finest site in London and for giving "primary education" in thirty-six different subjects were diverted to making London a decent, clean, and well-swept, cleanly-paved city, money would be saved to horseowners and contractors, to say nothing of the omnibus companies and their shareholders, while the man in the street could drive or walk abroad without being daily harrowed by the sufferings of horses.

THE RECENT GREAT FIRE.

PROPERTY covering four and a half acres has been destroyed at a loss of, speaking roughly, £1,500,000. This is the bill for the last great fire, leaving out of consideration the thousands of hands thrown out of work. In view of the rebuilding which no doubt will be commenced as soon as the area affected is cold enough to make a beginning is it too much to hope that some attention will be paid to the first principles of construction? That fires in the City of London commit the fearful ravages they do is, we are quite certain, entirely due to our abominable modern method of building. The enormous warehouses are mere shells consisting of an iron framework lightly filled in with bricks, a little concrete, and large sheets of glass. When completed the structure is said to be "fire-proof." Of course, glass, iron, brick and concrete are all non-inflammable, but once a fire gains a hold of the very inflammable contents what happens? The iron girders and beams expand with absolutely irresistible force and the whole building collapses. Were the good old style of using solid oak beams to be made compulsory the ruin wrought by expansion would be avoided and the very progress of the fire much delayed. It is, we suppose, hopeless to try to insist that a certain amount of isolation for buildings shall be made obligatory, or at least that the height of a building shall bear some sensible relation to the width of the street that it is in; but we should have thought it would have been cheaper in the long run to leave a little more land vacant than is at present the fashion. Another point to which we wish to draw attention with reference to this particular fire is the fact that nearly all modern silks are grossly adulterated and consequently far more inflammable than pure silk, a fabric which burns with great difficulty. Sophistication is especially common in the case of black silks. Again, it is reported that there was a large gas

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main in full blast in the centre of the fire without apparently there being any means of cutting off the supply. We do not see why the gas could not be turned off at various places along the street mains, as is the case with the water pipes. The efforts of the firemen must be seriously hampered by the huge jets of flaring gas, the flames of which are frequently to be seen enveloping inflammable structure which had long been put out only to be ignited afresh. The heat of a big conflagration such as that which recently took place in the neighbourhood of the General Post Office is sufficient to rapidly convert the jet of water from the hose into steam, and steam in contact with glowing charcoal produces inflammable gas—i.e., a mixture of hydrogen and carbon monoxide. Is this, perchance, any explanation of the difficulty of extinguishing the fire of buildings when in the official reports they are described as "well alight"? Water poured upon a glowing mass of embers may thus accentuate rather than stifle the blaze. We wonder that now carbonic acid gas can be obtained compressed in immense quantities in steel cylinders it is not tried, especially in the early stages of the fire, as an adjunct to water which after all is only applied to reduce the ignition temperature and not in any way as a non-supporter of combustion. With reference to the rumour that the supply of water was inadequate Colonel Rotton stated to the London County Council on the 23rd inst. that "there was plenty of water in every place."

PUBLIC HEALTH OF INDIA.

THE *Calcutta Review* for October last contains an article on "The Public Health of India" which calls for some attention on our part. The writer of the paper in question, while freely admitting that the "common sense" of England long ago recognised the immediate value of sanitary improvements in the shape of pure water, fresh air, and the removal of offensive matters from the neighbourhood of dwellings, adds that having opened its pockets to the demands of sanitarians in these respects, it was too much to expect it to give money for the provision and upkeep of laboratories and hygienic institutions the utility and profit of which were not so immediately apparent. It was soon found, however, that modern systems of scientific investigation and experiment led to results capable of being applied to practical hygiene and that these methods could not be neglected without prejudicially affecting the cause of public health and were, moreover, essentially necessary on the part of any country engaged in the contest for hygienic supremacy. As far as England is concerned she has learned this lesson and profited by it, but with India the case is different. All who know that country must acknowledge the great difficulties that have to be encountered there and more especially so at the present time. It has been said that the Indian Government takes a long time to make up its mind to do a thing, but having made it up it generally does it well. The matter is confessedly very important for India, and the need for undertaking and systematically prosecuting scientific inquiries into the causes of numerous diseases of that country is generally recognised. The Indian Government is most probably well aware of this and desirous of encouraging all attempts in this direction, but it nevertheless hesitates to make up its mind or to get any adequate grip of the requirements of the case. What is wanted, as we have said long ago, is the establishment of some really good institutes of public health in India superintended and conducted by a carefully selected staff of properly trained men, furnished with all the necessary appliances for the scientific investigation of disease and the study of hygiene. There should also, we think, be some local system analogous to that which obtains in this country organised at the different stations and cantonments of India for watching the public health and for investigating the facts connected with outbreaks of disease while these are fresh in the recollection of all concerned. The sanitary authority of a district or large cantonment might usefully be composed of a specially selected medical officer associated with an officer of the Public Works or Royal Engineer Services, and their reports might be furnished, together with their practical recommendations, to the principal medical officer of the district or station All questions requiring further scientific or bacteriological investigation might be referred by this or any other local authority to the Public Health Institute for that purpose. It is not merely a collection of statistics that is required, although these should of course be available. The temptation to calculate rather than analyse and to have recourse to a mechanical process in cases demanding a thorough and probably laborious examination is always present, but it is inapplicable and leads to no reliable conclusions. The medical services in India contain a number of young medical officers highly trained in modern methods of research, some of whom have public health diplomas, as well as some older and more experienced officers who have devoted themselves to this class of subjects, and the Indian Government cannot therefore have any difficulty in selecting the proper men for the purpose.

HYSTERIA IN EXCELSIS.

RARELY in the dismal annals of a coroner's court has a sillier or more pitiful story come to light than that related at Acton before Mr. Vere Benson on Nov. 22nd. The inquest was upon the body of a boy named Thomas Linklater, aged fifteen years, an assistant in the Assay Department of the Royal Mint, who committed suicide by taking cyanide of potassium on Nov. 10th. At the inquest William Hubert Antram, on the advice of his solicitor, elected to make a statement. Before doing so he was cautioned by the coroner in the usual way. This statement as reported in the *Times* ran as follows. He said he had known Linklater over twelve months. Early in the year he said something about taking his own life, but he afterwards said he had only been joking. On the Tuesday night before the occurrence he said something about taking poison and asked witness if he would do so. Witness, thinking he was joking, said he would. Linklater said, "You are not in earnest," and witness replied, "I am about as earnest as you are." On bidding him "good-night" Linklater said he was bringing some stuff the following night. The coroner then read the following letter which was found in Linklater's shorthand book: "This is to state I, Thomas Linklater, of Eastbury-grove, do mean to take this evening some prussic acid or cyanide of potassium in a bottle of ginger beer and thus end my miserable existence; and this is also to state that William Antrim, of Cranbrook-road, Chiswick, does mean to do the same. We shall go over into the meadows at about 10 o'clock and take the poison. Signed on Nov. 10, '97.—Thomas Linklater and William Antrim." Antram also told Dr. T. H. Bishop, of Chiswick, that Linklater had taken poison and had been sick. The jury returned a verdict that Linklater had committed suicide by taking cyanide of potassium, but exonerated Antram from aiding or abetting. However, they requested the coroner to censure him for the foolish part he had played. We do not know whether the unhappy Linklater was descended from a neurotic stock, as he probably was, or whether he is one more victim of the absurd system of over-pressure in education which is fostered by the Education Department and the various school boards. The old system of education had its faults but at least it inculcated habits of discipline and obedience. The modern system apparently

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does neither if we may judge by the recent reports of free shooting by light-hearted youths in the streets, while the strain it places upon delicate and unwholesomely bred children is often intolerable. So our hospitals are filled with the choreic and broken-down puny child, who sometimes dies, but if restored to comparative health is apt to develop into the unbalanced, weakly-minded adolescent, exhibiting the lack of mental stability which led the unfortunate Linklater to "end his miserable existence."

THE WORKHOUSE INFIRMARY NURSING ASSOCIATION.

THE Executive Committee of the Workhouse Infirmary Nursing Association, 6, Adam-street, Strand, W.C, held a meeting on Oct. 13th, when the following resolutions were passed: 1. "That the Executive Committee, after long and careful consideration, is of opinion that the time has arrived when the work of the Association must of necessity cease for the following reason—the impossibility of adequately meeting by private effort alone the demand for trained nurses in Poor-law infirmaries, under the prevailing conditions, viz., (*a*) inadequate financial support to meet the expenses of training, (*b*) lack of suitable candidates for training; and (*c*) the anomalous position of trained nurses in country workhouses. The committee consider that steps should be taken to urge upon the Local Government Board that the whole question of nursing in Poor-law infirmaries should be undertaken by a State department or should be the subject of a departmental inquiry." 2. "That a meeting should be called in order that the views of the Executive Committee should be laid before the general committee and the subscribers." A meeting will accordingly be held at St. Martin's (small) Town-hall on Dec. 2nd at 3 P.M., when the chair will be taken by Mr. E. Boulnois, M.P. The Association has sustained a heavy loss by the recent death of its president, the much-lamented Duchess of Teck.

HOSPITAL BOARDS AND MEDICAL STAFFS.

THE regrettable incident at the Glasgow Western Infirmary, where the board of management has somewhat arbitrarily deprived an eminent surgeon of nearly one-fourth of the whole number of beds hitherto placed at his service, has opened up a question of some importance to our medical charities. Whatever may be the decision on the special point at issue arrived at by the general meeting of subscribers to that particular institution which is being held as we go to press, there will still remain the question so ably and fully raised by the *Glasgow Herald* of the 17th inst. This question is, What share ought to be taken by the medical staff in the management of a hospital? In the Western Infirmary, as in many other hospitals, the medical staff are practically excluded from the government, and it may not, therefore, be surprising, although it is much to be regretted, that acts are done affecting the privileges and interests of the medical officers in which they have no share. At the same time it is only fair to state that as a general rule the recommendations of medical staffs are loyally carried out by the lay committees. It is when the initiative in medical matters is taken by the latter that difficulties are apt to arise. It would appear that even in those hospitals where the staff does share in the management the amount of their participation varies within wide limits. In some hospitals every member of the staff is entitled *ex-officio* to a seat on the board of management; in others in order to secure this privilege he must first qualify as a governor; in others, again, two or more delegates or representatives of the staff have seats on the board; and in others there is a kind of dual control — matters affecting finance and general management being directed by a lay board, those concerning the medical affairs by a medical committee, the decisions of which are, however, subject to the approval of the board of management. Now the question as to which plan is most desirable in the interests of the hospital may be fair subject of debate, but surely no one can contend that the medical staff should have no voice at all in the institution to which they give their services, upon which, indeed, its reputation mainly is founded. In the interesting reports published by our contemporary some strong testimony is given in favour of the direct participation of the medical staff in management by those who have had opportunities of contrasting a present system which gives them this share with a past system in which they had no seats on the Board. Their testimony is unanimous in approval of the new régime, which, wherever it has been tried, has been attended with the happiest results. Such a system of joint management appears on the face of it as preferable to the separation of the two elements into two distinct committees, for this latter plan must occasionally lead to misunderstandings that would never arise were the medical staff joined with the lay governors in one board. Theoretically, we believe that the justest course is to admit all the members of the acting honorary staff to seats on the board; but in practice such a plan must in many instances give too preponderating a voice to the medical members. Therefore, on the whole, we think that a certain number of seats on the board of management might well be assigned to members of the staff acting as delegates of the whole body. Were such representation the rule questions such as that which has led to so grievous a conflict in Glasgow and many others of less vital import which from time to time disturb the harmonious working of a hospital might be wholly avoided. There can be no desire on the part of the medical men to interfere in the general and financial management of the institution, but they are deeply interested in all that pertains to the care of the patients and they ought to be in a position to express their views and wishes on all such subjects with the certainty that they will, if feasible, be carried out.

OZONE.

WHETHER ozone plays an important part in the hygiene of nature is a moot point. Pure ozone is unquestionably poisonous. In air which is largely polluted with organic matter, as is the air of London and other large towns, small quantities of ozone cannot obviously live long. It is of course a powerful oxidiser and the oxygen with which it is surcharged is soon absorbed. It is found, however, in distinct quantity in the pure air of the country and, as everybody knows, in sea air. Its occurrence in air is invariably connected with the existence of water generally in motion. Thus the wind blowing over the sea waves or over the waves of a lake or the air in the immediate neighbourhood of a waterfall or spray contains a notable amount of ozone. Of course ozone must to some extent exert a purifying influence upon the air, but this can only be of importance when the ozone occurs in distinct quantity or when it is being constantly evolved, as over the surface of the sea. Doubtless sea air and mountain air owe their beneficial qualities to their purity which in some measure is due to the action of ozone. This fact has led to the devising of apparatus for the simple and easy production of ozone in hospitals and large buildings. It may not be generally known that a very simple and effectual way of bringing ozone into the house consists in first suspending moist linen sheets in a keen dry wind, and afterwards hanging them up in the house. The air in the room will thus become considerably charged with ozone and its presence will be easily detected by its peculiar smell, while a moistened starch iodide paper will instantly turn blue. Why ozone is accumulated in wet clothes in this way

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is not quite understood, but it may be due to the rapid passage of the oxygen in air over a large wet surface. It is not improbable that this interesting phenomenon plays an important part in the real hygienic cleansing of our linen articles of clothing. In big laundries when the not quite dry linen is brought in after having been exposed to a cold, dry air for a short time the smell of ozone is almost more than is agreeable.

"SCOTCH HAMS."

IN THE LANCET of Oct. 2nd, 1897, we commented upon the case of some tradesmen who were convicted of selling American hams as Scotch hams and "finest Irish hams" at Richmond, Surrey. A very similar set of cases were heard on Nov. 16th at the South Western Police Court before Mr. Marsham. In the first case Messrs. Frost and Co., of Lavender-hill, were, together with Horace Nice, the shopman, charged with selling an American ham as Scotch. The purchaser asked for a "nice Scotch ham," and Nice supplied him with one which he, Nice, said he had been told to sell as Scotch. As a matter of fact, said the witness, it was an American ham. Mr. Ricketts, in defence, said that there had been no imposition. There was no such thing as a Scotch ham, although this particular ham came from a Scotch firm of curers. Mr. Marsham acquitted the defendants of acting wilfully, but he fined Messrs. Frost £5 and £3 3*s.* costs, and Nice £1 and 2*s.* costs. In the next case Messrs. A. J. Palmer and Co., of High-street, Clapham, and Charles Bowden, their assistant, were charged. Mr. Moore, an inspector of the Bacon Curers' Association, who gave evidence as in the last case, said that Bowden asked him, "What kind of ham—English, Irish, or Scotch?" Moreover, the defendants had a regular price list, in which Scotch hams were priced at 8½*d.* a pound. Messrs. Palmer and Co. were fined £10 and £3 3*s.* costs, and Bowden was mulcted in £1 and 2*s.* costs. As we said in our former article on the subject, the sooner the suggestion of the Select Committee on Food Products Adulteration that offenders should be required to publish at their own expense a notice of their conviction passes into law the better.

HOMES FOR DESTITUTE CHILDREN.

ONE of the most important social questions of our day is what to do with our destitute children. It is important not merely from the point of view of humanity, but the very welfare of the State is bound up in this problem and put shortly the matter divides itself into two heads. Shall we rear a race of lawless, ignorant Ishmaels or shall we bring up children to be disciplined, God-fearing, law-abiding subjects. There are, of course, blackguards in every class of society, but beyond home influence there stands for the upper and upper middle classes the wholesome influence of the public school, and no one will deny that for teaching a boy to know his place, for knocking all nonsense out of him, and for generally fitting him for his work in the world there is nothing like an English public school. Among the lower and lower middle classes no such provision exists. We will not here refer to Board Schools but will confine our remarks to industrial schools, although some of these, in London at any rate, come under the control of the School Board. But the barrack industrial school is a dead failure. Here is discipline, indeed, and too much of it. The children are drilled and guided until they become merely wheels in a machine, and just as one cog-wheel is of no use by itself so the barrack-bred child when turned out into the world is useless. For this in London we pay about 11*s.* 6*d.* per child per week. In some towns however, notably Bradford and Sheffield—we quote from the *Bradford Observer*—the authorities are trying the cottage home system with, at present at any rate, admirable results. First as to the expense; the Bradford figures are not available yet, but the cost at Sheffield comes out at 7*s.* 9*d.* per child per week. The Bradford plan is to have eight children in a home and every home is under the care of a "mother" who is responsible for the care and cleanliness of the children. In these homes the children take part in the house-work, cleaning, cooking, washing, and bread baking, so that they get some idea of how daily wants are supplied and, although they may not be able to speak French or play the piano like the applicants for a shop boy's place mentioned recently in the daily press, they will probably be more useful and more sure of getting work in after life. Of course we do not pretend to consider this system to be as good as a real home, but for the unhappy children who have no home—and there are only too many of them—it seems to us the best hitherto devised. Bradford may well be proud thereof; meanwhile we can only hope that before long the cottage home system will be universal.

THE MOUNTING OF COVER-GLASS PREPARATIONS.

IN the current number of the *Deutsche Medicinische Wochenschrift* Dr. Peter Kaatzer, of Hanover, describes four instruments which he has found particularly useful in the manipulation of cover-glass preparations of objects for the microscope. The principal one is the upright forceps (Stehpincette), some idea of the shape of which as shown in the engraving may be given by supposing the bent part of a pair of sugar-tongs to be flattened and spread out, so that if required they will stand on this part with the points directed upwards. The inner surfaces of the tips of these forceps are roughened and have also one longitudinal groove in each, enabling them to hold a cover-glass either by opposite surfaces or by opposite edges. The spring of the forceps tends to close the points, so that the cover-glasses are held securely and without risk of being broken, and they are released by pressing two knobs which move the tips apart. When the cover-glass is held by the edges, the forceps being in the upright position, it is level and at a convenient distance from the work-table, so that the object may be arranged with needles or spread out as may be desired, or stained, or dried, or heated by holding a lamp under it. For the preliminary examination of objects under low powers he uses trays of black vulcanite three and a half inches in diameter. His needles are not of the usual pattern, but are made of platinum and are scalpel-shaped. For quickly drying an object on a cover-glass at the ordinary temperature he prefers the current of air produced by an indiarubber hand-bellows.

THE DANGERS OF GAS COOKING-STOVES.

IT might be thought that when persons are dealing with coal-gas every precaution would be taken to avoid the risks of accidental ignition of the gas, with probable explosion. That this is not so, however, is clear from the accounts which appear almost day by day in the papers of coal-gas explosions happening through a leak in the pipes, which leak has been sought and found by the aid of a naked flame. There does not, however, appear to have been negligence in a case reported recently where a serious explosion resulted on opening the door of a gas cooking-stove. The cooking-stove in question was supplied through a "penny-in-the-slot" meter which, owing to its refusal to yield gas on putting pennies in the slot had recently been changed for a new one. The new arrangement was tested and found satisfactory so far as regards the ring burners on the top of the stove. One of the rings was afterwards used to boil the water in a kettle, and later a chop was about to be placed in the oven. On opening the door,

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however, in accordance with the directions enjoined by the gas company an explosion occurred, causing serious injuries to the cook. This was the subject of an action, and eventually judgment was given for the plaintiff for £50 with costs. It is clear that the plaintiff had acted upon the gas company's directions and had not turned on the supply to the oven burners before opening the oven door. What had most probably happened was a leak from the burners in the oven, the escaping gas filling the oven chamber forming an explosive mixture which on opening the door by some means or other came into contact with the flames of the ring burner on the top. This occurrence shows the necessity of taking the simple precaution of ventilating the oven so that there may be no possibility of the contained air, mixed perhaps with gas, coming into contact with outside flames. A stove, however, that requires such a precaution is obviously defective in construction, and in view of the great number of gas-stoves now in use for cooking purposes the gas companies letting them out for hire should, we think, have the stoves inspected from time to time both in the interests of their customers and themselves. Moreover, we have recently learned on good authority that the great fire last week had its origin in a gas cooking-stove which was defectively connected with the service pipe.

THE TRAINING OF MISSIONARIES.

IN THE LANCET of Oct. 10th, 1896 (p. 1023), we commented on the remarks made by Dr. Harford-Battersby at the Church Congress last year. This speaker pointed out the necessity for missionaries using every precaution to keep their health, although they might expect Divine protection. The same gentleman has recently returned from the Niger and he is again very emphatic on the point that it is most important that missionary societies should give more attention to the health of their workers while in the foreign field. It seems a matter deserving of grave censure that men and women should be sent, as is sometimes the case, to a deadly climate, like that of West Africa for example, without the slightest medical training and with very little knowledge of how to take care of their health amid unwholesome surroundings. That they should be told to live in "faith" that they will be protected by "Divine Providence" from endemic diseases whilst living in those climates is almost as bad and useless as asking anyone to jump off the Clifton suspension bridge in "faith" that they will escape harm; people have been known to survive the fall, but the chances are greatly against it. Or perhaps a closer analogy is the second temptation and its answer, described in the Gospel according to St. Matthew, iv., 5–7. Some medical knowledge is essential to European missionaries who are sent to reside in unhealthy climates, not only that their lives may be spared but that they may carry out the work for which they are intended. The knowledge will help them in many ways. He whom they serve knew well the influence on the common mind of the healing art and used it frequently as a demonstration of His power. The means which He has given us for the relief of sickness makes the greatest impression on the savage mind and thus forms an additional argument that the missionaries should have some knowledge of medicine and the means of employing that knowledge. To send out missionaries, however, without any medical training or without the presence of a medical man in the neighbourhood is approaching very nearly to the doings of "the Peculiar People" so justly condemned by one of our judges in the Central Criminal Court. We are not preaching "coddling" the missionaries, but would strongly urge that the knowledge which we have suggested places a great weapon in their hands.

SUBSTITUTION.

WHEN will shopkeepers understand that it is a fraud to supply a customer with a substitute after he has asked for the real thing, be it food, drug, or article of clothing? They even go further and have the impertinence to suggest at times that the substitute which they tender is altogether a superior article to the original that is asked for and better suited to the health of the purchaser! A grotesque instance of this kind recently occurred when the Swansea Grocers Association, at a meeting held on Nov. 16th, discussed some recent prosecutions which had taken place because of the substitution of tapioca for sago. Strong protests were raised against the prosecution, it being stated that it was a general practice and that the customer procured a superior article. It is to be hoped that the law will continue to administer a strong rebuke to this erroneous notion. Tapioca is not sago or sago tapioca, and there are important dietetic differences between the two. The case just quoted is only another example of a very common kind of fraud—namely, that of palming off upon the public a substitute the attribute of which is in general its cheaper price. As we have pointed out before, it seems to us that the Sale of Food and Drugs Act might be conveniently shortened into an Act simply to provide against substituted articles being tendered for the real and for the supply of articles of standard quality. If the application of such an Act could be effectually worked we should hear less of those cases of fraud in which cotton-seed oil is substituted for olive oil, ox fat for butter, beet sugar for cane sugar, "flannelette" for flannel, "linenette" for linen, and so on. In fact, we should like to see an Act in operation similar to the Merchandise Marks Act, which shall provide that all substitutes must be very legibly labelled with the word "Substitute" in addition to whatever fancy title may be applied. We have not one word to say against substitutes, which doubtless supply a distinct want of the people, but when substitutes are palmed off for the real articles the crime is none the less because they happen to be good of their kind and harmless.

A SMOKING concert was given, under the auspices of the Cambridge Graduates Medical Club, in the Banqueting Hall, St. James's Hall, on Nov. 17th. The members of the Oxford Graduates Medical Club were invited and were well represented among the guests. The attendance was good, 213 tickets being handed in during the evening. Excellent music was provided by Dr. A. Shadwell, Dr. S. H. Habershon, Dr. Blumfeld, Dr. Ll. Powell, Dr. C. N. Chadborn, Dr. W. J. Harris, Mr. Cole, Mr. L. R. Marshall, Mr. Pollard, and Mr. Nixon. The proceedings, which were informal and thoroughly social, terminated shortly before midnight.

A MEETING of the Council of the Metropolitan Hospital Sunday Fund will be held at the Mansion House to-day (Friday) at 3 P.M., when amongst other business the convening of the next annual general meeting of constituents will be ordered and the question of the date of Hospital Sunday for 1898 to be recommended to the constituents will be considered.

H.R.H. THE DUKE OF CONNAUGHT will take the chair at the festival dinner in aid of St. Mark's Hospital to be held at the Whitehall Rooms, on St. Mark's Day, Monday, April 25th, 1898.

THE Council of King's College, London, have received an anonymous donation of £15,000 towards the liquidation of the College debt.

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The Lancet Special Commission

ON THE

METROPOLITAN WATER-SUPPLY.

XX.[1]

NEW RIVER COMPANY—*Continued.*

THE WELLS, PUMPING-STATIONS, AND RESERVOIRS.

A GENERAL survey of the present course of the New River having been given we proceed to describe the stations of the Company.

Broad Mead well (see C on general Map[2]).—At Broad Mead a boring was made in the hope that the greensand might be reached and that it would afford a supply of water. The bore of the well was taken down a distance of 831 ft., the size of the bore being 20 in. at the upper part and 16 in. at the lower part. The greensand formation was not found. A well 30 ft. in depth was sunk, but no large supply of water can be obtained here. The amount has been estimated at 500,000 gallons a day, but the pumping arrangements are, we believe, not capable of raising this quantity.

Pumping arrangements.—There is a simple horizontal engine with a centrifugal pump and a boiler of the locomotive type. The engine is of 16 horse-power. When visited on Jan. 5th and June 16th this engine was not working; it is rarely used. The water is pumped from the well into the river, which at this point contains the water derived from the Lee and from Chadwell spring.

Amwell End well and pumping station (see D on Map).—The well is 72 ft. in depth. Chalk occurs at the depth of about 36 ft. below the surface; the part above the chalk is lined with iron.

Pumping arrangements.—There are two reciprocating pumps which have barrels 22 in. in diameter. These are worked by a simple condensing vertical engine of 50 horse-power. The steam is generated by two Galloway boilers. The amount of water which can be obtained here is estimated at 1,500,000 gallons daily. The water is pumped into the river through iron pipes. It was stated on June 16th that the pumps had been at work for twelve hours daily from the month of April.

Amwell Hill well and pumping station (see E on Map).—This station is situated on the upper bank of the New River on the steeply sloping side of Amwell Hill, at a level of about 20 ft. above the New River. The well is 90 ft. in depth and goes into the chalk; it has headings and a bore hole. The shaft is lined with brick. From this shaft there are headings 6 ft. in height and 4 ft. 6 in. wide. From the centre of the shaft there is a bore hole 2 ft. in diameter at the upper part and 9 in. at the lower part. The bottom of the bore hole is 161 ft. from the surface. The amount of water which can be obtained daily is stated to be 3,500,000 gallons, and it is said that this quantity can be obtained day after day for a period of six months.[3] When visited on Jan. 5th the pumping arrangements were being overhauled and repaired. There is a beam engine of 50 horse-power and an inverted cylinder engine of 25 horse-power. The steam is generated by one Lancashire and one Cornish boiler. The water passes through a large brick culvert into the New River. At this station there is another small engine which is used for pumping water into the village; the water used for this supply is pure water from the well. No water from the New River is used for the local supply. With the exception of this small local supply no water was raised from the well from Nov. 21st, 1896, until the time it was visited on Jan. 5th, 1897.

Amwell Marsh well and pumping-station (see F on Map).—This station is situated on the lower bank of the river; it was completed in 1884.

Well.—There is a well 110 ft. in depth. The quantity of water which it is said can be obtained daily from the well is 2,750,000 gallons.

Pumping arrangements.—There are two simple vertical engines of 35 horse-power each. These work pumps through bell cranks. The steam is generated by two Cornish boilers. The water is all pumped into the New River. When visited in June the daily amount pumped was about 1,500,000 gallons daily.

Rye Common well and pumping-station (see G on Map).—This station is situated at the lower bank of the New River.

Well.—There is a well 200 ft. in depth lined with brick and iron cylinders to the depth of the chalk. The level of the water in this well on June 16th was 55 ft. below the surface. At this date the engines were worked for twelve hours daily and were raising about 2,500,000 gallons of water.

Pumping arrangements.—There are two vertical engines with inverted cylinders of 100 horse-power each. These work the pumps through bell cranks. Steam is generated by two Cornish boilers. The water is all pumped into the New River. It is stated that the well is able to supply from 4,000,000 to 5,000,000 gallons daily.

Hoddesdon well and pumping station (see H on Map).—The station is situated on the lower bank of the river. The well is 55 ft. in depth. Chalk was reached at a depth of 32 ft. from the surface. The amount of water which can be obtained is said to be 2,000 000 gallons daily.

Pumping arrangements.—There is a 50 horse-power vertical single cylinder engine which works two pumps through gear. The steam for working the engine is generated by a Lancashire boiler and the pressure used is 25 lb. All the water is pumped into the New River.

Broxbourne well and pumping station (see I on Map).—The well is about 200 ft. in depth. The diameter at the upper part is 16 ft. This well has two headings, one 300 ft. and the other 400 ft. in length. The amount of water which it is said can be obtained daily is 4,500,000 gallons. On July 16th it was 137 ft. below the surface. The level has been reduced to 145 ft.

Pumping arrangements.—There are three engines of 180 horse-power altogether. Of these two are vertical engines with inverted cylinders and the other a horizontal engine. The steam is generated by Lancashire boilers, and the pressure used is 65 lb. The pumps are worked through bell cranks. There are six pumps of which the cylinders are 14 in. in diameter and the stroke is 3 ft. The rate at which they are worked is 25 per minute.

Turnford well and pumping station (see J on Map).—The station is situated on the lower bank of the river. The well is 170 ft. in depth and has two headings of 220 ft. and 190 ft. in length respectively, and a bore hole to 1000 ft. in depth. The well is said to be capable of supplying 3,000,000 gallons daily.

Pumping arrangements.—There are two engines. One single cylinder side lever engine works bell cranks through gear, and an inverted cylinder engine works bell cranks directly. The steam is generated by two Lancashire boilers, and the pressure at which the engines are worked is 56 lb. Of the pumps two have cylinders 18 in. in diameter, a stroke of 2 ft. 6 in., and work at a rate of 27; the other two pumps have a diameter of 22 in., a stroke of 6 ft. 0 in., and work at a rate of 8 strokes a minute. The water is all pumped into the New River.

Hoe-lane well and pumping station (see M on Map).—The well is about 200 ft. in depth. Chalk occurs at a depth of about 100 ft. The amount of water which it is estimated the well could supply daily is 2,000,000 gallons.

Pumping arrangements.—The water is pumped by two horizontal engines which together possess 170 horse-power. The steam is supplied by three Lancashire boilers. The engines work the pumps through gear.

Bush Hill reservoir (see N on Map).—The reservoirs are situated in Bush Hill Park. A well was sunk here and a water tower built when the estate was laid out for building purposes. The well and reservoirs were taken over by the New River Company. The well is not now used. The water for the supply of the reservoirs is pumped from Highfield and is distributed to the surrounding district.

Southgate reservoir (see O on Map).—This reservoir is situated on the highest point at Southgate-hill, near Cockfosters-road and Chase Side-road. The area occupied by the

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[1] Nos. I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., XVII., XVIII., and XIX. were published in THE LANCET of Feb. 20th and 27th, March 6th, 13th, 20th, and 27th, April 3rd, 17th, and 24th, May 1st, 8th, 15th, 22nd, and 29th, June 19th and 26th, Oct. 23rd, and Nov. 6th and 13th respectively.

[2] The map referred to in this article appeared in THE LANCET of Oct. 23rd, p. 1069.

[3] Mr. Mylne, the engineer to the Company, stated in 1852, in his evidence on the Metropolitan Water Supply, that the well then yielded 2,466,000 gallons daily.

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station is about three acres, and it is surrounded by a 6-ft. brick wall; the reservoir occupies about one-third of the space. It is built of brick set in cement and covered by brick arches; the top is turfed over. Ventilation is effected through twenty iron gratings, 18 in. by 6 in. in size, which are placed at the sides of the reservoir. There is a circular manhole 4 ft. in diameter covered by York stone. The capacity of the reservoir is 1,000,000 gallons and the top water level is 308 ft. above ordnance datum. The water pumped here comes from the well at Betstile and from Highfield; it is all pure well water. The districts supplied are Southgate and Winchmore Hill. There is no electric communication between this place and the pumping station. A man is sent to the reservoir twice a day to note the height of the water.

Highfield (Edmonton) well and pumping station (see P on Map).

Well.—The well is about 200 ft. in depth. The diameter at the upper part is 15 ft. and at the bottom 11 ft. The upper 40 ft. of the shaft is lined with brick, and below that with iron cylinders to the chalk, which occurs at a depth of 116 ft. There are two headings, each about 30 ft. in length. The amount of water which the well is said to be capable of supplying is 3,000,000 gallons. When visited on July 20th the level of the water in the well was 160 ft. below the surface. The pumping had been going on continuously for a month. The rest level—that is, the height to which the water rises when pumping operations are discontinued for some time—is 60 ft. below the surface.

Pumping arrangements.—There is a pair of single cylinder vertical engines. The cylinders are 32 in. in diameter, the length of the stroke is 3 ft., and the rate at which the engines are working is about 28 strokes per minute. The engines work four bucket and plunger pumps through bell cranks. The diameter of the pump barrel is 14½ in.; the length of the stroke is 3 ft. The steam for working the engines is generated by three Lancashire boilers, and they are worked at a pressure of 50 lb. There is also a compound vertical engine which had a cylinder 15 in. in diameter and a stroke of 12½ in. This engine is used for pumping water to Southgate. The head of water worked against in pumping to Southgate is 250 ft. There is at this station the recording index of an electric gauge, which shows the height of the water in the Bourne Hill reservoir.

Bourne Hill reservoir (see Q on Map).—This is situated on the south side of Dog and Duck-lane, Southgate. It is surrounded by a wall on three sides and by a high oak fence on the side next to the road. The reservoir is built of brick set in cement, and is covered by brick arches on the top of which there is a layer of about 2 ft. of earth which is turfed over. There are twenty-four cast iron ventilators. The reservoir has a capacity of 1,500,000 gallons. The top water level is 195 5 ft. above ordnance datum. There is a floating gauge here which is in electric communication with Highfield engine house from which it is about a quarter of a mile distant. The communicating wire passes along the public high road. Water is pumped here from Highfield and the reservoir can also be supplied from the one at Crouch Hill, which is about two and a half miles distant. The water from this reservoir supplies Edmonton and part of Southgate.

Betstile well and pumping station (see R on Map).

Well.—At this station there is a well 142 ft. in depth sunk into the chalk.

Pumping arrangements.—The water is pumped by two horizontal engines of 12 horse-power each. These work pumps through gear. The steam is generated by two Cornish boilers.

The amount of water which can be obtained is estimated to be 500,000 gallons daily. It is used for the supply of the district around.

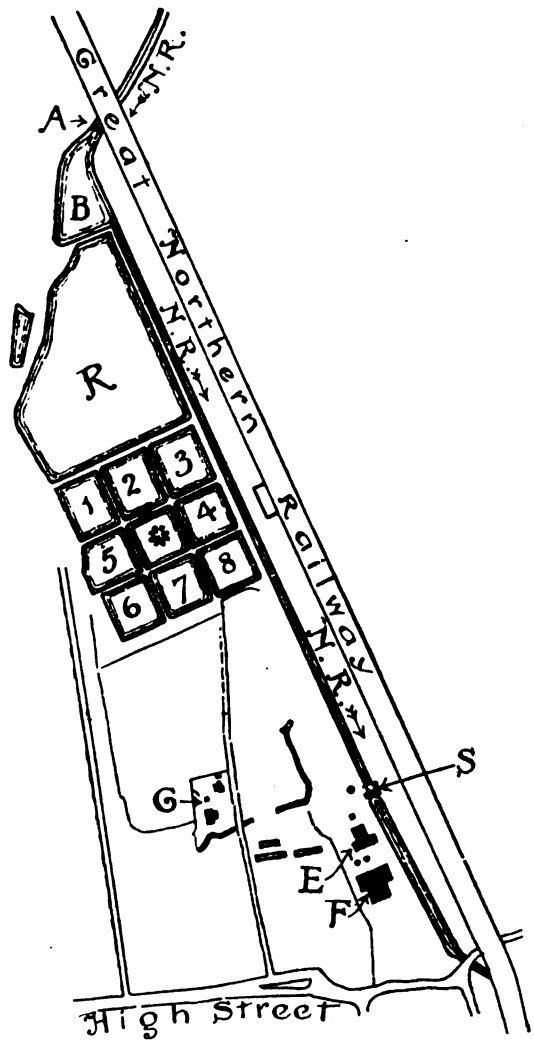
This place was formerly the property of the North Middlesex Waterworks Company.

Hornsey reservoir, filter beds, and pumping station (see S on Map, and Plan Fig. 1).—This station is situated on the lower bank of the New River at the foot of Muswell Hill and just to the west of the Great Northern Railway line. The water from the New River after passing the Hornsey grate-bridge (see Fig. 1, A), which has already been described, passes into the Hornsey basin (Fig. 1, B), a reservoir which has an area of about an acre. From the basin the water is conducted into the reservoir through a 48-in. pipe, guarded by a screw-cock.

Reservoir (Fig. 1, R).—There is an open reservoir, which occupies an area of eight acres and is capable of holding 8,500,000 gallons of water. The sides of the reservoir are lined with Kentish rag.

Filter beds.—There are eight filter beds, numbered 1 to 8 respectively. Of these, No. 1 when visited in July, 1897, was being re-made. Of the others, Nos. 4, 5, 6, 7, and 8 have vertical walls. Nos. 2 and 3 have sloping walls; these

FIG. 1.



Hornsey and Campsbourne Stations. N R, New River. A, Hornsey grate. B, Hornsey basin. R, Reservoir. 1, 2, 3, 4, 5, 6, 7, 8, Filter beds. * Storing place for sand. E, Hornsey sluice engine house. F, Hornsey engine house. G, Campsbourne well and pumping station. S, Hornsey sluice house.

will be re-made after No. 1 has been done. The central space between the filter beds is used for storing sand.

The upper parts and sides of the beds are lined with blue Staffordshire bricks. The old beds are formed as follows: sand, 2 ft.; fine shingle, 2 ft.; and coarse shingle, 1 ft. The floor of the filter bed is formed of perforated bricks set on edge, and the filtered water is collected in a central channel which is 2 ft. 6 in. square. Each filter bed has four 3-in. cast-iron ventilating shafts, which are situated at the sides of the bed, and none of the beds have central ventilating shafts. The sand is cleansed by washing with a jet of water working at a pressure of 100 ft. head.

Engine houses.—There are two engine houses close together called the Hornsey Sluice and the Hornsey. Water is pumped from the filter beds to Crouch Hill reservoir and to Hornsey-lane reservoir.

Hornsey Sluice engine house (Fig. 1, E).—Here is a pair of Worthington triple expansion pumping engines. These pump about 2,500,000 gallons of water daily to Hornsey-lane against a head of water 250 ft. They are capable of pumping

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a much greater quantity. The steam is generated by three Lancashire boilers which work at a pressure of 125 lb.

Hornsey engine house (Fig. 1, F).—There are four beam engines of 110 horse-power each. These are worked by steam supplied by ten Lancashire boilers.

The water, which is derived partly from wells and partly from the filter beds, is pumped to Crouch Hill reservoir and to Hornsey-lane.

Between the Hornsey Sluice engine house and the Hornsey engine house there is an excellent bath-room, provided with hot and cold water, which is at the service of the workmen. The sanitary arrangements here are admirable.

At Hornsey there is a tramway over the river from the Great Northern Railway. This is used for the conveyance of coals to the engine houses.

Campsbourne well and pumping station.—This station adjoins the one at Hornsey. (See Fig. 1.)

Well.—The well is 215 ft. in depth. At the upper part the shaft is 15 ft. in diameter, at the lower part 10 ft. The well is lined with brick for the upper 100 ft., then with iron cylinders. Chalk occurs at a depth of 168 ft. This well does not contain any bore hole. The level of the water when visited on July 21st was 190 ft. below the surface. The rest level is about 100 ft. below the surface. The amount of water which it is stated can be pumped daily is 3,000,000 gallons. At the present time the amount pumped is on an average 1,500,000 gallons. Water is pumped to (1) the New River, and (2) Hornsey, against a head of about 10 ft.

Pumping arrangements.—There are two compound vertical surface condensing engines, the size of the high pressure cylinder is 18 in., of the low pressure cylinder 3 ft. The length of the stroke 2 ft. 6 in. The steam is generated by three Lancashire boilers working at a pressure of 80 lb. The engines work pumps of which the barrels are 17 in. in diameter, and the length of the stroke is 2 ft. 6 in. The rate at which they are worked is 30 strokes per minute.

Workshops.—At this station there is a large carpenters' shop and a well-fitted blacksmiths' shop. Here much carpentering work is done. The wood and iron work required on the river is now carried out by the Company's own servants and under the supervision of their own engineers.

Crouch Hill reservoirs (see U on Map).—The station is situated next Mount View-road and Ferme Park-road, Hornsey, 195 ft. above ordnance datum. The area occupied here is about 8 acres. There are two reservoirs covered with brick arches and turfed over. The slope of the sides is 1 in 6, and the reservoirs are built of brick set in cement. There is a cast iron ventilator. Each reservoir has an entrance pit covered by an iron roof. There is an electric gauge here which records the height of the water in these reservoirs. The recording index is situated at the Green Lanes station, whence the water is pumped. These reservoirs are capable of holding 12,000,000 gallons. They are used for the supply of Islington, of Hornsey, and of part of the city. The turf over the reservoirs is used by the Northern Heights Lawn Tennis Club. A caretaker's cottage is situated here.

(To be continued.)

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE first meeting of the Royal Commission on the Metropolitan Water-supply took place in the Moses Room of the House of Lords on Monday last, Nov. 22nd. The Commissioners appointed, it may be remembered, were the Right Hon. Viscount Llandaff (chairman), the Right Hon. John William Mellor, Q.C., M.P., Sir John Edward Dorington, Bart., M.P., Sir George Barclay Bruce, C.E., Mr. Alfred de Bock Porter, C.B., Major-General Alexander de Courcy Scott, R.E., Mr. Henry William Cripps, Q.C., and Mr. Robert Lewis. With the exception of the Right Hon. J. W. Mellor all the Commissioners were present.

The London water companies and the county councils of London, Middlesex, and Hertfordshire were represented by counsel. Mr. Balfour-Browne, Q.C., and Mr. Freeman, Q.C., appeared for the London County Council; Sir Richard Nicholson for the Middlesex County Council; and Lord Robert Cecil for the Hertfordshire County Council. As counsel for the water companies Mr. Pope, Q.C., and Mr. Claude Baggallay, Q.C., appeared for the New River and Southwark and Vauxhall Companies; Mr. Littler, Q.C., and Mr. Lewis Coward for the Kent Company; Mr. Pember, Q.C., for the East London, Lambeth, Grand Junction, and West Middlesex Companies; and Mr. Richards for the Chelsea Company.

Before any evidence was taken the Commissioners had a preliminary private meeting and the inquiry did not commence until about forty minutes after the announced time which was midday. It may be well here to recall the exact scope of the inquiry, which will be best done by giving the terms of the reference, which are as follows:—

"To inquire: 1. Whether, having regard to financial considerations and to present and prospective requirements as regards water-supply in the districts within the limits of supply of the metropolitan water companies, it is desirable in the interests of the ratepayers and water consumers in those districts that the undertakings of the water companies should be acquired and managed either (*a*) by one authority, or (*b*) by several authorities; and, if so, what should be such authority or authorities. To what extent physical severance of the works and other property and sources of supply of the several companies and the division thereof between different local authorities within the limits of supply are practicable and desirable, and what are the legal powers necessary to give effect to any such arrangements.

"2. If the undertakings are not so acquired, whether additional powers of control should be exercised by local or other authorities; and, if so, what those powers should be.

"3. Whether it is practicable to connect any two or more of the different systems of supply now administered by the eight metropolitan companies; and, if so, by whom, and in what proportion, should the cost of connecting them be borne, and what are the legal powers necessary to give effect to any such arrangement."

At the opening of the proceedings Lord Llandaff stated that he would at once examine Mr. Cripps, the Parliamentary agent of the London County Council. The examination was founded on a long report which had been sent by the London County Council to the Royal Commission. This report was marked "Private" and was not in the hands of any one except the representatives of the County Council and the members of the Royal Commission. At a later stage of the meeting, however, Mr. Cripps put in two tables, summary analyses of the published accounts of the London water companies for the years 1895 and 1896, and these tables were given to the representatives of the water companies.

During the course of the examination Mr. Cripps said that he had been engaged in all the Parliamentary proceedings of the London County Council in reference to water companies and that he was acquainted with the views of the Council on the London water-supply, and that he appeared on their behalf to give any information he could on the subject. The London County Council had expressed their views on the question of the water-supply in a number of formal resolutions, and their latest opinion was: Firstly, that the undertakings of the water companies should be at once bought at their fair value; secondly, that the management of the water-supply should be carried out either by (*a*) the London County Council supplying its own area directly and supplying the outside authorities with water in bulk at a fixed price, or (*b*) that the London County Council should supply the area over which it has statutory rights and that the outside bodies should supply their own districts.

The London County Council had considered the question as to whether it was desirable that a new authority should be formed and invested with powers to carry out the water-supply of the county of London and the districts around, and they have come to the conclusion that such a solution of the question is undesirable; on the contrary, the London County Council were in favour of the immediate purchase by themselves of the property of the present companies supplying London with water. Mr. Cripps said he considered that Parliament had been in favour of the ultimate purchase of the undertakings of the companies by some one body. There were analogous cases also in provincial towns in which the water-supply which had at one time been in private hands had under Parliamentary sanction been taken over by the local authorities.

The Chairman asked if there were any statistical details with regard to the effect which these purchases had had on the cost of the water-supply in the case of these provincial towns but no information whatever on this subject was elicited.

In the case of London Mr. Cripps thought there were special reasons for the purchase of the water-supply by one authority. The reasons were briefly: 1. When the present companies for the supply of London with water were started

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there was no protection for the consumer with regard to the management of the supply. 2. The poor did not know who supplied them except in the case of those amongst them who were able to read and who might see the form of application for the water-rate. [The Chairman asked for some more important reasons.] 3. There was no competition between the various water companies and although their authorised limits of supply overlapped they did not undersell one another. 4. London does not get its supply from a great distance, therefore no great expense is being incurred. [It was not apparent to the Chairman what force this reason had.] 5. The auditor of the accounts of the water companies was paid by the water companies themselves and in the case of legal expenses proceeding from the audit there was a case in which the auditor had to pay them out of his own pocket. [No details or particulars were given of this case.] 6. The different companies had various scales of charges. 7. The height to which the supplies were given was not the same in the case of all the companies.

The witness was unable to say whether the London County Council would be willing to go to arbitration with regard to the price at which the property of the companies should be bought, nor would he say what he thought would be a fair price for the Council to pay for the undertakings, nor would he say what price he thought the Council could afford to pay so as to enable them to carry on without pecuniary loss the various water businesses in the way in which they are conducted at present. In the course of examination the witness said that he regarded the interests of the City of London as not identical with the interests of the rest of London as far as the water-supply was concerned; indeed, they were adverse to those of the rest of London because of the much greater rateable value of premises in the City as compared with the number of the resident population.

The Chairman pointed out that he should have thought from the fact that as the rateable value of the City premises was very high it would be all the more to the advantage of the citizens to have a cheap supply of water.

The witness then explained that what he meant was that in the case of the City, where the quantity of water taken was not very great, and in the case of highly rated premises it would be to the advantage of consumers to pay for their water by meter—that is to say, according to the amount which they receive and not according to the value at which their premises are rated.

The meeting was adjourned shortly after 4 P.M. The next meeting will take place on Monday, Dec. 5th.

LEICESTER AND SMALL-POX.

(*Continued from p. 1342.*)

IT is important to note that Mr. Biggs in his evidence before the Royal Commission declared that the Leicester method had been perfected. This evidence was given in 1891, there having been no deaths from small-pox in Leicester for some years, and the outbreak of 1892-93 not having commenced. His words were: "That with the abandonment of vaccination and with the perfecting of the 'Leicester method' of sanitation, isolation, quarantine, disinfection, &c. during the last six years small-pox mortality becomes extinct." In cross-examination Mr. Biggs was asked by Lord Herschell (Q. 15729-30): "Have you gone into the question at all as to whether there has been a similar extinction of small-pox mortality in places in which your system of isolation and quarantine has not been adopted?" and "Would not an inquiry of that sort be essential to enable one to judge how far the particular result was due to the suggested cause?" In reply Mr. Biggs said: "The only inference I could deduce from a comparison of that kind would be this, that if a town which had practised vaccination had been found to be free from small-pox and a town which had left off vaccinating was equally free, then nothing could be claimed for vaccination." In the process by which he arrived at the statement that, of the quarantined, "133 were neither vaccinated nor re-vaccinated" we have already met with Mr. Biggs as a statistician. Here we have the honour of being introduced to him as a logician. Supposing we alter the subject matter slightly his answer will read as follows: "The only inference I could deduce from a comparison of that kind would be this, that if a town which had practised the Leicester method had been found free from small-pox and a town which had not practised the method was equally free, then nothing could be claimed for the Leicester method." We have much pleasure in making Mr. Biggs a gift of his own argument and in claiming him as a non-believer in the method. As a matter of fact, many places had had as little small-pox as Leicester during the years in which the method had been in vogue, and this was the case even if we exclude the outbreak of 1892-93. This being so, then according to Mr. Biggs "nothing could be claimed for the Leicester method." But in defiance of his own argument, small-pox being at zero in Leicester, Mr. Biggs is thoroughly persuaded of the value and perfection of the Method. In May, 1891, he wrote; "We find small-pox very easy to deal with, and the same hospital and staff of officials deal with small-pox as with other infectious diseases. There is no compulsion. If people choose they may go into quarantine, or they may stay out. No one's liberty is infringed."[1] It would appear, therefore, that the Leicester method, as described to the public and the Royal Commission by the Leicester antivaccinationists, consisted of notification, disinfection, quarantine, and isolation. In addition "general sanitation" is spoken of. The "note" of the system was its voluntary character. Compulsion was altogether repugnant to it. It was denied that there was even the indirect inducement of payment of wages during quarantine. Mr. Biggs's statement to the Commission was unequivocal: "I think there is sufficient evidence to prove that no compensation has been made in the shape of wages, and that all that has been done in carrying out our system has been to reimburse those whose articles of furniture have been destroyed." The hospital was there alike for such diseases as small-pox, scarlet fever, erysipelas, &c., and also for quarantine. It had the same staff of officials, and the same ambulance waggon for all diseases, the nurses being vaccinated or not as they pleased, and scarlet fever cases, vaccinated or unvaccinated being in one part of the hospital, and small-pox cases in another, and quarantined persons in another. The Jennerian "rite" was a dead letter. The liberty of the subject was strictly attended to. In short, the Leicester method had been perfected, and small-pox was non-existent. The Method, moreover, was alleged to have this great advantage, that it was good alike for all infectious diseases. Mr. Israel Hart, ex-mayor of the town, pointed this out to the Commission. As to small-pox he said: "I have no doubt you have heard that we have adopted such measures in the district that practically the disease is stamped out." As to other diseases, "if there is a case of fever it is dealt with directly, and there is no fear of an epidemic; epidemics, as we know, arise from contagion, and it is difficult for contagion to take place as contagious disease is dealt with at Leicester." To make sure of the matter Sir William Savory asked, "Your sanitary measures are effective, I presume, not only against small-pox, but against all forms of infectious disease?" and the answer was: "All forms of contagious disease." Truly a wonderful Method—and perfected.

In 1891, as we have said, Leicester was free from small-pox. In the three years, 1889, 1890, and 1891, not only had there been no deaths, but there had been no cases. In previous years there had been a few cases, but owing, as was alleged, to the method, the disease had not spread. The favourite expression was that small-pox had been "stamped out." It had not died out. In other places small-pox might have died out, but not in Leicester. There it had been killed—by the Method. Near the end of August, 1892, a tramp came to Leicester and developed a mild attack of small-pox, and so gave the method another opportunity of exhibiting its powers. The *Vaccination Inquirer* was naturally jubilant. It dealt with the subject in the same issue (November, 1892) which contained Mr. Biggs's article already referred to. "There has, it seems, been another importation of small-pox into Leicester, and again it has been stamped out without the disease getting any real hold. As usual, a tramp brought it into the town, and, being taken ill at a lodging-house, was removed to the workhouse. The precise details seem to be somewhat in dispute as to the way in which he managed to infect two others, both of whom had

[1] Vaccination Inquirer, 1891, p. 69.

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severe attacks, one being fatal, the disease being in this case complicated with other disorders. The Leicester method, however, was equal to the emergency, and we hear nothing of the complaint spreading any further. We trust that the Commission will thoroughly investigate the circumstances of this latest Leicester success." Once more the Method had triumphed. The disease was again "stamped out." In accordance with the *Inquirer's* desire the Commission did investigate. What says their investigator, Dr. Coupland? That, instead of the disease having been stamped out, eleven cases were known of at the time the *Inquirer* was engaged in boasting about this "latest success." By the end of November there were sixteen more cases, all but perhaps two traceable to the tramp. This spread of the disease was something the *Inquirer* had not contemplated, and in its December issue it took a very curious line. Having already asserted that the "tramp" importation had been stamped out, it did not withdraw its misstatement, but declared that there had been an "importation of small-pox into the city on a rather larger scale than usual." But that was not all. Mr. Biggs, small-pox being absent, had told the Royal Commission that the Leicester system had been perfected. Now, small-pox being present and not having disappeared as before, the Leicester system came in for criticism, and the *Inquirer* urged that "public opinion should bring all the assistance it can to those of the Leicester authorities who are endeavouring to perfect the arrangements within the town for coping with epidemics of any kind, including small-pox." The authorities, or some of them (there seems an innuendo as to others), were thus "endeavouring to perfect" what had already been declared to the Commission to be perfected. Indeed, it now turned out that small-pox being abundantly present, and the "latest success" having been a desperate failure, criticisms of the Leicester system were rather welcome to the *Inquirer*, as providing it with an explanation of the outbreak, "so that every fault that can be found in the details and execution of the Leicester method, so far from being a proof that that method in itself is wrong, only shows the need for greater perfection *before the method itself can be said to have been really tried.*" (The italics are ours.) "Greater perfection" is a good phrase. It was only a Leicester town councillor who had told the Commission about the perfection of the Method, but a university graduate naturally wanted "greater perfection." Leicester had been free from small-pox for years. Anti-vaccinationist orators had stumped the country in glorification of what Leicester had done. Other towns had been strongly urged to copy its procedure. The Leicester case, the *Inquirer* had said, constituted "the keystone of the anti-vaccination arch." Now at last, however, when small-pox did begin to spread in Leicester the *Inquirer* was open to deny that the Leicester method had ever been really tried. If it were true that the Leicester hospital was only an old shed, as was being stated in THE LANCET, then that was no criticism of the Leicester system. Quite the contrary, "it is clear that so far the Leicester system has not broken down. It has not been tried."

The Leicester Method, in fact, was to be looked on as resembling Sairey Gamp's Mrs. Harris. There never had been any Mrs. Harris and there never had been any Method. So long as there had been no spread of small-pox in Leicester there had been plenty of talk in the *Inquirer* and before the Royal Commission and in letters to newspapers, but the talk had been about a myth, or at best a theory, and the journal which only the month before had been boasting of a fresh triumph of the Method was now preparing to take up the position that there "really" never had been anything more than talk. For a parallel to this attitude we have to look to anti-vaccination itself. When Gloucester was free from small-pox whilst neglecting vaccination it was declared to be a very sanitary town and to owe its freedom to sanitation. When small-pox came the town was forthwith denounced as highly insanitary and the denunciations have ever since formed the standing defence of Gloucester anti-vaccinationists.

The question for the *Inquirer* now was, whether it should in its next issue (for January) advance further on the line adopted in December and denounce Leicester for its want of a Method, or retrace its own steps and re-adopt the November attitude—that there really was a Method and that the Method was triumphant. The course of the outbreak during December might decide the matter. In the first half of the month there were nine or ten cases, and then suddenly there was a cessation of notifications, only one more being received previously to Dec. 30th. This lull seems to have settled the question, for on Jan. 2nd the *Inquirer* declared "that the Leicester system has again triumphed without recourse to vaccination or any other measures other than those always included in the Leicester method." The "old shed" of a hospital remained, but small-pox was fondly supposed to have gone. Radical change of attitude was hardly possible after this even for the *Inquirer*, and thirty-six cases having been notified in January, the editor tried to console himself and his readers by telling them in February, not that the Method was still triumphant, but that there were well-vaccinated places that were no better off than Leicester as regards small-pox. What a pitiful declension—that Leicester with its wonderful Method had no more small-pox than places that had trusted to the despised method of the much reviled Jenner! And what a contrast with the claim of Mr. Biggs before the Commission: "Your contention is, that whatever the virtue of vaccination in preventing small-pox, this good system of sanitation has just as much virtue?—My contention is that it has far more and that, in fact, vaccination has none, because we have dealt with small-pox without vaccination." (Q 15,734.) Then in March the *Inquirer* wrote that its readers would "hear with mingled surprise and pleasure that there are still some people left alive in Leicester." And here we shall leave the *Inquirer* to enjoy its mingled surprise and pleasure at the success of the Method, not even waiting to discuss which might be the greater—its surprise or its pleasure.

(To be continued.)

MAYORAL HONOURS FOR MEDICAL MEN.

BOOTLE.

JOHN MCMURRAY, M.D., M.S., M.A.O.R.U.I., matriculated in the Queen's University, Ireland, in 1878, and passed all his examinations for his profession with honours. He was a prizeman in various subjects, and competed for and held the Senior Scholarship in Therapeutics and Pathology (1881-82). He also obtained a gold medal given at the Children's Hospital, Belfast. After graduating Dr. McMurray acted as assistant for three months when he obtained the appointment of junior house surgeon at the East Dispensary, Liverpool. About a year after he was promoted to the position of senior house surgeon at the North Dispensary, Liverpool. From there he went to the Liverpool Parish Infirmary, became senior house surgeon within twelve months, and remained in that institution for almost three years. The appointment of medical officer to the Kirkdale Industrial Schools having become vacant he obtained this post and also the position of medical officer to two branch establishments of the Liverpool Workhouse. In February, 1888, he commenced private practice in Bootle, and in 1892 he was invited to become a member of the Bootle School Board. In 1895 he obtained a seat on the Stanley Ward Council. As a councillor for that ward he served on the Health, Library and Museum, and Parks and Baths Committees, and was this year unanimously elected by the council as mayor of the borough.

CARNARVON.

Robert Parry, M.B., L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., studied during the years 1872-74 at Owens College, where he passed the Matriculation and Preliminary Science Examinations of the University of London. In October, 1874, he entered Guy's Hospital and gained the first prize at the end of the session. Having filled the usual appointments, he passed the M.R.C.S. Eng., and L.S.A. examinations, and commenced practice at Harlech, where he remained for a few months. He returned to London in 1880 as assistant medical officer to the Cleveland-street Asylum and then passed the M.B. Lond. and L.R.C.P. Lond. He remained in Cleveland-street till 1883, when he started practice in Carnarvon. He entered the town council in 1887, and has since with the exception of one year been a member. Dr. Parry has served on the sanitary and other committees of the council, and for the last five years has been chairman of the Gas Committee. In 1894-95 he acted as deputy-mayor.

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COVENTRY.

Thomas Webb Fowler, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., was born at High Wycombe, Buckinghamshire, in 1861. He received his early education at Elmfield College, York, and afterwards studied at Queen's College, Birmingham, where he obtained honours certificates in physiology. He commenced practice in Coventry in 1885 and first entered the city council as a Conservative representative for Spon-street Ward at a by-election in August, 1889. In the following year, owing to the extension of the city boundary, the whole of the councillors vacated their seats; Mr. Webb Fowler again fought Spon-street Ward and has not since that period had to fight for his seat. Upon entering the council he first served upon the Gas Committee, and subsequently upon the Estates and Finance, Sanitary, and General Works Committees. He is on the Sanitary Committee and has occupied the position of vice-chairman of the Water-works Committee and of the Electric Light Committee since its inception. In sanitary matters Mr. Fowler has occupied a prominent position. As an example of the esteem in which the new mayor is held by the people it may be mentioned that on one occasion when the police were being pelted by a portion of the public at the Market Hall in connexion with an endeavour to sell goods seized for non-payment of the vicar's rate he mounted a form near the Market Hall, addressed the crowd for a few minutes, and succeeded in quelling the turbulence.

HASTINGS.

Frederic Bagshawe, M.D. Cantab., F.R.C.P. Lond., belongs to an old family of the Peak of Derbyshire. His grandfather was Sir William Bagshawe. Dr. Bagshawe was educated at Uppingham and thence proceeded to St. John's College, Cambridge, where he graduated and became M.A. in 1861 and M.D. in 1865. He studied medicine at Cambridge and at St. George's Hospital, London, became M.R.C.P. in 1864, and was elected F.R.C.P. in 1879. He held a medical appointment at the Hospital for Sick Children, Great Ormond-street and became a colleague of Sir William Broadbent as physician to the Great Western Dispensary, London. He began to practise in Hastings in 1865, but spent the winter seasons practising on the Riviera up to the time of the Franco-German War in 1870, when he finally settled in Hastings. He became assistant physician to the East Sussex, Hastings, and St. Leonards Hospital in 1871, and later full physician. For twelve years he was engaged with Mr. Howell and others in trying to secure a new site whereon to rebuild the hospital, the majority of governors voting being in favour of removal. He was chairman of the south-eastern branch of the British Medical Association in 1883, and presided over one of the sections of the Health Congress held in Hastings in 1889. He has taken an active interest in the water-supply and sanitary questions of the borough. Quite recently he has been placed on the county bench of magistrates.

HEDON (HULL).

James Soutter, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., who is thirty-four years of age, was a pupil of Mr. R. H. Bouchier Nicholson for two years and attended the practice of the Hull Royal Infirmary. The rest of his education he received at St. Bartholomew's Hospital, subsequently qualifying as M.R.C.S. Eng., L.R.C.P. Lond., L.S.A. He settled in Hull and was extra-mural house surgeon to the Children's Hospital, but on a death vacancy occurring in his native town he bought the practice ten years ago. His family have been connected with the borough a good many years, his great-grandfather having been a former mayor. He has been a town councillor since 1890, and was the mayor last year. He is a Surgeon-Captain in the 2nd East Riding Yorkshire Volunteer Artillery, Surgeon to H.M. troops stationed at Paull Point Battery, and district medical officer to part of two unions—viz., Skirlaugh and Patrington.

HENLEY-ON-THAMES.

James Lidderdale, M.R.C.S. Eng., L.S.A., entered as a student at St. Mary's Hospital in 1868, being then eighteen years old. In 1870 he was appointed assistant demonstrator of anatomy in the medical school and also a prosector at the Royal College of Surgeons of England owing to the excellence of his work. This latter appointment led to his being given the office of assistant curator to the Hunterian Museum of the College, and assistant to the Court of Examiners of the same College, which he held for three years—viz., from 1870 to 1873. He qualified as M.R.C.S. Eng. in 1872. Subsequently he was appointed resident medical superintendent to the Female Lock Hospital, Harrow-road, which appointment he held for some time. In 1874 he left London to practise in the country at the request of his family, and held various union and other similar appointments until the end of 1890, when he went to Henley to practise in partnership with Dr. Allden and Dr. Smith. In 1893, at the request of a large number of the ratepayers of the borough, he was nominated as a candidate for the town council and was returned at the head of the poll without soliciting a single vote. Last year he was re-elected without opposition. While on the council he has been a member of the Drainage Committee in connexion with the new drainage scheme which has been successfully carried out. Latterly he has been chairman of the General Purposes Committee and has now been elected mayor of the borough having just completed the fourth year of office as a councillor.

MARLBOROUGH.

James Blake Maurice, M.D. St. And., F.R.C.S. Eng., is a Justice of the Peace for Wiltshire, and Surgeon to the Savernake Cottage Hospital, Medical Officer to the Somerset Hospital, Froxfield, and Surgeon to the Great Western Railway Provident Society.

PRESTON.

John Edward Dunn, M.R.C.S. Eng., L.R.C.P. Edin., was educated at the Preston Grammar School and was subsequently a pupil for five years of the late Dr. Wm. Smith, of Preston. For four years he studied at St. Thomas's Hospital, London, and has been in busy and active practice since qualifying. He is medical officer of the No. 6 district Preston Union and Public Vaccinator of the No. 1 district. Mr. Dunn is an ex-president of the Preston Medico-Ethical Society.

RUTHIN.

Job Medwyn Hughes, M.B., C.M. Edin., graduated in 1886. For six years he has held the appointment of medical officer of health for Ruthin rural district, and was put on the Commission of the Peace for the county of Denbigh in 1893. In 1892-93 he was appointed mayor, and has this year received the same honour.

SALTASH.

Robert Thornton Meadows, M.D., M.S. Edin., is the son of Surgeon-Major-General R. W. Meadows, retired. He studied at Edinburgh University and took the degrees of M.B., C.M. in 1885. After a trip abroad he started practice at Saltash, Cornwall, in March, 1887. He took the degree of M.D. Edin. in 1892 and D.P.H. Lond. in 1894. For several years Dr. Meadows was the medical officer of health to the Saltash Urban Sanitary Authority and has showed great energy in coping with small-pox. On Nov. 9th, 1897, he was unanimously elected mayor of the borough and J.P. for the county of Cornwall. Dr. Meadows, who is thirty-five years of age, is Surgeon-Captain 2nd Volunteer Battalion Duke of Cornwall's Light Infantry and holds the same rank in the Army Medical Reserve of Officers.

The following member of the dental profession has been elected Mayor of

CHELTENHAM.

Richard Rogers, L.D.S. Irel., re-elected Mayor of Cheltenham for the third time.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE thirteenth annual meeting of the Fellows and Members of the Royal College of Surgeons of England was held on Nov. 18th, the President, Sir WILLIAM MAC CORMAC, Bart., taking the chair; twenty-eight Fellows (including seventeen Members of Council) and fifty-five Members were present.

The PRESIDENT welcomed the Fellows and Members present saing he had unfortunately been absent last year from causes beyond his control, and in placing before the meeting the report of the Council for the year ending July 8th, 1897, mentioned that many subjects of great

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importance were dealt with in the report. For instance, on page 4 an account was given of the endeavour which the Council had made to ascertain the opinion of the Fellows on the question of the desirability of according to the Members of the College direct representation on the Council. An elucidatory statement had been prepared and the Fellows were requested to give their opinion on the direct representation of the Members and on the way in which it should be effected. On page 11 was an account of the action taken by the Council in the matter of the great prevalence of venereal disease among the British troops in India; they had sent an address to the Secretary of State for India pointing out the danger it threatened both to the army itself and to the nation. The Council had been informed by the Secretary of State for India that their opinion had proved of much value to him. A portrait of Lord Lister had been presented to the College, and the honorary medal had been awarded to Lord Lister and to Sir James Paget. The reconstruction of the lecture theatre had greatly increased the comfort of the seats. The museum and the library had been fully maintained, and the latter had been visited by more than 10 000 readers. During the year many who had held official positions in the College had been removed by death, and among them might be mentioned Sir John Eric Erichsen, Sir George Humphry, Sir Spencer Wells, Mr. Walter Rivington, and Mr. Oliver Pemberton, and they had also to regret the loss of their librarian, Mr. Bailey. With regard to the motions to be brought before the meeting he thought it advisable to say a few words. The sentence in the first resolution that "parts of the elucidatory statement are misleading" was not a matter of fact but a matter of opinion and therefore he would ask the mover and seconder of that resolution to insert the words "in the opinion of this meeting." As to the second resolution he would like to point out that the Council was certainly the only representative body in the College and therefore it must represent the Members as well as the Fellows. With regard to the third resolution he would say that medical aid associations vary very greatly in character and constitution, and therefore the Council after careful consideration had declined to lay down any general rule, but had expressed their willingness to decide on any individual case submitted to them.

Dr. THOMAS MORTON then rose to move the first resolution which, with the alteration suggested by the President, read as follows:—

That as in the opinion of this meeting parts of the "Elucidatory Statement" are misleading and do not adequately represent the facts which were further obscured by a circular issued under the auspices of a member of the Council the recent vote on Members' representation cannot be regarded as a satisfactory or final expression of opinion by the Fellows.

He disclaimed any wish to impute any intention to mislead to any individual member of the Council in the preparation of the elucidatory statement, but he would show that it was misleading. When the result of the voting was announced the Society of Members applied to the Council for a special meeting, but as the Council had declined to call such a meeting this was the first opportunity Members had had of bringing the subject forward. He felt sure that if the questions to the Fellows had been put in a fairer way the result would have been different. He pointed out that the intentions of the Members in applying for representation occupied only eleven lines, while the reply of the Council occupied twenty-six. In Section 3 it appeared as if Members were standing out for representation by Members only, but this claim had been distinctly given up when the deputation from the Society of Members met a committee of the Council. The letter mentioned in Section 3 was not quoted in full and so its meaning was apparently altered. Dr. Morton considered that the rule for the Council of the College should be that which was the rule for the General Medical Council—namely, that any Member of the College should be eligible for the Council of the College apart from his academical status. The College depended greatly on its Members for its income, and it was not fair to estimate the share contributed by the Members in the way this had been done in the circular. The College was not a trading body and its object in its accounts was not to show as large a balance as possible. It was quite true that the primary object of the College was the encouragement of the science and art of surgery, but it was, as Mr. Hutchinson had said, impossible for the College to separate itself from many questions which might be called political, and this was shown by the fact that many of the subjects dealt with in the report before the meeting were in no way associated with lofty science but were connected with important social questions of the day. The Members had an inherent right to representation and this could not be controverted by proving that they had no legal right; the Members as well as the Fellows were the lineal descendants of the members of the old Company of Surgeons and their right would be recognised in time. The admission of the Members to a share in the representation on the Council of the College would certainly benefit the College itself.

Mr. JOSEPH SMITH seconded the motion and contended that the elucidatory circular was utterly misleading.

Sir ROBERT CRAVEN mentioned that he had voted in favour of allowing the Members to be represented on the Council; but the adverse vote of the Fellows had made it necessary that a new charter should be obtained. Therefore he advised the Members to turn their attention to that.

Mr. W. G. DICKINSON asked that the names of those Fellows who had voted in favour of the representation of the Members should be published.

Mr. HENRY MORRIS congratulated the mover of the resolution on the very temperate tone of his speech and said that though he had always opposed the claims of the Members yet it had been his wish and the wish of every member of the Council to send to the Fellows an unbiased elucidatory statement, and he mentioned that there had been on the committee appointed to draw up that statement two consistent supporters of the claims of the Members. Most of the arguments in the circular advanced on behalf of the Members were taken from communications received from the Society of Members, and especially was that true of Section 3 to which reference had been made.

Mr. W. G DICKINSON said that he had written the letter which was quoted in the elucidatory statement, and his meaning had been that the Society of Members, though willing to be represented by Fellows, were of opinion that every member of the body corporate should be eligible.

The PRESIDENT then put the resolution to the meeting, and 31 voted in its favour and 1 against, and the resolution was declared to be carried.

Mr. GEORGE BROWN then moved the second resolution which was as follows:

That this meeting repudiates the claim put forward by the Council in its resolution of March, 1896, to represent "the Members as well as the Fellows," and again calls upon it to accord the franchise to the former.

He remarked that possibly the subject of the first resolution might be considered a matter of opinion, but this was a question of fact. The claim that the Council represented the Members as well as the Fellows was utterly baseless; perhaps it was intended to be facetious. The Council was elected by the Fellows only, so how could it represent the Members? Mr. Jonathan Hutchinson had said, "Do not the Members possess a moral right to representation on the Council—that is, a right founded upon justice? If an entirely new scheme were to be devised for the government of such a body as the College now is, with its thousands of Members and hundreds of Fellows, can anyone believe that the former would be wholly excluded from power?" He did not think that the representation of the Members would materially alter the constitution of the Council.

Dr. HERBERT SNOW seconded the resolution and compared the Members to taxpayers who were not allowed to vote; for the Members contributed more than £14,000 out of £25,000, which was the total annual income of the College.

Dr. WARD COUSINS pointed out that the resolution of the Council against which Mr. George Brown's motion was directed was by no means unanimous, for though 11 had voted in its favour 8 had voted against it.

Surgeon-Major INCE considered that the Members were on the high-road to obtaining representation on the Council. He thought it would be wise to extend the franchise to Members of twenty years' standing. He believed he was correct in saying that the majority of the Fellows were in general practice. On being put to the meeting the resolution was carried by 37 votes to 1.

Mr. W. G. DICKINSON moved the third resolution:

That this meeting, in view of the widespread public and professional evils induced by "Medical Aid Associations" and other companies trading in medical attendance, calls upon the Council to make a clear pronouncement for the information of Fellows and Members that the acting by qualified medical practitioners as the paid officials of any institutions which tout and canvass for patients or which allow the well-to-do classes to take advantage of rates of payment arranged to meet the necessities of the poor is "disgraceful in a professional respect" and deserving of censure.

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He said he hoped that this motion would meet with more sympathy from the Council as it was not in any way in opposition to the Council. The matter was of the greatest importance; the harm done to medical practitioners by medical aid associations was incalculable, and this in conjunction with the overcrowded state of the profession was rendering the condition of the general practitioner unbearable. Then there was the very important consultation question. He did not on the whole object to the decision of the Council refusing to prohibit consultations with the practitioners serving under the medical aid associations, because the matter had to be looked at from the point of view of the public as well as from the point of view of the profession, but he considered that consultants would be less willing to give their services than they are if the College would speak definitely on the subject. The decisions contained on page 13 of the report were not what was wanted. In 1893 the Royal College of Physicians of Ireland expressed its disapproval of its Licentiates accepting appointments to medical aid associations. A case had occurred recently in which the medical man, a Licentiate of the Royal College of Surgeons in Ireland, attached to a medical aid association had resigned on receiving from his College a letter pointing out the impropriety of his holding such a post. In 1888 the Royal College of Physicians of London had declared it to be undesirable that any Fellow or Member of that College should hold a post in an association for treating patients for profit; but it would have been of more value if this resolution had applied also to their Licentiates.

Mr. BRINDLEY JAMES seconded the resolution and said that the lot of the general practitioner was very hard; his patients were taken from him by the medical aid associations, by the hospitals, and by the consultants.

Dr. BEVERLEY (of Norwich) said he was deputed by his professional brethren to thank the council for the action they had taken as mentioned on page 13 of the report, but also to express the great dissatisfaction they felt at the reply, for if the By-laws did not permit the Council to abate such evils as those described, then the By-laws must be altered.

Dr. ALDERSON considered the resolution of great importance to general practitioners; even such clubs as the Foresters did a great deal of harm.

Mr. MOXON (of Yarmouth) said the Council had expressed its sympathy with those who were injured by these trading associations; but they wanted more than sympathy, they wanted a clear pronouncement that the Council disapproved of this "sweating" of medical men.

Mr. GEORGE BROWN considered that it was clearly a matter of discipline; in the case already referred to, when a graduate of the College of Surgeons of Ireland had resigned on receiving the opinion of the College on his conduct, the medical aid association had been stopped. Why should not the College of Surgeons of England do what had been done by the College of Surgeons of Ireland?

Mr. ALFRED WILLETT asked that specific instances of the action of its members should be brought to the notice of the Council of the College. From beginning to end the Council had never had brought to its notice the conduct of any individual; the complaints had always been in general terms.

Surgeon-Major INCE said canvassing for patients was legal and could not be stopped.

The PRESIDENT before putting the resolution to the meeting said that the Council was very anxious to do its utmost in the matter, but it was useless merely to express a pious opinion; if a particular instance of canvassing for patients were brought to its notice with satisfactory evidence the Council would consider the case carefully.

The motion was carried and with a vote of thanks to Sir William Mac Cormac for presiding the meeting dissolved.

WATER-SUPPLY OF SALISBURY.—The Salisbury sanitary authority have recently submitted samples of the water-supply of that city for analysis. The analyst reports the supply of the city proper to be good and that of the Close fair; but he condemns the Wyndham-park district supply on the ground that it is contaminated with sewage. This is supposed to be owing to defective water-closet fittings, and consequently on Nov. 19th the sanitary authority cut off the water-supply at all houses where the existence of bad fittings made possible a communication between the soil pipes and the water service. Until these defects are remedied the inhabitants of these houses will be supplied from stand-pipes in the streets of the district.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Derbyshire County District.—The registration county of Derbyshire is not the administrative county presided over by the county council, and hence the valuable statistics of the former are not applicable to the latter. Dr. Sidney Barwise trusts that the necessary modifications will soon be effected, and that when the time for the 1901 census arrives there will be but one Derbyshire. There seems in the case of this county to be no serious difficulty in the way. Out of the population of the county no less than 95 per cent. are under the protection of the Notification Diseases Act, and Dr. Barwise thinks that the remaining 5 per cent. will remain obdurate until the Act is made compulsory. Among what may be the recalcitrant authorities we note with astonishment that of Matlock. The subject of infantile mortality is being attacked in a very practical manner by the people of Chesterfield, who have engaged a trained nurse to visit all houses in which births have recently occurred and there to offer advice as to the feeding and general management of infants. The nurse obtains each week from the registrar a copy of the births registered. In advocating greater stringency with regard to dairies, cowsheds, and milkshops Dr. Barwise refers to the excellent example set by the Corporation of Manchester, who, in advertising for tenders for milk, state that preference will be given to those who undertake that the milk shall be derived from cows which have been examined and tested by the tuberculin test by officers appointed by the corporation. This is certainly a decided step in the right direction. But little reference is made in the district reports as to the Factories and Workshops Act of 1895, and Dr. Barwise thinks that the Act will not be thoroughly enforced until local medical officers of health have proper security of tenure. The prevention of rivers' pollution in Derbyshire is making steady progress; but in several instances there is difficulty in arriving at the best means of sewage treatment. In connexion with this subject of the purification of sewage Dr. Barwise has prepared a special report which should be of much use to members of local bodies who are endeavouring to make themselves familiar with the questions upon which they are in large part called upon to decide.

Oldham Sanitary District.—During 1896 Oldham added a small-pox hospital to its equipment, and we may reasonably hope that no more will be heard of the baneful influence of the Westhulme Hospital when cases of small-pox were treated in it. Doubtless Dr. Niven, of Manchester, will read with satisfaction of this improvement in the district over which he formerly presided. Typhus fever is not yet extinct in Oldham, and last year there was a localised outbreak of this disease. There were seven cases and two deaths, one of the deaths, we are sorry to see, being that of a nurse who had attended upon the sick. Mr. Tattersall is far from being satisfied with the manner in which the notification of puerperal fever is carried out, and he states that in his own district no cases are reported unless death occurs or is thought to be likely to occur. Smoke abatement in Oldham has made some progress recently, and Mr. Tattersall tells us that there are fewer offenders now that the limit for black smoke is four minutes per half-hour than there were when this limit was nine minutes per hour. He thinks that if the limit was still further diminished the manufacturers would be capable of meeting it.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6744 births and 3927 deaths were registered during the week ending Nov. 20th. The annual rate of mortality in these towns, which had increased in the four preceding weeks from 16·9 to 19 0 per 1000, declined again last week to 18·6. In London the rate was 18·9 per 1000, while it averaged 18·4 in the thirty-two provincial towns. The lowest death-rates in these towns were 11·3 in Bradford, 13·4 in Portsmouth, 13·8 in Croydon, and 13·9 in Plymouth; the highest

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rates were 21·3 in Sunderland, 22·1 in Burnley, 24·3 in Liverpool, and 24·7 in Leeds. The 3927 deaths included 462 which were referred to the principal zymotic diseases, against 412 and 461 in the two preceding weeks; of these, 159 resulted from measles, 67 from "fever" (principally enteric), 64 from diphtheria, 63 from whooping-cough, 52 from diarrhœa, and 1 from small-pox. The lowest death-rates from these diseases were recorded in Brighton, Plymouth, Preston, and Bradford, and the highest rates in Gateshead, Burnley, Halifax, and Blackburn. The greatest mortality from measles occurred in Burnley, Blackburn, and Halifax; from scarlet fever in Derby and Halifax; from whooping-cough in Newcastle-on-Tyne; from "fever" in Derby, Salford, and Huddersfield; and from diarrhœa in Gateshead. The 64 deaths from diphtheria included 37 in London, 6 in Liverpool, and 3 in Wolverhampton. One fatal case of small-pox was registered in Bristol, but not one in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of last week was 3792, against 3652, 3680, and 3777 on the three preceding Saturdays; 397 new cases were admitted during the week, against 416, 339, and 460, in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 363 and 420 in the two preceding weeks, declined last week to 414, and were 12 below the average. The causes of 47, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bradford, Leeds, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Salford, Blackburn, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·8 and 20·1 per 1000 in the two preceding weeks, declined again to 18·5 during the week ending Nov. 20th, and was slightly below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16·6 in Dundee and 17·3 in Leith to 21·5 in Aberdeen and 22·1 in Perth. The 552 deaths in these towns included 19 which were referred to diarrhœa, 12 to measles, 10 to whooping-cough, 9 to "fever," 8 to scarlet fever, and 4 to diphtheria. In all, 62 deaths resulted from these principal zymotic diseases, against 70 and 64 in the two preceding weeks. These 62 deaths were equal to an annual rate of 2·1 per 1000, which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 12 and 7 in the two preceding weeks, rose again to 12 last week, of which 7 occurred in Glasgow and 5 in Greenock. The 10 deaths from whooping-cough showed a slight further decline from those recorded in recent weeks, and included 9 in Glasgow. The deaths referred to different forms of "fever" which had declined from 13 to 4 in the four preceding weeks, rose again to 9 last week, of which 8 occurred in Glasgow. The fatal cases of scarlet fever, which had been 18 and 11 in the two preceding weeks, further declined to 8 last week, and included 4 in Edinburgh, and 2 in Glasgow. Of the 4 deaths from diphtheria, 2 were recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 142 and 161 in the two preceding weeks, declined again to 145 last week, and were 34 below the number in the corresponding week of last year. The causes of 36, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks from 28·2 to 19·8 per 1000, rose again to 23·3 during the week ending Nov. 20th. During the past seven weeks of the current quarter the death-rate in the city has averaged 22·8 per 1000, the rate during the same period being 17·6 in London and 18·6 in Edinburgh. The 156 deaths registered in Dublin last week showed an increase of 23 upon the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against 12 and 24 in the two preceding weeks; of these, 6 resulted from "fever," 2 from diarrhœa, 1 from scarlet fever, and 1 from diphtheria, but not one either from small-pox, measles, or whooping-cough. These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 2·4 in London and 2·7 in Edinburgh. The deaths referred to different forms of "fever," which had been 8 and 10 in the two preceding weeks, declined again to 6 last week. The mortality from scarlet fever showed a marked decline, while the mortality from diphtheria corresponded with that recorded in the preceding week. The 156 deaths in Dublin last week included 33 of infants under one year of age and 38 of persons aged upwards of sixty years; the deaths of infants showed a marked increase, while those of elderly persons were slightly below those recorded in the preceding week. Eleven inquest cases and 8 deaths from violence were registered; and 46, or nearly a third, of the deaths occurred in public institutions. The causes of 12, or nearly 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR TIDBURY, M.D., has assumed Charge of the Station Hospital and troops at Winchester.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Colonel Bainbridge to be Surgeon-Major-General, vice Surgeon-Major-General Cook, deceased. Surgeon-Lieutenant-Colonel Arthur Tomes (Bengal) and Surgeon-Major Framji Ruttonji Divecha, 8th Regiment of Madras Infantry, retire from the service subject to Her Majesty's approval. Surgeon-Lieutenant-Colonel Martin, Civil Surgeon, who has been permitted by Her Majesty's Secretary of State for India to return to duty before the expiry of the leave granted him, is posted to the Hoshangabad District.

NAVAL MEDICAL SERVICE.

The following appointments have been announced:—Staff-Surgeons: Samuel W. Johnson to the *Liffey;* Samuel Keays to the *Devastation;* and Joseph R. M'Donnell to the *Trafalgar.*

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Thomas Lyndon, M.D., having resigned his Volunteer appointment, ceases to belong to the Army Medical Reserve of Officers.

VOLUNTEER CORPS.

Artillery: 2nd East Riding of Yorkshire (Western Division, Royal Artillery): Surgeon-Lieutenant H. Robinson, M.B., to be Surgeon-Captain. *Royal Engineers* (Volunteers): 1st Middlesex: Henry Macnaughton Macnaughton-Jones, M.B., to be Surgeon-Lieutenant. *Rifle:* 4th Volunteer Battalion the King's (Liverpool Regiment): Surgeon-Major W. J. Fleetwood, M.D., to be Surgeon-Lieutenant-Colonel.

THE HEALTH OF THE RUSSIAN ARMY.

The report of the Russian Army Medical Department which deals with the health of the army during the year 1895 was recently issued and contains a large number of statistics of some interest. The average strength of the Russian Army in that year was rather over a million officers and men, the former numbering 40,356, the latter 981,256. Among the officers the percentage of attacks of sickness was 50·8, and the death-rate 0·64 (a death-rate, therefore, of 6·4 per 1000). Among the men the admissions to hospital were at the rate of 32·8 per cent. of the total strength, while the sick cases treated as out-patients were 175·8 per cent. The total sickness, rate was therefore 208·6 per cent., which is equivalent to saying that each soldier was reported sick more than twice in the year. This is slightly above the percentages of the last five years, which have been respectively 179·8, 183·8, 194·4, 207·3, and 200·8. The number of men incapacitated by sickness was 2·4 per cent. of the total strength and the total loss to the army by sickness and death was about 3 per cent. Among individual groups of diseases infectious disorders occupied the first place (69,850 treated in hospital) and diseases of respiratory organs the second (42,928 cases in hospital). There were 33,735 cases of venereal

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disease admitted to hospital. Diseases of the respiratory organs caused a greater loss of strength to the army than any others; they affected 34·2 per cent. of the total number incapacitated by disease. Of the different divisions of the army those who suffered most were the prisoners in military prisons. Their attack-rate (80 8 per cent. of total strength treated in hospital) and death-rate (1·8 per cent) were treble the average for the whole army. This seems to point to sanitary defects in Russian military prisons. The following table is worth quoting:—

Branch of service.	Percentage of Sickness.*	Percentage of Deaths.	Incapacitated.
Infantry	36·6	0·64	2·60
Artillery	29·5	0 61	2·20
Cavalry	27·9	0 60	2 36
Engineers	27·2	0·57	2·40
Cossacks	27·1	0·47	1·90
All others	37·7	0·47	2·00

* Cases treated in hospital are alone considered in this column.

From these figures it appears that the Cossacks are the healthiest branch of the service and the infantry and others not specified the least healthy. The superior health of the Cossacks is further shown by the fact that the minimum total sickness-rate (including in- and out-patients) of the territorial divisions of the army occurred in the Don Cossack Province, where the rate was only 115·4 per cent. (the rate for the whole army being 208·6 per cent.). The highest sickness-rate was in Transcaspia, where it reached the high figure of 327·5 per cent. In St. Petersburg it was also high (271 per cent.). The highest death-rate was also in Transcaspia (0·98 per cent.), and the lowest in the Amur region (0·29 per cent.). Cholera occurred in the army only in the Kief district, where there were 344 cases and 94 deaths.

THE ROYAL NAVY LIST PUBLICATIONS.

Lean's Royal Navy List, published quarterly by Messrs. Witherby and Co., High Holborn, the October issue of which has reached us, deserves all the praise that has been bestowed upon it. To the Naval profession, the Press, and, indeed, to everyone who takes an interest in our first line of defence, it is an indispensable work of reference.

The Royal Navy List Diary and Naval Handbook for 1898 is a new publication issued by the same publishers, price 3*s*. The contents include a Summary of the Year's Naval Progress, by Professor J. K. Laughton, M.A., F.R G S.; the Navy Estimates for 1897–98, with Full Statistical and Comparative Tables; a Calendar of Notable Naval Events; the Naval Honours and Obituary for the Year, with the War and Meritorious Services of Deceased Officers; a Full Account of the Celestial Phenomena for 1898, with Notes and Tables of Tides, and Monthly Astronomical Ephemeris; Original Descriptive Articles on the Tides and Terrestrial Magnetism; Table of Stamp Duties and Fees; the Night Signals of the Principal Lines (revised to date); and a diary (a whole page to a day) with all the usual tables found in diaries. That the new venture will be a success there can be no doubt for such a book has long been wanted and the editors are to be congratulated upon the result of their labours.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

The twenty-first distribution of prizes will take place at St. Martin's Town Hall, W.C., on Dec. 9th, at 8.30 P.M., when Major-General H. Trotter will preside. There will also be a Bohemian Entertainment.

THE Hackney Vestry decided at their last meeting (on the 17th inst.) to appoint a lady sanitary inspector whose special duty it would be to look after the sanitary conditions of the workshops, workrooms, laundries, &c., where women and girls are employed.

MUNICIPAL MATTERS IN CARDIFF. — Dr. T. Wallace, J.P., has been re-elected on the free library committee of the Cardiff Corporation. Mr. J. L. Treharne, M.R.C S. Eng., L.S.A., J.P., and Mr. A. Rees, L.R.C.P. Lond., M.R.C.S. Eng., have been placed upon the technical committee of the town council, and Dr. C. T. Vachell, J.P., has been elected upon the museum committee.

Correspondence.

"Audi alteram partem."

"DR. R. R. RENTOUL'S RESIGNATION OF MEMBERSHIP OF THE GENERAL MEDICAL COUNCIL."

To the Editors of THE LANCET.

SIRS,—Dr. Rentoul's manifesto to his late constituents, of whom I was one, enables the other side to be heard. I am strongly of opinion that Dr. Rentoul's return last December at the head of the poll was out of gratitude for past services and by no means because his constituents considered him the best direct representative of their interest on the General Medical Council. I know several who voted for him and while they admired his courage they disliked his methods and many of his supporters resented his contemptuous style of addressing his fellow practitioners. He is deficient in the *suaviter in modo*, and there never was a time in which this quality was in such demand as at present. Let us come to the point.

Dr. Rentoul says: "I resigned as I came to the finding that I could not accomplish any of my work as a member of the Council constituted and worked as it now is."[1] It is unnecessary to say that Dr. Rentoul knew all about this before he became a candidate, so that this reason falls to the ground. He is considered a fool who proceeds to build a house without counting the cost. Was it "honest" to undertake the duties which he admits in Paragraph 2 he was unable to fulfil? A second, although it is called the "first," reason in the text is advanced — viz., the loss of confidence, or what he calls the "desertion," of his constituents. What does Dr. Rentoul advance in support of this assertion? Why, of course, that his Bill for the Registration of Midwifery and other Nurses was ignored by 126 out of 129 medical societies to which he sent it. To a "practical" man this fact would suffice to demonstrate the impracticability of the Bill I drafted a Bill entitled, "The Sick and Obstetric Nurses' Bill," an outline of which appeared in THE LANCET before Dr. Rentoul's Bill was heard of, and MS. copies were sent on request to Mr. Skewes-Cox, M.P. (our local member) and the Midwives' Registration Society. I may have it printed before Parliament meets, but it will be at my own expense. It would be unreasonable to expect the profession to pay for the printing of an "unauthorised programme." This brings me to the next "reason" or want of "financial support," for Dr. Rentoul's resignation. This was news to me, as I distinctly understood that the fund collected by Dr. Alfred Cox, of Gateshead, early this year, covered Dr. Rentoul's expenses to date. Is this so or not? If so, who authorised Dr. Rentoul to incur a fresh "bill of costs" to the tune of £81 15*s*. which he now demands? Then comes another "reason" which is "second" in the text but "fourth" in order—viz., the hopeless state of the "five Direct Representatives" on the Council. Why should they "fail," and why above all should Dr. Rentoul say it, who boasts what he has done single-handed? They have not failed hitherto. Why should they fail in the future? Fancy a man coming forward to represent the profession whose policy was stamped with the word Failure. Is this "honest"? A man may do his duty and yet "fail" in the sense of securing his immediate object; but what says Lord Lytton of "failure" in one of his charming plays? What said Mr. Disraeli to the Commons who laughed him to scorn in his maiden speech? Lesser lights have striven successfully against enormous odds. The "failure" of Dr. Rentoul to hold his own at the Council table must not be allowed to deter other men from doing their duty and to justify their resignation, nor must his pleading for increased expenditure by the Council be allowed to palliate his offence of forcing the Council to squander hundreds of pounds in an unnecessary election, knowing that this money has to come out of the hard earnings of his fellow practitioners whom he now proposes to further tax with an annual registration fee!

Having dealt with Dr. Rentoul's "reasons" for resignation I have only to add in regard to his "pet schemes" for which more funds are asked that there must be some demand for

[1] THE LANCET, Nov. 20th, 1897, p. 1350.

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such and proof that they are in the right hands before their author can be permitted to lay a further tax on the profession.—I am, Sirs, your obedient servant,

East Sheen, Nov. 20th, 1897. ALEXANDER McCOOK WEIR.

"THE DISINFECTION OF CLOTHING BY HEAT."

To the Editors of THE LANCET.

SIRS,—Will you kindly give me room for a few lines with regard to the article by Mr. Messiter published in THE LANCET of Nov. 20th, 1897, p. 1305.

Mr. Messiter very properly points out the advantages of current steam and of having some simple and portable form of current steam disinfector for certain public health purposes. Such a disinfector would be specially useful in places where no large disinfecting station exists or where it is desirable to carry out the disinfection of clothes, &c., at the houses of patients affected with infectious illnesses. He appears, however, to be quite unaware of the fact that both these desiderata have been met in Manchester for no inconsiderable time by means identical with those he recommends. He will find in Dr. Niven's report for 1895 full reference to this. It is remarkable that Mr. Messiter should have had constructed an apparatus which corresponds so closely with the one in use in Manchester that even the dimensions of the steam chamber are the same (within a quarter or half an inch). The mode of heating by petroleum furnace was introduced by me in 1894, not only on account of its convenience, cleanness, and cheapness, but also, and more especially, because I could find no other means to obtain rapidly the intense heat required to produce a very rapid ebullition of water, a factor which I consider of very great importance in steam disinfection. Mr. Messiter does not speak in his description of the means he uses for preventing the wetting of clothes by the condensation taking place on the sides of the steam chamber or of the ways in which he prevents the splashing resulting from sharp boiling. The quantity of water he recommends is the same as I have found after many trials to be the best. The method of drying clothes after disinfection is the same which has been taught to the sanitary inspectors in Manchester nearly two years ago.

Coincidences of this kind impress one as indicating the soundness of the method if they come from two absolutely independent sources. In justice, however, to Dr. Niven and myself I think it right to mention the fact that Mr. Messiter recommends methods which we have used in laboratory or public work for at least three years.

I am, Sirs, yours faithfully,

SHERIDAN DELÉPINE,
Professor of Pathology, Owens College,
Nov. 22nd, 1897. Manchester.

To the Editors of THE LANCET.

SIRS,—Professor Delépine having shown me a letter which he is about to send to you in reference to a paper on "A Mode of Disinfecting Personal Clothing at Home," by Mr. A. F. Messiter, M.R.C.S. Eng., which appeared in THE LANCET of Nov. 20th, 1897, p. 1305, I have to confirm his statement that Mr. Messiter's machine, in its shape and dimensions, in the means of heating, and in the purpose for which it is being introduced, is identical with a disinfector invented by Professor Delépine. Professor Delépine's disinfector contains a novel application of physical laws (not to be found in the description of a machine given in Mr. Messiter's article), and its working was demonstrated to the sanitary inspectors of this city over eighteen months ago, by whom it has since been used.

I am, Sirs, yours faithfully,

JAMES NIVEN,
Manchester, Nov. 23rd, 1897. Medical Officer of Health.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Nov. 20th, Mr. Messiter, medical officer of health to the Isle of Axholme District Council, illustrates an apparatus for disinfection of clothes by heat. As I had myself long felt the need of a somewhat similar portable apparatus I exhibited a model of one in the Section of State Medicine, Dublin, in April, 1896, a short description of which you were good enough to give in THE LANCET of May 16th, 1896, p. 1359. I afterwards sent the model to Professor Gairdner, of Glasgow, who forwarded it for exhibit to the medical officer of health of Glasgow. Each medical man in doing battle against the possible conveyance of contagion should be is own detective officer, and should with the most intense energy guard his coming puerperal patient with all the means that lie within his reach against scarlatinal or other poison. Our responsibility in this should make us tremble, as I fear we are indirectly the cause of some deaths. Every man, *paid or unpaid*, ought to be an honest, independent, and courageous sanitary worker.

I am, Sirs, yours faithfully,

Londonderry, Nov. 20th, 1897. WALTER BERNARD.

LOCALISATION AND MEASUREMENT BY X RAYS.

To the Editors of THE LANCET.

SIRS,—With reference to an article on the above subject in THE LANCET of Oct. 16th, of which I was a joint author, and with reference also to other means of localisation which have been suggested before and since, I beg to point out that whether a mechanical or a mathematical method be adopted the necessary apparatus need be only of the very simplest description. The primary requirement is of course a small steady stand to carry the focus tube and allow of horizontal and perpendicular adjustment. This stand may be either of the "Bridge" pattern—i.e., two small perpendicular pillars (with heavy bases) joined by a horizontal bar, the latter capable of being raised and lowered and permitting of lateral displacement of the tube—or it may be the "sliding tube holder" described by Mr. Payne.[1] In any case the horizontal bar must be provided with a knife edge bearing three shallow notches, a central and two lateral ones, the latter equidistant—say, two and a half inches—from this centre. These notches mark respectively a centre and the limit of the lateral displacements of the tube. In the further steps described in the above-named article it is evident that this same stand and these same notches permit of a perpendicular being dropped from the centre one, whilst the two lateral notches now carry the threads which represent the path of the x rays. In other words, the necessity for a second piece of apparatus is avoided—a pair of compasses, a spirit level, and a foot rule complete the equipment. Those who have become accustomed to associate x ray localisation with a formidable arrangement of stands, screws, and spirit levels, reflecting mirrors, cast-iron retouching desks, and yards of millimetre scale, may rest assured that they will lose little in time and nothing in accuracy if at the expense of a few shillings they avail themselves of the simple apparatus I now advocate.

I am, Sirs, yours faithfully,

W. S. HEDLEY, M.D. Edin.
Mansfield-street, Cavendish-square, W., Nov. 23rd, 1897.

"A NOTE ON CYCLING."

To the Editors of THE LANCET.

SIRS,—In the two able and interesting letters that have appeared in THE LANCET of Nov. 13th and 20th the writers make no reference to the two distinct methods of leaning forward: (1) the spine may be bent forward with a stoop of the shoulders; or (2) the pelvis may be rotated and the spine inclined forward without bending and with the shoulders back. Those who have studied river-rowing consider the former method unsightly and injurious while the latter is practised by all skilled oarsmen. To my thinking the same holds true in cycling. The bent back and stooping shoulders are certainly unsightly and the position seems to cramp the chest. On the other hand the body swung forward from the hips, with the back straight and the shoulders back, to my eye is graceful; the position allows freedom to the chest-wall and at the same time the rider gains the mechanical advantage that a forward position certainly gives. There is perhaps more danger of perineal pressure, but this would be avoided if the cycle makers would make a hard saddle with a low peak instead of the very unsatisfactory yielding leather hammock now in use.

I am, Sirs, your obedient servant,

Ottery St. Mary. O. CLAYTON JONES, M.B. Oxon.

[1] Archives of the Roentgen Ray.

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"THE PREHENSILE POWER OF THE HANDS OF THE HUMAN INFANT."

To the Editors of THE LANCET.

SIRS,—Mr. Freeman calls attention in THE LANCET of Nov. 20th (p. 1348) to the absence of sexual differentiation in the young human embryo and adds: "The early embryological sexual attributes to which I have drawn attention most probably point to a hermaphroditic ancestry." I fear I cannot agree with him for the simple reason that the embryo even at that stage is far too highly developed for it to be probable that its prototype in the phylogeny was hermaphroditic. It would be as reasonable to suppose because the human infant cannot easily digest anything but milk that therefore it has descended from ancestors who lived exclusively on that diet. This by the way; but the sentence I have quoted betrays on Mr. Freeman's part so far-reaching a belief in evolution that it is difficult to understand why he has recourse to the "special-creation" hypothesis to explain the presence of the prehensile reflex in the infant hand. Granting the truth of the theory of evolution, it affords a sufficient explanation of the fleeting resemblance which the embryo presents in certain particulars to lower forms of life, and to seek additional explanation of that which is already sufficiently explained is suicidal from a logical point of view.

I am, Sirs, faithfully yours,

Southsea, Nov. 21st, 1897. G. ARCHDALL REID.

"A TESTIMONIAL TO DR. JOHN T. ARLIDGE."

To the Editors of THE LANCET.

SIRS,—You will much oblige by inserting in THE LANCET the following further list of subscribers to the testimonial to Dr. J. T. Arlidge.—I am, Sirs, yours faithfully.

CHARLES F. MOORE.

10, Upper Merrion-street, Dublin, Nov. 23rd, 1897.

	£	s.	d.		£	s.	d.
Mr. T. W. Nunn, F.R.C.S. Eng.	3	3	0	Mr. Jno. Alcock, J.P. ...	2	2	0
Mr. Lionel Beale, M.B., F.R.C.P. Lond.	5	5	0	Mr. William Dawkins Cramp, H.M.S.I. ...	5	0	0
Mrs. Naomi Daltry ...	1	1	0	Lady Manningham Buller	10	0	0
Rev. T. W. Daltry	2	2	0	Mrs. F. Paddock	2	2	0
Mr. J. W. Moore, M.D. Dub.	1	1	0	Surgeon-Major J. G. Gibbs, M.D.	2	2	0
Mr. J. Gimson	1	1	0	Mr. D. Lloyd Roberts, M.D. St. And.	2	2	0
Mr. Thomas Oliver, M.D. Glasg.	1	1	0				

THE BUYING POWERS OF TEN POUNDS.

To the Editors of THE LANCET.

SIRS,—I beg leave to bring to your notice some remarks that appeared in the *Willesden Chronicle* apropos of the tendency lately displayed by public bodies to get their medical advice for nothing. The late chairman of the Willesden School Board recently invited medical men to attend at the schools and examine the children gratis, and I regret to say that some men have actually accepted the offer. The board of guardians have recently requested their medical officer in future not to perform any more operations for which they are under contract to pay him according to the Local Government Board schedule, but to send all cases to St. Mary's Hospital as they contribute £10 per annum to that institution, for which sum Mr. Ryan has undertaken to meet the surgical requirements of a parish of close upon 100,000 inhabitants. As most of the guardians are retail traders it is not surprising to find that they are under the impression that they are simply paying the market price of the services rendered at St. Mary's Hospital. In fact, one of them expressed the opinion that they would not be doing their duty to the ratepayers if they paid anything for what they could easily obtain for nothing. I think this is very significant and it is not necessary for me to point the moral. The remedy for this state of things is in the hands of the profession itself. When is it going to wake up and seek its own salvation? I am, Sirs, yours faithfully,

Willesden, Nov. 23rd, 1897. STRUGGLING PRACTITIONER.

*** We print our correspondent's letter but we doubt if his information as to any undertaking on the part of the hospital named is correct.—ED. L

THE EPIDEMIC OF TYPHOID FEVER AT BELFAST.

(FROM OUR SPECIAL COMMISSIONER.)

THE Belfast epidemic presents itself to the observer under two different and distinct aspects. On the one hand there is a sharp, rapidly developed epidemic extending only over a portion of the suburban district of Ligoniel. Then there is on the other hand a more slowly developed, but more persistent, prevalence of typhoid fever in the town of Belfast itself. As opposed to the experience of Ligoniel typhoid fever in Belfast is not restricted to one particular district or to one particular water-supply but exists in all parts of the town. To judge from the facts at present available we seem to be in the presence of a water-borne epidemic occurring side by side with another epidemic which does not appear to be due to the water-supply. Your Belfast correspondent has already described how Dr. Biggar has traced the Ligoniel epidemic to a contaminated spring. This district has recently been added to the city and it was only on Oct. 23rd that the Belfast Water Commissioner obtained jurisdiction over the Ligoniel water-supply. Dr. Biggar is the medical superintendent officer of health of the Belfast board of guardians; and this board of guardians is the rural sanitary authority for the districts lying outside the boundaries of the borough of Belfast. On Oct. 20th, Dr. Biggar was informed that there had been about forty cases of typhoid fever occurring during the previous five days in the upper end of the village of Ligoniel. These persons derived their milk-supply from ten different sources but their water-supply came from one and the same spring. On the other hand the inhabitants of the lower part of the village, though living if anything under worse sanitary conditions, had a different water-supply and they were not suffering from typhoid fever. The whole district has a population of about 5000, but it is only about half of this population that received the incriminated water and there have been more than a hundred cases of typhoid fever among them. How the water was contaminated has already been described. It is not necessary to go over the details again. I may add, however, that the reservoir which is supposed to have been polluted measures some fourteen by six feet and is about six feet deep. The little stream which pases by a cottage where there has been a case of typhoid fever delivers at this point about 600 to 700 gallons of water daily. A great part of this water sank into the field just above the reservoir and disappeared. The subsoil is of limestone. There may be fissures and the water from this brook may have freely mixed with the water of the spring that supplies the reservoir. As the typhoid dejections were thrown out on the garden of the cottage close at hand it is not difficult to see how the contamination may have occurred. In any case, Dr. Lorrain Smith, of Queen's College Pathological Laboratory, has examined this water and reports that he found it was contaminated and he has been able to isolate the typhoid bacillus.

The first measure was to construct a dam across the stream so that the water flowed down the other side of the hill and could no longer reach the field where it was supposed to have mixed with the water of the spring. But this could not be continued as it affected the riparian rights on the stream which had thus been diverted from its usual course. Iron pipes were therefore laid down to convey the water past the field and below the reservoir. This done it was possible to restore the water to its usual channel. At the same time this water-supply was cut off during the space of twenty-four hours. The water that came into the reservoir from the spring was pumped out as fast as it entered, and the reservoir was carefully cleaned out. There is no longer any means by which the water which now comes into this reservoir can mix with the water from the brook, for the brook water flows past in the iron pipes that have just been provided for that purpose. As a result presumably of these measures the epidemic seems to be decreasing.

On the other hand it is not so easy to account for the numerous cases of typhoid fever which have occurred in the town of Belfast. The water-supply is certainly not above suspicion; but it is, in any case, as safe as, indeed safer than, that of London. Dr. Percy F. Frankland, in

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a report on the subject dated Oct. 13th last says: "By far the greater part of the metropolis is supplied with water drawn from the Rivers Thames and Lea, which drain areas incomparably more densely populated and more highly cultivated than are the gathering grounds of the Belfast supply. In the valleys of the Thames and Lea above the intakes of the London supply typhoid fever is certainly at all times present among the population." Yet the typhoid fever mortality in London for the ten years from 1881 to 1890 only averaged 1·9 per 10,000 of the population, and this is much below the average of ten out of fourteen large English towns which are reputed to have water-supplies above suspicion. Dr. Frankland then adds the following argument: "If London, which is supplied with water initially far more exposed to contamination than is that of Belfast, exhibits no excess of typhoid fever mortality but, on the contrary, a very low average death-rate from this disease it is difficult to see why the water of Belfast, which is submitted to the same treatment of storage and filtration as is that supplied to London, should be credited with the communication of this disease, more especially as the Belfast water is subjected to a far more prolonged storage than is the case with any of the water supplied to London. It is particularly noteworthy, in connexion with water-borne epidemics of typhoid, that these have in almost all cases occurred through contamination of water, which was supplied generally without storage and almost invariably without filtration." Dr. Frankland, in support of this contention quotes the evidence he gave before the Royal Commission on the London water-supply (1892) concerning the West Middlesex Waterworks. He then showed that unfiltered Thames water from Hampton contained 1437 bacteria in a cubic centimetre. After passing through one storage reservoir this same water contained only 318 bacteria, and after a second storage 177 bacteria per cubic centimetre. In a previous report on the water-supply of Belfast, dated July 24th last, Dr. Frankland says: "With storage capacity the Belfast supply appears to be well provided, both the Woodburn and Stoneyford waters being subjected to a protracted period of quiescence in the large reservoirs bearing these names. A slight defect in this storage system I have already referred to—viz, the admixture of some unstored water with the stream below the Woodburn reservoirs. The benefits of storage are also to some extent neutralised in this portion of the supply by passing the water from these reservoirs through an open stream clothed with vegetation instead of exclusively through a closed culvert. The Belfast water-supply is further provided with a most admirable series of filter beds constructed on the most approved principles and worked with great care and attention.' This latter includes the allowing of a considerable amount of water to run to waste whenever a filter bed has been cleaned, so that there may be time for the slime deposit to form itself on the surface of the sand before the water is distributed for drinking purposes. The result of these measures was that in the worst sample 96 6 per cent. of the bacteria in the unfiltered water had been removed, and in the best sample 98 8 per cent. had been removed. In spite of these good results it is at least theoretically possible that the water might be contaminated, but Dr. Frankland concludes in his last report that "it appears in the highest degree improbable that the typhoid now prevalent in Belfast should be chargeable to the water as sent out to the consumer." To this he adds that as there are two water areas it is not likely that both would be simultaneously contaminated; and, if one only was contaminated, then the fever, instead of being spread all over the town, would be limited to the district provided by that supply.

In spite of these reassuring utterances, a strong impression prevails that the water is the cause of the epidemic. It is argued that Dr. Frankland was not fully informed as to all the circumstances. Thus it is a mistake to say that there are two separate water-supplies. The gathering grounds are quite separate, but the waters meet together and are mixed at the filter beds. Consequently Dr. Frankland has been called to Belfast for a third time and a list of sixteen farm houses has been given to him where the drainage from the stables, manure heaps, houses, &c., discharges either into the subsoil or the adjoining small water courses which are all situated on the Stoneyford gathering ground supplying Belfast with drinking water. At the commencement of the year there were four cases of typhoid fever in one of these farm houses, and it is urged that it was only after these four cases on the gathering ground that the fever became so general in Belfast. But here we are face to face with a difficulty. The cases at this farm, if I am rightly informed, occurred last January and the compulsory notification of infectious diseases only came into force last March. In the month of January 33 cases of typhoid fever were voluntarily notified and in February 14 cases. Now in the month of March when compulsory notification came into force 215 cases of typhoid fever were reported. The figures for the following months were as follows: April, 239; May, 527; June, 262; July, 172; August, 304; September, 379; and October, 354. Thus from January to the end of October we have a total of over 2000 cases notified as typhoid fever. There is every reason to believe that some errors in diagnosis have been committed. This is shown by the fact that a good number of the patients were up and well and attending to their business two or three days after they had been reported to the medical officer of health as suffering from typhoid fever. What, however, is still more significant is the fact that the number of deaths registered as due to typhoid fever do not at all correspond with the number of cases said to have occurred. There were 12 deaths in January, 19 in February, 16 in March, 35 in April, 40 in May, 35 in June, 9 in July, 30 in August, 27 in September, and 33 in October. Since then 9 deaths were reported for the week ending Nov. 6th, and 5 deaths for the week ending Nov. 13th. This gives us for the year and up to Nov. 13th 270 deaths from typhoid fever. But typhoid fever is endemic at Belfast, there having been 145 deaths from that disease in 1894, 184 in 1895, and 136 in 1896. Thus we may say that typhoid fever is much more prevalent this year than usual; but the difference is not so startling as to justify the belief in the presence of some very exceptional cause. If the water had been unusually contaminated we might have expected a greater number of deaths and a more uniform distribution of the disease. Though there are cases in all directions still the great majority are confined to two districts widely apart—namely, the high-level Shankhill and Crumlin district, and the low-level district on the other side of the water known as the Ballymagarret and the Newtownwards-road district. Then in the first, the Shankhill district, there are the barracks, the prison, and the union workhouse, with some thousands of inhabitants drinking the same water and yet escaping from the fever.

What, then, are the causes of the present prevalence of typhoid fever at Belfast? This is a complex question with which I cannot venture to deal till I have carried my investigations farther afield. But I may at least say this much, that not only is the soil unfavourable, alluvial and moist, but it is highly contaminated by some 20,000 cesspits that still exist in the town. Many of the houses cannot be approached from behind so that the contents of the cesspits have to be carried through the kitchens and the inhabited parts of the houses. A vast section of the population is singularly careless as to sanitary matters. Proper precautions are rarely enforced and there is little or no skilled nursing. The climate also is very damp and the flax spinning in which a large section of the population is occupied is unhealthy work. But all these are matters which I must discuss more fully when I have had the time to collect more evidence. For the present I must content myself with saying that I have not yet come across sufficient proof to be able to conclude that the present exceptional prevalence of typhoid fever in Belfast is due to a general contamination of the water-supply; but that there is much to show that the condition of the subsoil, the want of proper drainage, and the habits of the people are all well calculated to facilitate the spread of such a disease as typhoid fever.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Drainage Prosecution.

AN important prosecution under the city by-laws as affecting drainage was heard at the Police-court recently. A builder submitted plans for the erection of a number of houses which were disapproved by the corporation owing to certain defects. Again and yet again the plans were rejected. The houses were put up without the proposed alterations, hence the action by the corporation. It was stated that there was one inlet and one outlet for each house instead of two,

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and only one trap for the six houses. In accordance with the by-laws each house should have a separate connexion with the main drain. For the defence it was alleged that previously to the appointment of the present city surveyor the corporation allowed blocks of houses to be drained with one trap. An expert stated that in his judgment there was no sanitary defect in the plan followed and that a different interpretation was placed upon the by-laws to that previously existing. The Bench held that the by-laws had been broken and fined the defendant 20*s.* and costs, granting a case for appeal. Besides the question of legal interpretation of the by-laws the construction of the drainage from a sanitary point of view is important. Authorities appear to differ upon this arrangement, some considering that the system of interception traps are an unnecessary evil. An authoritative solution of this difficulty would go far to dispel the apprehension which exists as to the best plan of drainage for dwelling-houses, more especially in the face of prevalent enteric fever cases.

The Police and Assaults.

The repeated advice given by magistrates to the police as to the use of the staff in self-defence is prudent and judicious. They are recommended not to be aggressive, and when force is necessary to take care that they shall not strike the heads of their assailants with truncheons. This is no doubt wise as a sentiment of calm and reflective consideration from the bench. In the excitement of a street row under extreme provocation and often personal injury human nature is apt to assert itself and blow to be returned for blow. A police officer was lately convicted of viciously assaulting four men in a crowd and was sentenced to one month's imprisonment. The officer had been previously knocked down twice and kicked, when he got up in a sort of dazed way and ran amok among the crowd of bystanders. Some efforts have been made to obtain an appeal on the ground that an injury to the head such as the constable received frequently causes irresponsibility of immediate action. While recognising the danger of this plea in many instances it would appear probable from subsequent evidence that this might be reasonably allowed in this particular case, and I am glad to say that an appeal has ultimately been admitted, the necessary recognisances being entered into. Justice demands that the circumstances should be fairly and fully investigated on behalf of the police as well as for the protection of the public.

The Catacombs of Christ Church.

Under the recent Birmingham Churches Act the building of Christ Church is to be removed and the site sold. Under the church are catacombs containing 137 bodies, very few of which have been claimed by their descendants. The celebrated Baskerville is buried here. Failing sufficient interest with the surviving relatives these bodies will be removed to Wilton Cemetery for interment, that of Baskerville being reserved for St. Philip's Churchyard in the centre of the town of his labours.

Nov. 23rd.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Guardians and Chemical Odours.

PROBABLY in Oliver Twist's time nothing would have been done to protect him from bad smells but it must be acknowledged that no smells then existed which could be compared for sickening persistency with those now provided abundantly by the ingenuity and liberality of some of our chemical manufacturers. So shockingly offensive are these smells that the Prestwich guardians have asked the Manchester guardians to join them in a deputation to the sanitary committee of the Manchester Corporation "to direct attention to the nuisance which was caused by the smells from certain chemical works." It is no wonder that the two boards should act together in this matter, as the Prestwich and Crumpsall workhouses are near neighbours. As regards nuisances chemical manufacturers seem to be especially prominent. They are among the most diligent in the production of black smoke, and so highly do they value their proficiency in this art that they seek for greater privileges than are allowed to other manufacturers, while they are unrivalled in the skill with which they concoct bad smells and distribute them to the unfortunates who dwell around. No doubt something has been done in various places to put partial restraint on them, but there are well-known instances in Manchester where all such efforts have been evaded or defied. The practical applications of chemical science must be defective when the result is an almost unendurable nuisance, and it is time that the offenders should be compelled to have more regard for the comfort and well-being of others than they now exhibit, and they might as a change apply their science to the prevention instead of the production of bad smells.

Manchester Children's Hospital.

On Nov. 13th many of those interested in the Manchester Children's Hospital assembled at St. Anne's-on-the-Sea to take part in the formal opening and presentation of a convalescent home by Sir Wm. Agnew, president of the hospital. By his munificence in building and also in the equipment of this home a need long felt has been relieved. It is amply provided with ground for extension and stands some sixty or eighty yards from the coast line. There is accommodation for twenty-five boys and girls as well as for a matron, two nurses, and two servants. The Rev. S. A. Steinthal said that Sir William Agnew had that morning given £500 towards the endowment and that £350 or £400 a year would be required for the maintenance of the home. This will no doubt be found, for the hospital has many friends.

The Coachman with Medical Instincts.

The medical profession is familiar with many varieties of irregular competition, but it is comparatively rare that the medical man's coachman turns practitioner. That such a thing does happen sometimes is shown by the evidence given at an inquest held by the Manchester city coroner on the 17th inst. as to the death of a child three days old. At the birth a nurse and the uncle of the child's father—"who was considered very clever at the game"—were present. It was given in evidence, according to the newspaper report, that he was acting as assistant to a medical man, and when Mr. Smelt, the coroner, told him he had a distinct recollection that he was the late Mr. Pettinger's coachman the man acknowledged that it was so. It is a little hard on Dr. Nichol, a well-known practitioner in the neighbourhood, that he should be opposed by Mr. Nicholls—sometime coachman, now accoucheur — however clever he may be "at the game," and it seems to be a case which deserves inquiry by the Manchester Medico-Ethical Association. The coroner observed that "a person who knowingly engaged an unqualified man had to be content with the outcome," but the profession generally should not be content when such scandals are possible. The medical man does not seem to have been present at the inquest.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Social and Sanitary Society of Edinburgh.

THE annual meeting of this society was held in Edinburgh on Monday. After the report for the past year had been read and adopted Dr. Brock, the medical officer of health of Midlothian, spoke at some length on the milk question. He emphasised the necessity of a pure milk-supply and pointed out the liability to infection with tuberculosis and other infectious diseases through the milk-supply. Tuberculosis was responsible for one-seventh the total deaths in that country and dairy cows were tuberculous to the extent of from 20 to 50 per cent., so that it was necessary to make every effort to eliminate this source of infection. The disease might be communicated by cream, butter, cheese, and buttermilk, as well as by milk. To ensure a non-tuberculous milk-supply it was necessary that the animals should be systematically tested with tuberculin and that all the tuberculous cows thus discovered should be weeded out of the herds. To guard against infection with scarlet fever he thought various precautions necessary. The dairy buildings should be removed from the neighbourhood of dwelling houses, the milk should go straight from producer to consumer, and the people employed about a dairy should be regularly inspected by a medical man. He advocated the formation of a dairy company with the view of providing a pure milk-supply. He showed how much good

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could be done by workers of the society if as well as distributing leaflets they would enter the houses of the poorer classes and demonstrate to them how to render milk innocuous by sterilisation. Dr. Brock then moved a resolution that the society pledges itself to use all means in its power to further the necessary reforms in connexion with the milk-supply. The resolution was adopted.

Edinburgh Royal Infirmary.

At the meeting of the managers of the Royal Infirmary held this week the treasurer and clerk submitted a report on the income for the financial year. The ordinary income from all sources amounted to £30,620 2*s.* 11*d.*, being a decrease of £62 14*s.* 8*d.* as compared with last year. The extraordinary income showed the large increase of £4390.

Edinburgh Royal Physical Society.

At the first meeting of this society held last week Professor J. Struthers delivered an address on Rudimentary Structures and their meaning in Man and in Certain Animals. In the course of the address he said that one occasionally meets among those who have studied human anatomy only with persons who believe in the utility of every structure and in the independent origin of every species. He therefore would mention a few easily understood examples of structures occurring in man and animals no longer useful, but merely vestigial remnants, modifications of previously existing structures. He specified as belonging to this category the vestigial hind limb in the whale, the teeth of the young whale, and the vestiges of lateral toes in the horse. He spoke also of the vermiform appendix and of Meckel's diverticulum in this relation and concluded with a quotation from Darwin.

The Western Infirmary Dispute at Glasgow.

No public announcement as to the exact position of this controversy has yet been made, but it is known that negotiations between the managers and the University authorities are at present in progress and it is reasonable to hope and even to expect that a satisfactory issue will be the result. The annual meeting of the subscribers to the infirmary has to be held during the present week and the managers will in the report they submit to that meeting be almost compelled to define and defend their policy. The absence of any official statement has not, however, prevented certain echoes of the controversy from reaching the public ear. Thus Professor Gairdner has written to the press in reference to the statement prepared by Dr. J. B. Russell for the Faculty of Physicians and Surgeons. Professor Gairdner endeavours to negative Dr. Russell's contention that the University has attempted to encroach upon the clinical facilities and teaching offered by the infirmary. He does not, however, meet the specific instances quoted by Dr. Russell in support of his position but contents himself rather with a general negative to Dr. Russell's affirmation. No one for a moment believes that Professor Gairdner personally desires any unfair advantage or doubts his generous recognition of the work and ability of the non-collegiate clinical teachers, but whether the corporate influence of the university has been applied in this spirit is fairly open to question. That as the infirmary has been enlarged some physicians and surgeons have been appointed to the visiting staff who are not University professors without serious opposition from the University is surely no proof of the generosity of the latter body seeing that their four professors of medicine and surgery were already provided with wards, and some of the elections just referred to were not quite free from opposition from University quarters. Professor Macewen's position is being strongly supported by the *Glasgow Herald* and the controversy is being used with a view to raise certain aspects of the question of infirmary management. In none of the Glasgow infirmaries is there any representation of the staff on the board, and in each, too, the superintendent is a medical man. It is now being contended that in both of these respects the management ought to be altered and from certain movements which are in progress there is reason to believe that an organised agitation in support of this view is to be instituted. The only other incident in connexion with the controversy that falls to be noted is the publication of a letter signed by the majority of the visiting staff expressing appreciation of the manner in which they have always been treated by the managers and the superintendent. Professor Macewen's name is not appended to this document, nor is he the only absentee, and probably the names of those who have abstained have attracted more attention than the actual signatures.

Glasgow University.

At the September meeting of the University Court a letter was read from the Universities' Commission in answer to a memorandum from the court dealing with the proposal to confer disciplinary or penal powers on the University so far as its graduates are concerned. The effect of the letter was that the Commissioners declined to deal with the matter, regarding it as outside the scope of their powers. The court made the following appointments: Mr. L. R. Sutherland, M.B., C.M. Glasg., lecturer on pathology for the present academic year during the absence of Professor Coats; Mr. G. Burnside Buchanan, B.A. Cantab., M.B. Glasg., to be assistant to the professor of clinical medicine, vice J. C. Renton, M.D. Edin., resigned; and Professor Young and Professor Barr to be governors of the West of Scotland Technical College. Mr. R. Barclay Ness, M.A., M.B. Glasg., has been appointed an assistant to the professor of medicine.

Nov. 24th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal College of Surgeons in Ireland.

THE examination for the Fellowship of this College has recently concluded, when six candidates were adjudged to have passed the primary portion and one the second and final part. The recent regulation by which students who have passed the second professional examination of the College or the half M.B. examination of the Dublin University are entitled to present themselves for the primary examination for Fellowship was taken advantage of by three candidates who had fulfilled the necessary conditions—namely, two students of the medical school of the College and one of the Dublin University.

Typhoid Fever in Dublin.

Although the general death-rate of Dublin has recently been more than usually satisfactory the deaths due to zymotic diseases have been above the average. What may be called an epidemic of typhoid fever now prevails at the north side of the city. A large number of cases have been admitted to the Mater Misericordiæ Hospital, while many of the trained nurses from that institution are employed in the treatment of patients suffering from typhoid fever in the immediate neighbourhood. The disease seems to have first appeared in the recently-built Mountjoy station of the Metropolitan police, where no less than seven men out of the twenty-four in the force there were attacked. It was first surmised that the soil on which the new building rests might have been infected by sewage. Sir Charles Cameron has, however, been actively investigating the matter and seems to have traced the outbreak to an institution which supplied milk to the police-station and in which there have been a number of cases of enteric fever which were never notified, the Act for the Notification of Infectious Diseases not being in force in the district. It has now been ascertained that ninety cases of typhoid fever have recently occurred in this particular suburban district not far removed from the city boundary. At the last meeting of the guardians of the Drumcondra township a letter was read from the medical officer of health, Mr. Nedley, referring to the prevalence of fever at the north side of the city, and stating that after visiting and examining at the request of the board a certain house which was said to be in an insanitary condition he had come to the conclusion that the infection must have been conveyed from outside their area which was healthy at present.

The Apothecaries' Hall of Ireland.

The list of examiners in medicine, surgery, and midwifery, appointed by the Governor and Court of the Apothecaries' Hall of Ireland has just appeared. The names should be a guarantee that the examination for this old-established license will for the future be properly conducted.

The late Dr. James Cagney.

Dr. Cagney had many friends in Dublin who were shocked and grieved by the news of his untimely death. The Irish Medical Schools' and Graduates' Association in London will find it very difficult to adequately fill his place.

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The Typhoid Fever Epidemic at Ligoniel.

There have been eight fresh cases notified and three deaths since my last report. At a meeting of the board of guardians held on Nov. 16th a member of the board of guardians stated that he had visited the district of Ligoniel and had found a very serious state of affairs. In Lower Ballysillan some 300 people were supplied with water which passed through an open tank from which cattle were allowed to drink. He had also found that there were some ninety-seven houses in the upper end of Ligoniel with only two dry closets for all the inhabitants. He characterised it as a most scandalous state of affairs. The Water Commissioners are at present laying a 6-in. main, and in the course of about two weeks it is hoped that the objectionable tank will be removed. It was decided to refer the question of the houses which are without closets to Dr. Bigger and Mr. Milligan. Ligoniel is certainly in a most insanitary condition.

Prosecution in Belfast under the Public Health Act.

On Nov. 16th a woman was fined in Belfast for allowing her niece to go to school while suffering from typhoid fever. The child was sent to attend an examination. The case was brought forward for the purpose of letting the public know that such an offence could not be tolerated.

The Mater Infirmorum Hospital, Belfast

On Nov. 22nd the Right Honourable the Lord Mayor of Belfast opened a bazaar in the Ulster Hall, the object of which was to aid the executive committee of the Mater Infirmorum Hospital in providing a large balance of the total estimated probable outlay of £50,000 required to complete the buildings and equip this new hospital. The Roman Catholic Bishop presided and there was a very large attendance of the friends and supporters of the charity, and it is hoped that a large sum of money will be realised. The new Mater Infirmorum Hospital is now nearly completed and will be a most desirable addition to the charitable institutions of the city. Situated on the Crumlin-road with a frontage of 230 feet it occupies an area of slightly over one acre. The hospital which is built on the "pavilion" system has a centre administration building, with two lateral blocks for the patients. It is planned for 137 beds and 8 cots for children. The buildings are of red brickwork with stone dressings, the compartments are heated by steam and lighted by electricity, and everything that modern science and the latest experience could suggest has been done to make the hospital complete in every respect. A novel feature is the introduction of garden roofs for the use of convalescent patients. They cover the great pavilions and are well protected and sheltered. It is expected that the new Mater Infirmorum Hospital will be open for patients early in the new year.

The Belfast Royal Hospital.

At the quarterly meeting of this hospital held on Nov. 22nd Dr. Lowry, Dr. Mateer, and Mr. Montgomery were elected senior and junior house surgeons and house physician respectively.

Death of Dr. O'Connor, of Ballycastle.

Extreme regret is felt amongst his wide circle of friends in the medical profession and amongst the public at the death at a very advanced age of Dr. G. Matthew O'Connor, of Ballycastle. Educated in Dublin where he graduated M.B. of Trinity College in 1842, Dr. O'Connor spent the greater part of his life in Ballycastle, where he was medical officer of the workhouse and where he enjoyed an unusually large practice. Dr. O'Connor was a man of the most refined nature and of the most kind and gentlemanly character. His long experience and training made his opinion a most valuable one, and it is given to few medical men to be so thoroughly respected by their patients as Dr. O'Connor was. His death leaves a great blank in the roll of the older members of the medical profession in Ulster, and of no man can it be said with more perfect truth than of Dr. O'Connor that he earned the respect, the esteem, and the confidence of every one with whom he was brought into contact.

Nov. 23rd.

ON Monday, Nov. 22nd, the Cambridge Graduates' Club of St. Bartholomew's Hospital held their annual dinner at Frascati's Restaurant. The Vice-Chancellor of Cambridge University, Dr. Alexander Hill, was in the chair. Seventy-five members and guests sat down to dinner and the evening was in every way a great success.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Opening of the Annus Medicus.

THE University of Rome was opened for the winter by Professor Giovanni Battista Grassi who holds the chair of comparative anatomy and whose high reputation, enhanced by the English Royal Society having awarded him the Darwin medal for the best recent vindication of the law of evolution, attracted a numerous and distinguished audience. His discourse which occupied more than a hour had for its subject, "Critica della Filosofia Zoologica" and in a series of rapid but luminously effective side-glances went round the whole circle of the biological sciences. In none of these, he said, can the student afford to be a specialist, zoology itself having relations more or less intimate with all, which in turn are in varying degrees its debtors. In illustration of this last assertion he showed what physiology and biology have of late years owed to zoology, particularly in the "diramazioni" (ramifications) of the embryonal cell and he took occasion to eulogise the discoveries in this field by the Italian Camillo Golgi and the Spaniard Ramon Casali. A masterly survey of "bio-mechanics" (the mechanism of development), a science yet in its infancy, led up to the doctrine of man's rise and progress. As a theory—nay, as a law—evolution is inexpugnable, but it cannot solve the mystery of animal origin. As to its own vindication it must appeal to something more conclusive than "the struggle for existence." Darwinism and Neo-Darwinism are at best provisional bulwarks of the theory requiring still the "sussidii della zoologia" (the reinforcements of zoology) to enhance their sufficiency. From this stage Professor Grassi proceeded to illustrate the "exclusively critical character of zoological method" and made typical applications of it to anthropology and psychology, showing that what in the lower animals are "instincts" become specialised in men into "powerful impulses directed to the good, the beautiful, and the true." Thus far the zoologist can go without running the risk of trenching on the domain of metaphysics. Nature-study (physics in its largest sense) must be disjoined from metaphysics, and should the "fisico" (nature-student) arrive at intuitions which tend to enlighten the "metafisico" it is his duty "to express himself with caution." In the business of life and in applied psychology the zoologist remains an inadequate guide. In illustration of this position Professor Grassi ably examined the relations between zoological method and religion, anarchy, and socialism. The study of the instincts constrained to the belief that from society as now constituted religion cannot be excluded, while in their own interests Catholics have come to admit that it is not heretical to suppose that the human body is derived from some antecedent animal. They have ceased to declare war against the law of evolution. A rapid incursion into the troubled waters of "criminal anthropology" brought the lecturer alongside Lombroso and his school, with whom he declared himself in sympathy provided they made their science really sound and socially useful, "ricorrendo al positivismo dell' analisi zoologica." Similar was his attitude towards modern socialism while making large deductions from its premature ideals. "Given the progress of every created being, man tends to the integration of intelligence, to the knowledge of things in their essence. Herbert Spencer, judging ours to be a period of 'ecoessivo perfezionamento,' foresees the break-up of existing society from the débris of which will germinate the new era. But faith in our ideals," contended the orator, "will have power to save us from this decadence and from all such moral eclipse." The above is the merest outline of a discourse which, highly condensed and fraught with "pregnant epigram," was yet listened to with profound attention till its close when a loud and long outburst of applause gave vent to the feelings of the audience. In its published form it will doubtless provoke criticism and stir up controversy, but as to its ability and grasp of scientific results and tendencies there will be but one opinion. The University of Rome, I may add incidentally, was more numerously frequented last year than in any preceding one. This year, too, it makes an excellent start with 927 law students, 854 medical, 306 in physics and mathematics, 250 in literature and philosophy; 2337 in all.

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The Serum against Yellow Fever.

Professor Sanarelli (a correspondent tells me) delivered on the 14th ult. in Montevideo a lecture before an audience of medical practitioners and students on "Immunità contro la Febbre Gialla," in the course of which he showed that the serum of the blood of the human subject dead from yellow fever if injected into animals manifests no preventive power against the bacillus icteroides, while the serum of the blood of convalescents from the fever possesses a mild preventive action. Although, he continued, the simultaneous injection of the serum of convalescents and of the virus did not save from death yet a fatal issue was avoided in most cases when the injection of the serum was made, twenty-four hours before that of the virus in the dose of at least "due centimetri cubi." Professor Sanarelli added that the human serum obtained from sundry individuals in normal condition and convalescent from other maladies, although administered in high doses, never produces in animals the slightest preventive or curative action. Wishing to immunise animals against experimental yellow fever he had to abandon rabbits and after them goats and lambs on account of their excessive sensibility even with minimum injections of the virus. His experiments accordingly were restricted to guinea-pigs, dogs, and horses. He began by injecting the icteroid toxin in the dose of 0·01 c.c. The crisis of the first injection being over—a crisis lasting from twenty to thirty days—injections were made of 0·05 c.c. of toxin, and continuing at this rate he succeeded, only after six or seven months, in obtaining one guinea-pig well "vaccinated" against the bacillus icteroides. The dog and the horse respond much better to injections of the virus than the guinea-pig. At present Professor Sanarelli has in his laboratory three dogs and two horses well "vaccinated" which have yielded serums giving perfect immunisation against the experimental yellow fever in animals. On the strength of these experimental facts Professor Sanarelli says that in all likelihood—not to say certainty—this very serum which saves animals destined to succumb almost without exception to experimental yellow fever might be useful in the treatment of spontaneous yellow fever occurring in man, while possessing, moreover, a distinct preventive action against the disease.

Nov. 20th.

Obituary.

JAMES CAGNEY, M.D. R.U.I., M.R.C.P. LOND.

IT was with great regret that we announced last week the death of Dr. James Cagney at the early age of thirty-eight. Dr. Cagney carried out as usual the arrangements in connexion with the dinner of the Irish Medical Schools' and Graduates' Association which took place so recently as Nov. 2nd, but it was then noticed by several of his acquaintances that he was very unwell. He promised that he would take rest and advice on the following day, as a temperature of 102° F. suggested that he was suffering from influenza; the sequel showed, however, that while he had been trying to shake off a vague malaise by cycling and golfing, he was really entering the second week of an attack of typhoid fever which, as our readers already know, proved to be fatal.

James Cagney was born at Cork in 1859, his father being a well-known merchant in that city whilst on his mother's side he was descended from military medical officers through several generations. Coming of a Roman Catholic family he was educated at Ushaw, whence he passed with a high place in honours the London Matriculation Examination at the age of sixteen years. At Queen's College, Cork, where he went on leaving school, he distinguished himself in classics at the intermediate examination in arts and headed the list of candidates in mental and moral science at the M.A. degree. Having taken degrees of M.D., M.Ch., and M.A.O. in 1883 he made two voyages as a ship's surgeon, one to Australia and another to the Pacific. After these—that is, in 1885—he came to London for a course of post-graduate work at St. Mary's and St. Thomas's Hospitals. At the former he studied neurology in particular, and when Dr. De Watteville resigned his appointment as medical officer in charge of the Electro-therapeutic department of the hospital in 1890 Cagney succeeded him. From 1886 to 1894 he was also one of the demonstrators of anatomy at the St. Mary's Hospital Medical School. In 1889 he was elected physician to the Regent's Park Hospital for Epilepsy and Paralysis and in 1893 he was appointed assistant physician to the North-West London Hospital. At the time of his fatal illness he was in attendance at all three hospitals and his triple duties occupied no less than five afternoons in each week. He carried the same enthusiasm into other ramifications of his professional career. He was a regular attendant at the medical societies and two years ago he was secretary to three simultaneously, viz.: the North-West London Clinical Society, the Harveian Society of London, and the Irish Medical Schools' and Graduates' Association. What he did for the latter as its metropolitan secretary by his tact and energy is well known to all Irish medical men practising in England. Some years since one subject loomed largely on the Association's programme—namely, the ineligibility of Fellows of the Irish colleges to positions on the staffs of English hospitals. Dr. Cagney's exertions to obtain better treatment for his countrymen can be appreciated only by those who were actively associated with him in the work. He was himself a member of the Royal College of Physicians of London and was moreover connected with a metropolitan teaching hospital where there are no restrictions with regard to the source of the qualifications of the members of the staff, so that there was no question of his fighting for his own hand.

Dr. Cagney was a frequent speaker, mostly on neurological subjects, at meetings of the medical societies, and his words were always interesting and well chosen. His best piece of experimental research was in reference to the effect of suspension on the vertebral column, carried out in the dissecting room and post-mortem room at St. Mary's Hospital. This was inspired by the suspension treatment of locomotor ataxia so much in vogue about the years 1889 and 1890. In two papers, one read before the Royal Medical and Chirurgical Society and the other before the Anatomical Society and published in the Journals of those societies for 1890, Cagney clearly showed by a number of ingenious dissections and experiments that the effect of swinging and hanging postures on the vertebral column was to relax, not to stretch, the spinal cord. He contributed various papers to our own columns and those of other medical journals on Peripheral Neuritis, and at the time of his death he was engaged in collecting material for a small book on this subject. The three editions of "Clinical Diagnosis" which he translated and edited from the German of von Jaksch took Dr. Cagney into an altogether different field of medical thought, and the appreciative reviews which have from time to time appeared in this and other journals have testified to the skill with which he translated that work and to the judgment he showed in the incorporation of only the best English methods of research which were not contained in the original German edition.

James Cagney impressed all who came in contact with him as being a man of culture and high intellectual capacity. Those who knew him marvelled how, in spite of his many professional ties, he managed to find time for the discharge of the duties of an active volunteer—he was Surgeon-Captain of the "Artists,"—for golf, cycling, shooting, and numerous social engagements. But he appeared to lead his full life with ease and to make friends wherever his handsome presence and distinguished manner were to be met with.

A large circle of personal acquaintances (some 300 in number) attended the requiem mass which was offered St. James's, Spanish-place, on Monday, Nov. 22nd. Among those present were Lady Matthews, Judge Bacon, Sir William Broadbent, Dr. W. J. Collins, Dr. Frederick Roberts, Dr. Sydney Phillips, Mr. P. J. Freyer, Mr. W. H. Battle, and Dr. G. William Hill.

CUTHBERT WYMAN, M.D. CANTAB., F.R.C.S. ENG.

DR. CUTHBERT WYMAN, of Putney, who died on Nov. 21st as the result of an attack of pneumonia, was a distinguished student of St. Thomas's Hospital, where he gained the Solly Medal and held several resident appointments. He graduated as M.A. and M.B. at Cambridge University in 1891 and as M.D. in 1895; he became a Fellow of the Royal College of Surgeons of England in 1892. He recently gave a lecture on

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India before a large audience in Putney, the proceeds, amounting to about £50, being handed to the Indian Famine Fund. Baron Pollock, who died on the same day as Dr. Cuthbert Wyman, was in the chair at the delivery of this lecture. Dr. Cuthbert Wyman was very popular in the district and will be much missed.

ALEXANDER MONRO INGLIS, M.D. EDIN.

DR. INGLIS, of Montpellier Lawn, Cheltenham, died in London on Nov. 20th. He studied medicine in Edinburgh, graduating as M.D. in the university there in 1854, and many years ago settled in Cheltenham where he became physician to the General Hospital and eventually had an extensive practice. On resigning his hospital appointment, being then the senior physician, he was elected consulting physician. Dr. Inglis became a Licentiate of the Royal College of Surgeons of Edinburgh in 1854, and a Member of the Royal College of Surgeons of England in 1858. His death is deeply regretted by his numerous friends.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. A. Sheffer, Professor of Medical Chemistry in the University of Kieff.—Dr. Poisson, Professor of External Pathology in the Poictiers Medical School.—Dr. Chenantais, formerly Professor of Clinical Surgery in the Nantes Medical School.—Dr. Jacquemet, Professor *agrégé* in the Montpellier Faculty of Medicine.—Dr. Cristino Cebrian, Professor of Anatomy in the University of Salamanca.—Dr. Jazenko, Emeritus Professor of Surgery in the University of Kieff.—Dr. A. Bykow, formerly Principal of the Warsaw Medico-Chirurgical Academy.

SOUTH-WEST LONDON MEDICAL SOCIETY.—The second meeting of the current session was held at the Town Hall, Wandsworth, on Nov. 10th, the President, Mr. T. A. I. Howell, being in the chair. Mr. P. J. Freyer read an interesting paper on the Modern Methods of Diagnosis of Stone in the Bladder, giving a *résumé* of 900 cases and showing the instruments employed in the treatment of these diseases. A cordial vote of thanks was awarded to the lecturer at the close of the meeting.

FOREIGN UNIVERSITY INTELLIGENCE.—*Albany (Medical College):* Dr. Geo. Blumer has been appointed Assistant Professor of Histology, Pathology, and Bacteriology.—*Baltimore (Medical College):* Dr. Wm. E. Moseley has been appointed Professor of Gynæcology in succession to Dr. Ashby.—*Berlin:* Dr. Richard Greef has been appointed to the charge of the Ophthalmic Department in the Charité Hospital vacant by the death of Professor Burchardt.—*Greifswald:* Dr. Egon Hoffmann, *privat-docent*, has been promoted to an Extraordinary Professorship of Otology.—*Groningen:* Dr. Heyenga has been appointed Professor of Midwifery and Gynæcology in succession to Dr. Dödeshein who goes to Tübingen.—*Heidelberg:* Dr. Walter Petersen has qualified as *privat-docent* in Surgery.—*Königsberg:* Dr. Jaeger has qualified as *privat-docent* in Hygiene.—*Missouri:* Dr. W. Ophüls, Second Assistant in the Göttingen Pathological Institute, has been offered the chair of Pathological Anatomy and Bacteriology.—*Munich:* Dr. O. Krummacher has qualified as *privat-docent* in Physiology.—*Rostock:* The names selected for the Ophthalmic Chair vacant by the death of Professor Berlin are—(1) Dr. Axenfeld, of Breslau; and (2) Dr. Greef, of Berlin.—*St. Petersburg (Military Medico-Chirurgical Academy):* Dr. V. Grusden has been recognised as *privat-docent* in Midwifery.—*Tübingen:* Dr. Eugen Wintenitz, *privat-docent* of Midwifery and Gynæcology, has been promoted to the rank of Extraordinary Professor.—*Turin:* Dr. Scipione Vinaj, of Modena, has been recognised as *privat-docent* of Hydrology.—*Vienna:* Dr. Alois Kreidl, Dr. Hans Rabl, and Dr. Karl Ullmann have been recognised as *privat-docenten* respectively of Physiology, Histology, and Dermatology with Syphilography. Dr. Siegmund Fuchs has been appointed Extraordinary Professor of Physiology. Dr. J. Bille has been appointed to take charge of the Dermatological Department of the Policlinic.—*Warsaw:* Dr. Edward Przewoski has been appointed Extraordinary Professor of Pathological Anatomy.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

TUESDAY, NOV. 23RD.

THE sixty-third session of the General Council of Medical Education and Registration was opened to-day in the offices of the Council, Oxford-street, London. Not only was the President, Sir RICHARD QUAIN, absent, but there were several vacant places around the table.

The Health of the President.

Sir DYCE DUCKWORTH said that perhaps he might be permitted in a very few words to express the feelings they all entertained at that moment on seeing the presidential chair unoccupied. They all knew the cause of their President not being there and he was sure they were all deeply sorry for it. They had at all events the satisfaction of knowing that though he was unable to be amongst them yet his mind was clear and keen and he was with them in spirit. He believed that their President was fully aware of every item of business that was down upon their programme and that he would be deeply interested in all they did. This was about the twenty-fifth meeting of the Council at which he (Sir Dyce Duckworth) had been present and he could not recollect a single occasion—and certainly not an opening meeting—at which Sir Richard Quain was not present in his place either as an ordinary member or as President of the Council. That was a remarkable record and they knew that Sir Richard had been for a longer period than that a member of the Council. In his absence he proposed that Sir William Turner, chairman of the Business Committee, occupy the chair. Members would all recognise that Sir William Turner, by his great business capacity, his urbanity, and his great knowledge of the affairs of the Council was well qualified to perform the duties of their chairman.

This proposition having been seconded and adopted Sir William Turner took his place in the chair and the business of the session proceeded.

Introduction of New Members.

Sir CHRISTOPHER JOHN NIXON, the successor of Sir JOHN BANKS in the representation of the Royal University of Ireland, was formally introduced by Dr. Bennett and took his place at the table.

Mr. VICTOR HORSLEY, the new direct representative for England in succession to Dr. Rentoul, was formally introduced by Dr. Glover.

Letter from the President.

Mr. ALLEN, the Registrar, read the following letter which had been received from the President—viz.:—

67, Harley street, London, W.,
Nov. 23rd, 1897.

DEAR COLLEAGUES,—I deeply regret that—though my health is improved—I cannot undertake the risk of presiding at your meetings during the present session, and if it be your pleasure I shall be glad if Sir William Turner, the Chairman of the Business Committee, will discharge for me the duties of the office. Since the last session of the Council, notwithstanding my illness, I have continued, with the valuable assistance of the officials of the Council, to give close attention to its business; and I think you will find on the present occasion that the various matters that will be placed before you are in as complete and forward a state as usual.

To some of the subjects that appear on the programme I should like to draw your special attention. It is a source of great satisfaction to me to be able to announce that some progress has been made with regard to the question of disciplinary or penal powers exercised by the various licensing bodies. Following the example of the University of Cambridge, the University of Durham has now obtained a Charter under which it has the power of taking away any degree from a graduate who has been convicted of a crime for which he has been sentenced to penal servitude or imprisonment. Similar steps, I am informed, are being taken by the Victoria University, its Court having decided to make an application for the necessary amendment of its Charter, so that in a very short time that university also will be in possession of extended powers. In Scotland, also, some further steps have been taken in regard to this question. The Edinburgh University Court has again considered the question of obtaining power to remove from the Roll any graduate who may be found guilty of a criminal offence or other misconduct; and the Court has decided to intimate to the other University Courts that while remaining of opinion that the difficulties of the question are very great it is willing to confer with the other universities and to appoint representatives to a joint committee which might report to the various Courts. The Court of the University of Glasgow also, on July 8th, 1897, adopted a

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memorandum in which it expressed its willingness to take joint action with the other Scottish Universities, and suggested to the Universities' Commissioners that although the Commissioners regarded the subject of additional disciplinary powers as not within their province it might be possible for them to leave on record in their final report an expression of opinion in regard to it; but in reply the Commissioners appear to have adhered to their former opinion and state that they have no Parliamentary powers to deal with the question nor any instructions to report upon it. The Universities of Aberdeen and St. Andrews will, no doubt, be prepared to adopt a course of action similar to that taken by Edinburgh and Glasgow. There is the one remaining case of the Royal University of Ireland, from which no information has been received as to any steps taken to obtain additional powers.

With regard to the new edition of the British Pharmacopœia, I have much pleasure in informing the Council that the arduous and important work of preparation that has now occupied about three years, is well-nigh finished. The work is now practically complete, every question of principle having been decided; and if the Council will accept the draft which will be placed before them in the course of the present session it will only be necessary to allow a short time for putting into action certain legal details, so that it might be confidently expected that the work may be published at an early date.

The Council will be aware that during the recess Dr. Rentoul, who had been elected as one of the Direct Representatives for England, suddenly resigned, and it became necessary to hold a new election. As many members of the Council were absent from home at the time the arrangements for this as well as the responsibility had to be entirely undertaken by myself. The election resulted, as members know, in the return of Mr. Horsley at the head of the poll.

The number of penal cases engaging the attention of the Council at the present session is larger than usual, but I have no doubt that the Executive Committee will be able to arrange that the hearing of these cases may interfere as little as possible with the consideration of educational and other equally important subjects. The question of medical aid associations has received the careful attention of the committee appointed to consider it. A report on the subject will be submitted to the Council, the evidence obtained by the committee having been already placed in your hands. Other important reports will also be presented by the Education Committee on the subject of preliminary examinations, by the Executive Committee on the resolutions of the Council in regard to the employment of unqualified assistants, and by the Dental Education and Examination Committee in regard to the recommendations of the Council to the dental licensing bodies.

Again expressing my regret at not being able to be with you at this session—the first from which I have been absent during a period of thirty-four years—and trusting that I have clearly indicated the nature of the business to be brought before your attention,

I remain, yours faithfully,

RICHARD QUAIN.

The CHAIRMAN said the members were aware that it had been the habit of the President to open the business of the session with an address, and that after the address had been delivered it had been moved that it appear on the minutes. This always had been agreed to. They had not to-day an address from the President, but they had the communication which had just been read, and he felt sure that he was speaking the sentiments of the Council when he proposed that this communication should appear upon the minutes. He should like to say that as chairman of the Business Committee he had been during this month and a portion of last in frequent communication with the President as to the arrangement of the business and he should like to bear out the statement that the President's mind was as intellectually active as ever it was and that he had got a thorough grasp of all the details of the business that had to come before them on this occasion. He should like also to state from the chair that he was sure the Council would deeply sympathise with the President in his enforced absence and in his prolonged illness. He moved that this communication be entered on the minutes.

Mr. TEALE seconded the motion, and it was at once adopted.

On the motion of Sir DYCE DUCKWORTH, seconded by Mr. BRUDENELL CARTER, it was agreed—

That in accordance with the desire of the President, expressed in his communication to the Council, Sir William Turner, the chairman of the Business Committee, be requested to discharge during the present session the duties of the chair.

The Service Examinations.

Statistical tables were received showing results of competitions—(*a*) for commissions in the medical department of the Royal Navy, held on May 17th, 1897; (*b*) for commissions in the Medical Staff of the Army, held in August, 1897; and (*c*) for commissions in the Indian Medical Service, held in July, 1897.

Dr. HERON WATSON, seconded by Sir RICHARD THORNE, moved:—

That the thanks of the Council be conveyed to the Director-General of the Medical Department of the Royal Navy, to the Director-General of the Army Medical Department, and to the Examining Board of the Medical Department of the Indian Medical Service for the statements they have respectively furnished to the Council of the degrees, diplomas, and licences of the candidates for commissions in those departments of Her Majesty's Service of the dates mentioned, showing the numbers of vacancies to be competed for, the numbers that did and did not pass, the number obtaining commissions, distinguishing the qualifications, both medical and surgical, under the several licensing bodies, and indicating the subjects in which those who did not pass were found to be deficient; with the request that these returns may in future be continued to be furnished to the General Medical Council.

Dr. GLOVER pointed out that the returns were conspicuous for the want of information as to the number of vacancies competed for. If they were to believe the newspapers the state of the Army Medical Department was alarming, and he thought that this Council was one of the bodies which should have most immediate, complete, and specific information as to the point. Therefore, although he did not propose to move any amendment, he could not thank the Director-General of the Army quite so much as he would have done had he given the Council a little more light. Perhaps a request might be made for more information on this particular point. As to the general information given it seemed to him very satisfactory. Judging from the rejections it did not appear by any means that men of inferior character came before either the navy or the army medical authorities.

Dr. HERON WATSON reminded Dr. Glover and the Council generally that these returns were a matter of favour and not of right. As to what they contained he thought that a good deal might be read in between the lines, and he could not help thinking that the returns might be of considerable value to the inspectors of examinations.

The motion was then agreed to.

Preliminary Education.

Dr. HERON WATSON, seconded by Sir RICHARD THORNE, moved:—

That it be remitted to the Examination Committee of the General Medical Council to consider and bring up a report during the present session upon the letter of date June 16th of the present year from the Director-General of the Army Medical Department, in which he conveys to this Council the expression of his regret that he is unable to accede to the request (namely, that he should notify to this Council where the preliminary examination in Arts has been passed and the date of such preliminary examination of any candidate who may have evinced marked deficiency in preliminary education on the occasion of his examination for admission to the Army Medical Department), as there are, to his mind, serious objections to dealing with this subject in the manner proposed.

Dr. Heron Watson said that in the letter there was an indication of what probably was the source of the objection of the Director-General, and he thought it would be well to have the matter discussed in committee in the first instance.

Sir DYCE DUCKWORTH said it would be a matter of considerable interest and usefulness if the Council expressed an opinion on this subject. The point was that this Council wished to reach the bodies who passed candidates in preliminary arts examinations under what must obviously be very insufficient conditions, and very few opportunities presented themselves of ascertaining what those conditions really were unless they had to deal with the examinations of candidates who had already got diplomas. The examining bodies entirely washed their hands of all responsibility in the matter and threw it upon the General Medical Council. They told the Council that it was its business to see that the candidates who enter the medical profession were properly prepared by undergoing a liberal education. If the Council put them upon the Register as medical students the bodies washed their hands of all further responsibility as to the general educational attainments of the candidates who presented themselves. They had thought that by discovering defects in candidates either for the Navy or the Army or the Indian Service they might bring home to the bodies that the examinations these candidates had passed must be of an inferior order. Some of the candidates sent in papers that were perfectly disgraceful, showing that any best in their case must have been altogether inadequate. They wished to get from the army and navy authorities some clue by which to reach the bodies who passed such candidates, and he was sure the examination committee would be glad to know what was the feeling of the Council on the matter. He thought the Council should go into the matter and that it was its business to investigate and supervise and be thoroughly satisfied as to the quality of the preliminary examinations.

Dr. MACALISTER endorsed what Sir Dyce Duckworth had said, adding that the Council ought to be able to trace the source of the preliminary education. At present they were hampered by some scruple on the part of the Director-General, but he thought that they should make another and vigorous effort to get at the root of the matter.

The motion was then adopted by the Council

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The Employment of Unqualified Assistants.

The Council agreed to receive and enter upon the minutes the following Report from the Executive Committee on the Council's resolutions on the employment of unqualified assistants pursuant to the following resolution:—

That it be referred to the Executive Committee to consider whether the Council's resolutions on the employment of unqualified assistants, as they appear in the advertisements inserted in the medical journals, may not with advantage be rendered clearer and more stringent.—Minutes, vol. xxxiv., p. 90.

REPORT BY THE EXECUTIVE COMMITTEE ON THE GROWTH OF OPINION OF THE GENERAL MEDICAL COUNCIL IN REGARD TO THE EMPLOYMENT OF UNQUALIFIED ASSISTANTS AND ON "COVERING UNQUALIFIED PERSONS."

(Prepared by Mr. BRYANT)

(1) On April 21st, 1883 (Minutes, vol. xx., p. 91), the General Medical Council passed the following resolution as proposed by Dr. CHAMBERS and seconded by Mr. SIMON:—

That the following resolutions, passed by the Council in Committee, be received and adopted:—

(*a*) That the Council ask for legislation to the effect that any registered practitioner practising for gain, who knowingly and wilfully deputes a person not registered or qualified to be registered under the Medical Act to professionally treat on his behalf, in any matter requiring professional discretion or skill, any sick or injured person, shall be subject to the same legal liabilities as a person who falsely represents himself to be a legally qualified medical practitioner, but with special proviso that such enactment shall not hinder any duly regulated training of pupils in medical schools or otherwise by legally qualified practitioners, nor the use of trained pupils in partially treating the sick or injured under the direction, supervision, and responsibility of such practitioners, nor any legitimate employment of nurses, midwives, or dispensers.

(*b*) That communications be entered into by the Council with the Registrar-General with the view of procuring such amendments of the Registration Act of England as will diminish the present frequent evasions of the Act in the certification of causes of death.

(*c*) That the Council record on its minutes, for the information of those whom it may concern, that charges of gross misconduct in the employment of unqualified assistants, and charges of dishonest collusion with unqualified practitioners in respect of the signing of medical certificates required for the purposes of any law or lawful contract, are, if brought before the Council, regarded by the Council as charges of infamous conduct under the Medical Act.

(2) On Nov. 20th, 1886, the Council determined that steps be taken with a view of making the above resolution more public; accordingly, on July 25th, 1887, the Executive Committee ordered it to be inserted twice at an interval of a month apart as an advertisement in the medical journals.

(3) On Nov. 24th, 1887, a case of the misemployment of an unqualified assistant was brought before the notice of the General Council and adjudicated upon; and the registered practitioner concerned, having been informed of the grave disapprobation with which the Council regarded his conduct, promised at once to discontinue the practice condemned.

(4) On Nov. 26th, 1887, the General Medical Council passed the following resolution:—

That it be referred to the Executive Committee to consider under what circumstances a registered medical practitioner would render himself liable to the censure of the Council in reference to the employment of unqualified assistants.

(5) On Feb. 27th, 1888, the Executive Committee, pursuant to this resolution, without attempting to make a formal definition of the misconduct in question, reported to the General Council that, in its opinion,—

A registered medical practitioner would render himself liable to the censure of the Medical Council in case of the employment of an unqualified assistant in the practice of medicine, surgery, or midwifery on behalf and for the benefit of such registered practitioner, either in complete substitution for his own services or under circumstances in which due personal supervision and control are not, or cannot be, exercised by the said registered practitioner.

The Executive Committee also stated, in reference to the procedure known as "covering," that in its view a registered practitioner covers an unregistered person when he does, or assists in doing, or is party to, any act which enables such unqualified person to practise as if he were duly qualified.

(6) On May 24th, 1888, the Council found and declared that the offence of "covering" had been proved against a practitioner brought before it; but on the defendant's admission that he had inadvertently committed that offence, his statement that he had discontinued the practice, and his promising not so to offend again the Council passed thereon this further resolution:—

That A—— B—— having expressed his contrition at having followed a course of conduct which the Council had declared to be most gravely wrong, and having stated that he had altogether ceased to pursue, and would pledge himself not to resume such conduct, and having then prayed for a merciful consideration of his case by the Council, the Council, in view of all the circumstances of the case, does not see fit to proceed further in the matter beyond requesting the President to admonish him most seriously.

The President communicated to A. B. the foregoing resolution and also admonished him seriously as to the exceeding gravity of his conduct.

(7) In November, 1888, four other cases were brought under the notice of the General Council, and the offence of "covering" having, after careful consideration, been proved in two of the cases, the names of the two practitioners thus found guilty of "infamous conduct in a professional respect" were, by the Council's orders, erased from the Medical Register.

(8) In May, 1891, the General Council directed the removal from the Medical Register of the name of a practitioner who had been summoned to appear and was found guilty of infamous conduct in a professional respect on the following charge:—

That he had continuously throughout the year acted as cover to a person who was not registered or qualified to practise as a registered medical practitioner, that is to say, that he had in concert with the said person, and by permitting him the use of his name, enabled him improperly to practise and sign medical certificates as if he had been a duly qualified registered medical practitioner.

(9) In November, 1891, two practitioners were also summoned, and after consideration their names were respectively erased from the Medical Register on the following charge:—

That he, being a registered medical practitioner, caused and enabled a medical practice to be improperly carried on in his name and for his benefit by means of the employment of an unqualified person, in which medical practice so carried on there was gross misconduct and culpable neglect of patients.

(10) In May, 1892, the General Council directed the removal from the Medical Register of the names of two practitioners who, having been summoned to appear, were found guilty of infamous conduct in a professional respect on the following charge:—

That they systematically permitted and enabled an unqualified person, under cover of their names and qualifications, to attend and prescribe for patients on his own responsibility in all respects as if he were duly qualified, to the detriment of persons who applied for medical aid at the places where such medical practice was carried on.

(11) In November, 1893, a registered practitioner was found guilty by the General Council of infamous conduct in a professional respect and his name erased from the Medical Register on the following charge:—

That, being a regular medical practitioner, he had continually during the years 1891 and 1892 acted as cover of and by his presence and assistance had enabled an unqualified person to carry on a medical practice as if he had been duly qualified.

Also that during the period aforesaid he habitually signed and gave certificates of vaccination, illness, and death in cases in which the said person had attended and he had not attended, and empowered the said person to sign his name to such certificates in cases attended by the unqualified practitioner and not by him, thereby enabling him to practise as aforesaid.

(12) On May 26th, 1893, the Council, after considering the report of the Medical Aid Associations Committee, passed a resolution to the effect that the rules already laid down by the Council as to "covering" unqualified assistants should apply to medical officers of medical aid associations in respect of any unqualified persons whom an association may have engaged to assist them (vol. xxx., p. 64).

(13) In May, 1894, three further cases were considered by the General Council of registered practitioners who had lent their presence, advice, and assistance to enable unqualified persons to attend patients and recover charges therefore as though legally qualified, and after they had been summoned before the Council and, the charges proved, their names were erased from the Medical Register.

(14) On Nov. 27th, 1896, a practitioner from Wales was summoned before the Council for the offence of covering, when the President informed him that the charge had been proved to the satisfaction of the Council and that the services of all unqualified assistants must be dispensed with, and further stated that the Council wished it to be known by all practitioners in the district that the employment of such assistants in the practice of medicine, surgery, and midwifery would meet with its strong condemnation.

(15) On Nov. 27th, 1896 two practitioners from the county of Durham were summoned before the Council on charges of covering, when it was made clear to the Council that in this colliery district the custom of employing unqualified assistants was not only general but that the district registrar of that part of the country habitually received from unqualified persons "notes or information" informing him

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of the fact and cause of death and completed the registration in respect of the cause of death in the register without requiring a certificate of the cause of death signed by a registered medical practitioner; and, moreover, that this "information" was used in extracts granted to club officials in order that their members might obtain their club money.

(16) The General Medical Council having now had this question of the illegitimate employment of unqualified assistants before them for fourteen years, and that of "covering unqualified persons" for more than ten years; and having, by frequent advertisements in the medical papers during these last ten years, by censures in some cases and removals from the Register in other cases of a graver nature, proved to the members of the medical profession their entire disapproval of the employment of an unqualified assistant in the practice of medicine, surgery, or midwifery on behalf and for the benefit of such registered practitioner either in complete substitution for his own services, or under circumstances in which due personal supervision and control are not, or cannot be, exercised by the said registered practitioner (Feb. 27th, 1888); and having also made it widely known that they regard the practice of "covering" as "infamous conduct in a professional respect,"—the procedure known as covering having been defined by the Executive Committee as follows: "That, in its view, a registered practitioner *covers* an unregistered person when he does, or assists in doing, or is party to, any act which enables such unqualified person to practise as if he were duly qualified" (Feb. 27th, 1888),—

The Council now give notice that on and after Jan. 1st, 1900, the employment of any unqualified assistant in the practice of medicine, surgery, and midwifery will be treated as an offence under the Medical Act, and may be regarded as "infamous conduct in a professional respect," but with special proviso that such resolutions "should" not hinder any duly regulated training of pupils in medical schools or otherwise by legally qualified practitioners, or the use of trained pupils in partially treating the sick or injured under the direction, supervision, and responsibility of such practitioners, or any legitimate employment of nurses, midwives, or dispensers.

May, 1897. T. BRYANT.

APPENDIX.

Amendment of the Resolutions of the General Medical Council on the Employment of Unqualified Assistants as formulated by Dr. MACALISTER at the request of the President.

NOTICE.

EMPLOYMENT OF UNQUALIFIED PERSONS AS ASSISTANTS OR OTHERWISE.

Whereas it has from time to time been made to appear to the General Medical Council that some Registered Medical Practitioners have been in the habit of employing as assistants in connexion with their professional practice person who are not duly qualified or registered under the Medical Acts, and have knowingly allowed such unqualified persons to attend or treat patients in respect of matters requiring professional discretion or skill, and whereas in the opinion of the Council such a substitution of the services of an unqualified person for those of a registered medical practitioner is in its nature fraudulent and dangerous to the public health, the Council hereby gives notice that any registered medical practitioner, who is proved to have so employed an unqualified assistant is liable to be judged as guilty of "infamous conduct in a professional respect" and to have his name erased from the Medical Register under the 29th Section of the Medical Act, 1858.

Further, in regard to the practice commonly known as "covering," the Council gives notice that any registered medical practitioner who, by his presence, countenance, advice, assistance, or coöperation, knowingly enables an unqualified or unregistered person (whether described as an assistant or otherwise) to attend or treat any patient, to procure or issue any medical certificate or certificate of death, or otherwise to engage in medical practice as if the said person were duly qualified and registered, is liable to be judged as guilty of "infamous conduct in a professional respect" and to have his name erased from the Medical Register under the said enactments.

But the foregoing notices do not apply so as to restrict the proper training and instruction of *bonâ fide* medical students and pupils or the legitimate employment of dressers, dispensers, and surgery attendants under the immediate personal supervision of registered medical practitioners.

The Executive Committee having considered this subject as set forth in the foregoing statement on the growth of opinion in regard to it, and having considered also the proposed alteration of the Council's resolution drafted by Dr. MacAlister and entered in the appendix, directed that paragraph 16 of the foregoing report should be published annually in the medical journals in lieu of that now inserted.

Mr. BRYANT at the request of the CHAIRMAN read in full the portion of the report to which his signature was attached.

Dr. MACALISTER then read the appendix. He explained that having gone through Mr. Bryant's memorandum on the action of the Council he drew up the appendix and sent it to the President, who made some suggestions. Thereafter it was submitted to the lawyers of the Council, who accepted it with one or two verbal alterations. Then it went to the Executive Committee and this committee had apparently not reported upon it but had merely given it as an appendix to their report. He did not see how paragraph 16 of Mr. Bryant's memorandum could be regarded in the character of a notice and used as such because it could not be read without some context which was not supplied. Therefore he preferred the notice in the appendix.

The CHAIRMAN pointed out that the last paragraph in the report mentioned a date which the appendix did not. He thought there surely should be some notice or warning given.

Dr. MACALISTER said he was not at all sure about the warning because everything dealt with in this notice had been dealt with by this Council; there were precedents for every case that would come under this notice in the previous action of the Council. It was an unmistakable statement of their present stand in the matter that was wanted rather than any extension of legislation, and in that case he saw no need for notice. He moved: "That the notice to be inserted as an advertisement in the medical journals be that set forth in the appendix to the Executive Committee's report."

Dr. BRUCE seconded this motion.

Mr. TEALE said he was strongly in favour of the proposition in the report to name the first day of the year 1900 because he could not help regarding this as a new departure. In the previous definitions of the Council they had left a considerable margin between what was legitimate and what was illegitimate. He thought, too, that the matter of pupilage would have to be dealt with, and if necessary he would propose a rider to the motion.

Sir RICHARD THORNE said it seemed to him that in some respects Dr. MacAlister's motion was distinctly clearer than the proposal which stood above the signature of Mr. Bryant, because the latter implied that up till 1900 the Council would go back upon its present practice in regard to these matters.

Mr. BROWN said that having regard to the present practice of the Council he did not see any necessity for giving notice. The Council would be able to consider the merits of each case as it came up, and if mercy should be shown then no doubt it would be shown. He thought something should be inserted relating to the employment of midwives.

Dr. LOMBE ATTHILL supported the view that dates should be left out of the motion altogether.

Dr. HECTOR CAMERON, as the member who seconded the resolution by which this subject was referred to the committee, agreed entirely with Dr. MacAlister that the notice which the latter had drawn up was much more explicit and clearer than that which the Executive Committee proposed to advertise. But he further agreed with Mr. Teale that they ought to do two things. They ought to allow a little time before their intention became operative and they ought to make it clear what really was a pupil in contra-distinction to an assistant. What made it necessary for them to allow time was that the Council approved of the employment of unqualified assistants where such employment did not mean "covering." When that was so practitioners who had unqualified assistants should be allowed a year or two to make arrangements for carrying on their business. He should be disposed to support such a rider to the motion as Mr. Teale had drafted.

The CHAIRMAN thought it was as well that the Council should hear what the proposed rider was. It was this:—

That the decision and definition of the Council be issued to every medical practitioner on the Register and that the definition of a "pupil-assistant" as approved by the Council be: A medical student in whose case not more than six years has elapsed since his registration as a medical student.

The Council would need to pass Dr. MacAlister's motion before they dealt with this rider.

Dr. MCVAIL considered that the rider made more definite what Dr. MacAlister required in the last paragraph of his proposal. That was to say, he defined a medical student in such a way as to make it clear what a *bonâ-fide* medical student was. If Dr. MacAlister accepted the rider he (Dr. McVail) thought they might unanimously take the motion, after accepting which they could consider the question of the year in which it should become operative.

Dr. MACALISTER wished the motion to be taken on its own merits.

Mr. BRYANT liked Dr. MacAlister's motion better than the paragraph 16 which the Executive Committee suggested should be advertised, and he looked upon the proposed rider

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as also remarkably good in so far as it admitted no man to act as an unqualified assistant after his name had appeared for more than six years in the Students' Register.

Sir RICHARD THORNE asked Dr. MacAlister to explain why "midwives" did not appear in his motion seeing that the term occurred in the original resolutions of 1883.

Dr. GLOVER wished to know whether Dr. MacAlister was prepared to differentiate between pupil and unqualified assistant.

Dr. MACALISTER, in reply, adverted to an objection taken to the term "unqualified or unregistered person." He pointed out that there were some persons—lawyers—who held that "qualified" and "registered" were not synonymous, and therefore it was necessary to use the two words. With regard to "midwives" he thought that word was in his original draft of the motion and must have dropped out in the course of revision by their President and legal adviser. He saw no reason why "midwives" should not be in and he should now ask that the word be inserted. With regard to pupils the motion had it that the notices were not to apply so as to restrict the proper training and instruction of *bonâ-fide* medical students and pupils. Clearly a distinction of a practical kind between pupil and unqualified assistant was whether the man paid for his instruction or was paid for his work. That seemed to him to be a practical test, but he could not put it in his motion, which he should like to see accepted. If the Council did pass it they could consider the question of the time at which it should become operative.

The motion was amended by the insertion of the word "midwives," and on then being put was carried unanimously.

The CHAIRMAN said they had now to deal with Mr. Teale's proposed rider, but it seemed to him that it consisted of two distinct parts, and that the second, which contained the definition referred to in the earlier, should be first dealt with.

Dr. MACALISTER wished to point out that it was proposed to define a word which did not occur in the resolution just passed. What was a pupil-assistant?

Dr. BATTY TUKE suggested that to make such an alteration as the definition proposed would land them in a somewhat dangerous position. The average number of years between registration as a student and as a practitioner was six and a half, and if six years were, as proposed, adopted now they would be interfering with the average student.

Dr. GAIRDNER'S opinion was that six years was a matter that required very much attention.

Dr. LEECH said that the adoption of such a period would cut off very many of their best men who in the middle of the course went two or three years to science and then returned to complete the medical course. It would be a great mistake to accept the proposal.

Sir RICHARD THORNE suggested that seven years should be substituted for the six proposed.

Mr. TEALE and Dr. HECTOR CAMERON were quite willing to accept this suggestion.

Sir PHILIP SMYLY looked upon the rider as proposing something contrary to the Council's regulation permitting six months of the fifth year of study to be spent with a registered practitioner. Surely nothing should be done that would interfere with that regulation. He objected altogether to the use of the term "pupil-assistant," which had never been used before.

On the motion of Dr. BATTY TUKE the debate was adjourned.

The Council adjourned.

WEDNESDAY, NOV. 24TH.

The Council resumed to-day, Sir WILLIAM TURNER acting as chairman.

The President's Health.

Mr. H. E. ALLEN, the Registrar, read a letter, dated Nov. 24th, from Sir Richard Quain, asking him to be so good as to express to the Council the President's feeling of heartfelt gratitude for the previous day's resolution of sympathy with him which had been a source of much comfort. The President was happy to say that he was much better since his return from the country a few weeks ago.

On the motion of Mr. BRYANT, seconded by Dr. BRUCE, the communication was entered on the minutes.

Resignation of Dr. Wm. Moore.

The CHAIRMAN said that he had received a communication from the President on another subject. The Council would have noticed the absence of Dr. William Moore, one of the Irish representatives. Dr. Moore was in very bad health. He had intimated to the President some time ago that he feared he would have to retire from the Council, but at that time he had not actually intimated that he did retire. Dr. Moore had since been telegraphed to on the subject, and a telegram had been received in reply which the President took to intimate his resignation. The appointment of a successor lay with the Privy Council, to whom the resignation had been made known.

Employment of Unqualified Assistants.

Mr. BRYANT stated that he wished to correct the last paragraph of the Executive Committee's report in regard to the employment of unqualified assistants by the insertion of the word "formally" so as to make the first line read:—"The Council now formally give notice," &c.

Dr. MACALISTER wished to correct a mistake in the last paragraph of the "notice" which had been adopted by the Council. The word "and" between the words "*bonâ-fide* medical students" and "pupils" should be not "and" but "as."

Debate was resumed on that portion of Mr. TEALE'S rider to Dr. MACALISTER'S resolution which was under discussion at the adjournment on Tuesday, viz.:—

That the definition of pupil-assistant, as approved by the Council, be—"a medical student in whose case not more than seven years have elapsed since his registration as a medical student."

Dr. BATTY TUKE said he objected to this definition because it would exclude a certain number of medical students from a line of study which was approved of by the Council. The average period of medical students' study was six and a half years, and a table which he held in his hand showed that a considerable number of men took more than seven years to complete their course. He thought it was extremely dangerous to attempt to define in the present instance. It was absolutely impossible for them to foresee what possible dodges and subterfuges would be introduced to get behind such a definition as that proposed. It seemed to him that the position was sufficiently well-guarded in the "notice" which it was proposed to send out to the medical practitioners of the country. That declared that, "Whereas it has from time to time been made to appear to the General Medical Council that some registered medical practitioners have been in the habit of employing as assistants in connexion with their professional practice persons who are not duly qualified or registered under the Medical Acts, and have knowingly allowed such unqualified persons to attend or treat patients in respect of matters requiring professional discretion or skill." He thought that sufficiently defined the position. The correction made by Dr. MacAlister a few minutes since was intelligible and satisfactory, but the question would arise as to what a *bonâ-fide* student was. For his part he thought a definition would be arrived at by the decision given in a case or cases that would come before the Council. Meantime he objected to the term "pupil-assistant." It was entirely new and was one which in itself was dangerous. For such reasons he could not vote for Mr. Teale's proposal.

Mr. BROWN: Do you propose an amendment?

Dr. BATTY TUKE: No.

Sir CHRISTOPHER NIXON quite agreed with Dr. Tuke in objecting to the introduction in the proposal of a new term. He thought that as it stood at present the term "pupil-assistant" was simply a synonym for "unqualified assistant" and because of that it seemed to him to be very objectionable. He took the strongest view that this Council should do all in its power to stop the notoriously infamous practice of employing unqualified assistants, and what he was afraid of was that if the rider was adopted it would simply provide facilities to enable practitioners to proceed in the very line of conduct which the Council condemned because they would provide the general practitioner with assistants which they recognised in the most formal way. If they established a rule allowing the employment of pupil-assistants for two years he did not think they would be able to obtain the conviction of any man for the use of students as assistants unless they had it clearly defined that the students did not work for salary.

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Dr. MCVAIL was prepared to support the rider almost for the very reasons that were to induce Sir C. Nixon to vote against it.

Dr. ATTHILL, who intended to support the rider, asked if it would be possible to alter the term "pupil-assistant" which did not appear in the resolution adopted on Tuesday. He suggested that they should take "registered medical student" instead.

Dr. MACALISTER thought that in future a man would have to produce a great deal of proof before they believed that an unqualified assistant was only a student. The last clause of the resolution the Council had adopted was not one for allowing students up to seven years of studentship to go as assistants. The clause was a negative one. It said unqualified assistants would not be allowed, but it did not put any restriction on the instruction of students; it did not encourage the use of students for the purpose of gain. If a practitioner alleged that his assistant was a student he would have to prove it. The onus of proof should be on him and the Council should not in any way assist him to prove his allegation. A great many unqualified assistants were not students, but if the rider proposed were adopted what was to prevent any of these men entering themselves as students to-morrow and thus getting seven years in which they might assist a practitioner, who at the end of that period would find another man to register and act with him for another seven years? The rider would manufacture a supply of the men they wanted to get rid of. They should avoid the mistake Parliament found it had made in providing that the *bonâ fide* traveller was a man who had walked four miles. They should leave definition alone at present and let the *bona fides* be proved when a case came before them.

Mr. BRUDENELL CARTER agreed that the best way of dealing with this question was to leave it in such a state of indefiniteness that the discretion of the Council should be exercised on every case that arose.

Dr. GLOVER, while feeling that it was very difficult to arrive at a satisfactory definition of the kind of pupil that they approved and the kind that they disapproved, could not agree with Mr. Carter in prolonging indefiniteness. There should be some definition. If there was to be any improvement in the Council's penal procedure—if there was to be any effective stop put to a great evil—there must be precision of language in their pronouncements. That they should furnish such precision would not only be just to the practitioner but kind to the student. He did not think the period of seven years the rider provided was long enough, but if they made it ten years that would remove a great deal of the objection to the proposal.

Sir RICHARD THORNE said that he suggested on Tuesday that the period should be lengthened from six years to seven, but he was bound to say that as a result of the discussion of to-day he would rather not vote on the proposal at all.

Dr. GAIRDNER would rather not have the rider at all. He agreed that they should leave each case to be decided on its own merits. The time limit in his view was a hopeless one.

Sir WILLIAM THOMSON was prepared to contend that as soon as a fifth-year student completed his six months' instruction under a registered practitioner he became an unqualified assistant, and there would be a certain amount of protection to the public and the profession if this were set out properly by the Council. The "notice" did not sufficiently do what was necessary.

Mr. HORSLEY felt that he ought not to give a silent vote against the rider. He felt very strongly as had been said by other members of the Council that they were discussing something which did not exist, viz., the pupil-assistant. If that were so he suggested that the discussion was hardly in order. At any rate he would deprecate the further discussion of such a thing as a pupil-assistant. But he thought that the general practitioner should have some help in understanding the paragraphs of the "notice." Accordingly he would suggest that when they came to discuss the second part of the rider Mr. Teale should accept a modification to the effect that the decision of the Council and an explanatory statement relating thereto should be furnished to every practitioner on the Register. That, he thought, would be only just to all concerned.

Mr. TEALE said he felt that the Council were now taking a new departure. If they read the original resolutions of 1883 he thought that they would agree with him that that was so. They were now going to say that practitioners should not use unqualified assistants at all and were trying to draw the line between unqualified assistants and pupils. When they were taking this new departure he was anxious that the Council should let the profession know what they wanted. It had struck some of them that they might draw the line between the students and the unqualified practitioner in some such way as he had suggested, but he must say that although he was proposing this motion he was now convinced that they would land themselves in difficulties if the Council passed it. Therefore if the Council allowed it he would withdraw the proposal.

No objection being raised, the proposal was then withdrawn.

Mr. TEALE thereupon moved:

That the "notice" adopted by the Council in reference to the employment of unqualified assistants be issued to every medical practitioner on the Register, and that a copy thereof be given to every person who is about to have his name entered upon the Medical Register.

He said that the Council's notice at present was by advertisement. He himself had neither seen it in the medical journals nor had he read it, and he believed many members of the profession had like himself never seen it. Consequently, when men were before the Council and pleaded ignorance he had felt that they had rather a strong point against the Council for not taking the proper means to make the profession acquainted with their wishes and requirements.

Sir DYCE DUCKWORTH had some sympathy with this view. Their advertisement ought to get a better place in the medical journals than was given to it.

The proposal was adopted.

Mr. TEALE next moved:

That when the announcement of the decision of the Council as to the entire disuse of unqualified assistants, with the exception as to the instruction of *bonâ-fide* medical pupils, an intimation be issued that the Council will act on this decision in any case which occurs after Jan. 1st, 1900.

Dr. CAMERON seconded.

Dr. GAIRDNER could not see any reason for making any limit at all. They had declared that a certain thing was fraudulent and dangerous to the public. Were they to say that they were going to give a close time up to 1900?

Mr. TEALE felt strongly that as they were taking a new departure they ought to take the course suggested in his motion.

Dr. MACALISTER absolutely objected to any time limit. They did not require to give notice. They could deal with bad cases now and they could begin to deal with fresh cases that might arise under the new "notice" when they liked.

Dr. CAMERON pointed out that in proposing 1900 the movers were only following the course suggested by the Executive Committee.

Dr. MACALISTER: But that was not adopted.

After a few remarks by Dr. BRUCE, the Council divided, when 3 voted for the motion and 23 against it. The motion accordingly was rejected.

Members' Speeches.

On the motion of Dr. MACALISTER, the Council received and entered on the minutes a report from the Executive Committee, which stated that the committee had considered the resolution of May 31st, and were not prepared at this time to recommend the Council to adopt a standing order to limit the length of speeches. The resolution in question was as follows:—

That it be referred to the executive committee to consider and report whether it would be desirable for the Council to adopt a standing order to the effect that no member of the Council, other than the President or the chairman of a committee introducing a report, shall speak to any motion for more than ten minutes without the permission of the Council being asked from the chair, and granted by resolution moved, seconded, and put without debate.

AN INFORMAL PETITION.

On the motion of Dr. MACALISTER the following report was received and entered on the minutes:—

The Business Committee beg leave to report as follows:

They have had laid before them copies of a petition headed "Registered Practitioners of Great Britain and Ireland to the General Medical Council," signed by fifty-three persons in all. Under Standing Order VII., 16, "No petition shall be received by the Council which is reported ..... to refer to more than a single main question." The

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petition under consideration refers to ten or more main questions relating to the powers of the Council, to the ethics of the medical profession, and to proposals for medical legislation in various directions. The Committee accordingly report that the petition is not in accordance with the standing orders and is thus excluded from being received by the Council.

Mr. BROWN, suggesting that the petition must have been drawn up in ignorance of the standing orders, asked the Council to waive their standing orders in this instance and receive a deputation from the petitioners, who would address themselves to one single main question.

Sir WILLIAM THOMSON seconded a formal motion to that effect which Mr. Brown handed to the chairman.

Dr. MACALISTER objected that this motion consisted of two parts. A motion for the suspension of standing orders ought to be a separate proposal.

Mr. BROWN moved that the standing order that prevented the petition being received be suspended.

The original proposal was not withdrawn and this new one was not seconded.

Sir RICHARD THORNE thought the procedure in the case was most inconvenient. They were, he said, proceeding to suspend a standing order on a matter of which they knew nothing.

Mr. BRUDENELL CARTER pointed out that there was nothing before the Council about receiving a deputation.

The REGISTRAR, in answer to Mr. Brown, said that a letter asking that a deputation should be received had reached him, but the time had not arrived for considering it. It must be dealt with by the business committee.

Dr. MACALISTER hoped the Council would not suspend the standing order. If any number of practitioners had a grievance on which they wished to address the Council on a single point the Council were willing to receive them. But in this case it seemed to him that the first thing the petitioners should have done was to inform themselves as to what were the Council's standing orders in the matter.

As only two members voted in support of it Mr. Brown's proposal was rejected.

An Application for Restoration to the Register.

The following report was brought up:—

The Executive Committee have considered the application of John Melvin Campbell, Lic. Soc. Apoth. Lond. 1873, whose name was removed from the Medical Register on May 23rd, 1894, and have ascertained that the applicant has complied with the standing orders. The Committee, having considered the case and accompanying certificates, recommend the General Council to restore the name and qualification of John Melvin Campbell to the Medical Register.

Mr. BRYANT moved the adoption of the Committee's recommendation, and Mr. BRUDENELL CARTER, in seconding, said that he felt at the time the name of Mr. Campbell was removed from the Medical Register that the case was of such a kind that his name might be restored in two or three years. He had communicated his impression to the Apothecaries' Society so that they might leave him in such a position that he might apply for restoration. Mr. Campbell still possessed the qualification.

Mr. HORSLEY drew attention to the difference of procedure adopted by licensing bodies in cases such as that before them.

Mr. BRUDENELL CARTER stated that the Licentiates of the Apothecaries' Society stood in a different position from those of many other licensing bodies. The Apothecaries' Society, although having the power to remove a qualification, had no power to restore it. Other bodies could restore a qualification that had been removed.

Dr. MACALISTER remarked that the only thing the Society could do was to strike a man's name off the list of Licentiates. That had been done in this case, as in reply to a letter from the Council's registrar, Mr. Upton, of the Apothecaries' Society, had replied that the name of Mr. Campbell was struck off the list of the Society's Licentiates on June 21st, 1894.

Dr. BATTY TUKE said there was something mysterious about this case. They did not know all the facts. The executive committee were not aware that the man's name had been struck off the list. Was the executive committee going to recommend that a man without a qualification at all was to be put on the Medical Register?

The CHAIRMAN pointed out that Mr. Upton's letter also stated that although Mr. Campbell's name had been removed from the list of Licentiates he still held the Society's qualification, the Society having no power to cancel a qualification.

Mr. BROWN suggested that the Society should move first in this instance, and restore Mr. Campbell's name to their list of Licentiates.

Mr. BRUDENELL CARTER: They cannot do it.

The CHAIRMAN: By the Act power is given to strike off from the list of Licentiates, but no power is given to restore.

Mr. HORSLEY: What justification is there for Mr. Upton's statement that a man may still retain his qualification although his name is removed from the list of Licentiates?

Dr. MACALISTER thought they should not proceed further with this case until their legal adviser was present.

This seemed to be the feeling of the Council and the usual adjournment for tea then took place.

When business was resumed Mr. CARTER made a further short statement with regard to the legal position of the Apothecaries' Society in relation to its Licentiates.

The Case of Robert Masters Theobald.

The Executive Committee reported that having considered the application made by Robert Masters Theobald to be restored to the Medical Register from which his name was removed on Dec. 3rd, 1894, they recommended the Council that, as he had no registrable qualification, it was not in the power of the Council to restore his name to the Medical Register.

Mr. BRYANT, seconded by Dr. MACALISTER, moved the adoption of the recommendation. The former stated that in this case the diploma had been given up so that no question arose.

The recommendation was agreed to.

The Midwives Question.

The REGISTRAR read the following report on this subject—viz.:—

The Executive Committee inform the Council that they have received the following report from the Midwives Registration Bill Committee:

"The Midwives Registration Bill Committee beg leave to report to the Executive Committee that, having regard to the letter from the Privy Council Office of Nov. 20th, 1897, they are of opinion that there is no necessity for them to submit any observations to the Council on the Bill of last session.

"They are further of opinion that it is desirable that the Council should appoint a committee to report on any Bill for the registration of midwives that may be introduced during next session of Parliament and that may be referred to the Council by the Government.

"Nov. 22nd, 1897." "RICHARD T. THORNE, Chairman.

On the motion of Mr. BROWN there was added to the report the letter of Sir Charles Lennox Peel, which was to this effect: "I have submitted to the Lord President of the Council your letter of the 13th inst. on the subject of the Midwives Registration Bill of last session, and in reply I am directed by his Grace to state for the information of the General Medical Council that there would appear to be no necessity for the Council to consider the provisions of the Bill until it is re-introduced."

Sir RICHARD THORNE moved that the Council adopt the report and appoint the present Committee to report upon any Midwives Registration Bill which might be submitted to the Council by the Lord President before or during the present session of Parliament.

Dr. GLOVER seconded this motion.

Mr. HORSLEY said that he thought the functions of the Council in this connexion were to do something more than merely alter Bills sent down by the Privy Council, and he thought the letter of Sir Charles Lennox Peel showed that the Privy Council expected something more. He would suggest that the Committee be appointed to watch the progress of the Midwives question.

Sir RICHARD THORNE said he did not think it would be possible for such a Committee as this, composed of members from all parts of the kingdom, to watch the progress of the question.

Mr. HORSLEY pointed out that watching committees were frequently appointed by other bodies when legislation was in active progress or was threatened. Upon this subject they were threatened with legislation, and it might be necessary for this Council not merely to report upon any given Bill but to tell the Privy Council how far any legislation on

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the subject interfered with the existing Medical Acts. He moved in accordance with his suggestion.

Dr. BRUCE seconded the motion.

Mr. BROWN expressed the opinion that the motion of Sir Richard Thorne would meet the whole case.

Mr. CARTER said it would be a wholly new departure for this Council to take anything that could be looked upon as an initiative step with regard to midwifery. They had never regarded the question as falling within the proper limits of their activity except in so far as they had responded to an appeal made to them by the Government for their opinion as a medical body upon particular propositions. It was not for the Committee to discuss general questions, because these would afterwards have to be discussed by the whole Council if they were discussed at all.

After some further discussion Mr. Horsley withdrew his motion, and the motion of Sir RICHARD THORNE was agreed to.

On the motion of Mr. BROWN, seconded by Dr. GLOVER, the name of Mr. Horsley was added to the list of the Committee to take the place of Dr. Rentoul.

Dr. MCVAIL then moved:—

That the General Medical Council is of opinion that the practice of midwifery cannot be safely entrusted to persons who have a less knowledge of midwifery and of medicine and surgery than is required for admission to the Medical Register.

This, he said, was in his opinion a fitting opportunity for the Council to give a clear expression of opinion upon this question which had been exciting so much attention. To do so would be of very considerable assistance to the Government and to any Members of Parliament who might be induced to introduce a new Bill, and it would lighten the labours and clear the way of the Committee of the Council on the subject.

Dr. GLOVER, rising to a point of order, asked whether such a motion as this, inconsistent as it was with the resolutions of the Council, was in order.

The CHAIRMAN replied that he was not prepared to rule the motion out of order.

Dr. MCVAIL continuing said that the main point he wished to emphasise was that the intention of those who were promoting this legislation was to create a new class of practitioners, a class of persons who would independently conduct midwifery cases. Both Bills applied to women only, but it was perfectly certain that the matter would not rest there. There were throughout the country a great many men who had gone through a part of the medical curriculum and who had been attending cases of midwifery for a long time. This Council had been endeavouring to put down this class and were they now to open a door for them? Were they to say to men of that kind that while they were not fit to enter the profession they could go and join this inferior class of practitioners even though they happened to be men. If they said they were not to do that then they were going to exclude from this grade the very people who were of all others the most competent to meet the requirements of the situation—men who had got a certain amount of surgical and medical training and who had had great experience in midwifery cases. Not only so, but practitioners so admitted, whether men or women, would unquestionably seek to extend the bounds of their work and would begin to treat the diseases of women and of children. They would gradually come to be practitioners upon whom the mothers in the poorer classes of society would depend for advice in connexion with themselves or their offspring. Severe tests were now imposed upon dentists, but would anybody contend that the responsibility of a dentist was to be compared with that of a person who attended a case of midwifery. In all these proposals women were to be entitled to attend cases without the supervision of a medical man. When one of the Bills was being discussed by this Council he proposed that there should be an amendment to provide for the supervision of a medical practitioner, but the proposal was rejected. The statement was made that every year in England and Wales 500,000 women were attended by midwives, but was that to cause this Council to completely disunite the three great medical sciences which were united for them finally in the Act of 1886? Could this great country not meet the wants of these 500,000 women by securing for them through the means of the various boards of guardians and parochial boards the attendance of registered medical practitioners? The profession, they were told—and no journal told them more persistently than THE LANCET—was becoming overcrowded. If that were so, then surely the profession could undertake this extra work, and he thought there could be no higher duty for the Government than to give assistance to women in these circumstances. He did not object to a system of registration for midwifery nurses, but he objected to the creation of a body of practitioners who would without medical supervision undertake the management of midwifery cases and rely upon their judgment alone for their treatment. It might be said that what he proposed would be unfair to women but he would remind the Council that women were now admitted to the medical profession practically on the same terms as men. If women desired to follow midwifery as a profession they could enter the profession in the ordinary way.

The CHAIRMAN said he would suggest that the Council should not go into the question of midwives against midwifery nurses or women medical practitioners. He thought they should confine themselves to the discussion of the general question which was raised by Dr. McVail's motion.

Dr. ATTHILL in seconding the motion said that no one who had had such extensive practice as he had had in midwifery cases could fail to be impressed with the ills which were inflicted upon women and children by want of knowledge of the principles and practice of midwifery, and every effort should be made by this Council to enforce a proper standard of education in midwifery upon every person who went upon the Register. It was impossible to teach midwifery in three or six months as some of these institutions professed to do, and the sooner the Council looked into the matter the better. He urged for the sake of humanity that the Council would not vote against this abstract resolution.

Mr. CARTER said he doubted very much whether the Council would act wisely by adopting this resolution. One would think that Dr. McVail had been speaking of something new. Instead of that he had been speaking of a practice as old as human nature itself. What they had to deal with in this Council were the facts of life as they found them, and if the Council could not remove the evils incidental to the employment of women in midwifery cases they should do their best to minimise them, and he thought that they should probably find that minimising these evils by giving instruction to women would be a step towards doing away with them entirely, and towards producing in the public mind a demand for a better educated class of practitioners still.

Dr. GLOVER said he could not help thinking that this resolution was inconsistent with the previous action of the Council. He assured Dr. McVail that the Bills only contemplated women practising midwifery under the most limited circumstances and with the supervision of the medical profession. He was as anxious as Dr. McVail that there should be supervision, and he would tell the Council that at a most agreeable though small meeting of the Committee on the Midwives Bill, consisting of Mr. Brown, Dr. Rentoul, and himself, after much difference of opinion they agreed upon a clause providing that in every case attended by a midwifery nurse in which the labour was unusually prolonged or difficult or in the after period of which there was anything unsatisfactory in the health of the mother or child the midwifery nurse should send without delay for one of such registered men as should be appointed for such purpose by the local sanitary authority. Dr. McVail said that the curriculum of these women would be short and the examination worth nothing at all. But a very small amount of training was a very great additional security for the patient, and this was amply proved by the statistics of maternity institutions. As to men being included in the scope of this legislation, he did not believe that any Parliament would sanction anything of the kind, and, moreover, the present Medical Acts forbade it. Midwives they had with them now as they had always had them, and the object of this legislation was to bring them under control and limit their numbers. As to the 500,000 women attended by midwives Dr. McVail proposed to make them all paupers, a thing which would never be tolerated. He hoped the Council would not adopt this resolution, which he insisted would destroy the influence of the Council, and the profession in controlling this legislation. If this resolution were passed it would take the matter entirely out of the hands of the Council and of the profession. According to any practical proposals this Council was to sanction the rules that

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were to be provided and these rules were to be administered by a body consisting almost wholly of medical men. This resolution would stultify the Council and contradict its previous resolutions, and would be a hint to the Government that in this matter they should not seek the advice of the Council.

Dr. MACALISTER, seconded by Mr. BRYANT, moved as an amendment:—

That it is inexpedient for the Council to commit itself to an abstract resolution which may preclude it from giving full consideration to any future Midwives Registration Bill submitted to it by the Government.

Dr. ATTHILL said that in all the circumstances he thought this amendment was very judicious.

A reply from Dr. MOVAIL having been heard, the vote was taken, when Dr. MacAlister's amendment was carried by 16 votes to 6.

The amendment was then put as a substantive motion.

Mr. BROWN said he wished to take the opportunity of explaining his position with regard to the clause referred to by Dr. Glover. He only agreed to the clause by way of minimising the manifest evils of the Bill, and he reserved to himself the right to prepare a minority report to the effect that no legislation of this kind was necessary.

The amendment was carried as a substantive motion and became the finding of the Council.

Fines under the Medical Acts.

The following report on this subject by the special committee was read, viz.:—

Dr. Glover, as the chairman of this Committee, informs the General Council that in the course of the last session he had a second interview with Mr. Jessie Collings on the subject of penalties under the "Medical Acts and the Metropolitan Police Courts Bill," and at his request on this subject, in the course of which he expressed to Mr. Collings the anxious wish of the Council that fines imposed under the Medical Acts should be paid over in accordance with the spirit and letter of the Medical Acts to the treasurers of the Medical Council, and in defrayment of the expenses of prosecutions, Mr. Collings expressed much sympathy with the object of the Medical Council, and willingness to consider it on any suitable occasion: but said that the present measure was so technical and limited in its nature that the subject could not be dealt with in it.

The report was entered on the minutes, and it was agreed to re-appoint the committee with the addition of Mr. Horsley.

The Council then adjourned.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON. — In November the following candidates passed in the undermentioned subjects:—

Surgery.—J. Cater, King's College Hospital; and F. H. Fawcett Middlesex Hospital.
Medicine.—L. Blkind, Berlin; and W. A. B. Smith, King's College Hospital.
Forensic Medicine.—J. Ash, St. Thomas's Hospital; and T. H. Bailey and S. R. Bhagtani, King's College Hospital.
Midwifery.—F. G. Aldrich, Charing-cross Hospital; T. H. Bailey, King's College Hospital; F. W. Chesnaye, St. George's Hospital; F. R. Greenwood, St. Bartholomew's Hospital; B. S. Mankar, London Hospital; H. H. Monckton, King's College Hospital; and A. W. Shea, Sheffield and Dublin.

The diploma of the Society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery: Messrs. J. Cater, S. R. Bhagtani, F. R. Greenwood, B. S. Mankar, H. H. Monckton, and A. W. Shea.

ROYAL COLLEGE OF SURGEONS IN IRELAND: FELLOWSHIP EXAMINATION. — The following gentleman having passed the necessary examination has been admitted a Fellow of the College:—

D. P. O'Brien, L.R.C.S. Irel., &c.

The following gentlemen have passed the Primary part of the examination for the Fellowship:—

R. Allen, B.Ch., &c., R.U.I.; W. J. Corbett, L.R.C.S. Irel., &c.; J. M. Redington, L.R.C.S. Irel., &c.; Alfred H. Jacob, C. B. Pasley, and H. F. Stapleton.

ASSAULT ON A WORKHOUSE MEDICAL OFFICER.—On Nov. 15th a male pauper was sentenced to a month's hard labour by the magistrate at the Lawford's Gate, Bristol, Police Court for an assault upon Mr. R. Norgate, L.R.C.P. Lond., M.R.C.S. Eng., the resident medical officer of the Stapleton Workhouse. Evidence showed that the prisoner had struck Mr. Norgate in the face and had torn his clothes.

GREAT NORTHERN CENTRAL HOSPITAL.—Arrangements are being made for endowing a bed in the Great Northern Central Hospital in memory of the Duchess of Teck. A donation of £100 towards this object has been offered by Mr. C. F. Cory-Wright. A further sum of £850 is required, contributions to which will be received either by the President (the Baroness Burdett-Coutts) or by the honorary secretary of the Ladies' Association at the hospital.

BANQUET TO PROFESSOR ALFRED HUGHES AT CARDIFF.—On Nov. 20th last Professor Alfred Hughes, of King's College, London, was entertained at the Angel Hotel, Cardiff, at a complimentary banquet given conjointly by the Council and Senate of the University College, Cardiff, and the members of the Cardiff Medical Society. The chair was taken by Mr. Treharne in the absence of Principal Viriamu Jones. In proposing the toast of the evening the chairman referred to the general regret felt at the departure of Professor Hughes from the chair of anatomy in Cardiff and recalled the good and honest work he had done in the early years of the new medical school and also his universal popularity among the students as their teacher and friend, wishing him prosperity in his new sphere in London. Professor Hughes, in his reply, congratulated the council of the College on the appointment of Professor Dixon as his successor and warmly eulogised his distinctions as a teacher and investigator. In dealing with the future prospects of the medical school Professor Hughes maintained that the success which the school had achieved and the rapid developments of the clinical resources of the district justified them in looking forward at no great distant date to the further development of the school by providing lectures on the final subjects of the curriculum; if that were done he suggested that the authorities of the University of Wales might well take steps as to acquiring powers of granting degrees in medicine.

APOTHECARIES' HALL OF IRELAND.—At a meeting of the Governor and Court of the Apothecaries' Hall of Ireland the following gentlemen were appointed examiners to conduct the examinations in Medicine, Surgery, and Midwifery:—Chemistry and Physics: E. Davy, M.B., Dub., Government Analyst; N. Hartley, F.R.S., F.I.C., Professor of Chemistry, College of Science, Ireland; C. R. Tichborne, F.I.C., Diplomate Public Health R.C.S. Irel., L.A.H., Ex-examiner Chemistry (Dub. Univ.). Pharmacy: W. V. Furlong, L.R.C.P. Edin., L.R.C.S. Irel., L.A.H.; G. A. Stritch, L.F.P.S. Glasg., L.A.H. Anatomy: A. Birmingham, M.D. R.U.I., F.R.C.S. Irel., Professor of Anatomy, Catholic University, Fellow and Examiner, R.U.I.; (vacant). Biology: A. J. Blaney, M.B., B.Ch., Examiner Biology, R.U.I.; J. A. Johns, M.B., B.Ch. Dub., L.A.H. Materia Medica: John Evans, L.R.C.S. Irel., L.A.H., Ex-examiner, P.S.I.; S. M. Thompson, L.R.C.P. Irel., L.R.C.S. Irel., L.A.H., Visiting Physician to South Dublin Union. Physiology: D. J. Coffey, M.B., B.Ch. R.U.I., Lecturer on Physiology, Cecilia-street Medical School; G. B. White, M.B. Dub., F.R.C.S. Irel., L.A.H., Examiner R.C.S. Irel. Hygiene: D. E. Flinn, F.R.C.S. Irel., Diplomate Public Health, R.C.S. Irel.; A. Roche, M.R.C.P. Irel., L.R.C.S. Irel., Examiner Hygiene, R.U.I. Medical Jurisprudence: H. A. Auchinleck, F.R.C.S. Irel., L.R.C.P. Edin., L.A.H., Professor of Medical Jurisprudence, R.C.S. Irel.; J. E. Kenny, L.R.C.P., L.R.C.S. Edin., Coroner City of Dublin. Pathology: E. J. McWeeney, M.D., M Ch. R.U.I., Examiner in Pathology, Pathologist to Mater Misericordiæ and Coombe Hospitals; C. M. O'Brien, M.B. Durh., L.R.C.P., L.R.C.S. Irel., L.A.H., Ex-Senior Resident Surgeon and Registrar Jervis-street Hospital, Dublin, late acting Clinical to Out-Patients Middlesex Hospital, London. Midwifery and Gynæcology: T. More Madden, M.D. (Hon. Causâ) R.U.I., F.R.C.S. Edin., Obstetric Physician, Mater Misericordiæ Hospital, Ex-Assistant Physician, Rotunda Hospital; R. D. Purefoy, M.B. Dub., F.R.C.S. Irel., L.A.H., Master, Rotunda Hospital. Ophthalmology: A. H. Benson, M.B. Dub., F.R.C.S. Irel., Ophthalmic and Aural Surgeon to the City of Dublin and St. Mark's Hospital; R. J. Montgomery, M.B. Dub., F.R.C.S. Irel., L.A.H., Assistant Surgeon to St. Mark's Hospital, Ophthalmic Surgeon to Drumcondra Hospital. Surgery (appointed by the General Medical Council): A. Chance, F.R.C.S. Irel., L.A.H., Surgeon to Mater Misericordiæ Hospital; H. A. Thompson, M.D., B.Sc. Edin., F.R.C.S. Edin. Medicine: W. E. Ashley Cummins, M.D., M.Ch. R.U.I., L.A.H., Professor of Practice of Medicine, Queen's College,

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Cork, Senior Physician Cork County and City Hospital for Women and Children, &c.; and J. B. Coleman, M.D.R.U.I., Physician to Richmond, Whitworth, and Hardwicke Hospital.

SIR JOHN LUBBOCK has consented to deliver the first sessional lecture of the Royal British Nurses' Association on Wednesday, Dec. 1st. The lecture will be given in the rooms of the Zoological Society, 3, Hanover-square, W., at 8 P.M., on the subject "Ants." A limited number of seats will be available for the public.

FREEMASONRY.—*The Sancta Maria Lodge.*—The following are the officers of the new Lodge the inauguration of which we announced last week:—His Royal Highness the Prince of Wales, Worshipful Master; W. Bro. Edmund Owen, M.B. Lond., F.R.C.S. Eng., Deputy Master; W. Bro. Alexander Stewart Brown, F.R.C.S. Edin., Acting I.P.M.; Bro. the Hon. Reginald Bootle Wilbraham, Senior Warden; W. Bro. J. Ernest Lane, F.R.C.S. Eng., Junior Warden; W. Bro. the Rev. H. S. Cronin, M.A., Chaplain; W. Bro. Malcolm Morris, F.R.C.S. Edin., Treasurer; W. Bro. M. Handfield-Jones, M.D. Lond., Secretary; W. Bro. A. P. Luff, M.D. Lond., Senior Deacon; W. Bro. Henry Pearce, M.R.C.S. Eng., Junior Deacon; Bro. P. P. Whitcombe, M.B. Lond., Inner Guard; W. Bro. E. A. Priddle, B.A., Director of Ceremonies; Bro. M. Mitchell Bird, M.D. Durh., Steward; W. Bro. C. D. Leyden, Steward; and Bro. W. J. Gow, M.D. Lond., Steward. A large number of names have been proposed as initiates, amongst which may be mentioned that of the Dean of the Medical School of St. Mary's, Mr. G. P. Field. The deputy master will have a busy time during the coming twelve months as the names of many students as well as of several of their teachers have been given in as intending adherents.

RUSSIAN IMPRESSIONS OF THE PLAGUE IN BOMBAY.—At a largely attended meeting of the Kief Medical Society Professor Vuisokóvitch recently gave an account of his expedition to Bombay to study the outbreak of plague. The Russian Commission of which he was the head had made a careful study of the epidemic from the clinical, bacteriological, and other aspects, and the general impression they had gathered was that although plague is a very severe disease yet it is easier to deal with and control than some other diseases such as diphtheria or cholera. The plague bacillus dies quickly if completely dried up and it cannot live long in water. The disease is spread from man to man directly or by the medium of fomites; it is in fact a purely "house-disease." The part played by rats in spreading it is still doubtful. The most successful measures against the spread of the epidemic have been the following: the searching out of cases; their segregation in hospitals; removal of the healthy from an infected house; disinfection of the house and contents; examination of persons arriving at, or departing from, any district; and an eight or ten days' quarantine. Unfortunately these measures met with resistance in an unenlightened community; consequently it is of more importance to endeavour to keep the infection out of a country or district. This is not difficult if proper precautions are taken on the frontier. Professor Vuisokóvitch stated that neither Yersin's nor Khafkin's prophylactic inoculations had proved to be quite satisfactory. In monkeys neither gave more than ten or fourteen days' immunity. The best results followed the injection of a fresh agar cultivation, killed by heating to 60° C. for one hour. Yersin's serum had given very encouraging results as a curative agent. Among 150 patients so treated the mortality had, it is true, been 40 per cent., but it would probably have been less could many of the patients have been seen at an earlier stage of the disease.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BREW, C., M.B., B Ch. Dubl., has been appointed a Medical Officer for Bray Dispensary.

CLOUGH, JOSEPH, L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the No. 1 Sanitary District of the Hunslet Township, vice A. Nicholson, resigned.

DICKSON, J. D., M.D. Irel., M.Ch., L.R.C.S. Irel., has been re-appointed Medical Officer of Health by the Marlow Urban District Council.

HODGE, S. R., M.R.C.S., L.R.C.P. Edin., has been appointed a Clinical Assistant to Out-patients at the Chelsea Hospital for Women.

HOOLE, H., M.D. Lond., M.R.C.S., has been appointed Chief Medical Examiner in Great Britain and Ireland for the National Mutual Life Association of Australasia.

JACOB, E. L., M.R.C.S., has been re-appointed Medical Officer by the Walton Urban District Council.

JOHNSTONE, J. L., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Orrell Urban District Council.

MACDONALD, J., M.B., C.M. Edin., has been appointed Medical Officer for the Forbes Dispensary, Inverness, vice G. A. Lang.

MARR, GEORGE, M.B., C.M., has been appointed a Clinical Assistant to Out-patients at the Chelsea Hospital for Women.

MASON, F. W., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Medical Officer for the Nos. 1 and 5 Sanitary Districts of the York Union.

MILLIGAN, H. N. D., M.B., C.M. Edin., has been appointed a Member of the Medical Staff of the Linen and Woollen Drapers' Institution.

MORRIS, CYRIL G., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fourth District of the Bath Union, vice F. W. Hanham, resigned.

MURRAY, WM., M.A., M.B., C.M. Aberd., has been appointed Resident Surgeon at the Birmingham General Dispensary.

NABARRO, D. N., B.Sc., L.R.C.P., M.R.C.S., has been appointed a House Physician, University College Hospital.

SHARPE, S. H., M.B., B.S. Dubl., has been appointed Senior Resident Surgeon to the Jervis-street Hospital, Dublin.

SLOCOCK, RICHARD, B.A. Oxon, M.R.C.S., L.R.C.P., has been appointed House Surgeon at the Royal Portsmouth Hospital.

STEVENS, A. E., M.B. Durh., M.R.C.S., L.R.C.P., has been appointed by the Indian Government for Special Plague Duty in Bombay.

STREET, A. Ernest, L.R.C.P. Lond., M.R.C.S., has been appointed Second Assistant Medical Officer for the Lewisham Union Infirmary.

WHYTE, G. F., M.B., C.M. Edin., has been appointed a Resident Medical Officer for the Dundee Sick Poor Hospital.

WILKINSON, J. HOWARD, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the County Borough of Dudley.

WADE, R., M.R.C.S., has been appointed Medical Officer of Health for the Highbridge Urban Sanitary District.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident Assistant House Surgeon. Board, lodging, and washing provided in the hospital. No salary.

BRECKNOCK COUNTY AND BOROUGH INFIRMARY.—Resident House Surgeon, unmarried. Salary £70 per annum, with furnished apartments, board, attendance, fire, and gas. Applications to the Secretary, 6, Bulwark, Brecon, South Wales.

BRIGHTON AND HOVE LYING-IN INSTITUTION AND HOSPITAL FOR WOMEN, West-street, Brighton.—House Surgeon, unmarried. Salary £80 per annum, with furnished apartments, board, gas, coals, and attendance.

BRIGHTON THROAT AND EAR HOSPITAL, Queen's-road, Brighton.—Non-resident House Surgeon. Salary at the rate of £52 per annum.

CARDIFF INFIRMARY.—Assistant House Surgeon for six months. Board, washing, and apartments provided.

DERBYSHIRE ROYAL INFIRMARY.—Resident House Surgeon and a Resident House Physician for twelve months. Salary of House Surgeon £100 per annum and of House Physician £80 per annum, with apartments and board in both cases.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—House Physician for six months. Board, residence, &c., provided, and an honorarium of £15 15s. granted conditionally.

HEREFORD GENERAL INFIRMARY.—Resident House Surgeon, unmarried. Salary £100 per annum, with furnished rooms, board, washing, gas, coals, and attendance.

LIVERPOOL DISPENSARIES.—Head Surgeon. Salary £200 per annum. Also an Assistant Surgeon. £80 for the first year and £90 afterwards, with apartments, board, and attendance in each case. Both must be unmarried. Applications to the Secretary, 31, Moorfields, Liverpool.

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PARISH OF ROUSAY AND EGILSHAY, Orkney.—Resident Medical Officer. Salary £51 sterling per annum. Apply to the Clerk of the Parish Council, Rousay, Orkney.

PARISH OF ST. GILES, CAMBERWELL.—Assistant Medical Officer for the Infirmary, at Havill-street, Camberwell, and the Workhouse at Gordon-road, Peckham, also for Relief Duty at the Constance-road Workhouse of the Parish, for one year. Salary £50, with apartments board, and washing. Applications to the Clerk to the Guardians, Guardians' Offices, 29, Peckham-road, S.E.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, London.—Assistant Resident Medical Officer for four months. Salary at the rate of £50 per annum, with board, residence, and washing.

ROYAL BERKS HOSPITAL, Reading.—House Physician for six months. Salary £60 per annum, with board, lodging, and washing. Also Assistant Medical Officer for six months. Board, lodging, and washing provided, and an honorarium of 10 guineas awarded conditionally.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Non-resident Assistant House Surgeon to Out-patient Department. Salary £75 a year.

SALISBURY INFIRMARY.—Assistant House Surgeon for six months, unmarried. Board, lodging, and washing provided, and an honorarium of £10 given conditionally.

ST. THOMAS'S HOSPITAL, Albert Embankment, Westminster-bridge, S.E.—Assistant House Physician.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

UNIVERSITY COLLEGE, Liverpool.—Senior Demonstrator of Physiology. Salary £125.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea, S.W.—Dental Surgeon.

WALLASEY DISPENSARY.—House Surgeon, unmarried. Salary £150 per year, with furnished house, coal, and gas.—Applications to Mr. W. Heap, Elm Mount, Penkett-road, Liscard, Cheshire.

WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—House Surgeon. Salary £50 per annum, with board, apartments, and laundry. Applications to the Honorary Secretary, 5, Bamford-place, Liverpool.

YORKSHIRE COLLEGE, LEEDS.—Joint Lecturer on Forensic Medicine in the Medical Department.

Births, Marriages, and Deaths.

BIRTHS.

BARTON.—On Nov. 24th, at Sunnyside, Wimbledon, the wife of P. Fred. Barton, B.A., M.R.C.S., L.R.C.P., of a daughter.

ELLERTON.—On Nov. 20th, at Priory-terrace, Leamington, the wife of J. F. Heise Ellerton, M.D., of a daughter.

FREELAND.—On Nov. 17th, at Beaumont-street, Portland-place, the wife of H. Harding Freeland, L.R.C.P. Lond., M.R.C.S., of a son.

HORNER.—On Nov. 22nd, at St. Mary's-road, Walthamstow, the wife of Charles J. Horner, L.R.C.P. Lond., M.R.C.S., of a son.

LUCE.—On Nov. 18th, at Burton-road, Derby, the wife of Richard H Luce, M.B., F.R.C.S., of a daughter.

LUFF.—On Nov. 18th, at 31, Weymouth-street, W., the wife of Arthur P. Luff, M.D, F.R.C.P., of a daughter.

TAYLOR.—On Nov. 17th, at Boscombe, Hants, the wife of James Taylor, M.D., of a son.

MARRIAGES.

PHILIP—PONDER.—On Nov. 23rd, at St. Mary's Church, Kippington Sevenoaks, Andrew Philip, M.B., of Newport, Fife, to Alice Marion, eldest daughter of J. Edwin Ponder, of Sevenoaks, Kent.

WICKHAM—GILLING.—On Nov. 17th, at St. Peter's Church, Bournemouth, Gilbert Henry Wickham, M.B., second son of the Rev. H. J. Wickham, of Winchester, to Emma, daughter of the late John Gilling, of Linkfield Court, Bournemouth, and Redhill, Surrey.

DEATHS.

CARTER.—On Nov. 19th, at Hastings, Charles Henry Carter, F.R.C.S. aged 80 years.

HEDDLE.—On Nov. 19th, at St. Leonards, St. Andrews, M. Forster, Heddle, M.D., F.R.S.E., Emeritus Professor of Chemistry in the University of St. Andrews.

HORSFALL.—On Nov. 23rd, at Masham, Yorks, Henry Horsfall, M.D. St. And., aged 64 years.

WYMAN.—On Nov. 21st, at Red Brae, Putney-hill, Cuthbert Wyman, M.A., M.D., B.C. Cantab., F.R.C.S. Eng., L.R.C.P., in his 32nd year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (1st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (2nd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (4th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (3.30 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (1st).—BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Papers:—Dr. J. A. Shaw-Mackenzie: The Treatment of Syphilis by External Methods.—Dr. H. Solly (Harrogate): The Treatment of Syphilis at Harrogate.

OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Macnaughton Jones, Mr. Dauber, Dr Boxall, Dr. J. Phillips, Dr. Lea, Dr. McCann, and others. Papers:—Dr. Tate: Three Cases of Pyometra complicating Cancer of the Cervix Uteri.—Dr. McKerron: The Obstruction of Labour by Ovarian Tumours in the Pelvis.

THURSDAY (2nd).—HARVEIAN SOCIETY.—Mr. Juler: The Syphilitic Diseases of the Eye and its Appendages. (Harveian Lecture.)

FRIDAY (3rd).—WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, W.).—8.30 P.M. Clinical Evening. Dr. F. H. Low: A Series of Skiagrams illustrating the Location of Foreign Bodies.—Dr. J. B. Ball: A Case of Acromegaly.—Dr. S. Taylor: Three Cases of Symmetrical Nodes of Radii in Women.—Mr. Keetley: Two Cases of Stricture of the Œsophagus and of the Pylorus in the same Patient.—Mr. Bidwell: Note on a Case of Chancre of the Cheek.—Mr. McA. Eccles: Two Cases of Depressed Fracture of the Skull treated by Trephining.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

MONDAY (29th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. H. Law: Demonstration of Cases.

TUESDAY (30th).—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Moral and Impulsive Insanities.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Leprosy.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Victor Horsley: Surgery of the Nervous System.

HOSPITAL FOR NERVOUS DISEASES (73, Welbeck-street).—4.30 P.M. Dr. T. D. Savill: On Disorders of the Nervous System characterised by Muscular Tremor, with cases.

WEDNESDAY (1st).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: Disinfection and Disinfectants.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Acland: Data for forming a Prognosis in Pulmonary Tuberculosis, illustrated by Cases.

EVELINA HOSPITAL (Southwark-bridge-road, S.E.).—4.30 P.M. Mr. F. C. Abbott: The Surgery of Rickets. (Post-Graduate Course.)

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Ball; Throat Cases.

THURSDAY (2nd).—LONDON POST-GRADUATE COURSE.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. J. Hopkins: Clinical Lecture.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Barlow.

FRIDAY (3rd).—LONDON POST-GRADUATE COURSE.—King's College, 5 to 6 P.M., Prof. Crookshank: Tetanus, Rabies, and Cholera.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 25th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Nov. 19	30·46	W.	...	53	50	37	38	38	Foggy
,, 20	30·63	W.	...	57	55	38	45	46	Foggy
,, 21	30·65	S.W.	...	55	53	46	49	50	Cloudy
,, 22	30·67	E.	...	59	52	45	45	46	Foggy
,, 23	30·49	N.E.	...	45	45	43	43	44	Overcast
,, 24	30·43	S.W.	...	48	48	39	40	41	Foggy
,, 25	30·22	S.E.	...	56	50	41	46	48	Overcast

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

CHINOSOL FOR THE ANTISEPTIC TREATMENT OF TUBERCULOSIS.

OF late years the value of the administration of antiseptics in some cases of tuberculosis has been generally acknowledged; the antiseptics which have hitherto been chiefly employed have been creosote and guaiacol. In the *Allgemeine Medicinische Central-Zeitung*, No. 75, 1897, Dr. A. G. Cipriani has given an account of some cases of tuberculosis in which he has employed chinosol. This substance has been known for some time as a non-irritating and comparatively non-poisonous antiseptic, but we believe it has not been employed previously for tuberculosis. Dr. Cipriani gives notes of eight cases which he has treated, three of the cases being examples of tuberculous glands; in two cases there was tuberculous caries of bone; and in three cases the tuberculosis had attacked the lungs; in these three cases the chinosol was given by the mouth, but in the others the drug was injected locally in the form of a watery solution. When administered by the mouth one gramme was given during the day in divided doses, and it seems to have been well borne. In all the cases rapid and apparently permanent improvement followed the treatment. The number of cases is too small to justify any opinion being formed as to the real value of the drug, but since chinosol appears to be harmless, even in somewhat large doses, the treatment certainly deserves a more extended trial.

Edina informs us that he knows of a case where an American university has conferred the degree of Doctor of Medicine on a layman who had merely presented a thesis. He asks our opinion of the "degree" and of the "university." The institution has either been itself imposed upon or it is a bogus university—a degree shop—of which there once were many in the States. We do not know the place by name.

A MISTAKEN DIAGNOSIS UNDER DIFFICULT CIRCUMSTANCES.

A FRENCH medical journal mentions a case which shows how seriously a medical man may occasionally be blamed for the consequences of a diagnosis which, made under most unfavourable circumstances, may ultimately be shown to have been mistaken. A workman fell into a kneading-machine, and when he was extricated was found to be covered with wounds and to have sustained several fractures, amongst others the surgeon who attended him made out one of the neck of the femur. The man was unconscious for a fortnight, but after a couple of months' careful and assiduous attention the medical man had the satisfaction of being able to allow his patient to get up. The fractured femur, however, was shortened considerably. The man being insured against accidents, the company sent its own medical adviser to see the case, and he reported that the neck of the femur had not been fractured but that there was an unreduced dislocation of the hip. The company, not recognising the great difficulty of diagnosing and treating such a complicated case, have put in a claim against the medical man for 80,000 francs and the patient has added a claim for 10,000 francs compensation. What view the French law-courts will take of the matter remains to be seen.

R. P.—We do not recommend individual practitioners. The matter is one upon which the family medical man can best advise. If he or the patient's friends require a second opinion he will know the most suitable consultant.

WANTED SUGGESTIONS FOR TREATING A GANGRENOUS ULCER.

To the Editors of THE LANCET.

SIRS,—If you will insert the following notes in THE LANCET you will confer on me a great favour. Some six weeks ago I was consulted by a man who had received a slight injury on the front of one of his tibiæ which caused a small sore. He went to a druggist, who gave him a mixture of nitrate of silver and water, this solution was to be painted on the sore night and morning. After doing so for three weeks the patient applied a poultice and removed the scab, leaving a deep ulcer two inches in diameter. The case then came under my care. The upper two-thirds of the ulcer quickly healed, but the lower third gradually spread and encroached on the healthy skin, at the rate of about an eighth of an inch per diem. The patient is a most docile one and carries out all instructions most assiduously. So far my treatment has not improved the local condition, and I should very much like to have advice from some of the readers of THE LANCET.

I am, Sirs, yours faithfully,

Belmont Lodge, New Eltham, S.E., Nov. 23rd, 1897. JOHN D. RICE.

A RASH OPERATOR PUNISHED.

A CASE which for some time past has been much discussed locally, as well as throughout the whole medical profession in France, was recently decided in the Pau Court of Appeal. The circumstances were briefly as follows. A young medical practitioner named Lassalette, residing in the town of Pau, and who had qualified only about eighteen months previously, having been called in to attend a woman who was complaining of an abdominal tumour undertook to perform one of the most serious operations in modern surgery—namely, total hysterectomy, in spite of the fact that a distinguished surgeon of Bordeaux had given it as his opinion that active intervention was contra-indicated. It should, however, be noted that the consultant's views were based on an error in his diagnosis, for he believed that the patient was suffering from a mobile cyst, whereas in reality the affection was a very large fibroma. On the day fixed for the operation the young surgeon, accompanied by a medical man younger than himself and his own chamber-maid as his sole assistants, proceeded to the woman's lodgings, which were on the ground floor of a many-storeyed building. The chamber-maid having administered chloroform the patient, as soon as she was completely anæsthetised, was carried up to one of the landing places and placed upon an ordinary kitchen table. The operation is said to have lasted two hours, but although apparently successful the patient died suddenly during the night. An official inquiry was at once instituted, and at the necropsy, which was duly conducted by experts, two faults of major gravity were disclosed. A forgotten artery forceps was found inside the abdomen and also the unsecured stump of an artery, the bleeding from which had been the immediate cause of death. Upon this evidence the operating surgeon was condemned to two months' imprisonment and a fine of 500 francs; but dissatisfied with the sentence, and apparently refusing to admit that he was in the slightest degree blameworthy, he lodged an appeal. The result of this ill-advised procedure has now been declared. The presiding judge being of opinion that there was total absence of all extenuating circumstances increased the first pronounced imprisonment by a month and confirmed the fine.

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PURE TOBACCO.

THE remarks which we have had occasion to make more than once in this journal as to the desirability of tobacco being pure and free from artificial flavouring or scents have created some interest in this matter and not the least amongst the trade. It may be noticed with satisfaction that some members of the tobacco trade are honest enough to admit that inferior tobacco is often scented, a practice which even they regret as bringing tobacco into discredit. "It is a mistake," says one in a communication to us, "this flavouring; it is educating smokers falsely and spoiling their palate." "If a tobacco is good," he adds, "there is no need of any added flavouring." This coming from a member of the trade is an interesting endorsement of our views. We have also received various specimens of tobacco to illustrate what unsophisticated tobacco is. Mr. Thomas R. Seymour, of 4, North-street, Bristol, encloses us some tobacco for the pipe about the purity of which there can be little doubt, and it is far preferable to the stuff which reeks of Tonquin bean or other equally objectionable scent. Again, Messrs. Oakes and Co., of 46, New Broad-street, have sent us specimens of their "Little Indians" cigarettes which are all tobacco, the wrapper being tobacco and not paper. The combustion of paper materially spoils the flavour of good tobacco, but when the wrapper is tobacco this is avoided. The cigarettes are mild-smoking, of agreeable flavour, and free from acridity.

Sol.—If the false rumour is public it is right that the correction should be made publicly.

"THE PARISH NURSE DIFFICULTY."

To the Editors of THE LANCET.

SIRS,—The article written by me to which you refer in an annotation in THE LANCET of Nov. 20th was written with a purpose—i.e., to draw attention to the fact that villagers cannot get nurses, that the present system of charity nurses is a failing in that if any of the chief subscribers die or leave the nurse has to be given up. Secondly, she is generally placed under a committee yet is responsible to no one. Thirdly, not being fully qualified is frequently found a drawback, as in country places the medical practitioner often lives miles away and cannot come at a moment's notice. Fourth, if infection breaks out the nurse is not available, that medical men fear the introduction of women doctors, but they are wrong; the women doctors would prove valuable aids. I use the word "doctor" instead of nurse because the training is different and the knowledge wider. The woman doctor would call in the man doctor in serious cases. She could work under him and owe her appointment to him if it was ordered that the medical man of a district might grant her a working certificate. The woman doctor or doctoress might also earn a small fee as medical inspector of village schools.

As to the question of chemists being consulted instead of medical men, it is widely done. I mentioned the fact purposely. There are many trifling ailments for which it is unnecessary to send for a medical practitioner. The nursing of the middle-class and poor can only be systematically worked from a centre. The technical education funds now given to agricultural, horticultural, and other scholarships, or spent in superfluous education in minor sciences, might more worthily be applied to establishing a county nursing home worked on sound business-like principles so as to be self-supporting. Our poor do not want pauperising. They are willing to pay, but no hospital nurse is fitted for village work.

I hope you will find space for this letter as in the article referred to you only quoted a few sentences.

I am, Sirs, yours truly,

Suthamstead-park, Nov. 22nd, 1897. E. R. THOYTS.

*** Miss Thoyts has not comprehended our remarks. An inferior order of general practitioners is not required.—ED. L.

Professional Etiquette.—The case submitted to us forms one more example of the ills that arise from medical men entering into bonds with lay employers. C's agreement being a more advantageous one to the society than B's the society naturally favoured C at the expense of B. We do not see why C should not obtain the material advantage of a house as he is under the material disadvantage of a strict contract.

THE PROTECTION OF BIRDS.

THE International Congress on the Protection of Birds, inaugurated at Aix-en-Provence on Nov. 9th under the auspices of the Ligue Ornithophile Française, of which M. Louis-Adrien Lerat is the president, was concluded on Nov. 13th. The protection of insectivorous birds useful to agriculture was the chief subject of discussion and it was decided that the resolutions adopted should be forwarded to the Governments of Europe through the French Minister for Foreign Affairs. Numerous French and Italian agricultural, horticultural, and sporting societies sent delegates to the Congress. Mr. and Mrs. Lemon, of Hillcrest, Redhill, Surrey, represented the Selborne Society and the Society for the Protection of Birds.

THROWING STONES AT A TRAIN.

APROPOS of this subject, upon which we commented strongly in our issue of Oct. 23rd, we are glad to see that a boy, aged fourteen years, was, at Brentford police-court upon Nov. 12th, sentenced to hard labour for one month for throwing a stone at a train on the London and South-Western Railway. This is good as far as it goes, but a sound birching would have been better still.

F.R.C.P. Edin., &c.—The district council are bound by law to pay for certificates of notification sent to them by any medical practitioner, without any limitation as to the practitioner in question being an assistant to another one or not. As regards medical officers of health we have quoted in our reprint of articles on "Difficulties under the Infectious Disease (Notification) Act" the decision of the Local Government Board to the effect that where a medical officer of health is "attending on or called in to visit the patient," he is entitled to his fee for notification "just as if he were an ordinary medical practitioner." Provided the visit in question is definitely one of attendance on the patient and not one of inspection as health officer the fee should, in our opinion, be always claimed. Failure to demand a fee legally due under the circumstances named can only be regretted on the ground that it is liable to lead to difficulties such as those which in this case affect not the health officer but another medical practitioner.

A BOOK ON STAMMERING.

To the Editors of THE LANCET.

SIRS,—Could you or any of your readers tell me of a small but reliable book on Stammering suitable for a schoolmaster to read who seeks to benefit a pupil? I am, Sirs, yours faithfully,

Nov. 22nd, 1897. W. R. K.

AN EXPLANATION.

THE Secretary, Bournemouth Hydro Establishment, recently forwarded to some members of the medical profession in London a magazine containing a sketch relating to the institution. She omitted to place sufficient stamps on the wrappers. We are asked to state that she is anxious to hear from any recipient who may have had to pay additional postage as she will at once forward four penny stamps.

MALIGNANT SCARLET FEVER.

To the Editors of THE LANCET.

SIRS,—I think the following sad case may be interesting to your readers. I attended two cases of scarlet fever in a house in this city. After these were convalescent the authorities stoved the house—it was supposed most efficiently. About a month after this a message was brought to my house—not one of urgency, but merely "would I call on my round." On reaching the house the mother told me that the patient, a girl, was unconscious. I at once went up to see the patient. On feeling her skin I was astounded. It felt like putting one's hand on a red hot coal, and on taking her temperature my thermometer registered 110½°F. The whole of the body was covered by an ecchymosed rash and the patient was quite unconscious and collapsed.

It is the first case of malignant scarlet fever I have seen and I hope it will be the last. The girl seemed to have no earthly chance, the whole disease only lasting twenty-four hours.

I am, Sirs, yours faithfully,

THOS. J. WALKER, L.R.C.P. & S. Edin., &c.

Burley Mount, Leeds, Nov. 21st, 1897.

During the week marked copies of the following newspapers have been received: *Western Morning News, Cambridge Express, Carlisle Express, Harrogate Advertiser, Leigh Chronicle, Royal Cornwall Gazette, Bradford Observer, Glasgow Herald, Essex Telegraph, Washington Post, Le Temps, Brighton Argus, Times of India, Pioneer Mail, Cambrian, Kidderminster Shuttle, Walsall Advertiser, Somerset Herald, Architect, Express and Star, Hampshire Telegraph, East Anglian Daily Times, Newcastle Leader, Builder, Liverpool Daily Post, North British Daily Mail, Grimsby News, Colchester Mercury, Sheffield Telegraph, Manx Sun, Leeds Mercury, Hereford Times, Sussex Daily News, Midland Mail, Worcester Herald, Leicester Post, Yorkshire Post, Birmingham Gazette, Derbyshire Times, Isle of Wight Observer, Lincoln Mercury, Norwich Mercury, Scotsman, Dundee Courier, Bristol Mercury, Kent Messenger, Manchester Guardian, Sanitary Record, Brighton Gazette, Huddersfield Daily Examiner, Lynn Advertiser, Hertfordshire Mercury, Local Government Chronicle, City Press, Willesden Chronicle, Mining Journal, Reading Mercury, Public Health, Engineer, Financial Times, Launceston Examiner, Surrey Advertiser, Weekly Free Press and Aberdeen Herald, Local Government Journal, Croydon Chronicle, Croydon Times, Croydon Guardian, Croydon Advertiser, Rotherham Advertiser, Willesden Chronicle, Daily Gleaner (Kingston, Jamaica), Market Rasen Mail, Dereham and Watton Standard, &c. &c.*

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A.—Mons. J. Astier, Paris; Auram, Lond; Alpha, Sheffield.

B.—Mr. G. Y. Baldock, Lond.; Borough of Preston, Town Clerk of; Messrs. Burgoyne, Burbidges, and Co., Lond.; Brighton Throat and Ear Hospital, Secretary of; T. B. Browne, Ltd, Lond.; Messrs. Bates, Hendy, and Co., Reading; Bristol, Medical Officer of Health of; Messrs. S. Buckingham and Son, Colchester.

C.—Dr. J. Comby, Paris; Messrs. Crossley, Moir, and Co., Lond.; Mr. E. S. Cardell, Tonbridge; Cambridge Graduates' Medical Club, Secretary of;

D.—Mr. T. Dixon, Lond.; Dr. J. Don, Zuurfontein, Cape Colony; Sir Richard Douglas-Powell, Lond.; Mr. J. Dowie, Edinburgh; Derbyshire Royal Infirmary, Derby, Secretary of.

E.—Dr. H. M. Eyres, Low Fell.

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R.—Dr. C. Redwill, Christchurch, N.Z.; Surgeon-Captain O. G. Robinson Ballincollig; Dr. R. R. Rentoul, Liverpool

S.—Dr. J. B. Spence, Burntwood; S. M. D., Lond.; Messrs. Sharland and Co., Lond.; Springfield House Asylum, Bedford, Medical Superintendent of; S. L. K., Birmingham; Messrs. Street and Co., Lond.; Sunderland Borough Asylum, Ryhope, Medical Superintendent of; Mr. J. B. Sutton, Lond.; Society of Apothecaries, Lond., Secretary of; Dr. J. Smyth, Bournemouth; Sol, Axminster.

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Y.—Yorkshire College, Leeds.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. W. Adams, Lond.; Mr. E. Allen, Hawes; Alpha, Lond.; Dr. J. T. Arlidge, Newcastle-under-Lyne; Assistant, Lond.; Dr. T. Annandale, Edinburgh; Argentum, Lond.

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W.—Dr. F. R. Walters, Lond.; Dr. Wickham, Lond.; Messrs. Willing and Co., Lond.; *Welshman* Newspaper Co., Carmarthen; Professor A. E. Wright, Netley; Messrs. Wilcox and Co., Lond.; Mr. Wiseman, Lond.; W. R., Leicester; Dr. R. A. Williams, Ogmore Vale; Messrs. J. Wright and Co., Bristol; Wolverhampton and Staffordshire General Hospital, Secretary of.

Z.—Zeta, Lond.

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The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

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FAT IN HEALTH AND DISEASE.

THE ONLY FAT FOOD
IS
SAVORY & MOORE'S
PANCREATIC EMULSION.

FAT forms about 18 per cent. of the adult human body. It is stored up as a reserve in adipose tissue, and the loss falls chiefly upon this in starvation or in the wasting of disease, so that nearly the whole of the fat may disappear. Adipose tissue is very fluctuating in quantity. A large amount may disappear in a very short space of time, and within an almost equally short period the quantity present in a body may be several times multiplied. Stored-up fat comes from the fat of food, which in an ordinary diet varies from one to two and a half ounces. It is also formed from carbo-hydrates, such as starch and sugar, but both these substances, especially sugar, are frequently clinically counter-indicated. Fat is naturally indicated in all cases of wasting and loss of weight, and, conversely, a tendency to corpulency may be counteracted by restricting the fats and carbo-hydrates and increasing the proportion of proteid which augments the general metabolism of the body.

Digestion consists in the conversion of non-diffusible proteids and starch into more diffusible peptone and sugar, and in the emulsifying of fat by its division into minute particles. In certain diseases the action of the pancreas on fat is weakened, if not entirely suspended, with the result that much of the fatty part of the food passes through the intestine undigested.

The action of the healthy pancreas on fat is chiefly an emulsifying one, though under some conditions there is also an appreciable splitting up of the fat into its component fatty acids and glycerine. The fluid containing the elaborated product of digestion in its final stages—viz., chyle—owes its whiteness and opacity to fat, of which it often contains, after a meal, as much as 5 per cent., the fat existing in the form of exceedingly minute spherules or granules, far smaller than any globules to be seen in milk. It is the most perfect emulsion known, and is the only one that is not broken up by the action of ether.

The immense importance of maintaining the proper proportion of fat in chyle will be realised when we consider that an amount of chyle equal to half the whole blood of the body may pass through the lacteals from the alimentary canal in the twenty-four hours. The formation of an Emulsion of Fat, *identical with the emulsion as it exists in chyle passing through the lacteals*, has now been arrived at, outside the body, by the action of the pancreas. This Emulsion is known as *Pancreatic Emulsion*, and by its means we can present the fat of food in the condition necessary for immediate assimilation where the natural power of emulsifying fat is lost or impaired.

In disease arising from defective nutrition, and in phthisis and all scrofulous conditions, fat is often found of the greatest benefit. It is also invaluable in the convalescence of acute disease, and as a tonic to the nervous system in neuralgia and nervous debility. It is obviously an advantage in a dietary to give solid animal fat, which, like human fat, contains a considerable proportion of stearin and palmitin, as well as olein, in preference to a fat like cod-liver oil, which consists almost entirely of olein. "PANCREATIC EMULSION" provides the natural fat of food, emulsified so that it can be assimilated and absorbed with the greatest ease. Experience shows that it is free from the drawbacks so often attending the administration of cod-liver oil, and that it can be continued for any necessary length of time without disagreeing or causing nausea or diarrhœa, and that a rapid increase of weight and immediate improvement in health result from its use.

The Emulsion is a perfectly neutral one, formed solely by the action of the pancreas, is absolutely unobjectionable in taste, easily miscible with fluids, and of the consistence of Devonshire cream. It keeps sweet and good for years in any climate and may be obtained of all the principal Chemists throughout the world.

In bottles 2/6, 4/6, and 8/-, with special terms to Hospitals and Infirmaries.

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An Inaugural Address

ON THE

PROBLEM OF THE CONSUMPTIVE POOR.

Delivered at the Opening of the Session of the Ulster Medical Society in the Museum, Belfast, on Nov. 4th, 1897,

BY JAMES ALEXANDER LINDSAY, M.A., M.D. R.U.I., M.R.C.P. LOND,

PRESIDENT OF THE SOCIETY; PHYSICIAN TO THE BELFAST ROYAL HOSPITAL; CONSULTING PHYSICIAN TO THE ULSTER HOSPITAL, BELFAST; FORMERLY ATTENDING PHYSICIAN TO THE CONSUMPTIVE DEPARTMENT, THRONE HOSPITAL, BELFAST.

GENTLEMEN,—Michelet, the great French historian, once expressed the belief that the civilised races of mankind would eventually die out as the result of the ravages of phthisis and I have little doubt that if the rapid growth of population and the increasing tendency for men to mass themselves together in large urban centres had not been accompanied by a corresponding development of sanitary science, a wider recognition of the principles of hygiene, and a higher standard of comfort the prediction of Michelet would have been before now in a fair way of fulfilment.

Let us endeavour to form some rough estimate of the probable amount of phthisis in existence. No precise data can be obtained for a calculation of this kind, but the number of deaths from this cause are available and a comparison of these with the probable duration of the disease will afford the basis for a conclusion sufficiently probable for the purpose which I have in view. In the year 1890 Dr. Arthur Ransome estimated the deaths in the British Islands from tubercle in its various forms at 70,000. He also stated that "in the form of phthisis at ages between fifteen and forty-five—the most useful stages of human existance—it kills more than a third of the people who die and nearly half between fifteen and thirty-five." Dr. Chas. Denison, of Denver, computes that 40 per cent. of the deaths in New York between the ages of twenty years and forty years are due to phthisis. The returns of the various insurance companies show that between the ages of twenty years and fifty years phthisis is responsible for a fourth, and in some companies a third, of the deaths—a sufficiently striking fact when we recollect that these are picked lives. I find by the Registrar-Generals' Reports for 1895 that the deaths from phthisis in that year in England numbered 42,490, in Scotland 7688, and in Ireland 9768, making a total for the kingdom of 59,946. These figures are considerably under the average for the last fifty years, but let us assume that the annual deaths from phthisis in the British Islands are about 60,000. Can we from these figures form any sort of estimate of the probable number of cases of the disease existing at the same date in the same area? In order to do so we should require to determine the following points: (1) the average duration of fatal cases; (2) the number of cases which recover; and (3) the number of phthisical patients who die from causes other than their pulmonary malady—e.g., accident or intercurrent disease.

It is only as regards the first of these points that any definite information is procurable. Laennec and Louis estimated the average duration of the disease at two years, a calculation which still exerts some influence upon medical opinion although it has been long ago shown to be erroneous. Pollock found that at the end of two and a half years the majority of his hospital patients had still a fair expectation of life. C. J. B. Williams and Theodore Williams found that amongst 1000 cases occurring in the upper classes the average duration of 198 cases terminating fatally was seven years and eight months, and of the remaining 802 who were still living the average duration was eight years and two months. Against the rapid cases we must set the very chronic cases which are not rare. Wilson Fox mentions cases recorded by Laennec, Andral, Portal, Bayle, Flint, Walshe, and Williams where the disease lasted twenty, thirty, and even forty years. I had recently under my care a gentleman with well-marked affection of both apices in whom the disease set in with violent hæmorrhages just twenty years ago, in the autumn of 1877. He is still in fair health. I believe such cases, although exceptional, are not of excessive rarity and a due consideration of them must lead us to expand considerably our ideas regarding the average duration of the disease. Putting all the facts together I am inclined to think that the average duration of phthisis among all classes may be put safely at from three to four years. Sir Richard Douglas-Powell, to whom I referred this point and whose authority will be universally recognised, writes me that he thinks this calculation "quite within the average mark." As regards the proportion of cases which recover they probably constitute a by no means negligable quantity. To this subject I shall hereafter return. The number of phthisical patients who die from intercurrent maladies or from accident and violence must be considerable, but no statistics on the subject are available. Allowing due weight to all these considerations and admitting that the conclusion reached is somewhat speculative we may fairly estimate the number of persons suffering from phthisis in the British Islands at *not less than a quarter of a million*. That this calculation is probably under rather than over the mark will become evident if we consider the most authoritative figures available regarding other countries. Professor Leyden in an address delivered at the Congress of Budapest on Sept. 7th, 1894, calculated the deaths from phthisis in the German Empire at 170,000 per annum, the deaths in Berlin being 4590. From these facts he concludes that the number of phthisical patients alive in Germany exceeds a million. A recent German Commission estimated the sufferers from tuberculous disease at 1 in 50 of the population. I have no means of forming a correct judgment as to the accuracy of these calculations and it would be presumptuous in me to criticise the views of so distinguished an authority as Professor Leyden. I merely wish to point out that my own estimate as regards this country probably errs on the side of caution.

It is important with a view to our present purpose to form some rough estimate as regards what proportion of this quarter of a million of phthisical patients occur among the upper and well-to-do classes, and what proportion among the classes which usually seek hospital relief. No materials exist for a satisfactory calculation of this kind, but as some concrete figure is necessary, not so much for the purpose of reinforcing an argument as to give some degree of definiteness to our ideas, let us calculate the former proportion at one-fifth and the latter at four-fifths. If these calculations are well-founded—and they are put forward with unfeigned diffidence—we reach this conclusion—that there are in these islands at the present time about 200,000 persons suffering from phthisis who might be expected to seek hospital relief. What provision is made for dealing with this vast mass of misery and suffering? London has four chest hospitals with accommodation, as Dr. Theodore Williams informs me, for about 640 patients. There are chest hospitals, consumption hospitals, or sanatoria at Bournemouth, Ventnor, St. Leonards, Torquay, Liverpool, Manchester, Newcastle-upon-Tyne, Bridge of Weir (Renfrewshire), Edinburgh, Newcastle (Co. Wicklow), and Belfast. The total accommodation in these institutions would appear to be about 1160 beds. So that, allowing for the fact that many of these beds are frequently occupied by cases of heart disease, bronchitis, &c., we reach the startling conclusion that the nation provides about one bed for every 200 phthisical patients who might be expected to demand and require hospital relief. I do not overlook the obvious fact that many of these phthisical cases enjoy a certain fair amount of general health and that a considerable number of them are earning their living, but it will be admitted that there are very few phthisical patients among the lower classes who either do not from time to time require hospital treatment for one of the many complications of their malady or who would not benefit by a temporary sojourn in a well-organised sanatorium. To fortify my position and protect myself against the suspicion of exaggeration permit me to quote the statement of Dr. Hermann Weber that "well-arranged special hospitals for the treatment of consumption have accommodation only for one sufferer in a thousand." My calculation is rather less appalling, but it shows a condition of things which will be admitted to constitute a dark blot on our boasted civilisation.

To what causes are we to attribute this patent gap in the network of charity which, happily, in this country covers the greater part of the field of suffering? First may probably be placed the general feeling of hopelessness in face of a problem which seems to present insuperable difficulties. A further and not less important reason for the

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general apathy regarding the pitiable condition of the phthisical poor is, as I fear we must all admit, the divided counsels and doubtful voice of the medical profession on this subject. The public naturally look to us for guidance in a matter of this kind and that guidance has not been given—at all events with sufficient emphasis and unanimity to make it effective. It would, however, be most untrue and unjust to assert that the medical profession has been entirely silent on the subject. Most of the special workers in this field of practice have from time to time raised a warning voice and endeavoured to point out a better way; but the general mass of the profession has not made its influence felt. What we need is a consensus of medical opinion comparable to that which now upholds the principle of compulsory vaccination and insists upon the erection of special hospitals for fever. Is it too much to hope that such a consensus of opinion may be attained amongst us as to the best solution of the problem of the phthisical poor remembering what Alfred de Musset once said: "To formulate general ideas is to change saltpetre into powder"?

Let us first of all inquire what is being done elsewhere with regard to this question, to which end I will endeavour to give a brief sketch of the present state of accommodation for phthisis in different parts of the world, distinguishing between those institutions where the patient has to pay for the cost of his maintenance and those designed especially for the poor.

Germany.—Of sanatoria for paying patients we may enumerate the following:—1. The Brehmer Sanatorium at Görbersdorf in Southern Silesia. This institution is situated on the Riesengebirge at an elevation of 561 metres above sea-level. Its erection was begun in 1859 and the principles and methods therein developed so successfully by Dr. Brehmer have been the seed from which all the modern developments in the treatment of phthisis in Germany have sprung. In the near vicinity of Görbersdorf there are several subordinate sanatoria—viz, the Sanatorium Roupler and the Sanatorium de la Comtesse Puckler. 2. The Falkenstein Sanatorium near Cronberg on the Taunus Mountains, twenty-five kilometres from Frankfort-on-the-Main. This institution was founded in 1874, and under the able direction of Dr. Dettweiler it has achieved great success and well-deserved repute. I had an opportunity of visiting Falkenstein a few years ago and I have recently been in communication with Dr. Dettweiler, to whom I am indebted for much valuable information. The sanatorium is situated at an elevation of 420 metres above sea-level and is surrounded by pine forests. The situation is open and airy, commanding a fine prospect of the valley of the Main, and there is a fair amount of shelter. 3. Hohenhonnef on the right bank of the Rhine between Linz and Bonn. This sanatorium was inaugurated in 1892 and is one of the finest and most complete in Germany. 4. Reiboldsgrun in the Erzgebirge Mountains of Saxony was founded in 1873. This sanatorium is surrounded by pine forest and the soil is volcanic. The elevation is 690 metres. 5. St. Blasien (elevation 772 metres), Badenweiler (elevation 420 metres), Nordrach and Schömberg (elevation 650 metres) are all in the Black Forest. 6. The Harz Mountain Sanatoria—viz., Saint-Andreasberg (elevation 600 metres), Rehberg (elevation 150 metres), and Altenbrack.

Other institutions more or less devoted to the treatment of phthisis exist at Kissingen, Aussee, Baden-Baden, Blankenstein, Berkd, Dillenburg, Meran, Ems, Brückenau, Sophienbad, Schönberg, &c. Of hospitals for the phthisical poor Germany reckons the following: 1. Falkenstein. This is a small institution close by the Dettweiler Sanatorium, already described, which is for pay-patients. 2. Ruppertshain, near Königstein, about an hour's drive from Falkenstein. 3. The Malchow Hospital, in the neighbourhood of Berlin. 4. At Saint-Andreasberg, in the Harz Mountains, where (as already mentioned) there is a sanatorium for pay-patients. A small hospice also exists for the poor.

Several of the German towns—e.g., Bremen, Stettin, Dresden, Hanover, and Worms—either possess or have in contemplation hospitals or sanatoria for poor phthisical patients.

Switzerland.—1. Davos, elevation 1560 metres, so well known for the successful treatment of phthisis, possesses several sanatoria. The chief one is that under the direction of Dr. Turban. There are also the Maison des Diaconnesses and the Villa Pravignan. 2. Aroza, not far from Coire, at an elevation of 1856 metres, possesses a sanatorium where the same methods of treatment are pursued as those found efficacious at Davos. 3. Leysin, elevation 1450 metres, above Aigle in the Rhone Valley. 4. Wiessenbourg, in the Valley of Timmen, to the west of the Bernese Alps. The elevation is 890 metres.

The above are for pay-patients. Of sanatoria for the phthisical poor Switzerland reckons the following: 1. The sanatorium at Schwendi overlooking Lake Thun. This was erected by the town of Berne in commemoration of the sixth jubilee of the Swiss Confederation. 2. The sanatorium at Bâle. This town also possesses a sanatorium at Davos-Dörfli recently erected at a cost of £20,000. Other towns and cantons of Switzerland have followed or are about to follow the excellent example of Berne and Bâle—e.g., Glarus, Zurich, Geneva, Vaud, Neufchatel, Saint-Gall, the Grisons, and Zofingen. There is good reason to hope that in a short time Switzerland will possess a complete chain of hospitals for the phthisical poor, thus affording a proof of what even a very poor country can effect in the cause of charity.

Austria-Hungary.—The only Austrian sanatorium of which I can obtain any information is that of Neu-Schmecks in the Carpathian Mountains at an elevation of 1004 metres. A hospital for poor phthisical patients is projected at Alland, near Vienna.

Norway.—The sanatorium Tousaasen is situated between Bergen and Christiania at an elevation of 600 metres. The Norwegian Parliament has recently decided to devote two disused leper hospitals to the treatment of poor phthisical patients.

Russia.—There are the following sanatoria: (1) Oranienbaum, near Peterhof; (2) Slawata in Volhynia; (3) Halila in Finland; and (4) Yalta in the Crimea.

Italy.—Professor Tommasi Crudeli, of Rome, writes to me: "No special hospital for consumptive patients has till now been founded in Italy. They have only some special and isolated sections in many of the general hospitals. There is some talk now of building some sanatoria in the Alps, but till now it is only a remote hope and no sanatorium of the kind exists in Italy." It should be remembered, however, that Italy possesses quite a number of hospitals scattered along the Adriatic and Mediterranean coasts for the treatment of tubercular disease of bones and joints.

France.—The following sanatoria exist: 1. Angicourt, in the department of the Oise. 2. Canigou, in the Pyrénées Orientales. 3 The Sanatorium Touraine, in the environs of Tours. 4. The Ormesson Hospital, on a plateau above the valley of the Marne. 5. The Hospital of Villiers-sur-Marne. 6. The sanatorium at Saint-Martin-Lantosque, near Nice, at an elevation of 1000 metres.

America.—The following sanatoria exist: 1. Saranac Lake Sanatorium, in the Adirondack Mountains (elevation 1600 ft.), under the direction of Dr. Trudeau, founded 1884. This is the best-known sanatorium in America and has been very successful. 2. The Sharon Sanatorium (elevation 300 ft.), near Boston. 3. The Ashville Sanatorium, in North Carolina (elevation 2250 ft.). 4. The Chestnut Hill Consumption Hospital, Philadelphia. 5. The Bellevue and the Gleckner Sanatoria, in Colorado. As regards the provision for poor patients Dr. Osler writes me from Baltimore: "No attempt has been made to provide proper hospitals for consumptive poor in America."

For many of the above facts relating to foreign sanatoria I am indebted to the works of Knopf and Léon Petit and to Dr. R W. Philip of Edinburgh. The above enumeration makes no pretence to completeness as new institutions are constantly springing up. As regards our colonies a movement is at present on foot in Sydney, New South Wales, to provide proper hospital accommodation for phthisis, but the matter is still only in the tentative stage and some difference of opinion appears to exist as to the best method of procedure. One party advocates the foundation of a central institution in the city with branches in the country while the other would rely solely upon small cottage hospitals.

Let us return to the case of Germany and Switzerland, where the most substantial progress has been made. Dr. Brehmer, of Görbersdorf, and Dr. Dettweiler, of Falkenstein, have been the great pioneers of the modern movement and to their teaching and example we owe a large debt. The broad principles which underlie their methods are identical and may be summarised as follows: That phthisical patients should be treated in special institutions erected for the purpose on a healthy, airy, fairly sheltered, and if possible elevated situation; that the treatment should be essentially hygienic and dietetic, medicinal treatment and

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specific remedies being assigned a very subordinate place; that only early cases, or those offering a fair hope of cure, permanent arrest, or at least substantial benefit, should be eligible for admission; that strict medical control and the most vigilant supervision of the patients' habits, occupations, and amusements should be enforced, and that every precaution should be taken to destroy the virus and limit the dissemination of the disease. It is to be observed that the sanatoria in which these principles have been successfully carried out present many variations as regards situation and climate. Görbersdorf, the parent institution of the kind, is at an elevation of 1700 ft.; Falkenstein, 1300 ft.; Hohenhonnef, 770 ft.; Rehberg, in the Harz Mountains, 480 ft.; and others at still lower levels. The climate of the Silesian Mountains, or of the Taunus range, or of the Harz Mountains, or of the Rhine valley cannot be considered as especially favourable for phthisical patients, yet, as we shall see, the results of treatment obtained in these localities are on the whole encouraging and show that in a certain considerable proportion of cases the disease can be successfully combated without removal to the Alps, Egypt, South Africa, Colorado, Australia, or any of the other localities which have obtained a special repute in the treatment of phthisis. There is the more need to emphasise this point as our efforts to provide ampler accommodation for phthisis in this country are sure to be met with the objection that the climate is unfavourable and that therefore nothing can be done. This is one of those half truths which are often so much more dangerous than actual falsities. The best answer to this objection is to be found in the example of Germany. Without denying or minimising the considerable influence which climate exercises upon phthisis it is important to recognise that good results may be obtained even where the climatic conditions are only moderately favourable. It is obvious that for the great mass of phthisical patients a distant and expensive journey and a residence in a foreign country are quite impracticable.

These methods of treatment have now been in vogue in Germany for more than a quarter of a century and the number of cases thus treated has been very large. There should be no difficulty in forming a correct estimate of the value of these methods and whether they are suitable for imitation. The authority and reputation of Dr. Brehmer and Dr. Dettweiler stand so high that their reports may be regarded as conclusive, but it is only fair to add that these institutions have been repeatedly visited by British physicians who have fully corroborated the favourable reports of these gentlemen. Dr. Hermann Weber has given testimony in this sense. Dr. Dettweiler writes to me (Falkenstein, Oct. 16th, 1897) as follows: "At the Falkenstein Sanatorium we reckon about 30 per cent. of absolute or relative cures. In the latter class are comprehended those cases which, although restored to good general health and capability for work, still show some slight signs of remaining disease. The proportion of patients who derive signal benefit from the treatment and who are able to return for a longer or shorter time to their labours in the world is fully 45 to 50 per cent. Even severe cases often obtain surprising benefit, but it is not desirable to send cases characterised by hectic fever, much diarrhœa, amyloid degeneration and great loss of flesh." These statements touch the very kernel of the subject of any national provision of hospitals or sanatoria for phthisical patients. Is it true that a certain material proportion of cases can be cured and that a much larger proportion can be restored to years of useful and fairly comfortable life? The whole case stands or falls with these propositions and therefore I shall ask you to consider with me for a little the evidence which is available regarding the curability of phthisis.

Gentlemen, I think the time has come when we should cease to speak of the cure of phthisis with bated breath as if it were a vain pretence or a mere hallucination. Evidence is accumulating both on the clinical and on the pathological side to prove that a considerable number of persons pass through an attack of pulmonary tuberculosis, recover their health and live to the average period, ultimately dying from some other malady. I take the following statistics from Wilson Fox. In the first report of the Brompton Hospital, which included 535 cases, cure or complete arrest was recorded in 5·6 per cent. In the second Brompton report, which included 6001 cases, cure or complete arrest was recorded in 4·1 per cent. Williams records cure in the case of 3·1 per cent. of 700 patients who remained in England. Flint records cure in 12·1 per cent. of 74 patients who tried various climates, especially the sea-voyage. Hermann Weber records cure in 24·5 per cent. of 75 patients who tried the high altitudes. Clifford Allbutt's proportion of cures among patients resorting to the high altitudes was 22·5. Spengler, of Davos, had 21·3 per cent. of cures in 342 cases. These figures cannot be dismissed with a smile of incredulity. The writers in question are among the highest authorities upon pulmonary disease and if we cannot accept their figures there is an end to all statistical evidence in medicine. I should like especially to emphasise the fact that 4 or 5 per cent. of cures were obtained among patients who had no change of climate. Again, it has been found that a large proportion of persons dying from accident or old age bear traces in their lungs of having passed successfully through an attack of pulmonary tubercle. How often, also, do we meet in practice with elderly patients suffering from various maladies who tell the story of repeated pulmonary hæmorrhages in youth or of having been supposed to be "far gone in consumption" and yet recovered. It has been too much the habit to put these cases down to errors in observation and mistakes in diagnosis. The newer light which we have obtained upon the subject justifies the belief that no inconsiderable proportion of these cases are instances of arrest of the disease owing to tubercle becoming obsolescent.

The utility of special institutions for the treatment of phthisis does not depend solely upon the consideration that a certain number of cures are effected in them. We must remember the large proportion of patients who cannot, unhappily, be cured, but who can be restored to comparative health and well-being and enabled to resume for a longer or a shorter period their place in the world. No one who has studied the subject will deny that this class is a considerable one. To prolong life when it is doomed to suffering and uselessness may well seem a doubtful benefit, but the patients who rally from an attack of phthisis are not always, perhaps not usually, in this sad plight. Often they regain a very considerable enjoyment of life and the difficulty is to persuade them that their condition is precarious and that a relapse is probable. Not infrequently if they can be induced to select healthy occupations a considerable period of useful existence is before them. The very important subject of how far these special institutions may be made available for preventing the dissemination of the infective material of the disease and so limiting its propagation must be considered in a little detail. Many have been the fluctuations of popular and professional opinion upon this important subject and although we are probably nearer unanimity at present than we have ever been before we are still far from having attained to it. A belief in the contagiousness of phthisis has long prevailed in Italy and Spain more perhaps as a popular opinion than as a scientific doctrine. The contagionist view which received a great accession of strength from Koch's discovery is now widely prevalent upon the continent, especially in Germany, but never seems to have taken deep root in this country. The results of the inquiry instituted by the Collective Investigation Committee of the British Medical Association were equivocal. A large majority of the medical men how responded had seen nothing to warrant a belief in the contagiousness of the disease, but a respectable minority took the opposite view. The cases which were chiefly relied on in support of the contagionist view were those in which the disease appeared to have been transmitted from husband to wife or from wife to husband. There were 188 such cases reported and it is notable that of these 119 were cases of supposed transmission from husband to wife and only 69 from wife to husband. Dr. Longstaff in his work "Studies in Statistics" has, however, shown that these cases of phthisis in husband or wife when the other partner had been previously affected are not more numerous than would arise on the general principle of averages without postulating any theory of contagion. I content myself with giving my opinion that the direct transmission of phthisis from one individual to another is a rare event. Not the less, however, is the disease in all probability infective. All the facts of the case seem most easily explicable on the theory of Koch and Cornet that phthisis is chiefly disseminated by means of dust rendered infective by the drying and pulverisation of sputum from phthisical cases. According to this view the infectiveness resides rather in the rooms occupied by patients than in the patients themselves and the disposal of sputum becomes a question of the first

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importance. That the inhalation of infected dust is the usual method by which phthisis is contracted is at least a highly probable theory, but the report of the recent Royal Commission on Tuberculosis gives ground for believing that the use of tuberculous meat and of milk derived from cows with tubercle of the udder is at least a possible mode of origin of the disease. If we adopt the views of Koch and Cornet the argument in favour of special institutions for phthisical patients is much strengthened. The best prospect of arresting this scourge of humanity lies in preventive measures and no preventive measure is so hopeful as one which would tend to enable us to limit the *materies morbi* to institutions where it could easily be deprived of all infective properties.

The amount of accommodation which would be required to grapple with the huge mass of phthisis existing amongst us would no doubt be enormous, but in that halcyon future—

> "When wealth no more shall rest in mounded heaps,
> But smit with freer light shall slowly melt
> In many streams to fatten lower lands"—

some such scheme as the following will probably be adopted. Every city, town, and commune above a certain rate of population, will have a central hospital for phthisis with smaller branches in the most suitable adjacent locality either in the hills or at the seaside. The function of the central institution will be to receive cases in the first instance, to treat urgent symptoms, such as hæmorrhage, to select the cases suitable for transference to the various coördinated sanatoria, to promote research, and to educate the community in preventive measures. No cases will be received except such as hold out some prospect of decided improvement, advanced and hopeless cases being relegated to homes for incurables. The actual treatment of cases will be undertaken chiefly in the various sanatoria and will probably follow the lines adopted at Görbersdorf and Falkenstein. The following results may fairly be expected: 1. Cure or complete arrest in a certain proportion of cases which will probably be somewhere between the 4 or 5 per cent. hitherto obtained in this country and the 30 per cent. claimed by Dr. Dettweiler at Falkenstein. 2. Material improvement, permitting the patient to resume his work in the world and restoring him to fairly good health for a longer or shorter period. This proportion will probably be a considerable one. 3. The relief of suffering in cases which fail to respond to treatment or make any definite rally. 4. The education of patients in hygienic and dietetic principles and in preventive measures, especially the disposal of sputum. 5. The prevention of infection.

We may derive much encouragement in the fight against phthisis not only from the fact that the efforts made to stamp out the kindred disease of leprosy have been crowned with success but also from the fact that the disease is already steadily on the decline. In the quinquennium 1855–59 there died from phthisis in England and Wales 2648 persons per million living. Twenty years later, in the quinquennium 1875–79, the number of deaths per million living had fallen to 2117, a decrease of no less than 20 per cent. in twenty years. The latest available figures show that this decrease is still happily going on. As during the same period there has been an increased mortality from respiratory diseases other than phthisis it might at first sight appear that the apparent decline in mortality from phthisis was really due to greater precision in diagnosis and the transfer of cases from one column to the other. Dr. Longstaff and Dr. Newsholme have shown conclusively that this explanation will not harmonise with the facts. The mortality from phthisis has decreased at all ages, while the mortality from respiratory diseases has only increased under five and over thirty-five years of age. We may take it as certain that phthisis is sensibly on the decline in the British Islands, and there is the more encouragement to perfect our weapons and urge a more active warfare against it. Other measures in addition to those advocated in this address will be required, such as improvements in the dwellings of the poor, the regulation of unhealthy occupations, the dissemination among all classes of sound views on hygiene, and the means necessary for the prevention of infection, the inspection and control of our meat and milk-supply, the special nurture of children of tuberculous ancestry and the like. But I regard the adequate provision of special institutions for the treatment of the disease as an indispensable item in the programme of preventive measures. The present system of treating phthisis in general hospitals is on many grounds to be condemned. It is certainly bad for the phthisical patients, probably bad for the other patients. It was strongly condemned by the International Congress on Tuberculosis a few years ago and it is quite time for all hospital physicians and those interested in hospital administration to make a resolute stand against it. No phthisical patient ever recovers in a general hospital and his treatment there—with the exception of the relief of urgent symptoms—is little better than a farce.

Medical science and advancing civilisation have practically stamped out the plague, kept cholera successfully at bay, and robbed leprosy, small-pox, and typhus fever of most of their terrors. They are slowly beginning to make headway against a greater foe than all—tuberculosis. That its gradual arrest and final extinction are not only happy possibilities but practical certainties I for one firmly believe. I believe further that the means for attaining this end are already known and that we see the road which must be followed in order to reach the desired goal. That road is long and toilsome—worse still, it is extremely expensive—but the call to follow it is imperative and will some day become irresistible. The duty laid upon the medical profession is to point the line of advance and to lead the van. The results may not fully appear in our day, but "*arborem serit diligens agricola quarum aspiciet baccam ipse nunquam.*" If we are told that these proposals are vain and chimerical, that their realisation would put an intolerable load on the back of already overburdened humanity, let us reply in the glorious paradox of the great prophet-critic of this age: "You tell me what we ask is impossible. That may be so. I can only answer that it is indispensable."

A Lecture
ON
THE PULSE.

Delivered at St. Bartholomew's Hospital on Nov. 11th, 1897, preliminary to the Course of Lectures on Medicine,

BY NORMAN MOORE, M.D. CANTAB., F.R.C.P. LOND.,

LECTURER ON THE PRINCIPLES AND PRACTICE OF MEDICINE; ASSISTANT PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—The object of these lectures on the Principles and Practice of Medicine is to teach you how to recognise disease, how to forecast its course, and how to treat it. The patient or his friends offer you these complicated questions for solution in a particular case. You have to make a diagnosis and a prognosis and to carry out a method of treatment. You cannot take too much trouble to find out what is the matter. When you come to have many patients and to think over the cases in which your diagnosis was wrong you will find that in most of them the solution of the question was within reach had you but noticed and duly considered everything that was before you.

The first duty when you come to the bedside of a patient is to enter into such friendly relations with him as his condition allows. "A good bedside manner" is sometimes mentioned with scorn as an unworthy aid to the practice of medicine. I advise you to think it of importance. It is not an artifice—it consists in feeling and showing kindness to the patient. If he sees at once that you care to relieve him, are intent upon finding out what is the matter with him, and are willing to take any trouble to do so, he will in most cases at once give you his confidence and thus help you to an accurate diagnosis. No other art is needed than that you should do for him all that you would wish done for yourself were his illness your own. English literature contains one perfect description of the way to approach a patient. It is in Sterne's story of Le Fevre, a poor lieutenant who had been taken ill at a village inn and whose illness had been made known to Captain Toby Shandy, a retired officer of Marlborough's, living near the village, by the captain's devoted servant, Corporal Trim, who had seen the patient's son in the kitchen of the inn the night before. "The sun looked bright the morning after to every eye in the village but Le Fevre's and his

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afflicted son's; the hand of Death pressed heavy upon his eyelids—and hardly could the wheel at the cistern turn round its circle,—when my uncle Toby, who had rose up an hour before his wonted time, entered the lieutenant's room, and without preface or apology sat himself down upon the chair by the bedside, and independently of all modes and customs opened the curtain in the manner an old friend and brother officer would have done it and asked him how he did, how he had rested in the night, what was his complaint, where was his pain, and what he could do to help him." When in the way most suitable to the particular case and most natural to you you have entered into relations with the patient your first observation will probably be to feel his pulse. So long has this been associated with clinical investigations that a hand feeling the pulse is one of the bearings in the coat-of-arms of our London College of Physicians. In the quaint terms of the Elizabethan heralds, "The chefe an arm charnois out of a clowde argent and azure with the rase of the son golde with a cuffe ermin the hande felenge the powlse of an arme in fesse charnois as more plainely appeareth depicted in the margent."[1] Hippocrates, to whose writings we look for the first beginnings of so many parts of clinical medicine, was clearly accustomed to feel it, though there are not many passages in his books where it is mentioned. He speaks of a slow pulse in lethargy, notices that the pulse has a relation to age and that it is quick in fever. He is said first to have applied the word σφύγμος to the beating of an artery as distinct from any general pulsation, or throbbing as we should say. Herophilus of Alexandria, with whose torcular or wine-press we all became acquainted so early in our studies, wrote on the pulse,[2] and so did many other authors of whom we know little but in quotations. The first physician whose complete writings we possess on this subject is Galen. He died about 200 A.D., just two centuries before the entombment of the Romans or Romanised Britons whose sarcophagi were discovered on the site of our present school buildings. In the latter half of the second century of our era he was the chief physician in Rome. It is not known whether the Emperor Severus visited London in his British expedition, but if he did it is not impossible that there were among his officers patients of Galen who, walking in the country beyond Walbrook, may have considered the strategic advantages of Holborn-hill and Pentonville from the site of our hospital. He was a native of Pergamos in Asia Minor and of course wrote in Greek. His father was learned in mathematics, architecture, and astronomy,[3] and besides giving him much good advice and a taste for learning placed him under the tuition of several learned men of the chief philosophic schools of the time. After this course of study a dream[4] led his father to decide that Galen should be a physician and he studied medicine first at Pergamos and afterwards at Smyrna, Corinth, and Alexandria. In the year 164, when he was thirty-four years of age, he settled in Rome and soon became famous as a physician there. For more than thirteen centuries after his death his writings were the chief authority on medicine, and he was quoted in almost every medical book, whether Christian or Arabian. Subtlety of division and definition and argument are characteristics of his writings, and he never spares words in the discussion of his subject; but his is the prolixity of enthusiasm and of prolonged thought on every aspect of medicine. He is learned, exhaustive, indefatigable. He wrote six treatises, including eighteen books on the pulse. A short treatise on the pulse which he wrote for students gives a summary of his method. First, he says, learn the natural pulse, then appreciate swiftness and slowness, hardness and softness of the coats of the artery, then notice the intervals, observe equality and inequality and varieties of inequality. He then discusses the differences between the pulses of men and women, old and young, with the effects of sleep, of baths, of wine, of food, of mental emotions, and of pain, concluding with a description of the pulse in various diseases. Galen proved by careful experiment that the arteries contain blood and not merely air or spirit, as some of his predecessors had maintained, pointing to their emptiness in the dead body. Nevertheless, when he felt the pulse he thought that the motion was that of the vital spirit proceeding from the heart through the body. Therefore he regarded the pulse as an important indication of the condition and prospects of the patient. Though this theory of its nature had no basis in fact his observations were often exact and we can agree with many of his results. He gave all the consideration he could to the pulse and the physicians, his disciples, for many succeeding centuries estimated its qualities and drew conclusions from them. Galen felt but did not count the pulse.

A dialogue on statical experiments in the writings of Bishop Nicholas de Cusa, cardinal-priest of St. Peter ad Vincula, who was born in Germany in 1401 and died in 1464, contains the earliest mention of counting the pulse, though the counting was not of the kind we use. The Cardinal was a mathematician with a commendable taste for weighing and measuring. The dialogue is between an orator and a common person. The uneducated person says:[5] "Do you not think that if you were to allow water to flow out of the narrow aperture of a water-clock into a basin while you counted an hundred beats of the pulse of a healthy youth and were to do the same with a sick youth that different weights of water would fall through?" The orator has no doubt of it and the uneducated man goes on: "The weight therefore of water that flows out in relation to the differences of pulses in the youth, in the old man, in the healthy, and the sick ought necessarily to lead to a truer knowledge of the disease, one weight being proper to one infirmity and another weight to another." Everyone who has read at all in Demosthenes will remember the clepsydra or water-clock which marked the length of time for which he was to speak and which was stopped in its running while documents were being read. Galen in the fifth chapter of his book, "De cujusque animi peccatorum cognitione atque medela," gives a full account of the clepsydra and how to make, graduate, and use it. The glass vessel used at present in the operating theatre for irrigating parts of the body during surgical operations is a contrivance closely resembling a water-clock.

Cardinal de Cusa's works were printed at Bâle in 1565. On Nov. 5th, 1581, Galileo, afterwards so famous as an astronomer, entered at the University of Pisa as a student of medicine. His father became rather anxious about his progress, for he spent much time on mathematical studies which took him away from medicine. The wasted time of Galileo led to great results in astronomy just as the time which was taken from medicine by three students of this school, Thomas Young, Robert Bridges, and Edward Granville Browne, led to the undulatory theory of light, to the elucidation of hieroglyphics, to fine verse and to profound Persian scholarship. In Galileo's time as at the present day the greatest ornament of Pisa was its noble cathedral with the graceful leaning tower near one end and the beautiful baptistery standing a little way from the other. Engravings and photographs cannot give the wonderful combination of the effects of colour and form which its exterior presents. In the interior the lofty columns and round arches of its nave and its graceful triforium are no less admirable. It is pleasant to connect so glorious a building with the art of medicine. Galileo watched the swing of the great lamp of the cathedral[6] and noticed, as he thought, that its vibrations, whether great or small, were at equal intervals. He tested this by his own pulse, using it as a measure of time, and was thus led to the discovery of the isochronism of the pendulum. This discovery led to the construction and use of an instrument, long since forgotten, called a "pulsilogy." Sanctorius, a professor of medicine at Padua, claims it as his invention in his "Methodi vitandorum errorum omnium qui in arte medica contingunt,"[7] published at Venice in 1603, and gives a fuller account of it with a figure in his commentary on Avicenna, published at Venice in 1626.[8] The pulsilogy consisted of a scale of inches and of a cord with a moveable weight marked with a transverse line. The number of beats of the pulse corresponding to a given length was calculated by direct experiment, depending on the then recently established doctrine of the isochronism of the pendulum. Thus Sanctorius would speak, not of a pulse of sixty, but of a pulse of so many inches.

[1] Original grant.
[2] Galen: De Pulsuum Differentiis, Lib. i., cap. 2.
[3] De Cognoscendis Curandisque Animi Morbis, cap. 8, Opera, Venice, 1566.
[4] De Prænot ad Posthumum, cap. 2. Ed. Kühn.
[5] D. Nicolai de Cusa cardinalis utriusque juris Doctoris in omnique Philosophia incomparabilis viri Opera, Basileæ, 1565, p. 173.
[6] Galileo: Discorsi e Dimonstrationi Matematiche, Bologna, 1655, p. 73.
[7] Lib. v., p. 109 *a* and *b*.
[8] Sanctorii Sanctorii Justinopolitani olim in Patavino Gymnasio Medicinæ theoricam ordinar. Primo loco profitentis Commentaria in primam Fen primi libri Canonis Avicennæ, pp. 21, 22.

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Another century passed after the invention of his pulsilogy before the pulse came to be counted as we count it at the present day. Sir John Floyer, a most observing physician, also remembered for books on cold bathing and asthma, published in 1707 "The Physician's Pulse Watch." After a dedication to Queen Anne the preface gives an account of the author's invention. "I have for many years tried pulses by the minute on common watches and pendulum clocks when I was among my patients; after some time I met with the common sea minute glass, which I used for my cold bathing, and by that I made most of my experiments; but because that was not portable I caused a pulse-watch to be made which run sixty seconds, and placed it in a box to be more easily carried, and by this I now feel pulses." When you know that the grandfather of a member of the present staff of this hospital was born within ten years of the publication of Sir John Floyer's book you will realise how recent is the practice of counting the pulse by a second hand on a watch. I shall not trouble you with a history of the numerous instruments for registering the pulse. In "La Circulation et le Pouls" of Dr. Ozanam you will find a full discussion of sphygmographs up to 1886 and in the latest editions of physiological manuals a continuation to the present day. Such methods are of use for graphic purposes in the laboratory, but at the bedside the finger trained to a learned touch must be our instrument and is less liable to error than any mechanical contrivance yet invented.

You have already been taught how to feel the pulse so I will only remind you to exercise some care in finding the artery, to keep your finger upon it throughout your observation, to exercise equal pressure, to count the pulse more than once, to compress the artery lightly first and then more firmly, and finally to make a rule of feeling the pulse in both wrists for purpose of comparison. Study your own pulse and several normal pulses and consider their character as well as their rate. I have had printed a list of eight varieties of pulse which are to be observed in the medical wards this day and which you can go and feel at any proper time.

Slow: Seaman, aged thirty-one years. Luke: 10. (28 beats in a minute.)
Fast: Girl, aged sixteen years. Faith: 2. (120 beats in a minute.)
Feeble: Boy, aged ten years. Mark: 15. Boy, aged eleven years. Mark: 14. Man, aged forty-three years. Mark: 17.
Dicrotic (at times): Man, aged forty-three years (with enteric fever). Rabere: 4.
Of unequal beat: Boy, aged fourteen years (with mitral regurgitation). Mark: 16.
Of aortic regurgitation (water-hammer pulse): Man, aged fifty-four years. Matthew: 18
Artery hard: Man, aged forty-eight years (gout). Mark: 18.
High tension: Man, aged fifty-two years (renal disease). Luke: 24.

The slow pulse of 28 is remarkably distinct and there do not seem to me to be any beats which do not reach the wrist as there sometimes are in such slow pulses. You may easily find many other examples of swift pulse besides the girl aged sixteen in the list. Look at the temperature charts over the beds and satisfy yourselves that a raised temperature is accompanied by a rapid pulse. Two of the feeble pulses are in boys recovering from acute illnesses, and the third is a result of long-continuing wasting disease. Make yourselves familiar with the dicrotism so frequent in the pulse of enteric fever, with the inequality of beat of the pulse of mitral regurgitation and with the peculiar shock of the pulse of aortic regurgitation. You may, I think, satisfy yourselves that the artery itself is hard in the man with gout. This is an observation in which a mistake is often made. I have many times found by dissecting it out post mortem that a hardness which seemed a property of the wall of the artery was really a result of the blood stream, the artery being free from thickening or calcification.

Take early opportunities of observing in the wards some other pulses of which there do not chance to be typical examples to-day—the pulse easily altered by slight excitement so often to be seen in exophthalmic goitre and in the people we call nervous; the pulse of unequal groups common in tuberculous meningitis; the bounding pulse of pneumonia and that of some cases of cerebral hæmorrhage; the pulse influenced from day to day by drugs such as digitalis. Of all these you will soon come across examples. Note the difficulty of being quite sure that the pulse has stopped when you have been feeling it for a period of time with increasing difficulty. However marked the characteristics of the pulse may be do not hasten to a diagnosis from that observation alone. The character of the pulse will sometimes tell you whether an abdominal pain is due to the recent perforation of a gastric ulcer or to a general peritonitis. Its regularity and normal beat will tell you in a few rare cases that a cardiac murmur is produced at the pulmonary and not at the aortic valves.

The state of the pulse is an important aid to diagnosis in all cases; it is the guide to immediate treatment in some; and in many others it is one of the chief prognostic indications. Dr. Ewart in his interesting and useful book, "How to Feel the Pulse and What to Feel in It," mentions seventy-two terms formerly applied to as many pulses. This method of elaborate nomenclature of the pulse begins with Galen and may be dismissed with the remark of Heberden: "Such minute distinctions of the several pulses, if they do not exist chiefly in the imagination, at least have little place in the knowledge and cure of diseases."[9] My advice to you is not so much to ask what a variety of pulse which you may feel is called as what does it mean and what is its relation to the case in which you discover it. It was a conversation on the pulse with Dr. William Ogle, a very learned physician and editor of Aristotle, which suggested to me the subject of this lecture. It is not intended to be exhaustive or to do more than make the beginning of the study of the pulse interesting to you. I may fitly end it with Galen's first words in his short treatise for students: "Οσα τοῖς εἰσαγομένοις, χρήσιμον ἐπίστασθαι περὶ σφυγμῶν, ἐνταῦθα λεχθήσεται (What is most useful to beginners to know about the pulse I have set forth here).

THE OUTBREAK OF ENTERIC FEVER AT CLIFTON.[1]

BY D. S. DAVIES, M.D. LOND., D.P.H. CANTAB.,
MEDICAL OFFICER OF HEALTH OF BRISTOL.

[THE epidemic of enteric fever at Clifton caused by sewage contamination of milk and already mentioned in the columns of THE LANCET forms the subject of a valuable and exhaustive report by Dr. D. S. Davies, medical officer of health of Bristol. The report, moreover, contains a chart (reproduced herewith in fac-simile) showing the occurrence of cases on the various milk rounds. In the report the infected supply is referred to as X and names are for obvious reasons omitted. Dr. Davies says:]

It is a matter for congratulation that in my first report to the new Health Committee I am able to deal with a rapidly declining epidemic the exciting cause of which has been ascertained and removed. Thus during the past three weeks the notification returns for Clifton have fallen from 100 to 60 and again to 19. As the third week from the stoppage of the infected supply is now just completed it is reasonable to forecast that the diminution will be fully maintained. In my report to the Sanitary Committee on Oct. 28th I explained the nature of the epidemic and showed how the facts already ascertained, hurriedly but with minute care, pointed to a source of contamination from one particular farm. Further investigation has proved our original conclusions to be absolutely correct and I have nothing to withdraw from my report of that date. But the accumulation of evidence has thrown much fresh light on some points which were then obscure, and I will endeavour to explain as shortly as possible the main channels of diffusion of the infected milk. One farm only (X) supplied infected milk, but it found its way on to three milkman's rounds in the following manner:—

1. The milk from the infected farm X was consigned for delivery to the distributor in Bristol, by whose man it was met at the Suspension Bridge and distributed direct from the churn to customers without going to any local dairy. Any milk not used on the round was returned, however, to the branch dairy and sold to casual customers. This supply served during the holiday month of August and up to Sept. 26th, when the schools reopened, two districts—(*a*) the high level district, bounded on the east by College-road and on the south by Gloucester-road, and (*b*) the low level district, extending from the Mall to Grenville-place, Cumberland Basin, on the south, and as far as Bellevue on the east. On the re-assembling of the schools at the end of September, however, this supply was confined to the high level district. Some of the earliest cases developing at the beginning of October showed themselves on the low level

[9] Remarks on the Pulse, 1768.

[1] Abstract of a paper read before the Royal Medical and Chirurgical Society on Nov. 23rd, 1897.

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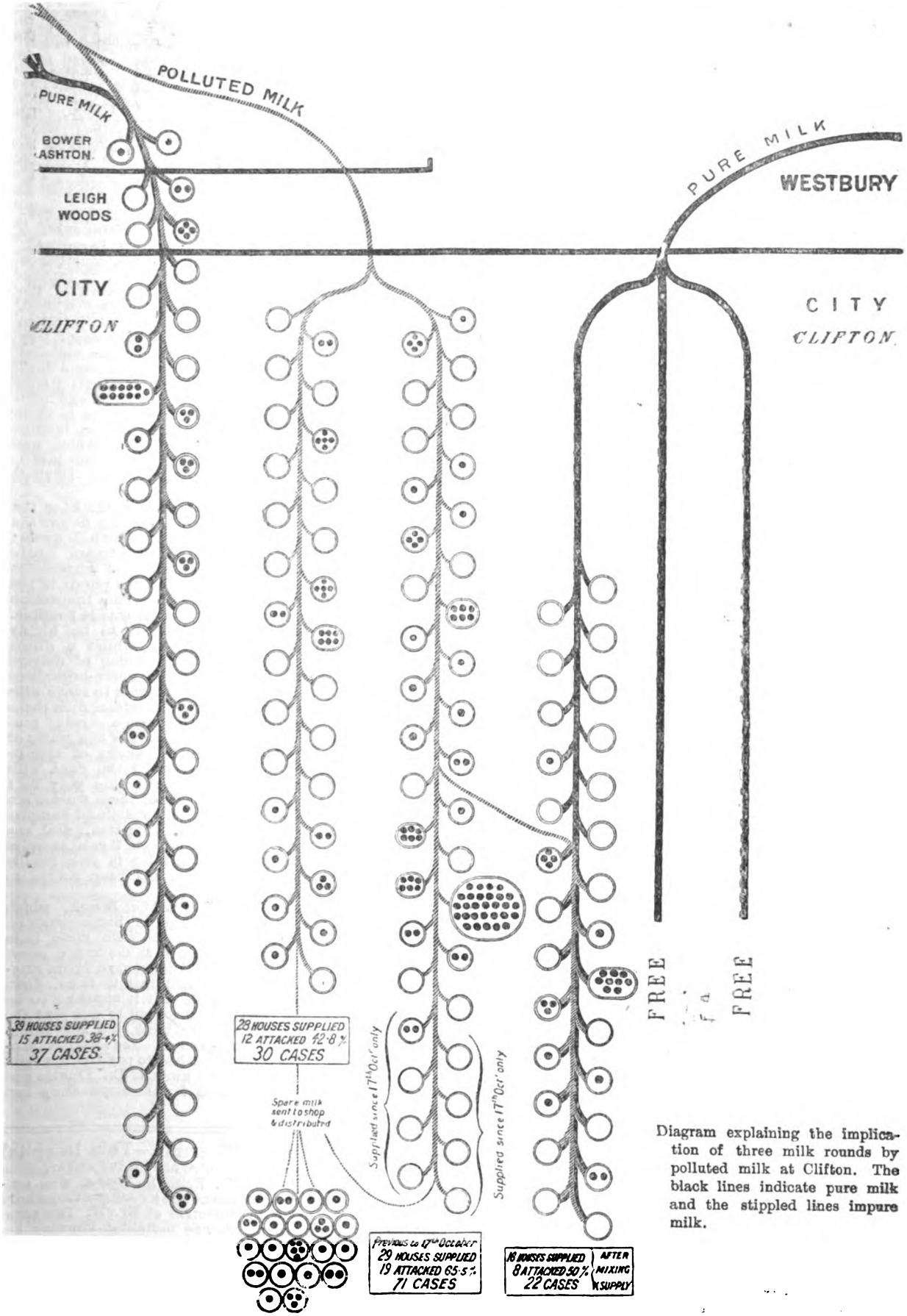


Diagram explaining the implication of three milk rounds by polluted milk at Clifton. The black lines indicate pure milk and the stippled lines impure milk.

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round, and many early cases also occurred on the high level round, but the incidence here was mainly in the second week of October. On the high level round 29 houses were supplied, 19 were attacked, and 71 cases resulted—a ratio of attacks to houses of 65·5 per cent. On the low level round 28 houses were supplied, 12 were attacked and 30 cases resulted—a ratio of 42·8 per cent. Taken together, 57 houses were supplied, 31 were attacked, and 104 cases resulted—a ratio of 54·8 per cent., or about two cases per house.

2. A milkman started with a pure milk-supply from Ashton, but at Bower Ashton he received a supplementary supply from X (the farm alluded to in the first section) consigned to Clifton, after receiving which he supplied milk to Bower Ashton, two cases of typhoid fever resulting, then proceeding to Leigh Woods, where six more cases appeared in two houses supplied, and then entered Clifton. In the course of his Clifton round the following resulted: 39 houses were supplied, 15 were attacked; ratio of attacks to houses 38·4 per cent.; the total number of cases was 37, or not quite one case per house. In this case a large quantity of good milk was polluted with a comparatively small quantity of infected milk and it will be noted that the attack rate upon houses supplied was smaller and the number of cases per house less. In one school, however, no fewer than 13 cases resulted and two were fatal. I may add that this purveyor had no right to purchase the X milk from the man who was forbiden to sell it. (The report then stated that very great difficulty arose in consequence of statements made to the medical officers' department which failed to give any explanation of the Ashton and Leigh Woods cases. The facts were discovered by a house-to-house visitation and subsequently the whole transaction was explained.)

3. The third and last implicated supply came originally from a farm at Westbury, to which no suspicion attaches, and this furnishes one of the most interesting features of the whole epidemic. The method of procedure adopted in working out the epidemic is this. As soon as suspicion attaches to a farm this is inspected, lists of the customers on the various rounds are obtained, the milkmen on implicated rounds are called to give evidence, the routes of each round are mapped out, and the lists and maps compared with the fever case-books compiled from the inquiries on notified cases. The milk from the Westbury farm is brought into Bristol on three rounds. Two of these rounds were found to be entirely innocent of cases, and the third round was (with the exception of the single case of a servant in one house, situated near the dairy where the returned infected milk went, and from which occasional supplies were possibly obtained) also quite innocent of cases up to a certain point, but beyond this point cases began to occur with marked frequency. These facts went a long way towards exonerating the farm itself as a source of infection. On comparing the mapped-out routes it was observed that at the very corner where this change from freedom to infection occurred this milk round crossed that of the X supply (previously referred to), and we were prepared to receive the admission that at this point, on occasions when the milkman found the demands of one large college house had shortened his supply, he was in the habit of buying a supplementary supply from the other who carried the infected X milk. After this cases commenced at the very next house supplied and recurred with considerable frequency throughout the entire route. The following are the results obtained: Before adding the infected milk 11 houses were supplied, 1 house was attacked, or 9 per cent.; 1 case resulted. After adding the infected milk 16 houses were supplied, 8 were attacked, or 50 per cent.; 22 cases resulted.

The explanation of this implication, which for some time seemed obscure, settles the question of causation and may silence some critics who, failing to trace from their imperfect knowledge any possible channel of infection, have traversed my statements while they have uniformly neglected the courtesy of asking me if I have any explanation. All the persons concerned have admitted before witnesses the accuracy of the facts I here adduce. In the aggregate up to Sunday, Nov. 14th, 1897, we find:—

Total houses attacked.	Houses.	Cases.
Houses attacked on regular rounds	55	163
Houses attacked obtaining casual supplies from the branch to which infected milk was returned ...	20	32
Houses attacked obtaining milk from dairymen not known to obtain infected supplies (no multiple cases in any such house)	13	13
	88	208

I am thus able to account satisfactorily for 195 out of a total of 208, or 93·7 per cent. of the total cases; and when it is remembered that the infected milk was supplied to one retail shop round which a cluster of cases has occurred and to one refreshment room, and when the chances of infection by visiting are taken into account, the percentage of failure, which I hope further inquiry will reduce, is very small. The number of multiple attacks in houses upon the infected supplies is very notable. The largest number in any one house (a schoolhouse) was 29; in others 11, 9, 7, 6, 6, 6, 5, 5, 5, 4, 4, 4, 3, 3, 3, 3, 3, 3, 3, 3 cases occurred, and several double cases in other houses. No multiple cases occurred in any house to which an infected supply cannot be traced.

[Dr. Davies here mentioned that at Clifton College, containing large numbers of boys at susceptible ages, 5 "houses" only were attacked, every one of which received, mixed or unmixed, the infected milk. Each circumstance of the attacks was satisfactorily explained, and it became possible to advise with confidence that the work of the school should continue without interruption and without fear of further infection. Several instances of infection under special conditions were also quoted. In one case a lady attacked was the only one in the house who drank unboiled milk. In another case a child of nine years of age on a day's visit to Clifton drank some of the unboiled infected milk at a restaurant and developed enteric fever at the end of a week (the incubation period in milk typhoid may be as short as five days). The infected milk was supplied to an institution containing sixty-three persons, not one of whom was attacked, in consequence, no doubt, of the milk being invariably scalded in a steam-jacketed cylinder. Dr. Davies's report then continued:]

I have already pointed out to the Sanitary Committee the conditions found to exist at the farm. I now lay before the committee the city analyst's report, from which I quote: "Oct. 30th, 1897. X Farm Pump and Stream above X Farm.—There is a remarkable closeness of agreement between these waters which suggests that the pump is not supplied from a spring but from the stream. Your inspection of the locality will have determined whether this is possible. The analytical results prove these samples to be highly charged with putrescent organic matter, whilst a direct microscopic examination, without the assistance of culture processes, shows them to be swarming with micro-organisms in great variety. Here also it is not possible to state with certainty whether part of the organic filth contained in these waters is or is not of sewage origin. From a careful consideration of the data and from a knowledge of the water of the locality I think there are distinct indications of sewage pollution, but the evidence, as is generally the case with stream waters, is not conclusive. However this may be I have no hesitation in saying that none of these waters are fit to be used for dairy work. I have also examined samples of milk, one received from X farm on 26th inst., and one on the 28th inst. Though in some respects these samples differ from average milk there is nothing in the results to justify the assumption that water has been added to either."

[The "stream above X farm" is Ashton Brook, which flows through Long Ashton, a village in Somersetshire, extending for a mile or more along the main road from Bristol to Weston. The brook is utilised as the main sewer of the village. Dr. Davies found that the sewage from fifty-nine houses is discharged into it and that it then flows directly through X farm. He adds that it appears to be the obvious duty of the rural district council to prevent the continuance of this pollution of the brook, the dangerous nature of which had been amply shown. The Health Committee of the Bristol Corporation resolved to pay for the milk destroyed to prevent infection and awarded Dr. Davies and his staff a cordial vote of thanks for the steps they had taken.]

HUNTINGDON COUNTY HOSPITAL.—This hospital has lately been thoroughly renovated and so far enlarged as to provide forty-two beds. Mr. Keith D. Young was consulted by the Board of Management and his suggestions have been carried out under the direction of Mr. E. Borissow, architect, of Huntingdon. A new operating theatre has been built, floored with terrazzo and lined throughout with opalite. A mortuary chapel, the gift of one of the Governors, is being built. The President of the hospital is the Earl of Sandwich, and the Honorary Secretary is the Archdeacon of Huntingdon.

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REMARKS

ON THE TREATMENT OF ACROMEGALY BY THE EXTRACTS OF THYROID AND PITUITARY GLANDS SIMULTANEOUSLY.

BY H. D. ROLLESTON, M.D. CANTAB., F.R.C.P. LOND.,
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IN THE LANCET of April 25th, 1896, p. 1137, I recorded the unsuccessful treatment of a case of acromegaly by pituitary gland substance. In some remarks which followed on the relation between the changes observed in the pituitary body (generally simple enlargement, cystic change, or more rarely sarcoma) and this disease it was pointed out that the internal secretion of the gland might theoretically be modified in three ways—viz., (*a*) by suppression, (*b*) by hypersecretion, or (*c*) by perversion of its composition. Suppression of secretion alone was not likely to account for the disease inasmuch as on that hypothesis the administration of pituitary extract should relieve the symptoms, whereas this therapeutic effect had not been definitely established. Hypersecretion again was improbable since the administration of the pituitary extract had not been shown to accentuate the symptoms. With regard to the possibility that the nature of the secretion was altered and that this perversion of its composition accounted for the changes characteristic of acromegaly the following suggestion was put forward: "That owing to alteration in the secretion of the pituitary the equilibrium between it and the other internal secretions are disturbed. Possibly some toxic body ..... might be thus produced. The thyroid and pituitary glands have been thought to be compensatory (to each other); recently, however, their extracts have been shown to be physiologically antagonistic.[1] Superficially there are some resemblances between acromegaly and myxœdema and it might be thought that acromegaly is the result of a disturbance of the chemico-physiological equilibrium maintained in health by the normal activity of these two glands.[2] Such a consideration suggests that acromegaly might be benefited by giving pituitary and thyroid extracts at the same time."

I have since the publication of this case in THE LANCET been able to test this theoretical consideration as to treatment on two cases of acromegaly. In both cases the pressing symptom of which the patient complained—headache—was relieved by taking twice a day five-grain tabloids of thyroid and of pituitary extract, ten grains of each being taken daily. It is to be added that the skeletal changes remained unaffected and that the amenorrhœa from which both patients had suffered since the onset remained.

CASE 1.—This patient was the woman described in THE LANCET in the communication already referred to. She was thirty-five years of age and had been ailing since 1891, but definite symptoms of acromegaly only dated from 1894, when her hands and feet began to enlarge and her sight began to fail. This was a well-marked case of the disease and the patient had optic atrophy and transient glycosuria. After being treated in the hospital with pituitary extract in February, 1896, she went home and was under the care of Dr. Hollis, of Wellingborough; towards the end of last year, (1896) headache became so intense that she was anxious to undergo any operation that would relieve it. Accordingly she came under my care again at St. George's Hospital. After consultation with my colleague, Mr. Sheild, who had seen her when previously in the hospital, it was decided that no attempt to remove the pituitary body, which from the primary atrophy of the optic nerves was probably much enlarged, was justifiable, but that if the pain continued the skull might be trephined and the subdural space opened with the object of relieving intracranial pressure. She was given the combined thyroid and pituitary extracts and she gradually lost the headache and was able to get up. Her improvement being sustained she went back to her home in March, 1897, with directions to continue the treatment. This advice, however, probably from the extra expense entailed, she did not follow. In June she began to get epileptiform fits with loss of consciousness, and gradually getting weaker she died early on Aug. 16th, on which day Dr. Hollis and I examined her body—fourteen hours after death. The results of this examination were communicated to the Pathological Society of London at the meeting on Nov. 2nd, 1897, but it may be stated here that the pituitary body was greatly enlarged by a soft white growth which invaded the right optic thalamus and microscopically had the structure of a medium sized round celled sarcoma. The thymus was persistent and microscopically showed marked enlargement of the concentric corpuscles of Hassall. The thyroid body was healthy both to the naked eye and microscopically.

This case belongs to the class of acute acromegaly, of which Maximilian Sternberg[3] has collected six examples all accompanied by sarcoma of the pituitary body and running their clinical course rapidly in from three to four years.

CASE 2.—A woman, aged twenty-six years, with symptoms of acromegaly for two and a half years was shown at a meeting of the Medical Society of London on April 12th, 1897. This was a less advanced case than the previous one, presenting no changes in the optic nerves. When she came under observation in October, 1896, she had had severe headache for six weeks. She was taken into the hospital and treated with the combined extracts of thyroid and pituitary glands. She soon lost the headache and subsequently attended as an out-patient until July, 1897, the same treatment being continued. As there was no return of the headache when she was an out-patient its disappearance can hardly be explained as being merely due to rest and improved physical conditions.

In these two cases amelioration of one symptom and that an urgent one—headache—followed the combined administration of thyroid and pituitary gland extracts but the structural changes remained unaltered. The results are too scanty to establish any reliable conclusion as to the value of the treatment but they justify a more extended trial and it is with the object if possible of inducing others who have cases of acromegaly under their care to try this form of treatment that this note is published. One point that specially requires investigation is whether any good effect that may result from the administration of the combined extracts is solely due to the contained thyroid extract or whether the two combined extracts have more effect than the administration of thyroid alone. Pituitary extract has been generally unsuccessful in the treatment of acromegaly while the treatment with thyroid extract has given variable results. Benson,[4] Bruns, and Bramwell[5] record improvement, Bramwell and Ransom[6] report no effect, and Murray[7] mentions temporary improvement which disappeared while the treatment was continued. Under these circumstances it has been thought that any beneficial effects it may have are of a general nature and not due to any specific action on the morbid processes at work in acromegaly. But since thyroid extract has been found to relieve the headache of acromegaly,[8] it is possible that the apparent success of the administration of the combined

[1] Schäfer and Oliver (Journal of Physiology, vol. xviii., p. 277) found that the effect of pituitary extract on blood-pressure was to raise it while the effect of thyroid extract was the reverse. Their "observations would appear to indicate that the opinion which has been freely expressed that the pituitary and thyroid are vicarious in function and which has been based upon the apparent enlargement of the pituitary after thyroidectomy is probably incorrect, seeing that the extracts of the two glands produce entirely contrary physiological effects." On the other hand, it does not follow that because the effects on blood-pressure of these extracts are antagonistic their other physiological actions necessarily follow suit. Dr. Abrahams has kindly called my attention to an interesting paper by Dr. A. Schiff in the Wiener Klinische Wochenschrift of March 25th, 1897, on the influence of thyroid and pituitary glands on metabolism. After referring to the clinical relations and resemblances existing between acromegaly and myxœdema he goes fully into the effects of thyroid and pituitary extracts on metabolism and shows that they resemble each other in increasing the excretion of phosphoric acid.

[2] In connection with this speculation reference may be made to a valuable paper on Acromegaly with Goitre and Exophthalmic Goitre, by Dr. G. E. Murray, in the Edinburgh Medical Journal, February, 1897. He quotes five cases in which exophthalmic goitre and acromegaly have existed together. While inclining to the view that acromegaly is in some way dependent on alteration in the function of the pituitary gland, he says that the coexistence of acromegaly and exophthalmic goitre suggests that there may be some common cause which brings about similar changes in both thyroid and pituitary glands, each in turn producing its attendant symptoms.

[3] Sternberg, Die Akromegalie, p. 67, 1897.
[4] Brit. Med. Jour., 1895, vol. ii., p. 949.
[5] Quoted by Murray.
[6] Brit. Med. Jour., vol. i., p. 1259.
[7] Ibid., p. 293.
[8] Bruns: Neurologisches Centralblatt, December, 1895 (quoted in epitome, Brit. Med. Jour., 1896, vol. i., No. 51).

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extracts was in reality due to the thyroid extract and not to the combination. In this connexion it would be interesting to ascertain what is the effect of thyroid extract on headache other than that of acromegaly; from the fact that it lowers external pressure it might be expected to relieve some forms of headache. In the Report of the Clinical Society of London on Myxœdema[9] occipital headache was present in one-fifth of the cases. On the other hand, excessive doses of the extract give rise among other symptoms to headache.[10]

At the present time the relation of changes in the pituitary gland to acromegaly cannot be considered as entirely understood or definitely settled; it is true that the change in the gland is generally regarded as primary. But it may be that they are both the manifestations of some primary change elsewhere,[11] or, as the occasional association of acromegaly with some or in very rare cases with all the symptoms of exophthalmic goitre on the one hand and the superficial resemblance to myxœdema on the other suggests, the symptoms of the disease may be due to some disturbance of a theoretical equilibrium which in health is maintained between the internal secretions of the thyroid and pituitary glands. In this state of the question the results of more extended therapeutical trial of thyroid extract both alone and in combination with pituitary extract might be of considerable value.

THE LUNGS AS DUST EJECTORS, VIEWED MAINLY FROM A PATHOLOGICAL STANDPOINT.

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THE respiratory functions of the human lungs are obvious and any interference with their efficiency in this regard is quickly made known both to the physician and to his patient by the urgency of the symptoms it engenders. It is scarcely surprising to find that an almost equally important service which these organs render our bodies unceasingly, yet unobtrusively, should be relegated by physiologists "to a back seat." I refer to their function as dust ejectors. Dr. E. H. Greenhow[1] was one of the first observers who drew attention to the changes which take place in the lungs of those much exposed to a dusty atmosphere. Subsequently Merkel,[2] Alexander Ross,[3] Mayet,[4] and others studied the subject. The present paper is not, however, written to confirm a proposition already well established that certain dusty occupations will lead to lung disease among the work-people but rather to show that we are all exposed in a modified degree to similar risks from the daily inhalation of dust and that certain well-marked pathological changes in the lungs and elsewhere may not infrequently be traced to a breakdown in the dust-expelling function of the lungs even among those whose surroundings are not excessively dusty.

We are taught by chemists to regard the air as a mixture of certain gases holding a little watery vapour in suspension. Yet I venture to assert that the air my readers are now breathing, the air I have breathed by day and by night for upwards of half a century, is something essentially different from this purely gaseous mixture. Some few years ago I read a paper on what was called "Motes from a Sunbeam." It was, however, a chemico-physical paper treating of air-dust and I should not have here alluded to it had it not been for some experiments in connexion therewith. Clean glass slides such as those used by microscopists were smeared with glycerine and exposed at different elevations to the open air for an hour or more. They were then examined both by the naked eye and microscopically. It was observable that the deposit—for there always was a deposit visible to the eye—varied much with the force and dryness of the wind and with the quarter whence it blew. Sometimes the dust consisted largely of deliquescent crystals of sea-salt brought from the English Channel a couple of miles away if the wind was a strong south-westerly gale. At others siliceous and calcareous particles, or hair, vegetable fibres, and such-like material, were visibly sticking to the glass. It is not, however, with these visible particles suspended for a time in the air that I have now to deal. It is with those minute orts, those fragments of a decaying world, whose very minuteness and want of density if once they are lifted by the wind ensure them a prolonged flotation in the atmosphere. Besides the naked-eye appearances of the slides above described the microscope revealed many other fragments, both organic and inorganic, which it is not necessary to recapitulate. These experiments were undertaken before Koch had shown how we can analyse by cultivations the various aerial bacteria. Where I, however, found visible solid particles in the air at heights of forty and fifty feet above the surface of the ground it may be assumed that thousands of bacilli escaped my notice because their presence was unlooked for. The air we breathe contains, then, besides the gaseous and watery components above mentioned, a variable amount of solid matter suspended in it, partly organic and partly inorganic. Of the organic particles, again, some are living and others are dead. I propose, first, to consider briefly the behaviour of motes whilst suspended in the air and subsequently to show what becomes of them when they have fallen upon the mucous membrane of a bronchial tube or have obtained ingress to the inner recesses of the lungs themselves.

The rate of subsidence of solid particles in still air depends largely upon their possession in a variable degree of three attributes—size, shape, and density. Organic motes are as a rule less dense than those of inorganic origin and consequently the latter sink for the most part more quickly through the air than the others do. The subsidence of motes conveyed onwards by an air current, although modified in special cases by the direction and force of the current, is still mainly controlled by gravitation. In a dusty atmosphere the subsidence of motes is interfered with and it may be indefinitely delayed by wind-gusts. The streams and eddies so produced have a tendency to raise the aerial flotsam to a higher level from the ground than that previously occupied by it. It is the disturbance of organic dust whereby the number of motes in a given volume of air may be temporarily increased that causes a draught in a crowded and ill-ventilated room to be specially dangerous. Along the respiratory tract the subsidence of aerial motes is regulated by similar laws to those in force outside the body. We may rightly conclude that the heavier particles of the road-drift, for example, are when inspired mainly deposited upon the mucosa of the inferior meatus narium of the pedestrian if he is a nose breather. We can obtain ample evidence of this fact as a rule when we clear the nose on a white handkerchief after a dusty walk. This result is probably due rather to the operation of certain physical laws regulating the subsidence of suspended air-motes than it is to any anatomical peculiarities of the nasal cavities as some will have us believe. The air which passes into and out of our lungs under ordinary circumstances does not mingle except by slow diffusion with that filling the upper nares where the complicated convolutions of the olfactory mucosa are found. It follows that the majority of the air-motes will pass along the inferior meatus. We cannot actually see them performing their adventurous voyage through this possibly somewhat constricted passage, but we have indirect anatomical evidence that they really do so. I need only bring to mind that the inferior meatus of the nose is lined with ciliated epithelium in common with the larger air-tubes, whilst this is not the case as regards the olfactory cavities and the pulmonary alveoli.[5] The velocity of the air-current along the bronchi during inspiration must be constantly changing and in the infundibula it will either cease or become greatly diminished. Despite the respiratory movements of the chest and the variable currents they necessarily induce the smallest and lightest motes will have a more favourable chance of passing deeply into the bronchial ramifications along with the inspired air than others. As the smallest and lightest motes are generally both organic

[9] Transactions of the Clinical Society, supplement to vol. xxi., p. 29.
[10] Osler: Principles and Practice of Medicine, 1895, p. 751.
[11] Compare remarks by Professor Panas of Paris reported in Brit. Med. Jour., 1895, vol. ii., p. 950.
[1] Transactions of the Pathological Society of London and THE LANCET, 1859-72.
[2] Deutsches Archiv für Klinische Medicin, Band viii. und ix.
[3] Dublin Quarterly Journal of Medical Science, February, 1871.
[4] Société des Sciences Médicales, Lyon Médical, 26.
[5] In accordance with the observations of Todd and Bowman and confirmed by Kölliker and other writers. Schech, however, gives the opposite view—i.e., ciliated epithelium in the olfactory region. (Diseases of Mouth, 1888, p. 2C4.) My own observations seem to agree with those of the older writers.

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and alive these microbes may occasionally find their way into the alveoli even when other motes are excluded.

When a mote falls upon the mucous membrane of the respiratory tract its subsequent history depends much on its chemical constitution, size, and shape. Metallic and mineral dust as met with in certain dusty occupations include for the most part a large number of sharp-edged or pointed particles admirably adapted to penetrate the mucosa of the tubes. If, for instance, we examine fine iron or copper filings under a microscope many of the minute particles of metal will be found to have assumed the shape of spiral ribbons, some of which are more closely twisted than are others. Yet all are so fashioned as to easily cut into the pulmonary tissues. Coal dust, although composed mainly of smaller particles than the metal filings, is largely made up of pieces with peg-shaped points and cutting edges. Again, mother-of-pearl dust[6] may be almost said to typify a truly penetrative powder, consisting as it does almost entirely of delicate needle-shaped spicules of lime carbonate on some organic, possibly chondrin, base. Finely pulverised flints or other stones, as met with in road drift, in stonemasons' sheds and elsewhere, doubtless possess in many cases considerable cutting capabilities. On the other hand, a very large majority of the air-motes of everyday life are harmless as regards their penetrative ability. These are at once moved onwards, whenever they have fallen on the viscid surface of a bronchial tube, and are eventually ejected into the pharynx by the aid of cilia, supplemented by occasional and forcible expiratory efforts. Having arrived so far on their return journey the motes mixed with mucus are either swallowed or expectorated at the discretion of their possessor. The above sketch represents with reasonable accuracy the progress within the lungs of the myriads of air-motes which every healthy person must have inhaled during an average lifetime. Occasionally it happens that tubercle or other noxious bacilli are introduced together with harmless motes to the bronchial mucosa. So long as the epithelial surface is intact these organisms are swept outwards again by the cilia and are not allowed to obtain a permanent lodgement. If, however, they have succeeded in gaining the infundibula they must be removed with difficulty owing to both the physical and anatomical conditions of their surroundings. This is doubtless one of the modes in which the lungs can become infected by septic bacteria.

The smaller bronchi are proportionally more muscular and contractile than the larger tubes. When one of the former is contracted its lumen is almost obliterated by infoldings of the mucosa. A sudden change of calibre is often rendered necessary to prevent the ingress of solid particles to the alveoli. If, however, a sharply-edged metallic or mineral mote is caught by the contracting tube it is probably forced by the movements of the muscular ring into the parenchyma of the lung. The intrusion of such particles is admittedly well borne by the pulmonary tissues, and it only at times leads to serious and progressive complications. These, when they exist, take the form of patches of sclerosed tissue, each surrounding a bronchiole (Osler). Besides these lesions the arteries are often affected with endarteritis, and the embedded particle is usually surrounded with a zone of pigmented tissue (Woodhead). These appearances are similar, whatever the nature of the inorganic dust inhaled (Zenker). Exclusive of the arterial disease and the pigmentation, to both of which I shall refer subsequently, there are two chief facts regarding the behaviour of the pulmonary tissues when they are invaded by mineral or metallic fragments. First, they bear the intrusion well as a rule; and, secondly, whatever the metal or mineral of which the motes consist, the resultant sclerosis if it takes place is practically identical. These facts undoubtedly point to the pulmonary lesion as the result of a third factor, whose occasional ingress along with the inorganic particles above mentioned is the true cause of the sclerosis. If we consider the possibilities there must be of infection when hundreds of minute pinpoints are being forced in many different directions through the lungs, as is necessarily the case in many instances of pneumokoniosis, we ought not to feel surprise that infective germs are sometimes introduced with them. That this is the true interpretation of the sclerosis, the pigmentation, and the arterial disease will be disclosed in the latter part of this paper.

[6] See a paper by Greenhow: Transactions of the Pathological Society of London, vol. xxi., Organs of Respiration; "Specimen of a Pearl-shell Cutter's Lung."

From what has been already stated we may consider that the lungs have a strong outer line of defence against invasion by air-dust in the branching air-tubes and their moistened lining. When, however, certain mineral or metallic particles are precipitated upon the pulmonary mucosa they are frequently forced into the lungs themselves by the efforts made to dislodge them. Owing to the comparative scarcity of these motes in the dust of ordinary life this accident rarely happens even to dwellers in towns. It is otherwise with small amorphous particles, as smoke-smuts, broken epithelial scales, or the hundred and one oddities which form the air-dust of civilised life. The lungs will grievously fail in their dust-ejecting function when such material is left to choke the finer bronchi. As a rule, I believe, this dust when deposited in the lungs is quickly and thoroughly removed. I even doubt whether many hours' exposure to a smoke-laden London fog will leave an atom of carbon permanently fixed within the meshes of the pulmonary tissues of a healthy man. Some pathologists have assumed that the pigmentation of town-dwellers' lungs is due to the inhalation of an excessively smoky atmosphere. The discoloration may be explained more truthfully otherwise. That the "black-lung" of coal miners[7] is due to the invasion of the pulmonary parenchyma by coal dust is unquestionable; but this intrusion is largely due, as previously pointed out, to the shape of coal particles. Smoke carbon is quite incapable of cutting its way into the mucosa as some coal dust probably can.

When dust has by any means evaded the natural safeguards to its promiscuous introduction within the tissues of the body it loses its individuality if I may so phrase it and its further movements are somewhat difficult to trace. This difficulty is rendered all the greater among the higher vertebrates because, owing to the efficiency of the defences, the intrusion of even the tiniest bacterium is probably challenged and for the most part prevented. Among the Aves the respiratory movements of the lungs are more restricted than they are in mammals, and these organs in birds communicate freely with large air sacs in different parts of the body. The safeguards to prevent the introduction of atmospheric dust or other forms of contamination into this complex respiratory system are apparently trivial and easily evaded—at all events, in some species. For instance, it is not unusual to find entozoa (monostoma mutabile, &c.) in the subocular air cell of the coot, water-hen, goose, and other water-birds.[8] When comparatively large creatures are permitted to live with impunity it is reasonable to suppose that smaller organisms are not rejected. These avian receptacles, notwithstanding their close relationship in many cases to the innermost cavities of the skeleton, must occasionally admit many air-motes. It is difficult to understand how any of the dust when once it has been drawn into these sacs can get back to the open. At all events it seems probable that a far larger proportion of the total amount of captured particles will be retained in these extensive air-chambers of birds than in the lungs of mammals. From what we know of the behaviour of certain motes, as above stated, a percentage of the captured particles will sooner or later become involved in the highly vascular lining membrane and in this manner there will undoubtedly be a risk of blood contamination. When foreign particles get into our blood-vessels they are attacked and devoured, as is well known, by leucocytes. The necessity for depurative measures must be theoretically greater in birds than in mammals, and possibly it is more urgent in water-fowl than in other species of birds if my line of reasoning is sound. We ought therefore to expect in birds' blood a condition of physiological leucocytosis, and water-birds ought to possess this physiological attribute to a greater extent perhaps than land-birds.

In January, 1896, Mr. E Lewys Lloyd kindly undertook to count for me by means of a Thoma-Zeiss hæmocytometer the actual number of red and white corpuscles respectively in given volumes of blood taken from four different species

[7] Black-lung had been recognised as a common result of respiring air laden with carbon-motes many years before Greenhow published his observations. Dr. Gregory, Mr W. T. Cox, and Mr. Couch (Statistical Investigation into the Mortality of the Miners in the District of Lelant, 1859) severally concluded that the discoloration was due to carbon (British and Foreign Medico-Chirurgical Review, vol. ii., 1860, p. 53, and THE LANCET, May 1st, 1869, p. 604, for report of discussion on Greenhow's paper).

[8] Owen: Anatomy of Vertebrates, vol. ii., p. 217. See also paper read by Mr. McCallum before the British Association, 1897, on Hæmatozoon Infections of Birds.

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of birds. The investigations were made in the laboratory at St. Bartholomew's Hospital and the birds selected were hens, pigeons, larks, and ducks. In describing these enumerations Mr. Lloyd fully upheld the high reputation he has as a painstaking and accurate observer and I here give the average proportions of white to red cells in each of the four species above mentioned as found by actual experiment: in hens the average proportion of white to red cells was 1 : 234, in pigeons nearly 1 : 114, in larks nearly 1 : 166, and in ducks 1 : 97. These results were obtained under identical conditions from several examinations of the blood of two healthy birds in each species. If we take the average proportion of white to the red corpuscles in man to be about 1 in 500 these averages for birds show that a leucocytosis existed in all the tested samples of avian blood; and, furthermore, of birds' blood the highest percentage of white corpuscles to the red existed in the duck, a water bird. These figures as far as they go confirm in a curious manner the suggestion that birds' blood by incurring greater risks of contamination from without owing to the conformation of the respiratory apparatus ought to be provided with a larger proportion of phagocytes than is man's blood for instance. Water birds, again, owing possibly to their dirty habits seem to incur greater risks than do land birds and against these dangers the duck at all events is sufficiently provided by a well-marked physiological leucocytosis.

Pigmentation is a common accompaniment of many chronic diseases of the lungs. It has been found, to take a few examples, not only in cases of anthracosis, but in stone-mason's lung[9]; in the chronic congestion of mitral incompetency[10] and along with tropical abscess of the liver, as in the case hereafter mentioned. The colour of the pigment is usually black; it may, however, be brown, green, or yellow. I shall confine my remarks to the common black variety as the one generally met with even in cases where the rarer coloured pigments predominate. Under a high power the microscope resolves the pigment into minute granules. Many pathologists consider it to be composed of carbon. The transference by wandering cells of granules discharged from other cells or of matter to be converted into granules, "to organs which lead out of the body, where they may be put to secondary uses," appears specially to have been studied by Mr. H. M. Bernard, of the Natural History Museum, South Kensington.[11] Although in some metazoa, the crustacean apus, for instance, the pigment granules of the eye are highly complex bodies, according to the same authority there is no doubt that these granules are mainly excrementitious and are discharged by the wandering cells as waste products. Guanin ($C_5H_5N_5O$) has been found in the granules of some animals. The pigmentary granules found in the lungs of townsmen are doubtless pathological in nature and composed entirely of excrementitious substances. In the following case, which I shall quote at some length, we have indirect evidence (1) that pigment granules were partially digested pus cocci, (2) that they were removed from the blood-vessels by leucocytes, and (3) that the pigment deposited on the middle and outer coats of the pulmonary artery and elsewhere was in every case conveyed in the manner above stated from the blood stream during life.

A soldier, aged twenty-five years, invalided two months previously from India for "ague," was admitted to the Sussex County Hospital in February, 1896. He was then suffering from obscure symptoms suggestive of hepatic abscess. An exploratory puncture, although it showed the presence of a few dead leucocytes, did not localise an abscess cavity so definitely as to justify further operative measures. About a fortnight afterwards he died. At the necropsy the right pulmonary artery was, as regards its larger and medium branches, distended with thrombi, causing typical wedge-shaped areas of consolidation. Some of the infarcts were breaking down centrally into pus. A large abscess, with almost cartilaginous walls, about the size of an orange, was found near to the anterior surface of the right lobe of the liver. No amœbæ coli were found in its contents under the microscope, only pus cells and broken-down tissue. Pus cocci were seen on a cover-glass preparation stained with methylene blue. On inoculating culture tubes with pus, cultures were obtained, but the nature of the organism was not determined. There was no evidence of dysentery in the four inches of sigmoid flexure examined. The above extracts are from the notes of Dr. Arthur Stanley. Upon subsequently making some sections from a thrombosed patch in the lung I noted smaller branches of the pulmonary artery mapped out by dense lines of black pigment, mostly in the outer coats of the vessels. At the angles formed by the insertion of a branch into a larger vessel the pigment was mostly in evidence. Owing to the thrombosed condition of the vessels it was easy to trace the branches of the pulmonary artery. In addition to the walls of the artery pigment was found to a small extent on the pavement cells lining the alveoli, and there were a few scattered granules elsewhere among the pulmonary tissues, possibly along lymph channels. The largest amount by far, however, was heaped around the blood-vessel in the manner described, some of the smaller vessels being apparently changed into blackened tubes. If the black patches were examined with a high power it was easy to resolve them into aggregations of granules for the most part contained within the nuclei of small oval cells, others, although preserving in the aggregate the oval shape, were undoubtedly without a cell-covering. Having stated so much as regards the topographical distribution of the pigment I shall next discuss its probable origin in the case under consideration.

In the above case we have proofs of the finding of pus cocci in the contents of the hepatic abscess shortly after death, an abscess from which we have clinical evidence that the patient had suffered for some long period. At the time of death and shortly before that event we have strong presumptive evidence in the thrombi within the walls of the pulmonary artery that some of these cocci, this living organic dust in other words, had made its way into the blood-vessel. If this happened during the last few days of life—and we can scarcely suppose the thrombi to have lasted for longer—the condition of the abscess walls and the patient's clinical history both confirm the opinion that the hepatic abscess was of older date than the blood-clots. It is highly probable, this being so, that cocci may have escaped into the pulmonary artery in small numbers before the final catastrophe brought about the thrombosis, and that they were seized upon and destroyed by leucocytes ere much harm was done. Both pathology and comparative physiology render it probable, as I have elsewhere shown,[12] that phagocytes after a meal of this kind often seek to free the blood from their presence as soon as may be by passing out of the blood-vessels into the peri-arterial lymph spaces.[13] In the lungs, owing to the substitution of oxygen for the carbon peroxide of the hæmoglobin, the activity and energy of all intervascular changes are accentuated generally and that of protoplasm in particular, and we ought to look for and expect evidences of these changes in pulmonary pathology. The present case furnishes conclusive information on these points if it is rightly construed. The lines of pigment which map out the branches of the pulmonary artery represent the "dumping ground" of half-awakened leucocytes poisoned by their meal upon streptococci pyogenes. That this is no fanciful explanation of these pigmentary deposits there is evidence in the clots themselves, for I have found several leucocytes filled with granules embedded therein, caught and retained in the firmly clotted blood.

We may conclude therefore with a reasonable assurance that our conclusion is true that pigment granules in the lung substance represent in many cases partially burnt or in other words digested dust removed from the pulmonary vessels by phagocytes; and, furthermore, that there is no satisfactory evidence in support of the conjecture that the pigment is ever caused by inhalation of smoke-carbon suspended in the air. The latter particles are probably always swept away by cilia along with the mucus coating the air passages. If we examine the small masses of black pigment so commonly found in the expectoration of a townsman after an influenzal catarrh they will be found to consist apparently of two varieties—namely, of granules contained in oval sacs many of which average 0·001″ long diameter and of granules not surrounded by a cell wall. Sometimes it may happen that the free granules have escaped from a sac

[9] Practical Pathology, by Dr. Sims Woodhead, 1885, p. 281.
[10] American Journal of the Medical Sciences, January, 1871, paper by Francis Delafield.
[11] Annals and Magazine of Natural History, Series 6, vol. xvii., p. 162.
[12] Journal of Pathology and Bacteriology, vol. iii., pp. 1 et seq.
[13] There are two directions in which living bacteria may be supposed to pass along the lymphatics, in the direction of the current or against it. I believe that these organisms usually move with the stream—that is, mainly from the blood-vessels to the neighbouring lymphatic glands.

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through rupture of the walls, but there is no evidence of this accident in many cases. With the exception of a difference in size, to be accounted for by some general shrinkage in the microscopic sections, a comparison of the pigment cells in sputum with others in the pulmonary tissues shows a resemblance between them which I believe implies an identity of origin. In other words we have here unfolded to our view a second line of defence in the lungs, whereby even after the entrance of pernicious organic dust into the blood[14] the freshly stimulated phagocytes in the smaller branches of the pulmonary system of vessels at once attempt its oxidation and removal.

The difference in size between the granule-bearing cell and the average leucocyte may be explained as follows: the pigmented cell is a leucocyte surfeited with the plethora of an indigestible meal. These large cells are found mostly outside the blood-vessels either in the pulmonary tissues or in the sputa of a patient. They then represent cells whose active locomotion is over or is largely replaced by internal molecular movements, constituting digestion and tending to the growth or enlargement of the cell. It is not difficult in many cases to pick out pigment cells in various stages of growth from the size of an average leucocyte onwards. In the higher vertebrates the extra-vascular pigmented cell must be a comparative rarity, to be met with only in cases of urgency when the blood-motes are from sheer numbers in danger of gaining an ascendancy over the rest of the body. Otherwise much organic dust in the pulmonary system of blood vessels, after being devoured and partially consumed by phagocytes, is conveyed onwards by them to the left auricle. Thence the blood current makes a twist upon itself before reaching the aortic ostium by passing sharply round the free edge of the aortic cusp of the mitral valve. This mitral curtain corresponds to the single valve, guarding the auricular opening in reptiles, and is most developed in birds.[15] Conformably to its ancient evolutionary pedigree we might expect this flap to be affected at an early period, whenever an excess of half-poisoned leucocytes passed around it. And so I believe it really is, although I have no statistics bearing upon this statement; my experience certainly favours the supposition that atheroma more frequently affects this cusp than it does other parts of the endocardium. In tracing the subsequent progress of the surfeited phagocytes along the blood-vessels we should have to recapitulate the arguments I have elsewhere given in favour of the dust origin of aortic atheroma. This is unnecessary. I shall content myself with pointing out that the partial failure of the dust-restraining function of the lungs offers a simple and more satisfactory explanation of the etiology of aortic atheroma than any other that I have yet seen.

Brighton.

[14] Oftentimes through the portal system.

[15] Article, "Birds" (Rees's Cyclopædia), written by Macartney and quoted by Owen, ibid., vol. ii., p. 203.

A BRIEF ACCOUNT OF TROPICAL ABSCESS OF THE LIVER.

BY C. W. WINDSOR, M.A., M.D. CANTAB.

IN this article I have endeavoured to bring out the striking connexion of dysentery with hepatic abscess and also to try to prove some relation between these two affections and the amœba coli. My own experience has been derived from the study of cases during the last two and a half years at the *Dreadnought* Seamen's Hospital, where perhaps more cases of abscess of liver and dysentery are met with than elsewhere in England. A brief *résumé* of the cases appears at the end.

Symptoms.—The onset of the symptoms of tropical abscess of the liver is commonly gradual and insidious and the patient may only seek advice when the abscess is fully developed. In many instances everything points to the presence of an abscess but there is no one single symptom or physical sign which is absolutely diagnostic of the condition. Early in the case the patient may complain of lassitude, weakness, and feeling of general ill-health and of loss of appetite and impaired digestion. A general alteration in the complexion is very often noticed, though when the patient has lived for a long time in tropical climates this change will not be very well marked. This alteration is one of increasing sallowness with a muddy, earthy appearance of the face. The eyes look heavy and there are deep shadows beneath them. There may be attacks of jaundice either transient or permanent, but it is not common to see any of the symptoms of biliary obstruction. The bowels are usually constipated and obstinate vomiting is said by Murchison to be frequent, but in the cases I have seen this has not been present in one; digestion is impaired and the tongue is coated. The first definite sympton is that of pain commonly situated in the right hypochondrium. This may be of two kinds: (*a*) a dull, heavy, aching pain; and (*b*) a sharp, stabbing pain. The former is the more common and usually shows the gradual increase in size and stretching of the liver tissue and integuments. The presence of a pain referred to the tip of the right shoulder is common. The sharp, stabbing pain is probably nearly always due to pleurisy or in rarer cases to perihepatitis. The pleurisy often goes on to the effusion of fluid though only to a moderate extent—*vide* case. This symptom—i.e., pleurisy—is brought about by the extension of the inflammation to the superficial parts of the liver, causing adhesion of the liver to the diaphragm and then implicating the parietal and visceral layers of the pleura. This process may stop short at almost any stage, so that the liver may not be adherent to the diaphragm or the layers of the pleura may not be involved at all, or only the parietal layer, in which latter case the pleural cavity is open. In long-standing cases the liver, diaphragm, and pleura are all firmly matted together, so that perihepatitis to a limited extent—i.e., over the surface of the abscess—is very common, but this is not invariably the case, as sometimes the liver is quite free from the diaphragm and has to be stitched to the edge of the wound before the abscess can be opened. Great stress has been laid on this perihepatitis from the point of view of diagnosis, but I think that the differentiation of friction due to perihepatitis from that due to pleurisy, except in those cases where well-marked friction is heard either low down over an enlarged liver or in the epigastrium, must be almost impossible. The size of the liver is of great importance; there is usually enlargement which may be upwards or downwards or in both directions, the former being common. It must be remembered that any increase of the dulness above the sixth rib may be due to a localised collection of the fluid in the right pleura quite as much as to enlargement of the liver. The increase in the liver depends upon the situation and size of the abscess. The lower border is often felt to be smooth and rounded as if the edge had been rolled under; the contraction of newly-formed fibrous tissue on the under surface (due to perihepatitis) may account for this. There may be bulging of the right side and bulging of the intercostal spaces with perhaps slight increase in measurement; if the left lobe be implicated there will probably be an easily recognised elastic swelling in the epigastrium. The increase in the area of liver dulness may be appreciable behind, usually extending upwards towards the angle of the scapula. There is nearly always tenderness on palpation over the liver, especially on firm pressure in the lower intercostal spaces. A very constant and valuable sign of hepatic abscess is œdema of the skin over the lower ribs, but this is not absolutely diagnostic any more than in a case of empyema. Redness of the skin and fluctuation will be present only when the pus is approaching the surface. There is pyrexia of a remittent or intermittent type; this fever is not as a rule very high, 102° or 103° F. being the common limits. It may show curious remissions, the patient being free from fever for a few days, after which the temperature rises and may take a typical hectic character. In some cases the fever may be slight or even absent, especially in long-standing cases. Actual rigors are not commonly seen except occasionally in the early stages of the disease, but the occurrence of profuse sweatings, especially at night, is considered a characteristic feature; these sweatings are not so frequent as in pyæmic abscesses of the liver. Jaundice has already been mentioned as being rare; Murchison attributes it to a catarrh of the bile ducts. It was only noticed in five cases out of 120 collected by Moorhead. Marked emaciation is very commonly found and, with the sallow cachectic complexion, helps to give the patient a very characteristic appearance. It is only rarely that portal obstruction is brought about by the pressure of a large abscess.

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Terminations of a tropical abscess.—It may be diagnosed nd treated surgically. Rupture of the abscess into the general peritoneal cavity may occur, as was the case in four of the fifty-eight cases treated in the Seamen's Hospital during the last twenty-seven years. In the same series ten abscesses perforated the diaphragm, six of these bursting through the lung and four opening into the right pleura. The stomach, transverse colon, and right kidney were perforated once each in the above series. It will be noted that there is no case amongst the fifty-eight just mentioned showing the rupture of an hepatic abscess into the pericardium, so we may fairly presume this mode of termination to be rare, as this series may be taken as representing a record of average cases. Apart from surgical interference it is most common for the abscess to extend upwards and burst through the lung; in the recognition of this condition the expectoration of brick-red pus is most important. The diagnosis of tropical abscess of the liver is not always simple; many features may be present to render the presence of an abscess probable, but an exploration with a syringe and hollow needle is almost always necessary before the diagnosis is settled. Stress will naturally be laid on the question as to whether the patient has lived in the tropics or if he has had dysentery. Empyema has been frequently confused with tropical abscess, but the characteristic red pus ought to prevent error. The diagnosis between tropical abscess and a large subphrenic abscess is almost impossible before operation and even then the distinction is not always clear. Congestion of the liver, cirrhosis, or acute hepatitis may present a little difficulty, but an exploration will put the matter beyond doubt.

Treatment.—We can be very brief on this subject as it rests entirely with the surgeon to say how the abscess shall be evacuated. It is important that operation should be undertaken as soon as the abscess is diagnosed; nothing is gained by delay, it being useless to wait until adhesion of the various structures has taken place with the idea of minimising the risks of the operation. If the layers of the pleura are non-adherent or the liver not attached to the diaphragm these layers must be stitched together and the abscess opened a few days later when adhesion has taken place. It does not concern the physician to decide on the merits of the different operative procedures, but one may perhaps express the preference for resecting a portion of rib and free incision of the liver over the abscess to the plan of aspiration which is frequently recommended. The prognosis in tropical abscess cannot be expressed in very certain language. So much depends upon its early diagnosis and active treatment; under these circumstances the outlook is quite hopeful. But when an abscess has existed some time and then finally bursts into the lung or some abdominal viscus the patient has rather a poor chance and frequently succumbs to exhaustion or to some intercurrent affection, especially dysentery.

Pathology and morbid anatomy.—Most commonly only one tropical abscess is found in the liver, but there may be two or three large ones quite separate or communicating with each other by narrow channels; and in some cases there may be a large number of small abscesses scattered throughout the whole of the organ. When the abscess is single it is far more frequently found in the right lobe and nearer to the upper surface, as shown in Waring's series of 300 cases, in nearly 70 per cent. of which the abscess was in the right lobe and nearer to the convex surface. It is fair to suppose that where one abscess has been successfully treated and the patient recovers that only one abscess was present in the liver, although it has been suggested that other abscesses may have been present but were eventually absorbed but this is far from probable as the effect of the operation would be to stimulate other purulent collections rather than promote their absorption. Waring found that out of 288 cases of tropical abscess 177 were single. At the Seamen's Hospital, Greenwich, between 1870 and 1895, in 25 cases out 44 the abscess was single. At the same hospital during the last two years 7 cases have been recognised, 2 showed multiple abscesses, whilst the remainder were single. So that out of 51 cases 30 showed the presence of only 1 abscess—i.e. nearly 60 per cent. These 30 cases were judged to be single thus: 14 were examined post mortem; 12 recovered after one operation; and 4 burst through the lung and recovered. The remaining 21 cases were composed thus: 13 with multiple small abscesses and 8 with 2 or 3 large abscesses. It is difficult to say why the tropical abscess is usually single, there must be something in the nature of the tropical abscess to account for this fact as other varieties of suppuration in the liver are almost always multiple.

Presuming that the abscess is caused by something travelling to the liver from the ulcerated large intestine, then this material would be disseminated throughout the liver following the distribution of the branches of the portal vein, and why should an abscess form at one place and not be scattered in different parts of the organ? No definite solution can be given. It is probable that a large abscess is formed by the fusion of several small collections of pus. One may say that a lowering of the vitality of the liver tissue at one spot will determine the formation of an abscess there, but this assertion brings one no nearer to answering the question. Those who attribute tropical abscess to acute hepatitis say that the inflammation is most severe at one spot and so goes on to the formation of pus, but this is only pure assumption and based upon the somewhat slender foundation of acute hepatitis, which is itself a little open to doubt. The size of tropical abscess varies between very wide limits, a superficial collection of a few ounces of pus may produce sufficient indications for operation, while in long-standing cases there may be a huge abscess containing as much as three pints of pus which has only produced marked symptoms in its later stages or may even have passed unrecognised until discovered at the necropsy. The abscess cavity is lined with a ragged yellow material presenting a shaggy appearance, or the inner walls of the cavity may be honeycombed, the interstices of which contain pus. This lining membrane consists of necrosed liver tissue, leucocytes and coagulated fibrin. A definite fibrous capsule is very rarely seen, and then in chronic cases only, but there is always a zone of hyperæmic liver tissue surrounding the abscess which merges on the one side into normal hepatic substance and on the other into the shaggy membrane lining the cavity. If the abscess has approached the surface there will be considerable thickening of the peritoneal coat of the liver, and the process may extend still farther involving the diaphragm and layers of the pleura, matting all the layers together into firm fibrous tissue. The pus contained in the abscess is very commonly of a brick-red or anchovy sauce-like colour due to the disintegration and necrosis of the liver tissue accompanied by slow oozing of blood into the abscess. This colour of the pus is very characteristic, although not met with in every case, cases which have been diagnosed as empyema or pleural effusion only being rightly diagnosed as having their origin in the liver by the withdrawal of this reddish coloured pus. It is probable that this colouration of the pus only occurs when the abscess has reached a moderately large size, for in a recent case in the Seamen's Hospital the large abscess had burst into the pleura and was aspirated under the belief that the patient had an empyema. Chocolate-coloured pus was removed, while on examination of the liver at the post-mortem examination three small abscesses about the size of a walnut were found in which the pus was of the ordinary yellow colour. After an abscess has been opened the pus quickly loses this red colour and the draining on the third day is usually of the ordinary colour of pus. On microscopic examination there is a great preponderance of the ordinary granular pus cell staining deeply with logwood. In addition one sees large irregular shaped cells with a large solitary nucleus, sometimes deeply stained with bile. These represent liver cells in various grades of disintegration and necrosis. Red blood corpuscles are in great abundance; cholesterin crystals and fat globules are also seen.

The pus from a true tropical abscess usually shows a complete absence of pyogenic organisms. In several of the cases at the Seamen's Hospital recently attention has been paid to ascertain the truth of this assertion. When a true abscess has been suspected and an exploration puncture is about to be made the skin is thoroughly cleaned and the exploring needle sterilised. The pus withdrawn has been carefully examined with high powers under the microscope and no organisms have been found. In addition to this several culture tubes of blood serum and agar-agar have been inoculated with the pus both on the surface and by stabbing and no effect on the nutrient medium has been produced nor has a growth of staphylococci or other organisms been found. As bearing on this question of the sterility of the pus Case 7 is interesting. At the time of operation no adhesions were found and the peritoneal and pleural cavities were opened and some pus undoubtedly entered. The liver was then stitched to the edges of the wound and the layers of the pleura united. No peritonitis or pleurisy developed

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and examination of the pus failed to show any pyogenic organisms. Osler expresses the opinion—based upon Councilman and Lafleur's experiments—that the pus of "tropical abscess" (connected with dysentery) is quite free from pyogenic bacteria. On the other hand, Macfadyen holds that in tropical abscesses pyogenic organisms are constantly met with, staphylococcus pyogenes aureus being the commonest, while the staphylococcus albus and streptococcus pyogenes are often found.

This point about the sterility of tropical abscesses is most important. If it can be clearly proved that infective organisms are constantly present and are the essential cause of the suppuration then there will be little reason for differentiating a special class of abscess of liver; that is to say, all hepatic abscesses will be of an infective nature and the only features specially characteristic of the tropical abscess would be its occurrence most frequently in the tropics, its tendency to be single, and finally a curious connexion with dysentery. This latter connexion would be quite easily explained by the entrance of the infective organisms from the lesions in the large intestine into the lymphatics or portal radicles and which would so be carried to the liver. On the other hand, if we admit the conclusions of Councilman and Lafleur, supported somewhat by the observations on our own cases, as being substantially accurate, the pyogenic character of the abscess would be disproved and it would be necessary to find some other cause for the production of tropical abscess.

Admitting that careful examination of the liver pus fails to reveal any septic organisms there is another frequently found constituent of the pus of tropical abscess which it is necessary to recognise and place upon it whatever value it may possess. When examined in the ordinary way, in addition to the ordinary constituents of the pus a certain number of large round bodies considerably larger than white corpuscles are seen containing a number of red blood cells and an indistinct nucleus. The ground work under a low power looks granular, but on focussing a large number of vacuoles are seen. On staining with logwood the nucleus becomes very apparent but the vacuolation is not so distinct. If no other steps be taken in the examination of the pus nothing further will be made out with regard to these round bodies. But if, on the other hand, the pus be kept at a temperature of 100° F. from the time of its removal from the body (either from an exploration or from the fresh drainings from the wound after the abscess has been opened or from the freshly collected sputum in those cases in which the abscess has burst through the lung) and examined upon a warm stage these bodies undergo a most remarkable series of changes. The method that I have adopted is to collect the fresh pus—preferably that of a yellow colour—in a warmed test-tube which is then placed in a vessel containing hot water, the pus will then be kept warm and can be examined on a warm stage almost at one's leisure. The changes about to be described have been observed after the pus has been kept in this manner for twenty-four hours. A very handy and simple warm stage can be made out of a strip of copper 14 in. long and 1 in. wide, the lower edge being bent up at a right angle forming a support for the slide; in the middle of the copper a round hole of about 1 in. diameter is cut through which the light is reflected up from the mirror on to the specimen. At each end of the copper a small spirit lamp suffices to treat the whole length of the copper bar and also the slide resting upon it.

One very important thing to be remembered in the search for amœbæ is the fact that the pus withdrawn at an exploration or that evacuated at the time of operation very frequently contains no amœbæ whether living or dead. At the same time the fact will be recalled that the pus found under these conditions is nearly always of the brick-dust colour. But if the pus is carefully examined on the warm stage amœbæ will almost certainly be found on the second or third day and then as the discharge diminishes and the pus becomes yellower amœbæ may be abundant. It thus appears probable that the amœbæ remain near the spreading border of the abscess and not in the older pus in the central part of the abscess. This has been the case in at least four of the seven cases which have come under my own personal observation. I feel sure that if this fact were fully realised and the adequate precautions taken when searching for the amœbæ many cases which have been declared free from them would show their presence. In the last seven cases out of the series of fifty-seven taken from the Seamen's Hospital, Greenwich, the pus was not examined in two, and out of the remaining five four showed amœbæ, and in two recent cases under the care of Dr. Patrick Manson both showed the presence of amœbæ. In the earlier cases of this series of cases the microscopic examination of the pus was not made. During recent years amœbæ have been frequently found in liver pus, especially by American observers. When examined in the method described the bodies, which in the ordinary examination are round, show most active movements and the greatest variations in shape. These, then, are easily recognised as the amœbæ coli. Owing to the constant movements the size of the amœbæ cannot be stated; but some are large, with a diameter of 60μ; others are smaller, with a diameter of from 25μ to 40μ. Their shape is oval or round in a resting or dead condition, but when actively moving presents great variations. The constant and characteristic feature of these organisms is their capacity for throwing out pseudopodia, it may be in one or in several directions. Under observation a short, thick, blunt-pointed projection appears at the edge of the amœbæ which gradually increases in length by a peculiar flowing movement, the amœbæ itself becoming proportionately smaller. This pseudopodium has precisely the same structure as the main body of the amœbæ. Sometimes it is withdrawn into the body of the amœba or its extremity may become fixed, and the whole body of the organism merges into the pseudopodium again. One characteristic of this throwing out of processes is the power the amœba has of enclosing neighbouring cells or particles. One can often see the inclusion of a red corpuscle thus take place.

The structure of the amœba is difficult to make out clearly owing to its hyaline translucent character. There appears to be a well-defined outer edge although the organism is really a naked mass of protoplasm without a cell membrane. The main body of the amœbæ may be divided into two parts (1) an outer clear investment, the ectosarc; and (2) the inner granular looking endosarc. In the latter numerous small vacuoles are seen, not of regular size but occasionally one is seen considerably larger than the others; nothing has been seen of the nature of a contracting vacuole, in which respect it differs from the ordinary freshwater amœbæ. Situated in the endosarc is the large single nucleus, but this cannot be usually seen in living specimens but in amœbæ killed with a little acetic acid or by cold the nucleus is brought out distinctly on staining with logwood or magenta. In nearly every amœba a variable number of red corpuscles are seen. There may be as many as fifteen or twenty arranged in various ways and their overlapping edges help to give rise to the granular appearance of the endosarc. Sometimes dark masses of pigment are seen and the amœbæ are sometimes stained yellow with bile. It has already been mentioned that in all the amœbæ under my own observation no micro-organisms have been found in living or stained preparations. This is equally true of those found in liver pus or in dysenteric stools, which latter have been swarming with bacteria.

Influence of race.—Tropical abscess of the liver is much more common among Europeans living in the tropics than among the natives, although it is curious to note that the latter class suffers almost equally from dysentery and malaria (Cayley). It is a striking fact that as civilisation in India increases so does the frequency of tropical abscess among the richer and more leisured class of natives. In the series of 57 cases at the Seamen's Hospital, Greenwich, the race was noted thus: British, 38; Germans, 3; Hindoos, 7; Scandinavians, 4; Africans, 3; and Portuguese, 2. With regard to age tropical abscess is very much commoner between the ages of twenty and forty years; thus in the above series of cases 40 of the 57 were between these limits. Tropical abscess is far commoner in men than in women.

[The continuation of this paper, dealing with the connexion between tropical abscess and dysentery, and a set of illustrative cases will appear next week.—ED L.]

THE RETREAT, YORK.—The 101st report of The Retreat, York, a registered hospital for the treatment of mental diseases, states that on June 30th, 1897, there were 156 patients in the institution, 63 men and 93 women, the average number of patients during the year being 156·04 or 1·76 less than during the previous year. With regard to the finances the amount received as board of patients shows a slight increase as compared with the year 1896 and is higher than in any previous year. The nurses' accommodation has been improved.

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A CASE OF

HYSTERECTOMY WITH SOME UNUSUAL AND INTERESTING COMPLICATIONS

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ON June 8th of this year I was asked to see an unmarried woman, aged forty years, whose menstrual periods had always been very regular every four weeks. She said that about two and a half years ago she had a sudden attack of very severe pain over the womb which lasted some hours and was attended by faintness, and about three months before I saw her another similar attack with vomiting had occurred. After these attacks she was quite sure that she had no vaginal discharge. The condition of her bowels lately had varied between diarrhœa and constipation. For years she had been troubled with having to pass urine day and night at short intervals. Under an anæsthetic an examination revealed a moderately large tumour of the uterus situated on the left side. When the os uteri was pulled down with a volsella the sound passed in a distance of barely one inch. On the right side was another tumour of larger size but much less resistant to pressure.

On the 11th I opened the abdomen and found no difficulty in withdrawing a cylindrical-shaped fibroid tumour weighing nineteen ounces in which the diminutive uterus was buried. A wire was passed round the cervix and made to include the left ovary and tube. On approaching the right side I found a hæmatomatous-looking tumour which appeared to be so soft that I extended the abdominal incision above the umbilicus so as to enable me to enucleate it with less risk of rupturing it. I then packed it all round with sponges and turned out a large quantity of old blood-clot. The bowel was adherent, but there was not much difficulty in separating it and teasing out the tumour until a pedicle was found and secured at the broad ligament. No ovary or tube was discovered. (I am sending this specimen to Mr. Bland Sutton to ask him to be good enough to tell me what it is and to append his opinion to this report.) The uterine stump was so easily brought outside the abdomen that the serre nœud pins had no strain on them. Everything went on well with a normal temperature till the fourth day, when she began to complain of flatulent distension and great discomfort. A saline draught of sulphate of soda and sulphate of magnesia was given and frequently repeated until fourteen drachms had been used; in addition she had fifteen grains of calomel in three doses of five grains each. Turpentine enemas were also used with both long and short tubes, but neither flatus nor motion was passed. On the sixth day she began to vomit and continued on this and the following day to bring up large quantities of characteristic fæcal matter. Both the vomit and the breath were offensively fæcal to the smell. She had been going on so well up to the fourth day that she was then taking teaspoonfuls of Brand's essence and ounce doses of peptonised milk. Her temperature was now slightly subnormal in the morning with a rise in the evening of only 1° F. I used my utmost endeavours with her to allow me to open the wound to find out the cause of obstruction, but she would not hear of it. After vomiting set in nothing was given by the mouth, and beef enemata were administered. On the eighth day the nurse, on washing out the rectum before giving a nutrient enema, noticed what she thought was a fæcal smell coming from the discharged water, and as the beef-tea injection was not retained she kept it for my inspection as she thought that it looked fæcal in character. This point, however, was soon set at rest, as during the day several large loose motions were passed.

There is nothing further worthy of notice to report in this case. The convalescence was rapid and the bowels afterwards, if showing any tendency to sluggishness, were easily relieved by teaspoonful doses of castor oil. I have never known of a case with fæcal vomiting where the termination was favourable without the obstruction being relieved by operation.

Christchurch, New Zealand.

Note by Mr. BLAND SUTTON. — The blood-containing tumour was an ovarian cyst which had undergone acute axial rotation.

CASE OF OVARIAN CYST WITH UNUSUAL HISTORY.

BY J. B. HELLIER, M.D. LOND., M.R.C.S ENG,
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A WOMAN, aged sixty-two years, a widow, mother of two children, was admitted to the Hospital for Women and Children on July 14th, 1897, for ovarian tumour. She passed the menopause at fifty years of age and seemed to have enjoyed very good health till four years ago, when a soft, uniform enlargement of the abdomen was noticed. This did not seriously incommode her till about Christmas, 1896, when the increasing size of the abdomen began to interfere with breathing and she had much pain in the back. But in March, 1897, she was taken very ill and was seen by Mr. J. W. H. Brown and Mr. A. E. Ellison, of Holbeck, who have kindly given me details of the condition in which they found her. She was suffering from pneumonia of the right base and probably also of the left. She was extremely prostrate; her breathing was rapid and shallow, the pulse was very rapid and feeble, the lips and nostrils were covered with herpetic sordes, and the abdomen was enormously distended with fluid, being tense and elastic with well-marked thrill. The urine was not albuminous; the bowels were costive. The patient was unconscious and wandering and seemed at first to be absolutely moribund. Ether and digitalis, &c., were administered, and on March 18th paracentesis was performed in the middle line two inches below the navel. Three and a half gallons of excessively offensive, opaque, greenish brown fluid were slowly evacuated. The abdomen became quite flat except in the hypogastric region, where the cyst wall could be felt like thick leather. After this the patient slowly recovered, but the cyst began to fill again. On admission (July 14th) the patient was found to be a thin, spare, anæmic woman. There was some arcus senilis; the arteries were rather hard. The lips were stained with pigment where the sordes had been. The abdomen measured forty-four inches in circumference and presented the usual signs of a large single cyst rising out of the pelvis to two-thirds of the distance between the navel and the sternum. The flanks were resonant; no solid portion was felt in the tumour. The uterus was mobile and anteverted. Some ill-defined swelling was felt in the right cul-de-sac. The lungs were healthy, the temperature was normal, and the urine also. There was no sign of peritonitis or of septicæmia. In deciding to perform ovariotomy at once I felt anxiety on account of the possible condition of the cyst contents, the probability of adhesions, and the age and weak state of the patient. Ovariotomy was performed on July 21st, 1897. Ether was administered by Dr. Wear. I was assisted by our house surgeon, Mr. Pierson, and Mr. Ellison was present. The tumour was found to consist of one very large cyst with a thick wall. It sprang from the left side and had a pedicle two inches wide. It contained eleven pints of greenish-yellow, opaque fluid which was neither purulent nor offensive. There were extensive adhesions to the abdominal wall, to the omentum, and to the colon. The parietal adhesions were easily broken down; the omental adhesions were ligatured and divided. Those to the colon were separated by careful use of blunt dissector and dissecting forceps. This was a little tedious but was successfully completed. The cyst had no pelvic adhesions. The pedicle was ligatured in two portions. The fundus uteri contained a fibroid of the size of a small orange, but this was not disturbed. The right ovary was embedded in adhesions and seemed somewhat large but not cystic. This also was left untouched. The abdomen was flushed out with sterilised water. There was no serious oozing from the separated surfaces. A glass drainage tube was left in the wound for forty-eight hours. The wound was stitched in three stages and it healed without any suppuration. The temperature was normal from the third day onwards and the patient made a rapid recovery without any bad symptom.

Remarks.—In spite of the tendency of tapping to produce adhesions it holds its place in the treatment of ovarian disease as a measure to be resorted to in cases such as this, when a major operation is for the time being impracticable. Here it saved the patient's life. The most striking feature

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in the case is the fact that the contents of the cyst were offensive at the time of tapping but not at all so five months later at the time of ovariotomy. The two practitioners who performed the tapping assure me that the fluid drawn off had such a sickening stench that they had to leave the room at frequent intervals to breathe fresh air. At the ovariotomy we noticed no smell whatever, and after some of the fluid had stood two days in warm weather it was still free from unpleasant odour. The cyst wall was rough inside and coated with caseous matter. There were one or two very small secondary cysts in the wall. I have no data to decide whether the pneumonia was secondary to a septic condition of the cyst contents or whether the contents became offensive on account of the pneumonia. But after the evacuation of the fluid the constitution seemed able to deal with any germs that were left and a more satisfactory issue from a desperate condition could hardly be experienced.

Leeds.

AN ANALYSIS OF EIGHTY CONSECUTIVE CASES OF ENTERIC FEVER.

BY ERNEST RINGROSE, L.R.C.P. LOND., M.R.C.S. ENG.

THE 80 cases from which this analysis is made came under my observation at the hospital, Newark-on-Trent, between August, 1891, and November, 1893, during which time two epidemics occurred in the town and district; 73 occurred in the town and 7 were sent in from the outlying districts. As to sex, 52·5 per cent. were males and 47·5 per cent. were females. Between the ages of one year and five years there were 8 cases; between six years and twelve years there were 22 cases; between thirteen years and twenty years there were 27 cases; between twenty-one years and thirty years there were 11 cases; between thirty-one years and forty years there were 8 cases; and between forty-one years and fifty years there were 4 cases. One case only occurred in which the patient had had enteric fever previously—viz., four years before. The initial subjective symptoms were chiefly headache (frontal), vomiting, and pain in the abdomen; in 27·5 per cent. of the cases there was epistaxis.

The maximum temperature, taken in the axilla, was as follows: 109° F., 1 case, fatal; 108°, 1 case, fatal. The temperature ranged from 104° to 106° in 12 cases, 4 of which were fatal; 103° to 105° in 28 cases, 4 of which were fatal; 103° to 104° in 28 cases, 3 of which were fatal; 102° to 103° in 7 cases, none of which were fatal; and 101° to 102° in 3 cases, none of which were fatal. The highest temperature reached during the attack occurred during the first week in 19 cases; during the second week in 28 cases; during the third week in 23 cases; during the fourth week in 6 cases; and during the fifth week in 4 cases. The temperature remained normal at the end of the second week in 1 case; during the third week in 17 cases; during the fourth week in 24 cases; during the fifth week in 8 cases; during the sixth week in 10 cases; and during the seventh week in 7 cases. In 40 cases the temperature became and continued subnormal throughout convalescence.

Two relapses occurred in 1 case with return of all the symptoms and one relapse occurred in 18 cases, with return of all the symptoms in 6. The interval of apyrexia before relapse averaged eight days; in 1 case the interval was twenty days, this was in a child aged ten years, whose primary attack had been most severe; there was a complete return of symptoms which lasted eleven days; in no cases except this one could the relapses in any way be attributed to change of diet. The average duration of the relapse was nine days, the temperature assuming the intermittent type.

With regard to the spleen, enlargement was made out by palpation in 20 cases; increased splenic dulness (no tenderness and spleen not felt) occurred in 3 cases.

There were typical rose spots in 67 cases and no rose spots in 13 cases. The rash appeared in the first week in 2 cases, in the second week in 42 cases, and in the third week in 23 cases. The spots came out in one crop in 28 cases and in several crops in 39 cases.

As to the bowels: (1) in 11 cases no diarrhœa occurred throughout the attack (constipation); (2) in 51 cases the stools were typical; (3) in 11 cases the stools were loose and offensive but not typical of anything; and (4) in 7 cases the stools were normal. Constipation was very troublesome in 36 cases, especially about the beginning of the third week. An enema of olive oil followed by an enema of glycerine proved by far the most efficacious treatment.

Hæmorrhage took place in 9 cases, 2 of which were fatal. In 1 case, that of a patient aged fifty years, the hæmorrhage was profuse (ten attacks in three days) and the total loss of blood was twenty-one and a half ounces. This patient made a very quick recovery. The temperature came down to normal after the last hæmorrhage and remained normal. Hæmorrhage occurred in 1 case during the second week, in 6 cases during the third week, in 1 case during the fourth week, and in 1 case during the fifth week.

With regard to nervous manifestations severe delirium occurred in 36 cases, troublesome insomnia in 5 cases, and melancholia in 3 cases. Typical epileptiform convulsions were present in 1 case; tremor and deafness were not frequent. As to complications, pneumonia occurred in 20 cases—right in 10, left in 4, and both in 6; pleurisy with effusion occurred in 1 case; suppurating glands occurred in 2 cases—axilla in 1 and neck in 1; albuminuria occurred in 13 cases—in 6 cases there was only a trace and in 7 cases there was from one-twelfth to one-sixth; retention of urine occurred in 3 cases; thrombosis of the long saphenous vein occurred in 1 case; hæmaturia occurred in 1 case; and abscess over the buttock occurred in 1 case. Mitral systolic murmur developed in 3 cases, lasting not longer than two weeks. Bradycardia, lasting two weeks, occurred in 1 case, the pulse falling to 40. The apex of the lung became impaired in 1 case. Purpuric eruptions appeared in 3 cases; 1 case was complicated by whooping-cough. No case of ulceration of the larynx occurred.

The death-rate was 16·25 per cent; 4 cases died during the second week, 5 during the third week, 3 during the fourth week, and 1 during the sixth week. Hyperpyrexia caused death in 2 cases, peritonitis (perforation) in 3 cases, pneumonia in 3 cases, hæmorrhage and exhaustion in 2 cases, cardiac failure (sudden) in 2 cases, and bronchitis and collapsed lung in 1 case.

The following points appear to me to be of interest: (1) the marked influence of severe hæmorrhage in the one case; (2) the infrequency in which the spleen could be felt; (3) the unusual period of twenty days occurring before a relapse; (4) the frequency of transitory albuminuria, the effect of the poison and not of nephritis; and (5) the presence of an epileptic attack during the course of enteric fever.

Newark-on-Trent.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CASE OF HICCOUGH OF UNUSUAL DURATION AND SEVERITY; SUCCESSFUL TREATMENT BY GALVANISM.

BY GEORGE HERSCHELL, M.D. LOND.,

SENIOR PHYSICIAN TO THE HOSPITAL FOR DISEASES OF THE HEART, SOHO-SQUARE.

A WOMAN, aged twenty-four years, first attended my out-patient clinic on Oct. 26th, 1895, complaining of persistent hiccough, from which she had suffered for a week. The attack had been preceded by a prolonged period of overwork and worry. She was markedly anæmic but nothing else could be detected upon a physical examination. She improved very much under treatment consisting of iron, bromides, bismuth, and arsenic, but still continued to have a mild attack every few days. In March, 1896, she had a severe fright, after which the attacks greatly increased in severity and frequency. It was found that the medicines which formerly did her good were now without good effect and in the case of the iron it made her worse. She derived most benefit from bismuth with which I succeeded on two occasions in stopping the attacks for a few days. In each case as she was so anæmic (hæmoglobin 30 per cent., red corpuscles 2,300,000) I followed it up with iron, with

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the result of immediately after two or three doses bringing back the hiccough as bad as ever. Valerian and assafœtida made her worse. In April, 1896, whilst waiting in the hall of the hospital she had the severest attack of hiccough I have ever seen in my life, and I thought at one time that she would die then and there from failure of the heart. I had her at once taken into the consulting room and a continuous current of about 8 milliampères applied to her, the anode being applied alternately for a minute or so at a time, stabile to the sides of the neck, whilst the kathode was placed upon the epigastrium. The effect was almost instantaneous, the attack passed away, and she had no return of it for several weeks. At the end of this time, however, the affection returned and she gradually became much worse, the attacks frequently lasting for a whole week with, as the patient declared, no intermission. There would then be an interval of a few days, during which time she would have merely several attacks in the twenty-four hours lasting an hour or so each, and then another long spell of almost continuous hiccough. As she daily grew weaker I decided to take her into the hospital in order to give a more extended trial to the galvanism which had been so successful on a previous occasion, and she was admitted on Nov. 27th, 1896. On admission it was recorded that the spasms were of such violence as to shake the whole body and give her the greatest distress. She slept very little as she was continually awakened by the hiccough which occurred, but with less frequency, during sleep. The treatment prescribed was the daily application of 15 milliampères of the continuous current, the anode on the epigastrium and the kathode on the small of the back; this was followed by the electric brush to the epigastrium. For the first few days she improved very much, but as this was not maintained the application was altered and the anode was applied alternately to the pneumogastric nerves in the neck whilst the kathode was placed on the nape of the neck. From this date she rapidly improved and was discharged on Jan. 21st, 1897, being directed to continue the treatment in the out-patient department and to attend twice a week for galvanism. This treatment was continued until May, 1897, when all attacks having ceased for over a month she was finally discharged. There has been no relapse.

The main point about this case is its extreme duration. Dr. Edward Liveing mentions a case in which hiccough occurred in paroxysms of twelve hours' duration twice a week for four years, but I have been unable to find another one reported of anything like the severity. It is a remarkable thing that the administration of iron should have invariably brought on an attack, and I think that the fact of its having done so goes far to suggest that in this case the affection had its origin in some irritation reflected from the stomach. This theory would also be strengthened by the fact that galvanism had little or no effect until it was applied to the pneumogastric nerves. Against the hypothesis that the affection was of an hysterical nature we have the facts that it occurred during sleep, that the medicines usually of service in hysteria were without effect, and that the suggestion involved in the daily manipulation with the galvanic current and electric brush did not cure until the former was applied in one particular manner.

Queen Anne-street, W.

A CASE OF POISONING BY CANNABIS INDICA.

By C. C. BAXTER-TYRIE, M.D. EDIN.

THE following case of poisoning by Indian hemp is not only interesting in itself but sheds a vivid light on the evils of the writing of so-called popular medical works by gentlemen of good professional standing and the dispensing by chemists of unauthorised prescriptions.

A few weeks ago I was called about 11 P.M. to see a young woman who had it was alleged "gone out of her mind." I thought at first I had to do with an ordinary hysterical fit, but closer observation convinced me that although the symptoms were a curious caricature of some hysterical attacks there were other symptoms that made such a diagnosis untenable. Fits of laughter and incoherent ravings alternated with comparatively lucid intervals. She complained of various hallucinations and delusions, chief of which were a complete perversion of the relations and elapse of time and a loss of identity. She was now herself, now again a different individual, and the modifications of her behaviour in relation to her dual personality were grotesque. I was entirely at a loss as regards the cause of the patient's condition until her mother volunteered that she had been taking Indian hemp. Like many other foolish people they had purchased a book on family medicine. The girl had suffered severely from headache for some time and after consulting the book they pitched upon Indian hemp as the likely remedy. A local chemist made them a dozen pills each containing one-half grain of the extract. The girl took one with no relief then two with a similar effect. She then concluded that they were "a fraud" and to demonstrate it swallowed the remaining nine with the result that I found her four hours after in the above-mentioned condition. I administered strong coffee and gave her a few doses of strychnine and she quite recovered on the following day. It is a well known fact that many victims of morphine and cocaine have derived their knowledge of these drugs from books on popular medicine, and it was very injudicious for the chemist to make up the pills without medical sanction.

Keighley, Yorkshire.

A CASE OF TETANUS TREATED WITH INJECTIONS OF SERUM.

By THOMAS G. C. EVANS, L.R.C.P. EDIN., M.R.C.S. ENG.

THE patient was a man, twenty-four years of age, who was admitted into the Budleigh Salterton Cottage Hospital on Oct. 7th suffering from severe injuries caused by the wheels of a loaded waggon passing over him. He had a badly comminuted fracture of the left leg immediately below the knee with a great deal of bruising of the soft parts around but the knee-joint was uninjured and the larger vessels were intact; he had also a large ragged wound over the right knee. The left leg was put upon a back splint and slung and the wound of the right knee was carefully cleansed and dressed. During the next few days the skin about the seat of injury gave way in several places and the leg was put upon a perforated metal splint in order that it might be irrigated with as little movement of the limb as possible. On Oct. 23rd he complained of a feeling of slight stiffness of his neck which he thought was due to taking his food in a recumbent position; his temperature which had been almost normal for the last few days rose to 101° F. and he was drowsy. At this time the wound of the right knee was almost healed. On the left leg there were several large granulating surfaces where the skin had given way and two or three sinuses leading into the fracture. He took his food well but nothing solid after 12 30 P.M. and he had a good night. On the 24th the stiffness of the neck and jaws was increased. The patient's temperature was 98·4° in the morning and 100° in the evening. He was cheerful and took large quantities of liquid food well. After a consultation with my colleagues Dr. Walker and Mr. Semple it was decided to amputate the left thigh. This was done at 11 P.M. On recovering from the anæsthetic after the operation the patient had a severe spasm. He passed a fairly good night. On the 25th his jaws were rather less stiff, he passed a fairly comfortable day and took his food well. The morning temperature was 100 8° and the evening temperature 103°. The stump was dressed at 8.30 P.M. and 10 c.c. of antitetanic serum were injected. He was very restless the first part of the night but slept better towards morning. On the 26th there was more stiffness of the jaws and neck and he could not move his head from side to side His temperature was 99° in the morning and 101° in the evening. At 10 A.M. 10 c.c. of the serum were injected. An ounce of castor oil was given. He had not quite so good a day, being restless. At 5.30 P.M. an enema with olive oil was given and was followed by free action of the bowels. At 8.30 P.M. the stump was dressed and 10 c.c. of the serum were injected. He felt better that evening and passed a better night, having good sleep after 4 A.M. On the 27th the stiffness was much the same. At 10 A.M. 10 c.c. of the serum were injected. He had a much more comfortable day and took nourishment well. At 5 30 P.M. an enema was given but there was no action of the bowels. At 8 30 P.M. the stump was dressed and 10 c.c. of the serum were injected. He passed a restless night. His temperature was 101° in the morning and 102° in the evening. On the 28th the stiffness of the jaws was

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much the same; there was a good deal of general muscular twitching during the day. At 10 A.M. 10 c.c. of the serum were injected. He had a comfortable day. An ounce of castor oil was swallowed with difficulty. At 5.30 P.M. an enema was given and was followed by slight action of the bowels. At 8 30 P.M. the stump was dressed and 10 c.c. of the serum were injected. His temperature was 101° in the morning and 102·4° in the evening. He passed a quiet night but had not much sleep and wandered a little. He had more difficulty in taking food and was fed by a tube. On the 29th he said he felt better. At 10 A.M. 10 c.c. of the serum were injected. At 2.15 P.M. he had a spasm on waking from a short sleep and lost a little blood from his mouth, probably from biting the tongue; this frightened him a good deal. At 5 30 P.M. a castor oil enema was given, followed by a better action of the bowels. At 7 P.M. the stump was dressed and 10 c.c. of the serum were injected. The temperature in the morning was 102° and in the evening 103·4°. The patient passed a quiet night; he had not a great deal of sleep and was slightly delirious. On the 30th he was very bright and in good spirits, saying he felt better. At 9.35 A.M. he had a sudden spasm with a slight flow of blood from the nose and the mouth. He died at 9 40 A.M. The temperature in the morning was 101 4°.

This was a disappointing case, the length of time between the accident and the first symptoms of tetanus, its chronic character and the almost entire absence of convulsive spasm all gave reason to hope that the result would be favourable. Feeding presented no difficulty, liquid food being always taken in large quantities; an average amount in twenty-four hours would be six eggs, from five to six pints of milk, one pint of beef-tea, and from ten to twelve ounces of whisky. Restlessness was overcome and sleep obtained by opium given in the form of nepenthe, usually one dose of twenty minims during the day and one of thirty minims given after the dressing in the evening, followed by another of thirty minims four hours later. The serum injections had no effect whatever as far as could be seen, either good or bad, and the patient suffered no inconvenience from them.

Budleigh Salterton, Devon.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

TWO CASES OF HYDRONEPHROSIS.

(Under the care of Mr. EDMUND OWEN.)

THE following cases are very good examples of the two commonest causes of hydronephrosis in children. In the first the condition was apparently congenital in origin, though we cannot say what malformation gives rise to hydronephrosis in such cases; in some instances congenital narrowing of the ureter at its renal insertion has been found [1] A case very similar to Mr. Owen's was recorded in THE LANCET by Mr. Arbuthnot Lane.[2] The second case occurred in a private patient under the care of Mr. Owen but we have thought it well to include it in the "Mirror of Hospital Practice" as it is in several respects similar to the first case and yet the two have many points of contrast, so that they may be usefully studied together. In this case traumatism was the cause of the hydronephrosis and the result of leaving the ruptured kidney has been eminently satisfactory. The only other frequent cause giving rise to hydronephrosis in children is the impaction of a stone in the ureter.

CASE 1. *Hydronephrosis; operation; recovery.*—A girl, aged thirteen years, was sent to the hospital by Dr. Houston Davson for a tumour of the left side of the abdomen which had been noticed only two weeks. The child had been steadily losing flesh, however, for a year, and had recently been complaining of abdominal pains; she also had had attacks of vomiting for a long while. There had been no history of colic or of hæmaturia, and there was no suggestion of tuberculosis. A large globular swelling extended from the left side of the abdomen across the median line; there was resonance around it except to the left and behind; there was no bulging in the loin. On the day after her admission, without any exploratory aspiration, Mr. Owen opened the abdomen in the median line, and, exposing the tumour, sought for possible obstruction of the ureter, and finding none emptied the hydronephrotic sac, tied the pedicle, and removed the cyst. The right kidney was larger than normal, but it appeared healthy. The tumour removed consisted of one large cyst about the size of a fœtal head, occupying the position of the pelvis of the kidney; the kidney-tissue was stretched, and involving the upper infundibula was another dilatation which opened freely into the larger cavity. A considerable amount of healthy renal tissue remained at the lower part and presented congenital lobulation.

Apparently the case was one of congenital cystic dilatation of the kidney; at any rate, no obvious cause of the hydronephrosis could be discovered. The girl made a complete recovery. Her attacks of vomiting ceased and she grew strong and plump.

CASE 2. *Traumatic hydronephrosis; nephrotomy; recovery.*—The father of this child, who was a medical man, gave the following account:—On the morning of April 26th, 1897, the patient, a boy aged seven years, was kicked on the front of the left side of the abdomen by a horse. He immediately became blanched, but complained of no great pain; he was carried home. On examination over the seat of the injury no abrasion or discolouration was found. The muscles of the abdomen on the same side were tender and tense, but beyond this nothing abnormal was detected. Persistent vomiting supervened, lasting twenty-four hours. On the evening of the accident a considerable quantity of blood was passed with the urine, and this continued until the 28th, when the urine was apparently free from blood. No severe pain was complained of, but there was tenderness over the seat of the injury. He was kept quiet, and took nourishment well after the vomiting ceased; the temperature remained below 100° F. On May 1st he was removed to London to be under the care of Mr. Rayley Owen, a tedious journey of two hours, without ill effect, and he improved so much that on the 5th he was anxious to get about, and was permitted to do so. There was nothing abnormal to be discovered on examination over the seat of injury. He remained fairly well until May 11th, when he complained of left lumbar pains and had some return of vomiting. There was no rise of temperature. On the 13th a tumour the size of a large orange was made out in the left lumbar region circumscribed and not tender. This increased rapidly without constitutional disturbance beyond occasional vomiting and sharp paroxysmal pains, which were referred to the lumbar region and the front of the left thigh. These pains increased in severity as the tumour grew larger. On May 22nd the tumour was aspirated by the loin and a wine-bottleful of bloody urine was withdrawn. The tumour at the time of the aspiration extended above to the false ribs and below to the crest of the ilium. After the aspiration the vomiting and pain ceased and the tumour disappeared, but on the third day the tumour began to refill, and with this the vomiting and pains reappeared. A second aspiration was therefore performed and with a like result. At this time Mr. Bennett kindly saw the boy with Mr. Owen, and as the tumour had recurred it was advised that an incision should be made in the loin for exploration and for needful drainage. This being done the kidney was found to be torn right across. The upper part comprised about four-fifths of the gland and the lower fifth was separated from it by a considerable space in which blood-stained urine was collected. The capsule of the kidney had been completely torn across by the kick, and the blood and urine had evidently collected in the loose tissue around the kidney and between the fragments. A drainage-tube was placed in the wound for a few days and the boy made a complete and uneventful recovery. The father wrote under date Nov. 10th: "The boy is very well and seems quite strong."

Remarks by Mr. OWEN.—The features common to these two cases are fulness in the renal region and persistent

[1] Martin: Revue des Maladies de l'Enfance. June, 1895.
[2] THE LANCET, Oct. 20th, 1894, p. 910.

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vomiting. Taken together these symptoms are more than suggestive. As there was some doubt as to the nature of the tumour in the first case it was approached by abdominal section. It could, of course, have been removed with equal ease by the loin without opening the peritoneum; but when there is room for doubt as to the nature of a tumour in the renal region the operator does well to make himself master of the situation by opening the abdomen through the median or semilunar line.

The second case is instructive in that it shows that though a child's kidney is broken right across it does not necessarily demand removal. Probably the actual rent was so far below its equator that the urine secreted by the chief part of it was eventually enabled to find its way along the ureter. And I think that it would be well in all cases of nephrotomy for ruptured kidney in children to give the gland and its duct the off-chance of rearranging matters to the physiological advantage of the individual. If persistent lumbar fistula gave evidence that the injury was such as to be wholly beyond the reparative power of nature, nephrectomy could be resorted to.

VICTORIA INFIRMARY, GLASGOW.

A CASE OF EXTENSIVE CARCINOMA OF THE STOMACH FOR WHICH JEJUNOSTOMY, AS MODIFIED BY MAYDL, WAS SUCCESSFULLY PERFORMED.

(Under the care of Mr. A. ERNEST MAYLARD.)

FOR the notes of the case we are indebted to Dr. Weir, resident house surgeon.

A man, aged fifty years, was admitted to the Victoria Infirmary, Glasgow, on May 7th, 1897. At the beginning of March of this year the patient began to feel himself becoming gradually weaker and rapidly losing flesh. Except these symptoms he noticed nothing until a month previously, when he began to vomit his food. The ejection was frequently preceded by an attack of severe coughing. Often in the morning and just after rising and before his breakfast he would vomit a few mouthfuls of clear, watery fluid quite bland in character. No blood appears at any time to have been seen in the vomit or in the stools, which he stated were perfectly natural. Until recently he had felt no marked pain in his stomach, but he had entirely lost his appetite. On admission to the hospital he was seen to be a sallow-complexioned man; he was much emaciated and much enfeebled. He complained of pain in the region of his scapulæ, but he stated that his worst pain was felt when he took food. So much suffering did this cause that he preferred to desist from any attempt. On examination of the abdomen a swelling was seen on the left side of the epigastrium which was hard to palpation, quite painless, rounded in shape, and moved slightly with respiration. The dulness on percussion was continuous with that over the liver. It was found that by a careful regulation of the diet it was possible for him to take food without it being vomited, nevertheless its ingestion was always accompanied with pain. A test breakfast was administered, and the gastric contents when removed were examined by Günzberg's method for hydrochloric acid, but no reaction was obtained. Endeavours were made to wash out the stomach, but the tube caused so much irritation that the attempt had to be abandoned. Nutrient enemata were administered every four hours and one was given just prior to the operation.

The operation was performed on May 18th with the assistance of Dr. Grant Andrew and Dr. Weir. A median incision was made above the umbilicus, and after opening the general peritoneal cavity a digital examination of the stomach was made. It was then found that the organ was extensively implicated, the greater part of the body consisting of a hard nodular mass of tumour tissue. An attempt was first made to bring up the duodenum with the object of performing duodenostomy, but this not being possible Maydl's method of performing jejunostomy was proceeded with. The operation lasted one hour and ten minutes and was not followed by vomiting. The patient rallied well. On the second day peptonised milk was given by the abdominal wound, and this was repeated every three hours. The administration of nutrient enemata was also continued. A marked diminution of the tumour was observed on the fourth day. On the fifth day a good motion passed; for the first time also there was regurgitation of bile from the abdominal orifice. A little fluid nourishment was given by the mouth, and this appeared to cause no pain. On May 28th, that is, ten days after the operation, the patient confessed to feeling much better; his cough, however, was proving more troublesome, and whatever improvement had taken place in his gastric condition seemed more than counterbalanced by the trouble he was beginning to suffer in respiration. At times his cough was very troublesome. Considerable regurgitations of bile occasionally took place, and at times also the injected food was returned. On the eighteenth day after the operation the Murphy's button used at the operation to implant the proximal end of the divided jejunum into the distal segment was passed in the motions without causing the patient any discomfort. After this the patient's lung trouble continued to increase, his cough becoming persistent, until on June 8th he died just three weeks after the operation.

Necropsy.—At the post-mortem examination, which was made by the pathologist, Dr. Galt, the lungs were found to be extensively involved, the left being consolidated and in places gangrenous. On examining the stomach tumour tissue was found involving chiefly the lesser curvature, but extending from this on each side down to the greater curvature. Microscopical sections of the growth showed it to be colloid carcinoma; spaces were seen almost entirely filled with colloid material to the exclusion of cellular elements, although here and there existed well-marked groups of carcinoma cells. An examination of the parts operated upon showed perfect union between the two attached portions of the intestine. A well-marked canal existed between the united segments with no signs of any contraction.

Remarks by Mr. MAYLARD.—The operation of jejunostomy, as usually understood, resembles in its performance those other operations upon the alimentary canal which possess in their terminology a similar suffix; that is to say, it consists in fixing the viscus to the abdominal parietes and maintaining for a period, either temporary or permanent, a fistulous connexion with the outside of the body. Many different methods are employed in performing the operation, and the various modifications introduced have for their chief object the prevention of any escape of the contents of the bowel. Maydl, however, has so modified the operation that it almost belongs to a class of its own so much does it differ from those usually understood by the term jejunostomy. The operation known as Maydl's consists in first opening the abdomen in the middle line above the umbilicus and then seeking for the upper end of the jejunum; when this is secured it is brought out of the abdominal wound and divided. Another opening is made in the side of the distal segment into which the proximal is implanted. This union is effected either by stitching or, as performed in the above case, by a Murphy's button. The orifice of the distal segment is lastly stitched to the parietal wound (see diagram). A precisely similar operation has been

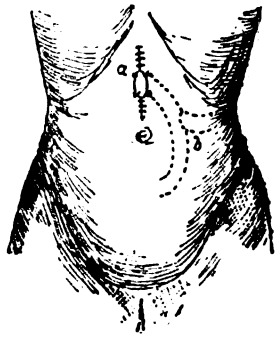


Diagram of Maydl's operation for jejunostomy. *a*, orifice of jejunum stitched to parietal wound; *b*, lateral implantation of upper segment into the side of the lower.

devised in place of gastro-enterostomy, the only difference being that the distal free end of the divided jejunum is planted into the stomach instead of into the abdominal parietes. The operation of jejunostomy, by whatever method performed, is only called for in extreme cases of gastric carcinoma, and it is therefore essentially an operation of expediency rather than one of necessity, one which aims at the relief of suffering for the comparatively short time that life is likely to last. From the point of view of relief given the present case seems one worthy of record, for the great suffering which the patient endured whenever nourishment was administered was entirely removed by the

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giving of all food through the jejunal orifice. The stomach thus obtained complete rest, while the operation itself produced but slight temporary disturbance to the patient. However, although the patient constantly expressed himself as greatly relieved by the operation I confess I was somewhat disappointed at the regurgitation of bile which took place from time to time through the artificial orifice. This, I believe, was due to planting the proximal end of the jejunum into the distal segment at a point too near the orifice. In a second attempt to perform the same operation I shall endeavour to make the union some few inches further down. This will of necessity entail a more extended severance of the mesentery so as to admit of the required separation of the two cut extremities, for without such division it would be impossible to bring up the distal extremity to the surface of the abdominal parietes without drawing up also the proximal end. There was a point of considerable interest observed in connexion with the feeding of the patient. It was found that although food properly prepared and peptonised was freely given through the artificial orifice and retained the man seemed to be gradually getting weaker, more than could be accounted for from any other cause except that of insufficient nourishment. I thought it just possible that absorption and assimilation were not taking place owing to the want of bile and possibly pancreatic juice, and that these failed in being secreted owing to the absence of any normal stimulant conveyed through the usual channels of gastric ingestion. We therefore commenced giving a little bland liquid food by the mouth, and with the best results, for the patient soon showed signs of regaining strength. It was further noted that food so taken into the stomach no longer caused the acute pain it previously had. The temporary rest which had been given to the viscus by the operation had apparently been the means of allaying a good deal of its irritability.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Calot's Operation for the Immediate Reduction of Angular Deformity of the Spine.

A MEETING of this society was held on Nov. 26th, Mr. LANGTON, President, being in the chair.

The PRESIDENT read an English translation of the paper read by M. Calot at the last meeting, which was published in THE LANCET report of Nov. 20th. — Mr. MAKINS (honorary secretary) read some remarks which had been contributed by M. P. Rédard, of Paris, who was unable to be present. M. Rédard considered that the method was a very valuable one in certain cases and was convinced from his own experience in some forty cases that if reasonable precautions were taken it was effectual and free from risks. He pointed out, however, that all cases of Pott's curvature were not amenable to immediate reduction and he only advocated its use in those cases in which the reduction was easy and he deprecated its employment for the reduction of irreducible ankylosed curvatures. He held that neither size nor duration of the curvature was a contra-indication for the method but that all cases were suitable which were reducible with moderate force, and he was strongly opposed to rough or violent manipulations. M. Rédard sent photographs of the apparatus which he employed for the purpose of effecting reduction and which enabled him almost to dispense with assistance and avoided the necessity for the prolonged compression of the boss during the setting of the plaster. The exact amount of traction employed was indicated by a dynamometer. When applying the plaster jacket too thick a layer of cotton wool should not be placed next to the skin as it hindered the secure maintenance of the spine in position. He had met with no unpleasant results in any of his forty cases, but had observed indisputable correction of the deformity in many severe cases.

The discussion on the paper by Mr. Robert Jones and Mr. Tubby, adjourned from the last meeting, was then continued by Mr. WATSON CHEYNE, who said that he considered that the subject was hardly ripe for discussion as so short a time had elapsed since the operations were performed. Undoubtedly the results were satisfactory from an orthopædic point of view, but it must be remembered that in these cases the surgeon was dealing not only with a deformity but with disease. As regards the ultimate effect of the treatment on the diseased bone at this early period they could only fall back on general experience of the behaviour of tuberculous disease in bone. He admitted that the absence of serious accidents had surprised him, but a cure could not be said to have taken place unless and until firm bony ankylosis had occurred. Unpleasant consequences appeared to be less frequent than after similar interference with ankylosed tuberculous joints such as the knee. Spinal abscess was, however, very slow in developing and he would not consider that any of the patients operated on within the last few months were free from danger from this sequela. In order that the disease might be actually cured two things were necessary. First, the tuberculous tissue must have disappeared or become encapsuled and the conditions did not look favourable for this issue. One or several cavities would be produced filled with blood-clot, fragments of cancellous bony tissue, and cheesy material, conditions which would favour extension of the disease or formation of abscess. Secondly, ossification and consolidation must take place. As a rule, in contrast to what happened in acute necrosis, there was remarkably little new bone formed in tuberculous disease of bone. If an ankylosed tuberculous joint were examined it would be found that there was a very small surface united by bone most of the union being fibrous. He doubted whether bony union would occur anteriorly. Calot held that union would take place posteriorly, but although some museum specimens showed that this had occurred little trace of it could be found in recent cases. Some of the cases recorded by Calot and others had been reduced after the curvature had existed for periods of from six to eleven years, showing that even in this time firm ankylosis had not occurred under circumstances not less favourable than those after forcible reduction. He thought if the operation were performed at all it would be well to follow Calot's plan of freshening the adjacent edges of the laminæ of the vertebræ and uniting the periosteum at the same time. He did not believe that the results obtained by this method would be better than by double extension with weights followed by prolonged recumbency, improvement following even with a constant weight of eight pounds. He always adopted this plan before performing laminectomy which he believed was necessary in only a few cases. The method was absolutely on its trial and he considered that a sufficient number of operations had been done to test its value although several years must yet elapse before the ultimate effect on the cases which had been brought before the society could be estimated, and he thought that before any more cases were treated its effects on these early cases should be known.

Mr. BARWELL said that the mortality had been surprisingly small. He thought that some attempt would have been made to give some account of the effects on the bones as found at the necropsies on these fatal cases. The specimen shown by Mr. Murray at the last meeting did not satisfy him as he wanted to know the condition of the whole spine *in situ*. He considered that the method was in an experimental stage and that accurate judgment could not be passed on it for some years.

Mr. NOBLE SMITH said that he had seen several cases in which immediate reduction of bone was accidentally brought about and the results in those cases were such as to make him sceptical about the advisability of Calot's operation. The first case was that of a child who suffered from active caries the result of a fall and leading to the formation of a curvature. After eighteen months' rest he was able to get about, but he fell again and the ankylosis not being firm the curvature was straightened. The caries again became active and abscesses formed, the child dying three years later. The second case was that of a youth, aged sixteen years, who had a large rounded curvature. When the spine was forcibly extended the curvature was straightened out, but general tuberculosis ensued, and the patient died. The third case was that of a boy, aged seven years, who had extensive disease of vertebræ. He had adopted the posture of lying prone on his elbows and knees, which had the effect of straightening out the curvature. He died from tuberculous meningitis two years later and on examining the spine it was found to be united by bone anteriorly but this new bone was of such loose and friable quality that it entirely crumbled away when the bone was macerated. He

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thought that the suggestion of Mr. Jackson Clarke that new bone might be thrown out from the anterior common ligament and help to fill the cavity was a very likely one. He showed an elderly woman suffering from caries in whom the deformity was practically reduced by wearing a suitable apparatus which had enabled her to resume her occupation.

Mr. JACKSON CLARKE said that of the two factors, the disease and the deformity, the former was of primary importance. The deformity tended to increase after the disease was checked owing to the adaptive growth of the healthy portions of the spine, which were "kinked down" at the diseased vertebra. For some time past he had used Chance's splint as an efficient means of arresting the disease. He had tried the method of immediate reduction in the case of a girl with a sharp angular curvature which had only existed for two months. The deformity was reduced without much force being used, a distinct crack of the bone being heard. A plaster cuirass strengthened by metal strips was then applied while the manual extension was kept up. The plaster jacket had to be removed after a few weeks and the curvature was found to have returned. Reduction by forcible extension was again performed and this time the spine was put up in an over-extended position. Five weeks later there was considerable diminution of the curvature and on extending the spine there was some slight cracking but no further yielding. The child was now going to have a Chance's splint with an occipital band to control the movements of the head. He thought that the splint shown by Mr. Jones confined the whole body too absolutely. He recalled one case in which there had been absolute fixation in such a splint for four years, but this did not prevent the formation of a boss, and the child's general health suffered. He thought that two years' fixation in such a splint would be a very serious thing for the child especially if any bronchitis occurred. He thought that the best plan was to employ fixation for three months and then apply a Chance's splint.

Mr. W. G. SPENCER said that the operation would allow the subsequent treatment to be commenced with the spine straight. It did not appear to offer any danger to life, and there was no evidence that any of the cases had been made worse. He thought that ossification would go on as well after this operation as before. Bone would probably be thrown out by the anterior common ligament. He did not think that the post-mortem specimen shown by Mr. Murray taught much. The gap which was shown might have been formed post mortem as it was empty, not even containing blood as would have been the case if it had been formed during life. He believed that these cases would be found to have ankylosed as firmly as cases treated by other methods.

Mr. COTTERELL said that he had operated on two cases. The first was that of a child who had been treated for dorsal caries and paraplegia for five months by rest without improvement. The curvature was relieved by forced extension in October and the paraplegia was rapidly passing off. In the second case an angular curvature was easily reduced, but while putting the jacket on the child stopped breathing and artificial respiration had to be resorted to. Undoubtedly the position required for the extension made things very difficult for the anæsthetist.

Mr. THELWALL THOMAS (Liverpool) considered the objections to forcible straightening of the spinal column to be based on a wrong reading of museum specimens, whose very existence depended—too often, alas!—upon inefficient treatment. The ordinary treatment of spinal caries never really prevented undue pressure of the softened bodies on each other, and it was easy to account for the large mortality which they all knew existed from abscesses and dissemination of tubercle, brought about by this constant grinding pressure. The theoretical objections that were raised to the new treatment—namely, (1) that paraplegia would result, (2) that abscesses would occur, and (3) that dissemination of tubercle would be brought about—had all been disproved so far and the only pathological item which remained now to be settled in the minds of some was what filled the "gap" assumed to be always produced by forcible straightening. The practice of surgery consisted almost entirely of making "gaps" which nature obligingly filled up (even after such proceedings as scraping tuberculous bone) and certainly they ought not to worry about that.

Mr. A. E. BARKER endorsed all that Mr. Watson Cheyne had said and agreed that it would be well to wait to see the result in the cases already operated on. He mentioned a case in which a fatal acute pleurisy followed the rupture of a spinal abscess when a patient was suspended in a tripod for the application of a plaster jacket and he thought that a similar accident must be expected in a certain proportion of the cases. He thought that the evidence was quite against the possibility of the new formation of bone in sufficient quantity to fill up the gap. M. Calot stood by the analogy between the ankylosed spine and an ankylosed knee and agreed that what would be bad for one would be bad for the other. Mr. Barker would anticipate extension of the disease if he attempted forcibly to extend a tuberculous knee, and he thought that that was the general experience of surgeons.

Mr. ROBERT JONES expressed his satisfaction that the subject had been so well discussed, even though some speakers had been pessimistic. He reminded the society that the object of the paper was to lay certain clinical facts before them in relation to the immediate straightening of spines which were at complete variance with traditional and present belief. In no case had abscess, dissemination of tubercle, or paraplegia followed reduction. Instead of producing paraplegia it had in several instances by relieving pressure on the cord cured it. Mr. Watson Cheyne had urged that when the backs were straightened they were not cured. The same argument might be applied to neglected deformities following tubercle in joints. Mr. Watson Cheyne and Mr. Barker deprecated the immediate reduction of tuberculous hips and knees. Mr. Jones constantly practised such reductions without any of the evils referred to following. The fatal character of Pott's disease was admitted and the difficulties of governing the deformity by mechanical means were so well known that some radical effort should be made to bring about a better state of things. When he first practised this method with a full sense of the responsibilities friends warned him of paraplegia, abscess, and dissemination. Now these dangers had proved groundless they were told to beware of the "gap." Had he feared the separation of bodies he had no right to operate upon a single case, but speakers who advocated the removal of intra-articular pressure in joints deprecated it in the spine which exhibited the *strongest* tendency to bony exudation. Fixation could be more efficiently applied to a straight than to a *crooked* spine, and prevention of the crunching of vertebræ from superincumbent weight should tend to firm and rapid union. He had just received a communication from M. Calot stating that he had patients walking without supports after the practice of immediate reductions, and in no instance did the spine "wobble." Such a fact should altogether dissipate the pathological fear. Mr. Tubby and he very cordially accepted the suggestion of the President to show cases when sufficient time had elapsed.

Mr. TUBBY said with reference to Mr. Murray's communication that gentleman had granted all the points of their argument but had then branched off into *speculations* and had spoken of the possibility of a "wobbly hump" resulting, as if such an event were likely, in the spine. He thanked Mr. Watson Cheyne for his criticism but wished to join issue with him on this point—viz., that the cure of the deformity and of the disease were entirely different. In dealing with tuberculous joints such as the hip and knee one object in treatment was to separate the parts and give them rest, and this was precisely what was done in the spine when it was straightened. Mr. Tubby added that he thought the reason why a diseased spine took so long in healing was on account of the want of complete rest. As to the disputed question of ossification taking place in the gap formed by reduction, certain specimens, notably one in the St. Thomas's Hospital museum and another bearing on the question in the Hunterian Museum were alluded to. In the first-named specimen ossification in, and filling up of, the gap had evidently occurred during the ordinary course of the disease the back having been kept straight. As to the plea uttered by Mr. Watson Cheyne and Mr. Barker that Mr. Jones and he would now withhold their hands, there was no reason for doing so. Abroad this treatment was still being extensively tried, 600 cases, according to M. Calot, having been operated upon in France and so long as no danger or undue risk was incurred he failed to see the necessity for reaping experience at second-hand.

HARVEIAN SOCIETY OF LONDON.

Hernia of the Abdominal Cicatrix and Operations for its Cure.—Empyema of the Antrum of Highmore.

A MEETING of this society was held on Nov. 18th, Mr. MILSON, the President, being in the chair.

Mr. ALBAN DORAN read a paper entitled Hern

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of the Abdominal Cicatrix and Operations for its Cure. This paper was given at length in THE LANCET of Nov. 27th. — Mr. BUTLER-SMYTHE congratulated his colleague on the success attending his efforts to relieve those women suffering from ventral hernia. Mr. Doran had his sympathy in that one instance where the hernia had returned after operation, but perhaps it might be some consolation to him to know that there was no surgeon living of whom it could be said that he had not had many such cases following his operations. He (Mr. Butler-Smythe) ridiculed the idea of operators stating "that they could not trace a single case of ventral hernia in their own practice." The fact was that when an operation for the removal of an abdominal tumour was unfortunately followed by a hernial protrusion, varying from the size of a walnut to that of a pouch reaching from the ensiform cartilage to the pubes and containing the greater portion of the abdominal contents, it was, to say the least, improbable that those patients would return to the original operator but rather would seek fresh advice. Ventral hernia would now and again occur no matter how careful the surgeon might be in the matter of closing the abdominal wound. In most of the cases read that evening it seemed that the hernia had occurred at either end of the abdominal scar, and this looked as if the closing of the upper and lower angles of the wound had been imperfectly sutured. In his opinion the chief point in sewing up the wound was to approximate the sheaths of the recti muscles as accurately as possible. Union of fibrous tissue was stronger and more permanent than that of muscle or skin. He was convinced that if attention were directed to the accurate suturing of the aponeurosis the chances of hernia would be greatly diminished.—In reply to Mr. Butler-Smythe Mr. DORAN remarked that the edge of the rectus muscle as well as its sheath should always be included in the suture whether the aponeurotic layer were united separately and continuously or simply closed by deep interrupted sutures passed through all the layers of the parietes.

Mr. E. W. ROUGHTON read a paper on Empyema of the Antrum of Highmore. He limited his remarks to those cases in which the ostium maxillare was patent and the symptom complained of was a discharge from the nose. The discharge was usually purulent, unilateral, intermittent, and affected by posture. An examination of the nose by speculum and light revealed pus in the middle meatus; after cleansing the nose pus reappeared when the head was hung down and towards the unaffected side. As aids to diagnosis he mentioned transillumination of the antrum, catheterisation through the ostium maxillare, percussion of the teeth, and exploratory puncture through the nose, alveolus, or canine fossa. He also insisted upon a careful examination of the teeth in the upper jaw. A carious first or second molar was a very common cause of empyema, but any tooth in the upper jaw might involve the antrum; it was also important to bear in mind that a tooth which was quite free from caries and to the ordinary observer apparently healthy might have an alveolar abscess at its root. The indications for treatment were—(*a*) removal of the cause by dealing with dental or nasal disease; (*b*) evacuation and drainage of pus; (*c*) antiseptic irrigation; and (*d*) removal of morbid tissue (when present) from the antrum. He advocated that an alveolar tube should be fitted in every case. In acute or subacute cases a cure would often be effected provided that the tube was of large calibre (at least an eighth of an inch) and that its upper extremity was on a level with the floor of the antrum. The length of the canal from the gum to the floor of the antrum could be best determined by means of a small *catheter à boule* used in the same way that it is used to measure the position and length of a stricture of the urethra. In chronic cases or those that resisted treatment by the alveolar tube for six months it was necessary to open the antrum through the canine fossa and thoroughly remove all morbid tissue found therein. The canine fossa operation should always be supplemented by an alveolar tube to facilitate drainage in the after treatment. He had had no experience of opening the antrum through the inferior meatus of the nose as he considered that there was no case which could not be effectually treated by the alveolar tube with or without the canine fossa operation. In some cases the nasal discharge continued after draining the antrum; attention should then be directed to the frontal sinus or fronto-ethmoidal cells.—Mr. LENNOX BROWNE remarked on the great improvement observed in the general health of patients who had been efficiently treated for empyema of the antrum.—Dr. SCANES SPICER had yet to see a complete cure of a case of chronic antral empyema by the ordinary irrigation tubes inserted through the alveolus. By that he meant—(1) permanent cessation of pus flow, bad smell in the nose, and pain; and (2) permanent removal of tube, no irrigation worries, and healing of fistula in a case of antral empyema of several months' or years' standing and in which the antrum was not merely a receptacle of fronto-ethmoidal pus. Anything short of this he could only regard as a very equivocal palliation, for, indeed, in many cases the irrigation apparatus aggravated discomfort by causing recurring acute sinusitis with pain and, further, the taste of pus was always in the mouth. He had known many cases that had endured this for years. After giving the alveolar tube methods a trial for years with the coöperation of the most skilful dentists he had been compelled to drop these methods as never successful in chronic cases such as chiefly came under his notice. At one time he had a large accumulation of these failures, many of which he subsequently submitted to the radical operation, and if the antral empyema were uncomplicated these had been completely cured, usually in a very few weeks. During the last eight years he had operated radically on well over thirty cases.[1] The points he regarded as essential for the success of the radical operation were (1) a large opening through the canine fossa; (2) thorough curettement of diseased antral mucosa; (3) very free counter opening from the nose into the antrum; and (4) no drainage apparatus (the air blast suffices to clear the antrum of pus until the mucosa is healthy). No bad results, certainly no disfigurement or sinking of the cheek, had occurred in any of his cases.—Dr. WILLIAM HILL had experience of cases in which an alveolus had been drilled and a tube inserted without marked relief, so that it was necessary to make an opening in the canine fossa and scrape out the antrum.—Mr. SEFTON SEWILL said that the operation of puncturing through the alveolus was a simple one and one which in conjunction with a permanent drainage apparatus was considered efficient treatment by distinguished surgeons.—Dr. DUNDAS GRANT spoke of the frequency with which the uncinate process of the ethmoid became diseased and led to accumulation of pus in the antrum. Such cases were purely nasal and demanded nasal treatment.

LIVERPOOL MEDICAL INSTITUTION.

Removal of Epithelioma from the Larynx by Thyrotomy.—An Account of Nine Operations on the Liver.—Ice-cream as a Vehicle of Infection in Typhoid Fever.—Details of the Clamp and Cautery Operation for Hæmorrhoids.

A MEETING of this society was held on Nov. 18th, Dr. RICHARD CATON, President, being in the chair.

Mr. BARK showed a case of Removal of Epithelioma from the Larynx by Thyrotomy. The patient was a man, aged forty-one years, from whom he had removed the right vocal cord, ventricular band, and arytenoid cartilage for epithelioma by thyrotomy. Hahn's tube was used for seven days. The patient made an uneventful recovery. The man had suffered from hoarseness for two years previously to the operation. There was now, eight months after the operation, no sign of recurrence. He had a strong though hoarse voice.—Dr. HUN drew attention to the duration of the disease and said that it was not unusual for a malignant papilloma to remain quiescent for some years causing no symptoms except hoarseness. He preferred to remove Hahn's cannula immediately after the operation on account of the risk of septic pneumonia.—Mr. RUSHTON PARKER mentioned a case of thyrotomy where he had removed Hahn's tube immediately but had been obliged to re-introduce it later.

Mr. RUSHTON PARKER read notes of Nine Operations on the Liver. Three were for abscesses, four for hydatids and two were cases of gall-stones impacted in the ducts. All were successful. In one case of hydatid, punctured less than twenty-four hours before extraction of the cyst, universal peritonitis had resulted. There were vascular injection of the peritoneum and purulent effusion with large non-adherent flakes in the pelvis. This was treated by copious washing and by pelvic drainage through an additional suprapubic

[1] See Proceedings of the Laryngological Society of London, Proceedings of the West London Medico-Chirurgical Society, and Brit. Med. Jour.

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incision. The desirability of avoiding puncture of hydatid cysts except when the operator is prepared to remove the cyst immediately and certain features in the diagnosis of hepatic abscess were dwelt upon.—Dr. BRADSHAW wished to emphasise the fact that the absence of pyrexia for longer or shorter periods by no means excluded hepatic abscess. In the third case of Mr. Parker's series the temperature was normal or sub-normal during the five days that the patient was in hospital before the operation. The abscess when opened was found to contain three pints of pus. The diagnosis was based upon a history of tropical diarrhœa, pain in the right shoulder, tenderness in the region of the liver, and remarkable enlargement of the organ in an upward direction.—Mr. PAUL said he used the aspirator for hydatid of the liver in children and had met with several cures. In both abscess and hydatid he had had the misfortune to meet with cases in which a communication had been established with the bile-ducts previously to operation. They all ended fatally sooner or later. In reference to gall-stones he thought the question of recurrence extremely important. Apart from inaccessible stones left behind it seemed to be very rare.—Dr. E T. DAVIES thought the use of the exploring needle for diagnostic purposes was to be deprecated unless immediately followed by operation.—Mr. BANKS, Dr. FINEGAN, Mr. LARKIN, and Dr. O'HAGAN also made remarks.

Dr. E. W. HOPE read a short paper on Ice-cream as a Vehicle of Infection in Typhoid Fever. He spoke of the dangers of ice-cream as sold by the itinerant vendor. He had obtained some street-sold ice-creams and had submitted them to Professor Boyce for bacterial examination; these had shown an enormous number of sewage bacteria. Some cases of typhoid fever had been distinctly traced to ice-cream sold at a fair in a suburb of Liverpool. In the future the manufacture of ice-creams would be regulated in the same manner as the milk traffic.—Dr. HILL said he was engaged at the present time in an investigation into the micro-organisms of sewage. He was struck with the marked similarity between plate cultivations of the ice-creams referred to and those of sewage. It was difficult to distinguish between them both from the number and the nature of the organisms present, many being identical in character and appearance.—Professor BOYCE, Dr. BABB, and Dr. LOGAN also spoke on the subject.

Mr. BANKS read a note on the Clamp and Cautery Operation for Hæmorrhoids. He said that he considered the operation a good one and one which was permanent in its results. He also said that he thought Paquelin's cautery if properly cared for a most reliable instrument. He mentioned various small details which he had found useful to the patient in saving pain and to the surgeon in saving time and annoyance.—Mr. ROBERT JONES condemned the clamp and cautery as an implement not in accord with modern surgery; it possessed no advantages over cleaner methods. He had for some years practised a method of suturing hæmorrhoids which promoted rapid healing, rendered bleeding impossible, and saved the patient much pain. Dilatation of the anus should always be performed as a preliminary.—Mr. THELWALL THOMAS had abandoned the cautery for years and now treated hæmorrhoids by clamp, removal of excess, and suturing the stump with a crossed and reef-knotted stitch. The operation was painless and uneventful. Patients were out of bed on the sixth or seventh day. Hæmorrhage could not occur. Forcible stretching of the anus was always used as a preliminary.—Mr. PAUL supported Mr. Banks's contention that properly carried out the operation by clamp and cautery was the most safe, effective, and permanent cure for hæmorrhoids.—Mr. RUSHTON PARKER thought the principal aid to operation and painless recovery was the stretching of the anus.—Mr. BANKS replied.

MIDLAND MEDICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on Nov. 17th at the Medical Institute, Birmingham, Mr. J. W. TAYLOR, President, being in the chair.

The following gentlemen were elected members of the society: Dr. H. E. Thompson, Dr. C. K. Millard, Dr. R. W. Briggs, Dr. W. Lamb, and Mr. G. Leonard Hill.

Mr. HEATON showed a girl, aged seven and a half years, whose Left Elbow-joint he had Excised eighteen months previously for extensive tuberculous disease of the joint complicated by peri-articular abscesses. Excision was performed in the usual way. Passive movements of the joints were commenced on the fifth day. At the present time the child could use the arm almost as well as its fellow. The movements of flexion and extension were perfect, but there was some limitation in the power of pronation and supination.

Dr. FOXWELL read a paper on Colitis and showed a married woman, aged thirty-nine years, sent to him by Mr. J. S. Crabbe in illustration of his remarks. In July, 1894, the patient had severe urticaria after taking some tinned rabbit. This was followed by diarrhœa accompanied by tenesmus. This became much worse in November, 1894, and was accompanied by two or three severe hæmorrhages. She was confined to bed for ten weeks and was told that she had typhoid fever. In January, 1895, the diarrhœa ceased and her bowels became irregular and had so continued ever since. The stools were either lumpy and scybalous or else there was diarrhœa. She still passed a good deal of mucus and sometimes the stools resembled the white of an egg. Blood only occasionally appeared, but there was constant tenesmus "even when it was diarrhœa." The patient's bowels had been blocked three times; on the second occasion the obstruction was serious and an operation for its relief was contemplated. Occasionally she could not pass urine for more than twenty-four hours, at other times she had done so every five minutes. She has always been subject to sick headache but had had much more during the last three years. She had lost strength but was fairly nourished and could manage her household duties. There was a dyspeptic redness about the face and the tongue, though clean, was too red. Dr. Foxwell brought her forward as a typical case of non-amœbic colitis; the bowel irregularity, the stools, the fæcal obstruction, the increase of "biliousness," and the acute exacerbation ("typhoid") being all typical of the disease.

Mr. JORDAN LLOYD showed a Suppurating Cyst of the Left Broad Ligament with gaseous contents removed successfully from a woman, thirty-five years of age, about four months after a premature confinement. Her illness began about a week after delivery with multiple joint pains, and as these subsided an abdominal swelling made its appearance without much pain but with irregular septic temperatures. She became anæmic and prostrate, but would not consent to operation until nearly two months after the pelvic swelling had been found and diagnosed. Mr. Lloyd called particular attention to the fact that the tumour was tense and gave a tympanitic percussion note and even when first cut into had the appearance of a distended intestinal coil.

Dr. KAUFFMANN showed a set of specimens of Syphilitic Lesions in the Liver, Lung, and Shoulder-joint, all from the same patient. In the liver there were numerous small gummata, not exceeding a split pea in size and of characteristic appearance to the naked eye and under the microscope. In the lung the lesion took the form of an extensive mass of white fibrous tissue of great denseness, forming a stout solid mass evidently peribronchial in origin and spreading in a radiating manner into the lung tissue. In the shoulder-joint the lesion was considered during life to be of tuberculous nature and this opinion was borne out by the appearance of the joint when opened after death. The clinical points in which the joint conditions differed from the tuberculous suppurative disease were the comparative absence of pain considering the amount of swelling and destruction and the wide ramifications of the abscess along the lines of tendon sheaths in the neighbourhood.

PLYMOUTH MEDICAL SOCIETY.

Exhibition of Cases and Specimens.

A CLINICAL meeting of this society was held on Nov. 20th, Mr. J. E. SQUARE being in the chair.

Dr. FOX showed the following cases:—1. A man, aged forty-two years, in whom Jaundice had suddenly appeared three months previously after a sharp attack of pain. The gall-bladder was distended and the liver was enlarged. It was decided to explore the gall-bladder. 2 A man, aged about forty years, with Obscure Nervous Symptoms most pronounced on the right side. An Argyll-Robertson pupil was noted on the right side and absence of the knee-jerk in the right leg. The ankle of this side had developed (after an injury) large masses of new bone from the

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lower epiphyses of the tibia and fibula and a thickened elastic condition of the synovial membrane. The joint was not at all flail-like nor did there appear to be any fluid in it.

Mr. WOOLLCOMBE showed a man from whom, for Epithelioma of the Penis with enlarged inguinal glands on both sides, he had removed the entire penis, scrotum, and testicles, bringing the urethra out in the perineum. Both inguinal regions were cleared of glands by means of two horizontal incisions radiating from the central one. The operation was rapid,—it left a wound with no pouches to delay healing—was thorough, and was not followed by any severe shock or mental disturbance.

Mr. J. E. SQUARE showed a girl, aged twenty years, with a Thickened Conjunctival Fold in the Outer Canthus of the Right Eye, from which grew a hair.

Mr. C. E. RUSSEL RENDLE showed a child, aged nine years, who had been a well-marked Cretin but under thyroid extract was rapidly losing the characteristic signs and symptoms.

Mr. ALDOUS showed a boy, aged thirteen years, with a round, raised, and partially pedunculated Swelling three-quarters of an inch above the red margin of the left Upper Lip. The surface was red and crossed by numerous dilated capillaries and exuded a thin, purulent, and sometimes bloody fluid. Beneath the jaw were two or three enlarged and hard glands. About the base of the tumour there was no trace of induration. Three weeks ago the sore was twice the size. He regarded it as a chancre and was treating the case with mercurial inunction. Various opinions were expressed as to its being of sebaceous origin—molluscum, nævoid, &c.—and a cessation of treatment was advised.

Mr. WHITEFORD showed a youth, aged eighteen years, with Syphilitic Sloughing of the Soft Palate and Adhesion of the remains to the Pharynx and Naso-pharynx almost occluding the posterior nares, causing bad phonation and deafness.

Mr. RYAN showed a woman, aged sixty-two years, with nodules of varying size from that of a pea to that of a hen's egg beneath the skin of the Face and Neck, some of ten years' duration. The largest had rapidly grown after a blow three months previously and the skin over it had become discoloured. He regarded them as sarcomata. Other members thought them lipomata and the large one to be undergoing nævoid degeneration.

The following specimens were exhibited:—

Dr. WEBBER: (1) A large Multilocular Ovarian Cyst; (2) a Tongue removed from a woman, aged forty-two years, for Epithelioma; and (3) a Uterus removed per vaginam for early Cancer.

Mr. WOOLLCOMBE: Fourteen Calculi removed from a Kidney. The largest weighed two and three-quarter ounces and the whole number five and a quarter ounces. The patient made a good recovery.

Mr. ALDOUS: Primary Scirrhus of the Head of the Pancreas obstructing the common duct and causing Jaundice.

Dr. BUSHNELL: A slide of Diphtheria Bacilli.

GLASGOW SOUTHERN MEDICAL SOCIETY.

Exhibition of Cases.

A CLINICAL meeting of this society was held on the 18th inst. in the Victoria Infirmary, Dr. JAMES W. ALLAN, President, being in the chair.

Dr. EBENEZER DUNCAN showed a case of Diabetes under treatment with Uranium Nitrate. This drug was introduced into medicine by the homœopaths who got good results with it, probably by using large doses of it. Dr. Samuel West recently brought the drug before the profession.[1] Dr. Duncan made brief reference to his Montreal paper.[2] Since then two cases had been under treatment one—the case shown—being a man who had been ill for eighteen months and having 26·25 grains of sugar per ounce in the urine when admitted to hospital. Beginning with a dose of 5 grains it was gradually increased to 10 grains, when the dose had to be diminished to 7½ grains on account of diarrhœa and then again increased to 10 grains, which dose the patient was then taking with comfort and decided benefit. Previous careful treatment by opium and codeia had made an improvement up to a certain point, relapse immediately following when this treatment ceased. The patient had much improved in health and strength. Sugar was absent from the urine and polyuria and the other distressing symptoms were entirely relieved. The remedy was harmless; no nephritis or gastritis was produced. Diarrhœa might easily be avoided by using a pure salt, reducing the dose if it threatened, and avoiding over-eating. The usual dietetic treatment was adhered to, but all the patients had an abundant supply of milk—two or three pints per diem. The other case mentioned was that of a child who came into the ward feeble and passive but improved so much under this treatment that he became strong and active and so unruly and unmanageable that he had to be dismissed. Dr. Duncan was of opinion that the remedy had a stimulating effect on the sugar-producing cells either directly or through the nervous system.

Dr. DUNCAN also showed a patient who had suffered from a Syphilitic Gumma of the Brain. The patient was a woman, aged forty-nine years, who complained of weakness of the left arm and slight aphasia. There was no weakness in the lower limb. Headache was present. Ophthalmoscopic examination showed congestion of the discs and filling up of the congenital cup. There was a clear history of syphilis dating twenty years back; the patient had had seven still-born children and had had attacks of Jacksonian epilepsy involving the affected limb. Perchloride of mercury and iodide of potassium were given. Then the iodide alone, beginning with a 10 grain dose and pushed to 130 grains three times a day. The signs of the disease quite disappeared but cardiac symptoms developed under the large doses. Nitrite of sodium in doses of 2 grains afforded marked relief from the anginal attacks.

Dr. DUNCAN further showed a case of Chronic Rheumatic Arthritis treated by baths (Schott system) and salophen in gradually increasing doses of cod liver oil, and described various forms of Valvular Disease of the Heart—Enlarged Heart improved by Bath treatment; Double Aortic Disease; and Graves's Disease.

[1] THE LANCET, Aug. 10th, 1895, p. 356.
[2] Brit. Med. Jour., vol. ii., 1897, p. 1044.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Pneumonia a Multiple Infection.—Pityriasis Rubra.

A MEETING of this section was held on Nov. 19th, Sir G. F. DUFFEY, President, being in the chair.

Dr. J. W. MOORE read a paper entitled Pneumonia, a Multiple Infection, in which he adduced evidence that the micro-organisms peculiar to erysipelas, to influenza, to tuberculosis, and to enteric fever may one and all give rise to a specific pneumonia or pneumonic fever. So also may Löffler's diphtheria bacillus and the bacillus of malignant anthrax as well as other pathogenic bacteria. There is clinical evidence to show that a true pneumonitis may occur in any one of the four diseases—erysipelas, influenza, tuberculosis, and enteric fever; and if it is objected that Eberth's bacilli have not as yet been often found in the lungs or sputum of enteric fever patients this is probably due to the comparative infrequency with which so far search has been made for these bacteria in the pulmonary organs.—Mr. HENRY CROLY said that he had for twenty-four years been familiar with pneumonia as a complication of erysipelas.—Dr. J. W. MOORE, in reply, said that in influenzal pneumonia the specific organism of pneumonia was not often present but the streptococcus pyogenes.

Dr. J. B. COLEMAN read a paper on Pityriasis Rubra, and exhibited a patient suffering from the disease, a man, aged twenty years, who was admitted to the Whitworth Hospital on Nov. 4th, 1897, suffering from general redness and scaling of his skin and from some itchiness. The eruption appeared suddenly last May in the shape of redness on the back of his hands and wrists and within a week his whole body was red and scaly. He had not previously suffered from any form of skin disease and had enjoyed excellent health. The appearance of the affection was attended with no general symptoms. He never had syphilis, but there was a history of alcoholism and of exposure to cold and wet. His family was free from any gouty, rheumatic, or phthisical taint. On admission to hospital he was fairly well nourished though of slight build and he enjoyed good health except for the condition of his skin. He felt chilly when he went out of doors and at night he was troubled with itching. His lungs and heart were healthy, his appetite was good, and his temperature was normal. He had marked leucocytosis, the

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white corpuscles being increased to 37,000 per cubic millimetre. The eosinophile cells were also relatively increased, constituting 10 per cent. of all the white cells. The urine was normal; the bowels were confined. The axillary and inguinal glands were moderately enlarged. The skin all over his body was dull red in colour and covered with thin papery scales; it felt hot, rough, and dry; he never sweated. The redness faded on pressure and left a yellowish hue. The scales varied in size from branny desquamation on his face to larger flakes as big as a sixpenny-piece on his back and limbs. The scales were thin, whitish, easily separated from the subjacent skin, which was red, but neither moist nor infiltrated. During the earlier months of the disease the scales were larger, and every morning about a pint of scales and powdery detritus was found in his bed. Some of the nails were thickened and loose, whilst others were thin and long. The scalp was covered with whitish-yellow matted scales and the hair was falling out. The epidermis on the palms of the hands was thin (as if newly-formed) and superficially cracked; the skin of the soles was thicker and desquamating. When the skin on the flexor surface of the arms and on the sides of the neck and trunk was relaxed it was covered with fine ridges and furrows which were replaced by red linear streaks when the skin was made tense. The diagnosis of the case, as an example of Hebra's type of pityriasis rubra, depended on the onset of universal redness of the skin, associated with loosely adherent, thin, papery scales and on the absence of thickening, moisture, or of any primary lesion.—Dr. WALLACE BEATTY said that on looking at Dr. Coleman's case for the first time one might think that it was one of generalised seborrhœa, but the history must show that it was a case of pityriasis rubra.—Dr. FINNY said that there were in this case symptoms which he had not seen in any case of pityriasis rubra—namely, great thickening of the scalp with a great quantity of scales and with alopecia. The patient also had to scratch himself and he (Dr. Finny) thought that this was one of the peculiarities wanting in pityriasis rubra as there was generally no itching at all.—Dr. COLEMAN, in reply, said that neither some thickening of the skin nor itching were sufficient to upset the diagnosis of pityriasis rubra; in fact, in some of the very chronic cases a considerable amount of thickening of the skin had been found. Itching had also been noticed in cases now and then as a prominent symptom although not a common one.

Reviews and Notices of Books.

The Dwelling-House. By GEORGE VIVIAN POORE, M.D., F.R.C.P. Lond., Physician to University College Hospital, London: Longmans, Green, and Co. Price 3*s.* 6*d.*

THE main object of this book is to advocate the adoption of the dry method of sewage disposal in preference to water carriage and many of Dr. Poore's arguments have much force. He is an excellent debater and the position he takes up is very strong if not impregnable, but by selecting extreme cases he arrives in one or two instances at some rather startling results. In one case in the opening chapter he reproduces certain plans of the first of two typical London houses examples of which were published in THE LANCET.[1] The various evils, both sanitary and constructive, commonly met with in town houses had been concentrated in this example, for purposes of illustration, though it is to be hoped that few houses exist actually in such evil plight. Had Dr. Poore taken the second example in this report to demonstrate his argument against the excessive cost of existing sanitary methods, his calculations would have more nearly approached a correct average, and his arguments, though apparently robbed of a little force, would have been just as sound.

Dr. Poore is ingenious in his indictments. He holds that the water carriage of sewage and the high pressure system of water-supply tend to overcrowding by facilitating the erection of enormously high buildings to the exclusion of sunlight and of the free circulation of air, the result being damp, gloomy houses and streets filled with the exhalations from sewer gratings and drain ventilators. His remarks upon overcrowding, its causes and its effects, are emphasised by some very unpalatable but reliable statistics, and the Building Acts and by-laws under which model dwelling-houses are constructed (?) come in for their share of censure. The central idea of modern municipalism, in Dr. Poore's opinion, is the raising of loans and the sweating of the ratepayers.

That the water-carriage system is essentially an artificial one is evident and in common with every unnatural process is surrounded with special elements of danger. In London and other great towns existence is, however, more or less artificial throughout. Water as a carrier has obtained such a hold upon public favour and vested interests are so involved in its maintenance that however desirable a change might be there is at present little prospect of any alteration in our larger towns. Dr. Poore appreciates this position, but points out the extreme folly of taking the system of building and the sanitary methods prevalent in London as models for country towns and villages where the environments are altogether dissimilar and where the expedients to which the metropolis has been driven are quite uncalled for. Water carriage for sewage Dr. Poore designates as "spending our money to dissipate our capital" with the added risk of poisoning our water-supplies. He insists upon advantage being taken of the recently discovered fact that the first few inches of cultivated soil alone can break up and assimilate organic matter, the subsoil having no such power. Whatever is buried deeply or escapes from drain or cesspool below the protecting layer of living earth may retain indefinitely its original character and immensely increase the risks of pollution. He recommends the use of the dry earth closet so that the whole of the effete organic matter may be promptly returned to the surface of the land. This closet is not the usual pail closet met with in so-called dry methods in which the urine and fæces mingle but a special arrangement, devised by Dr. Poore, illustrations of which are given.

If a dry method of dealing with sewage were employed the subsoil water, being unpolluted by leaky drains and cesspools, could under such circumstances (as Dr. Poore points out) be collected in properly constructed shallow wells, and thus local water-supplies could be formed. He believes that such local supplies would be preferable, as the putting of all sanitary eggs into one basket which has led to disaster at Maidstone, Lynn, and elsewhere would then be avoided. We are not sure that such local supplies would be an improvement, for they would not receive the same supervision that ought to be, and is supposed to be, given to one main and central supply. The book describes in detail and illustrates the various means to be employed for the disposal of slop water and fæcal and other organic waste. The results of some experiments of filtering urine through sawdust are particularly interesting, as also is the chapter upon the circulation of organic matter and the effect of manure upon garden *humus* under varying conditions of temperature and moisture. Dr. Poore aptly views our modern sanitary methods as savouring "too much of Hercules and too little of Minerva."

Certainly the constantly recurring epidemics should cause rural authorities to pause before adopting, often at vast expense, a system or systems of dealing with their sewage for which in some cases there is no absolute necessity. The reason why former attempts at dry methods have often proved so discouraging is that the systems adopted have not been in conformity with natural laws. Dr. Poore has not only devoted many years to the study of the question but, and this is of equal value, he has superintended its practical application.

With hundreds, nay, thousands, around us stricken down

[1] Report of THE LANCET Special Commission on the Relative Efficiency and Cost of Plumbers' Work, THE LANCET, July 4th, 1896.

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by preventable diseases, the present subject cannot be dismissed with a few commonplace eulogies upon Dr. Poore's book. Worthing, Maidstone, Lynn, and Clifton are neither better nor worse than hundreds of other towns in which the elements of danger are present and are only waiting the moment of conjunction to develop similar or even worse disasters. Instead of passively following models that are not always good, and when good by no means always suitable, it surely would be better if sanitary authorities carefully investigated without prejudice every rational suggestion for the amelioration of existing dilemmas. Dr. Poore's book is an eloquent little plea for such practical open-mindedness.

Handbuch der Therapie innerer Krankheiten. Herausgegeben von Dr. F. PENZOLDT und Dr. R. STINTZING. Zweite Auflage. Lieferungen 1, 2, und 3. (*Handbook of Treatment of Internal Diseases.* Edited by Dr. F. PENZOLDT and Dr. R. STINTZING. Second edition. Parts 1, 2, and 3.) Jena: G. Fischer. 1897. Complete in seven volumes. Price 105*s.* by subscription.

THE first edition of this encyclopædic undertaking has been barely completed before we have to notify the issue of the first three "Lieferungen" of the second edition. The original publication appeared in somewhat piecemeal fashion, each "Lieferung" mostly containing portions of one or more of the seven bulky volumes that made up the whole work; but this re-issue will proceed in more regular fashion. The work opens with the subject of the Infective Fevers and measures of general prophylaxis are described by Dr. A. Gärtner and those of General Therapeutics by Professor von Ziemssen, Dr. Buchner writing upon protective inoculations. Amongst the special articles that on Small-pox and Vaccination by Dr. L. Pfeifer is most noteworthy; it contains a description of the author's discovery of protozoal organisms in variola. The subject of vaccination is fairly and thoroughly dealt with. In the discussion of other infectious diseases the serum treatment naturally receives much attention, Dr. von Ganghofner writing on Diphtheria and Dr. Th. Rumpf, of Hamburg, on Asiatic Cholera. The latter article is very full and contains much valuable information, the prophylaxis being especially dwelt upon. With regard to the treatment of Typhoid Fever (Professor H. von Ziemssen) cold or tepid bathing is strongly approved, the recommendat on being made to commence the treatment in the early stages of the fever, the baths at first being tepid. The volume closes (in the third "Lieferung") with articles on the treatment of affections of the ear and eye arising in connexion with specific fevers. The second volume opens with such "disorders of metabolism" as corpulency, diabetes, and gout. The work is well-known and evidently much appreciated and the second edition brings the publication well up to date.

Reference Book of Practical Therapeutics. By Various Authors. Edited by FRANK P. FOSTER, M.D. In two volumes. London: Smith, Elder, and Co. 1897. Price £2 10*s.*

THIS is an elaborate work in two volumes containing a vast amount of information on practical therapeutics. The editor states in his preface that the leading idea in the preparation of this work has been to make it pre-eminently serviceable to the practising physician. It is not intended to take the place of treatises on materia medica or on pharmacy, hence as regards the physical properties of drugs, their mineralogical, chemical, botanical, or zoological relations, &c., the endeavour has been to set down only so much as is of direct bearing on the use of those drugs in medical practice or on the management of poisoning due to them. In all these matters the writers who have assisted Dr. Foster have been most successful. Even accounts of the physiological actions of drugs are condensed, for much of what the experimental pharmacologist justly looks upon as essential to the prosecution of his studies is useless and clogging superfluity to the physician in the daily work of treating the sick. For the same reason profusion of references to literature has been avoided. With one exception (Dr. Gordon Campbell, of Montreal) all the contributors are American.

The various drugs and methods of treatment are arranged alphabetically so that the work forms a dictionary very easy of reference. The articles are on the whole well written and the information full and reliable. For instance, the article on Cinchona, by Dr. Henry A. Griffin, of New York, is an admirable description of the various forms of cinchona barks and their uses. Another contribution—namely, that on Exercise, by Dr. Henry Ling Taylor—is also valuable, containing as it does a full consideration of the functions and needs of the neuro-muscular apparatus of the body and the importance of gymnastics and other forms of regular exercise in the training of children. A kindred subject, Massage, is ably dealt with by the same author.

Some of the articles, however, are written in rather too dogmatic a form. We may take, for instance, that on Hydrocyanic Acid by Dr. J. T. Whittaker. The effects of poisoning by this substance and the methods of treatment and antidotes employed in combating an overdose are certainly well described, but we think that general opinion would be against the following sentiments: "Hydrocyanic acid has little or no medicinal virtue and should, on account of its danger (*primum non nocere*), be banished from the shop of the apothecary and the pages of the materia medica. It had formerly a reputation as a sedative and was often prescribed, especially with morphine, for the relief of nausea and pain in the stomach. It is very questionable, however, if it possesses any such virtue."

A most interesting contribution is that by Dr. Austin O'Malley, of Washington, on Serum Therapy. Much care has evidently been expended in collecting the material needed and all the latest knowledge and experience in this newest branch of therapeutics are concisely recorded. The work certainly supplies a want and can be recommended to our readers.

LIBRARY TABLE.

Descriptive Catalogue of the Pathological Museum of St. Mary's Hospital. (Additions, 1891–1897.) By J. JACKSON CLARKE, M.B. Lond., F.R.C.S. Eng. Morton and Burt, Printers. 1897.—The value of a museum depends very largely upon the care which is bestowed on the preparation of a descriptive catalogue and Mr. Jackson Clarke is to be congratulated on the thoroughness and care with which the present addendum to the catalogue of the St. Mary's Hospital Museum has been prepared. Amongst the specimens described are many of great importance. No feature of our London hospitals is more striking to the foreigner than their pathological museums, and we have just reason to be proud of them, not only for their intrinsic value, but for the care which is displayed in the cataloguing and description of their contents. The present volume is clearly printed and well arranged and short clinical abstracts are in most cases appended to the descriptions of the specimens adding much to their value.

On the Employment of Itrol (Citrate of Silver) in the Treatment of Gonorrhœa. By Dr. O. WERLER. *On the Treatment of Venereal Ulcers with Itrol.* By Dr. O. WERLER. Berlin: S. Karger.—These are reprints from the *Dermatologische Zeitschrift.* The author claims that in gonorrhœa itrol has an intensely destructive effect on gonococci and that solutions of it are well borne by the urethra and cause neither irritation nor any increase of the inflammatory

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symptoms, also that it has an energetic penetrating power without damaging the mucous membrane and that it therefore fulfils all the necessary indications for the modern treatment of gonorrhœa. In venereal sores he says that owing to its bactericidal energy, its desirable effect, and deep action it soon brings the destructive process to a standstill and rapidly reduces the chancre to the condition of a healthy sore. Dr. Werler says that it is absolutely without smell, makes a clear solution, and produces only slight smarting when applied. It is also very likely to prevent secondary affections of the inguinal glands such as virulent suppurative buboes.

Transactions of the Pathological Society of London. Vol. XLVII. London: Smith, Elder and Co. 1896.—The matter contained in the present volume of these transactions is sufficiently familiar to our readers to absolve us from the necessity of any detailed notice. The value of the communications shows no falling off in merit and the Transactions remain an indispensable work of reference for pathologists. The feature which strikes us as especially noteworthy is the great and increasing excellence of the illustrations which form so valuable and essential a part of the work. For this of course the many advances in the processes for the mechanical reproduction of photographs and coloured drawings are in part responsible but much credit is due to the enterprise of the Pathological Society in making such liberal use of them.

The Edinburgh Medical Journal. New Series. Vol. I. Edinburgh and London: Young J. Pentland. 1897.—The first volume of the new series of this well-known monthly periodical shows that its high standard of excellence is fully maintained. In spite of its title we note that a very fair proportion of its original articles are from the pens of writers south of the Border and indeed this is as it should be. A judicious admixture of writers from various "schools" should not only secure a wider circle of readers but also—and this is more important—act as a check to the tendency to exclusiveness which must inevitably beset the teachings of any particular school. Amongst the original contributions are many of a very high order of interest and importance. The reviews are by able and critical writers and the monthly accounts of recent advances in medical science are of great excellence. The volume as a whole is well printed and attractive and forms a valuable addition to a medical library.

The Leisure Hour still maintains its high standard of excellence and in the December part just issued will be found many articles of interest. The Science and Discovery section is a useful one.

The current issue of the *Girls' Own Paper* contains several seasonable articles. There is also a full-page reproduction of a portrait of the late Duchess of Teck. The Christmas extra number of this publication *Christmas Chimes* will no doubt find, as it deserves to, a place at many a Yule ingle-side.

The Sunday at Home is full of good reading suitable for the purpose which the title of the magazine suggests. The frontispiece, "Nothing venture nothing have," is a good reproduction after the picture by Mrs. Alma Tadema.

DIARIES.

Messrs. Letts's Diaries (Cassell and Co.) are so well known and highly appreciated that it is scarcely necessary to do more than call attention to the fact that those for the new year fast approaching are now ready, and that, as usual, the series comprises books to meet almost every individual requirement, at prices varying from 6*d.* to 16*s.* The "Medical Diary" is ruled for noting obstetric engagements, vaccination, nurses' addresses, thermometrical and other fluctuations, monthly cash account, &c., and contains in addition much useful information expressly compiled for the profession. Another very useful publication of Messrs. Letts is the "Medical Prescription Copyist," by means of which prescriptions can be made out in a uniform style and a copy of each kept for future reference.

Messrs. Rudall, Carte, and Co., of 23, Berners-street, send us their *Professional Pocket Book and Hourly Engagement Diary.* The diary is divided into three parts of four months each, a convenient arrangement which reduces the size of the book to be carried, as of course only one part need be carried at a time. The three portions are contained in a neat leather case, and although the diary is primarily intended for the professional musician its arrangement will make it useful for any busy man whatever be his calling.

Analytical Records
FROM
THE LANCET LABORATORY.

SOLOIDS FOR USE IN GYNÆCOLOGY.

(BURROUGHS, WELLCOME, AND CO., SNOW HILL BUILDINGS, E.C.)

THE following formulæ have recently been adopted by Messrs. Burroughs, Wellcome, and Co. in soloid form. 1. Sodium biborate compound, each soloid containing 20 grains of sodium biborate and 10 minims of tincture of opium. 2. Alum compound, each soloid containing 15 grains of zinc sulphate and 15 grains of alum. 3. Zinc and tannin compound, each soloid containing 5 grains of sulphate of zinc, 10 grains of lead acetate, 2 grains of extract of opium, and 1 grain of tannin. In this last formula obviously the zinc sulphate will when the soloid is placed in water react with the lead acetate to form acetate of zinc in solution and a precipitate of sulphate of lead. The resulting zinc acetate would then yield a zinc tannin compound. The object of these soloids is to enable the practitioner to prepare solutions for irrigations in gynæcological practice.

FALONA.

(THE FALONA FOOD AND CEREAL CO., 15, SEETHING-LANE, E.C.)

Falona is described as a combination of dried vegetables and cereals. We found it to contain more than one cereal, but of the existence of vegetables we cannot speak. It has a very pleasant malty flavour and yields when suitably prepared an undoubtedly nourishing food. This appears from our analysis which is as follows:—Moisture, 10·88 per cent.; mineral matter, 2·11 per cent.; organic matter, 87·01 per cent. The organic matters consist as follow:—3·40 per cent. fat, 12·81 per cent. nitrogenous substances, and 70·85 per cent. carbo-hydrates. It is thus, in addition to the digestible character of the carbo-hydrates consequent chiefly on careful cooking, rich in fat and in mineral matter, the latter consisting largely of phosphates.

VINOLIA PRODUCTS.

(BLONDEAU ET CIE, MALDEN-CRESCENT, LONDON, N.W.)

According to our examination the Vinolia preparations consisting mainly of articles for toilette use afford distinct evidence of the endeavour of these manufacturers to use only innocent yet effective ingredients. This is the only point which interests us in regard to such preparations. We have not found a single injurious constituent in any one of the new preparations recently submitted to us. An enormous advance has been made in the preparation of soaps, hair-washes, powders, shaving materials, &c., during the last twenty years, a fact which has contributed not a little to the comforts and sanitary conditions of modern life. Of new preparations recently submitted to us we may mention three soaps respectively entitled "buttermilk," "lilac," and "heliotrope," each of

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which carries its own distinctive yet delicate scent. They contain nothing but bland soap and are free from any resinous matters or trace of free alkali. Vinolia violet powder is very finely divided and in addition to this desirable condition is a harmless antiseptic. Another preparation worthy of notice is the Vinolia dry hair wash. It is of course a spirituous fluid which yields on evaporation a delicate lather but without stickiness. It is satisfactory to find that articles of the quality described may be obtained at quite a moderate figure.

DIABETIC BROWN BREAD.

(CALLARD AND CO., 65, REGENT-STREET, W.)

Despite the entire absence of farina and sugar in this sample it is pleasing both in appearance and to the taste. It is desirably moist and keeps for some days without getting stale. We have tested the bread thoroughly. It can hardly be distinguished from the ordinary brown loaf when partaken with butter or when toasted.

AMBER ALE.

(THE ANGLO-BAVARIAN BREWERY, LIMITED, SHEPTON MALLET, SOMERSET.)

The specific gravity of this ale proved to be 1010 observed at normal temperature. This is the first indication of a malt liquor of a light character. Further results confirmatory of the foregoing were as follow: alcohol, by weight 4·62 per cent. by volume 5·78 per cent., equal to proof spirit 10·13 per cent.; extractives, 3·95 per cent.; mineral matters, 0·26 per cent., containing abundance of phosphates; acidity reckoned as acetic acid 0·02 per cent. The ale possesses a delicate bitter taste and as the results show is of comparatively low alcoholic strength. It was in perfectly sound condition, of a pale colour, and free from objectionable preservatives. It therefore accords with the definition of pure beer—that is, a liquor brewed from malt and hops.

OKOL.

(THE SANITAS CO., LTD., BETHNAL GREEN, E.)

Okol is a creamy fluid mixing in all proportions with water and forming a milky mixture which has a very pronounced smell of coal tar acid derivatives. It is said to be non-poisonous when used with ordinary care which means of course that it is poisonous but very much less so than carbolic acid. It is decidedly alkaline to test-paper and on acidifying the fluid with hydrochloric acid the separation of oils is evident. In regard to its antiseptic and germicidal properties it compares favourably with allied preparations. According to Dr. Rideal this preparation is far more active than is carbolic acid in the same weight.

ONOMOSTO.

(THOMAS GRANT AND SONS, MAIDSTONE.)

As the title of this sparkling beverage would imply it is made solely from pure grape juice. This is fully confirmed by our analysis, which is not different from the results obtained with many high-class champagnes. It was as follows: alcohol, by weight 9·50 per cent., by volume, 11·79 per cent., equal to proof spirit 20·65 per cent.; extractives, 4·10 per cent.; mineral matter, 0·15 per cent.; fixed acids reckoned as tartaric, 0·63 per cent.; volatile acid reckoned as acetic acid, 0·07 per cent.; grape sugar, 3·58 per cent. The specimen contained no objectionable preservatives. Its flavour was of that agreeably dry character esteemed in champagne of good quality. It is evidently prepared with the greatest care or otherwise the delicate fruity and pleasantly acid flavour of the juice of the grape would not have been so successfully retained. As will be seen from the above analysis the wine is of the same alcoholic strength as champagne. The small amount of acidity both free and fixed is another commendable feature. It is a sound exhilarating beverage and pleasantly sparkling and compares favourably in regard to its pleasing qualities with similar sparkling but much more expensive wines. It is quoted at 24*s.* per dozen champagne quarts.

New Inventions.

A NEW VAGINAL TUBE.

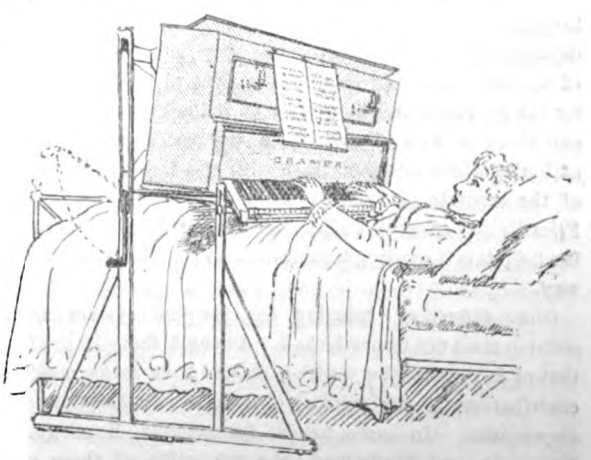


WITH a view to improving on the red gum-elastic tube that is almost universally used for vaginal douching I have devised one that is intended not only for simple hygienic self-douching, but which will be found to be of considerable advantage under all circumstances where it is necessary to apply antiseptic solutions to the walls of the vagina. The tube is seven inches long and rigid; its "business" end is bulbous, sufficiently so to allow facile introduction and withdrawal, yet of such size as will dilate each portion of the vagina as it is passed. It can be made of vulcanite or any rigid material that will bear the action of solutions. Those made for me by Messrs. Arnold and Sons are of vulcanite. The bulbs are of three sizes, the largest being used after parturition or where the vagina is particularly roomy. This form of tube may be manipulated into each fornix freely and fearlessly, and however clumsy a patient or nurse may be no harm can possibly be done to the parts. Rigidity enables the manipulator to douche out all folds, even if the size of the bulb is not of itself quite sufficient. The end is bulbous in order to dilate each successive portion of the vagina as it is passed, though it permits a ready outflow behind it, while complete collapse of the vaginal walls takes place upon the thin stem so that no air is admitted. The holes are made at the extreme end of the bulb and not on the periphery. The small end is made to fit the ordinary bone rectal tube that accompanies all enema syringes.

Buckhurst-hill. HAYDN BROWN.

A PIANO FOR INVALIDS.

THE illustration which we give below sufficiently explains itself. Messrs. Cramer and Co. are the designers of the small portable piano which thus slung from a frame across the patient's bed enables the bed-ridden musician to pursue



his or her art. We are indebted to Dr. Frederick Spicer, of Devonshire-street, Portland-place, W., for the sketch which we reproduce and think it probable that many invalids may like to avail themselves of the opportunity afforded by this little instrument of whiling away weary hours.

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THE LANCET.

LONDON: SATURDAY, DECEMBER 4, 1897.

THE outspoken series of articles on the subject of the abuse of hospitals contributed by our Special Commissioner shows the prevalence of hospital abuse throughout the provinces while the same evil is rampant in London, where deception is rendered easier by the immense size of the population. London has not only its own special liabilities to hospital abuse but it is the refuge of those who find abuse not so easy to practise in provincial towns. Such people, usually of a somewhat mean nature to begin with, find an easy excuse for themselves and others either in the supposed importance of their cases or the just charges of their local physicians and surgeons for transferring themselves to a London hospital where the operation or the advice that would cost them a reasonable fee in their own town is to be had for nothing. This is the essence of the forbidding story that our Special Commissioner has told with wonderful consistency despite its variety of illustration and we are glad to notice a very general feeling that "something must be done." The Hospital Sunday Fund, instigated by a report of its Distribution Committee, has after long delay and hesitation determined to face the out-patient question and at the annual meeting of its constituents will ask for a rule enabling it to regard the presence of an efficient officer to inquire into the fitness of out-patients as a "merit" in a hospital. This is perhaps a very small remedy for meeting such a gigantic evil but it is a step in the right direction, while those who have pressed for some action must now watch its efficiency and report in case of any defect. The Charity Organisation Society has been indefatigable this year in keeping the subject of hospital abuse in the out-patient departments to the front. There may be some differences of opinion about the details of a Central Hospital Board for the guidance and assistance of individual hospitals, but one thing is sure—that will be the best form of central authority which interferes least with the individual freedom of the separate institutions while correcting gross abuses. Friendly and effective coöperation must take place between the hospitals if existing troubles are to be alleviated in this way.

Other influences bringing our hospital system under revision must not be overlooked. Amongst these is the fact that of late years the working classes have made material contributions to our medical charities—both hospitals and dispensaries. In some towns—for example, Birmingham, Newcastle, and Sunderland—the proportion of these contributions to the whole expenditure has become considerable. This is as it should be. But out of this circumstance has arisen a new demand quite clearly unjust. The demand is, in plain English, that the contributions of the working classes shall constitute a claim to attendance—in other terms, that the word "charity" shall be deleted from the vocabulary of hospitals and that everybody who has contributed a few pence or a few shillings in some more or less systematic way to the fund for the support of hospitals and dispensaries shall be entitled to a *quid pro quo* in the form of treatment for any and all ailments that may befal him or his family. This demand must be sternly resisted. A workman's contribution to medical charities no more entitles him to personal treatment than the subscription of the Duke of WESTMINSTER to St. George's Hospital entitles his Grace, his family, and servants to treatment as in- or out-patients of the hospital. To argue the contrary would exhibit a desire to convert our hospitals into provident dispensaries and give a mean character to subscriptions meant for the benefit of those who are the subject of exceptional disaster or disease. If the claim to make the hospital an open surgery for everybody who likes to go and who has paid a few small fees to its support is to be allowed it requires little foresight to see that the generous gifts of the unselfish will be promptly withdrawn in favour of other charities that restrict themselves to helping those who need help—those people, in fact, whose benefit was originally contemplated by the founders of hospitals.

The most memorable fact in hospital history during the Diamond Jubilee year is one which promises to have lasting influences on the hospital system—we mean, of course, the PRINCE OF WALES'S Hospital Fund for London. The kindness of the PRINCE'S nature and the beneficence of HER MAJESTY'S reign could have no better illustration than the one supplied by the PRINCE OF WALES'S Hospital Fund. As the time approaches for the dispensing of the Fund all friends of sound hospital charity have become deeply interested in the principles that will be employed in the distribution. We venture to believe that the PRINCE OF WALES and his Council may be safely trusted to see that no fantastic experiments and no crude theories will be sanctioned in connexion with this Fund. It is the outcome of the joint loyalty of the rich and the poor. Both must be credited with equally unselfish motives in their contributions. As a means of lightening the burden of real hospital work—work done for the genuine poor—the Fund will be invaluable but as an object for new-fangled experiments it may be worse than useless. The PRINCE OF WALES may do as much good by insisting upon principles of distribution in accordance with his own good judgment as he has done by the creation of the Fund itself.

SIR RICHARD THORNE'S inaugural address to the Midland Medical Society on Soil and Circumstance in their Control of Pathogenic Organisms, which appeared in THE LANCET of Nov. 6th, will have been read, we know, with particular interest, coming as its views do from the highest official sanitary authority in the land. To put the matter shortly Sir RICHARD THORNE points out that places and persons equally show a predisposition to, or immunity from, certain diseases; in other words, that specific infections continue to retain their vitality in certain localities so that diseases are found to haunt these spots. "I have known," he says, "a house standing in large grounds to be smitten with enteric

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fever on three different occasions, the disease affecting in succession three different sets of tenants; and although between the second and the third occurrence the dwelling had been untenanted for nearly two years yet the disease reappeared amongst the new tenants within a few weeks only of their occupation of the dwelling." We may feel perfectly sure that all the ordinary defects of drainage and water-supply were absent in this house, for otherwise Sir RICHARD THORNE would not have adduced the instance as proving anything; but in view of the two years' rest given to the polluted environment it would be interesting to learn the results of a bacteriological examination of the soil.

To examine the soil to find bacteriological reasons for epidemic diseases is an eminently practical proceeding and we learn from Sir RICHARD THORNE that Dr. SIDNEY MARTIN has been conducting a series of such experiments for the Local Government Board, his attention being specially directed to the power of certain sterilised soils to maintain the vitality of the bacillus typhosus artificially implanted into them. The result of Dr. MARTIN'S experiments with these soils is that in a soil "organically polluted" the bacillus typhosus not only lived for over nine months but increased; while in two samples of virgin soil, one peaty and the other sandy, the vitality of the bacillus extended to twenty-three days at the utmost. Of course the conditions under which these experiments were made do not exist in nature, but the results are none the less suggestive, and we see no difficulty in admitting the possibility that the bacillus typhosus may live in soil even in the presence of millions of saprophytic enemies. Sir RICHARD THORNE uses the words "organically polluted" to apply particularly to soil sodden with the soakings of midden privies such as are common in the tiny back yards of the midland towns, and we do not gather that he anticipates any danger from an open field which is richly manured and skilfully and properly tilled. He says: "Where open spaces about dwellings are large, and where organic pollution of surface soil is practically absent, we may rely, as inhibitive of this bacillus, on the influence of sunlight and of alternating weather; but in our towns the conditions have become too artificial and the open area about dwellings has become too restricted for us to hope that, under the unnatural conditions which have been induced by urban aggregations of dwellings, we have any right to expect the full benefit of nature's remedies." It is to be hoped that Parliament will some day see the folly of allowing houses to be built in such a way that the necessary befoulings which are part and parcel of our existence have no chance of being remedied by natural processes. Dung of all kinds should go to the soil, but there seems to be some danger of this common fact being forgotten in the present day.

WITH the prospect of a meeting of Parliament at an early date next year the question of a Teaching University for London is again being actively revived. The scheme for a reconstitution of the existing University so that it might be at the same time an Imperial Examining Board, as it is at present, *and* a teaching university to satisfy the needs and aspirations of the London students and their teachers, was given up by the Government last session in consequence of threatened obstruction. The scheme was introduced too late and abandoned too quickly. The Government cared little about it and only introduced it because of the recommendations of the Cowper Commission, yet the necessity for a teaching university in London is so obvious and the educational advantages to be derived from its establishment are so great that we wonder at the apathy towards the movement that was displayed by the Government as well as by the London citizen and his representatives in Parliament. For fifty years attempts have been made to establish such a university in London—one whose teaching character should not deprive it of Imperial functions. In 1857 the degrees of London University were thrown open to all persons resident in the United Kingdom without reference to their place of education or to attendance upon any regular course of instruction except—an exception of vital importance at this moment—to persons intending to graduate in medicine for whom a very definite course was, and must be, laid down. In 1863 the Charter was still further widened so that the University had power to confer degrees upon all persons whether resident in the United Kingdom or abroad, but again medical degrees were made the subject of exception, a definite course of medical education being absolutely laid down. In the next year Convocation appointed a special committee to draw up suggestions for the University to undertake teaching functions and from that date to the present the controversy as to teaching and examining or examining alone has been going on.

Twenty schemes for the settling of the question have been fruitlessly brought forward and the twenty-first has been submitted to us and other journals recently for consideration. This latest scheme aims at obtaining the grant of a Charter for a proposed "University of Westminster" in every way separated from the University of London. The new university is to be a metropolitan teaching university whilst the existent institution is to continue its duties as an Imperial Examining Board. The plan of two universities in London—one teaching and examining and the other examining only—was the central idea in the Albert or Gresham scheme, which scheme did not obtain the favour in Parliament which it had met with before the Privy Council and was finally thrown over by the Cowper Commission. We can quite see the conveniences of the plan which provides for two universities and comprehend the view which considers it the real and proper solution of the question but we think that the proposed "University of Westminster" would follow its "Gresham" predecessor into the abyss of lost causes if any attempt were made to carry its academic proposals into reality. It would therefore, to our thinking, serve no practical purpose to discuss the scheme in detail but its promoters—all, we believe, medical men—have done good service by their action for every action is useful that accentuates the needs of the London medical student. It is vital to the London medical student that the same facilities should be given to him that are given to the medical students of other great cities for obtaining a medical degree.

The Duke of DEVONSHIRE, speaking on Tuesday night last at the anniversary dinner of the Royal Society, expressed

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his hope and trust that at no distant date the Government might be able to make proposals and submit measures for—among other things having an educational bearing—the creation of a teaching university in London. The Duke of DEVONSHIRE is a highly responsible statesman, and we believe that we can read into his words a guarantee that when the Bill dealing with the reconstitution of London University is introduced into Parliament the time chosen will not again be the last moment of the session. We would therefore ask the promoters of the "Westminster University" scheme to be very chary of doing anything that might be or appear to be in conflict with the Government's action for this might lead to another shunting of the whole question. The provisions for the promotion of a Faculty of Medicine are far more satisfactory in the "Westminster University" scheme than are those in the University of London Bill of 1897 and might with advantage be introduced as amendments to that Bill.

Annotations.

"Ne quid nimis."

"WALLACE-ISM."

AT an inquest held not very long since the jury returned the following verdict: "The deceased man died from cardiac failure produced by a poisonous dose of aconite contained in a bottle labeled Wallace's specific, No. 1." As a sequel to this finding the Treasury instituted a prosecution against Wallace, who is described as "a homœopathic practitioner." Upon conviction he was fined in all £20 12*s.* for selling a poisonous drug to a person not known to him without inquiry, without entering the fact of such sale in a book, and without being a chemist registered for the sale of such drugs. On that occasion Dr. Luff, one of the official analysts to the Home Office, deposed that an ounce bottle contained $\frac{1}{2}\frac{1}{7}$th gr. of aconitine, and that a sixth part of an ounce might prove fatal. On Nov. 12th a second Treasury prosecution also resulted in a conviction and the sum total of the fines amounted to £62 16*s.* The so-called "Specific No. 1" is a patented medicine, prepared according to the specification which was submitted to the Patent Office on March 3rd, 1897, and accepted on May 1st, 1897. In this specification the following statement occurs: "It [the invention] consists of a new method of preparing a watery alcoholic tincture of any part of the plant called aconite, which shall retain its curative physiological properties without the greater part of its toxic elements. The chief poisonous alkaloid or principle of aconite is aconitine, and by the method of preparation hereinafter to be described its toxic properties are wholly, or in great measure, eliminated whilst its curative value remains." For the defence it was alleged that the method of preparation ensured the destruction of aconitine or its being broken up into comparative harmless substances, and in support of this contention direct evidence was given by Mr. Wynter Blyth, public analyst to the parish of St. Marylebone, who stated that as a result of his analysis he found 0·09 gr. of an alkaloidal residuum from an ounce bottle of the specific, that this residuum had a bitter taste, and reduced the salts of silver, characters not possessed by aconitine. He concluded that the residuum was a mixture of benzoil-aconine—a very small portion of *aconitine* and a little aconine. There was about $\frac{1}{1}\frac{1}{0}\frac{1}{0}$ gr. of aconitine in the one-ounce bottle. The results of Dr. Luff's analysis varied from those of Mr. Blyth to a singular degree. From an ounce bottle examined in January, 1897, he extracted $\frac{1}{2}\frac{1}{7}$ gr. of aconitine. From an ounce bottle analysed in July, 1897, he obtained $\frac{1}{2}\frac{1}{5}$ gr of aconitine; whilst from a like quantity of the "specific" made by him according to the specification the yield of aconitine was $\frac{1}{2}\frac{1}{0}$ gr. Dr. Luff has had almost unrivalled experience in the study of the chemical nature and other properties of aconitine and his official position is a warranty of his scientific attainments and reliability. It is, moreover, remarkable that the results of his three analyses should have so closely coincided, the quantity of aconitine to the ounce varying only from $\frac{1}{2}\frac{1}{0}$ to $\frac{1}{2}\frac{1}{7}$ gr. As there is no known trustworthy chemical test for aconitine Dr. Luff resorted to physiological experiment. He found that $\frac{1}{7}\frac{1}{0}\frac{1}{0}$ grain of the alkaloid extracted from the contents of the ounce bottle of the "specific" killed a mouse in eighteen minutes with the symptoms of aconitine poisoning. To check the results of the experiment he at the same time injected into another mouse of the same weight and the same species the same weight of ordinary aconitine. The animal succumbed in the same time and in like manner as the other. It is not necessary to call into question the results obtained by Mr. Blyth to prove the accuracy of Dr. Luff's deductions. It is quite possible to accept both as substantially correct. Such a course would, however, lead to the conclusion that the contents of the different bottles of the "specific" varied enormously, and to a degree which showed that no reliance could be placed in the alleged composition of the contents of a particular bottle offered for sale to the public; that in fact the so-called remedy can be looked upon in no other light than as a mixture dangerous to human life. To contend that the Patent Office approved of the specification, and that, too, without objection from the Pharmaceutical Society, goes for nothing in extenuation. The patent was granted on the assumption that the mixture did not contain the poisonous properties of aconite, and any inaction on the part of the Pharmaceutical Society cannot be taken even as a tacit admission of the harmlessness of the "specific." The public need protection and we heartily congratulate the Home Office on their thorough exposure of a miserable piece of quackery and illegality.

ABUSE OF MEDICAL CHARITY IN THE UNITED STATES.

AN American correspondent writes to us: "The question of dispensary and hospital abuse is being raised again in New York City. Although by the refusal of the governor of the state to sign the Bill presented in the spring of this year for the purpose of remedying the existing condition of affairs the hoped-for reforms received a set back it is tolerably certain that this will be but temporary. A very large majority of the medical practitioners of New York are in favour of a radical change in the methods of conducting the hospitals and dispensaries and are determined to leave no stone unturned to gain their object and there can be no doubt but that their efforts in this direction will be crowned with success. On the other hand, it may be said that there is no real desire on the part of the managers of the hospitals and dispensaries to remedy the evil; in fact, it is to their advantage that the present system should continue, so that it is practically a fight between the hospital boards on the one side, who wish things to remain *in statu quo*, and the outside practitioners on the other side, who desire reform. There is a similarity and at the same time a wide difference in the abuse prevailing in the hospitals of London and New York, and this statement can be further applied to such institutions in America and Great Britain in general. So far as the dispensaries and the out-patient departments of the hospitals

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are concerned the grievances of the medical men in both countries are almost identical—in fact, the conditions in this respect are more or less alike in all the large towns of the civilised world. It is in the internal economy of the hospitals that most of those in the United States differ so widely from those of Great Britain, and the abuses rampant in the in-patients' departments of the two countries are of a totally different nature. In Great Britain people sponge on the charity of the in-patients' department in the same way as they do upon the out-patients' department and the dispensaries. That is to say, persons who can afford to pay for medical attendance pose as paupers and under that guise receive the benefits of a charity intended only for the poor. In the United States, on the contrary, the hospitals for the most part having no income from invested property are compelled in order to keep their wards open to charge the majority of their patients. Some, indeed, are even too poor to admit any but those who can pay, hence there is a disposition to conduct these institutions on a wholly commercial basis and to make charity play but a secondary part. The question asked of a would-be inmate is not how poverty-stricken he is but how much he can afford to pay, and room can seldom be found for a non-paying patient when there is the opportunity of receiving a paying one. To such lengths has this pay system been carried that it is at the present time a serious and growing scandal. Some of these hospitals appear to be fitted up rather as medical and surgical boarding-houses than for the purpose for which they were originally intended. Rooms in them are let at rents from £3 to £10 weekly. The most galling feature in connexion with this system to the medical profession is that the hospital medical officers cannot claim payment from these rich patients and in many instances are compelled to do the extra work for little or nothing, so that what should be their legitimate fees are diverted from the medical staff and the general practitioner is in a worse case as he gets neither advertisement nor money."

SMOKE IN SALFORD.

MANCHESTER and Salford, more especially the latter, suffer much from black smoke and though efforts have been made for many years to prevail upon the authorities to insist on its diminution both towns are still grievously afflicted. It is difficult to convince corporations that smoke is an evil and to induce them to make any earnest efforts for its abatement. Even in these days the amount of smoke is looked on by many as a measure of the activity of trade, and it is more than tolerated on the plea that too much interference would drive industries out of the town, the fact being forgotten that the smoke itself puts great difficulties in the way where any of the numerous occupations requiring cleanliness are carried on—such as the manufacture and manipulation of light and delicate fabrics. It is pleasant, therefore, to know that the other week a deputation from the Manchester and Salford Sanitary Association and the Smoke Abatement League was well received by the Mayor of Salford, when a memorial was presented which stated that it was thought the time had come when "more active steps should be taken by your health committee in the suppression of the smoke nuisance"; that on account of "undue indulgence" the air of Salford was more polluted than that of Manchester and that the latter suffered from Salford smoke over which it had no control. The memorial urged the assimilation of the Salford procedure in respect of the smoke nuisance to that of Manchester. It was signed by Professor Leech, chairman, and by the honorary secretaries of the Sanitary Association, and by Mr. Johnston, chairman, and Mr. Fred Scott, general secretary, on behalf of the Smoke Abatement League. Professor Leech spoke of the great difference between Manchester and Salford as to the regulations concerning smoke and of smoke being one of the factors in bringing about the "frightful mortality" which still prevailed. Mr. Johnston, as an engineer of many years practical experience, said there was no difficulty in dealing with smoke without any injury to manufacturers. Dr. Hutton dwelt on its injurious effects in cases of phthisis and chest diseases and said it was a painful thing to tell people whose livelihood depended on their employment in the great towns that they must live elsewhere. Mrs. Hopwood, of Hopwood, who has been remarkably energetic and successful in her own neighbourhood in efforts for the diminution of the smoke nuisance, said that in Middleton, Castleton, Heywood, and Chadderton there had been great improvement. "One Chadderton manufacturer had thanked her for saving him £12 per week in coal." The rector of St. Stephen's, Salford, spoke of the "enormous quantity of soot for ever falling and finding its way into every part of his house." The deputy mayor (Sir Richard Mottram) and the mayor (Alderman R. Husband) expressed their sympathy with the object of the deputation, but the former mentioned the difficulties of small manufacturers in the matter of boiler expansion, and said that "if smoke prosecutions were pushed too far they would drive manufacturers out of the borough." He did not say that they would so reduce the price of gas as to make it economical to use gas engines or that they would do all they could to favour the use of electricity as a source of power, and yet it is pretty evident that the extended use of gas or electricity promises the best solution at present known of the problem how to carry on manufacturing processes with the least possible pollution of the air. But it is something to have the sympathy instead of the hostility of the corporation in this effort to make Salford in the future brighter and healthier than it is to-day.

THE QUESTION OF THE IDENTITY OF YAWS AND SYPHILIS.

IN 1891, in a preface to Mr. Numa Rat's essay on Yaws, Mr. Jonathan Hutchinson expressed his well-known opinion that the disease was simply syphilis, though modified by race and climate. In THE LANCET of Feb. 13th, 1897, we gave a brief summary of his reasons. Though he has enforced this view repeatedly with his usual dialectic skill and command of facts it does not appear to be accepted by any one who has observed the disease in life. Mr. Hutchinson has of necessity had to take his facts from descriptions and portraits. In the *Indian Medical Gazette* for October Dr. A. Powell presents forcibly the case against Mr. Hutchinson's views. His statements are based on an outbreak of yaws which occurred in Assam. They appear to be the result of careful observation but exemplify the confusion which still exists on the subject. For while the colonial surgeons unite in the conclusion that yaws is not syphilis they contradict one another on fundamental facts. Thus Dr. Powell denies that a primary ulcer ever occurs as stated by Mr. Rat. In the majority of cases a papule first forms which develops into a granuloma, exactly similar to those of the general eruption. Again, he has never seen the tertiary lesions alleged by Mr. Rat, though almost all his cases have remained under observation since 1890. In reply to Mr. Hutchinson's query, "Are there many cases in which it is impossible to decide whether the symptoms are due to syphilis or yaws"? he states that he has never seen such, and that there is no disease—not even small-pox—more definite than yaws. In the secondary stage of yaws in 130 cases he never found the throat affected. But his most powerful argument is the coexistence of yaws and syphilis in the same patient. He observed in two cases of well-marked yaws typical attacks of syphilis—indurated chancres, buboes, symmetrical ulcers of the tonsils, and a macular

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and roseolar rash. In both the syphilis yielded to mercury whilst the yaws persisted. There are but few cases of this kind recorded. Mr. Hutchinson has admitted that these cases have caused him to suspend his judgment. But as they are so few he asks for corroboration. On the other hand, beyond explaining its infrequency in Europeans from their different habits, Dr. Powell makes no attempt to deal with one of Mr. Hutchinson's most powerful arguments that yaws can be nothing else than syphilis. How is it that such a very contagious malady, of prolonged duration, to which white as well as coloured races are liable, never comes to Europe? On the whole we consider that the weight of evidence is against Mr. Hutchinson's view. But he seems to have established that the diseases are very closely analogous and that yaws may be exactly simulated by a rare form of the secondary eruption of syphilis—the framboesial; also the modified view which he has suggested, that yaws may be the parent stock from which European syphilis has sprung, but that the two, by long transmission in different races, have become modified, deserves attention. But proof or disproof of this seems to be impossible.

OTITIS MEDIA FROM SWALLOWING A PIN.

THE passage of foreign bodies into the Eustachian tube and tympanum is one of the curiosities of medical literature. In his classical work on the ear Politzer cites the two following cases. A patient was chewing oats and a husk stuck in the throat and wandered up the Eustachian tube and through the tympanum to the external meatus. During the use of the nasal douche a piece was broken off the vulcanite syringe which reached the tympanum, caused acute inflammation, and was removed by incision of the membrane. In the *New York Medical Journal* of Oct. 30th, 1897, Dr. Hoover has published the following case. A child swallowed a pin; no symptoms except sore throat followed. After two months she complained of pain in the left ear which was somewhat relieved when a discharge commenced. On examination a small perforation was seen below the handle of the malleus. In using a pledget of cotton-wool it caught in something. A probe was introduced and a small object could be felt. The opening in the membrane was enlarged by incision with a Graefe's knife and again something was felt with the probe which could be moved. With an alligator forceps a small pin about a quarter of an inch long was seized and removed. The child completely recovered in a fortnight.

THE CLINICAL VALUE OF THE WIDAL TEST.

WHEN Ehrlich's diazo test was first introduced as an aid to diagnosis in doubtful cases of typhoid fever it was believed that a most valuable addition to other confirmatory tests for that disease had been secured. Further experience showed, however, that its value was not nearly so great as was predicted. Although doubtless of use in some cases in others the presence of the reaction is misleading and it frequently cannot be obtained until other phenomena, such as the appearance of the eruption, place the diagnosis beyond all doubt. The Widal test seems likely to have a similar history. The earlier reports were all in its favour, but later investigations tend to show that it often cannot be obtained in doubtful cases afterwards proved to be typhoid fever. It is too early yet to come to any positive conclusion, but as all evidence on either side is important we draw attention to a paper on the subject by Dr. W. Gilman Thompson, of New York, in the *Medical News* (New York) for Oct. 30th. His conclusions are drawn from an examination of 503 cases, 157 being undoubted enteric fever. He remarks that the Widal test is unquestionably ingenious and it constitutes a most instructive and suggestive bacteriological demonstration, but he asks, Is it more than this? Is it of genuine, practical, diagnostic value to the clinician? The great majority, fully 75 or 80 per cent. of cases of typhoid fever, need no confirmatory test beyond the plain history and symptoms and the remainder, in which such a test if accurate and exclusive would be invaluable are chiefly (1) cases of enteric fever seen very early in the course of the disease, principally in private practice; (2) cases of obscure sepsis; (3) severe or protracted cases of malarial remittent fever; (4) certain cases of typhus fever and of acute miliary tuberculosis; and (5) various atypical forms of enteric fever. Dr. Thompson might well have added cases of influenza which frequently simulate typhoid fever having an acute onset. With regard to the earliest day of the disease at which the reaction has been distinctly observed it must be admitted that the reaction may be obtained toward the end of the first week, although the reported tests which would confirm an earlier diagnosis are few and uncertain. Dr. Thompson gives a summary of his results thus: 1. While the test is positive in the large majority of cases of enteric fever and negative in the greater number of other diseases there is a margin of error of 11 to 12 per cent. on each side of what might be called the normal line between cases in which the test fails where it ought to succeed and succeeds where it ought to fail in order to make it of real clinical value. 2. This total of 23 per cent. of possible error includes unfortunately just those cases in which there is the greater doubt upon the purely clinical side. 3. As a genuine diagnostic aid the test has about the value of the diazo reaction in typhoid urine or the study of leucocytosis in pneumonia—that is, it is confirmatory in connexion with appropriate symptoms but misleading if positive reliance be placed upon it. 4. The fact that an expert bacteriologist is required to make the test is offset by the ease of transportation of specimens of dried blood which long retain the power of reaction, and it is greatly to be hoped that further possible improvement in technique may place this most ingenious test upon a firmer practical basis than can at present be claimed for it.

CONGRATULATORY DINNER TO SIR WILLIAM GOWERS.

ON Nov. 25th the Society of Medical Phonographers gave a dinner to their distinguished president, Sir William R. Gowers, Sir William H. Broadbent occupying the chair. Among the guests were Mr. Rudyard Kipling, Sir William Thomson (Dublin), Sir Henry Howorth, Professor Bonney, Mr. Reed, the well-known phonographer, and others. The existence of this society is entirely due to the energy and perseverance of its present head, Sir William Gowers, and the members decided to hold a dinner to congratulate him on the recent honour which Her Majesty has been pleased to confer upon him. The honorary secretary, Dr. Neil, presented an illuminated address indicating the indebtedness of the society to Sir William Gowers' fostering care and expressing admiration of his qualities as a distinguished man of science. The chairman in proposing Sir William Gowers' health referred to his published works translated into nearly all European languages as marking an era in the history of diseases of the nervous system. Besides "his own original contributions to our knowledge, he has taken up knowledge wherever it is to be found—he has taken up what we may call the raw material working that out into a piece of beautiful texture." Referring to Sir William Gowers' paper on the Dynamics of Life he characterised it as "one of the most thoughtful, one of the deepest and most interesting, pieces of work" that he had ever perused. In replying, Sir William Gowers gave a short history of his life as a student and pointed out that it was to his knowledge of shorthand he attributed his success in his professional career. Because of

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his ability to use phonography he was appointed private secretary to Sir William Jenner, which appointment prevented his accepting a partnership in a practice at Bournemouth. This proved to be the turning-point in his life. The toast of the visitors was proposed by Dr. Neil in a felicitous speech and replied to by Mr. Rudyard Kipling, Sir William Thomson, Sir Henry Howorth, Rev. Dr. Jessop, and Mr. Reed. No author has more medical readers than Mr. Kipling. His breeziness, romanticism, and virility are exactly the qualities that commend him to us. It was therefore with great pleasure that we learned from his lips his excellent opinion of "the doctor."

ENGLISH RECOGNITION OF ITALIAN SCIENCE.

OUR Rome Correspondent writes:—"The Cambridge Philosophical Society has just nominated as honorary member an illustrious leader of one among the 'auxiliary forces of medicine,' Signor Augusto Righi, Professor of Electro-physics in the University of Bologna. Professor Righi is in excellent company the Cambridge Philosophical Society having also conferred the same honour on M. Ludwig Boltzmann, Professor of Theoretical Physics in the University of Vienna, and Professor Mendelejev, Professor of Chemistry in the University of St. Petersburg, the distinguished Russian chemist. Hitherto only two Italians have been similarly honoured, the celebrated mathematician, Francesco Brioschi, Director of the Polytechnic Institute at Milan, and Luigi Cremona, Professor of the Higher Mathematics in the University of Rome. Professor Righi has recently made many important studies on the nature of those electro-static waves so brilliantly utilised by the young Italian physicist, Signor Marconi, for his 'telegraphy without wires.'"

AN ACTION FOR MALPRAXIS IN DENTISTRY.

AN action has recently been heard in Manchester in which a man sought to recover damages for malpraxis against an unregistered dental practitioner who, it was alleged, had fractured the jaw of the plaintiff in the process of extracting some teeth and, as a result, much unnecessary pain was caused and a certain amount of necrosis supervened. Evidence on behalf of the plaintiff was given by the plaintiff himself, two medical men, and a properly registered dentist, while for the opposite side the defendant, two medical men, and a member of the Victoria Dental Hospital gave evidence. The plaintiff obtained £50 damages. This case affords another glaring instance of the way in which the public fail to be protected by the Dentists Act from the unregistered practitioner and shows in a forcible manner that more energetic measures should be taken by the Legislature to see that the Act does not become a dead letter. A question of ethics is also raised by this case—namely, the propriety of the giving of evidence on behalf of unregistered practitioners by registered medical men and dentists. This is always a regrettable position for a medical man to find himself in, though we do not forget that such evidence can be compelled by subpœna.

REFRACTION AND GLYCOSURIA.

AT the meeting of the American Ophthalmological Society in May Dr. Risley read notes of two cases of Diabetes in which diminution of the glycosuria was attended with a curious result—loss of refractile power and *vice versâ*. Thus in a man whose urine was of the specific gravity of 1050 the glycosuria and thirst disappeared under nitrate of uranium and his general health improved. But his vision grew rapidly worse and it required an addition of 4 D. to restore it to normal. The glycosuria reappeared and the refraction was again increased so that his glasses had to be reduced by the 4D. Dr. Risley endeavoured to explain these changes of refraction by the theory that the indices of refraction of the media of the eye were affected by the sugar or other elements. In the *New York Medical Journal* of Oct. 2nd Dr. C. Prentice has discussed the question. He rightly points out as an objection to this theory that an opposite result should be expected—a lower state of refraction with a higher specific gravity of the urine and *vice versâ*. He suggests that the low refractive state was induced by a cessation of ciliary innervation (from what cause he does not state), and that with this there was depression of the renal nerve centres to irritation of which the glycosuria was due. He states that for some years he has followed the practice of lowering ciliary innervation by over-correction with stronger convex lenses and prisms than are required for vision in cases of diabetes, and thereby has produced diminution and even disappearance of glycosuria, of thirst, and of polyuria. Dr. Risley's observations bear the stamp of accuracy and deserve investigation. But what shall we say of Dr. Prentice's theory? If glycosuria is ever caused by disturbance of any particular centre it is the hepatic and not the renal. There is no proof whatever that such disturbance is an irritation. But granting so much, we must now make another, and almost incredible assumption—that diminution of the action of the ciliary centre, produced by wearing a pair of spectacles, could so profoundly modify this glycosuria centre as to restore it to its integrity. Finally, in Dr. Risley's cases there was no over-correction of vision to start this wonderful process. But let us not be too severe, for are not other branches of medicine permeated by these nerve-centre explanations which are only assumptions?

ASCARIDES PRODUCING SYMPTOMS OF TYPHOID FEVER.

THE production by round worms of a state resembling typhoid fever has not, as far as we know, been noticed in this country; but in France it has of late years attracted the attention of several writers and its reality cannot be doubted. "Lumbricose à forme typhoïde" is the subject of an article by Dr. A. Chauffard in the *Semaine Médicale* of Nov. 27th, 1895, and more recently of a Thèse de Paris of M. Tauchon. The matter did not escape the observation of the older French writers, for, as Dr. Chauffard points out, his case was typically one of "la fièvre putrido-vermineuse" described in 1770 by Lepecq de la Clôture. The latest contribution to the subject is an article by Dr. Pierre Marie in the *Journal des Praticiens* of Nov. 6th, 1897. In the beginning gastro-intestinal symptoms predominate; there are anorexia, fœtid breath, dyspeptic tongue, attacks of vomiting, and very marked tympanites. To these nervous symptoms are added headache, somnolence, and weakness, which may be followed later by hebetude; sometimes there is vertigo and even convulsions occur. Pyrexia is well marked but does not exceed 104° F. Usually the evening temperature lies between 102·2° and 103·1° and the morning temperature between 100·4° and 102·2°. The spleen is but little or not at all increased in size. Sometimes, as in typhoid fever, epistaxis occurs. On the other hand as points of difference there are no rose spots and no characteristic course of typhoid temperature. Dr. Chauffard's patient was a lad, aged eighteen years, who was admitted to hospital in a miserable condition with drawn features and sunken eyes, dry lips, stupor, and headache. There were general abdominal tenderness, gurgling in the ileo-cæcal region, and slight swelling of the spleen, all pointing to typhoid fever and this disease was in fact diagnosed. But it was noted that the tongue was not characteristic of typhoid fever, being large and flabby and red only at the edges, and that the breath had a strong odour of putrefaction. The temperature ranged up to 102·2° and repeated epistaxis occurred. On the fifth day after admission a

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round worm was passed, on the eighth and ninth two were passed, and on the tenth one was vomited. Santonica was administered daily in doses of from one to two grammes and worms were passed in numbers—as many as twenty-eight in a week. After this the fever ceased, the patient gained weight, and convalescence was established. But the administration of the anthelmintic was continued and worms were passed though in smaller numbers for several weeks afterwards, in fact, as late as the end of the second month. How was it that the parasites resisted treatment for so long a time? Dr. Chauffard's explanation is as follows. Worms existed in the intestine in different stages of development and only the mature ones were affected by the vermifuge. As proof of this is the fact that they are never expelled except in this stage. Young ones have only been found in the intestine at necropsies. Moreover after each administration of santonica the ova disappeared from the fæces for two or three days and then reappeared.

THE CHOICE OF A TOBACCO-PIPE.

IF tobacco-smoking is justifiable at all on hygienic grounds it is generally conceded that the pipe is the least injurious means. But tobacco-pipes differ considerably in material and shapes, both of which must be important factors in determining the character of the smoke. Thus there is the clay, the meerschaum, and the various wooden pipes, the briar, cherry, or myall. Next to the tobacco therefore, which should always be pure and free from added flavouring, an expedient which is resorted to far too commonly nowadays, probably in many instances to cover an inferior quality of tobacco, the best kind of pipe is a point to be considered. Even assuming that he is smoking good tobacco the smoker knows how different in character the smoke is when drawn from a clay or a wooden bowl. There is probably a scientific explanation of this fact which must have some bearing on the noxious or innocuous character of the smoke associated with other products of combustion. A soft clay is invariably cool smoking because the acrid oils obtained on the destructive distillation of the tobacco are absorbed instead of collecting in a little pool, which must eventually either by the volatilisation or by mechanical conveyance reach the mouth. A particular pipe "smokes hot" not necessarily because the temperature of the smoke is high but because it favours the passage by one of these means of the oils into the mouth. Meerschaum is another porous material. Again, an old wooden pipe or briar, so dear to inveterate smokers, becomes "smooth smoking" because the pores of the wood widen and so absorb, as is the case with clay and meerschaum, a large proportion of the tobacco oils. Thus an old pipe "sweats" as it is termed—that is, the oil intrudes into the expanded pores of the wooden bowl and at length exudes. Similarly, a hook-shaped pipe must be better than a pipe the bowl of which is on the same level as the mouth, for the simple reason that in the former a considerable quantity of the oil is kept back in the U-shaped part of the pipe while in the latter the oil travels easily down the stem. Ebonite stems are in general objectionable because they commonly spoil the true flavour of tobacco smoke. This is most probably due to the sulphur of the ebonite combining with the volatile oils in the smoke. We know instances where ebonite stems have produced distinctly objectionable symptoms in the throat most probably for the reason just given. Bone or real amber makes a much more satisfactory stem or the pipes should be of wood throughout. Amber substitutes, and especially celluloid, should be discarded entirely as dangerous, while the flavour of camphor which these invariably communicate to the smoke forms a very unpleasant combination. Pipes of special construction cannot be regarded with much favour such as those which are said to be hygienic and usually contain a so-called nicotine absorber. Those smokers who require such auxiliary attachments had better not smoke at all. As a matter of fact tobacco yields little nicotine in the smoke produced on its partial combustion; it is mainly to oils of a tarry and acrid character that the toxic symptoms of tobacco-smoking are due.

DEGENERATION OF THE NEURON.

IN the October number of the *Journal of Mental Science* there is a short account of an able and interesting communication made by Dr. Mott at a meeting of the South-Eastern Branch of the Medico-Psychological Association. The neuron, he pointed out, must be considered as a very complex cell with processes, one of which is the neuraxon or axis cylinder process, the others being the dendrons. The neuron consists of two substances, one stainable by basic dyes and the other unstainable by such. If the cell undergoes chemical changes either of hydration or of dehydration regeneration, he thought, was probably impossible. He also pointed out the probability of the production of toxins as a result of degeneration of nervous structures, and he explained many phenomena of general paralysis—e.g., degeneration of heart and other muscles—by such auto-intoxication. General paralysis, he thought, depended upon a primary progressive degeneration of the neuron affecting chiefly the neurons of association, but starting sometimes in the afferent or efferent projection systems and producing respectively the ataxic and lateral sclerosis type. The secondary inflammatory phenomena, he thought, were due to irritation by the products of degeneration, and so in this disease were found congestive stasis, anæmia, epileptiform discharges, &c. Each fresh seizure resulted in an access of degeneration, thus producing a vicious circle and leading to progressive destruction of the whole nervous system. As to the influence of syphilis, in general paralysis as in locomotor ataxy he regarded syphilis as a most potent factor, although the morbid conditions in these diseases were not to be regarded as true syphilitic lesions.

THE WATER-SUPPLY OF COUNTRY DISTRICTS.

IT is surely a most unusual thing for a medical officer of health to be obliged to use terms such as are found in Mr. Parker's annual report to the Lancaster rural council. He says: "It is at least seven years since I first drew the authority's attention to the fact that the water-supply of Cookerham, Thurnham, and Glasson Dock was most unsatisfactory. It is still in the same state or if possible worse. No remedy has been found for this sad state of affairs. No notice has been taken of the matter and it seems almost useless for me to refer to it." The district named is close to the sea and is mostly low-lying. The large majority of farms have no water at all except rain water and that which is got from the dykes. These receive the drainage of the land and in several cases liquid manure from cow-houses. The village of Glasson Dock possesses a few pumps which yield a supply of brackish water, but the bulk of the population drink water from the dock basin. This is connected with the canal which is partly supplied from the River Conder after it has passed through a village named Galgate and received the drainage of several houses. Moreover, the canal is the favourite place for disposing of dogs and no less than twenty of their decomposing bodies have been seen within a distance of little more than 100 yards. A member of the council glories in the statement that he has drunk the water for twenty years without ill effect, which of course proves nothing. The Local Government Board is now moving in the matter and one of its inspectors is attending the meetings of the rural council.

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The plan that he supports is that the Lancaster water, which is excellent in every way, should be supplied, but the proposal is meeting with considerable opposition. The state of things really seems to be very serious and a heavy load of responsibility rests on the authorities after the facts have been so strongly and persistently placed before them.

THE SALMON CLAUSE AND APPRENTICES' INDENTURES.

IN THE LANCET of Sept. 25th we commented upon some researches of Dr. T. N. Brushfield into this matter which showed that the existence of the clause was very doubtful. A correspondent, however, writes to us enclosing the views of a learned antiquarian from which we extract the following:—"I look upon the statement as correct. There would scarcely be documents to prove it because servants are hired verbally as a general rule. ..... My impression is that it was only in localities where salmon was superabundant ..... and there was no proper market ..... that this stipulation was resorted to." Our correspondent goes on to say that salmon probably followed the price of all other articles of food and that it is money which has fallen in value not salmon which has risen in price. For instance, feuduties or ground rents in Scotland used to be payable either in money or in a good fat hen. In a document dated 1779 the feuduty is fixed at twelve good fat hens or 6*d*. sterling each. A fat hen is now worth 3*s*., but it is the value of the coin which has fallen. Many years ago the means of transport were very imperfect and fish being a perishable commodity would be very cheap. In this way, our correspondent thinks, the stipulation arose and would arise again were the same state of things to come about. Most likely, however, there never was any written agreement to this effect, so that Dr. Brushfield's inability to find an indenture setting forth this clause is thus explained.

ATTACKS OF MIGRAINE WITH ELABORATE VISUAL PHENOMENA.

A VERY interesting and unusual case of severe headache associated with visual hallucination and convulsive attacks is published by Dr. John K Mitchell in a recent number of the *American Journal of Nervous and Mental Diseases*. The patient is a native of the West Indies whose health has been good. His age is not stated. The only neurotic history in his family is of an uncle who committed suicide. Three years before he came under observation he began to suffer from recurrent headache accompanied by a curious visual hallucination. He first becomes aware of the approaching attack by impairment of vision. Then he has a vision of a tiny dwarf appearing at a great distance. This figure gradually approaches, becoming larger and larger, finally assuming the form of a gigantic figure armed with a club. During his approach the headache gradually increases, and when he comes close he seems to strike the patient repeatedly on the head with his club, producing excruciating pain, until consciousness is lost. Violent convulsions usually follow, with arching of the body, so extreme as to cause it to rest on the head and heels. Between the first appearance of the dwarf and the time at which the apparition seems to strike the patient's head as much as eight hours have elapsed. Usually, however, the interval is less. At first the whole attack lasted twenty-four hours, but with more frequent recurrence of the attacks the duration of the individual attacks has lessened. The attacks never occur from December to May. There is a considerable refractive error which has been corrected. There is no history or evidence of malaria and apparently no signs of any gross visceral disease. Dr. Mitchell believes that the condition is really one of severe migraine, for in migraine, he says, it is usual to have (1) slight visual or other sensory disturbance, (2) pain, and (3) nerve storm. In this patient all three phases are present in a marked degree. The periodicity of the attacks also lends likelihood to this view and also the progressively increasing character of the symptoms. Epileptiform convulsions are, as is well known, of occasional occurrence in association with migraine. The case is a very interesting one and suggests the elaborate aurae which have been present in some cases of epilepsy. But the attacks are much more of the character of so-called hysteroid attacks, such as may occur in neurotic patients from any violent nervous disturbance. It will be interesting to know the result of treatment adopted on the supposition that the case is one of migraine.

HEREDITARY SPASTIC PARAPLEGIA.

IN the November number of the *American Journal of Nervous and Mental Diseases* Dr. Weston Bayley gives an account of several members of a family whom he has had under observation. The history of the affection shows that members of the family in five successive generations have been affected with the disease, which is characterised by a spastic condition, coming on as a rule about the fifth or sixth year of life, associated with exaggeration of knee-jerks and usually also ankle clonus, and without any sensory impairments or pupil affection. Dr. Bayley has himself examined nine patients in the family, involving three generations and, as he remarks, it is obvious that they are examples of an hereditary affection of the spinal cord. Of course, instances of family spastic paralysis have been described by more than one observer but Dr. Bayley is to be congratulated on the conclusive proof of its existence which he brings forward by showing its certain presence in three generations of the same family and its all but certain existence in two others.

A FORM OF MULTIPLE NEURITIS IN THE WEST INDIES.

IN the November number of the *Practitioner* Mr. Strachan, of Jamaica, contributes an article dealing with this subject, one to which he directed attention nine years ago in *Sajous' Annual*. A patient suffering from the disease in a typical form presents himself complaining of numbness and cramps in hands and feet, dimness of vision, and tightness round the waist. There is also a burning sensation in the soles of the feet and in the palms of the hands, worse at night usually than in the day, and there is as a rule slight excoriation with fine desquamation at the edges of the eyelids and at the margins of the lips and nostrils. The main nerve trunks in the limbs are tender to pressure and this is particularly true of the ulnar nerve, and along the distribution of the terminal filaments are fine herpetic vesicles. The muscles of the limbs waste and the trunk muscles may become involved and lead to respiratory difficulty. The pupillary reaction is not impaired although vision is much reduced. The external ocular muscles may become affected but this is rarely the case and a fatal termination is uncommon. When it does occur it is preceded by dyspnœa and riotous action of the heart. The mental condition is unimpaired except in the extreme cases in which delusions may be present. The reflexes do not differ in their condition from the condition of these phenomena found in other kinds of neuritis. In the few necropsies which Mr. Strachan has seen the most noteworthy feature was pigmentation of the brain, spinal cord, and larger nerve trunks. The changes in the liver and spleen were such as are usually found in cases of malarial poisoning. There is no mention of any microscopic examination of the nervous system or of the blood but Mr. Strachan is of opinion that malaria is the most probable toxic agent although he also

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recognises the possibility that the poison may be the result of some micro-organism or other agency at present unknown.

THE Council of the Metropolitan Hospital Sunday Fund will recommend the constituents, who are to be convened on Monday, Dec. 13th, that June 12th be fixed for Hospital Sunday of 1898. We understand that Sir G. Faudel-Phillips, (the late Lord Mayor), Mr. Augustus Thorne, and Mr. Peter Reid will be recommended by the Council to fill vacancies on the Council. The report of the Council for the past year will be published next week.

THE subject of the Hughlings Jackson Lecture to be delivered before the Neurological Society of London by Dr. Hughlings Jackson at 11, Chandos-street, W., on Wednesday, Dec. 8th, 1897, at 8.45 P.M., will be "Remarks on the Relations of Different Divisions of the Central Nervous System to one another and to Parts of the Body."

THE monthly meeting of the South-West London Medical Society will be held at Stanley's Restaurant, 235, Lavender-hill, on Dec. 8th, at 8.30 P.M., when Mr. Victor Horsley will read a paper entitled "The Medical Acts of Parliament; What They Are and What They Ought to Be."

A CONFERENCE of the delegates of the various institutions affected by the scheme of Lord Cowper's Commission will be held at the University of London on Dec. 14th at the invitation of the Senate of the University.

Pharmacology and Therapeutics.

CREOSOTAL.

DR. NORDT has published full details of the very favourable results obtained by Professor von Leyden, of Berlin, in the treatment of phthisis by creosotal. The medicine was given in gradually increasing doses commencing with five drops three times a day and three drops being added daily until the quantity of twenty-five drops three times a day was reached. This dose was continued for a period varying from one to four weeks, after which the quantity was reduced and increased again. The night-sweats and fever of phthisis obviously became less under creosotal, while from week to week the bronchial secretion and cough were perceptibly diminished and the physical symptoms of phthisis disappeared completely in two cases in which the treatment had been continued for eight months and ten months respectively. Creosotal is perfectly free from the disadvantage of creosote, no unfavourable effects on the stomach or intestines having been observed in any case.

TETANUS ANTITOXIN.

Dr. Max Engelmann, of Leipzig, having successfully treated three cases of tetanus—two with Tizzoni's serum and one with Behring's—gives a detailed account of the cases in the *Münchener Medicinische Woohenschrift* (No. 32), and adds some remarks concerning the use of these serums in a number of cases published by others. Thirty-four were treated by means of Tizzoni's serum. Only eight terminated fatally and in three of these there were septic complications, four others were given doses that were probably inefficient, and the eighth case came under treatment only a few hours' before death. As no ill effects were produced by the serum he advises that it should be tried in all cases and that where a case appears to be a serious one a large dose should be at once administered. Of course sedative drugs should also be prescribed and the wound if it can be discovered treated on surgical principles. Seventeen cases were treated by means of Behring's serum, with a mortality of seven. In six of the fatal cases and in some of the successful ones the old preparation was used, while others were given the newer dry form. This last is more powerful, and even in large doses does not produce any unpleasant effects. Dr. Max Engelmann has not been able to discover any appreciable difference in the behaviour of the Tizzoni and Behring preparations.

HYPODERMIC INJECTIONS OF COCAINE IN THE VOMITING OF PREGNANCY.

In five cases of the vomiting of pregnancy where morphia injections and cocaine given by the mouth had failed Professor Tibone of the Turin obstetric clinic was able to effect an immediate cure by means of hypodermic injections of hydrochlorate of cocaine. One-seventh of a grain was thus administered just before food was taken, the puncture being made in the epigastrium and the injection repeated two or three times a day. It was found that this enabled the patients to retain their meals, and under this treatment they increased in weight and their condition improved in a marked degree, no unpleasant effect on the pulse, the respiration, or the temperature being observed in any of the cases. As soon as possible of course the cocaine was stopped and the vomiting did not show any tendency to return. Dr. Pozzi who writes on these cases suggests that it is probable that similar treatment may be found valuable in vomiting due to other causes.

The Lancet Special Commission

ON THE

METROPOLITAN WATER-SUPPLY.

XXI.[1]

NEW RIVER COMPANY.

THE WELLS, PUMPING-STATIONS, AND RESERVOIRS—*Continued.*

IN the previous article the stations of the company between Broad Mead Well (see C in the general map of the Company's works which appeared in THE LANCET of Oct. 23rd, p. 1069) and the Crouch-hill Reservoirs have been described. Continuing the survey towards the metropolis we come now to—

Stoke Newington reservoirs, filter beds, and pumping station (see V on general Map and Fig. 2).—The station at Stoke Newington is situated at Green Lanes. It occupies a large area and is divided into two by the road called Green Lanes. The part to the east of the road consists of two large open reservoirs and a pumping station; the filter beds are situated to the west of the road. The New River enters the eastern reservoir at its north-eastern extremity at Woodbury Down. Almost the whole of the water goes through this reservoir in the direction shown by the small arrows in the diagram (Fig. 2). A small amount of water only passes down the course of the river which is situated just to the north of the reservoir at the bottom of the gardens of the houses on Woodbury Down. The sluice at the part of the river near the inlet into the reservoir is kept almost shut, and through that part of the river which is situated just to the north of the reservoir a sufficient amount of water is allowed to pass so that a gentle flow may keep it sweet by circulation. The eastern reservoir is of somewhat irregular oval form, and covers an area of about 21½ acres and has an average depth of about 16 ft. except near the banks. It is surrounded by a puddle wall which goes down to the London clay. There is a grass walk all round and the eastern and southern sides are protected from the wind by a luxuriant thorn hedge. The available capacity of the reservoir is confined to the upper 3 ft. At the western side of the reservoir there is a disused engine house now occupied as a store; the engine was formerly used for pumping to the reservoir at Claremont-square but it has not been used for many years. From the eastern reservoir the water passes into the New River and in a south-westerly direction under Lordship-road, and then into the western reservoir. The area of this is about the same as that of the one just described and it is constructed on the same principle, that

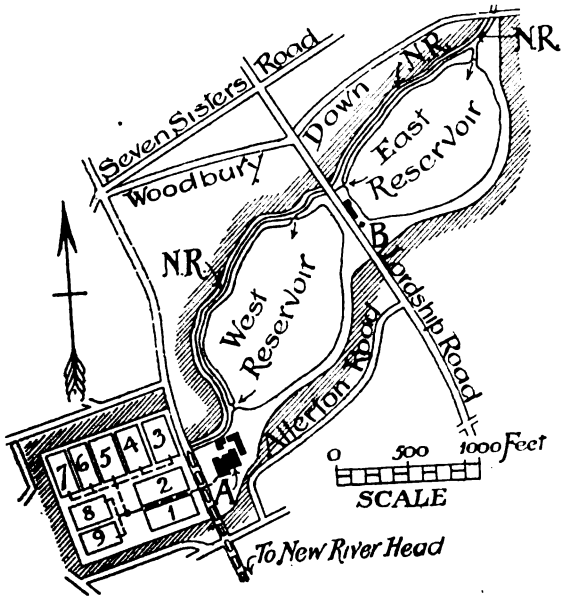
[1] Nos. I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., XVII., XVIII., XIX., and XX. were published in THE LANCET of Feb 20th and 27th, March 6th, 13th, 20th, and 27th, April 3rd, 17th, and 24th. May 1st, 8th, 15th, 22nd, and 29th, June 19th and 26th, Oct. 23rd, and Nov. 6th, 13th, and 27th respectively.

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is to say, it is surrounded by a puddle wall and the bank-slope down gradually. The reservoirs together have an available capacity of about 90,000,000 of gallons, and roughly speaking the water remains in them for from two and a half to three days.

Filter beds.—There are nine filter beds which have a total area of about 8½ acres. On June 14th two of these were not in use; the one marked 3 was being cleaned and the one marked 5 was being re-sanded. Nos. 1, 2, 3, 4, and 5 are constructed on the same plan. The upper part of each is lined with blue Staffordshire bricks. The sides, which are lined with bricks and concrete, slope as 2½ to 1. The composition of the filtering material is as follows:—sand 2 ft., shingle 3 ft. For the collection of filtered water there are two culverts. To these culverts drain pipes, 10 in. in diameter, conduct the filtered water. These lateral pipes are arranged in lines which are at a distance of about 8 ft. apart, and the pipes run into the culverts. The upper part of the culvert is flat and is covered with flagstones. Each

FIG. 2.



Stoke Newington Station. N R, New River. A, Engine house. B, Disused pumping station. 1, 2, 3, 4, 5, 6, 7, 8, 9, Filter beds.

culvert has an air-shaft which has its outlet at the end of the bed. Filters 6, 7, 8, and 9 were built after the others, and they differ slightly in construction. The sides of these beds are nearly vertical. The filtering material consists of 2 ft. of sand and 6 in. of fine shingle (here called "pea shingle"). The method of collecting the filtered water in these beds differs from that adopted in those just described. In the newer beds the channels for the collection of the filtered water were formed of two courses of bricks built to form channels; no mortar was used. Each of these beds has one air-shaft, the outlet of which opens at the side of the bed. The other extremity of the shaft passes down to the bottom of the bed.

Cleaning filter beds.—As a rule a bed is used for about six weeks. It is cleaned by removing about a quarter of an inch of sand from the surface. The sand is washed in a place specially built for the purpose, which consists essentially of a number of bays formed of concrete. The sand is first placed on a hopper and subjected to jets of water at a pressure of 150 ft. head. From the hopper the sand passes through troughs into the washing bays, where it is cleaned by water which plays on it from a hose at a pressure of 150 ft. The amount of water used in washing the sand is about 3000 gallons per cubic yard.

Rate of filtration.—The rate of filtration is from 2½ to 4 gallons per square foot per hour.

Gauge.—There is a simple instrument in use at this station for gauging the rapidity of the filtration. It consists essentially of a diaphragm which is placed in the stream of water which flows from the filtered water culvert to the engine wells. The current of water acting on the diaphragm moves a lever to which an index is attached, and the index is thus able to show on a graduated gauge the rate at which the filtered water is passing out, the gauge being so graduated that it records the result in terms of gallons per square foot per hour. The arrangement is a simple one and is certainly worthy of general adoption. The filtered water passes into a shaft 16 ft. in diameter, from which it is conducted into a culvert as far as the boundary of the western part of the Company's property; it is then conducted under the road (Green Lanes) in two 48-in. pipes to the engine well.

Pumping arrangements.—There is a compound engine having cylinders 48 in. and 77 in. in diameter respectively and a stroke of 8 ft. This is worked at a pressure of 70 lb. and pumps the water to Crouch Hill reservoir against a head of 100 ft. As a rule this engine is worked for about eleven hours a day, and the water supplies Hornsey, Stoke Newington, Edmonton, and part of the City.

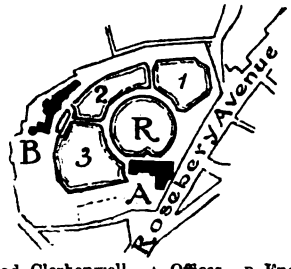
There are two pairs of compound engines, Nos. 3, 4, 5 and 6. Of these Nos. 3 and 5 are compound beam-engines with steam drop valves arranged with a high pressure cylinder mounted on a base in front of the low pressure cylinder. The diameter of the high pressure cylinder is 28 in., that of the low pressure cylinder is 46 in., and the strokes are 5 ft. 6⅜ in. and 8 ft. respectively. Nos. 4 and 5 are compound beam engines with steam slope valves. The diameter of the high pressure cylinders is 22 in. and that of the low pressure cylinders 36 in. The strokes are 5 ft. 6 in. and 8 ft. respectively. Of these engines Nos. 3 and 4 are worked together being coupled on one fly-wheel 24 ft. in diameter. Engines 5 and 6 are also coupled on a fly-wheel.

Another house contains a compound Worthington engine with high duty attachments. Of this engine the cylinders are 27 in. and 54 in. in diameter respectively, and the stroke is 3 ft. 6 in. This engine is capable of pumping 9,500,000 gallons of water daily and is used for pumping water to Maiden-lane, working against a head of 150 ft. The Maiden-lane reservoir supplies the higher district.

Amount of water pumped.—On June 14th water was coming down the New River to Newington at the rate of 31,000,000 gallons in the twenty-four hours. Of this quantity 25,000,000 gallons were filtered at Stoke Newington, and pumped to Maiden-lane, to Crouch Hill, and to the districts between Stoke Newington and those places. The other 6,000,000 gallons of water passed on down the New River to New River Head, Clerkenwell.

Workshops.—This station contains a large workshop and also cottages for caretakers.

FIG. 3.



New River Head, Clerkenwell. A, Offices. B, Engine house and workshop. R, Reservoir. 1, 2, 3, Filter beds.

New River Head, Clerkenwell (see W on Map and Fig. 3). The area of the station at New River Head is about eight acres. It is surrounded by a high brick wall. The house formerly occupied by Sir Hugh Myddelton, first governor of the Company, was situated here and part of it is now occupied by the offices of the Company. (Fig. 3, A). In addition to these, the station contains a small open subsiding reservoir, filter beds, pumping engines, a yard containing stores, and a large workshop. The water from the New River is received into a subsiding reservoir (Fig. 3, R), which has an area of about an acre, and is capable of holding 700,000 gallons. It is of circular form and lined throughout with stone. The flow of water into it is regulated by a cock. The water has very little time to remain in this reservoir, for the amount pumped daily from the station is about 6,000,000 gallons, therefore the water in the reservoir is changed several times daily.

Filter beds (Fig. 3; 1, 2, and 3).—There are three filter beds which have a total area of about two and a quarter acres. They are of somewhat irregular shape, as may be seen in the accompanying plan, which was taken from the ordnance

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map. The sides of the filter beds are nearly vertical, and are lined with stone. The composition of the beds is as follows: Sand 2 ft., shingle and stones about 5 ft. The stones vary in size from that of a bean upwards. The smaller ones are placed at the top and larger ones below. Each filter bed has two culverts for the collection of filtered water. The culverts are square in form at the bottom and are built of brick. The water at the bottom of the bed is collected into a central culvert by U-shaped pipes, which are laid in lines at a distance of about 10 ft. apart. The diameter of these pipes is 6 in. The end of each filtered water channel is ventilated by a 4-in. iron pipe. This ventilating pipe is situated at a distance of about 4 ft. from the edge of the filter bed. The three filter beds are all constructed on the same plan and differ only in shape. Near the filter bed No. 1 there is a place for sand washing and a similar one is situated near bed No. 2.

Cleansing sand.—The arrangements for sand washing are similar to those at the other stations of the Company. Near the larger filter bed there are three bays for sand washing. The pressure of water is 120 ft. and the amount of water which is used for washing a cubic yard of sand is 3000 gallons.

Pumping arrangements (Fig. 3, B).—There are two engine houses called respectively east and west. The engine in the eastern house is in course of removal. The western house contains a beam engine made by Boulton and Watt in the year 1810. The steam cylinder is 44 in. in diameter, and the stroke is 8 ft. There are two pumps having barrels of 29 in. and 18 in. respectively, and strokes of 8 ft. and 6 ft. The steam is generated by two Lancashire boilers, and both the engines work at a pressure of 20 lb. It may be of interest to note that when the engines were first put up the steam was generated by copper boilers and the pressure used was only 4 lb. The water was formerly pumped through a stand-pipe; at the present time a large air vessel is used instead. The water is pumped to the High Pond reservoir, Claremont-square, a lift of 50 ft. The new engine which will be put up is an over-head three-cylinder engine of marine type capable of working at a pressure of 120 lb.

Workshop.—There is a large workshop in which taps and ball valves are tested and those found to be efficient are stamped with the Company's mark. An enormous amount of this work is now done, the number of taps tested being sometimes not less than 50,000 a week. Taps are tested to stand a pressure of 300 lb., which is about equal to a column of 670 ft. of water, which it may be noted is a much heavier pressure than they would be likely to sustain in actual practice.

High Pond reservoir, Claremont-square (see X on Map).—This reservoir is situated in the centre of Claremont-square, Clerkenwell. It is on the site of a high service pond which was formerly used. The present reservoir is covered with brick arches supported by brick piers. The sides are nearly vertical, the slope being 1 in 12. The bottom of the reservoir is lined with York paving stones set in cement. There are 30 cast iron ventilators and 8 circular manholes 5 ft. each in diameter. These are covered with galvanised iron sheeting. The reservoir has a capacity of 3,500,000 gallons; the top water level is 139 ft. above ordnance datum. Here there is a standpipe 45 ft. in height. There is a clock-work recording gauge here and a tabular gauge at the pumping-station at New River Head, whence the reservoir is supplied. The water is used for high service supply to the city. The reservoir is surrounded by a cast iron spiked railing.

Hampstead reservoir (see Z on Map).—There is a covered reservoir at the highest part of Hampstead Heath near the flagstaff. It is triangular in form, built of brick set in cement. It is covered by brick arches which rest on iron joists, which are carried by iron pillars. The reservoir is ventilated by iron shafts. It is surrounded by an iron fence and is covered by turf. Water is pumped here from Hornsey-lane and is used for the supply of the highest districts of Hampstead. There is here a stand-pipe 40 ft. in height, the top of which is 486 ft. above ordnance datum, and which is used for the supply of the highest services in the immediate vicinity.

Highgate reservoir (see AA on Map).—The reservoir at Highgate is situated near South-grove on the highest part of Highgate Hill. The area occupied is about two acres. The capacity of the reservoir is 1,000,000 gallons. The sides of the reservoir are built of brick set in cement, and the slope is 1 in 2. The depth in the centre is 12 ft. The reservoir is covered with a slate roof supported on iron joists. The water is pumped here from Hornsey-lane and is distributed to the higher parts of Highgate. There is a stand-pipe 6 in. in diameter and 50 ft. in height, the top of which is 481·8 ft. above ordnance datum. It is used for the high service of houses in the immediate neighbourhood. There is a small round-house which contains a cockpit and is used also for keeping tools. An iron railing surrounds the reservoir.

Hornsey-lane reservoir and pumping station (see BB on Map).—Water is pumped to this station from Hornsey, and is pumped hence to Highgate and to Hampstead.

Pumping arrangements.—There is a compound beam engine which has a high pressure cylinder 17 in. in diameter, and a low pressure cylinder 29 in. in diameter. It works two pumps which have cylinders 18 in. in diameter and a stroke of 2 ft. 6 in. The rate at which the pumps are worked is from 27 to 28 per minute. The steam for the engines is generated by two Galloway boilers, one only of which was working when visited. The steam pressure is 80. The head of water worked against in pumping to Highgate is 103 ft. and to Hampstead 133 ft. For six hours a day water is pumped against a head of 150 ft. over the stand-pipes at Hampstead and Highgate for the supply of the highest parts of those districts.

Another engine house contains a simple low pressure horizontal engine which works a double action pump which has a barrel of 12½ in. in diameter. The length of the stroke is 6 ft. and the engine works at a rate of twenty-two strokes a minute. This machine is not generally used, the engines first described having sufficient power to do all the pumping usually required by working for twelve hours or so daily.

This station is in telegraphic communication with Green Lanes, but not with the reservoirs at Hampstead and Highgate, so that when it is necessary to communicate with these stations a messenger is sent.

The reservoir is situated close to the engine house on the west side of Tile Kiln-lane next to Hornsey-lane. It is covered with brick arches which are turfed over at the top; the slope of the sides is about 1 in 6. The reservoir is ventilated by 6-in. cast iron pipes, it has a capacity of 3,000,000 gallons and the top water level is 348·2 ft. above ordnance datum. The reservoir occupies from two and a half to three acres and is protected by a high wall.

Maiden-lane reservoirs (see CC on Map).—This station is situated on Dartmouth Park Hill, Camden Town. There are two covered reservoirs and a cottage occupied by a street foreman—a man in charge of the arrangements for the local distribution of the water. The total area occupied is about ten acres. The reservoirs are capable of holding 15,000,000 gallons of water. The top water level is 232 ft. above ordnance datum. The reservoirs are covered with brick arches which are turfed over at the top. Each is ventilated by sixty cast iron ventilators, and there are ten inspection- or man-holes, which are covered with galvanised iron. There is a large cock-pit adjoining the reservoirs. This is covered by brick arches. It is 30 ft. in length and 20 ft. in width. Through it pass two 36-in. pipes which convey the water into the reservoirs and there is also a 24-in. overflow pipe which goes into the sewers. This pipe is provided with cocks which can be open or shut from the cock-pit. The pipes are 30 ft. below the surface of the ground. The pit is used for emptying the reservoirs when necessary, and when this is done the water passes first into it and then into the sewers. It has three divisions: (1) a central one into which the water passes before it is discharged into the sewers when the cistern is emptied for cleansing purposes; (2) the second division has a 36-in. supply and delivery pipe for the southern reservoir; and (3) the third division has a 36-in supply pipe for the northern reservoir. The water is pumped here from the Green Lanes station and is used for the supply of the district.

Gauge house.—At the south-east corner of the reservoir there is a gauge house. It is fitted up with a battery which records at the Green Lanes pumping station the amount of water in the reservoir. The electric arrangements are managed by the General Post Office. The construction of the gauge is briefly as follows: there is a copper float which is connected with a balance weight by a copper wire which runs on grooved wheels so arranged that each alteration of one inch in the water level is recorded.

DISUSED STATIONS.

A brief description may here be given of the disused stations at Cheshunt and Tottenham.

Cheshunt.—The station at Cheshunt is situated on the

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right side or lower bank of the New River. There are two large reservoirs here and a well. The only use which is now made of this station is that there is a smithy here. The well has not been used for years. It was found that the level of the water in it was affected by the pumping at the station at Turnford, which is about three-quarters of a mile off. This well has, in fact, been disused since the new well has been sunk at Turnford. It is estimated that 750,000 gallons of water could be obtained daily at Cheshunt. The old machinery which is situated here consists of a single cylinder beam engine with gear working bell cranks. There are two large reservoirs. When these were made the idea was to store water in them, obtaining some, if necessary, from the New River and some from the well. The water which comes into these reservoirs at the present time is derived from the surface drainage of the country around. This water is not now, and has not been for many years, used by the New River Company as a source of supply. The surplus water from the reservoirs passes under the New River in a conduit made for that purpose and passes down into the River Lee.

Tottenham.—There is a disused pumping station in Ferry-lane, Tottenham. It was formerly used for pumping water from the River Lee into the New River at a point near the Seven Sisters-road. This, however, has not been done for more than thirty years.

Pumping arrangements.—There is a Cornish pumping engine which was worked by steam generated by three Cornish boilers. The engines are bright and clean; the boiler fittings have been removed. A workshop and caretaker's cottage are situated here. Near the pumping station there were formerly two mills which belonged to the New River Company. The water was taken from the mill tail and the New River Company had a sluice which was regulated so as to supply the mill tail with water as it was required without the necessity of its passing through the mill race. One of the mills was burnt down many years ago and the other has been dismantled. The water was formerly taken from the mill tail through cast iron gratings with ½ in. spaces and ½ in. bars; these remain *in situ*.

(*To be continued.*)

LEICESTER AND SMALL-POX.

(*Continued from p. 1408.*)

RETURNING now to Mr. Biggs we desire to note that with regard to the vaccinated condition of the tramp first attacked in the outbreak there is a discrepancy in Dr. Coupland's report. At page 26 the tramp is described as having "a smooth, small cicatrix" as quoted by us in THE LANCET of Nov. 20th. In the table of cases however (p. 12) under the heading of "Vaccination data" the entry is "Infancy: small smooth marks." Whether the plural or the singular is correct we know not, but in fairness to Mr. Biggs it is right to assume the plural. What therefore remains as regards this particular case is that the evidence being that the tramp, aged thirty-five years, had been vaccinated in infancy, Mr. Biggs declares in 1893 that the tramp "was well vaccinated" though he had previously held that after even nineteen years' interval vaccinal protection "has theoretically expired." His versatility in this connexion is further illustrated by a criticism which he made in the London *Echo* and the *Leicester Post* of Dr. Priestley's annual report for 1893. With regard to the protective power of vaccination against attack by small-pox Mr. Biggs then stated that the Local Government Board had "issued a memorandum fixing the limit at about ten years." This needless to say is simply incorrect. The Board never issued any such memorandum. Mr. Biggs of course has in mind here the Board's opinion that as a precautionary measure re-vaccination should be performed after ten years of age where primary vaccination has been done in infancy. But no one would accuse an insurance agent of declaring a man's stock of vitality to be entirely exhausted merely because of the agent's advice that the man should take out another life policy. On this assertion, however, that the Board had "fixed the limit at about ten years" Mr. Biggs proceeded to declare that of 184,000 inhabitants of Leicester only 10,000 could be looked on as theoretically protected by vaccination against small-pox. This was the same Mr. Biggs who wrote to the *Star* that the Leicester nurses who were attacked by small-pox were well vaccinated, their vaccination having been done in infancy and their ages ranging from twenty to forty-five years.

In Leicester a great deal is made of the assertion that every outbreak of small-pox has owed its origin to an "importation" and it is alleged by Mr. Biggs that such importations have been usually from well-vaccinated towns or districts (Q. 16,205). His Diagram D appended to his evidence before the Commission gives a table of so-called "importations." In 1877 it is admitted that the origin of the disease was unknown and the total number of persons infected was 12. Yet the outbreak is assumed to be due to an "importation." So also in 1885 there is no knowledge of how the disease arose, but the "importation" theory is adopted as a matter of course. It is obvious, indeed, that even Dr. Johnston, the medical officer of health, used the term "importation" very loosely, sometimes as meaning no more than that he could not trace the origin of the disease, as in 1883, when he says: "On the 31st August two additional cases having as far as could be ascertained no connexion with the previous one were reported in Argyle-street, making the fourth and last importation." Most importations are alleged to be by tramps. The "tramp" theory, indeed, is dragged in quite unjustifiably sometimes, as in 1881, when a father and daughter resident in Leicester and attacked in March are counted as a tramp or tramps in Mr. Biggs's table, whereas the first "tramp" visitation of the year is not recorded until May. However, the capacity of vagrants to convey small-pox is very well known and Leicester, like other places in the kingdom, has experienced this. These people travel about all over the country and as most places in this country can still be described as well vaccinated so far as primary vaccination is concerned it is not surprising that various tramps who came to Leicester had previously been in places where vaccination had not been neglected as in Leicester. Looking to the fact that every new appearance of the disease, whether recorded or unrecorded as to source, is described as an "importation," all that can be meant or ought to be meant would appear to be that Mr. Biggs, or whoever was originally responsible for applying the term "importation," did not believe in the *de novo* origin of small-pox, but that when the disease arose in Leicester it came from somewhere and not from nowhere. The same could be equally assumed of every outbreak of small-pox from the days of Rhazes onwards.

With regard to these importations Mr. Biggs, under examination, gave replies which amounted to a confession that evidence given by the chairman of the Sanitary Committee was very far from according with the facts. That witness had declared repeatedly that under the Leicester system all the cases of small-pox which occurred had been imported (Q. 13,238 and 13,240). From Mr. Biggs, on the other hand, Lord Herschell elicited the fact that many of the cases were not imported, but in spite of the Leicester system resulted from imported cases or cases which Mr. Biggs assumed to have been imported, their origin being unknown. Thus, according to Mr. Biggs, of 116 cases in the period 1874–89 only 33 had been imported, even allowing him to attach his own meaning to the term importation. Undeniable as his Table D shows this fact to be Mr. Biggs is exceedingly loth to give it due recognition. Having mentioned that "an epidemic threatened us in 1888 through the importations of small-pox from well-vaccinated Sheffield" (Q. 16,793) it was pointed out to him that he had shown only 2 cases imported from Sheffield in that year. It happened however that from these and other 3 "importations" from other places 16 persons had been infected, making 21 for the year, and that in the latter part of the previous year 2 "importations" (1 from Sheffield) had been followed by 8 cases, making 10 for that year. Adding these together he says (Q. 16 805): "There were 10 cases at the latter end of 1887 and 21 at the beginning of 1888, making a total of thirty-one centres of infection." Thus the Leicester method had failed to prevent the infection of 24 persons from 7 "importations," and straightway the whole 31 are described as "centres of infection" and the method gains new laurels in being able to deal with so great a number. So also Mr. Picton argued in cross-examination of Dr. J. H. Neale, of the Leicester Infirmary. That witness had said to Professor Michael Foster, in reply to a question as to the value of isolation as

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practised in Leicester, that there had been very little small-pox to test it by, but that if an epidemic of small-pox came similar to an epidemic of scarlet fever which had attacked Leicester, so that there had been many cases waiting for admission to hospital and no beds to receive them, then "the effect might be rather disastrous" (Q. 14 897). Mr. Picton called the witness's attention to this answer and asked him if he was not aware that in 1888 no less than 23 cases of small-pox had been admitted to the hospital, and "as a medical man do not you think it a noteworthy fact that there have been these introductions of the disease into Leicester without any spread of it?" But as a matter of fact the 23 cases themselves included a "spread," for even Mr. Biggs alleges only 5 "importations" for that year. Yet Mr. Picton speaks of the whole 23 as "introductions of the disease into Leicester." In the course of the 70 weeks dealt with in Dr. Coupland's report there were 357 cases of small-pox in Leicester. Taking these as constituting the outbreak, if each of them is to be regarded as an "introduction of the disease," then, no more cases occurring, we reach the conclusion that, shall we say owing to the Leicester method, 357 introductions of small-pox were stamped out without infecting a single individual in Leicester. In the same way if we take say 1500 as the number of cases constituting the epidemic of 1870–73 in Leicester, and call each case a centre of infection or an "introduction of the disease," we find that under a system of primary vaccination even without re-vaccination 1500 centres of infection were "stamped out" without infecting anybody in Leicester, so that the triumph of infantile vaccination was much greater than that of the later Leicester procedure. The kind of argument here adopted by Mr. Biggs and Mr. Picton is so ridiculous that we are almost ashamed to spend time in its refutation.

We may note in passing that Mr. Biggs's statement regarding the quarantined that "compensation for loss of time is *not* offered" is based on a letter which he quotes from the town clerk and which seems definite enough. It is, however, contradicted by information given to Dr. Coupland by Dr. Johnston, the reputed author of the Leicester method. "It was the custom, Dr. Johnston informed me, for the corporation to pay the wages of the quarantined during their fortnight's detention." Between Dr. Johnston and the town clerk we do not pretend to judge, especially as the difference of statement refers to a time when there was very little small-pox in Leicester. When small-pox did come, however, in 1892–93 Dr. Coupland's report shows that payments *were* made for wages and he gives excerpts from the minutes of the Health Committee which leave no doubt about the matter. The Leicester system in the absence of small-pox was one thing. In presence of small-pox it was something else.

Questions relating to the hospital and quarantine have next to be looked at. It was part of the method to carry out quarantine in the hospital and we have seen how loth, according to Mr. Biggs, the quarantined people were to leave their quarters after their time of isolation had passed. "Many," he declared, "had been reluctant to leave the hospital." Turning to Dr. Coupland for a description of the place it hardly appears to have been a paradise. In 1881 Dr. (now Sir Richard) Thorne described the buildings as they were then. They were constructed of wood and galvanised iron. The erysipelas pavilion (where quarantine for small-pox was carried out) was somewhat dilapidated. Both it and the small-pox pavilion had been originally coated with tar but were afterwards whitewashed and remained "very unattractive in appearance." In 1885 the late Dr. Tomkins, then the medical officer of health, told the town council that the hospital was "an ugly makeshift" which had been "constructed hurriedly and on an ill-designed plan" and that it provided "unsatisfactory accommodation for the treatment of small numbers of patients or for the convenient separation of such cases as it may be desirable to isolate from others. It is also in many respects deficient in the accommodation and arrangements adopted in modern hospitals of this description."

This was the charming residence from which the quarantined people of Leicester could hardly be torn away. It was here, too, that the triumphs of Leicester were accomplished as regards both small-pox and other infectious diseases. In 1892-93 Dr. Coupland's comments agree with those of Sir Richard Thorne and Dr. Tomkins. "The sanitary accommodation is bad and I am informed that the building is infested with rats. I cannot avoid expressing the opinion that these two wooden buildings are a reproach to the authorities." Such was the place round which centred the Leicester system. Looking to the decade of boasting of which the system had been the subject it is really surprising that in face of criticism both by the Local Government Board and by its own health officer Leicester did not in defence of its own consistency provide itself with a building which would be something better than an "old shed." "It is not surprising," says Dr. Coupland, "that in 1893 it was found necessary to abandon the system of interning families in the hospital quarters and to substitute for it the practice (which had always been adopted when persons refused to go to hospital quarantine) of daily inspection of infected houses, a practice which is customarily carried out in other towns during epidemics of small-pox." Hospital quarantine, therefore, which, when small-pox was not prevalent, had been described as part of the Leicester method, had to be given up when the outbreak did come. Here also, as with regard to non-payment of wages of quarantined persons, the method was one thing in the absence of small-pox and another thing in the prevalence of small-pox. In short, the Leicester system was triumphant so long as there was nothing to triumph over. It was an excellent, even a "perfected," method when there was no small-pox, but when small-pox prevailed Leicester had to fall back on "a practice which is customarily carried out in other towns." Notwithstanding the assertion of Mr. Biggs regarding non-payment of wages to quarantined persons Dr. Priestley, who was medical officer of health then, stated at the annual meeting of the British Medical Association in 1894 that the cost of hospital quarantine in the outbreak was 25*s.* per head per week for adults and 12*s* 6*d.* for children. The total number of persons kept under observation was 1261. If half of these were children their hospital quarantine would have cost nearly £1200 for a single week. But as we have said small-pox being prevalent the system was dropped.

"We find small-pox very easy to deal with," said Mr. Biggs in 1891,[1] "and the same hospital and staff of officials deal with small-pox as with other infectious diseases."

In 1885 Dr. Tomkins had reported to the town council that the hospital was only an ugly makeshift and that there was not proper accommodation for the separation of different diseases. That, however, was the opinion of a mere medical man, and one who, moreover, though a Leicester official, was actually a believer in vaccination and had the temerity to warn Leicester of its possible danger. Councillor Biggs knew better. He declared in 1891:[2] "We find small-pox very easy to deal with and the same hospital and staff of officials deal with small-pox as with other infectious diseases." Ex-Mayor Hart had gone even further than Councillor Biggs. As to other infectious diseases he had declared "if there is a case of fever it is dealt with directly and there is no fear of an epidemic." Of course not. That declaration also belongs to 1891. But—and there is much virtue in a but—there was no small-pox in 1891 and we have already admitted that the Leicester system is good so long as there is no small-pox.

How long did this system of using the same hospital and staff for different diseases continue after small-pox broke out? We shall see. Small-pox began to spread in October, 1892, and in November the *Vaccination Inquirer* was engaged in advertising another triumph of the method. The town council was differently occupied. With regard to children convalescing from scarlet fever in the hospital the following is a resolution, as we learn from Dr. Coupland (p. 40), dated Nov. 1st, passed by the Fever Hospital Sub-committee and approved by the Sanitary Committee: "Resolved that the parents of the children in quarantine be advised to attend at the hospital so that they may be informed of the danger of small-pox in the hospital and asked if they wish their children to be brought home to morrow (Wednesday) or would prefer to leave them at the hospital for the present." The form of words adopted here provokes a smile in its comical attempt to preserve some appearance of regard for the liberty of the subject and to conceal the urgency of the need for immediate escape from the hospital. There is a curious resemblance to American methods of voluntary vaccination as indicated by Dr. Rauch to the Royal Commission. Here is the impression which Dr. Rauch's evidence leaves on the reader's mind. An immigrant train as it nears the borders of the State for which the passengers are bound

[1] Vaccination Inquirer, July, 1891. [2] Ibid.

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is boarded by one or two vaccination officers. They pass from one to another explaining that they are there to carry out vaccination of all who cannot show that owing to small-pox or recent vaccination they do not require it. Everything goes smoothly till they come to some professor of the cult of anti-vaccination. "I understood that vaccination was voluntary here." "So it is," replies the officer, "quite voluntary." "Then I won't be vaccinated." "That's all right," is the reply, "you do just as you please. We'll stop the train and let you out when we get to the boundary of our State. At present we don't want anybody coming into it who is not protected against small-pox." "What is the town at which we will have to get out then?" is the next question. "Oh, there ain't any town; it's a hundred miles from anywhere." "Well, I suppose I must get vaccinated." "Not at all," replies the officer; "we always respect the liberty of the subject in the United States. Vaccination is quite voluntary. Ah, that's the part of your arm you wish me to do it on; thank you. Next, please."

So it was with the Leicester Hospital scarlet fever cases. Their parents were to be told of the danger of small-pox and then they were to do as they pleased. Three weeks later we have an indication of the result. On Dec. 21st we read: "Resolved that the three scarlet fever wards be recommended to be utilised for the reception of small-pox cases."

As regards small-pox this *sauve qui peut* made the best of a bad job. But how was it as regards scarlet fever? Dr. Priestley states in his report for 1893 that within the next two months after the hospital was closed against scarlet fever the cases in the town doubled in number. It appears in that year, if unnotified cases are included, the total ran up probably to 4000. Confining ourselves to notifications, however, Dr. Coupland shows that in 1888 the scarlet fever cases amounted to 132; in 1889 to 409; in 1890 to 516; in 1891 to 794; but in 1892 to 1331; and in 1893 to no less than 2308. Further commentary is not required either on ex-Mayor Hart's statement to the Commission that as regards fever under Leicester management there was "no fear of an epidemic" or on Mr. Biggs's assertion that "we find small-pox very easy to deal with and the same hospital and staff of officials deal with small-pox as with other infectious diseases." As before the Leicester system was one thing small-pox being absent and a very different thing small-pox being prevalent. But we do insist that these several thousand cases of scarlet fever be taken into account in considering the results of Leicester's procedure with regard to small-pox in 1892–93.

THE ROYAL SOCIETY.

ANNIVERSARY DINNER.

THOSE who were fortunate enough to hear the presidential address delivered by Lord Lister on the occasion of the anniversary meeting of the Royal Society on the 30th ult. must have been convinced that the society does important public work apart altogether from the stimulus which it gives to scientific workers to wrest from nature her secrets. It is a fitting occasion, too, to pay tribute to those who have gone from their labours during the year.

The past year in the history of the Royal Society has been a memorable one to which the fact of it being Jubilee year has contributed not a little. The Royal Society in the persons of the officers, vice-presidents, and three former presidents and Lord Lister formed a deputation to the Queen at Windsor to present *in propriâ personâ* the congratulations of the society. These and other incidents, such as the memorial to the Prime Minister urging upon him the importance of establishing in this country a national laboratory in which the testing and verification of instruments of various kinds should be undertaken in a regular and systematic way, afforded Lord Lister abundant material for the annual address. And it was but natural that he should linger upon the close bearing of much of the work done by Fellows of the society to the healing art. The most important reference of this kind was to the work of Dr. Monckton Copeman, whose valuable researches on variola and vaccinia are well known to our readers. Although comparatively little advantage has yet been taken of the system suggested by the lines of this research in this country it has been adopted abroad and the Local Government Board have recently requested their medical officer, Sir Richard Thorne, to inspect the operation of this system abroad with the result that Mr. Chaplin is likely soon to propose legislation for the purpose of giving the full benefits of this valuable process to the country of its discoverer. The advance to which Dr. Copeman's researches have led consisted in the newly found fact that an admixture of glycerine in certain proportions with vaccine lymph derived from the calf had the effect of causing in no long time the disappearance of what were termed the "adventitious microbes" invariably present in that material at the outset without diminishing the efficacy of the lymph for the purpose of vaccination. Lord Lister also announced that his old friend, that distinguished medical officer and gallant soldier, Sir William Mackinnon, the late Director-General of the Army Medical Department, had made a very important bequest to the Royal Society in furtherance of original scientific investigation and research. By his will and codicils dated 1896 and 1897 Sir William Mackinnon, after making certain specific legacies including one of £2000 to the University of Glasgow, bequeathed the whole residue of his property to the Royal Society subject to certain life annuities. The proceeds of the fund are to be applied by the Royal Society for the foundation of such prizes and scholarships for the special purpose of furthering natural and physical science, including geology and astronomy, and for furthering original research and investigation in pathology as the society may think best and most conducive to the promotion of those sciences and of original discoveries therein, such prizes and scholarships to be called after the name of the testator. At the conclusion of Lord Lister's address the society's medals were presented to those recipients whose names have already been announced in this journal.

In the evening the annual dinner was held in the Whitehall Rooms of the Hôtel Métropole, when there was present a very distinguished company including the leaders of all departments of science besides Ambassadors of various countries and representatives of the Houses of Lords and Commons. To the Duke of Devonshire had been allotted the duty of replying to the toast of "Her Majesty's Ministers and the Members of the Legislature." Though his Grace confessed to little scientific attainment his speech proved of the deepest interest to scientific men and to those interested in the progress of science in this country. Touching upon the question as to whether the State can with advantage more directly interest itself in the direction or assistance of scientific inquiry he confessed he was not prepared to express much, but he was led rather to consider the less ambitious object as he termed it—namely, that of making some of the main principles of science more accessible to the main body of the people. He expressed the hope and trust that at no distant time Her Majesty's Government may be able to make proposals and submit measures bearing in some degree upon the subjects just referred to. Amongst these the Duke of Devonshire included such subjects as the creation of a teaching university for London and for the whole country some reorganisation of its secondary education "which is the indispensable foundation of any progress towards higher scientific study." It is needless to add that these pronouncements met with considerable applause.

The proceedings terminated in the usual way, the American Ambassador proposing the "Health of the Royal Society," to which toast the President responded, and he in turn proposed the "Health of the Medalists," to which Professor Forsyth replied with great self-possession and felicity. The final toast, that of "The Guests," was proposed by Lord Kelvin, and Professor Campbell replied. The company then dispersed.

THE CAMPAIGN ON THE INDIAN FRONTIER.

THERE is not much news to be chronicled regarding the progress of the campaign against the frontier tribes. The operations have, as far as the Afridis are concerned, assumed the character of a harassing guerilla warfare. Sir William Lockhart has penetrated to the heart of their country and occupied Tirah and has announced to the Afridis

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his terms of peace and given them a week in which to submit to them. The cold is beginning to be severe and preparations must be made for winter quarters in case of a more prolonged occupation being necessary, and some of the Sikh regiments, who have done such splendid service and would suffer greatly in health from the cold of a winter's campaign, are returning to India.

But the strategical plan of the campaign, as we have understood it, does not necessarily involve our remaining in the country during the winter and there are indications that this plan will be adhered to. It is announced that Kohat will cease, or has already ceased, to be the base of operations and the Peshawar end of the Khyber Pass will take its place. General Lockhart's object was to get to and pass through the Tirah and Bara valleys and then make his way towards the Peshawar border, joining hands *en route* with General Hammond's column advancing towards the Bara valley from the east from Peshawar by the Khyber route. Sir William Lockhart, in the address he gave to the troops at Maidan, highly commended their bravery and devotion and pointed out very frankly the great natural advantages which the tribes possessed in the kind of warfare in which they were engaged from their intimate knowledge of the ground and from their skill in skirmishing and as rifle shots. He did this in order to inculcate the importance of discipline, controlled fire, mutual support, and the avoidance of straggling. Of course he did not omit to add his assured confidence in the success of his force, and it is a noteworthy indication of a general's entire belief and trust in the troops under his command that he had no misgivings about putting the position thus plainly before them. He knew the men with whom he was dealing. The troops composing the expeditionary columns have had most laborious marches through the defiles and over mountainous passes and have had to encounter a good deal of hardship due to the great diurnal variations of temperature, the hard work by day and disturbed rest at night, owing to the nightly firing and occasional "rushes" of the tribes, but their health and spirits have remained excellent. As illustrative of the liability of native troops from the plains of India to contract and die from respiratory diseases as compared with European troops we may take the figures in the blue-book on the "Sanitary Measures in India" recently issued. Respiratory diseases are the chief cause of death and in 1895 no less than 42 per cent. of all the deaths in the native army were due to them. Much of the pneumonia was attributable to the exposure endured by the regiments on active service in Waziristan and Chitral. The admission and death ratios were highest in the Indus valley and the hills, and the percentage of pneumonia to total deaths was there also highest. Both in the Indus valley and in the hills pneumonia was most prevalent in the cold months, and the same was the case for India as a whole. European troops suffer much less on field service than the natives, probably because they are more accustomed to cold, because they are better clad, and more nutritiously fed. Many medical officers serving with native regiments on the frontier are of opinion that the pneumonia is often of an infectious type and all seem agreed that malaria-saturated or scurvy-tainted men exposed to chill are peculiarly vulnerable in this respect.

Some progress towards peace has been made. The Tochi expedition appears to be settled, things are quiet in the Kurram, the Malakand expedition is over, the Ali Khel Orakzais in Mastura Valley have submitted and are paying the fines imposed upon them, and Sir William Lockhart is now waiting to see the result of his proffered terms to the Tirah tribesmen. If they are accepted, and according to the latest intelligence there appears to be some hope that they will be accepted, the troops will forthwith commence their return marches to India by columns. The "politicals" will, we feel pretty sure, try to effect a settlement if only to avoid the ruinous drain of a prolonged occupation on the Indian exchequer. General Westmacott's brigade has advanced to Duatoi after having traversed some miles of the worst defiles they have yet had to cross. It may be mentioned that the Lee-Metford bullet, as modified in India, has proved much more effective as regards "stopping power" than the missile which it replaced. According to the *Times of India* of Nov. 6th the deaths from disease in General Blood's Malakand force since Sept. 6th, including those at the base hospital at Nowshera, had only been—British seven, native five. This shows how healthy the troops have been and reflects much credit on the sanitary and medical arrangements. Intelligence from the Indian frontier regarding the campaign fixes what is to be the future programme. From the Bagh camp as a centre detached columns will march through the country, equipped with the lightest amount of baggage, stores, and food supplies. The latest news is of a more favourable character owing to the submission of several of the Afridi tribes. If the remaining tribes refuse to accede to the terms offered them the force will winter in a standing camp in suitable and specially selected position, probably near Barkai. According to some accounts the position of the Ameer of Afghanistan is a very difficult one, for his friendly policy towards the Indian Government is not popular with his own people or, of course, with the Afridi tribes. It is, to be earnestly hoped that a satisfactory settlement may be soon arrived at, for the situation whether regarded from a military or political point of view has grave difficulties. The positions taken by us cannot for sanitary, financial, and transport reasons be held during the winter, and when the troops evacuate them and return towards India it may be confidently expected that they will be subject to attacks by the tribesmen; and on the other hand to undertake another punitive campaign will be merely doing the work over again at ruinous cost. The sick and wounded are, we are glad to learn, doing well. The commissariat and medical arrangements during the campaign have by all accounts been very good.

THE BATTLE OF THE CLUBS.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND AND MEDICAL AID ASSOCIATIONS.

AS we reported in THE LANCET last week, Mr. W. G. Dickinson, the honorary secretary of the Society of Members of the Royal College of Surgeons of England, moved a resolution at the thirteenth annual meeting of the Fellows and Members of the College, held on Nov. 18th last, asking the Council of the College "..... to make a clear pronouncement for the information of Fellows and Members that the acting by qualified medical practitioners as the paid officials of any institutions which tout and canvass for patients or which allow the well-to-do classes to take advantage of rates of payment arranged to meet the necessities of the poor is 'disgraceful in a professional respect' and deserving of censure." Mr. Dickinson pointed out the widespread public and professional evils induced by Medical Aid Associations and other companies trading in medical attendance and was able to adduce examples in the procedure of other corporations in support of his resolution. The Royal College of Physicians of Ireland had expressed disapproval of their Licentiates accepting appointments to medical aid associations; the Royal College of Surgeons in Ireland had on one occasion at any rate represented to a Licentiate the impropriety of being associated with a canvassing business; and the Royal College of Physicians of London had declared association with institutions of this sort to be undesirable on the part of their Fellows and Members.

Mr. Dickinson's motion was carried, the President saying that if particular instances of canvassing were brought before the Council the cases would be considered very carefully. There should be no difficulty in giving the Council a good deal to consider.

EASTBOURNE PROVIDENT MEDICAL ASSOCIATION.

A meeting of the medical profession in Eastbourne was recently held to receive the second annual report of this association. The report showed that the year had been one of steady progress. The number of members had grown to 4153 as against 3689 at the date of the last annual report. The total amount received in members' payments for the year had been £743, an increase of 23½ per cent. upon last year. £624 had been distributed amongst the acting staff—a total higher than last year's by £130. The working expenses had been covered by a charge of something over 16 per cent. of the money collected. Only one instance of a family financially ineligible having gained admission to the association had been brought to the notice of the committee, and they were, after due inquiry, removed from membership. We congratulate the association upon their sound work; local organisations of this sort should have no difficulty in holding

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their own against the medical aid societies, supplying as they do better attendance at much the same aggregate cost, while the money is received by the people who do the work.

THE WANDSWORTH PROVIDENT DISPENSARY.

We have received the rules of the Wandsworth Provident Dispensary, the object of which institution is "to enable the working classes to insure to themselves and their families efficient medical advice and medicine during illness by their own weekly payments, *commenced in time of health*, aided by the contributions of other inhabitants." There are certain points about the rules which call for commendation, although in other respects the dispensary sins in company with most medical aid societies. For example, under Rule IV. the consulting medical officer, together with the treasurer and secretary, becomes an *ex-officio* member of the Committee of Management, whose functions are to be "entrusted with the general management of the institution, the appointments and dismissal of its officers and the superintendence of its financial affairs." We are glad to see that the resident medical officer, whose services constitute the whole and only benefit which the dispensary offers to its members, will have someone of medical knowledge to represent professional views on the Committee of Management by which he is controlled. He is himself probably in a far better position to help the Committee of Management than ever his consultant-colleague can be, but presumably he can inform that gentleman of the things that it is necessary for him to know. We note with regret that no wage limit is imposed upon the members. We have reason to believe that this dispensary is well and fairly managed, but we would point out to those in authority over its working that to have no wage limit and to seek aid from "other inhabitants" than the members is to invite abuse of the charity.

A QUESTION OF COMPARATIVE IMPORTANCE.

A correspondent in the Isle of Man sends us the following extract from the *Isle of Man Examiner* of some weeks ago:—

"The minutes of the Stores Committee [of the town council of Douglas] included the following:—

"Resolved: That the tender of Mr. T. S. Atkinson, Finch-road, quoting 3*s.* 6*d.* per horse per month for shoeing, including leathers, frosting extra, be accepted.

"Tender for supplying veterinary attendance and medicine for the ensuing year submitted and considered. Resolved: That the tender of Mr. T. S. Atkinson offering to supply veterinary attendance and medicine for the horses for a period of twelve months at £1 1*s.* per horse per annum, examinations as to soundness to be extra, be accepted.

"The minutes were adopted upon the motion of Councillor Cubbon, seconded by Councillor Moore."

An accompanying letter informs us that from the balance-sheet of a friendly society before him he learns that "a leading practitioner of the district attends members, provides medicine, and, if ordered, stimulants at the rate of 2*s.* 6*d.* per member per annum, a very small proportion of which is levied from the members themselves." We, like our correspondent, are very glad that Mr. Atkinson's services are appreciated at their true worth, but the difference between the price paid for the medical charge of a horse and that paid for the medical charge of a man is a little sensational, even though the quadruped is the larger animal.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6409 births and 4258 deaths were registered during the week ending Nov. 27th. The annual rate of mortality in these towns which had been 19·0 and 18·6 per 1000 in the two preceding weeks rose again last week to 20·2. In London the rate was 21·0 per 1000 while it averaged 19·7 in the thirty-two provincial towns. The lowest rates in these towns were 11·0 in Cardiff, 12·5 in Croydon, 13·1 in Portsmouth, and 15 5 in Hull; the highest rates were 23·7 in Sheffield, 24·1 in Burnley, 28·2 in Oldham, and 28·6 in Swansea. The 4258 deaths included 552 which were referred to the principal zymotic diseases, against 461 and 462 in the two preceding weeks; of these, 218 resulted from measles, 97 from diphtheria, 70 from whooping-cough, 70 from "fever" (principally enteric), 58 from scarlet fever, and 39 from diarrhœa. No death from any of these diseases was recorded last week in Brighton, Plymouth, or Derby; in the other towns they caused the lowest death-rates in Cardiff and Croydon and the highest rates in Oldham, Burnley, Halifax, and Blackburn. The greatest mortality from measles occurred in London, Birmingham, Huddersfield, Oldham, Halifax, Blackburn, and Swansea; from scarlet fever in Burnley; from whooping-cough in Sheffield; and from "fever" in Bristol, Preston, and Birkenhead. The 97 deaths from diphtheria included 63 in London, 8 in Leeds, 4 in West Ham, 4 in Burnley, and 3 in Manchester. No fatal case of small-pox was registered last week either in London or in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday last, Nov. 27th, was 3818, against 3680, 3777, and 3792 at the end of the three preceding weeks; 375 new cases were admitted during the week, against 339, 460, and 397 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London which had been 420 and 414 in the two preceding weeks rose again to 471 last week and were 36 above the corrected average. The causes of 59, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bradford, Leeds, Newcastle-upon-Tyne and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, Liverpool, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns which had been 20·1 and 18·5 per 1000 in the two preceding weeks rose again to 19·5 during the week ending Nov. 27th, but was 0·7 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·5 in Leith and 17·5 in Dundee to 22·2 in Aberdeen and 25·4 in Greenock. The 581 deaths in these towns included 23 which were referred to whooping-cough, 22 to diarrhœa, 12 to scarlet fever, 10 to measles, 5 to diphtheria, and 2 to "fever." In all, 74 deaths resulted from these principal zymotic diseases, against 64 and 62 in the two preceding weeks. These 74 deaths were equal to an annual rate of 2·5 per 1000 which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough which had declined from 16 to 10 in the three preceding weeks rose again to 23 last week and included 15 in Glasgow. The deaths referred to scarlet fever which had been 18, 11, and 8 in the three preceding weeks rose again to 12 last week, of which 5 occurred in Glasgow, 3 in Dundee, and 2 in Edinburgh. The 10 fatal cases of measles showed a decline of 2 from the number in the preceding week and included 9 in Glasgow. The deaths from diphtheria which had been 6 and 4 in the two preceding weeks were 5 last week, of which 2 were recorded in Glasgow and 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 161 and 145 in the two preceding weeks further declined to 123 last week and were 49 below the number in the corresponding week of last year. The causes of 35, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin which had been 19·8 and 23·3 per 1000 in the two preceding weeks further rose to 25 4 during the week ending Nov. 27th. During the past eight weeks of the current quarter the death-rate in the city has averaged 23·2 per 1000, the rate during the same period being 18·0 in London and 18·8 in Edinburgh. The 170 deaths registered in Dublin during the week under notice showed an increase of 14 upon the number in the preceding week and included 20 which were referred to the principal zymotic diseases, against 24 and 10 in the two preceding weeks; of these, 12 resulted from "fever" (principally enteric), 4 from diarrhœa, 3 from scarlet fever, 1 from whooping-cough, and not one either from

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small-pox, measles, or diphtheria. These 20 deaths were equal to an annual rate of 3·0 per 1000, the zymotic death-rate during the same period being 3 3 in London and 1 6 in Edinburgh. The deaths referred to different forms of "fever" which had been 8, 10, and 6 in the three preceding weeks rose again to 12 last week. The fatal cases of scarlet fever which had been 8 and 1 in the two preceding weeks rose to 3 last week. The 170 deaths in Dublin last week included 28 of infants under one year of age and 36 of persons aged upwards of sixty years; the deaths of infants showed a decline while those of elderly persons corresponded with the number in the preceding week. Four inquest cases and 4 deaths from violence were registered; and 71, or more than a third, of the deaths occurred in public institutions. The causes of 11, or more than 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR MACPHERSON is directed to investigate the cause of the recent outbreak of scarlet fever at Caterham Barracks. Surgeon-Lieutenant-Colonel Powell is appointed to the medical charge of the 18th Regimental District. Surgeon-Captain Weir, Surgeon-Lieutenant Hewetson, and Surgeon-Lieutenant Clements are ordered to be ready to start shortly for India; Surgeon-Lieutenant S. A. Archer is also held in readiness for service in India. Surgeon-Major Battersby takes over the charge of Station Hospital, Dover Castle, and Surgeon-Major White takes over medical charge of the Staff and Departments, Dover.

NAVAL MEDICAL SERVICE.

Surgeon George Allan has been allowed to withdraw from Her Majesty's Naval Service with a gratuity.

MILITIA MEDICAL STAFF CORPS.

The under-mentioned gentlemen to be Surgeon-Lieutenants:—Alfred Hugh Benson and William Fletcher.

VOLUNTEER CORPS.

Artillery: 1st Ayrshire and Galloway: Surgeon-Lieutenant J. G. Thomson resigns his commission. *Rifle:* 2nd Volunteer Battalion the Duke of Wellington's (West Riding Regiment): Surgeon-Lieutenant R. C. Brown resigns his commission. The under-mentioned gentlemen to be Surgeon-Lieutenants:—Louis Demetriadi and Henry William Williams. 3rd (Duke of Connaught's Own) Volunteer Battalion the Hampshire Regiment: Surgeon-Lieutenant C. S. Ticehurst to be Surgeon-Captain.

NAVAL MEDICAL EXAMINATION.

The under-mentioned gentlemen, who competed on Nov. 22nd and following days at Examination Hall, Victoria Embankment, for appointment as surgeon in the Royal Navy, have been granted commissions:—

	Marks.		Marks.
H. Newsome, M.B.	2702	H. W. A. Cowan, M.B. ...	2171
M. Cameron, M.B.	2670	S. H. Facey	2064
J. D. S. Milln, M.B.	2456	G. Taylor, B.A., M.B. ...	2043
D. W. Hewitt, M.B.	2323	A. Woollcombe	1974
K. H. Jones, M.B.	2318	F. Bolster, B.A., M.B. ...	1951
M. Waterfield	2285	G. E. Macleod	1942
H. W. W. Townsend, B.A.	2216	W. H. Pope	1932
E. D. Macnamara, B.A. ...	2165	J. W. Bird	1928
W. J. Codrington, M.B. ...	2148	J. H. Fergusson	1924
A. W. Campbell, M.B. ...	2102		

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

The following officers have accepted the invitation of the President and staff of the school to be present at the distribution of prizes and Bohemian entertainment which will take place at St. Martin's Town-hall, Charing-cross, on Thursday, Dec. 9th, viz.:—Major-General H. Trotter, commanding the Home District; Surgeon-Major-General J. Jameson, M.D. Glasg., Director-General Army Medical Department; Surgeon-Major-General J. B. Hamilton, M.D. Dub., Principal Medical Officer Western District; Surgeon-Colonel T. O'Farrell, M.D. R.U.I., Principal Medical Officer; and Colonel W. H. Mackinnon, Assistant-Adjutant-General Home District. The proceedings will commence at 8 30 P.M. precisely and a large number of the commanding officers of Yeomanry and Volunteer corps of the Home District have signified their intention of being present.

THE FRENCH IN MADAGASCAR.

The news from Antananarivo regarding the French occupation of Madagascar is not satisfactory. It appears that several of the French posts established in the Sakalava district have been attacked with the loss in some cases of a number of officers and men forming the garrison of these posts. A number of rifles and a large quantity of ammunition have fallen into the hands of the rebels. Reinforcements are being rapidly forwarded and the French will no doubt speedily stamp out the rebellion but not without incurring, it is feared, a good deal of sickness and loss of life on their part from malarial fevers and dysentery, owing to the fact that this is the most unhealthy season of the year in that climate.

THE GALLANTRY OF SOME OF THE NATIVE TROOPS IN INDIA.

The loyalty and devotion of the native army engaged in the frontier war in India have afforded extreme satisfaction. There have been several instances of great bravery on the part of native soldiers, in the Sikh and Goorkha regiments more especially, which thoroughly deserve recognition. It seems to us that examples of unusual gallantry entitle the individuals concerned to share in the honour and glory of their deeds and we hope to see a few soldiers of the native army who have been conspicuous for any act of heroic gallantry recommended for the Victoria Cross and that this tribute may be conferred upon them in a few cases where it is thoroughly merited.

THE SOUDANESE MUTINY.

News received from Fort Lubas and dated Oct. 24th gives an account of the great gallantry of Dr. Macpherson in carrying off Mr. Jackson, the Acting Commissioner, when badly wounded by the mutineers, to a place of safety under a heavy fire. Dr. Macpherson was himself wounded in the shoulder at the time of his succouring the Acting Commissioner.

THE SICKNESS IN THE RIFLE BRIGADE IN INDIA.

The *Times of India* of Nov. 13th states that the Rifle Brigade had arrived at Rawal Pindi where they made a halt for three days before proceeding to Umballa. It is reported that there have recently been 73 deaths in the regiment and that probably 100 men will require to be invalided.

DEATHS IN THE SERVICES.

Brigade-Surgeon-Lieutenant-Colonel North, 1st Madras Lancers, from cholera at Sanganakulli, in the Madras Presidency.

The *Army and Navy Gazette* says: "The Government of India has recently been called upon to decide a point affecting officers of the Indian Medical Service. The question raised had reference to the right of an officer of the Indian Medical Service in civil employ to demand a fee when called into a consultation on a sick military officer by the medical officer in charge of the case. It has been decided that an officer entitled to gratuitous medical attendance is also entitled to gratuitous advice from a medical officer in the employment of the Government called into consultation by the medical officer who is, in accordance with the regulations, in charge of the case. It is only when an officer declines the attendance of the medical officer provided by the Government and calls in another medical officer to attend him in illness that the usual fees can be claimed by the latter."

The promotion of Brigade-Surgeon-Lieutenant-Colonel Caldecott, I.M.S., to the rank of Surgeon-Colonel removes him from Central India where, according to the *Pioneer Mail*, he has served for a long time and enjoyed a deservedly high reputation for his surgical skill as well as his administrative ability. The Indore Charitable Hospital, the scene of his hospital work, is said to be a model of what such institutions should be. He was not only well known in Indore but throughout Central India, and in every native State will the loss of his services be deplored. The amount of good done by medical officers of this stamp in strengthening our position with the native population is not easily estimated.

TROWBRIDGE COTTAGE HOSPITAL.—The annual report of the Trowbridge Cottage Hospital shows that thirty-three patients were admitted during the past year.

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Correspondence.

"Audi alteram partem."

UNQUALIFIED ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—The General Medical Council have at last declared the employment of unqualified assistants to be "infamous conduct in a professional respect," but having done so it should I think go further and as far as possible protect not only the public but the qualified practitioner from the hosts of unqualified men up and down the country who unfairly and illegally pose as qualified. Hitherto this task has been undertaken, but only to a limited and half-hearted extent, by practically one body—viz., the Society of Apothecaries. In the analogous case of the law, however, we do not find our legal brethren so slow to move in the matter of protecting their qualified men against the insidious attacks of legal quacks. If the General Medical Council has no powers in the matter by their several Acts of Parliament it is surely time that these were obtained in the interests both of the profession and the public.—I am, Sirs, yours faithfully,

Swinton, Nov. 27th, 1897. SAMUEL HOSEGOOD.

To the Editors of THE LANCET.

SIRS,—I have perused the report of the proceedings of the General Medical Council in THE LANCET of Nov. 27th and I am lost on account of the vague, opposite, and indefinite expressions of opinion by the individual members of the Council as to what the appendix introduced by Dr. MacAlister really means. To begin with, on receipt of the appendix notice is a practitioner supposed to have to wade through these various speeches and digest them for his own mental enlightenment or confusion? The appendix concludes as follows: "But the foregoing notices do not apply so as to restrict the proper training and instruction of *bonâ-fide* medical students and pupils or the legitimate employment of dressers, dispensers, and *surgery attendants* under the immediate personal supervision of registered medical practitioners," and while I observe endless discussion — without any definite decision being arrived at—as to when, where, and how a man is a *bonâ-fide* student or pupil not one word do I note as to what is, or what is not, the limit of work of "a surgery attendant." I may say that I am in general practice and keep a qualified assistant and also a gentleman—full curriculum and son of a deceased hospital staff practitioner—whom at present I would describe as "a surgery attendant." We all live under the same roof; the attendant keeps my books, dispenses, and stays in the surgery while the qualified assistant and myself are out on our "rounds." He also attends a few midwifery cases when the qualified assistant and myself are otherwise engaged. He does not pay visits in the ordinary course of events; if a message comes when the qualified assistant and myself are out it awaits our return—unless there is a pressing and urgent call. Am I to understand that if word is sent to my house that one of my patients is in the position of imminent danger from miscarriage, hæmorrhage, precipitate labour, or accident during the absence of myself or assistant such a competent "attendant" is to shut the door and decline to act in the emergency, while the herbalists and midwives in the district and the very policemen in the street or some factory operative who have attended a superficial course of ambulance lectures are fit and proper persons to interfere in the hundred and one cases which arise in the everyday life of our manufacturing towns. It is all very well for the consultant majority of the General Medical Council to sit in philosophic arm-chairs and draw up theoretical, vague, and indefinite resolutions, but I, as a general practitioner and a practical man, would ask for something more definite. Until then I do not know what my position is — whether I am a law-abiding citizen or an "infamous" one! Finally, is it the intention of the General Medical Council to drive from within the ranks of the profession a whole army of deserving men, although unqualified, who are in common with their principals actuated by the ethic and moral code of a liberal profession, to swell the decidedly better paid outside ranks of unqualified persons and quacks over whom the Council not only have no control but judging by their past and present action do not seek to have control by those powers which are possessed by other professions?

I am, Sirs, yours faithfully,

Nov. 29th, 1897. G. P.

To the Editors of THE LANCET.

SIRS,—The resolution recently passed by the General Medical Council in regard to the employment of unqualified assistants is truly hard if not unjust. I know many who like myself have had a chequered career for want of other necessaries than brains and under the old regulations we were allowed and encouraged to prosecute our studies by the help of a qualified principal. The penalties set forth for a breach of this rule are so plain and so severe that it means a speedy extinction of the unqualified assistant and a great hardship upon many a principal whose slender means may not be sufficient to justify the engagement of a qualified assistant. Hundreds of married men in colliery districts will have to seek other employment.

If the General Medical Council would move in the matter of suppressing the quackery practised by so-called "oculists" and "aurists," abortionists, truss-specialists, and swindling pill vendors and leave the *bonâ-fide* unqualified assistant alone they would earn the gratitude of thousands of practitioners and especially of one who is not ashamed to say that had this stringent clause been inserted six years ago he would not have been able to sign himself

Yours faithfully,

Nov. 30th, 1897. M.B. LOND.

To the Editors of THE LANCET.

SIRS,—My son and I are partners and for many years have had an unqualified assistant who acts as dispenser and when very busy or in an emergency visits. The assistant registered many years ago as a student, but from pecuniary difficulties has never been in for his examinations; he has had ample experience both in England and Scotland and is quite capable of taking charge of any ordinary case. Are we acting in an "infamous" manner or going against the law of the land? I may say that we have three or four times tried a qualified man for the post, but they were always a failure, not because of any faults in practice, but because they thought that they ought to be more entrusted with patients and in fact got above their position. What am I to do?

I am, Sirs, yours faithfully,

Dec. 1st, 1897. MEDICUS.

THE ANNUAL MEETING OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—In your report of this meeting you omit to notice the fact that the Council of the College passed in 1893 a resolution (which I quoted) supposed by many to refer to medical aid associations. This resolution declares it to be degrading to the profession and disgraceful to the College that Fellows or Members should be connected with "trading institutions for the treatment of disease." This would be considered by most people a good definition of a medical aid association as usually conducted by laymen. It appears, however, that it really referred to the Harness Belt Company. My point was that if the Council could, without hesitation or difficulty, pass such a resolution as this in 1893 there can be no valid reason why it should not pass a similar one in 1897. There is every reason why it should do so since its obstinate refusal has already led to the scandal of medical aid appointments being resigned by Members or Licentiates of other colleges whose councils have had the courage of their convictions and to their places being immediately taken by Members of the Royal College of Surgeons of England.

It is no doubt satisfactory that the Council is willing to consider a case in order to determine whether it comes under By-law XVI., but as it has already decided that it has no power to question the legal position of the holders of these appointments the probable result of such consideration may be easily foreseen. It comes to this; every member of the Council knows that what is going on all over the country is a scandal and a disgrace to the profession several have said so publicly; and yet on account of some absurd technicality they are afraid to express a collective

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opinion which they know would have a powerful effect in checking the evil. Such an opinion may be called "pious," but it would govern the policy of the Council, would act as a warning to offenders, and would indicate a determination to use every possible means to purge this College of all complicity with one of the greatest scandals of the day.

I am, Sirs, yours faithfully,

Nov. 29th, 1897. W. G. DICKINSON.

"MORALS AND THE STAGE."

To the Editors of THE LANCET.

SIRS,—In an annotation with the above heading in THE LANCET of Oct. 2nd you say: "We should doubt ourselves whether crime was ever prompted by either a poster or a stage representation," and you also quote Sir Henry Irving as having asked at a complimentary dinner at Cardiff, "How many wives had owed a violent death to the pernicious example of Shakespeare in *Othello*"? While I agree with you as to posters, which produce a mere passing impression, and are therefore as highly coloured as possible with that object in view, I think that a stage representation is a very different thing and that in the case of tragedies the more powerful the play the more is the attention fixed and the more likely are the mental images to remain deeply impressed in the brain of the spectator.

Some years ago I had to do with a case of murder where the idea of strangulation was directly prompted by a theatrical representation of *Othello*. It was the case of a young Italian who insured the life of his servant to his own benefit and after waiting a couple of months smothered him in his bed one night. At his trial the criminal calmly remarked that he had lately seen (*twice* he actually went, probably with the object of perfecting his method) the opera of *Othello* and that he "only did to the young man what Othello did to Desdemona," and he also confessed that in the very act of smothering his victim "the scene in the theatre was vividly before him as it was before him now" ("*Tuve y tengo presente lo que hizo Otello con Desdemona*" is what he actually said in Spanish). There is no doubt that in this case the crime of strangulation was directly suggested to the would-be murderer by a stage representation of *Othello*. This is one case at any rate for Sir Henry Irving to ponder over. The whole case of this Italian was especially rich in medico-legal interest, but I must not encroach any more on your valuable space.

I am, Sirs, yours faithfully,

GEORGE MACKERN, M.D. Lond.

Buenos Aires, Argentine, Nov. 4th.

"THE DISINFECTION OF CLOTHING BY HEAT."

To the Editors of THE LANCET.

SIRS,—I have not the good fortune to be personally acquainted with Professor Delépine, but judging from the courteous wording of his letter I feel confident that he will acquit me of plagiarism when I assure him that until to-day I was absolutely ignorant that anything like my steam disinfector had ever been in use before. I think that there is some excuse for this inasmuch as I have not noticed any mention of it in THE LANCET; nor in the appendix on Steam Disinfectors in Applied Bacteriology (edition 1897), by Pearmain and Moor; nor in the chapter on Disinfection in the Manual of Infectious Diseases (edition, June, 1896), by Goodall and Washbourn; nor in the Theory and Practice of Hygiene (edition 1896), by Notter and Frith. Mr. Bailey and myself had been working at the subject for several weeks, but the heating power was always the stumbling-block, and although the sight of painters with an "Etna" in hand scraping old paint off doors was familiar enough the idea of using volatilised petroleum never occurred to me until Mr. Bailey suggested it. Curiously enough, a week or two before I had begun to think about making a machine a notice under the head of "New Inventions" appeared in THE LANCET of May 29th, 1897, describing "a wickless oil stove with smokeless flame" (made by the same firm which makes the "intensive oil-furnace" shown in the illustration to my paper) and referring to the production of this flame as an "attainment of some importance." This notice escaped my attention probably because I had not at that time any use in view for such a stove. With regard to the similarity in shape, dimensions, and the amount of water necessary which Professor Delépine points out, my opinion is that if he put the principle of heating by volatilised petroleum into the heads of ten men and told them to make a steam disinfector nine of them would make one pretty much the same in shape and dimensions and would come to the same conclusion as to the amount of water necessary as Professor Delépine and myself. With regard to Mr. Walter Bernard's letter I have looked up THE LANCET of May 16th, 1896, and I find a short account of an apparatus for disinfection by exposure to fumes of heated eucalyptus and carbolic acid. There is no mention of volatilised petroleum or steam at boiling water temperature and without steam at 100° C. I feel convinced he will not get eucalyptus and carbolic acid fumes to penetrate through woollen fabrics in any reasonable time; if, on the other hand, he can get steam at that temperature throughout his disinfecting chamber he can then dispense with those agents altogether.

I am, Sirs, yours faithfully,

Nov. 27th, 1897. A. F. MESSITER.

To the Editors of THE LANCET.

SIRS,—Mr. Messiter has shown me Professor Delépine's letter to you and his own answer. I beg to confirm all that Mr. Messiter says and to say that the use of volatilised petroleum was suggested by myself alone without ever having seen or heard of any similar disinfection apparatus. The similarity in shape and dimensions may be accounted for by the fact that galvanised iron is sent out in sheets 6 ft. by 2 ft. 6 in. The height of the chamber without the lid is 2 ft. 6 in. and 6 ft. gives diameter of 21 inches after allowing for seams.

I am, Sirs, yours faithfully,

Epworth, Nov. 29th, 1897. ALFRED BAILEY.

"THE MECHANISM OF DEATH FROM CHLOROFORM."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Nov. 13th Surgeon-Lieutenant Lane criticises my paper on the Mechanism of Death from Chloroform. It would have been fairer to me had he read my paper more carefully, giving the expressions used in it their proper value, and it would have been still better had he reserved his remarks until he could have referred to my previous paper and Dr. Snow's book from which Cases 6 and 7 are taken.

The reports of the cases coming at second-hand are not full, but the information afforded is enough for the immediate purpose and greater than Surgeon-Lieutenant Lane seems to appreciate. In describing Case 2 I advisedly employ the terms "breathing deeply" and "free respiration" expecting these words to be taken at their current value, as indicating that air was freely entering the chest and trusting your readers to credit me with a knowledge of the difference between "free" and "obstructed" respiration. Yet Surgeon-Lieutenant Lane does not know "whether air was entering the chest or not!" In Case 3, scanty as the information is, it is enough to emphasise the fact that there may be free respiration at a period when the circulation has practically ceased as shown by the absence of bleeding on incision. As regards Case 7 Surgeon-Lieutenant Lane says "the clinical picture is familiar enough. It is that of a man whose air-passage is obstructed, say, by the root of his tongue." Has Surgeon-Lieutenant Lane ever known a patient with his air-passage obstructed in this fashion take long, deep inspirations or die under the circumstances described?

In Case 1 I agree with Surgeon-Lieutenant Lane that similar symptoms could be produced by shock—that is practically the point to which I have already drawn attention. In this particular instance I consider the symptoms were caused by the chloroform and precipitated by the sudden raising of the head further depleting the nerve centres of blood. May I remind Surgeon-Lieutenant Lane that in the condition known as "shock" we have extreme lowering of the blood pressure. My contention is that an equal lowering of the blood pressure may also be produced by chloroform (indeed is produced) and the outward manifestations of the occurrence of this condition depend upon the degree of narcosis the patient is in at the time.

I am, Sirs, yours faithfully,

Manchester, Nov. 24th, 1897. ALEXANDER WILSON.

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"A NOTE ON CYCLING."

To the Editors of THE LANCET.

SIRS,—As a cyclist of over a quarter of a century (I first rode in 1872) I feel I must challenge Dr. Campbell's statements regarding posture and reasons given for less fatigue in cycling compared to walking.

First, regarding posture, it stands to reason that if the dorsal curve of the spine is exaggerated the ribs must necessarily come closer together and so impede thoracic movements. Diaphragmatic respiration is encouraged therefore. The intervertebral discs are pressed upon and, in proportion to the length of time the position is assumed, they are made wedge-shaped, the spinal ligaments are modified by vibration to this position, and the result is kyphosis bicyclistarum in those cases where Dr. Campbell's graceful curve of back is made to harmonise with the wheel rims for hours and days together. I have ridden all sorts of "safeties," various makes of "ordinary" (varying from a 56 in. to a 62 in.), the old Ariel, and the iron-rimmed "bone-shaker," and my experience is that the intervertebral discs, though capable of much recuperation after malposition in riding, are very sensitive to jarring and vibration. To ride an iron-rimmed bone-shaker with a curved back would be fraught with dire discomfort subsequently. My theory is this—that so long as the *lumbar* curve of the spine is a forward one—i.e., so long as its convexity is anterior—it is quite allowable to bend the spine forward as a whole, so that the resistance to the atmosphere is diminished; but if the lumbar curve is obliterated and made continuous with the dorsal one the position is faulty. I speak with more authority than most cyclists for I have made many trials and being 6 ft. 6½ in. in height a faulty position of the spine in my case soon "tells."

Regarding the second point, as to increased endurance, the whole hinges upon carrying *versus* rolling a weight. In cycling we roll our own weight; gearing gives leverage (third order) and diminishes muscular movements; ball-bearings diminish friction, and pneumatic tyres are to the cycle what steel rails are to the train and locomotive. I am willing to admit Dr. Campbell's comparative anatomy, but if the erect position were such an effort to maintain as he suggests, then I for one ought to find walking a most arduous exercise. In practice I do not; I can walk all day and do a mile in eleven minutes, therefore although Dr. Campbell's suggestions regarding diminished distance from head to feet may apply in some cases he cannot lay it down as a universal fact.

I am, Sirs, yours faithfully,
G G. GIDLEY, M.R.C.S. Eng., L.R.C.P. Lond.

Cullompton, Devon.

A QUESTION OF TITLE.

To the Editors of THE LANCET.

SIRS,—The modern development of professional ethics has quite determined that a practitioner shall not advertise himself as a Doctor of Medicine when he is a Licentiate of the College of Physicians only and so on. Is it not quite a parallel indiscretion for a hospital to advertise itself as the "Cancer Hospital" when members of its staff admit cases of uterine myoma and perform "panhysterectomy" without making it clear that they at least had the excuse of a mistake in diagnosis?

I am, Sirs, yours faithfully,
LAWSON TAIT.

Newhall-street, Birmingham, Nov. 26th, 1897.

"SURGICAL SYMPTOMS IN CONNEXION WITH FILARIA SANGUINIS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 9th last is an annotation on an interesting paper on Filarial Diseases of the Lymphatics, read by Surgeon-Lieutenant-Colonel W. K. Hatch before the Bombay Medical and Physical Society. Everyone must sympathise with Surgeon-Lieutenant-Colonel Hatch in the unfortunate issue of the case upon which he reluctantly operated, but at the same time the evidence afforded by the symptoms point to death having been due to some cause unconnected with the disease of the lymphatics. In any case I submit that it is hardly rational to condemn this operation on the results of an isolated case.

In an article on this subject[1] I drew attention to the fact that twenty-four operations of this nature had been performed during the last seven years in the Madras General Hospital and in none of these cases did any serious symptoms arise. In carrying out the operation care should be taken as far as possible to secure all the lymphatic vessels before they are divided. If, in spite of this precaution, leakage should occur, firm pressure should be applied by means of a sponge which is included within the dressings. If these precautions be adopted the wound will generally heal by first intention. Cases of filarial lymphangiectasis of the spermatic cord are treated in the same manner and with the same precautions. Experience has confirmed me in the opinion that operative measures are called for in many cases of lymphangiectasis of filarial origin. Not only is there a prospect of securing some of the parental worms, a result which I have in several instances achieved, but there is also the prospect of relieving the patient from the serious annoyance caused by recurring attacks of inflammation. There are no doubt certain cases in which there have been attacks of chyluria or in which there are other evidences to show that the seat of obstruction is at some point high up in the lymphatic system that is not suitable for operation. Putting such cases aside the operation is one which, in my opinion, may be confidently recommended as holding out a prospect of relief to the patient and one which involves but little risk.

I am, Sirs, yours faithfully,
J. MAITLAND, M.D. Edin.,
Surgeon-Lieutenant-Colonel.

General Hospital, Madras, Nov. 11th, 1897.

ON A SOPHISTICATED SYRUP OF FERROUS IODIDE.

To the Editors of THE LANCET.

SIRS,—May I be allowed to call attention to the fact that much of the syrup of ferrous iodide now found in the pharmacies contains hypophosphorous acid in appreciable quantities. The responsibility for this seems to rest on certain London firms who prepare syrupoids or solutions for the preparation of these syrups alleging them to produce more elegant syrups than the methods of the Pharmacopœia. The presence of the hypophosphorous acid being quite unlooked for may explain how it is that syrupus ferri iodidi so often produces gastric troubles in young children.

I am, Sirs, your obedient servant,
Dublin, Nov. 29th, 1897. J. C. MCWALTER, L.R.C.S. Irel.

"THE IMMEDIATE TREATMENT OF THE DEFORMITY OF SPINAL CARIES."

To the Editors of THE LANCET.

SIRS,—The paper which we read on this subject before the Clinical Society of London on Nov. 12th was brought forward by us for certain specific purposes which were therein detailed—viz., to demonstrate the feasibility and safety of this method in suitable cases. The question of ultimate results was one with which a paper founded upon cases of four months' duration could not pretend to deal nor did it attempt to do so. As such it was accepted for reading. It is a matter of great satisfaction to us that you in your editorial article of Nov. 20th and in common with other medical periodicals have granted our theses and in the following words: "(1) That angular curves of the spine can very generally be straightened by the exhibition of an amount of force well within the limits of safety; (2) that this treatment is not attended with grave immediate danger if carried out with due care; and (3) that curves of long duration and great extent may yield to this treatment."

There appear, however, to be two discrepancies in your editorial article to which we wish to allude. In the first place we fail to understand how, in view of the three conclusions to which you had already come, the next statement can be substantiated—viz, "the demonstration was of value and interest solely as indicating the method adopted and the extent to which curves of the spine will yield to force." And in the second place in an early part of your remarks you speak of the method as "an altered form of an old and discarded treatment of Pott's disease of the spine," and later

[1] Brit. Med. Jour., Oct. 2nd, 1897

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as a "new treatment." The desire to see ultimate results can and will be gratified when sufficient time has elapsed for the spines to become consolidated which in the nature of things must take at least twelve to twenty-four months. We regard our paper as a timely and not a premature communication delivered with the object of demonstrating the facts and conclusions you have described as "being clearly shown." We are, Sirs, yours faithfully,

A. H. TUBBY.

Weymouth-street, W., Nov. 27th, 1897. ROBERT JONES.

*** We fail to appreciate the "discrepancies" our correspondents allude to. Spinal curvature is not the essence of spinal caries but an accident in its course, and we are of opinion that the authors of the papers at the Clinical Society offered no material evidence to show that the treatment they described and illustrated is of value in the treatment of the disease as distinguished from the deformity with which it is often accompanied. It is not unusual to describe "an *altered* form of an old" treatment as a "new" treatment; indeed, if the word were not to be used in this sense it would have to be almost banished from modern medical literature. We shall await the demonstration of the ultimate issue of this treatment with open mind and in the meantime remind our correspondents that a demonstration of a method of treatment does not afford material for the discussion of the therapeutic value of that treatment.—ED. L.

THE INDIAN MEDICAL SERVICE.

To the Editors of THE LANCET.

SIRS,—We have now such an unsatisfactory condition of the Medical Department of the British Army that anything which tends to impair the position and diminish the efficiency of one of the allied departments will I am sure receive consideration at your hands. Hitherto the advantages offered by the Indian Medical Department to members of the profession have been sufficient to induce our best men to become competitors at the examinations, and there are always plenty of good candidates for vacancies. Perhaps this is the reason why the authorities are beginning to make encroachments on what should be regarded as rights. To many perhaps the changes made may not appear important, to those affected by the changes they are so, and appear to indicate the inauguration of a period of interference, the result of which may be to the detriment of the service, of which they are at present proud to be members. For instance, no allowance is now made to a medical officer for the expenses involved in moving his charger from one station to another when he is on duty, whilst a combatant officer receives a station warrant which enables him to take his horse without expense whether the stations are far apart or not. This sometimes presses very hardly on a junior officer. Again, when a medical officer is attached to a native regiment for duty he is not given staff pay until he has passed the lower standard examination in Hindustani, although he performs all the duties which will devolve on him after the passing of the examination. This is all the more a hardship when the medical officer is sent to serve with a regiment on the frontier, which occasionally happens, and is refused leave from his post for the examination. He may be detained for several months on duty and yet receive no consideration, whilst the newly joined wing-officer or squadron leader is granted the extra pay on joining the regiment and before passing the examination

The question of private fees and presents from native chiefs who may have been patients is one into which I will not enter now; it is a large question and demands attention from one more conversant than myself with the facts of the case. There appears, however, to be little doubt that the British Resident at the court of a native potentate occasionally exercises his power in estimating the value of the services rendered by the medical officer at a sum which is, perhaps, hardly adequate, and conveys his decision in a manner which is not only harsh but unfair, whilst the snub which the would-be donor of the gift receives must make him chafe at the presence of the official meddler. Some of the presents which have been given have been possibly more than adequate to the service rendered in the opinion of government officials and have aroused their jealousy, but it is surely ill-advised for the Government to interfere too much in what should be a private transaction between doctor and patient. The prospect of obtaining high fees must be a strong inducement to many to perfect their knowledge and gain such a reputation as to cause a demand for their services by those well able to pay.

The abolition of the two posts of Surgeon-General in Bombay and in Madras, and the appointment of a Surgeon-Colonel with the added rank of Inspector General of Hospitals cannot be regarded as a step in the right direction. The officer so appointed has to do the same kind of work as the former holder of the post—the Surgeon General—and has the same amount of responsibility, but receives only the pay which was paid him before (so-called) promotion, and when he retires is only entitled to the pension of Surgeon-Colonel and not that of the higher rank.

I do not think, Sirs, that a finer body of public servants exists than the Indian Medical Service, it is simply invaluable to the Empire of India, and its members would probably be the last to complain, however unfairly treated. There is all the more reason for those at home with the efficiency of that service at heart to raise a word of protest against procedures on the part of the Government which are sometimes unfair, sometimes ungenerous, and occasionally hurtful, to those who, bound more or less by the rules of the service, are unable to raise their own voices in protest.

I am, Sirs, yours faithfully,

London, Nov. 16th, 1897. PRŒLIUM.

"DR. MENDINI'S HYGIENIC GUIDE TO ROME."

To the Editors of THE LANCET.

SIRS,—With reference to your reviewer's remarks in THE LANCET of Oct. 9th. p. 919, about the "reckless consumption of quinine," while I admit that its use at other times than during illness will to some extent interfere with its successful use when fever comes on, does not this, however, strike at the use of the drug as a prophylactic whether so used by "medical advice" or otherwise (residents in malarious countries do not need medical advice to use quinine; most know its value)? I wonder what your reviewer would think of the gigantic experiment going on in Bengal and Punjab gaols for the past three years. From June to November for three years past every prisoner in Bengal and Punjab (32,000 in all) has been given either with lime-juice or with sulphuric acid daily for five months five, ten or fifteen grains of either quinine or cinchonidine and no bad results have been heard of. If quinine is such a deadly "poison to the vaso-motor system" as Tommasi-Crudeli says how is it so constantly recommended for prophylactic use? I have now for three years for five months each year given cinchonidine sulphate to 1200 prisoners daily and have never seen anything approaching a bad effect; a few cases (and very few) of mild headache and buzzing in the ears are the worst results I have seen and I have been on the look out for such. On the contrary the results of the prophylactic issue have been, in my opinion, exceedingly good. In my own large central gaol there has been a death-rate of only 9·0 per mille in 1895 and 7·5 in 1896, a result which few prisons with over 1200 prisoners in non-malarious England will beat, and in the present very malarious and famine year the results of the cinchonidine parade have been also very good—viz., the mildness of the cases of ague and as in the past two years the almost total absence of bowel complaints. Moreover, the Bengal Government have, in my opinion, done great good by encouraging the "reckless consumption" of quinine by selling it in "pice packets" in every post-office in every village in populous Bengal. In a malarious country like either Italy or Bengal I should be sorry to see people wait for "medical advice" to take a dose of quinine.—I am, Sirs, yours faithfully,

Buxor, India, Oct. 27th. W. J. B.

BARRY ACCIDENT HOSPITAL.—The committee of the Barry District Nursing Association and Accident Hospital held a meeting on Nov. 23rd under the presidency of Mr. G. Neale, L.R.C.P. Edin., J.P. The secretary reported that the financial difficulties were considerable and added that he thought they would have to discontinue the work if the subscriptions were not increased. It was decided to fully consider the financial position of the association at the next meeting.

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LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Lunacy Difficulty in Lancashire.

THE unfortunate *contretemps* which resulted from the refusal of the Mill-road Infirmary authorities to admit the wandering lunatic alluded to in an annotation in the last issue of THE LANCET has given occasion to the West Derby guardians to explain their position in the matter. The chairman of the Mill-road Infirmary pointed out at the last meeting of the board that the guardians had done their utmost to stir up the Lancashire Asylums Board to make further provision for lunatics in the county asylums and on several occasions had had some sharp passages of arms with the Asylums Board. He had no hesitation in saying that the blame rested entirely with the Asylums Board. He further stated that the Commissioners in Lunacy had backed them up in refusing admittance at Mill-road to police cases; but on the other hand no one had ever been refused when accommodation could be found. Other members concurred in the censure of the Asylums Board. At the annual meeting of the Lancashire Asylums Board held at Preston last week the chairman contented himself with saying that the board were being roundly abused for not providing additional accommodation in the county asylums. A new asylum is about to be erected at Winwick for the sum of £253,000, which will be ready for the reception of patients in two and a half years! The wards for male suicidal patients at Rainhill are also to be enlarged, fourteen single rooms are also to be added to the female refractory ward, and the admission wards are also to be enlarged, the total cost of which will amount to £5900.

Health Committee: the Cost of Disinfecting Houses.

Owners of house property in Liverpool have long felt it a hardship that the cost of disinfecting their tenants' houses after the occurrence of infectious diseases should fall upon them instead of upon the tenant or municipal authority. The considerate action of the health committee will now relieve them of a portion of their liabilities. After the first of January next the work of stripping the papers off the walls of infected houses will be done by the health committee; for which purpose the sum of £1000 will be included in the estimates for the year 1898. This concession has been brought about by the action of the Land and House Owners' Association which has agitated in the matter for a considerable time.

A Nurse's Quarantine: A Wholesome Rule.

A case of interest to employers of nurses in attendance on infectious diseases recently came on for trial before Judge Shand at the Liverpool County Court. The defendant's child was suffering from scarlet fever and was nursed by the plaintiff; the latter now claimed from the defendant one week's additional wages and expenses for the period during which she remained in quarantine. The rules of the nurse's home where she was employed prohibited her from accepting another engagement until she had undergone disinfection for one week. His Honour gave judgment for the amount claimed and remarked that the rule alluded to above was a wholesome one and clearly in the interests of the public.

Ladies' Charity and Lying-in Hospital: A New Departure.

A new departure is about to take place in the conditions for the admission of patients to the Lying-in Hospital. At present none but married women on production of their "marriage lines" are admitted. A more generous and humane spirit has now infused itself into both committees (ladies' and gentlemen's). The two committees have unanimously decided that some provision should be made for unmarried women in their first confinement. It has not yet been arranged whether the accommodation for such cases shall be in the hospital or in wards outside it. Additional funds, it is needless to say, will be required to enable the committees to carry out this most kindly act of charity. All right-thinking people will congratulate the joint committee on its large-heartedness and good common sense in introducing such a long-needed reform in the economy of the hospital, which after all is only in accordance with the gospel of humanity.

Annual Dinner of the Medical Students of University College, Liverpool.

In point of numbers the medical students' annual dinner, which took place on Saturday evening last at the Adelphi Hotel, was the most successful ever held; 150 gentleman sat down to an excellent repast. The students were in great "form" and thoroughly realised their importance on the festive occasion.

Bacteriologist to the Liverpool Corporation.

Professor Rubert William Boyce, of University College, Liverpool, has been appointed analyst to the corporation at a salary of £230 per annum, which provides for 200 analyses of food, including meat, milk, &c., and 100 analyses of water. The appointment although technically that of "analyst" will be for all intents and purposes bacteriological; but as the Food and Drugs Act only makes provision for the former title the corporation have no power to appoint a bacteriologist pure and simple. With the large field for scientific observation which Professor Boyce will now have at his command the experience gained will not only be of incalculable benefit to the city of Liverpool but also to the North of England in general for which his laboratory will eventually become the bacteriological depôt. It is needless to say that Dr. Boyce's new appointment is in addition to that of his professorship in University College and will be received with approbation by his numerous friends here.

Nov. 30th

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

The Western Infirmary, Glasgow.

No progress towards the settlement of the dispute with Professor Macewen can yet be recorded. The report submitted by the managers to the annual meeting on Nov. 26th expressed the view that the proposed rearrangement of wards was quite in harmony with the agreement between the University and the infirmary. At the same time it was allowed that the Senate does not assent to this view and it was intimated that negotiations are at present proceeding which the managers trust will soon lead to an amicable settlement. It is understood that whilst there have been conferences between the managers and the university representatives no terms of agreement have been arranged. The terms of the report led to some discussion at the meeting of the subscribers and an endeavour was made both to obtain more information and to bind the managers to restore the third ward to Professor Macewen's care. Neither of these attempts was, however, successful and the proposal to substitute the name of another gentleman for one of the nominees in the official list was also fruitless. The meeting therefore resulted in a decided victory for the managers, though all the speakers agreed in their estimate of the great value of Professor Macewen's work and expressed their conviction that every effort must be made to retain his services for the University and the infirmary. Other features of interest in the managers' report are the announcement of the decision of the managers to erect a new building for the out-patient department at a cost of £25,000, the building to include also two wards for the treatment of cases of skin disease; the proposed conversion of the old laundry into wards for the accommodation of cases unsuitable for admission to the general surgical wards; and the extension of the nurses' home. The treasurer's statement showed a deficit on the year of the sum of £3135 8*s.* 2*d.*, which includes a sum of £693 0*s.* 2*d.* charged against the infirmary from the Lady Hozier Convalescent Home, this branch of the organisation not yet being self-supporting.

Glasgow Royal Infirmary.

The proposal to commemorate the sixty years of the Queen's reign by a partial rebuilding of the infirmary has not met with the full success for which the promoters hoped. For this the difference of opinion as to the wisdom of the proposal is in part responsible. The actual sum raised amounts to £74,000, whilst £100,000 was the total desired. At a recent meeting of the committee in charge of the scheme a letter was read from Sir John Muir offering suggestions for the improvement of the fund and the perfecting of the reconstruction scheme. The basis of the proposal is that in the new pavilions, each of which is to contain eight wards, any donor of £5000 shall be allowed to name a ward, whilst a gift of £250 shall confer a similar privilege in reference to an individual bed. Sir John

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Muir accompanies his letter by the offer of an additional £5000 provided four other donors of a similar sum can be found. The plans of the new buildings have been prepared and it is anticipated that the building operations will be commenced in the spring of next year. During the period of reconstruction some of the present wards will necessarily be closed and temporary accommodation for patients is to be provided outside the infirmary.

Dec. 2nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

General Medical Council: The New Crown Representative.

HER MAJESTY has been graciously pleased to nominate Dr. James Little, of Dublin, to succeed Dr. William Moore as the Crown representative of Ireland on the General Medical Council for the next five years.

A New Convalescent Home for Dublin.

A special meeting of the guardians of the South Dublin Union was held on Nov. 29th to consider the advisability of establishing a convalescent home for patients suffering from infectious diseases which would be practically an auxillary to the Hardwicke and Cork-street Fever Hospitals. A resolution was proposed that Kimmage House and lands in the neighbourhood of Terenure should be purchased for the purpose, but it met with very strong opposition on the part of the residents in that populous district. Sir Frederick Shaw read a memorial signed by many of them protesting against the injury to valuable property that would follow the adoption of the scheme suggested. It was pointed out that the Terenure College for boys and a large poor school educating about 300 children were both situated within a few hundred yards of the proposed site. After a long discussion the resolution was ultimately rejected by a large majority. The guardians are therefore baffled again in their efforts to establish the much required convalescent home. It will be remembered that a former attempt to locate the hospital at Blackrock raised a storm of very natural opposition from the residents there and from the press of Dublin as well. The public were informed on that occasion that Dr. Blyth and other eminent sanitarians had made very strong statements as to the long "striking distance" of infectious disease and the advisability of the complete and thorough isolation of hospitals containing it. It is evident that the guardians of the South Dublin Union must, next time, look further afield.

A Medical Deputy-Lieutenant.

Sir Francis Cruise, M.D., of Newtown-Cruisetown, Nobber, in the county of Meath and Merrion-square, Dublin, has been appointed a Deputy-Lieutenant for the county of Meath. Sir Francis Cruise is consulting physician to the Mater Misericordiæ Hospital.

Viceregal Visit to the Royal Hospital for Incurables, Dublin.

Her Excellency the Countess Cadogan paid a private visit to the Royal Hospital for Incurables, Morehampton-road on Nov. 29th for the purpose of inspecting the articles made by the patients for the sale of work which is about to be held there. Her Excellency made many purchases and spent a long time in the wards of the institution where she spoke kindly and graciously to many of the poor inmates, especially to those in the department for phthisical cases where, among many other interesting patients, is to be encountered a man who was orderly to General Gordon at Khartoum.

The O'Grady Memorial.

A meeting of the executive committee in furtherance of this memorial was held at 90, Stephen's-green, Dublin, on Monday evening, Nov. 29th, Sir George Duffey, M.D., in the chair. The hon. treasurers announced a considerable number of subscriptions. The committee having transacted all necessary business adjourned till Dec. 13th. Further subscriptions will be received by the hon. treasurers, Mr. M. A. Donnelly and Mr. George de Belle Ball.

The Belfast Municipal Elections.

These elections consequent on the enlarged area of the city were held on Nov. 25th and the results present two remarkable features—the success of the Labour candidates and of the members of the medical profession. The United Trades Council put forward six candidates, all of whom were successful, and in a number of the wards the Labour candidates headed the poll. Eleven medical men presented themselves as candidates for the corporation and of these six have been elected—Alderman Graham, M.D. R.U.I., Alderman Bigger, M.D. R.U.I., Councillor H. O'Neill, M.D. R.U.I., Councillor T. White, L.R.C.P., L.R.C.S. Edin., Councillor A. V. Browne, L.R.C.P., L.R.C.S. Edin., and Councillor O'Connell, M.D. R.U.I.

Letterkenny Water-supply.

At a special meeting of the Letterkenny town commissioners held on Nov. 25th it was reported that the tank at Glencar was in a most objectionable condition, half filled with a deposit of peaty matter and the spring filled up with filth and mud. The basin had never been cleaned out since 1880. It was decided to have the reservoir, drains, &c., of the present supply cleaned out, and a committee was appointed to devise means for supplying the town temporarily while these cleansing operations were being done.

Belfast Nurses' Home and Training School.

At the annual meeting held on Nov. 29th it was reported that this society was in a flourishing condition there being a balance of £251 17*s.* 4*d.* in hand. Private cases to the number of 506 had been attended to in addition to the work done in the Belfast Royal Hospital, where there are twenty-four probationers at work as well as the staff and ordinary nurses. Special reference was made to the death of the senior nurse of the hospital, Miss Hanna, who for thirty years was staff nurse in the Belfast Royal Hospital, where by her kindly manner and good-nature she secured the respect and regard of all who came in contact with her.

The Payment of Consultants by Poor-law Guardians.

A man who had been found in the street by the police in an unconscious condition was recently conveyed to the Mitchelstown Union Hospital. Mr. Walsh, the medical officer, on examination discovered a depressed fracture of the skull and instructed the master of the workhouse to summon Dr. Corby, of Cork, by telegram. Prior to Dr. Corby's arrival the patient recovered consciousness and absolutely refused to permit an operation to be performed. Dr. Corby in due course applied to the guardians for his fee, but they declined to pay it on the ground that in accordance with the terms of a circular recently issued by the Local Government Board Mr. Walsh should have called in "the nearest doctor," as it was a case of emergency. In reply Dr. Corby pointed out that the circular referred to was issued in the interests of the sick poor and that the Local Government Board could never have intended that their circular should apply in every case of emergency as otherwise such incongruities might occur as the calling in of an ophthalmic specialist to attend a midwifery case. The guardians had also before them a communication from Dr. Corby which had been addressed by him to the Local Government Board but they persisted in their determination not to pay the fee. The decision of the Local Government Board is now looked forward to with considerable interest by consultants and Poor-law medical officers generally and Dr. Corby has decided to bring the matter before the superior courts if necessary.

Dec. 1st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Etiology of Cirrhosis in the Intemperate.

M. LANCEREAUX and M. Laborde have laid some further details of their researches into this matter before the Academy of Medicine. M. Lancereaux announced that the inquiry which was demanded to set aside their views had already been put in hand by M. Boix and M. Lestienne. He also read a letter from Dr. Viola, of Padua, which completely confirms his point of view. The Italian practitioner states that hepatic cirrhosis was unknown in the valley of the Po previously to the introduction of the wines of the South of France and those of Spain which wines are to-day all plastered. M. Laborde, on the other hand, read a letter from a medical man who has practised in Burgundy for thirty-eight years and who plainly proves that it is the alcohol in wine that must be held responsible for the occurrence of cirrhosis. He lays stress upon the fact that real Burgundy is not plastered but is over-alcoholised by the addition of sugar to the must

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at the moment of fermentation. Alcohol must therefore be considered as an undoubted factor in the etiology of cirrhosis.

Bone Grafting.

At the same meeting of the Academy of Medicine M. Dubar, of Lille, read a paper upon the case of a little girl, aged ten years, in whom he had performed resection of the wrist for tuberculous disease. With the intention of giving some firmness to the resulting joint M. Dubar, after having removed the diseased bone, filled up the gap with fragments of bone taken from the femora of an eight days' old puppy. The wound was simply dressed and drained and the patient made an uneventful recovery and has good use in her hand. Her wrist is firm, painless, and moveable. In order to see what had become of the transplanted fragments an x ray photograph of the wrist was taken when it was seen that some of them were lying in the midst of newly-formed fibrous tissue and others had grown into the remnants of the carpal bones, while they had all slightly increased in volume.

Foreign Students.

At a recent meeting of the Municipal Council the Prefect of the Seine made known the decision of the Superior Council of the University as to the admission of foreign students. In his letter of Nov. 10th M. Gréard, the vice-rector, wished it to be known that foreign students would be admitted to the lectures of the various faculties of the University of Paris in accordance with the by-law of the Municipal Council passed in compliance with the proposal of M. Astier. In returning thanks to the University for its decision M. Astier said that he hoped that the measures to be taken in future would be the means of attracting foreign students to Paris.

The Causation of Pleurisy.

M. Le Damany has published the results of his researches into this subject founded on an examination of eighty cases of pleurisy of which fifty-four were first cases. From the point of view of pathology he considers that the parts played by cold or the rheumatic diathesis in the case of a first pleurisy are almost *nil*, but on the other hand one can almost always demonstrate in pleuritics the existence of a tuberculous soil. As to bacteriology M. Le Damany observed that inoculation carried out in a special manner of the exudation from fifty-five cases of pleurisy gave rise in forty-seven cases to evident tubercle in the guinea-pig, while in eight cases the results were negative. The effusion in four of these latter was bacteriologically sterile but clinically tuberculous. From these researches M. Le Damany considers that only one sero-fibrinous pleurisy is due to the invasion of the pleura by a microbe and that is tuberculous pleurisy. The other microbes which have been found in the pleural cavity produce purulent effusions.

Unjust Imprisonment of a Medical Man.

A recent proof of the animus of the magistrates against medical practitioners in France has just been afforded by the following case which has provided a second victim to succeed the unfortunate Dr. Laporte. In this instance the blow fell on Dr. Rémond, a country practitioner, settled at Villeneuve-sur-Yonne, where he was highly respected. One evening two gendarmes arrested him without any warning, took him to the railway station, put him in a prison van, and conveyed him to Paris where he remained in prison for six days without the nature of the charge being disclosed to him. At last a magistrate examined him and informed him that he was accused of having committed rape a year previously on a young woman who had given his name as being her assailant. He was further accused of having put her to sleep by means of a narcotic, under the influence of which she had robbed her father of 500 francs (£20), this money being spent in buying finery and in living extravagantly at an hotel for four days. She alleged that she had met him in the street while she was going for treatment to a hospital for nervous diseases. In vain did the unfortunate man protest that he had never seen the young woman, that she was hysterical and obviously lying, and that all the story of the narcotic was entirely false. The magistrate still kept him in prison. At last he was able to prove that on the day named by the girl he had been engaged in a consultation with a professional colleague. The girl then said that she had made a mistake in the day and the magistrate continued to believe her. After he had been in prison for forty-five days a number of witnesses gave evidence that they had met the young woman accompanied by an individual who had no resemblance to Dr. Rémond, so the magistrate was compelled to release him for want of evidence. This occurrence has caused great excitement in the medical world.

Opening of a Hospital for Incurables at Brévannes.

The authorities of the Assistance Publique are going to transfer from the Laennec Hospital to Brévannes those patients who are suitable to be taken in under the rules of the newly-founded institution. Such patients are chronic incurables, especially those suffering from phthisis and heart-disease. As no hospital for acute cases will take in these patients no place can be found for them at present except in the wards of the Laennec Hospital, which is not nearly large enough for all. The Assistance Publique came into possession of the ancient château of Brévannes in 1883 and a portion of it has been fitted up as a hospital to contain 100 beds. The administration further erected a special block containing 100 rooms for married couples. The park, extending to seventy-five acres, is admirably fitted as a site for an establishment large enough to make up for the lack of room at the Laennec Hospital and not only to receive a large number of chronic cases but to place them under hygienic conditions vastly superior to anything which they would be able to secure in Paris. Until the time at which it shall be decided to support these patients at their own homes by the aid of a system of outdoor relief they will find a refuge at Brévannes. The new buildings, which will be open in a few days, only represent a quarter of the immense establishment which the Assistance Publique proposes to found at this place. In proportion as need arises and funds are obtainable the new buildings will be erected in succession. According to the general plan which has been decided upon for some time past the whole establishment when completed will consist of sixteen blocks with plenty of room for 3200 patients.

The Accusation against a Graduate of the Faculty of Medicine.

Sentence has just been pronounced by the Superior Court of the University of Paris in the case of the Professor of Natural History, M. Heim, referred to in THE LANCET of Nov. 13th. He was accused of having taken various scientific apparatus and specimens from different laboratories. The court sat for eight days for six hours a day, M. Darboux, Professor in the Faculty of Sciences and Member of the Institute, being President. A number of witnesses gave evidence, and it was alleged that M. Heim had hidden in a case labeled with his name various objects belonging to a neighbouring laboratory—objects from which he had scratched out the name of the original owner and substituted his own. Some books bearing the authors' dedication to the rightful owners were among the spoil. M. Heim, although found guilty, was not condemned to the maximum penalty—namely, dismissal—for the court allowed the existence of extenuating circumstances—viz., kleptomania—and merely ordered him to be suspended. M. Heim, however, has sent in his resignation to the Minister.

The Association of the French Medical Syndicates.

This body has just held its annual meeting during the course of which M. Comby was elected President. Many important decisions were arrived at, among others one asking that the regulations regarding medico-legal experts should be modified and another declaring that the number of medical men existing was already in excess of that needed for the population so that it would be useless to create any new schools of medicine or faculties for that such would merely flatter the *amour propre* of sundry little towns and appeal exclusively to electoral interests.

The late Professor Tarnier.

Professor Tarnier died on Nov. 23rd from a malignant intestinal growth which had increased very rapidly of late and which gave rise upon the day of his death to profuse and fatal hæmorrhage. His end, however, was quiet and painless and there were present his old pupils Pinard, Budin, Bonnaire, and others. He had been for some time surgeon to the Maternity Hospital and Professor of Midwifery at the Faculty of Medicine of Paris; he was also a member of the Academy of Medicine and Commander of the Legion of Honour. He was without doubt the chief obstetrician in France and very many accoucheurs of to-day have been his pupils. His writings include the "Treatise on Midwifery" which has become classic and which he began in collaboration with his pupil Chantreuil, but it was finished on the

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death of the latter with the assistance of his pupil Budin. He was the inventor of a traction forceps with a separate traction handle, otherwise known as the "*forceps à aiguille*." He was not a good speaker but his clinical teaching at the hospital was of the very first kind. He was the introducer of the antiseptic system into midwifery and thereby converted the old maternity hospitals, which had been hotbeds of puerperal fever, into healthy places. He was seventy years of age at the time of his death.

Nov. 30th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The New Tuberculin.

SINCE my last reference to Professor Koch's new tuberculin in THE LANCET of July 17th a great many articles on the subject have appeared in the *Deutsche Medicinische Wochenschrift*. The first of the series was a communication by Dr. Doutrelepont, Professor of Dermatology at the University of Bonn. He has treated fifteen patients suffering from lupus, of whom three suffered also from tuberculous ostitis. The injections were performed strictly according to Professor Koch's directions, but temporary elevation of the temperature nevertheless occurred in a considerable number of the cases. The injections were resumed as soon as the temperature became normal. An exceptionally marked reaction followed the use of a new bottle of the remedy received on July 2nd, a fact quite in accordance with the observations of Dr. Bussenius as mentioned in THE LANCET of July 17th; the samples of the preparation therefore seem still to differ very much in strength. The other symptoms were nearly the same as those described in my last article. With respect to the therapeutic effect of the remedy Professor Doutrelepont states that the ulcerations cicatrised and some of the swollen lymphatic glands decreased, but some of them suppurated and had to be removed by operation. The weight of the patients increased. The new remedy seems to be beneficial in lupus and is certainly much better than the old preparation. Too rapid an increase of the dose injected should be avoided as undesirable symptoms may be thereby produced.—The opinion of Dr. Leick, assistant physician to the medical clinic of Greifswald University, is quite different from that of Professor Doutrelepont. He has treated fifteen patients suffering from pulmonary tuberculosis all of whom had tubercle bacilli in the sputum. In no case did the amount of tuberculin injected reach the maximum of twenty milligrammes authorised by Professor Koch. Increased temperature and urticaria-like exanthems were observed by Dr. Leick in addition to the complications described by Dr. Bussenius and other observers. Although the majority of the patients improved during their stay in the hospital Dr. Leick is of opinion that the same effect would have been obtained without the tuberculin treatment. He states that in accordance with Professor Koch's directions only such cases were selected for treatment as were in an early stage of the disease and not yet pyrexial. The state of those patients, who naturally belonged to the poorer classes, as a rule very soon changes for the better without any specific treatment—merely by the good food and nursing and the other advantages afforded by residence in a hospital. A real improvement was obtained in two instances. One of these patients was a young man who after entering the hospital suffered from slight pyrexia, but his temperature became normal before the beginning of the treatment. When he left the hospital his weight had increased by 3½ kilos (= 7¾ lb.). Tubercle bacilli, however, continued to be found. The other patient, a woman, also showed an increase of weight, but she had been several times in the hospital already and had always become better without treatment. It it thus not certain that the new tuberculin has had any beneficial influence in these cases.—Professor Rumpf, of the General Hospital at Hamburg, has tried the old tuberculin, Maragliano's anti-tuberculous serum, and the new preparation. He says that the old tuberculin was very useful for deciding a doubtful diagnosis, that in some instances of peritoneal tuberculosis it even afforded quite satisfactory results, but that in many cases of pulmonary tuberculosis the illness was undoubtedly made worse. He also says that Maragliano's serum had no therapeutic effect at all and as it produced syncope in several instances it was now no longer used. The opinion of Professor Rumpf on the new tuberculin is as follows: (1) It produces infiltration at the place of injection without suppuration; (2) when the dose is very slowly increased the maximum amount may be reached, but fever may nevertheless occur in the course of the treatment; (3) the strength of the preparation is not the same in every instance; (4) it produces not only fever but cyanosis, giddiness, increase of the pulse, &c.; (5) It is uncertain whether immunity can be obtained by the remedy; and (6) it may be cautiously tried in the early stage of pulmonary tuberculosis provided that a reliable preparation can be manufactured.—Dr. Baudach, physician to a private sanatorium at Schömberg (Würtemberg), has obtained much better results than any of the preceding observers. The cause of this difference is probably that his patients being of a better social position than those of the general hospitals and the university hospitals could as a rule be kept longer in the sanatorium, and moreover enjoyed all the advantage of open-air treatment. They nearly all increased in weight, the physical signs in the lungs became better, and the general state of the patients, notwithstanding the above-described complications produced by the injections, was satisfactory. Dr. Baudach expresses confidence in the new method which however must be combined with the usual hygienic and dietetic treatment.—Cases of laryngeal tuberculosis have been treated with tuberculin by Dr. Herzfeld, of Berlin. Of seven cases only one showed an improvement perceptible by laryngoscopical examination. In the others the tuberculous process either remained stationary or extended to parts of the larynx which had previously been healthy. Dr. Herzfeld concludes that the usual local treatment would probably have given a better result.—A very remarkable observation is published by Dr. Müller, physician to the department of Diseases of the Ear in the Charité Hospital. A patient suffering from pulmonary tuberculosis and otitis media received injections of the new tuberculin. During the course of the treatment it was found that the affected ear not only did not improve, but the disease extended to the other ear and tubercles which eventually ulcerated were developed on the membrana tympani, perforation of the membrana being the result.—Cases of pulmonary tuberculosis and lupus are also described by Dr. Gerber, of the out-patient department of Königsberg General Hospital, who concludes that tuberculin has done good in some cases and therefore deserves a fair trial.—Dr. Kaatzer, of Hanover, has also formed a good opinion of the new remedy. In the majority of his cases of pulmonary tuberculosis the bacilli disappeared and there was a considerable increase of weight. His results are the best hitherto published.—In lupus Dr. van Hoorn, of Amsterdam, has obtained a marked improvement in a series of cases, whilst in tuberculosis of the bladder the injections were followed by pain so severe that the treatment had to be conducted very cautiously.—Dr. Petruschky, of Danzig, one of Professor Koch's pupils, has published an elaborate memoir on the selection of cases for the treatment, its technical details, and the results obtained of recent years with the old tuberculin, which he has continued to use in his practice.

It will thus be seen that there are wide divergencies of opinion among the medical men who have tried the new tuberculin. All of them agree that it sometimes produces undesirable symptoms which however have never led to any serious complication. It is further the general opinion that the manufacturers have not yet succeeded in producing a preparation of uniform strength. In lupus it has undoubtedly given good results; with respect to pulmonary tuberculosis some writers express much enthusiasm, but others almost a complete condemnation. Further experience is obviously required and the editors of the *Deutsche Medicinische Wochenschrift* in closing the series of articles on the subject remark that several years must elapse before the real value of Koch's treatment can be definitely ascertained.

Dec. 1st.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Russian Red-Cross Expedition to Abyssinia.

DURING the past few years Russia has sent a considerable number of expeditions, scientific, political, and others, to Abyssinia. One of the largest of these expeditions was that

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of the Red Cross Society which was sent early last year to tend the sick and wounded Abyssinians in the war against Italy. An interesting description of their experiences was recently given by M. Shtchusef, a medical student who accompanied the expedition, in a paper read before the St. Petersburg Medico-Chirurgical Society. The party followed the usual route to Abyssinia save that the Italians declined to allow them to pass through Massowah, and they were consequently obliged to pass through the French colony of Djibuti. The Somali desert took two weeks to cross. When Harrar was reached the war was already over; but a large number of patients soon came under treatment, and these included cases of leprosy, syphilis (secondary and tertiary), scabies, eye diseases, gonorrhœa, gastric catarrh, and one case of molluscum fibrosum. The Negus Menelik is described as a man of fifty-eight years of age, his face marked with the traces of small-pox, and at the time the Russians visited him he was suffering from ophthalmia. He showed much interest in medical matters and was present at several operations, including an ovariotomy. He even asked the members of the expedition if they had not brought a Roentgen apparatus with them! The inoculation of small-pox is said to have been practised in Abyssinia for the past two hundred years. Menelik, it is gravely stated, was desirous of sending a paper on this subject to the International Medical Congress through M. Mandon, a Frenchman, but for some reason he did not carry out his intention. According to M. Shtchusef the Abyssinians treat many forms of disease with iron; syphilitics are treated with some unknown herbs and also by exsudatives, hot baths, and eliminants. In the holy town of Aksum there is said to be preserved a book on the treatment of diseases which has been in existence for 2000 years. The Abyssinians are almost of European type in their features but their skins are black. They are monogamists; with them the religious form of marriage does not admit of divorce and consequently civil marriages are common. Justice is administered in public and punishments are awarded on the principle of an eye for an eye. For example, a man who had murdered another with a sword would be executed by the sword. For less grave crimes—as, for example, theft—the punishment may be the loss of the left hand or the right foot. M. Shtchusef, since reading the paper, has again started for Abyssinia, where he is now attached to the Russian Embassy. On the eve of his departure he read another paper before the Russian National Health Society on the Climate and Balneology of Abyssinia. Near Harrar, he stated, are a number of hot mineral springs, occupying the craters of extinct volcanoes. These springs have no little reputation among the natives for their medicinal powers. Particularly efficacious is the hot spring of Alisa-Babi. The reader of the paper was requested by the society to make further observations upon these springs on his return to the country and also to make inquiries as to the prevalence of malarial fevers and the local modes of treating them.

General News.

The museum of anatomy and surgery recently built to the memory of Pirogoff and to be called the Pirogoff Museum was opened in St. Petersburg on Sunday, Oct. 26th (old style). The total funds collected for the purpose were 115 000 roubles and the building has cost 85,000 roubles (about £9000). The opening ceremony was attended by the Prince and Princess of Oldenburg and a large number of other distinguished guests.—One of the worst inundations of recent years visited St. Petersburg on Nov. 4th (16th). A violent gale from the south-west, accompanied by snow and frost, heaped up the water at the mouth of the Neva to a height of 8½ ft. above the average. The result was that the greater part of the city was for some hours deeply under water. The facts that a large number of the poorer classes in St. Petersburg live in cellars and basements and that the inundation occurred when the thermometer was some 7° F. below the freezing point, so that there will be no possibility of thoroughly drying such habitations before next summer, combine to make the calamity a very serious one for a large section of the community.

St. Petersburg.

MEASLES AT EXMOUTH. — The elementary schools at Exmouth have been closed owing to an outbreak of measles.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The New York Quarantine.

DURING 1896, 252,350 steerage passengers were examined at this station and out of 12,127 vessels which arrived at the principal ports of the United States during the same year (1896) 6241 or more than one half of the entire number were inspected at the New York Quarantine Station. The work of 1897 will show about the same result. During this period plague, cholera, small-pox, yellow fever, and typhus fever have existed in numerous ports throughout the world which have been in constant communication with New York, and although numerous cases of small-pox and yellow fever have reached this harbour no infection has passed the station. This fact will be appreciated when it is remembered that during certain portions of last year, and also of this, from 200 to 300 cases of yellow fever and an equal number of cases of small-pox daily existed in the city of Havana. As this place is about three and a half days' journey by water from New York it is within the period of incubation of both diseases. In order that passengers arriving from Havana and other ports of the north side of Cuba shall not be a menace to the health of this country and at the same time that commerce should not be unnecessarily interfered with it is required that all persons coming from Havana shall be supplied with a certificate to the effect that they have had yellow fever or are natives of Cuba. In either case these persons are rarely subject to this disease and can be safely allowed to pass quarantine. Persons who do not present these certificates on their arrival are removed to Hoffman Island, there to remain until the difference in time between the period occupied by the passage and five days (the period of incubation of yellow fever) has elapsed. A number of persons thus held have developed yellow fever and have been transferred to the hospital at Swinburne Island. All vessels arriving from Cuban ports are subjected to disinfection. Their crews are not held for observation as these persons are not allowed to leave the vessels which are not docked but remain in the stream where they are loaded and unloaded.

Midsummer Day Schools.

The New York Association for Improving the Condition of the Poor have undertaken an experiment of vacation instruction by providing a six weeks' midsummer term for the children who loiter in the heated streets of New York while the public schools are closed. The Board of Education when the project was first presented promptly agreed to coöperate by donating four public school buildings in crowded and destitute districts and lent such other aid as was in their power. A corps of teachers under a superintendent was organised and has worked faithfully and well. The teaching has been wholly of the manual training and kindergarten order and it is hoped that it may prove to be an object lesson so encouraging as to win wider adaptation in the ordinary curriculum of the common winter schools. A children's playground with the novelty of a sand garden was opened; it was given over to the use of boys in the morning and to the girls in the afternoon and some 200 of them romped there every day. In one vacation school about 400 boys and girls were taught kindergartening, paper folding, drawing, clay modelling, and sewing, with elementary industrial work for older boys. The hours at all the schools were from nine to twelve. By this means 1000 children have been cared for and kept off the streets during the hot summer months, which means a new life to the children of poor working people.

The New York Zoological Park.

The preliminary plans of the New York Zoological Park, to be located in South Bronx Park, one of the new acquisitions of Greater New York, have been completed and work upon them will soon be commenced. These plans include those for the lion house, monkey house, elephant house, bird house, winter house for birds, reptile house, tropical ruminants house, main restaurant, and administration buildings. Among the secondary structures there will be a flying cage, eagle and vulture aviary, buffalo house, deer barns, wolf and fox dens, bear dens, sea-lion pond, pheasant aviary, mountain sheep shelter, and duck aviaries. Particular attention has been given in connexion with this

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park to as complete a system of sewerage and water-supply as science and money can create. The different houses and the outer grounds will be kept in almost as aseptic condition as the wards of a well-regulated hospital.

Lodge Medical Officers not allowed in Quebec.

The College of Physicians and Surgeons of the Province of Quebec which has the power to revoke all licences to practise medicine or surgery in the province recently passed the following resolution: "In view of the extent to which the members of the medical profession are defrauded of proper remuneration for professional services owing to the acceptance by many of positions as medical officers to various benefit societies, lodges, &c., where remuneration is arranged for by contract, it be considered beneath the dignity of our profession to accept and hold such positions. In order that all professional services shall be awarded remuneration not less than the tariff adopted by this board it is hereby enacted that members of the College of Physicians and Surgeons of the Province of Quebec shall be prohibited from accepting or retaining the position of lodge medical officer where a stipulated amount is paid annually or otherwise for professional services amounting to less than the minimum tariff adopted by this board or from attendance upon families, groups of families, or other associations at contract prices which name a stated sum for a certain term—usually an annual fee—and that no physician shall be permitted to retain membership in this College or practise in this Province who accepts such positions."

Nov. 19th.

Obituary.

HENRY WILLIAM FREEMAN, F.R.C.S. IREL., L.R.C.P. LOND., J.P.

MR. H. W. FREEMAN died at his residence, the Circus, Bath, on Nov. 28th, at the age of fifty-five years. He was born at Westward Ho, Devon, in 1842, and after education at the Bideford Grammar School went to the Middlesex Hospital, London, where he studied with marked success, taking prizes and holding resident appointments. He qualified M.R.C.S. Eng. and L.S.A. in 1864, taking the L.R.C.P. Lond. the year following and the F.R.C.S. Irel. in 1882. In 1864 he was appointed resident medical officer to the Royal United Hospital, Bath, and about a year afterwards commenced practice in that city; later he was appointed honorary surgeon to the hospital and in a few years became one of the best known of the Bath surgeons. In 1887 he was elected on the town council and the following year was appointed mayor; this office he held most successfully and at its expiration Mr. Freeman was made an alderman. In 1893 he was placed on the Commission of the Peace for the city and also for the county of Somerset. Mr. Freeman had for many years done his utmost to develop the baths of Bath and more recently had introduced the Nauheim system. When the new Queen's Baths were opened by the Duchess of Albany in 1888 Mr. Freeman presented a beautiful statue, "The Angel at the Pool"; this now stands over the fountain in the pump-room. In 1887 he offered Hamilton House, on Lansdown, as a convalescent home for the city, but the necessary funds for endowing it not being subscribed the scheme fell through. Mr. Freeman's principal work in addition to several surgical papers was "The Thermal Baths of Bath" (1888) and only last month he published a smaller work entitled "New Methods of Cure at Bath." Mr. Freeman was owner of an extensive thoroughbred stud at Weston. His health had been weak for some time, but his fatal illness commenced soon after the opening of the new pump-room in October. He leaves a widow with whom great sympathy is felt. Mr. Freeman will be much regretted and missed in Bath and his death will cause a blank in the city which it will be impossible to fill.

WATER-SUPPLY OF SHANKLIN, ISLE OF WIGHT.—At a meeting of the Shanklin district council held on Nov. 19th it was resolved that a deputation wait on the Local Government Board to urge them to give their decision on the scheme for obtaining water from Wroxall, which is about two miles distant from Shanklin.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THURSDAY, NOV. 25TH.

THE Council met again to-day, Sir WILLIAM TURNER being in the chair, and resumed the work of the session.

The Resignation of Dr. W. Moore.

The CHAIRMAN said the President wished him to read the following letter:—

Privy Council Office, Whitehall,
Nov. 24th, 1897.

SIR,—I am directed by the Lord President of the Council to acknowledge the receipt of your letter of the 24th inst. stating that Dr. William Moore, one of the Crown Nominees in the General Medical Council, has resigned his seat in that Council.

I am, Sir, your obedient servant,
J. H. HARRISON.

Sir Richard Quain, Bart., M.D., 67, Harley-street, W.

On the motion of the CHAIRMAN the letter was entered on the minutes.

The Case of George Hamilton Wyse.

After sitting for fully an hour in private to receive a recommendation from the Penal Cases Committee the Council proceeded to the consideration of the case of George Hamilton Wyse, of 51, Talbot-street, Southport, Lancashire, registered in Ireland, June 27th, 1871, as Lic. Apoth. Hall. Dubl. 1871; Lic. R. Coll. Phys. Edin. 1871; Lic. R. Coll. Surg. Edin. 1871, who had been summoned to answer the following charges on the complaints of the Medical Defence Union and the Wigan Medical Guild:—

(1) The complaint relates firstly to a medical practice carried on under his name at 88, Adelphi-street, Preston, in the county of Lancaster, and secondly to a medical practice carried on under his name at 95, Wallgate, Wigan, in the same county.

(2) The charge against him in respect of the practice at 88, Adelphi-street, Preston, is that he covers an unqualified person named George Wyse, who is, or purports to act as, his assistant, and whom he permits and enables, under cover of his presence, name, and qualifications, to attend on and administer medical relief to patients and give medical relief to patients and give medical certificates and generally to carry on at the said place a medical practice as if he (George Wyse) were a duly qualified and registered practitioner.

(3) The charge against him in respect of the medical practice at 95, Wallgate, Wigan, is that he covers an unqualified person named Cowan, whom he permits and enables, under cover of his name and qualifications, to attend on and administer medical relief and treatment to patients and give medical certificates, and generally to carry on at the said place a medical practice as if he (Cowan) were a duly qualified and registered practitioner.

(4) The complainants are in the matter of the covering of George Wyse the Medical Defence Union, Limited; and in the matter of the covering of Cowan the Wigan Medical Guild.

Mr. R. B. D. Acland appeared as counsel for Mr. Wyse and Dr. Bateman for the complainants.

Dr. BATEMAN, in opening the case for the complainants, said that there was no dispute as to the facts.

Mr. ACLAND, interposing, said it would be necessary to call Mr. Wyse and his son to dispute the most serious allegations in the charge made against Mr. Wyse. The reason why a declaration had been made without disputing the facts alleged was that Mr Wyse had not the slightest suspicion until he received various letters that any charge had been made against him. When he first realised that there really was a charge he wrote to his Lancashire professional colleagues to withdraw it, but he was informed, in reply, that the matter was before the General Medical Council. On learning this he placed himself in communication with his solicitor, who wrote to the Council asking for an adjournment of the case, but that had been refused, and thereupon, without really understanding the gravamen of the charge, the declaration was drawn up in the form in which it was now put before the Council.

The CHAIRMAN informed Mr. Acland that he would have full opportunity to call Mr. Wyse and his son for examination.

Dr. BATEMAN thereupon proceeded with his opening of the case. He read a series of affidavits upon which he relied as proving the charges brought by the Medical Defence Union. He stated that he had no documentary evidence from the Wigan Medical Guild.

Mr. MUIR MACKENZIE thereupon read one of several documents received from the Guild in question, but as copies of the rest had not been furnished to the accused all except the one read were withdrawn.

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Mr. WYSE went into the witness-box and in reply to Mr. ACLAND said he had been in practice for twenty-five years and during a little over four years had carried on his present practice at Wigan. He emphatically denied that he acted as cover to Cowan. He lived at Southport, but it could not be said that he practised there because he had seen months pass without any patients calling on him. In September, 1896, he opened a surgery at Preston and in the second week of February of the present year he closed it. The first time he heard of any complaint being made against him was last month when he received a letter from the solicitor of the General Medical Council. Before that he had heard not a word of complaint either in connexion with the practice at Wigan or that at Preston. His son lived with him at Southport and went to Preston with him every day the surgery in the town was open, which meant about four days a week. His instructions to his son were to see if any patients were waiting and if so to detain them until he came and not to sign any certificates. Shown two certificates he admitted the one was in the handwriting of his son, who apparently had acted contrary to his instructions on this particular occasion.

Cross-examined by Dr. BATEMAN witness said that his son was a student in his fifth year of study, while Cowan was not exactly a student; he was about thirty-six years of age and had studied in Dublin.

Mr. WYSE, Jun., also gave evidence. He explained the nature of the instructions given him by his father with regard to the practice at Preston and admitted that he had done wrong in signing the certificate in question.

Mr. ACLAND, addressing the Council on behalf of Mr. Wyse, complained of the manner in which the charges had been prosecuted and especially of the absence of notice to his client. Not one hint of malpractice was given to Mr. Wyse during the whole of the time that the surgery at Preston was open, and it was only on Oct. 29th of the present year when he received the communication from the solicitor of the General Medical Council that he heard of the proceedings which had been taken. In connexion with the Wigan charge only one case was brought up and the case resolved itself into whether they were to believe Mr. Wyse or the woman who had sworn the affidavit.

The Council then deliberated in private on the case.

The CHAIRMAN thereafter addressed Mr. Wyse as follows: I have to inform you that the Council having, as you know, gone very carefully into the case have come to the conclusion that the charges made against you have been proved to the satisfaction of the Council—that is to say, that you have acted as a cover, but the Council have not gone so far as to say that you have been guilty of infamous conduct in a professional respect; they have not pronounced that yet. And they have instructed me to say to you that the further consideration of the charges made against you is adjourned until the next session, which will probably be held in the month of May, when they expect you will be able to come and show them that such a charge as has been made against you can no longer be made—namely, that you have given up all such practice. The Council wish you to understand clearly that they regard this question of covering as a charge of a most serious kind against a professional man and they hope you will take the matter seriously to heart and that you will be able to report in May that no such charge can in the future be brought against you.

The Council then adjourned.

FRIDAY, NOV. 26TH.

The Council resumed work to-day, Sir WILLIAM TURNER being in the chair.

The Case of E. E. Hooper.

The REGISTRAR reported that since the meeting of the General Medical Council in May last information had been received of the death of Mr. E. E. Hooper, the further consideration of whose case was adjourned to the present session of the Council.

The Case of William John Patterson.

The Council proceeded to the consideration of the case of William John Patterson, of 33, Rodney-road, London, S.E., registered in Ireland August 27th, 1890, as Lic., Lic. Midwif. 1890, R. Coll. Surg. Irel.; Lic. Apoth. Hall, Dubl., 1890, who had been summoned to appear before the Council on conviction for the following misdemeanour:—

That he, on the 31st May, in the year of our Lord, 1897, at Brentford, in the County of Middlesex, unlawfully and indecently assaulted Fanny Amelia Ker.

The following is a copy of the certificate of conviction that had been received:—

Middlesex } These are to certify that at the Midsummer Quarter
to wit. } Sessions of the Peace, holden at Guildhall, Westminster, for the County of Middlesex, on Saturday the 3rd day of July in the year of our Lord 1897, William John Patterson was in due form of law tried and convicted on a certain indictment against him, for that he on the 31st day of May in the year of our Lord 1897, at Brentford in the said county, unlawfully and indecently did assault Fanny Amelia Ker, against the form of the statute, &c. And the said William John Patterson was thereupon ordered to be imprisoned and kept to hard labour in Her Majesty's prison at Wormwood Scrubbs for the space of nine calendar months. And these are further to certify that the record of the said conviction is still unreversed and of full force and effect. Given under my hand at the Guildhall, Westminster, this 27th day of July in the year of our Lord 1897. RICHD. NICHOLSON.
Clerk of the Peace for the said County of Middlesex.
County of Middlesex, Guildhall, Westminster.

Mr. FARRER said that although there was no appearance Mr. Patterson had put in a defence. He should like, however, to point out that this Council could not go behind the conviction which they must assume to have been lawfully and properly obtained. Mr. Patterson had written a letter on Oct. 30th, 1897, in reply to the summons, the principal point of the letter being an earnest appeal to postpone the case until he could be heard by the Council after his liberation from prison. Mr. Patterson insisted that he had done nothing more than kiss the girl and that this act was the result of some unaccountable and sudden impulse.

Mr. MUIR MACKENZIE said that the duty of the Council was imperative. In only one case—and there special circumstances arose—had they left a man upon the Register who had been convicted.

The Council decided to instruct the Registrar to erase the name of Mr. Patterson from the Medical Register.

The Case of Charles Day.

The next business was the consideration of the case of Charles Day, of 1, Benwell-road, Drayton-park, N., registered in England Jan. 1st, 1859, as Mem. R. Coll. Surg. Eng. 1841; Lic. Soc. Apoth. Lond. 1846, who had been summoned to appear before the Council to answer the following charge on the complaint of the Medical Defence Union:—

That he had acted and acts as cover to an unqualified person named Alfred Henry Day, who, acting or purporting to act as his assistant, was and is permitted, authorised, and enabled by him to carry on medical practice and administer medical treatment to and sign certificates for patients as if he (Alfred Henry Day) were a duly qualified and registered practitioner.

The complainants were the Medical Defence Union, Limited.

Dr. BATEMAN said he wished to explain how the Medical Defence Union appeared in this case. About August certain newspaper cuttings were sent to the Union with reference to an inquest upon the body of a child called O'Sullivan and to certain proceedings taken by the Registrar-General in a police-court against an unqualified man for issuing a certificate. These were forwarded to this Council to take whatever steps were thought proper.

Mr. CHARLES TOWNLEY, Superintendent Registrar of St. Mary's district, Islington, examined by Dr. BATEMAN, gave an account of the inquest and what transpired at it. The mother of the child, he said, gave evidence to the effect that Mr. Day's son attended the child, saw it several times and treated it, and after the death she was handed a certificate signed "Charles Day" although at the time Mr. Day, sen., was out of town on holiday. The District Registrar refused to accept the certificate, the coroner was communicated with, and on the instruction of the Registrar-General proceedings were taken in the police-court against the son who was fined £10 and £1 13*s.* 6*d.* costs. The coroner said that there was no fault to find with the treatment of the child by the son.

Mr. MUIR MACKENZIE read Mr. Day's written defence. His son, he said, had been his assistant for many years. He had really been his pupil, his hospital course having been interrupted. Having lost his wife and being in ill-health he (Mr. Day) left home for two days giving his son instructions to send to a neighbouring registered practitioner if any serious matters arose in his absence requiring special treatment. He gave his son instructions how to treat this particular child. On the second day of his absence the child succumbed and his son thinking that the case had been practically attended by him signed the certificate in his father's name. They both deplored what had occurred, but he was bound to say in his own defence that his son had

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acted without his consent and against his instructions. He could not understand how the employment of an unqualified assistant residing in his own house and under his own direct supervision and control could be construed as an infringement of the Act and to support his view he quoted the notice given in THE LANCET in the column where unqualified assistants were advertised. This notice, he said, represented the feeling generally entertained by the medical profession on the subject. As to his son he had already suffered for the error he had committed.

Mr. DAY then addressed the Council, submitting that he had conducted his practice with all possible care.

After the Council had deliberated in private for a time,

The CHAIRMAN intimated to Mr. Day that they had come to the conclusion that the charge made against him had not been proved to their satisfaction. But the Council wished him to state that the difficulty into which he had been put had been owing to the employment of an unqualified assistant and to the opportunity which had been given to the unqualified assistant to transgress the law—that was to say, to sign a death certificate, which he had no right to do. Consequently in his further practice he would have to be very careful indeed how he carried on his work with the aid of an unqualified assistant, supposing he continued to employ one.

The Case of William Robert Nuttall Maloney.

The next business was the consideration of the case of William Robert Nuttall Maloney, of Roden-street, West Melbourne, in the Colony of Victoria, registered in England March 3rd, 1886, as Lic. Soc. Apoth. Lond. 1885, who had been summoned to appear before the Council to answer the following charges as formulated by the Council's solicitor:—

The matters charged against Mr. Maloney relate to public advertisements by him in Calcutta, Melbourne, and Belfast, and also to his conduct in associating himself with a so-called medical electrician, and in practising and conducting in public a medical electrical treatment; and it is complained against him that he seeks to attract patients by a system of extensive public advertisements of his name and address and qualifications, and of the said treatment as practised by him, in and by which persons in need of medical aid were invited to consult him professionally and adopt the said treatment, and that the advertisements systematically published by him were of themselves of a character discreditable to a professional man.

Mr. FARRER said that Mr. Maloney had been summoned and in reply had sent certain letters of defence. The matter had been brought to the notice of the Council by the Royal College of Surgeons of England, who had removed Mr. Maloney's name from their list of Members. He submitted to the Council specimens of the advertisements as well as a newspaper account of a meeting held in the Ulster Hall, Belfast. In one of his letters Mr. Maloney suggested that he had been sufficiently punished by being deprived of his place in the Membership of the Royal College of Surgeons of England. As to the electrician with whom he had been associated for a time he had fled the country when his antecedents became known. Mr. Maloney further said that his qualifications had been inserted in no advertisement with his knowledge. He explained his non-appearance before the Council with the statement that he was standing for re-election as a member of the Legislative Assembly of the Colony of Victoria.

Mr. BRYANT gave some account of the experiences of the Royal College of Surgeons of England with Mr. Maloney.

The Council found the charge proved and adjudged Mr. Maloney to have been guilty of infamous conduct in a professional respect and directed the Registrar to erase his name from the Medical Register.

The Case of William Masson.

The Council proceeded to the consideration of the case of William Masson, of Cottingham, East Riding of Yorkshire, registered in Scotland, December 12th, 1888, as M.B., Mast. Surg. 1888, Univ. Aberd., who had been summoned to appear to answer the following charge on the complaint of Mr. Edward Ball, of Southport, registered as Lic. R. Coll. Phys. Edin. 1886; Lic R. Coll. Surg. Edin. 1886; Lic. Fac. Phys. Surg. Glasg 1886, viz.:—

That he had acted and acts as cover to an unqualified person named George Watson, who, acting and purporting to act as his unqualified assistant, was and is permitted, authorised, and enabled by him to carry on medical practice and administer treatment to patients as if he (Watson) were a duly qualified and registered practitioner. It is particularly alleged against him (Masson) that George Watson attended a woman named Higgins in her confinement, using instruments upon her, and that on the death of the woman he (Masson) signed and gave a death certificate purporting to certify that the woman had died of eclampsia.

Mr. Farrer, the Council's solicitor, attended to advise the Council on the case, and Mr. Muir Mackenzie was present as legal assessor. Dr. Masson, the accused, appeared in response to the summons along with his counsel, Mr. J. Scott-Fox, instructed by Mr. George Trenam, solicitor.

Mr. FARRAR stated that Mr. Ball, the complainant, did not attend. He had sent a letter which intimated that he did not intend to be present at the investigation; he had supplied information which he had received from the friends of the deceased and he did not see what use he could be.

Dr. BATTY TUKE wished to know who, then, was the prosecutor in the case.

The CHAIRMAN replied that the case had been before the Penal Cases Committee and inquiry had been ordered.

Mr. MUIR MACKENZIE read the documents in the case. These included a first letter, dated Aug. 2nd last, and a further letter in support of the charge, enclosed with the latter being answers to a series of questions, some of them drawn up by the President of the Council and also extracts from a letter addressed to a certain "Dear Fred" by the deceased's husband.

Dr. GAIRDNER said that in this letter of Mr. Ball they had two or three very grave assertions of which, so far as appeared, they, in the absence of the complainant and witnesses for him, would have no proof whatever.

Mr. SCOTT-FOX submitted that in the circumstances the natural course that ought to be adopted was to dismiss the case without a moment's consideration. That would be the course adopted in any regularly constituted court of justice. However, as the Council wished inquiry he would proceed and Dr. Masson who was present would answer any questions addressed to him. Pointing out that Mr. Ball's letter to the Council contained the sentence, "I wish to keep my name silent in the matter," he said he thought that threw some light on a case for the accusations raised in which there was no evidence whatever. The indictment was unfair; it was absolutely unjustified. There was no denial on the part of his client that George Watson was unqualified, but Watson had acted during some twenty years as assistant to his late father, Dr. Samuel Watson, to Mr. Chambers, who succeeded the latter, and to Mr. Baldwin, who followed Mr. Chambers. He had had great experience and had attended down to the present perhaps as many as 2000 cases of childbirth. He did not assume the title of "doctor" and there was no name-plate on his door or anything to show that he practised on his own account, which he did not. Counsel read Dr. Masson's written explanation in answer to the charge. This showed that he had purchased the practice in 1893 from Mr. Baldwin for £750. He continued Mr. Watson as assistant, but he had never heard it suggested that he was other than an unqualified assistant. Dr. Masson had never asked Mr. Watson to take upon himself and assume or perform any duty which was outside of duty that could be performed by unqualified assistants. Though he lived in the house occupied by his late father there was no surgery there and not during Dr. Masson's connexion with Cottingham had there been complaint or suggestion of complaint made to him as to Mr. Watson, who had not and never had had any pecuniary interest in Dr. Masson's practice. The summons to appear before the Council was the first intimation Dr. Masson had that any explanation was required in the case of Mrs. Higgins. Her relatives had made no complaint before they left the district. Counsel concluded by asking the complaint to be dismissed with the contemp which it merited.

In answer to members of the Council Dr. Masson stated that he had seen the woman three times before her death and the certificate he gave stated the true cause of death. He admitted that Watson had told him that he used forceps. He had no authority to use instruments. It was in violation of his instructions that he did. They were not accused's instruments but had belonged to Watson's father. It was untrue that the accused was dominated by the local influence of Watson and it was decidedly untrue to say that Watson had the whole practice of the place in his hands. Under the agreement he (Dr. Masson) obtained on taking over the practice he could dismiss Watson at three months' notice and he could restrict him from assisting any other practitioner in the district.

In answer to Mr. SCOTT FOX, Dr. Masson said that Mr. Watson never took cases for his own profit and any fees received by him were always handed over to accused.

The case having been closed the Council deliberated in private. On the re-admission of the public

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The CHAIRMAN, addressing Dr. Masson, said he was instructed to tell him that the charge made against him had been proved to the satisfaction of the Council, but the Council were not prepared at this time to judge him guilty of infamous conduct in a professional respect. They, however, would further consider the charge during their next session which would be held in May, 1898. He thought Dr. Masson would understand from what had happened that he would have to reconsider his position as to the employment of this unqualified assistant.

Dr. MASSON: He is now dismissed.

The CHAIRMAN: Oh, he is now dismissed. Very well, the further consideration of the charge is adjourned till May next when you will be asked to appear before the Council.

The Council adjourned.

SATURDAY, NOV. 27TH.

The Council resumed work to-day, Sir WILLIAM TURNER being again in the chair.

Nomination of Dr. James Little.

The REGISTRAR read a letter from the Privy Council announcing that Her Majesty in Council had nominated Dr. James Little to be for five years a member of the Council for Ireland in place of Dr. William Moore, resigned.

The Case of Julius Mostertz.

The Council proceeded to the consideration of the case of Julius Mostertz, of 13, Salisbury-road, Noel-park, N., registered in England as Lic. Soc. Apoth. Lond. 1893, who had been summoned to appear before the Council to answer the following charges on the complaint of the Medical Defence Union, Limited:—

1. The complaint relates to a dispensary or establishment carried on or conducted at 13, Salisbury-road, Hornsey, under the name of the Noel-park Dispensary.
2. The complaint is that Mr. Mostertz, being a registered medical practitioner, acts as cover to an unqualified person named George W. Johnson, who, purporting to act as his assistant, carries on at the said Noel-park Dispensary a medical practice, and who, under cover of Mostertz's name, presence, and assistance, is enabled to and does attend on and administer medical treatment to patients and carry on such medical practice as though he were a duly qualified and registered medical practitioner.
3. The complainants are the Medical Defence Union, Limited.

Dr. Bateman, with Mr. Hempson, solicitor of the Medical Defence Union, appeared for the complainants and Mr. Ward appeared for Mr. Mostertz.

Dr. BATEMAN, opening the case, said that some years ago a Mr. Johnson, M.R.V.S., opened at 13, Salisbury-road, Wood-green, a chemist's shop under the style of the Noel-park Pharmacy, Mr. Johnson being a registered chemist as well as a veterinary surgeon. This Mr. Johnson died and the pharmacy was carried on by the widow with the assistance of a man known as Mr. George W. Johnson. Some little time ago the medical men and others in the district began to hear very frequently of a "Dr. Johnson" engaged in practice, and finding that there was a certain amount of unqualified practice going on and being determined to put a stop to it the medical men called a meeting by post-card. The meeting was to be at Mr. Tomlin's house and the post-card set forth that its purpose was to consider what steps should be taken to cause the unqualified practice to cease. The post-cards were sent to all the medical men in the district whose names could be remembered, and among the rest to Mr. Mostertz at his residence in Lordship-lane. Next morning Mr. Tomlin received a letter signed by "G. W. Johnson." The letter started with an extract from the notice as to unqualified assistants appearing in the advertisement columns of THE LANCET and then went on to say that the writer courted the fullest investigation as to whether he had infringed the regulations of the General Medical Council. He admitted having prescribed for hundreds of people since he had resided in Wood-green, but when he had been asked to visit he had told them that he could not do so as he had not quite finished his curriculum, but that the doctor to whom the dispensary belonged would call upon them and could easily do so because he lived only a hundred yards away. At the meeting, which was attended by a large number of medical men, Mr. Mostertz after a time got up and said that he had handed his post-card to this Mr. Johnson. The meeting passed a resolution to the effect that unless Mr. Mostertz severed his connexion immediately with Mr. Johnson, either by withdrawing absolutely from Noel-park Dispensary or dispensing with the services of Mr. Johnson, the matter would be reported to the General Medical Council. Later a letter was received from Mr. Mostertz saying that he could not allow any practitioner or combination of practitioners to dictate to him how he was to conduct his dispensary so long as he had not been guilty of unprofessional conduct and further that when Mr. Johnson left as he intended to leave for Australia he (Mr. Mostertz) would not hesitate to engage another unqualified assistant. Another meeting was held at which it was decided that the matter should be laid before the Medical Defence Union in order that proceedings might be taken before the General Medical Council. There were declarations by Thomas William Tyrrell and Albert Bright. The former said that he called at the dispensary and saw Mr. Johnson, who felt his pulse and looked at his tongue and said he was suffering from gastric catarrh and indigestion and would give him a medicine. Mr. Tyrrell said he saw Mr. Johnson make up the medicine and he handed it to him and gave him directions as to its use. The charge was 7*d.* and when Mr. Tyrrell remarked that it was very cheap Mr. Johnson replied that he could not charge west-end prices in Wood-green. Mr. Tyrrell also described an interview with Mr. Mostertz and told how on another occasion he went to the dispensary and saw certain certificates and qualifications with regard to Mr. Mostertz displayed. The declaration of Mr. Albert Bright had reference to a visit paid by him to the dispensary.

Mr. THOMAS WILLIAM TYRRELL was then called as a witness and in reply to Dr. BATEMAN said he was a clerk residing in East Dulwich and was instructed by Mr. Hempson, solicitor of the Medical Defence Union, to visit the Noel-park Dispensary.

Cross-examined by Mr. WARD witness denied that he gave a wrong address.

By Dr. BATTY TUKE: He was in the employment of Mr. Hempson as a clerk.

Dr. A. CAMPBELL, examined by Dr. BATEMAN, said he called at the dispensary and asking for the doctor saw Mr. Johnson. Witness was examined by Mr. Johnson, who prescribed for him and charged him 6*d.* for medicine and advice.

Dr. BATTY TUKE: Why did you go there?

WITNESS: Curiosity pure and simple.

Dr. BATTY TUKE: Were you ill?

WITNESS: No, I was not ill. I said I had a cold.

Dr. BATTY TUKE: How did your evidence come here?

WITNESS: Because I live in the neighbourhood.

Dr. BATTY TUKE: How did it come under the observation of the Medical Defence Union?

WITNESS: I let all the doctors in the place know I had been there as a joke.

Dr. BATTY TUKE: Were you paid for going?

WITNESS: No; it was I who paid.

Mr. BRUDENELL CARTER: May I ask you if you took the medicine?

WITNESS: No, sir; I was asked if I would take a dose there and then but I said I would wait until I got home.

Mr. R. F. TOMLIN was the next witness and in answer to Dr. BATEMAN said he lived in Wood-green, not far from Mr. Mostertz and it was he who called the meeting.

Cross-examined by Mr. WARD: He had never complained that Mr. Mostertz called himself Dr. Mostertz. He invited Mr. Mostertz to his house along with the other medical men of the district and he remembered that as Mr. Mostertz left the house he asked him to give up this class of practice and make himself agreeable and join in with the rest of the medical men.

Dr. R. E. FOOTT, one of the medical men who attended the meeting, also gave evidence.

Dr. BATEMAN then intimated that this closed the case for the complainants.

Mr. WARD, addressing the Council on Mr. Mostertz's behalf, said the question to decide was whether or not Mr. Johnson was practising in this place under cover of Mr. Mostertz. He proposed to call Mrs. Johnson, who would tell the Council that since the death of her husband in May last she had carried on the pharmacy which she had a perfect right to do under the Pharmacy Act as the widow of a qualified man. By a fortunate accident Mr. Alfred William Johnson came to stay there while his brother was ill. During the illness he looked after the shop and after the death he assisted the widow in the business. In August last Mr. Mostertz went to Mrs. Johnson and engaged at a weekly rent of 10*s.* the room which he now used as his dispensary. Mrs. Johnson was the tenant of the house and paid the rent and taxes for it. Mr. Mostertz employed

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Mr. Johnson at a salary of £1 per week, but never with the permission of Mr. Mostertz had Mr. Johnson practised. Mr. Mostertz had been careful to see all the patients himself and he left word with Mr. Johnson to call for him if any person came after dispensary hours. If Mr. Johnson did what Dr. Campbell had stated then he had exceeded his instructions and he submitted that the Council should not visit upon Mr. Mostertz the fault or offence of his assistant. In his deposition Mr. Mostertz said that so far as he knew there was no such person as "George W. Johnson" in existence. He employed Alfred William Johnson as a dispenser and paid him £1 a week for his work in that capacity and for keeping his books and announcing patients. When he saw Tyrrell he told him that Johnson was his unqualified assistant acting under his supervision as he (Johnson) had acted for twenty-three years to eight other registered practitioners in different parts of the country.

Mr. MOSTERTZ then went into the witness-box. He denied that he acted as cover to Johnson in any way. He simply dispensed the medicines and in some cases he went out with him to assist him, as for instance he did in a case of fractured pelvis. Johnson derived no other income from the dispensary than the £1 per week which he paid him, though he believed he received some sort of payment for the assistance he gave his sister-in-law.

Cross-examined by Dr. BATEMAN witness said that since the issue of the new notice of this Council with regard to unqualified assistants he had told Johnson not to prescribe for anyone. Although in his time Johnson had attended many midwifery cases he had never attended any for him. As Johnson had been an assistant for twenty-three years he could scarcely be described as a medical student. It was the case that the certificates of witness had been placed in the window, but that was because a rumour had been spread about the neighbourhood that if any of his patients died there would be an inquest and the place would be shut up.

By Mr. MUIR MACKENZIE: When he engaged Johnson in May the latter solemnly declared that he had never treated patients at the dispensary and among other things he said he had sent a case of broken arm that came in to Mr. Tomlin.

By Dr. GLOVER: Witness attended all scarlet fever cases though he might send Johnson to see that the disinfection was carried out.

Mrs. ELIZABETH JOHNSON was next examined. She explained that her deceased husband had let the room to several medical men, including one who was a member of the Medical Defence Union, and that since she became a widow she had paid the rent and rates.

Mr. WARD read a declaration from Mr. Alfred William Johnson in which he denied that he had ever attempted to practise. As to Tyrrell he saw at once that there was very little the matter with him. If there had been anything serious about him he should have referred him to Mr. Mostertz.

The Council having deliberated *in camerâ* on the case,

The CHAIRMAN announced to Mr. Mostertz that the decision was that the charge had been proved to the satisfaction of the Council, but the Council had taken the matter into consideration and determined to adjourn further proceedings until next session when he would be cited to appear and would have to show that he had dissolved his connexion with this person whom he had been employing as an unqualified assistant.

The Council then adjourned.

MONDAY, NOV. 29TH.

The Council resumed to-day, Sir WILLIAM TURNER acting as chairman.

Preliminary Examination—Important Resolutions.

Dr. BATTY TUKE submitted a report from the Education Committee on the measures to secure a higher standard of preliminary examination for intending medical students. He said that before he read the report he would state the general principles which had actuated the committee in framing it and he thought he might be allowed to foreshadow as far as possible the policy which the committee thought should be followed by the Council in dealing with preliminary examination. In order to do this he must ask the Council to allow him to give a *résumé* of the work done during the last few years. He should speak of that work only since the establishment of the Education Committee. That preliminary examination had received a great deal of attention was marked by the fact that it had been the subject of no fewer than ten reports. He did not propose to go into the details of all these reports but would confine himself to a general outline. They showed that the Council had insisted upon candidates having a knowledge of mathematics (including arithmetic), of Latin, of one modern language, and of English. These were the subjects prescribed by the Council and were the subjects which were now demanded by the Council. They had been prescribed in general terms because the Council thought it was better to leave to the genius of each examining body to determine how the examination was to be carried out. But in order to preserve its hold on the examinations year by year the committee had overhauled the subject and reviewed the subjects of examination with the object of suggesting improvements. They had erased the names of some examining bodies and they had added new bodies. They had also effected an alteration in procedure by ordering that all the subjects should be passed at one time with, he was informed, very good results indeed, for it had eliminated from various examinations the weaklings—men who had gone up for examination time after time in the hope of passing at last. On the whole there had been during the last nine years a general improvement. That it was so was shown by the gradually increasing standard, the characters of the questions, and the increased percentage of rejections. But notwithstanding the improvement he was sure he expressed the general view of the committee when he said that the time had come when it was not only necessary but highly desirable that the standard of preliminary examination should be raised still further. The question had long exercised the minds of the committee. The great difficulty they had had to face was how was the change to be carried out. They were agreed that the standard should not be raised suddenly, but that the more cautiously and more carefully they proceeded the more likely was their action to be successful. The Council must remember that they possessed no power of insisting on preliminary examination and they had no statutory power of enforcing registration. That nowadays all medical students passed preliminary examinations and registered was due not to Statute but to recommendations of the General Medical Council and to the recognition of these by the various educational and licensing bodies of the kingdom. Preliminary examination and registration had become part of the system of medical education and registration, owing to the cautious action of the General Medical Council and the loyalty of the bodies. Still there was another thing that should be remembered and that was that no legislation could succeed that was in advance of public opinion. He thought it would be seen that no legislation in connexion with preliminary examination could proceed in advance of the general educational condition of the country. He was quite willing to admit that at one period of its deliberations the committee hoped to be able to submit to the Council a recommendation by which the standard of the preliminary education would be raised to a higher degree than that recommended in the report to this session, but they found that if not absolutely impracticable it was at least inexpedient to recommend any such step at present. They believed that any such step would dislocate the existing arrangements of bodies which had acted loyally towards the Council, and, moreover, that the general educational condition of the country would not warrant a sudden jump. At the same time the committee kept steadily in view the necessity there was that the standard of medical examination should be raised. They thought that all minimum examinations should be brought up to the level of those accepted by the universities, realising the fact that the standard of preliminary examination was not only being raised but would be still further raised. What he hoped was that after the lapse of a certain number of years under the conditions now recommended the Council would be in a position to exclude all junior examinations and accept only the senior examinations of the universities and governing bodies; and he anticipated after the lapse of a further period that they would find themselves in a position to advise all the bodies to institute a preliminary scientific examination which would include not only the subjects of general knowledge but also the subjects of chemistry and physics, leaving the full five years for strictly professional study. The report, which he would now read, was as follows:—

On June 9th, 1896, the Council agreed to the following motion:—"That the Education Committee be requested to consider whether the time has not come for erasing from the list of recognised preliminary examinations the 'Examination for a Second-Class Certificate (of First or Second Division) of the College of Preceptors.'"

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This motion formed the subject of a report presented to the Council on Nov. 25th, 1896. In this report the committee expressed their opinion that it was inexpedient to make more stringent the conditions applicable to one of the recognised examinations without imposing the same restriction on the other examinations of the same grade; but they concluded the report by making two recommendations to the Council, the second of which forms the subject of the following report. The terms of this recommendation are as follows: "That the Council instruct the committee to consider the requirements of the several junior preliminary examinations now recognised by the Council and to report on the steps that may be necessary for enforcing a higher and more uniform standard therein; that the recommendations which the committee may propose with this object be brought before the Council at the November Session of 1897 in order that if approved they may be brought into force on Jan. 1st, 1900."

This recommendation was adopted by the Council after substitution of the words "at the earliest possible date" for "January 1, 1900."

The result of the inquiries the committee have conducted during the past year is that the minimum standard of certain of the junior examinations in general knowledge now recognised by the Council is insufficient to guarantee such a degree of general education as is desirable for persons entering on the study of a liberal profession, and that a considerable number of medical students receive certificates of having passed such examinations though they obtain low marks in particular subjects. The committee have had under review not only the questions submitted to candidates in these examinations, but also in certain instances the written answers of candidates who have passed on the lowest marking. The latter method of inquiry especially served to convince the committee that the general standard of these examinations is too low. The committee have to thank the Examining Boards, and in particular the College of Preceptors and the Scottish Educational Institute, for the facilities afforded them for conducting their inquiries. Various educational authorities have also been consulted and their general opinion is that the minimum standard of the preliminary examinations should be raised; that no difficulty stands in the way of doing so provided due notice be given to the public and that the effect of such a measure might be expected to have a beneficial effect on school education in general. The Reference instructs the committee to consider the requirements of the several junior preliminary examinations and to suggest steps which might lead to their improvement. After deliberation the committee have come to the conclusion that it would be impracticable to obtain a higher standard in the lowest class of these examinations by merely enjoining a higher pass-mark in any or all of the required subjects. The examination papers themselves are in general of too elementary a character, being evidently adapted to the ordinary capacity of pupils of less than fifteen years of age.

The committee are of opinion that the best means of securing the object in view is in the first instance to insist on a higher class of examination, the preparation for which must imply more extended training and wider study such as might fairly be expected to have been undertaken by students who had at least attained the age of sixteen years. The various local and matriculation or entrance examinations conducted by the several British universities are in general of this character; they include the required subjects prescribed by the Council, usually with others that are educationally related to them; and the regulations under which they are conducted are, in the opinion of the committee, adapted to ensure fuller and more mature school education in the candidates who succeed in passing them. The standard of examination the committee think desirable now to fix is such as can be readily passed by an average pupil on leaving the form next below the highest of a good school, and this standard they believe can and ought to be attained at the present time by students proposing to enter the medical profession. The committee do not suggest any increase in the number of obligatory subjects to be taken up by candidates, believing that if a student stands the test of a sufficiently searching examination in English, Latin, Mathematics, and in Greek or a second modern language he will be prepared to commence the study of the various sciences ancillary to medicine. The committee, however, recognise that it may before long be desirable to raise still further the minimum standard of preliminary education in such wise that no examination of lower standard than (for example) the senior local and higher grade examinations should continue to be recognised by the Council. These latter examinations are adapted to the capacity of students of about seventeen years of age, and require a wider range of study and a more detailed knowledge of particular subjects than the junior local examinations and certain of the university matriculation or entrance examinations. If the recommendations of this report be adopted by the Council the committee propose to watch carefully the effects thereby produced on the general education of medical students, to accumulate information on the subject from the various educational authorities, and thus to obtain materials for reports to be presented from time to time to the Council on the practicability of a further advance. For these reasons the committee have resolved to advise the Council to confine its recognition on and after Jan. 1st, 1899, to such examinations as the local and matriculation or entrance examinations conducted by the universities of the United Kingdom and to the examinations of corresponding standard held by the College of Preceptors, the Scottish Education Department, and the Intermediate Education Board of Ireland; and to intimate to other bodies in the United Kingdom and to the Indian, colonial, and foreign examining bodies that on and after the same date no examination of a lower class than those above referred to will be recognised by the Council.

The following are the examinations conducted in the United Kingdom which are regarded as at present of a lower standard than that which should be required:—

Royal Colleges of Physicians and Surgeons in Ireland.—Preliminary Examination.

College of Preceptors.—Second-Class Certificate of First or Second Division.

College of Preceptors.—Preliminary Examination for Medical Students (standard of Second-Class Certificates).

Educational Institute of Scotland.—Preliminary Medical Examination.

So far as the United Kingdom is concerned the step now proposed, if it be approved of by the Council, will serve to secure a higher and more uniform standard of preliminary examination; but it is manifest that as regards the Indian, colonial, and foreign universities and colleges the procedure will require some time. Not only must due notice of the impending change be given to these bodies, but the new standard of examination must be indicated to them, and they must have time to re-arrange their regulations and to satisfy the Council that their amended examinations are worthy of recognition. On the receipt of evidence to this effect the committee will prepare and issue a list of examinations which they regard as of sufficient standard. The committee are therefore of opinion that it would not be expedient for the Council to enforce the new standard of preliminary examination before Jan. 1st, 1899.

The committee submit the following recommendations:—

1. That the Council intimate to all the examining bodies whose examinations in general education are recognised by the Medical Council as qualifying for the registration of medical students that on and after the 1st day of January, 1899, no certificate of lower standard than that of the matriculation or entrance and the junior local examinations of the universities of the United Kingdom will be accepted for registration.

2. That the Education Committee be instructed to revise the list of examinations recognised by the Council with a view to removing from it on the 1st day of January, 1899, those examinations which are of a lower standard than that indicated in Recommendation 1.

He (Dr. Batty Tuke) moved the adoption of the first of these recommendations.

Dr. MACALISTER seconded the motion.

Mr. BRYANT agreed entirely with this admirable report. He was exceedingly pleased at it, for he felt with the committee that it was desirable gradually to raise the standard of education. He was also pleased to know that the Conjoint Board of the Royal Colleges of Physicians and Surgeons in Ireland was willing to conform to the wishes of the Council and drop their preliminary examinations in arts and that the College of Preceptors and the Educational Institute of Scotland were willing to help the Council in this matter. He thought there was little room for criticising the report.

Mr. TICHBORNE pointed out that while the Apothecaries' Hall of Dublin was the first of the professional bodies to drop the preliminary examination in general knowledge the Royal Colleges of Ireland were the last.

Mr. BROWN thought that the report was a step in the right direction, but he must confess he was disappointed in finding that the committee had not seen fit to increase the number of compulsory subjects. It would, in his view, have been greatly advantageous to the profession in the future if they had recommended the French language as an obligatory subject.

Dr. BRUCE did not quite agree with Dr. Batty Tuke that the Council had no power over the preliminary examination. He thought the Medical Act gave them power of the kind.

Sir RICHARD THORNE had listened with a good deal of attention to Dr. Batty Tuke's opening statement, but he must say that during it and the reading of the report his hopes underwent considerable oscillation, now rising and now falling, as Dr. Tuke proceeded. Dr. Tuke in one breath would tell the Council the extreme importance that existed of raising the standard; in the next he would caution them that education should not go in advance of public opinion. He entirely disagreed with Dr. Batty Tuke there, for he thought that education should be just so far in advance of public opinion as to lead public opinion. He had no hesitation whatever in saying that the advance which they had made in the elementary education which was necessary for entrance to the medical profession, so far from having gone in advance of the general education of the country, had lagged behind in the most lamentable, the most deplorable manner. They were cautioned that a rise in the standard of examination might lead to depletion of medical students. He could not see that there would be anything more advantageous to the profession than depletion. He knew that there were many Oxford and Cambridge men hanging about hospital doors without being able to find work to do, and what was wanted was depletion not only of medical students but of those who had not even the education of an ordinary gentleman. Adverting to the option the candidate now has of taking "Greek or a second modern language" he pointed out that if the modern language was selected it would be only one in addition to his own, which naturally he ought to know. He did wish that either French or German was made a compulsory subject. Nowadays there was such a vast amount of medical literature in French or German that members of the profession should have knowledge of one of these languages, if not of both, so as to be able to go for their information to the original and not be dependent on translations. Apart from these points he did not think the report was altogether logical. He read that "the committee have come to the conclusion that it would be impracticable to obtain a higher

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standard in the lowest class of these examinations by merely enjoining a higher pass mark in any or all of the required subjects. The examination papers themselves were in general of too elementary a character, being evidently adapted to the ordinary capacity of pupils of less than fifteen years of age." These examinations were perfectly hopeless. If they were hopeless and could not be raised it was certain that the recommendation they were discussing did not bear on the matter and, unless he misunderstood, when taken in connexion with that paragraph was hardly consistent. If he were asked for an amendment he should have to ask the Education Committee to point out the examinations which being hopeless could not be accepted.

Mr. BRUDENELL CARTER said he would be very glad to fall in with the suggestion made by Mr. Brown that at least the French language ought to be made obligatory. He did not think it would be possible to make it one of the compulsory subjects for 1899, as the interval would not be sufficient to allow candidates to prepare; but all the same they should decide that in some not distant year French should be compulsory. He should prefer French to German. At the same time he should be very glad if the Council could see its way to enforce a really high standard in the English language. The knowledge of English possessed at present by the profession generally was not extensive enough. It seemed to him that students should be encouraged to know more about it seeing that they had to think and speak in it and as practically it was the first requirement of the medical men of this country. The recommendations might be modified to secure compulsorily a better knowledge of English and knowledge of French.

Dr. LEECH considered that all the members of the Council would be glad that the committee had gone so far that some of them were disappointed that it had not gone further. It was perhaps not very satisfactory to find that the standard of examination which the committee thought desirable was such as could be "readily passed by an average pupil on leaving the form next below the highest of a good school," but it seemed to him that if a boy learned mathematics well and passed a good examination in Latin, English, and Greek he did enough. He would not put any further subject compulsorily upon him.

Sir WILLIAM THOMSON, as a member of the committee, had nothing special to say about this report. A report of this kind was always one of compromise and in the present case the members of the committee sat for three days and discussed the *pros* and *cons.* of the matter with a great deal of earnestness. What he particularly rose for was to express his agreement with Mr. Carter in regard to the necessity that existed for a higher standard of English in the medical profession and also to express his sympathy with the proposal to make one of the continental languages an absolutely compulsory subject, preference being given to French. The reference to the committee did not include these matters, but they were such that the committee might well consider them and take such steps as to increase the value of the examination they now recommended.

Dr. MACALISTER, replying on the whole debate, was glad that the general principles of the committee's procedure had met with a fair amount of approval on the part of the Council, though the points raised by Sir Richard Thorne showed that the argument was not stated so clearly as it might be. What the committee were asked to do was to examine the various junior examinations—that was to say, those that were not senior or called senior. When they looked into these examinations they found that there were two well-marked levels—one representative by the local examinations of most of the universities, all of which were pretty fairly of one standard and were regarded as fairly equivalent of each other; the other class represented by examinations of a standard lower than the university local examinations. A little investigation showed that the papers and the second class of examinations were of such a character that if even full marks were awarded for them that would not be sufficient to meet the object in view. Consequently, merely to insist upon higher marks would not have improved things, neither would any increase in the number of subjects. So the committee had decided as the report set forth. With regard to the amount of change which was involved he thought the gravity of it was not fully appreciated. The step proposed to be taken was not quite a small one. The students who were examined and registered yearly numbered something like 1600, and of that number 480 or so passed on to registration by means of those examinations which it was intended to recognise no longer as sufficient. Accordingly when it was seen that at one stroke they cut off more than a fourth of the number which at present secured registration as students the gravity of the step would perhaps be a little more appreciated than it seemed to be. As to making French obligatory, his opinion was that if that were done it would result practically in leaving out Greek. He would prefer to see logic rather than Greek struck out. They had endeavoured five years ago to get logic omitted from the optional subjects, but at that time they were unsuccessful. He should not be sorry to see it go now.

The recommendation was then put and unanimously adopted.

Dr. BATTY TUKE next moved the committee's second recommendation. He expressed the wish that they could have brought the new system into operation more speedily, but that was out of the question owing to the amount of correspondence that the change would involve.

Dr. MACALISTER seconded, and after a remark by Sir RICHARD THORNE about men getting through with a sixpennyworth of logic.

The second recommendation was also unanimously agreed to.

On the motion of Dr. BATTY TUKE, seconded by Sir RICHARD THORNE, it was further agreed:

That on and after Jan. 1st, 1899, Logic be omitted from the list of optional subjects in the preliminary examination.

Mr. BROWN thought the feeling of the Council was favourable to a motion for the inclusion of French amongst the compulsory subjects, say, from the year 1901.

The CHAIRMAN was of opinion that this matter should not be pressed at present but should be left to the committee.

Dr MACALISTER indicated that adequate means would be taken to let the educational world know of the changes they had just agreed to.

Sir CHRISTOPHER NIXON moved:—

That it be referred to the Education Committee to consider and report to the next session of this Council the procedure necessary for the institution of a preliminary examination for medical students of a standard uniform throughout the United Kingdom, such examination to be wholly conducted by the General Medical Council.

In supporting this proposal Sir Christopher Nixon said that it was only a few hours since he learned from his friend Sir William Thomson that in the session of November a year ago Sir William Thomson himself had moved a resolution somewhat to the same effect, and as he would not like to steal Sir William Thomson's clothes while he was bathing it would be only fair of him now to give Sir William Thomson the option of taking up the motion. (Sir William Thomson indicated that he had no wish to do so.) Then, Sir Christopher Nixon went on to say, the reason why he proposed the resolution was that the present mode of holding examinations seemed to him to be largely responsible for what he might call the degradation of the profession and to a large extent instrumental in the production of those penal cases which absorbed so much of the time of the Council. He was quite aware of the desire of the Council to raise the standard of preliminary examinations by every means in its power, but even the debate they had just been engaged in showed how little power the Council had in connexion with these examinations or in securing what was so important—a minimum standard. There were so many bodies conducting these examinations which the Council did not inspect—had not, he supposed, the power to inspect—and which he did not think could in any way be regarded as uniform in standard. The percentage pass was low—33 per cent. in some cases—and the result was that at the very entrance to the profession they had men cramped by a deficiency in elementary knowledge. He thought the report just adopted was of such a character as to imply that the Education Committee would not be remarkably successful in securing their object. To his mind the only way of attaining that object was to establish an examination which would be absolutely controlled by the General Medical Council. Short as his acquaintance with that Council was, he had seen enough to convince him that there was no other body—at any rate, none he knew of—to whom he would more willingly entrust the interests of the profession.

Mr. HORSLEY formally seconded the motion.

Sir WILLIAM THOMSON did not like to express his entire approval of this proposal. He was afraid that at the present moment the Council had no power to carry out such a scheme.

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It was certainly a scheme in which he personally took the greatest interest, but a modification of the Act of Parliament under which the Council acted would be necessary before effect could be given to it.

Mr. BRUDENELL CARTER, who mentioned that he had always entertained the view that the profession should keep the key of its own door, remarked that he should be exceedingly glad if the suggestion in the proposal was one that could be adopted as he was quite sure that to place it in the power of the General Medical Council to carry out the reforms that were now required would add immensely to the culture and dignity of the profession.

Dr. CHURCH looked upon the proposal as a dangerous one. Supposing it were competent for the Council to conduct the preliminary examination for the medical profession he thought the area too wide to be undertaken by one body. He thought a higher standard of education was now possible by the competition among educational bodies that went on at present than could be obtained if there was only one body controlling the whole set of examinations. He for one could not agree that it would be wise on the part of the Council either to fix the standard of preliminary examination for candidates for the medical profession or undertake the labour of maintaining that standard.

Mr. TEALE pointed out that the direction in which the Council had hitherto gone was to put the preliminary examination in the hands of the educational bodies thoughout the country and more particularly in the hands of the universities. He saw no reason why they should make a change. Though they understood medical education the General Medical Council were not the body to undertake general education.

Dr. LOMBE ATTHILL thought that if Mr. Teale's views were carried out it would simply mean that the medical education would fall into the hands of the universities.

Sir WILLIAM TURNER: Oh, no.

Dr. LOMBE ATTHILL was sure the Council would never attain an efficient standard of education until they had examining boards for the different parts of the kingdom which they themselves controlled and could visit and inspect.

Dr. MACALISTER wanted to know if the mover and seconder of the proposal had ascertained whether there was legal power to give effect to their proposal and whether they were prepared to start a school with the object of securing the fitness of candidates for the examination suggested.

Mr. HORSLEY pointed out that all the motion did was to ask the Education Committee to consider and report upon the procedure that it would be necessary to adopt to institute and carry on a preliminary examination to be conducted by the Council. Neither he nor the mover intended to raise the general question of the advisability of entering upon such a scheme. Both he and Sir Christopher Nixon, both new members, were ignorant of what the procedure necessary would be and they wanted information. That practically was all the motion amounted to.

The CHAIRMAN: The motion certainly does involve the institution of an examination by this Council.

Dr. BATTY TUKE: This is not a matter for the Education Committee at all. It is one for the legal advisers.

Mr. HORSLEY: If the Education Committee find that any legal point is involved they could consult the legal advisers. All we ask is that the Education Committee consider how it could be done. I do not see that this motion binds the Council to anything.

Dr. MACALISTER: Six months hence it would be held that it did bind the Council.

Sir WILLIAM TURNER said there was no doubt that it had been the aim of the Council to leave examinations in arts to the educational bodies. It would be rather inconsistent after their efforts to get the licensing medical bodies to give up their preliminary examinations for the Council to come in and say that it would itself now take over the whole of the preliminary examinations for medical students.

Dr. LEECH objected to any resolution which would lead to the General Medical Council undertaking the preliminary examination. Such a change in the present system would do education a great deal of harm and no good.

On a division the motion was rejected by 19 votes to 7, 2 members declining to vote.

Accumulation of Examinations.

The next business on the notice paper was the following:—

Report of a conference between the Examination and Education Committees on Mr. Teale's motion of June 2nd, 1896: The Examination Committee begs leave to report that in conformity with the wish of the Council it has conferred with the Education Committee. Pending additional information on the subject it is not prepared to make any recommendations at the present session, but asks leave from the Council to continue the reference.

Sir DYCE DUCKWORTH, as chairman of the Examination Committee, in moving that the report be entered on the minutes, said that last session it was decided that a conference should be held on a point which was referred to the Examination Committee and which caused so much interest and attention when raised by Mr. Teale in what he (Sir Dyce Duckworth) would call his (Mr. Teale's) celebrated motion on the accumulation of examinations. That motion referred to the large number of rejections at examinations which it was said was believed to be caused by the great pressure of examinations the students were subjected to. That matter had been considered by the Examination Committee and a report had been submitted to the Council who had authorised the conference. The matter had not been lost sight of. It would still be under the notice and discussion of the Examination Committee, who already had held a conference with the Education Committee without much coming from the meeting. The whole point was conceived to be, What position is to be held by scientific and preliminary subjects? That would be carefully considered, but it was necessary that the Council should give leave to continue the reference and let a report be prepared.

Dr. PETTIGREW seconded.

Mr. TEALE wished to remind the Council that when proposing his motion he had stated distinctly that he did not expect an immediate result. The motion was put forward rather to draw the attention of the Council and bodies concerned to the question in the hope that something might be done when the curriculum or any part of it was under consideration.

Sir DYCE DUCKWORTH'S motion was agreed to.

Penal Powers of Licensing Bodies.

Mr. BRYANT, on behalf of the Executive Committee, submitted the following report on the penal or disciplinary powers of the licensing bodies:—

The Executive Committee have pleasure in reporting that some progress has been made in regard to this question since the Interim Report was received last session. With reference to the English Universities a communication has been received from the University of Durham informing the Council that a Charter, dated Aug. 25th, 1897, has been granted from which the following Sections have been extracted:—

"Whereas doubts have arisen whether the Warden, Masters, and Scholars of the University of Durham have power to cancel, revoke, annul or take away any degree or title conferred by the University of Durham upon any person who shall have been proved to be unworthy to be a Member or Graduate of a University, and whether such power was at the date of the Charter first hereinbefore recited and now is a right or privilege incident to a University established by Royal Charter. And whereas it is expedient to remove such doubts as aforesaid. ..... Now know ye that We do of our especial Grace, certain Knowledge and mere motion by these presents for Us, our Heirs and Successors will grant, ordain and declare that the said Warden, Masters and Scholars of the University of Durham shall be empowered and are hereby authorised and empowered to cancel, annul, revoke, and take away any degree or title that has been or shall hereafter have been conferred by the University of Durham upon any person of whom it shall be reported to Convocation by the Warden and Senate that such person has been convicted of a crime for which he has been sentenced to penal servitude or imprisonment and that such crime is one which renders him unfit to be a member or graduate of the University of Durham."

It has also been intimated to the Council that the Court of the Victoria University has decided to apply for similar powers to those already obtained by the University of Cambridge, and that now it only remains that the application should be formally made to the Crown with every prospect of the power being conferred. With reference to the Scottish Universities the President has informed the Council that the Edinburgh University Court has again considered the question of obtaining power to remove from the roll any graduate who may be found guilty of a criminal offence or other misconduct; and the Court has decided to intimate to the other University Courts that, while remaining of opinion that the difficulties of the question are very great, it is willing to confer with the other universities and to appoint representatives to a joint committee which might report to the various courts. An official communication has been received from the University of Glasgow stating that the Court on July 8th, 1897, adopted a memorandum in which it desired very respectfully to raise the question whether it might not be possible for the Universities Commissioners even now, without determining anything, to leave on record in their final report such an expression of their opinion as may tend to bring the Scottish Universities into line with each other or with those universities of the United Kingdom which either already possess or have expressed the desire to obtain further disciplinary powers in accordance with the expressed wish of the General Medical Council.

The Glasgow University Court is fully aware of the difficulties of the subject and has made no attempt to disguise or to over-ride these in its communications to the General Medical Council. The court is also willing, nay, desirous, that the whole subject should be fully discussed from the point of view of the other Scottish universities, so that any attempt made after the expiry of the Commission to meet the

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wishes of the General Medical Council in respect of disciplinary powers may proceed as a conjoint movement on the part of all the Scottish universities. But it appears to this University Court that in no way could this desirable object be more facilitated than by an expression of opinion, after due inquiry by the Universities' Commissioners, to be included in their final report. The Glasgow University Court will be willing to place itself at the disposal of the Universities Commissioners should it appear desirable to take evidence or to bring about in any way a conference of the Scottish universities with respect to the questions involved in this memorandum. The Scottish Universities Commission in answer to the Glasgow and Aberdeen Courts, however, assert that the matter to which the above memorandum refers is not within the province of the Commission. They have no Parliamentary powers to deal with it or instructions to report upon it. In the Joint Committee referred to above all the universities of Scotland would no doubt take their part and thus united action be taken by all the Scottish universities. So far no information has been supplied to the Council as to any further steps taken by the Royal University of Ireland.

In moving that this report be entered on the minutes Mr. Bryant said there had been a first report on this subject, then an interim report, and now this further one, which he should like to distinguish as the third report. It simply gave information to the Council of what had been done by the different licensing bodies since last May. He was happy to say that it was favourable. He hoped that when the subject was again reported upon there would be something more definite to say.

In answer to Dr. MCVAIL Sir CHRISTOPHER NIXON said that the Irish University authorities considered they could do nothing in this matter unless they had some new powers.

Dr. MCVAIL suggested that they should inform the committee of their view.

Sir DYCE DUCKWORTH seconded Mr. Bryant's motion, which was agreed to.

The CHAIRMAN said no further motion on the subject was needed seeing that the report was only narrative.

The Case of Alfred Freeman.

The Council proceeded to the consideration of the case of Alfred Freeman, of 163, Bloomsbury-street, Birmingham, registered in England as Mem. R. Coll. Surg. Eng. 1862; Lic. R. Coll. Phys. Edin. 1879, who had been summoned to appear before the Council on the following charges, on the complaint of Albert Henry Bygott, of 1, Deritend, Birmingham, registered in England as Lic. Soc. Apoth. Lond. 1893:—

(1) The complaint is in respect of two dispensaries or establishments where branch medical practices are carried on in the name of Mr. Freeman at 65, Benacre-street and 163 and 165, Bloomsbury-street, Birmingham. (2) The complaint is that at such establishments or dispensaries Mr. Freeman, being a registered practitioner, authorises, permits, and enables two unqualified and unregistered persons, who purport to act as his assistants, to attend upon and administer medical treatment to patients and give and sign medical certificates in his (Freeman's) name and carry on medical practice as if they had been duly qualified and registered. (3) The unqualified persons referred to were his (Alfred Freeman's) two sons. (4) The complainant is Mr. Albert Henry Bygott, of 1, Deritend, Birmingham.

Mr. Bygott appeared to support his case and Mr. Freeman was assisted by Mr. Meade, solicitor.

Mr. BYGOTT made a statement as to the position of the two dispensaries and Mr. Freeman's residence and the manner of practice carried on in the former and presented to the Council certain declarations.

Mr. FREEMAN went into the witness-box and tendered evidence. He said he had been thirty-four years in practice; of this time twenty-nine years being spent in the town of Wolverhampton, where he had been a member of the town council. About two years ago he went to Birmingham, taking up his residence and practising at Bloomsbury-street. He afterwards changed his residence to Nechell's-green and opened the surgery in Benacre-street. One establishment was taken by his eldest son, who was thirty-two years of age, and the other by another son, eighteen years of age, but both were conducted under his close personal supervision.

The Council decided that the case had been proved and directed the Registrar to erase Mr. Freeman's name from the Medical Register.

Thereafter the adjournment took place.

TUESDAY, NOV. 30TH.

On taking the chair Sir WILLIAM TURNER said there was a good deal of business on the programme, some of it of considerable importance, and he would express the hope that members would address themselves closely to the points so that they might finish the session that day.

The Pharmacopœia.

Mr. H. E. ALLEN, the Registrar, read the following report from the Pharmacopœia Committee:—

The committee having had entrusted to it the duty of preparing the new edition of the British Pharmacopœia has now the honour to submit for the approval of the Council copies of their final draft of the work subject to the correction of typographical and other errors. The estimated amount to be expended on its production will be about £6000. If 20,000 copies are printed the cost to the Council will be about 6s. per copy. The committee accordingly suggest that the price of the volume might suitably be 7s. 6d., but the power of actually fixing the price rests with the Commissioners of the Treasury. In order that the Pharmacopœia may be issued early next year the committee recommend that it be delegated to the Executive Committee to adopt the fully corrected work as "The British Pharmacopœia, 1898," to communicate with the Commissioners of the Treasury on the question of price, to publish the Pharmacopœia, and to make the legal announcement of publication by notice in the London, Edinburgh, and Dublin Gazettes in accordance with the provisions of the Medical Act, 1862.

This report having been entered on the minutes.

Mr. BRUDENELL CARTER moved the adoption of the recommendation which it contained. In so doing he said that as it was not in his power to practically render any other assistance to the Pharmacopœia his colleagues on the committee had been kind enough to put him in the chair when their President (Sir Richard Quain), who was chairman of the committee, was absent. That had given him the opportunity of seeing with what painstaking care the new edition of the Pharmacopœia had been produced. On the production of no previous edition of the work had anything like the same labour, pains, and care been bestowed, and he felt quite confident that it would remain as a monument of the greatest possible credit to this Council. The book now was entirely complete with the exception of typographical corrections, and the committee therefore asked the Council to refer to the Executive Committee the special function of ordering it to be published. Unless they secured an arrangement of this sort with the Executive Committee the publication of the book would have to be deferred until the end of May. They felt that the necessary corrections could be made before the next meeting of the Executive Committee in February, 1898, and that it would be in a fit condition to be published. The book would cost 6s. 2d. per copy and the price at which it was to be sold to the public might be higher than the 7s. 6d. named in the report. That was a matter that rested with Her Majesty's Treasury, but personally he thought that the price of 10s. or 10s. 6d. would probably not be too much to pay for a work of the character in question.

Sir DYCE DUCKWORTH, in seconding, said it was due to the Council that they should know what an immense amount of labour and pains had been taken in connexion with this new edition of the Pharmacopœia and how much painstaking labour had been bestowed upon it by their esteemed President himself. Those who knew Sir Richard Quain knew what pride he had taken in the production of each successive book in the preparation of which he had taken part and he felt sure that if Sir Richard Quain had been able to be present he would have told them something in detail of the work which had been carried on during the last few years. The labour had been simply stupendous. The committee had been materially assisted by the painstaking work of Dr. Tirard, who had had the most of this large work in his hands during the last two years. The book would not now have been so well advanced as it was but for the work Dr. Tirard had done. This edition of the book had been revised in a way that no previous Pharmacopœia had been. In making it such a complete work as it would be they had had the assistance of Indian and colonial authorities and it was really the first Imperial Pharmacopœia. Altogether the labour bestowed upon its production was unprecedented and it was a work that ought to command the utmost confidence. The book was worthy of the Council and he hoped that every member of the profession would provide himself with a copy of it.

Dr. MACALISTER cordially agreed with all that had been said.

Mr. BROWN asked what was the price of the present edition of the Pharmacopœia.

The CHAIRMAN replied that it was 6s., but it was being sold for 4s. 6d.

Mr. BROWN thought it would be a big jump if they raised the price of the book from 6s. to 10s.

The CHAIRMAN said that under the Act of Parliament it

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rested entirely with Her Majesty's Treasury to say at what price the book should be sold.

The motion was agreed to.

Dental Education and Examination.

On the motion of Dr. MACALISTER, seconded by Dr. LEECH, the Council went into committee for the consideration of the recommendations of the Dental Education and Examination Committee.

Mr. BRYANT explained that in December, 1896, the Committee presented a report; in May, 1897, they presented an additional report; and now they presented their third and final report. He had hoped to have been able to ask the Council to adopt this final report, but when he looked down the programme of business and saw the notice of motion in the names of Dr. Heron Watson and Dr. McVail he felt that to meet the resolution he should be obliged to go into details connected with all these reports and he suggested that the Council accept the final report as read and allow him to confine himself simply to the point raised by Dr. Heron Watson and Dr. McVail.

The CHAIRMAN thought the best course in the meantime would be for Mr. Bryant to read to the Council the final report.

Mr. BRYANT then read it, the terms of the report being as follows:—

This Report is based upon the "Additional Report" of this Committee which was presented to the General Medical Council in May last and was entered on its Minutes, together with the remarks upon it made by the four licensing bodies to which it was referred with the whole of the previous Reports bearing upon the recent inspection of their examinations. We have reason to believe that the Report of the Royal College of Surgeons of England will be favourable to the recommendations of this committee with respect both to the curriculum and to the examinations, but it cannot be communicated officially at present. Upon the recommendation of this committee that the Royal College of Surgeons of Edinburgh should unite with the Faculty of Physicians and Surgeons of Glasgow and so form one Conjoint Dental Board for Scotland, the Edinburgh College reports that the recommendation was carefully considered by the President and Council of the College and subsequently at the statutory meeting of the College on Oct. 20th, 1897, when it was resolved that the recommendation of this Dental Committee should neither be accepted nor even entertained by the College.

The Faculty of Physicians and Surgeons of Glasgow after referring it to their legal advisers likewise reports: "In view of the fact that there appears to exist no statutory provision for sanctioning the suggested combination and of the doubtful validity of a voluntary or non-statutory union of the two boards the Faculty consider that they are at present precluded from taking action in the direction indicated by this recommendation."

Under these circumstances this committee can only express its regret that its suggestion for providing one Dental Examination Board for each division of the United Kingdom cannot at present be carried out. With respect to the recommendation of this committee that the three months' course of materia medica should not be required, it would appear from the remarks of the Royal College of Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow, that such an omission is not by them considered desirable; whereas the London Royal College is in accord with the recommendation and the Irish College seems to be indifferent to it as it passes it by. With respect to the recommendation of this committee that the courses of lectures in physiology, metallurgy, and mechanical dentistry should be helped by special practical courses, the Edinburgh Royal College of Surgeons states that the additional courses suggested already substantially exist in its curriculum although not directly specified under a separate designation, and "considers that the remedy for any supposed deficiency in such teaching will be found not in further sub dividing the courses in the curriculum but in securing that the courses as at present prescribed are thoroughly and efficiently utilised."

The Faculty of Physicians and Surgeons of Glasgow fully recognises the importance of practical instruction and that the changes recommended are generally in that direction. It thinks, however, that whenever practicable the practical instruction should be combined with the ordinary course, but approves of the addition of a practical course of dental metallurgy.

The London College already acts up to the recommendations and the Irish College has not raised any objections to them, consequently your committee leave these recommendations as they now stand with the assurance of the examining bodies that the practical part of the instruction will be effectively provided for.

The recommendations of this committee with respect to examinations are covered by the scheme of the London College and are not criticised by the Irish College. The Edinburgh College states that its First and Second Examinations comprehend substantially all the subjects suggested by this committee, although the order in which they are taken at the examinations may differ. The College criticises severely the suggestion of this committee that an examination in general medicine and therapeutics is not required. The Faculty of Physicians and Surgeons of Glasgow is of opinion that, assuming there should be a preliminary and two professional examinations, the grouping of the subjects under these examinations is on the whole judicious; but it considers that all the subjects of the dental curriculum can be sufficiently covered by the two professional examinations, but agrees with this committee that the practical tests in the examination should be increased in stringency. It, however, points out to the committee that there is no necessity for elementary chemistry to be included in both the preliminary—if instituted—and first professional examinations. The error was due to the omission of a note in the original report that chemistry would only be included in the first professional examination if it had not been passed in the preliminary. The faculty also complains that "on the important point of the extent and area of the examinations of dental students in such subjects as anatomy, physiology, and general surgery the recommendations of this committee give no leading and are of opinion that in such subjects the range of topics to be examined on should be less extensive than that for general medical students and be limited by some consideration for their practical application to dentistry."

The committee feels that it does not fall within the province of the Council to furnish anything like a complete syllabus of any part of the examination but would suggest that it should include, in addition to a thorough acquaintance with dental and oral anatomy, pathology, and surgery, a general knowledge of anatomy and physiology and of the principles of medicine and surgery with only such details in any of these subjects as may have a practical bearing upon the actual requirements of dentistry.

Your committee finally now present to the Council the recommendations as originally drawn up by the Dental Curriculum Committee in 1879 in regard to the education of the dental student, and corrected up to date according to the experience gained by one or other of the four dental licensing bodies. The deviations from the original scheme which have been adopted have, as it were, grown out of experience, and their results have chiefly been to encourage the practical branches of the dental art and to eliminate what has been found to be unnecessary. Neither radical changes in curriculum nor rigid methods in examination have been suggested, for your committee are well assured that so long as the examining bodies do not fall behind the main recommendations of this Council, either in the way of curriculum or examination, this Council has no other wish than that the details of the course of study and examinations may vary in the way which seems best to the governing authorities of the licensing bodies, all of which have full liberty of action. But this committee feels that all the bodies interested ought to work on the same lines. With these objects in view it is hoped that the recommendations of this committee will prove acceptable.

APPENDIX A.

AMENDED RECOMMENDATIONS OF THE GENERAL MEDICAL COUNCIL.

(1) In Regard to Preliminary Education Applicable to Dental Qualifications.

(*a*) The registration of dental students shall be carried on at the Medical Council Office in London or at the branch Council office in Edinburgh or in Dublin in the same manner as the existing registration of medical students and subject to the same regulations as regards preliminary examinations.

(*b*) Students who commenced their professional education by apprenticeship to dentists entitled to be registered, or by attendance upon professional lectures, before July 22nd, 1878 (when dental education became compulsory), shall not be required to produce evidence of having passed a preliminary examination.

(2) In regard to Professional Education.

(*a*) Candidates for a diploma in Dental Surgery shall produce certificates (i) of having passed a preliminary examination in General Education; (ii) of being twenty-one years of age; and (iii) of having been engaged during four years in professional studies.

(*b*) Candidates shall produce certificates of having passed through the following curriculum:—

(i) General Medical Subjects.

Anatomy, one winter session.
Dissections, twelve months with demonstrations.

Physiology, with a separate practical course, or with practical work introduced in the course. } one course
Chemistry, including Physics. } of
Surgery, including Pathology. } six months.
Medicine, }
Materia Medica, one course if thought necessary.
Practical Chemistry, one course of three months.

Attendance at a recognised general hospital with clinical instruction, not less than one year.

(ii) Special Subjects.

Dental Anatomy and Physiology, human and comparative, not less than twenty-four lectures, including Dental Histology and the preparation of Microscopic Sections.

Dental Surgery and Pathology, not less than twenty lectures.

Metallurgy, not less than twelve lectures, or demonstrations made practical, or with a distinct practical course.

Mechanical Dentistry, not less than twelve lectures, with separate course of Practical Dental Mechanics.

Practice at a Dental Hospital, or
Dental Department of a general hospital, two years.

(*c*) Candidates shall produce certificates of having received three years' instruction in Mechanical Dentistry from a registered practitioner.

(*d*) The three years of instruction in mechanical dentistry, or any part of them, may be taken by the dental student either before or after his registration as a student; but no year of such instruction in mechanical dentistry shall be counted as one of the four years of professional study unless taken after registration.

(*e*) One year's *bond-fide* apprenticeship with a registered dental practitioner, after being registered as a dental student, may be counted as one of the four years of professional study.

Mr. BRYANT having read this report moved that the amended recommendations as specified in the Appendix A be adopted.

Mr. CARTER seconded this motion.

Dr. MCVAIL suggested that the Council should before going into this matter deal with this:—

Notice of motion, to be moved in committee by Dr. Heron Watson, seconded by Dr. D. C. McVail: That this Council is of opinion that the suggestion of the Dental Education and Examination Committee that the Royal College of Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow should unite in conferring a single qualification in dental surgery is not provided for in the Dental Act

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(Section 28 of that Act never having come into operation) and need not therefore be entertained by this Council, whose duties consist simply in administering the Act.

Mr. BRYANT said that the state of the case in this regard was that the committee made their recommendation. The bodies said they were not in a position to carry it out, but the recommendation stood and there was no reason why it should not remain on record in the report.

The CHAIRMAN asked whether, after this statement, it was necessary for Dr. Heron Watson to proceed with his notice of motion.

Dr. HERON WATSON took the view that it was necessary in order that the constitutional question might be made clear. In his opinion the committee had far exceeded its duty. Not only so, but he doubted whether this report was brought up in a form in which it could be dealt with by the Council. He did not see why the committee had not presented certain definite issues upon which the Council might express an opinion.

Mr. BRYANT then read to the Council the additional report presented in May, which is much too long a document to be reproduced in these columns. With regard to the question of materia medica which appeared to excite a good deal of interest Mr. Bryant said that in the case of his own College the general student was not required to attend a course of materia medica, and he thought they could not ask more from the dental student than they did from the general one in this respect. He did not think it was advisable to do anything which might give to dentists the idea that they were justified in administering drugs. They learned the work of their profession in the lectures and advice given to them in practical surgery. They were taught to write prescriptions, but his College did not wish them to write other than simple prescriptions of lotions and so on because there was no desire to suggest that they were justified in administering medicines for internal diseases. That was all Edinburgh seemed to require of their students—knowledge of narcotics, emetics, purgatives, depressants, and stimulants; and in the case of Glasgow they simply spoke of knowledge of therapeutics in relation to emetics and vomiting, including the modes of prescription and the medicines employed. The Royal College of Surgeons in Ireland seemed to eliminate it altogether. What the committee did was to leave materia medica an open question so that the College might include the subject or not as they wished. He could not see that there was any objection in leaving it standing. Let the Council remember that these were not requirements. They had no absolute power of compelling any one of these bodies to do this or the other thing; they could only express pleasure when they fell in with the Council's recommendations and regret when they took a different course. Moreover, he thought that so long as the bodies did not fall behind the recommendations of the Council they ought to be fairly satisfied. As to the suggestion that came from the Glasgow Faculty with respect to some sort of guiding as to the extent to which dental students should be required to go into anatomy, physiology, medicine, and surgery, and if the body wished it materia medica, he might say that at first sight he was so satisfied with it that he sat down at once to form some sort of syllabus of the subjects, but after a time he realised that it was not the function of this Council to draw up syllabuses or synopses for the examining bodies and he abandoned the idea, and the committee had contented themselves with the expression of opinion found in their report.

The CHAIRMAN said he could not help thinking that the committee should have formulated a series of specific recommendations so that a vote could be taken upon each and the opinion of the Council thus obtained. As it was he suggested that the Council was not ripe to come to a decision upon the report.

Dr. MACALISTER moved:—

That it be remitted to the Dental Education and Examination Committee to draw up their recommendations in the form of a series of propositions, each dealing with a single subject, in order that the Council may be enabled next May to come to a definite decision on this subject.

Mr. BROWN, in seconding this amendment, said that in the present state of the case the Council was not in his opinion in possession of sufficient information to come to a proper conclusion.

Sir RICHARD THORNE said that while he quite approved of what Dr. MACALISTER had proposed he would read to the Council a motion he had prepared on this subject. It was to this effect, viz.:—

That it be remitted to the Dental Education and Examination Committee to consider and report whether it is not possible and expedient so to restrict the curriculum for dental students as to make it less adapted to the practice of medicine and surgery and better adapted to the practice of dentistry.

Since he had been a member of this Council nothing had impressed him more than the encouragement given for the education of mongrel doctors. One day they were attempting to stop irregular practice and the next they were engaged in supporting the education of these men in medicine and surgery. He would say that nine-tenths of the work was not adapted to the dental profession and that it was mere waste of time for the dental student to occupy himself with it because he might be much more profitably employed.

After some further discussion the Council by a large majority adopted Dr. MacAlister's proposal both as an amendment and as a substantive motion.

The CHAIRMAN asked Mr. Bryant whether he intended to insist on the reference to the proposal to fuse the two Scotch bodies in order to constitute a single examination in Scotland.

Mr. BRYANT said he thought it well that it should remain on record.

Dr. HERON WATSON expressed the opinion that it should be removed.

Dr. MCVAIL said that what the Scotch bodies objected to was the suggestion that this idea of a combination had never occurred to them until it was put forward by this committee. As a matter of fact it had been discussed immediately after the passing of the Act and from time to time since by them and they had found that they could not possibly unite under the present Dentists Act.

Dr. MACALISTER pointed out that the report was not adopted by the Council and therefore the reference to this subject could do no harm.

The CHAIRMAN suggested to Mr. Bryant that in bringing up his new report he should make a point of putting the two bodies in their proper position and so disposing of this matter.

Mr. BRYANT acquiesced in the suggestion.

Dr. HERON WATSON said that in these circumstances he would not press the motion of which he had given notice.

The following motion also standing in the name of Dr. Heron Watson was not moved, viz:—

That this Council, while recognising the care and attention bestowed by the Dental Education and Examination Committee upon the consideration of the reports furnished by the inspector of dental examinations, desires to place on record that no occasion is shown for the suggested withdrawal of materia medica from the dental curriculum and from the list of subjects for examination, and that the substitution in its stead of the hospital attendance and general lectures and four years of practical work does not meet either the requirements or the approval of this Council; and further that the conclusion at which the Dental Education and Examination Committee arrives, "that an examination in general medicine and therapeutics is not required," the necessary teaching and learning of these subjects so far as they belong to the practice of Dentistry being included in the general scheme as laid down," is also contrary to the requirements and approval of this Council.

The Council having resumed confirmed Dr. MacAlister's proposal adopted in committee.

On the motion of Dr. HERON WATSON, seconded by Dr. MCVAIL, it was agreed that an honorarium, the amount of which was left to the decision of the Executive Committee, be voted to Mr. Tomes, together with the best thanks of the Council for his inspection of the dental examinations and his reports upon them and upon the requirements of the curriculum in the case of each of the bodies granting a registrable diploma in dentistry.

Public Health.

Sir RICHARD THORNE presented a report from the Public Health Committee. In this report the committee begged leave to advert to their report to the Council of May 27th, 1897, on the Scotch Public Health Bill, which report was adopted by the Council and forwarded to the Secretary of State for Scotland, the Lord Advocate, and each member of the Committee on Law of the House of Commons then sitting on the Scotch Public Health Bill. In that report the committee drew attention to the fact that the proposal embodied in Section 22 of that Bill to place the opinion of the sanitary inspector in matters where a judgment has to be formed as to what is or is not liable to constitute a danger to public health on a statutory equality with that of the medical officer of health was calculated seriously to frustrate the efforts which the Council had made to ensure a distinctively high standard of proficiency in the public health service. The committee now further reported that following on the action taken by the Council the reference to the sanitary inspector was altogether deleted from the section as it now stands in the Public Health (Scotland) Act, 1897, and that the

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hitherto existing status of medical officer of health in Scotland in the matter referred to has been maintained. The only remark he desired to make was that, knowing, as he did, how extremely strong was the determination of some who were in very high positions to prevent the restitution of these rights to medical officers of health, he thought the Council was greatly to be congratulated on the result which could not fail to have its effect both in England and Ireland as well as in Scotland.

Dr. BRUCE, in seconding the motion, said that undoubtedly the action of the Council in this matter had been of great assistance to the medical officers of health.

The report was received and entered on the minutes.

Medical Aid Associations.

Dr. GLOVER read the following interim report from the Medical Aid Association Committee, namely:—

The Committee on Medical Aid Associations have to report to the Council that they have met deputations from Norwich and Yarmouth and have conferred with them on the memorial on the subject presented to the Council. On the suggestion of Mr. E. W. Brabrook, the Registrar of Friendly Societies, the committee has had an interview with a sub-committee appointed for the purpose by the leading friendly societies at which an opportunity was given for a full expression of opinion on the matters in dispute between the members of the profession and the associations. In the result a desire was expressed that the subject should be still further discussed in a similar conference to be held in the course of a few weeks. In view of such conference and of the need for further consideration of the matter by the committee the committee does not see its way at present to give more than this *interim* report and suggests to the Council to re-appoint the committee.

Dr. Glover assured the Council that the committee had been met in a most kindly manner by the friendly societies.

The report was received and entered on the minutes and the committee re-appointed to continue its work.

The Army Medical Department.

Sir DYCE DUCKWORTH read the following report of the Examination Committee upon the letter of the Director-General of the Army Medical Department with regard to the Council's request for information as to deficiencies in writing, spelling, and composition in the written work of candidates appearing before the examiners of the Department for Commissions in the Army Medical Department.

The Examination Committee of the General Medical Council of Education and Registration beg leave to report to the Council, with reference to the letter of the Director-General of the Army Medical Department (Minutes of Executive Committee, Nov. 22nd, 1897, p. 9), that it may be well to communicate to the Director-General for the information of his office an indication of the aim of the Council in asking him for any information he might be at liberty from time to time to communicate to the Council bearing upon glaringly faulty spelling, writing, or composition in the paper work of any of the candidates for appointments in the Army Medical Department brought under his notice by the examiners by whom these examinations are conducted. The information is desired by the Council not for the identification of candidates but to enable the Council to exercise from time to time a corrective influence upon those bodies from which preliminary examination certificates in general education had been obtained and which had apparently proved remiss in the exercise of their duty in granting certificates to pupils who did not possess a requisite degree of preliminary educational training; and, further, to indicate to the Director-General that the information asked for was afforded by the Director General of the Medical Department of the Navy and by the India Office, and that it had been furnished on former occasions by his predecessor in the Army Medical Department.

The report was received and entered on the minutes and the chairman of the committee was invited to communicate with the Director-General of the Army Medical Department in the sense indicated in the report.

A Delayed Registration.

A report from the Students' Registration Committee having been formally adopted it was agreed, on the motion of Dr. MacAlister, seconded by Dr. Leech, that on the recommendation of the English Branch Council the General Council should register the name of Mr. G. S. Dobrashian, Mem. R. Coll. Surg. Eng., 1880, Lic. Soc. Apoth. Lond., 1881.

Vacancy on the Executive Committee.

Dr. LOMBE ATTHILL was elected a member of the Executive Committee in the place of Dr. William Moore. The election was by ballot and was made from amongst the representatives of Ireland, Sir Philip Smyly, already a member of the committee, excluded.

Claim by Dr. Rentoul.

The next business proceeded with was on the agenda as follows: "The treasurers to make a communication respecting a letter received by the Registrar from Dr. R. R. Rentoul."

Sir DYCE DUCKWORTH read the letter in question. In it Dr. Rentoul wrote: "Respecting my letters of June 14th and July 13th asking the treasurers of the General Medical Council to pay the ten guineas due to me under standing orders, Clause 4, and the treasurers' refusal to pay, will you please bring this before the Council and ask the Council to see that the above rule is put into rightful operation?" At the end of last May session, Sir Dyce Duckworth went on to say, Dr. Rentoul and the other members of committee received payment according to the regulated scale. Dr. Rentoul received the proper, fair, and regulated sum for his attendance, but on the last day of the session he had applied for 10 guineas more because, as he said, the treasurers had mistaken the distance between Liverpool and London. He (Sir Dyce Duckworth) had told Dr. Rentoul that as in years previous they had had a member of Council (Mr. Mitchell Banks) who came from Liverpool and had accepted the payment on the scale on which payment had been made to Dr. Rentoul he did not feel at liberty to pay Dr. Rentoul 10 guineas more. Dr. Rentoul thought he was being badly treated. He wanted to know whether he was to be paid for the Sunday or for his wife who had accompanied him to London. He told the treasurers that if he did not receive the proper sum he would take further steps. Ten days later he (Sir Dyce Duckworth) had received some documents from Liverpool showing that Dr. Rentoul had got the chief constable of Liverpool to measure the distance from his residence to the railway station and had written to the Commissioner of Police of the metropolis to ascertain the distance between Euston Station and the hotel at which he stayed during the sitting of the Council. This, according to the documents in question, had resulted in showing that the distance altogether was over 200 miles and that distance Dr. Rentoul maintained put him into another category than the one the treasurers put him into and entitled him to extra payment. He (Sir Dyce Duckworth) still refused to pay the extra ten guineas and had told Dr. Rentoul that if he thought he had a claim he should refer it to the whole Council, advising him, however, that he (Sir Dyce Duckworth) would not support it. He had heard nothing more until this letter to the Registrar. In consultation with Mr. Bryant it had been determined that they as treasurers were not entitled to pay more than they had already paid. The distance by railway from London to Liverpool was under 200 miles, and the Council were not in the habit of including in calculation of distance the space between the railway stations and the residences or hotels of members. With Mr. Bryant's sanction and approval he laid the matter before the Council.

The CHAIRMAN: Is there any motion to be made on this?

Sir DYCE DUCKWORTH: I have no motion.

Mr. BRUDENELL CARTER said that according to the A.B.C. Time Table the distance between London and Liverpool was 201 miles. He should like to ask their legal adviser if Dr. Rentoul had any legal claim.

Mr. BRYANT said that he and Sir Dyce Duckworth had gone into this matter and they had come to the conclusion that according to the railway Parliamentary fare which was 16*s.* 6*d.* the distance was equal to 198 miles.

Mr. TEALE said this was clearly a case in which unless they were legally bound they were not morally bound to pay. It was not a case in which they could pay for two extra days—one for coming the day before the meeting of the Council and the other for leaving the day after.

The CHAIRMAN: Is there any motion?

Mr. BROWN wished to point out that the question involved here was not so much one of distance between one station and another as it was a question of residence. Dr. Rentoul did not reside in Liverpool but in a suburb of that city and he was clearly entitled to charge as from his residence. When he did that it would be found that he did reside more than 200 miles distant from the Council offices and that being so would it not be better to pay this ten guineas without more to-do? Before making any motion he should like to take Mr. Muir Mackenzie's opinion on the point.

The CHAIRMAN: I do not think it is a matter for Mr. Muir Mackenzie. It is a question for the Council.

Dr. BATTY TUKE: It would be much better to pay the ten guineas and be done with it.

Dr. BRUCE moved that the sum be paid and Dr. BATTY TUKE seconded the motion.

The Council divided, but as 10 voted against and only 9 for the motion was rejected.

Dentists' Registration.

The Council sat in private for considerably over an hour. On the readmission of the public the CHAIRMAN announced

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that the Council had passed a resolution directing the Registrar not to act on instructions he had already received in the matter of certain registrations in the Dentists Register until further orders from the General Medical Council.

The Dublin Apothecaries' Hall.

Sir DYCE DUCKWORTH moved:—

That all the examinations of the Apothecaries' Hall of Ireland be regularly reported on by an inspector appointed by the Council.

He would drop, he said, the concluding words of the notice he had given—viz., "as well as by the assistant examiners in surgery." He was sorry the motion came on so late in the session as he considered it one of the most important pieces of business the Council had to do. The Council were really responsible for the work that this re-established licensing body might do and it was the Council's duty not only to the public but also to the profession to inspect the work so that they might be fully aware of all that was done.

Mr. BRYANT seconded the motion.

Mr. TICHBORNE, the representative of the Dublin Apothecaries' Hall, said that what the body he represented objected to was turning the assistant examiners into inspectors.

The CHAIRMAN pointed out that the intended references to the examiners had been withdrawn. He asked if Mr. Tichborne objected to the motion in its altered form.

Mr. TICHBORNE: Not in the slightest.

The motion was then adopted.

After some discussion as to whether the assistant examiners in surgery appointed by the Council at the instance of the Privy Council could take notice of examinations in medicine and midwifery as conducted by the Hall,

Mr. MUIR MACKENZIE gave it as his opinion that as, according to the Act of Parliament, it was the duty of the assistant examiners in question to secure such a standard of efficiency as was enjoined by statute, and as for that purpose they should have such powers and perform such duties as the General Medical Council might from time to time prescribe the Council were within their powers to prescribe that assistant examiners who were appointed for the purpose of examining candidates in surgery should have the further power of reporting on the examinations generally.

Mr. TICHBORNE: Would they not in so doing be acting as inspectors?

Mr. MUIR MACKENZIE: No.

On the motion of Dr. MACALISTER, seconded by Sir DYCE DUCKWORTH, it was remitted to the Executive Committee to appoint an inspector for the work suggested in Sir Dyce Duckworth's motion.

The Penal Cases Committee.

Dr. GLOVER moved that the number of members for England on the penal cases committee be increased from three to five.

Mr. BRYANT seconded.

Dr. BRUCE thought it was now too late in the session to interfere with the standing orders and he moved the previous question.

This proposal was at once put to the Council and was carried by 13 votes to 3.

A Further Sitting in Private.

The Council then sat in private to discuss the following notice of motion by Dr. Batty Tuke:—

That it be an instruction to the Penal Cases Committee that no case be laid before the Council except upon evidence which will be presented orally when the case is heard or upon evidence given in the form of statutory declaration.

No intimation of the result of the discussion was given to the public on their re-admission to the Council Hall.

Death Certification.

On the motion of Dr. MACALISTER it was agreed that the following should be entered on the minutes:—

The President informs the Council that owing to the illness and absence of the Right Honourable Henry Chaplin and the absence of Sir Richard T. Thorne on the Continent on official business the deputation on death certification has not yet waited on the President of the Local Government Board, but that a statement to be handed in to the Board has been prepared.

An Invalid Petition.

Dr. MACALISTER moved the adoption of the following report, viz.:—

The Business Committee beg leave to report to the Council as follows: A petition signed by Dr. J. H. Hill and others, entitled "A Petition on the subject of the choice of persons to be Members of the Council by the several Bodies represented thereon," has been examined by the committee. They find that the question to which it refers is one which deals entirely with the legal powers of the medical authorities and therefore does not come within the purview of the Council. The committee accordingly recommend that the petition be not received.

Mr. BRYANT seconded the motion.

Mr. BROWN moved as an amendment:—

That the petition of Dr. J. H. Hill and others be read and entered in the minutes.

He took exception to the statement that the petition was one of a legal character which could not come within the purview of this Council and maintained that the document was in perfect order.

Mr. HORSLEY seconded the amendment.

On a show of hands only two members were found to be supporting the amendment, which was accordingly rejected. The roll was then called and the motion was carried by 9 votes to 2.

Mr. BROWN withdrew his intended motion:

That a deputation not exceeding five persons be received in support of the petition signed by Dr. J. H. Hill and others.

This concluded the business.

Vote of Thanks.

Dr. MACALISTER moved that the Council records its cordial thanks to Sir William Turner for the manner in which he had discharged the arduous duties of chairman during the session.

Sir PHILIP SMYLY seconded and the proposal was carried with applause.

Sir WILLIAM TURNER, in acknowledgement, said that he begged to thank the Council for the hearty vote of thanks they had just passed. He had endeavoured to act, he hoped, fairly to all persons around the Council table. That had been his wish and he thought he might say after the hearty expression of opinion just given that he had not failed.

The Council rose till May next.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination for the diploma of Fellow at a meeting of the Board of Examiners:—

Monday, Nov. 15th:

Arthur Stanley Barnes, B.Sc. Lond., Mason College, Birmingham, Herbert Johann Scharlieb, M.R.C.S. Eng., L.R.C.P. Lond., M.B. and B.S. Lond., University College, London; Robert Craig Dun, M.R.C.S. Eng., L.R.C.P. Lond., M.B., C.M., and B.Sc. Edin., Edinburgh, Berlin, and Bern Universities; Harold Collison, Yorkshire College, Leeds; Hugh Lett, Yorkshire College, Leeds, and London Hospital; and David Sydney Graves, Guy's Hospital.

Nine gentlemen were referred back to their professional studies for six months.

Tuesday, Nov. 16th:

Sydney Smith, University College, London, and St. Mungo's College, Glasgow; William Henry Passmore and Burton Alexander Nicol, Charing-cross Hospital; George Aylwin Clarkson, M.R.C.S. Eng., L.R.C.P. Lond., and Charles John Napeau Longridge, St. George's Hospital; and Lewis Augustus Walker, St. Bartholomew's Hospital.

Ten gentlemen were referred back to their professional studies for six months.

Wednesday, Nov. 17th:

Ronald Francis Campbell Ward, B.A. Cantab., Middlesex Hospital; Cyril Alfred Rankin Nitch, St. Thomas's Hospital; John Percy Lockhart Mummery, Cambridge University and St. George's Hospital; Arthur Murray Cudmore, M.R.C.S. Eng., L.R.C.P. Lond., M.B., Ch.B Adel., Adelaide University and London Hospital; and John Ernest Sullivan Frazer, M.R.C.S. Eng., L.R.C.P. Lond., St. Bartholomew's Hospital.

Eleven gentlemen were referred back to their professional studies for six months.

Thursday, Nov. 18th:

Claude Alley Worth, M.R.C.S. Eng., L.R.C.P. Lond., St. Bartholomew's Hospital; Graham Winfield Roll, M.R.C.S. Eng., L.R.C.P. Lond., M.B., B.C. Cantab., Cambridge University and St. Thomas's Hospital; Hormasji Manskji Masind, L.M. & S. Bombay, Grant Medical College, Bombay, St. Bartholomew's and King's College, London; Harold Rothery Nutt, St. Mary's Hospital; and Herbert Dean Pollard, London Hospital.

Eleven gentlemen were referred back to their professional studies for six months.

Friday, Nov. 19th:

Herbert Tilley, M.R.C.S. Eng., L.R.C.P. Lond., M.D., B.S. Lond., University College, London; William Stuart Low, M.R.C.S. Eng.,

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L.R.C.P. Edin., St. Thomas's Hospital, Edinburgh, and King's College, London; Thomas Patrick Joseph Hartigan, L.R.C.P. & S. Edin., and John Robinson Benson, M.R.C.S. Eng., L.R.C.P. Lond., King's College, London; and James Sherren, London Hospital.

Five gentlemen were referred back to their professional studies for six months. Of the total number, 73, who presented themselves for this examination twenty-seven passed and forty-six were referred.

The following gentlemen having passed the necessary examinations and having conformed to the by-laws and regulations have been admitted Members of the College and are now entitled to practise Medicine, Surgery, and Midwifery:—

Anderson, William Maurice.
Anning, George Paul.
Aubrey, Sydney Ernest.
Baylis, Henry Edward Montgomery
Beath, David Leslie.
Beavis, John Douglas Wilson.
Belt, Francis Victor Owen.
Bell, Robert Hamilton.
Bell, Thomas Herbert.
Bennett, Norman Godfrey.
Bidwell, Charles Hugh.
Black, Charles.
Bottomley, Thomas Abbey.
Boulton, Harold.
Bousfield, Stanley.
Brickwell, Frank.
Chatterton, Edgar.
Chenery, Arthur.
Cholmeley, Montague Adye.
Clark, Reginald William.
Clarke, Frederick Addlerley Howard.
Cole, John William Edward.
Corfield, Edward Carruthers.
Cowburn, Arthur Douglas.
Crossley, Henry Joseph.
Cruddass, Hamilton Maxwell.
Evans, David Edward.
Evans, Frederick Hudson.
Evans, John Howell.
Evans, William.
Falwasser, Arthur Thomas.
Fanning, William Joseph.
Fitz-Hugh, Richard Truman.
Forge, George Baynton.
Foulerton, Harry Percival.
Fremantle, Francis Edward.
Gough, Bernard Bradley.
Greaves, Francis Ley Augustus.
Gregory, Henry Lonsdale.
Grove, Ernest George.
Gutch, John.
Guthrie, Thomas Clement.
Hancock, Arthur Ernest.
Hawkesworth, Thomas Ayscough.
Henshaw, Harry Williams.
Hewitt, Harry Edward.
Hine, Hugh Fitz Neville.
Hornabrook, Rupert Walter.
Hutcheson, George.
Jackson, Harold Hart.
James, Philip William.
Johnson, Alfred.
Johnston, William.
Jones, Edward Shirley.
Jones, Thomas Caldwell Litler.
Joynes, Francis William.
Judd, Walter Rossell.
Leake, Jonas William.
Leclézio, Gustave Ernest.
Littlejohn, Thomas Plested.
Lloyd, Evan.
Lucas, George Humphrey.
McAnally, Edward Arthur.
Mackay, Duncan Matheson.
Macnair, Norman.
Macnamara, Eric Danvers.
Markby, Herbert.
Martin, Francis Raynes.
Maugham, William Somerset.
Maunsell, Debonnaire Frederick.
May, Sydney William.
Mayo, Edmond Godfrey.
Modi, Shapurji Hormasji.
Mossop, Charles Henry.
Nabarro, David Nunes.
Novis, Thomas Shepherd.
Oldfield, Josiah.
Page, Frederick William Tudor.
Palgrave, Edward Francis.
Palser, John Edwin Fo.d.
Pearson, Thomas.
Poole, Cyril Cecil.
Prance, Charles Herbert Gouldsmith.
Prescott, Thomas.
Raper, Henry Edward.
Relph, Herbert John.
Richmond, Richard Thomas.
Rogers, Reginald James.
Roman, Alphonse Henry.
Rowe, William Trethowan.
Scott, John Geddes.
Shea, Henry Francis.
Small, Arthur Atwell.
Smith, Montague.
Smith, Walter Hugh Montgomery.
Starling, Hubert John.
Stevens, Alfred Edward.
Stevenson, Walter Brodie.
Street, Albert Ernest.
Sykes, John Lewis.
Taw, Moung Pha.
Thorneley, Michael Harris.
Trewby, Henry William.
Tyndale, Wentworth Francis.
Tyrrell, Francis Astley Cooper.
Verdon-Roe, Spencer.
Wall, Reginald Cecil Bligh.
Walton, Henry Beckles Call.
Waterhouse, Rupert.
Watt, James George.
Weaver, Frederick Kearsley.
Wells, Lionel Thomas.
White, Frank Harris.
White, Harold Edward.
Wilkinson, Frank Herbert.
Williams, John Daniel Evans.

UNIVERSITY OF LONDON.—At the M.B. Examination in October the following candidates were successful:

First Division.—Cyril Wolrige Alford, Middlesex Hospital; Montague Dixon, B.Sc., University College; Brennan Dyball, St. Thomas's Hospital; John Llewellyn Jones, University College; William Percy Nicol, Mason College; Alfred Walter Sikes, B.Sc., St. Thomas's Hospital; Francis Hugo Thiele, B.Sc., University College; Edwin Josiah Toye, B.Sc., St. Bartholomew's Hospital; and Alexander Gordon Wilson, London Hospital.

Second Division.—Edward William Adams, University College, Sheffield; Louisa Garrett Anderson, London School of Medicine for Women; Walter Rothney Battye, B.Sc., and Charles Henry Benham, University College; Harry Charles Plant Bennett, St. Bartholomew's Hospital; Sidney Herbert Berry, Charing-cross Hospital; John Broadley, Yorkshire College; Harold Wilson Bruce, Guy's Hospital; Alfred Burn, St. Mary's Hospital; Joseph Ernest G. Calverley, St. Bartholomew's Hospital; Colin Campbell Clarkson, University College; Arthur Stanbury Cobbledick, Bristol Medical School; Ernest Coleman, Guy's Hospital; Mary Frances Cornford, Royal Free Hospital; Sydney Cornish, St. Bartholomew's Hospital; Thomas Varley Cunliffe, Owens College and Manchester Royal Infirmary; Wilfrid Arthur Dewhirst, Yorkshire College; Mary Buchan Douie, London School of Medicine for Women and Royal Free Hospital; William Edward Nickolls Dunn, St. Bartholomew's Hospital; Campbell Dykes, University College; Charles Herbert Fagge, Guy's Hospital; Ernest George Leopold Goffe, University College; Charles Poulett Harris, London Hospital; Alice Mary Hawker, London School of Medicine for Women; Cortis Hawsthorne Hodgson, Guy's Hospital; Alfred Lucette Home, St. Thomas's Hospital; George Hutcheson, London Hospital; Arthur Edward Jerman, Westminster Hospital; Beatrice Knowles, London School of Medicine for Women and Royal Free Hospital; Harold Leader and George Kenny Levick, Guy's Hospital; Richard Drummond Maxwell, London Hospital; Robert William Mayston, Guy's Hospital; Charles Herbert Melland, Owens College and Manchester Royal Infirmary; William Tayler Milton, Guy's Hospital; Hugh Percy Noble, Middlesex Hospital; John Hare Phipps, Owens College, Manchester Royal Infirmary, and Guy's Hospital; R. Wynne Cnas. Pierce, B.Sc., St. Thomas's Hospital; G. E. Richmond, B.A., B.Sc., and John Thomas Roberts, Guy's Hospital; Frederick William Robertson, St. Bartholomew's Hospital; Thomas O'Neill Roe, University College; James Percival Scatchard, St. Thomas's Hospital; Joseph Shardlow, University College; Mary Nona Sharman, Royal Free Hospital; Edward Birchall Sherlock, B.Sc. Westminster Hospital; James Eckersley Smith, University College, Liverpool; Lewis Albert Smith, London Hospital; Hubert John Starling, Guy's Hospital; Ernest Stanley Stork, University College; Paul Cuningham Edward Tribe, King's College; William Percival Walker and Richard James Warrington, Owens College and Manchester Royal Infirmary; Bertha Margaret Webb, London School of Medicine for Women and Royal Free Hospital; Percy Glyn S. Williams, University College; and Thomas Harold Woodfield, St. Bartholomew's Hospital.

SIR SQUIRE BANCROFT will give a reading in Plymouth on Jan. 26th in aid of the funds of the South Devon and East Cornwall Hospital.

CHELTENHAM WATER-SUPPLY.—The Cheltenham Town Council at their meeting held on Nov. 22nd decided to apply to the Local Government Board for power to borrow £30,000 for the extension of their waterworks. It is intended ultimately to improve the Tewkesbury station so that it will yield 1,000,000 gallons of water per day.

BRISTOL BOARD OF GUARDIANS AND VACCINATION.—At the meeting of the Bristol Board of Guardians held on Nov. 26th a member, in accordance with notice, moved "That the resolution passed on March 27th authorising vaccination officers to take proceedings against defaulters be rescinded." Unfortunately the resolution was carried by 20 votes to 13.

BORACIC ACID IN BUTTER.—At the meeting of the Cardiff Watch Committee held on Nov. 23rd a deputation representing the Cardiff Grocers Association attended and requested that the Watch Committee should take no steps in prosecuting grocers who sold butter containing boracic acid until it had been ascertained whether it was injurious to health or not. It was decided to await the presentation of a report on the subject by the medical officer of health.

BRISTOL CONVALESCENT HOME.—The Mayor of Bristol announced last week that the subscription list for the convalescent home now exceeds £81,000. He also stated that the committee have resolved that there shall be 80 beds, 65 of which will be apportioned as follows: 30 each to the Royal Infirmary and General Hospital, 1 to the Eye Hospital, 3 to the Bristol Dispensary, and 1 to the Clifton Dispensary.

ROYAL VICTORIA HOME, BRISTOL.—The objects of the institution are to provide a home for the treatment of female inebriates and for presumably reclaimable female offenders as well as to train such of these as are unmarried for domestic service and in various home industries. The committee have been obliged to refuse cases owing to want of funds and therefore appeal to the inhabitants of Bristol for subscriptions.

ROYAL ALBERT HOSPITAL, DEVONPORT.—The annual meeting of this hospital was held on Nov. 22nd, under the presidency of Lieutenant-General Sir W. Forestier-Walker, K.C.B. The annual report showed that 588 in-patients had been admitted during the year and that 2326 casualties had been treated in the out-patient department. The out-patients numbered 523, the great decrease in the number as compared with the preceding year being due to a system of inquiry which had been instituted to ascertain the income of all applicants for gratuitous relief. This had resulted in obtaining from those patients who were willing to pay 2*s.* 6*d.* per month the sum of £13 7*s.* 6*d.* There were 24 patients admitted to the wards for paying patients and their payments amounted to £144. There were 137 women received into the lock wards. The members of the Provident Dispensary numbered 2907 at the close of the year and the working of the Nursing Institute had been most successful. The total cost for maintenance was £4037 or an average cost per bed of £54 4*s.* 10*d.* The treasurer's report showed an adverse balance of £305, against £175 last year. Legacies amounting to £8000 had been left to the institution.

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THE LATE CYCLONE AT CHITTAGONG.—No country in the world has probably been so terribly tried as India of late. In addition to war, pestilence, famine, and earthquake there has been a serious cyclone at Chittagong which has done immense damage to crops and property and been seriously destructive of life. It is estimated that close upon a million persons have been rendered homeless by it.

MANCHESTER THERAPEUTICAL SOCIETY.—The second meeting of the present session was held on Nov. 24th. Professor Dixon Mann occupied the chair. Dr. E. S. Reynolds opened a discussion upon Thyroid Medication with especial reference to (*a*) indications for thyroid treatment, (*b*) the relative value of the various preparations of thyroid gland, and (*c*) dosage of the crude gland and its preparations. The discussion was continued by Dr. Harris, Dr. Brooke, Professor Dixon Mann, Dr. Wild, and Dr. Coutts.—Dr. E. S. Yonge gave a preliminary communication on Orthoform and its anæsthetic action on the upper air-passages.—Dr. Wild showed a specimen of the Hydrobromide of Emetine and also solutions of the salt of convenient strength as substitutes for the preparations of ipecacuanha.

NEW COTTAGE HOSPITAL AT FRESHFORD, SOMERSET.—For four years Freshford and some of the neighbouring parishes, now comprising a population of about 3000, have had the services of a Queen's Jubilee district nurse. This year in commemoration of the Diamond Jubilee the District Nursing Association has founded, and this month opened, a home for the nurse and at the home has provided four beds and a cot for such cases as cannot be properly treated at their own houses. There is also at the home a bed in a separate room for a private paying case. All medical men practising in the district are *ex officio* members of the association, and the medical director of the home is *ex officio* a member of the executive committee which consists of one or two members from every parish in the nursing district.

THE NATIONAL DENTAL HOSPITAL.—The annual dinner of the past and present students of the above hospital was held at the Holborn Restaurant on Nov. 26th. There was a full attendance, and amongst the guests were Dr. Samuel West, Professor H. R. Spencer, Professor J. Rose Bradford, Dr. Blacker, Mr. Raymond Johnson, Mr. Morton Smale, Mr. J. Smith Turner, Mr. W. B. Paterson, &c. The chair was taken by Mr. E. W. Roughton, F.R.C.S. Eng., the honorary visiting surgeon to the hospital, who, in proposing the toast of the school, mentioned that out of fourteen candidates sent up this year thirteen had been successful in obtaining the Diploma in Dental Surgery at the Royal College of Surgeons of England. During the evening songs were contributed by Mr. Alfred Smith, Mr. W. H. Wheatley, and Mr. Wallis Arthur, whilst ventriloquial sketches by Mr. Fred Russell and sleight-of-hand exhibitions by Dr. Herschell added to the pleasure of the evening.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The second meeting of the session was held on Nov. 10th in the Medical Library of University College, Bristol, Dr. J. E. Shaw being in the chair. Dr. Michell Clarke brought forward a case of Filariasis, the patient and specimens being shown. Dr. E. C. Williams showed the following patients who had been treated by the localised application of Super-heated Dry Air: (*a*) Monarticular Rheumatoid Arthritis; and (*b*) Polyarticular Rheumatoid Arthritis. Dr. James Swain made some remarks. Mr. C. A. Morton showed the following specimens: (*a*) a Large Gall-stone successfully removed from the Common Duct of a woman aged seventy-two years; and (*b*) a Renal Calculus detected by means of the X Rays. Dr. James Swain, Mr. Paul Bush, Dr. Skerritt, Mr. Brazier, Dr. Michell Clarke, and Dr. Fisher made remarks on the specimens. Mr. Munro Smith showed a specimen of Tumour in the Mesentery of a Fowl. Dr. F. H. Edgeworth read an interesting paper on Cases of Illness due to Opening of a Sewer. Mr. Munro Smith, Mr. Paul Bush, Mr. H. Wathen, Dr. D. S. Davies, Dr. Rogers, Dr. Harrison, and Mr. J. C. Heaven commented on the paper. Mr. Munro Smith read a paper on a Case of Cancrum Auris. Dr. Fisher, Mr. E. Harris, and Dr. D. S. Davies spoke on the subject. Dr. J. O. Symes gave a demonstration of Widal's Serum Diagnosis of Enteric Fever. Dr. Davies, Dr. Rogers, and Mr. H. Wathen made remarks.

VACCINATION AWARD.—The Local Government Board has awarded to the representatives of the late Mr. Peter Swales, of Sheerness, the proportion of the grant for successful vaccination to which he was entitled at the time of his death. This is the twelfth award made to Mr. Swales, who thereby attained the maximum possible for his service of twenty-five years and four months as he had not been twelve months appointed when the first inspection was made. Mr. Swales, who qualified as M.R.C.S. Eng. in 1861 and died in February, 1896, held several appointments in his locality including that of medical officer of health of Queenborough.

SUPERANNUATION OF A MEDICAL OFFICER.—At the meeting of the Downham Market board of guardians held on Nov. 19th it was decided to grant a superannuation allowance of £60 12*s.* per annum to Dr. Alexander J. Mackintosh, medical officer and public vaccinator to the third district of Downham union. Dr. Mackintosh has passed thirty-seven years in the service of this union and has had the unusual good fortune to receive the Government grant for successful vaccination from its commencement with the exception of one year when he allowed an assistant to vaccinate only three cases. He graduated as M.D. at Glasgow University in 1858 and is the author of numerous articles quoted in Taylor's "Principles of Medical Jurisprudence."

INFIRMARY MEDICAL SUPERINTENDENTS' SOCIETY. The November meeting was held on Nov. 27th, at the Poplar and Stepney Sick Asylum, Mr. Charles Spurrell, the medical superintendent, being in the chair. The society unanimously agreed to Mr. Walter Burney's motion to subscribe one guinea annually to the Royal Medical Benevolent College. The wards of the hospital were visited and Mr. Spurrell showed the following cases: (1) Locomotor Ataxia with Charcot's Disease of the Knee-joint; (2) Laryngeal Gumma for which tracheotomy had been performed; (3) Floating Kidney; (4) Osteitis Deformans; (5) Peripheral Neuritis of the Lower Limbs with Paralysis of the Left Third Nerve in a phthisical woman; (6) Tuberculous Arthritis of the Elbow and Wrist in a boy; and (7) case of Ascites with great Dilatation of the Superficial Abdominal and Thoracic Veins in a young man whose history revealed no proof of alcoholism.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—A meeting of this society was held at 20, Hanover-square on Nov. 24th, Dr. J. F. Payne, President, being in the chair. Dr. Payne showed a case of Sarcoma of the Skin in a man about sixty years of age. He was the subject of a general dry eczema. Over the right pectoral region there was a well-marked, raised, ulcerating tumour rather larger than a five-shilling piece which had existed for three years and between the shoulders was a second tumour about the size of a walnut; this was much more raised than the anterior tumour and the surface was but little ulcerated. Histologically the malignant elements showed as spindle-celled sarcomatous tissue.—Mr. Hope Grant showed for Dr. Abraham a case of Xanthoma Diabeticorum in a robust middle-aged man whose urine when examined had never contained more than a trace of sugar. At the October meeting in a similar case shown by Dr. Abraham there was found a large quantity of sugar. There were a number of well-marked yellow-tipped nodules about the flexor surfaces of the forearms; the nodules were discrete but grouped. They were also plentifully arranged on both surfaces of the knees and lower thighs. There were a few scattered nodules over the back and abdomen. Dr. Payne remarked that at the Dermatological Congress it was stated that the histology of these cases was not that of xanthoma.—Dr. Walsh showed a case of Infective Angeioma. The case had been published and named by Mr. Hutchinson some two years ago. The patient was a fairly healthy looking girl, aged twenty-one years, and the condition had commenced when she was about thirteen years of age. It began on one arm near the wrist and gradually spread in arborescent lines until it had affected a large portion of the whole surface of the body. Where it had travelled faint cicatrices had been left. The term "infective" was used only in a limited sense to imply that it spread locally.—Dr. Savill showed two patients, one suffering from Lupus of the Conjunctiva with many recurrent multiple nodules upon the face and the other being a case of localised Scleroderma with large morphœa patches on the chest and abdomen.

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THE LIEUTENANT-GOVERNOR OF BRITISH COLUMBIA.—The very responsible office of Lieutenant-Governor of British Columbia has been entrusted to Dr. T. R McInnes who holds the qualification of M.D. Harvard and is a Member of the College of Physicians and Surgeons of Ontario. Dr. McInnes was born in Nova Scotia of Scotch parents. In 1878 he entered the Dominion House of Commons and obtained a seat in the Senate three years later. In the same year he was appointed Medical Superintendent of the British Columbia Lunatic Asylum.

LITERARY INTELLIGENCE.—Messrs. Baillière, Tindall, and Cox inform us that a second edition of Sir William Broadbent's work on Heart Disease is being printed, the first edition having been sold out.—The addresses of thanks to the Czar and to the President and Committee of the Twelfth International Congress, signed by 100 British members, have been forwarded this week. They were both tastefully illuminated by Messrs. Marcus Ward and Co., the one being in the form of a very handsome book bearing the Russian arms on the cover and the other a scroll enclosed in a scarlet morocco leather case.

UNIVERSITY OF CAMBRIDGE.—The Examiners in State Medicine for the year 1898 are Dr. B. Anningson, Dr. W. Collingridge, Professor A. A. Kanthack, Dr. J. L. Notter, and Dr. T. Stevenson.—The appointment to the Professorship of Surgery, vacant by the death of the late Sir G. M. Humphry, is to be further suspended until April 18th, 1898, the General Board of Studies being not yet in a position to make definite proposals as to the stipend, duties, &c., of the chair.—Mr. J. W. W. Stephens, B.A., M.B., B C. (Caius and Gonville), has been elected John Lucas Walker Student in Pathology, vice Mr. L. Cobbett, M.A., M.B. (Trinity), and Mr. H. K. Wright, M.D., C.M., McGill University, Montreal, has been awarded an exhibition of the value of £50 from the John Lucas Walker Fund. The following degrees in Medicine and Surgery were conferred on Nov. 25th:—Doctor of Medicine: L. B. Hayne, B.A., and H. M. Stewart, M.A. Bachelor of Medicine and Bachelor of Surgery: G. T. Watson, B.A., and T. L. Jackson, B.A.

DIPHTHERIA IN LONDON.—The amount of fatal diphtheria registered in London during the week ending Nov. 20th showed further decrease on former weeks. The deaths registered from the disease during the week numbered 37, as against 65, 59, and 46 in the three weeks preceding, and as against the corrected decennial average of 48 for the corresponding week of the period 1887-96. All the 37 deaths were of persons aged from one to twenty years, and 4 belonged to Lewisham, and 3 each to St. Marylebone, St. Pancras, Bethnal Green, Wandsworth, and Camberwell sanitary areas. On Nov. 20th there were 1064 patients in hospital on account of diphtheria, the admissions during the week having been 150. In the outer ring the registered deaths numbered 11, of which 5 occurred in West Ham, and 3 in Edmonton registration districts. Last week witnessed a large rise in the number of fatal attacks from diphtheria in the county of London, the registered deaths having been as many as 63 and 13 in excess of the corrected decennial average for the corresponding week of the period 1887-96. The fatal cases were widely scattered over the metropolis though as usual certain defined areas suffered more than others. Thus 6 deaths belonged to Lambeth, 5 to Battersea, 4 each to St. Pancras, Islington, Hackney, and Wandsworth, and 3 each to Paddington, Kensington, Bethnal-green, Newington, and Bermondsey sanitary areas. Of the 63 deaths 3 were of infants and 2 of persons aged over twenty years, whilst 44 were of young children aged from one to five years. On Saturday 1052 persons were under isolation in London hospitals on account of diphtheria, the fresh admissions during the week having numbered 158. In the outer ring there were 14 deaths registered from the disease, of which 5 were in the endemically affected West Ham registration district. The vast Edmonton Union was entirely free from registered fatal diphtheria. Thus in a population estimated at 6,291,677 persons there were last week 77 deaths registered from this disease out of 97 in the 33 towns of the Registrar-General (including London) with their 11,000,000 inhabitants.

ROYAL UNITED HOSPITAL, BATH.—The Amateur Theatrical Week at the Theatre Royal, Bath, has been very successful and the final performance was received with great enthusiasm by a crowded audience. At the conclusion of the *Mikado* the Rev. E. Handley, President of the Royal United Hospital, which receives the proceeds, came before the footlights and addressing the Mayor expressed his gratification at the fact that aid was given to the hospital in this way rather than by the former plan of street collections in one Saturday in the year. Dr. Lionel Weatherly, the organiser of the performances, afterwards made a speech which was very well received.

PRESENTATIONS TO MEDICAL MEN.—On Nov. 12th at a farewell entertainment at the Thistle Hotel, Milnathort, Mr. E. N. Burnett, M.B. Glasg., who has relinquished his practice in that town, was presented with a gold albert chain subscribed for by the inhabitants generally.—On Nov. 17th Mr. T. T. Somerville, L.R.C.S. Irel., of Sheffield, was the recipient from the members and supporters of the Sheaf Works Ambulance Class of a silver-mounted walking-stick and umbrella suitably inscribed in recognition of his services in preparing the class for examination on First Aid.—On Nov. 19th Mr. H. F. Cook, L.R.C.P. Lond., M.R.C.S. Eng., was presented at a meeting at the National Schools, Treeton, with an illustrated address and a purse of sovereigns from the inhabitants of Treeton, Catcliffe, Winston, Aughton and Ulley on the occasion of his leaving Treeton for Australia. Mr. Cook had been an assistant medical officer of the district for upwards of two years and his unvaried kindness and courtesy were appreciated by all.—At the Public Hall, Clevedon, Somersetshire, on Nov. 20th, after the completion of a course of lectures which have been recently held in connexion with the St. John Ambulance Classes the lecturer, Mr. H. Rogers-Tillstone, M.D. Aberd., was presented with a handsomely fitted "emergency bag" and a mother-of-pearl match-box together with an address containing a list of subscribers in appreciation of the lectures given by him.—Mr. C. M. Maxwell, of Lasswade, who has unfortunately been compelled to relinquish practice there on account of ill-health, has been presented by his patients with £200 and a silver salver to carry an inscription; the miners of Whitehill Colliery, to which he is medical officer, have also arranged to give him two silver dessert dishes. Dr. Maxwell has made many friends in Lasswade, a picturesque locality not far from Edinburgh, where he has been in practice for nearly seventeen years. He now intends to proceed to Australia in the hope that the change of climate may be beneficial.

BOOKS, ETC., RECEIVED.

ARROWSMITH, J. W., Quay-street, Bristol.
Abdominal Surgery. By J. G. Smith, M.A., F.R.S.E. Sixth Edition. Edited by James Swain, M.S., M.D. Lond. Vols. I. and II. 1897.

BAUERMEISTER, F., Glasgow.
Wolf's Medicinisches Vademecum. 1890-1897 enthaltend; Dr. K. Kuster. No. 1, Band 5.
Therapeutisches Taschenbuch für Augenarzte. Von Dr. H. Landolt und Dr. P. Gygax. 1897.
Verhandlungen des Congresses für Innere Medicin, 1897. Von Dr. E. von Leyden und Dr. E. Pfeiffer.
Handbuch der Medicinischen Gymnastik. Von Dr. A. Wide. 1897.
Historisch-Medicinische Bibliographie für die Jahre 1875-1896. Von Dr. J. Pagel. 1898. Price 12s.
Einführung in die Geschichte der Medicin. Von Dr. J. Pagel. 1898. Price 10s.
Die Bedeutung der Augenstörungen. Von Dr. Otto Schwarz. 1898. Price 2s. 9d.

BERGSTRASSER, A., Stuggart.
Handbuch der Architektur. IV. Theil, 5. Halb-Band, Heft 1. 1897.

CARRÉ, GEORGES, ET C. NAUD, Paris.
Optique Physiologique. Par Dr. Tscherning. 1898.

CASSELL AND CO., London.
The South African Climate. By William C. Scholtz, M.D. Edin. Illustrated. 1897.

CHAPMAN AND HALL, Henrietta-street, Covent-garden, London.
The Journals of Walter White, Assistant Secretary of the Royal Society. With a Preface by his brother, William White, and a Portrait. 1898. Price 6s.

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CHURCHILL, J. & A., Great Marlborough-street, London.
Nettleship's Diseases of the Eye. Revised and edited by W. T. Holmes Spicer, M.A., M.B., F.R.C.S. Sixth edition. 1897. Price 8s. 6d.
Transactions of the Ophthalmological Society of the United Kingdom. Vol. XVII. Session 1896-97. With list of officers, members, &c. 1897. Price 12s. 6d.

COBLENTZ, O., Berlin W.
Zur Thätigkeit der Cellularen Körperelemente bei Infektionskrankheiten. Von Dr. B. Schurmayer, Hannover. 1897.
Untersuchungen ueber die Infektiosen Krankheiten der Harnorgane. Von T. Rovsing. 1898.

GEORG ET CIE., Bâle et Genève.
Dyspepsies nerveuses et Neurasthenie. Par Dr. P. Glatz. 1897.

HIRSCHWALD, A., Berlin.
Elemente der Pathologisch-Anatomischen Diagnose. Von Dr. O. Israel. 1898.

HOEPLI, ULRICO, Milano.
Manuali Hoepli—Sieroterapia. Del Dott. E. Rebuschini. 1898.

KIMPTON, H., High Holborn, London.
A System of Practical Medicine. By American Authors. Edited by A. L. Loomis, M.D., and W. G. Thompson, M.D. Vol. II. Illustrated. 1897. Price 25s. net.

LEHMANN, J. F., München.
Die typischen Operationen. Von Dr. E. Rotter. 5. Auflage. 1898.

LIPPINCOTT, J. B. COMPANY, London and Philadelphia.
The Practice of Surgery. By H. R. Wharton, M.D., and B. F. Curtis, M.D. Illustrated. 1898. Price 25s. net.

MASSON ET CIE., Paris.
Chirurgie du Poumon. Par Dr. Tuffier. 1897.

SAMPSON LOW, MARSTON, AND CO., Fetter-lane, Fleet-street, London.
Twentieth Century Practice. Edited by T. L. Stedman, M.D. Vol. XI., Diseases of the Nervous System. 1897.

SMITH, ELDER, AND CO., Waterloo-place, London.
English Sanitary Institutions: Reviewed in their Course of Development and in Some of their Political and Social Relations. By Sir John Simon, K.C.B. Second Edition. 1897. Price 18s.

THIEME, GEORG, Leipzig.
Handbuch der Ernährungstherapie und Diätetik. Von E. von Leyden. 1897.

WITHERBY AND CO., High Holborn, London.
Lean's Royal Navy List. October, 1897.
The Royal Navy List, Diary, and Naval Handbook for 1898. Price 3s. net.

WRIGHT AND CO., Bristol.
Epitome of Mental Diseases. By James Shaw, M.D. Irel. Second Thousand. With Appendix. 1897.

The Dental Surgeon's Daily Diary and Appointment Book, 1898 (John Bale and Sons, Great Titchfield-street, London, W.); prices 6s. and 7s. 6d.—The "Sunlight" Year-book for 1898; a Treasury of Useful Information; also a Story by Conan Doyle, with Portraits and Illustrations (Lever Brothers, Port Sunlight).—Magazines, &c., for December: Bailey's Magazine of Sports, &c., Strand Magazine, Boy's Own Paper; Girl's Own Paper, Leisure Hour, Sunday at Home, Sunday Hours, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, English Illustrated Magazine, Knowledge, Humanitarian, Christmas Number of Pears' Annual, and The Queen.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BERTRAM, T. D., M.B., Ch.M. Glasg., has been appointed a Government Medical Officer and Vaccinator for the district of Coonamble, New South Wales, vice E. O. Newland, resigned.

BODE, F. F. O., M.B. Sydney, has been appointed a Public Vaccinator for the District of Takaka, New Zealand.

BREBNER, ARTHUR, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Assistant Medical Officer to the Poplar Union Workhouse.

BRODRICK, C. CUMBERLAND, L.R.C.P., L.R.C.S., L.M. Edin., has been re-appointed Medical Officer of Health for the Tavistock Rural District.

EDGE, FREDERICK, M.D., M.R.C.S., M.R.C.P., B.S., B.Sc. Lond., has been appointed Surgeon to the Out-patients of the Birmingham and Midland Hospital for Women.

DYER, BERNARD, has been appointed Public Analyst for the County of Wilts.

GILRAY, G. V., M.B., Ch.M. Edin., has been appointed *pro tem.* a Government Medical Officer and Vaccinator for the District of Nyngan, New South Wales, vice W. H. Jermyn.

HAINES, H. G., L.R.C.P., F.R.C.S. Edin., has been appointed Surgeon-Lieutenant to the Auxiliary Forces, Tasmania.

HALFORD, A. C. F., M.B., Ch.B. Melb., has been appointed an Assistant Demonstrator of Pathology at the University of Melbourne, Australia.

JOHNSON, C. H., M.B., C.M. Edin., has been appointed a Public Vaccinator at Beeac, Victoria, Australia, vice R. A. A. Manly, resigned.

KENNEDY, T. J. M., M.B., Ch.B. Melb., has been appointed a Public Vaccinator at Leigh Road, Victoria, Australia, vice J. S. Park, resigned.

KENNY, F. H., M.R.C.S., L.S.A. Lond., has been appointed Health Officer for Nannine, Western Australia.

KOCH, E. A., M.D., Ch.D. Kiel, has been appointed a Visiting Surgeon to the Prison at Cairns, Queensland.

LAING, J. A., M.B., M.S. Edin., has been appointed a Health Officer for the Port of Gisborne, New Zealand, vice J. F. Innes.

MACANSH, WM., M.B., Ch.M., Edin., has been appointed Officer of Health at Brighton Town, Victoria, Australia, vice C. N. Simons, resigned.

MACDONALD, D., M.B., C.M. Glasg., has been appointed Medical Officer, for Glenmoriston, Inverness-shire.

MACKENZIE, J. H., L.R.C.S. Edin., has been appointed Officer of Health in and for the Town of Strahan, Tasmania.

MAILES, R., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed *pro tem.* Medical Officer for the Metropolitan Lunatic Asylum, Kew, Melbourne, Australia.

MANLY, R. A. A., M.B. Melb., has been appointed Officer of Health for Korong Shire, North and Central Ridings, Victoria, Australia, vice A. A. Rinder, resigned.

MULLICK, SARAT, M.B., C.M. Edin., has been appointed Resident Medical Officer to the National Hospital for the Diseases of Heart and Paralysis, Soho-square, London, W.

NISBET, W. B., M.B., Ch.M. Edin., has been appointed Health and Medical Officer at Townsville, Queensland.

RICHARDS, J. B. C., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer and Public Vaccinator for the Binbrook Sanitary District of the Louth Union.

SWETE, H. LAWTON, L.R.C.P., Lond., J.P., Medical Officer of Health for Fishguard, Pembrokeshire.

TRENOW, N. A. A., L.R.C.S. Irel., L.S.A. Lond., has been appointed Health and Medical Officer at Cooktown, Queensland.

WOOLLEY, G. T., M.R.C.S., has been appointed a Certifying Medical Officer under the Factories and Shops Acts for Castlemaine, Victoria, Australia, vice G. M. Reid.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident Assistant House Surgeon. Board, lodging, and washing provided in the hospital. No salary.

ATCHAM, CHURCH STRETTON, AND OTHER DISTRICTS.—Medical Officer of Health for one year. Salary £375, to include all expenses. Applications to Mr. J. Everest, Clerk, Atcham Union Offices, St. John's-hill, Shrewsbury.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES, John Bright-street, Birmingham.—Clinical Assistant for three months.

BRECKNOCK COUNTY AND BOROUGH INFIRMARY.—Resident House Surgeon, unmarried. Salary £70 per annum, with furnished apartments, board, attendance, fire, and gas. Applications to the Secretary, 6, Bulwark, Brecon, South Wales.

CATERHAM ASYLUM, Caterham, Surrey.—Assistant Medical Officer for three years. Salary £120, rising at the discretion of the committee to £150, with board, lodging, attendance, and washing subject to statutory deduction. Forms of application obtained at the Chief Office of the Board, Norfolk House, Norfolk-street, Strand, W.C.

CHESHIRE COUNTY ASYLUM, MACCLESFIELD.—Junior Assistant Medical Officer for three years, unmarried. Salary £120, rising £10 yearly to £140, with board (no alcohol) and washing.

CHORLTON UNION.—Junior Resident Medical Officer at the Workhouse Hospitals, Withington, Manchester, for twelve months. Salary £120 per annum, with furnished apartments and attendance (but not rations) in the workhouse. Applications to the Clerk to the Guardians, Chorlton Union Offices, All Saints, Manchester.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

CORPORATION OF MANCHESTER, MONSALL FEVER HOSPITAL.—Third Medical Assistant for one year. Salary £100 per annum, with board and lodging. Applications to the Town Clerk, Town-hall, Manchester.

DERBYSHIRE ROYAL INFIRMARY.—Resident House Surgeon and a Resident House Physician for twelve months. Salary of House Surgeon £100 per annum and of House Physician £80 per annum, with apartments and board in both cases.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Honorary Ophthalmic Surgeon.

HACKNEY UNION.—Second Assistant Medical Officer at the Workhouse and Infirmary at Homerton, N.E., unmarried. Salary £100 per annum, with rations (no beer), furnished apartments, washing, and attendance. Subject to statutory conditions. Applications to the Clerk to the Guardians, Clerk's Offices, Hackney Union, Homerton, N.E.

HERTFORD UNION.—Medical Officers and Public Vaccinators for the second and third districts. Salary No. 2 district £29 16s., No. 3 district £50 per annum, subject to certain conditions. Applications to the Clerk, Hertford.

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KING'S COLLEGE, LONDON.—Professorship of Hygiene.

LIVERPOOL DISPENSARIES.—Head Surgeon. Salary £200 per annum. Also an Assistant Surgeon. £80 for the first year and £90 afterwards, with apartments, board, and attendance in each case. Both must be unmarried. Applications to the Secretary, 34, Moorfields, Liverpool.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant for one year at least. Salary £120 for the first year and £150 afterwards.

PARISH OF LIVERPOOL.—Assistant Medical Officer for the Workhouse, Brownlow-hill, unmarried. Salary £80 per annum, with rations, an additional sum of £20 being allowed for examining applicants for out-door relief. Applications to the Vestry Clerk, Parish Offices, Brownlow-hill.

ROYAL COLLEGE OF PHYSICIANS, London.—Milroy Lecturer for 1899.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Non-resident Assistant House Surgeon to Out-patient Department. Salary £75 a year.

ROYAL VICTORIA HOSPITAL, Bournemouth.—Ophthalmic Surgeon.

SHANGHAI.—Medical Officer of Health for three years. Salary taels 4500 (about £600) a year. Unfurnished quarters, consisting of bedroom, bath-room, and sitting-room. Means of conveyance provided. Apply to Dr. Sims Woodhead, Examination Hall, Victoria Embankment, London, E.C.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

UNIVERSITY OF ABERDEEN.—Two additional Examiners for Graduation.

UNIVERSITY COLLEGE, London.—Surgical Registrar.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea, S.W.—Dental Surgeon.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon for six months. Board, lodging, and washing in the hospital provided.

WESTMINSTER GENERAL DISPENSARY, 9, Gerrard-street, Soho, W.—Resident Medical Officer for one year.

Births, Marriages, and Deaths.

BIRTHS.

BROADBENT.—On Nov. 29th, at Brunswick-place, Brighton, the wife of Walter Broadbent, M.B. Cantab., M.R.C.S., L.R.C.P. Lond., of a daughter.

COATES.—On Nov. 14th, at Vancouver, Streatham, S.W., the wife of M. Coates, M.D., of a daughter.

FISHER.—On Nov. 29th, at Ramsey, Huntingdon, the wife of W. Fellowes Fisher, M.B. Durh., of a son.

FRASER.—On Nov. 30th, at Leigh, Tunbridge, the wife of Frank Fraser, M.D., of a son.

MACVICKER.—On Nov. 23rd, at Isleham, Cambs., the wife of C. G. MacVicker, B.A., M.B., of a son.

MILLHOUSE.—On Nov. 27th, the wife of George Millhouse, M.R.C.S., L.R.C.P., Kirkstall, Leeds, of a son.

MARRIAGES.

GOOD—WILLIAMS.—On Nov. 18th, at Holy Trinity Church, Wallington, Surrey, by the Rev. G. H. Pole, J. Ernest Good, M.B., C.M., of Adelaide, South Australia, to Minnie, second daughter of H. E. Williams, of the Home Office, Whitehall.

PODMORE—AMOR.—On Nov. 26th, at Stepney Parish Church, Robert Podmore, M.R.C.S. Eng., Linden-gardens, Chiswick, to Henrietta Catherine, youngest daughter of Robert Amor, Esq., of Limekiln Dock and Burdett-road, Limehouse.

STANWELL—COX.—On Nov. 24th, at St. Matthew's Church, Baling, by the Rev. C. Stanwell, M.A., vicar of Ipsden, uncle of the bridegroom, assisted by the Rev. H. C. Douglass, M.A., vicar of the parish, Charles Oliver Stanwell, L.R.C.P. & S. Edin., Darwen, second son of the late William Stanwell, M.R.C.S., of Rochdale, to Sarah Katharine, youngest daughter of the late Henry Rix Cox, Rathmines, Dublin.

WAKEFIELD—CHADWICK.—On Nov. 25th, at Christ Church, New Malden, Christopher Frank Wakefield, M.R.C.S. Eng., L.R.C.P. Lond., Lincoln Lodge, Horley, to Sophia, eldest daughter of the late James Chadwick, Esq., of York.

WHITE—DAVIES-COLLEY.—On Dec. 1st, 1897, at the Julfa Mission Church, Ispahan, Persia, by the Right Rev. Bishop Stuart, D.D., Henry White, M.R.C.S. Eng., M.R.C.P. Lond., to Eleanor Constance, daughter of the late T. Davies-Colley, M.D., of Newton, Chester.

WILLIAMS—WALLACE.—On Nov. 25th, at Christ Church, Lancaster-gate, Campbell Williams, F.R.C.S., to Isita Eglantine Agnew Wallace, daughter of the late Robert Agnew Wallace, of Rhynd, Dunfermline, N.B.

DEATHS.

CHIPPERFIELD.—On Nov. 17th, at Inverness Lodge, Strawberry-hill, Elizabeth Susan, widow of the late Surgeon-Major William Nathan Chipperfield, A.M.S., Professor of Medicine, Medical College, Madras, aged 67 years.—R.I.P.

FALLS.—On Nov. 26th, at Montpelier-street, S.W., suddenly, William Coulthard Falls, M.B. Oxon, aged 44 years.

FREEMAN.—On Nov. 28th, at his residence, 24, The Circus, Bath, Henry William Freeman, in his 56th year.

MARSH.—On Nov. 27th, at Cheltenham, Dr. T. P. P. Marsh, aged 91 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (8th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.).

THURSDAY (9th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2 30 P.M.).

FRIDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (11th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (7th).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Prof. Rose Bradford: Experimental Atrophy of the Kidney.—Mr. S. G. Shattock: Negative Action of Sewer Air in raising the Toxicity of Non-virulent Diphtheria Bacilli.—Mr. H. C. Haslam: A Note on the Morphology of the Colon Bacillus.—Mr. Strangeways Pigg: Four Unusual Cases of Melanotic Sarcoma.—Mr. F. C. Abbott: Congenital Abnormality of the Sternum and Diaphragm with Downward Displacement of the Heart.—Mr. Parkes Weber: A Heart with Extreme Calcification of the Aortic and Mitral Orifices from a Case which presented exceptional Physical Signs.—Dr. F. W. Andrewes and Mr. James Berry: Nose and Lung from a case of Glanders (Human).—Prof. McFadyean: Lung from a Case of Glanders (Horse).

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-square, W.C.).—8 P.M. Paper:—Mr. C. Tomes: Partial Suppression of Teeth in a very Hairy Monkey (Colobus Caudatus). Communications:—Mr. R. Barrett: A Case of Composite Odontome in the Lower Jaw.—Mr. G. Thomson: Chloroform in Dental Surgery.—Mr. H. Ll. Williams: Excision of Necrosed Roots.

ROENTGEN SOCIETY (Medical Society's Rooms, 11, Chandos-st., W.).—8.30 P.M. Paper:—Mr. A. C. Swinton: Adjustable X-Ray Tubes.

WEDNESDAY (8th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—8 30 P.M. Clinical Evening. Cases will be shown by Dr. A. T. Davies, Dr. Appleford, Dr. Kelson and Dr. G. H. Sequeira.

MEDICAL SOCIETY OF UNIVERSITY COLLEGE (London).—8 30 P.M. Mr. A. Pearce Gould: University College Hospital Thirty Years Ago.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases and Specimens will be shown by Dr. J. Horne, Dr. Pegler, Mr. W. Wingrave, Mr. de Santi, Dr. Bond, Dr. S. Spicer, Dr. H. L. Lack.

THURSDAY (9th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-sq., W.).—8 P.M. Patients and Card Specimens. Cases will be shown by Mr. W. J. Cant, Mr. Hartridge, Mr. Holmes Spicer, Mr. Stanford Morton, Mr. Lawford, and others.

HARVEIAN SOCIETY.—8.30 P.M. Mr. Juler: The Syphilitic Diseases of the Eye and its Appendages. (Harveian Lecture.)

BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Specimens will be shown by Mr. O'Callaghan. Papers:—Dr. J. A. Shaw-Mackenzie: Hæmorrhagic Endometritis.—On the Dangers to the Ureters in performing Hysterectomy.

FRIDAY (10th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Paper:—Mr. A. Pearce Gould: A Case of Acute Intestinal Obstruction relieved by Operation, Death from Intestinal Toxæmia on the Ninth Day after Operation.—Mr. C. B. Lockwood: A Case of Radical Cure of Inguinal Hernia. Injury to the Bladder, Formation of Phosphatic Calculi, Lithotrity, Recovery.—Mr. A. E. Barker: Fifteen Consecutive Cases of Acute Intussusception.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

TUESDAY (7th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Ballance: Surgery of the Nervous System.

HOSPITAL FOR NERVOUS DISEASES (73, Welbeck-street).—4.30 P.M. Dr. Fletcher Beach: On Cases of Epilepsy and other Convulsive Disorders of the Nervous System.

WEDNESDAY (8th).—HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. H. Mackenzie: Mitral Stenosis.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. D. Hood: Albuminuria.

THURSDAY (9th).—THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Colman: Demonstration of Selected Cases.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 2nd, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Nov. 26	30·50	S.W.	0·04	62	51	33	34	35	Hazy
,, 27	30·07	S.W.	0·40	56	55	35	50	51	Cloudy
,, 28	29·85	S.W.	0·08	54	51	44	44	45	Raining
,, 29	29·29	NNW	0·01	64	46	39	39	44	Stormy
,, 30	29·69	W.	0·05	64	53	34	43	45	Raining
Dec. 1	29·44	W.	...	60	47	40	39	40	Cloudy
,, 2	30·00	N.E.	...	62	43	37	37	38	Cloudy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

THE WATER-SUPPLY OF ROME.

To the Editors of THE LANCET.

SIRS,—Your correspondent, Dr. Wyckoff, to whom you replied in THE LANCET of Nov. 6th, page 1231, had probably in his mind the opening on Sept. 10th, 1870, of the Acqua Marcia, which, though the hardest of the four chief supplies, is looked on as the best, being the coldest of all the thirteen sources. The Acqua Paola is the softest and the Vergine the most aerated, the Felice being, save in its higher temperature, almost identical with the Marcia. Pope Sextus V. and his engineer, Pompilio Eusebi, of Perugia, included the Marcia in their scheme for the re-opening of the ancient aqueducts, which received the Papal approval in 1589, but the death of the Pope intervening the commissioners dropped it and confined their operations to the other three. But excellent as are these waters there were until recently at any rate a number of shallow wells in use, of which Dr. Francisco Marino-Zuco and Dr. Guido Fabris declared in 1885, "La composizione chimica di queste acque, adattatissima alla coltura dei germi viventi, e *le loro posizione molto prossima alle fognature*, da cui possono ricevere le putride infiltrazioni e i germi morbigeni, i quali trovebbero in esse liquidi fertili per la loro propagazione, ci fanno concludere che *l'uso delle dette acque non è soltanto nocivo a chi ne beve, ma è altresì molto pericoloso per la salute pubblica*, e percio nello interesse della pubblica igiene *deve essere rigorosamente proscritto*." If the municipality from whose "Bulletino" I have taken this extract have carried out the earnest recommendation of their own official chemical advisers and closed the city wells there certainly has been "an improvement in the water-supply" such as Dr. Wyckoff inquires about and that within the last dozen years.

I am, Sirs, yours faithfully,

Nov. 29th, 1897. M.D

"WANTED SUGGESTIONS FOR TREATING A GANGRENOUS ULCER."

To the Editors of THE LANCET.

SIRS,—In reply to a letter in THE LANCET of Nov. 27th from Mr. John D. Rice asking for suggestions for the treatment of gangrenous ulcers I would recommend him to try pulvis cinchonæ dusted over the ulcer night and morning with complete rest in bed. This treatment was, I believe, suggested by Dr. Sidney Ringer in his book on Therapeutics some years ago. I have frequently found it succeed when all other treatment has failed. The following case which I now have under my care illustrates this method of treatment. A woman, aged seventy-five years, about two months ago fell down and grazed her right shin. She treated herself for two weeks with poultices and warm fomentations. When I first saw her she had a large, acutely painful gangrenous ulcer about 3 in. by 4 in. in size. The edges were undetermined and the surrounding skin was inflamed and boggy with several large bullæ filled with dark blood-stained serum. The surface of the ulcer was very irregular, varying in depth from an eighth to a quarter of an inch, completely destroying the subcutaneous tissue and involving the muscular layer. The ulcer was partly covered with black sloughs and the discharge was abundant and offensive. All loose sloughs were removed and the ulcer was bathed with boracic lotion and carefully dried and then well dusted with powdered cinchona bark; the wound was covered with linen rag, the limb enveloped in cotton-wool and elevated on pillows. The dressing was changed night and morning and the wound well washed with boracic lotion and powdered on each occasion. The powder has a tendency to "cake" and such crusts require carefully removing every third day. Under this treatment the ulcer rapidly decreased in area and depth, the remaining sloughs dropped off, and healthy granulations made their appearance. The discharge lessened and was no longer offensive. The pain ceased and the surrounding skin became firm and healthy. The progress towards recovery has been continuous and at the date of writing the wound has practically ceased to exist. I should be glad if any gentlemen who have adopted this treatment would communicate results.—I am, Sirs, yours faithfully,

EDWARD MONRO SPOONER, M.D. St. And.

Blandford, Dorset, Nov. 29th, 1897.

A Sufferer.—The abuse is rife all over the kingdom. If our correspondent will send a statement on the matter to us (in the signature of which other medical men in the neighbourhood should join) we will consider the desirability of its publication.

CHEMICAL NOMENCLATURE.

SOME change must soon be made in chemical nomenclature or a large portion of a lecture on chemistry will be occupied in articulating the name of the subject which it is proposed to discuss. In a late number of the *Comptes Rendus* MM. A. Haller and A. Guyot describe a new substance they have obtained which has the portentous title of the "tétramethyldiamidodiphenyldianthranoltetramethylédiamidé symmetrical with the corresponcent oxanthranol." This, we think, would be hard to beat even amongst German sesquipedalian words. The chemists want a Linnæus.

F. H.—We doubt if any good would be done by pointing out the childish and mischievous absurdities of a quack's circular in our columns. All readers of THE LANCET know that such literature is stuffed with lies aimed at the credulity and the purse of the unfortunate public. We recommend our correspondent to enclose the circular to the Parliamentary representative of his electoral division and to ask whether in the near future such frauds cannot be stopped by legislation.

BIRTHS AND DEATHS IN LONDON.

To the Editors of THE LANCET.

SIRS,—Will you kindly inform me how to obtain the register of births and deaths in London this year, 1897?—I am, Sirs, yours truly,

Sheerness, Nov. 23rd, 1897. L.R.C.P.

*** The figures for the last quarter of 1897 obviously cannot be given; for the three completed quarters of the year the figures are appended.—ED. L.

1897.	Births.	Deaths.
First quarter	34,643	20,504
Second quarter	32,412	17,261
Third quarter	33,722	21,560
Three quarters	100,777	59,325

Mr. T. Hebb.—Our correspondent would not be justified in recommending the treatment or using it under cover of another name or method. He can only try to wean the persons concerned from the error of their ways.

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THE ETHICS OF DEATH CERTIFICATION.

To the Editors of THE LANCET.

SIRS,—I should be glad of the opinion of your readers on a point of conduct which has given me some qualms. Some time since I was called to see a child of eight years who after the ordinary evening meal, composed of a milk pudding of some kind, became violently sick and brought up a considerable quantity of blood. There was severe diarrhœa and the temperature shortly ran up to 104° F. I must confess that I was at a loss to explain these symptoms except on the assumption that the child had swallowed an irritant poison or had taken a sharp fragment with the food. A neighbouring practitioner was called in to assist me but neither he nor any one of the others who were called in consultation could throw any light on the nature of the illness. Ultimately the child became delirious and died within three days. From every point of view I should have liked a post-mortem examination but to this the parents demurred. Convinced as I was and am that death was due to natural causes I, after some hesitation, certified that death was due to gastritis, an accurate diagnosis no doubt but under the circumstances somewhat misleading. I wish to know whether my conduct commends itself to my fellow practitioners, or whether I ought to have offered the bereaved parents the alternative of a post-mortem examination or an inquest on the ground that I was unable to certify that whereof I was admittedly ignorant. An expression of opinion on this subject may serve as a guide not only to me but to other practitioners who happen to find themselves landed in a similar dilemma. I am, Sirs, yours faithfully,

Nov. 29th, 1897. INTIMIDAD.

Ignoramus is recommended to follow the custom of the place, to be ascertained by inquiring from one of the resident medical men.

"A TESTIMONIAL TO DR. JOHN T. ARLIDGE."

To the Editors of THE LANCET.

SIRS,—Will you kindly oblige by inserting in THE LANCET the subjoined additional subscriptions to the testimonial for Dr. J. T. Arlidge, Mr. W. H. Folker, F.R.C.S. Eng., of Hanley, has kindly undertaken to receive subscriptions locally. Sir Thomas Wardle, President of the Silk Association of Great Britain and Ireland, has also kindly joined the committee. I am, Sirs, yours truly,

CHAS. F. MOORE.

10, Upper Merrion-street, Dublin, Nov. 30th, 1897.

	£	s.	d.		£	s.	d.
Mr. J. H. Tylecote, M.D. St. And....	0	10	6	Mr. Jas. Holmes, M.D. Edin.	0	10	6
Mr. Thos. Salt, M.R.C.S. Eng., L.R.C.P. Lond.	1	1	0	Mr. Urban Pritchard, M.D. Edin., F.R.C.S. Eng....	2	2	0
Mr. Joseph Bell, F.R.C.S. Edin.	1	1	0	Mr. A. Going Pritchard	2	2	0
Dr. F.	1	1	0	Mr. Thomas Twyford ...	1	1	0
Mr. J. J. Ritchie, M.R.C.S. Eng., L.S.A.	0	5	0	Mary Ford...	1	1	0
				Mr. George Menzies ...	1	1	0

A Disgusted M.D. is recommended to bring the matter before the General Medical Council. In doing so he will be careful to enclose copies of both papers and he would be well advised to secure the coöperation of other practitioners in the neighbourhood.

"A BOOK ON STAMMERING."

To the Editors of THE LANCET.

SIRS,—I note on p. 1433 of THE LANCET of Nov. 27th a request to vindicate a small book on "Stammering," &c. I have put forth a booklet on the subject entitled "Lip Chorea," published by Bale, 85, Great Titchfield-street, W., at 1s. net.—I am, Sirs, yours faithfully,

64, Seymour-street, W.. Nov. 27th, 1897. EDWARD BLAKE.

To the Editors of THE LANCET.

SIRS,—The little book on Stammering—constantly advertised in your columns—by the late Emil Behnke, and edited by his widow, answers all purposes, being free from the faults of most of such essays and founded on that sound knowledge of physiology which is essential to the successful and permanent treatment of all defects of speech.

I am, Sirs, yours faithfully,

Nov. 29th, 1897. ELLBEE.

*** Mr. G. Phillips and Mr. J. F. Hallows also wish to call the attention of "W. R. K." to the late Emil Behnke's book.—ED. L.

Mr. N. Evedin.—It is within the discretion of the coroner to call either medical witness or both.

A REMEDY FOR SEVERE LUMBAGO.

To the Editors of THE LANCET.

SIRS,—In answer to "L.R.C.P.," who asked in THE LANCET of Nov. 13th for a remedy for lumbago, I may state that I have had good results with ammonii chloridum (gr. xx.) combined with ammonii carbonas (gr. v.), or a mixture: ammonii chloridi 3iii., liquoris hydrargyri perchloridi ℥xs., spiritus chloroformi ℥ss., infusum gentianæ compositum ad ℥vi.; ℥ss. ter in die ex aqua.

I am, Sirs, yours faithfully,

R. STUART BENNIE, M.A., M.B., C.M.

Dobeross, Saddleworth, Yorkshire, Nov. 18th, 1897.

A STORY OF MORALS.

To the Editors of "THE LANCET."

SIRS,—I make no comment on the following case which I have fully investigated and every fact of which I can prove and have proved in conjunction with a colleague. A child of eleven years was suffering from a purulent vaginal discharge which proved to be gonorrhœa. On investigation it was discovered that this child had contracted it from her uncle; she had given it to her brother aged seven years, who in turn had passed it on to his sister aged three years. The boy of seven years had a very bad attack with phimosis and the girl of three years had it somewhat severely. On further investigation the following side-lights were discovered. The girl of eleven years felt no discomfort through connexion with an adult man of about thirty years; rather the contrary. She gives a graphic and evidently truthful account of her seduction, at the age of eight years, by a boy four years her senior, since which time she has been living in frequent sexual intercourse with boys. The mother of this child three years ago gave the father syphilis and was turned out of doors, since which time she has not been back and is believed to be living the life of a common prostitute. The uncle was confronted with the girl who accused him of having given her gonorrhœa and on being pressed confessed in the presence of the girl's father and the husband of his own sister that it was true and that he had done it to get rid of his own disease, having succeeded in doing so in this way on four other occasions. Meanwhile the girl's father and the other man, who were present when the remark was made, stood placid and indifferent, expressing neither indignation, disgust, nor surprise.

I am, Sirs, yours faithfully,

Dec. 1st, 1897. M.R.C.S.

Spectator brings to our notice a matter to which we have given attention before. The publisher distributes books to the press, and is therefore indirectly responsible for the publicity given to medical authors in a lay paper.

THE TITLE OF DOCTOR.

To the Editors of THE LANCET.

SIRS,—I should be much obliged if you will kindly give your opinion as to whether a graduate of a university, say M.B., B.S., or M.B., C.M., has the right to use the word "Surgeon." Graduates are very jealous if a simple diplomate uses the word "Doctor."

I am, Sirs, yours faithfully,

Nov. 30th, 1897. ENQUIRER.

*** A Bachelor of Surgery is a *surgeon* by right; a Bachelor of Medicine has been styled a *doctor* by courtesy and long-established custom, probably because the gap between his position and the position of Doctor of Medicine has been very small, although the modern tendency is to widen it. A diplomate of a corporation cannot make his *membership* or *license* carry the title of *Doctor*. The trouble arises, as we have so often pointed out, from the fact that the public use as a popular title for a medical man the academic title which happens to pertain to one group of medical men.—ED. L.

Rus.—The matter is one for the Council's discretion. The last superintendent of an asylum under the Council's jurisdiction who resigned his office received a pension, which would seem to indicate the Council's views.

R. R.—THE LANCET, vol. i., 1896, contains several papers on the subject.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received: *Heywood Advertiser, Birmingham Gazette, Bradford Observer, Accrington Observer, Newbury Weekly News, Preston Guardian, Carlisle Journal, Kentish Express, Times of India, Pioneer Mail, Cambridge Express, Halifax Guardian, East Anglian Daily Times, Western Morning News, Glasgow Herald, Architect, Dundee Advertiser, Manchester Courier, Builder, Yorkshire Post, Sheffield Telegraph, Sussex Daily News, Grantham Journal, Halifax Guardian, Norfolk Chronicle, Liverpool Daily Post, Kidderminster Shuttle, Derbyshire Times, Newport Advertiser, Northampton Mercury, Kendal Mercury, Leicester Post, Bristol Mercury, Lowestoft Standard, Keighley News, Doncaster Chronicle, Cheltenham Mercury, North Wilts Herald, Grimsby News, Essex County Chronicle, Somerset County Gazette, Worcester Chronicle, Freeman's Exmouth Journal, Sanitary Record, Lisburn Standard, Brighton Gazette, Mining Journal, Hertfordshire Mercury, Local Government Chronicle, Reading Mercury, City Press, Newbury Weekly News, Weekly Free Press and Aberdeen Journal, Local Government Journal, Surrey Advertiser, Australasian Medical Gazette, Townsville Daily Bulletin, Keighley Herald, Jarrow Guardian, Carnarvon Herald, Leeds Mercury, West Middlesex Herald, Clifton Chronicle, Pullen's Kent Argus, Radcliffe Express, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Apothecaries' Hall of Ireland, Dublin, Secretary of; Messrs. Arnold and Sons, Lond.; A. B., Merthyr Tydfil; Apollinaris Co., Lond.

B.—Mr. E. Baker, Birmingham; Birmingham and Midland Hospital for Skin, &c., Diseases, Hon. Secretary of; Messrs. W. J. Bush and Co., Lond.; Mr. A. S. Barling, Lancaster; Dr. Brand, Dortmund; Bristol Medical Library, Hon. Secretary of; Dr. B. W. Bond, Godalming; Messrs. J. B. Brooks and Co., Birmingham; Mr. G. P. Butcher, Plymouth; Messrs. Burgoyne, Burbidges, and Co., Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Dr. E. Blake, Lond.; Mr. W. H. Bull, Stony Stratford.

C—Mr. J. Clay, Shrewsbury; Mr. J. Caldwell, Brighouse; Messrs. Cassell and Co., Lond.; Messrs. T. Cook and Son, Lond; Mr. F. W. Clarke, Manchester; Mr. E. M. Camis, Paris; Cardiff Medical Society, Secretary of; Chorlton Union, Clerk of; Mr. A. C. L. Cole, Lond.; Cheshire County Asylum, Macclesfield, Clerk of; C.A.M.W.A.L., Lond.

D.—Mr. Dowies, Edinburgh; Mr. A. W. Down, Lond.; Sir John Dorington, Stroud; Denaeyer's Peptonoids and Extract of Meat Co., Lond.; Durham County Asylum, Winterton, Steward of; Miss Davies-Colley, Higher Broughton.

E.—Mr. T. G. C. Evans, Budleigh-Salterton; Mr. A. R. Edwards, Aachen; École de Médecine et de Pharmacie, Grenoble, Librarian of.

F.—Mr. W. T. Freeman, Reading; First Swiss Wine "Sans Alcohol" Co., Lond.; Messrs. Fannin and Co., Dublin; Dr. D. Fennell, Lond.; Messrs. Fletcher, Fletcher, and Co., Lond.; F.R.C.S., London; Mr. J. Fallows, Lond.

G.—Dr. G. A. Gibson, Edinburgh; General Apothecaries' Co., Lond.; Mr. T. Gaddes, Harrogate; Messrs. R. W. Greeff and Co., Lond.; Messrs. Gilyard Bros., Bradford; Messrs. G. Gale and Sons, Birmingham.

H.—Dr. G. Herschell, Lond.; Dr. Harford-Battersby, Lond.; *The House*, Lond., Proprietors of; Dr. J. B. Hellier, Leeds; Messrs. Hampton and Sons, Lond.; Hertford Union, Clerk of; Messrs. Hertz and Collingwood, Lond.; Mr. Reginald Hansell, Lond.; Mr. J. Hicks, Leeds; Mr. J. Heywood, Manchester.

I.—Infirmary Medical Superintendents' Society, Lond., Hon. Secretary of; Investors and Contract Agency, Lond., Secretary of.

J.—Messrs. T. Jones and Co., New Ross; Jenner Institute for Calf Lymph, Battersea, Secretary of; Messrs. W. and A. K. Johnston, Edinburgh.

K.—Dr. G. B. Keith, Lond.; Messrs. Krohne and Sesemann, Lond; Messrs. H. and T. Kirby and Co., Lond.

L.—Dr. J. F. Little, Lond.; Messrs. Lee and Nightingale, Liverpool; M. H. Littlewood, Leeds; Mr. E. Landon, Lond.; Messrs. Lorimer and Co., Lond.; Mr. Lewis, Lond.; Mr. F.C. Larkin, Liverpool.

M.—Mr. R. D. Morgan, Pontypridd; Dr. C. Martin, Birmingham; Mr. K. W. Millican, St. Louis, Mo.; Dr. Mackay, Devizes; Maltine Manufacturing Co., Lond.; Manchester Corporation, Medical Officer of Health of; Milk Preparations Co., Brentwood; Medico, Lond., Mellin's Food Works, Lond.; Major, Lond.

N.—Nottingham Union, Clerk of; Dr. C. Nedwill, Christchurch, N.Z.

O.—Messrs. Oppenheimer, Son, and Co., Lond.

P.—Dr. N. O'D. Parks, Ashton, R. I., U.S.A.; Messrs. Parke, Davis, and Co., Lond.; Messrs. Parry and Co., Lond.; Plymouth Medical Society, Secretary of; Mr. A. De Bock-Portir, Lond.; Mr. J. B. Pike, Loughborough; Peptenzyme Co., Lond.

Q.—Queen Charlotte's Lying-in Hospital, Lond., Secretary of.

R.—Dr. H. D. Rolleston, Lond.; Dr. J. S. R. Russell, Lond.; Messrs. Robertson and Scott, Edinburgh; Dr. J. Radzimovski, Station Okulovka, Russia; Mr. E. Ringrose, Newark; Ross, Ltd., Lond.; Royal Medical Benevolent College, Lond., Secretary of.

S.—Mr. W. J. Smith, Brighton; Messrs. Street and Co., Lond.; Mr. E. H. Shaw, Cambridge; Major-General A. de C. Scott, Lond.; Dr. A. Smart, Edinburgh; Mr. T. B. Seymour, Bristol; Surgeon Captain R. B. Sleman, Lond.; Dr. E. J. Smyth, Lond.; Spectator, Bradford; Mr. Noble Smith, Lond; Messrs. R. Stanley and Co., Lond.; S. E., Lond.; Singer Cycle Co., Coventry.

T.—Mr. J. C. Taylor, Gronville, Jersey; Tower Tea, Ltd., Lond.; Dr. C. C. B. Tyrie, Keighley; Messrs. J. Turner and Co., Queensferry.

U.—University of London, Registrar of; United Alkali Co., Liverpool.

V.—Dr. Vallin, Paris; Mr. Van Praagh, Lond.; Dr. M. Volkow, St. Petersburgh.

W.—Mr. E. H. Woods, Lond.; Mr. J. C. Woodside, Ballycastle; Messrs. J. Wright and Co., Bristol; West Bromwich District Hospital, Secretary of; Worcester Union, Clerk of; Messrs. W. White and Son, Glasgow; Worshipful Company of Plumbers, Lond., Secretary of; Mr. S. Wand, Leicester; Messrs. West, Newman, and Co., Lond.

Y.—Yorkshire School for the Blind, York, Superintendent of; Yost Typewriter Co., Lond.

Z.—Z., Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. J. Adam, West Malling; Aleph, Lond.; Ancoats Hospital, Manchester, Secretary of; A. B., Lond.; Dr. E Allen, Hawes; Aurum, Lond.; A. H., Frome; A. E. C., Gravesend.

B.—Mr. W. Bowes, Aldington; Dr. M. Beattie, Gotham; Bristol Royal Infirmary, Secretary of; Dr. R. W. Branthwaite, Rickmansworth; Mr. J. Berry, Lond.; Mrs. L. Bennett, Lond.

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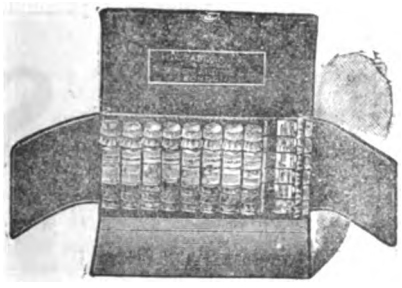
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FOR

MEDICAL MEN.

TRADE MARK **'Tabloid'** BRAND

Medicine & Hypodermic Cases



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'TABLOID' MEDICINE CASE.

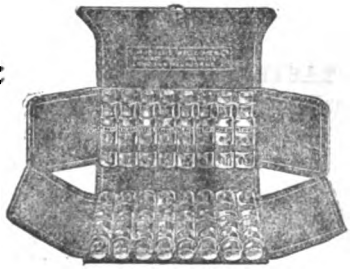
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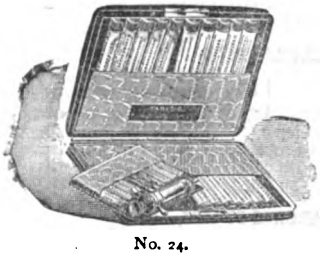
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Nos. 7 and 21	**12/6**;	No. 30,	**14/-** each
do. in brown or green seal	**18/-**;	,,	**19/-** ,,
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No. 48 **ARSENI SULPHIDI**, 1-100 gr.

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The demand for "Ergotin" Pills has been very great. We have manufactured for a long time this "Ergotin," which is, more properly speaking, a carefully prepared aqueous extract. The "Ergotin" of the market is of several kinds and generally unreliable. Our 3-gr. pill represents 15 to 17 grains of Ergot.

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Strychniæ,	1-60 gr.

No. 209 **FERRUGINOUS (Blaud's)**

Ferri Sulph.,	1½ gr.
Potassii Carb.,	1½ gr. (A)

No. 210 **FERRUGINOUS (Blaud's)**

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Potassii Carb.,	2½ gr. (B)

These pills are admirably adapted for the assimilation of iron, as the ingredients re act upon each other to form Ferrous Carbonate which, owing to the protection afforded by the soluble coating, remains unaltered until freed for action by the stomach juices.

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Ext. Nucis Vomicæ,	1-8 gr.
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No. 262 **IPECAC. ET OPII** (Dover's Powder), 2 gr.

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No. 303 **OPII ET CAMPHORÆ**

Pulv. Opii,	1 gr.
Camphoræ,	2 gr.

No. 304 **OPII, CAMPHORÆ ET ACIDI TANNICI**

Pulv. Opii,	¼ gr.
Camphoræ,	1 gr.
Acidi Tannici,	2 gr.

No. 390 **QUININÆ, FERRI, ET STRYCHNINÆ VALERIANAT**

Quininæ Valerianat.,	1 gr.
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Quininæ Hydrochlor.,	1½ gr.

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Harveian Lectures

ON

SYPHILITIC DISEASES OF THE EYE AND ITS APPENDAGES.

Delivered before the Harveian Society

BY HENRY E. JULER, F.R.C.S. ENG.,

OPHTHALMIC SURGEON TO ST. MARY'S HOSPITAL; SURGEON TO THE ROYAL WESTMINSTER OPHTHALMIC HOSPITAL; AND CONSULTING OPHTHALMIC SURGEON TO THE LONDON LOCK HOSPITALS.

LECTURE I.[1]

Delivered on Dec. 2nd, 1897.

SYPHILITIC DISEASES OF THE EYELIDS.

MR. PRESIDENT AND GENTLEMEN,—Chancres of the eyelid are always hard or infecting sores. Soft or locally contagious sores are never seen in this region. There is not according to Panas[2] a single authenticated case of a soft chancre attacking the eyelid recorded. To quote the great English authority on syphilis: "It is a remarkable fact that the non-indurated sore is almost never seen except on the genitals" (Jonathan Hutchinson). Chancres of the eyelids involve with very few exceptions the palpebral conjunctiva. Rarely they may be seen limited to the cutaneous surface of the eyelid on the one hand or the conjunctival surface on the other. The frequency of primary syphilitic lesions here compared with those elsewhere is difficult to determine with any degree of accuracy and, based on de Beck's[3] valuable researches, varies within wide limits in different countries. He considers that in France it is reasonable to expect a palpebral chancre once in every five hundred cases of syphilis. This, in my opinion, far exceeds its relative frequency in this country. In Germany, also, this would be considered excessive. Though the situation of a chancre is in most instances on the lid margins spreading on to the palpebral conjunctiva they may start on the caruncle or plica semilunaris and involve the two eyelids at their junction, the inner canthus. Infants and young children run a risk of inoculation by the kisses of infected persons. It is a pernicious habit and mothers should not allow their offspring to be kissed by anyone indiscriminately. On the other hand nurses may be infected by a syphilitic infant. The following is a case in point:—

CASE 1.—A woman, aged forty-five years, came under my care at St. Mary's Hospital suffering from an irregular ulcer at the inner canthus which had resisted treatment for three weeks. The pre-auricular gland and one submaxillary lymphatic gland were enlarged. She had been nursing a baby with evidences of congenital syphilis—viz., ulcers around the mouth, snuffles, and sores on the soles of the feet when three months old. The ulcer was not much indurated nor were the eyelids much swollen. It was surrounded by a red zone, had a grey surface, and very little discharge. The ocular conjunctiva was injected to the inner side. The nature of the lesion was suspected. My colleagues, Mr. Anderson Critchett and Mr. Ernest Lane, confirmed my opinion and advised the suspension of antisyphilitic remedies till the secondary symptoms appeared. A month later she developed a roseolous rash, a sore throat, and syphilitic onychia. Subsequently the rash became a tuberculous syphilide. The ulcer healed readily under the influence of mercury, but epiphora resulted from the involvement of the canaliculi in the scar

Kissing the eyelids is recorded as an instance of contagion. The introduction of the virus by the finger is perhaps the most common mode of inoculation. Medical men and midwives especially have been known to fall victims in this way. As the finger is so often placed on the caruncle to remove mucus or relieve irritation it is not surprising that we find chancres at the inner canthus.

The clinical course of these erratic chancres differs immaterially from those elsewhere. It is necessary, by the way, to remember that the amount of local reaction varies greatly. I have seen the eyelids considerably swollen with chemosis of the ocular conjunctiva, but inflammatory troubles of this nature are the exception. It is not uncommon to find a chancre extending throughout the length of the eyelid either by the coalescence of two or more primary lesions, such as may be acquired by treating blepharitis in the manner described above, or by a single chancre spreading along the lid-margin. Phagedæna, however, of the eyelid is practically unknown. The outline of the sore is usually circular or oval but may be very irregular. Similarly, there may be an absence of the usual induration.

Certain complications may occur locally which are of interest. The canaliculi may be strangulated in the contraction of the cicatrix, which happened in the case described, and epiphora ensued as a consequence. Again, a chancre may spread from the palpebral conjunctiva on to the ocular and in the healing process symblepharon may result. The pre-auricular gland is always enlarged, firm, and painless, and not tender unless manipulated roughly. I know of no instance in which in an undoubted case the former was not perceptibly swollen and hard. The absence of tenderness has a diagnostic significance. The diagnosis of primary syphilitic sores in this region constitutes one of the most interesting problems in surgery. It may be mistaken for any one of the following lesions: rodent ulcer, epithelioma, lupus, chalazion, hordeolum, and tuberculous ulcer of the palpebral conjunctiva.

Chancre of the eyelid is always accompanied by enlargement and induration of the pre-auricular or submaxillary gland, usually both; the absence, therefore, of glandular swelling will help to exclude many of the above affections. Thus rodent ulcer, tertiary syphilitic ulcer, lupus, and in most instances chalazion and hordeolum may be excluded, for in all of these the pre-auricular gland seldom, if ever, becomes enlarged. I have known both eyelids removed for suspected rodent ulcer; the growth proved to be epithelioma and yet the pre-auricular gland could not be felt. By the time that an epitheliomatous ulcer caused enlargement of the gland a chancre would have healed spontaneously and the sufferer be half through the secondary stage of syphilis. With suppurating chalazion and large suppurating styes the pre-auricular gland may be infected, but in such cases it is much swollen, painful, very tender, and the skin over it is red and œdematous. It is an acute lymphadenitis easily distinguished from a chronic enlargement. By a process of exclusion only one ulcer is left, the tuberculous ulcer of the conjunctiva, which is sufficiently rare to have been very much overlooked in literature. In my opinion this is the only ulcer that is likely to be mistaken for a chancre. The pre-auricular gland is firm and swollen and the ulcer is either round or oval and saucer-shaped. Be suspicious if there is no induration at the base of the ulcer. A tuberculous ulcer I have learned from experience is never indurated. The following are two cases of tuberculous ulcers of the palpebral conjunctiva which came under my care and which were at first mistaken for chancre.

CASE 2.—A girl, aged thirteen years, came to the ophthalmic department at St. Mary's Hospital complaining of a discharge from her right eye attended with slight pain and discomfort. On examination a purulent discharge was seen in the conjunctival sac and slight redness of the eyeball. On everting the upper eyelid an ulcer on its inner surface was seen as large as a split pea, saucer-shaped but without induration. The pre-auricular gland was enlarged and tender. It was thought that the ulcer might be a chancre and the child was treated with grey powder. At the end of five weeks it was no better and as she was looking so ill and complained of headache she was admitted as an in-patient. Her temperature was 100·4° F. and her general condition rapidly became worse. Losing consciousness a week later she developed an internal strabismus and slight optic neuritis and died a few days later. The necropsy revealed tuberculous meningitis.

The second case is also a good illustration of a tuberculous conjunctival ulcer which likewise proved fatal in an almost similar way to the last.

CASE 3.—A girl, aged six years, was brought to me for redness of the right upper eyelid. Upon everting it an oval ulcer was exposed 12 mm. long and about 6 mm. wide situated near the outer canthus and depressed in its centre with margins slightly raised and granular. The surface of the ulcer was smooth, clean, and pale pink in colour. There

[1] Lecture II. was delivered on Dec. 9th and Lecture III. will be delivered on Dec. 16th, 1897.

[2] Traité des Maladies des Yeux, 1894, vol. ii.

[3] Hard Chancre of the Eyelids and Conjunctiva, Cincinnati, 1886.

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was no induration of its base. The cutaneous surface of the eyelid in its vicinity was slightly swollen and red and the ulcer secreted a muco-purulent discharge. The pre-auricular gland was swollen as large as a haricot bean and was tender. The glandulæ concatenatæ could be felt but were not much enlarged as also the submaxillary lymphatic glands. A month later a similar ulcer developed on the lower eyelid. There was a small lupus-looking nodule on the right cheek but beyond this no cutaneous trouble. On the whole she was a healthy-looking child with a bright, florid complexion. The only family history of any importance was the death of the girl's grandmother on her mother's side from phthisis. Two months later the patient died from general tuberculosis.

I do not apologise for describing both these cases of tuberculous ulcers of the conjunctiva for they are rare and in each instance the diagnosis of chancre was made. As the prognosis differs widely in each it is well to have some distinguishing features of importance. The absence of induration, the smooth, clean, pale pink surface of the ulcer, and the tenderness of the enlarged pre-auricular gland are the chief points in these cases worthy of notice.

The treatment of chancre of the eyelid should not be undertaken till the diagnosis is confirmed by the development of secondary manifestations of syphilis. It is possible, if not probable, that mercury in the first case aggravated the local and probably primary tuberculous lesion and increased the predisposition to general infection, so in a two-fold manner hastening the end. When it is proved beyond doubt to be a syphilitic sore measures for its cure, local and constitutional, should be at once adopted. Locally, dusting calomel or iodoform powder on the ulcer is advisable as well as bathing the sore with black wash or weak perchloride of mercury lotion.

TERTIARY MANIFESTATIONS.

Gummata occasionally appear in the skin and subcutaneous tissue superficial to the tarsus or may develop in the substance of the latter. The cutaneous lesions soon ulcerate and a punched-out ulcer occupies the place. In the tarsus they do not break down so early and are easily mistaken for chronically inflamed Meibomian cysts. Trousseau[4] has paid much attention to gummata of the palpebral conjunctiva and describes two clinical varieties, the chronic and the acute. The latter resembles an acutely inflamed chalazion attended with œdema of the eyelids, the skin dusky red or of a purplish hue, enlargement of the pre-auricular and submaxillary glands, and with marked muco-purulent discharge. I do not think that we are in a position to attribute this acute inflammatory lesion to syphilis. It is possible that a gummatous deposit in the eyelid might become infected by pyogenic organisms and so be the cause of the distinction made by Trousseau, but a suppurative process acute from the onset in a syphilitic subject must be *post hoc* not *propter hoc*. Syphilitic tarsitis or diffuse inflammatory infiltration of the tarsus caused by syphilis is a rare affection and so far I can only remember seeing two cases which at all agreed with the description given by Stedman Bull.[5] I will describe the affection in his own words: "It is a chronic indolent infiltration of the tarsus which does not involve the skin. This process is not, however, always indolent or passive. It is usually accompanied by little œdema of the conjunctiva and swelling of the rest of the eyelid. It is almost always in the upper lid and generally involves its whole from inner to outer canthus, though it may be circumscribed. After the disappearance the tarsus is found to have entirely lost its normal resistance. There is no pain and no secretion from the conjunctiva and the disease is of slow progress. The tumour is hard, resisting and solid. The lid cannot be everted. The swelling is homogeneous throughout and though starting in the tarsus usually involves the other tissues of the lid with the exception of the skin and perhaps the conjunctiva also. After the dense infiltration has somewhat subsided under appropriate treatment so that the lid may be everted there may be seen in various places under the conjunctiva a brawny, yellowish-white infiltration of the tissues which slowly subsides. The cure is probably never a complete one, for after the absorption of so extensive and dense an infiltration more or less deformity of the tarsus must and does result from compression or softening of the tarsal tissue." We are led to believe from Bull's description that the inflammation starts primarily in the fibrous tissue, but according to Panas such is rarely the case. He believes the glands of Meibomius are first involved and lays but little stress upon its syphilitic origin. Michel and others have reported cases of syphilitic tarsitis. A recent case under my care presented all the appearances of the above affection but is not an uncomplicated case.

CASE 4.—A man, aged thirty-four years, married, had syphilis about fifteen years ago with rupial sores. He had had weak eyes from childhood. The right eye presented a leucoma adherens from a perforating ulcer six years ago. The left upper eyelid presented a swollen appearance with redness of the skin. It was firm and much thickened throughout its greater part and resembled numerous cysts blended together. There was no thinning of the ocular conjunctiva corresponding to the supposed cysts. The swelling had existed for fourteen days, but he had been attending for some months for treatment for trachoma. Iodide of potassium was prescribed and he is now well.

CASE 5.—A similar case is that of a married woman who was under my care about six years ago with a similar diffuse swelling of the tarsus in the upper and lower eyelid on one side. Like the case above she had a coarse acneform eruption on her face but no trachoma or any history of syphilis. Though numerous incisions were made into the nodular masses nothing could be scraped out. It subsided eventually under iodide of potassium.

Whether these cases of thickened tarsi, homogeneous on section, diffuse in nature, and yielding only to iodide of potassium, are syphilitic manifestations has yet to be proved.

THE LACRYMAL APPARATUS.

Syphilitic dacryo-adenitis either in the form of a diffuse interstitial adenitis or of gummata is not known—i.e., there is no undoubted case yet placed on record. Syphilitic lesions are equally unknown in the salivary glands, they are rare in the pancreas. Instances have been published by Alexander, Bull, and others in which the lacrymal gland has participated in the infective process, but in none could it be ascertained that the periosteum was not the primary seat of the lesion. Bull says that he has seen a case in which the gland upon examination was found hypertrophied from connective tissue growth and gummatous infiltration. The patient died from a gumma of the dura mater.

Symmetrical enlargement of the lacrymal glands is, perhaps, one of the rarer affections of the appendages we are liable to meet with and I have but little hesitation in attributing many instances of this condition to syphilis. Further researches have yet to be made in the pathological histology of these cases before we can assert that the gland is the original seat of the mischief. If it eventually proves to be so it is very certain that the inflammation spreads far beyond the confines of that organ. It has been my lot to come across two, if not more, cases of this kind, which, in spite of imperfect histories of venereal trouble, I have believed to be syphilitic and they have yielded in a satisfactory manner to antisyphilitic treatment. The last case is reported in the Transactions of the Ophthalmological Society (vol. xii., p. 44), and at that time was shown at its acme as a case of symmetrical tumours of both orbits probably sarcomatous. Since then they have under iodide of potassium and mercury completely disappeared. I will give the details of the case as briefly as possible.

CASE 6.—A woman, aged forty-five years, came under my care in May, 1891, with slight redness, mistiness, and lacrymation of the left eye. Vision was normal in each eye. She was ordered glasses and treated for slight conjunctivitis. Two months later she consulted me again for a nodule that had appeared a month ago above and to the outer side of the left eye, stating that it had increased in size and that one had appeared in the same position over the right eye. I found what appeared to be enlargement of the left lacrymal gland, but could detect no nodule in the right orbit. The eyes were both congested. She was a very stout, plethoric woman and suffered from glycosuria. She had lived twenty-two years in Paris and she gave a history of four successive stillbirths. She was treated with iodide of potassium and codeia. This tumour slowly increased in size, but on Aug. 17th a distinct swelling was found in the right orbit, œdema was present in both upper lids, there was chemosis of the conjunctiva, and ptosis was present on the right side. Movements of the eyeballs were fairly good. Subsequently, in spite of treatment, the growths increased and almost complete anæsthesia

[4] Société Française d'Ophtamologie, 1888.
[5] Morrow's System of Genito-urinary Diseases, vol. ii., part ii., p. 547.

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of the left half of her forehead became manifest, also limitations of the movements of both eyes in every direction. The tumours were hard and nodular, and arched over both eyeballs to near the inner canthi (Fig. 1). With a view to clearing up the diagnosis I elected

FIG. 1.



Symmetrical enlargement of the lacrymal glands.

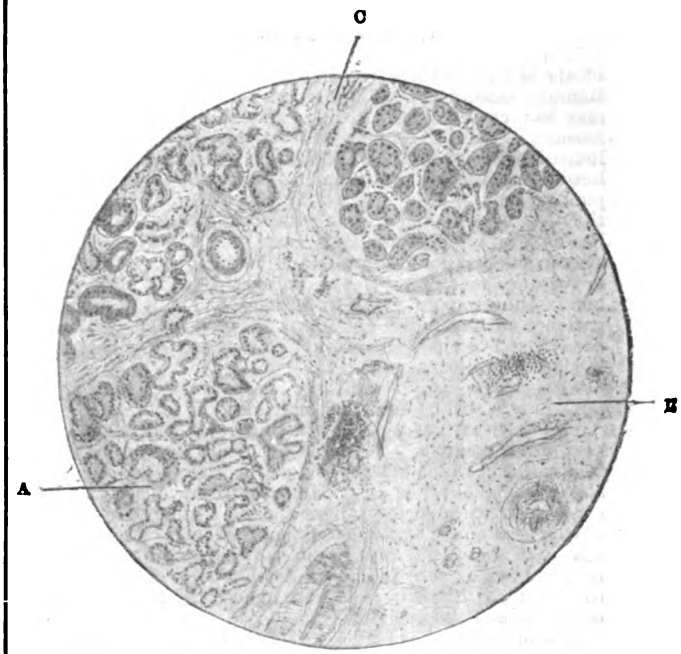
to cut down upon the tumour of the right orbit for microscopic investigation. Sections of a piece removed showed the growth to consist of spindle and round cells. Iodide of potassium was persistently continued with increasing doses. Mercury was now added to this. Having reached their acme in December the tumours began slowly to subside. A year later the eyes and orbits had regained their normal state. No swelling, only slight ptosis, no anæsthesia, no limitation in movement, or any evidence of former trouble existed in the early part of 1895. Mr. Adams Frost, Mr. Hutchinson, and Mr. Nettleship saw the case in consultation at different times and two were of opinion that the growths were syphilitic. At the Ophthalmological Society the general opinion was that it was either syphilitic or sarcomatous. I had scarcely a doubt in my mind that this was an instance of enlargement of the lacrymal glands due to either a chronic interstitial adenitis or a peri-adenitis due to syphilis. Especially as in addition to the history of four successive stillbirths I found distinct scars of deep ulceration above the left groin. She was seen again in 1894 by Dr. Tom Robinson who informs me that there was still slight ptosis but that the eyes were otherwise fairly well. She had, however, "an enormous distribution of cutaneous gummata interspersed here and there with cicatrices which were more or less sickle-shaped. They disappeared under a course of mercuric perchloride with inunctions of iodide of lead ointment. In 1896 she developed rapid phthisis, wasted very much, and died in October."

A similar case to this has been recorded by Adams Frost.[6] Symmetrical tumours of the orbit appearing at the upper and outer part have been proved clinically and by microscopic examination to be lympho-sarcomata, the diagnosis therefore is rendered especially difficult by the tendency which these syphilomata have to persist, and steadily increase in spite of treatment, and we find that it is only after a very prolonged course of iodide of potassium with increasing doses that they yield. To make a diagnosis it is well to make an early exploratory incision and remove a piece of the growth of sufficient magnitude to be certain of its nature by microscopy. Bearing in mind the rarity of dacryo-adenitis it is merely a hypothesis that the glands are primarily the seat of the inflammation, but instances have been recorded in which the swelling has been examined and found to be the lacrymal gland enlarged and, by the microscope, interstitially inflamed.

CASE 7.—The patient, a girl aged five years, was under Mr. Wainwright's care in November, 1892. A tumour about the size of a Brazil nut was situated in the region of the lacrymal gland. It appeared as if the latter was greatly enlarged. The eye itself appeared normal and the vision was good. The temperature and pulse were normal. The history given (unreliable) was that the swelling had come on suddenly a month previously and had not increased or diminished since. The swelling was punctured in several places with a hypodermic syringe but nothing but bloody serum was withdrawn. As the swelling increased in size the contents of the orbit were removed on the suspicion that the growth was sarcomatous. The tumour was found to involve the periosteum on the upper, inner, and outer walls of the orbit, completely enveloping the lacrymal gland, and extended as far back as the optic foramen. The discharge from the orbit was profuse and purulent for some time, but eventually the cavity became closed. The history of the case and especially the antecedents of the parents were, I regret to say, not recorded in the notes; the diagnosis of syphilis is based entirely upon the pathologist's report. Nor can I learn whether the child is still alive as the parents have left their former residence and their whereabouts is also unknown.

The pathologist, Mr. John Griffith, has furnished me with sections of the gland (which are here under the microscope) and also the following report: "Contents of orbit removed for suspected sarcoma Dec. 22nd, 1892. The eyeball is healthy. The growth is firm and lobulated and consists of a large piece and a few smaller pieces. Examined microscopically the larger mass is found to consist of the lacrymal gland and dense fibro-cellular, peri-adenomatous tissue. The smaller portions are simply chronic inflammatory material and like the tissue around the gland, are composed of vascular fibro-cellular tissue (Fig. 2). Formative or epithelioid cells

FIG. 2.



Lacrymal gland (low power). A, A lobule. B, Thickened capsule. C, Thickened trabeculæ.

are grouped more especially around the smaller blood-vessels, but they are to be recognised in all parts organising fibrous tissue. The blood-vessels are healthy. The capsule of the gland is considerably thickened as also the trabeculæ; the peripheral lobules are consequently much separated. Within the lobules the sustentacular tissue is more cellular than in health. The condition is one of chronic periostitis and peri-dacryo-adenitis. I believe it to be a syphilitic change, analogous to syphilitic peri-hepatitis." If, as there is reason to believe, this was caused by syphilis it was probably the hereditary form and should

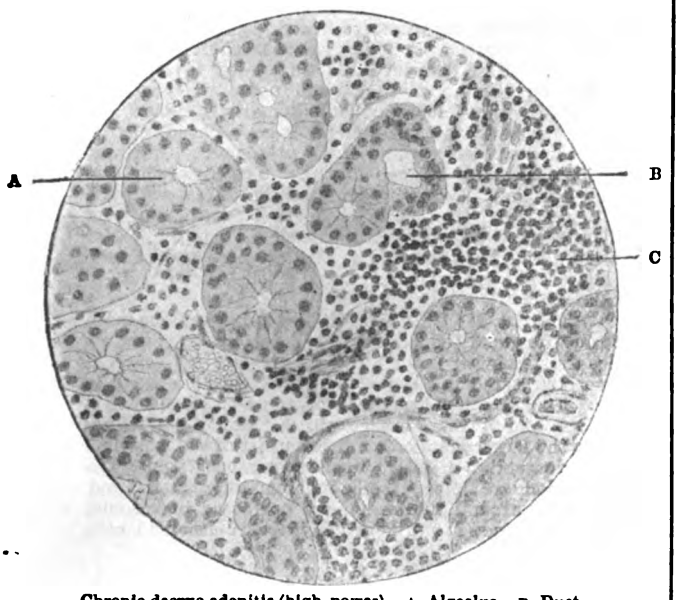
[6] Transactions of the Ophthalmological Society, vol. vii., p. 112.

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come within the category of the third lecture, but I have thought it advisable to bring it before your notice now as it tends to throw some light upon the nature of these symmetrical tumours of the orbit starting in the vicinity of the lacrymal glands.

To recapitulate, these tumours start in the upper and outer part of the orbit, first in one then in the other. Small nodules are felt at first which multiply until symmetrical lobulated tumours exist arching inwards over the eyeball.

FIG. 3.



Chronic dacryo-adenitis (high power). A, Alveolus. B, Duct. C, Inflammatory cells.

Ptosis is the first obvious sign though puffiness and even slight redness of the eyelids may be noticed. The periosteum may be very extensively involved so that nerves and even the muscles at their origin may be interfered with, giving rise to limited movement of the eyeball and anæsthesia of the forehead and scalp. There is no papillitis, the eyeballs do not pulsate nor are they invaded by the growth. The close of the disease leaves the eyes as perfect as before. From what has been said, therefore, it is clear that the treatment consists in the persistent exhibition of iodide of potassium with or without mercury. Weeks or even months may elapse before the tumours yield to treatment. It is a game of patience on both sides and must be persevered with. The dose should be slowly increased and only temporarily reduced if signs of iodism appear.

Though the conjunctival sac is part of the lacrymal apparatus it will be dealt with separately.

The lacrymal caruncle at the inner canthus may be the seat of a chancre. It may participate in the catarrhal inflammation which attacks the conjunctiva in the secondary stage of syphilis. It is possible for a mucous patch or a condyloma to be present here though I do not remember having seen one. A gummatous infiltration of the caruncle has been described by Taylor, of New York, who has reported two cases. In each a firm globular enlargement of the caruncle existed, deep red in colour, and protruded outside the closed eyelids.

Syphilitic affections of the lacrymal passages are not at all uncommon, and though the nasal duct is implicated more in hereditary syphilis, the acquired disease is a very frequent cause of lacrymal obstruction, and usually the severer forms in which necrosis or caries is present. The puncta and canaliculi may be obliterated by cicatrisation of a chancre or of a tertiary ulceration. A gumma of the caruncle may give rise by pressure on the canaliculi to epiphora, and the lacrymal sac may be opened up by an ulcer with a fistula as a result. During secondary syphilis secretion may be pent up in the sac from inflammatory swelling of the muco periosteum of the nasal duct, or by mucous patches at its opening in the inferior meatus. In each case there is a tendency for a catarrhal dacryo-cystitis to become purulent. A lacrymal abscess, however, is more liable to occur in the later stage of syphilis. Obstruction in the nasal duct is essential to the formation of a lacrymal abscess. A mucocele or chronic dacryo-adenitis is brought about in the same way. Any acute or chronic swelling of the muco-periosteum is a factor in the causation of one or the other.

Tertiary syphilis obliterates the lumen of the canal by causing a muco-periostitis more or less chronic. In some cases the syphilitic deposit in this lining membrane breaks down and necrosis occurs or the change is less active and caries or caries-necrotica is the result. At the junction of the sac with the duct, the narrowest part of the passage, the stenosis is complete and shuts off the sac above from the nasal duct below. If the sufferer is seen in an early stage the stricture may be dilated without gross changes taking place in the duct, but if neglected certain forms of gummatous muco-periostitis undergo secondary changes with destruction of the bony wall, and upon passing the stricture the probe passes into a large cavity of broken down gummatous material and the bony wall if not much destroyed can be felt rough as the probe grates against it.

The treatment resolves itself into keeping the canal patent, washing it through daily or three times a week with a solution of perchloride of mercury and giving internal anti-syphilitic remedies. These cases often have ozæna with extensive disease in the nose which must have simultaneous attention.

CONJUNCTIVA.

In dealing with primary and tertiary ulcerations of the eyelid the palpebral conjunctiva was included. Besides chancres on the palpebral the primary sore has been seen on the ocular conjunctiva, also in the folds of the fornix. In the process of cicatrisation the latter will, to a varying extent, cause adhesions of the palpebral and ocular surfaces of the membrane. Much deformity, however, is rare. A form of catarrhal conjunctivitis often occurs as a secondary manifestation preceding an attack of iritis. The ocular conjunctiva is much congested and there is a muco-purulent discharge. It is owing to this catarrh that syphilitic iritis is sometimes neglected, for the one runs imperceptibly into the other; on the other hand, the redness of the eyeball may lead to the early use of atropine and prevent an impending attack of iritis. The catarrh is usually symmetrical. Other secondary affections of the conjunctiva as condylomata, mucous patches, &c. I have never had the opportunity of witnessing.

THE ORBIT.

The most prominent part of the orbital rim is the upper and outer angle, that formed by the external angular process of the frontal bone. Syphilis predisposes to periostitis, and as a tertiary phenomenon a gumma of the periosteum is a common lesion. It is seldom, however, that a gumma develops without an exciting cause and usually a blow, slight in character and possibly unnoticed, is the determining agent. We are not surprised, therefore, if a gumma develops in the periosteum at the upper and outer part of the orbit. The following is an illustration.

CASE 8.—A woman, aged fifty-six years, in November, 1890, attended my clinique with a swelling over the external angular process of the frontal bone on the right side extending beneath the orbital rim. It had been noticed for three weeks and was growing larger. The swelling had a smooth uniform surface, elastic, almost fluctuating, and of about the size of a small walnut. The skin was normal over it and moveable. It was doubtful whether the lacrymal gland was involved or not. The eye appeared to be pushed downwards though there was no diplopia, nor were the movements of the eyeball limited (Fig. 4). She had had no children or miscarriages. There was extensive scarring about the left knee which she admitted were due to "holes about the knee which came by themselves." They were distinctly scars of old syphilitic ulcers. Under iodide of potassium the orbital tumour rapidly disappeared so that in the following January there was no trace of the swelling left.

I could quote several similar cases, for they are not rare, and unlike the former orbital growths of which I have spoken they are quickly cured by iodides. The diagnosis is in many instances rendered easy by the existence of gummata elsewhere. It is a curious fact that in one year I saw two cases of gumma of the clavicle associated with gumma of the orbit. The chief features to be noticed in these cases are the following. Displacement of the eyeball; this varies with the site of the tumour. In most instances there is slight

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proptosis. If the growth is above as is more often the case there will be ptosis, chiefly mechanical. Double vision though not invariably present is a common symptom. Signs of inflammation are usually conspicuous by their absence.

Retro-ocular neuritis has lately received much attention abroad as well as in this country. Only last March this subject was ably introduced by Mr. Marcus Gunn and Dr. Buzzard[7] at the Ophthalmological Society, and a keen discussion ensued. The chief clinical features of such cases are, according to Mr. Gunn, "rapid failure of vision, usually in one eye only, often accompanied by pain and tenderness in the neighbourhood, absence of early ophthalmoscopic changes, and a tendency to recovery." To these let me add a central absolute scotoma as a frequent though not constant symptom. The absence of early changes in the fundus oculi does not exclude the possibility of gross lesions, for I have myself had the opportunity of seeing pronounced

FIG. 4.



Syphilitic periostitis of orbit.

papillitis in cases of retro-bulbar interstitial optic neuritis caused by syphilis. It is, moreover, usual to find pallor of the optic discs without a preceding papillitis. Syphilis is only one of the various diseases which is attributed as a cause of this complaint.

If the trouble is limited to one eye we have every reason to suppose that the lesion is intra-orbital, and, in the absence of papillitis, situated far back. Hence we may surmise that a local periostitis in or near the optic foramen is, in some instances, the lesion. We cannot, however, explain the cause of the central scotoma in a satisfactory manner. Mr. Nettleship[8] says: "It is not so easy to draw a good distinction, save ophthalmoscopically, between the cases now specially referred to"—namely, cases of retro-ocular neuritis in one eye, with loss of vision, neuralgic pain about the orbit and temple, and little or no ophthalmoscopic change, "and those much more rarely seen in which single violent papillitis occurs with severe localised pain and sometimes paralysis of other nerves in the same orbit." I have seen at least half a dozen of these rarer cases and feel convinced in my own mind that they are the result of an interstitial optic neuritis immediately behind the eyeball. Moreover, I can bring forward a proof that this if not invariably is sometimes the case. Allow me first of all to quote an instance which I published in the Transactions of the Ophthalmological Society[9] with my views which at that time were wanting in facts in spite of the strong evidence of the clinical details. Subsequently I proved microscopically the truth of my assertion in examining the optic nerve of an eye of a parallel case.

CASE 9.—A woman, aged twenty-eight years, attended the Royal Westminster Ophthalmic Hospital on Feb. 3rd, 1894, complaining of loss of sight in her right eye and intense pain in her head. "Her sight was perfectly good till the latter end of November, 1893, when she first noticed that her sight was failing in her right eye, and in three weeks from that date it was quite blind." She was a married woman, though separated from her husband, had three children, the youngest having been born in September, 1893. She together with her youngest child had been treated for syphilis. There was no doubt about syphilis. There was no other recent illness. The right eye was quite blind; the pupil only responded consensually to light. There was very pronounced papillitis with much swelling. There was slight divergence of the right eye, but the conjugate movements were good. There was no local or general paralysis, no proptosis, and no swelling of eyelids. The left eye was normal in every respect. Beyond the severe hemicranial headache and the loss of vision there was no other symptom. There was no history of vomiting, vertigo, or fits.

The following remarks I made at the time I showed the patient at the society. "This case resembles one of those rarer forms of retro-ocular neuritis attended with profound papillitis and intense headache mentioned in a paper by Mr. Nettleship at this society [Ophthalmological] in 1884. The early, rapid, and complete loss of sight on one side only combined with loss of direct light reflex points to the lesion being intra-orbital rather than intra-cranial and involving early and completely the optic nerve. The absence of any other sign of orbital tumour, as proptosis, limited movement, vascular disturbances, and the like, suggests the lesion being within rather than outside the nerve. I am inclined to look upon it as a diffuse interstitial neuritis due to syphilis. The pain disappeared and the papillitis subsided under anti-syphilitic treatment, and perception of light returned for a time, though finally the eye became quite blind." Since then, four years ago, I have not only had no reason to change my views but have had an opportunity of strengthening them by the examination of an eye together with the optic nerve of a similar case, which was shown and described by me at the French Ophthalmological Society[10] last May.

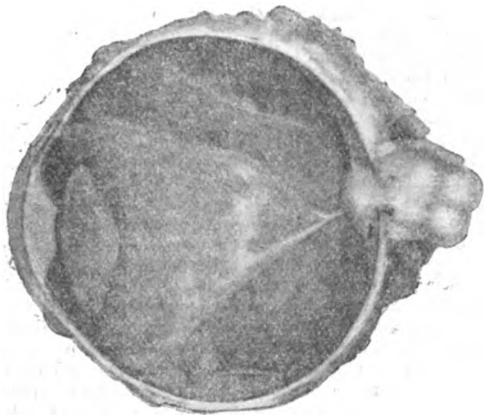
CASE 10.—A man, aged fifty-two years, contracted syphilis in April, 1894. He was treated at that time with iodide of potassium and mercury and all symptoms disappeared. In July, 1896, he noticed that the sight of the left eye was beginning to fail. He lost first of all the inner half of his left visual field, then the outer half, until his sight went altogether. After the loss of his sight, on July 26th, the eye became inflamed and very painful. His sufferings were increased on the slightest movement of the eye. He was at that time on the sea, where he was leeched, the eye was fomented and atropised, but without relief. When I saw him for the first time in August, 1896, he was absolutely blind with the left eye. The tension was normal; there was slight iritis with complete posterior synechia. It was impossible to see the fundus oculi. There was severe pain round the orbit. All the remedies—fomentations, leeches, atropine, opium—were given without relief. An intra-ocular tumour was suspected, so the eye was excised on Aug. 26th, 1896. The operation was followed by a complete relief from pain. The right eye was normal and its vision was good. There was nothing indicative of intracranial trouble. In the middle of September the patient experienced intense pain in the popliteal region; the pain extended to the foot and he was unable to walk. In October he had severe and prolonged inflammation of the throat. In November there appeared large bright-red thickened patches on the skin of the forehead, the cheeks, the shoulders, and the back; these increased to such an extent that the forehead and the face were completely covered; several of these commenced to ulcerate at the centre and to suppurate. The patient was seen by Mr. Malcolm Morris, who was of opinion that the disease was due to syphilis, but that the case appeared like, and might possibly be, one of leprosy. Careful search was made in the discharges for the leprosy bacillus, but with a negative result. The patient suffered greatly from diarrhœa and became so feeble that I was afraid he would not live. He was kept in bed, carefully nourished, and treated with mercurial inunctions. The diarrhœa ceased and the pains in the leg disappeared. The skin rapidly healed

[7] Transactions of the Ophthalmological Society, vol. xvii., p. 107.
[8] Ibid., vol. iv., p. 189.
[9] Ibid., vol. xiv., p. 121.
[10] Société Française d'Ophtalmologie, vol. xv.

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and the patient regained perfect health in the course of two months. I heard from him only the other day and he reported that he had continued well ever since his return to one of the colonies. The extirpated eye was hardened in formol and on section exhibited several points of interest. The papilla was greatly swollen (see Fig. 5) and the adjacent

FIG. 5.



Interstitial retrobulbar optic neuritis and papillitis.

retina was much thickened; the latter was detached on the left side and was of a mahogany colour. The optic nerve was nearly twice its normal thickness, being 6 mm. in diameter immediately behind the globe of the eye. It presented longitudinal striations alternately white and grey. There was a diffuse cloudy opacity of the vitreous humour with interruptions of membranous bands of which one passed forwards and inwards from the summit of the swollen papilla. The pupil was blocked with lymph. The lens was normal. Under the microscope the optic papilla was found to be infiltrated with leucocytes; the nerve-fibre layer of the retina also showed this dense cellular infiltration, whilst the outer layer of the retina had undergone the plication or folding which is ordinarily found in cases of severe papillitis. The nerve itself near the globe of the eye was entirely blocked with leucocytes whilst further back these cells were grouped in compressed masses around the blood-vessels. The choroid also presented diffuse cellular infiltration. The mahogany patches of the retina proved to be extravasations of blood chiefly occupying the nerve-fibre layer.

This case is full of interest not merely to ophthalmologists but to all clinical observers and pathologists. In the first place it is undoubtedly a case of inflammation of the optic nerve behind the eyeball near to and invading the papilla. This is proved by the swelling and infiltration of leucocytes. It is not a simple œdema of the papilla and its surroundings as one frequently finds in cases of papillitis due to intracranial tumours. Secondly, there is no question about the case being one of acquired syphilis. The other lesions which followed the excision of the eye, the cutaneous eruption and the peripheral neuritis of the leg, proved that it was a case of delayed secondary syphilis. In this particular instance the inflammatory exudation is very pronounced within as well as behind the globe; but one can easily imagine a similar inflammation of less severity in the same region and due to the same cause.

The cause of retrobulbar neuritis where the presence of a central scotoma is the chief symptom and where the ophthalmoscope reveals no change beyond perhaps slight pallor of the disc is often very obscure. In observing the cases which have come under my care, all being treated and many cured by mercury (excluding tobacco amblyopia), I am persuaded that the principal cause was a syphilitic inflammation of the optic nerve. The most marked case was that of a man who had recently contracted syphilis; he had papillitis and a large central scotoma for colours in each eye. His vision was less than Jaeger 20, but he was completely cured, recovering vision in both eyes after prolonged treatment by mercurial inunctions.

Besides the optic nerve, other nerves in the orbit, the motor nerves especially, may have their function impaired with varied palsies of the extra- and intra-ocular muscles, from syphilitic affections. We have no evidence at present pointing to the lesions being peripheral or orbital. So far as we understand their pathology we know that the majority of the cases of ocular paralysis are due to syphilis acting upon the motor nerves of the eye before they pass out of the cranial cavity through the sphenoidal fissure. When we consider the manifold ways in which syphilis may act directly upon these nerves it is not surprising. The anatomical seat is as varied as the nature of the syphilitic lesion. From the nuclei of the third, fourth, and sixth nerves to their entry into the orbit there is a possibility for syphilis to interfere with them by gummata, pachymeningitis, aneurysms, hæmorrhages, thrombosis, &c. I will not, however, weary you by giving instances of such every-day complaints nor is it my intention to wander from the domains of ophthalmic surgery into the more intricate and subtle provinces of the neurologist.

ABSTRACT OF A

Presidential Address

ON

THE INTERNATIONAL SANITARY CONFERENCES OF THE VICTORIAN ERA.

Delivered before the Epidemiological Society of London on Nov. 19th, 1897.

BY J. LANE NOTTER, M.D. DUB.,

PROFESSOR OF MILITARY HYGIENE, ARMY MEDICAL SCHOOL, NETLEY.

GENTLEMEN,—It seems to me that a review of the growth and position of the knowledge of the infective diseases as guiding the methods of prevention taken by the various European States, especially as regards the possible introduction of epidemic disease from the east into Europe, may offer a theme for a presidential address not in itself uninteresting or unprofitable. Such a view will emphasise the fact that England through all these conferences has gradually educated Europe to the true principles of self-defence which have been the means of relieving many a State of the old system of quarantine, a system based upon false principles, adverse to all sanitary improvements, ruinous to trade and to commercial development, and utterly out of date with modern scientific knowledge.

The first suggestion of an international conference was made by the French Government in 1838, but so diverse were the views held on the subject of quarantine and its enforcement at stations and ports on the Mediterranean that the proposals fell through owing to various difficulties which arose. Again in 1843 the British Government suggested a further conference; but this again was opposed by Austria as premature as there was no information on which to found regulations which would be acceptable to the Powers. The wave of cholera epidemics which passed over Europe, and especially over Ireland and other parts of the United Kingdom, in 1849–50 brought the subject again prominently under notice and accordingly we find the French Government again taking the initiative and a conference assembled in Paris in 1851 to consider the question of quarantine in relation to cholera, yellow fever, and plague, the only diseases in which this means of prevention was to be employed. For all practical purposes the results of this conference were unsatisfactory; there was little unity of opinion and no system of international control was possible under the circumstances. It was not until 1865 that the consideration of the question of international control began to be seriously considered. The developments of trade and commerce with the introduction of steam transport and the inconvenience to which the ship-owners were subject demanded that some official pronouncement should be made. It rested with the medical officer to the Privy Council to raise the question and it was chiefly owing to the masterly exposition of his views expressed by Sir John Simon in the report of the Local Government Board for that year that the subject assumed the position of scientific inquiry which has ultimately led step by step to the almost total abolition of quarantine not only in England but in countries under international control.

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That report was the first, I believe, which insisted on the importance of looking to local sanitary conditions as a means of protection instead of depending altogether on the vague protection offered by strict quarantine, and this is really the basis on which England has made her stand at all recent conferences and with such satisfactory results.

The next International Conference was held in Constantinople in 1866. The conference came to the conclusion that cholera had always its origin in India and that its extension followed the lines of human intercourse. They were of opinion that quarantine was capable of arresting the disease; such quarantine should be quarantine of observation or quarantine of rigor. Strict quarantine was to be applied to all ships from an infected port with a foul bill of health as well as to any vessel which had cases on board during the voyage although provided with a clean bill; the time fixed was ten days from the time of entering any port to re-commence if any case occurred thereafter. Quarantine of observation was to consist of keeping isolated and under observation for an indefinite time, to be fixed by the local authority, a vessel with crew and passengers with free ventilation but no disinfection. Strict quarantine was defined as the isolation for a fixed time of a ship and persons on board with disinfection of all that might contain the germs of disease. The whole of the cargo was to be landed and the passengers disembarked at a lazaret. In 1873, so far as cholera was concerned, quarantine was officially abandoned by order of the Local Government Board. In 1874 an International Sanitary Conference was held at Vienna, the object being to arrange among the Powers interested compulsory regulations having as their object to bring about a perfect uniformity in the measures to be adopted against the common danger. This conference was the first which in any form gave sanction to the principle of medical inspection taking the place of quarantine and although the decision was not unanimous it obtained the sanction of the majority of the European powers and in the case of the minority some important modifications were made. France was the only one of the great powers who still adhered to quarantine. With so large and powerful a minority, however, it was felt that little could be done and that little had been accomplished.

In the fifteenth report of the medical officer to the Local Government Board Sir Richard Thorne gives an admirable history of these conferences and compares them with the International Sanitary Congress which met in Rome in 1885. He tells us that on no occasion has the value of the adoption of sanitary measures as the principal safeguard against cholera been more prominently recognised than was the case at Rome. In the matter of disinfection it was for the first time distinctly laid down at Rome that it is not necessary to consider articles as infected merely because they come from a country where cholera prevails; that only persons or articles that have actually been soiled by choleraic discharges and articles that have been worn by persons suffering from cholera ought to be subjected to such process; and that in the case of individuals disinfection by means of baths ought alone to be resorted to, fumigation being thus incidentally condemned as useless. In the conclusions of the Technical Commission of the Rome Conference medical inspection, however, finds no place—an omission of a retrograde tendency. The next International Sanitary Conference met at Vienna in 1892. This conference dealt entirely with the question of cholera. It was convened to consider the regulations then existing relative to transit in quarantine by the Suez Canal. The delegates were asked to notify what modifications should be introduced into the constitution of the Sanitary Council of Marine and Quarantine of Egypt and generally the constitution of that council. The conclusions arrived at were subsequently largely modified and considerable alterations and concessions were made, all of which were favourable to this country. Briefly, the following rules were adopted: (1) instead of a prescribed five days' detention of all passengers other than those sick of cholera at Moses' Wells in the case of vessels without a medical man or a disinfecting stove on board the detention will vary according to a sliding scale from forty-eight hours to five days; (2) in the case of a vessel carrying a medical man and a disinfecting stove it is the medical man on board who is to decide what person or persons are to be landed on the ground that they are suffering from cholera—thus there is a quarantine against British subjects suffering from dysentery being landed compulsorily; and (3) in the same class of vessels, whether mail, transport, or other, all landing of healthy persons at Moses' Wells will be avoidable. The conference regarded troopships, from the point of view of the transmission of cholera, to constitute a specially dangerous class.

The next conference was held at Dresden in 1893 to complete, so to speak, the work of the previous conference. It was convened to consider (1) the precautions to be adopted on land and at seaports against cholera; (2) in connexion with them the special conditions affecting the Danube were dealt with also; (3) the organisation of the Board of Health at Constantinople; and (4) the establishment of a board of health at Teheran. The last two points were apparently not raised or discussed. The Convention provided a minimum and a maximum of precaution, the minimum to be obligatory, corresponding closely with the provisions of the cholera regulations in this country. Under the Dresden Convention no ship will be detained in any port when there is a hospital for the sick and all other persons are if possible to be disembarked. The most important difference between minimum and maximum occurs in the treatment of healthy ships coming from cholera infected ports; such ships are always to receive immediate *pratique*. As a minimum of precaution bilge and drinking water must be evacuated and persons landing from such ships may be subjected to medical supervision at home without detention. Healthy ships will not in any case be detained. This was no doubt the most valuable part of the Convention from the point of view of navigation. All goods were freed from restrictions excepting fresh rags and things believed to be "contaminated"—that is, fouled with cholera matters. The measures to be applied to land frontiers were analogous to those for seaports with the important exception that only persons actually suffering from cholera may be detained on land frontiers.

A careful study of the Convention shows that the various provisions were founded on the tacit belief that the poison of cholera comes exclusively from the evacuations of the sick and unlike other disease poisons it becomes innocuous if once thoroughly dried. The conclusions adopted embodied the principles of notification of cases of cholera and aimed at preventing certain unreasonable measures of restriction against countries in which cholera has appeared. The rules as they now stand may be regarded both as defining a maximum and permitting a minimum of restrictions. As regards vessels deemed to be actually infected with cholera the maximum restriction to which they may be subjected will involve a detention of the hitherto healthy passengers for a period not exceeding five days as reckoned from the date of the last occurrence of cholera on board. The minimum of restrictions which is held to be obligatory in the case of vessels actually infected agree with the restrictions which it has long been deemed necessary to apply to such vessels arriving in English ports. This Convention was finally signed by the delegates of Germany, Austria-Hungary, Belgium, France, Great Britain, Italy, Russia, Switzerland, Luxemburg, Montenegro, and the Netherlands. It will last for five years from the date of ratification and be renewed every five years by Tacit Council unless removed by one of the high contracting parties six months before the expiration of this time. Although it does not establish a perfect system it marks an enormous advance.

The next international conference was convened under the auspices of the French Government at Paris in 1894 with a view of devising measures for preventing the spread of cholera by way of the Red Sea and the Persian Gulf. The first point discussed was to the necessity of requiring a medical inspection of all persons going on board a pilgrim ship before embarkation. The conference was assured that this was strictly carried out by Great Britain and British India not only as to cholera but as to all infectious diseases and the proposal to the requirement was unanimously accepted. A second proposal was made relative to the disinfection of all articles deemed "contaminées" or "suspect" in accordance with the terms of the Vienna Convention; and subject to the understanding that the medical officer of health of the port was to be the judge as to what articles came under these definitions the proposition was carried. A third proposal forbidding the embarkation of any passengers deemed to be infected or suspected of being so was also unanimously agreed to. The British delegation opposed the addition of words which would have brought "dysentery" within the scope of the prohibition to embark because for the purposes of the Indian Empire a complete distinction

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between dysentery and cholera should be maintained and the conference had concern with cholera and not with any other diseases; this was accepted by the Conference. Another proposal was to require an "observation" of five days for pilgrims at the port of departure. Objections were raised on behalf of India and other British colonies and it was decided to grant to each Government the right to act as it saw fit in the matter. At a full plenary meeting of the conference decisions on the following heads were arrived at: (1) sanitary police at the ports of departure; (2) measures to be adopted on board pilgrim ships; (3) sanitary surveillance over pilgrimages in the Red Sea; and (4) surveillance over the pilgrims going by land to Mecca and Medina. In this as in all previous conferences vessels were classified as follows: (*a*) indemns, or ships in which no case of cholera has existed before starting or during the voyage—these receive immediate *pratique* whatever their bill of health; (*b*) suspects, or those ships in which any case of cholera has arisen within seven days; these receive medical visits, are subjected to disinfection, &c., and there is a recommendation (1) as to maintaining the passengers under observation for five days from the date of leaving the port of departure and (2) as to preventing the landing of the crew except for purposes of necessity; and (*c*) "navires infectés," those in which any case of cholera has arisen within seven days before arrival. The sick and the remainder of the passengers are obliged to disembark and to undergo detention under observation for a period of five days at the outside to date from the occurrence of the last case of cholera. Disinfection of linen is also compulsory. This Convention was ratified subsequently by the British Government subject to certain points which bore directly on Indian traffic and pilgrimages from the East.

In 1897 the last international sanitary conference assembled at Venice in connexion with the outbreak of plague in the east and the conference met to settle on an international basis the steps to be taken to prevent, if possible, its spread into Europe. One of the first points to be dealt with was to settle the incubation period for this disease and the period to be adopted for administrative purposes. It was admitted that the incubation period was, as a rule, a comparatively short one—namely, of some three or four days. After much discussion ten days was accepted by a very large majority The work of the conference was divided into two sections; one was to undertake the task of formulating rules for preventing the spread of plague outside Europe and the other for preventing the spread of plague in Europe. When rules came to be formulated for prevention outside Europe the work was considered under several heads such as: (*a*) the action to be taken on land frontiers, (*b*) at infected ports of departure, (*c*) in the Persian Gulf, and (*d*) in the Red Sea. The principle of notification was unanimously adopted. Each Government was to notify to other Governments the existence of plague within their several jurisdictions and at the same time state the measures of prevention which were being carried out to prevent its diffusion. As regards the precautions to be taken on land frontiers it was finally settled that during the prevalence of plague every country had the inherent right to close its land frontiers against traffic. The difficulty which had to be overcome in respect of the Red Sea traffic was the lengthened period of incubation as regards plague compared with cholera. It was decided after much discussion that a healthy vessel might "transit" the Suez Canal and continue its voyage in the Mediterranean during the period of incubation of the disease the prevention of which is in question. This decision was a great advance—more so than was ever admitted at previous conferences. With regard to suspected and infected vessels the conclusions arrived at are in substance those of the Venice Convention of 1892 altered so far as these became necessary in view of the longer incubation period for plague.

Passing on to the conclusions dealing with regulations to be imposed "in Europe" the following were the chief points to be noted. As regards the measures to be adopted at ports of arrival healthy vessels—i.e., those on board which, though they have sailed from an infected port, no plague had occurred—were to have at once free *pratique*, but at the option of the local authority certain measures of disinfection of soiled articles may be required. Suspected vessels—namely, those on board which there has been plague but no fresh cases within twelve days—were to submit to some limited processes of disinfection. It was recommended that the crew and passengers should be subject to surveillance for a period of ten days from the date of the arrival of the vessel. Infected vessels—namely, those on board of which plague was either actually present or on which that disease had occurred within ten days of arrival—were to land their sick. These were to be isolated and other passengers were to be subjected at the discretion of the local authority to "observation" or "surveillance" for a period not to exceed ten days from the date of the occurrence of the last case of plague. The terms "observation" and "surveillance" were for the first time clearly defined, the definition as to the latter stating that under that system passengers are not to be isolated but are to be allowed at once to proceed to their own homes, where they can remain under medical supervision so long as may be deemed necessary by the local authority.

The results of this last conference indicate a great advance on the part of the nationalities represented towards a liberal and truly scientific conception of the means to be adopted by respective Governments for the prevention and control of the infective diseases. Previous conferences upon this matter have indicated a wide divergence between the views held and expressed by the British Government and those of other Powers. This last conference has shown this regrettable divergence of views to be considerably less than it was formerly; in fact, it has demonstrated a well-defined desire on the part of many continental Governments to accept and come into line, as it were, with the well-known and oft-expressed views and practices of the British in regard to the prevention of epidemic diseases from the east and elsewhere.

THE VIS MEDICATRIX NATURÆ IN DISEASE OF THE KIDNEYS.[1]

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EVERY thoughtful practitioner will acknowledge that when his therapeutic resources are exhausted and he is about to give iodide of potassium, by far the most reliable consultant to be obtained is the vis medicatrix naturæ. Moreover, it is well known that most presidents of societies fall back on this lady in their opening addresses. It would therefore ill become me to pass by so ancient and honourable a practitioner, especially as I believe that both in medical teaching and medical practice we do not give her that pre-eminent position which she deserves. It is true that when we have our little jokes at her expense we suggest that she is a much better physician than surgeon. I have, indeed, seen her amputate a leg that literally had not yielded to a popular ointment and I confess that she did not do it with the neatness or despatch that marked a Lund and a Bradley. Nevertheless, the one object of the surgeon of to-day, after laying aside the knife and closing the breach, is to prevent anyone or anything interfering with this lady doctor of doubtful age into whose hands he commits his case with the utmost confidence. In medicine, where she ought to play the combined *rôle* of colleague and teacher, we are apt to forget her presence. To ignore the fact that she has already been in charge of the case for hours or days when we first approach with our mixtures and tabloids is at least a mistake in medical ethics. To remind you of her existence and her work in one branch of medicine is my object to-day.

The old creative view of nature saw, or endeavoured to find, design in everything. If you will read the works of Ray, who with Boyle and other Fellows of the Royal Society in the seventeenth century led the way to modern science, you will be struck not only with the keenness of his observation and the ingenuity of his theories, but also with the fact that to everything he puts and presses home the question, *Cui bono?* The evolutionary view of nature does not abolish but rather emphasises the legitimacy of this question. It suggests the "how" without taking away the "why." If the principle of utility govern the correspondence of an organism with its environment, surely the re-adjustments within the body in disease will reveal a like law. Moreover, though it may be hard or for the time an

[1] Being the Presidential Address to the Manchester Clinical Society for the session 1895–97.

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impossible task to ascertain how the readjustments are brought about, the reason why they occur, the *Cui bono?* may be perfectly plain and carry with it important therapeutic suggestions. The limited local movement in pleuritic pain is of complex mechanism, but of the simplest significance and openly counsels enforced rest. Fortunately therapeusis has not always to wait for pathology.

The vis medicatrix naturæ is not simply a power, a vital resistance to disease, but an inherited organised resistance; a series of strategic movements, first offensive, then defensive; a skilled retreat when advance and victory are out of the question. The animal economy has battled for ages with its visible and invisible foes and becoming used to the fight has planned its defence with increasing skill and elaboration. Defeated at the skin or tonsils it shows its second line of defence in the lymphatic glands where phagocytes wrestle with the invaders, whilst other organs manufacture and hurry up reinforcements and prepare and pour out into the blood food and ammunition for the combatants—facts which we as yet only dimly see, and so darkly use our animal extracts and antitoxins. Most of the protective processes are grouped together under the term "symptoms of disease" when they should be regarded as "hereditary treatment." It thus comes about that one of the most important functions of the physician is to determine the therapeutic value of those changes which are too often credited with a purely diagnostic significance or are looked upon as being "part of the disease," for to treat symptoms is at times to neutralise treatment. It is in affections of excretory organs such as the kidneys that the friendly relations existing between the different parts of the body are most evidently displayed and the principle of mutual aid most easily established. Apart from definite tumour, local phenomena, and septic absorption, the presence of disease in the kidneys is revealed (1) by urinary changes—i.e., by excess or deficiency of water, urea, uric acid, and other normal ingredients—and by the presence of abnormal substances such as albumin, blood, casts, renal and pus cells, &c.; and (2) by the constitutional signs of imperfect excretion—namely, high arterial tension, dropsy, cardiac, ocular, and other changes. Many persons exhibit the former—e.g., albuminuria—for long periods without any sign of the latter. This is not at all surprising. We know that one kidney can deal with the nitrogenous excreta of the body if kept within reasonable limits, otherwise nephrectomy would invariably be followed by the results of inadequate renal action. Hence strictly unilateral disease of the kidney is not associated with the signs of renal retention. But we may go further. As long as bilateral disease leaves intact the functional equivalent of one kidney—possibly rather less—there need be no special constitutional discomfort. This is well seen in those lighter renal affections which accompany many febrile diseases, in the earlier stages of the back-working of chronic urethral and prostatic troubles, in early senile failure, and also under another condition to which I must make a passing reference. Scarlatinal dropsy is well known to us—an acute renal failure with vascular, tubal, and interstitial changes, and marked urinary phenomena. That this may end in chronic interstitial nephritis and the patient die several years after with contracted kidneys is also placed beyond doubt. But I have for many years held that we underrate the *rôle* played by scarlet fever in the production of renal fibrosis. Scarlet fever occurs in early life; the history of dropsy often dies with the parents, being quite unknown to the individual concerned. The tubal disturbance subsides, but interstitial processes are left the influence of which on the secreting powers of the kidney are so slight that the knowledge of disease only comes with an attempt at life assurance many years later. For example—(1) a young man in the twenties had mild scarlet fever and dropsy six years ago; his urine before the attack was normal; now it invariably contains albumin; the patient is in robust health and scorns the idea of disease; (2) a man, aged fifty years, leading a very active public life without the aid (?) of alcohol, had scarlet fever thirty years ago; ever since when examined the urine has been found to be albuminous, but it is only within the last year or two that cardio-arterial changes have become definitely manifest. He still enjoys excellent health. These conditions left by scarlet fever may apparently remain *in statu quo* and so account for some cases of lifelong albuminuria without other morbid phenomena. They may, however, progress, and I believe that many otherwise inexplicable cases of interstitial nephritis ending fatally in the twenties, thirties, and forties arise thus. One typical case of my own, in which the retinitis was the sole cause of complaint and led to the diagnosis of the disease, terminated at twenty-four years of age after a latent period of seventeen years. It is to private practitioners, who even in this age of change keep some families under observation for a lifetime, that we look for the more complete elucidation of this question.

In persistent albuminuria the absence of high arterial tension and cardio-arterial changes does not therefore negative the existence of chronic Bright's disease. It merely signifies that the encroachment on the secreting area of the kidneys is as yet limited. If then we find constitutional reactions in persons leading a sober life—i.e., avoiding excess in food and drink—we may reasonably conclude that at least half the secretory power is lost. Turning now to cases that have passed this point I must first remark that the usual result of imperfect excretion is attempted exoretion. That the proper performance of the functions of the kidneys is largely dependent on the blood-pressure is placed beyond doubt. We are therefore prepared to find that increased arterial pressure is the first sign of the contamination of the blood which follows renal failure. The exact cause of this high tension which, with Sir Wm. Broadbent, I believe involves the arterial system from heart to capillaries, is as yet undetermined, but the significance of it—the *cui bono?*—is plain; it is an attempt at excretion. It is physiological rather than pathological, therapeutic rather than morbid. As the late Dr. Mahomed pointed out in his study of scarlatinal dropsy it is a very early phenomenon in acute Bright's disease and may precede marked urinary change. That the high tension is itself the cause of the renal trouble I cannot bring myself to believe; that scarlatinal toxins acting on the cells and glomeruli primarily produce renal inadequacy with high tension, and if not checked lead to further gross morbid changes, seems to me to be a more likely explanation. With the high tension we have the laboured impulse of the distended heart, the impure, prolonged, or reduplicated first sound at the apex and the accentuated second sound at the aortic cartilage and to the left of the cardiac impulse.

The degree to which the system responds to the appeal from the kidneys varies much. A gross public abuse at one time will lead to a riot, at another to a quiet well-organised public protest, or no notice may be taken of the matter at all, the abuse being beyond remedy or the public hopelessly callous or too fully occupied with other concerns. So in renal failure the riot of uræmia may take the place of the well-organised attempt at reform just referred to. But it may be that there is no such response, the task being recognised as hopeless, the vis medicatrix naturæ being ill or ill-developed or the system otherwise occupied as with the febrile process. It is well for us then to bear in mind that at any stage in the defensive operations the system may fail to make a stand, and therefore the absence of high tension, renal dropsy, &c., is occasionally of bad omen. When present we may interpret the high tension as an attempt to stimulate the kidney to action and that I take it is the prime aim of the physician. It may be wise and necessary to promote elimination in other ways, but our first thought is how to re-establish renal excretion. In passing I doubt therefore whether we do well in acute vascular engorgement to omit the cupping of the loins practised by our forefathers. The influence of such measures, applied to the corresponding segment of skin, seems to be independent of any demonstrated anastomosis between the superficial and deep blood-vessels. Constitutionally we usually have recourse to saline diuretics and digitalis. It must, however, be remembered that just as digitalis through accumulation may turn from a remedy to a poison, so this therapeutic high tension may become morbid in quantity. Still, in acute disease attacking a healthy body the chances of evil effects are minimised and under digitalis the heart is less likely to yield to the pressure and the kidney more likely to respond to the appeal.

Should the kidney be placed wholly *hors de combat* the high tension must seek some other outlet. The result is the "acute dropsy" of our forefathers, a term which still appears in the examination papers presented to "practitioners of more than forty years of age." The so-called "mechanical dropsy" of heart failure is often seen in Bright's disease, especially in its later stages, but the acute primary dropsy I now refer to is arterial, not venous, associated with high, not low, vascular tension. It has a different origin and significance. It is an excretion into the body instead of out of the body and therefore a definite

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therapeutic measure. The products of the metabolism of the master tissues, muscle and nerve, and of the liver accumulate in the blood; they cannot be eliminated by the kidneys; they are therefore turned into the indifferent connective tissues of the body where there is ample accommodation without serious detriment to the system. Hence the eyelids, loose tissue of the scrotum and penis, the skin generally, and the serous cavities are commonly selected. It is an expedient for diluting the poison and providing room in the body for a much larger quantity than the blood itself could hold. Many ounces of urea, not to mention other substances, can thus be stored up. In a case recently under my care, in which the body appeared to be twice its usual size, the liquid in the limbs and cavities yielded 0·5 per cent. of urea and about one-eighth of albumin. Renal dropsy is our friend, not our foe, as long as it does not choose for its habitat a vital spot such as the lungs, the larynx, or the brain. We talk of treating this dropsy, but if by that we mean the mere abstraction of liquid to lessen the swelling we fight our friend. As Sir Grainger Stewart observes, "Perspiration may be followed by marked increase of discomfort." Unless the harmful elements in the dropsical effusion be also withdrawn the letting out of water simply condenses the poison. An ingenious German has suggested that in purely local dropsy the system might be persuaded to drink up the effusion were the patient to abstain from liquids and live on salt food. In Bright's disease this would be a suicidal policy. Hence the recommendation to administer water or some other equally innocent drink in renal dropsy is excellent, as it prevents the concentration of the poison as well as helping to wash out the tubules of the kidney. When purgation and diaphoresis are employed this precaution should always be taken lest the body as well as the kidney be unduly dehydrated.

In the out-patient room at the Manchester Royal Infirmary we have literally forced upon our notice a disease to which little or no reference is made in the text-books. It was, however, most accurately described by Dr. Graham Steell in an excellent paper in the *Medical Chronicle* for 1893 entitled "Heart Failure as a Result of Chronic Alcoholism." There can be no doubt whatever as to the existence and definiteness of this complaint. It is, moreover, so common that the absence of any reference to its frequent occurrence elsewhere leads one to think either that the quality of Manchester beer is not strained, or that Lancashire porters, carters, brewers' labourers, &c., are men of more unbounded stomach than their fellows elsewhere. To attempt a miniature of Dr. Steell's perfect picture would be to mar the original. I will only say that whenever a burly man with a permanent nasal blush, complaining of shortness of breath with more or less cough and occasionally of irregular dropsy, is sent into the examination room and it is found that the area of complete dulness in the cardiac region extends beyond the left vertical nipple line and runs right along the fourth interspace from the sternum to the nipple, not with the half-and-half dulness of health but with a note almost as toneless as that found over the liver, and this without any rheumatic history and usually without bruit, the students instinctively murmur "C_2H_6O." We never interrogate a woman as to alcoholic habits to save the commandments, but we always ask that man how many pints of beer he takes per day and we find that the acknowledged amount ranges from three and four up to twenty, or he says, "Really, sir, I cannot count." Such a patient commonly has a furred tongue with a varying amount of gastric catarrh and in addition to morning sickness the bowels are moved two or three times a day. Unless, however, the nervous system be in the condition which forms the first stage of the journey towards delirium tremens the pulse is not abnormally fast but shows considerable arterial tension. This I have verified by the sphygmograph and I believe it has a very important bearing on the pathology of the complaint. Needless to add this fact did not escape the notice of Dr. Steell. In every case I have seen the bulk of the liquid ingested has been quite as striking an element as the character of the liquid. The latter, however, is etiologically essential as I have not seen the same condition in pure spirit drinkers or "nippers." I believe the complaint is due to a general cardio-arterial stress, to high arterial tension, to a constant overfilling of the blood with material supplying excrementitious matter in excess, and possibly containing one or more substances which specially affect arterio-capillary permeability. No doubt the alcohol plays an important part in the process, probably lowering the nutrition of the cardiac and vascular walls, and thus laying them open to the deleterious action of the high pressure. Still the main element seems to me to be the continuous ingestion of an enormous quantity of liquid much more substantial than water which fails to turn on the renal taps sufficiently to ensure its own rapid excretion. Could the patients start a true diabetes insipidus I have no doubt but that their drinking days might be much prolonged. Such persons drink up to the very moment of their admission to the out-patient room and therefore, in spite of the commencing cardiac failure, by no means rarely exhibit the cardio-vascular stress referred to. In a later stage and after admission to the wards, where the supply of beer is distinctly limited, this etiological factor is not likely to be noted.

Now in this complaint we frequently have dropsy. Sometimes it is typically that of cardiac failure, but the acute dropsy of the earlier stages does not locate itself like cardiac dropsy; it simulates that which is seen in acute renal disease. Only the other day—and not for the first time—I had an experience just such as Dr. Steell describes in his paper. A man came complaining that "his testicles were swelled." We found marked scrotal and penile œdema but hardly a trace of dropsy elsewhere. It looked like a case of Bright's disease; but the urine was highly coloured, acid, specific gravity 1024, and did not contain a trace of albumin. It was simply a case of this peculiar beer disease. Twice within the last three months have I had such cases sent to me as Bright's disease. I have little doubt but that many cases of so-called Bright's disease without albumin belong to the same category.

Albumin may be present in alcoholic heart failure, especially in the later stages, but in these erratic dropsies I have usually found the urine as described. As a rule the forearms and skin of the thorax and loins show marked effusion; the face is involved but the loose tissue of the eyelids not out of proportion to the rest of the face. In one case slight peripheral neuritis may have influenced the distribution of the dropsy, but in the rest I have not noted any nerve lesion. I believe these early effusions have much the same origin and significance as those occurring in Bright's disease; they are excretory dropsies of high tension. That the kidney is functionally at fault there can be no reasonable doubt. The diuresis that should be provoked by the excessive libations is conspicuously absent; the urine is highly coloured, condensed, and scanty; there is increased income, diminished output, and vascular strain. In passing I may observe, as Sir Grainger Stewart points out, that the cough in acute Bright's disease more commonly indicates attempted excretion by the lungs than true bronchitis, so I believe that the cough almost invariably present in beer dropsy has frequently the same significance. Take charge of this disease early enough, cut off the cause, and rest, digitalis, strychnine, and alkaline diuretics soon produce a marvellous change for the better. The free use of alcohol advocated by my colleague, Dr. Steell, I am afraid I cannot endorse. If, however, the above theory of the origin of the "alcoholic heart" be true it is not altogether a case of "similia similibus." Alcohol plays a part, but not the main rôle, in its production. The cardio-arterial condition found in this disease differs materially from that seen in chronic inflammation of the kidneys to which I am about to pass. The changes are distinctly more degenerative and therefore we have much earlier failure of the heart, and in the sequel the more pronounced old-fashioned arterial atheroma. This I am inclined to attribute to the presence of the alcohol.

I have not time to refer to the use made by the system of other excretory areas in its attempt to deal with renal inaction, but must pass on to the cardiac hypertrophy and arterial changes which are the register of chronic high tension and the diuresis which is the *alter ego* of dropsy. Prolonged overfulness of the arterial system produces hypertrophy and dilatation of the heart and arteries as naturally as urethral stricture leads to hypertrophy of the bladder or pyloric obstruction causes hypertrophy and dilatation of the stomach. I believe that the change is at first chiefly muscular and truly conservative and that its degree depends largely on the length of time spent in its production. The vis medicatrix naturæ thus protects the system against undue dilatation whilst securing excretion—an achievement rendered impossible in the beer-drinkers owing to the depressed and deteriorated nutrition of the muscle cells and the checked renal outflow. But let us bear in mind that the only conclusion that

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can be logically drawn from the presence of these cardio-arterial changes is the existence in the past of prolonged high tension—usually a chronic need for excretion, a chronic attempt at excretion. They do not certify the presence of chronic inflammation of the kidneys; they have a wider significance. In the Transactions of the Royal Medical and Chirurgical Society for 1872 Sir William Gull and Dr. H. G. Sutton attempted to show that the arterio-capillary changes referred to were independent of Bright's disease, purely degenerative in character, and therefore found most commonly in advanced life. This theory has, in my opinion, been rightly discarded. But unless we strain the meaning of the term chronic Bright's disease so as to include simple senile failure, which gives quite different urinary phenomena, we must be prepared to admit that cardio-arterial changes may be renal in origin and yet independent of renal inflammation. All that they indicate is a limited amount of secreting power or secreting tissue, not a certain degree of fibrosis. In chronic interstitial nephritis it is not the increase of fibrous tissue that leads to the affections of the heart and arteries, but the gradual interference with the cells and Malpighian bodies which because of the slowness of its development is compatible with prolonged imperfect excretion short of complete bankruptcy. The same result ensues whether there be pressure from without or gradual primary failure of excretory power on the part of the active tissue itself. The latter occurs in old age, in what we may call the senile kidney, producing many of the constitutional symptoms of Bright's disease without the urinary phenomena. This condition has no more right to be called chronic inflammation of the kidney than senile loss of muscle power has to be called chronic myositis. As I dealt with this subject at some length in a paper read before the Manchester Clinical Society two years ago I will not make further reference to it now. As long, however, as we invariably associate renal high tension and cardio-vascular changes with renal inflammation so long will there be a large residuum of cases occurring apart from anything that one can consistently call Bright's disease. But if we allow that any change which limits renal excretion and habitually leaves in the blood a balance against the kidneys may in course of time bring about the same alterations in the heart and arteries as the coarser inflammatory renal changes so soon shall we rightly interpret many of the troublesome hearts and aching confused heads with vertigo found in old age, ever remembering that senility in body may precede senility in years.

The high tension of chronic Bright's disease and allied states is a means to an end; that end is excretion and the outcome of the attempt is diuresis. Let us not forget that the ordinary constituents of the urine are diuretic and probably help to bring about the high tension in renal failure. After an undiagnosed bladder retention has lasted several days and the urine is eventually drawn off by the catheter we often see as sequel a short diuresis no doubt indicating the retention and therapeutic activity of the urinary excreta within the system. As I have seen two such cases quite recently we perhaps do well to remind ourselves of the extreme latency of chronic urinary retention, the bladder being so tolerant at times that general symptoms, often misinterpreted, may be much more prominent than local distress, and also to remember in connexion with urinary overflow that in bed a very little urine goes a very long way. Everyone is aware that one of the most important signs of improvement in acute Bright's disease with dropsy is the establishment of diuresis. This certainly has no reference to interstitial changes in the kidney and simply shows that the active elements can now respond to the solicitation to excretion. Should the amount of urine return to the normal as soon as the body is cleared of the dropsy the sign is a most encouraging one; but if the diuresis continue long it is plain not that interstitial changes are beginning, though that may be true, but that the recovery of the kidney is as yet only partial and not equal to the needs of the system. It suggests a limit in the amount of active tissue quite as much as a special pathological process. In acute disease diuresis may be regarded as the *alter ego* of dropsy.

In chronic disease diuresis is at the same time a sign of weakness and an evidence of strength. It indicates a deficiency of healthy renal tissue on the one hand, and on the other a cardio-arterial system capable of maintaining the high tension necessary to enable the remaining cells and glomeruli to undertake extra work. Let the heart fail and oliguria, marked albuminuria, and dropsy are the immediate result. That diuresis is limited to those cases developing renal fibrosis I do not believe; there is a systemic as well as a local cause for it. But that it is most marked and most persistent in interstitial nephritis and other forms of renal fibrosis is undoubted. This is probably due, at any rate in part, to the local rise of blood pressure occasioned by the thickening and actual obliteration of so many of the arterioles in the kidney, the gradually diminishing vascular area being supplied by the undiminished renal arteries. Why at times in beer drinking and in old age there is no diuresis is not altogether plain. There may be some inhibition of the secretory elements, but its absence is much more striking in those cases in which the blood contamination is brought about by increased ingestion rather than by pure and simple imperfect elimination. Both conditions give rise to high pressure but the latter more readily leads to diuresis if the renal tissue be in a condition to respond.

In chronic Bright's disease it is the hope and aim of the physician to sustain the relation between the cardio-arterial system and kidneys which secures diuresis, and herein comes the wisdom of the ancients. In the later stages when the arteries lose their elasticity and the heart-muscle its tone high tension becomes a danger and we have to provide against not only cardiac failure but also the possibility of cerebral hæmorrhage, ocular changes, and uræmia. In this connexion it is well for us to remember that even so-called antidotes are far from co-extensive in action and may therefore in therapeusis act as "correctives." Sometimes, indeed, the more detailed the antagonism the more definite and pointed is their combination. In cerebral cases I frequently prescribe strychnine with bromide of potassium and have seen students open their eyes and occasionally their mouths thereat. One of our most popular infirmary mixtures contains dilute hydrocyanic acid and tincture of nux vomica, in spite of the scathing remarks made about such combination in Dr. W. H. Griffiths' useful "Lessons on Prescriptions and the Art of Prescribing." Now in cardiac failure digitalis is so far above all other drugs that if we are obliged to set it aside we are left almost powerless, strophanthus in such cases being a feeble substitute. The liability of digitalis to raise the arterial pressure by increasing the peripheral resistance makes its unqualified use hazardous when the arterioles in places are unfit to bear extra strain. We therefore require something to mitigate this action of the drug whilst upholding or increasing its diuretic power. In my experience iodide of potassium possesses this property, and digitalis may be safely administered in combination with the iodide when it might be dangerous to give it alone. The halogen appears to allow the full cardiac action of digitalis whilst protecting the system against the dangers of undue tension. Anyhow I obtain very satisfactory results from the alliance; prescribed in small repeated doses the quickly-acting iodide no doubt outstrips its slower companion and coöperates with the alkaloids previously ingested. It may be of interest to add that I have found the same combination of drugs on the whole more effective than any other method of treatment in those forms of exophthalmic goitre in which the cardio-arterial phenomena are most prominent. The therapeutic key to the latter disease is, however, yet to be found.

Whilst we promote cardio-arterial competence in Bright's disease we must not fail to read the indications given to us for further treatment. The vis medicatrix naturæ suggests an appeal to the alimentary tract too emphatically for us to overlook it. I well remember an old gentleman in the "seventies," who suffered from the obstruction usual in enlarged prostate, whom I was able to watch closely for several years. Every six to twelve weeks a gradually increasing pulse tension led up to a severe attack of eliminative vomiting lasting from twelve to twenty-four hours or more. The combined emesis and starvation was invariably followed by a wonderful improvement in the pulse and a new lease of life. This went on for years, the vomiting being at times replaced or accompanied by diarrhœa. The patient died from an entirely independent infective bowel inflammation. This action of the vis medicatrix naturæ is plainly set before us for our imitation. I confess I have not hitherto ventured to initiate the movement upwards, but the movement in the other direction falls in so completely with current Lancashire proclivities that I do not hesitate if need be to satisfy the desires of the people to the full. Of the use, however, of calomel, the sulphates

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and other purgatives and therapeutic measures in Bright's disease I spoke at length in a former paper. Indeed I have now said enough to provoke discussion and that is my main object. There may have been no great novelty in my remarks, but we all look out upon disease from somewhat different standpoints and it does us good from time to time to compare notes so that our views may not become too "cabined, cribbed, confined."

Manchester.

CASES OF

PARALYSIS OF MUSCLES OF THE UPPER EXTREMITY OF PERIPHERAL ORIGIN, WITH SPECIAL REFERENCE TO THEIR CAUSATION.

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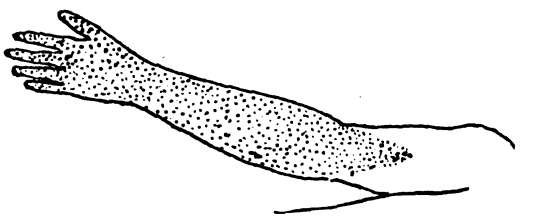
A NUMBER of cases of paralysis of various muscles of the upper extremity, from lesions of the brachial plexus or branches thereof, have come under my observation which have presented points of considerable interest, either with respect to their causation or to the form of paralysis. The following are abstracts from the notes which I have taken on the cases.

CASE 1. *Obstetrical paralysis; peculiar deformity of the arm.*—A girl, aged thirteen years, came under my care at the Pendleton Dispensary on account of loss of power in the right arm. The mother stated that the right arm had been paralysed from birth. The labour had been a very difficult one and there had been a "cross presentation." No instruments were used, but from the mother's account it is probable that turning had been performed. The child cried all night, and next morning the mother noticed that the right arm was motionless and that there was a swelling about the size of a duck's egg in the right posterior triangle of the neck. Ointment was applied to the swelling and it disappeared in the course of five or six weeks. For a long time the right arm "hung helpless at the side," and then (five or six years ago) gradually assumed its present peculiar flexed position. There had been no mental symptoms; the girl was very intelligent at school and had learned to write with the left hand. The right arm had gradually improved to a slight extent. The legs had never been affected.

On examination the right arm was found to be flexed to a right angle at the elbow. The upper arm was in close apposition to the side, the forearm was supinated, the hand was strongly flexed to the ulnar side, the fingers were semiflexed, and the thumb was markedly adducted, the phalanges of the thumb being in a straight line with the metacarpal bone. The fingers and hand on the right side were bluish, slightly œdematous, and cold; and the whole limb was wasted considerably, but most markedly in the region of the deltoid. The patient could not abduct at the right shoulder. She could flex the elbow quite well, both biceps and supinator longus contracting, but could not extend at that joint. She was unable to pronate the forearm, to extend the fingers, to abduct the thumb, or to perform any movement at the wrist except flexion to the ulnar side to a greater extent. She had the power of increasing the adduction of the thumb and of causing the fingers to become more rigid by slight flexion at the metacarpo-phalangeal joints and slight extension at the other joints. The fingers could also be slightly separated. Beyond adduction no other movement of the thumb could be performed. The muscles paralysed were the right deltoid, the latissimus dorsi, the triceps, the flexors of the fingers, the long muscles of the thumb, the pronators, the extensors of the fingers, the radial extensors, and the radial flexor of the wrist, and the small muscles of the thumb, with the exception of the adductor. The muscles not paralysed were the pectorals, the biceps, the supinator longus, the flexor and extensor ulnaris, the adductor of the thumb, the interossei, the serratus magnus, and the trapezius. On the right hand and forearm and on a triangular area at the front and lower part of the upper arm (as shown in Fig. 1) there was impaired sensation; a very slight touch with the head or the point of a pin was generally not felt. Occasionally over the metacarpal bone of the thumb and on the radial side of the index finger both were felt. There was no affection of the legs or face. The knee-jerks were present. The pupils were equal and reacted to light and accommodation. The palpebral fissures were also equal.

In this case in all probability a lesion of the brachial plexus in the posterior triangle of the neck had occurred at birth. No lesion of any single nerve-root, or of any two nerve roots as they leave the cord, would explain the symptoms. Probably the lesion was very extensive at first, but when the patient came under observation the muscles chiefly paralysed were those supplied by the posterior cord of the brachial plexus and by the median nerve. Both these nerve trunks are composed of fibres derived from the upper and lower divisions of the brachial plexus. The muscles supplied by the outer and inner cords of the plexus (by the musculo-cutaneous and external anterior thoracic, the ulnar, and internal anterior thoracic) were not paralysed. To the above statement there was one exception—i.e., the supinator longus though supplied by the posterior cord was not paralysed.

FIG. 1.



Shaded area indicates region of partial anæsthesia in Case 1.

Combined paralysis of deltoid, biceps, brachialis anticus, and supinator longus; Erb's paralysis of the arm.—This combination of paralysed muscles was first described by Erb,[1] who also pointed out that by careful electrical examination it is possible in many individuals to find a spot (corresponding "to about the point of emergence of the sixth cervical nerve between the scaleni") by the stimulation of which, with the faradaic current, the deltoid, biceps, brachialis anticus, and supinator longus are thrown into contraction. Erb referred the combined paralysis of these muscles to lesion of the sixth cervical nerve root, but many subsequent writers have referred it to the junction of the fifth and sixth cervical nerve roots. This combined paralysis of the above-mentioned muscles may be produced in many ways.

(*a*) It has been caused by tumour growths in the posterior triangle of the neck and by lesions of the cervical nerve roots close to the cord. In the following case a new growth, possibly a syphilitic gumma, in the region of the fifth and sixth nerve roots appears the most probable cause of the paralysis.

CASE 2.—A man, aged thirty-two years, was admitted as an in-patient at the Manchester Royal Infirmary under the care of Dr. Steell (to whose kindness I am indebted for the opportunity of reporting the case). There was a history of neuralgic pains at the back of the head twelve months previously to admission. These disappeared at the end of four weeks, but a few days later he began to suffer from pain at the back of the neck and down the arms. One month after the onset of pain in the neck and arms he first noticed weakness in the right arm; this gradually increased, and in about a week the arm became paralysed, the condition being much the same as on admission. There was a history of gonorrhœa (? syphilis). When first seen at the infirmary the following muscles were found to be paralysed and wasted: the right deltoid, the biceps, the brachialis anticus, and the supinator longus. External rotation of the arm and extension of the elbow were a little impaired. The other muscles of the arm were not affected. There was no definite anæsthesia, but there was a slight impairment of sensation along the radial border of the forearm. No other signs of lesion of the nervous system could be detected. Considerable improvement took place under iodide of potassium and mercurial inunctions.

[1] Ziemssen's Cyclopædia of the Practice of Medicine, vol. xi., English translation, London, 1876, p. 560.

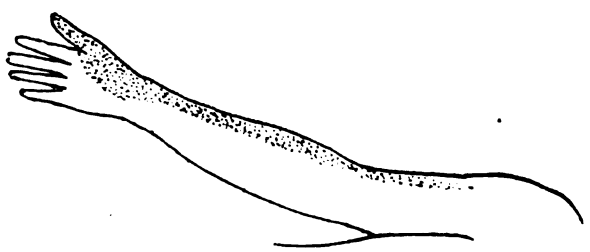
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(*b*) This form of paralysis is sometimes met with in newly-born children. It was first described by Duchenne[2] as *obstetrical paralysis*. Generally the labours have been difficult and some obstetrical operation has been necessary for the delivery of the child, such as turning and subsequent traction, or traction applied to the shoulder, or energetic pressure of the fingers on the neck in the so-called "Prague grip" (Erb), or occasionally the pressure of the forceps.

(*c*) It is often *traumatic*. It has been produced in many cases by falling with the upper extremity outstretched, directed forwards and upwards to prevent the fall; in one case by lifting up a child suddenly to a considerable height by one arm; in another case by dragging a child very rapidly and forcibly by one arm from under a cart to prevent it being run over; in other cases by falls on the shoulder. A number of cases have recently been recorded in which this combined paralysis has followed chloroform or ether narcosis, chiefly in operations on the breast or axilla, and in these cases the arm has been drawn away from the side as far as possible upwards and backwards, and kept fixed in this position for a long time for various reasons. In two cases which I have seen recently the paralysis has been caused by very violent traction on the arm through the limb being entangled in rapidly-rotating machinery.

CASE 3.—A young woman, aged twenty-two years, was admitted into the Manchester Royal Infirmary under the care of Mr. Southam, to whose kindness I am indebted for permission to report the case. On June 5th whilst at work in a cotton mill the left arm was entangled in a rapidly-rotating strap connected with the machinery. The limb was drawn very forcibly upwards and from the side and the body was whirled round, the whole weight bearing on the entangled left arm. Since the accident the patient had not been able to raise the left arm at the shoulder, but had been able to move the fingers and hand. There was some discolouration of the skin with swelling in the left posterior triangle of the neck just above the clavicle for four or five weeks after the accident. On examination the left deltoid,

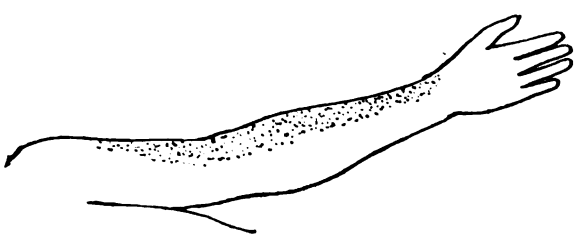
FIG. 2.



Shaded area indicates region of anæsthesia on dorsal surface of hand and in arm in Case 3.

biceps, brachialis anticus, and supinator longus were found to be completely paralysed and markedly atrophied. The muscles of the hand and forearm (with the exception of the supinator longus) were not affected. On the radial border of the forearm (both flexor and extensor surfaces), on the front of the upper arm at its lower part, and on the dorsal

FIG 3.



Shaded area indicates region of anæsthesia on flexor surface of arm in Case 3.

aspect of the thumb and hand at the radial side, is an area of diminished cutaneous sensibility. In this region, shown in Fig. 2, tactile impressions were not felt so well as in other parts of the arm. On this area the touch with a hair was not felt. On the whole of the palmar surface of the hand tactile sensations were felt quite well.

CASE 4.—A boy, aged thirteen years, was admitted as an in-patient at the Manchester Royal Infirmary under the care of Dr. Dreschfeld, to whose kindness I am indebted for permission to mention the case. Nine weeks before admission the patient was pushed by a companion against a large rapidly rotating wheel at the bottom of a shaft of the coal-pit in which he worked as a pit boy. His left hand and coat-sleeve were caught in the wheel, he was carried "off his feet," and whirled round in the air for a few seconds, the whole weight of the body being borne by the left arm. After becoming disentangled from the wheel he found the left arm paralysed. He could move the fingers, but could not perform any movement at the shoulder. On examination the deltoid, biceps, brachialis anticus, and supinator longus, and latissimus dorsi were found to be paralysed on the left side. The first three muscles were also atrophied and gave no reaction to the faradaic current. On examination with the galvanic current—ACC>KCC in the deltoid and supinator longus; in the biceps ACC=KCC. The other muscles of the arm were not affected. There was no anæsthesia.

Now in the majority of the cases in which Erb's paralysis of the arm has been the result of accident the limb has been very forcibly elevated. Often powerful traction has been made on the arm, as when children have been suddenly lifted up or suddenly dragged by one arm; or the arm has been caught in a rotating wheel and very forcibly drawn upwards, as in Cases 3 and 4. Again, in other cases the arm has been drawn upwards and backward forcibly, and kept in that position for a long time during an operation, such as removal of the breast, removal of glands in the axilla, &c. Also, in some cases the paralysis has followed a fall, the arm being extended and raised to "break" the fall. Now in all these cases the position of the arm has been such that the clavicle would be drawn or pushed backward and upward very forcibly, and it appears most probable that the paralysis is caused—at least, in many cases—through compression or laceration of the trunk of the united fifth and sixth nerve roots by the posterior part of the clavicle. From a dissection which I made on the dead subject about twelve years ago I was inclined to regard Erb's paralysis in these traumatic cases as the result of a nipping of the united fifth and sixth cervical nerve roots between the posterior part of the clavicle and the transverse process of the last cervical vertebra, owing to the clavicle being suddenly forced upwards and backwards.[3] At that time I was not aware that this explanation had ever been suggested, but on looking up the literature of the subject a few months ago I found that a similar suggestion had been made by Hoedemaker[4] in 1879. Büdinger[5] refers the cases produced during chloroform narcosis (when the arm is raised and drawn backwards forcibly) to pressure of the upper roots of the brachial plexus between the clavicle and first rib. Gaupp[6] has recently investigated the subject anatomically, especially with reference to paralysis after anæsthetics. He concludes that in these cases the clavicle is rotated on its own axis and is displaced upwards; that it lies across the first rib and compresses the spot where the fifth and sixth cervical nerve roots pass out from between the scaleni.

From a careful dissection which I have recently made with the structures of the cervical region in a much more favourable condition than in my previous dissection I think it is possible that the united trunk of the fifth and sixth cervical nerves might be compressed or lacerated either between the clavicle and the transverse process of the last cervical vertebra or between the clavicle and the first rib when the arm is very forcibly elevated; but by placing the finger in the posterior triangle of the neck in the dead subject in the position of the united fifth and sixth cervical nerves and raising the arm very forcibly I find that it is most tightly nipped between the posterior surface of the clavicle and posterior part of the first rib. The nipping is greatest at a point just in front of the articulation of the first rib with the transverse process of the first dorsal vertebra—i.e., at the posterior part of the rough elevated surface to which the scalenus medius muscle is attached, just in front of the tubercle of the first rib.

Électrisation Localisée, third edition, p. 357.

[3] My suggestion is referred to by Dr. Ross in his Handbook of Diseases of the Nervous System, London, 1885, p. 398.

[4] Archiv für Psychiatrie und Nervenheilkunde, Band ix., 1879.

[5] Archiv für Klinische Chirurgie, Band xliv., 1894, p. 121.

[6] Centralblatt für Chirurgie, No. 34, 1894.

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Hence I believe that this is the point at which the nerve trunk is compressed or lacerated by the clavicle.

CASE 5. *Paralysis of the inferior roots of the brachial plexus.*—A man, aged sixty years, came under my care at the Pendleton Dispensary in 1894. Twenty-five years previously a heavy beam of wood fell on to the left shoulder whilst he was at work. The shoulder was not dislocated, the patient did not lose consciousness, and there was not very much pain; but immediately after the accident there was loss of power in the left arm, and he was unable to move the fingers. His condition when first seen (1894) was as follows: the fingers of the left hand were semi-flexed; the skin of the hand was "glossy"; there was marked atrophy of the thenar and hypothenar eminences, of the interossei, and of the flexor and extensor muscles of the forearm; whilst the muscles at the radial side of the forearm—i.e., the supinator longus, the long and short extensors of the wrist, and the flexor carpi radialis—were hypertrophied. In the region of the deltoid, triceps, biceps, and pectorales there was no wasting. The fingers and thumb could not be extended, flexed, or otherwise moved. The wrist could be extended but was drawn to the radial side of the forearm. Movements at the elbow and shoulder could be performed quite well. The muscles paralysed were the thenar, hypothenar, interossei, extensor and flexor ulnaris, flexor sublimis and profundus digitorum, extensor communis digitorum, and long extensors of the thumb. The muscles not paralysed were the deltoid, biceps, brachialis anticus, triceps, supinator longus, long and short extensors of the wrist, and flexor carpi radialis. The pupils and palpebral fissures were equal. There was anæsthesia to the touch with the head and point of a pin on the fourth and fifth fingers (dorsal and palmar surfaces, and both ulnar and radial side), and along the ulnar border of the hand and forearm both on the flexor and extensor surfaces, as shown in the diagram (Fig. 4). In other parts of the arm sensation was normal.

FIG. 4.



Shaded area indicates region of anæsthesia of hand and forearm in Case 5.

In the above case it is probable that there had been a lesion of the eighth cervical and first dorsal nerve roots, and some fibres of the seventh cervical also, at the time of the accident.

CASE 6. *Bilateral paralysis of the deltoid.*—A man, aged thirty-two years, was admitted as an in-patient at the Manchester Infirmary on June 22nd, 1889, under the care of the late Dr. Ross, who kindly gave me permission to record this case and also the one following. On Dec. 17th, 1888, the patient fell and broke his right leg. He was admitted as an in-patient at a country hospital in East Lancashire, and kept in bed on his back for one month. Whilst in bed he began to suffer from pain in the shoulders. This continued after he left the hospital and the shoulders began to waste and the skin in the region of the deltoids became numb. Under treatment with electricity the numbness disappeared. On admission to the infirmary both deltoids were completely paralysed and markedly atrophied. The other muscles of the arm and shoulders were not affected, and the patient could perform all the movements of the arms except those depending on the action of the deltoids. There was a small patch of anæsthesia about the size of a sixpence close to the insertion of each deltoid. Apart from these symptoms there were no other signs of any lesion of the nervous system or other organs. The cause of the paralysis in this case was probably a neuritis of the circumflex nerve on each side. These nerves wind round behind the neck of the humerus in their course to the deltoid muscles, and a reference to any anatomical diagrams or to a dissection of the parts will show the possibility of the nerve being injured by pressure of the neck of the humerus in a person kept on his back in one position for a long period, especially if the bed be hard. Osler[7] states that occasionally paralysis of the deltoid arises from a pressure neuritis during an illness. Raymond[8] has published a case in which the deltoids became somewhat suddenly paralysed. The patient had gone to bed quite well and had fallen asleep on his back with the hands clasped behind the neck. Next morning both deltoids were paralysed. In most persons the circumflex nerves have a sinuous course, but in others the course is straight: and observations on the dead subject have shown that when the course is straight the nerve is stretched if the arms are raised and clasped behind the neck in the posture in which Raymond's patient fell asleep; but when the nerve is tortuous no stretching occurs. Raymond regards the paralysis of the deltoids in his case as the result of the bruising and stretching of the circumflex nerves produced by a forced position of the arms in a man whose circumflex nerves ran a straight course instead of the usual sinuous course. In the case which I have recorded it seems probable that owing to the patient being kept for a long period in one position, on his back, the circumflex nerves had been in some way bruised and a neuritis set up, either by pressure on the nerves by the neck of the humerus or by stretching, providing the nerves had a short straight course.

CASE 7. *Paralysis of the serratus magnus, probably the result of violent muscular strain during labour.*—The patient, a woman, aged thirty-four years, was confined on Sept. 25th. The labour was very difficult and finally chloroform was given and the forceps were used. During labour a towel had been attached to the head of the bed; the patient had rested on the right side, with the right shoulder on the bed, and had grasped the towel with the hands. For a long period she had made repeated and very violent traction on the towel. The muscular efforts were so violent that her medical attendant warned her of the danger thereof. On Sept. 28th she suffered from burning pain in the region of the right deltoid. This extended to the scapula and to the middle of the back. There was tenderness in these parts and soon afterwards the patient noticed that the right arm was "too short" when she "tried to reach anything," and a little later it was noticed that the scapula projected. Then the pain disappeared and she had not been troubled with it since. When the patient first came under observation (Jan. 19th) she presented typical signs of paralysis of the right serratus magnus. The other muscles of the arm—the deltoid, trapezius, pectorals, latissimus dorsi, &c., the muscles of the forearm and hand—were not affected. There was no anæsthesia, and apart from the paralysis of the serratus magnus no other signs of disease of the nervous or other systems were detected. Now in this case it seems very probable that the paralysis of the serratus magnus was connected with the very violent and repeated muscular exertion (traction on the towel) during labour. The patient was turned on the right side, the right shoulder was in contact with the bed, and the traction would be made chiefly by the right arm. During these prolonged exertions there would be a repeated gliding of the scapula to and fro over the lateral wall of the thorax, and it appears very probably that thereby a bruising and compression of the nerve to the serratus magnus might be produced and a neuritis set up.

CASE 8. *Unilateral dropped wrist; paralysis of the extensor communis digitorum of syphilitic origin.*—A man, aged twenty-five years, came as a patient to the Pendleton Dispensary about four years ago on account of dropping of the wrist on the right side. Five weeks previously he had begun to suffer from pain along the inner side of the right upper arm and also in the right shoulder. Soon after the onset of the pain loss of power was noticed. The pain was very severe and continued for four weeks. When I first saw the patient the right wrist was found to be "dropped," just as in lead paralysis. Careful examination showed that the extensor communis digitorum was paralysed, but the other muscles of the forearm, the shoulder, and hand, were unaffected. There was no anæsthesia, but there was tenderness along the course of the nerve trunks on the inner side of the upper arm just below the axilla. No tumour growth could be felt however. The left arm was unaffected and there was then no other nerve lesion. There was no

[7] Text-book of Medicine, first edition, Edinburgh, 1892, p. 815.
[8] Raymond, Souques and Charcot J. B. Nouvelle Iconographie de la Salpêtrière, No. 1, 1895.

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blue line on the gums and no indication of lead poisoning. There was no history of alcoholism. The knee-jerks were present and there was nothing to indicate alcoholic neuritis. Further there was no history of injury in the course of the musculo-spiral nerve and no history of any pressure on the arm or in the axilla such as might be produced by falling asleep with the arm over the back of a chair or by the pressure of a crutch. The pain at the inner side of the arm just below the axilla had been severe; it was present a short time before the onset of the paralysis and continued for four weeks. The severe pain and tenderness appeared to indicate a neuritis or some persistent irritative lesion of the musculo-spiral nerve causing loss of function of some of its fibres. At first I was much puzzled as to the exact cause. The paralysis of the extensor communis digitorum was, however, the first of a series of nerve lesions from which the patient has not yet recovered. In the course of a few months the arm recovered completely. But about twelve months later the patient suffered from a complete paraplegia (transverse myelitis) and then for the first time a history of syphilis was obtained. (At first all venereal disease was denied.) The patient had suffered from syphilis several years before the onset of the paralysis of the extensor communis digitorum.

Under anti-syphilitic treatment the patient completely recovered from the paraplegia. About eighteen months later he suffered from right facial paralysis and paralysis of the right third nerve These symptoms in course of time disappeared, but a little later complete ophthalmoplegia developed on the left side, with loss of vision in the left eye (due to optic atrophy). I think there can be no doubt that in this case the paralysis of the extensor communis digitorum was due to a syphilitic lesion (? neuritis or gummatous infiltration) of the musculo-spiral nerve, just below the axilla, and that this lesion had caused loss of function of certain of its fibres only.

Manchester.

A BRIEF ACCOUNT OF TROPICAL ABSCESS OF THE LIVER.

BY C. W. WINDSOR, M.A., M.D. CANTAB.

(Concluded from p. 1449.)

[IN our issue of Dec. 4th we published the first part of Dr. Windsor's paper. The following is the concluding portion.]

Connexion of tropical abscess with dysentery.—In carefully examining any series of cases of tropical abscess of the liver one cannot fail to be struck by the frequency with which dysentery is mentioned. This association may be brought out in three ways: (1) from the history of the patient; (2) from the occurrence of an attack while the patient is suffering from the abscess; and (3) by post-mortem records. This association of the two diseases has long been recognised and much discussion has taken place as to the reality of this connexion. Most of the knowledge of tropical abscess has been derived from India, and looking at the records of these cases quite impartially it is evident that the question of dysentery in some way or other appears very frequently. Dr. Budd was one of the earliest to call attention to the fact that there was considerable importance to be attached to the connexion of dysentery with tropical abscess; his observations were based on cases occurring at the Seamen's Hospital, Greenwich.

In the following statistics the history of the patient plays an important part, and this being so the figures may be objected to on account of the difficulty of getting reliable information. The second source of information is not very fruitful; only one case that I have seen has shown the co-existence of the two affections. As regards post mortem evidence, cases from Murchison's lectures, from Budd's lectures, and cases occurring during the last twenty-seven years at the Seamen's Hospital show numerous examples of the existence of dysenteric lesions occurring in patients who have suffered from tropical abscess; this is perhaps the most trustworthy kind of evidence that is available.

Source.	Number of cases.	History of dysentery.	Post-mortem records.	
			Examinations.	Lesions found.
Budd	13	—	13	
Murchison	23	12	5	4
Cayley	—	25 per cent.	—	—
Waring	300	82	204	153
Seamen's Hospital				
Series "A"	45	19	33	20
Series "B"* ...	7	5	1	1

* Under my own observation.

Admitting the above statistics as showing that there is a connexion between the two conditions the question arises, Why should dysentery stand more closely in relation with tropical abscess than other intestinal ulcerations? In India dysentery is of course very common, but then so is enteric fever, and it would be a matter of extreme rarity to see suppuration in the liver as a result of typhoid ulceration, and the same may be said of tuberculous and malignant ulceration. Abscesses in the liver do occur with a certain frequency following injuries and ulcerations in the intestinal tract, but these are almost invariably small and multiple and are part of a general pyæmic infection; while, on the other hand, the abscess following dysentery is usually large, single, and probably contains no infective organisms, and also is not infrequently followed by recovery. So that one is inevitably brought to the conclusion that there must be some peculiarity—some special feature—to account for the frequent connexion between the two diseases. It may be urged that as a certain proportion in a series of cases of tropical abscess show the presence of multiple abscesses why should not all cases, the multiple ones especially, be regarded as pyæmic in nature. To a certain very limited extent this may be true, as it has been suggested that a secondary infection of the liver may take place in addition to the original abscess. Against this view one may bring the facts that the single abscess is more common and that even when the abscesses are multiple there is usually one abscess much larger than the rest, and that it is uncommon to find abscesses multiple in the sense used in pyæmic conditions. And, in addition, the evidence of the sterility of the pus in tropical abscesses, incomplete though it may be, is totally opposed to the idea that tropical abscesses are pyæmic or septic in nature.

An explanation of the connexion of tropical abscess and dysentery would be satisfactory if some factor common to each disease were found, and it was further proved that this factor was the essential cause of the lesions in each disease. But before attempting to settle these questions (which constitute the crux of the whole matter) it is necessary to try to ascertain more definitely the connexion between the two diseases. Three views are held on this point:—(*a*) That supported by Murchison, Abercrombie, Fayrer, and Cayley which, while admitting that there is often some association between dysentery and tropical abscess, says that it is accidental and that there really is no definite relationship between the two, both being due to the climatic conditions. But this theory, although ostensibly admitting that there is a peculiar association between the two conditions, practically denies this by saying that the association is the result or pure coincidence. Nearly every series of statistics is entirely opposed to this view. (*b*) That the dysentery is a sequence of the liver abscess brought about by the contact of irritating bile with the large intestine. This view has met with very little acceptance although Annesley was inclined to support it. The fact that the usual course of events as recorded in histories of cases is the direct opposite of this and also that the whole of the small intestine and biliary passages are unaffected by this supposed irritating bile will go far in disproving this view. (*c*) That dysentery in the majority of cases precedes the abscess is the view strongly supported by Dr. Budd. In most cases where dysentery is mentioned it is usually in the form of preceding attacks, and also in cases examined post mortem scars of dysenteric ulceration are frequently found. Dr. Murchison, although opposed

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to this view, mentions Waring's series of 300 fatal cases of liver abscess in which 82 gave accounts of antecedent dysentery, and also 204 cases by the same observer in 153 of which intestinal lesions were found. Dr. Moxon expressed the opinion that intestinal lesions would be found in all cases if the intestines were carefully examined. The time elapsing between the occurrence of the dysentery and the development of symptoms of hepatic abscess is very variable but is nearly always covered by twelve months. It is not at all uncommon for patients to be admitted with dysentery who show symptoms of tropical abscess, or an attack of dysentery may come on during convalescence from operation for liver abscess, as in the second case of my own series. Now, in the face of the conflicting views of eminent observers it is not becoming to lay down dogmatically the opinion that dysentery always complicates hepatic abscess and always occurs as an antecedent, but it seems fairly clear that in a large and striking proportion of cases this is the fact.

The next step is to examine the symptoms and physical signs and varieties of dysentery for something definite and characteristic with which to support this opinion. This is a difficult matter, for if one simply relies on the accounts of published cases nothing very definite is found except that the patient gave a history, or showed clinical signs, or gave post-mortem evidence, of dysentery, recent or remote, without any distinguishing features. It seems clear that ordinary dysentery is not more likely to produce an abscess of the liver than other intestinal ulcerations—e.g., in 700 cases of severe dysentery in Millbank Prison not a single case of hepatic abscess was recorded. This fact alone seems to show conclusively that some special feature must be present in the dysentery before a hepatic abscess can be produced. Dysentery is used as a general term to imply frequent motions consisting largely of blood, mucus, and a certain proportion of pus, with tenesmus and tormina. Acute and chronic forms are described, but the distinction between them is arbitrary and is based either upon the severity of the attack, the duration of the symptoms, or the extent of intestinal ulceration, thickening or cicatrisation. In the former there is more active inflammation with infiltration by small cells, necrosis, and ulceration of the solitary follicles which may, however, spread to the adjacent mucous membrane, while in the latter the mucous membrane is thickened and more fibrous in structure, with large irregular areas of ulceration, the whole surface presenting a grey appearance in contrast to the active congestion of acute dysentery. As regards the stools the difference is one of degree only; the frequency is much less in chronic dysentery, although this may be greatly increased during the exacerbations which frequently occur. Blood is more frequent in the acute, and mucus more abundant in the chronic, variety; pus and shreds of necrotic tissue are found in each. The symptoms are less marked but there is greater proportionate wasting in the chronic forms. Diphtheritic dysentery is almost invariably fatal and there is great exaggeration of all the symptoms with delirium, high fever, and acute pain, but it is stated that blood and mucus are not so abundant and that tenesmus is not very common.

There is another form of dysentery which has received much attention lately and on which Councilman and Lafleur and Stockton have written monographs. This variety does not present many variations in symptoms from catarrhal or follicular dysentery but differs essentially in its morbid anatomy and also in showing amœbæ in the stools. From this latter reason it has been called amœbic dysentery. Osler describes the condition of the intestine as being swollen, pale and œdematous, with numerous ulcers of varying shape and depth. There is great undermining of the mucous membrane which may extend into the submucous tissue; the excavations of the mucosa may contain mucus either clear or opalescent. The ordinary signs of purulent inflammation are not present. On examination of the stools there is a striking absence of pus cells but shreds of necrotic tissue are abundant. The characteristic feature is the presence of large numbers of actively moving amœbæ coli. What was said about the mode of examination of the liver pus when searching for these organisms holds good in this case; even the contact with a cold bed-pan is quite sufficient to kill them, when they assume a round shape so that they may be quite easily overlooked. Osler says that this variety of dysentery is often fatal but out of a dozen cases recently under my own observation only one patient has died. Councilman and Lafleur have demonstrated the amœbæ in the floor of the ulcers, in the submucosa and deeper layers of the intestinal wall, and also in the lymphatic vessels. Personally I have never had an opportunity of examining the intestines in a case of amœbic dysentery as the only fatal cases I have seen were in Lascars and Africans upon whom no necropsy is allowed. The amœba coli was first described by Lambl in 1859 and much work upon this subject was done by Kartulis in his study of the endemic dysentery of Egypt. He was enabled to cultivate the amœbæ on straw infusion and noted their multiplication by fission; he injected the cultivated amœbæ in the intestines of dogs and produced dysenteric symptoms, specimens of the amœbæ being subsequently found in the stools. Recently Councilman and Lafleur have written a most exhaustive and apparently convincing monograph with beautiful illustrations to show that this variety of dysentery—which they have called amœbic—is actually due to the amœba coli, and also that this is the form which is so frequently associated with tropical abscess of liver. In fact, they say that the amœba coli is the common cause of a definite variety of dysentery and also of tropical abscess.

I have stated that as far as my own personal experience goes the amœbæ have been found in nearly every case of tropical abscess and in many cases of dysentery and in at least two out of seven cases they have been found in the liver pus and stools from the same case. It thus appears to be proved that there is a special form of dysentery in which amœbæ are constantly present and also that in the pus of certain tropical abscesses of liver the same bodies are found. If the former is to stand in causative relation to the abscess the amœbæ must travel from the intestine to the liver. By what path they do this has not been discovered, but it is highly probable that they are carried in the vessels which drain into the portal vein. This intermediate step in the chain of evidence is not of great importance when it has been shown that by some route or other the organisms do get from the intestine to the liver. It should be mentioned that amœbæ coli have been found in the stools of patients who were not at the time suffering from dysentery. This fact may account for some cases of hepatic abscess in which there is no trace of a dysenteric connexion, for it is quite conceivable that the amœbæ may enter the deeper layers of the mucosa and so into the blood stream without provoking any lesion sufficient to cause symptoms of dysentery. The analogy of the white corpuscle escaping by diapedesis through the blood-vessel wall will help to make this supposition more probable. And also the fact that amœbæ are found in more or less healthy intestines is quite on a level with the discovery of genuine Klebs-Löffler bacilli in the mouths of people who show no signs of diphtheria. So that it will hold good in the case of amœbic dysentery that a place of lowered resistance is necessary before the organisms can produce their effects.

Although the exact path by which the amœbæ reach the liver is obscure it seems fairly clear that they gain access to the human system by means of the drinking-water or by the eating of uncooked vegetables. The drinking-water in those parts of India where the sanitary arrangements are primitive runs great risk of contamination from the dejecta of patients suffering from dysentery. This supposition is much strengthened by the fact that the frequency of dysentery and abscess of the liver in India is diminishing proportionately to the improvement in hygienic conditions generally; the records of the Indian army and gaol population show that abscess of the liver is not so frequent as it was twenty years ago. The improvement in the removal of excreta, in the water-supply, and also, although to a less extent perhaps, in the housing of the native population must contribute to bring about this diminution. At this stage it will be well, perhaps, to mention briefly the etiological factors in the production of tropical abscess which are usually described.

The intense heat of the tropics has been credited with a large share of the etiology of tropical abscess. This applies to India especially; it is rarely that a large single abscess is met with in temperate climates unless the patient has spent some time in hot countries. Intense heat will undoubtedly favour the formation of abscess of the liver but will not by itself account for it as it is a curious fact that tropical abscess is rarely seen in the West Indies or Ceylon where meteorological conditions are found very similar to those of India and also that dysentery is not nearly so common. The influence of sea breezes has been said to bring about this difference. Over indulgence in alcohol undoubtedly is a predisposing cause of all forms of liver trouble, abscess among them. The mortality among publicans is said to be very much higher

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than among other classes. Among the Indian troops this feature is of importance, while it is interesting to note that tropical abscess is very much rarer in the French colonies in India, where the residents are more abstemious, than in English settlements, showing among other things that careful living has a considerable influence in modifying the tendency to abscess of the liver and also that the tropical heat is not an all-important factor. The lazy sedentary life of most of the European residents in India is said to dispose to abscess, probably acting in conjunction with over-indulgence in rich food and alcoholic beverages. In spite of these causes cases of abscess of the liver are seen in young healthy Europeans who lead healthy abstemious lives and who have only been a short time in India; in this class the liver trouble is more acute and severe than in those who have become acclimatised by long residence in the tropics. All the above mentioned general causes and in addition a chill to the surface of the body when sweating are considered as predisposing to a condition of the liver known as acute hepatitis. It is to this latter cause that most abscesses of the liver are ascribed. In theory this view is quite sound, as in other organs and tissues if the inflammation is acute enough suppuration will result; but it is curious that conditions such as heat, laziness, over-indulgence, &c., which must influence the liver generally should produce only a localised focus of suppuration while the surrounding liver tissue is healthy. Patients supposed to have acute hepatitis show some fever, often high and intermittent with rigors, localised pain and tenderness, with enlargement of the liver and general signs of severe illness and with considerable digestive disturbances, such as constipation, vomiting, varying degrees of jaundice, and loss of appetite. Steps are taken to relieve the acute inflammation—such as local depletion, application of ice, and rest in bed with low diet—and the patient either recovers or presents unmistakable signs of an abscess. The two following cases are quoted from Professor Cayley to show how abscess is supposed to follow acute hepatitis. A man was admitted on Feb. 8th, 1889, with liver enlarged upwards and downwards, with pain, tenderness over the liver, fever, and diarrhœa. No exploration was made and the symptoms were put down to acute hepatitis and the man was invalided home. On April 15th an abscess of the liver burst through the lung and large quantities of pus were expectorated daily. The man died from exhaustion. At the necropsy a shallow, superficial abscess of the liver was found which had burst and converted the whole of the right lung into a huge abscess cavity. In the intestines there were signs of extensive ulceration with numerous small ulcers and thickening of the intestinal coats. Here obviously the symptoms put down to hepatitis were due to the formation and general extension of the abscess of the liver and in all probability had the exploring needle been luckily directed an abscess would have been discovered at the time when the patient was said to have been suffering from hepatitis. The discovery of dysenteric ulceration will be noted. The next case is quoted as "Acute hepatitis following dysentery, going on to abscess formation, one being opened externally by operation and the other bursting into the right lung." The patient had dysentery in September, 1891, and recovered in three weeks. Twelve days after he was re-admitted with symptoms of acute inflammation of the liver—viz., pain, liver enlargement, rigors, fever, and sweating. He was discharged in fourteen days. He was re-admitted with similar symptoms in a few days and in three weeks an abscess was found in the liver and operated on. Another abscess burst through the right lung and after a long, tedious illness the patient recovered. The same arguments as in the preceding case will hold equally good here.

Personally I think that this theory of acute hepatitis has been carried too far and is only a theory with nothing very tangible or objective to support it. The two cases just cited were instanced by Professor Cayley to support his theory, but they do not appear to be very convincing when looked at closely, as all the symptoms quoted as being due to the acute hepatitis are quite compatible with those of abscess of the liver in process of formation and extension and it will be noted that in each case the abscess was large and therefore we may assume took some considerable time to form. So far as I know there is no post-mortem record of acute inflammation of the liver substance brought about by such conditions as those to which the acute hepatitis of tropical climates is said to be due. In pyæmic abscesses of the liver one sees typical acute hepatitis with infiltration of the small round cells, vascular changes, and degenerations of the hepatic cells and all the classical signs of inflammation, including the formation of fibrous tissue. But I have looked in vain for a description of this nature in cases of tropical acute hepatitis. And, moreover, the whole process of the formation of a tropical abscess is different; there is an area of softening (showing degeneration of the hepatic cells—coagulation necrosis) and this area of necrosis breaks down and forms an abscess filled with oil globules, débris of liver tissue, leucocytes, cholesterin, and bile pigments; and above all pyogenic organisms are absent while numerous amœbæ are found. Altogether it appears that the commonly stated factors in the etiology of tropical abscess are somewhat inadequate, although each and all of them may have some contributing effect. On the other hand the presence of the amœbæ coli may be deemed of very much greater importance, and although one cannot absolutely say that this is the essential cause of tropical abscess it does seem probable that it approaches more nearly to a true explanation of the nature of the disease.

CASES OF ABSCESS OF THE LIVER.

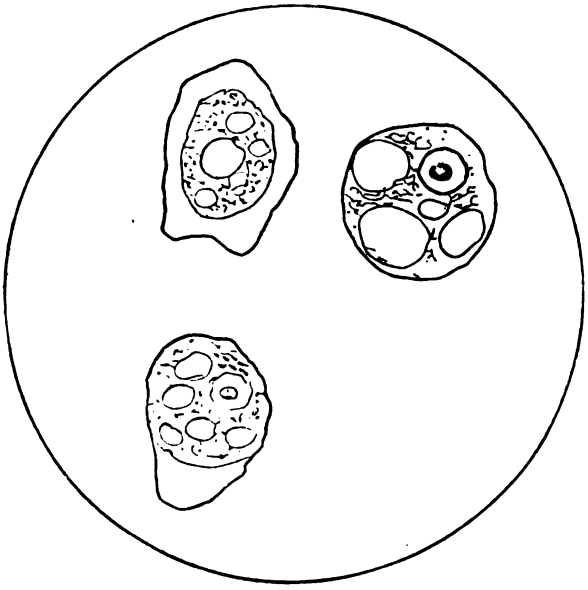
CASE 1.—The patient was a man, aged thirty-seven years, a native of the Channel Islands. He was admitted in a state of collapse. His present illness began six weeks before admission with abdominal pains, cramps, and dysentery, which continued until admission. The pain was of a dull aching character, situated in the right hypochondrium, extending down to the groin. Rigors and rapid loss of flesh had been noticed. On admission the patient was found to be extremely emaciated, with a sallow, earthy complexion, his face bearing a very anxious expression. The abdomen was retracted. At the back there was extension of liver dulness upwards for two inches in the line of the scapula, but no upward extension was noticed in front; downwards there was dulness for two inches below the costal margin. There was bulging of the lower right intercostal spaces and also considerable tenderness on palpation. No œdema of the skin was present. There were signs of pleurisy on the right side. The temperature was high and intermittent. The motions were dysenteric. The liver abscess was diagnosed, but the condition of the patient was too bad for operation. He died a few hours after admission. At the necropsy numerous adhesions of the pleura were found on the right side. Two large, separate abscesses were found in the right lobe of the liver containing yellow pus streaked with blood. Very extensive ulceration of the colon was found, the mucous membrane being much thickened and burrowed in all directions. I must confess that the pus and ulcerated colon were not examined microscopically, as I did not know anything about the amœba coli or its connexion with liver abscess.

CASE 2.—The patient was a Lascar, aged forty-two years. He complained of pain in the right side of the chest, cough, and a feeling of general illness for one week. Eighteen months before admission he had an attack of dysentery. He had been treated in Calcutta Hospital for an attack which lasted twelve days, subsequently to which his health had been fairly good. On admission he was found to be a poorly nourished man suffering from a dull aching pain in the right side with some cough. There were signs of pleural effusion on the right side. The liver was not enlarged downwards and its upper limits could not be accurately made out on account of the fluid in the pleura. There was slight tenderness over the liver. The bowels were regular. The temperature was remittent, between 101·8° and 99° F. There were no rigors, but profuse sweatings at night were noticed. Ten ounces of clear straw-coloured fluid were aspirated from the right pleura. Three weeks after admission, the patient's condition not improving, and the presence of an abscess of the liver being diagnosed, two inches of the seventh rib were resected and the abscess was freely incised, allowing the escape of a large quantity of thick, sweet-smelling, chocolate-coloured pus. Three days after the operation the patient had a sharp attack of dysentery lasting ten days which was cured by rectal irrigation with a weak solution of quinine. The patient was discharged cured four months after admission. Large numbers of amœbæ coli were found in the liver pus and in the stools during the attack of dysentery. The appended diagrams are taken from THE LANCET of May 4th, 1895, where the case is fully reported by Dr. Curnow. I need hardly say that they are diagrammatic, but they are accurate

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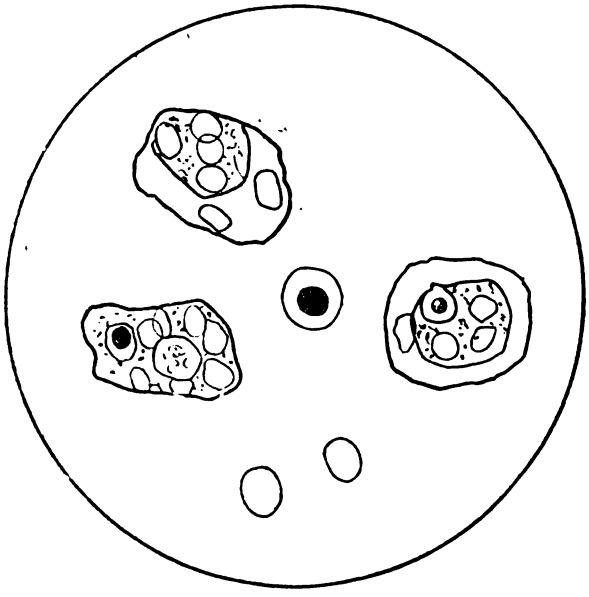
as regards size, having been drawn by the aid of a camera lucida from a specimen seen under a $\frac{1}{12}$ inch objective.

FIG. 1.



Diagrammatic representation of amœbæ showing ectosarc and endosarc. The amœba on the right shows large vacuoles and a pus cell.

FIG. 2.



Amœbæ showing the overlapping of red corpuscles and a free pus cell with two red corpuscles which are drawn rather too large.

CASE 3.—This patient, an African, aged twenty-seven years, complained of pain in the right side of the abdomen and chest of a sharp, shooting, paroxysmal character which had been present for one month. Four months before admission he had a typical attack of dysentery lasting one month, and for the three weeks before admission he had been suffering from a similar attack. He was emaciated. On admission the liver was found to be considerably enlarged downwards, the edge being felt midway between the costal margin and the umbilicus. There was considerable tenderness over the liver. The spleen was enlarged. The urine and stools showed the effects of biliary obstruction although the conjunctivæ were clear. The temperature was high—up to 103° F. —and remittent. There was a small collection of fluid in the right pleura. The liver abscess was diagnosed and was operated on a few days after admission. A portion of the eighth rib was resected and the layers of the pleura were stitched together in order to shut off the pleural cavity, the abscess was opened three days later. About a pint of blood-stained yellowish pus was evacuated; no amœbæ were found although repeated examinations were made, but streptococci were very numerous. The patient made a rapid and uninterrupted recovery.

CASE 4.—This patient, a Scotsman, aged thirty-seven years, complained of a swelling in the upper part of the abdomen. There was absolutely no history of dysentery or chronic diarrhœa. On admission he was found to be an emaciated, sallow-complexioned man, who had been suffering from an aching intermittent pain in the epigastrium for thirteen weeks. Eight weeks before admission the patient first noticed a swelling in the upper part of the abdomen, which was tender and had increased rapidly in size, the skin becoming reddened during the last fortnight. There was a swelling about the size of a baby's head lying midway between the ensiform cartilage and the umbilicus, obviously a large pointing abscess and most probably connected with the liver as the dull percussion note over the swelling was continuous with that over the liver. There was no jaundice. The temperature was high and remittent. There were occasional nocturnal sweatings. The bowels were regular. The chest was quite normal. On operation two pints of reddish-coloured pus were evacuated and the connexion between the swelling and the liver was clearly established. Amœbæ were found only after repeated examination and then not until the fourth day after the abscess had been opened. The patient made a rapid recovery.

CASE 5.—This patient, an Englishman, aged thirty-four years, complained of a sharp, shooting pain in the abdomen, radiating through to the right shoulder, which was so severe as to prevent him from sleeping for one month. An abdominal swelling, tender to the touch, was noticed seventeen days before admission. The bowels usually were constipated. He had lost 2 st. in weight during the last two months. On admission there was a globular swelling lying very nearly in the middle line of the abdomen extending from the ensiform cartilage to the umbilicus and laterally almost to the costal margin on each side. The swelling was tense and elastic and fixed to the liver; fluctuation was obtained and the percussion note was dull, but no fluid thrill was detected. The liver dulness was not increased upwards but downwards and to the right was continuous with that over the swelling. There was no jaundice. The urine was normal. There was slight remittent pyrexia. Three days after admission the swelling was incised and a large quantity of reddish-coloured pus was evacuated, in which, however, no amœbæ were found. Subsequently a few were seen. After the operation the temperature fell to normal and the patient rapidly recovered. There was a somewhat inconclusive history of dysentery a few months previous to admission.

CASE 6.—The patient, a Lascar, aged nineteen years, complained of pain in the right hypochondrium for fifteen days. A history of dysentery could not be elicited. On admission the patient was seen to be fairly well nourished; there was bulging of the right side of the chest, which moved less freely than the left on respiration. There was dulness on the right side from the clavicle to the costal margin in front over the whole of the axillary region, and behind from the spine of the scapula downwards. All the signs of a large collection of fluid in the right pleura, probably pus, were present, the temperature being 103° F. No enlargement of the liver could be made out. There was œdema of the skin of the chest wall on the right side. Twenty-two ounces of chocolate-coloured pus were aspirated from the right pleura. On microscopic examination pus cells, red and white blood corpuscles, and some degenerate liver cells, but no amœbæ, were found. A few days afterwards a large liver abscess was opened after resecting portions of the seventh and eighth ribs and incising the liver substance. Amœbæ, actively moving, were found in the liver pus two days after the operation. The patient died three weeks subsequently from exhaustion. A very limited necropsy was possible, so I had to remove the liver as well as I could through the enlarged operation wound. A large abscess cavity was found in the upper and posterior part of the right lobe which had been opened by the operation; its inner wall was honeycombed and of a dirty yellow appearance, and outside this was a band of hyperæmic liver tissue about half an inch in width. Three small areas of softened liver tissue were found, one in the left and two in the right lobe; they were about the size of a penny on transverse

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section, yellow in colour, and each was surrounded by a zone of hyperæmic liver tissue. Amœbæ were found in the lining membrane of the main abscess and in the pus from the three patches of softening in the liver. I was not able to examine the intestines.

CASE 7.—The patient, an Irishman, aged twenty-three years, complained of abdominal pains for two months. He gave the following history of dysentery: Eight months before admission his ship—which, by the way, condensed water for her own use—was lying off Java for six weeks. He went on shore once, but did not drink any cold water. As the engines were busy working the cranes loading the ship they could not be spared for the purpose of condensing water, so a quantity was brought off from the land. A few days after drinking this water five men out of a crew of thirty were attacked with dysentery, four very severely, the patient having only a mild attack. The present illness began two months before admission with severe aching pain in the right hypochondrium, constipation, depression of spirits and increasing sallowness of complexion. There was profuse sweating, but there were no rigors. On admission the patient was sallow-faced and rather emaciated; he was suffering from severe abdominal pain. There were slight bulging in the right hypochondrium, considerable tenderness on palpation and œdema of the skin over the lower ribs. The liver was slightly enlarged upwards in the axilla, but downwards it extended almost to the umbilicus, the edge being well defined and the surface smooth. There was no apparent enlargement of the left lobe. The stools were apparently normal, but some amœbæ were found. The temperature was high and remittent. There were no rigors or sweats and no jaundice. The diagnosis of hepatic abscess was confirmed by the exploring needle and subsequently about fifteen ounces of chocolate coloured pus were removed by operation. While opening the abscess both the peritoneum and right pleura were accidentally opened and some pus must have escaped into these cavities before the peritoneum and pleura were stitched up and shut off from the wound. No trouble in the abdomen occurred but the presence of the pneumothorax on the right side considerably delayed recovery by the collapse of the lung which eventually expanded all right. No amœbæ were found in the pus until four days after the operation when they became very numerous. Considerable attention was devoted to ascertaining whether the pus contained organisms, but both cultivation and staining gave negative results. The patient made a rather tedious recovery but was in the best of health on leaving the hospital three months after admission.

Note by Author.—This account of Tropical Abscess of the Liver was written as a thesis for the degree of M D. at Cambridge and I am indebted to Dr. Clifford Allbutt, Regius Professor of Physic in the University, for allowing it to be published. I also wish to express my deep obligation to Dr. Curnow and Dr. John Anderson, physicians to the Seamen's Hospital, Greenwich, for their kind permission to publish and make use of the cases under their care and for much kind help and advice.

Banbury.

TREATMENT OF ACUTE PROLAPSUS ANI.

BY FRANK ELVY, M.R.C.S. ENG., L.R.C.P. LOND.

ACUTE prolapsus ani occurs frequently at childbirth, but as the patient has to keep her bed irrespectively of the anal trouble the condition does not assume so much importance as when the sufferer is an active man of business to whom the time and rest necessary for recovery are serious matters. A succession of these acute cases in many respects similar led me to adopt a treatment which has given encouraging results. The pathology of the condition appears to be a slipping or forcing down of the mucous membrane investing the sphincter and of the mucous membrane immediately above it. Spasm of the sphincters, impeded venous return, and œdema result in the formation of an elastic and exceedingly tender, livid or purple swelling occupying either a portion or the whole of the circumference of the anal aperture. The swelling can be returned above the sphincter without much difficulty by the finger but in the course of a few minutes in many cases the prolapsus has recurred. The application of heat or of cold in the form of an ice compress relieves the discomfort but does not effect a cure or materially alter the size of the swelling. Astringents, either in the form of an ointment or of suppositories, I have found to be useless. Regulation of the bowels and the recumbent position are necessary, but a week often passes before nature brings about recovery.

It is obvious that if the prolapsus could be kept up for a few hours a speedy cure might be anticipated and this led me to employ pads and a T bandage, but it was almost impossible to prevent the descent of a small swelling in this way owing to the awkward situation in the hollow of the buttocks. Under these circumstances and in the absence of thrombosis which would call for incision I have successfully used as a pessary a full-sized Tait's cervical dilator. After replacing the prolapsus with the finger the vulcanite uterine dilator is lubricated and inserted for one inch up the rectum and is retained in position by a collar of dentiste' wax (Stent's composition) supported by cotton wool and a firmly applied T bandage. The pessary not only prevents a descent of the swelling while in position but by its pressure it favours absorption of the œdema and it empties the engorged veins; it should be inserted at night and retained until the following morning. This treatment I have found to bring about a complete cure; there has been no tendency to relapse and the patient has been able to rise and resume his occupation without discomfort. Olive-shaped pewter pessaries have been used for this purpose but they are dependent for their position and retention upon the action of the sphincters which cannot be relied upon in these cases. In the chronic condition of prolapsus ani arising from atony of the levator and sphincter ani muscles much benefit cannot be expected from treatment by pessary.

The following case was the first one treated by me in this way. On June 22nd, 1897, a man complained that for two days he had been in pain from a swelling which he took to be a hæmorrhoid. On examination a tense, bluish, semi-lunar swelling was found occupying the right margin of the anus, the mucous membrane being continuous with the skin at the outer circumference. The patient stated that he had pushed up the swelling repeatedly but that it always returned in a few minutes. This I found to be the case. I then gave him a full-sized Tait's dilator 2¾ in. long and ¾ in. in greatest diameter and conical in shape, for which a collar was made as described above so as to grasp the pessary thus improvised at one inch from its point and prevent it from slipping entirely into the bowel. The patient was directed to return the prolapse when in bed and immediately to insert the pessary well lubricated and supported by a T bandage; he was also strongly advised to remain in bed on the following day until seen by me. Next morning however I received a note to the effect that he felt quite recovered and I heard afterwards that the pessary was worn until 4 A M. when it slipped out but the prolapse did not show any tendency to return and has not done so up to the present time. I have requested Messrs. Fergusson and Co. to make the pessary described above.

Eastbourne.

BRITISH ORTHOPÆDIC SOCIETY.—An ordinary meeting was held on Nov. 5th at the National Orthopædic Hospital, Mr. Muirhead Little being in the chair.—Mr. Reeves exhibited three cases, one of Doubtful Congenital Dislocation of the Left Hip, Double Equino-Varus, and Paralysis of both Groups of Anterior Tibial Muscles. The second case was that of a child suffering from Extreme Equino-Varus on the Left Side with Congenital Absence of the Fibula. The third case was one of Congenital Fracture of the Tibia and Malformation of the Hip.—Dr. Risien Russell, Mr. Tubby, Mr. Little, and Mr. Noble Smith joined in the discussion.—Mr. A. H. Tubby showed a boy, aged nine years, upon whom he had performed Arthrodesis at both Ankles for Flail-like Foot.—Remarks were made upon the case by Mr. Jackson Clarke, Mr. Little, and Mr. Robert Jones.—Mr. Wm. Thomas exhibited a photograph and gave details of a doubtful case of Traumatic Spinal Caries which had been the subject of an action-at-law. He also showed a skiagram representing an Injury to the Epiphyseal Line of the Radius with subsequent Arrest of the Growth of that Bone.—Mr. Jackson Clarke showed the skiagram of a marked case of Flat-foot in a girl about ten years of age.—Mr. Noble Smith read a paper on Spasmodic Wry-neck.—Dr. Risien Russell and other members joined in the discussion which followed.—Mr. Jackson Clarke read a paper and exhibited drawings and skiagrams of cases of Coxa Vara in Infants.

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Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SARCOMA OF UNDESCENDED TESTICLE REMOVED BY ABDOMINAL SECTION.

BY J. B. PIKE, M.R.C.S. ENG.,
HONORARY SURGEON TO THE LOUGHBOROUGH HOSPITAL AND DISPENSARY.

THE patient was under my care for about ten days before his admission to the Loughborough Hospital. He was suffering from a feverish attack, probably due to chill, and had also some œdema of the right leg. On looking for a cause of the latter symptom I found an abdominal tumour filling the right iliac region and extending beyond the middle line. It was hard, smooth, and freely moveable. The patient was admitted to the Loughborough Hospital on April 8th, 1897, the temperature having fallen to normal, with a view to operation. He was in several respects an abnormal individual, the palate was cleft, both feet were clubbed, and the scrotum contained no testicles. A diagnosis of sarcoma of the retained testicle was made. On April 28th, with the assistance of my colleagues and in the presence of Mr. C. J. Bond, of Leicester, who kindly gave me the benefit of his large experience of abdominal surgery, I opened the abdomen by a median incision. Having ligatured and divided an anterior omental adhesion I attempted to deliver the tumour. The pedicle however being short and the tumour lying with its long axis across that of the abdomen it was necessary to extend the incision for two inches above the umbilicus and as far as possible toward the pubes. The tumour was then brought out by twisting the pedicle in such a way as to bring the long axes of the tumour and the incision into line. The pedicle was ligatured and divided close to the tumour and grasped with vulsellum forceps. It was then again transfixed and tied as low down as possible and divided between the two ligatures. The left testicle was felt, small and apparently healthy, near the inguinal ring. The wound was closed with silkworm gut sutures passed through the whole abdominal wall and no drainage-tube was used. At the end of a week half the sutures were removed and about the tenth day the remainder, the edges of the somewhat large incision being firmly united.

The tumour, which weighed 3 lb. 6 oz., was forwarded the Pathological Museum of the Royal College of Surgeons of England, and for the following description and for a microscopical section which showed typical round-celled sarcoma I am indebted to Mr. Targett, the curator: "It is a very good example of an intra-abdominal retention of a right testis which has become converted into a sarcoma. The growth is round celled in type and is extremely degenerated in the centre. The mesorchium in undescended testicle is usually slender and round. In this specimen it becomes the pedicle of the tumour, which is short, round, and thick. The pedicle appears to be invaded by growth, hence it is probable that the lymphatic glands are already affected. The digital fossa of the testis is distinct, but the globus major and minor are involved in the tumour."

I could find no special directions as to the removal of such tumours in the text-books to which I had access. The operation, of course, resembled the ordinary ovariotomy for solid tumour. The only difference and the chief difficulty lay in the nature of the pedicle. The patient has called upon me since the operation and is at present in good health.

Loughborough.

A CASE OF CONGENITAL ABSENCE OF BOTH PATELLÆ.

BY GERALD S. SAMUELSON, M.D. EDIN.,
HONORARY SURGEON TO THE ARMIDALE AND NEW ENGLAND HOSPITAL, NEW SOUTH WALES.

THIS case I examined in the waiting-room of a railway station some twelve months ago; it was that of a girl aged years. She was unable to walk without assistance, but save for a total absence of both patellæ was a well-grown child. The extensor tendon was thin and narrow and lay free over the anterior aspect of the joint towards its insertion upon the tibial tuberosity; the fingers could be approximated under it as under the tendo Achillis and that of the biceps. Winslow's ligament was weak and slack and was readily distended over the posterior aspect upon hyper-extension of the joint. Keeping the thighs horizontal the legs could be hyper-extended through an angle of some 45° whilst flexion was limited to one of about 25°. There was very little lateral movement or rotation of the legs on their long axes. I know the mother's family, who are vigorous farm-folk; there was no morbid history on the father's side. The mother's pregnancy was uneventful; there was no accoucheur at her confinement; she ascribed her daughter's condition to a "maternal impression" but I forget its nature.

Armidale, New South Wales.

NOTE ON A CASE OF PHTHISIS ENGRAFTED ON MITRAL DISEASE.

BY E. CECIL WILLIAMS, M.B. CANTAB.,
PHYSICIAN IN CHARGE OF OUT-PATIENTS, ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN, BRISTOL.

IT is held by many that phthisis and mitral disease do not go together, but it is highly probable that cases are not so rare as is generally supposed. Harris and Beale out of 133 post-mortem examinations found that mitral stenosis was present in three cases. The reason for any such antagonism, if it really exists, does not appear obvious unless it can be explained by the pulmonary œdema due to the mitral stenosis acting in the same way as the passive hyperæmia in cases of tuberculous disease of joints. The following are the notes of the case.

A young woman, aged thirty-two years, had rheumatic fever twelve years ago. The patient was fairly well up till six months ago, when her legs began to swell and she had a cough. She was losing her voice and had night sweats and was losing flesh. On examination of the chest there was found to be a slight falling in of both supra-clavicular fossæ and dulness of both apices on percussion. There was a bad entry of air into both apices and there were rhonchi heard both in front and behind. At both bases there were crepitations due to œdema. The heart apex beat in the sixth intercostal space outside the nipple line; the area of cardiac dulness was not increased. There was a low-pitched presystolic murmur heard at the apex and a systolic murmur conducted into the axilla.

It is probable in this case that the heart would have done its work in a satisfactory way for some years if it had not been complicated by the lung disease; it was only during the last six months that it had exhibited any tendency to fail. As the patient has only recently come under observation it is impossible to state exactly when the phthisis first began; she says, however, that she has been failing for the last eighteen months, and it is just possible that the slow progress of the disease may depend on the presence of the mitral disease. The œdema of the legs has disappeared under treatment and there is no albumin in the urine.

Clifton, Bristol.

STARVATION IN CUBA.—Recent reports received by Surgeon-General Weyman, of the Marine Hospital Service, from Sanitary Inspector Brunner note seven deaths in Havana during one week and also an increase in intestinal diseases due to diminished food supplies; he estimates that two-fifths of the total deaths of the city are due to this cause. The place called Los Fosos set aside for the country people sent to Havana is described as a pest-hole. This is a large wooden building sixty feet by fifty feet standing in an enclosure used for storing the carts of the municipality. Of the 500 persons in this building which is *not* a hospital 200 were found lying on the floor sick and dying; all the children under ten years of age were suffering from enteritis or dysentery and their emaciation was appalling; there is an average of ten deaths daily. The civil hospitals are full to overflowing and are refusing patients. One, the Mercedes Hospital which is capable of caring for 200 patients has now 500 within its walls.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SALFORD ROYAL HOSPITAL.

TWO CASES OF GANGRENOUS STRANGULATED HERNIA; RESECTION OF BOWEL; RECOVERY IN ONE CASE.

(Under the care of Mr. EDMUND T. MILNER)

CASES of strangulated hernia which have become gangrenous are fortunately now more rare than in former years, and as intestinal anastomosis by the aid of Murphy's button is still on its trial a record of its application to this class of case may be deemed to be sufficiently interesting for publication.

CASE 1.—A single woman, aged forty years, the subject of phthisis, was admitted into the Salford Royal Hospital on June 23rd, 1897, suffering from a strangulated femoral hernia on the right side. She stated that she had had a rupture for three or four years, that for many months it had not been entirely reduced (? lymphatic glands), but that she had worn a truss over it. There had not been an action of the bowels for seven days, and vomiting had persisted for five days, becoming stercoraceous two or three days before her admission. The patient had rather a languid look, the pulse was intermittent but otherwise fairly good, and the skin of the groin covering the hernia had assumed a greenish-yellow colour. Under chloroform herniotomy was performed. On opening the sac it was found to contain nothing but a loop of small intestine measuring from four to five inches, the middle half of which had sloughed through its entire thickness, but had not actually perforated. After freeing the constriction the loop of gut was drawn down a little, and in order to prevent escape of fæces a double cord passed through the mesentery was divided, and each tube of intestine firmly ligatured just beyond the seat of strangulation, thus securing healthy bowel for these temporary clamps. The herniated bowel was then cut off below the two ligatures and the two stumps of intestine were well washed. The opening into the abdomen was now enlarged by extending the incision upwards for an inch or more, Poupart's ligament of course being divided. A medium sized Murphy's button was selected. The distal (collapsed) stump was dealt with first. Its end with the ligature was re-amputated, the half button was inserted, and its central tube was tied in the lumen of the intestine, just as one would tie a tube in the mouth of a bag. The proximal (distended) stump was similarly treated after emptying and temporarily clamping the intestine a few inches higher up; the two segments of the button were then pressed home. At this stage it was discovered that the cord securing the male half of the button had been inadvertently tied round the spring flange or buffer-segment instead of round the central cylinder, so that the silk cord interfered with a good apposition of the serous surfaces; a continuous Lembert's suture was therefore inserted beyond the line of junction of the approximated buttons, and lastly the edges of the cut mesentery were united. After closing and dressing the wound the patient's stomach was washed out. Feeding with diluted milk (in tablespoonful doses) was commenced six hours after the operation. The button was not passed till the forty-eighth day, the silk cords still retaining remnants of the annular sloughs. The patient made an uninterrupted recovery so far as the operation was concerned, and that in spite of the fact that the phthisis was accompanied by a troublesome cough with the daily expectoration of from six to eight ounces of nummular sputum. She was discharged from hospital on Sept. 23rd, having been kept in the last month on account of her lung trouble.

CASE 2.—A married woman, aged fifty-one years, was admitted on July 7th, 1897, just a fortnight after the first case, suffering from a strangulated inguinal hernia, with gangrene of all structures even to the skin; the egg-shaped rupture occupied the left labium and measured about seven inches by four inches. There was a history of vomiting and obstruction commencing ten days previously, but so reticent had the patient been that it was left for a district nurse to discover a large tumour of the labium, which was already black from gangrene. On admission to hospital the woman was hardly coherent, and her condition was desperate. Under ether the hernial sac was opened, washed out, and the macerated slough of small intestine, measuring ten or twelve inches, removed; the emerging and returning gut were temporarily ligatured as in Case 1, whilst all the gangrenous tissue—sac, skin, &c.—was dissected away. The largest-sized button was chosen and fixed as before, after allowing the distended bowel to empty itself. The woman rallied for a while, but died early the next morning (about six hours after the operation) from exhaustion.

Necropsy.—The post-mortem examination showed very good repair for the time and a healthy peritoneum; the bowel at the seat of resection readily withstood a pressure of from two to three feet of water without leakage.

Remarks by Mr. MILNER.—The introduction of a ready means of establishing intestinal anastomosis has been an important factor in determining the surgery of gangrenous strangulated hernia. It was formerly a common practice in such cases to be content in the first instance with relieving the obstruction, and to hope that the patient's condition would improve before resorting to a secondary operation for the cure of the inevitable fæcal fistula. Experience has shown that only a small proportion of such cases survive to undergo the second operation, for even of those who recover from the immediate effects of prolonged strangulation many gradually succumb to inanition, especially if the alimentary canal has been cut short high up in the small intestine, so that any readier method of restoring the continuity of the alimentary canal is welcomed which can be effected at the time of the herniotomy, and especially if the operation can be accomplished without skilled help. During both the above operations the senior house surgeon happened to be out, and the junior house surgeon, Dr. Arnison, was fully occupied, especially in the second case, in giving the anæsthetic, so that I had to do the operations single-handed but for some valuable help from the nurses. This was my reason for departing from the more usual method of securing the buttons and adopting what appeared to me at the time the quickest though perhaps more clumsy plan. Still, under ordinary circumstances I would not recommend it, as in both cases I found it necessary to supplement the operation with Lembert's sutures, though in the second case merely to cover in a little exposed mucous membrane near the mesentery. The temporary ligaturing of the bowel I found of great assistance; it enabled me to cut away rapidly the gangrenous portions and to cleanse thoroughly the parts before enlarging the abdominal wound, thus minimising the risk of infecting the peritoneum. In the successful case it is interesting to note that the intermission of the pulse—probably due to toxins—disappeared about the third day. The healing of Poupart's ligament has resulted in a thoroughly firm and sound cicatrix, and the bowels, though at first rather constipated, have since become normal.

ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE.

A SUCCESSFUL CASE OF PYLORECTOMY.

(Under the care of Dr. G. H. HUMB.)

THE operation of resection of the pyloric end of the stomach for malignant disease must always remain one of the most severe operations in surgery. The amount of shock is great and much care is required to bring accurately together the very unequal apertures of the stomach and the duodenum. The recorded mortality is high as might have been expected. Winslow[1] collected 55 cases and of these 41 died from the effects of the operation, a mortality of 74·5 per cent.; Bramer[2] collected 72 cases of pyloroctomy and 55 died, a death-rate of 76·3 per cent.; in Eiselsberg's list of 19 cases from Billroth's clinic from 1885 to 1889 there were 10 deaths; this is equal to a mortality of 52 per cent.[3] Even should the patient survive the immediate dangers of the operation the prospect of a perfect recovery is exceedingly small. In a large majority of the cases recurrence occurs after a few

[1] American Journal of the Medical Sciences. 1885, vol. lxxxix., p. 345.
[2] Centralblatt für Chirurgie, 1885, p. 548.
[3] Archiv für Klinische Chirurgie, 1890, p. 785.

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months or freedom from return of the disease may be more prolonged, but in almost every case recurrence occurs sooner or later. In Wölfler's case the patient had no digestive disturbance for five years, but died five and a quarter years after the operation.[4] We published in THE LANCET about two years ago[5] an account of the death of a patient on whom pylorectomy had been performed nearly five and a quarter years previously; the case had been operated on by Mr. Rawdon, of Liverpool; recurrence was shown by hæmatemesis which occurred three and a half years after the operation. The most satisfactory case of all is a patient under the care of Kocher. She is still alive and in good health with a very good appetite and digestion and now more than nine years have elapsed since pylorectomy was performed for undoubted carcinoma.[6] This is the only recorded case which can be described as probably cured. The following case is well worthy of record, for in operations of such importance as pylorectomy each case should be published whether successful or not, and especially is this case of value as from the great mobility of the pylorus the risk of recurrence is probably not so great as usual. For the notes of the case we are indebted to Mr. John Clay, the surgical registrar.

A woman, aged forty-nine years, was admitted into the Royal Infirmary, Newcastle-upon-Tyne, on June 28th, 1897, giving the following history. A year before admission she began to feel weak and tired and six months later she commenced to be troubled with severe aching pain in the epigastric region, the pain being constant and worse at night and after food. She vomited about once a month, but the vomit was not frothy or large in quantity. On admission she was thin but not emaciated or anæmic, but her nights were much disturbed by the severe pain in the epigastric region. A round hard tumour could be felt in the epigastric region; it was about the size of an egg but not tender, although handling increased the after pain. The tumour was very moveable, it being possible to push it well over to the left of the middle line.

An operation was performed on June 30th. The anæsthetic used was chloroform. After a median incision from the ensiform cartilage to the umbilicus had been made the moveable tumour felt through the parietes was found to be the pylorus which was with ease brought out through the median incision and was packed round with gauze, its upper and lower borders being separated from the lesser and greater omenta respectively; it was impossible to get between the right gastro-epiploic artery and the stomach and the artery had in consequence to be divided. A small hard gland was found in the free border of the lesser omentum. The stomach was divided, the cut end being held in the fingers of an assistant. The duodenum was ligatured by an indiarubber tube and divided; the cut surfaces were very vascular. The posterior parts of the duodenum and the stomach were united with interrupted sutures of catgut passing through all the coats as recommended by Mr. Rutherford Morison, the anterior wall of the duodenum was then divided longitudinally as is done in pyloroplasty, making a larger free edge to suture to the stomach. The front parts of the stomach and the duodenum were then united by interrupted catgut sutures; the stomach having a larger free edge than the duodenum a portion of the free edge of the stomach had to be sutured in a line at right angles to the junction of the duodenum and the stomach. The catgut sutures were then buried by Lembert's sutures of fine silk and the abdominal wound was closed.

The patient made an uninterrupted recovery and was discharged from the infirmary on July 28th feeling well and being able to eat ordinary food. When she was seen on Nov. 1st she looked very well, she had had no pain, and her food was digested without discomfort.

GOVERNMENT CIVIL HOSPITAL, HONG-KONG.

A CASE OF ABDOMINAL HYSTERECTOMY FOR MALIGNANT DISEASE.

(Under the care of Dr. J. M. ATKINSON.)

IN the majority of the cases of carcinoma of the uterus the vaginal method of hysterectomy is to be preferred and most statistics on the subject show a much lower mortality for this operation than for abdominal hysterectomy, but in not a few of the cases the higher operation is the only one available because it is not possible to pull down the uterus satisfactorily. There is but little to choose between the operations so far as the chance of recurrence is concerned.

A woman, aged forty years, was admitted on July 21st 1897, to the Government Civil Hospital, Hong-Kong, suffering from malignant disease involving the cervix and the posterior part of the vagina. The patient was married when she was eighteen years of age, and had had five children born alive and three premature confinements, the last of which occurred on May 23rd in this year, and was complicated with a placenta prævia. For the last eight months she had been losing weight, and had suffered from occasional attacks of menorrhagia; latterly the discharge, in addition to being sanguineous, was particularly offensive. Examination by the vagina showed the presence of a hard mass growing from the cervix uteri and extending backwards involving the posterior wall of the vagina. The growth sprouted into the vagina, the outgrowths being very soft, breaking down with the least pressure and bleeding profusely. As the uterus was fixed, and it was impossible to draw down the cervix with volsella, the abdominal operation was decided upon.

The operation was performed on Aug. 8th, Dr. Jordan, Mr. Bell and Dr. Swan assisting. Chloroform was the anæsthetic used. An incision was made in the middle line some four inches in length, this was prolonged upwards to allow of more room. The uterus was drawn out of the abdomen. After ligaturing the ovarian vessels, the pampiniform plexus, and the uterine vessels the broad ligament was divided along the brim of the pelvis; this having been completed on both sides the peritoneum was incised transversely in the vesico-uterine fold and reflected backwards for a short distance on the uterus; the peritoneum was incised similarly in the recto-uterine fold. The whole of the uterus with its appendages and the growth were then removed by incising the vagina in front of the external os. The growth was found to involve the posterior wall of the vagina and the tissues round about; this was removed as far as possible by dissection. After securing all the bleeding points the cut surfaces of the peritoneum were brought together by fine sutures, and after carefully sponging and cleansing the peritoneum the abdominal wound was closed, the vagina being packed with iodoform wool.

As the patient was somewhat collapsed three minims of the hypodermic solution of strychnine were injected hypodermically, and in the evening a sixth of a grain of morphia was injected. She passed a fair night and there was no vomiting. On the 9th the temperature at 6 A.M. was 100·4° F. and the pulse was 118; at 4 P.M. the temperature was 101°; and at 8 P.M. 100·4°, the pulse being 126. As there was considerable pain a sixth of a grain of morphia was given. On the 10th the temperature at 8 A.M. was 100·6°, at 6 P.M. 99·8°, and at 12 midnight 99°. The abdominal wound had practically united by first intention. The temperature kept below 100° until the evening of the 13th, when it rose to 101·8°, the cause being a stitch abscess in the upper part of the abdominal wound. On removing two stitches the tension was relieved and the temperature next morning was 100°. She now steadily improved until the 20th, when her temperature was normal all day. She was practically convalescent by the 26th, but was detained in the hospital for a few weeks longer on account of an attack of malarial fever. She was finally discharged on Sept. 26th, having put on 3 lb. in weight during the last two weeks.

Remarks by Dr. ATKINSON.—I have recorded this case as it shows what can be done in the way of abdominal surgery even in the middle of a trying summer in the tropics. This was evidently a case of rapidly growing medullary carcinoma, as nothing was observed at the last confinement in May. On examining the uterus after removal the growth was found to have extended to the body of that organ.

[4] Chirurgische Operationslehre, von Th. Kocher, third edition, 1897, p. 178.
[5] THE LANCET, July 13th, 1895, p. 92.
[6] Loc. cit., p. 179.

LIFE ASSURANCE MEDICAL OFFICERS' ASSOCIATION.—The following have been recommended by the Council as officers for 1898:—President: Dr. Herman Weber. Vice-Presidents: Dr. Charles E. Hoar and Dr. T. Glover Lyon. Treasurer: Dr. C. Theodore Williams. Council: Sir Hugh Beevor, Bart., M.D Lond., Dr. Robert W. Burnet, Dr. T. Colcott Fox, Dr. G. A. Heron, Dr. F. de Havilland Hall, Dr. J. F. Payne, Dr. J. E. Pollock, Dr. G. Vivian Poore, and Sir R. Douglas Powell, Bart., M.D. Lond. Secretary: Dr. Hector W. G. Mackenzie.

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Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Experimental Atrophy of the Kidneys—Human and Equine Glanders—Negative Action of Sewer Air in Raising the Toxicity of Non-Virulent Diphtheria Bacilli.—Cyst of Cæcum—Pleomorphism of the Colon Bacillus.—Calcification of the Mitral and Aortic Orifices.—Exhibition of Specimens.

A MEETING of this society was held on Dec. 7th Dr. J F. PAYNE, the President, being in the chair.

Dr. J. ROSE BRADFORD read a preliminary note on Experimental Atrophy of the Kidney caused by Obstruction of the Ureter. The experiments were performed on dogs. The ureter was ligatured in two places near the bladder through an incision in the groin and divided between the ligatures. After an interval varying from ten to forty days the distended ureter was exposed, brought to the surface of the abdominal wall, sutured to the skin and drained, about from 50 to 70 c.c. of fluid being evacuated corresponding to a distension of the kidney to the size of the fist. The fluid was clear in nine cases and purulent in three. The animals were killed by prussic acid at periods varying from seven to fifty days after the second operation, the kidneys being removed at once and placed in Muller's fluid. On examining them it was found that atrophy had ensued. The kidney had resumed its normal shape, but was only one-third or one-fourth of its normal size. The naked-eye appearance of the cortex and medulla was so little altered that it was difficult to believe that it had ever been dilated to the extent that was proved by the amount of fluid which escaped when the ureter was drained. The length of time during which drainage was allowed to go on before the animal was killed did not appear to have much influence on the amount of atrophy. The exact composition of the fluid which drained off was not yet thoroughly worked out. Microscopically the kidneys showed no general cirrhosis. Some of the tubules had disappeared and in others the epithelium had in part been shed, but the main cause of the atrophy was the crowding together of the tubules and more especially the small size of the cells lining them. These cells had lost all their granules, their protoplasm being clear and glass-like, while the nuclei stained well. The appearances were those of "resting cells."—Mr. T. W. LAWRENCE gave a lantern demonstration of photographs showing the microscopic changes produced in the renal structure in the dogs experimented on.

Dr. F. W. ANDREWES and Mr. JAMES BERRY showed the Nose and Neighbouring Parts and also the Lungs from a case of Human Glanders. The patient from whom they were taken was a man who was not known to have had anything to do with horses. Ten days before death he noticed a swelling of one eyelid which was supposed to be an ordinary cellulitis. The day before death profuse discharge from the nose occurred. In the mucous membrane of the nose and antrum there was a number of small yellow tubercles, some of which had coalesced and softened, leaving an ulcerated surface. There was some ulceration in addition on the lips and palate. There were also the scars of old syphilitic mischief on the palate. The lungs were studded with small yellow nodules partly on the surface, partly in the deeper parts, not unlike multiple pyæmic abscesses, but harder and not breaking down in the centre. There were a few small round tubercles in the skin in front of the shoulder. Cover-glass preparations showed the presence of the glanders bacillus and this was confirmed by cultures and by the demonstration of the bacillus in the diseased tissues.

Dr. JOHN MCFADYEAN showed recent specimens and lantern slides illustrating the characteristic appearances of Equine Glanders. He described fully the appearances of the lungs and said that in the majority of cases the deposit was in the form of masses which went by the name of "glanders tubercles," which differed from true tubercles in being less numerous and harder to the touch. On section they were often grey and translucent, with a whitish opaque centre and were usually surrounded by a hæmorrhagic zone. The lung tissue between the nodules was often absolutely normal.—Dr. BRADFORD asked whether there were any abscesses in the muscles in Mr. Berry's case. Some years ago there were three cases admitted into University College Hospital and in those there were multiple abscesses in the centre of the muscles.—Mr. BERRY, in reply, said that no muscular abscesses were found, nor had softening taken place in any of the other nodules.

Mr. S. G. SHATTOCK read a paper on the Negative Action of Sewer Air in Raising the Toxicity of Non-Virulent Diphtheria Bacilli. He remarked that it had at different times been surmised that some causal relationship subsisted between defective drainage and outbreaks of diphtheria—i.e., that the inhalation of sewer air determined the occurrence of diphtheria. By some it had been thought enough in refutation of such a view to point out that the diphtheria bacillus could not be conveyed in sewer air seeing that bacilli are not disengaged by evaporation from the fluids in which they are growing. What is conceivable, however, is that a non-virulent diphtheria bacillus such as is present in the throat of many individuals might in consequence of the inhalation of sewer air regain its virulence and become the cause of a diphtheritic lesion which except for this factor would not have arisen. Having for some time had this possibility in mind Mr. Shattock had put it to the test and though the results were negative they might be of interest, though he did not think they exhausted this question. Two samples of diphtheria bacilli were tested. They were derived from cultures made by Dr. F. W. Andrewes, who had examined them with Professor Kanthack, and they presented the morphological characters of diphtheria bacilli, although upon guinea-pigs their subcutaneous injection was followed by local swelling only. Mr. Shattock had, moreover, tested them on 1 per cent. glucose broth, to which they imparted in twenty-four hours a characteristic acid reaction. The cases from which they came presented clinically the signs of ordinary sore-throat. Before commencing the experiment Mr. Shattock had for several days carried the bacilli from broth tube to broth tube (prepared from fermented veal) in order that any toxicity they possessed might be raised to its acme. When tested upon guinea-pigs they were found to be still non-virulent. The method of experiment consisted in growing the bacilli in Duclaux flasks of broth over the surface of which medium sewer air was continuously and slowly drawn by means of a water pump. The flasks were renewed about every three days for several weeks, the inoculation being made from each pair to its two successors. The main sewer was found to be so well ventilated that no "sewer air" could be got from it. It was necessary therefore to improvise a badly drained sewer and this was done by drawing air over sewage stored in two tanks and afterwards through sewage in a capacious Wolff's bottle in the hot room itself; the tube from the latter was conducted to the Duclaux flasks. From time to time fæces were added to the sewage so that a continuous supply of fæcal air was thus obtained. This addition had the effect of considerably retarding the growth of the bacilli for some days. One bacillus was cultivated in this manner for two months, the other for five weeks. From the first flask in each case after growth was pronounced a test-tube of broth was inoculated and twenty-four hours later the cultures in the tube were tested by means of 2 c c. injections given subcutaneously to guinea-pigs. The bacilli had remained non-virulent.

Mr. C. A. MORTON showed a specimen of a Cyst of the Cæcum. The cyst was attached at the opening of the vermiform appendix with which it communicated by a very fine aperture. The appendix was adherent to the cæcum and its walls were thickened. The cyst and the appendix were removed. It was then found that the cyst had a thick muscular wall and contained a rich amber-coloured jelly and was lined by a definite membrane on which were some calcareous plates. Mr. Morton found it difficult to account for the formation of the cyst as it was not covered by the mucous membrane of the cæcum as would have been the case if it had been due to an obstruction of the orifice of the appendix.

Mr. H. C. HASLAM read a paper on Pleomorphism of the Colon Bacillus in which he endeavoured to find some of the causes of the variations in size and shape which occur so extensively in different cultures of the bacillus coli communis. He grew the bacillus on certain pure substances, on peptone, albumin, glucose with only a minute amount of nitrogenous matter, ammonium tartrate, and leucin. He found that the organism varied in size, shape, and structure according to its medium. On proteid the bacillus was pleomorphic, of length generally between 1 μ and 2 μ. In structure the organism was not uniform, the ends of the bacillus appearing darker and slightly granular while the body was translucent and homogeneous, and these ends

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stained deeper than the bodies. This appearance was always associated with alkalinity of the medium and in neutral or acid media is far less marked. On glucose short coccus-like forms were in the majority; on ammonium tartrate, a highly nitrogenous material, the forms were longer, varying from 2·5 μ to 1 μ. On leucin, a substance containing a less amount of nitrogen, the forms were smaller again. And if in a glucose solution the nitrogenous matter was increased an increase of longer forms took place.

Dr. F. PARKES WEBER showed a Heart in which the aortic orifice was stenosed and rigid from calcification. The mitral valves were likewise thickened and calcified. There was great hypertrophy (the weight was twenty-four ounces) chiefly of the left ventricle. The main interest in the case depended on the physical signs observed during life. The fact that the cardiac dulness reached higher up on the right than on the left of the sternum suggested aneurysm, but in other respects the clinical features of the case were those of an extreme instance of "pure aortic stenosis" associated with persistent bradycardia and more or less permanent dyspnœa with occasional syncopal attacks. The systolic murmur was loudest over the second and third intercostal spaces to the right of the sternum; it could be easily heard without a stethoscope if the ear were placed within an inch or two of the chest wall and was accompanied by a harsh thrill and slight (non-expansile) pulsation. The frequency of the heart's action remained between 44 and 48 beats in the minute, unaltered by exercise or by drugs. The patient, who had lived an active life, had suffered from syphilis when seventeen years of age, but had never had rheumatic fever. He had been told that he had heart disease several years ago, but had enjoyed tolerable health till the year preceding that of his death. Dropsy and signs of increasing cardiac failure appeared at the last. In one of the coronary veins was an adherent, red, comparatively recent thrombus.—The PRESIDENT remarked that he had seen two cases in which the murmur was audible at some distance from the bed. In neither was there an aneurysm.

The following card specimens were exhibited by Mr. CECIL F. BEADLES: (1) Primary Sarcoma of the Liver; and (2) Tumour of the Suprarenal Capsules.

OBSTETRICAL SOCIETY OF LONDON.

Pyometra complicating Cancer of the Cervix.—Obstruction of Labour by Ovarian Tumours in the Pelvis.—Exhibition of Specimens.

A MEETING of this society was held on Dec. 1st, Dr. C. J. CULLINGWORTH, President, being in the chair.

Dr. WALTER W. H. TATE read a paper on three cases of Pyometra complicating Cancer of the Cervix. According to Bürkle's statistics, compiled from German operators, pyometra occurred as a complication of cancer of the cervix in 17 out of a total of 273 cases, giving a percentage of 6·2. Dr. Tate had met with this condition in 3 out of 28 cases of vaginal hysterectomy for cancer of the cervix. Case 1.—The patient was a widow, aged sixty years, who had had nine children. The menopause occurred at the age of forty-five years. There was a history of slight discharge, occasionally bloodstained, for two years, which had become offensive in character for the last six months. The cervix was greatly enlarged and infiltrated with cancer which formed a large mass filling the upper part of the vagina. Vaginal hysterectomy was performed on July 9th, 1897; the uterus contained three or four ounces of most fœtid pus. The patient recovered. Case 2.—This patient was a married woman, aged sixty-one years, who had had nine children. The menopause occurred at the age of forty-five years. There was a history of slight blood-stained vaginal discharge for nine months, more profuse for three weeks before admission to hospital. The cervix was hard and infiltrated with cancer; there was a shallow ulcer around the external os. The uterus was not apparently enlarged. Vaginal hysterectomy was performed on July 30th, 1897; the cervical canal was practically occluded and the uterus distended into a sac which contained about three ounces of very fœtid pus. The patient recovered. Case 3.—This patient was a married woman, aged sixty-five years, who had had seven children. The menopause occurred at the age of forty-one years. There was occasional blood-stained discharge for four years at intervals of a fortnight; for five weeks before admission the discharge was purulent and offensive. The cervix was enlarged and very hard, with an irregular ulcerated surface towards the vagina which bled very freely. On examination the body of the uterus was found to be enlarged and elastic, obviously containing fluid. Vaginal hysterectomy was performed on Aug. 26th, 1897. The uterus contained three and a quarter ounces of very fœtid pus. The patient recovered.—Dr. LEWERS said he had had sixty-seven radical operations for cancer of the uterus; excluding ten of these which were cases of cancer of the body of the uterus there remained fifty-seven operations for cancer of the cervix. Among these he had met with two examples of pyometra, the larger of which he had shown before the society. In that case he removed the whole uterus not on account of the pyometra but because the growth had spread so high that it seemed easier to get well beyond it by complete hysterectomy.—Dr. AMAND ROUTH thought that the fact brought out so well by Dr. Tate that cases of pyometra could exist without stenosis of the cervix was of great importance and enabled one to explain those cases of hydrometra and gushes of large quantities of clear, straw-coloured fluid which were not uncommon after the menopause. Many of such cases had no obstruction of the cervix and no tubal swelling was present. With regard to the two cases of vaginal hysterectomy where the surrounding tissues were already apparently involved he said it was impossible to be sure that such indurations were malignant and not inflammatory.—After remarks by Dr. LEA and Dr. HERMAN, Dr. TATE replied.

Dr. R. G. MCKERRON read a paper on the Obstruction of Labour by Ovarian Tumours in the Pelvis. This paper dealt only with those cases where the ovarian tumour occupied the pelvis during labour. One hundred and eighty-three instances of this complication had been collected. These were arranged in nine tables according to the treatment adopted. Two unpublished cases were detailed. A brief reference was then made to the various publications on this subject. It was pointed out that there still existed as evidenced in the more recent publications a divergence of opinion as to the most satisfactory treatment. The results of the various methods were analysed. To avoid the erroneous deductions to which mere statistical enumerations were liable account was taken where the data permitted of the character of the tumour, of the duration of labour, &c., points which would be found noted in the tables. Attention was directed to a few features of interest in the clinical histories of the cases. Practical observations were made on the various methods of treatment based on a study of the cases and of the literature of the subject. Reposition should in all cases be first attempted; where it failed a selection, according to circumstances, must be made from the following operative measures: puncture, Cæsarean section, abdominal or vaginal ovariotomy. The indications for each of these methods were given. Dr. McKerron concluded with a brief reference to the after treatment in those cases where the tumour had not been removed during labour.

The discussion on the paper was adjourned.

The following specimens were exhibited:—

Dr. MCKERRON (for Dr. WILLIAM STEPHENSON): A Peculiar Mucous Polypus of the Cervix Uteri.

Dr. MACNAUGHTON JONES: (1) Notes of a case of a Double Pyosalpinx with Enlarged Bladder; and (2) Uterine Fibroids.

Dr. DAUBER: Carcinoma of the Body of a Uterus, also Affected with Multiple Fibromyomata, removed by Abdominal Pan-Hysterectomy.

Dr. ARNOLD LEA: Microscopic Sections of Uterine Mucous Membrane immediately before and after Menstruation.

HUNTERIAN SOCIETY.

Chronic Dry Catarrh of the Middle Ear.—Value of the Microscopical Examination of Uterine Curettings.

AN ordinary meeting of this society was held at the London Institution on Nov. 24th, the President, Dr. G. E. HERMAN, being in the chair.

Dr. DUNDAS GRANT read a paper on the Diagnosis and Treatment of the Varieties of Chronic Dry Catarrh of the Middle Ear. He pointed out that there were essentially two different forms, one of the nature of an adhesive process resulting from a previous exudative catarrh and the other an

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apparently primary adhesive process without evidence of any previous exudation. The former or exudative form arose by extension of the inflammation from the naso-pharynx through the Eustachian tubes; the latter or sclerotic was essentially a primary arthritis of the stapedio-vestibular articulation and had a tendency to involve labyrinthal structures. In the exudative form there was evidence of nasal disease and narrowing of the Eustachian tubes and the drum membrane was indrawn. In the sclerotic form the nose, Eustachian tubes, and membrane might be perfectly normal in appearance. In regard to diagnosis chronic dry catarrh of the middle ear had to be distinguished from an affection of the auditory nerve by the fact that the hearing by bone conduction was better than by air conduction and usually better than normal and that the loss of hearing power was greatest for deep tones. In nerve deafness bone conduction was less than air conduction and less than normal, while the loss of hearing was most marked as a rule for high-pitched tones. The diagnosis of chronic dry catarrh of the middle ear having been established the sclerotic form was to be distinguished from the exudative by its insidious onset, the very early occurrence of tinnitus aurium, the marked hereditary element, the absence of any distinct history of catarrh, the normal appearance of the nose and tympanic membrane, patency of the Eustachian tube on auscultation during inflation, and the improvement in the symptoms on inflation. The sclerotic form was more frequent in the female sex; it sometimes started at puberty and there was considerable evidence of its getting worse after the birth of children. There was possibly a bone change analogous to the osteophytic plates described by Moreau and Ducrest as occurring on the inner surface of the skull of women who died in child-bed. In other cases it was probably of an osteo-arthritic nature and occasionally syphilitic. In many, however, no cause could be made out and from the diminution of sensation in the membrane and the interior of the tympanum, as well as from the atrophy of nerves found in microscopical examination, it was possible that it was of the nature of a trophic neurosis. The prognosis was generally unfavourable and more especially in the sclerotic form. It was relatively favourable, &c., in proportion as the deafness depended upon narrowing of the Eustachian tubes, which was fairly amenable to treatment. Treatment in the exudative form was to be mainly directed towards the nose, naso-pharynx, and Eustachian tubes. The judicious use of Politzer's inflation, the Eustachian catheter, and above all the injections of liquid vaseline and the passage of solid or hollow bougies for the dilatation of the Eustachian tubes were of the utmost value. In the sclerotic form operations on the nose were on no account to be recommended. Injections and inflations did more harm than good. Massage of the tympanum and rarefaction of air in the external meatus was often the means of producing some improvement. Dr. Grant had considerable hopes of advantage from the adoption of general treatment appropriate to the dyscrasia, whether syphilitic or osteo-arthritic. He had seen benefit in the latter class of case from residence at Aix-les-Bains and in all cases a high altitude seemed advantageous.—Dr. KELSON asked if Dr. Grant believed that some of the tinnitus and vertigo might be relieved by application of chromic acid as recommended by Dr. Woakes and whether he would advise repeated inflations if the first proved unsatisfactory.—Dr. F. J. SMITH drew attention to the possible relationship between sclerosing otitis and the disease known as osteo-arthritis. He had not noted any particular frequency of deafness amongst the sufferers from the joint trouble.—Sir HUGH BEEVOR referred to a case of a young woman suffering from subacute rheumatoid arthritis who mentioned deafness occurring as part of the disease.—Dr. FORTESCUE FOX doubted if there was any frequent association of this affection with rheumatoid arthritis proper—at all events, in young females who were the most frequent sufferers from arthritis. On the other hand, chronic catarrh of the middle ear seemed to be relatively common in gout in which all other catarrhs, moist and dry, are met with. If a constitutional state of this kind underlies the catarrh one might hope that sufficiently early treatment would be effectual.—Dr. HERMAN asked as to the value of oxygen in a vaporiser and referred to the use of chromic acid by Dr. Woakes in the cases of hypertrophied mucous membrane of the nose. He spoke also of arsenic and its value.—Dr. DUNDAS GRANT replied.

Mr. TARGETT then read a paper on the Value of the Microscopical Examination of Uterine Curettings based on the results of the examination of more than 200 specimens during the past twelve months. The material consisted chiefly of fragments of tissue removed by operation from the uterus, but included with these were a few other specimens evacuated from the uterus or vagina the nature of which could only be determined by the microscope. A sketch of the routine method of investigation was given and the importance of certain details emphasised. The results of these 200 examinations were classified as follows: 1. Endometritis and endocervicitis represented 42 per cent. of the cases. In the large majority of these instances the clinical symptoms were suggestive of malignant disease and the examination was necessary to settle the diagnosis. 2. Malignant disease of all kinds constituted 32 per cent.; a few doubtful cases—probably malignant—had been included in the previous class with the exception of three (two being sarcomata and one deciduoma malignans). All these growths were carcinomata of the squamous or columnar-celled types. 3. In twenty-one instances—10 5 per cent.—the material consisted of degenerated placental tissue and as many of these cases had been suspected of malignant disease the value of a microscopical examination indicating the line of treatment was clearly demonstrated. 4. Sixteen—or 8 per cent.—of the specimens were classified as "membranes" and of these eight had the structure of a true decidual cast of pregnancy and four were menstrual in origin. Of the remainder two were fibrinous and two vaginal casts, the latter being composed entirely of epidermis shed from the surface of the vagina due to the use of too astringent injections. 5. On fourteen occasions—7 per cent.—nothing but blood clot was found which was partly due to want of proper care in collecting the curettings at the time of operation. In several instances the clot was partially decolourised having evidently been retained in the cavity of the uterus. The paper was illustrated by a series of microscopical sections.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

Partial Suppression of Teeth in a Monkey.—Composite Odontome.

THE usual monthly meeting of this society was held at 40, Leicester-square on Dec. 6th, Mr. W. E. HARDING, President, being in the chair.

Mr. C. S. TOMES read a paper on Partial Suppression of Teeth in a very Hairy Monkey (*Colobus caudatus*). The specimen he referred to is in the Natural History Museum at South Kensington. The abnormality of the teeth at first sight suggested that the monkey under observation might represent a distinct species, but a close study of the teeth and the absolute identity of the skin with that of other specimens showed that it was an instance of reduction accidental in the individual, and as far as is known it is the only recorded example of great reduction in the teeth of a monkey. Mr. Tomes pointed out that in the human subject partial suppression of teeth has been found associated with redundant hair and also with paucity of hair, and hypertrophy of the teeth has been met with in at least one case of redundant hair—namely, in the case of Julia Pastrana, whose face was covered with hair—so that in the human subject all it was possible to state was that abnormality in hair is apt to be accompanied by abnormality in development of teeth. In the monkey under consideration the abnormality of the teeth was quite independent of any abnormality of hair, the animal having a similar amount to that usually seen in specimens of the same species. The reduction in the number of teeth consisted in the suppression of two pre-molars upper and lower on the right side and one pre-molar upper and lower on the left side. No incisors upper or lower were present in the jaws, but the appearance of the alveolus indicated that they may have been present although they must have been very small. The maxilla and mandible of the monkey were much reduced in size, but the remaining bones of the skull appeared to be of normal size in comparison with specimens of the same species.

Mr. W. R. BARRETT read the notes of an interesting case of Composite Odontome occurring in a Human Subject aged twenty-three years. The patient was a male and the odontome was situated in the mandible on the right side in the position of the second molar. The mass, which was rough

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and nodulated, measured ⅛ in. in antero-posterior diameter, about ¾ in. from above downward and 1/16 in. across, and it weighed 102½ gr.

Mr. G. THOMSON referred to the question of Chloroform in Dentistry, the discussion being continued by Dr. HEWITT, Mr. BALDWIN, Mr. J. F. COLYER, Mr. TOMES, Mr. ROBBINS, and Mr. WOOD.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Acromegaly.—Symmetrical Nodes of the Radii in Women.—Stricture of the Œsophagus associated with Stricture of the Pylorus in the same patient.—Depressed Fracture of the Skull.—Ulcerative Purpura of the Legs.—Skiagrams and Pathological Specimens.

A MEETING of this society was held on Dec. 3rd, Dr. H. P. POTTER, President, being in the chair.

Dr. J. B. BALL showed a case of Acromegaly in a woman, aged fifty-one years. Menstruation ceased about twenty years ago and then gradually the facial features, hands, and feet began to enlarge. There was no retro-sternal dulness and the thyroid gland appeared to be of normal size. Headaches occurred but there were no ocular symptoms. The urine contained a little sugar. No specific treatment had been adopted.

Dr. SEYMOUR TAYLOR showed three cases of Symmetrical Nodes of the Radii in women. All the cases were of a syphilitic nature and two had other signs of syphilis. The symmetry was interesting and it was the lower sixth of the shaft of each radius which was affected. There had been much improvement under iodide of potassium and Dr. Taylor advocated the use of this drug in small doses at the commencement, instancing the fact that if a large dose be given to start with much iodide is excreted rapidly in the urine.—Mr. SWINFORD EDWARDS remarked that he had had very beneficial effects in nodes on the forehead from the use of iodide of sodium combined with carbonate of lithium.—Dr. CHAPMAN said he habitually gave the sodium salt.—Dr. MORGAN DOCKRELL thought that two of the cases were undoubtedly of acquired syphilis but that the third was probably of syphilis derived from the fœtus in utero. He advocated very large doses of the iodide.—Mr. J. R. LUNN, Dr. MANSELL MOULLIN, and Dr. A. WHITFIELD also discussed the cases and Dr. SEYMOUR TAYLOR replied.

Mr. C. B. KEETLEY showed one case of Stricture of the Œsophagus associated with Stricture of the Pylorus in the same patient and instanced another similar case. Both cases were the outcome of the swallowing of hydrochloric acid. In one case Mr. Keetley had performed Loreta's operation with marked success, but the other patient died before an operation could be undertaken. He alluded to the opinion he had formed that the stricture of the pylorus, which was organic, had really produced a spasmodic stricture of the œsophagus in much the same way as a stricture of the urethra may affect higher parts of the urinary tract. He insisted on early operative interference as soon as symptoms showed themselves.—Mr. J. R. LUNN alluded to cases which had been under his care. He was not in favour of Loreta's operation.—Dr. J. B. BALL also made some remarks.

Mr. MCADAM ECCLES showed a boy whom he had trephined for a compound Depressed Fracture of the Frontal Bone and alluded to another case of a simple depressed fracture also of the frontal bone. He advocated the replacement of bone in all cases where there was no septic infection of the same, but doubted the advisability of doing so if there was a suspicion of not being able to secure asepsis.—Mr. BRUCE CLARKE alluded to a case in which he had removed fouled bone and washed it and afterwards replaced it, primary union following.—Mr. KEETLEY preferred the use of a chisel and mallet to a trephine.

Dr. A. WHITFIELD showed a girl, aged eighteen years, with Ulcerative Purpura of the Legs.

Dr. F. H. LOW exhibited a large and interesting collection of Skiagrams chiefly illustrating the detection of foreign bodies in the tissues.

Mr. ERNEST CLARKE showed some beautifully prepared Ophthalmic Specimens of pseudo glioma, displaced lens, &c.

Dr. SEPTIMUS SUSDERLAND exhibited a Dermoid Cyst from an Ovary removed by laparotomy.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

Complications of Scarlet Fever.—Leucocytosis.—Respiration, Normal and Abnormal.

A MEETING of this society was held at the Royal Kent Dispensary on Dec. 3rd, Mr. W. ARBUTHNOT LANE, the President, being in the chair.

Dr. SCHOLEFIELD read a paper on Some Complications of Scarlet Fever, in which he pointed out chiefly the characteristics of the so-called diphtheritic throat in the acute stage of scarlet fever. He showed (1) that it neither spreads to the trachea and larynx nor produces paralysis afterwards, nor does it infect other patients in the same wards who are convalescent from scarlet fever; and (2) that diphtheritic outbreaks among scarlet fever convalescents present quite different characters and are much more frequent where both diseases are admitted to the same hospitals, cross infection thus being rendered possible. He regarded the white patches as being purely streptococcal in origin. Rheumatism, albuminuria, and septic bronchitis were discussed, and nasal feeding was recommended for patients who swallow with difficulty and cough after the administration of fluids by the mouth.—The paper was discussed by the PRESIDENT, Dr. BOWEN WILLIAMS Dr. TAYLOR, Dr. PURVIS, and Dr. HERSCHELL.

Dr. HERSCHELL read a paper on Leucocytosis as an Aid to the Differential Diagnosis of Diseases of the Digestive Organs. He said that there was an increase in the number of white corpuscles in many conditions such as in inflammation, suppuration in any part of the body, absorption of toxins, and in most infective diseases except typhoid fever and tubercle. Besides materially assisting in the diagnosis between the chronic affections of the stomach, the counting of the leucocytes in the blood is of immense assistance in estimating the gravity of appendicitis. A small leucocytosis passing off after a few days showed that the affection was slight and limited in extent. A large leucocytosis maintained without change for a week showed that there was an extensive collection of pus walled in which had no tendency to be absorbed and that operation should take place without delay. A leucocytosis increasing from day to day showed that the disease was extending and that the patient was in danger and should undergo an operation at once. Cases of appendicitis in which a diagnosis could not be made have been reported in the medical journals, but if the blood had been examined there would have been no difficulty.

Mr. MAYO COLLIER read a paper on Respiration, Normal and Abnormal, in which he emphasised the need of making a thorough examination of the nose and throat in all respiratory affections.

KIDDERMINSTER MEDICAL SOCIETY.

Exhibition of Cases.

A MEETING of this society was held at the Kidderminster Infirmary on Nov. 26th, Mr. S. STRETTON, President, being in the chair.

Mr. LIONEL STRETTON showed:—1. A girl, aged twenty-five years, suffering from Chronic Rheumatism with Plastic Effusion around some of the Joints. She was first attacked with rheumatism about twelve months previously when she had an acute attack lasting about a fortnight. About six months after the attack the joints began to enlarge and had remained so since. The interphalangeal joints of both hands were swollen and slightly flexed, both wrists were swollen and stiff, and so also was the left elbow-joint. Around the first interphalangeal joints of the fingers there was a considerable amount of exudation giving them a peculiar appearance. Various forms of treatment had been tried without benefit. 2. A girl, aged four years, was admitted to hospital on Sept. 4th. She had fallen down with a glass in her hand causing a jagged wound in the palm and on examination it was found that the whole of the structures down to the metacarpal bones were divided. It was necessary to make an extensive dissection to divide the annular ligament and follow the tendons up the forearm in order to secure the proximal ends of those divided but after a tedious operation these and the nerves were all approximated. The wound healed without any trouble and there was very fair movement of the fingers. 3. A youth, aged seventeen years, who had had an

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Undescended Testicle in the Left Inguinal Canal. In August last the canal was opened and the testicle was dissected out and pulled down to the scrotum where it was fixed with a suture. It remained in its position and showed no signs of atrophy; indeed it was considerably larger than the opposite one and could be moved about in the scrotum as in the normal condition.

Dr. EVANS showed a man upon whom he had performed Excision of the Elbow-joint for disease following an accident. The man who was a farm labourer found that he could do his work almost as well as before the accident.

Mr. W. H. MOORE showed a woman suffering from Ataxic Symptoms of an Obscure Nature which he thought might be due to a small tumour in the cerebellum.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Forceps and Forceps Mortality.—Vaginal Section versus Abdominal Section.—Phenacetin.

A MEETING of this society was held in the Medical School, Sheffield, on Nov. 19th, Dr. BRIGGS, President, being in the chair.

Dr. MACFIE CAMPBELL (Liverpool) read a paper on Forceps and Forceps Mortality in which he maintained that delivery by means of instruments was not more common among the poor than among the rich, that the amount of disease or injury was not increased by their use, and that the risk to mother and child was not increased. The use of forceps in general practice was largely a question of whether chloroform was employed or not, for if it was then forceps would be more recognised in upper-class practice. By that he meant the low operation, and while his own percentage of forceps deliveries was 29 per cent. four-fifths of these were low operations. As for disease and injury he thought the gynæcologist was in the present day employed more than formerly because he could do more, not because there was more to be done. That laceration of the perineum occurred in 85 per cent. of cases of forceps delivery according to Münchmeyer he doubted from his own experience in which he sutured every case, even the slightest. The diminution of cases of vesico-vaginal fistula was noted by more than one observer, among whom might be quoted Dr. Playfair. Of 107 primiparous forceps cases Dr. Campbell had lost one mother, a craniotomy case, and four children three of whom were twins; while of 230 forceps cases (taken altogether) he lost three mothers (two craniotomies and an eclampsia) and nine children.

Dr. WALTER (Manchester) made some remarks on the relative advantages of Vaginal Section *versus* Abdominal Section. He also exhibited a Dermoid Ovarian Cyst removed by Vaginal Section and a Piece of Glass Drainage-tube removed by Vaginal Section on the fourth day after Ovariotomy.

Dr. LLOYD ROBERTS (Manchester) recommended Phenacetin as an alternative to opium for the relief of pain in cancer of the uterus, rectum, and mammary gland. It did not produce gastric disturbance or constipation. In severe cases the amount required was 30 gr. in twenty-four hours given dry and washed down with a little cold water.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Retained Placenta after Abortion.

A MEETING of this society was held on Nov. 25th, the President, Dr. SINCLAIR WHITE, being in the chair.

Dr. COCKING showed a boy, aged six years, suffering from Cerebral Tumour. The history of the illness was as follows: In February, 1897, there was severe headache accompanied by vomiting for six weeks, in April weakness of the left arm (gradual onset), in June gradual loss of sight, and in August gradual weakness of the left leg. The patient's condition when shown at this meeting was as follows. There were commencing optic atrophy (post papillitic), left hemiplegia the arm, leg, face, and tongue (slightly) being affected; the deep reflexes were exaggerated and the superficial were diminished on the left side; there was no loss of sensation, no headache or vomiting; the patient had never had convulsions; there was no albuminuria, tuberculosis, syphilis, rheumatic fever, ear disease or injury. There was nothing in his family history.

Dr. BURGESS showed: (1) a mother and child and two sisters, all suffering from Congenital Heart Disease; (2) a case of Xanthoma Multiplex with, among other features, multiple periosteal swellings along the edges of the ulnæ and tibiæ; and (3) a man who had for thirteen years with remissions and exacerbations exhibited frequent and varied Movements of the Face, Head, and Limbs. The movements though apparently voluntary were denied to be so, and as far as could be ascertained there was no motive for making them.

Dr. PORTER showed a specimen of a Heart with well-marked Stenosis of the Pulmonary Valve. The patient was twenty-nine years of age and the affection was congenital. He had, however, continued work up to a few weeks before death which occurred from pulmonary tuberculosis. He had no cyanosis and no clubbing of the fingers, and until a few months before death he had only complained of shortness of breath. The physical signs consisted of the single systolic bruit and thrill over the pulmonary artery conducted towards the left clavicle.

Mr. RICHARD FAVELL read notes of a case of Retained Placenta after Abortion and made remarks on the treatment of such cases. Mr. Favell also showed specimens of Ovarian Dermoids removed by operation.

Mr. ARCHIBALD YOUNG showed a patient who had been recently successfully operated on by Dr. Sinclair White for Abscess of the Lung.

Mr. ARCHIBALD CUFF read notes and showed specimens of (1) a case of Scirrhus of the Male Breast, and (2) a case of rapidly growing Soft Cancer commencing simultaneously in both breasts. Mr. Cuff also exhibited a series of microscopical slides illustrating the chief diseases of the breast.

The PRESIDENT, Dr. HARGREAVES, Dr. SWEETEN, Mr. LOCKWOOD, Dr. MARTIN, Dr. THOMSON (Retford), Mr. PYE-SMITH, Mr. ATKIN, Mr. BENSON, and Dr. BURGESS made remarks on the cases and specimens.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Some Points of Living Interest to the Teacher of Gynæcology and Obstetrics.—Ruptured Tubal Pregnancy.—Exhibition of Specimens.

A MEETING of this section was held on Nov. 26th, Dr. F. W. KIDD, the President, being in the chair.

The PRESIDENT having thanked the section for electing him to the presidential chair for the ensuing two years delivered an introductory address on Some Points of Living Interest to the Teacher of Gynæcology and Obstetrics. He dealt with the position of the "lady student" as regards her attendance on mixed classes of instruction, her position afterwards as a qualified practitioner with regard to the specialities of gynæcology and obstetrics, and her position as a unit of the profession to which she belongs. He drew attention to the fact that the difficulties in her way were: (1) custom; (2) men are already in possession; (3) physique; and (4) the suspicion or rather want of confidence with which one woman usually regards another woman. He dealt with the question of the improvement in nursing, recognising that it was a boon to both patient and practitioner but not an unmixed blessing and he drew a fine distinction between "lady nurses" and "nurse ladies." He drew attention to the objections to a Midwives Registration Act and inferred that there would not be the same amount of interest taken in it in England that there undoubtedly is if the poor were provided with as good nurses as there are in Ireland. The advantages possessed by students who study gynæcology and obstetrics in Dublin were pointed out, especially the facilities afforded for practical work, and attention was drawn to the fact that the Conjoint Board of the Royal Colleges of Physicians and Surgeons, London, while refusing to acknowledge a course of practical work for three months taken out at a midwifery hospital such as the Rotunda or Coombe Hospital, nevertheless

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accepted as evidence of practical midwifery a certificate stating that the student had "attended" not less than twenty labours and this need only be signed by one qualified practitioner. The Irish licensing corporations — Dublin University, the Royal University, and the Conjoint Royal Colleges of Physicians and Surgeons—require a six months' attendance on practical midwifery in a lying-in institution and a certificate of having attended at least thirty labours.—Dr. MORR MADDEN proposed that the President's admirable address should be printed in the Transactions of the Academy.

Dr. ALFRED SMITH read notes on a case of Ruptured Tubal Pregnancy which occurred in a young married woman, aged twenty-nine and a half years. She was five years married and had three full-term children. Cœliotomy was performed and there was removed a Fallopian tube of the left side which showed a rent through its inferior border at the junction of the ampulla with the isthmus. There was also to be seen a large circular opening sufficient to admit the tip of the index finger in the posterior layer of the broad ligament quite close to the rupture and leading to it. A tuft of chorionic villi and also a fœtus were enveloped in its amniotic sac. The latter was about half an inch long and was approximately the growth of between the eighth and tenth week of gestation. The points of interest seemed to be: (1) the occurrence of a tubal pregnancy in a patient so prolific; (2) the history of a secondary rupture, for pain first occurred on May 17th last, then there was a period of quiescence followed by a return of pain on May 22nd, and the pathological specimen shows evidence of a primary rupture between the layers of the broad ligament and a secondary one into the peritoneal cavity; (3) the absence of any hæmorrhage per vaginam; and (4) the fact that the patient is again pregnant since August so soon after such a serious operation.

Dr. JELLETT showed for Dr. PUREFOY a case of Ruptured Tubal Pregnancy. The patient was admitted to the Rotunda Hospital on Aug. 12th, 1897. Her last pregnancy was March 12th, 1897. She stated that she was unwell seven weeks after delivery, then had amenorrhœa for two months, followed by hæmorrhage and bearing-down pains and after this had seen nothing since July. Upon admission she complained of pain in the back and iliac regions and of dysuria. An irregular tumour filled Douglas's pouch; the uterus was not considered to be enlarged. Her general condition was bad and operation was deferred until Aug. 31st. At the operation the uterus was found to be enlarged to about three and a half months' pregnancy; the tumour in the posterior *cul-de-sac* was adherent and on removal proved to be a tube distended with blood; as it was thought possible the enlargement of the uterus might be myomatous the other tube and ovary were removed. The patient left the hospital on Sept. 28th and the uterus was then the size of a five months' pregnancy; she was subsequently delivered of a premature child on Oct. 22nd. On microscopic examination the tube was found to contain the remains of a fœtus and placental tissue.

Fifty gynæcological specimens were exhibited by, or for, Dr. HENRY JELLETT, Dr. W. G. SMYLY, Mr. T. HENRY WILSON, Dr. E. HASTINGS TWEEDY, Dr. ALFRED J. SMITH, and Dr. R. D. PUREFOY.

WATER-SUPPLY OF CHARD, SOMERSET.—At the meeting of the Chard Town Council held last week the Water Committee presented a report in connexion with the proposal of the council to obtain a water-supply by means of gravitation from Combe St. Nicholas.

UNIVERSITY OF CAMBRIDGE.—The new Professor Chinese is Dr. H. Allen Giles, of Aberdeen.—Mr. W. H. Rivers, M.D. Lond., of St. John's College, has been appointed a University Lecturer in Physiological and Experimental Psychology.—Mr. W. L. H. Duckworth, Fellow of Jesus College, has been recognised by the Special Board for Biology as a Lecturer in Anthropology.—The Walsingham medals given by the High Steward for the encouragement of physiological and biological research have been awarded to Mr. V. H. Blackman, of St. John's College, and Mr. W. Morley Fletcher, Fellow of Trinity College. The University has appointed Dr. D. MacAlister and Dr. Anningson as its delegates to the International Congress of Hygiene and Demography to be held at Madrid in April, 1898.

Reviews and Notices of Books.

A System of Practical Medicine. By American Authors. Edited by ALFRED LEE LOOMIS, M.D., LL.D., and WILLIAM GILMAN THOMPSON, M.D. Vol. I., Infectious Diseases. London: Henry Kimpton. 1897. Price 25s. net.

ALTHOUGH opinions may differ as to the immediate necessity of adding to the number of works on systematic medicine there can only be one sentiment as to the character of this the latest addition to the library of the practitioner. In the style and substance of its contributions as well as in the handsome manner in which the work has been produced it leaves nothing to be desired. It is to be completed in four volumes, but since its initiation death has removed one of its editors, the accomplished Dr. Loomis, as well as one of the contributors to the present volume, Dr. John M. Byron, formerly director of the bacteriological department of the New York University Medical Department. The multiplication of works of this class, built up by the labours of many writers, must be taken as an index of the vast extension of medical science in every department. It has grown to such proportions as to be beyond the capacity of a single author to do it adequate justice, and if thereby the reader loses the unity of thought that must pervade the work of one hand he gains the more thorough and detailed study of each of the subjects which proceeds from their being assigned to different pens.

The present volume is devoted to Infectious Diseases. It opens with an elaborate study of Malarial Fevers, the interest of which at the present time mainly centres in the hæmatozoal parasites, the discovery of which is due to Laveran. Dr. W. H. Welch, of Baltimore, tells all that can be told upon this part of the subject, and that, too, in a manner which carries conviction with it. When discussing the question of pathology he ably shows how much that was obscure in the clinical history of these affections has been made plain from the facts ascertained about the life-history of the malarial organisms; and although doubtless much remains to be discovered to bring these facts into harmony with other etiological data there is good reason to believe that they will some day be obtained. The clinical, pathological, and therapeutic aspects of malarial fever are dealt with by Dr. W. S. Thayer, of Baltimore, who contrives to differentiate the various types and forms of these fevers in a lucid manner. To those whose medical experiences are gleaned in districts infected by these diseases such a differentiation must be welcome, whilst even to the academic student the gain in clearness of conception of their nature that accrues thereby can be best appreciated by comparing the present exposition of the subject with that to be found in text-books of twenty or even ten years ago. It is gratifying to find it affirmed that "typho-malarial fever as a distinct entity does not exist," for the introduction of that term has been one of the most misleading and puzzling in the nomenclature of disease. A case of typhoid fever may be complicated with malaria, or the converse, but no doubt Dr. Thayer is correct when he says (p. 134):—

"There is little doubt that the enormous majority of cases referred to to-day as 'typho-malarial' fever in this country and elsewhere are cases of typhoid fever, pure and simple. Too much stress cannot be laid upon this point, for the groundless assumption that there exists in this country a fever due to the combined action of typhoid and malarial poison, pursuing a fairly characteristic course and calling, from its malarial nature, for the continued use of quinine, has exercised in the past, and is exercising to-day, an extremely injurious influence upon the medical practice of this country.'

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Similarly the writer of the article on Typhoid Fever says (p. 198) that this term—i.e., "typho-malarial"—is "an unfortunate one and has given rise to no little confusion concerning the nosological conditions of the various forms of disease to which it has been applied." Dr. J. C. Wilson, of Philadelphia, contributes the article on Enteric or Typhoid Fever, and it is a most able and accurate description of a disease which is known the world over. There are few points to criticise in this article, but we should have liked somewhat more attention paid to the subject of ulcerative colitis in relation to typhoid fever, and especially with regard to the features of an attack in which such involvement of the large bowel in the morbid process is marked. Our impression is that nearly all such cases are fatal, the diarrhœa being most continued and exhausting. It was hardly to be expected that the "agglutination test" should have received mention, for works of this class take some time to compile, and the reaction is one of comparative novelty. Dr. Wilson is a strenuous advocate of the cold bath treatment (by the way for "Curry" should be read "Currie," the pioneer in this line), his own experience being highly favourable to its systematic use, whereby it is claimed that the fatality is lowered to 7 or 8 per cent. Dr. G. M. Sternberg writes on Yellow Fever, than whom few are better entitled to speak with authority, but his declaration that the "yellow fever germ" has yet to be demonstrated was doubtless written prior to the recent researches of Dr. Sanarelli. The late Dr. Byron's article on Cholera is noticeable for his entire adhesion to the causative agency of Koch's comma bacillus of which a full description is given. Dr. Hamilton West, of Texas, deals with the somewhat involved subject of Dysentery in an able manner, differentiating pathologically and clinically the forms of (1) acute catarrhal dysentery; (2) diphtheritic dysentery; and (3) amœbic dysentery. Some excellent plates of the amœba are given. Influenza is described by Dr. J. C. Wilson, and Epidemic Cerebro-spinal Meningitis by Dr. T. S. Latimer, of Baltimore. Dr. W. M. Welch, of Philadelphia, contributes an excellent account of Small-pox and Varioloid, comprising under the latter head all forms of modified small-pox, which he correctly says may present all types of eruption, but which are sharply demarcated from the true disease by the manner in which they abort in their course and in which secondary fever is lacking. Dr. Welch also writes on Varicella, his remarks on the differential diagnosis from variola being especially to the point. The difficulty, which may be a very real one, is enhanced when severe varicella occurs in the adult, for this disease is not, as some say, limited to childhood. The same subject is dealt with in almost the same manner by Dr. Lenhartz in the last number of the Hamburg Hospital Reports. Of its practical importance it is needless to speak. In the article on Vaccinia Dr. Welch writes with judgment, but we must take exception to the very highly-coloured drawing supposed to represent the mature vaccinal pustule and areola.

Dr. W. H. Park, of New York, in the article on Diphtheria enters very fully into the bacteriology of the subject, and does good service by his attempt to clearly define the nature and relationships of "pseudo-diphtheria." This is a subject which certainly requires most thorough investigation and it is one which has entirely arisen out of bacteriological studies. Upon the value of antitoxin Dr. Park speaks with no uncertain sound. He devotes several pages to its discussion and furnishes numerous statistics, the most instructive being reports on 24,768 cases furnished to him by Dr. Girade. Surely the accumulated testimony is all-sufficient to establish the efficacy of this remedy, of which Dr. Park says (p. 707):—

"Diphtheria antitoxin has a marked curative effect in diphtheria. The results are very striking when the injections are used early in the disease and when the diphtheria is uncomplicated with pneumonia or sepsis. In well-developed cases and in those having complications its benefit is less marked. In cases already profoundly under the influence of the diphtheria toxin and in a dying condition it is useless."

Professor W. Osler writes upon Tuberculosis. It is needless to say that the subject is treated in a thoroughly scientific as well as practical manner, and as it comprises all manifestations of the infection, including pulmonary phthisis, his contribution forms by itself a monograph of no mean order. Amongst other articles are those on Syphilis, by Dr. W. F. Robinson, on Leprosy, by Dr. J. Dyer, and on Tetanus, by Dr. James Stewart. The work is, indeed, one of a high class, and will be all the more welcome as the selection of writers has evidently been made with great judiciousness, so that their contributions represent fully the high position which American medicine may well claim to have attained.

LIBRARY TABLE.

Chirurgische Operationslehre. (*A Manual of Surgical Operations.*) Von Dr. TH. KOCHER, Professor an der Universität und Director der Chirurgischen Klinik der Universität Bern. Mit 213 teilweise farbigen Holzschnitten im Texte. Dritte vielfach umgearbeitete Auflage. Jena: Verlag von Gustav Fischer. Pp. 412. 1897. Price 11 Marks.—We have recently reviewed the English translation of the second German edition of this work and though various slight alterations have been made in this edition yet they are not such as to alter the character of the book. In estimating the value of this treatise it must be remembered that it was never intended to give an account of all the varieties of surgical operations which ever have been, or even now are, performed. Professor Kocher has limited the scope of the work to the inclusion of those operations which he himself is in the habit of using or which are generally recognised as of value, but even with this restriction the volume contains all that is really required. Its abundant and excellent diagrams and the clear descriptions of the surgical procedures combine to make it one of the most valuable of the many treatises on operative surgery.

The American Year-book of Medicine and Surgery. Collected and Arranged with Critical Editorial Comments under the general editorial charge of GEORGE M. GOULD, M.D. Profusely illustrated. London: The Rebman Publishing Company. Pp. 257. 1897. Price 38*s*.—We had occasion in reviewing the first appearance of this work last year to speak of it in terms of almost unqualified approval and the present volume is in no way behind its predecessor. The only alteration in the editorial staff has been the accession of Dr. Dühring, who is responsible for the department of Dermatology. A very valuable feature of this year's volume is a brief summary of the results of the whole year's work which precedes each article. The editorial comments, which were one of the most noteworthy characteristics of the volume for 1896, are again of the utmost value to all those who have not the time or opportunity to investigate the claims of every new departure which is made in medicine or surgery. The names which are attached to the several departments are in themselves a guarantee of the excellence and exactness of the abstracts. The work is one which should be in the possession of every medical man who wishes to know all that has been done during the past year in any department of the medica sciences. We shall look forward to its reappearance year by year.

Cutaneous Medicine. By LOUIS A. DÜHRING, M.D. Part 2. London: J. B. Lippincott Company. Price 12*s*. 6*d*.—A general classification of diseases of the skin occupies the

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first few pages of this volume. There has always been a difficulty in obtaining any scientific classification in this branch of medicine and many different methods have been tried. Until the knowledge of skin diseases is complete enough to make a classification on strictly scientific lines the great object is to obtain the one which will be most serviceable in practice, and the author thinks that the one which he adopts will be found to fulfil all requirements. He classifies the diseases under the following heads: Anæmias, Hyperæmias, Inflammations, Hæmorrhages, Hypertrophies, Atrophies, Neoplasmata, Anomalies of Gland Secretion, and Neuroses. As may be imagined, the group of inflammations is the largest and it is rather surprising to find the parasites in this group, for although their effects are doubtless of an inflammatory nature they surely deserve a separate group to themselves. On turning to the body of the book it will be found that the subject of eczema claims the largest share and this disease and its many variations are very fully described. The illustrations are very numerous and admirably executed, but unfortunately very little can be learnt from pictures of skin diseases which are not coloured, for so many of the finer differences depend upon colouration that in uncoloured plates one kind of ulceration must necessarily look much like another. The plates of pathological sections, however, do not need colour and they convey an excellent idea of the morbid anatomy of the different diseases.

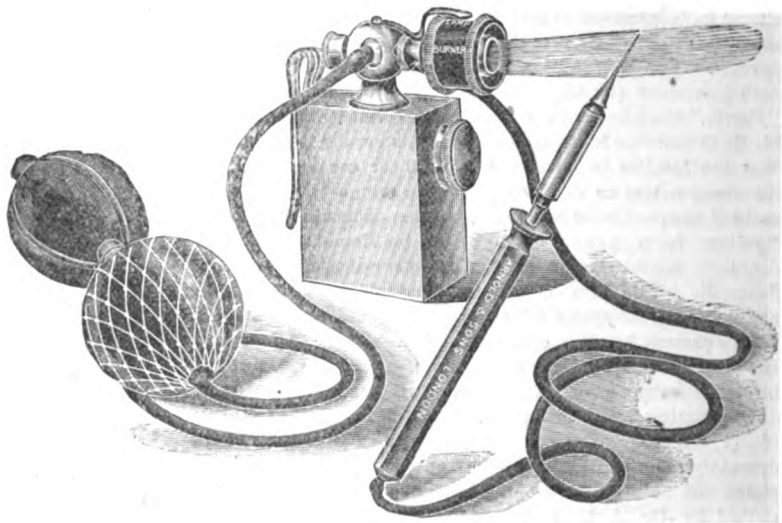
The *Journal de Clinique et de Thérapeutique Infantiles* of Nov. 18th contains a careful study of Infantile Glaucoma by Dr. Rochon-Duvigneaud. As regards causation the writer makes no definite addition to our knowledge of the disease. He notes, however, its prevalence in infants of weak neurotic type as well as its extremely early, even intra-uterine, origin which is the frequent occasion of its being overlooked. He draws attention to the fact that the glaucomatous globe in the infant presents, in addition to the usual symptoms, a peculiarity, unknown in the adult—i.e., that it slowly becomes dilated and actually increased in size. This enlargement is a natural consequence of tension on tissues which are still distensible. The point is of some practical importance, for Dr. Rochon-Duvigneaud reminds us that eyes which have undergone such dilatation are unsuitable for iridectomy and are readily liable to such accidents as hæmorrhage, luxation of the lens, escape of vitreous, and detachment of the retina. Prior to enlargement iridectomy as in the adult is of the greatest value (von Muralt, Horner). After this condition is established he strongly advises sclerotomy repeated as often as needful and quotes Arnold[1] in support of the excellent results obtained by this method. He has not found eserine or pilocarpine as useful as in the adult in arresting the progress of infantile glaucoma and he relies upon them chiefly as aids to operative measures which they facilitate by contracting the pupil and reducing tension. The differential diagnosis between glaucoma and exophthalmos, myopia, tumours of the retina and choroid, and the rare disease known as keratoglobe, in which the corneal curve is actually increased, is also discussed with due care in this interesting paper.

[1] Beiträge zur Augenheilkunde, 1893.

New Inventions.

NEW PORTABLE CAUTERY.

THE diagram shown below represents a modified form of Paquelin's cautery made for Messrs. Arnold and Sons without any glass parts (which so easily get out of order and break). This new form is composed entirely of nickel-plated metal (except the bellows) and does away with the necessity for a spirit lamp which has always been a source of danger. The metal reservoir is half filled with benzine and to heat the cautery the regulator has simply to be turned to the word "Lamp" and the lamp then lighted when a powerful



flame is produced and the cautery is heated in less time than by the ordinary Paquelin's cautery. When this is done the regulator is turned to the word "Burner" and the operation can at once be commenced, retaining a perfect burning surface as long as required. When finished by turning the regulator to the word "Closed" the action is immediately suspended. The cautery is not only simple and quicker in its action but it has the great advantage of being extremely portable; the case containing the instrument only measures six inches long, four inches wide, and one and a half inches deep, and the whole apparatus is sold at a moderate price.

CYCLE HANDLE-BAR TABLOID MEDICINE CASE.

THIS is a handy little case for carrying either the things with which the bag is fitted or any other instruments or drugs that may be preferred or that suit any particular emergency. It is made of waterproof leather, measures 8¼ in. by 4¼ in. by 2⅜ in. (outside measurements), is fitted with loops for bottles and small instruments, can be easily and quickly attached to the handle-bar, and is so constructed that while still strapped to the handle-bar the case may be opened and anything required may be taken out. The case submitted to us was fitted with scissors, knife, clinical thermometer, spring forceps, caustic-holder, eye-dropper, adhesive tape and court plaister, two bandages (3 in.), lint, box of safety pins, a tube of hazeline cream, and nine bottles for drugs—some in liquid and others in tabloid form. It seems impossible to construct a very portable and small case to contain everything that may be required for all emergencies, and some to whom a little extra weight is of no consideration might prefer a larger case; but, as the above list of its contents shows, this case, which weighs when empty 10 oz., is sufficiently capacious to contain a variety of instruments, &c. The price of the fitted bag is £1 13s. and the makers are Messrs. Burroughs, Wellcome, and Co.

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THE LANCET.

LONDON: SATURDAY, DECEMBER 11, 1897.

THE General Council of Medical Education and Registration came to the end of its sixty-third session on Tuesday, Nov. 30th, having sat for seven days. It may be doubted whether the Council ever did in so few days so much work. Opinions differ as to the capacity of the Council for the work contemplated by the Legislature in creating it—which work may shortly be defined as the supervision of medical education for the purposes of pass examinations and the duty of medical registration with a view to keeping the Medical Register accurate and purging it of names which discredit the profession. But the severest critics of the Council must allow that in seven days it has dealt with an enormous number of subjects and has contrived to look at them from many sides and from many points of view. There has been little waste of time; indeed, on one or two subjects more time might well have been spent. The conclusions reached with regard to some of the questions may not be universally approved, but we mistake if it will not generally be conceded that for so large a body representing such a variety of interests and dealing with such a variety of subjects the work has been done in a fairly business-like fashion. We have already dwelt upon what may be regarded as the *magnum opus* of the week's proceedings—the dismissal of the unqualified assistant from sharing the responsible work of the profession. If anything were wanted to justify the act of the Council it will be found in the penal cases tried during the session, showing the plights into which medical men are brought by the employment of unqualified assistants and the discreditable mockery of medical practice which such employment involves. It is impossible not to feel a certain amount of pity for the individuals who form the class which is now extinguished, but it must be remembered that unqualified assistants have had long notice of their coming disestablishment and that the General Medical Council has acted by no means precipitately. We refer to other aspects of the question in another column.

A feature of the session just concluded has been the discussion of points of law arising out of the Medical Acts themselves, out of the decisions of the courts, or finally out of the by-laws of the Council. Many of the most important and interesting of these discussions have involved personal and delicate questions and have almost necessarily had to be discussed *in camerâ*. All such discussions are apt to be complicated by the inevitable collision of strictly legal interpretations with that professional judgment which is expected from the Council not as a court of law but as a domestic tribunal for the judgment of professional conduct. There is a whole host of such questions on which the judges themselves are not agreed or have given no certain sound. It must be the endeavour of the Council to work steadily and quietly at the process of eliciting legal decisions on vital points. The minutes show that a noticeable step in this direction has been taken by the Council in instructing its law officers to proceed with various prosecutions which will test the efficiency of the present law in restraining the action of persons with "bogus" or with foreign qualifications. Persons removed from the Medical Register and therefore presumably legally unqualified will also be prosecuted if they continue to use professional titles and to practise as if their registration and their professional honour were both intact. In short before another session of the Council comes round many things will have happened and among them doubtless several prosecutions which will throw light on the sufficiency of the present Medical Acts. If the cases for the prosecution should show weakness against fully proven abuses it will be the duty of the Council to lose no time in asking Parliament for more effective clauses to guard the public and the profession whose interests are identical. A large portion of the time of the Council has been occupied by the discussion of questions arising out of the inspection of examinations under the Dentists Acts and of the right of the General Medical Council—or rather its Executive Committee—to register persons, including foreigners, under the latter part of the Thirty-seventh Clause of the Dentists Acts by special order. Time might be saved by due notice to the dental profession of proposals in which it has a deep and natural interest.

Another important subject on which the Council has taken a step forward is that of Preliminary Education. It is a happy proof of the addition to the strength of the Council that two of its new members made interesting and important speeches on this subject. Sir CHRISTOPHER NIXON, the new representative of the Royal University of Ireland, and Mr. VICTOR HORSLEY, recently elected as a Direct Representative, respectively proposed and seconded a motion that the Education Committee should be called on to report on a scheme under which a preliminary examination might be instituted "for medical students of a standard uniform throughout the United Kingdom—such examination to be wholly conducted by the General Medical Council." The idea is a captivating one but scarcely practicable at present. The General Medical Council has enough on its hands to secure fair uniformity and efficiency in the strictly professional examinations of the country, with regard to which by its very catholic constitution it may be supposed to have ample materials and knowledge for judgment. As an authority on general education it has no standing and it can scarcely pretend to compete with the recognised educational bodies of the country upon which it has always sought to throw the responsibility of preliminary examination. The Council has done well to provide for a decided rise in the standard of general education. If it has not gone far enough it has taken a very sensible step in the right direction.

IT is now more than a quarter of a century since THE LANCET Commission on Nursing in Workhouses first aroused public opinion as to the shocking state of things which existed in these institutions. Consequently on this Miss

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TWINING with Lady LOTHIAN and Lady MONTAGU of BEAULIEU formed, with other ladies and gentlemen, an association the objects of which were to improve the state of nursing in workhouses by promoting the employment of paid and efficiently trained nurses. In the eighteen years during which this association has been in existence its members have trained at their own expense, and with money raised by public subscription, nearly 400 nurses, and have been the means of nearly as many women trained elsewhere taking posts in workhouses and infirmaries.

A report of the general meeting of this association will be found in another column, and it is with great regret we find that it is about to cease the good work upon which it has been engaged. In view of the new Workhouse Nursing Order recently issued by the Local Government Board, to which we have already called attention, we cannot help thinking it is a pity that the association should have chosen this moment for bringing its work to a close. The Order itself is the outcome of the efforts of the association and although, as we have pointed out, the new Order accomplishes a very small part of a much-needed reform, nevertheless it is a considerable step towards the much-to-be-desired end that pauper nursing should be completely abolished. It is a matter of great regret that this Order uses the vague term "experience" instead of "training," as Miss TWINING pointed out at the meeting. We are also aware that the difficulties attaching to the position of a workhouse nurse are so great that it is hard to find suitable women to undertake the work, when there are so many attractions elsewhere, particularly in the way of private nursing. There is no doubt that the time has now come when the central authority should take up this matter of organising a training school for workhouse nurses and for introducing reforms as regards increased salaries, pensions, regulations for duty, and the like, so as to constitute a separate and more attractive service of its own on the same lines as has recently been done in the army and navy. At the same time, the very fact that the new Order is faulty and that matters are in such an unsettled condition makes it desirable that a committee of experienced ladies and gentlemen, such as that of the Workhouse Association, should not withdraw altogether from the arena. It was abundantly evident from what took place at the meeting that there are many guardians who greatly appreciate and value the aid and advice of the association, and the nurses supplied to them by it. Very probably after this they would be willing to subscribe, as they ought to do, far more liberally than heretofore. We cannot help thinking that if the guardians be left entirely to their own devices in the rendering of this Order it will result in a retrograde movement and the employment by them, under the cover of what are called "experienced" women, of women of a very inferior stamp, many of whom could not pretend to any kind of training, and that the tone of the service of nurses in workhouses will inevitably deteriorate.

We fully realise the difficulties with which the association has to deal, and has had to deal, for they are not new ones; it is simply that they have been recently growing more acute. If we could agree with Miss TWINING in her hopes that the cessation of the Workhouse Association would result, in the near future, in the creation of a State department—and undoubtedly such a creation would be of great value even if not a matter of necessity—then undoubtedly we might regard it as a correct step. But we cannot help thinking that the creation of such a department is still far off; and in the meantime the guardians, being compelled to employ nurses and not being able to obtain trained ones, will—indeed, they must—employ those who possess only what is called "experience"—a lax term which we fear will become still wider in its application in the absence of the Workhouse Infirmary Nursing Association.

IT was in a way fair that a period of transition should elapse between the restriction of the use of the unqualified assistant and his extinction. He had long been a sort of recognised agent in medical practice and in some instances he only escaped obtaining a legal position in the profession by an accident of date, for the Medical Act of 1858 contains a clause for the registration of persons without qualification who were in practice before 1815. For a quarter of a century after the passing of the Act medical practitioners went on employing unqualified assistants without any intimation from the General Medical Council that they were doing anything wrong or unlawful, and undoubtedly the fact that the possession of the diploma had only recently become a necessity conduced to some obtuseness on the point. Still, the passing of the Act was a hint to the unqualified that they were in an unsatisfactory position and one which could not be permanently defended. It was also a hint to practitioners that the use of unqualified persons might easily assume a fraudulent appearance and place their employers in a false position. Unfortunately this was not recognised even by the Council itself, for it was not till the year 1883 that it awoke to the fact that it had responsibilities as the chief ethical authority over medical men in the matter of the wide employment of unqualified assistants. About this time a case where such employment had had serious results was brought to the notice of the Home Secretary who referred it to the General Medical Council. The Council responded by giving a broad, if somewhat vague, notice to the profession that a medical man employing an unqualified assistant, save under his immediate supervision, to do duties only proper to be done by a registered practitioner was exposing himself to the risk of being considered guilty of infamous conduct in a professional respect and consequently of erasure from the Register. We tried at the time to give practitioners a rough idea of what we thought the Council meant and the limits within which it permitted the use of unqualified assistants. Our note on the subject in our advertising columns was constructed after due consideration of cases tried by the Council and after conference with some of its more authoritative members.

Two things have been notorious for some time—firstly, that the action of the Council was not efficient—i.e., either it did not reach practitioners or was not understood; secondly, that the vagueness of its notice enabled the Council to vary its judgments so much that practitioners

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lost respect for its edicts and have continued to employ unqualified assistants to this day on an enormous scale. The Council accordingly has proclaimed its intentions in more uncompromising terms. We must emphatically decline to say exactly what is meant by the recent notice (for the text of which we refer our readers to our advertisement columns, p. 93), nor can we in answer to numerous correspondents define the cases in which unqualified persons not being *bonâ-fide* pupils may be employed by practitioners. We shall not even venture to decide the point raised in the *Times* of the 6th inst. where an unqualified assistant claims a right to a fair notice of the termination of his engagement, though we must venture to doubt whether the Council ever meant to carry its point so violently as the denial of this claim would imply. The Council still seems to recognise in addition to the use of medica lstudents as *bonâ-fide* pupils "the *legitimate* employment of dressers, midwives, dispensers, and surgery attendants under the immediate personal supervision of registered medical practitioners." Though the Council would seem to have decided to recognise no assistant but a well-advanced student, not receiving money from his principal but paying his principal for training and instruction, it still leaves a goodly army of officials to be "legitimately" employed, and under one title or another it seems not improbable that our old friend "the unqualified assistant" may show himself to be not extinguished. We shall now hear much doubtless of the dispensing assistant and he is a very important person. It is notorious that the great majority of medical students not sons of actual practitioners are not *au fait* at dispensing and only those who live in the transcendental regions of the profession will deny the importance of ready and efficient dispensing in the general practice of the country. Fine questions will arise over the acts of this official if they seem in any emergency to exceed the modest but important *rôle* assigned to him. Altogether, unless the Council sees its way to be more specific there is little doubt the language of its new regulations will furnish material for an ever-increasing number of charges against medical practitioners which may make still heavier demands on its time and its financial reserves than even the cases with which we have been hitherto familiar.

It is only fair to admit that if the profession is agreed as to the severity of the new regulations it is almost unanimous with regard to their justice. It is monstrous to insist on severe examinations and a long curriculum for medical students if those who evade such labours are allowed to act as if they had undergone them. The public itself would have just reason to distrust the General Medical Council if it allowed a large amount of medical practice to be done by unqualified persons "covered" by those who enjoy the privileges of registration. But all this only makes it the more imperative that the Council should be explicit and clear. The necessity for such clearness is the greater as the new regulations affect a much larger number of persons than did the old ones, for the number of practitioners having unqualified assistants in their service whom they have employed in the manner hitherto deemed legitimate is much larger, we are glad to believe, than the number of practitioners who deliberately practise the trick of coveria

Annotations.

"Ne quid nimis."

UNIVERSITY COLLEGE HOSPITAL: ITS NEEDS AND ITS CRITICS.

NOTWITHSTANDING strenuous efforts on the part of their supporters the financial condition and prospects of the metropolitan hospitals, with very few exceptions, are still far from satisfactory. In the case of several the outlook is eminently discouraging. Most of our readers will have seen the accounts recently published with reference to the wards at University College Hospital, where the net result of necessarily heavy expenditure and a diminished income has been the closure of 50 out of 210 beds. During the present year the funds of public charity have certainly been taxed to an unusual degree and this partly in connexion with the collective interests of the hospitals themselves. As yet, however, the Prince of Wales's Fund, which must have withdrawn a portion of the sums formerly subscribed for more strictly local objects, is not available. Meanwhile expenses accumulate. It is to be feared, moreover, that in the case of University College Hospital the very munificence of a benefactor has by a singular misunderstanding become in some degree a cause of deprivation. Early in the present year Sir John Blundell Maple came to the help of the hospital with a princely contribution of £120,000. A not unnatural impression appears to be prevalent that this amount is intended to relieve the pressure of working expenses and that consequently the public purse may for a time be best employed in meeting claims elsewhere. We hasten to correct this erroneous impression. Sir John Maple's liberal gift was offered with an entirely different object—namely, the rebuilding of part of the hospital which has long been in such a condition as greatly to impair its utility as a house of treatment for the sick and hurt. No part of the donation is designed for the actual cost of treatment. In addition to this fact it is to b noted that the falling off in ordinary subscriptions during the present year, no doubt on account of the causes we have already indicated, has been very great. It follows that the most stringent economy is imposed on all entrusted with the management of the hospital. Many suitable cases must be refused admission and none may remain in the wards a day longer than is essential to their safe removal. It is impossible to allow for any period of convalescence. In this connexion the history of a man who was recently allowed to leave the hospital and whose case, a medico-legal one, has been well ventilated in the daily press is of particular interest. The patient who was consigned to the care of the police authorities on the express understanding that he required rest and that his appearance in court if allowed must be merely nominal was removed accordingly and after an interval of detention elsewhere was called upon to appear before Mr. Curtis Bennett at Marylebone Court. The observations attributed to Mr. Bennett on this occasion, however they may reflect his own disappointment at the man's condition, were, we do not hesitate to say, not less unjust towards the hospital than injurious to its interests. They show that Mr. Bennett entirely failed to appreciate the circumstances under which the patient was allowed to be removed and the conditions entered into with the police when he was discharged. There is, we fear, no reason to doubt the accuracy of the expressions reported to have been used respecting the hospital. As such they amount to an imputation of neglect. As such they are equally damaging and unfounded. We are willing to allow that they were

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used in a moment of irritation and not deliberately, but this fact does not render their repudiation the less a point of justice and a privilege of honour.

THE CONDITION OF THE ARMY AND ITS PROPOSED INCREASE.

THE next session of Parliament will be productive of several very important measures, not the least among them being that for the proposed increase of the army. After the series of letters that have appeared in the press from Mr. Arnold Forster, Lord Wantage, Sir Arthur Haliburton and others too numerous to mention, and the various speeches that have been delivered on the subject there will be no lack of material for important debates on the condition of our military forces, War Office administration, and army reform. Our statesmen and the nation generally will have to recognise that ours is a voluntary service army and to count on the fact that as we have not conscription and, what is more, are not likely to get it, the army must be content to compete in the labour market with other sources of employment. This means money for one thing and army reform and improved chances of employment for soldiers who have served their time for another. There cannot be a river without water or an army without recruits. Everything turns on that. To obtain recruits of the right stamp they must be paid a proper wage, the system of stoppages must either be altogether cancelled or altered, many irksome and unnecessary things connected with a soldier's life in barracks will have to be removed or modified, and, whilst all necessary discipline is maintained, the army must be put more on a level with the advances and requirements of life in the present day. The existing system of recruiting, too, needs to be thoroughly re-considered and popularised. Those medical officers who have had large experience of recruiting could no doubt afford some valuable information in this respect. We want better buildings and rooms more conveniently situated for the examination of recruits.

THE SCHOLAR IN MEDICINE.

THE annals of medicine contain the names of many who were not only brilliant lights in the calling to which they belonged but who were also possessed of that cultivation and mental training in other directions which make the scholar. It was a happy thought therefore of Dr. J. M. Da Costa, who recently delivered the inaugural address at the opening of the Harvard Medical School, to pass in review the names of members of the profession who have distinguished themselves in the broad fields of learning other than in their own line. In a sense all successful medical men must be scholars inasmuch that they are always students but Dr. Da Costa's address dealt more particularly with the men who while actively pursuing their profession and who were learned in it were not learned in it alone. Beginning with recent years the names which at once suggest themselves are Adams with his admirable translations of Hippocrates and of Paulus Ægineta; Greenhill, of Oxford, deeply learned in Greek and Arabic lore; Bussemaker and Daremberg with their Oribasius and other editions of Greek and Latin classics; and Littré the lexicographer and the learned editor of Hippocrates. Going back a century or two we find Linacre, Court Physician to Henry VIII. and founder of the College of Physicians, who had Erasmus among his pupils; Caius, Physician to Queen Elizabeth; Locke, Sir Thomas Browne, and Rabelais. Later came Galvani, Linnæus, Berzelius, Thomas Young (one of the first to interpret the Egyption hieroglyphics and who amongst his other accomplishments was master of Latin, Greek, Chaldee, Arabic, Syriac, Hebrew, Persian and Samaritan), Joseph Black, Gray, Owen, Agassiz, Leidy, Huxley, and Helmholtz, too, are all well-known names. Then there are the men who have been famed in their profession as well as being scholars. Perhaps the most conspicuous is Harvey "whose style is so limpid and clear that whatever he states becomes at once a demonstration and grace and propriety mark every utterance," the Cambridge scholar all his life as well as the great physiologist and physician. Sydenham too and Boerhaave, Haller, Mead (a Mæcenas in literature and art), Morgagni, Andral, Laennec, and Rush, will ever be remembered. This does not by any means exhaust the list of scholars who have been medical men or of medical men who have been scholars but they are some of the most prominent of those whose names are emblazoned on the roll of fame. It will be noticed that although, strictly speaking, these have not all been medical practitioners yet they have been eminent in some particular branch of medical knowledge. To mention the names of the living would be invidious but of those who have quite recently passed away the names of Simpson, Brodie, Watson, Latham, John Brown of Edinburgh, Trousseau, Malgaigne, Sée, Dunglison, Billroth, Hyrtl, and Wendell Holmes will always be associated with the title of scholar. It is not to be expected that everyone can equal or even approach the accomplishments of these men but the love of intellectual cultivation is widespread in the profession and ought to be encouraged. The practical bearings of scholarship in medicine are admirably summed up by Dr. Da Costa—power of expression and the critical judgment of a trained mind. "He" [the scholar] "was never more needed than now when every atom of discovery is heralded as of prodigious importance and as sure to influence immediately the laws of the universe (*sic*). ..... It is the scholar whose knowledge teaches him to appreciate correctly the different fads and 'isms' which are constantly cropping up and which he recognises as old errors with new faces."

PERSON *v.* PROPERTY.

AT the Clerkenwell Police-court on Dec. 3rd Henry Abbenhausen, of 134, Lever-street, St. Luke's, was summoned for having in his possession in preparation for sale 91 lb. of beef, mutton and pork unfit for human consumption. Mr. Horace Smith fined the defendant £20 and 2*s.* costs. At the same court Charles Clarke, aged sixteen years, and William Bunyan, aged sixteen years, were charged with assaulting Ada Fry and Rachael Welsh. The prisoners belong to a gang of roughs and on Dec. 2nd attacked the women, Bunyan striking Fry in the face making her nose bleed, while Clarke struck Welsh in the mouth knocking out a tooth. Mr. Horace Smith, as reported in the papers, said to the prisoners: "I must do something to stop this ruffianism; the only thing that holds me is your youth. You go about in gangs assaulting and terrorising poor women. It is perfectly shocking." After this admirable exordium Mr. Smith continued: "I ought to send you to prison, but having regard to your youth I will order you to pay 40*s.* each; in default a month's imprisonment." "Do you know I shall have to give you a good hard knock!" as the Rev. Robert Spalding remarked. What is the use of fining young blackguards of this sort? They will not pay the fine themselves. What is needful is a sound birching for we are compelled to agree with Mr. Smith that prison is not a helpful place, but if the law does not allow this class of offender to be birched it should be altered. Now let us take another class of case at another court. On Dec. 4th Benjamin Nordheim, a baker, of 141, Commercial-road, was fined the handsome sum of £417 17*s.* for allowing his premises to be used for the purpose of betting. This is wholesome but surely a man who keeps stinking meat presumably for the purpose of selling it as food or scoundrels who go about assaulting respectable passers-by should be

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punished equally or even more severely. We are glad to note that upon Dec. 6th Mr. Curtis Bennett sentenced two roughs to two months' hard labour each for knocking down and kicking a man in the Edgware-road. If they had only stolen something from him they could have been soundly flogged as well.

TUBERCULOSIS IN CATTLE AND THE SLAUGHTER-HOUSE QUESTION IN THE UNITED STATES.

A CORRESPONDENT in America writes: "The question of tuberculosis in cattle as a means of spreading that disease has for a considerable time been occupying the attention of medical and scientific men in the United States. The danger resulting from the consumption of milk procured from diseased cows is probably more fully recognised in America than in any other country of the world Denmark alone excepted and in very many of the large towns stringent regulations are in force to ensure as pure a milk-supply as possible. So grave a menace to public health is the prevalence of bovine tuberculosis in New York State that the committee on tuberculosis appointed by the Legislature of 1895 virtually recommended the destruction of all cattle affected by it. That typhoid fever, diphtheria, and cholera can be, and often are, transmitted by the agency of milk is now an undisputed fact. In regard to the transmission of tuberculosis by the same means opinions are still somewhat divided, the English being specially rather sceptical on that point. Their standpoint, however, is quite a logical one as they do not hold with the extreme views advanced by American bacteriologists in regard to the contagiousness of tuberculosis. Nevertheless the supporters of the theory that the germs of tubercle transmitted by diseased cattle and other animals will under certain conditions infect human beings have many strong arguments on their side. A striking object lesson in support of this contention has lately been afforded in Kansas, and if the facts have been correctly reported should go far to prove the case for the upholders of the transmission theory of tuberculous contagion. For some time past a suspicion has existed that many of the cows composing the herd at the 'Kansas State Agricultural College' were infected with tuberculosis. Things went rapidly from bad to worse and when two or three of the cattle tenders were taken ill and one died the authorities took alarm and a committee of inquiry was instituted who after investigating published a report. In this report it is stated that a large shorthorn cow was killed and examined by the college veterinarian, who found that the lungs of the cow were a mass of tubercles, that the pulmonary and costal pleuræ were covered with tubercles, nd in fact that the entire entrails were diseased. Further, that from the appearance of the entire herd of fifty-eight cows and from the results of the tuberculin test the conclusion was warranted that all of them were infected with tuberculosis. The committee state in their report 'that in all probability the sheep and hogs are also infected, the barn and the yard and the feed lots having in their opinion been for years occupied by animals seriously affected with tuberculosis and being at this time little less than a pest-house and grounds, dangerous to both animal and human life.' When the fact is taken into consideration that something like one-seventh of all deaths is due to tuberculosis and that cows are very subject to the disease identical with that found in man the importance of studying animals in this connexion should not be under-estimated. In America Dr. Ernst, of Massachusetts, on the evidence of thirty-nine veterinarians representing seventeen states and reporting on 3000 cattle, gives 18 per cent. tuberculous and 8 per cent. suspicious. Dr. Deschwemitz, of North Carolina, says that in many cases from 50 to 70 per cent. of the dairy herds examined were found to be infected and in one of these 50 per cent. had tuberculosis of the udder. There is a growing opinion both in England and America that to the insanitary state of most of the slaughter-houses is due transmission of many diseases. Ch. Wardell Stiles, Ph.D., Zoologist, Bureau of Animal Industry, U.S. Department of Agriculture, says 'that slaughter-houses, more particularly those in the country, are centres of disease, and naturally the poorer the condition of the premises the more dangerous they are. These facts will appear clear if one considers what takes place at one of these houses. Even if only a few animals are slaughtered each week the total number may amount to several hundreds during the year. Some of the animals are surely diseased. At least one of the hogs has trichinosis and when the offal of this trichinous hog is fed to hogs which are raised upon the grounds the latter cannot escape infection with trichinæ. But that is not all. The slaughter-houses are often overrun with rats; the rats feed on the offal and when feeding on the offal of a trichinous hog they likewise cannot escape infection with trichinæ.' Dr. Stiles then goes on to show that not only trichinosis but echinococcus disease, 'staggers,' wireworm, and other troubles caused by animal parasites, as well as tuberculosis, hog cholera, swine plague, and other bacterial diseases are disseminated by means of dirty slaughter-houses. The result of the investigations of Dr. Stiles agree in the main (so far as the spread of consumption is concerned) with the conclusions arrived at by the Royal Commission on Tuberculosis in 1895. Without doubt the report of the Commission now sitting will when published throw much fresh light on this subject and will help to clear up many disputed points. At least, it is now agreed on all hands that the question of slaughter-houses should be thoroughly looked into and a sweeping reform in their management should be instituted."

REMOVAL OF A FOREIGN BODY FROM THE TRACHEA BY INTUBATION.

AT the meeting of the Société Médicale des Hôpitaux of Paris on Oct. 29th what appears to be the first case of removal of a foreign body from the trachea by intubation was related by M. Sevestre for M. Bonnus. A child, aged five years, put a bead in her mouth which passed into the larynx. Attacks of suffocation with cough lasting for about an hour and terminating with bloody expectoration occurred from time to time. During these at the end of expiration a distinct sound could be heard which appeared to be due to the shock of a foreign body. At the end of a month the child was admitted to hospital; at the time there were no symptoms. On the third day whilst she was being lifted a violent attack of suffocation—the fifth—occurred. Immediate intervention was imperative. As the foreign body was moveable the idea that it might be expelled after intubation occurred and that if it were large enough to be arrested in the tube it could be removed with the latter. To facilitate expulsion a tube for a greater age—that of seven years—was selected and easily introduced. A fit of coughing was immediately produced; another followed in three minutes, during which the body—a fragment of a glass bead—was expelled. Lest other fragments might be present the tube was retained. Only mucus containing black powder—débris of the bead—was expectorated. The child being quiet the tube was removed at the end of ten minutes. M. Sevestre pointed out that two conditions were necessary for success—mobility and moderate size of the foreign body. In this case it was slender, measuring one centimetre by three or four millimetres. The only case presenting any analogy to this, but one also very different, was reported to the International Medical Congress.

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at Moscow by Bokay. Upon a child aged seven months, having some egg-shell impacted in the larynx, intubation was performed to break up the fragments which were expelled not through the tube but after its removal. The method of M. Bonnus certainly deserves a trial in similar cases; it is less serious than tracheotomy which can be performed in case of failure.

A CORRECTION.

IN a leading article which was published in THE LANCET of Oct. 16th the following words occurred: "Alderman Cooke, chairman of the Hospital Saturday Fund, said emphatically to our Commissioner: 'A subscription to a fund, whether it be weekly or yearly, gives no right whatever.'" It has been pointed out to us that the words thus attributed to Mr. Alderman Cook were really used by Mr. W. T. Smedley, the honorary secretary of the Birmingham Hospital Saturday Fund; and we have been referred by Mr. Smedley to an article written by him some four years ago in *Forward*, the official journal of the Birmingham Hospital Saturday Fund, where the phrase occurs. We are sorry for the error, for which, we may add, our Commissioner was in no way responsible.

PROPOSED MONUMENT TO THE LATE BARON SIR FERDINAND VON MUELLER, K.C.M.G., M.D., F.R.S., ETC.

BY the death of Baron Sir Ferdinand von Mueller at South Yarra, Victoria, on Oct. 10th, 1896, the scientific world lost one of its most erudite and industrious professors. As Government botanist he did some most painstaking work and it is gratifying to note that his supplemental volume of the "Flora Australiensis" which he was preparing for the press at the time of his death will be published by his executors together with two volumes on his administration as Director of the Botanical Gardens, Victoria, with a biography and complete bibliography of his writings. It is also intended to erect over his grave in the St. Kilda Cemetery a monument of grey granite twenty-three feet in height surrounded by an ornamental iron railing. Subscriptions are earnestly requested and will be received by the Rev. W. Potter, "Vonmueller," Arnold-street, South Yarra, Victoria, Australia.

A WONDERFUL INVENTION.

A SYNDICATE has been started with a capital of £5000 in £1 shares under the title of the "Ditcham Divinometer Syndicate, Limited." According to the prospectus the object of the association is "to acquire from Dr. Ditcham, the inventor, an instrument known as the 'Divinometer' and his patent and other rights therein." We also learn from the same authority that "this invention consists of a novel machine of simple construction whereby it is claimed that the psychic force of the individual can be gauged and the character of his will power determined," and are further modestly informed that "this discovery is as unique in its way as the Röntgen rays." The directors of the concern are Mr. Elphinstone Thorpe, Mr. Louis Hemmington Pegler, M.D. Edin., Mr. Duncan Cecil Smart-Melhuish, and Mr. William Vooght Ditcham, dental surgeon. It would have added immensely to the excitement that a discovery of this magnitude—the equal of skiagraphy—cannot but arouse if the promoters had appended an explanatory note on psychic force for the benefit of their prospective shareholders, and they might also have advantageously furnished a little information as to the ways and means by which it is proposed to make the speculation commercially successful. Ordinary ignorant people will be sure to want to know whether psychic force is a desirable possession or one to be mitigated by medicine. Perhaps the syndicate hope to gain fees from employers on the look-out for assistants. It is not difficult to imagine a druggist, for instance, anxiously awaiting the verdict as to the psychic force of a probationary pill-manipulator or a dressmaker on thorns while that of a prepossessing employée is being tested. But supposing the examinee had more will power than the examiner how would the divinometer act? It is really most regrettable that more ample information has not been afforded.

ISO-KREATININE.

A NEW nitrogenous substance differing from kreatinine in various particulars but especially in having a yellow colour has been obtained by Dr. Thesen of Christiania from the muscles of the codfish. To isolate it the dried muscle is infused in a large quantity of water to which a few drops of chloroform are added to prevent putrefaction. The vessel is set aside for the muscular tissue to subside and the supernatant fluid is boiled down to half its bulk. The albumin which is thus coagulated is removed with a spoon and the fluid is filtered and evaporated till the salts begin to make their appearance. The extract is mixed with its own volume of alcohol and allowed to stand to permit the subsidence of gelatin and inorganic salts precipitated by the alcohol. The alcohol is then distilled off when the yellow crystals of iso-kreatinine often make their appearance. On further addition of alcohol and purification with boiling water the iso-kreatinine can be collected in quantity in the form of small, delicate, shining, yellow laminæ. Dr. Thesen obtained about one gramme of iso-kreatinine from one kilogramme of cod's flesh, the actual quantity present being probably considerably greater. Its taste is bitter with an unpleasant after-taste. At a temperature of about 230°–240° C. it decomposes and at a somewhat higher temperature burns. It does not rotate the plane of polarisation. Its rational formula seems to be $C_4H_7N_3O$. It is therefore isomeric with kreatinine. Its reaction is alkaline and it forms well-defined salts with acids. It would be interesting to know whether this new body reduces alkaline copper solution

DR. YERSIN AT BOMBAY.

DR. YERSIN'S report on his late visit to Bombay is published in the *Archives de Médecine Navale et Coloniale* for November. He arrived on March 5th, 1897, having with him a very limited supply of serum which had been prepared by means of dead bacilli. If used the first day of the declared disease he found that thirty cubic centimetres were sufficient to effect a cure but on the second day four or five times as much was necessary. Most unfortunately from every point of view M. Pesas, the director of the laboratory at Nhatrang, died shortly after Dr. Yersin's departure and there was consequently some delay in obtaining a fresh supply of serum, for M. Roux in Paris "was not yet ready." Dr. Yersin treated 17 cases on the first day of the disease with a mortality of 12 per cent.; 17 on the second day, mortality 35 per cent.; 12 on the third day, mortality 50 per cent.; and 4 of longer standing, mortality 75 per cent.; the average death-rate on fifty cases treated being 34 per cent.—a very great improvement on the general ratio which among natives amounted to 85 per cent. We recently mentioned Dr. Bonneau's views regarding the relative efficiency of the anti-plague serums when prepared with living and dead microbes.[1] Dr. Yersin now confirms the statement that the intravenous injection of living cultures produces a more active serum in a shorter time but the process is so deadly to the horses, killing quite half of them, that he was induced to devise the second

[1] THE LANCET, Oct. 16th, 1897, p. 995.

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method. No one can, of course, deny that expense is a major consideration in most things, but it is nevertheless regrettable that human lives should have to be sacrificed on account of a little "filthy lucre." At Amoy Dr. Yersin's death-rate was only 7·6 per cent., or not much more than half his best results in Bombay, and nearly one-fifth of his average mortality in the latter city. The course adopted by the Indian authorities for the suppression of the plague seems to have met with Dr. Yersin's unqualified approval, for he gives it as his opinion that precisely similar measures strictly applied would suffice with the aid of preventive inoculation for the rapid extinction of an epidemic of the disease in any French territory. With regard to prophylaxis Dr. Yersin found that a small injection of serum (ten cubic centimetres) protected a healthy person from the plague during a period of between ten and fifteen days and that a second injection would then prolong the immune condition for the same length of time. On his return to Nhatrang the distinguished French investigator was fated to experience the truth of the proverb that misfortunes never come singly. In addition to the irreparable loss already mentioned an epidemic of anthrax had broken out among the laboratory horses, but happily the officer in charge, M. Fraimbault, proved himself capable of dealing with the emergency.

THE WORSHIPFUL COMPANY OF PLUMBERS.

SPEAKING at the recent annual banquet given by the Worshipful Company of Plumbers at the Saddlers' Hall the Lord Mayor (Lieutenant-Colonel H. D. Davies, M.P.) dwelt upon the grave responsibility that devolved upon the plumber in that the lives of so many of his fellow creatures depend upon the conscientious execution of his work. He also warmly supported the Plumbers Registration Bill and deplored that such a useful measure should become involved in party strife. In his reference to the opposition offered to it by trade unionism and in the remarks made later by the Lord Provost of Glasgow on the iniquity of accepting tenders for work of this nature only because they were cheap the source of much bad plumbing was revealed. The Lord Provost justly held that such tenders had proved to be the very dearest that could be got. He said: "When I speak of the dearest I do not refer only to money but to human lives. There is nothing cheap in money if the lives of those we love best and have charge of are endangered." In every trade this mania for so-called competition in order to reduce cost is invariably the parent of one or the other of two grim offspring either of which is fruitful for evil. The first is "the sweating system"; the second "modern trade unionism." The former is an attempt on the part of the employer to secure orders by reducing the cost of production, using all means to this end, legitimate or otherwise, and is prolific of untold misery. Hence come all things cheap and nasty, from jerry buildings to shoddy, slop-made clothes and rickety furniture. The hidden work of the plumber presents a favourable field for operations under this head. The latter, "modern trade unionism," is the malignant growth of a very natural and proper combination on the part of those employed to resist such oppression and produces tyranny in its worst form, strikes, lock-outs, and increased cost of production, individual freedom and with it all real competition between the actual producers being strangled by the rules of the union. Thus the object aimed at—viz., reduction of cost—is ultimately defeated by the very means used for its attainment. Competition is productive only of good up to the point where individuals exercise their ability in contending to produce an improved article at the lowest possible price. It ceases to be aught but evil directly falsehood is somewhere introduced into the struggle. Ignoring its often too obvious presence will not relieve us from the penalty attached to it. The Plumbers' Company is certainly doing a good work. The Master, Alderman Richard Hind, himself a plumber, stated that in 1884 classes for scientific, practical, and technical instruction only amounted to five establishments with some two hundred students. There were in 1896 two hundred classes established and over three thousand students. The meeting together of the masters and men in connexion with this subject of education under the auspices of the Plumbers' Company should also do much to promote a better understanding throughout the trade.

THE DANGERS OF CHRISTENING.

AT the conclusion of a series of inquests held at the St. Pancras coroner's court a juryman remarked that in two of the cases children had died from pneumonia after having been taken to church to be christened, and he thought that mothers ought to be cautioned against taking very young children out into the cold for such a purpose. The coroner said that he did not think that if the children were well wrapped up taking them out would harm them, but he believed that if the parents chose the clergy would go to the house to perform the baptism. Of course they would if they were satisfied that it was a case of emergency but otherwise private baptism is forbidden. For the matter of that lay baptism, provided that the right matter and words are used, is perfectly valid, but this again is only to be used in extreme emergencies. One improvement we might suggest is that the rubric commanding baptisms to be performed in the middle of the office of mattins or evensong should be done away with so as to shorten the length of time that the child would be out and for the convenience of the godparents, and we would also impress upon the clergy the necessity of having the water warmed. Baptism it is true is seldom or never administered by immersion but even when affusion is used the contact of cold water with a child's head might injuriously affect one with an already sufficiently low power of resistance. But if sufficient care as to clothing is taken the mere conveying of the child from the house to the church should do no harm.

THE DENTAL HOSPITAL OF LONDON.

THE staff and present and past students of this hospital must have been gratified to be informed authoritatively on the occasion of their annual dinner, which was held in the Whitehall Rooms of the Hôtel Métropole on the 4th inst., of the progress that is being made in connexion with the building of the new hospital. The site is contiguous to the old building, which, with a deceptively large front, is in reality utterly inadequate to the needs of both patients and students. The old hospital is an extremely narrow building and affords no convenience or accommodation in accordance with the increasing demands upon the energy and skill of the staff or for the educational purposes of the institution. Mr. F. A. Bevan, one of the trustees, in his response to the toast of "The Hospital," stated that some delay had occurred in clearing away the vested interests in the property in the new site, but now they were within measurable distance of the commencement of building operations. The plans of the new building showed that when finished it would be an adequate hospital and school fully equipped, and with offices and appointments thoroughly in accordance with modern advance in dental treatment. Mr. Watson Cheyne referred to the progress which dental surgery had made and congratulated the authorities on having decided upon a step which was to give increased facilities to the study of the various scientific subjects such as bacteriology, metallurgy, &c., now of necessity included in the dental curriculum. The chairman, Mr. A. S. Underwood, in proposing the toast of "The Past and Present Students," expressed the opinion that in view of

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the increased demands upon the time and attention of dental students they should be careful to organise a system of recreation for the advantage of both body and mind. Mr. C. S. Tomes, F.R.S., proposed the health of "The Chairman" and briefly referred to the rapid progress which the school had made.

THE QUESTION OF REGULAR ATTENDANCE AT BOARD SCHOOLS.

A CORRESPONDENT writes to us upon this subject, one not in any way new but none the less important. It is certainly a fact that children are sent to school when they are quite unfit in themselves to attend; moreover, there is no doubt that they are sometimes sent from houses where infectious disease exists without this fact being made known. The School Attendance Committee in its eagerness for equality of treatment is becoming a veritable Procrustes. The children whether able or not must lie on the educational bed and if they will not fit they must be made to fit. The Education Department and the School Board between them lay a most grievous burden on the backs of both children and parents. Compulsory primary education is a good thing and should by all means include swimming, cookery, needlework, and house-work, subjects which are taught at the present moment, so that perhaps in time it will be possible for the average householder to find a servant who will know how to set a candle or clean a window. But besides these subjects the Board teach over thirty other different things most of which can by no manner of means be described as primary. No wonder that the wretched children are ground in the mill; let the Board diminish its curriculum to a third of its present size and then an occasional absence will not matter so much. It is difficult to see how a Board can be punished. It cannot be fined under the Public Health Acts for exposing cases of infectious disease for the fine would simply fall upon the ratepayers, but Boards must not be allowed to foster the spread of infectious disease owing to a fatuous craze for regular attendance.

OSTEO-ARTHRITIS CAUSED BY PNEUMOCOCCI.

ARTHRITIS, due to the presence of pneumococci in the joints, is now one of the recognised complications of pneumonia. At a recent meeting of the Société Médicale des Hôpitaux of Paris Dr. Fernet called attention to a peculiar form which differed entirely from the ordinary and purely articular. Only two cases had been observed and the sterno-clavicular joint was the one attacked in both. The onset was sudden and attended with severe pain, considerable swelling soon followed, but redness was slight or absent. The swelling was not due to effusion into the joint (as demonstrated by puncture), but to œdema of the peri-articular cellular tissue. The articular surfaces were rapidly eroded, so that crepitus like that of a fracture was soon felt, as early as the thirteenth day in one case. Dr. Fernet regarded this sign as characteristic. The duration of the disease was long because fibrous ankylosis, the natural termination, took some time to develop. In one case it was more than two months. The treatment followed was immobilisation of the joint. The other case terminated fatally at the end of three weeks. A necropsy was made. The peri-articular cellular tissue was infiltrated with serum; the muscles looked uneven and pale and showed purulent striæ; the ligaments and cartilages were completely destroyed; the articular surfaces were represented by rugged surfaces of spongy bone. There was no effusion in the joint and a few drops of serous fluid were obtained with difficulty which yielded pure cultures of the pneumococcus. In this case there was also pulmonary and meningeal infection. Dr. Fernet called attention to the analogy of the osseous lesions to those observed in the arthropathies of locomotor ataxia both in their nature and clinical evolution and suggested that possibly the latter was also due to a microbial cause favoured perhaps by trophic defects.

THE PLAGUE IN INDIA.

WE much regret to say that the latest intelligence from India regarding the plague is not satisfactory. The disease shows no signs of abatement in Poona. The cantonment is now entirely under the charge of the military plague management. Privileged segregation has been abolished and there have been no disturbances or expressions of dissatisfaction. The public health statistics in Bombay show that the total mortality is very high although it has somewhat declined. There are still numerous cases of bubonic plague occurring—especially in the insanitary districts where it originally appeared. At Sholapore, Belgaum, Kotri, near Kurrachee, in Sind, at Shanderkhard in the Jullunder district of the Punjab, and other places we read in the Anglo-Indian journals of the appearance of cases. The India Office in this country has sent out a number of medical men and nurses for employment during the prevalence of the epidemic and the local governments of India are actively engaged in enforcing measures for the repression and limitation of the disease. Although there is no doubt that local causes and environing conditions have a good deal to do as fostering the epidemic the practical fact to be grasped is that the plague is spread through human beings: it is the individual and not the locality that is in the first instance infected. Some interesting details as to the spread and prevention of plague will be found in another column. Bacteriological researches support the view that we have to deal with a contagious disease depending upon a specific cause.

ARE CIGARETTES INJURIOUS?

WE have been favoured with an "advance" abstract of a paper appearing in the number for December of the *Medico-Legal Journal of New York*. It is entitled "A Brief for the Cigarette" and is written by Mr. W. H. Gerrison. While it disposes of a good deal of nonsense that is talked about the terribly poisonous nature of cigarettes and the dire harm resulting from their consumption it does not quite satisfy us upon the important point—the quality of the tobacco. We do not believe that tobacco is ever seriously sophisticated as with arsenic and opium, but we are pretty sure that very inferior kinds of tobacco and diseased tobacco disguised with certain scents are commonly the materials of which absurdly cheap cigarettes are composed. Small boys and even full-grown boys are not thus deterred from smoking them because these cigarettes afford them something at any rate to smoke in spite of the obvious "faking." In America two states—namely, Tennessee and Iowa—and two cities, Denver and Chicago, have legislated against the cigarette apparently on grounds that its excessive use and very rapidly increasing consumption had led to dreadful degradation of the physical as well as moral health. Excess in anything is always an evil and one it is difficult to check by legislation; but are the great majority to forego the honest and perfectly legitimate use of a thing because of the abuse practised by the few? We do not believe that where injurious effects do occur they are due to added toxic substances. Our own inquiries established this some years ago, both in regard to the tobacco and the fragment of paper in which the former is wrapped. They were both quite free from arsenic, opium or other monstrous additions. If the cities and states just mentioned would direct their attention to ensuring the supply of tobacco of unquestionable quality and purity, be it in the shape of cigar, cigarette or pipe tobacco, they would proceed, we

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venture to think, upon a more rational line of action and secure the gratitude and esteem of the public. One result of this action at least would be to render impossible the sale of cheap and nasty cigarettes and thus some limitation would be put upon the excessive number consumed by almost every small boy met with at every turn in the street.

MEMORIAL TO THE LATE DR. F. W. BARRY.

A PRIVATE subscription has been opened among certain of Dr. Barry's friends and colleagues, Sir Richard Thorne acting as treasurer, with a view to the erection of a lych-gate for the burial-ground at Downe, Kent. The extension of the churchyard was a much-needed scheme in which Dr. Barry as a resident in the village took an active part, and he was one of the first to be laid to rest in the newly-consecrated ground. The provision of a lych-gate for the churchyard in which he took such interest will commend itself as a most fitting tribute to the memory of one whose distinguished services and sterling character secured for him the esteem and strong personal regard of all who were brought into contact with him. It was at first proposed that the cost should be defrayed by his immediate colleagues, but many others have expressed a wish to contribute and it has been decided to deviate from the original intention to that extent although no special appeal will be made.

AT the adjourned discussion on the Prevention of Enteric Fever to take place at the meeting of the Royal Medical and Chirurgical Society on Tuesday next the following speakers are announced amongst others:—Dr. J. F. Payne, Surgeon-Major-General Jameson, Dr. Kanthack, Dr. A. Macfadyen, Dr. Sims Woodhead, Dr. Edward Seaton, Dr. F. W. Andrewes, Dr. Corfield, Dr. Washbourn, Dr. Newsholme, Dr. Seymour Taylor, Dr. Little, Mr. Tivy, and Mr. Bokenham.

AT a meeting of the lecturers and teachers in the medical school of Guy's Hospital held on Dec. 6th, 1897, the following resolution was unanimously passed:—

That the medical school of Guy's Hospital earnestly request Her Majesty's Government to reintroduce into Parliament the London University Commission Bill of 1897 and to pass it into law during the ensuing session.

THE annual lecture under the Richard Middlemore Post-graduate Lectures Endowment will be delivered at the Birmingham and Midland Eye Hospital by Mr. H. Eales on Thursday, Dec. 16th, at 5 P.M. The subject will be Exophthalmos, its Causes and Treatment.

FOR the consideration of their report meetings of the Royal Commission on Tuberculosis were held at Whitehall-place on the 1st, 2nd, 3rd, 4th, 6th, and 7th inst., Sir Herbert Maxwell, Bart., M.P., presiding. A further sitting will be held in January next.

Pharmacology and Therapeutics.

HYPODERMIC INJECTIONS OF OXALATE OF POTASSIUM IN PHLEGMONOUS INFLAMMATION.

OXALATE of potassium being known to have the property of preventing or retarding the tendency of organic fluids to coagulate, it occurred to Dr. G. Cavazzani, the principal surgeon of the Civil Hospital in Venice, to utilise this property in the treatment of phlegmonous inflammation by injecting a 1 per cent. solution into the surrounding tissues so as to diminish the capillary engorgement and the plastic effusion which always exist there under these circumstances. The first case in which this plan was tried was that of a woman who had a large phlegmonous swelling which extended from the middle of the upper arm to the hand and which had been in existence for two months. The acute stage was passed and there were no collections of pus or patches of slough but the arm was stiff, swollen, red, hot, and painful. Ten injections were given into the cellular tissue around the affected portion, thirty minims in all being thus introduced. The next morning the swelling, the redness, and the pain had perceptibly diminished; the injections were repeated every three or four days and at the end of three weeks the patient was completely relieved. Subsequently Dr. Cavazzani employed this treatment in several other cases of phlegmonous inflammation with good results. Among them were two cases of phlegmasia alba dolens which rapidly recovered under the influence of the same solution, thirty to forty-five minims being introduced in ten or twelve points. In one of the cases two repetitions were sufficient; in the other three. Another case was that of a man who had undergone an operation for inguinal hernia and in whom three days afterwards inflammation of the cellular tissue of a somewhat alarming character began to appear. Thirty minims of the solution were injected in eight points situated beyond and around the circumference of the inflammation and the next day the inflammatory symptoms were found to have subsided. The only inconvenience resulting was a trifling amount of suppuration about two of the sutures of the wound. These injections of oxalate of potassium appear to be quite harmless as no sign of poisoning was observed in any of the cases. Whether the theory upon which Dr. Cavazzani based his employment of this salt be correct or no the fact remains that the results obtained by him are very encouraging and the treatment seems to be worthy of a trial by other practitioners.

AIROL IN THE OPHTHALMIA OF NEWLY-BORN CHILDREN.

Airol having proved very useful in the treatment of gonorrhœa M. Ardin-Delteil, of Montpelier, was induced to make trial of it in a case of ophthalmia in a newly-born child, nitrate of silver which had been previously employed having appeared to increase rather than to diminish the intense inflammation. He applied a 5 per cent. airol ointment made with vaseline, leaving it in contact with the mucous membrane for twenty minutes and then washing it off thoroughly with a solution of boracic acid. After this an immediate improvement was manifest, the swelling and conjunctival secretion being greatly diminished by the next day when a fresh application was made. The treatment succeeded in preventing suppuration and in a week's time a successful result was achieved.

THE WORKHOUSE INFIRMARY NURSING ASSOCIATION.

A WELL-ATTENDED meeting of the Workhouse Infirmary Nursing Association was held on the 2nd inst. in St. Martin's Town-hall, to consider the following resolution:—

"That the Executive Committee after long and careful consideration is of opinion that the time has arrived when the work of the Association must of necessity cease."

Mr. E. BOULNOIS, M.P., occupied the chair, and after making sympathetic allusion to the loss sustained by the Association through the death of its President, H.R.H. the Duchess of Teck, drew attention to the great work which the Association had done, not only in directing public attention to the terrible state of things which existed twenty years ago—a work in which THE LANCET had also taken a prominent part—but also in remedying such a state of matters, and inducing boards of guardians to appreciate the value of trained nursing. He also referred to the benefit which had accrued not only to the poor but also to the ratepayers—facts of which he had personal cognisance by his long association with the Marylebone Board of Guardians.

Miss WILSON, the honorary secretary of the Association, then read a brief statement showing that during the eighteen years the Association had been in existence over 1200 applications had been received and nearly 800 nurses supplied. The applications for nurses from boards of guardians had steadily increased during that period, but unfortunately the supply of suitable women for training had steadily diminished.

The resolution was moved by Mr. BOUSFIELD, a guardian of Kensington and a member of the working committee, and seconded by Lord MONTAGU of BEAULIEU.

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Many speakers, delegates from boards of guardians in different parts of the country, spoke on the subject and expressed the grave and serious regret which they felt that the Association should give up its good work. Several of them, including Miss Brodie Hall (Eastbourne), Mr. Shepherd (St. Pancras), Miss Lawes, and the chairman of the Cheltenham Board of Guardians, went so far as to suggest increased subscription on the part of the guardians so as to meet one of the difficulties, and affirmed that they did not know what they would do in country workhouses without the assistance of the Association.

The second resolution laid before the meeting by the Executive Committee was to the effect that the Association would continue for a time as a centre of information to guardians and nurses and for the maintenance of a connexion with the nurses and probationers still belonging to the Association.

Miss TWINING in support of this resolution pointed out that the real difficulty of the committee was the lack of suitable candidates for training and that the cause of this was undoubtedly the anomalous and difficult position in which nurses found themselves, especially in country workhouses. At the same time the Association felt that they were, in view of all the circumstances, altogether unable to deal with the matter in an adequate fashion, and it was hoped that when the Association ceased to attempt the work in their small and imperfect way it would result in its being done on a larger scale and more adequately either by the Local Government Board or by associated guardians. It was impossible for the Workhouse Infirmary Nursing Association to supply the 600 workhouses in England and the matter had reached a stage at which a private body was no longer able to deal with it. Responsibility must now rest upon the shoulders of the central board. The new Order, which was undoubtedly one of the achievements of the Association, finally did away with pauper nursing and created a demand for trained nurses, and some sort of State organisation must inevitably be formed to supply them in the same way as had recently been done for the Army and Navy. Miss Twining took grave exception to the use of the word "experience" in the new Order, instead of the word "training," because she could remember the time when all the old-fashioned drunken attendants in workhouses were in the habit of calling themselves "experienced" nurses. The Association had repeatedly asked for a State grant or some State recognition, but as it was not forthcoming it was impossible for a private philanthropic association to deal with the matter any longer.

Both the resolutions were carried.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE second sitting of the Royal Commission on the Metropolitan Water-supply was held in the Moses Room of the House of Lords on Monday last, Dec. 6th. All the Commissioners were present at the meeting. The London County Council and the water companies were represented by counsel and the Corporation of the City of London by the Remembrancer, Mr. Goldney. At the commencement of the meeting the chairman made an important announcement. He said: "We have decided not to reopen the questions reported upon by the Royal Commission presided over by Lord Balfour and, speaking generally, we accept the findings of that Commission." [1]

Mr. H. L. Cripps, the Parliamentary Agent of the London County Council, was again examined. He put in three tables giving a quantity of information on the subjects on which he had been examined at the last meeting. Table A, "showing the various areas in London under the Metropolis Management Acts, the companies originally authorised to supply water within those areas, and the manner in which Parliament has introduced and confirmed the number of competitive powers of supply in London." Table B, "showing certain areas actually supplied by the New River or Chelsea companies and the dates at which a fresh competitive supply by another company or other companies was authorised." Table C, "showing the dates of the Acts under which several metropolitan water companies were originally authorised to make charges for water and cases in which authorised rates have been reduced and the dates when the existing scales of charges were fixed." A large map showing the area of distribution of the metropolitan water companies was hung on the walls. This map, like those which have been recently published in THE LANCET, showed the sources of intake of the various companies and gave the course of the chief mains in the case of each company. Mr. Cripps was examined at some length by the chairman concerning the information given on the tables and particularly with regard to the competition between the different companies. He pointed out that Marylebone, which was at one time supplied by the New River and Chelsea companies, was afterwards supplied by the West Middlesex and Grand Junction companies. The chairman inquired as to what precise evidence there was that Parliament had encouraged competition between different water companies. He asked whether when Acts authorising new supplies were passed there was any direct reference in any Act bearing on the question that a new supply was needed because the then existing supply was bad in quality or because the inhabitants were charged too much. Mr. Cripps could not point to such an instance, but said that the Vestry of Marylebone had supported the West Middlesex Bill on the grounds that the quality of their water-supply would be improved and that they would receive it at higher pressure, but he could not name any street in which the mains of two companies were actually supplying water at the same time. The chairman asked on what he founded his statement that the West Middlesex Company had ousted the Chelsea Company, and in reply Mr. Cripps pointed out that at one time Marylebone was supplied by the Chelsea and New River companies and that in the year 1806 their customers preferred to have a new supply which was said to be better in quality and for which they certainly had to pay less. Mr. Cripps could not remember any case since the passing of the Waterworks Clauses Act in 1847 in which Parliament had anywhere in the United Kingdom authorised a further supply of water in competition with the already existing supply.

The next question considered was the advantage which Mr. Cripps thought would accrue to the people of London by the purchase of the existing water companies by the County Council. The chief reasons given were as follows:—1. The purchase by the County Council would be a final settlement of the matter. (The present state of things resulted in a very great expense because of the numerous Parliamentary proceedings which took place and the amount of money

[1] The report of the Royal Commission which was presided over by Lord Balfour was published, it may be remembered, in 1893. It may be well to recall the terms of the Commission and to state briefly the conclusions to which the Commissioners came. The questions which the Commissioners were asked to determine were: "Whether, taking into consideration the growth of the population of the metropolis and the districts within the limits of the metropolitan water companies and also the needs of the localities not supplied by any metropolitan company, but within the watersheds of the Thames and the Lea, the present sources of supply of these companies are adequate in quantity and quality; and if inadequate whether such supply as may be required can be obtained within the watersheds referred to, having due regard to the claims of the districts outside the metropolis but within those watersheds, or will have to be obtained outside the watersheds of the Thames and the Lea?' The report described the area affected by the inquiry, gave some account of the histories of the water companies which supplied it and entered in some detail into the question of the probable future population of greater London. Statistics were given with regard to the amount of water supplied at the time and as to the quantity which would be likely to be required in the future. An account was given of the geological structure of the basins of the Thames and the Lea and the present sources of supply were considered in some detail. Various schemes suggested for future supply were briefly described and an estimate was given of the quantity of water which it was thought probable could be obtained from the deep wells. The important conclusions to which the Commissioners came with regard to the quantity of water which could be obtained and to the quality of that which was then supplied to London may be summed up as follows. With regard to quality the Commissioners were of the opinion "that the water as supplied to the consumer in London is of a very high standard of excellence and of purity and that it is suitable for all household purposes." With regard to the quantity the Commissioners came to the conclusion that a daily supply of 420,000,000 gallons could be obtained from the sources and by the methods mentioned in their report. This quantity was sufficient to supply thirty-five gallons a head to a population of 12,000,000 persons, "which is about three-quarters of a million in excess of the total population of Greater London, together with the outlying parts of water London will have become in 1931, even if the ratio of increase in the decennial period from 1881-91 is fully maintained." It will be seen that by accepting the findings of Lord Balfour's Commissions the present Royal Commission have greatly limited the scope of their present inquiry.

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which was spent on learned counsel and surveyors.) 2. If all the water undertakings were under the same administration the public would have a better chance of bringing pressure to bear on those who administered the undertaking. (At present the offices of some of the companies were inconveniently placed—for example, that of the East London Company was situated in the City of London at some distance from the area actually supplied by the company.) 3. The water-rates at present charged were unequal in different parts of the metropolitan area; under one central authority a rearrangement of the amount paid could be more readily made. 4. Some organised local authorities ought to be responsible in the case of the water-supply because on its purity the public health so largely depended and in this connexion Mr. Cripps adopted the words as well as the argument of Mr. Chamberlain, who in supporting the Birmingham Water Bill spoke as follows: "I consider the grounds for transfer more strongly applicable to the case of water than of gas. The case of water is a question chiefly of health, whilst the case of gas is a question chiefly of profit, and it seems to me absolutely certain that what Professor Simon called 'the power of life and death' should not be left in the hands of a commercial company, but should be entrusted only to the representatives of the people. I think the supply of water should not be directly or indirectly dependent upon the profits of a private association. In the first instance the obvious duty of the directors of a private company is to consider the interests of the shareholders, and this necessarily, without any imputation on their *bona fides*, stands in antagonism in principle to the interests of the community at large."

The latter part of the sitting was taken up by an examination of the witness on the action taken by the London County Council with regard to the local authorities of the various areas surrounding their own sphere of influence. Mr. Cripps said that negotiations had been entered into with the Surrey County Council, the Croydon Corporation, and with the county councils of Kent and Essex. An agreement was arrived at with the Surrey County Council by which the London County Council would give over their claims to supply that part of the County of Surrey which was under the jurisdiction of the Surrey County Council. The chairman, however, stated that he was informed that the Surrey County Council were now opposed to the purchase of this water-supply. An agreement had been made with the Croydon Corporation. The Hertfordshire County Council would enter into no agreement nor would the County Council of Middlesex. The County Council of Essex wished also to manage their own affairs. The chairman asked Mr. Cripps whether he knew of any case in which water trusts covering several areas had been established and whether they were worked satisfactorily. In reply Mr. Cripps said that in the case of Belfast the water trust did not work well for it led to conflicts between the corporation and the water trust. Mr. Cripps was not in favour of the formation of a Water Board for London. As far as the County Council were concerned he said it was an impracticable scheme and that all the arguments which justified the London County Council in urging the transfer of the water undertakings to themselves would justify the surrounding local authorities in asking that a transfer should be made to them of their parts of the undertaking.

THE INDIAN FRONTIER CAMPAIGN.

SIR WILLIAM LOCKHART is fast carrying out the plan of his projected expedition and enforcing obedience on some of the recalcitrant tribes, but we do not hear that the Afridis are submitting to the terms offered to them. We presume that the campaign will be officially closed before long in view of the winter. It appears to be undoubted that some interesting documents have been discovered which throw a fresh light upon the causes of the general uprising of the frontier tribes. The Mullahs had been urging the chiefs of the tribes to join the present campaign alleging that the Turks had conquered the Greeks and were fighting against the English and that the Suez Canal had been closed, consequently the time was propitious for a successful revolt. It is of course greatly to be regretted that this tribal war has broken out at the present time, but the revolt having taken place the Indian Government was compelled to take action in order to punish the tribes and defeat the object they had in view; arguments about the past and future policy that had been or should be adopted had in the meantime to be deferred.

The Anglo-Indian papers are naturally full of descriptions and details of the expedition, but their news has been forestalled by the telegraphic summaries which have already reached this country. Owing to the number of sick that have arrived from the front and from the Mohman force and that in the Tochi Valley it is stated that the hospitals in the rear have been overcrowded and additional hospital accommodation will be required.

The opening of another hospital at Nowshera is urgently called for, an addition of 300 beds being probably required. The hospitals at Rawal Pindi are unable to accommodate any sick from Nowshera in consequence of having to provide for those from the Tochi Valley and Kohat, where also and at Gumbat additional accommodation had to be provided recently.

There had been a large amount of sickness among the troops in the Tochi Valley and the rifle brigade had suffered so much and lost so many men that it had returned to India. The 93rd Highlanders and the native troops had also had a good deal of sickness. The valley is known to be very unhealthy, but it had for military and strategical reasons to be occupied. The troops were exposed to considerable physical strain in their marches and were fatigued; the water was bad, the climatic heat and the changes of temperature were great, and the "sniping" at night also told on the force. The troops were frequently moved to new ground but did not throw off their sickness. In addition to malarial fever a severe form of dysentery was very prevalent and was fatal to many soldiers and led to a good deal of invaliding. The disproportionate loss of life among officers in the fighting that has taken place during the various operations on the frontier has been a subject of general remark. Apart from their greater exposure in leading their men it is probable that the difference in their uniform causes them to be singled out by the Afridi marksmen.

THE BATTLE OF THE CLUBS.

THE MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND AND MEDICAL AID.

"M.R.C.S." writes to us as follows:—

"The resolution carried by the Members of the College of Surgeons at the annual meeting re medical aid associations and touting is in my opinion a farcical one. In this district within a quarter of a mile of my surgery four associations exist who all tout: (1) Medical Aid Association, fee 1*d.* per week; (2) Medical Service Association, fee 1*d.* per week; (3) Provident Dispensary, fee ½*d.* per week (membership 13,000 at least); and (4) Maternity Society (average number of cases 700 per annum), fee 5*s.*; nurse 2*s.* 6*d.* extra."

This is certainly a most unsatisfactory state of matters. That any member of a learned profession should consent to bind himself down to be at the beck and call of anyone who likes to summon him at all hours of the day or night for the magnificent sum of 2*s.* 2*d.* per annum is simply scandalous. Such a man can set no value whatever upon his work and we are quite certain that no member of the club, whatever his trade, would consent to be at the service of a medical man to clean his windows or house, look after his gas-fittings or his water-supply, or even perform such unskilled labour as cleaning boots, knives, or carrying coals for twenty times the sum. We advise "M.R.C.S." to send in the names, addresses, and qualifications of the medical men attached to the institutions mentioned to the Council of the Royal College of Surgeons of England, who have promised to consider carefully any such specific instances when brought before them.

MANCHESTER MEDICAL GUILD.

The council of the Manchester Medical Guild has issued a circular to the practitioners of Manchester and the neighbourhood upon the subjects of Hospital Reform and Medical Aid. With reference to the first matter the council says that a joint committee representative of the medical charities and the medical societies of Manchester and Salford has been appointed to inquire into the alleged abuse of hospitals and to suggest remedial measures. Abuse doubtless exists, but

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the committee cannot be expected to recommend any substantial reform without some clear and irrefragable evidence. As various medical practitioners most probably possess such evidence but feel doubtful about coming forward to give it the Medical Guild is prepared to act as intermediary between the practitioner and the committee and will submit to the latter any cases of abuse of which it may receive satisfactory evidence. All information will be communicated to the committee in confidence and the names of practitioners will not be divulged unless they wish it. Practitioners are therefore urged to send to the secretary of the guild any cases of abuse of which they have knowledge. "The Council of the Guild has recorded its disapproval of the practice of exacting fees from patients of the medical charities." This we suppose means disapproval of the system of pay hospitals and the like. As to medical aid the Council refers to a lately started branch of the National Deposit Friendly Society and points out that the profession ought in no way to lend their aid to this scheme, for (1) it means the interference of third parties between the medical man and his patient; (2) the fees are altogether inadequate and have been arranged without consultation with the medical profession; (3) there is no wage limit; and (4) the most likely people to join would be the thrifty, better-off people who are well able to pay the ordinary medical fee, while the poor and improvident would remain on the hands of the profession as now.

The Manchester Medical Guild ought, we think, to do good work. Its objects are shortly to organise the profession to secure united action and the coöperation of all for the common good. The annual subscription is 5*s.* and the secretary is Dr. Alexander Stewart, 12, Eccles Old-road, Pendleton, Manchester.

THE MEDICAL ACTS OF PARLIAMENT.

AT a meeting of the South-West London Medical Society held on Wednesday, Dec. 8th, Mr. Victor Horsley, F.R.S., gave an address on "The Medical Acts of Parliament: as they are and as they ought to be." Mr. T. A. IVES HOWELL presided.

Mr. HORSLEY said he had found that considerable misapprehension prevailed as to the exact powers the medical profession were accredited with as a body politic under the Acts of 1858 and 1886. The Act of 1858 put them into the position that they were registered practitioners of medicine and they alone were qualified practitioners of medicine. But this was not the view which had been taken by the legal advisers of the General Medical Council. They had now, however, been forced to take that view. Their previous contention was that the Acts only protected the title and did not protect a medical man in their practice. It had been held by the legal advisers of the General Medical Council that the diplomas of the corporate bodies were licences to practise medicine, but whatever they were in the past they were entirely altered by the Act of 1886 and 1858. The Act of 1886 says the qualifying examination shall be one in medicine, midwifery, and surgery held for the purpose of granting a diploma or diplomas conferring a right of registry. That was where the whole structure of the Medical Acts came in. So that in the eyes of the law the diplomas did not give the right to practise but the right to demand that the names of the holders of the diplomas should be placed on the Medical Register, the obvious inference being that any person not on the Register was liable to prosecution. The diploma given by a corporate body was therefore not a licence to practise. All that was wanted to do away with any doubt at all in the matter was a section added to the Act that only registered persons should be entitled to practise: the section to be followed by the penal clauses. By the Act no person could hold an appointment of any kind to any public body or friendly society without being a person registered under the Acts. Yet it had come to his knowledge that unqualified persons were placed as medical officers in public situations. He pointed out that the administration of the Acts were practically in the hands of the General Medical Council, but there was so much diversity of opinion that anything like concentrated action in administering the Medical Acts would always be difficult until the constitution of that Council was altered. He referred to the need of a one portal system and the power of the General Medical Council to bring about that desirable reform. From his own observation it would seem that the corporate bodies would not object to one professional examination although they might object to one preliminary examination. That would be beginning reform by placing the cart before the horse, but it would be better than no reform at all.

A discussion followed, in which the Chairman, Dr. ALDERSON, Dr. BATEMAN, Mr. JOSEPH SMITH, and others joined.

THE CYCLING EXHIBITIONS.

IN spite of the large number of accidents which occur during the cycling season the craze for "wheeling" increases and the large crowds which have daily visited the two great "shows" of the year, the Stanley and the National, seem to show that the interest in the pastime is likely to be still larger in the coming season.

At the Stanley Show which held its twenty-first annual exhibition at the Agricultural Hall from Nov. 19th to Nov. 27th little was to be seen that could be called novel, but some of the "gears," saddles, brakes, and accessories were worth careful examination. The Pyramid frame, manufactured by the Genese Cycle Co., places the rider exactly between the front and back wheels and would seem to be an improvement on the conventional form. Several new chainless gears were shown, but although they presented some obvious advantages over the ordinary chain and toothed wheel time alone can show their value. Most of them take the form of a revolving rod which is connected with the back wheel and bottom bracket by bevelled cog-wheels. Among the most ingenious of them is that known as the "La Gazelle" Link Motion Chainless Bicycle. The mechanism cannot be adequately described in a few words but the action is perfectly simple when seen. The appearance of this new gearing is similar to that of a draughtsman's pantograph. The "Protean" gear of the Whippet Cycle Syndicate enables the rider to change the gear at will—a decided advantage when travelling over roads which present frequent undulations.

The liability of nickel plating to become rusty has had the effect of stimulating inventors to produce a metal which while maintaining a high state of polish shall not have the disadvantages of nickel. "Kronard" metal has somewhat the appearance of silver and is stated by the manufacturers to be non-rusting and to be stronger than steel. It is claimed to be the strongest and whitest metal yet produced. A number of cycle parts are shown in "Kronand" such as hubs, spokes, rims, bells, foot rests, &c. "Hecunum" is another metal of similar description.

Saddles were to be seen in infinite variety. Among the most noticeable were the Pattison, which certainly goes a long way towards reducing perineal pressure, and the Henson. Wood's patent wire saddle which is constructed similarly to a wire-woven mattress and covered with a leather or felt cover would seem, as is claimed for it, to be cool, comfortable, and light.

Of the brakes the pneumatic which consists of a hollow bulb which being compressed forces air into a rubber chamber or pad and thereby expands this on the tyre has the advantage of being fixed over the back wheel. Williams's patent concealed brake, the rod of which runs down the steering post, appears to be a useful one. The Sawyer safety foot-brake is powerful in action but has the obvious disadvantage of necessitating the taking of the foot from the pedal.

Bowden's new mechanical movement for the transmission of power along slack wires as adapted to brakes is ingenious and likely to prove useful in many other directions. Mr. Bowden also showed a new brake which acts on the rim of the back wheel and, if it should prove as powerful in practice as its demonstration at the exhibition would seem to show it will, there is a great future before it.

As at the Stanley show so at the National show which closes to-day (Saturday), little is to be seen in the way of new machines—that is to say novel in design. Exception must be taken however with regard to "the Cantilever" (the Cycle Supply Association), the advantages claimed for which are lightness, strength, and rigidity. It is about two-thirds the weight of an ordinary bicycle. The Crypto Works Company

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show a new form of the "Bantam" having an elongated A-shaped frame, hence called the "Alpha." This is certainly an improvement in appearance on the old form.

With regard to tyres the "make" which seemed to attract the most notice is the Fleuss, a tubeless tyre which for ease of manipulation and durability of material holds a high place. Two of its great advantages are its self-closing property when a puncture is made by an object such as a thorn and the facility with which a larger puncture can be patched until the rider arrives at a place more convenient for a complete repair. The Dunlop Company show their well-known tyres and there are several makes which enter into keen competition with them, such, for instance, as "The Woodstock" (which is arranged for easy attachment and detachment), "The Scottish," "Clipper Reflex," and the Clincher. The self-sealing air-chamber inner tube deserves a word of special notice inasmuch as it is quite possible to stab through and through again and again the tread of the tube without causing any appreciable escape of air. The Glansure tyre, which is made of shark skin, is also worthy of notice and would seem to possess many advantages, but at present it is made in the form of a "stuck-on" tyre and in this respect does not commend itself.

That attention is being paid to the important subject of perineal pressure is illustrated by the multiplicity of patent saddles which are everywhere to be seen. One that is likely to receive notice is the Esmond which has lately been improved and which is still undergoing further improvements. This saddle is so attached that it has a backward and forward motion as well as a side or rocking motion, and practically becomes one with the rider. Pedaling is greatly improved and vibration and concussion are practically absent. Altogether this saddle can be strongly recommended and when the new improvements—namely, a locking device for holding the saddle steady when going up or down hill and a spring under the back of the seat—are added, it will probably be still more appreciated. The "Christy" is another saddle which is used by many with comfort and consists of two pads divided by a metal gutter terminating in a short peak. This latter would be greatly improved if it were padded and it is quite possible that the perineum may be bruised if due care is not taken. Otherwise this form of saddle is a good one. Martin's "Silent Saddle" is of the "peaked" variety, but its construction and form would seem to merit attention. One of the saddles manufactured by Messrs. Webb, Limited, of Birmingham, has a low back-rest running round the posterior portion of the seat. All other things being equal this in some cases should be of advantage.

The "Doolittle" (Singer Cycle Co.) is an ingenious contrivance whereby the machine can be stopped by back pedaling or the speed reduced by the same means. Various forms of brakes are shown, but they require to be inspected in order that their construction may be understood.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6008 births and 4172 deaths were registered during the week ending Dec. 4th. The annual rate of mortality in these towns which had been 18·6 and 20·2 per 1000 in the two preceding weeks declined again last week to 19·8. In London the rate was 20·2 per 1000 while it averaged 19·5 in the thirty-two provincial towns. The lowest rates in these towns were 9·9 in Croydon, 13·1 in Derby, 13·2 in Cardiff, and 14 2 in Salford; the highest rates were 23·8 in Liverpool, 24 6 in Blackburn, 26 2 in Leeds, and 27·9 in Norwich. The 4172 deaths included 541 which were referred to the principal zymotic diseases, against 462 and 552 in the two preceding weeks; of these, 215 resulted from measles, 89 from diphtheria, 77 from whooping-cough, 61 from "fever" (principally enteric), 53 from scarlet fever, and 46 from diarrhœa. No death from any of these diseases was recorded last week in Plymouth; in the other towns they caused the lowest death-rates in Bradford, Preston, and Portsmouth, and the highest rates in Gateshead, Halifax, Burnley, and Blackburn. The greatest mortality from measles occurred in Swansea, Oldham, Huddersfield, Halifax, Gateshead, and Blackburn; from whooping-cough in Bolton and Norwich; and from "fever" in Derby. The mortality from scarlet fever showed no marked excess in any of the large towns. The 89 deaths from diphtheria included 52 in London, 7 in Burnley, 5 in Liverpool, 4 in Cardiff, and 4 in Wolverhampton. No fatal case of small-pox was registered during the week in any of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 3811, against 3777, 3792, and 3818 on the three preceding Saturdays; 328 new cases were admitted during the week, against 460, 397, and 375 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London which had been 414 and 471 in the two preceding weeks, declined again last week to 418, but slightly exceeded the corrected average. The causes of 58, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Bradford, Leeds, Newcastle-upon-Tyne and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, Liverpool, and Salford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns which had been 18·5 and 19 5 per 1000 in the two preceding weeks further rose to 19·6 during the week ending Dec. 4th, but was 0·2 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·9 in Aberdeen and 16·1 in Paisley to 27·9 in Greenock and 29·0 in Perth. The 583 deaths in these towns included 22 which were referred to whooping-cough, 15 to measles, 13 to diarrhœa, 9 to scarlet fever, 8 to "fever," and 6 to diphtheria, In all, 73 deaths resulted from these principal zymotic diseases, against 62 and 74 in the two preceding weeks. These 73 deaths were equal to an annual rate of 2·4 per 1000 which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough which had been 10 and 23 in the two preceding weeks, were 22 last week, of which 16 occurred in Glasgow and 3 in Greenock. The 15 deaths referred to measles showed an increase of 5 upon the number recorded in the preceding week and included 11 in Glasgow and 3 in Greenock. The fatal cases of scarlet fever which had been 8 and 12 in the two preceding weeks declined again to 9 last week, of which 3 occurred in Glasgow, 3 in Edinburgh, and 2 in Leith. Of the 8 deaths referred to different forms of "fever" 3 were recorded in Greenock and 2 in Paisley. The 6 fatal cases of diphtheria showed a slight further increase upon recent weekly numbers, and included 2 in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 145 and 123 in the two preceding weeks, were 125 last week and were 21 below the number in the corresponding period of last year. The causes of 36, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the three preceding weeks from 19·8 to 25·4 per 1000, was again 25·4 during the week ending Dec. 4th. During the past nine weeks of the current quarter the death-rate in the city has averaged 23·4 per 1000, the rate during the same period being 18·2 in London and 19·1 in Edinburgh. The 170 deaths registered in Dublin during the week under notice corresponded with the number in the preceding week and included 19 which were referred to the principal zymotic diseases, against 10 and 20 in the two preceding weeks; of these, 12 resulted from different forms of "fever" (principally enteric), 3 from scarlet fever, 2 from diphtheria, 2 from whooping-cough, and not one either from small-pox, measles, or diarrhœa. These 19 deaths were equal to an annual rate of 2·8 per 1000, the zymotic death-rate during the same period being 2 9 in London and 1 8 in Edinburgh. The deaths referred to "fever" which had been 6 and 12 in the two preceding weeks were again 12 last week. The fatal cases of scarlet fever which had been 1 and 3 in the two preceding weeks were again 3 last week. The mortality from diphtheria and from whooping-cough exceeded that recorded in the preceding week. The 170 deaths in Dublin last week included 32 of infants under one year of age and 42 of persons aged upwards of sixty

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years; the deaths both of infants and of elderly persons exceeded the numbers recorded in the preceding week. Seven inquest cases and 2 deaths from violence were registered; and 69, or more than a third, of the deaths occurred in public institutions. The causes of 9, or more than 5 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR ALLAN PERRY retires from the service receiving a gratuity. Surgeon-Major Morris has been posted to the Sind District and Surgeon-Lieutenant-Colonel Le Mottée has been posted to the medical charge of the Station Hospital, Quetta District. Surgeon-Major Lyle has assumed charge of the Station Hospital at Newcastle-upon-Tyne.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Colonel Hay (Bombay), Officiating Principal Medical Officer, Bombay and Aden Districts, are placed at the disposal of the Government of Bombay. Surgeon-General G. Bainbridge, lately appointed with the Government of Bombay, in succession to the late Surgeon-Major-General Cook, is the junior of the three Surgeon-Colonels pertaining to the Bombay Medical Establishment. Surgeon-Major Brazier Creagh, who has been on plague duty in Eastern Persia, has returned to Quetta.

NAVAL MEDICAL SERVICE.

Staff Surgeon Thomas Edward Henry Williams has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet.

VOLUNTEER CORPS.

Artillery: 1st Ayrshire and Galloway: Surgeon-Lieutenant S. A. D. Gillespie, M.B., resigns his commission; Henry Alexander Pattullo, M.B., to be Surgeon-Lieutenant. 2nd Devonshire (Western Division) Royal Artillery: Surgeon-Lieutenant J. P. S. Ward to be Surgeon-Captain. *Royal Engineers: Submarine Miners:* The Clyde Division: Surgeon-Captain J. Whiteforde, M.D., retires under the provisions of paragraph 111 of the Volunteer Regulations, 1896. *Rifle:* 1st Volunteer Battalion the Queen's (Royal West Surrey Regiment): Surgeon-Captain W. Rosser, M..D, resigns his commission. 3rd Volunteer Battalion the Bedfordshire Regiment: Brigade-Surgeon-Lieutenant-Colonel H. F. Holland, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the battalion on his retirement, vacating at the same time his appointment as Senior Medical Officer to the Home Counties Volunteer Infantry Brigade. Galloway: Surgeon-Lieutenant J. Cowan, M.B., to be Surgeon-Captain. 3rd Glamorgan: Surgeon-Lieutenant E. Reid to be Surgeon-Captain. 2nd (Angus) Volunteer Battalion the Black Watch (Royal Highlanders): Surgeon-Major R. Grant to be Surgeon-Lieutenant-Colonel. 3rd London: Surgeon-Lieutenant-Colonel W. T. Whitmore resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the corps on his retirement. 1st Dumbartonshire: Thomas John Burton, M.D., to be Surgeon-Lieutenant. 7th (Clackmann and Kinrose) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders): The under-mentioned Surgeon-Captains to be Surgeon-Majors: J. H. Hay, M.D., and D. W. Currie, M.B.

THE SOUDAN EXPEDITION.

There is a great lull in Egyptian affairs at the present time and we are without any reliable news as to the probable course of future military operations. Sir Herbert Kitchener has been to Suakin and Massowah and after paying a visit to Cairo he will return to Berber in command of the Egyptian expeditionary army. In the meantime a force has proceeded to Kassala with the view of taking over that garrison from the Italians, and Egyptian troops will also occupy Massowah. The news about the evacuation of Metemmeh by the Dervishes has not been corroborated, but some of the tribes are deserting from the Dervish army. It seems probable that an advance on Khartoum will be made early next year and that the troops garrisoning Kassala will take part in it. No announcement has yet been made about the employment of British troops with the Egyptian force when the start for Khartoum is made. The Khedive's troops in the field are healthy and everything, as far as the medical service is concerned, is working satisfactorily.

BRIGADE-SURGEON-LIEUTENANT-COLONEL D. D. CUNNINGHAM.

The *Pioneer Mail* of Nov. 19th announces that Brigade-Surgeon-Lieutenant-Colonel D. D. Cunningham, who came to England last April on account of ill-health, will not return to India. This will be a great loss to the service and to the cause of scientific medicine in that country. This officer was Professor of Physiology in the Medical College, Calcutta, and has done a large amount of scientific work of an exceptional, and often of an original, kind in connexion with a variety of subjects—such as cholera, the conditions of ground-soil in relation to temperature, moisture, and disease, the nature of snake poison, &c. He is an expert and admirable microscopist and a good bacteriologist. He has always exhibited the spirit of an independent and impartial observer in scientific research and has won for himself a distinguished position not only in this respect but as a very industrious and highly-cultured man.

A MEDICAL OFFICER'S GALLANTRY.

Brigade-General Ellis, C.B., in his despatch relative to the action near Shabkadr on the Indian frontier refers to the services of Surgeon-Captain T. H. Goodwyn, Army Medical Staff, in eulogistic terms. The general brings to very special notice the gallantry of this officer, the only medical officer with the force. "He was attending to the wounded wherever the fire was hottest and showed great devotion to his duty. He was himself knocked out of time by a stone or spent bullet but refused to leave his work."

ALUMINIUM COOKING UTENSILS FOR FIELD SERVICE.

The French in Madagascar have been using aluminium for cooking utensils with, it is reported, satisfactory results. In lightness, cleanliness, and non-liability to rust aluminium has great advantages, but it has one very serious drawback for field service in that utensils made of this metal cannot be repaired by any process of soldering.

THE OUTBREAK OF SCARLET FEVER AT THE GUARDS' DEPÔT, CATERHAM.

In order to check the spread of scarlet fever at Caterham an isolation camp has been formed for the occupation of the men of the depôt not required for duty in barracks.

Notification has been received that the s.s. *Dilwarra* left India with 309 invalids for Netley. She is due to arrive at Southampton at the end of the present week.

Correspondence.

"Audi alteram partem."

"ON THE CLIMATIC TREATMENT OF PHTHISIS."

To the Editors of THE LANCET.

SIRS,—The communication of Dr. Walters on the above subject in THE LANCET of Nov. 20th will have been read with especial interest by those who are occupying themselves with the question, How can phthisis be more adequately treated in this country than it is at present? The continental sanatoria for the hygienic treatment of phthisis have become an established success, and Dr. Walters argues that "the essential features of a successful health-resort for the cure of phthisis" obtain in parts of our own country. During the last two and a half years I have put this to the test in a convalescent home at Cromer. A suitable shelter has been provided and twenty-four phthisical patients have undergone the "open-air" treatment there for periods varying from one to fourteen months. The results obtained—especially those of the winter months—have been surprisingly encouraging. As I hope to publish an account of these cases shortly I will only say now that three-fourths of them manifested marked improvement which has been maintained till now.

I am, Sirs, yours faithfully,

F. W. BURTON-FANNING, M.D. Cantab., M.R.C.P. Lond.

Norwich, Dec. 6th, 1897

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CRIPPLED CHILDREN'S CHRISTMAS.

To the Editors of THE LANCET.

SIRS,—By a vote of the Court of Common Council to-day the Corporation of the City of London has for the fourth time granted the use of the Guildhall for the Christmas entertainment to ragged school children which it has been my privilege annually to promote. The guests are drawn from all of the poorest parts of the metropolis. I am sure that the sight of their radiant faces at the well-spread board under the eye of those genial giants—Gog and Magog—must have repaid the kind-hearted donors of this joyful feast. I have every confidence that the generous public will once more assist as liberally as heretofore, but this year I ask for your coöperation to make a special and wider appeal.

There are over 5000 little crippled children passing a monotonous existence in crowded courts and alleys in this great city. Many of them are stretched on beds of suffering and are prisoners from year's end to year's end. Others are quite unable to participate in the pleasures offered to the more robust. Realising how sad was the lot of these afflicted little ones last year the surplus of the funds entrusted to me for the children's banquet at the Guildhall was spent in providing 100 Christmas hampers for crippled children. There was not the smallest difficulty in distributing them to the most deserving cases, for every cripple is registered and visited systematically by the Ragged School Union. But in making the selections it gave great pain to be obliged to refuse four out of every five applicants. Why should not all the 5000 homes be brightened and made happy for one day at least in the year?

It rests simply with sympathetic people to provide the means. The cripples' Christmas hamper may be large or small according to the measure of support I may receive. Last year it contained a 2 lb. meat pie, a plum-pudding, a substantial cake, a packet of tea, and a parcel of sweets; and judging from the pathetic letters of thanks these unaccustomed dainties—the mere elements of Christmas fare—gave untold satisfaction. That is why I want to disappoint no child-cripple this year out of the 5000 and that is the reason why I would earnestly ask for contributions, large or small, to be sent to the Little Cripples' Christmas Fund, care of Alderman Treloar, Ludgate-hill, E.C.

I am, Sirs, your obedient servant,

Ludgate-hill, Nov. 18th. W. P. TRELOAR.

"DR. RENTOUL'S CLAIM FOR FEES FROM THE MEDICAL COUNCIL."

To the Editors of THE LANCET.

SIRS,—In your issue of Dec. 4th, under your report of the November session of the Medical Council, reference is made to a claim made by me for a fee of £10 10*s.* 0*d.* from the Medical Council. My claim rests upon the following Standing Order of the Medical Council:—Section XI. 4: "Each member of the General Council who *resides* more than two hundred miles from London shall receive five guineas for the day of his coming and five guineas for the day of his return." In so far as I can find out, the Treasurers of the Medical Council (Sir D. Duckworth and Mr. Bryant) object to pay me the 10 guineas for the three following reasons:—

1st. That Mr. M. Banks, when on the Medical Council, did not receive any payment under the above Rule. From what I have learned, I believe Dr. Banks did not know of this Rule. Had he known, I feel fairly certain he would have claimed. But I have stated that I refuse absolutely to be bound by what *one* member of the Medical Council has done. The above rule was made—not by *one* member of the Medical Council, but by the majority of the Council, and in 1859. Let me project this excuse for non-payment a little further so as to see how ludicrously ridiculous it is. Suppose Dr. Banks had refused to take any payment whatsoever. Such an action of his could, according to the Treasurers, be used against me, or any other member, just as the above has been! Either the above rule is, or is not in force. If it be still in force, let it be honestly put into force. If not, let it be struck out.

2nd. Sir D. Duckworth and Mr. Bryant contend that the above Rule does not take in the distance from my *residence* to the Medical Council office. I contend that it does. The word "resides" is expressly and pointedly used in the above Rule. Do they contend that I "reside" at the railway station! The distance from my residence to the Medical Council is 204¼ miles. I contend that under the term "resides" is included the *total distance* travelled by a member attending a meeting of the Medical Council. It can not include *railway* travelling only. Else how could the Irish Representatives, when travelling by boat, be justly dealt with. Again, supposing a Member has to drive 5 to 10 miles, is this distance not to be included when making up the total 200 miles?

3rd. Sir D. Duckworth and Mr. Bryant wrongly calculate the distance to London upon the charges made by the Railway companies from their third class parliamentary fare. No method of calculating is more absurd. In my letter of July 13th, '97, I particularly pointed out that the railway fare charged was *not* based upon *the distance*, but was due to the prices charged for tickets *by the competing railway companies*. In his letter to me of June 16th he says—"the Parliamentary fare to Liverpool, 16*s.* 6*d.*, is calculated on the basis of the distance being 198 miles." This is a very gross and grave inaccuracy, and especially so when made by Teasurers of the funds of the Council. There are three chief railway lines from Liverpool to London: the L. & N. Western; the Midland; and the Great Western. The distance *from station to station* (Liverpool to London), by the L. & N. W. is 201 miles; by the Midland, over 218 miles; and by the Gt. Western 228 miles. By Section 6 of the Cheap Trains Act, 1844, it is enacted that the Parliamentary fare shall not 'exceed' one penny for each mile. But, be it noted, this act does not say the railway companies shall not charge *under* one penny per mile. Evidently Sir D. Duckworth and Mr. Bryant fancy the railway companies charge just as high a price as they legally can. But this is not so. Competition among railway companies steps in as among other affairs of life. If the railway companies charged up to their legal rates, the Gt. Western with its 228 miles, at 1*d.* per mile, would charge 17*s.* 8*d.* (it actually, with the *longest* distance of the three, charges 16*s.* 2½*d.*: the Midland, with its over 218 miles could charge 18*s.* 0½*d.* (it actually charges 16*s.* 6*d.*): while the L. & N. Western with its 201 miles could charge 16*s.* 9*d.* (it actually charges 16*s.* 6*d.*). Therefore, by the shortest distance from station to station (upon the chief objection of Sir D. Duckworth and Mr. Bryant) is 201 miles. This being so, and taking it that the above Rule refers only to the distance from station to station I can honestly claim the above fee of £10 10*s.*

All the above facts were laid by me before Sir D. Duckworth and Mr. Bryant in my letters of June 14th and July 13th, '97. Let me just add, I believe this pettifogging action of these two gentlemen would not have taken place had I not, at the last May session of the Medical Council, stated, when the subject of Medical Aid Associations was before the Council, that if the Council was to act honestly in this matter, it must wash its own hands first, as at least one Member of the Council was connected with a London hospital (Guy's) which was to all practical purposes a large medical aid association at which persons, by paying threepence per week, or sixpence per fortnight, could obtain out-patient medical and surgical treatment and medicines; the medical officers being specially paid about £100 per annum each for such services; and where beds for in-patients were advertised at from 21*s.* to 63*s.* per week. If this statement is false, then I publicly challenge the members of the Medical Council connected with this "hospital" (or medical aid association) to deny it.

There are two other statements made by Sir D. Duckworth and reported to which I wish to refer. He stated before the Council that I asked him if I was to be paid for my wife's presence in London. I can only answer this gross impertinence by publicly stating that the person who said it is a gross perjurer of the truth. Is it likely that I would make such a claim, or if I thought I could make it would I not first have read the rules of the Council or asked the Registrar privately? Evidently the mantle of knighthood sometimes covers those who are not above using the grossest slander. I have been "blackballed" by the members of the Liverpool Medical Institute for membership on account of the action I have taken upon the question of abuse of medical charities. This I do not much mind. But if Sir D. Duckworth insists in dragging in others closely related to me I shall take a very sharp method of trying to teach him how to act as a gentleman. His other gross y untrue statement is "that Dr. Rentoul had got the Chief Constable of Liverpool

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to measure the distance from his residence to the railway station." I am yours,

Liverpool, Dec. 5th, 1897. ROBERT R. RENTOUL.

*** Having reported the statements to which Dr. Rentoul takes exception we publish his letter at the same time deprecating the unnecessary violence of his language.—ED. L.

THE MEDICAL STAFF OF THE SEAMEN'S HOSPITAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—The attention of my committee has been drawn to a letter that appeared in your paper on the subject of the titles of the honorary medical staff of this society, and I am directed to send you the following copy of a minute which was passed on April 10th, 1896:—

"That in future the title of all honorary medical officers appointed to the branch hospital be Visiting Physician or Surgeon (as the case may be) of the Seamen's Hospital attached to the Branch Hospital; and that in future appointments to the Hospital at Greenwich the title of Visiting Physician or Surgeon (as the case may be) of the Seamen's Hospital attached to the Dreadnought Hospital."

I am, Sirs, yours faithfully,

Greenwich, Dec. 8th, 1897. P. MICHELLI, Secretary.

*** The letter to which our correspondent refers is probably one which appeared in our issue of Oct. 30th, 1897, under the heading "Beri-beri and Erroneous Diagnoses."—ED. L.

"TEMPORA MUTANTUR, NOS ET MUTAMUR IN ILLIS."

To the Editors of THE LANCET.

SIRS,—I have been in practice for thirty-seven years and have brought up a large family. It has always been my endeavour to keep up the dignity of the profession though of late it has been increasingly difficult to do so. The authorities, both medical and legal, have deprived me or have allowed me to be deprived of many rights while burdens have been imposed which lower my income and increase my expenditure. Having paid a premium myself I had reason to suppose that I might some day take pupils and recover my outlay, but that privilege is denied me. For copy certificates of the cause of death I used to receive payments ranging from 1*s.* or 2*s.* 6*d.* in the case of poor people to 1 guinea or 2 guineas in the case of large insurances. Now the registrar not only copies my certificate but takes the fee. At considerable personal inconvenience and expense I acquired proficiency as an accoucheur and had a fair proportion of midwifery cases to attend, but now certificated nurses are permitted to attend them and they take the fees so that part of my income is lost. All fractures and other injuries in the streets are at once attended to by the active and intelligent constable, who would lose caste if he called in proper professional assistance, so I do not even get the chance of earning the wretched 3*s.* 6*d.* which police regulations allow.

As I cannot have a pupil I am driven to choose between a qualified assistant, who expects me to pay him a salary while I teach him his practical work at my own expense, and an unqualified assistant, with the risk of being treated as a criminal if anything should go wrong with any patient whom he has once looked at. As if impoverishing causes from outside the profession were not sufficiently numerous some of my neighbours have allied themselves with medical aid societies and by their agents systematically call on my patients and press them to join the "doctor's club" as they call it and thus more of my income is diverted from its proper course. So serious is the effect of these combined causes that during the last two years my income is reduced by £190. This has thrown me into a position of great difficulty and distress. My youngest son, who is commencing his third winter, has received notice that unless his fees amounting to £30 are paid forthwith he will be excluded from lectures. He is an ardent and eager student and it will be heartbreaking work if I have to keep him at home, but I do not know how to get the money. I have already paid £80 to the hospital besides examination fees. What can I do? Is there any fund available in such a case? Perhaps some of your readers will kindly throw out a suggestion.

I am, Sirs, yours faithfully,

Dec. 6th, 1897. PATERFAMILIAS.

THE NOTIFICATION OF PUERPERAL FEVER.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Nov. 27th[1] it is stated that a medical officer of health is dissatisfied with the manner in which the notification of puerperal fever is carried out in his district. If other medical men have to contend with what I have had to twice lately I wonder notification occurs at all. A year ago I notified a case of puerperal fever to the medical officer of health of an adjoining parish with the result that he sent a loud-voiced inspector who in the passage of a four-roomed cottage talked about "infection, disinfectants, and death," the patient of course hearing it all and being much upset. A few days since it became my intense misfortune to notify a case to another medical officer of health and this is what happened. The sanitary inspector called, in not the most gentle way, then a few days later the medical officer of health who, without having communicated with me, cross-questions the nurse (also in a four-roomed cottage with the patient upstairs with a temperature of 104° F.) as to whether instruments were used, if used properly (the nurse had to admit she had never before seen them used), if the instruments were boiled, if any disinfectants were used by me (the nurse was so flurried at the sight of instruments she could not say), if there was any difficulty in getting the placenta away, and if I douched afterwards, &c., &c. As the husband said to me, "All this questioning of the nurse would make it appear as if you had not done your duty."

All this is not pleasant to either patient, medical man, or the household at a time when there is so much anxiety to bear. Could not medical officers of health exercise a little more tact? Of course inquiry must be made and should be courted by all. Surely a quiet note to the nurse from the medical officer of health asking her to see him at his office on a nursing matter (there to be questioned as to whether the forceps were put on properly, &c.), and then if necessary a visit to the house and patient as a friend of the attending practitioner, ought to be sufficient without paying surprise visits. I cannot help thinking that in such an illness as puerperal fever no interference should be allowed with the house or patient until the illness is well over. Why should not a medical man exclude the authorities in the same way that he does the friends? I have no wish to draw attention to any particular officials but only to point out a very likely reason for risking a £2 penalty and costs.

I am, Sirs, yours faithfully,

Nov. 30th, 1897. NOTIFICATION.

PLAGUE IN INDIA: ITS SPREAD AND ITS PREVENTION.

(FROM A CORRESPONDENT.)

"PROXIMUS ARDET UCALEGON."

RECENT events in India have shown how little regard is paid to the dictates of science until these have been confirmed and emphasised by a terrible experience. There is therefore all the more reason to hope that this experience will not be lost and that its lessons will be borne in mind, in view of the facts (1) that plague is undoubtedly showing a tendency to spread in India, and (2) that when the proper measures are taken in time there is no disease the spread of which can be so certainly checked and finally arrested. Although we do not know all about the modes of spread of plague we now know enough of the subject to enable us to deal confidently with local outbreaks, where the men, the means, and the money are forthcoming—and this is not merely a forecast, but a result achieved in more than one instance of local outbreaks in the present Indian epidemic. Of these, Hurdwar in the North-West Provinces, and Shikarpur, Jacobabad, and Tatta in Sind, are examples, while there is no doubt that the early extinction of the disease in Karachi was due to the comparatively prompt measures taken there. Plague, from its public health aspect,

[1] Report of the Medical Officer of Health of Oldham, reviewed in THE LANCET of Nov. 27th, p. 1411.

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comes, then, to be considered, firstly, as to its modes of propagation and, secondly, as to the prevention of its spread.

THE PROPAGATION OF PLAGUE.

Although we do not know all, or nearly all, that is to be known of the bacillus of plague we have yet become acquainted (through the labours of bacteriologists on the one hand and through the experiences of those who have intelligently studied the history of the disease as it has appeared to them under various local conditions on the other) with a sufficient number of unassailable facts upon which to formulate rules for practical application in cases of plague whether imported or local. Thus we know that the individual bacillus is short-lived and may be easily destroyed, but is capable of enormous multiplication in a short time under favourable conditions; that no spore has ever been found and that it may be hoped that such a spore does not exist. We also know that certain animals are obnoxious to infection and that most, if not all, of them can be rendered immune for a longer or shorter time by inoculation with attenuated virus. The bacillus has been found to thrive most in floors of houses whose inmates have been infected, and it seems to the writer to be proved by experience in various local epidemics in India that the disease in its epidemic form is essentially one of floors of houses rather than of humanity, though the medium of importation in the first instance is generally either an infected person or (much less frequently) infected clothing.

The bacillus has been found in most of the organs of those dead from the disease. Its presence in the living blood is by no means satisfactorily made out; but it is held by some who regard the disease as invariably conveyed by inoculation that the bacillus may be found in lymph-channels, glands, and blood, but that its presence in the blood is necessarily of fatal import. Apart from the inherent improbabilities of the theory that every infected person has been inoculated through an accidental fissure or abrasion this view is, the writer thinks, negatived by the fact that incision of the gland at an early stage, which involves giving free access of the gland bacilli to the blood stream, was followed by recovery in the majority of cases thus treated in the Karachi plague hospital.

The facts observed in India lead to the belief that the invasion by the bacillus comes about in many ways and that inoculation is one of the least frequent of these, while the modes of invasion by the lungs and stomach are probably the most common. The writer is not aware of any experiments made as to the presence of the bacilli in the air of infected rooms, but the facts that the disease chiefly attacks those who live or sleep in an infected quarter and that the bacilli, while swarming in the floor surface, are found with difficulty or not at all on the walls of an infected room, tend to show that contact with the poison must be intimate and prolonged to ensure infection. Were this not so the work of a plague superintendent would be much more dangerous than it has actually proved to be. The presence of the bacillus in the various excretions furnishes an obvious explanation of house floors in native houses becoming infected and the question of the spread of the disease to the neighbouring houses comes to be considered. The view that this occurs by human intercommunication was naturally that which was first entertained, but reflection, on further experience, tends to show that though this may be the method of spread in some cases it does not satisfactorily account for the regular advance of the disease house by house and street by street from its original focus which is so often seen and some other cause for this phenomenon came to be sought for.

It was noticed, not once but many times, that in the case of a town which was itself free from infection but in very close connexion with an infected city (as at Hyderabad about 100 miles from Karachi) cases of plague first occurred in persons lately arrived and that it very often happened that several cases of the kind occurred at longer or shorter intervals before the first local case was reported in the person of an inhabitant of the hitherto uninfected town and that simultaneously with the first appearance of the local epidemic rats were found to be dying in numbers from plague in the dwelling of the original imported case, the local case, or in both. Of course, many theories as to the method in which this occurred may be, and have been, formulated, the most obvious being that of the rats having infected the floors of the next dwelling and thus given rise to a local outbreak. Thus, a rat poisoned by excreta from an imported case travels to the next or to a neighbouring house and infects the floors there. There are plainly many arguments to be raised against this simple explanation as it does not "fill the bill" in every respect unless we suppose rats to have been non-existent in the house or houses in which the first imported cases developed. Yet the fact remains that the appearance of local plague and of rats dead from the disease, as proved by bacteriological examination after death, were in very many cases simultaneous and a consideration of the fact that the floors are the chief breeding places of the bacillus renders the explanation a probable one. In well-ordered hospitals where the floors were constantly sluiced with disinfectants the danger to the medical officers, nurses, and hospital attendants was practically *nil*—as seen in Karachi—whereas in other instances where these measures were neglected the result was invariably the spread of the disease to those engaged in tending the sick. Of course, accidents will happen and even in the best regulated hospital a case of plague may occur among the medical staff or attendants, but this is rare, and the writer has always regarded the occurrence of a number of cases amongst the staff of a plague hospital as an indication of imperfect management, especially as to the use of disinfectants, and this has invariably been found on inquiry to have been the case.

THE PREVENTION OF THE SPREAD OF PLAGUE.

The principles underlying this are rational and as already stated have been proved capable of being put into effective operation. These principles are to secure early detection of cases of plague and to arrange for isolation of the sick, segregation of the inhabitants of infected quarters, and disinfection of all such quarters and of all bedding, clothing, &c., which may harbour the microbe.

In India the early detection of cases was effected in various ways by search parties, civil or military, under the direction of a medical officer, by offering small rewards for information, and by private inquiry, and although at first some difficulty was experienced it was found that when the nature of the disease was understood such information was often voluntarily given by persons living near the infected quarters. In Bombay the spread of the disease may fairly be attributed to two causes—firstly, the non-recognition of its nature when it first appeared in a poor and dirty portion of the city where the people do not as a rule call in the aid of European physicians; and secondly, the reluctance on the part of the local government to institute measures which would interfere to some extent with the prejudices of the ignorant native population.

It was held by some in local authority that the plague must run its course and although information to the contrary was promptly forthcoming from the professional advisers of the Government the mistake, which doubtless those responsible have been the first to acknowledge and regret, was made and a policy of *laisser faire* was inaugurated and maintained until too late. Fortunately better counsels have now prevailed and the plague, whether in Bombay or elsewhere, has been dealt with more or less promptly and *pari passu* more or less efficiently. In Karachi, where plague was not reported until December, 1896, similar indecision at first marked such action as was taken, but the value of the measures advocated by medical authorities both in India and at home was soon appreciated by the chief administrator in Sind, and these measures when taken were very thoroughly given effect to, and this without giving rise to any serious discontent among the Mussulman inhabitants—a virile race who contrasted strongly with their Hindu compatriots both in Sind and the Deccan—while absolutely no outrage of any kind occurred.

These facts are strong presumptive proof that the agitation against plague measures—resulting in the deplorable and dastardly outrage which marked the night of Her Majesty's Jubilee in Poona—was an artificial agitation, nursed and fomented by seditious persons with plague measures as a watchword for want of a better pretext. The idea that the murders of Messrs. Rand and Ayerst had any closer connexion than this with plague measures is not entertained by thinking people in India.

To return to these plagues measures. The sick are isolated either in camps or in existing buildings, and in the Presidency proper the latter are a necessity during the rains. In Sind the Government school buildings were frequently utilised for the purpose.

The arrangements for the treatment of the sick and the

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protection of the healthy in hospital are now well understood by a large number of medical officers in India who have had charge of such institutions. As regards segregation the ideal aimed at in the first instance and carried out in great perfection and detail at Sukkur, in Upper Sind, was to provide accommodation separately: (1) for the sick; (2) a segregation camp proper for the inmates of infected houses; (3) a health camp for the probably uninfected inmates of neighbouring houses; and (4) a detention and observation camp for persons going from, or coming to, the infected city, each with a separate staff. More extended experience has, however, inclined the writer to believe that this multiplication of camps is unnecessary, and although the arrangements at Sukkur left little to be desired in the matter of efficiency this was only achieved with a large staff and at great expense.

At Tatta, in the Karachi Collectorate, a different and less elaborate method was carried out under the writer's direction, a plague hospital was established, and two camps were erected close together so as to admit of their being administered by a single superintendent. These camps were only divided by a roadway and into one of them were sent all persons from infected quarters, while the other—a larger settlement—was used both as a hospital and a detention camp. It is found that when the number of cases in a town increases there is an exodus of the people, and that as soon as the epidemic shows signs of abating there is a corresponding return of the exiles, so that the numbers of each class are complementary and the amount of camp accommodation required for both is practically constant. Hence this large camp was not only used as a health camp but was occupied for eight days by all persons either leaving the infected town or returning thereto, while the opportunity was taken to disinfect by boiling in large caldrons the clothing and effects of all in the camp both on admission and discharge. This method was found to be free from all danger of spreading the plague in the camp; and it is now an established fact that where camps are well looked after, disinfection being thorough and destruction of huts in which cases occur being prompt, there is no danger of a camp epidemic. The disinfectant now almost exclusively used is a 1 in 1000 perchloride of mercury acid solution, and it has proved so satisfactory and so cheap that it is inadvisable to seek further and possibly fare worse.

A somewhat extended experience of plague camps of various kinds has impressed upon the writer the feasibility of still further simplifying the work by the establishment (1) of a hospital and (2) of a single large camp for use as segregation, health, and detention camp in one, as it is found by experience that camp epidemics do not occur in segregation, any more than in health, camps when proper care is taken. The arrangements for sanitation, police, water- and food-supply, disinfection, registration of admissions and discharges, and medical inspection of all inmates twice daily are, of course, much more readily and economically carried out in a single large camp than in a number of small ones, and these arrangements are now well understood by many officers, both lay and medical, in India. The chief difficulties in carrying out plague measures are encountered (1) during the monsoon, when camps are uninhabitable; (2) in large cities; and (3) in small villages. But all these may be, and in many instances have been, overcome. During the monsoon if no camp formation is possible vacant quarters are often available outside the town, and if not it still seems possible to empty an outlying quarter of the town itself, and use it for the purpose, while if thought necessary the fine weather may be utilised for making existing camps watertight or erecting new ones.

In large cities the magnitude of the task forms its chief difficulty, especially if the epidemic has been allowed to make much headway before any measures are taken. The results achieved in Bombay city have proved how much, even in this case, may be done. In the case of small villages, Sind experience goes to prove that the disease has a tendency to die out, probably from exposure to wind and sun, and this was found to be the case not only in Upper Sind but in the villages in the Karachi district where the air is comparatively moist. The chief danger lies in the conveyance of plague from village to village till it meets with a large town or city, and this can be to a great extent prevented by the promulgation from the office of the chief civil authority of a notice warning the inhabitants of healthy villages against admitting persons from a known infected town into their community. Such a warning is doubtless regarded by many of the villagers as an order and it has undoubtedly the effect of strengthening the hands of the village Panchayet in the matter. At Daharki, on the Sind-Punjab frontier, the writer observed an instance of self segregation and exclusion of infected persons from surrounding villages initiated by the people themselves and followed by the best possible results.

In the present state of our knowledge as to the part played by the rat in the spread of plague it should be the object of special attention and its destruction is more safely and surely effected by trapping and shooting than by the use of poison.

Locally the above represents all, or nearly all, that can be done and when done thoroughly the results are always valuable, but in view of the facts that counsels of perfection are much more easily given than followed and that railway facilities are as likely to be utilised by the bacillus as by its possible host, it becomes necessary to form a second line of defence for uninfected districts or provinces at a distance from the focus of infection. This is best done by establishing railway detention camps and disinfecting stations on the line of rail (preferably at a junction) beyond the known infected area where passengers and kit are derailed and disinfected, the former by an antiseptic bath and the latter by steam at high pressure. The arrangements as carried out at Sukkur, Khanpur, and Shikarpur for the protection of Baluchistan and the Punjab were simple and proved effective. It is understood that a scheme of a similar nature for the protection of Madras, Central India, the Central and North-West Provinces, and Rajputana submitted by the writer to the Bombay Government has now been put in operation on the various lines of rail passing through, and beyond, the infected areas in the Bombay Presidency.

In conclusion the following instances (1) of the value of floor disinfection and the danger of its neglect, and (2) of the value of segregation may be given.

In the Karachi plague hospital where the floors were constantly soaked with disinfectant not a single case of plague occurred among the attendants during six months if we except the case of a lady nurse who was attacked but recovered. At Karad, in the Satara District, on the other hand, where floor disinfection during the first two months of the epidemic there was little more than a name, the hospital assistant died from plague contracted in hospital, the child of another hospital assistant was attacked but recovered, and of six ward attendants two died from the disease, while it is believed that since the disinfection of ward floors has become a matter of daily routine no further cases have occurred in the hospital staff there. The danger of house destruction or cleaning without previous disinfection was tragically exemplified at Sukkur in the beginning of the terrible epidemic there in March, April, and May last, no fewer than five (and possibly more) of a gang of twenty coolies engaged in pulling down a large tikhana (temple) without previous disinfection having died from the disease within a week. The pulling down of houses, though at first resorted to somewhat freely, is in most cases unnecessary and is always a costly business. When houses are obviously unfit for habitation the presence in them of plague may form a plausible pretext for the process; but in no case should this be done without previous thorough disinfection of the house, the floorings receiving especial attention. Coolies engaged in cleaning out plague houses always receive instructions to spray thoroughly the floor and walls of each room with disinfectant before entering it; and it is to be feared that most of the cases of plague which occurred among these coolies were due to their ignorant disregard of the instructions given them. The value of segregation was markedly shown on many occasions—the most notable that came under the writer's observation having been at Sukkur, where the survivors of an epidemic which had its centre in a poor outlying quarter, known as Gharibabad, were, to the number of 601 persons, moved simultaneously into a fully equipped camp about a mile distant. These 601 were the survivors of about 1000, the remainder of whom had been seized with plague at the rate of 25 per diem *in the preceding 16 days*. Of these one individual developed symptoms of the disease within twenty-four hours of his arrival in camp, after which not a single case appeared among the remaining 600. Another instance of successful segregation on a smaller scale occurred at Igatpuri on the Great Indian

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Peninsular Railway, where the inmates of a block of buildings, railway porters and their families, were found to be suffering from plague. In the absence of other accommodation the unaffected were placed in railway wagons which were duly disinfected and no more cases occurred among them.

The occurrence of cases of plague amongst those freshly segregated is, of course, to be expected, especially in the first four or five days after admission to camp, but, as already remarked, this need cause no uneasiness if proper use is made of disinfectants, while the very occurrence of these cases is a proof that the necessity for segregation existed. In one instance of a local outbreak during the rains no attempt at segregation was made, while disinfection was very thoroughly done, and here it was found necessary to repeat the process of disinfection many times—once as often as seven times—in the same houses owing to their re-infection by persons who were left there for want of segregation accommodation while in the incubation stage of the disease. It is stated in the press that the official report upon plague is completed and is about to be sent home to the Secretary of State for India. It is to be hoped that when it is published this high officer will see fit to direct that a plague code for guidance in future epidemics, should such unfortunately occur, be drawn up by competent officers and published under the authority of the Government of India.

THE EPIDEMIC OF TYPHOID FEVER AT BELFAST.

(FROM OUR SPECIAL COMMISSIONER.)

To understand the present singular and distressful condition of affairs at Belfast it is first necessary to realise the wonderful rapidity with which the town has grown. In one sense the measure of its prosperity is also the measure of its distress. Not that this need necessarily have ensued. Indeed, the very contrary should have been the case. It would be necessary to go to America to find similar examples of rapid development. The number of new houses erected every year is a clear indication of the growth of Belfast. This has fluctuated from 840 in 1862 to 2538 in 1895 In 1861 there were 18 375 buildings in the city. The number rose to 31,645 in 1871, to 43 790 in 1881, and to 57,540 in 1891. Prior to 1878 there were 796 new streets and in 1891 there were 1618 new streets, all laid out, paved and sewered at the cost of the owners of the property; and this has been done since the passing of the Belfast Improvement Act of 1865. The population of Belfast was set down at 48,224 in 1831. It reached 100,301 in 1851, 174,412 in 1871, and 255 235 in 1891. To-day it is supposed to exceed 300,000. According to the Registrar-General's estimate the population for the year 1896 should have been 277 354. This is calculated on the rate of increase during the decade 1881 to 1891. The number of Parliamentary and municipal voters, together with the number of new houses recently built, indicates that the increase of population is more rapid than that which is shown by the last decade. According to the Registrar-General's return the birth-rate for 1896 would be 37 4 per 1000 and the death-rate 25·1. But according to local calculations, which estimate the population at over 300,000, the birth-rate would be 34 5 and the death-rate 23·1 per 1000; while if estimated according to the census population of 1891 then the death-rate for 1896 would amount to 27·2. It is not altogether easy to decide which of these three estimates is nearest to the truth; but in any case the fact remains that even if the most favourable version be adopted the death-rate is still much too high. Then according to the lowest estimate the zymotic death-rate was 3 3, and according to the highest computation 3·9 per 1000. Of the sixteen principal urban districts of Ireland that of Londonderry alone exceeds Belfast in its zymotic death-rate. The average zymotic death-rates for these sixteen towns was equal to 1·5 per 1000, so that Belfast stands out in very unpleasant contrast with the other urban districts of Ireland.

It is considered that the population of Belfast increases at the rate of about 10,000 per annum. During the last four years more than 2500 new houses have been erected each year and there were in July, 1896, the last figures I have been able to procure, 62 207 houses. Of this number 27,463 had privies and 22,746 had no back passages, so that the refuse has to be carried through the houses into the street. This refuse in 19,095 cases included night-soil, for of the houses without back passages only 3651 had water-closets. When the night-soil has been carried through the inhabited rooms of a house that house becomes temporarily unfit for human occupation and it would not be too much to insist that its inhabitants should go and live elsewhere for a day or two. Such a barbarous state of affairs, it will be thought, must have arisen in olden days when the country was plunged in ignorance and knew nothing about sanitation. This, however, is not the case. Belfast is a modern town. These abominations are of recent creation and the local authorities were much to blame. It was their duty to enforce sanitary laws, whereas it has been their practice to neglect such enactments. Not only has the spirit of the law been overlooked but its very text has been defied by the authorities themselves. This is so strong a statement that I would scarcely venture to make it on my own account and responsibility; but I hold in my hand a document which the corporation itself has printed and issued and it is on this document as well as on my own personal observations that I base this accusation.

A special committee was appointed by the corporation on Aug. 1st, 1896, to "consider and report on the high death-rate of Belfast and the unsatisfactory condition of its public health generally." This committee was composed of seven councillors and two aldermen. The report commences with the damaging acknowledgment that the sanitary authority of Belfast is the Council itself. Under Section 5 of the Public Health Act (1878) the council is authorised to appoint a committee to discharge the duties of the sanitary authority and it is called the Public Health Committee. Though the Council as a whole is legally liable the practical work and responsibility rests therefore with the Public Health Committee. But to do its work the committee must have an efficient staff and at that time there was but one clerk for the whole department and but one inspector in charge of 2715 workshops and factories. Of these about 500 are factories and since 1891 the responsibility for cleansing, overcrowding, ventilating, and lime-washing of workshops rests with the sanitary authority and not with the Government factory inspector. With regard to the population at large there was only one sanitary inspector for every 30 000 inhabitants. Consequently the supervision exercised was qualified as of "the most superficial character" by the writers of the report. The Special Committee then proceed to deal with the 19,000 houses which have no water-closets and no back passages and they state that this "is a state of things which exists in no other town in the three kingdoms to anything like the same extent. The privy and ashpit system no doubt exists elsewhere, but in no other place except Belfast is this system aggravated by the absence of back passages and the consequent necessity of removing the excreta and every other form of refuse through the dwelling rooms of the family. Nor have all these houses been built long years by when sanitary science was in its infancy. Large numbers have been built within the past twenty years and built after the full gravity of the situation was apparent to, and recognised by, the corporation and by Parliament." Nevertheless, the report relates that so recently as 1895 eight water-closet houses were allowed to be built without back passages. The fact that these houses had water-closets somewhat mitigates the evil, but the contents of the ashpits would have to be carried through the dwelling rooms. These ashpits, which in 19,000 houses are also privies, are generally unpaved and the walls are rotten and uncemented; they are uncovered and during wet weather are full of liquid filth. These ashpits and privies have been condemned over and over again by Dr. Whitaker, the medical officer of health of Belfast. To quote his own words, "The ashpit is at the wall of the dwelling house and the noxious damp creeps up the wall of the small room behind the kitchen in which occasionally a patient suffering from bronchitis or phthisis is lying on a wretched bed stretched on a tiled or earthen floor." But the complaints of the medical officer "have been merely ordered to be printed and then allowed to be forgotten."

In support of the assertion I ventured to make that the local authority had failed to carry out the law I must quote in full from pages 9 and 10 of the report issued by the

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Special Committee appointed by the Town Council the following passages:—

"There is no doubt that the Improvement Committee is primarily to blame in this matter. They have permitted these houses to be built. They have allowed the ashpits of both water-closet and non-water-closet houses to be constructed contrary to law. Section 44 of the 1878 Act requires *every* ashpit to be furnished with 'proper doors and coverings.' Any person contravening this statute is liable to a penalty of £20. Yet notwithstanding this penal statute owners have been allowed since 1878 and in many cases after 1890 to erect houses with ashpits unprovided with either doors or coverings. With regard to ashpits in the thousands of non-water-closet houses of the city no attempt has been made to have them 'provided with proper doors and coverings,' though the Act required this to be done and the executive sanitary officer told us that he nearly got a vote of censure from his committee for trying to get the Act of Parliament obeyed. After considering all these circumstances we can come to no other conclusion than that the Improvement Committee has practically allowed this important provision of the Public Health Act requiring all ashpits to be covered to remain a dead letter and that the Public Health Committee has taken no means whatsoever to have the evil effects of this neglect remedied."

The next legal point comes under Section 25 of the Public Health Amendment Act, which runs as follows: "It shall not be lawful to erect a new building on any ground impregnated with fæcal, animal, or vegetable matter or upon which any such matter has been deposited unless and until such matter shall have been properly removed by excavation or otherwise or shall have been rendered or become innocuous." Up to the year 1892 there was no systematic removal of refuse garbage. Some persons emptied their own ashpits and privies into the nearest plot of vacant ground. Others sold their contents to farmers. The worst feature is the fact that the owners of low-lying ground paid small sums to carters for every load deposited on such ground so that it might be raised to a higher level for building purposes. Of course the carters were not particular as to the quality of the material they thus brought. The neighbours complained in vain of the nuisance occasioned. What became building soil was therefore composed of every kind of filth. Speaking of the soil on one particular site the borough surveyor Mr. Bretland himself admits that "it is of the worst possible description and that in his opinion houses should not be built on it. Mr. Munce admits it might be described as an enormous dunghill. Personal examination satisfied those members of the committee who visited it that it is composed of every description of decaying organic refuse. Now," adds the report of the committee, "it is surely a matter for surprise that much of this condemned ground has already been covered with houses, that plans for streets have been already passed by the Improvement Committee for the remainder, that these streets at the present moment are being laid out, and that plans for houses to be built thereon were recently submitted to the Improvement Committee and a recommendation made to the council to pass them. How, it may be asked, does it happen that the council should be asked to pass plans for houses on ground which the surveyor and the assistant surveyor in their evidence condemn as unfit to build on?" This noxious ground was not removed because, as one of the building inspectors said, "the further you go down the worse it becomes." Then the fact that the use of concrete is recommended to prevent noxious exhalations arising into the houses proves that the ground has not become innocuous. As for the concrete, considering that some subsidence will inevitably occur, it is bound to crack and would not therefore prevent the noxious exhalations from coming through. Even if the concrete remained sound the exhalations would permeate the streets where the children play about and whence the houses derive their air-supply. A list of streets and districts built on town refuse, the contents of ash pits and privies, is given and this is a direct contravention of the Section 25 of the Public Health Amendment Act quoted above.

Under Section 113 of the Public Health Act, 1878, and Section 32 of the Housing of the Working Classes Act, 1890, ample power exists to obtain a closing order for houses that are unfit for human habitation. But on page 16 of the Special Committee's report I find the following strong statement: "Now, it was plainly alleged before us that it is altogether useless to ask the Belfast magistrates to close a house even on the most possible evidence that it was unfit and could not be made fit for human habitation. It was stated that the magistrates ordered, in the face of such evidence, some trifling repairs to be done and then adjourned the case and there the matter ended. This is a serious allegation and if it is true that the justices, by refusing to enforce the provisions of these Acts, have paralysed the sanitary authority in its efforts to improve the dwellings of the people, then the sooner public opinion expresses itself on this subject the better." The report then describes some such places, as, for instance, a row where "there are about eighty inhabitants with only one common privy, so foul that it really cannot be described. The sewage runs into the open court and on wet days is carried into the houses, where it becomes absorbed in the earthen floors." If in such cases the magistrates refuse to give a closing order it is urged that an appeal should at once be taken to the Recorder. "By this means public attention would have been drawn to what, if the allegations of the officials of the Public Health Committee be correct, we cannot describe as other than grave miscarriages of justice on the part of some of our magistrates." It had been urged that action had not been taken because some general scheme was in contemplation. But the special committee argued that by such scheme the ratepayers would "be compelled to practically compensate landlords for the loss of rents which, while the houses are in their present condition, should not be payable. In other words, these general schemes often mean that this unsanitary property should be purchased at extravagant prices by, and developed at the expense of, the general ratepayer. If the houses are unfit for human habitation they should be closed until they are habitable and once they are closed the ground landlord and owners may safely be trusted to develop the ground themselves."

The report then goes on to complain that Belfast was the only important town in the United Kingdom where the Infectious Diseases (Notification) Act was not enforced. As, however, this Act has now at last been applied this grievance may be passed over. The report further complains that the fines imposed for selling milk under the proper standard of quality, margarine for butter, and diseased meat, and for violating the Shop Hours and Factories Act are so light as to be ineffectual, but that "the large fines which the magistrates impose for diluting porter stand out in startling contrast to the nominal penalties imposed on farmers and milk-vendors for diluting milk—the staple food of a large part of our infant population." Then there is no hospital for infectious diseases; and though Section 15 of the Infectious Diseases Act and Section 42 of the Belfast Main Drainage Act require that the corporation should provide a temporary shelter for families who have to leave their homes while undergoing the process of disinfection no such shelter has been provided. With regard to the building of new houses and streets there are not enough inspectors attached to the surveyor's department to see that the by-laws are carried out. "As an example of this lax organisation and supervision we found that in Battenburg-street a sewer had been constructed without any outlet whatever. Into this blind sewer the sewage of five houses flowed for several months, impregnating with sewage the adjacent ground, and it was only when the drainpipes of several other houses were being connected with it that the absence of an outlet became evident. We have no desire to exaggerate the significance of this mistake, but we are of opinion that with better organisation and a more numerous staff such incidents as this would be impossible."

Finally the report of the Special Committee deals with such passages as do exist and they are thought to number about a thousand. Previously to 1878 workmen's cottages were generally built without any back passages at all. The 1878 Act empowered the Improvement Committee to insist on a back passage not exceeding nine feet in width. But in view of this Act any number of plans were drawn up for the building of houses without back passages and these were sanctioned though there was no immediate intention of building the houses. Thus many houses have been built after 1878 without back passages because they were sanctioned before that date. It is obvious that if the authority had been earnest in the matter they would not have sanctioned plans which were drawn up for the evident purpose of defeating the law about to be enacted. From 1878 to 1888 plans were sanctioned which provided for back passages which were only four and a half feet wide, but many of the passages that exist are uncompleted. The law requires that they should be paved, but they are not paved All kinds of garbage were thrown into them and

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the report states that they are seldom cleaned and become sodden and saturated with filth. In some cases the doors leading on to these back passages have been walled up so that they are useless for the emptying of the ashpits and therefore the filth has to be carried through the houses.

Such are the main features of the remarkable report which was presented to the special meeting of the Belfast Town Council called together by the Lord Mayor on Oct. 22nd, 1896. I have dwelt at great length with this document because it seemed likely to be more convincing than anything I might have said. Here are two aldermen and seven town councillors, inhabitants of Belfast, not casual visitors like myself but men who so far enjoyed the confidence of their fellow citizens that they were elected to the responsible posts they occupied at the time and yet these gentlemen found themselves compelled by the facts of the case to draw up a strong indictment against the very council to which they belonged. But if I have reproduced at length their principal arguments and statements I have also taken pains to ascertain how far the condition of things described as existing in the autumn of 1896 still prevails in the winter of 1897. This enables me to say that there has been some improvement, though unfortunately that improvement is but slight and insufficient.

First, with regard to the number of officials whose duty it is to watch over the health of the town. Instead of one factory inspector there is now in addition an assistant inspector; but even this does not suffice for their district extends for many miles outside the town of Belfast. Six extra sub-officers or sanitary inspectors were added last June, raising the total number to twenty-three. But this includes the common lodging-house inspector, the dairy and cowshed inspector, the inspector under the Food and Drugs Act, and the workshops inspector, there therefore remain only nineteen inspectors available to perform the ordinary duties of an inspector of nuisances. But now that the boundaries of Belfast have been largely extended and include vast suburban and semi-rural districts three of these inspectors have been deputed to attend to these newly-acquired and outlying neighbourhoods. There consequently only remain sixteen inspectors of nuisances for Belfast town. Now the town has been divided into fifteen sanitary districts, each district having about 20,000 inhabitants. Therefore when the report of the Special Committee complains that there is but one sanitary inspector for 30,000 people it will be seen that there is now one or rather more than one inspector for every 20,000 people; but it must also be borne in mind that six out of the sixteen available inspectors for the town are newly appointed and therefore comparatively inexperienced.

What the report of the Special Committee did not notice, though it deeply affects the efficacy of sanitary supervision, is the confusion and conflict of authorities. Belfast is divided into what are called the ten dispensary districts. These districts do not correspond with the fifteen sanitary districts, yet each has its dispensary officer, who is the medical officer of health for his dispensary district. Now this medical officer of health is not appointed by the town council or sanitary authority. He is appointed by the Dispensary Committee, which is not an elected body but is nominated for the purpose of managing the dispensary organisation of the Poor-law guardians. These dispensary medical officers of health receive salaries which are defrayed half by the ratepayers and half by the State, and what makes matters worse they are allowed to engage in private practice. It was this organisation that proved the principal obstacle to the application of the law on the compulsory notification of infectious diseases. The general practitioners objected to notify to the dispensary medical men who were competing against them. The enforcement of the law was only accepted when it was arranged that the notifications should not be sent to the dispensary medical officers but to the superintendent medical officer of health, Dr. Whitaker, who is appointed by the town council. But what is the position of Dr. Whitaker? Nominally he is the head of all things appertaining to the sanitation of the town. Practically he has little or no power and his mission seems restricted to periodically expressing a pious wish in respect to sanitary reform which is as punctually relegated to a pigeon hole and duly forgotten. In one respect Dr. Whitaker can render eminent service. He is independent of private practice so that when the dispensary medical officers fear to make themselves unpopular by insisting on the removal of a bad case to the hospital they apply to Dr. Whitaker, who having no patients to lose takes upon himself this unpleasant task. But here we come to the scandalous fact that there is no hospital for infectious diseases. The patient must be removed to the workhouse infirmary where there is provision made for fever cases and (I believe) 250 beds disposable. There are also a few beds in an isolation ward of the General Hospital, but the practical result is that with the exception of the poor the great mass of fever patients are treated at home.

If a widespread epidemic were to occur it is the Dispensary Committee that would have to appoint extra medical men, provide nurses and beds, and the Poor-law guardians would have to pay. The Public Health Committee of the town council could only instruct their sanitary inspectors to disinfect the houses and assist the dispensary practitioners to remove the patients. Here again we come to another gross piece of neglect. In spite of the precise stipulation of the law mentioned above no shelter has yet been provided, so that when a house is disinfected the inhabitants have to be turned into the street.

With regard to the other grievances I am told that if the sanitary authority were to cement and cover the ash-pits and middens it would appear as if they approved of the system, while their object now is to abolish it altogether. Therefore but little has been done in this direction. Then with respect to the closing of houses unfit for habitation, such houses when closed are broken into, the window frames are torn away for fuel, and they are said to become a greater nuisance than when inhabited. This I must confess seemed to me a somewhat lame explanation. Doubtless such nuisance does arise, but it is not likely to last for long as the owners would soon find some means of rendering their property profitable. As for the unpaved back passages these are in many cases private and have doors. If they were paved the doors would be taken away and they would become public passages. Strangers would enter these passages and commit nuisances. The second condition of affairs would perhaps not be better than the first. The powers of supervision are so limited and the increase of these passages so rapid that it is difficult to keep pace with them.

Notwithstanding, however, these excuses and explanations it is quite clear that much more could and should have been done. It is notorious that too many people in authority have been personally interested in resisting proposed sanitary reforms. But now perhaps a new era is about to dawn upon the town. In consequence of the extension of the borough boundaries another and more numerous council has just been elected. It is to be hoped that the present council will have a keener sense of its responsibilities and a higher appreciation of its duties.

(To be continued.)

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Hospital Saturday and Sunday Funds.

THE annual meeting of the subscribers to the Manchester Hospital Saturday and Sunday Funds was held on the 22nd ult. There has been some falling off in the amount collected which may be attributed to the numerous and special calls made during this year. In 1895, 1896, and 1897 the collections were £8200 12*s.* 8*d.*, £8315 8*s.* 2*d.*, and £8088 4*s.* 1*d.* respectively, while the amounts distributed were: in 1895, £7400; and in 1896 and 1897, £7500 for each year. From some passages in the report it would seem that the members of the Red Cross Society (the working-men's auxiliary to the Fund) in most cases objected to the charges made to patients at some of the hospitals and the committee was requested to ascertain whether (1) the charges would be modified for members of the Red Cross Society in consideration of their subscribing systematically; (2) whether members of the General Committee of the society might visit the hospitals at reasonable times other than the ordinary visiting days; and (3) that the system of making inquiries respecting the circumstances of patients through the agents of the provident society be discontinued. The sub-committee appointed to consider these proposals rejected the third as impracticable until some equally efficient system of preventing abuse was available. With regard to 1 and 2 the views of the Red Cross Society were laid before a sub-committee of the Royal

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Infirmary Board and the reply was that the board did not see its way to make any concession in favour of any section of contributors to the funds of the infirmary. The point of all this seems to be that many of the working classes do not look on hospitals as charities but as business establishments for the sale of medical and surgical treatment.

Manchester Port Sanitary Authority.

The annual meeting of the Manchester Port Sanitary Authority was held on the 2nd inst. The clerk stated that the regulations as to the notification of infectious cases on shipboard were still awaiting sanction by the Local Government Board and the delay had been considerable. It was decided to call the attention of the board to the matter. The report of Dr. Crooker, the medical officer, showed that 102 inspections of vessels had been made and four re-visitations. Of the ships inspected eighty-five were British, ten Norwegian, four German, and one each Danish, Spanish, and Russian. Insanitary conditions were found in fifteen British and four foreign vessels, but they were of a trivial character and soon remedied.

The Rivers Committee.

The November elections have brought about many changes in the Manchester City Council and in its various committees. The Rivers Committee has lost its chairman, Alderman Joseph Thompson, and Alderman McDougall who declined to serve on it again in the face of the adverse vote of the citizens on the culvert scheme. The former must feel relieved to find himself free from one of the three offices, Director of the Ship Canal Company, Vice-Chairman of the Joint Mersey and Irwell Committee, and Chairman of the Rivers Committee of the Corporation, involving duties more or less antagonistic He is succeeded as chairman by Sir Bosdin Leech.. The sewage difficulty still remains and on the 26th ult. an application was made on behalf of the corporation at the Manchester county police-court for an extension of time for the construction of the sewage works at Davyhulme. Mr. J. M. Yates, the stipendiary, made some pertinent remarks, saying that the summer was coming on and people would like to know that something was being done to make the canal sweeter and that though Manchester might have to expend a large amount of money its wealth was very great. He felt that the difficulty was that the corporation did not want land filtration and the Local Government Board did. An adjournment to April 1st was suggested, but he thought that would be rather bad, and that seeing "there was a new Rivers Committee who were prepared to look the matter fairly in the face he thought the best course would be to adjourn till March 25th." It is to be hoped that the process now being carried on at Exeter will be carefully watched, for if successful—and appearances are favourable—it promises to go a long way in solving the sewage difficulty.

Dec. 7th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Opening of the M'Ewan Hall of the Edinburgh University.

THE formal transfer of the M'Ewan Hall to the University authorities was made on Dec. 3rd by the University Buildings Extension Trustees. The event was marked by an academic ceremonial of an unusually imposing character; in fact, no such ceremonial has been seen since the celebration of the tercentenary of the University. A description of the hall has already been given in THE LANCET and in its completed form it has more than realised the most sanguine expectations. The design, the richness of the decorations, and the harmonious blending of colour formed a suitable setting for the ceremonial of Friday. The area of the hall and the first gallery were occupied by graduates in academic costume and by those of the public who had been fortunate enough to receive invitations. The topmost gallery was occupied by students. The platform and the front rows in the area were reserved for members of the University Court, professors, civic authorities of the city, and other important personages including representatives from other universities. The chair was occupied by the Chancellor of the University, the Right Hon. A. J. Balfour, M.P. The proceedings were opened by the singing of the Hundreth Psalm and the reading of appropriate prayers. Thereafter Mr. M'Ewan, M.P., the donor of the hall, indicated the reasons which had led him to offer to build such a hall for the University and then handed the transfer deed of the hall to the Chancellor. The Chancellor in suitable terms acknowledged the gift. The Lord Rector, Lord Balfour of Burleigh, then spoke as chairman of the University Court. Next Principal Sir William Muir spoke as representing the Senatus Academicus of the University, the Lord Provost on behalf of the City, and Professor Sir William Turner on behalf of the trustees. After this the Dean of the Faculty of Law presented Mr. M'Ewan to the Chancellor for the honorary degree of Doctor of Laws. An address was then presented to Mr. M'Ewan by the Students' Representative Council on behalf of the students. Both before the ceremony and as the procession from the platform was leaving the hall Dr. A. L. Peace played selections on the grand organ. It may be mentioned that the hall cost about £115,000. The day was observed as a holiday in all the Faculties and on the previous evening the students had a very successful torchlight procession.

Edinburgh Royal Infirmary.

At the meeting of managers on the 6th inst. Mr. John Walcot, convener of the House Committee, made a statement dealing with the expenditure for the past year. The ordinary expenditure as compared with 1895-96 showed a decrease of £144 on five items, while on fourteen other items there was a gross increase of £2048, leaving a net increase of £1904. One item in this was the parochial assessment, this being the first time in the history of the infirmary that payment had been exacted. A second item was under the head of furnishing and repairs and the third large item was under the head of medical expenditure. The last included £91 for serum. He said they could not justly complain of that. It was to the honour of the infirmary that in it the poorest patient might benefit by skill and remedies which men of wealth could only obtain by heavy payments. There had also been a considerable increase in "dressing." This might have been unavoidable but it was as stern a duty to prevent excess as to secure sufficiency. During the year the list of nurses and servants had been increased by twenty-seven. The daily average of indoor patients was 703 and the total number of outdoor patients was 28,000. He referred at some length to the progress the infirmary had made during the past ten years and they could not conclude that they had reached the limit of demand on their space and resources. Their experience of a generous and sympathetic public warranted them to go forward in the spirit of enterprise and confidence while exercising due caution and economy.

Appointment of Assistant Physician to the Edinburgh Royal Infirmary.

At the meeting of the managers on Dec. 6th the vacancy on the staff of assistant physicians to the infirmary was filled by the appointment of Dr. J. J. Graham Brown.

Glasgow Southern Medical Society.

This society met on Dec. 2nd, the President, Dr. Jas. W. Allan, being in the chair. Dr. J. Walker Downie read a paper on the Treatment of Nasal Obstruction and Asthma due to Turbinal Hypertrophies, which subject was dealt with very fully. Wax casts and specimens were shown illustrating the paper. The "spokeshave" of Carmalt Jones was preferred for removing the turbinate to the use of the cautery or wire-snare, but Dr. Downie urged that the bone should not be entirely removed; an anterior or posterior inferior turbinotomy should be performed, or both, leaving an intermediate portion. To this great importance was attached, the patient escaping pharyngitis sicca and other discomforts following complete removal of the bone. Hæmorrhage in all cases had easily been controlled, only one case in twenty requiring plugging. Dr. MacMillan, Dr. Thomas Forrest, Dr. Hamilton, and others discussed the paper. Mr. L. Burges exhibited photographs of a case of Syphilitic Disease showing the benefit of large doses of iodide of potassium.

University of Aberdeen.

Aberdeen University Court estimate that they will require a further sum of £30,000 to complete the University buildings extension scheme. They have asked the Aberdeen town council to contribute an additional £10,000, and intend to apply to the Government for a further grant of £10,000, and to the general public for the balance. The students' representative council has in polite terms remonstrated against having so many examinations on Saturday as has hitherto

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been the case. The students' representative council has also resolved to petition for the abolition of the present "academic costume" at the Arts classes and favour the wearing of differently coloured tassels for the various years. A large fisheries exhibition is to be held in Aberdeen in the summer of 1899 and Professor Alleyne Nicholson has promised the coöperation of the University in the movement so far as its available funds will permit.

Dec. 13th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Medical Officers of the Tirah Expedition.

THE *Irish Times* of the 3rd inst. contains the following statement: "The principal medical officers arranged under the supervision of Surgeon-Major-General A. A. Gore, F.R.C.S.I., Principal Medical Officer of Her Majesty's Forces in India, are Surgeon-Major-General G. Thomson, C.B.; Surgeon Colonel G. M'B. Davis, D S.O.; Surgeon-Colonel E. Townsend; Brigade-Surgeon-Lieutenant-Colonel W. R. Murphy, D.S.O.; Brigade-Surgeon-Lieutenant-Colonel R. G. Thomsett; Brigade-Surgeon-Lieutenant-Colonel W. E. Saunders."

The Children's Hospital, Temple-street, Dublin.

The annual meeting of the friends and supporters of the Childrens' Hospital was held on the 2nd inst., the Most Rev. Dr. Donnelly, Bishop of Canea, in the chair. The report, which was of a very satisfactory character, was read by Dr. Joseph O'Carroll, and after the meeting had been addressed by many speakers, including Sir Percy Grace, Bart., D.L., the proceedings terminated.

The Ulster Medical Society.

The annual dinner of the Ulster Medical Society was held in Thompson's Restaurant, Belfast, on Nov. 30th. The chair was occupied by the President, Dr. J. A. Lindsay, and there were seventy members and guests present. After an excellent dinner the chairman proposed the toast of "The Queen" and "The Prince and Princess of Wales and the other members of the Royal Family," referring very happily to the progress made by medical science in Her Majesty's reign and to the fact that the heir apparent was now, thanks to the Royal College of Physicians of London, able to add another *rôle* to the many parts he played. The next toast, "The Lord-Lieutenant and Prosperity to Ireland," proposed by the President was replied to by Professor Byers, who said he was sure they all were pleased to notice that in recent times there was less political strife and sectarian bitterness in Ireland, and he hoped the time was soon coming when all parties in their native country, irrespectively of creed or political opinion, would work together for the good of Ireland, just as in that room medical men of all religions and opinions met around one common board, united in the brotherhood of the medical profession. Brigade-Surgeon McFarland proposed in complimentary terms the toast of "The Queen's College and Belfast Medical School," referring to the very great interest the President of Queen's College had always taken in the medical profession. Dr. Hamilton (President of Queen's College), in his reply, thanked the members very warmly for the kind way in which they had received the toast of his health and said the medical faculty was the "predominant partner" in the College. He gave very interesting figures showing the growth of the medical school. Dr. O'Neill, surgeon to the Royal Hospital, and Dr. J. Lorrain Smith (Lecturer on Pathology at Queen's College) also replied. Professor Symington proposed "The North of Ireland Branch of the British Medical Association" to which Professor Whitla (ex-President)—who apologised for the absence of Dr. Gray, of Armagh (this year's President)—and Dr. John Campbell, the secretary, replied. "Our Guests" was given by Dr. Dempsey, J.P., who referred specially to the visit to Belfast of the Special Commissioner of THE LANCET. Dr. Graham having thanked the members for coupling his name with the toast, THE LANCET Special Commissioner, in responding, said that he was the more gratified by the reception accorded him as he could not but look upon himself as a bird of evil omen. After following the cholera for three years from town to town in Europe he had pursued typhoid fever from Maidstone to Lynn and from Lynn to Belfast. His bed had not always been a bed of roses, and although a rose by any other name would smell as sweet, the courts and alleys of Belfast, whatever might be their names, certainly did not suggest the perfume of flowers. The fact, however, as shown by that banquet, that the medical profession in Belfast stood shoulder to shoulder, in spite of their deep religious and political differences gave good hope that the necessary sanitary reforms would be ultimately accomplished. The Ulster Medical Society had a high mission to perform—that of preserving the health of the public and of defending the dignity and honour of science. Mr. Seddall (the Assistant Commissioner of Police) also replied. The President of Queen's College then in very laudatory terms proposed the health of the President of the Ulster Medical Society referring to his high literary, professional, and academic status. The toast was received most warmly and Dr. Lindsay having replied the health of the secretary of the Ulster Medical Society was given by Dr. Campbell and replied to by Dr. Colville. During the evening some capital music was rendered by a stringed band and songs were contributed by Dr. McKisack and Dr. Leslie, while Dr. J. S. Morrow gave an excellent recitation of one of Rudyard Kipling's poems.

Health of Belfast.

During the past five weeks (from Oct. 21st to Nov. 24th) 424 cases of zymotic diseases were notified—viz.: typhoid fever, 351 cases; simple continued fever, 45; scarlet fever, 36; erysipelas, 24; diphtheria, 19. It will thus be seen that typhoid fever still prevails. The deaths from zymotic diseases were 67, those from phthisis 76, and from diseases of the respiratory organs 165, making the very large total of 241 from these two causes. In the mortality from zymotic diseases and chest affections the Registrar-General's last statistics show that Belfast occupies the unenviable position of being at the head of the list. During the past month the cases of typhoid fever (as well as the deaths from that disease) were less than in the preceding four weeks.

Dec. 7th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Etiology of Appendicitis.

THE theory of Dieulafoy as to the part played by the "shut sac" (*vase clos*) in the matter of appendicitis has received confirmation in a paper read by MM. Hatmann and Mignot before the Society of Surgery at the meeting held on Nov. 17th. They cited the case of a boy, aged sixteen years, upon whom laparotomy in the iliac region had been performed for an appendicular abscess. Three months later he was seized with violent abdominal pain and constant vomiting and the appendix was accordingly removed. This organ, which was coiled upon itself, was found to have at its extremity a very minute opening, while at the level of the upper third with the two lower thirds the canal for the space of half a centimetre was obliterated and converted into a fibrous cord. Microscopic sections taken at this level presented no trace of any canal. Two cultures were made with the mucus from the two portions—the obliterated and the patent—and the first was found to contain colon bacilli of a far more virulent quality than those present in the other portion—i.e., that above the obliteration. This is the first demonstration that has been made of such increase of virulence. MM. Dieulafoy and Caussarede have repeated their experiments and reported identical results at the meeting of the Hospitals Medical Society held on Nov. 26th. They brought forward the case of an obliterative acute appendicitis in which the closed portion of the appendix was absolutely shut off from the free portion of the appendicular canal. Two bouillon cultures were prepared, the one with fluid taken from the free portion of the canal, the other with a like quantity from the shut off portion, and both cultures were found to contain quantities of the colon bacillus. Twelve guinea-pigs of equal weights were then inoculated, six with culture No. 1 and six with culture No. 2. These latter all died while the former remain in perfect health. Moreover, appendicitis is not merely an infection but an intoxication. When guinea-pigs were injected not with the culture as a whole but with the filtrate from them, those injected with the filtrate from No. 1 remained well, but out of three guinea-pigs injected

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with the filtrate from No. 2 two died with all the symptoms of toxic poisoning. Appendicitis is, then, a toxic infection.

The Shuttle Bacillus.

At the meeting of the Hospitals Medical Society held on Nov. 26th M. Barbier described a simple, short bacillus which he calls the "shuttle bacillus" (*bacille en navette*) and which he has met with in certain throat affections. Experimental investigation still has a good deal to say about that class of bacillus called "short" which is met with in patients presumably the subjects of diphtheria. Some present the characters of the bacillus of Löffler, others are non-virulent, and so on. The organism described by M. Barbier must not be confounded with these. It is bellied out in the middle, fining down towards the ends, shorter than the diphtheritic bacillus and thicker than the "short" diphtheritic bacillus, and when cultivated gives a warty growth on the surface of glycerinated gelatin. It is always found in clusters and is not poisonous to guinea-pigs under conditions in which the diphtheritic bacillus is so. Its special habitat is the nose and it is found in 6 per cent. of throat affections. Those caused by it are either membranous or simply inflammatory. The first class have a suspicious aspect and resemble the serpiginous type of sore-throat; the membrane keeps on returning or else persists in spite of the employment of antitoxic serum which has apparently no action. The patient's general health remains good with no sign of any intoxication. In fine, the shuttle bacillus is an accidental parasite and the sore-throats where it is found are either cases of true diphtheria or else septic, its presence not being essential to these affections.

The Night Medical Service.

A circular dated November 27th has just been issued to the officials in charge of the medical night service by the Prefect of Police containing new instructions having their origin in the Laporte case. For the future any medical man when summoned to a case at night, under this service whether the case be a midwifery one or any other, can claim the help of a colleague and both medical men will receive the fee allowed by the prefecture of police for night attendance. This decision was arrived at upon the report of a case sent in by Dr. Guyon-Dessaigne, the head of the Beajon Maternity Hospital. A midwife had summoned one of the night medical officers and he, to avoid the responsibility of the difficult operation of delivering the patient sent her to the hospital, on arriving at which she died though probably a timely intervention would have saved her life.

Opening of the Boucicaut Hospital.

On Dec. 1st the President of the Republic opened the magnificent hospital built at a cost of 8,000,000 francs from a bequest of the late Madame Boucicaut. The opening, which was to have taken place on July 14th, was delayed owing to some of the internal fittings not being completed. Every modern improvement is contained in the building; it is lighted with electric light and has a lift on every floor. The floors are all of grey tiles and at the end of every ward is a verandah prettily decorated with flowers and plants for the use of the patients, a verandah which is also to be used for smoking. Lifts are provided for bringing up food and for other purposes and in the basement they all communicate with a little railway and a subterranean passage so that none of the working of the hospital is obvious from the outside.

Dec. 1st.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Brindisi Route.

A QUARTER of a century ago France, among other disasters of her war with Germany, lost the transmission of the Indian mails, the contract being ceded to Italy who thus secured a golden opportunity of increasing and perpetuating her profits derived from tourist traffic between West and East. But how perfunctorily Italy has risen to the occasion no one, certainly no invalid, who has tried the "Brindisi route" can have failed to realise. The inconveniences, or worse, of landing or getting on board at Brindisi; the occasional annoyances of quarantine; the baggage robberies, frequent enough to be almost systematic, coming after customs-house "formalities" the most vexatious in Europe; above all the insanitary condition of Brindisi itself, of Bologna, of Milan, where destructive epidemics are combated rather by a "conspiracy of silence" than by appropriate measures vigorously applied, contribute to form an *ensemble* of deterrents culminating in the imminent forfeiture by Italy of the concession she has so long enjoyed and the loss of that Anglo-Indian traffic from which she derives so much of her revenue. She has had severe enough lessons of late as to the folly of her colonial enterprises and of her sacrificing so much to an army and navy beyond her requirements, certainly beyond her means, but the contemplated return to the French Republic of the privilege taken away from France in 1872 is perhaps the sternest rebuke that could have been administered to her. Italy may yet, so say her official organs, retain her "Brindisi route," but only by prompt and effective abatement of the abuses so long complained of, prominent among them being that "neglected sanitation" of which she has often enough experienced the Nemesis.

A Government "Anthropometric Office."

That Italy cannot cope with her crime is only too clearly set forth in her periodical readjustment of her "Pubblica Sicurezza," a system which is once more to receive a drastic overhauling at the hands of the Di Rudini administration. One of the proposals of the Premier's forthcoming "Progetto di Riforma" is the institution under Government of an "Ufficio Antropometrico," an office, that is to say, which will assist the police in their task of identifying criminals. Not for the first time has such an auxiliary to the "Pubblica Sicurezza" been brought before the Italian Government. Here in Rome rather more than eleven years ago at the memorable Congresso Penitenziario M. Alphonse Bertillon, director of the "service d'identification" in the police system of Paris, placed beyond question the importance of identification by means of anthropometry, whereby a criminal may ever after be recognised and identified by measurements taken on his person, measurements between two osseous points remaining unaffected by time or age. So practised, anthropometry recommends itself not only to the judiciary authority, not only to the police, but even to the criminal himself. For such an one after a first condemnation has a powerful deterrent against a relapse into nefarious courses in the knowledge that the measurements of his person are always within reach, that no disguise or self-manipulation can neutralise them, and that brought once more under police scrutiny he does it with the absolute certainty of being identified, re-convicted, and sentenced to a more exemplary punishment than before. Flight to a foreign country cannot avail him. The fatal measurements clog him from police authority to police authority and bring him to justice at last. Anthropometry, indeed, through its office attached to the Prefecture of Police in Paris more than justified its practice by identifying between 1883 and 1890 as many as 3017 criminals in France alone and has only to be adopted south of the Alps to find a yet larger field for its exercise and yet further opportunities for perfecting itself. Nowhere so warmly as in Italy will its coöperation be welcomed as nowhere more than in Italy have the substitutes for it so miserably failed. Take photography for an example. Not without its efficacy when the number of criminals is small how can photography succeed when the identifying photograph has had to be sought from among thousands upon thousands? As a humble auxiliary it has its uses, but even these are minimised by the resources of the criminal who to say nothing of minor facial or corporeal changes does not shrink from inducing vast cicatrices on the forehead, across the nose, with loss of the integument; while even emaciation will alter appearance and expression beyond all recognition. M. Bertillon, no doubt in his anxiety to retain the photograph as an auxiliary, has proposed new applications of it, using it for identifying stature, occipito-frontal diameter, and bi-parietal diameter, down to the length of arms and fingers, legs and feet. But Italian criminologists have pointed out how easily these indications may be modified, not only by the "oscillations of disease" but by the artifice of the individual under examination. They fall back, therefore, with increased emphasis on anthropometry pure and simple. One of the school—Signor Anfosso, I believe—invented the "Tachy-Anthropometer" (so-called from the celerity with which it works) which, avoiding some of the objections to the photograph, was not free from others of its own; but now as used under the "systema craniografico" Anfosso's

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apparatus may be considered as nearly perfect, the craniographic relief obtained, however quickly, being seldom or never vitiated by any flaw and even then the "margin of error" does not exceed a millimetre, if so much. The diagram, directly superimposed on the head of the subject, guarantees precision, whereas with the "millimetric measurements the only way of verifying their exactness lies in repeating them." The system of craniological identification has the still further advantage of "presenting a multitude of differentiating points between individual and individual" and of "helping the judiciary as well as the police identification." "Nothing more easy," says Dr. G. E. Curátolo (Professor of Gynæcology in the Roman University, to whose masterly paper on the subject the reader is referred), "nothing more easy than to add to the passport of an individual the craniogram which, better than any photograph, guarantees his identity. The apparatus with which the cranial curve is obtained consists of two metallic "reguli" carrying a "listarella" (small strip) of lead. This is supported on the head along the antero-posterior curve, starting from the base of the nose to the inferior point of the nucha and is sustained (as already said) by the two "reguli" which, moving on a pivot carry it over a vertical plane. On this rests a sheet of paper prepared with picrate of potash. When the "listarella" touches the paper, a current of electricity intervenes which, decomposing the solution at the points of contact, determines a coloured line which reproduces the curves of the "listarella" and hence that of the head. The "Tachy-Anthropometer," soon to be in working at the Government "office of Anthropometry," will according to Lombroso and others engaged in perfecting it, assist materially the judiciary and the police authorities, while it will contribute to enlarge the area of criminal anthropology as a science. "If," adds Professor Curátolo, "after eleven years from the Congress held in Rome at which Bertillon read his paper we see the establishment of an institute like that which in the Paris Prefecture of Police has operated so successfully since 1883, the praise is due to the Marchese di Rudini who in providing for the 'Pubblica Sicurezza' in the capital of the kingdom will have performed the further service of meeting a long-felt scientific want."

Dec. 4th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Diseases of the Liver.

A HIGHLY interesting paper on the Prognosis and Treatment of Diseases of the Liver has been read by Dr. Kolisch at a meeting of the Vienna Medical Club. Disease of the liver is as a rule only a part of a morbid condition such as sepsis, phthisis, or phosphorus poisoning; but there may on the other hand be local affections of the liver—carcinoma, for instance—which by the nature of the lesion influences the prognosis. In uncomplicated affections of the liver the prognosis depends on the proportion of liver cells which no longer fulfil their functions and on the derangement of the normal metabolism. The secretion of urine containing bile pigment and throwing down much sediment is a grave symptom; scanty urine is more unfavourable, but polyuria shows that the state of the liver is improving. Urobilinuria is a very important sign. Clinical experience shows that a great many forms of jaundice begin and end with it, but that bilirubinuria prevails during the intervening period. Urobilin is not formed in the liver, but is produced in the intestine by the reduction of the bilirubin which originates in the liver and is absorbed by the intestine. The theory that urobilin is formed when the liver is diseased is disproved by the fact that a minute amount of urobilinuria is normal, and also by the occurrence of bilirubin in the urine in cases of acholia. But the theory that urobilin is formed in the intestine does not explain some cases of urobilinuria in diseases of the heart, in fever, in the onset and disappearance of jaundice. Dr. Kolisch's theory of urobilinuria is as follows. The bile is always being secreted by the liver and absorbed by the intestine (circulation of the bile). The urobilin which is normally formed in the intestine from bilirubin also circulates in the same manner. Urobilin is more easily diffusible than bilirubin, and under ordinary circumstances a small portion of it makes its way through the liver cells and appears in the urine (normal urobilinuria). Under pathological conditions a slight impairment of the function of the liver cells permits the passage of an increased amount of urobilin which appears in the urine (pathological urobilinuria), whereas the bilirubin is retained. Dr. Kolisch's experiments show that the so-called cholæmic coma is due to an increase of the ammonia compounds, especially carbamic acid, circulating in the blood and he therefore believes that the amount of albuminous food should be reduced in serious disorders of the liver such as cirrhosis with destruction of the liver tissue. In order to promote the elimination of toxic substances from the organism he administers diuretics, especially those which are antiseptic and act on the bowel. Medicines which assist the disintegration of albumin—salicylic acid for instance—are to be avoided. As a cholagogue he uses ox-bile and its preparations.

Hay Fever.

At the same meeting of the Medical Club Dr. J. Müller discussed the question of hay fever. He said that patients were able to predict an attack and that in a great many cases it occurred yearly. It could be proved that pollen entering the respiratory tract was the cause of the disease. The patients are very nervous and a great many show gastric symptoms. The attack begins with itching in the nose or sometimes in the eyes, accompanied by convulsive movements of the eyelid. This was followed by spasmodic sneezing and a profuse secretion of serous fluid from the nose. The mucous membrane of the nose was swollen, the conjunctiva was injected or chemotic, and sometimes there were œdema of the eyes, vertigo, photophobia, pain in the forehead, in the temples, at the back of the head, and in the teeth. There is a causal relation between hay fever and gastro-intestinal symptoms. Dr. Müller adopted energetic local treatment of the nasal mucous membrane, which he touched with a 20 per cent. solution of nitrate of silver, and after some days irrigated it with seven litres (twelve pints) of Karlsbad water, followed at last with a mixture consisting of three grammes each of menthol and resorcin and fourteen grammes of spirit of wine. The result was the detachment of the diseased mucous membrane and disappearance of the secretion.

Legal Sanction of an Unqualified Practitioner.

The permission to practise medicine granted to an unqualified person named Stadlbauer under the circumstances described by me in THE LANCET of Nov. 13th, p. 1290, has elicited several protests. At the last meeting of the Vienna Medical Society Professor von Schrötter proposed the following resolution which was unanimously adopted:—"The Medical Society expresses its sympathy with the Upper Austrian Medical Chamber and adds its protest against the 'venia practicandi' granted to Stadlbauer. At a time when it is being discussed whether five years' training is sufficient for medical students, when examinations are being made more stringent, and when a two year's practical course is about to be made compulsory for those who have obtained their M.D. degree the authorising of a shopkeeper to practise medicine seems to be a mockery of recognised methods."

Rioting in the University.

Last week the University of Vienna was the scene of riots such as have not occurred since the memorable year 1848, the exciting cause being the resentment of the German party against the so-called "language decrees" ("Sprachenverordnungen"), by which Count Badeni endeavoured to conciliate the Slavs. On Nov. 29th about 4000 students assembled in the aula of the University, shouting "Abzug Badeni!" (Away with Badeni!), the consequence being that the police entered the building in defiance of a longstanding privilege. The students then went to the Houses of Parliament, where there was a regular battle between them and the police, and the number of wounded students was very considerable. Count Badeni eventually yielded. A great many professors of the four faculties of the University protested energetically against his policy.

Dec. 5th.

UNIVERSITY COLLEGE, BRISTOL.—The Vice-Chancellor of the University of Cambridge has nominated the Bishop of Bristol to serve on the council of University College, Bristol, in place of Mr. F. W. Budd resigned.

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Obituary.

WILLIAM FETTES MURRAY, M.D. ST. AND., F.R.C.S. EDIN.

FORFAR has sustained a severe loss by the death of its most prominent medical man, Dr. William Fettes Murray, who passed away on Nov. 28th, aged fifty-nine years. He received his education at Forfar Academy and the University of Edinburgh and after holding the post of resident physician at the Birmingham Maternity Hospital settled down in practice at Forfar some thirty years ago. He was one of the first to insist upon the danger of the transmission of tuberculosis by milk and meat from animals infected with that disease and had many a fight with the local authorities by reason of his opposition to the sale of animals known to be tuberculous. In 1874 he was appointed medical officer of health for the burgh. He enjoyed a large private practice and was a universal favourite. He was closely identified with the management of the Forfar Infirmary and opposed to the utmost of his power a proposal that the upper wards of the main building should be utilised for the reception of infectious cases. He was a great cricketer and fond of sport of all kinds. The funeral took place on Dec. 9th.

SIR ANTHONY BROWNLESS, K.C.M.G., M.D. ST. AND., M.D. MELB., F.R.C.S. ENG.

BY the death of Sir Anthony Brownless, which occurred on Dec. 3rd, Melbourne loses one of her most distinguished citizens and the University her Chancellor. He was the only son of the late Anthony Brownless, of Goudhurst, Kent. He received his education at St. Bartholomew's Hospital and at the University of Liege. In 1841 he was admitted a Member of the Royal College of Surgeons of England and in 1846 took the degree of M.D. at the University of St. Andrews. Until 1852 he practised in London as a physician, but he then went to Victoria, where he was elected physician to the Melbourne Benevolent Asylum. Two years later, in 1854, he was elected physician to the Melbourne Hospital, a post he held for twelve years, and on his retirement in 1866 was appointed consulting physician and life governor of that institution. To him was due the founding of the medical school of that University and he was the first on whom she conferred the degree of M.D. He was elected Vice-Chancellor of the University for twenty-nine years, in succession and in 1887 when Dr. Moorhouse the present Bishop of Manchester, was chosen for that office Dr. Brownless succeeded him as Chancellor. He held the degree of LL.D. in addition to that of M.D. from both the University of St. Andrews and Melbourne. In 1870 the Pope made him a Knight of St. Gregory the Great and in 1883 a Knight Commander of the Order of Pius. In 1884 he was elected a Fellow of the Royal College of Surgeons of England. Some years later he was created a K.C.M.G. He was also a J.P. for Victoria and had been a member of several important Government commissions. He was twice married, first in 1842 to Ellen, daughter of Mr. W. Hawker, M.D., of Charing, Kent; she died in 1846; and secondly in 1852 to Anne, daughter of Mr. William Hamilton, Captain, Rifle Brigade, of Eden, co. Donegal.

JAMES MURRAY, M.B., C.M. ABERD.,

SURGEON-CAPTAIN, INDIAN MEDICAL SERVICE.

WE have to record the early death of Surgeon-Captain James Murray at the Ripon Hospital, Simla, on Nov. 8th, 1897. James Murray was educated at the Chanonry School (Gymnasium) and the University, Aberdeen, graduating M.B., C.M. in 1886. He joined the Indian Medical Service in the following year, passing out third from Netley and gaining the Parkes' Memorial Medal. On proceeding to India he was appointed to the 15th Bengal Cavalry and was with this regiment in cholera camp during the hot weather of 1888. It was at that time that he first suffered from dysentery, the disease which ultimately led to his death. With his regiment he saw service in the Black Mountain expedition of 1888 and obtained the medal.

In 1889 he was appointed the colleague of Dr. Watt during the preparation of the "Dictionary of Economic Products of India," receiving the thanks of the Government of India. In 1891 he was appointed to the newly-established Professorship of Pathology in the University of Lahore and the rest of his life when free from illness was devoted to the organisation of his department. Those who were brought in contact with Surgeon-Captain Murray during this period will appreciate how much his heart was in his work. He engaged in teaching with his characteristic enthusiasm, and made a high reputation as demonstrator and lecturer. His clinical skill, which was of the highest order, rapidly brought him a consulting practice in the Punjab. In 1893-94 he had to take long sick leave home as the result of chronic dysentery and again in Australia in October, 1896. While in Melbourne symptoms of abscess of the liver appeared requiring operation, but he returned to his post improved in health and continued his duties. At the end of last hot season the symptoms of dysentery and hepatic abscess recurred and on going to Simla, in spite of rest and an apparently successful operation, he gradually succumbed. Surgeon-Captain Murray, in addition to possessing ability of high quality, was one of the most amiable of men and truest of friends. His death is mourned by his comrades and numerous friends in India as well as by old friends at home who will always have his friendship in loving memory.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Edward S. Bunker, Professor of Pathology in Long Island College Hospital, Brooklyn.—Dr. Müller, formerly teacher of Children's Diseases in Moscow University.—Dr. Joachim Voss, formerly Professor of Anatomy and of Forensic Medicine in the University of Christiania.—Dr. Marc Olivet, formerly Professor of Mental Diseases in Geneva.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Amsterdam:* Dr. G. MacGillavry has been qualified as *privat-docent* of Dermatology and Syphiligraphy.—*Bologna:* Dr. Francesco Roncati has been appointed Professor of Clinical Psychiatry.—*Groningen:* Dr. J. Nijhoff, of Amsterdam, has been appointed Professor of Midwifery and Gynæcology, in succession to Dr. Döderlein, who goes to Tübingen.—*Jena:* Dr. M. Matthes and Dr. A. Witzel have been appointed Extraordinary Professors of Internal Medicine and Odontology respectively.—*Königsberg:* Dr. Jäger, of Stuttgart, has qualified as *privat-docent* of Hygiene.—*Rostock:* Dr. Th. Axenfeld, of Breslau, who together with Dr. von Hippel recently gained the Graefe Prize of the German Ophthalmological Society, has been appointed Professor of Ophthalmology, in succession to Dr. R. Berlin, who has resigned.—*Sienna:* Dr. Benedetto Monpurgo, of Cagliari, has been appointed Extraordinary Professor of General Pathology.—*Toulouse:* Dr. Abelous, *agrégé*, has been appointed Professor of Physiology.—*Warsaw:* Dr. A. Grigorieff, formerly of St. Petersburg, has been appointed Professor of Forensic Medicine.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, MARYLEBONE-ROAD, N.W.—This hospital, the largest of its kind in Great Britain, is making a Christmas appeal. It received 1151 patients into its wards last year and in addition attended 1122 patients at their own homes. The expenditure for the year amounted to £4300 while the income reached £3600 only, this leaving a deficit of £700. To meet the great pressure on the accommodation of the hospital an extension is being carried out and a new nurses' home will shortly be commenced. For these works upwards of £12,000 will be needed. The Committee of Management earnestly appeal for contributions to both the building fund and the general maintenance fund which may be sent to the bankers, Messrs. Cocks, Biddulph, and Co., 43, Charing-cross, S.W.; or to the Secretary (Mr. Arthur Watts) at the hospital. Gifts of clothing for mothers and infants will also be much appreciated.

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WATER-SUPPLY OF SHANKLIN.—The Local Government Board has sanctioned the scheme for procuring a supply of water from the springs at Wroxall.

ON Dec 1st, at Horfield, Bristol, a complimentary dinner was given to Mr Colston Wintle, L.R.C.P. Lond., M.R.C.S. Eng., who was returned at the head of the poll for Horfield Ward at the recent municipal election.

ON Dec. 3rd Sir Squire Bancroft gave a reading in Cardiff on behalf of the Seamen's Hospital building fund and the Cardiff Infirmary. Lord Tredegar presided over a large audience and was supported by the bishop of the diocese, Judge Grantham, and others.

OYSTERS AND TYPHOID FEVER AT TRURO.—At the meeting of the Truro City Council held on Dec 2nd the medical officer of health (Mr. E. Sharp, M.R.C.S. Eng., L.S.A., J.P.) reported upon two recent cases of typhoid fever and stated that there was a strong probability that they were attributable to the eating of unwholesome oysters.

BRISTOL CONVALESCENT HOME.—At a committee meeting of this fund held on Dec. 2nd the mayor announced that the total amount of contributions was £82,000. It was thought advisable to invest the money until it was needed for the purposes of the scheme and a committee was appointed with that object.

WALTON CONVALESCENT HOME, NEAR CLEVEDON.—During the past twelve months 341 patients have been admitted to this institution, being an increase on the previous year. The working expenses exceeded the income by £18, although £100 had been received for reducing the mortgage existing on the institution.

THE PROPOSED NEW INFIRMARY AT BATH WORKHOUSE.—A long discussion took place at the meeting of the Bath board of guardians, held on Dec. 1st, when it was eventually decided to rescind the resolution adopted three weeks ago to erect a new detached infirmary at the workhouse to cost £40 000. It was contended that the resolution was carried without due consideration.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—At the monthly meeting of the President and Fellows held on Friday, Dec. 3rd, 1897, the President admitted to the Licence in Medicine Richard Arthur Jackson, M.R.C.S. Eng., who had been successful at a special examination held on Thursday and Friday, the 2nd and 3rd inst.

SANITARY INSPECTORS' ASSOCIATION.—At the recent meeting at Newton Abbott of the western branch of the Sanitary Inspectors' Association the President (the Right Hon. C Seale-Hayne, M.P.) maintained that inspectors should be placed in a position independent of local pressure so that they could carry out their duties in a free and independent manner.

UNIVERSITY COLLEGE OF WALES, ABERYSTWITH.—At a meeting of the council of this College held last week a letter was read from the Old Students' Association offering to provide a scholarship of £40 per annum, tenable for two years, at the College by a former student being a graduate of one of the universities of the United Kingdom. The scholarship is intended for the encouragement of higher study or research.

THE LATE MR. H W. FREEMAN.—The funeral of the late Alderman H. W. Freeman, F.R.C.S. Irel., J.P., of Bath, which took place in the Landsdown Cemetery on Dec. 3rd, was very numerously attended by fellow citizens and friends. The mayor and corporation attended in state and the committee of the Royal United Hospital were also present. The majority of the members of the profession of Bath were represented and amongst others who attended were Earl Temple and Canon Quirk, rector of Bath.

POISONING CASE AT BRISTOL.—At the Bristol Assizes held on Nov. 29th a man, aged twenty-five years, described as a servant to a veterinary surgeon, was charged with the manslaughter of his brother by administering nine grains of morphia. The deceased was intoxicated at the time and prisoner gave him the drug in order "to quiet him." The prisoner, who pleaded guilty, was discharged in his own recognisances to appear for judgment if called upon, Justice Hawkins remarking that he should never call him up to receive sentence.

WEST OF ENGLAND EYE INFIRMARY, EXETER.—An anonymous donor has given £2000 to the building fund of the West of England Eye Infirmary. Exeter.

DIPHTHERIA IN LONDON.—In the four-weekly period ended Nov. 6th the amount of diphtheria notified in London was excessive. In fact it is necessary to go back to the four weeks ended Dec. 28th, 1895, before finding a similar period having a weekly average higher than that for the four weeks first named. In the 1895 period the total of notifications including duplicate certificates was 1941 and the weekly average 485. In the period ended Oct. 9th of this present year the actual total was 1169 (the several weekly numbers being 267, 309, 290, and 303) with a weekly average of 292. But in the four weeks ended on Nov. 6th the total was 1336, made up of 351, 363, 319, and 303 as the constituent totals and the weekly average as high as 334 cases. In the earlier of these recent periods all save one of the sanitary areas in London were invaded; seven districts had 50 cases and upwards each with an aggregate of 469; and other 5 invaded areas had only 17 cases in all. In the later period all districts were invaded; 10 districts had 50 cases and upwards each with an aggregate of 700 attacks or more than half the total for the 43 sanitary areas; and other 10 districts had only 59 cases in all. In the ealier period the deaths registered numbered 182, or 45 weekly, and yielded a case mortality of 15·6 per cent; but in the later period the registered deaths were 224, or 56 weekly, and the case mortality was 16·8 per cent. Thus not only has there been in London during the October-November period a heavier record of attacks of diphtheria than any chronicled since the close of 1895, but there has also been a heavier case fatality rate than in any period since May last. In the completed weeks that have since elapsed the registered deaths from diphtheria in London have been as follows: 46, 37, 63, and last week 52, the latter total being 5 in excess of the corrected decennial average for the corresponding week of the period 1887-96. Of the 52 deaths last week 7 belonged to Hackney, 7 to Lambeth, and 4 each to Kensington, St. Pancras, and Lewisham sanitary areas. Five of the deaths were of infants, 31 in all were of children under five years of age, and 3 were of persons aged over twenty years. The admissions to hospital during the week numbered 147, and 1056 cases of the disease were under isolation on Saturday last in London institutions. In the Outer Ring there were last week registered 15 deaths from diphtheria of which 6 occurred in the Edmonton union districts.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALFORD, H. T. M., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

BABINGTON, L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

BATEMAN, W. H., M.B., Ch.B. Vict., has been appointed a House Surgeon to the Manchester Royal Infirmary.

COBB, E. H., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

COWBURN, A. D., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

DAVIES, J. E. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 6 Sanitary District of the Wrexham Union.

DEANE, S. R., L.R.C.S. Irel., has been appointed Medical Officer for the Childrens' Homes of the Lincoln Union.

DICKSON, GRAEME, L.R.C.P., L.R.C.S., L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Town of Hay, and Medical Officer for the Radnorshire District of the Hay Union, vice R. J. Sheperd, resigned.

DOUGALL, JOHN MCPHAIL, M.D., M.B., C.M. Glasg., has been appointed Medical Officer to the Castle Howard Reformatory, York.

FREELAND, A. R. S., L.R.C.P. Lond., M.R.C.S., has been appointed a Resident Medical Officer at the Convalescent Hospital, Cheadle.

FRYER, G. E., L.R.C.P. Lond., M.R.C.S., has been re-appointed an Assistant Medical Officer to the Manchester Royal Infirmary.

GIBBON, A. H., L.R.C.P. Edin., L.R.C.S. Edin., has been appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

GILBERT, L., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

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GOODE, H. N., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

GRIFFITH, W. V., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the No. 2 Sanitary District of the Wrexham Union.

HALL, J. S., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

HART, F. J. LORIMER, M.B. Edin., C.M., has been appointed Divisional Surgeon to the Metropolitan Police, vice W. Erskine, deceased.

HASLAM, H. C., M.A., M.B., B.C. Camb., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

HEWITT, H. E., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

HINDLEY, G. D., B.A. Oxon., L.R.C.P., M.R.C.S., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

HODGES, G. W. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Second Sanitary District of the Bridgnorth Union.

HOLMES, H., B.A., M.B., C.M. Cantab., has been appointed Junior House Surgeon to the Royal Albert Edward Infirmary, Wigan.

HULL, A. J., M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., has been appointed Clinical Assistant to the Hospital for Women, Soho-square, London.

JOHNS, J. F., M.D. Durh., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed Medical Officer of Health by the Cheltenham Rural District Council.

JONES, J. H., M.D. Lond., M.R.C.S., has been appointed Medical Officer for the First Sanitary District of the Launceston Union.

LAKE, RICHARD, F.R.C.S., has been appointed Assistant Surgeon to the Royal Ear Hospital, Frith-street, Soho, London.

MARRIAGE, H. J., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

MARTIN, F. R., B.A. Camb., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

MCCLEAN, J. F., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

MCDOUGALL, W., M.A., M.B., B.C. Camb., has been appointed House Physician to St. Thomas's Hospital.

MCKIE, G. M., L.R.C.P., M.R.C.S., has been appointed Junior House Surgeon to the Seamen's Branch Hospital, Royal Albert Dock, London.

MEADE-KING, R. LIDDON, M.D. Durh., has been appointed an Honorary Physician to the Taunton and Somerset Hospital.

MUSSEN, A. A., M.D. Dubl., has been appointed a House Physician to the Hospital for Women, Soho-square, London, W.

OSBORNE, O., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Bexhill Urban District Council.

PATERSON, W. H. J., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

PRIOR, J. R., M.B. Durh., M.R.C.S., has been appointed Surgeon to the East India Dock Dispensary of the Seamen's Hospital Society, Greenwich.

SANGUINETTI, H. H., B.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

SHELDON, G. H., M.B., Ch.B. Vict., has been appointed a House Surgeon to the Manchester Royal Infirmary.

STAINER, E., M.A., M.B., B.Ch. Oxon., has been re-appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

TUKE, A. W., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

TURNER, S. D., L.R.C.P., M.R.C.S., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

WALKER, J. N., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

WESTCOTT, WARREN GUY, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed a House Surgeon to the West Sussex, East Hants, and Chichester Infirmary.

WILSON, A., F.R.C.S., has been re-appointed Senior Anæsthetist to the Manchester Royal Infirmary.

WIMBLE, H. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fifth Sanitary District of the Hertford Union.

WOODHOUSE, H. C., M.B., Ch.B. Vict., has been appointed a House Surgeon to the Manchester Royal Infirmary.

YEARSLEY, P. MACLEOD, F.R.C.S., has been appointed Assistant Surgeon to the Royal Ear Hospital, Frith-street, Soho, London.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BATH ROYAL UNITED HOSPITAL.—Resident Medical Officer for three years. Salary £100 per annum, with board, lodging, and washing.

BOOTLE BOROUGH HOSPITAL, Bootle.—House Surgeon. Salary £80 per annum, with board, washing, &c.

CAMBERWELL PROVIDENT DISPENSARY, Camberwell-green, S.E.—A vacancy on the medical staff.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY, Dumfries.—House Surgeon. Salary £50 per annum, with board and washing. Also an Assistant House Surgeon. Board and washing provided. No salary.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Honorary Ophthalmic Surgeon.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon, for six months. Board and lodging provided.

NORFOLK AND NORWICH HOSPITAL, Norwich.—Honorary Surgeon and Honorary Assistant Surgeon.

NORTH-WEST LONDON HOSPITAL, Kentish-town-road, N.W.—Assistant Physician.

NORTHUMBERLAND COUNTY ASYLUM, Morpeth.—Clinical Assistant. Board and residence provided.

PARISH OF ST. GILES, Camberwell.—Assistant Medical Officer for the Infirmary at Havil-street, Camberwell, and the Workhouse at Gordon-road, Peckham; also for Relief Duty at the Constance-road Workhouse of the parish, for one year. Salary £50, with apartments, board, and washing. Applications to the Clerk to the Guardians, Guardians' Offices, 29, Peckham-road, S.E.

PARISH OF ST. LEONARD, Shoreditch, N.E.—Second Assistant Medical Officer for the Infirmary, Hoxton-street, N., for six months. Salary at the rate of £50 per annum, with rations, washing, and furnished apartments in the infirmary. Applications to the Clerk to the Guardians, 213, Kingsland-road, N.E.

PERSHORE UNION.—District Medical Officers. For the Eckington District. Salary £65 per annum. For the Fladbury District. Salary £50 per annum. For the Upton Snodsbury District. Salary £50 per annum. The salaries are exclusive of vaccination and extra medical fees, but inclusive of all drugs, medicines, and appliances, and travelling expenses. Applications to the Clerk to the Guardians, Union Offices, Pershore.

ROYAL COLLEGE OF PHYSICIANS, London.—Milroy Lecturer for 1899.

ROYAL SOUTH LONDON DISPENSARY, St. George's-cross, S.E.—Surgeon in ordinary to visit patients at their own homes in the St. Saviour's district. Honorarium £20 per annum.

SHANGHAI.—Medical Officer of Health for three years. Salary taels 4500 (about £600) a year. Unfurnished quarters, consisting of bedroom, bath-room, and sitting-room. Means of conveyance provided. Apply to *Dr. Sims Woodhead, Examination Hall, Victoria Embankment*, London, W.C.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

TAUNTON AND SOMERSET HOSPITAL, Hammet-street, Taunton.—Assistant House Surgeon for six months. Board, washing, and lodging in the institution.

UNIVERSITY COLLEGE, London.—Surgical Registrar.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon for six months. Board, lodging, and washing in the hospital provided. Gratuity £20.

Births, Marriages, and Deaths.

BIRTHS.

DAVIES.—On Nov. 29th, at Kenilworth Lodge, Kenilworth-road, Ealing, W., the wife of Howard Owen Davies, M.D., B.S. Lond., of a son.

FOWLER.—On Dec. 2nd, at the residence of her mother, Mrs. Boulton, Highgate House, Beverley, East Yorkshire, the wife of C. E. Percy Fowler, F.R.C.S., Army Medical Staff, of a son.

FRASER.—On Dec. 6th, at Epworth, St. Edward-road, Southsea, the wife of A. Mearns Fraser, M.B., of a daughter.

GOUGH.—On Nov. 30th, at Glenalien, Old Torwood-road, Torquay, the wife of John Harley Gough, M.R.C.S. Eng., L.R.C.P. Lond., of a son.

RAYNER.—On Dec. 1st, at Harcourt House, Camberley, the wife of Herbert E. Rayner, F.R.C.S. Eng., of a son.

RICE.—On Dec. 1st, at Clarence-terrace, Leamington, the wife of Bernard Rice, M.D. Lond., of a son.

STEEDMAN.—On Nov. 30th, at High-road, Streatham, S.W., the wife of J. F. Steedman, F.R.C.S., of a son.

MARRIAGES.

BURGESS—BEAN.—On Dec. 4th, at St. Pancras Church, Edward John Burgess, M.R.C.S. Eng., L.R.C.P. Lond., of Whitechurch, Hants, to Catherine Frances, daughter of the late Alexander Bean, of The Firs, West Mersea.

HUGHES—HUGHES.—On Dec. 1st, at St. Jude's, Southsea, John Douglas Hughes, Surgeon Royal Navy, son of the late James Charles Perry Hughes, late of Caterham, Surrey, to Ethel Maud, second daughter of Colonel W. Hughes, A.P.D., Chief Paymaster Southern District.

PEACOCK—HANBURY.—On Dec. 2nd, at St. Michael's, Swanmore, Ryde, by the Rev. W. P. Hanbury, vicar, uncle of the bride, William Ernest Peacock, M.D., Scorton, Yorkshire, to Katharine Mabelle Hanbury, Swanmore, Isle of Wight.

WAKEFIELD—CHADWICK.—On Nov. 25th, at Christchurch, New Malden, by the Rev. W. Allan Challacombe, M.A., Christopher Frank Wakefield, M.R.C.S. Eng., L.R.C.P. Lond., of Lincoln Lodge, Horley, to Sophia, eldest daughter of the late James Chadwick, Esq., of York.

DEATHS.

BANKS.—On Dec. 1st, at Osman House, Sutton-in-Ashfield, Leonard Philip Banks, L.R.C.P. Irel., L.F.P.S. Glasg., aged 38 years.

DUNLEY-OWEN.—On Oct. 26th, at Umtali, Rhodesia, South Africa, Ada Mary, the wife of Arthur Dunley-Owen, M.R.C.S., L.R.C.P., aged 30 years.

GOODCHILD.—On Dec. 2nd, at Thurlow-road, Hampstead, John Goodchild, L.R.C.P., M.R.C.S.

KIRTON.—On Dec. 3rd, at Dawlish, South Devon, Charles Stanley Kirton, M.D. Brux., M.R.C.S. Eng., L.R.C.P. Lond., late of The Oriel House, Leigh, Essex.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 9th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Dec. 3	30·25	N.E.	...	58	43	35	35	37	Cloudy
,, 4	30·17	S.W.	...	41	40	28	Fzn.	31	Foggy
,, 5	30·25	S.E.	.	45	44	31	37	40	Cloudy
,, 6	30·00	S.W.	0·06	49	49	39	42	44	Raining
,, 7	30·11	W.	0·67	56	55	39	37	41	Cloudy
,, 8	29·39	W.	0·04	68	47	41	44	46	Cloudy
,, 9	29·34	W.	...	61	45	39	38	41	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (15th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.).

THURSDAY (16th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.).

FRIDAY (17th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (18th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (13th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. A. Doran: A Case of Pancreatic Cyst treated by Incision and Drainage, with Comments.—Dr. H. D. Rolleston and Mr. G. R. Turner: A Case of Peri-pancreatic Cyst.—Mr. J. D. Malcolm: A Case of Complete Removal of a Multilocular Cyst of the Pancreas; Recovery.

TUESDAY (14th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Adjourned Discussion on the Prevention of Enteric Fever.

WEDNESDAY (15th).—ROYAL METEOROLOGICAL SOCIETY (Institution of Civil Engineers, Gt. George-street, Westminster, S.W.).—7.30 P.M. Mr. R. C. Mossman: Daily Values of Non-Instrumental Meteorological Phenomena in London, 1763-1896.—Mr. W. Marriott: The Rainfall of Seathwaite, Borrowdale, Cumberland.

ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Mr. E. B. Stringer: A New Form of Photomicrographic Camera and Condensing System.

NORTH-WEST LONDON CLINICAL SOCIETY (North-West London Hospital).—8.30 P.M. Cases will be shown by Dr. H. Campbell, Mr. Goulting, Mr. Jackson Clarke, and others.

THURSDAY (16th).—SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—Clinical Evening.

FRIDAY (17th).—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Meeting.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

TUESDAY (14th).—HOSPITAL FOR NERVOUS DISEASES (73, Welbeck-street).—4.30 P.M. Dr. H. Campbell: On Disorders of the Nervous System characterised by Rigidity and Tonic Spasm.

WEDNESDAY (15th).—HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Maguire: Abnormal Breathing.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. L. A. Bidwell: The Surgery of the Liver.

THURSDAY (16th).—THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Barlow.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—5 P.M. Mr. H. Eales: Exophthalmos, its Cause and Treatment (illustrated by cases and specimens). (Richard Middlemore Post-graduate Lectures.)

FRIDAY (17th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Victor Horsley: Surgery of the Nervous System.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

"THE MICROBE OF DEATH."

To the Editors of THE LANCET.

SIRS,—The editor of *Pearson's Magazine* has drawn my attention to the criticism which appeared in THE LANCET of Nov. 20th of my story "The Microbe of Death." In this connexion I trust you will accord me the courtesy of your columns to make the following remarks. Your critic accuses me of (1) "gross plagiarism"; (2) ignorance of what I am writing about; and (3) giving "a grossly unfair description of the medical profession." 1. I have not only not read the book—"George de Barnwell"—from which I have "grossly plagiarised," but I fail to see the connexion instanced between my definition of "remorse—fear of detection"—and Barnwell's declaration "where there is no remorse crime cannot exist." 2. In the case of poisoning by anthrax through a wound "a pustule would almost certainly appear at the site of puncture.' "Almost certainly" admits the very possibility which is set forth as one of the proofs of my ignorance. 3. If by making a doctor kill a man "I give a grossly unfair description of the medical profession," would your critic, if I wrote a story of a woman who killed her own child accuse me of giving a grossly unfair description of maternity?

I am, Sirs, yours faithfully,

RUDOLPH DE CORDOVA.

Duke-street, Adelphi, W.C., Dec. 1st, 1897.

*** 1. We are quite ready to accept Mr. de Cordova's statement. If he will read "George de Barnwell," which is not a book but one of the "Novels by Eminent Hands" of Thackeray, he will we are sure see the similarity between the remarks we quoted. 2. We allow that in very rapid cases of death from anthrax there is no local manifestation. But it is exceedingly difficult to bring about such rapid death from a scratch and under the circumstances mentioned in the story impossible. Germs injected into a dying man, one actually dead within half an hour, would scarcely grow at all. The patient died between 5 and 6 A.M. and the post-mortem examination was made six and a half hours later. The body therefore could not have been swarming with bacilli, certainly not in sufficient number to kill a patient with the incredible rapidity mentioned—i.e., twenty-one hours—the means of inoculation having been the very slight scratch mentioned in the story. 3. We do not see the force of Mr. de Cordova's parallel. It is the deliberation and gloating over the crime to which we take exception.—ED. L.

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STONE v. CEMENT.

To the Editors of THE LANCET.

SIRS,—Would you or any of your readers kindly favour me with an opinion as to the relative values of stone and cement work as to durability, &c. Some architects prefer in the building of churches, &c, stone, others cement petrified by a certain process based on chemical principles. These latter claim that their preparations last longer than stone and do not chip away as this does. One often notices in old abbeys, castles, &c., the cement work in a practically perfect condition while the neighbouring stones are crumbling away. Has the method of making such lasting cement ceased with our forefathers—is it a lost art? In the foregoing I refer particularly to facings, stucco work, &c., in buildings. An answer to this will be very highly esteemed by your constant reader.

I am, Sirs, yours faithfully,

Dec. 4th, 1897. S., M.D

P.S.—What book or authority on this subject would you recommend?

Enquirer.—If the vendor contracted to give an introduction of a certain sort and *this* can be proved and if the vendor failed to give the introduction and *this* also can be proved the payment of the balance of the purchase money might be legally resisted. We observe, however, that our correspondent says "the purchase of a practice involves a careful introduction." This is a matter of opinion and he will be unwise to take any steps without consulting a solicitor.

NASTINESS SUPREME.

IT is a notorious fact that the refreshments supplied at many of our public places of amusement are not of first-rate quality although high and even exorbitant prices are frequently charged. As the catering in public places is usually in the hands of a single firm there is no competition and advantage is taken of the fact to foist upon the public articles which are dear and nasty, but we sincerely trust that the practice which was disclosed in a recent case at the Kensington Petty Sessions is not by any means universal. It would appear that the well-known refreshment contractors, Messrs Spiers and Pond, caterers to the Victorian Exhibition, were summoned at the instigation of the Kensington Vestry for selling a sample of brandy and two samples of whisky which were not of the nature, substance, and quality of the article demanded. The defence set up was the extraordinary one that in one case a barmaid had emptied into the brandy and whisky decanters the remaining portion of a glass of brandy and water and also a portion of a glass of whisky and water left on the counter by customers. In the case of the other sample the barmaid had, in consequence of a complaint which had been made to her that the stock of the bar under her charge was unsatisfactory, put water into the syphon which supplied the tap from which the sample of whisky was purchased. The bench inflicted a penalty of £15. Apart from the fact that the spirits were adulterated the practice of emptying the leavings of customers' glasses into the vessels holding the spirits for public supply is a disgusting and filthy and dangerous one and the Vestry of Kensington deserve the unqualified thanks of the public for the action which they took.

Verbum Sap.—We doubt the preponderating political influence of the medical man and the social morality of employing it in the way suggested. We do not think a good citizen should make the particular wants of his class decide entirely where his vote should go.

"A TESTIMONIAL TO DR. JOHN T. ARLIDGE."

To the Editors of THE LANCET.

SIRS,—The insertion of the following list of further subscriptions to the testimonial to Dr. J. T. Arlidge will much oblige.

I am, Sirs, yours faithfully,

CHAS. F. MOORE.

10, Upper Merrion-street, Dublin, Dec. 7th, 1897.

	£	s.	d.
Rev. C. E. Waller	1	1	0
Prebendary Hutchinson	0	10	0
Miss Littledale	2	2	0
Dr. Peirce	2	2	0
Messrs. Gale and Co. ...	1	1	0
Rev. W. W. Tyson	2	2	0
Mr. John Strick	1	1	0
Mr. John Kendrick Wynne, M.D.	3	3	0

P.S.—Owing to my inability to decipher Mr. Thomas Fort's name, who is, M.R.C.S. Eng. and L.R.C.P. Edin., it appeared as "Dr. F." in THE LANCET of Dec. 4th.

M.D.—If there are public rumours the medical man has a right to correct them publicly. We are aware that such corrections are occasionally inserted on insufficient grounds or for too long a period or in somewhat unprofessional phraseology, but we do not understand our correspondent to allege anything of this sort against the advertisement he encloses.

Mr. W. H. Bull.—A very proper limitation is insisted upon and we see no evidence that it was not suggested by the medical man in all [illegible]

"THE ETHICS OF DEATH CERTIFICATION."

To the Editors of THE LANCET.

SIRS,—The following case which occurred in my practice the week before last may interest "Intimidad" and others of your readers. A fine healthy little boy, aged three years and three months, who had never had a day's illness in his life, complained of slight pain in his stomach and vomited at 11 P.M. on Wednesday, Nov. 24th. At 1 A.M. he was violently purged, the purging (which was painless) continuing the remainder of the night and following morning. He still had no pain, but seemed much exhausted. I saw him at 2.30 on Thursday afternoon. He was slightly cyanosed, the hands and feet were cold, the pulse was very weak (120 per minute), and the temperature was 101° F. There was no pain, tenderness, or swelling of the abdomen. Sore throat was not complained of, but the tonsils and fauces were congested and there was a uniform flushing of the skin. There was not then or subsequently any obstruction to the breathing and careful auscultation of the chest revealed nothing abnormal. The tongue was thickly coated with a yellow fur. I saw the child again at 10 P.M. when he was much the same, but the cutaneous flush was more marked as was also the congestion of the throat and the temperature was 103°. He had a bad night, the purging continuing but not severely, the stools being very green and sour-smelling but not very offensive. Next morning he was obviously worse. The feet and hands were cold, the lips and face were cyanosed, the flushing of the skin was gone, the throat was still slightly congested, the pupils were equal and contracted (that was their condition from the first), the tongue was clean and bright-red, and the temperature was 102°. The patient seemed very drowsy. At 1.30 he was rapidly becoming comatose; there were muscular twitchings and the temperature was 105°. At 4.30 Dr. Beattie, of Newcastle, saw him with me. He was then quite comatose, the pupils were equal but dilating, the pulse was quite imperceptible at the wrist, and the temperature was 105·6° in the axilla and 108° in the rectum. At 6 P.M. he died, the illness having lasted forty-three hours. Careful inquiry established beyond doubt that the child had had nothing but what others had partaken of and I had no hesitation in certifying that death was due to acute gastro-enteritis and septic absorption from the bowels.

I do not think "Intimidad" need have any qualms of conscience about his conduct. If he was satisfied that the gastritis in his case was due to natural causes he was quite justified in certifying. We are not, fortunately, called upon to certify the cause of the illness. If we were how many certificates should we have to refuse? In both his case and mine the symptoms might conceivably have been caused by some irritant poison, but having satisfied ourselves that they were not, what more was required? An inflammation of the lungs (not pneumonia) may be caused by exposure to cold or by the inhalation of an irritant gas, but we should not refuse to certify a death from that disease merely because of the latter possibility. And, again, in "Intimidad's" case the verdict of the coroner's jury would have depended entirely upon his evidence, so no possible good would have resulted from an inquest. As to a post-mortem examination, I doubt very much whether it would have thrown much light on either case. We could have demonstrated the absence of irritant poisons (supposing our opinions to be correct) and the presence of inflammatory lesions and so proved ourselves right. But the cause of those lesions, which is what we do not know, would most likely still remain obscure.

I am, Sirs, yours faithfully,

Wylam-on-Tyne, Dec. 6th, 1897. W. H. BISHOP.

Zeta.—It would appear from our correspondent's statement that he would not incur the penalty. The wording of the agreement might, however, indicate another construction.

A MEDICAL MAN IN BAD COMPANY.

THE following testimonial is printed in the *Dean Forest Mercury* of Feb. 3rd, 1897:—

"Mitcheldean, 25th October.

"Dear Sir,—I have found your Ointment most valuable as an application in Eczema and other skin diseases.

"J. ABELL, M.R.C.S."

The ointment thus eulogised is a preparation named "Marvello," which is prepared by the Royal Forest of Dean Remedy Co., and which, to quote another part of the advertisement,

"Gives immediate Relief and speedily Cures Burns, Scalds, Bruises, Rheumatism, Neuralgia, Bronchitis, Chilblains, Eczema, Croup, Catarrh, Sore Throat, Irritation, Humours, Boils, Erysipelas, &c."

Mr. J. Abell, M.R.C.S., who is a registered medical practitioner, should withdraw his public support of this quack remedy. If his name is being unjustifiably used he should insist on public reparation.

Consultant.—The wording of the deed of dissolution should have been more clear. In the absence of a definition of the word "consultant" the man who wrote the clause can alone say what he meant. We think it probable that A intended to see patients who came direct to him at an enhanced fee and not to confine himself to cases where he was called in by a professional brother; but if this was not made clear to B he has grounds for thinking otherwise.

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THE VACCINATION AGE.

To the Editors of THE LANCET.

SIRS,—Since the Commissioners have recommended the extension of the present age (three months) to six months it appears to me highly desirable in view of the fact that legislative measures are likely to be made during the ensuing session to find out what public vaccinators think of this recommendation. I have no hesitation whatever in saying that my experience tells me that children under three months are, as a rule, in a far better condition to be vaccinated than those who have attained the age of six months. Those who have had to do with children know full well that the majority of infantile complaints occur after the first three months of the children's life. Beyond a little temporary attack of "red gum" children of that age really suffer from no other disorders. And moreover mothers believe in having their children vaccinated when they are under three months because they are so little trouble; in point of fact they (the children) sleep during the major portion of the twenty-four hours. The question (and it is a very important one in urban districts) arises whether the difficulties of tracing the abodes of the children will not be greatly increased if a period of six months is allowed for the performance of the operation. At the present time vaccination officers lose all trace of a considerable proportion of children and it is perfectly manifest that that proportion will increase enormously if any extension of time is allowed. I should like to add that I believe from an experience of five months in the use of calf lymph that no measure is so well calculated to do away with the unpopularity of the operation as vaccination with that lymph. Even more than the operation itself the taking matter from the children's arms was always a great source of irritation to the parents.

I am, Sirs, your obedient servant,

A PUBLIC VACCINATOR OF TWENTY YEARS' STANDING.

Dec. 6th, 1897.

*** Whilst giving every weight to our correspondent's argument we cannot but think the Commissioners' recommendation a wise one as tending especially to diminish the risks (slight and variable as they may be) which attend the practice of vaccination in the very young. After all, the raising of the age to six months is only doing for England and Wales what has long been the practice in Scotland, whereas in Germany—the best vaccinated country in the world—the limit for primary vaccination is two years. We would commend to our correspondent a careful study of the clauses 438 to 446 of the Final Report and also the references to this subject made by Dr. T. D. Acland in his exhaustive article on Vaccinia in the second volume of Clifford Allbutt's System of Medicine.—ED. L.

H. E. T.—There is room for the exercise of propriety in the printing o. such notices. The announcement seems to us to be a reasonable one, but our correspondent will be well advised not to make it in a type or style of vulgar conspicuousness.

One of Twenty-seven Years' Standing.—Yes, the decision is final. The terms of the notice will be found in our advertisement columns.

"OIL OF SANDAL WOOD."

MESSRS. W. J. BUSH AND CO., Limited, of Artillery-lane, Bishopsgate E.C., point out that a prejudice has been caused to both buyers and sellers of sandal wood oil by some chemists accepting as absolute the figures relating to its physical characteristics published by certain German chemists. To obviate this they wish to make known the results of their own observations together with those of other observers who have published their results from time to time. The rotation figures in these observations are for monochromatic (D) light, but in the other cases the source of light is not stated; the figures for ordinary light (transition tint) would with most substances be considerably higher. It is evident from the results recorded that English drawn oil from East Indian sandal wood may vary in density from 0·970 to over 0·980, and it would appear that, as might be expected, the German distilled oil varies to the same extent. The rotation also may vary from 16° to 20°, and it is not advisable to fix narrower limits than these for density and rotation. They agree with previous observers as to the solubility in 70 per cent. alcohol, all the oils distilled by themselves having been found to be readily soluble in less than five parts by volume and spirit at 20° C.

Starboard.—We do not know what official view the General Medical Council might take, but we consider that the circulation of a medical man's name in such a way is distinctly inadvisable.

WANTED A SCHOOL.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me of a charitable institution where a boy, aged eight years, and a complete cripple can be received for educational purposes? He lives in the country, his parents are poor, and the nearest school is some miles away.

I am, Sirs, yours faithfully,

123, Stamford-hill, N., Dec. 3rd, 1897. D. MOWAT.

"A FAMOUS PARISIAN LADY SPECIALIST."

To the Editors of THE LANCET.

SIRS,—Who was Dr. Marion Sims? I, a layman, don't know. But I happen to have seen the other day a circular bearing the name of a chemist not unknown describing something invented by the *late Dr. Marion Sims, a famous Parisian lady specialist.* I once heard of a man who took Marion Crawford down to dinner and found her a most charming and accomplished lady. If this is a parallel case it might amuse your readers to hear of it.

I am, Sirs, yours truly,

Dec. 7th, 1897. A BARRISTER.

Dr. Arthur E. Larking.—We are not responsible for the opinions of our correspondents.

A QUESTION FOR MUTUAL SETTLEMENT.

M.B. Vict. writes: "A is a resident medical officer in a workhouse hospital. B is a consulting medical officer to the same and attends every morning and at such other times as his services are required. If during B's absence A diagnoses or admits any case of infectious disease A at once notifies them to the local authority and claims the fee. B says that A has no right to notify these cases, but that A ought to report them to B, and B will notify them. Is not A quite correct in the course he is pursuing as he is a registered practitioner as much as B is?"

*** It would be a great pity that so trivial a matter should break the harmony that should exist between two gentlemen standing in close professional relation towards each other. There cannot be a right or a wrong in the matter, all that is wanted is a decision, but it would be idle to give a decision, which must be to some extent capricious, unless the arbitrator knew that both gentlemen were prepared to abide by it.—ED. L.

Selhurst.—The best course would be to trace the falsehood to some one and ask the individual to make public retractation of his error. Our correspondent might advertise a correction once or twice, but this proceeding is open to abuse and does not dispel the old rumours.

A Fellow of the Society of Medical Officers of Health.—We shall be happy to read anything that is sent us in proof of the desirability of an independent investigation being made.

A PROTEST.

To the Editors of THE LANCET.

SIRS,—I was recently elected as a resident medical officer to an infirmary in England. Immediately after the election I learned on inquiring that I should be expected to share a sitting-room with a lady doctor, who is one of the three residents to the institution. As this was practically the only sitting-room accommodation which the committee could provide—the alternative being the board-room, which serves also for a secretary's office—I felt bound on principle to resign the post. I should like to know whether such an arrangement as this exists in any other English hospital and if not whether it appears to your readers as one which is likely to become popular. As far as I know the experiment has never before been put to the test in the infirmary in question and as the post is still vacant it remains for someone else to establish in hospital life a custon which is presumably new and one which surely is a little "before the times."

I am, Sirs, yours faithfully,

Dec. 3rd, 1897. PUDOR.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received: *Manchester Guardian, Bedford Standard, East Anglian Daily Times, Newcastle Leader, Yorkshire Herald, Glasgow Herald, Birmingham Post, Pioneer Mail, Times of India, Hereford Times, Somerset County Gazette, Dundee Advertiser, Liverpool Daily Post, Architect, Builder, North British Daily Mail, Norwich Mercury, Royal Cornwall Gazette, Newbury Weekly News, Keighley News, Science Siftings, Leeds Mercury, Kensington News, Cambridge Independent Press, Bury Guardian, Bolton Chronicle, Mirfield Reporter, Sheffield Telegraph, Surrey Mirror, Wolverhampton Chronicle, Newport Advertiser, Bridgwater Independent, Yorkshire Post, Heckmondwike Reporter, Bristol Mercury, Chester Chronicle, Herald of Wales, Waterford Chronicle, Kidderminster Shuttle, Sussex Daily News, Sanitary Record, Northern Chronicle, Mining Journal, Public Health, Engineer, Local Government Chronicle, Reading Mercury, City Press, Hertfordshire Mercury, Local Government Journal, Lancaster Observer, Guy's Hospital Gazette, Welshman (Carmarthen), Surrey Advertiser, Weekly Free Press and Aberdeen Herald, West Middlesex Herald, Newport Pagnell Gazette, Prescot Reporter, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Dr. J. Althaus, Lond.; Messrs. Armour and Co., Lond.; Mons. J. Astier, Paris; Messrs. Arnold and Sons, Lond.; Dr. D. H. Anderson, Barrow; Dr. R. D. R. Allison, Liverpool.

B.—Mr. A. S. Barling, Lancaster; Dr. E. Blake, Lond.; British Orthopædic Society, Lond., Hon. Secretary of; Messrs. Bewlay and Co., Lond.; Bath Royal United Hospital, Secretary of; Messrs. W. H. Bailey and Son, Lond.; Mr. S. H. Benson, Lond.; Mr. L. Browne, Lond.; Herr J. F. Bergmann, Wiesbaden; Mr. H. Browne, Buckhurst Hill; Messrs. J. B. Brooks and Co., Birmingham; T. B. Browne, Ltd., Lond.; Messrs. Baiss Bros. and Co., Lond.; Mr. G. P. Butcher, Plymouth; Bootle Borough Hospital, Secretary of; Mr. R. Baker, Lond.; British Medical Temperance Association, Lond., Hon. Secretary of.

C.—Messrs. A. H. Cox and Co., Brighton; Messrs. Callard and Co., Lond.; Messrs. R. Crooks and Co., Liverpool; Commercial Printing and Stationery Co., Blackpool; *The Cable*, Lond., Editor of; Messrs. T. Cook and Son, Lond.; Mr. T. Culleton, Lond.; Messrs. Cassell and Co., Lond.; Messrs. T. Christy and Co., Lond.; Cantab, Lond.; Mr. M. P. M. Collier, Lond.; Camera Club, Lond., Secretary of.

D.—Mr. T. Duke, Rugby; Mr. A. K. Dresser, Brighton; Dr. Davies, Lond.; *Die Medicin der Gegenwart*, Berlin, Editors of; Sir W. B. Dalby, Lond.; Messrs. Duncan, Flockhart, and Co., Edinburgh; Dumfries and Galloway Royal Infirmary, Dumfries, Treasurer of; Messrs. Dakin Bros., Lond.; Mr. A. D'Arcy, Leeds.

E.—Mr. A. D. Edginton, Lond.; Mr. H. Eales, Birmingham; Mr. E. Eissenhardt, Lond.

F.—Mr. A. Fuller, Chichester; Falona Food and Cereal Co., Lond.; Messrs. E. Fischel and Co., Lond.; Fromm's Extract Co., Lond.; Mr. H. Frowde, Lond.; Messrs. Fangier and Co., Lond.; Formalin Hygiene Co., Lond.; Messrs. J. S. Fry and Sons, Bristol; First Swiss Wine Sans Alcohol Co., Lond.; Mr. C. H. Flory, Bilesmere; Dr. W. S. Fenwick, Lond.

G.—Dr. J. Galloway, Lond.; Mr. W. H. Garrison, New York, U.S.A.; Mr. W. Gibson, Lond.; Dr. L. G. Guthrie, Lond.; Messrs. Glaisyer and Kemp, Brighton; Gamma, Lond.; Messrs. Gale and Sons, Birmingham; Mr. A. B. Gilbert, Newcastle-on-Tyne; Dr. Gemmell, Lond.

H.—Mr. W. H. Hillyer, Buckden; Dr. Harrer, Lond.; Hospital for Women, Lond., Secretary of; Messrs. Hertz and Collingwood, Lond.; Mr. J. Harrison, North Frodingham; Mr. E. Henry, Porth Leven; Mr. J. Heywood, Manchester; Mr. F. A. Homfrey, Darlington; Prof. F. Hobday, Lond.

J.—Mr. G. H. Jones, Deddington; Mr. H. E. Juler, Lond.; Mr. Hermann Jacoby, Lond.; Mr. R. Jones, Liverpool; Dr. Jaeger's Sanitary Woollen System Co. Lond.

K.—Messrs. P. S. King and Son, Lond.; K. L. S., East Grinstead; Dr. W. H. E. Knaggs, Scarborough; Mr. B. K. Kuhn, Lond.

L.—Rev. H. Lansdell, Lond.; Llanelly Hospital, Secretary of.

M.—Dr. Macintosh, Norfolk; Miss Molony, Lond.; Milk Preparations Co., Brentwood; Dr. W. F. MacDonogh, Twickenham; Mr. P. Möller, Lond.; Maltine Manufacturing Co., Lond.; Dr. B. G. Moynihan, Leeds; Mr. A. B. MacDowall, Lond.; M.B., Vict., Manchester; Mr. C. T. Millis, Lond.

N.—Mr. O. Norman, Lond.; Messrs. B. Newgass and Co., Lond.; Naval and Military Press Bureaux, Lond.; National Hospital for the Paralysed and Epileptic, Lond., Secretary of; Northumberland County Asylum, Morpeth, Clerk of; Mr. W. G. Nash, Bedford; Norfolk and Norwich Hospital, Norwich, Secretary of; Mr. H. W. Nott, Liverpool; Dr. J. T. C. Nash, Beckenham.

O.—Messrs. Oppenheimer, Son, and Co., Lond.

P.—Mr. R. Palmer, Bethersden; Rev. W. Potter, Victoria, Australia; Dr. M. E. Paul, Nagasaki; Mr. C. C. Poole, Hastings; Dr. E. F. Potter, Lond.; Mr. E. P. Pentony, Middlesborough; Pershore Union, Clerk of; Mr. J. B. Pike, Loughborough.

R.—Dr. G. Reid, Stafford; Dr. Dr. C. A. Rayne, Lancaster; Mr. A. B. Reck, Copenhagen; Royal College of Surgeons, Dublin, Registrar of; Messrs. Richardson Bros. and Co., Liverpool; Dr. Byrom Robinson, Chicago.

S.—Mr. H. Sell, Lond.; Mrs. M. Spackman, Cliveden; Surgical Aid Society, Lond., Secretary of; Mr. D. W. Samways, Mentone; Mr. J. E. P. Shera, Cootehill; Dr. F. Spicer, Lond.; Sanitas Co., Lond.; Dr. W. J. Stott, Haslingden; Mr. E. M. Spencer, Tavistock; St. Giles Camberwell Parish, Clerk of; Dr. A. Smart, Edinburgh; Sanitary Institute, Lond., Secretary of.

T.—Mr. W. J. Tucker, Lond.; Mr. Lawson Tait, Birmingham; Dr. J. C. Thresh, Chelmsford; Messrs. W. Thacker and Co., Lond.; Messrs. Teff and Co., Bristol; Taunton and Somerset Hospital, Taunton, Secretary of.

V.—Lr. Swale Vincent, Lond.

W.—Mr. G. B. Wherry, Cambridge; Dr. E. C. Williams, Bristol; Mr. G. B. M. White, Lond.; Mr. A. T. Wysard, H.M.S. *Pembroke*, Chatham; Messrs. Wyckoff, Seamans, and Benedict, Lond.; Mr. S. Wand, Leicester; *Western Mail*, Cardiff; Messrs. Wickramanayaka and Co., Colombo; Sir Samuel Wilks, Lond.; Messrs. H. Whewell and Co., Bolton; West Bromwich District Hospital, Secretary of; Messrs. Whittaker and Co., Lond.; Messrs. West, Newman, and Co., Lond.

Y.—Yöst Typewriter Co., Lond.; Mr. P. M. Yearsley, Lond.

Z.—Messrs. A. and M. Zimmermann, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. F. W. Apthorp, Burgess Hill; Apollinaris Co., Lond.; Messrs. Allen and Hanburys, Lond.; Anderson's College Medical School, Glasgow, Secretary of; Abstainer, Hanley; Apothecaries' Hall of Ireland, Dublin.

B.—Dr. M. Beattie, Gotham; Mr. C. Birchall, Liverpool; Dr. Brand, Dortmund, Germany; Belfast City and District Water Commissioners, Secretary of; Dr. S. K. Basu, Patna, India; Mr. C. J. Bond, Leicester; Mr. W. A. H. Barrett, Ottery St. Mary; Mr. R. V. Babst, Middlesbrough; Messrs. Brown, Gould, and Co., Lond.; Mr. H. Brice, St. Austell; Miss A. Bangham, Ashby-de-la-Zouch.

C.—Dr. W. T. Carroll, Hafod; Dr. J. J. Crawford, Pulborough; Mr. J. Clay, Shrewsbury; Captain, Lond.; Mr. J. B. Cornish, Manchester; Mr. J. Caldwell, Brighouse; Calcutta Corporation, Secretary of; Dr. E. H. Cooke, Bhusawal, India; Confidential, Lond.; Cortex, Lond.; Cocaine, Lond.; Confidence, Lond.; Cawnpore, Lond.; Conatum, Lond.

D.—Dr. H. L. Davies, Liverpool; Miss Davies-Colley, Higher Broughton; Mr. R. R. Douglas, Liverpool; The Paul & Docrick Advertising Agency, Lond.; Mr. S. Downton, Southsea; Mr. N. Daly, Kingston, Bagpuze; Dr. I. Davis, Lond.

E.—Mr. W. J. G. Evans, Brynmawr; E. W., Lond.; Mr. J. Elliott, Stroud; E. W. O., Warminster; Epsilon, Lond.; East Suffolk Hospital, Ipswich, Secretary of; Dr. R. Edwards, Colwyn Bay.

F.—Mr. Fitzgerald, South Bank; Messrs. Fletcher, Fletcher, and Co., Lond.; Fides, Lond.; Facilis, Lond.; Mr. J. M. Fry, Lond.; Mr. D. B. Foley, Wombwell.

G.—Mr. F. R. Gibbs, Bourne End; The Gables, Bracknell; Messrs. Graggen, Williams, and Conway, Lond.; Mr. V. C. Garman, Wadhurst; G. E. A., Lond.

H.—Mr. C. E. Hollings, Calverley; Dr. J. R. Holmes, Plumstead; Messrs. R. and J. Hill, Lond.; Mr. M. E. Herbert, Uttoxeter; Mr. E. C. Hort, Mickleton; Mr. P. Heanen, Keady; Dr. E. V. Halliday, Christiana, Jamaica.

J.—Mr. G. M. Jones, Alton; J. A., Lond.; Messrs. Jones Bros., Clifton; J., Lond.; Jumbo, Lond.; Mr. Y. M. Jones-Humphreys, Cemmaes.

K.—Dr. J. D. Kenny, Treeton; Klein, Lond.; Mr. R. G. Kirton, Shooter's Hill.

L.—Mr. J. Lockwood, Kirkburton; Mr. W. Lawton, Worthing; London Post-graduate Course, Lond., Treasurer of; Mr. E. G. Lumsdon, Irthlingborough.

M.—Mr. L. Milnes, Littleborough; Medico, Lond.; Marcus, Lond.; Messrs. F. G. Moore and Co., Lond.; Mistura, Lond.; Medicus, Birmingham; Medicus, Lond.; Mr. A. E. Macgrave, Tralee; Medicus, Sheffield; M. O. H., Lond.

N.—Mr. G. T. W. Newsholme, Sheffield; Dr. E. Niemeyer, Utrecht, S.A.R.; Nurses' Coöperation, Lond.

O.—Dr. W. Overend, Edmonton; Ozone, Lond.; Occupier, West Kensington.

P.—Dr. J. Phillips, Southsea; Messrs. Potter and Sacker, Lond.; Mr. F. Piggott, Cambridge; Mr. C. C. Parsons, Eastbourne; Mr. H. Peacock, York.

R.—Dr. R. Robinson, Winston; R. M., Edinburgh; Rays, Lond.; Royal Victoria Home, Bristol, Warden of; Mr. J. Reader, Wakefield; Messrs. Rebbeck Bros., Bournemouth; Dr. J. C. Robertson, Kirkcaldy; Dr. J. C. Renton, Glasgow; Messrs. Robertson and Scott, Edinburgh; Rest, Ilfracombe.

S.—Mr. W. J. Smith, Brighton; Mr. W. Stuart, Brighton; Messrs. Street and Co., Lond.; School of Medicine of the Royal Colleges of Edinburgh, Treasurer of; S. E., Lond.; Surgeon, Lond.; Suaviter, Lond.; Suburban, Lond.; Statim, Lond.; Dr. C. S. Sherrington, Liverpool; Serpe, Lond.; Dr. S. E. Solly, Colorado Springs, U.S.A.; Scope, Lond.

T.—Mr. W. J. Twig, Clifton; Miss Thomson, Mealsgate.

V.—Dr. G. R. Vicars, Wood Dalling; Dr. J. M. Vallance, Thornley.

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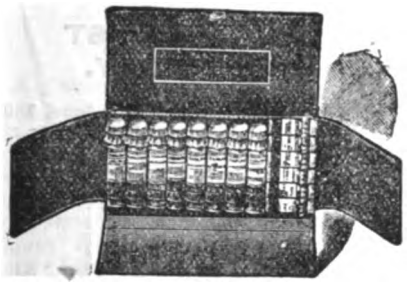
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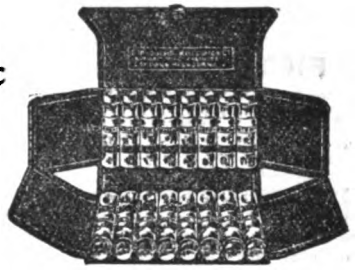
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ABSTRACT OF

The Bradshaw Lecture

ON THE

CORRECTION OF CERTAIN DEFORMITIES BY OPERATIVE MEASURES UPON BONES.

Delivered before the Royal College of Surgeons of England on Dec. 8th, 1897,

BY ALFRED WILLETT, F.R.C.S. ENG.,
SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

MR. PRESIDENT AND GENTLEMEN,—The subject I have chosen for this year's Bradshaw Lecture is "The Correction of Certain Deformities by Operative Measures upon Bones."

To Mr. Wm Adams, of orthopædic surgery fame, must be ascribed the distinction of first placing before the profession—certainly in this country—a definite and carefully matured plan for correcting faulty position in cases of synostosis at the hip joint, for which he proposed to saw through the neck of the femur. Mr. Adams called his operation—which by the way was performed for the first time on Dec. 1st, 1869—subcutaneous osteotomy, since he operated upon the lines of subcutaneous tenotomy, making an incision only just large enough to admit of the introduction of a fine saw he had devised, then sawing in great part through the neck of the femur, and finally wrenching forcibly, he in this way fractured the bone. He instantly closed the wound, and all through the operation carefully excluded the entrance of air. Adams's operation was introduced before the days of antiseptic surgery and although in his cases I believe suppuration rarely occurred other surgeons who followed his teaching were not so fortunate, suppuration following in not a few instances; whilst even Mr. Adams himself, Mr. John Croft, and I had each to record a fatal result. At the time Mr. Adams claimed the highest surgical importance for the subcutaneous character of his operation as introducing a new feature and a wider scope for the principles of subcutaneous surgery—for by open wounds other surgeons, both in this country and in the United States, had divided bones, taking away even wedge-shaped portions in close proximity to joints for the correction of deformities, the result of synostosis in faulty position after arthritic disease. I only allude to the importance then claimed for the subcutaneous principle in Adams's operation to say how entirely it has vanished under the universal acceptance of the Listerian law of asepsis in operative surgery.

Osteotomy has since been performed in many similar deformities such as faulty position after fracture, the division of, or removal of wedge-shaped portions from, curved rachitic bones and the like. In 1879 Prof. Macewen, of Glasgow, brought before the profession a new method of dividing bones by mallet and chisel, applying it specially to the correction of knock knee. But with the advent of antiseptic surgery more extensive operations by open wounds of sufficient magnitude for the necessary manipulation have been introduced, so that now, with but little risk to life or limb, operative measures are adopted for the radical treatment of a large number of deformities. Yet another measure must be mentioned—an operation having for its object the production of a simple fracture by a powerful specially contrived apparatus such as was a few years since introduced by the late Dr. Grattan, of Cork. He gave the name "osteoclasia" to the operation and of "osteoclast" to the instrument. Rapidity of action in an osteoclast is essential; sudden impact also seems necessary to make a bone crack across as well as to avoid seriously damaging the soft parts by continuous pressure. In all these points Thomas's osteoclast has the advantage over Grattan's. Osteotomy is the most reliable operation for deformities involving long bones and is the one I invariably select for patients over the age of fourteen years. Its performance is characterised by great precision; it is most effective in accomplishing the desired object and has but very rarely been associated with disaster of any sort. Whilst, however, its risk in children is almost *nil*, I must confess that I undertake Macewen's operation with some misgivings in young adolescents who are growing rapidly and whose bones are very vascular, as it is in such patients as these I have seen osteomyelitis and necrosis supervene twice, whilst not infrequently a sharp rise in temperature has caused anxiety for a few days. Personally, as between saw and chisel I prefer, where choice may be said to exist, the chisel.

[Mr. Willett here stated that he considered it very important not to close the osteotomy wound so that no tension might result from the accumulation of blood.]

One objection taken against osteoclasia is that the operator cannot ensure the line of fracture being at a given level with the exactness that is attained in osteotomy, but I must say I regard it as immaterial to the success of the operation whether the fracture takes place an inch higher or lower in the bone, for after both operations a fining down of the irregularities in outline may be confidently expected to follow. And by the growth of the bone the original situation of the fracture is altered. I regard the age of thirteen or fourteen years as about the highest limit at which osteoclasia should be practised. Above this age there must be, owing to the strength of resistance in the bones of the thigh and leg, so much risk of lacerating the soft parts that osteotomy is preferable. But as acquired deformities are mostly seen under this age limit and as genu valgum and rachitic curved tibiæ form a large proportion of the deformities coming under treatment it follows that I have adopted osteoclasia very generally at St. Bartholomew's Hospital. I should add that even in young subjects the osteoclast occasionally fails. This seems to be due to the yielding condition of the bones in the primary stage of rachitis rather than to any defect in the osteoclast. Only once have I seen any skin lesion beyond simple bruising occur. In the comparatively few instances where I have subsequently performed osteotomy when osteoclasia has failed, the operation has been carried through just as satisfactorily and completely as if no previous attempt had been made to fracture the bone.

As the correction of deformities in the upper extremity is so seldom called for, except for faulty position after fracture, I propose only to take into consideration the application of the operations I have mentioned to the deformities of the lower extremities. Upon investigation I find I have performed 634 operations on 383 patients. The proceedings have been as follows: viz:—1. For deformities due to ankylosis at the hip 11 Adams's and 20 Gant's operations, making a total of 31 operations performed on 28 patients; 2. For knock-knee and allied deformities 232 Macewen's operations were performed on 137 patients, 159 osteoclasia operations on 83 patients, and 21 Reeve-Ogston operations on 16 patients, making a total of 412 operations on 236 patients. 3. For bow-leg 40 osteotomy operations were performed on 32 patients, 105 osteoclasia operations on 55 patients, total 145 operations on 87 patients. 4. For inveterate club-foot 23 astragalectomy operations (tarsotomy and tarsectomy) were performed on 14 patients. 5. For hallux valgus and its allied conditions 14 operations were performed on 9 patients. 6. For deformities resulting from fractures of long bones 9 operations were performed on 9 patients. There have been 2 deaths—1 after Adams's and 1 after Macewen's osteotomy.

The most common deformity in ankylosis at the hip-joint is flexion, inversion, and adduction; this induces as a secondary result lordosis and lateral tilting of the pelvis. A less frequent but still well recognised deformity is outward rotation with more or less of abduction and perhaps with flexion. Now as to the nature of the uniting bond. The cases may be classified as follows: (1) there may be simply synostosis of the head of the femur to the acetabulum, occasioned by some very acute inflammatory affection, most frequently of an infective type, such, for example, as gonorrhœal rheumatism; or (2) the ankylosis, being also bony in character, may be very much more widely diffused, as is commonly seen in tuberculous disease of the hip-joint, where caries has extensively affected the bones on either side of the articulation; and (3) the ankylosis may be firm, close, and extensive, but the bond of union remain fibrous. This condition may result from more chronic forms of rheumatism and tuberculosis, where the disease remains limited mainly to the synovial membrane and fibrous capsule of the joint with, later, fibroid degeneration of the cartilages.

If we place the first and probably most of the third of these classes into one group and regard them with Mr. Adams as the rheumatic type in which the greater trochanter stands out prominently, indicating the existence of a healthy neck of the femur with as a rule absence of old abscess scars, and

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in which also there is an entire absence of bosses of new bone around the hip-joint, we have the cases of deformity for which Adams's operation was devised and for which its author has expressly limited its employment. In the second class, called by way of contrast the tuberculous, where scarring and production of new bone with thickening and flattening of the trochanter are present, we have on the other hand the cases which Mr. Adams emphatically pronounced to be unsuitable for his operation. It was for this class, forming by far the larger proportion of cases of deformity after hip-joint disease, that Mr. Gant devised sub-trochanteric osteotomy. Thus the aim of both surgeons was to divide the femur where it was healthy, and since Adams and Gant devised their operations for quite distinct conditions there is in practice seldom any difficulty in deciding which operation should be performed.

[Mr. Willett does not consider it necessary to attempt to procure a false joint after osteotomy of the neck of the femur unless synostosis of the joints of both sides is present, but in these cases it is absolutely necessary to procure at least one false joint.]

One other point which I desire to touch upon is the line or position in which the bone should be placed or set, after the completion of either Adams's or Gant's operation. I use a double Thomas's hip-joint splint in these operation cases. Every surgeon knows, if after hip disease adduction of the thigh forms one element in the deformity, that then the apparent shortening of the limb will be greater than the real; on the other hand, if the thigh be abducted, the difference is the other way, either the apparent shortening is less than the real, or apparent lengthening is found. Well, if on measuring the two limbs before operation I find actual shortening exists then in setting the limb after osteotomy I place it in the abducted position, the result being that when union has taken place that side of the pelvis is permanently tilted downwards; the apparent shortening is correspondingly lessened and sometimes so completely as to make it unnecessary to add a cork sole to the patient's boot.

Passing from this subject I turn to those deformities at the knee of which knock-knee forms the most common example. It is, I think, unfortunate that there is no generally accepted rule for estimating the extent of the deformity in knock-knee—I mean in relation to the amount of abduction of the leg.

The angle which I am accustomed to take for recording the amount of deformity in a case of knock-knee is the one formed at the outer aspect of the joint by the meeting of two lines, the one drawn downwards from the great trochanter to the external tuberosity of the tibia, passing over the outer surface of the external condyle, and the other upwards from the external malleolus to the outer surface of the external tuberosity of the tibia.

Assuming that an operation is necessary the choice seems to me to lie between (*a*) Macewen's transverse supra-condyloid osteotomy; (*b*) an osteotomy detaching the internal condyle by the Reeve-Ogston method; and (*c*) osteoclasia. First, then, for all patients under the age of thirteen in whom the recording angle is not less than 120° I perform osteoclasia; about four-fifths of all cases fall into this category. In cases above this age, presumably patients whose femora are too dense to be broken by the osteoclast, I perform transverse supra-condyloid osteotomy. There remain the cases in which the recording angle is less than about 120°, in other words more nearly approaching a right angle.

[Mr. Willett then mentioned that in these the skin on the outer side might be so very tightly stretched after Macewen's operation as to make it impossible to correct the deformity, and continued:]

I now make it a rule in all such cases to treat them by the Reeve-Ogston operation in the first place, and although in one or two instances I have had to supplement this operation by a supra-condyloid osteotomy, yet in nearly all instances the Reeve-Ogston operation has proved quite adequate for the complete correction of the deformity.

Early in my lecture I implied that for rickety deformities of the bones of the leg in young patients the operation I am in the habit of performing is osteoclasia and I am confident that my success in correcting deformities in these cases is quite as good as, and I am inclined to think better than, by osteotomy either with or without removal of a portion of bone, while the convalescence of the patient is greatly expedited.

As rickety bending and bowing of the legs predominates in quite young subjects I have in recent years had but few occasions for performing osteotomy. I will, however, take the opportunity of saying that I am not in favour of removing wedge-shaped portions of the tibia in correcting the severer forms of this deformity partly because union is delayed by this step but chiefly because I have not found it necessary, for by sawing in an oblique line over the convexity and completing the division of the bone with the chisel I am enabled to slide the lower fragment upwards and by this manœuvre to bring the leg straight.

At this point it will, I think, be convenient to offer a few remarks upon the operative treatment of badly united fractures. In fractures of the long bones, usually from some peculiar incident in the circumstances of the patient's treatment, union may occur in wholly abnormal positions and cause very marked conditions of deformity. In cases like these re-fracture permitting reduction into proper position is imperatively required; if the accident has been tolerably recent this may be easy, occasionally I have used the osteoclast. Should all efforts fail osteotomy is the only resource left, and I have obtained very satisfactory results by this operation. I would just mention that it is very essential for its success that the fragments should be disengaged very thoroughly, and after careful adjustment I have generally found it necessary to employ very much more extension-weight than in ordinary simple fractures to ensure full length being maintained; in one instance I used as much as thirty pounds of shot in a canister. The ultimate results not only as regards union but position are, in my experience, extremely satisfactory, although constant supervision is needed to ensure success.

The next deformity I propose to discuss is the treatment of inveterate club-foot. I would premise that in my opinion radical operations for congenital club-foot are only justified either by the neglect of treatment by tenotomy in early childhood or where, relapse having occurred, a condition appropriately termed inveterate talipes exists. Indeed, I desire to express the strong feeling I entertain that this affection is not only curable in infants by appropriate treatment, but that this result ought to be obtained practically within the first year of life. But I hold equally strongly that when this condition is established a radical correction of the deformity is called for and that an operation should be performed entailing either the removal of a single tarsal bone or the removal of parts of several of these bones.

Of several operations which might be named, the one which I have come to regard as the best is astragalectomy. Anyone who studies the condition of the bones of the foot in a case of inveterate talipes cannot fail to note a special abnormality in the astragalus which, I think, has a determining influence in maintaining much of the deformity in the foot anterior to this bone. This peculiar defect lies in the inward curving at its neck, for from this circumstance it follows that the scaphoid, cuneiform, and indeed all the bones in advance of it are directed inwards. Again, the astragalus is the connecting bone between the tibia and fibula above and the os calcis with other bones of the foot below; hence it will be found that when the astragalus has been removed the foot can readily be placed in a natural position. A very marked instance of the superiority of this operation was seen in my wards at St. Bartholomew's Hospital some years ago. A boy about ten years of age was the subject of congenital double talipes equino-varus. In one foot, the left, the operation of tarsectomy had been performed at another hospital; the usual wedge-shaped piece had been removed; nevertheless the deformity had not been materially altered, the foot was still turned inwards and upwards and the boy still walked upon the outer surfaces of his feet. I performed the operation of astragalectomy on the other foot—the right—which came at once into good position. The result of this operation was so satisfactory that subsequently I performed the same operation upon the left foot; the ultimate result in both instances being that the patient walked well on the soles of both feet, but the right foot—that from which the astragalus alone had been removed—proved the stronger and better foot, the other being stunted and more rigid. I have in one or two instances after the operation of astragalectomy found it necessary to perform tarsotomy to correct the inward turning of the distal part of the foot.

Of other operations which have been suggested, such as the division of the neck of the astragalus—the division of all the ligaments on the inner side of the ankle or forcible rectification by crushing up the tarsus collectively—one and all have seemed to me proceedings either so much more

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severe than the removal of the astragalus or wanting the advantages gained by that operation.

There is one other group of deformities on which I would wish to offer a few brief remarks—it comprises hallux valgus, hallux flexus, and hallux rigidus. These conditions have been discussed very thoroughly by Mr. Davies-Colley in the Guy's Hospital Reports and by Mr. Walsham in his work on "Deformities of the Foot." Time would not permit me nor, in view of the writings of these two surgeons, is it necessary to treat of the pathology and etiology of this deformity. The operation which I have invariably performed is that recommended by my colleague Mr. Walsham and it consists in the removal by an open linear incision over the internal surface of the metatarso-phalangeal joint of the whole of the head of the first metatarsal bone. Much care is needed to place the toe in line with the inner border of the foot as well as to maintain it in this position for a month or six weeks in order to obviate relapse, whilst passive movements should be commenced in a fortnight from the operation. I perform the same operation in hallux flexus and rigidus.

With this deformity of the great toe I, not inappropriately, come to the end of my lecture, not that I would for a moment pretend to have exhausted the subject of the correction of deformities by operative measures upon bones, only that I have dealt with those of them with which I am fairly familiar, having in the thirty-two years during which I have been on the surgical staff of St. Bartholomew's Hospital had considerable clinical experience in this field of operative surgery. I hope that what I have ventured to put before you has not seemed fragmentary or disconnected. I return you, Mr. President and gentlemen, my most cordial thanks for the attention you have bestowed upon me.

Two Lectures
ON
URINARY FEVER.

Delivered at the London Hospital on July 7th, 1897,

BY C. MANSELL MOULLIN, M.D. OXON., F.R.C.S.ENG,

SURGEON TO, AND LECTURER ON SURGERY AT, THE LONDON HOSPITAL; EXAMINER IN SURGERY AT THE UNIVERSITY OF OXFORD.

LECTURE I.

GENTLEMEN,—There have been several cases in our wards recently of what is commonly spoken of as urinary fever. As some of them have presented symptoms of an unusual character and as many of them have proved of especial interest I propose to group them together and to point out to you what pathological factors are common to them all and how far we are justified in using a term such as urinary fever—fever, that is to say, caused in some way by the normal constituents of the urine.

CASE 1.—The first case occurred a few months ago, but it was of so striking a character that it is scarcely likely to have faded from the recollection of those among you who happened to see it. The patient was a young girl in Sophia Ward. All her life she had suffered from symptoms of calculous pyonephrosis. Six weeks before I had removed from the right kidney a large branching calculus with several smaller ones, some of which were certainly fragments broken off. The operation was a severe one and her recovery was slow. Rigors, concerning which I shall have something to say later, occurred on several occasions. But by degrees the wound contracted to a sinus, the amount of discharge diminished, and the temperature fell to normal. The pain however did not disappear. That one tell-tale spot opposite the tip of the eleventh rib persisted. The slightest percussion there caused a sharp stab of pain and it was evident that something had been left behind. Accordingly I explored the kidney a second time. The first operation was one of considerable difficulty. The patient's chest was very long, so that the lower ribs almost touched the pelvis; the kidney was completely covered by the ribs and was very moveable and a great deal of manipulation was required to extract the stone. The second operation was as simple as such an operation can be. The kidney was fixed and drawn much nearer to the surface by the cicatricial tissue that had formed around it. A sinus led down into the pelvis. All that was required was to dilate this sinus and introduce the finger into it. A small calculus was detected almost at once lying in the upper part of the pelvis in one of the calyces and extracted without difficulty. The operation lasted a very short time; the patient was not chilled in the least and there did not appear to be any reason why shock should be severe. In the evening it was noted that the extremities were warm and there was no fall in the temperature. The thermometer in the axilla marked 98° F. The next morning it was 101° and in the afternoon it had fallen again to 99°. But the face was dusky and the pulse was quick and running; a diffuse erythema had made its appearance over the lower part of the body and the thighs, and the patient died in the course of the evening within thirty hours of the operation. There was no suppression of urine or vomiting.

At the post-mortem examination all the viscera were more or less congested. The opposite kidney was healthy and sufficiently large. There was no evidence of peritonitis and there was no hæmorrhage or thrombosis. The patient retained a certain degree of consciousness almost to the last, but lay perfectly quiet with eyes half closed, scarcely answering when spoken to and taking no notice of anything that was going on around. The condition, in short, was such as is sometimes seen in very severe cases of acute suppurative osteomyelitis—cases that prove fatal before any secondary pyæmic symptoms such as pericarditis have had time to develop.

Such cases are fortunately of rare occurrence. A few of a similar character have been recorded at various times by other surgeons and they have been regarded by most as the result of shock. With this opinion, however, I am quite unable to agree. So far as I understand shock the characteristic symptoms are entirely wanting. Shock I admit is often very severe after operations upon the urinary organs and especially upon the kidneys. I have been told by Dr. Hewitt that he has several times known the pulse to fail at the moment that the ligature was tightened around the pedicle in performing nephrectomy. The operation is a long one. The wound is of considerable depth. The semilunar ganglion is in close proximity, and the nerves of the renal plexus are often included in the loop thrown around the vessels But the symptoms in the case that I have described to you were totally different from those of shock. In shock the temperature always falls. The extremities grow colder and colder. The face and lips are white and the forehead is covered with perspiration. The eyes are sunken and surrounded by dusky rims. The nose is pinched and the secretion of urine is either stopped altogether or falls very far short of the normal. I cannot, therefore, regard this as a case of shock. On the other hand there can be no question that septic poisons were present in the wound, that they were of the most virulent character, and that there was every facility for their absorption. The mixture of pus and urine that filled the pelvis of the kidney and overflowed into the sinus was full of micro-organisms. They consisted for the most part of staphylococci and a bacillus which agreed with the bacillus coli in its mode of growth upon potato and gelatin and the rapidity with which it coagulated milk. As usual when this bacillus is present in any numbers the odour was decidedly fæcal. These organisms must have been growing in the pelvis of the kidney in very favourable circumstances for some considerable time. The fluid therefore that filled it certainly contained some, probably a large amount, of their toxic products. And the operation was one that might very easily have resulted in forcing some of these products into the open ends of the torn vessels. Nor can there be any doubt as to the virulent character of these toxins. Numerous experiments upon animals have been performed abroad by Melchior, Gilbert, and others and they have shown conclusively that the most minute quantity injected into the circulation gives rise to fever, with loss of appetite, apathy, and diarrhœa, and that a quantity only slightly larger will cause dyspnœa, convulsions, and fatal collapse. Sometimes there is high fever, sometimes a temperature below normal, and mixed toxins such as were present in this case are often much more poisonous than would be expected from the effects they produce when acting separately. All the conditions, in short, for the production of acute septic poisoning were present in this case and I regard it as an instance not of shock or urinary fever, but of acute septic intoxication due

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to the sudden entrance into the circulation of an overwhelming dose of mixed toxins at a time when it can easily be imagined the kidneys were not working at their best. The germs themselves may have entered too; it may have been a case of septic infection as well as of septic intoxication; but the symptoms set in with such rapidity and intensity that they could scarcely have been caused in this way. There was no time for incubation.

CASE 2.—The second case to which I wish to call your attention is one that occurred only a few days ago. The patient was a man, in other respects healthy, who was suffering from stricture of the urethra and upon whom internal urethrotomy was performed. As in most cases of stricture that present themselves for operation there was a purulent discharge from the urethra and this, as usual, contained numbers of the bacillus coli with other organisms. The urine, too, contained the bacillus coli, as was shown by the appearance of the cultures that were grown from the sediment upon potato and gelatin. A few hours after the operation, shortly after passing urine, he was suddenly seized with a violent shivering fit. The temperature rose to 104° F. There was a sensation of the most intense cold so that the teeth chattered and the limbs quivered until the bed shook. This was followed by burning heat, and in a few minutes this, in its turn, gave way to profuse perspiration. The next day he was quite well and no ill result of any kind followed.

Such cases are common. You must have seen many of them, as stricture of the urethra is so frequent here. Sometimes there is more than one rigor, but whether there is one or more than one provided there is no serious renal disease and the temperature soon falls to normal there is no occasion for alarm. These rigors are typical instances of what it is customary to speak of as urinary fever. They are due, however, not to the absorption of any normal constituent of the urine or to any nerve irritation, but, like the collapse in the first case that I described to you, to the sudden entrance into the circulation of some of the products of the organisms (and especially of the bacillus coli) growing in the urine or on the walls of the urinary passages. They are examples, in other words, of septic poisoning and should not be called urinary fever at all. Normal urine, if it is absorbed or injected into the circulation in sufficient quantity, will give rise to symptoms of poisoning, but not to such as were present in either of these cases.

I am aware that this is not the view that is generally received. The current explanation is that these rigors, as they may certainly occur without organic disease of the kidneys, are due to some transitory or functional affection caused by the passage of an instrument through the deep part of the urethra. Now it is impossible to disprove so vague a statement as this. It rests solely upon authority, not upon facts. Even if it is conceded that renal congestion may be caused by the passage of catheters through the deep urethra (and this is certainly not a common occurrence) there is no proof that the congestion can cause a rigor such as these. On the other hand, there is no difficulty in showing that septic organisms are always present in these cases, that the toxins they form are capable of causing these symptoms and even worse ones, and that the frequency with which these rigors occur is proportionate to the facilities that are offered for the absorption of the toxins. Normal urine is sterile; it does not contain any organisms. Nor are there, as a rule, any pathogenic organisms in the deep part of the male urethra so long as it is healthy. In stricture cases, however, and especially in those that require operation, it is absolutely different. There is always a certain degree of urethritis and generally of cystitis, and whenever you meet with either of these the bacillus coli or some other equally septic organism is invariably present. The septic organisms are the cause of the inflammation and inflammation of this character never occurs without them. I have examined the urine in twenty consecutive cases of cystitis (excluding tuberculous ones) and the bacillus coli was certainly present in eighteen and probably in the other two. There can be no question that septic organisms are invariably present in the urethra and in the urine in cases of stricture attended by the slightest degree of urethritis. Nor is there a doubt as to the intensely virulent quality of the toxins that are produced by the bacillus coli. A good deal depends upon the source whence the culture is taken (that which comes from a perfectly healthy intestine has been shown to be not nearly so powerful as one taken from a case of diarrhœa; and this in its turn cannot be compared with a culture from a case of English cholera), and still more upon the conditions under which it is grown. But experiments performed abroad have shown conclusively that a perfectly infinitesimal quantity if injected into the veins or the peritoneal cavity of a rabbit is sufficiently active to cause prostration and even death.

But this is not all. If you inquire into the conditions under which these rigors occur you will find that not only is a septic poison present in every case, but that rigors are common in proportion to the facilities that are offered for its absorption. The mucous membrane that lines the urethra is very different in this respect from that of the bladder. Even when it is uninjured, when there is no wound or recent abrasion of the surface, it absorbs everything that is brought into contact with it. Cocaine, for example, is taken up by it with the greatest readiness. In those who are susceptible to its influence I have several times known an injection of cocaine into the urethra followed by definite symptoms of poisoning within a minute. When there is a recent wound absorption is easier still. And every time the urine passes down the urethra there is a very considerable rise in pressure. Given these facilities and the presence on the surface of the mucous membrane of septic organisms producing a virulent poison, is it wonderful that some of it is absorbed? The clinical circumstances under which urethral rigors occur afford further and even more direct evidence of this. The most frequent of all causes is an operation upon the deep part of the male urethra. Those performed upon the penile part are rarely followed by them and they never occur after such a proceeding as division of the meatus. Women are not exempt from them, but for obvious reasons rigors are much more rare in them. Rigors may be caused by simple exploration with a catheter or dilatation or internal urethrotomy. External urethrotomy is much less liable to be followed by them than internal. And I have many times known that while every attempt at passing a catheter through a stricture gave rise to a rigor, free and clean division of the obstructing ring put a stop to them once and for all. Tying a catheter into the urethra is one of the most effectual methods of preventing the occurrence of rigors, a fact that is quite inexplicable if rigors are caused by reflex irritation of the deep part of the urethra.

Operations upon recent strictures are more liable to be followed by rigors than those upon old and dense cartilaginous ones and the frequency of their occurrence is very greatly influenced by the amount and the roughness of the manipulation to which the stricture is subjected. The rigors that occur after operations for stricture rarely follow immediately. Nearly always they begin shortly after the first act of micturition and the longer this is postponed the less the risk. They may, however, be brought on the following day and even the day after that by any sudden chill. I have several times known a rigor occur for the first time after the fifth or sixth act of micturition because the patient, who had grown careless from immunity, got out of bed to pass urine and stood with bare feet upon some oilcloth. In comparison they are rare after operations upon the bladder. I have never known one occur after suprapubic cystotomy, but they sometimes follow when the incision is made in the perineum.

On the other hand, rigors are quite common after exploration of the kidney in cases of septic pyelitis and occur, irrespectively of sex, in women as frequently as they do in men. They differ from urethral rigors in this, that they may begin immediately after the operation. I have known a patient who was suffering from septic pyelitis for which it was thought advisable to drain the kidney seized with a rigor before she had recovered from the anæsthetic. A second followed a few hours later, but neither had the least effect upon the patient's convalescence which progressed without interruption from the first. These facts all point to absorption as the cause, while it is impossible to account for them on the hypothesis of nerve irritation. The difference in the length of time between the operation and the rigor in the case of the kidneys and the urethra is an instance in point. When there is septic pyelitis the symptoms may begin at once, because the poison that has collected in the pelvis of the kidney is driven by the manipulation directly into the torn and injured blood-vessels. On the other hand, in stricture of the urethra there is no pressure upon the urine and no absorption until micturition takes place. Then the rigor follows within a few minutes. Operations upon the meatus

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are quite exempt and cystotomy and external urethrotomy are almost so, because the wound is so wide and free that there is no pressure. For the same reason, because the wound is more tortuous, they are more likely to occur after perineal cystotomy than after the suprapubic operation. Old cartilaginous strictures enjoy much greater immunity than recent ones. The cellular tissue is so dense and hard that no absorption can take place.

Free division of a stricture often puts an end to the rigors that occur when a catheter is passed because removal of the obstruction does away to a large extent with the increased pressure when micturition takes place. Tying in a catheter prevents rigors for the same reason; there is no pressure of fluid down the urethra when the bladder empties itself. If micturition is delayed for some hours after a stricture has been divided there is much less risk of a rigor than if urine is passed immediately. The wound is glazed over and absorption does not take place so readily. For the same reason rigors that occur on the second or third day are generally less severe and often need some additional cause such as a sudden chill to start them.

But the strongest argument in favour of the septic origin of these rigors is the fact that they can be prevented by adopting suitable antiseptic measures—measures that would not be of the least use if the cause were the irritation of local nerves. The first essential is to clear out the intestinal canal thoroughly. I do not mean to say that the bacillus that causes rigors always comes directly or indirectly from the intestine, though I am sure that it has done so in some cases. But there can be no question that the intestine is the chief nursing ground for it and that it is eminently desirable to get it as clear as possible. For some days beforehand the patient should be given two or three grains of salol six or eight times in the twenty-four hours. If given in larger amounts the salol may melt and run together during digestion and then later crystallise out again and form an intestinal concretion. If the urine is alkaline from the presence of a fixed alkali benzonaphthol is to be preferred, given in cachets, as it breaks up in the intestine into β naphthol and benzoic acid. Three days before the operation the patient should be given a calomel purge, followed by an effervescing draught and again the night before. The amount of calomel can, of course, have little direct influence upon the growth of septic organisms in the intestines, but as to its value clinically I have not the slightest doubt. The patient should be very warmly clad for the operation, especially if ether is given. There can be no question that cold can precipitate if it cannot cause a shivering fit. Immediately before the operation the glans penis, prepuce, and meatus should be thoroughly washed with soap and water and then with corrosive sublimate solution (1 in 1000). The urethra itself must be cleansed as perfectly as it can be with a boracic acid douche and a catheter that admits of a return current along the walls. It is impossible to get it quite aseptic, but by passing the catheter into the fossa navicularis and washing that out thoroughly, then pushing it in a little further and repeating the process, and finally carrying it down to the face of the stricture the anterior part of the urethra can be fairly well cleared. The portion behind the stricture is of course unapproachable at this period. The instruments should be sterilised and kept from contamination by wrapping them in a carbolised towel. As few as possible should be used and the less manipulation the better, so long of course as the dilatation or division is effectually performed. At the end of the operation the bladder should be emptied by means of a catheter and two drachms of a 2 per cent. solution of nitrate of silver injected into the deep part of the urethra and on to the face of the stricture and left there. The nitrate is decomposed at once into the chloride, which is thrown down as an insoluble powder on the surface of the mucous membrane acting as an effectual germicide.

Micturition should be postponed for as long as possible after the operation in order that the surface of the wound may become glazed over and the patient should not be allowed under any circumstances to get out of bed or expose himself to the least chill. In one case under my care in which, in spite of all my precautions, two rigors did occur after a stricture had been divided further trouble was prevented by injecting some nitrate of silver into the urethra at the seat of the stricture and tying a catheter into the bladder. If rigors were really due to reflex irritation the latter proceeding would undoubtedly have made them worse. As a matter of fact, in conjunction with the nitrate of silver, it stopped them by preventing further absorption. All the other measures that are usually recommended, such as allowing the patient to empty his bladder while sitting in a hot bath and giving hot tea, quinine, opium, and brandy, I have tried thoroughly, and I have come to the conclusion that though they may lessen the patient's discomfort when rigors actually occur they do little or nothing in the way of preventing them.

These are the reasons why I regard urinary rigors as a form of septic poisoning due mainly, if not entirely, to the bacillus coli. The presence of the bacillus can be demonstrated in the vast majority of cases. It is certainly capable of producing toxins of sufficient virulence even when the dose is infinitesimally small. Everything that favours absorption increases the likelihood of rigors. Conversely, everything that checks it tends to prevent them. And the most effectual method of stopping them altogether, one that rarely fails, is the injection of a powerful germicide on to the spot where it may be presumed the organism is most abundant and absorption most likely to occur. It is a mistake to speak of rigors like these by the name of urinary fever—fever due to re-absorption of some of the constituents of the urine. It overlooks the true cause, gives an entirely wrong impression, and, what is much more important, leads to a wrong method of treatment.

Harveian Lectures

ON

SYPHILITIC DISEASES OF THE EYE AND ITS APPENDAGES.

Delivered before the Harveian Society on Dec. 2nd, 9th, and 16th, 1897,

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LECTURE II.[1]

Delivered on Dec. 9th, 1897.

GENTLEMEN,—This evening I propose to deal with the diseases of the eyeball itself caused by acquired syphilis. My first lecture embraced the subject of the diseases of the appendages. The final lecture will take into consideration those diseases of the eye and its appendages caused by hereditary syphilis.

THE CORNEA.

Inflammation of the cornea is a very common affection of hereditary syphilis, indeed, so frequent is it that its value as a diagnostic sign cannot be over-estimated. To acknowledge that a patient has interstitial keratitis is almost paramount to saying he is the victim of hereditary syphilis. You will admit, therefore, that it is a remarkable fact that it is a disease almost unknown in the acquired form. So far as I am aware only one case has been recorded in England. The sufferer was a patient under the care of the late Mr. Wordsworth and the details of the case are published by Stanford Morton in the Ophthalmic Hospital reports. Stedman Bull[2] classifies no less than four different kinds of inflammation of the cornea due to acquired syphilis. In the *Clinical Journal* this year Jonathan Hutchinson states definitely that he has seen only one case, the one referred to above. A form of keratitis due to acquired syphilis is described by Mauthner[3] as consisting of punctiform infiltrations of the substantia propria. It is the same as the keratitis interstitialis punctiformis specifica of Hock. These dots of opacity must be distinguished from those deposits situated on the back of Descemet's membrane which have received the appellation "keratitis punctata," for this is not a corneal inflammation at all, but a sign of sero-plastic irido-cyclitis. Greeff states that acquired

[1] Lecture I. was published in THE LANCET of Dec. 11th, 1897.
[2] Morrow's System of Genito-Urinary Diseases, vol. ii., part 2.
[3] Mauthner: Zeiss's Lehrbuch der Syphilis, p. 279.

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syphilis occurring in infancy is that which is most frequently followed by interstitial inflammation. This is a revelation of great interest and seems to point out that the corneal tissue is more susceptible to the poisonous influences of syphilis in childhood than in adult life. My experience is limited to a single case which was under my care some years ago.

CASE 1.—The patient, a young married woman, consulted me for inflamed eyes. The right eye had been inflamed for a fortnight; so far as she could tell, it had never been inflamed before. A peculiar striated condition of the cornea was seen, giving the cornea a diffuse cloudy appearance. The right vision was $\frac{6}{9}$ Sn. The left eye had been inflamed for two months and the cornea presented punctate and striate opacities similar to, but more pronounced than, the right cornea. Iritis co-existed. The left eye could only dimly see fingers at one metre. There was a gumma of the periosteum at the left angle of the lower jaw. There was no history of syphilis, but she had been pregnant three times, the first two resulting in miscarriages, the third time she gave birth to a living child at the time I saw her eleven months old only, but apparently quite a healthy bairn. Treated with atropine locally and iodide of potassium internally she soon improved so that in April the right vision was $\frac{6}{6}$, the left vision was $\frac{6}{9}$ Sn., and the inflammatory symptoms had disappeared as well as the periosteal node on the inferior maxilla.

I believe this case to have been one of *keratitis punctata profunda* of Mauthner caused by acquired syphilis. It is interesting to note that the opacities showed distinct striations, an appearance especially drawn attention to by Morton in the case he published.

THE SCLERA.

Syphilitic episcleritis and gumma of the sclera are not separate affections. This tertiary manifestation of syphilis is recognised as a circumscribed growth superficial to the sclera in the ciliary zone of the eye. It is quite possible that a syphilitic deposit might occur behind the eyeball, but its recognition would be difficult. In a case to be presently described this actually did occur. Those situated in front are always covered by inflamed conjunctiva, are yellowish-white in colour, and do not appear to be very vascular. A good example of gummatous scleritis came under the care of my colleague, Mr. John Griffith, at the Royal Westminster Hospital about a year ago. A firm yellow node was seen over the ciliary region just below the cornea. The outline of it was easily perceptible through the lower lid. The sufferer acquired the chancre only three months before. Under iodide of potassium it disappeared. Two cases of suspected gumma of the sclera were reported as well as depicted in the Transactions of the Ophthalmological Society for 1891,[4] one by Silcock which disappeared under appropriate treatment, the other by Lawford, but the treatment adopted in his case is not recorded. Gummata of the sclera or episcleral tissue are rare, and I can only boast of having seen the three cases just referred to, though a case of ulceration of the ocular conjunctiva involving the sclera even to perforation has been under my care at St. Mary's Hospital due apparently to syphilis, a lesion rarer and more serious than a gumma. It was not, so far as my notes record, preceded by a syphilitic node.

CASE 2.—The patient, a man of advanced middle age, attended St. Mary's Hospital some five years ago, having a cutaneous ulcer just below the inner canthus of his right eye. It was as large, and even larger, than a sixpence. The pre-auricular or submaxillary glands were not enlarged. He was advised to come into the hospital, but no bed being vacant he went away. The ulcer was considered malignant. He applied some vaseline to the ulcer and when he attended again it was decidedly smaller, 6 mm. × 6 mm. There was considerable conjunctival inflammation below. On Dec. 10th he attended with a perforating ulcer of his cornea and prolapse of the iris without any obvious cause. Also, a deep ulcer of ocular conjunctiva and sclera, at the bottom of which the uveal pigment could be seen. History of syphilis was imperfect. He had suffered from buboes. He was ordered a mercurial lotion for the eye and a mixture of iodide of potassium and bark. He came again on Jan. 10th, 1893—i.e., a month later—and the cutaneous ulcer had almost disappeared, being now about 2 mm. in diameter and the scleral and corneal ulcers were quite healed.

Though my notes do not say that the ulcer at the inner canthus underwent complete cicatrisation I believe it did. The evidence of syphilis is not strong though more suggestive of that disease than any other. Of the three tunics of the eyeball, the middle or vascular coat is more prone to suffer from syphilis than the others. The tunica vasculosa is subdivided from before backwards into iris, ciliary body, and choroid. I will take the parts in that rotation; especially is this advisable as there is a tendency for syphilis to attack each in its turn and in that order.

THE IRIS AND CILIARY BODY.

Syphilitic iritis presents three varieties—plastic iritis, serous iritis, and gummatous iritis. Syphilis is not the only cause of plastic iritis, it may be brought about by gout, rheumatism, gonorrhœa, diabetes, and other causes. I venture, therefore, to throw out the question, Is there any sign which is pathognomonic of syphilitic iritis? and I answer it emphatically, No. There are certain minor points, points of comparison only, in the clinical history which to an acute observer may assist him apart from entering into collateral evidence, but it is the patient's antecedents, the presence of active syphilis, rash, sore throat, mucous patches, &c., which determine the nature of the exciting cause. Let me call to your mind the chief signs of plastic iritis. These are circumcorneal redness, contracted and inactive pupil, and loss of brilliancy of the iris. The colour is changed, a blue appears green, and a brown iris a dirty mud-like colour. The visual acuity is much diminished, pain, and other subjective phenomena are present. We find all these signs in syphilitic iritis. A drop of atropine instilled followed by irregular dilatation of the pupil is absolute proof in doubtful cases. Pain is not, however, unusually severe as it is in gouty, rheumatic, and gonorrhœal iritis. The exudation, on the other hand, and the consequent alteration in colour is more pronounced. These variations by comparison are not very striking, even if you have one of each before you, hence a single case of the one or the other cannot, by the signs presented alone, be a trustworthy guide as to the cause. A previous history of iritis in the same eye is, however, of assistance, for the rheumatic class of iritis has a tendency to relapse—it is its striking feature—whereas syphilitic iritis rarely recurs, and if it does we suspect gross lesions within the eyeball. It nearly always attacks both eyes, either simultaneously or successively. Let me quote a typical example of syphilitic iritis, though I know you must all be very familiar with it:—

CASE 3.—The patient, a domestic servant, came to me at St. Mary's Hospital complaining of redness and slight pain in her left eye. The iris was slightly discoloured, the pupil was contracted and inactive, and there was circumcorneal redness. There were no nodules on the iris. The vision of the right eye equalled $\frac{6}{6}$ Sn. She had a sore throat at the time, the fauces were congested, and mucous patches were visible on the soft palate and tonsils. She gave a history of rash two months previously, but this had faded away. Under the use of atropine drops locally, and constitutional treatment by mercurial inunctions she got quite well.

This is a typical case of syphilitic iritis; it illustrates accurately its chief features—the sub-acute nature of the affection, its occurrence about the fourth or fifth month of the disease from the probable date of contagion, the absence of any pathognomonic sign in the lesion itself, and its perfect amenity to treatment.

Syphilitic iritis appears, as a rule, within the first nine months of contagion and it is safe to conclude that if that period has elapsed the danger of iritis is past. It must be remembered that iritis is not by any means a constant manifestation of secondary syphilis. It occurs in only about 4 per cent. The usual time is during the fourth or fifth month as happened in the case just cited. Hutchinson gives a slightly wider limit; he says: "It usually occurs from three to six months after the chancre." Deposits on the iris and within its stroma of circumscribed nodules of lymph, chiefly near the pupillary margin of the iris, multiple, and orange- or rust-coloured, have received the appellation of gummata of the iris or *iritis gummosa*. This form is absolutely characteristic of syphilis, it occurs in 18 per cent.[5] of all cases of plastic iritis; the absence, however, of these specific changes on the iris does not by any means exclude syphilis as the exciting cause. Gummatous iritis usually appears as a secondary manifestation; it may, however, occur late in this stage. A neglected form of simple plastic iritis is prone to present these so-called "gummata" in its substance. Another clinical fact of importance is the certainty that in this variety a broad synechia will remain. I never remember having seen a typical gummatous iritis clear up without leaving one broad adhesion or more to the capsule of the lens, whilst in rare cases it happens that the nodules from the iris are so large as to abut against the posterior surface of the cornea where they become adherent and appear as black deposits. After the recession of the gumma by treatment the pigmented spot on the cornea remains as an anterior synechia and is connected with the tissue. I well remember a case of this kind which occurred in a young man about twenty-five years of

[4] Transactions of the Ophthalmological Society, vol. xi.

[5] Alexander: Syphilis und Auge, 1887, Wiesbaden.

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age who was under my care about ten years ago, but I have been unable to find the notes of his case.

There is a variety of iritis accompanied by small multiple growths on its surface which may possibly be mistaken for gummatous. It is called *granuloma of the iris* and is, so far as I know, not syphilitic. The growths are pale, translucent, grey deposits. They clear up entirely without leaving any change visible in the iris and never, so far as my knowledge goes, leave any adhesions to the lens capsule. Two cases of the kind I remember well and have their notes. They both had associated with the iritis keratitis punctata and other evidences of cyclitis. The following is a brief record of one of these instances of granuloma of the iris not caused by syphilis.

CASE 4. — The patient when he came under my care had failure of vision in both eyes. Twelve months before he had noticed his sight dim and under the club medical officer he got quite well. In November, 1889, he had another attack of dimness and consulted his club medical officer again, but did not improve, so came to the Royal Westminster Ophthalmic Hospital. The condition of his eyes was as follows: the pupils were semi-dilated, there were keratitis punctata, slight circumcorneal redness, and vitreous opacities. His vision was reduced to recognising large objects only; he could count fingers held up before him. The vision equalled $\frac{1}{60}$. Mercurial inunctions and atropine were prescribed, although there was no reason to suspect syphilis either hereditary or acquired. Four days later it was noticed that there were small gelatinous-looking growths on the surface of both irides. Mercury and the drops were continued and three months later there was marked improvement. The vision of the right eye equalled $\frac{1}{4}$ and that of the left eye $\frac{1}{12}$. He now had slight mercurial stomatitis, so the drug was discontinued for a fortnight and chlorate of potash gargle was prescribed. The nodules were also much smaller and one had disappeared from the right eye. By June the nodules had all disappeared without leaving any trace behind. He had now ceased taking mercury for five weeks and was taking quinine. In September, 1890, the media were clear, but traces of keratitis punctata still persisted. The vision of the right eye equalled $\frac{6}{9}$ and Jaeger 1 and that of the left eye $\frac{6}{12}$; fingers could be counted at two metres. There were glaucoma, cupping of the disc, with atrophy of the optic nerve. There was no subsequent change when last seen in 1896 beyond the disappearance of the remaining dots on Descemet's membrane.

I have perfect confidence in this patient's statement with regard to syphilis nor could I elicit any history of any constitutional complaint in his family likely to produce this trouble. He had never been abroad and was a healthy, robust-looking fellow.

Another form of iritis which occurs invariably in association with inflammation of the ciliary body is the so-called "serous iritis." A better name would be "sero-plastic irido-cyclitis," for a few iridic adhesions may occur showing that the iris is inflamed and lymph is thrown out, but the evidences of cyclitis are predominant—viz., "keratitis punctata," deep anterior chamber, increased intraocular tension, and a tendency to dilatation of the pupil rather than a congestive miosis. It is an inflammation which usually attacks both eyes as a late secondary or tertiary manifestation and though in my opinion it is a disease which should be classed together with those signs seen in the period of relapses or "reminders" yet it does very often develop as a tertiary phenomenon. This opinion has been urged by Brailey[6] who brought forward cases in evidence of his assertion. As examples of irido-cyclitis as a tertiary manifestation may be quoted the following:—

CASE 5.—The patient, a young married woman, came to me with the story that "both eyes became suddenly inflamed five days ago." Both pupils were dilated owing to the use of atropine before she came to me. Tension in each eye was normal. There were keratitis punctata and circumcorneal injection. The media were hazy and V. = $\frac{6}{9}$ Sn. In the right eye two small posterior synechiæ were present. "She had had five children, no miscarriages. The first child, seven years old, was rickety, had snuffles, and a rash all over the body when fourteen days old. The second child had snuffles. The third child was rickety. The fourth child died as a baby from wasting. She had lost her hair in great quantities before the birth of the first child."

Though no proof of syphilis the history was certainly in favour of it and she must have acquired it before the birth of her first child. If so the irido-cyclitis appeared seven years or more after the initial lesion. There was no other cause that could have accounted for the eye affection.

The inflammatory signs of sero-plastic irido-cyclitis are, as a rule, less pronounced than the true plastic syphilitic iritis and it is a more chronic affection. Although it is slower in yielding to the subtle influences of mercury and iodide of potassium it does subside completely under that treatment. It will yield to mercury alone or to iodide of potassium, but the combination is more effectual. The tension is frequently raised in cyclitis and though it is scarcely ever that operative interference is called for, yet a timely paracentesis of the anterior chamber will have its reward.

It is necessary to consider the question of diagnosis between iritis gummosa and tuberculous iritis. In both we find growths of the iris and in both we usually see plastic iritis; apart from the history and collateral evidence we are quite capable of deciding the one from the other by the appearance of the eye. So evident are the points of distinction that a mistake can scarcely be made. If we re-call to memory the appearance of gummatous iritis—orange-coloured nodules at the pupillary margin, intense redness of the ocular conjunctiva, pain and tenderness of the eyeball, photophobia and lacrymation — we find they disagree almost at every point from those in tubercle of the iris. The tuberculous growths are white, tend to coalesce, are situated chiefly in the iridic angle and grow inwards from the periphery. The dead-white growth often *appears* to be a corneal opacity. Sometimes the tuberculous deposit is marrow-red, but never orange, and with the absence of pain or subjective phenomena beyond gradual loss of sight, combined with persistent growth in spite of treatment, we have little difficulty in determining the nature of the lesion. Again, in tuberculous irido-cyclitis the tension is usually reduced, but in gummatous it is normal.

The recognition of iritis, whether it be the *simple plastic*, the so-called "*gummatous*" (*iritis papulosa* of Alexander), or the *sero-plastic*, in their earliest stage is of the greatest consequence both to the medical man and to the patient. In all we have certain signs present pointing to inflammation of the iris—viz., turbidity of the aqueous humour, loss of lustre in the iris, blurring of the pupillary margin, sluggish action of the pupil, circumcorneal redness, and impaired vision. In one we have growths on the iris absolutely characteristic of syphilitic iritis; in the serous form we have a semi-dilated pupil and "keratitis punctata." This latter sign is recognised by a cloudiness of the lower third or half of the cornea and the discrete dots of which it is composed are readily seen with a magnifying lens. It is not necessary here to dwell upon the distinctions between iritis and other diseases of the eye attended with redness, such as the different forms of ophthalmia, keratitis, acute glaucoma and the like, for in doing so I should be wandering from my subject; moreover, I have already considered the differential diagnosis of some of the more important iridic diseases.

In using the term "*gummatous*" in connexion with iritis attended with deposits on the iris do not misunderstand me. I do not wish you to think they are real gummata. The term is a misnomer, and perhaps the expression *iritis papulosa* given to it by Alexander[7] would be preferable and less misleading. He would restrict this title to those cases of iritis occurring in the secondary stage of syphilis and reserve quite rightly the epithet "*gummatous*" to a tertiary syphiloma of the iris, upholding thereby the generally accepted opinion that a gumma is a manifestation of tertiary syphilis. A true *gumma of the iris* is a much larger growth, is usually single, and starting in the iridic angle grows into the anterior chamber. It may increase to the size of a pea or larger, pushing the lens backwards. It is usually fawn-coloured, is much rarer than the so-called gumma of secondary syphilis, and much more serious. The treatment of syphilitic iritis resolves itself into the exhibition of drugs for the general disease and the use of atropine or some efficient mydriatic locally. There is no special point of distinction to be considered between the local treatment of iritis due to syphilis and that caused by other complaints. It must be borne in mind that in all cases of "iritis gummosa" broad adhesions to the capsule of the lens are often inevitable. Yet in spite of this perfect vision is usually restored to the eye, nor need a second attack be feared, so that on the whole the prognosis is favourable.

It has already been mentioned that inflammation of the ciliary body is a late secondary or tertiary manifestation. There is besides sero-plastic cyclitis another syphilitic lesion which may attack this region—the ciliary body may be the seat of a gumma. This is essentially a tertiary manifestation. Two cases have been recently published, one by Dr. Campbell Highet[8] and the other by Mr. Vernon Cargill.[9]

I have no notes recorded of ciliary gummata nor can I call to my memory any case that I have seen except

[6] Transactions of the Ophthalmological Society, vol. xv.

[7] Alexander: Syphilis und Auge, Wiesbaden, 1889.

[8] Brit. Med. Jour., 1896, vol. ii., p. 1380.

[9] Ibid., 1897, vol. i., p. 17.

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as a pathological specimen In the Museum of the Royal Westminster Ophthalmic Hospital there is a jelly preparation of a gumma of the ciliary body and one of the choroid near the optic disc. The patient was under the care of Mr. Adams Frost at the Royal Westminster Ophthalmic Hospital in 1891. She had attended in October, 1890, with fine vitreous opacities which cleared up under pilocarpin injections hypodermically and exposed to view choroiditis consisting of pale roundish areas devoid of pigmentation. In February, 1891, R.V. = $\frac{6}{6}$, L.V. = $\frac{6}{9}$; soon afterwards the vitreous of the left eye became opaque, the eye painful and inflamed. There was bulging of one part of the ciliary region and the eye was excised. The choroid near the posterior pole is thickened to 2·5 mm. and consists of a pale grey opaque mass, which has perforated the sclera and is continuous with a similar but larger mass in Tenon's capsule. There is a similar but smaller growth in the ciliary region.

(To be continued.)

THE VACCINATION PROBLEM: A CONTRIBUTION TO ITS SOLUTION.[1]

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[DR. BOND commenced by defining the vaccination problem as one consisting of two parts, the first, "Is vaccination a protection against small-pox and if so to what extent and under what conditions?" Assuming this question to be answered in a sense favourable to the advocates of vaccination there arises the second question, "How far is it expedient and practicable to enforce vaccination on the community generally?" The solution of the first question rests upon scientific facts and statistics and the judges of these facts and statistics are the medical profession throughout the world. Dr. Bond then went on to speak of the late Royal Commission. He mentioned its constitution, how it sat for seven years, and finally the decision it arrived at on the first question. He continued:]

In their report eleven of the thirteen surviving Commissioners have given a decision as to the first half of the vaccination problem that fully confirms the opinion as to the efficiency of vaccination as a protection against small-pox which the leading medical authorities in all parts of the world have for many years held. The conclusions at which they arrived may be summarised as follows: (1) that vaccination diminishes liability to attack by small-pox; (2) that when attack does occur in properly vaccinated individuals their vaccination renders the disease milder and less fatal; (3) that protection against attack is greatest during the years immediately following vaccination, and that the period of highest protection may perhaps be fairly stated as covering nine or ten years; (4) that after the period of highest protective potency the efficacy of vaccination against attack is considerable for the next five years, and possibly never altogether ceases, but that it rapidly diminishes; (5) that the power of vaccination to modify attack outlasts its power to protect against attack, and that its efficacy in this respect is still very considerable, even during the later periods of life; and (6) that re-vaccination restores protection, but that this restored protection again diminishes, and should be renewed, if it be desired to ensure the highest degree of protection which vaccination can give.

As to the safety of vaccination the Commissioners state: "A careful examination of the facts which have been brought under our notice has enabled us to arrive at the conclusion that, although some of the dangers said to attend vaccination are undoubtedly real and not inconsiderable in gross amount, yet when considered in relation to the extent of vaccination work done they are insignificant. There is further reason to believe that they are diminishing under the better precautions of the present day and with the addition of the further precautions which experience suggests will do so still more in the future." With reference to the possibility of replacing vaccination by any other substitute, especially by isolation, the Commissioners state: "We can see nothing then to warrant the conclusion that in this country vaccination might safely be abandoned and replaced by a system of isolation."

The verdict of the Commission is given with a caution of expression that has been represented as an indication of weakness of conviction, but which is clearly the outcome of a studied judicial deliverance on a highly complicated problem. Of the real strength of their convictions as to the efficacy of vaccination the Commissioners have left no room for doubt or misrepresentation,[2] for they have founded on them recommendations for the continuance of the present State machinery for vaccination which would on any other supposition be wholly unjustifiable, even the two Commissioners who have dissented from the majority in some of the most important conclusions at which their colleagues have arrived having joined them in these recommendations. So far, therefore, as it is possible for any problem to be solved by painstaking, competent, and honest inquiry this first section of the vaccination problem must be looked upon as finally settled. Those who refuse to accept the solution of it thus offered, who claim that their views were not adequately represented on the Commission or who insinuate that it was "packed" at its formation with members who had committed themselves beforehand to a verdict, may be honest in their belief on these points, however difficult it may be to look on them in this light, but they will not easily persuade reasonable men to accept such an untenable position.

[As to the second question Dr. Bond said that a doubt as to the desirability of enforcing vaccination might co-exist with a belief in its efficacy because—and this is the view to which the majority of the Commissioners appeared to lean—"the results of compulsion as hitherto practised show that it is not expedient, in the interests of vaccination itself and consequently of the community generally, to attempt to enforce it, at any rate in the way in which this has been hitherto done. It is this aspect of the vaccination problem, with its mingled ethical, political, and administrative considerations, that it is proposed here to discuss."]

PREVIOUS ATTEMPTS TO SOLVE THE PROBLEM.

It is well at the outset to bear in mind that the problem requires us to deal with the demand of a dissentient minority, not only for the entire abrogation of a law which has been in operation for half a century, but for the dissolution of an organisation which has for the same period been maintained by the State for facilitating in the public interest the acquirement of the protection which the law was intended to enforce.[3] Under ordinary circumstances this sort of problem is solved by the simple process of enforcing the law without

[1] Abstract of a paper read before the Sanitary Congress at Leeds on Sept. 15th, 1897.

[2] Further evidence in illustration of this important point is to be found in the statement since made by Lord Herschell of the openness of mind with which he commenced the inquiry and of the conviction forced upon him by the evidence submitted to the Commission. Lord Herschell said (see report of speech at a meeting to promote a National Jenner Memorial): "A vast amount of material was considered by the Royal Commission, and it fell to my lot to have to digest that material and analyse it and submit a report for the consideration of my colleagues. In that task I determined to follow boldly the facts which experience disclosed wherever these might lead. I laid down in the first instance the tests that seemed most fitting to enable an answer to be furnished to the question, 'Is vaccination, or is it not, a preventive of the disease of small-pox and a cause of the modification of the disease where it occurs?' I applied those tests, I can honestly say, entirely ignorant of the conclusions to which they could lead. I was myself surprised at the force of the evidence which was afforded in favour of vaccination. The report which I prepared was submitted to the criticism of my colleagues. Amongst them were some by no means favourable to vaccination, to put the matter not too strongly, and we availed ourselves of the benefit of all their criticism. Wherever they pointed out that undue weight had been given to this fact, that this or that consideration had not been sufficiently weighed, we made modifications to meet these criticisms." After dealing with some of the statistics of vaccination in several English towns Lord Herschell observed: "Is it not difficult for any human reason to get over a collection of facts such as those, and all the more when we find this not only the result ascertained by combining the cases in all those different towns, but that the same phenomenon is observed if you deal with the case of each town separately and if you deal with the separate districts of a town. Such facts as these should be pointedly called to public attention. Yet they are only a small part of the case. It would be impossible to resist the case in favour of the efficacy of vaccination if there were no other facts, but I could mention many other facts drawn not only from our own country but other countries also." See also speech by Professor Michael Foster, Secretary of the Royal Society, in report of meeting, published by the Jenner Society.

[3] The objects of the National Anti-Vaccination League are stated in its prospectus to be "the entire repeal of the Vaccination Acts, the disestablishment and disendowment of the practice of vaccination, and the abolition of all regulations in regard to vaccination as conditions of employment in State departments or of admission to educational or other institutions."

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respect to the objections, whether honest or otherwise, of dissentients. And in the present case this solution has been steadily tried for nearly fifty years, but with results which cannot be said to be altogether satisfactory. For though an overwhelming majority of the infant portion of the community whom the law was specially intended to protect have for many years under its influence escaped small-pox, the opposition to vaccination which existed even fifty years ago has not diminished but has, on the contrary, decidedly augmented and children in increasing numbers are escaping its protection. What is more striking still is that this has occurred in spite of the steady accumulation of evidence confirmatory of the value of Jenner's great discovery from all parts of the world. But the climax of the paradox is reached when we find that this opposition doggedly maintain its claims notwithstanding the crushing verdict delivered against it by the Royal Commission.

THEIR IMPERFECT SUCCESS.

It is clear, therefore, that so far as the extinction of the agitation against vaccination is concerned the policy of the past cannot be said to have been a success. The chief reason for this steady increase of opposition is to be found in the defects of the procedure by which vaccination itself has been carried out. The evidence submitted to the Royal Commission and embodied in its report shows conclusively that however much this procedure may have commended itself to those by whom it was suggested five and forty years ago practical experience of its working has revealed various weak points in it which of themselves go a long way to account for the opposition that has grown up against it. One of these points in particular so far transcends all the others in importance that it might alone account for much of the antagonism which compulsory infant vaccination had encountered. The employment of human lymph, by transmission from arm to arm, was the only procedure at the date of the passing of the Vaccination Acts that suggested itself as either practicable or effective for the object in view. But it has, through the allegation of dangers which are in an "insignificant"[4] degree real but mainly exaggerated or unfounded, become since that date the chief cause of this increase of the agitation against vaccination. And if we had now no alternative but to continue this method of administering vaccination the difficulty of solving the problem which we have before us would be very serious. Fortunately, however, this is no longer the case, since we have in calf-lymph, prepared as it can now be by methods which guarantee it against any probabilities of taint, a medium for the performance of vaccination which reduces still further even the infinitesimal amount of risk which the report of the Commission recognises as attaching to human lymph. With the general employment of calf-lymph therefore, especially if it be carried to the doors of those who are to be vaccinated, as the Commissioners recommend, and accompanied as they also suggest by such free medical attendance as may in some cases be required, we may confidently expect that a considerable proportion of the opposition to vaccination will disappear.

THE OPPOSITION TO VACCINATION NOT ENTIRELY ERADICABLE.

But we must not suppose that an agitation which has existed for so many years and to which so many persons have publicly committed themselves will collapse all at once even after the removal of this objection, or that an antagonism which is so largely founded on ignorance and sentiment to an operation so free from risk as vaccination will be under the improved procedure which the Commissioners recommend will altogether cease. Objections have been hitherto directed against arm-to arm vaccination; now they are being turned against calf lymph, and there will still be those who will refuse to have their infant children vaccinated on any conditions. This brings us to a second and more perplexing aspect of the vaccination problem.

HOW IS IT TO BE DEALT WITH?

There are some who in their enthusiasm for vaccination and their intolerance of "faddism" will no doubt urge that the mode of promoting vaccination which the law at present prescribes should be left undisturbed. They will argue, and not altogether without reason, that before we in any degree abandon a safeguard against small-pox which the report of the Vaccination Commission has shown to be an effective one, we ought to see what will be the result of the adoption of those administrative improvements which the Commissioners recommend. But a very little consideration should suffice to convince the most uncompromising advocate of compulsion that such a course, however theoretically defensible, is impracticable. The Commissioners have unanimously recommended that some concession should be made to persistent objectors and the unanimous recommendation of such a body as the late Royal Commission cannot be disregarded. Moreover, in some cases we have to deal not merely with the resistance of individuals but of communities like Leicester; and however possible it may be to coerce the former no Government is likely to commit itself to any scheme for the compulsory vaccination of a whole town. Burke asserted that an indictment will not lie against a nation, and the results of the imprisonment of the Keighley Board of Guardians no less than the caution which has subsequently characterised the exercise by the Local Government Board of the powers with which the law has entrusted it in this matter seem to show that it is almost as difficult to enforce a *mandamus* against a recalcitrant vaccination authority.

But though we may recognise the necessity of giving effect to this recommendation of the Commission it is of the first importance that in so doing we should also bear in mind the spirit in which it was evidently made at any rate by the large majority of the Commissioners and that we should at the same time have in view some considerations which they have not in their report fully discussed.

VIEWS OF THE ROYAL COMMISSION ON THIS POINT.

And here it must be remarked that the majority of the Commissioners, whilst distinctly indicating their opinion that it is expedient that some concession should be made to those who are somewhat vaguely designated as "honestly" objecting to the vaccination of their children, make no satisfactory recommendation as to how this is to be done so as to avoid the danger which they distinctly deprecate of opening the door to wholesale evasion. The risk of such a result is obvious, but the only suggestion which they offer towards a solution of this the most puzzling portion of the problem is that if any parent who entertains such an objection is prepared to make a formal statement to that effect no further proceedings shall be taken against him. Now this suggestion obviously involves two distinct assumptions—viz., that a certain amount of pressure, direct and indirect, towards vaccination shall still be maintained as the general law, but that persons who "honestly" object to obeying it shall be formally relieved from so doing. And it is well also to note here two other points. The first is that the exception which the Commissioners thus propose to make for the first time in the history of British legislation is not based, as has been above shown, upon any doubts as to the efficacy of vaccination as a protection against small-pox. Upon this point, as has been above indicated, the report of the Commission leaves no room for question. Even the two Commissioners[5] who declined to sign it and who have stated at great length what they conceive to be a justification for their refusal have nowhere denied that vaccination is in some degree a prophylactic. They only question the degree of protection and the length of time for which the protection is effective. The large majority of the Commissioners distinctly express the hope that their report "will stimulate belief in the efficacy of vaccination that it will remove some misapprehensions and reassure some who take an exaggerated view of the risks connected with the operation as well as lead to a more ready enforcement of the law by local authorities."

THE GROUNDS ON WHICH THE COMMISSIONERS BASE THEIR SUGGESTION.

The Commissioners base their suggestion solely on the grounds of expediency and on the interests of the community generally. They assert that in the case of "indolent or indifferent" parents no right can be admitted on their part to neglect to have their children vaccinated, because "it is better for the child and better for the community that it

[4] See report of Royal Commission, Section 434: "A careful examination of the facts which have been brought under our notice has enabled us to arrive at the conclusion that although some of the dangers said to attend vaccination are undoubtedly real and not inconsiderable in gross amount, yet when considered in relation to the amount of vaccination work done they are insignificant."

[5] Dr. Collins and Mr. Allanson Picton.

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should be vaccinated than that it should remain unvaccinated. A parent can have no inherent right under the circumstances to which we have alluded to prevent or neglect its vaccination." The second point in connexion with the suggestion of the Commissioners which it is desirable to note is that the exemption from obeying the law which would be thus conceded to the "honest" objector would, for anything that appears to the contrary, be perpetual. There is nothing in the report to suggest that a parent who had once made a declaration would ever be troubled again or that a child who had thus been withdrawn from the operation of the law, even though under circumstances of a temporary character, would not be practically exempt from compulsory vaccination for life unless becoming subsequently a candidate for employment in the service of the State.

HOW WILL IT WORK?

Let us assume then, as we are bound to do, that the recommendation of the Commissioners is a defensible one and that it is not expedient to endeavour to enforce a law which cannot by any attempt to enforce it against determined objectors be made certainly effective. But it will assuredly be asked, What are the cases which are to be thus treated exceptionally and how is it proposed to differentiate them from those in which some attempt at compulsion must be inferred from the suggestions of the Commissioners themselves to be justifiable?

ANOTHER COURSE.

It would seem that if a parent is desirous of obtaining exemption from vaccination for his child he should be required to appear in person before the justices as at present and to apply for an order to that effect.

[As summarised by Dr. Bond his suggestions were as follows: That the object of the Commissioners can be attained with the least risk to the community, with the least disturbance of the present law, and with reasonable consideration to those who are affected by it by the magistrates exercising more largely than they have hitherto done the discretion with regard to the enforcement of vaccination which the law already gives them; by an extension of that discretion so far as may be necessary and of the principle of temporary suspension of vaccination which is already recognised by the law in cases where it may appear expedient; and also by providing for the distinction between *defaulters* through negligence or indifference and *objectors* who urge sufficient grounds for their objection by giving the latter an opportunity of applying voluntarily to a court of summary jurisdiction for an order for the suspension of the vaccination of their children instead of their being required to be summoned as at present. That it is expedient, in justice to objectors no less than in the interest of the community generally, that in any case in which objection to the vaccination of a child is made on the ground that injury from vaccination has been experienced in the family of the objector or that there is special reason for fearing danger therefrom to the child, competent inquiry should be made into such allegations and a report thereon presented to the justices for their information as well as for that of the public.]

The suggestions of the Commissioners if adopted without safeguards would practically involve the withdrawal of the child from the control which the State should exercise over him in vaccination as well as in other matters in his own interests as well as in those of the public health. They are open also to another objection, for they involve the creation of a dangerous precedent which if once established might be drawn into use in other matters, since it might be reasonably urged that if the children of those who object to vaccination are to be exempted altogether and in perpetuity from the operation of the vaccination law, why should not those whose parents object to education, factory, and other protective legislation be equally exempted? The key to this part of the vaccination problem is to be found in the provision which the law already recognises for temporarily suspending vaccination where there is sufficient reason for so doing, though probably some statutory extension of this discretion may be required in order to indicate clearly to the magistracy the course which it is desirable for them to pursue. Such a course, apart from the advantage which it offers of avoiding a dangerous precedent, includes as will be presently shown others which greatly commend it for adoption.

ADVANTAGES OF THIS PLAN.

It cannot be denied that to properly carry out the plan thus suggested will involve a good deal more trouble both to the magistrates and their clerks than they have hitherto been in the habit of taking with vaccination cases. They will have to recognise that their duties in regard to them are not simply ministerial but judicial. It will also involve a large amount of new work for the medical officer of health. But these are considerations to meet which involves no insuperable difficulty. The work will, no doubt, be heavy at first, but it will gradually lessen as the mode of dealing with it becomes more familiar both to the public and the judiciary and as precedents are established they will simplify routine. On the other hand the gain will be enormous. In the first place the objector to infant vaccination, whether honest or otherwise, will no longer be able to trade on the cry that he is denied the simplest rudiments of justice, the opportunity of showing cause why he should not be punished. He may object to the decision of the magistrate but there will be always the reply that this case has been considered and that the grounds on which his objection has been dealt with are in evidence. This is of itself a great advantage so far as the cause of vaccination is concerned for it will remove a strong and reasonable source of public sympathy which at present exists and it is also only common justice to the objector himself. But there is another advantage which is of no less moment in the interest of vaccination and of the public generally. Nothing is more certain than that the cause of vaccination has suffered greatly not only from the injudicious enthusiasm of its friends but from the want of any organised effort to meet and expose the fallacies and misrepresentations of its opponents. There are various ways in which this latter object can be accomplished, but there is no better way than by competent inquiry into statements of mischief which vaccination is alleged to have produced and by exposing as publicly as possible misconceptions as to facts upon which opposition to it is so largely founded. A police-court may not be the *beau ideal* machinery which would be selected for the purpose of doing this work if any better were available; but it has the recommendation of being ready to hand, of being already recognised by the law as adapted for the purpose, and it is capable of being made still further suitable by the aid of the improved procedure suggested. If used in this way it is believed that it will become a valuable means of education not only to the public generally but to the magistrates themselves, who will be necessarily led to take a less perfunctory view of their duties in this matter than they have hitherto done. In Scotland, where vaccination prosecutions are conducted before the sheriff, a highly-trained legal official, these proceedings are much more creditably managed than they are as a rule in England.

It may be safely asserted that if such machinery for the formal investigation of allegations against vaccination had been in existence ten years ago a great deal of unfounded objection against it would have been brushed away. And it may be added that if there were any doubt about the cause of vaccination emerging with credit from such inquiries it would not be worth defending at all. But they may be safely left to those whose experience as medical officers of health enables them better than anyone else to appreciate the value of vaccination as a defence against small-pox and who have no possible interest in exaggerating it. It cannot be too strongly insisted on that vaccination has been discredited in the past by misconception, on the one side, mainly due to misrepresentation playing upon ignorance; and on the other by undue confidence shutting its eyes to patent facts and making no effort to meet the organised attack upon it which has for more than ten years been persistently carried on. No small share in this result also has been due to the careless way in which vaccination prosecutions have too often been conducted and to the unreadiness of the magistrates to embark on inquiries for which they have probably felt themselves to be unfitted in the absence of skilled assistance. The prosecuting authority, the board of guardians, even when they have exhibited any interest in the matter, have generally been represented by the vaccination officer, who though capable of conducting the proceedings if unopposed is as a rule quite unfitted to meet the adroit defence which has been for some years brought to bear upon them. It is a considerable recommendation of the proposal to transfer the administration of the Vaccination Acts from Poor-law to sanitary authorities that it would bring the whole procedure into the hands of officials who may be expected to take an intelligent interest in it because it is so important a branch of public health work. But whatever may be done in this direction it is imperative, if the errors of the past are to be retrieved and the public are to be effectually protected against recurring epidemics of small-pox, to

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treat objections to vaccination on the part of parents with consideration when they are entitled to it; to remedy the defects of vaccination procedure which experience has demonstrated; and, above all, to lose no opportunity of educating the public to judge intelligently for themselves on which side the truth lies.

(To be continued.)

A CASE OF INCOMPLETE RUPTURE OF THE RIGHT VENTRICLE, WITH ADHERENT PERICARDIUM.

BY DAVID HUNTER, M.A., M.B., B.C. CANTAB.,
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A MARRIED woman, aged seventy-seven years (at death), was admitted to the County Asylum, Whittingham, in July, 1876, suffering from chronic mania and secondary dementia. The notes soon after her admission state that she was in only moderate health, but no organic disease was found. Her weight on admission was 10 st. 10 lb. and she had since become exceedingly obese. There is no record of any serious illness during her stay in the asylum until September, 1892, when she was confined to bed for a few weeks with pyrexia, swelling of one knee and leg, and dyspnœa. The cardiac action had been feeble for the last ten years and she had been liable to cyanosis and swelling of the feet and ankles, but no cardiac bruit could be detected at any time. Mentally she had become more and more demented and childish and she had been subject to periodical attacks of excitement, being of late as a rule cheerful and garrulous with many senile delusions of identity. On Nov. 19th, 1897, after three or four sleepless and restless nights, she was noticed to have some dyspnœa and to be unusually cyanosed. The temperature was subnormal, the respirations were 23 per minute and laboured, and the pulse was 80, being very feeble. She was kept in bed and was treated with appropriate stimulants; she improved slightly until the 21st, when she rather suddenly became worse. The symptoms were collapse with very low temperature (94° F.), respirations from 30 to 44, shallow and laboured, much cyanosis of the face and extremities, cold sweats, vomiting with much retching, and retention of urine. The pulse was 80 per minute and almost imperceptible. She retained consciousness the whole time, and complained of difficulty in breathing and tightness across the chest, but owing to her mental condition it was uncertain whether there was any severe pain. During this time and for the next two or three days she slept fairly well at night and took nourishment freely. Her general condition remained much the same until the 24th when the dyspnœa became worse and she died at 10.50 P.M.

Necropsy.—A post-mortem examination was made on Nov. 25th at 2 P.M., when the body was found to be enormously obese. The brain showed thickening of the membranes, general cerebral atrophy, a morbid degree of sub-pial felting, and dilatation of the lateral ventricles, with granularity of the ependyma; there was also slight atheroma of the basal vessels. The pericardium was thickened and showed complete firm adhesion between its layers with no sign of recent inflammation. The heart was enlarged and globular. There was a considerable excess of epicardial fat and the walls of both ventricles were thickened. The right ventricle was much dilated and the left to a less extent. The right side of the heart was engorged with soft dark clot. In addition to the fatty overgrowth and infiltration in the walls the myocardium showed advanced fatty degeneration, especially that of the right ventricle, the muscular fibres being pale, soft, and friable—indeed scarcely distinguishable from the epicardial fat. On the anterior surface of the right ventricle immediately under the dense superficial stratum of the epicardium there was seen a small extravasation of soft, dark clot—about 2 cm. in diameter—slightly bulging the membrane outwards, and on section this was seen to communicate with the right ventricular cavity by an irregular narrow channel with ragged, softened, and reddened walls, a small clot connecting the extravasation on the surface with the mass of clot in the ventricle. The valves were healthy save for slight chronic thickening of the mitral cusps and dilatation of the tricuspid orifice. The first part of the aorta showed some atheromatous degeneration. The weight of the heart was 450 grammes. Each lung weighed 420 grammes. There was emphysema of the free borders. The tissue was indurated, brown, and tough, with considerable œdema. Each pleural cavity contained about 340 c.c. of clear fluid. There were no pleuritic adhesions. The liver weighed 1120 grammes and was pale and friable. There were four irregular dark-brown calculi in the gall-bladder with a few cubic centimetres of almost colourless mucus. The spleen weighed 100 grammes and was pale, soft, and friable. The kidneys showed advanced chronic interstitial nephritis; a large amount of peri-renal fat was present. The stomach was dilated. The intestines were small and shrivelled in appearance. There were large deposits of fat in the omentum.

Remarks.—Rupture of the right ventricle is a comparatively rare occurrence, about three-fourths of the cases of cardiac rupture recorded having taken place in the left ventricle. In this case the rupture was evidently prevented from becoming complete by the firm pericardial adhesions. The conditions necessary to bring about changes in the myocardium favourable to the occurrence of rupture were many—fatty overgrowth, with great general obesity, senility, adherent pericardium, and chronic interstitial nephritis. One of the most prominent symptoms in such cases—namely, severe cardiac pain—appeared to be absent, but as stated above, owing to the patient's condition of dementia, this is not certain. For the clinical notes of this case I am indebted to my colleague, Dr. W. R. Dix.

Whittingham.

A CASE OF TETANUS COMPLICATING ULCERS OF THE LEG TREATED WITH ANTITOXIN; RECOVERY.[1]

BY E. J. SMYTH, M.D., B.S. LOND.,
ASSISTANT MEDICAL OFFICER TO THE WANDSWORTH AND CLAPHAM UNION INFIRMARY, S.W.

THE patient was a woman, aged sixty years, who was admitted to the Wandsworth Infirmary on the evening of Aug. 19th, 1897. Her previous history was unimportant; she had had one attack of rheumatic fever and had suffered from ulceration of the right leg for about two years. Her present illness, as stated by a friend, dated from four days previously and commenced with stiffness of the lower jaw which had now become quite fixed, the patient being scarcely able to speak or swallow. She complained also of great pain in the jaws, at the back of the neck, and in her chest and back, more or less constant but subject to paroxysms of aggravation at varying intervals. On admission there were general rigidity of the whole body, retraction of the head and slight tendency to opisthotonos; marked trismus, the masseters being firmly contracted and the jaws closed; while the majority of the trunk muscles were also firmly contracted. The condition of the latter varied a good deal, especially that of the abdominal muscles which were at times much more tense than at others. There were slight spasms of the muscles of the head and trunk at varying intervals of from two or three to ten minutes accompanied by risus sardonicus, increased retraction of the head, and opisthotonos, but at no time were these so severe as to cause any distress in breathing though accompanied by a good deal of pain and cyanosis. The patient was emaciated and in a weakly state generally; sordes were present on the lips and she complained of great thirst. The tongue could not be seen and she could only swallow with great difficulty and in small quantities at a time. The heart's action was slightly irregular, the pulse 96, and the temperature subnormal. Two chronic ulcers were present in the lower part of the right leg on each lateral surface respectively; they were unhealthy in appearance the bases being covered with sloughs and foul discharge and the skin around inflamed. No other wound or breach of surface was present.

She was ordered rectal feeding and a supply of anti-tetanic serum was at once sent for, 10 c.c. (prepared by the British

[1] The patient was shown at a meeting of the South-West London Medical Society, Oct. 13th, 1897.

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nstitute of Preventive Medicine) being injected five hours later under the skin of the abdomen. On the following morning (Aug. 20th) she was in much the same condition, though the muscles of the lower jaw were rather more relaxed and the patient could swallow slightly better. The spasms were still occurring frequently but the intervals increased in length later in the day. At 3 30 P M. 10 c c. of serum were again injected, and at 8.30 she seemed decidedly better and was sleeping quietly. On Aug 21st her condition was not markedly changed and, as the ulcers remained very foul in spite of frequent dressing, the patient was anæsthetised with chloroform, the surfaces were scraped, and strong carbolic lotion was vigorously applied. She also had another injection of serum in the morning and during the rest of the day the spasms were less frequent, this being no doubt in part due to the effects of the chloroform. The temperature rose slightly in the evening for the first time. On the 22nd she appeared to be worse, the spasms being more frequent and more severe than at any previous time and the temperature at 6 A M. being 101·2° F.: 10 c c. of serum were again injected and about half an hour later the spasms became decidedly less frequent, the patient appearing to be generally better in the evening. She was also ordered twenty grains each of bromide of potassium and chloral three times a day per rectum. She was still being fed by nutrient enemata and stimulants were given freely. On the 23rd she expressed herself as feeling better though complaining of pain in the ulcers which were still very unhealthy looking; the spasms were rather more frequent but the opisthotonos was less marked; 10 c c. of serum were injected at 11 A M and at 12.30 P.M. there was no sign of spasms and the patient was sleeping quietly. The temperature in the evening was 98°. On the 24th her condition was unchanged, the spasms having recurred and being at times fairly frequent. Another injection was given in the morning. The ulcers now for the first time were noticed to be somewhat cleaner and the sloughs seemed separating. On the 25th there was no material change; an injection was given in the afternoon and the chloral and bromide mixture was omitted. On the 26th there was no improvement and in the evening the temperature rose slightly, the breathing became more rapid, and the spasms were occurring as before; 10 c.c. of serum were again injected in the evening. During the next two days no change of importance occurred. Another injection was given on the 27th about midnight. On the 29th she was worse, the ulcers also having become more offensive; the pulse was feeble and the temperature slightly raised. On the 30th no improvement in her general condition was noticed, though she appeared to swallow slightly better and could take some nourishment by the mouth; another injection of serum was given on this date. On the 31st there was decided diminution of the spasms and she could swallow well without their occurrence. The ulcers, however, showed no improvement and her general condition during the next two days was weaker if anything. On Sept. 2nd she had another injection, which was the last given. The spasms had now disappeared, and from this time she began to show signs of improvement. Two days later the ulcers also appeared to be healthier and their surfaces cleaner. On the 6th she was decidedly better and the muscles generally were more relaxed.

The further history of the case was uneventful and the patient improved steadily after this time. On Sept. 11th there was general relaxation of the trunk and neck muscles, though slight rigidity of the limbs on passive movement was noticed for two or three weeks afterwards. On the 15th she could open her mouth well and protrude her tongue, and the ulcers showed signs of healing. On Sept. 23rd she could sit up with assistance, but was still very weak. She continued to improve physically and the ulcers were healing steadily, but four or five weeks later she began to develop symptoms of melancholia associated with delusions of persecution, which unfortunately persisted and have since necessitated her removal to an asylum.

Remarks.—Although numerous successful cases have now been recorded in connexion with the antitoxin treatment of tetanus and its efficacy I suppose, especially in those of the chronic variety and with long incubation period, conclusively established there are several points in the present case which I think are worthy of note; and first I would call attention to the nature of the wounds, one or both of which presumably gave access to the tetanus bacillus—viz., two chronic ulcers of the leg. The rarity with which such a common condition is complicated with tetanus is, I think, of interest, and I have not been able to find a record of any similar case either among those recently published or in any text-book, the disease being, as is well known, most commonly associated with punctured, contused, or lacerated wounds, especially of the hands or feet. As to the exact means of infection and the period of incubation no definite facts could be obtained in this particular case.

With regard to the effects of the serum and its bearing on the ultimate result of the case of course nothing definite can be said, especially as other means were employed. It should be noted, however, that several of the injections, especially in the early part of the treatment, were followed by marked amelioration and diminution in the frequency of the spasms, and the influence of the antitoxin in this direction has been observed in many of the cases so treated which have been reported in the columns of THE LANCET, even amongst those with a fatal termination. The effect of the serum on the general condition was very doubtful, and though slight rise of temperature followed the earlier injections no constant result occurred. A temporary improvement certainly appeared to follow the first few but after this for about a week the patient seemed to become slightly and progressively worse, so that during this period little hope was entertained of her recovery. The fact that the ulcers showed no sign of improvement until the general symptoms abated is also a point of some interest, I think. The total number of injections given was eleven and beyond slight reddening of the skin and transient tenderness on one or two occasions no local disturbances were produced, the injections being given under the skin of the abdomen on every occasion. Part of the serum used was that prepared by the British Institute of Preventive Medicine, while the rest was prepared at the Pasteur Institute in Paris.

I am permitted to publish these notes through the kindness of Dr. J. Brevard Neal, Medical Superintendent of the Infirmary.

New Wandsworth, S.W.

DIAPHRAGMATIC HERNIA; PERFORATION OF THE STOMACH.

BY T. E. H. FISHER, M.R.C.S. ENG., L.R.C.P. LOND.

AT 6.30 P.M. on Oct. 18th I was called to see a man, aged fifty years. His history was as follows. He had suffered off and on from pain after food and distension for years. The pain was sometimes so severe that he rolled about the floor until vomiting relieved him. For the last two months these attacks had been more pronounced in character. On Oct. 17th he felt quite well until after taking a cup of tea about 5 P.M., when slight gastric pain, flatulence, and distension came on. The pain grew worse and kept him awake the greater part of the night. It was spasmodic and localised to the epigastrium. Next morning, feeling no better, he tried to make himself vomit, but only succeeded with difficulty in bringing up some mucus with a good deal of flatus. In the afternoon he vomited three or four times and was doing so when I arrived. He complained of nausea with pain and distension in the abdomen. The vomit shown me was an odourless brown fluid. On examination there was slight distension with resistance and tenderness in the epigastrium. On percussion a tympanitic note extended out to the anterior axillary line as high as the sixth rib, being bounded above by the normal cardiac dulness and apparently due to a dilated stomach. The lower abdomen moved well. The liver dulness was normal. With respect to the lungs nothing abnormal was detected save a few crepitations over the right. The heart was normal. The patient was ordered a bismuth mixture with fomentations and to have a soap-and-water enema with turpentine in the morning. When I saw him again (at 12 A.M. on Oct. 19th) he had had no more vomiting but the pain was worse. He was twisting about in bed bringing up flatus at intervals. The enema had brought away a soft formed motion with flatus. I ordered twenty grains of sulphate of zinc hourly for three doses. The emetic not acting at 4 30 P.M. I attempted to wash out the stomach with the ordinary rubber syphon. Half a pint of water was with difficulty introduced and immediately and forcibly thrown back, flatus accompanying it. On examination the epigastric

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distention, resistance, and tenderness had increased. The left side gave a tympanitic note as before, changing to a dull one in the angle between the ribs, and on the right side extending below the ribs for two inches. On deep palpation a swelling could be felt in the epigastrium like an india-rubber bag. The pulse was by this time distinctly weaker, the pain was evidently severe, the patient looked anxious, and was very restless. Considering the obscurity of his symptoms I advised a second opinion with a view to sending him to a hospital for exploratory operation. Mr. Morgan, of West Green, saw him with me one and a half hours afterwards. He quite concurred in the advisability of getting him away, but doubted if he would stand the journey. The patient's condition by now was very bad, the extremities were getting cold, and the pulse was almost imperceptible. The abdominal signs were unaltered. While a cab was being ordered to take him to St. Bartholomew's Hospital I left the house for a short time. In that interval he walked down stairs. After a hypodermic injection of morphia he was carried out to the cab. The journey was well borne till towards the end when he collapsed a good deal. Dr. Briggs, the senior house surgeon, saw him at the hospital. The patient was promptly taken in. The abdominal dulness had disappeared and was replaced by a high note suggesting a huge dilated stomach. He died at 10 40 P.M.

Necropsy.—I am indebted to the courtesy of Mr. James Berry, surgical registrar, for the following full notes of the post-mortem examination performed on Oct. 22nd. The external appearance was rather thin. There was much post-mortem decomposition. The abdomen was much distended. There was emphysema about the scrotum, head, and neck. The skull, brain, tongue, larynx, and thyroid were all normal. The chest, heart, and pericardium were normal and not obviously displaced. The pleuræ were normal except as below. There was a good deal of recent congestion in the right lung. The left lung was much shrunken, and occupying only the upper part of the left pleura. There were no adhesions and no disease. Bulging into the left side of the chest and covered by normal pleura was a large, nearly globular sac measuring between 4 in. and 5 in. in diameter. It had a broad pedicle at the inner and lower part and was clearly a diaphragmatic hernia. The peritoneal cavity contained free gas. The lesser peritoneal cavity was greatly distended and filled with a thin, nearly black fluid looking like altered blood. This sac formed a huge globular mass occupying most of the left upper quadrant of the abdomen. The transverse colon ran across the lower front part. The intestines, large and small, were quite healthy everywhere. The stomach was remarkably abnormal both in shape and position. About one-half of it, the cardiac end, was greatly distended, forming a rounded sac some 6 in. in diameter. This portion bulged into the lesser peritoneal sac above mentioned. At the lower border was a small perforation through which blackish fluid was oozing into the peritoneal cavity mixed with small particles of food. A fairly well-marked and evidently old constriction separated this half of the stomach from the pyloric half which was in the hernial sac above mentioned. Nothing else but stomach was in this sac and there was no inflammation, congestion, or other sign of strangulation. When drawn out of the sac the whole stomach was seen to be enormously dilated, and the lesser omentum was greatly widened, being seven inches across at its widest part. A constriction at the pylorus marked the lower limit of the part that had been in the sac. The cardiac portion of the stomach was considerably decomposed and it was difficult to say whether the perforation was ante- or post-mortem. It seemed probable, however, that it occurred a few hours before death on account of the large quantity of fluid distending the lesser peritoneal sac. The opening in the diaphragm through which the hernia occurred was oval (or nearly round) and measured about two inches in diameter. It was situated just to the left of the œsophageal opening, the herniated portion of the stomach passing in front of the œsophagus and before entering the hernial sac. The hernial opening appeared to have been congenital and the stomach had evidently been in the habit of passing freely into the hernial sac for a long time; it was very easily reduced by pulling and had probably often been spontaneously reduced. There was no sign of any old injury to the ribs, liver, diaphragm, or any other part. The gall-bladder was much shrunken and contained nothing but two calculi each as large as a cherry-stone. They were tightly grasped by the walls of the gall-bladder. Around the gall-bladder were a few old adhesions, evidently the result of old inflammation. There was no disease of any other abdominal viscus.

Remarks.—This case appears to present unusual features in a good many respects. The symptoms were obscure, but towards the latter part of the second day pointed to some grave mischief in the upper abdomen. At first it presented all the appearances of a dilated stomach with subacute gastritis. There was no dyspnœa or sign suggesting pneumothorax. The alteration in the physical signs by the time the patient arrived at the hospital suggest that the gastric perforation was ante-mortem. If it occurred post mortem it is a little difficult to understand what determined the sudden fatal collapse. From his history he had had many attacks beginning as this one did. I have to thank Mr. James Berry and Dr. J. A. O. Briggs for their kindness in giving me all the information at their command.

Wightman-road, N.

PULMONARY ABSCESS; OPERATION; RECOVERY.

BY ARNOLD EDWARDS, M.D., CH.B. VICT.,

HONORARY SURGEON TO THE CHORLTON-UPON MEDLOCK DISPENSARY, MANCHESTER.

A WOMAN, aged twenty-one years, was first seen by my friend, Mr. H. Dumville Harthan of Salford, on Jan. 8th, 1897, when she complained of acute pain in the right half of the chest, troublesome cough, and a very abundant fœtid expectoration. Previously to this she appeared to have been ill for some five or six weeks with symptoms of pleuro-pneumonia on the right side. The patient's father died from phthisis and there was also a tuberculous family history on the maternal side. On Jan. 23rd I was asked by Mr. Harthan to see the case with him. The patient was then very thin, flushed, and short of breath, with a weak, husky, whispering voice, breathing at the rate of 33 per minute, with a paroxysmal distressing cough resulting in the daily expectoration of a pint or more of highly offensive thin watery pus and mucus. The tongue was dry and thickly-coated with a brownish fur. Pain, slight but occasionally stabbing in character, was complained of at the back of the right side of the chest. The temperature was 102° F. and the pulse was 128. The apex beat could be felt in its normal position. The whole chest moved badly, the right side hardly moving at all. On percussion there was dulness over the lower half of the right side of the chest posteriorly and laterally. On auscultation numerous moist sounds were to be heard over both lungs, but these sounds were much coarser, in fact gurgling in character and accompanied with bronchial breathing, just below the angle of the right scapula. Vocal fremitus and vocal resonance were slightly diminished throughout the dull area. Guided by the greatest intensity of the physical signs, I introduced a sterilised exploring needle into the eighth intercostal space immediately below the angle of the right scapula. Nothing resulted until the point of the instrument had travelled from two and a half to three inches directly forwards, then the barrel of the syringe filled with pus of rather thin consistency and free from flocculi slightly stained with blood, and of a most penetrating foul odour. Examination of this fluid and also of the sputum for tubercle bacilli proved entirely negative. In spite of the patient's low condition, operation was decided upon as offering the best chance of recovery.

An operation was performed on Jan. 24th. The patient was placed in an almost completely prone position, chloroform was administered by Mr. Harthan and my brother, Dr. Fox Edwards, assisted me. Introduction of the exploring needle under antiseptic precautions into the sixth intercostal space along the mid-axillary line resulted in the immediate withdrawal of pure serum entirely free from the slightest turbidity or odour. The instrument was now passed for a second time to a depth of about three inches in the situation of the first puncture, and again drew off stinking pus. An incision about two and a half inches long was then made down to the periosteum along the ninth rib immediately below the angle of the right scapula. The

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periosteum was divided along the course of the rib and reflected with a raspatory and a good inch of rib was removed with bone forceps. A fine trocar and cannula was employed as a guide to the pus, and the track was opened up by sinus forceps and a large cavity was reached in the lung from which about ten or more ounces of fœtid pus and gas escaped. The aperture made by the forceps was further enlarged by passing the finger through about an inch or so of condensed tissue which bled rather profusely at first but the hæmorrhage soon ceased. The abscess cavity appeared to be irregular and was lined with much broken-down and softened material, but its complete exploration was impossible the finger not being long enough to map out its limits with any precision. A wide rubber drainage-tube about six inches long was introduced, no attempt being made to irrigate the abscess cavity. The wound was dressed with a pad of wood-wool freely covered with iodoform. Morphia (¼ grain) combined with atropine ($\frac{1}{150}$th grain) was given hypodermically. By the next day the patient had rallied wonderfully well, the temperature had come down to 99° and the pulse had dropped to 96. The sputum showed marked decrease and was almost odourless. The dressing was saturated with horribly offensive pus, the edges of the wound were covered with a very adherent dirty-grey material and there was some cellulitis in the immediate neighbourhood. On Jan. 27th the temperature again rose to 101° and the pulse reached 114. There was considerable cyanosis with marked laboured breathing and much rambling and the whole body was bathed in perspiration. Fine crepitations and bronchial breathing were to be heard over the greater part of the right lung but there was no appreciable increase in the dulness. A mixture of ammonium carbonate, digitalis, nux vomica, and senega was freely given together with considerable quantities of brandy. The patient's condition for the next few days was very critical but a marked improvement took place on Feb. 3rd. An evening temperature of only 99·2° was then registered, the circulation had improved, the bronchial breathing had disappeared, and the fine crepitations had given way to moist râles. By this time also she had begun to sleep well, the rambling had ceased, and the sweating had markedly diminished. In addition the wound had cleaned, the discharge had become odourless and the sputum quite sweet, and the quantity daily expectorated did not amount to more than an ounce. Three days later the temperature being normal the tube was shortened half an inch. On Feb. 13th she was allowed to sit up for a short time. The tongue had quite cleaned and the appetite was good, there was practically no expectoration and as the discharge through the wound was now slight the tube was shortened to three inches. The after history was uneventful. On Feb. 24th the tube having slipped out it was not replaced and on March 7th, six weeks after the operation, the wound closed. She rapidly gained in weight and strength and is now (December) in perfect health. There is not the slightest sign of cough or trace of expectoration. No retraction or bulging of one side of the chest can be made out, the measurement from the spinous process to mid-sternum at the level of the scar being 15 in. on either side; in fact there is now nothing to show except a cicatrix with some deficiency of resonance and weak breath sounds in its neighbourhood.

Remarks.—This case presents several points of interest. There is, firstly, its successful issue, a sufficient rarity of itself to be worth recording. Another feature was the discovery of a simple serous pleuritic effusion in the vicinity of the pulmonary abscess. Had the aspirating needle hit upon this at the first puncture the correct diagnosis would probably not have been then arrived at and the patient would consequently have lost her life. Again, the rapid obliteration of the large abscess cavity and the few physical signs now remaining to indicate the previous serious condition are also noteworthy.

Manchester.

CORPORATION HOMES AT DARTMOUTH.—At the meeting of the Dartmouth Town Council held on Dec. 10th it was stated that Mr. Richard Burford Searle, L.R.C.P. Lond., M.R.C.S. Eng., had offered £2000 at 3 per cent. interest to the council for carrying out their scheme of corporation homes provided a particular site named by him is available and chosen. He also proposes that on his and his wife's death the property should revert entirely to the corporation.

CASES OF ACUTE ATAXY OF ONE LIMB

BY H. CAMPBELL THOMSON, M.D., M.R.C.P. LOND.,
MEDICAL REGISTRAR TO THE MIDDLESEX HOSPITAL.

THE two cases I have recorded below are interesting examples of an acute onset of ataxy in one limb. They appear to be widely different in origin, for while the first was accompanied by definite symptoms of organic disease the second was apparently functional in character and seemed in some way to be connected with over use of the muscles. Ataxy of acute onset limited to one arm or leg is a rare condition, and when resulting from organic disease of the cord is probably in most cases due to a focal lesion situated somewhere in the posterior columns so that the muscular sense impressions are interrupted. Sir William Gowers[1] mentions a group of cases (to which he has given the name of acute myelitic ataxy) which were characterised by an acute onset of ataxy in one arm accompanied by complete muscular anæsthesia so that all power of estimating weights was lost although the cutaneous sensibility might be perfect. The condition usually reached its height in a few hours, remained complete for some weeks, and then slowly disappeared, and it probably depended upon some organic lesion of an inflammatory character. In the first case given below, although the ataxy was limited to the left arm the other symptoms were widely distributed over the cord and the right arm was the only limb which was not affected in some way or other.

CASE 1.—The patient was a man, aged forty-eight years, who was admitted to the Middlesex Hospital on June 4th, 1896, under the care of Dr. Sidney Coupland, to whose kindness I am indebted for permission to publish the notes. There was nothing of importance in the family history and previously to this illness the patient had never been laid up. He was a man of moderate habits and there was no history of specific disease. On May 29th in the middle of the morning as the patient was walking home he felt giddy and noticed that his left leg seemed heavy, and he also found that he was unable to pass his urine. On reaching home he sat down and did not try to walk again for the rest of the day. Towards the evening he felt some numbness in his left hand, and control over the movements of that limb was lost so much that if he tried to touch his face with his hand, the movements were so erratic that he hurt himself. On the next day (May 30th) there was some weakness of the right leg; it could be moved but the patient was not able to stand. There was no weakness of the right arm. He was admitted into hospital on June 4th complaining of loss of power in the legs and the left arm. On examination it was found that there was some slight weakness of the left arm accompanied by marked incoördination, so that the patient was quite unable to perform simple movements with any degree of accuracy, and he stated that this symptom had been much worse, and was now less marked than it had been. The power of distinguishing weights was not lost and there was no anæsthesia. There was considerable loss of power in the left leg. The limb was extended and turned on its inner side and although some movements could be performed at the knee- and ankle-joints the leg as a whole could not be raised. The right leg was also weak but much less so than the left and it could be raised off the bed. There also seemed to be some loss of movement of the lower intercostal muscles. There was alteration of sensation over the trunk and lower limbs commencing at a line about one inch below the nipple. If the point of a pin was drawn down the chest the pain ceased to be felt at the level of that line and became changed into a dull sensation of touch. Heat and cold could not be recognised with any certainty below the same level. Sensation to touch was considerably diminished and the loss was more marked in the left than in the right leg. There was no anæsthesia of the left arm. There was neither girdle pain nor zone of hyperæsthesia. All control over the sphincters was completely lost and the urine had to be drawn off. The abdominal, plantar, and epigastric reflexes were all absent and so also were the knee-jerks and the deep reflexes of the left arm. There were no bedsores.

[1] Diseases of the Nervous System, vol. i., p. 322.

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On the 5th the symptoms had improved. The line of anæsthesia was a little lower and the movements of the left arm were more coördinated but still very clumsy. On the 8th the plantar reflex could be obtained on the right side but there was no alteration of the other reflexes. There was also some increase of power in the lower extremities. On the 9th both plantar reflexes could be obtained and there was also a very slight return of knee-jerk on both sides. On the 16th power over the sphincters had returned. The patient from this time continued to improve very rapidly and when seen some weeks afterwards he was quite well, his gait was normal, he had perfect control over the sphincters, and the knee-jerks were both present.

The symptoms in this case make it quite clear that the ataxy depended on an organic lesion, and its mode of onset points to the nature of the lesion being an inflammatory one and of a disseminated type. It is especially interesting to note that there was no anæsthesia of the arm or loss of sensibility to weights but with regard to the latter symptom it must be stated that it was not tested until after the ataxy had begun to improve so that possibly there may have been some sensory alteration when the disease was at its worst. Another important feature of the case was the very rapid recovery which took place, especially with regard to the ataxic symptoms which passed off in a very few days.

CASE 2.—The second case was that of a woman, aged fifty-eight years, who complained of inability to use the left arm. She stated that she was in her usual health until the evening of Sept. 4th when she noticed a tingling in the left arm and hand and she also thought that her left leg dragged a little. She took very little notice of these symptoms until the next day when she found she had lost control over the movements of the left arm. This annoyed her especially at meals, for she was quite unable to guide a fork to her mouth with the left hand and she was afraid to try much lest she should hurt herself. She also found that she dropped things if she held them in the left hand. I saw her first on the 6th, two days after the onset of the symptoms, and there was then still very marked incoördination of the left arm. On attempting to touch any point the fingers went very wide of the mark, so much so that on trying to put her finger to her mouth she missed her face altogether. There was no anæsthesia either over the arm or elsewhere, weights could be well distinguished, and she could also tell what position the limb was put into. There appeared to be some slight weakness of the limb. No definite symptoms could be found in the left leg either motor or sensory. I did not see her again until a week had passed, and by that time the incoördination had almost entirely passed away. She still complained of sensations of numbness, tingling, and coldness all down the left side of the body but no anæsthesia or other objective symptoms could be found. At the end of another week the patient was again seen and the ataxy had then quite disappeared. The coldness of the left side had improved but some tingling and numbness, especially of the left arm, still remained. Otherwise she expressed herself as perfectly well.

With regard to the cause in Case 2 the patient put it down to the fact that she had lately been obliged to carry heavy weights. For three weeks before the attack she had carried a large bucketful of water from the top to the bottom of a house and *vice versâ* and the journey was made altogether about four times a day. She stated that she always used the left hand and that she felt a great strain on coming down stairs as she always kept the arm stiff and held the pail well away from the body in order not to spill the water. There were no signs whatever of any organic lesion in this case. On the whole it seemed probable that fatigue was the cause of a temporary functional derangement of the movements of the limb which caused a loss of harmony between the actions of the different muscles and so produced the clumsy movements.

Queen Anne-street, W.

WEST OF ENGLAND EYE INFIRMARY, EXETER.—The committee of the West of England Eye Infirmary, Exeter, which receives patients from all parts of Devon and Somerset, is anxious to erect a new building on the present site. To carry out their full plans £30,000 would be required, but in order to meet present exigencies £10,000 is asked for. As has been already stated in THE LANCET an anonymous donor has recently given £2000 and on Dec. 10th two anonymous gifts of £1000 and £105 respectively were received.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF OTITIS MEDIA ACUTA HÆMORRHAGICA.

BY J. T. C. NASH, M.B., C.M. EDIN.

A WOMAN, aged forty-seven years, whose powers had been overtaxed by long and incessant nursing and anxiety, was suddenly seized about 2 o'clock one morning with severe pain in both ears. She stated that the pain was very acute for about an hour when the ears went "pop" and blood began to stream from them. When I saw the patient, about 8 A.M., I was shown several pellets of blood-saturated wool while from both ears there still issued a copious sero-sanguineous discharge. Hearing was markedly deficient on both sides. Each drumhead showed a recent tear. There was a history of some ear trouble when a child but of none in the meanwhile. Under careful treatment the discharge ceased after passing through serous and purulent stages. There was at no time any odour. In the course of the affection the mastoid cells on both sides became involved but the inflammation quickly resolved. The patient made a thorough recovery with normal hearing power. The tympana were left only slightly opaque but the tears had healed.

No doubt the early and free hæmorrhage was of benefit. Both ears were simultaneously affected, but the pharynx was not inflamed.

Beckenham.

A NOTE ON A RARE DEFORMITY.

BY CYRIL H. FLORY, M.R.C.S. ENG., L.R.C.P. LOND.

ON Oct. 3rd last a primipara in the course of a natural labour was delivered of a male infant who is bilaterally "club-handed"—that is to say, the child's hands are situated at the lower end of the ulna but articulate loosely with the inner lateral aspect of the same. Both radii are wanting (this is mentioned in text-books as being a usual concomitant condition) and on neither hand is there a thumb. The ulnæ are unusually stout as if to compensate for the first-mentioned deficiency. At birth and for some days afterwards the thenar border of the hand lay alongside the inner border of its ulna, the fingers pointing towards the elbow; this position is now modified, the hands being at right angles with the forearm. Using a little force the hand can be brought to the extremity of the ulna and in the same straight line, but the original position is assumed immediately on releasing. The child is for the rest beautifully shaped and there is nothing in the parental history which would lead one to anticipate such a misfortune.

Overton, Ellesmere.

NOTES ON TWO TYPICAL EXAMPLES OF VARIETIES OF OVARIAN TUMOUR.

BY JAMES OLIVER, M.D., F.R.S. EDIN.,
PHYSICIAN TO THE HOSPITAL FOR WOMEN, SOHO-SQUARE.

CASE 1. *Cholesteatoma; operation; recovery.*—A single woman, aged twenty-five years, began to menstruate at the age of sixteen years. Since its appearance the menstrual discharge had reappeared regularly; it had always been scanty and accompanied by pain, seldom severe, in the lower abdomen. Two years ago the patient had detected a small lump in the hypogastric region. For twenty-one months it seemed to have maintained the same size and as it produced practically no discomfort she paid little heed to its existence. Three months ago she was seized suddenly with severe pain in the lower abdomen and as the pain had continued more or less since its onset and the lump had steadily increased in size I

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was asked to see her. This attack was not connected with menstruation. On examination I found that the hypogastrium was occupied by a small, central and globular swelling which pushed forward markedly the abdominal wall in its immediate locality. The tumour extended three inches to the left and three inches to the right of the linea alba and its summit was felt at a spot four and a half inches above the pubes. It was very tender to the touch and with difficulty fluctuation could be elicited. Per vaginam the cervix uteri was found to be located rather far back. In front and to the right of the cervix the vaginal roof was pushed down by a somewhat globular swelling, which was fixed and was continuous with the abdominal tumour.

At the operation the tumour was found to be extensively adherent to the anterior abdominal wall and to the floor of the pelvis. After separating the adhesions I transfixed and tied the pedicle and removed the tumour intact. It was a cholesteatoma of the right ovary. The inner lining of the cyst glistened like mother-of-pearl and the fluid teemed with cholesterine and fat.

Remarks.—The cholesteatoma is according to my experience most probably a congenital tumour. It may display no activity until the occurrence of menstruation or the observance of marriage.

CASE 2. *Chondrocystoma; operation; recovery.*—The patient was a woman, aged forty-two years. She had been married twelve years, had had two children and no miscarriage; the last child was born nine years previously. During the last nine months the menstrual discharge which hitherto had recurred regularly had been delayed seven or fourteen days, and had been accompanied with severe pain in the lower abdomen. For six years the patient had complained off and on of pain in the lower abdomen and back. On abdominal examination nothing of note was found, but on vaginal examination the cervix uteri was found to be located well forwards and towards the right wall of the pelvis and the fundus was felt posteriorly in Douglas's pouch; the uterus as a whole was retroverted. To the left of the uterus and in close apposition with it was felt a small moveable swelling of about the size of a hen's egg. This swelling was extremely nodular and very hard.

The patient was operated upon, and the tumour when removed proved to be the left ovary slightly enlarged. Its surface was much corrugated. When cut into it was found to be composed of two loculi, one of which contained clear fluid whilst the other was occupied by two softish bodies of the size of beans floating in a little clear fluid. These bodies were unattached. The wall of the cyst was cartilaginous and was nearly a quarter of an inch thick. The free bodies contained in the tumour appeared to be macerated ovarian stroma.

Remarks.—"Gyroma" is the name given to this variety of tumour by some authorities, but in my opinion it is not so appropriate as "chondrocystoma." It is a benign growth and is in no way related to the endothelioma. The cartilage of which it is composed is fibrous. The loose bodies found in the interior of this tumour appear to be pieces of ovarian stroma macerated and slightly altered.

Gordon-square, W.C.

WITHINGTON FEVER HOSPITAL SCHEME.—A meeting of ratepayers and property owners in Burnage was held on the 4th inst. "to protest against the proposed erection in Burnage of a hospital for infectious diseases by the Withington Urban District Council." The hospital has to be built somewhere and no one objects to it if it is not near them, but only near their friends somewhere else. The common pleas were raised that it would lower the value of property and was unpleasant in a residential district, but the chairman acknowledged that the objections to it "were largely sentimental." He thought the neighbourhood of the Withington workhouse would be a suitable site as there was an isolated area where there were already a workhouse, a crematorium, a destructor, and a cemetery. But this site would no doubt be objected to by the people of Whalley Range, Chorlton-cum-Hardy and West Didsbury, all residential suburbs. Many speeches were made, all more or less in the same strain, though one of the speakers pointed out "that at present there was not a building within a quarter of a mile of the proposed site." It seems [illegible] this protest will be successful, for an "infe[illegible]ital" as it is often called is never welcome [illegible] where there is least resistance.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LEEDS GENERAL INFIRMARY.

A CASE OF ANEURYSM OF THE LEFT POPLITEAL ARTERY TREATED BY REMOVAL OF THE ANEURYSMAL PORTION OF THE VESSEL.

(Under the care of Mr. H. LITTLEWOOD.)

EXTIRPATION of the sac of an aneurysm, when possible, is probably the most satisfactory method of treatment of this serious disease of an artery and the results are superior to those following any other method of treatment. P. Delbet[1] collected statistics on the subject and showed that extirpation gave a mortality of 11·32 per cent., while the death-rate from ligature was 18·95 per cent., though it must be remembered that in most of the cases in which extirpation has been applied the aneurysm has been traumatic. It might have been thought that gangrene would have been a more frequent result of this method than of ligature, but it is decidedly less common after extirpation, and the probable explanation is that in ligature the artery is occluded at two points—namely, at the aneurysm and at the point at which the vessel is tied, while in extirpation the continuity of the artery is destroyed only at one spot—namely, where the aneurysm is situated. Of course the method of extirpation has its limits, but at present it is hardly possible to define them as it has not been applied in a very large number of idiopathic aneurysms. For the notes of this case we are indebted to Mr. F. E. Taylor, house surgeon.

A married man, aged twenty-five years, was admitted to the Leeds General Infirmary under the care of Mr. Littlewood on June 9th, 1897, on account of pain and a pulsating tumour in the left popliteal space. He stated that he was engaged as a tailor's presser and stood all day at a table and used with his right hand an iron weighing 24 lb; whilst doing so he had the left leg constantly extended and in advance of the right. He was engaged to do "piece-work" and when in regular employment worked about twelve hours a day. For two months previous to the onset he had been working for fourteen or fifteen hours a day through overtime. The symptoms commenced six weeks before admission. On returning home from his day's work he began at that time to have shooting pains at the back of the left knee and down the leg. The pain was at first slight and appeared in the evenings only. Little notice was then taken of the pain as it was thought to be due to rheumatism and the leg was daily rubbed with some embrocation. The pain gradually increased in severity so that at the end of a week he consulted Dr. Gordon Sharp to whom Mr. Littlewood is indebted for the notes of the case until the time of the patient's admission to the infirmary. When first seen by Dr. Sharp the patient complained of pain in the left popliteal space. He was treated as a case of rheumatism as nothing could be found on examining this region. He was seen a week later when a faint but distinct pulsation could be made out. He was advised to stay in bed, but this he refused to do—in fact he kept to his work (not working overtime) until June 3rd, but he then consented to stay in bed. A few days before this a pulsating swelling could be made out and over this was heard a harsh continuous murmur. From the 3rd until the time of his admission to the infirmary on the 9th he remained in bed. During this time he suffered greatly from pain and the swelling increased in size.

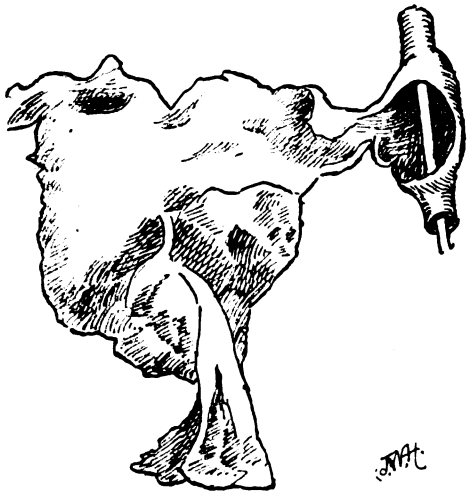
On examining the left lower extremity a pulsating tumour was visible at the back of the knee distending the popliteal space. The circumference of the limb round the middle of the patella measured 16 in., the similar measurement of the other limb being 14 in. The pulsation in the tumour was

[1] Traitement des Anévrysmes externes en général et en particulier. 1839.

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very distinct both to touch and sight. It was expansile in character. A loud bruit could be heard over it. Pressure on the femoral artery obliterated both the pulsation and the bruit. The swelling was fixed and the skin, which was of normal appearance, was freely moveable over it. The left leg was distinctly warmer than the right. The knee was kept semi-flexed. There was no evidence of arterial disease elsewhere and the heart appeared to be normal. There was no history of syphilis. After admission it became necessary to administer morphia every night on account of pain.

An operation was performed on June 15th. The patient was placed in the prone position and ether was administered. An Esmarch's tourniquet having been placed on the upper part of the thigh an incision about eight inches long was made over the whole length of the popliteal space beginning at its upper limit on the inner side and continued downwards along the middle of the ham. The superficial and deep fasciæ were divided and the internal popliteal nerve was drawn outwards by means of a retractor. The muscles forming the boundaries of the space were then separated and were held aside by means of large retractors so as to expose fully the aneurysmal sac. An attempt to completely dissect out the sac failed owing to the thinness of its walls and in one part it appeared to have become diffuse. The sac was accordingly laid freely open and its contents were turned out. The artery above the sac was then cleared for a short distance, ligatured with moderately fine silk, and divided near the sac. The aneurysmal part was then dissected out from above downwards and a portion of the vessel below the aneurysm was exposed, ligatured, and divided. The aneurysmal portion of the vessel and the greater part of the sac were now removed. All clots and any remaining shreds of the sac were then cleared out of the space and the parts were washed out with some hot solution of biniodide of mercury and made thoroughly dry. The wound was closed with silk-worm gut sutures without any drainage and was dressed with iodoform and cyanide gauze. The whole limb was enveloped in a thick layer of cotton wool and placed between hot bottles. Recovery was uninterrupted. After the operation the pain in the leg entirely disappeared and the patient slept well without morphia being administered. On the third day pulsation could be felt in the posterior tibial artery. On the tenth day the wound was dressed and was found to have healed throughout; the alternate stitches were removed and two days later the remainder. On the fourteenth day the patient



The figure represents the portion of vessel and as much of the sac as was removed in one piece with it.

got up and he left the hospital on July 3rd, eighteen days after the operation. He was shown at the meeting of the Leeds and West Riding Medico-Chirurgical Society on Nov. 5th and was then quite well having returned to his work for some weeks.

The portion of the vessel removed measured about two inches in length. The coats of the vessel where divided looked healthy. The aneurysm appeared to be fusiform, becoming sacculated in its posterior half. The opening into the sac measured about an inch in the vertical and half an inch in the transverse direction. In size the aneurysm was about as large as a goose's egg. The sac was partly filled with dark soft clot; the walls were very thin and in one part appeared to have given way.

Remarks by Mr. LITTLEWOOD.—I am recording this case of popliteal aneurysm as additional evidence in favour of treating aneurysm in accessible regions by the old operation somewhat modified—i.e., the removal of the diseased part—in addition to laying open the sac and tying the vessel above and below. In THE LANCET of Nov. 17th, 1894, there is a paper of mine on this subject with a record of two cases, one of the superficial femoral and the other of the popliteal. Reference is made in this paper to a case of traumatic aneurysm of the ulnar artery treated in February, 1891, by completely dissecting out the sac. Since then I have removed three others: (1) aneurysm of the radial artery at the back of the wrist[2]; (2) diffuse popliteal aneurysm[3]; and (3) the present case. I feel convinced that in the majority of cases this method of treatment is the most satisfactory to adopt. In the case recorded above I soon discovered that it was impossible to remove the sac intact, so without any delay I opened it and turned out the clot. This at once enabled me to find the artery at the upper part of the sac and facilitated its separation, ligation and division. Having done this it was not at all difficult to separate the sac from the surrounding structures and to remove it after ligaturing and dividing the vessel below. In my former cases I feel I have wasted time in attempting to remove the sac intact. Except in the two cases of traumatic aneurysm I have never succeeded. I consider that the attempt causes delay and increases the difficulty of the operation. I now think it better to follow Guattani and lay open the sac before attempting to ligature the vessel. It has been urged by some surgeons that it would be better to follow his method more closely and be content after ligaturing the vessel above and below not to remove the aneurysmal portion. It appears to me that the removal does not make the operation more difficult and there are obvious advantages in getting rid of it. In THE LANCET review of the work of the year 1894 my cases are referred to and this method of excision of the sac is attributed to Antyllus[4]; apparently this is not correct. Antyllus ligatured the vessel above and below the sac; then opened it and turned out the clots but did not excise it. (Apparently none of the original documents of Antyllus can be found.) My friend and colleague Mr. Moynihan, has very kindly furnished me with the following extract bearing on this point from the writings of Oribasius, whose chief work was discovered in the Vatican in 1825. Oribasius (fourth century) quotes Antyllus as saying: "We operate upon aneurysms of the extremities and the head in the following manner. If the aneurysm be by dilatation make a straight incision through the skin in the direction of the length of the vessel and, drawing open the lips of the wound, divide with precautions the membranes which cover the artery. With blunt hooks we isolate the vein from the artery and lay bare on all sides the dilated part of the vessel. After having introduced beneath the artery a probe we raise the tumour and pass along the probe a needle armed with a double thread. Cut the threads near the needle so that there be two threads. Seizing then the ends of the one thread we gently draw it towards one of the two extremities of the aneurysm and tie it carefully. In like manner we also bring the other thread towards the other end of the aneurysm and tie this in its place. Thus the whole aneurysm is between two ligatures. We open then the middle of the tumour by a small incision and in this manner all which it contains will be evacuated and there will be no danger of hæmorrhage. To extirpate the dilated part between the ligatures is a dangerous operation."

[2] Brit. Med. Jour., Feb. 15th, 1896, recorded in a paper on a Method of Tendon Suture.
[3] Ibid., May 8th, 1897. Report of Leeds and West Riding Medico-Chirurgical Society.
[4] THE LANCET, Dec. 29th, 1894, Annus Medicus, p. 1546.

CARDIFF SEAMEN'S HOSPITAL.—At a meeting of the committee of the Cardiff Seamen's Hospital Building Fund, held on Dec. 6th, it was announced that the Cardiff Football Club had subscribed £100 and the Italian Government £20 towards the fund. About £90 will be received as the result of the recent reading by Sir Squire Bancroft.

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Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Adjourned Discussion on the Prevention of Enteric Fever.

A MEETING of this society was held on Dec. 14th, the President, Dr. HOWSHIP DICKINSON, being in the chair.

Dr. J. F. PAYNE in continuing the discussion said that the methods of combating the disease had been considerably modified of late years by the discovery of the typhoid bacillus, though its value as a factor was still uncertain since it had not yet been shown that it could communicate the disease to animals. He thought that it was not beyond the bounds of possibility that the organism might at one time exist as a saprophyte and only become pathogenic under given conditions, though this has not been proved and as a rule the disease originates from some previous case. He insisted on the importance of disinfection in the immediate environment of the patient and the disinfection not only of the fæces but also of the urine and the expectoration; he thought that undoubtedly the best method of disinfecting the fæces was to burn them, but the difficulties of carrying out such a method in private houses were considerable and he suggested that the mixing of the fæces with perchloride of mercury and hydrochloric acid was effectual. He then discussed the disinfection of cotton, linen, and woollen garments, &c.; the two former, he said, were easily disinfected, while the last was, he thought, hardly ever disinfected by the ordinary process of washing. He thought it probable that typhoid fever could be acquired in certain cases by inhalation.

Surgeon-Major-General JAMESON showed tables demonstrating the relative frequency and mortality of the disease in various countries. In Bermuda the disease is endemic and although in some stations by hygienic measures the disease seems to have decreased yet in others it seems to have advanced, but it is not in the places where the soil is waterlogged that it has increased but in the places where the dry-earth system is in use. This is well shown in his table, for it is in these places that the highest ratio occurs. He considered that flies were a definite agent in the distribution of enteric fever and they could not be disregarded by the advocates of the dry-earth system, and in this connexion it was most important to attend to the proper sanitation of the kitchen as it was a most difficult thing to keep food from becoming infected in this way. In practice he thought there was difficulty in using the Pasteur filter and he preferred the method of boiling, cooling, and aerating the water. He referred to the micro-organisms which were antagonistic to the typhoid bacillus and mentioned the experiment at Agra of inoculating the water with the Ghadi Ali bacillus during an epidemic of typhoid fever; the epidemic was stopped, but it should also be noted that the water used was at the same time boiled. The disease in India occurs (1) in young soldiers and recent arrivals; women and children suffer less than men; (2) in the frequent occurrence of isolated cases distributed over a wide area; and (3) at posts which in all probability are for the first time occupied.

Professor KANTHACK said that there were two points which he proposed to deal with—(1) source of supply, and (2) distribution of the bacilli in space. In regard to the first point it is commonly supposed that the bacilli exist in the urine and fæces only at the time of the disease. It has, however, been shown that the bacillus exists in the pus of abscesses formed during an attack and may even be found in abscesses some years after the attack. The typhoid bacillus has been shown to occur in the gall-bladder and may occur in this situation years after the attack as shown by Welch. How long the bacillus may remain in the fæces is still uncertain, but it has been shown in the case of cholera that the bacillus exists long after the motions have become solid and therefore it is not probably safe to regard a patient as free from infection as soon as he has recovered from the disease. With regard to the second point Lösener has found the typhoid bacilli in the superficial layers of ploughed lands and this has been confirmed by Pfeiffer and Kolle; they have also been found in conditions when typhoid fever could be excluded. There is then distinct evidence that the typhoid bacillus may thrive and multiply in the soil and from there may enter the water-supply. He thought that considerably more care should be exercised in the post-mortem room in the disinfection of the intestines, &c., removed from a case of typhoid fever.

Dr. SIMS WOODHEAD referred in the first place to the contamination of the water-supply. He thought that undoubtedly the cistern in private houses was an advantage to the community at large but a disadvantage to the family in particular, for although the cistern might be a source of infection to the family yet it afforded protection against the infection of the mains as it was impossible to keep the pressure in them constant. The outbreak of plague at Poona had shown that two methods were of service in checking an epidemic—viz., notification and inspection; and he referred to the recent Clifton epidemic as showing how an epidemic could be stopped by these methods. It was a comparatively easy matter to check an epidemic due to milk infection but a much more difficult matter to deal with one due to the infection of water. He thought that the constant and regular examination of the water-supply was most important as it gave an indication of a change of condition occurring in the supply. The serum test should be applied in all cases and it was of especial importance to obtain evidence in early cases of diarrhœa which are said to precede the outbreak of an endemic of typhoid fever. Metchnikoff has shown that the cholera bacillus may be present in the motions before an attack of cholera and it is not therefore improbable that the typhoid bacillus may be present in the intestines some time before the disease asserts itself. With regard to the organisms that are able to inhibit the growth of the typhoid bacillus there is still uncertainty, but as the typhoid bacillus grows under very similar conditions to the bacillus coli it is probable that where the bacillus coli flourishes there the typhoid bacillus will also flourish.

Mr. W. J. TIVY (Bristol) considered that both influenza and enteric fever had been endemic in Clifton during October and November. The cases of influenza had been of aberrant type and were accompanied with abdominal symptoms. In most of these cases the invasion was sudden and the temperature high, ranging from 102° to 104° F.; diarrhœa was present in many; there was, however, no splenic enlargement or eruption and the cases convalesced in from eight to sixteen days. None of his cases were submitted to Widal's test as according to his opinion the test is deceptive in cases unaccompanied by the usual clinical symptoms of enteric fever, and this view is supported by THE LANCET.[1] Dr. Davies, however, in his remarks before the society on Nov. 23rd, strongly advocated Widal's test as absolutely diagnostic in all doubtful cases and mentioned that in over seventy cases the diagnosis of enteric fever was made certain by it. During the time these cases of influenza were about a sudden and most serious type of enteric fever broke out and in these cases, too, the invasion was sudden; the temperature from the onset was high, from 103° to 105°; delirium was marked; there were severe pains in the limbs; diarrhœa was present in all cases; the rose rash was uncertain. Severe hæmorrhage occurred in many cases and there was splenic enlargement; in fact, after the first week there was no doubt they were enteric, therefore Widal's test was unnecessary. According to Dr. Davies both of these epidemics were enteric fever and as he showed at the last meeting could be traced to the milk-supply of a small farm having fifteen cows and giving 100 quarts of milk in the morning and 40 in the evening; this amount of milk is said to supply 65 large houses containing about 700 people entirely with milk and 81 houses partially; out of the total, according to Dr. Davies's own showing, 66 houses were not attacked through taking the alleged infected milk. Dr. Davies states that the outbreak was due entirely to rinsing the cans and tins, five in number, in impure sewage tainted water; no allegation is made that water was added to the milk. On the other side, the farmer, his wife and daughter who solely manage the dairy and have done so for years positively state that they always with their own hands rinse their cans and tins in boiling pump water only and that they never touch them with cold or unboiled water. The public analyst has not, it is understood, found typhoid bacilli in either the alleged infected water or infected milk and no case of enteric fever has been traced to the neighbourhood of the farm. It is said that on Nov. 20th, seven weeks after the first of these cases occurred, a labourer on the farm was found to be ailing though he had worked every day as usual and by

[1] THE LANCET, Dec. 4th, 1897, p. 1468.

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Widal's test alone, his blood was decided to be enteric. Mr. Tivy's own views are that there have been two epidemics in Clifton, one of influenza, in which many of the cases had abdominal symptoms. The second and most serious epidemic was one of severe enteric fever produced by sewage air poisoning owing to the utter want of ventilation of the main drains in Clifton and that owing to the prolonged drought in August, September, and October the drains were not properly flushed, and being ill-ventilated sewage air in volumes was forced back chiefly into the houses attacked, which stand on high ground and in close proximity to the large main sewer, which, after descending a steep declivity of about 270 feet, empties itself at all tides directly into the River Avon a short distance below the suspension bridge. The sanitary authorities flushed the drain at the end of October and through November and heavy rain fell and then the epidemic subsided. He believed that unless the main drains were ventilated and the sewage of Bristol and Clifton diverted entirely out of the Avon the present epidemic will be nothing to what will follow should there again be a prolonged drought.

Mr. ADAMS (Maidstone) referred to the diarrhœa which preceded the outbreak of the epidemic of typhoid fever at Maidstone and showed a chart demonstrating that there is no intermission between the preceding diarrhœa and actual outbreak or the epidemic of typhoid fever. The incidence of the usual autumnal diarrhœa is higher in men than in women, while in this attack of diarrhœa the number of women attacked is greater than the number of men attacked and the speaker attributed this to the fact that more women drink water. It is noteworthy that in the cottages near the supposed origin of the infection diarrhœa had been prevalent before the occurrence of a definite case of typhoid fever.

The discussion was again adjourned.

MEDICAL SOCIETY OF LONDON.

Cases of Cysts of the Pancreas treated by Incision and Drainage.

A MEETING of this society was held on Dec. 13th, the President, Dr. SANSOM, being in the chair. The President announced that he had received a letter from Dr. Robert Barnes enclosing £100 as a donation to the society to be applied in whatever way the council might think best.

Mr. ALBAN DORAN read a paper on a case of Pancreatic Cyst treated by Incision and Drainage, with Comments. The patient, a single woman, aged twenty-four years, was admitted into the Samaritan Hospital in May, 1897, on account of a prominent abdominal tumour which had been growing for over two years, in the course of which period she had two attacks of mental depression and spasmodic epigastric pains. The patient concealed these facts which were not obtained till after the operation. There was no positive evidence of injury. The urine was free from sugar. The tumour was prominent, fluctuating, and mobile, lying chiefly in the epigastric and left hypochondriac regions. An exploratory operation was performed as the diagnosis was uncertain and tapping was objectionable. The tumour proved to be a cyst occupying the lesser peritoneal cavity; the lesser omentum and stomach formed the front of its capsule and the transverse meso-colon was entirely below it. It was attached by a broad base to the body of the pancreas near the head and was sutured to the abdominal wound and drained. The cavity contained 44 oz. of a greasy yellow fluid; after draining a clear secretion with amylolytic qualities escaped till the middle of October when the fistula closed. The secretion never irritated the skin though the integuments were naturally sensitive in this patient. Mr. Doran dwelt on the chief features of this case in relation to over a hundred already published. These cysts may occur at any age. One in an infant six months old was recorded by Railton and another in a patient seventy-six years old by Stieda. Much stress was laid on the surgical importance of defining peritoneal relations and the exact attachment of the cyst during the operation. The cyst may lie in the lesser peritoneal cavity or between the folds of the transverse meso-colon or in the general peritoneal cavity. When it occupies the lesser peritoneal cavity, as in Mr. Doran's case, it has probably burst through the peritoneum in front of the pancreas. This would account for the complete freedom of the ascending layer of the transverse meso-colon which is found entirely below the cyst in many of these cases. When a pedicle could be formed, even if it included the tail of the pancreas itself, total removal of the cyst was justifiable. Removal of a sessile cyst on the other hand involved risk of damage to the splenic and other large vessels and to small arteries and veins in the friable pancreatic tissue. The statistics of drainage in the treatment of sessile cysts seemed very satisfactory. Owing to the situation of the cyst in Mr. Doran's case it could not have been drained through the loin. Aspiration and tapping for diagnostic purposes are both perilous and seeking for a calculus during the operation is not without danger.

Dr. ROLLESTON and Mr. G. R TURNER contributed the notes of a case of Peri-Pancreatic Cyst. The patient, a man, aged thirty years, came under observation with a history of epigastric pain of six months' and jaundice of three months' duration; the fæces had been clay-coloured for five months. The skin was deeply jaundiced and itching was a prominent symptom. In the abdomen there was a tense tumour separated from the liver by a band of resonance. From its association with jaundice the tumour was thought to be probably a dilated gall-gladder. Laparotomy, performed by Mr. Turner, showed, however, that it was a cyst arising from the neighbourhood of the pancreas. It contained 30 oz. of dark-brown fluid which owed its colour to methæmoglobin and was not due to bile; a considerable amount of blood-clot separated on standing. Dr. Arthur Latham, who undertook this analysis, found no evidence of the presence of pancreatic ferments. The cyst was tapped and drained and the patient made a good recovery. The cyst was certainly peri-pancreatic, but in the absence of any positive evidence of its being pancreatic it was impossible to say that it was not a hæmorrhage cyst such as might result from injury or pancreatitis. There was, however, no history of traumatism. The association with jaundice was remarkable and since it passed away after tapping and draining it was presumably due to pressure exerted on the bile-ducts by the tense cyst. The fact that the fæces were noticed to be clay-coloured two months before the onset of jaundice might be explained by supposing that the flow of pancreatic juice into the duodenum had been interfered with. Dr. T. J. Walker, of Peterborough, had described a similiar condition of the fæces without jaundice due to obstruction of the pancreatic duct.

Mr. MALCOLM read the notes of a case of Multilocular Cyst of the Tail of the Pancreas which simulated hydronephrosis of the left kidney. Laparotomy was performed and the tumour removed. There was much difficulty in arresting hæmorrhage, but this was eventually done so completely that the wound was closed without drainage. Convalescence was uneventful. The tumour was shown and its contents were described as strongly amylolytic. Mr. Malcolm said that according to Mr. Doran only some dozen cases of complete removal of these cysts were on record, a case recorded by Mr. Clutton and the present one being the only ones operated on and published in this country. A case published by Dr. Malcolm Mackintosh[1] was quoted as showing one mode of death with very obscure and misleading symptoms which might occur when a pancreatic cyst was not treated surgically. The possibility that a tumour might be a pancreatic cyst was urged as as pecial reason for making an exploratory incision.

Mr. G. R. TURNER said that in addition to the case brought forward on that occasion he had recorded another. In both the cyst wall was very thin and difficult to distinguish from peritoneum. Enucleation of the cyst would have been impossible and he agreed with Mr. Doran that it was improper to attempt it in cases such as his. When the cyst was on the left side possibly enucleation in the way Mr. Malcolm had adopted might be advisable. He had drained both of his cases from the front without difficulty. In the first case some hard material was felt at the bottom of the cyst the nature of which was not clear; there was no evidence of malignant disease and the patient was now well four years after the operation. He thought that both of the cysts were in the lesser peritoneal cavity projecting between the stomach and the transverse colon.—The PRESIDENT said that the papers were very valuable as giving fresh data for the diagnosis of these puzzling tumours. They did not strongly support the view that he had always held that these cysts were usually traumatic.—Dr. C. W. CHAPMAN had seen one case of pancreatic cyst of doubtful origin in a lad aged ten

[1] THE LANCET, Oct. 24th, 1896, p. 1149.

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years. The cyst was incised and drained by the late Mr. Leopold Hudson and the patient was now in perfect health.—Dr. DE HAVILLAND HALL mentioned a case of pancreatic cyst in which jaundice was one of the first symptoms. As this did not clear up Mr. Pearce Gould cut down and found a cyst of the head of the pancreas.—Mr. BATTLE asked if there were any facts showing what liability there was to relapse and as to the efficacy of drainage from the loin. He mentioned a case that he had seen with Dr. Hector Mackenzie of enlargement of the liver, probably syphilitic, in which a swelling appeared in connexion with the head of the pancreas. As this did not disappear under iodide of potassium he explored and found a mass there the nature of which could not be ascertained, but it entirely disappeared and was probably gummatous.—Mr. DORAN, in reply, said that the hard material mentioned by one or two speakers as affecting the head of the pancreas was probably pancreatitis, in some cases possibly traumatic. A posterior incision had been adopted by Mr. Pearce Gould in his first case. He thought that the cyst removed by Mr. Malcolm very closely resembled the retro-peritoneal cysts, probably congenital, which were sometimes met with in front of the kidney.—Dr. ROLLESTON, in reply, said that in three fatal cases of acute pancreatitis which he had seen there had been localised effusion into the lesser peritoneal cavity. Possibly if they had recovered this effusion of fluid might have become encysted. Enlargement of the head of the pancreas might be due to malignant disease, but it was also common in any cases of inflammation about the pylorus or duodenum from localised pancreatitis, and Dr. Hale White had shown that the head of the pancreas might be so much enlarged as to be palpable in consequence of back pressure from cardiac valvular disease.—Mr. MALCOLM, in reply, said that the cyst in his case was very like the retro-peritoneal cysts referred to by Mr. Doran, but it was very closely associated with the tail of the pancreas and large vessels entered it from that body, so that he had little doubt that it was a true cyst of the pancreas.

CLINICAL SOCIETY OF LONDON.

Acute Intestinal Obstruction; Death from Intestinal Toxæmia.—Vesical Calculus as a Result of Injury of the Bladder during the Operation for Radical Cure of Hernia.—Cases of Intussusception.

A MEETING of this society was held on Dec. 10th, Mr. LANGTON, the President, being in the chair.

Mr. PEARCE GOULD read a paper on a case of Acute Intestinal Obstruction relieved by operation in which death occurred on the ninth day from Intestinal Toxæmia. The patient was a man, aged forty-three years, who developed symptoms of acute intestinal obstruction after receiving a strain at his work. On the fourth day the abdomen was opened and a coil of small intestine was found in the pelvis adherent and twisted on itself. This was liberated and at once the fluid intestinal matter passed into the collapsed lower ileum and cæcum. Next day a small motion was passed and two days later flatus passed freely and also a large formed motion showing that the obstruction was relieved. For three days after the operation intestinal matter regurgitated into the stomach and was removed by washing out the stomach on three occasions. The patient took fluid food well and there were no signs of peritonitis, but still the urine continued to give a very dark indican reaction with nitric acid and gradually he passed into a condition of stupor, deepening into coma, accompanied by a slightly quickened pulse, quickened, deep, and noisy respiration, a subnormal temperature which was lower in the rectum than in the axilla, profuse diarrhœa, the motions being of a peculiar odour and of a grey-green colour, and the skin was covered with a dark erythematous rash. These symptoms first reached their maximum on the sixth day after the operation; four pints of saline fluid were injected into a vein and immediately all the symptoms passed away. He relapsed next day and saline fluid was again injected with marked benefit. Two days later he again became unconscious and died comatose in spite of a third injection of salt and water. All this time the urine contained a great excess of indican and Dr. P. A. Young, who analysed the urine, found that another chromogen was present which was converted into dark brown pigment by [illegible]ation but was not melanin. Mr. Gould pointed out that [illegible]ymptoms were toxic and their slow onset, coupled with the marked instantaneous effect of saline infusion and the succeeding relapse, he took as showing the poison was a chemical one which only exerted its influence when in a certain degree of concentration.—Mr. A E. BARKER mentioned the case of a woman whose abdomen was opened in consequence of intestinal obstruction. The cause was a growth which could not be removed and intestinal anastomosis was performed. A few days afterwards she developed an erythematous rash which he believed was due to poisonous substances absorbed from the bowel.—Dr. P. A. YOUNG called attention to the toxic substances contained in normal urine which when injected into the blood caused acceleration of the heart, pyrexia, frequent micturition, and death.—Dr. COLMAN mentioned a case which was under the care of Mr. Grubb in which intestinal toxæmia caused not coma, as in the preceding cases, but mental excitement. The patient was a woman, aged about forty years, who had a large fæcal impaction in the ascending colon. Under treatment the mass became softer and she began to pass fæcal material in considerable quantity. But on the third day she became delirious with no knowledge of her surroundings, with hallucinations of hearing and hallucinations of vision which took the form of animals running about her bed, which did not terrify her but amused her. There was no history of alcohol or of the administration of belladonna. Her temperature was low and her pulse was quiet. By means of frequent enemata the bowel was completely emptied and the delirium entirely passed off. Dr. Colman remarked that erythematous rashes were not infrequently met with in children after the administration of enemata.—Mr. EASTES observed that in chronic cases there was often ulceration above the seat of the obstruction and it occurred to him that toxic substances might be absorbed through such a raw surface which would not penetrate the normal intestinal wall.—Mr. MAKINS asked whether the urine or the blood had been examined for micro-organisms. He thought that the rash was more likely to be of bacterial origin than due to chemical products. It was remarkable that the pulse should remain so steady if the condition was one of toxæmia.—Mr. GOULD, in reply, said that neither the blood nor the urine had been examined for micro-organisms. He thought that the evidence as a whole favoured the view that the condition was caused by a chemical poison rather than by living organisms.

Mr. LOCKWOOD described a case in which he performed Lithotrity for the removal of phosphatic calculi which had resulted from an injury to the bladder some months previously. The patient had been operated on in June, 1895, for the radical cure of a right inguinal hernia. He was, however, rejected for the army because of another incomplete inguinal hernia of the left side. In November, 1895, this was operated upon by Mr. Lockwood. Soon afterwards the patient complained of discomfort in the bladder and it was ascertained that at the first operation a finger-like extension of the bladder had been opened in dissecting away a mass of fat near the neck of the hernial sac. The opening had been closed by silk sutures. Pus afterwards appeared in the urine and a cystoscopic examination revealed the presence of two phosphatic calculi. Mr. Lockwood removed these by lithotrity and the patient soon recovered. No remains of ligatures could be found in the débris of the calculi. It was suggested that in future such injuries should be sutured with sterilised catgut inserted by Lembert's method.—Mr. BARKER asked whether there were many cases on record in which calculi had formed after ligature of the bladder in the ordinary way in consequence of the ligature forming the nucleus of a calculus. He had difficulty in understanding how the sutures should find their way into the cavity of the bladder.—The PRESIDENT said that hernia of the bladder was more frequent than was believed and was more common in men than in women and usually occurred on the right side. The relation of the peritoneum to the displaced organ was very variable. The etiology of the condition was obscure.—Mr. PEARCE GOULD related the case of a woman on whom he operated for a small swelling in the crural canal which proved to be a subserous lipoma. He dragged firmly on it, ligatured it, and cut off the end. Extravasation of urine followed and no doubt when dragging on the fat he had ruptured the bladder wall. Mr. Pearce Gould remarked that in this case the patient was a woman and the hernia was on the left side.—Mr. MAKINS thought that there was a tendency for any ligature in the pelvis to pass into the

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bladder just as a ligature applied to the outside of the intestine usually found its way into the lumen of the bowel.—Mr. LOCKWOOD replied.

Mr. A. E. BARKER read a paper on Fifteen Consecutive Cases of Intussusception in eight of which injection failed, and subsequent events showed that no less than twelve of the fifteen could not possibly have been reduced by injection when first seen. He concluded, therefore, that except in the rare instances in which the case was seen within a few hours of the onset of the symptoms it is safest not to employ injections but to proceed at once to abdominal section.—Mr. LOCKWOOD said that after twenty-four hours the immediate performance of laparotomy gave the patient the best chance; after that time injection rarely did good and might do harm.—Mr. E. W. ROUGHTON said that his experience was limited to one case and in that he was able to open the abdomen within twenty-four hours of the commencement of the symptoms with a good result. The recorded cases appeared to show that the chances of recovery were in inverse proportion to the length of time that the symptoms had lasted and there were very few cases which recovered if the symptoms had lasted more than two days, and more recovered when operated on without previous injection than when injection had been tried, perhaps because of the delay involved.—Mr. BARKER, in reply, said that any liability to ventral hernia might be minimised by adopting a very small incision. In most cases an incision large enough to admit a single finger was sufficient. He should hesitate to draw conclusions from collation of isolated cases from the medical journals as only selected cases were published. A consecutive series of cases was more reliable and instructive.

OPHTHALMOLOGICAL SOCIETY.

Foreign Bodies lodged in the Eye and Orbit.—Mules's Operation for Ptosis.—Non-recurrent Orbital Sarcoma.—Solid Œdema of the Conjunctiva.—Traumatic Cyclitis.—Specimens of Pseudo-glioma.—Secondary Sarcoma of the Orbit.—Chip of Steel in the Vitreous for Eighteen Months.—Perforating Wound of the Eyeball.—Recurrent Membranous Conjunctivitis.

A CLINICAL meeting of this society was held on Dec. 9th, the President, Mr. H. R. SWANZY, being in the chair.

Mr. HARTRIDGE showed a case of Leaden Pellet lodged in the Eye, with skiagraph. The patient was shot in the right eye by a pellet from an air gun. When seen two hours after the accident there was a large linear wound of the cornea with prolapse of the iris and hæmorrhage into the anterior chamber. There was no perception of light. Tension – 1. The prolapsed iris was cut off. Two days later, after the blood in the anterior chamber had cleared up, it was found that the lens was wounded. A skiagraph was taken, the plate being placed on the right side of the head and the Crookes's tube on the left so that the x rays passed through the head from left to right. The exposure was fifteen minutes. The result showed that the pellet was lodged about the middle of the orbit. The eye was excised as it was obviously lost, and the pellet was found lodged in the globe.—Mr. J. F. BULLAR also showed a Skiagraph of a Fragment of a Percussion Cap in the Orbit.—Remarks were made by the PRESIDENT, Mr. BICKERTON, Mr. JOHNSON, Mr. TAYLOR, Mr. POWER, and Mr. HOLMES SPICER.

Mr. W. J. CANT and Mr. A. S. MORTON each showed a case of Ptosis treated by Mules's operation which consists in the insertion of a wire loop from the free edge of the lid beneath the skin to the eyebrow. Mr. Cant's case was one of congenital ptosis of one eye. When the frontalis muscle was put into action the lid was raised by means of the loop so as to expose the pupil. Mr. Morton's case was one in which ptosis had been present in the right eye for twenty years and in the left eye for three years. Referring to the difficulty of tightening the suture Mr. Morton had had a communication from Mr. Mules in which the latter said he used silver wire as stout as the lid would bear and before using it he heated it in a spirit lamp to make it less brittle. After inserting the suture from the free edge of the lid to above the eyebrow he allowed it to remain five or six days before tightening it. In order to tighten it the wire near the ends was grasped with lead-lined forceps while the ends were twisted. Mr. Morton had also heard from Dr. Tatham Thompson of his experience which was entirely favourable. In one of his cases after two months' use a blow on the eye caused the wire to snap but the ptosis was not so bad as it had been before insertion of the suture, a certain amount of cicatrisation of the subcutaneous tissue of the lid having been set up.

Mr. MORTON showed a case of Non-recurrent Orbital Sarcoma. The patient had had a sarcoma extending from the upper outer part of the orbit to its apex. The whole of the contents of the orbit were removed and chloride of zinc paste was applied. After fourteen months there was no sign of recurrence.

Mr. HOLMES SPICER showed a case of Solid Œdema of the Conjunctiva. The patient was a woman, aged twenty-one years. The condition was present in the right eye only; it was confined to the ocular conjunctiva; it had been noticed for about three or four months. The only apparent cause was an obstruction to the return of lymph from the eye produced by suppuration and subsequent cicatrisation in the lymphatic glands of the neck two years before. On the affected side the preauricular and cervical glands had both suppurated, and on the other side the cervical glands only. There was no proptosis of the eye; the vision was normal and the retina and its blood-vessels appeared normal. There was no sign of disease in the nasal passages.—The PRESIDENT thought the case was a very rare one.—Mr. ADAMS FROST thought it was similar to two cases shown at the society some years before by Mr. Donald Gunn which were described as syphilitic infiltration of the conjunctiva. In those cases he thought the preauricular glands were also enlarged.—Mr. SILCOCK referred to a case which he had published in the Transactions of the society similar to this one; he had incised the conjunctiva and scraped granulation tissue from Tenon's capsule.—Mr. EALES spoke of a case of similar appearance which he had seen.

Mr. MARSHALL showed a specimen of Traumatic Cyclitis, in which the injury had been caused by a piece of wood; there was a dense cyclitic membrane dividing the eye into two cavities.

Mr. MARSHALL showed one specimen of Pseudo-Glioma, and Mr. ERNEST CLARKE another. In the former the child was seven weeks old, there was a white mass seen behind the lens, and the tension of the eye was raised. After excision the case was found to be one of pseudo-glioma. Mr. Clarke's case was one of bilateral pseudo-glioma, in which there was a record of pseudo-glioma occurring in two other members of the family.—Mr. TREACHER COLLINS said that he would have been inclined, apart from the family history, to have regarded this as a case of congenital membrane in the vitreous.

Mr. RIDLEY showed a case of Secondary Sarcoma of the Orbit. There were all the signs of a tumour of the orbit, and there were also tumours of the scalp, of the supra-spinous fossa, and of one fibula.—Remarks were made by Mr. JESSOP, Mr. EALES, Mr. COLLINS, and Mr. NETTLESHIP.

Mr. LAWS showed a patient with a Chip of Steel in the Vitreous which had been there for eighteen months. There was no sign of irritation; the body in the vitreous was encapsuled; there were several red streaks on the lens and fine red particles all over the surface of the lens; the lens remained clear for fifteen months but had slowly become opaque in its posterior parts.

Dr. BRAILEY showed a case of Perforating Wound of Eyeball. The patient's right eye had been struck by a piece of wood. There had been a wound of the cornea and prolapse of the iris; the prolapse had been removed. Without any apparent cause the vision of the other eye which had remained quite good for two months and a half was beginning to deteriorate and had fallen from $\frac{6}{6}$ to $\frac{6}{18}$. There was no sign of sympathetic inflammation and nothing to account for the defect.

Mr. BATTEN showed a case of Recurrent Membranous Conjunctivitis. The membrane had been removed several times but always recurred; it had the appearance of a superficial burn. The bacteriological examination had not been completed.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.

Exhibition of Cases and Skiagrams.

A MEETING of this society was held on Nov. 11th, the President, Dr. DAVID FAIRWEATHER, being in the chair.

Dr. SCLATER JONES read the notes and showed Skiagrams

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of a case of a child in whom a shilling had remained lodged in the cardiac end of the œsophagus for six months. The coin was successfully removed by an umbrella probang.

Dr. SYERS showed two cases of Lichen Ruber Planus in female patients aged thirty-four years and twenty-six years respectively. In the former the rash had been present for two months and in the latter for five months. The distribution in both cases was typical and both patients were in good general health.—Dr. SYERS also exhibited a well-marked case of Dermographia. The affection first manifested itself at the age of thirteen years and had existed for four years. The slightest injury or irritation of the skin produced marked erythema followed by the development of urticarial wheals and by a sensation of burning and tingling. There was no connexion between the diet and the appearance of the eruption. With the exception of a tendency to constipation the health had always been very good.—A fourth case shown by Dr. SYERS was a man, aged fifty-two years, from whose left pleural cavity several ounces of chylous fluid had been obtained. Dr. Syers expressed the opinion that it was a case of chylothorax due possibly to tuberculous or to malignant disease of the lung and pleura which had involved a portion of the thoracic duct.

The Secretary (for Dr. MALCOLM) showed a case of a child, aged ten years, who had been treated for Torticollis by division of both heads of the Left Sterno-cleido-mastoid through open Wounds. The patient was treated subsequently to the operation for six weeks by a traction apparatus made of plaster-of-Paris and pieces of drainage tube and now four and a half months after the operation there was no recognisable deformity.

Mr. CLEGG exhibited the following cases: (1) Tuberculous Disease of the Testicle in a child eleven months old—the vesicula seminalis of the same side contained a large deposit of tubercle; (2) a very pronounced case of Hallux Valgus; (3) a case of Syphilitic Arthritis of the Knee-joint; and (4) one of Extensive Tertiary Syphilitic Ulceration of the Lower Limb.—Dr. CLEGG also showed a specimen of Black Urine from a patient who had swallowed four ounces of Calvert's No. 5 carbolic solution.

Mr. GORING and Mr. MOWER WHITE showed a female patient, aged fifty-three years, who was admitted to the hospital suffering from the effects of a gumma of the cerebral cortex involving the upper limb "area." Jacksonian fits followed by dementia and signs of cerebral compression occurred after admission and to relieve these symptoms a large piece of very dense and greatly thickened bone was removed. The dura mater, which was involved in the gumma, was not opened. The improvement immediately after the operation was very marked and subsequently large doses of iodide of potassium led to recovery.

The PRESIDENT, Dr. BAILEY, and others took part in the discussion which followed the exhibition of each case.

MANCHESTER MEDICAL SOCIETY.

Exhibition of Cases.—Henoch's Purpura.

A MEETING of this society was held on Dec. 1st, Dr. GRAHAM STEELL, President, being in the chair.

Dr. ERNEST S. REYNOLDS showed the Photograph of a man, aged thirty-five years, suffering from typical Pseudo-hypertrophic Paralysis with well-marked enlargement of various muscular groups.—Dr. REYNOLDS also showed a boy, aged eighteen years, who was the son of the sister of the above patient. This boy also was suffering from the same disease, but at first sight without enlargement of the affected muscles. More careful examination showed, however, that the calves, the buttocks, the deltoids, the forearm muscles, and especially the infraspinati were enlarged and increased in hardness. All these groups of muscles were very weak and the patient had the typical "waddling" gait. The facial muscles were unaffected.

Mr. J. E. PLATT showed a patient, a young woman, aged nineteen years, who had had almost the whole of the scalp torn off as a result of a machinery accident in July, 1896. The detached portion had extended from the occipital protuberance to within one inch of the forehead. The raw surface was afterwards covered up by Thiersch's method of skin-grafting which was carried out in two stages at periods of a month and six weeks after the accident respectively. Three months after the injury the whole surface was healed. Twelve months later the grafted surface remained quite sound and had regained a considerable degree of tactile sensibility. The patient almost invariably gave correct answers when asked whether any part of the scalp was being touched and there was very fair power of recognising two points as distinct when the scalp was touched in two places a short distance from each other. The method of performing the operation, the precautions necessary to ensure success, and the cases which are suitable for this method of treatment were briefly alluded to.

Dr. DRESCHFELD made some observations on the symptoms, pathology, and treatment of Henoch's Purpura, cases of which, though not under this name, have been repeatedly observed and described in English journals. The disease occurs much more frequently in children and the principal symptoms are: (1) pain in and near a joint; (2) a purpuric or erythematous eruption; (3) abdominal pain accompanied by vomiting and diarrhœa; and (4) hæmorrhagic nephritis. In typical cases all these symptoms are present; in other cases one or other of the symptoms may be absent. Relapses are very common. Referring to each group of symptoms it must be noted that the pain is often the first symptom noticed; it is often only slight and transient and may affect larger and smaller joints; often there is also some œdema near the joint. The skin eruption occurs early in the disease and may take the form of erythema nodosum, erythema circinatum, or urticaria; hæmorrhages in the affected patches may take place and lead to sloughing ulcers; purpuric spots may appear on the lower and upper extremities and on the face; these eruptions may last for some days, then disappear and reappear; this may occur several times. The gastro-intestinal troubles occur often at a later period and resemble very much the gastric crisis of locomotor ataxy. The vomiting may be very persistent, the vomited matter consisting of mucus and bile; at other times blood is vomited. Diarrhœa may be present and become troublesome and the stools contain blood; the abdominal pain is often very severe; the patient feels quite exhausted and may even become collapsed. Hæmorrhage from the kidney has been noticed in all the nine cases observed by Dr. Dreschfeld and appears to be very common in this disease; the urine beside the blood shows hyaline, granular, and epithelial casts; often after the hæmaturia stops the urine still contains for weeks albumin and casts; relapses of the hæmaturia are not uncommon. Besides the hæmaturia other hæmorrhages (epistaxis, hæmoptysis, retinal hæmorrhages, melæna, &c.) have been noticed. The temperature may be normal throughout the disease, but occasionally there is remittent or intermittent pyrexia. The spleen in several of the cases observed was found to be slightly enlarged. Endocarditis, pericarditis, and pneumonia have occasionally been observed as complications. The prognosis is on the whole favourable. Death may take place from the excessive renal hæmorrhage, or from cerebral hæmorrhage, or from acute uræmia; some cases pass into chronic Bright's disease as described by Osler. Quinine has been found very useful and turpentine has in several cases checked the renal hæmorrhage effectively. In a case published by Sansom with very severe hæmorrhage the patient recovered after the administration of half-drachm doses of sulpho-carbolate of soda. The disease belongs to the group of purpuric diseases and is probably due to a bacillus, as shown by the observations of Letzerich, Tizzo, Babes, and others. Bacteriological examination of the blood in two cases observed by Dr. Dreschfeld gave negative results.—Dr. EDGE made some remarks on the disease which has been described by Mr. Hutchinson under the name of "gouty hypertrophic acrodermatitis" and of which Dr. Crocker in conjunction with Mr. Campbell Robinson has published a case under the title of "erythema elevatum diutinum." He also showed a girl, aged eighteen years, who presented the disease in a well-marked form. He referred more particularly to cases occurring in young people which both these writers consider to constitute a type more or less distinct from those found in men past middle life. Dr. Edge said that his case strongly supported the suggestion of Dr. Judson Bury, who was the first to record a case in a young person, that this disease is a disturbance of nutrition due to altered innervation of the vaso-motor system.

Dr. ARTHUR HELME mentioned a case of Acute Ascending Paralysis during Lactation.

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LIVERPOOL MEDICAL INSTITUTION.

Changes in the Spinal Cord.—Exhibition of Specimens.

A MEETING of the Pathological Section was held on Dec. 9th, Mr. F. T. PAUL being in the chair.

Dr. A. W. CAMPBELL read a note on the Changes in the Spinal Cord in Pernicious Anæmia. The patient was a middle-aged female. The spinal cord in the sacral region was healthy. In the lower part of the lumbar enlargement two small patches of absolute sclerosis appeared in the centre of the posterior columns, one on either side of the posterior median fissure. In the dorsal region the field of sclerosis gradually increased in size, but remained more or less confined to the postero-internal columns, the whole of which it affected with the exception of a zone of fibres at the periphery and another zone adjoining the posterior commissure. In the cervical region the change was most extensive, not only the postero-internal, but also to a certain extent the postero-external columns being involved. As in the dorsal region, the sclerosis was separated from the periphery and from the grey commissure by a zone of normal fibres and at no point in the cord did the sclerosis reach the posterior cornua. The remaining fields of the cord were healthy. The sclerosis was traced up to the nuclei of the columns of Goll and Burdach, but the cells of these nuclei had undergone no important change nor were the internal arciform fibres atrophied. The posterior spinal roots and some posterior root ganglia and peripheral nerves which were examined presented no noteworthy alteration. The literature on the subject was referred to and theories concerning the origin of the spinal change were discussed. A lantern demonstration was given and microscopic specimens were shown.

Dr. WIGLESWORTH showed the following specimens:—1. Acute Pancreatitis. The investing tissues were thickened and brawny and the pancreas itself was enlarged, of a pale yellow colour, with diminished consistence, and microscopically there was great proliferation of small round cells alike in the investing tissues, along the trabeculæ and between the alveoli. The cells of the alveoli were blurred and in osmic acid preparations were laden with coarse black pigment granules. The gall-bladder was inflamed and contained fœtid semi-purulent fluid, but no other organ of the body was diseased. The specimen was taken from a man, aged fifty-three years, who died after two days' acute illness with vomiting, abdominal distension, and rapid collapse. 2. Hæmorrhage into the Pancreas. The pancreas was somewhat enlarged and acutely reddened for the middle third of its extent, which area was found on microscopical examination to be the seat of a sanguineous effusion beneath the capsule and along the trabeculæ. There were, in addition, several hæmorrhages consisting of black blood clot, each about 1 c.m. in diameter; these were situated beneath the capsule, chiefly towards the head of the organ. There were numerous hæmorrhages into the omental fat around the pancreas and also numerous areas of fat necrosis. The specimen was taken from a female general paralytic, aged thirty-seven years, who died after about three days' illness, with urgent vomiting, constipation, abdominal distension, and collapse. 3. Lymphadenoma of the Spleen. The spleen was enlarged to about three times its normal size, weighed fourteen and a half ounces, and exhibited scattered throughout its whole substance numerous whitish nodules varying from the size of a bean to that of a small shot, which were of very firm consistence. There were similar nodules in both lungs and the retro-peritoneal and mesenteric glands were much enlarged. The specimen was taken from a female, aged thirty-eight years, who had been gradually wasting and suffering from fever both of continuous and hectic type for several months.

Dr. J. HILL ABRAM described and exhibited a new Micro-organism which he found in the blood of a patient suffering from lymphadenoma.

Dr. J. E. DUTTON read a note drawing attention to the marked increase in the quantity of Iron in the Liver and Spleen in cases of malaria, there being five times the normal amount in the liver and ten times the normal amount in the spleen in two cases examined by him.

The following specimens were also exhibited:—

Dr. BRADSHAW: Tuberculous Suprarenals from a case of Addison's Disease.

Mr. KELLETT SMITH: Fibroma with Silk Ligature as Nucleus

Dr. WARRINGTON: Sarcomatosis of Ovary, Thyroid, Kidney and Intestine from a child.

Mr. NEWBOLT: (1) Carcinoma of the Tibia (Secondary?); and (2) Multiple Neuromata.

Mr. RUSHTON PARKER: Carcinoma of the Male Breast, Stomach, and Lymph Gland; Tuberculous Peritonitis, Macroglossia, and Nævi of Ear and Scalp.

Mr. THURSTAN HOLLAND: Radiographs.

Dr. BUCHANAN: Pinguecula (Epithelial).

Mr. F. T. PAUL: Sections of Early Human Embryos showing stages in the development of the Wolffian body.

Mr. PAUL, Professor BOYCE, Dr. WARRINGTON, Dr. BRIGGS, and Dr. LOGAN took part in the discussion.

MANCHESTER PATHOLOGICAL SOCIETY.

Exhibition of Specimens.

A MEETING of this society was held on Dec. 8th, Mr. C. E. RICHMOND, President, being in the chair.

The PRESIDENT showed: (1) a preparation of Myxo-Sarcoma of the Femur; and (2) a Mixed-celled Sarcoma apparently arising from the Antrum. This had given rise to tooth trouble and several teeth had been extracted. This procedure was immediately followed by rapidly growing tumours on the alveolus. The upper maxilla was excised but it was found impossible to remove all the new growth which rapidly recurred and the man died within a month of operation.

A rare and interesting specimen of Congenital Dilatation of the Colon was shown by Dr. A. T. WILKINSON.

A specimen of Molluscum Fibrosum and Fibro-lipoma of the Arm removed by Mr. Walter Whitehead was described by Mr. RAY, who pointed out that the growth extended from shoulder to wrist, and was almost entirely on the extensor surfaces. The main portion of the tumour depending from the forearm was coarsely ridged and pitted and had several degeneration cavities and one large suppurating cavity. On the inner and outer borders of the forearm were several pedunculated fibromata, which were shown to be connected with two of the cutaneous nerves of the forearm. From the shoulder to elbow, apparently independent of the molluscum growth, was a large fibro-lipoma. The entire limb weighed seventy and a quarter pounds immediately after operation, and the patient made a good recovery. The structure of several parts of the tumour was described and illustrated by micro-photographs, whilst another set of photographs was exhibited to show the patient, a male, thirty-two years of age, before and after operation. The growth was first noticed at about the age of seven years, the patient having sustained a fracture of the radius and ulna of this limb eighteen months previously. He presented no other growths elsewhere.

Dr. NATHAN RAW (Liverpool) described the pathological appearances and showed macroscopical and microscopical specimens of a Lung in which the Pleura was the seat of Acute Tuberculosis without any invasion of lung tissue. Very many and interesting points were suggested by this case, chiefly the etiology of pleurisy and the treatment of tuberculous pleurisy. Modern views did not admit pleurisy as due to cold, but cold might be a predisposing agent which facilitated the action of micro-organisms. If cold was the only cause of pleurisy a very large number of people who are constantly exposed to cold and wet would suffer from it. Dr. Raw thought the evidence at the present time all points to the fact that acute sero-fibrinous pleurisy is always of microbial origin, in a very large number of cases due to the tubercle bacillus, and in others occurring in the course of rheumatism, septicæmia, or other infectious diseases due to specific micro-organisms. The importance of carefully recognising the subsequent relation of acute pleurisy to tuberculosis of the lung is very great and especially so with regard to examining patients for life insurance. Dr. Raw also recommended that as much of the infected pleura as possible should be removed and scraped away under operations for empyemata which have been recognised as tuberculous.

Dr. PERCY R. COOPER and Dr. KELYNACK showed preparations of Syphilitic Disease of the Right Kidney. The specimen was removed post-mortem from a man, aged

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fifty-two years, who died after a long illness in which the most conspicuous symptoms were vomiting, neuralgic pain in the nerves of the right lumbar plexus, hæmaturia, wasting, and progressive enlargement of the kidney. No syphilitic history could be obtained. The organ was greatly enlarged, firmly fixed, of fibrous-like consistency, and microscopically presented a fibro-cellular structure. In the liver was a distinct gumma with much coarse cirrhosis in the parts adjacent. There was an extensive retroperitoneal expansion of the growth extending right across the vertebral column and into the pelvis.

Dr. KELYNACK exhibited a series of microscopic preparations illustrating the Forms and Relationships of the Various Growths met with in the Kidney. The collection included a number of specimens kindly lent by Mr. Paul, of Liverpool.

The following card specimens were exhibited :—

Mr. BURGESS: Congenital Absence of Anus, with Fistulous Communication between Rectum and Bladder.

Dr. DRESCHFELD: Mediastinal Sarcoma, with extensive Deposits in both Kidneys.

Dr. FOTHERGILL: (1) "Inclusion" Epithelioma of enamel-organ; and (2) Ovum in Condition of Fatty Degeneration.

Dr. FOX: (1) Congenital Atresia of Anus; and (2) Ulcerative Endocarditis.

Dr. HELME: Sessile and Pedunculated Submucous Fibroids of Uterus, removed per vaginam.

Dr. HARRIS: Gangrenous Stomatitis.

Dr. KELYNACK: (1) Perforated Duodenal Ulcer; (2) Healed Gastric Ulcer; and (3) Malignant Endocarditis.

Dr. LEA: (1) Series of Casts of Uterine Mucous Membrane; and (2) Three Specimens of "Missed Abortion."

Dr. LEECH: Unusual Form of Extensive Ulceration of Stomach.

Dr. STEELL: Preparations of Aortic Valvular Disease.

Mr. WOLSTENHOLME: Aneurysm of Renal Artery in the Horse.

Mr. WRIGHT: Osteomyelitis of Femur.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Serum Reaction of Enteric Fever.—Cyanosis in Convulsions.

A MEETING of this society was held on Dec. 1st. Dr. BATTY TUKE occupied the chair and thanked the society for the honour it had done him in electing him President.

Dr. J. W. MARTIN showed a case of Thyroid Hypertrophy with aggravated symptoms, which had been markedly benefited by the use of splenic and thymus extracts.

Dr. ALLAN JAMIESON showed two patients with Eczema Palmare which had been successfully treated.

Mr. ALEXIS THOMSON showed (1) a Hydatid Cyst which he had removed from the liver; and (2) a portion of Gangrenous Intestine, the result of strangulation by a band, which he had removed.

Dr. HARVEY LITTLEJOHN showed specimens from (1) three cases of sudden death due to rupture of an aortic aneurysm in none of which had the diagnosis been made before death—in one of the cases there had been a history of blood-spitting for two years; and (2) a case of Rupture of Tubal Pregnancy, in which there had been profuse hæmorrhage into the abdominal cavity, the rupture having been the result of an injury to the abdomen.

Mr. COTTERILL showed (1) specimen from a case of Enterectomy for Fibrous Stricture—the operation had taken three hours to perform and the patient was doing well; and (2) a specimen of Perforated Appendix which had been removed. The patient did well for some days, after which the symptoms returned, and on re-opening the abdomen the stump of the appendix was found to have sloughed off. The patient was again progressing satisfactorily.

Dr. AFFLECK demonstrated an adaptation of the Phonendoscope for teaching purposes. By attaching tubing twelve feet long it was possible to demonstrate heart murmurs to members of the class at that distance from the patient.

Dr. CLAUDE B. KER read a paper on the Serum Reaction of Enteric Fever. Dr. Ker's paper was based upon work during the current year in the Edinburgh Fever Hospitals. As regards his method of investigation he used blood serum in the dilution of 1 in 30 of beef bouillon. His rule was to give the specimens a time limit of four hours. If at the end of that time the clumps were not distinct and the field between them clear he considered the reaction negative. If there was a partial clumping he waited for a few days and then examined another specimen of the patient's serum. The cases examined were cases sent into the hospital as enteric fever or for observation for enteric fever and were 169 in number. Of those cases which gave the reaction there was one which Dr. Ker did not believe to be enteric fever. It was apparently a case of typhus fever. Of the cases showing negative result with the serum test there were three which were possibly enteric fever. Those four cases were the only ones in which the results obtained were dubious. Dr. Ker therefore concluded that Widal's test might be accepted as the best method for the diagnosis of enteric fever. He had found that the age of the patient in no way interfered with the reaction, his youngest patient having been one year and his oldest fifty years of age. He had also found that capsules of dried bacilli gave results that were entirely satisfactory. In conclusion he emphasised the fact that to obtain good results it was necessary that the serum should be sufficiently diluted. He had always endeavoured to have it at 1 in 30 though 1 in 25 was probably sufficient. One drop of blood was drawn up into a pipette and then sterilised beef bouillon was sucked up till there was a mixture of one of serum in ten of bouillon. This after centrifugalisation was further diluted by adding the bacteria as an emulsion in bouillon which brought the serum to the desired proportion of one in thirty.

Dr. FOULIS read a paper on Cyanosis in Convulsions; how Caused and how Prevented. He demonstrated very vividly that the cyanosis was the result of the base of the tongue falling against the posterior wall of the pharynx and thus mechanically obstructing the entrance of air. He illustrated this by means of limelight views taken from frozen sections made by Symington and others. He pointed out the disadvantages and the inefficiency of pulling the tongue forward in these cases. He advocated a method which he had employed for many years and found most efficacious. He introduced the handle of a spoon far back in the mouth and by means of it compressed and brought forward the root of the tongue. By this means air was allowed freely to enter the lungs. He had used the method not only in the convulsions of children but also in the threatened cyanosis which was liable to occur in cases of cerebral apoplexy.

FORFARSHIRE MEDICAL ASSOCIATION.

Bradycardia.—Abdominal Cases.—Exhibition of Cases.

A MEETING of this society was held on Dec. 3rd in the University College, Dundee, Dr. J. W. WEMYSS, Broughty Ferry, ex-President, being in the chair.

Dr. TENNANT BRUCE read notes of a case of Bradycardia. The pulse varied from 20 to 34 per minute and was associated later with convulsions of an epileptiform character. The literature of the subject was reviewed. Dr. Bruce suggested that some confusion existed due to confounding two distinct conditions—viz. (1) slow pulse as a symptom of other diseases and (2) slow pulse as a disease itself and dependent on interference with nerve force. Though interference in the functional activity of the intrinsic cardiac ganglia was, he thought, the most probable explanation, yet the possibility of a purely medullary origin must not be lost sight of. He quoted the position of the intra-medullary nuclei given by Dr. Alexander Bruce in his book on the Hind Brain and asked whether lesion in the neighbourhood of the motor nucleus of the vagus, the nucleus ambiguosus, might not explain the condition.—Dr. SINCLAIR agreed with Dr. Bruce that slow pulses after influenza or other diseases should be excluded and quoted a case similar to that given by Dr. Bruce in which a cessation of pulse-beat preceded epileptiform convulsions.

Mr. GREIG read notes of two Abdominal Cases. The first was a case of Enterectomy with end-to-end Anastomosis. The patient, aged sixty-nine years, was admitted to the surgical wards of the Dundee Infirmary suffering from strangulated inguinal hernia on the right side. There was a small irregular laceration found in the portion of bowel exposed; this was excised and the cut ends of the bowel were

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brought into apposition and sutured. The patient recovered well from the operation, had no pyrexia, and left the infirmary in four weeks wearing a truss. Mr. Greig considered this operation preferable, though it occupied a little longer time, to the introduction of a foreign body such as Murphy's buttons or bobbins. The second was a case of Intra-abdominal Strangulation successfully treated by Cœliotomy. The patient was a stout, healthy boy twelve years of age who was admitted into the infirmary with symptoms of acute obstruction. On opening the abdomen there was found to be distension of the small intestine and of part of the large intestine. There were several enlarged glands but one larger gland to which the omentum was adherent and also an appendix epiploica which had caused kinking of the bowel. This was divided and the obstruction relieved. The patient was restless and for this reason required to be dressed daily. The stitches were removed on the tenth day but were reintroduced under chloroform because the boy was so restless as to open up the wound and allow the bowel to prolapse. The case gave no further trouble, and the patient was dismissed in due course. Mr. Greig thought this showed a tolerance in succeeding cœliotomies — Mr. GREIG also showed a photograph of a case of Recovery from Favus of six years' duration, the treatment being daily depilation and inunctions with various parasiticides for twelve months.—Dr. WHYTE quoted cases of recovery under similar treatment.

Dr. KYNOCH showed a case of Dermatitis due to Pregnancy.

Mr. GREIG showed (*a*) Hæmatoma removed from the neck, (*b*) Congenital Dislocation of the Humerus, and (*c*) Cast of Osteo-arthritis of the Wrist and Ankle from a lad of thirteen years.

Dr. WHYTE showed an Aneurysm of the Aorta involving the ascending, transverse and descending portions of the aorta.—Dr. WHYTE also showed a Liver from a woman, aged fifty-three years, who had had symptoms of obstructive jaundice. There was a large caseating gland surrounded by a dense mass of fibrous tissue involving the hepatic duct. There was also some perihepatitis with several small abscesses throughout.

Reviews and Notices of Books.

A Manual of Midwifery. By ALFRED LEWIS GALABIN, M.A., M.D. Cantab., F.R.C.P. Lond., late President of the Obstetrical Society of London; Obstetric Physician and Lecturer on Midwifery and the Diseases of Women to Guy's Hospital, &c. Illustrated with 271 Engravings. Fourth edition. London: J. & A. Churchill. 1897. Price 15*s.*

THE appearance of this, the fourth, edition of Dr. Galabin's "Manual of Midwifery" sufficiently indicates its continued popularity. The work has been thoroughly revised and a few new illustrations have been added. The section on the structure of the chorion and the placenta has been brought up to date. One of the new illustrations shows the appearance of the chorionic villi in section from an ovum at the sixth week. The author says: "In a well-preserved specimen of a young placenta a double layer of cells may be demonstrated covering the villi and all other parts of the chorion. After the mid-term of gestation the deep layer disappears more or less completely. In a full-term placenta even the superficial layer has disappeared from many of the villi and the fœtal capillaries are only separated from the maternal blood-space by a delicate layer of connective tissue. The superficial layer consists of a thin stratum of granular multi-nucleated protoplasm in which no cell outlines can be distinguished. This layer has been called by some the 'syncytium.' In the deep layer the cells are large and well defined with oval nuclei standing with their long axes at right angles to the surface."

In the chapter on Extra-uterine Fœtation we see that the author does not regard all ectopic pregnancies as primarily tubal, in which he differs from the majority of modern authorities. Dr. Galabin is of opinion that a primary abdominal fœtation is a thing that does actually, though rarely, occur. His retention of this variety (primary abdominal fœtation) in his classification seems to be chiefly based on a case that occurred in his own practice, but even in that case he admits the possibility that it might have been an example of tubal abortion. In describing the treatment advisable in Accidental Hæmorrhage the author says: "The membranes should be punctured as soon as possible. ..... Plugging the vagina is considered inadmissible in cases of accidental hæmorrhage because concealed hæmorrhage might be going on behind the plug. ..... It is important for the student to remember the correct treatment of accidental hæmorrhage not only for the sake of his patients but because a question on this subject is frequently a fatal one in examination especially if plugging the vagina be suggested as treatment." Possibly the author may not have seen Dr. Jellett's little book on Midwifery recently reviewed in these columns. In a prefatory note to that work Dr. Smyly, speaking of his experience of rupturing the membranes in serious cases of accidental hæmorrhage, says: "The results were so bad that I resorted to plugging in all cases of external accidental hæmorrhage in which the membranes were intact and labour pains absent or feeble—that is, in the great majority of cases—and with excellent results. The fear that an external would be converted into an internal hæmorrhage proved groundless." We should like to have seen this aspect of the matter thoroughly discussed by an obstetrician of Dr. Galabin's experience.

We have no doubt that the present edition will be received with as much favour as its popular predecessors.

The Journals of Walter White, Assistant Secretary of the Royal Society. With a Preface by his brother, WILLIAM WHITE, and a Portrait. London: Chapman and Hall. 1898. Price 6*s.*

A PERUSAL of these journals reminds the reader of Pepys's Diary. We find the personality of the author reflected just as clearly in the earlier entries, during the time when he pursued his calling as a cabinet-maker, as in the latter records, made when he was Assistant Secretary of the Royal Society, the spirit of the student pursuing knowledge for its own sake, so characteristic of the author, being very apparent. The entry of Jan. 30th, 1837 ("Reading, writing, working at washstand *au soir*, much pleased with the book I have, showing knowledge may be acquired in spite of adverse circumstances. Ought I not to apply myself also?"), when coupled with that of Oct. 10th, 1870 ("Everything confirms my opinion that what is wanted is not more appliances for education, but students who really are in earnest") afford an interesting instance. Many other entries showing the same excellent philosophic temper will be found. Greater interest will attach to those descriptions and incidents in the lives of prominent personalities of the century with whom Walter White was brought in contact while at the Royal Society. The friendship existing between the author and the late Poet Laureate is dealt with in a separate chapter. The poet's passion for tobacco is well illustrated. The entry of Oct. 16th, 1852, records: "Tennyson came to the library to-day. After a time he said, 'I must have a pipe,'" and apparently he was referred to the roof. So the entry concludes: "In a quarter hour he came down again greatly refreshed." A very interesting conversation between Kingsley and Carlyle is recorded. In reference to preaching Kingsley spoke of 15,000 clergymen having to stand up Sunday after Sunday with nothing to say, adding, "Ah, the Reformation has much to answer for." Turning to Carlyle: "You and your Puritans have much to answer for. Those men first started the notion that the way to heaven was by infinite jaw, and see what infinite jaw has brought us

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to." "Ay," said Carlyle, "'tis wonderful how men will go on talking with nothing to say." These are only a few of the numerous interesting little sidelights on the literary and scientific worthies, living and dead, including Huxley, Darwin, Lyell, Tyndall, Faraday, &c., to be found in the journal. The book should be warmly welcomed by scientific men.

Elements of the Comparative Anatomy of Vertebrates. Adapted from the German of Dr. Robert Wiedersheim by W. N. PARKER, Ph.D. London: Macmillan and Co. Price 12*s.* 6*d.*

THIS is the second English edition of Professor W. N. Parker's adaptation of Dr. Wiedersheim's well-known work. On comparing it with the former edition it will be noticed that a considerable amount of new material has been added, while many of the old figures have been replaced by others which are often more instructive as well as more artistic. The work may now be fairly described as profusely illustrated and we cannot help feeling sorry that it was not possible to enlarge the whole book somewhat in order to spread out the mass of facts with which it is filled. The determination to increase the number of illustrations and to add to the mass of facts without at the same time materially enlarging the size of the book has necessarily resulted in the matter being too condensed for an altogether satisfactory student's text-book. The condensing process, too, has not acted quite evenly, the skeleton obtains rather more than 100 pages for its description, while the muscular system is dismissed in ten pages. The liver of vertebrates is treated in three pages which, by the way, are chiefly occupied by illustrations and the pancreas takes up rather less than half a page. The last ninety pages of the book are devoted to a bibliographical appendix which in the places tested by us was found to be accurate and quite full enough for ordinary purposes.

The paper and printing are excellent and we have already expressed our opinion on the general value of the illustrations—a value that is added to by the fact that every part of each figure is clearly indicated and named without troubling the reader to seek an explanation on another page. There can be no doubt that this book should find a place on the shelves of every worker at vertebrate morphology.

JOURNALS AND REVIEWS.

The Ophthalmic Review. Edited by Messrs. LAWFORD, MACLEHOSE, and Others. London: J. & A. Churchill. Vol. XVI. Nos. 187–192.—These parts contain several interesting original communications. Amongst others are the following: Dr. A Alt on the histology of a case of sudden blindness caused by a gunshot injury to the skull. In this case the eye was not struck by the shot, but rupture of the choroid and detachment of the retina occurred from contre-coup with extensive hæmorrhage into the orbit necessitating removal of the eye and enabling a good histological examination to be made. Mr. C. G Lee describes a case of Malignant Tumour of the Orbit in which partial removal was accomplished followed by re-growth and, after the exhibition as a medicine of a decoction of cinnamon, complete recovery. The question whether cinnamon possesses any virtue as an antidote against malignant disease is thus raised. Dr. Jehin-Prume, of Montreal, contributes a valuable article on the proceedings and instruments to be employed when intravenous injections of mercury are practised and it appears that M. Wolfing-Luer, of Paris, has devised a syringe which is constructed wholly of glass and which works well whilst it is capable of easy sterilisation. Mr. Priestley Smith writes on Diminished Secretion as a Factor in the Causation of Primary Glaucoma, a view which he supports by reference to various well-known facts. Mr. Simeon Snell recommends the employment of Electrolysis as a Means of Treating Granular Lids. He gives the details of a convenient instrument for the application of electrolysis. The subject of Myopia is dealt with by Mr. W. G. Laws who reports a case of temporary myopia following a blow on the eye, and by Dr. Norman Maclehose who gives some notes of a myopic family. Dr. George Bull contributes an article on the Ophthalmometer as a Guide in Subjective Optometry. Mr. Myles Standish strongly insists in another article on Diphtheritic Conjunctivitis on the necessity of having a bacteriological diagnosis, since there is clinical evidence to show that this disease may be present in localised areas and that rapidly progressing ulcers of the cornea may be due to infection with the Klebs-Löffler bacillus and are then favourably affected by antitoxin treatment. Dr. Burnham gives the results of his Clinical Experience with Pilocarpine used hypodermically. In his hands when employed alone and in combination with other remedies it has proved successful in cases of rheumatism and of syphilis. Dr. Stevens, of New York, points out in a short article the relations which the Form of the Skull bears to the Occurrence of Trachoma. Dr. J. W. H. Eyre reports some cases of Albuminuric Retinitis and Dr. F. Buller has some notes on Mules's Operation. From an examination of these original articles, many of which are of considerable interest, it will be seen that the high position of the journal is fully maintained. The parts also contain various reviews and notices of books.

Recueil d'Ophtalmologie. Sous la direction de MM. GALEZOWSKI et CHAUVEL 3e. Série., 19. Année. Août Septembre, et Octobre. 1897.—This review, which is amongst the most important of the French journals on ophthalmology, contains in the last three parts that have been issued various papers of interest, amongst which are the following articles. M. Galezowski on Sympathetic and Parenchymatous Keratitis of the Cornea. Such forms of keratitis, he points out, are often complicated with iritis and resemble syphilitic keratitis, they may proceed from lesions of the opposite eye and from carious teeth and should be treated by removal of the exciting organ. Dr. Augiéras on the Stereoscopic Fusion of Colours. Dr. A. Puech on the Best Mode of Operating on Old and Large Fistulæ of the Lacrymal Sac. Dr. Vian, in an article on the Treatment of Purulent Ophthalmia both in Infants and in Adults, recommends the use of concentrated solutions of permanganate of potash. Dr. Strzeminski reports a case of Recurrent Paralysis of the Third Nerve and gives references to many other cases. Dr. Georges Valois gives the details of a case of Infective Ulcer of the Cornea and Dr. H. Bentejac one of Superficial Rodent Ulcer of Paludal Origin following an Operation. M. Pean describes the Surgical Treatment that should be adopted in cases of Exophthalmic Goitre. He considers that surgical treatment should only be resorted to when other means have had a fair trial given to them and have failed, but that the removal of the thyroid gland may be effected whilst the enlargement is yet of small size and that myxœdema is rare as a consequence of the operation and when it does occur is of transitory character. M. Bourgeois of Reims gives the treatment he has found successful in cases of Detachment of the Retina, which consists in the injection of ten drops of a fluid containing ten grammes of glycerine, three grammes of sodium chloride, and 0·001 gramme of perchloride of mercury. His results are excellent. M. Truc supplies a contribution from a clinical point of view to the Pathogeny and Treatment of Dry Blepharitis. The successive numbers contain full accounts of the meetings of the Société d'Ophtalmologie de Paris, reviews, and notices of books.

The December number of the *Veterinarian* is quite up to the average as regards the quality of its contents, whilst it is

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larger than usual. The number consists of 134 pages and contains much valuable matter. The record of the Penycuik Experiments on Telegony and the Observations on the Striping of Zebras and Horses and on Reversion (Atavism) in the Equidæ by Professor Cossar Ewart is continued and a series of most interesting facts are brought out. This is followed by an article on Louping Ill and its Connexion with the Tick, by Alexander Meek, M.Sc., and R. Greig Smith, M.Sc., who have made a number of experiments on this question following up those already recorded by them. They draw attention to the fact that it is possible that some antitoxic method of serum treatment may yet be devised or discovered for the treatment of this disease as has already been done in the case of Texas fever and the tick fever in Australia. There are a number of interesting reviews and sixty-four pages of reports on veterinary medical societies from which it may be gathered that these societies are in an exceedingly flourishing condition. The papers reported are certainly full of interest and the discussions are in many cases somewhat animated. Altogether this is an exceedingly good number of the *Veterinarian*.

CHRISTMAS BOOKS.

MESSRS. CHAPMAN AND HALL have sent us the following:—1. *Four Poets: Selections from Wordsworth, Coleridge, Shelley, and Keats.* Selected by Oswald Crawfurd. Selections from any author are always apt, as Mr. Crawfurd candidly confesses in his preface, not to include the very passage or work that any particular reader happens to like best. We think, however, that the editor of this collection has been happy in his selections, for besides the well-known and generally appreciated poems he has given us some veritable gems much less commonly quoted; for instance, the magnificent lines of Shelley beginning, "Oh, world! oh, life! oh, time!" and the lines of Wordsworth on the expected death of Fox. The book is tastefully printed and bound and its price is 3*s.* 6*d.*—2. *Epigrams and Epitaphs.* Selected by Aubrey Stewart. Cloth, 2*s.* A charming little anthology. The flowers in the fields of epigram and epitaph are so many that it is difficult to make a really representative collection which shall form a nosegay of reasonable size, but Mr. Stewart has done his work well. We are tempted to quote a modern epigram which does not appear in this collection and which is, we fancy, not so well known as it deserves to be—one written by a former master at Eton on the occasion of a Mr. Day marrying a Miss Week:—

> "A Day the more, a Week the less,
> Yet Time must not complain;
> There'll soon be little Days enough
> To make a Week again."

MESSRS. BLACKIE AND SON have sent us the following works:—1. *Just Forty Winks.* By Hamish Hendry. Illustrated by Gertrude M. Bradley. Price 5*s.* This is what is generally called a fairy tale, although there are no fairies in it but plenty of talking beasts and other interesting creatures. We do not think that children will appreciate Mr. Hendry's disrespectful remarks about the House of Commons, but that will come later. They will, however, be delighted with the rest of the book and with Miss Bradley's charming illustrations, especially the one of the butterfly on the bicycle.—2. *Lords of the World: a Tale of the Fall of Carthage and Corinth.* By the Rev. Alfred Church. Illustrated by Ralph Peacock. Price 6*s.* Professor Church is well known as a successful writer and one who possesses the power of describing in a life-like manner events occurring in classical times. Schoolboys have been known to conceive a violent distaste for Roman history except, perhaps, as interpreted by the genius of Macaulay, but the boy who reads this book will certainly take an interest in the Punic wars. Professor Church has considerably reduced the horrors of the sacrifice to Moloch. It is a comfort to know that the wretched children were spared suffering but Flaubert's description of the same rite is infinitely more thrilling. Mr. Peacock's illustrations are good, but we fancy that any Roman officer would have recognised the girl in the frontispiece as a girl even in her man's dress.—3. *With Moore at Corunna.* By G. A. Henty. Illustrated by Wal. Paget. Price 6*s.* Mr. Henty is quite up to his best form in this book, and that is saying a great deal. His hero is like one of Lever's heroes and none the worse for that. It is just the book for a soldier's son, or indeed for any boy who likes a book full of adventures. Mr. Paget's drawings are very good.—4. *The Golden Galleon.* By Robert Leighton. With Illustrations by William Rainey. Price 5*s.* This is a narrative of the adventures of Master Gilbert Oglander and of how in the year 1591 he fought under the gallant Sir Richard Grenville in the great sea fight off Flores on board Her Majesty's ship *Revenge*. It is an interesting story of the conditions of life ashore and at sea in the days of Queen Elizabeth and the account of the famous battle between the *Revenge* and the Spanish ships (which Tennyson has so admirably portrayed in his well-known poem) is here excitingly recounted.—5. *With Crockett and Bowie; or, Fighting for the Lone Star Flag: a Tale of Texas.* By Kirk Munroe. With Illustrations by V. Perard. Price 5*s*.—The story of the struggle by which Texas threw off her allegiance to Mexico and retained her independence until of her own free will she threw in her lot with the great American Republic is the theme of this volume, and the account of the part played by Rex Harden and his beloved stallion Tawny in gaining for the Texans their freedom is admirably interwoven with the record of the historical struggle. The additional help of both Crockett and Bowie combine to make Kirk Munroe's book a storehouse of exciting adventures and an entertaining record of youthful pluck.

DIARIES.

Smith's Physicians' and Surgeons' Visiting List, Diary, Almanack, and Book of Engagements for 1898 (Hazell, Watson, and Viney, 59, Long-acre, W.C.) is now in its fifty-second year—a sufficient testimonial, if any were necessary, to the appreciation in which it is held by the profession. There is much useful information within its covers and it is conveniently shaped for the pocket. Not the least useful will be found the opening devoted to a record of "things lent" and to whom.

The Dental Surgeon's Daily Diary and Appointment Book. London: John Bale, Sons, and Danielsson, Ltd., 85-89, Great Titchfield-street, Oxford-street, W. Price 6*s.*—This diary for 1898 is, we are told, prepared under the advice and with the assistance and approval of many eminent members of the dental profession. It contains a large amount of information about dental hospitals, associations, and odontological societies in addition to that which is common to diaries in general. It has been specially got up and arranged for the object in view and will be found a very useful and convenient form of daily diary and appointment book.

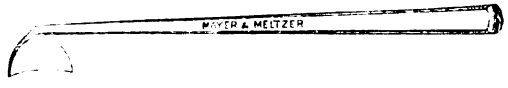
THE RECENT EPIDEMIC OF TYPHOID FEVER AT CLIFTON.—At a meeting of the Bristol Health Committee held on Dec. 7th Dr. D. S. Davies reported that during the past six weeks the notifications of typhoid fever in Clifton for the weeks ending on the dates mentioned had been as follow: Oct. 30th, 100 cases; Nov. 6th, 60 cases; Nov. 13th, 19 cases; Nov. 20th, 9 cases; Nov. 27th, 2 cases; Dec. 4th, 2 cases. Dr. Davies stated that he anticipated that fresh cases would practically cease upon the expiry of a full incubation period of twenty-one days from Oct. 26th, when the contaminated milk was definitely stopped.

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New Inventions.

LUPUS SCRAPERS.

ONE of the principal reasons why curetting operations for the relief of lupus are so frequently attended by unsatisfactory results is owing to the shape of the instruments with which they are performed. While Volckman's scoops are all that can be desired for the removal of nodules and small circumscribed areas, whether superficial or deep, they are quite unsuited for the removal of extensive patches of diseased tissue; therefore, Messrs. Mayer and Meltzer have made at



my suggestion a set of steel scrapers, three in number, the blades of which are slightly concave and measure ¼ in., ½ in., and 1 in. in length. They are beautifully finished out of one piece of steel, are fitted into a neat metal case, and in my hands have proved most useful, and, I trust, will prove a welcome addition to the armamentarium of the dermatologist.



G. G. STOPFORD TAYLOR, M.D. Durh.,
Honorary Physician, Liverpool Hospital for Cancer and Skin Diseases.

A COMBINED STAY-BELT.

IN many cases in which the muscles of the anterior abdominal wall are unduly lax, or in which a laparotomy has left a tendency to a ventral hernia, it is desirable to have some means of affording efficient support to the weakened structures. An objection to the ordinary abdominal belt is that it tends to rise up unless it is held in position by an understrap which is often far from comfortable. The Stay-belt has been designed to overcome this difficulty. It consists of an abdominal belt attached to the lower edge of a corset, and the requisite pressure is obtained by means of two steel bands, fastened at the back and in front bearing on the belt by means of a pad. We have examined a model of this stay-belt and we consider that in suitable cases it would form a comfortable and useful appliance, but it would need to be carefully fitted to the individual case. The makers are Messrs. K. R. Schramm and Co., of Great Castle-street, Oxford-circus, W.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE annual general meeting of the constituents of the Metropolitan Hospital Sunday Fund was held in the Egyptian Hall of the Mansion House on Dec. 13th. The Right Honourable Horatio D. Davies, Lord Mayor, president and treasurer of the Fund, was in the chair, and amongst those present were the Bishop of Stepney, the Archdeacon of London, Canon Fleming, Sir Edmund H. Currie, Sir Stuart Knill, Lord Stamford, Dr. Glover, the Chief Rabbi (Rev. Dr. Adler), and Mr. Wakley. Letters regretting inability to attend had been received from the Dean of Westminster, Cardinal Vaughan, Rev. Dr. Rigg, Sir Dyce Duckworth, and others.

The LORD MAYOR, in moving the adoption of the report, said that the Hospital Sunday Fund was an institution which everyone must appreciate and it was most gratifying to see that it was steadily growing. This kind of charity appealed in an especial degree to the hearts of Englishmen and no effort would be wanting on his part to make it a great success.—The adoption of the report was seconded by the Rev. E. WARING, of St. Paul's, Bermondsey, and was agreed to.

Mr. F. H. NORMAN moved that some alterations should be made in Laws 2, 3, and 11, and that the following should be added to Law 5: "That where any hospital having an out-patient department has appointed a special and efficient officer for detecting any abuse in that department it shall be regarded by the Committee of Distribution as an important factor in determining 'Merits.'" He said that in consequence of persons eminent in the medical profession asserting that the out-patient departments had been grossly abused the Committee of Distribution had made an investigation and had come to the conclusion that although the charges had been very materially exaggerated yet there was reason to suppose that a certain amount of abuse existed. The Council accordingly sought to alter the laws so as to leave it to the Committee of Distribution to determine whether satisfactory measures had been taken to check such abuse. Law 5 provides that the awards shall have reference to the "merits" and "needs" of the institutions. The term "needs" denotes the amount of pecuniary assistance they require and "merits" takes account of whether they are skilfully and properly conducted. The result is that the appointment of an officer to prevent abuse in the out-patient department will entitle a hospital to more liberal treatment in the distribution.—Sir E. HAY CURRIE, in seconding the resolution, said that no harm and nothing but good could follow from having a properly trained man or woman in the hall to investigate the circumstances of patients. Sir Sydney Waterlow and his committee had been engaged in considering this question for a year past. The motion was agreed to.

The appointment of the Council for the year 1898 was moved by the Rev. C. H. GRUNDY, seconded by the Rev. Dr. HODSON, and agreed to.

The ARCHDEACON OF LONDON, in moving that June 12th be fixed for Hospital Sunday of 1898, said that last year's collection of £41,000 had been exceeded in seven different years, but only on one occasion very largely, when the amount was £60,000, great support having been given by members of the Stock Exchange.—The motion was seconded by Canon GRAHAM.—At this point the Rev. J. F. B. Tinling, of the City-road Congregational Church, commenced to protest against what he called "the increasing habit of vivisection" in hospitals, but was immediately ruled out of order by the Lord Mayor.—On a show of hands Archdeacon Sinclair's motion was agreed to with two dissentients, and the usual vote of thanks to the chairman, moved by the Chief Rabbi, terminated the proceedings.

HEALTH OF DEVONPORT.—Calculated on a population of 59 000 the death-rate at Devonport last year was 17·5 per 1000, the total number of deaths being 1033, the births for the same period numbered 1595, or 27 per 1000. The average number of deaths during the past ten years has been 1000 annually, or 16·9 per 1000, and the average births 1556 per annum, or 26 3 per 1000. In 1896 there were a higher birth-rate and a higher death-rate, the latter being caused by a greater prevalence of zymotic diseases.

SANITARY INSPECTORS' DINNER IN LIVERPOOL.—The tenth annual dinner in connexion with the North-western and Midland Sanitary Inspectors' Association was held on Saturday evening at the Compton Hotel, Liverpool, when there was a large attendance. The President (Mr. Francis Vacher, medical officer of health, Cheshire County Council) occupied the chair, and amongst those present were the Lord Mayor (Alderman J. Houlding), Councillor William Roberts, Dr. E. W. Hope (medical officer of health, Liverpool), Mr. Edward Sergeant (medical officer of health, Staffordshire County Council), Dr. William Carter, J.P. (Liverpool), Dr. E. P. Manby (assistant medical officer of health, Liverpool), Dr. S. G. Moore (Liverpool), Mr. Hewitt, J.P., C.A. (Cheshire County Council), and Dr. E. T. Whitaker (Shrewsbury); Professor Boyce (University College, Liverpool), Mr. T. E Sampson (Liverpool City Coroner), Mr. W. Hewitt, B.Sc., Mr. W. Urquhart (Crewe), Mr. H. H. Spears (honorary secretary), together with representatives from Manchester, Wigan, Barton, Bebington, Birkdale, Droylsden, Prescot, and St. Helens.

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THE LANCET.

LONDON: SATURDAY, DECEMBER 18, 1897.

THE severe epidemics of typhoid fever which have lately afflicted Maidstone and Lynn will serve one good purpose. They will call, and indeed they have already called, general attention to the paramount importance of a pure water-supply and not only of a pure supply but of a supply the purity of which can be safely guarded and periodically tested. Already we find that sanitary authorities throughout the country are investigating the conditions under which their districts are supplied with water and are taking every means in their power to improve them. The state of things which exists in many towns and most rural districts is unsatisfactory, but the facts must be faced fairly.

A very large number of places are supplied with water by public companies, and it may be worth while to consider for a moment under what conditions these companies have come into existence, for the story of their origin counts for something in their inadequacy. A plentiful supply of water laid on to every house must be looked upon as a modern requirement; not many years ago it was considered a luxury and not a necessity. At that time sanitary authorities would not have had the support of the electors if they had undertaken any great public work to ensure an ample water-supply, so that the only way in which a supply could be afforded to a neighbourhood was by private enterprise. When the histories of many small water companies in towns and rural districts are carefully studied it is found that in very many instances the money necessary for carrying out the work of construction was provided at considerable risk by public-spirited individuals whose first wish was for the public good and who thought only secondarily of the profit likely to accrue to them. Many such companies worked for years against local opposition and only after a prolonged struggle were they successful in paying even a small dividend. The origin of other water companies will not bear so close an investigation. They have been started in a purely commercial spirit against which nothing is to be said, for in these matters no man need be public-spirited unless he likes. But the commercial spirit has in some cases, it is to be feared, led to actual wrong-doing. The local influence of petty officials in small towns has not always been fairly used and in their desire to spread the business with which they were connected they have wronged private individuals who possessed pure water-supplies of their own. These things must be mentioned because if on the one hand they are but considerations of minor and local importance their significance is always much insisted upon when there is any trouble between the local authorities and the water companies. The closing of a well will be quoted as an act of virtue when really it was an act of depredation, or the non-closing of a well may be a source of danger to the community whose safety has been allowed to rank second to the convenience of an important citizen. But, as we have said, these matters form side-issues. The main facts to be kept in the public mind are that pure drinking water is a matter of the first importance to the community and that the water-supply of every town and rural district should be sufficient in quantity for all domestic purposes and for flushing the drains—for we are not now considering any alternative method for the removal of sewage,—and its purity must be kept above suspicion by periodical examination. Elementary as this information must seem to our readers we assure them that it is imperative that they should keep it before their patients. There are many districts where such adequate and pure supply is not forthcoming. A medical officer of health is held responsible for the general sanitary condition of the district under his authority, which is equivalent to saying that he must use every means in his power to ensure to the district an adequate and pure water-supply. But water is supplied by private companies, and he has no power to examine or even to visit the property of these companies. Quite apart from any other local considerations which might hamper his work he may find himself unable to visit the waterworks of his district.

This question has lately been prominently brought into notice by the Sanitary Committee of the town of Stockport. Dr. PORTER, the medical officer of health for the borough, has called the attention of the Council to the conditions which exist at the gathering ground used for the collection of some of the water being supplied to the town. Dr. PORTER was unable to visit the whole of the catchment area, but from the report which he gave of the part which he did visit it would appear that the state of things existing there was most unsatisfactory. Into the unsavoury details we need not at present enter. In his report Dr. PORTER called the attention of the Sanitary Committee to the fact that as he was held responsible for the sanitary condition of the town it was an anomalous state of things that the law did not allow him the same power of supervision over the water-supply which is given in the case of foods and drinks. Acting on this report the Stockport Town Council after considerable discussion passed a resolution to the following effect:—

"That inasmuch as outside the metropolis and except in regard to wells and pumps sanitary authorities possess no executive powers for the protection of public water-supplies in the hands of water companies, whereas the consumers of flesh, milk, and other foods are safeguarded by statute, this committee respectfully recommends that a petition be presented to the Local Government Board, under the seal of the Council, praying that legislation be initiated whereby every sanitary authority supplied by a water company which is not also a sanitary authority be empowered to authorise any duly appointed official to enter, inspect, inquire, and take samples at any part of any source or works of water-supply or water purification, at any time by day or night, and whereby also such water company be required to afford all reasonable facilities and information for such inspection, inquiry, and sampling."

The resolution of the Stockport Sanitary Committee is one of considerable importance and may, and we hope will, lead to good results. The matter of the control of the water-supplies is one of great difficulty and complexity, but there is no doubt that if the medical officer of health for any district were legally entitled to examine the way in which water was

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collected and purified and if he had power of entry not as a matter of courtesy but as a matter of right to all parts of the water companies' premises he would be in a much better position than he is at present to protect the interests of those for whose health he is held responsible. With regard to the immediate practical outcome of the resolution we may, however, point out that legislation on matters of sanitary import is not initiated by the Local Government Board's medical officers. The discussion and resolution initiated by the Stockport Town Council need not on that account necessarily be without effect. The interest excited at so important a town on the question of their water-supply and the fact that the public authorities are taking all the means in their power to improve it without waiting for the exciting cause of a prevalent epidemic make most satisfactory hearing, and we are pleased to see that a member of the Corporation in the course of his speech quoted at length some weighty words of the late Sir GEORGE BUCHANAN to the effect that in obtaining a pure water-supply it was unnecessary to rely on chemists who "can in brief tell us of impurity and hazard but not of purity and safety." With the advantage of an active medical officer of health and an enlightened council the Corporation of Stockport should be able to bring popular pressure so strongly to bear on the water company which supplies them that the gross impurities which at present are alleged to corrupt the catchment area of their water-supply may be at once removed and never allowed to recur. In the case of local water supplies the initiative must always come from the place affected. More is to be hoped for from well-informed local popular opinion than from the supervision of a central authority. When the people of any town or district are thoroughly resolved to improve the sanitary conditions under which they live the matter can always be done. In the past the chief troubles of the medical officers of the Local Government Board have been caused by the opposition of sanitary authorities to any suggested improvements. The most satisfactory indications for the future with regard to the public health of the people of this country are to be found in the increased and increasing interest which is manifested by sanitary authorities in the improvement of the hygienic conditions of the people, and in the spread of knowledge of the causes and of the means of prevention of epidemic disease.

CONCERNED as it is with all matters affecting the health of the community our profession cannot view with indifference the question of the training of weak-minded children, of whom such large and increasing numbers are to be found among the lower classes. The institution known for the sake of brevity by the somewhat inappropriate name of the Darenth Schools, but the full style of which is the Darenth Asylum and Schools, has lately occupied a good deal of the attention of the Metropolitan Asylums Board, and it is with a sense of relief that we record the fact because it is high time for reformation in this quarter. In reality this large establishment consists of two hitherto separate institutions within the same curtilage—viz., the Darenth Imbecile Asylum and the Darenth Idiot Schools, each containing approximately 1000 inmates, and each under a separate medical superintendent. But at a recent meeting of the Metropolitan Asylums Board a report of the General Purposes Committee was brought up recommending that both institutions should be placed under one medical superintendent. This was followed by a series of contingent proposals which have for their object the utilisation of the Brighton-road Schools at Sutton for the reception of "helpless or industrial imbeciles," such as are now received at Darenth; and the conversion of the two separate establishments at Darenth into one huge school "devoted exclusively to the reception of children capable of receiving some degree of instruction."

Here, then, are two gigantic institutions, which are already too large for anything like personal supervision to be exercised over the inmates—and in which some members of the Board, in the discussion which followed, alleged that deficient and faulty classification already exists—which are to be amalgamated, and this in spite of recent revelations concerning the evils of huge institutions for the training of the young. It is idle to urge that a large number of the inmates are of the imbecile and incurable class and that in the event of "the Brighton-road Schools at Sutton becoming available, they should be used to relieve the pressure at Darenth." The facts remain that by the proposals of the managers, if they are correctly reported, there will be for a considerable time a population of over 1500 inmates consisting of a major proportion of trainable, as well as incurable, weak-minded persons, herded together without adequate classification. Even when "the pressure has been relieved" and a normal standard has been attained there will still exist an institution for the training of weak-minded children which in point of size will rival or exceed many of those condemned by the Departmental Committee. The sum of £377,000 is stated to have been expended on the Darenth Asylum and Schools, and almost the only argument advanced—at any rate the only one which can be seriously and reasonably urged—in support of these proposals is economy—viz., the utilisation of this collection of buildings already in existence. But surely this is false economy when the facts are closely examined in the light of modern views on educational matters.

If these large schools are bad for the education of normal children—and this was proved beyond doubt by the Departmental Committee—how much worse are they for abnormal, weak-minded children who differ from each other in an infinite number of ways. Many of these latter by careful personal supervision are capable of becoming very useful and wage-earning members of the community; but if dealt with "in bulk," in a mechanical manner, they almost invariably drift into a life of useless imbecility. Moreover, if they are associated by faulty classification with children of a lower grade of intelligence they themselves are degraded in intellect and the hopeful cases become quite hopeless. Dr. DOWNES, the Local Government Board inspector, is reported to have said at the meeting of the Metropolitan Asylums Board above alluded to that "he should have the greatest hesitation in assenting to a scheme which would leave the comparatively educable children part and parcel of one enormous institution"; and we sincerely trust that the Central Board will take the same view of this

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ill-advised proposal, and decline to sanction the perpetuation, nay rather, the accentuation—for the intention is to amalgamate two institutions which are already too large—of this mistaken policy.

THE question of hospital abuse has been to the fore for some time past, but recently an incident has occurred at Newport, Monmouth, which bids fair, to use a legal expression, to become a ruling case. The facts are as follows. The honorary ophthalmic surgeon to the Newport Infirmary is Mr. H. C. ENSOR and a short time ago two patients went to the infirmary to consult him, their position, in his opinion, not being such as to warrant their seeking charitable relief. Accordingly he refused to treat them, the board of directors took up the matter and applied to Mr. ENSOR, who gave his reasons for the refusal. The board then wrote to one of the would-be patients asking her to come up again, which she did, and again Mr. ENSOR refused to treat her. Accordingly the board of directors intimated to Mr. ENSOR that "his valuable services" as ophthalmic surgeon would be dispensed with at the end of the year. The facts concerning one case are as follows. The family, by the patient's own statement, earn £117 per annum and in addition the mother keeps a small shop. In the other case the father earns 35*s.* a week and the proposed patient 24*s.* a week. The medical staff of the infirmary held a meeting on Friday, Dec. 10th, but the result of their deliberations have not been made public. The Cardiff Medical Society, at a meeting held on the same day, unanimously passed a resolution as follows:—

"The members of the Cardiff Medical Society having heard Mr. ENSOR'S statement and having duly considered the statement of the Chairman of Directors of the Newport Infirmary, which appeared in the public press, unanimously express their sympathy with Mr. ENSOR in the position in which he has been placed and their sincere hope that the Board may see their way to withdrawing their notice."

The statement of Mr. Alderman DAVIS, the Chairman of Directors, as given in the *Western Mail* of Dec. 11th, was to the effect that Mr. ENSOR had been told that the directors would look at the end of the year for another ophthalmic surgeon, that it was not the first time that Mr. ENSOR had declined to treat cases which the directors upon inquiry had found to be in their opinion suitable persons to receive gratuitous treatment, and that the directors must be the judges. A man might be respectably dressed and be earning 30*s.* a week, but that was not sufficient guide unless all his circumstances were inquired into and a fee of a guinea for treatment was a good deal for poor people.

Such, then, are the facts of the case as it now stands and technically it must be allowed that Mr. ENSOR, as he himself confesses, is in the wrong, for he accepted the post well-knowing that he would be in a subordinate position to the directors. But from another point of view it is surely the obvious duty of an officer of a charity to do his utmost to prevent abuse of that charity and it is owing to action of this kind that Mr. ENSOR has come into conflict with the directors, and we consider that he is much to be commended in that he as a consultant has not feared to face obloquy by his stand for the good of both the hospitals and the profession at large. It is perfectly true, as the directors argue, that weekly income is no sure guide to whether a man is or is not a fit recipient of charity; many a poor cleric or struggling member of the other professions may be earning £4 a week and yet owing to the circumstances of his position be much worse off than another whose income is only 30*s.* or £2 a week. But surely the two cases which have brought the matter to a head do not come under the category of being eligible objects for charity; either of the patients in question could certainly afford a five-shilling fee and *pace* Mr. Alderman DAVIS there must be plenty of capable practitioners in Newport or Cardiff who would see patients for less than a guinea.

Difficulties such as the above always arise and probably always will arise at hospitals where the income is dependent upon the subscriptions of the charitable, for human nature being what it is, the average subscriber looks for a return for his charity not only in the world to come but in this as well, and therefore he demands and procures letters of recommendation which are in the majority of cases distributed without any inquiry as to the fitness of the recipient. Hence comes the appearance of the well-to-do patient at the hospital, the refusal of the conscientious medical officer to abuse the charity, the appeal to the governing body, and the old argument, "If we refuse the patient we shall offend the subscriber who gave the letter; if we offend the subscribers the funds of the charity will suffer." Such we expect has been the course of events at Newport, but we may hope that matters may yet be settled amicably. Mr. ENSOR is anxious for some arrangement to be arrived at and we are sure the directors are so too. The governing body of the infirmary has for its president Lord TREDEGAR, who is also a vice-president of the Hospital Reform Association, a fact which of itself makes for peace, and four of the medical officers to the charity are *ex officio* members of the board of management. There will have to be something given up on the part of both sides, for no doubt there is something to be said for the point of view of either, but disputes about the management of a charity are bad in every way. The prestige of the institution is lowered, its usefulness as a helper of the poor and needy is impaired, and the cause of charity generally throughout the kingdom may be injured, by a scandal arising at any one institution for dispensing relief. For all these reasons we would counsel that if possible some agreement be arrived at.

The position of the directors is apparently that after a patient has been refused advice inquiry is made and occasionally it is found that the said patient is a worthy object for relief. Would it not be better in every way that inquiry should be made before the letter of recommendation is given or if this is too Utopian a scheme that inquiry should be made by some other than the medica officer when the patient presents his letter at the hospital? The problem of hospital relief and abuse of the same is no doubt a very hard one to solve, but the hoped-for solution will never be found unless the representatives, if we may call them so, of both sides of the question, those who look at it from the point of view of the medical man and those who approach it as subscribers, will unite in working together for the common good.

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Annotations.

"Ne quid nimis."

THE LANCET SPECIAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

WITH the article which appears in our columns on page 1610 this important Commission comes to a close. Its scope was limited, but its work was designed to be exhaustive within those limits. We did not desire to write of the water-supply of London from the point of view of its adequacy or purity or to make the subject an opportunity of introducing into our columns discussions upon municipal or Imperial politics. Our object was to give our readers information by which they would be enabled to form sound judgment as to any proposals that in the future — and possibly in the near future—might be made for the reform of the metropolitan water-supply. Before any reform can have logical reasons it is necessary that the present condition of the thing to be reformed should be thoroughly known. That is the information which our Commissioner has been content to give. That it has already proved of great value to many persons we have been glad to learn from letters that we have received; that it has been opportune is shown by the character of the evidence now being taken before the Royal Commission presided over by Lord Llandaff. Our Commissioner has described the present condition of the metropolitan waterworks and to the comprehension of any scheme in the future this knowledge is indispensable.

A CENTRAL HOSPITAL BOARD FOR LONDON.

ON Monday last the first report of the General Committee for the Promotion of a Hospital Board for London was read and discussed at a meeting of the Charity Organisation Society. To this meeting the chairmen and treasurers of the different metropolitan hospitals as well as members of the medical profession were cordially invited and those who attended were rewarded by interesting proceedings. These proceedings will be found reported elsewhere. The profession was in good evidence and was represented among others by Sir Wm. Broadbent, Sir Joseph Fayrer, Dr. Glover, and Mr. Victor Horsley, but the chairmen and treasurers of hospitals were notably absent or at least notably silent. In this abstention of the officials from debate lies the chief difficulty of the situation—at least, so it seems to the promotors of the reforming scheme. The authorities of individual hospitals are reluctant to recognise the need of a central body. They appear not to see that such a board would facilitate their work by enabling them to face with united front the abuse of charity from which they are suffering. It is to be hoped that this reluctance will be overcome. The demand for more system and principle in the administration of hospital charity does not come primarily from the profession but from the public. The need for reform in the administration of hospitals is not the greedy cry of a class directed against the managers of hospitals. The language of Sir William Broadbent and Sir Joseph Fayrer on this point is conclusive as regards the medical profession. It is really the public who are showing their sense of hospital management in an unmistakeable way. With the existing number of wealthy people it is impossible to interpret the impecunious plight of our deserving hospitals on any other theory than that of distrust of their administration. A grave responsibility now rests on the governing bodies of hospitals and they must accept the principle of some common board to which they can look for an impartial judgment of their work and of its claims on the public. They have indeed done so by the formation of the Central Hospital Association. They will do well to show some activity in the use of this association and even to extend the conception of it till it shall include all respectable hospitals and representatives of all who wish them well. The governing bodies of such dispensaries as are conscious of a good *raison d'être* would do well to follow the example of the general hospitals and adapt their institutions to the altered circumstances of the day. They may be needed to take over some of the work which the hospitals may find it right to refuse. By such action and by a little mutual coöperation hospitals and dispensaries might have a new lease of public confidence and of prosperity and might even forestall the action of those who seek to create a central hospital board. But united action must not be long delayed, while the approaching distribution of the Prince of Wales's Fund makes of the present an auspicious time. Resistance to public opinion displayed in such unequivocal fashion can only tend to injure institutions of which we are all proud. The governing bodies of our medical charities should rise to the occasion and meet the public demand for their more efficient and harmonious coöperation and should rise at once.

"MODIFIED MILK" FOR INFANT FEEDING.

A NEW departure in the feeding of infants has been described in a recent paper by Dr. D. J. Evans, of Montreal Foundling Hospital. The essence of the new method consists in the substitution of a "modified" cow's milk for the natural product. The writer maintains that an ideal milk for infants must preserve a certain regulated proportion between the proteid, fatty, and saccharine constituents, that this proportion should vary with the age and the digestive system of the child, and that excess not only of the whole but of one or other of its constituents is accountable for the gastro-intestinal troubles of infancy. Thus an excess of the proteid elements gives rise to vomiting, constipation, less commonly diarrhœa, colic, and the passage of small, hard curds. He considers that "as a rule proper management of proteids means success in infant feeding." Excess of fat causes frequent evacuation with soft curds and vomiting but seldom colic. Excess of sugar leads to colic and thin yeasty motions. He finds the "modified milk" most useful for premature, feeble, and marasmic infants and in the treatment of summer diarrhœa. This milk is prepared by adding solutions containing definite percentages of cream or sugar to milk so as to obtain the desired proportions of each of the components needful for nutrition. This process can be carried out at home by a careful nurse or, if preferred, with greater ease in the laboratory. The milk should also be sterilised. Some of the details given in this paper are to our mind too strongly suggestive of an effort to improve upon nature or even to do away with the services of that "homely nurse" altogether. We quote an example. A table gives the following average composition of human milk: fat, 4·00; sugar, 7·00; proteid, 1·50. In a subsequent passage the writer says: "An average formula for a healthy infant during the first week of life would be: fat, 2·00; sugar, 6·00; proteid, 0·60. The percentage may ..... reach: fat, 3·00; sugar, 6·00; proteid, 1·00 by the end of the first month." Not till the third month does he allow milk of the average composition. In prescribing the amount of milk he is even more sparing, from 10 to 16 ounces per diem at the end of the first week being increased to from 30 to 40 ounces from the *sixth to the ninth month*. Excellent results are claimed for this method of artificial nourishment which we are informed sustains at the present time 30,000 infants in Canada and the United States. Dr. Rotch, of Boston, U.S., who is the originator, states that of 115

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children suffering from diarrhœa and thus fed 109 recovered. Such reports are certainly very encouraging. We feel sure that they will obtain for the new mode of feeding full justice in its trial. We confess, however, that we cannot agree with the writer of this paper in what appears to us to be his wholesale distrust of the provision made by nature for the needs of infancy. We cannot but think that his process errs by over-elaboration of those simpler measures by which with some judicious help in times of difficulty she has on the whole very successfully reared the race of man through countless generations.

THE SANITARY CONDITION OF THE FRENCH ARMY IN 1895.

THE Medical Department of the French War Office has just published some medical statistics of the army during the year 1895, and from their very interesting report we take the facts and figures which follow. The total number of admissions to infirmary and hospital is given as 313,579, answering to a general sickness-rate of 631 per 1000 efficients. This proportion is much higher than that of preceding years. There were 3933 deaths during the year, of which 197 in hospital occurred in men belonging to the Madagascar expeditionary force. Of 1000 deaths typhoid fever caused a mortality of less than a quarter instead of a quarter or even a third, as was the case in former years. Next came tuberculosis, influenza, pneumonia, and bronchitis. The year 1895 was marked by a great recrudescence of influenza, the disease being of a very grave type and attended by a greater mortality than had hitherto been known in the army under this head. 22,407 men were admitted to hospital for influenza; about 90,000 were treated without admission and 484 deaths were attributed directly to this disease. As to mortality the 1st corps was, as usual, the one which suffered least. It was closely followed by the 2nd, which also as a rule is a particularly healthy body. Then came the 16th, 15th, 3rd, 6th, 11th, 18th, 12th, 4th, and 10th corps; the Paris garrison, the 8th, 14th, 7th, 19th, 9th, and 13th corps; the divisions of Algiers, Constantine, Tunis, and Oran, this last being specially affected by typhoid fever. The classification according to branch of service, beginning with those which suffered least, gives the following order: fire brigade, the writers of the staff and recruiting department, clerks and employés of the War Office, *ouvriers d'artillerie*, artificers, engineer regiments (*la génie*), republican guard, *chasseurs à pied*, the cavalry, the garrison artillery, and the infantry of the line. The list ends with the prison and penitentiary officials, the army of Africa, the foreign legion, the pioneers, and the military police. To sum up, the branches of the service which come off best are those in France which are made up of a small body of men or are scattered over a large area, and those which suffered most represent the unfavourable elements of the army of Algeria. There were 52 cases of sudden death, 221 accidental deaths, and 135 suicides, of which half were by gunshot wounds, one-third by hanging, and the remainder by drowning or jumping from a height. Of the 410,044 reserve men called out in 1895 there were 8575 treated in the infirmary, 2041 in the hospital, and 33,474 treated without admission, 3825 were discharged for various reasons, and 80 died during their period of training. The medical report in conclusion draws special attention to the insanitary state of the barrack of Babylon in Paris, shut in between two narrow streets and surrounding houses. In 1895 there were in this barrack 330 sick and 12 deaths in one battalion of the 130th regiment of infantry, while the second battalion of the same regiment, quartered at the École Militaire had only a fourth of the number of sick and no deaths. But for the influenza epidemic the garrison of Paris was in a very healthy condition during 1895. The number of soldiers pensioned off or discharged for sickness or wounds was 15,145, of whom 77 were officers placed on the retired list, 367 were cases of sick leave under Class 1, comprising 331 who were allowed a bonus, and 14,569 were cases of sick leave under Class 2. This large increase in the number of discharges is due to the weeding out from the ranks of a large number of young men who in 1894 had been enrolled as "bons avec infirmités." At their meeting of April 8th last the Conseil Général adopted a proposition with a view to diminishing the number of soldiers attacked by tuberculosis. The first part of this proposal is as follows: "The Conseil Général, struck by the constantly increasing ravages of tuberculosis among young soldiers, recommends that the medical examination of young soldiers should be very much more strict and that after a careful examination men already attacked by, or suspected of, tuberculosis should be rigorously excluded." M. Dubois remarked at the meeting of Nov. 24th that even the most skilful military medical man could not examine and decide in a few seconds as to the health of the young soldier who came before him. It would be desirable for the information of the military surgeon that certificates granted by the ordinary medical attendant of the recruit should be taken into consideration. As an outcome of this the Conseil Général unanimously passed the following: "That the military authorities may legally accept the reports and certificates of civilian medical officers who have attended the young men who present themselves for medical examination to serve in the army; that every young man suspected of tuberculosis should be kept under observation of a very thorough character; and that he should not be attached to a regiment unless bacteriological examination showed the absence of Koch's bacillus."

BERI-BERI AT THE RICHMOND DISTRICT ASYLUM, DUBLIN.

THIS asylum serves the counties of Dublin, Louth, and Wicklow together with the City of Dublin and the town of Drogheda with an estimated population of 552,390. The legal limits of accommodation allow for 1100—viz., 505 males and 595 females—but the "legal accommodation of the original buildings is an over estimate as they are incapable of affording proper accommodation for more than 1000 patients." The total number of patients on the books on Dec. 31st, 1896, was as follows:—males, 861; females, 867; total, 1728. Of these 59 male patients resided in the old residence at Portrane, 39 female patients were housed by night in the former quarters of the medical superintendent, and provision was made for 264 patients in the temporary buildings erected by the Board of Governors at the Richmond Asylum. It is obvious, however, that the building is much overcrowded and it reflects the greatest credit upon the management, both medical and otherwise, that the death-rate should only have been 7·8 per cent. for the year 1896. Of the total deaths 30·5 were due to phthisis. The most important disease, however, which visited the asylum was undoubtedly an epidemic of beri-beri. There were 8 deaths from this cause—2 males and 6 females. The attacks among patients numbered 109—32 males and 77 females, while 7 nurses were attacked in addition. Nothing seems to be known as to the origin of the disease, which first appeared in 1894, but according to the report of Dr. Patrick Manson "a germ of foreign origin was fostered by the excessive overcrowding, defective ventilation, and dampness which was patent at the time of my visit both in many of the day rooms, in the dormitories, and even in the hospital wards of the Richmond Asylum." Dr. Manson goes on to say that the only method of getting rid of the disease is prompt and thorough relief of overcrowding together with a number

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of sanitary and hygienic improvements. Dr. Walter Smith and Sir Thornley Stoker say practically the same thing. The inspection by these gentlemen was made on Oct. 16th, 1896. There would seem, therefore, to be a very strong opinion with regard to the necessity of getting rid in some manner or other of the overcrowding and the authorities are doing their utmost to bring this about. The question of boarding patients out was discussed, but owing to legal difficulties did not come to anything. A new asylum is in course of erection at Portrane which will provide sleeping accommodation for 665 men and 733 women besides 128 attendants and at present there is temporary accommodation for 100 men at Portrane.

DOMESTIC HYGIENE.

As a general rule lectures on medical subjects delivered at a lay public are much to be deprecated. They are likely to produce an entirely wrong impression on the members of the audience when previous education and want of knowledge of physiology and the kindred branches of science do not prepare them for a right mental assimilation of the facts laid before them. There is one branch of medical knowledge, however, in respect to which exception must be allowed in giving expression to the above opinion and that is as regards matters concerning domestic hygiene. The utmost ignorance is generally displayed on this subject, by the poorer classes especially, and consequently the announcement made by the Mansion House Council on the Dwellings of the Poor that arrangements are being concluded for the delivery in the various districts of London of lectures on "Healthy Homes," and "Essentials of House Sanitation" is to be commended. The question remains whether the desired audiences will be obtained. Not only ignorance but utter want of interest are exhibited on such matters by the classes referred to, but we wish the council every success in their endeavours to instil into the minds of the people the most simple and essential points concerning the hygiene of home and body.

POST-MORTEM DELIVERY.

IN German medical literature is found a term for which as far as we are aware there is no English equivalent, viz., "Sarggeburt," which literally translated means "coffin-birth"—that is to say, that a pregnant woman dies and the body is placed in a coffin and then before or after burial delivery takes place. Very few cases of this kind are on record. A notable case, however, is recorded by Dr. Bleich, of Tschirnau.[1] Before proceeding to describe the case Dr. Bleich makes some remarks on the theories that have been advanced to account for the causes which bring about post-mortem delivery and states that two explanations have been advanced; the first supposes that the pressure produced in the abdomen by the gases evolved in post-mortem decomposition is sufficient to cause the expulsion of the uterine contents, whilst the second suggests that the necessary force is brought about by the condition of rigor mortis into which the muscular structure of the womb is thrown. Proceeding then to a description of the case which he himself observed, Dr. Bleich records that on July 6th the dead body of a woman was found lying in a shallow pool of water. It was ascertained that she had escaped from her home in a state of insanity. On examination no signs of injury could be found with the exception of slight bruises on the knees; it was found that she was pregnant, probably in about the seventh month. Post-mortem rigidity was present; a few post-mortem stains were found on the back. It was concluded that the body had only been a short time in the water and that all the evidence pointed to suicide, and the burial took place on July 9th. Eight days after the finding of the body it was ascertained that three young labourers had had sexual intercourse with the deceased woman shortly after one another. They were arrested and closely questioned and all three persistently denied that any criminal force had been used, but, on the contrary, said that the woman had been a consenting party. Exhumation of the body was ordered and a post-mortem examination was made on July 19th. Delivery was found to have taken place after the coffin had been closed with complete inversion and prolapse of the uterus and vagina. A full account of the necropsy is given in Dr. Bleich's paper. We can only give a brief abstract. The abdomen was greatly distended but exhibited no signs of injury. Between the thighs lay a dark-red mass (the uterus) about the size of a head, from the under side of which sprang a dark umbilical cord, and connected with the latter was the body of a child 36 cm. in length. The vulva was wide open. The uterus was flabby and like a sac and lay with its inner surface pressed against the thighs together with the vagina; the placenta had separated and was dark-brown in colour and of a hard consistence. The muscular walls were thin and brittle. Dr. Bleich suggests that the violence experienced by the woman shortly before death had been of such a nature as to render abortion probable and that the collection of the gases of decomposition in the abdomen had been sufficient to complete that process and also cause the condition of the uterus found on the exhumation of the body.

[1] Vierteljahrsschrift für gerichtliche Medicin und öffentliches Sanitätswesen, 3. Folge, Band xiv., p. 2.

OVERCROWDING IN LONDON.

THE London County Council on Tuesday took a step which will have an influence on the health and welfare of the London inhabitants more important perhaps than any action taken by that body since it was called into existence in 1889. One of the most difficult tasks which has to be undertaken is that of dealing with overcrowding in the metropolis. The erection of artisans' dwellings is a step in the right direction, but this can be met by the enterprise of public companies and by the natural tendency of private builders to provide accommodation whenever the need for this provision is such as to ensure that the accommodation will be utilised. The great difficulty is to prevent overcrowding and all the evils which are attendant on overcrowding in dwellings which already exist. The only means which the Council possesses of dealing with this question is to ensure that by the regulation of houses let in lodgings of the poorer sort there shall be no overcrowding within them. A report just issued by the Public Health Department of the County Council shows that the majority of the sanitary authorities have been very lax in exercising the power with which the wisdom of Mr. Ritchie provided them in 1891. The Council, after waiting until the sanitary authorities had made by-laws and until a sufficient time had elapsed for them to undertake the work, has caused inquiry to be made into the progress they have accomplished, with the result that it has been found necessary to make complaint to the Local Government Board of one authority which has made default in enforcing this provision of the Act. The authority which has been selected by the Public Health Committee for this purpose is the vestry of Bethnal-green, but the discussion in the Council showed that other authorities have been equally lax in the administration of the law. The question arose whether these other authorities should be dealt with in a similar manner, and Dr. Forman, the chairman of the Public Health Committee, at once on behalf of his committee expressed willingness to make complaint of all defaulters. The Council evidently hoped that it would prove sufficient to make an example of one authority, but the position assumed by Dr. Forman and the support he received

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from both parties in the Council showed plainly enough that the recommendation of his committee was merely a beginning and that his committee and the Council had fully made up their minds that every effort should be made to raise the standard of house accommodation for the poor throughout London. The vestry of Bethnal Green will therefore be complained of and in the meantime it may be expected that other sanitary authorities will carefully consider how far they have done their duty. We are sure the lesson to be learned from Tuesday's proceedings will not be thrown away and that London will now seriously address itself to this important work. Whatever changes may be made in the Council as the result of the next election there will evidently be no hesitation in persevering with the work which had its beginning this week.

HOSPITAL ACCOMMODATION FOR SMALL-POX.

THE Local Government Board inquiry which was held at the Town Hall, Croydon, on Dec. 9th is of considerable interest in reference to the very difficult question of the proper isolation of small-pox. We use the term "proper" isolation since it is obvious that the treatment of small-pox in hospitals surrounded by inhabited houses can in no sense be considered as such; indeed it is, as has been found over and over again, one of the readiest means of spreading the disease. At the inquiry to which we refer it was proposed that the Local Government Board should issue a Provisional Order under Section 279 of the Public Health Act, 1875, forming the County Borough of Croydon, the Urban District of Wimbledon, and the Rural District of Croydon into a United District for the purpose of providing hospital accommodation for the reception of cases of small-pox; and as there was no opposition to this proposal we infer that the provisional order will be issued, with such modifications as were discussed at the meeting, and that the joint board will be formed. This solution of the hospital difficulty seems to us the best that can be devised under all the circumstances, and fortunately there is no serious contra-indication to the conveyance from long distances of patients suffering from this disease. Moreover, there is no reason why a joint board such as that now in question should not erect several small-pox hospitals should the occasion demand. When the question of site or sites comes to be considered there will doubtless be some outcry from the neighbourhood selected, but this is inevitable and in the joint district there should be found comparatively uninhabited areas in which the small-pox hospital or hospitals might safely be erected.

EPIDURAL ABSCESS WITH ABSCESS IN THE BRAIN.

IN the November number of the *American Journal of the Medical Sciences* Dr. Charles H. Burnett gives an account of an interesting and very important case. A man, aged thirty years, who was said to have had a discharge from his left ear ever since childhood, was admitted to hospital in a semi-comatose condition. He seemed to understand questions but was unable to answer them and he could not protrude his tongue, simply opening his mouth when asked to do so. His appetite was fair, his digestion good, and his bowels were not constipated. The history was that ten days before admission he complained of earache and toothache on the left side and he had a tooth drawn. The pain continued and three days later he came home from his work complaining of pain in the left ear, headache, and nausea, and he actually vomited. Three days before admission he was able to sit up in bed, but in the afternoon he became suddenly unconscious and in the course of the evening had two severe convulsions. After this he remained semi-comatose and paraphasic, the condition in which he was on admission to hospital. He was found to have a granulation in the left ear which was removed. It was then seen that the tympanic membrane had disappeared, the promontory was red and sensitive, there was a flabby granulation protruding from the antrum into the auditory canal, and a large perforation into the attic. It was decided to explore by way of the mastoid. No pus was found, only crumbling bone and two or three granulations which were removed from the antrum. The temporal bone was then trephined, the lower edge of the trephine hole being situated about an inch above the external auditory meatus. A director was passed between the dura mater and the bone and about two drachms of offensive pus escaped. In spite of this operation the aphasia increased, the patient became quite incoherent, and there was great restlessness at night affecting chiefly the right arm and leg. A communication was next established between the epidural abscess cavity and the drum cavity, but without affording any relief. It was then thought that there must be a collection of pus in the brain, most probably in the temporal lobe, and it was decided to explore. About half an ounce of thick, greenish, offensive pus escaped and a drain was inserted by which pus continued to discharge. The patient, however, did not recover consciousness and died comatose with a high temperature two days later. A necropsy unfortunately was not permitted. Dr. Burnett remarks that the conditions in this case indicated a pyæmic condition rather than a simple cerebral abscess. Considerable variation in the temperature took place and it would naturally be expected that thrombosis had occurred in the sinuses, although the variations of temperature were the only indication of such a condition. It is unfortunate that inspection of the actual condition present in the brain was not permitted.

NILE BARRAGES.

THE International Controllers of the Egyptian *Caisse* have, according to Reuter, relaxed their purse-strings to the extent of over half a million sterling for the purpose of repairing existing barrages in the Nile and creating new ones, and they are also said to have conceded £100,000 for renewal of railway material. These large concessions are apparently in addition to a grant of £150,000 which was recently accorded to the irrigation department, in which case the total sum released from the swollen reserve fund would amount to no less than £780,000. It seems that the great barrage below Cairo which was originally constructed by French engineers has again been injured by under-springs and that its "holding-up" power has consequently been considerably diminished. This of course is by no means surprising for the enormous structure stands upon alluvium and is yearly subjected to immense pressure while the river is in flood. Under the circumstances the wonder is that it has not long since been swept away. We also learn from the same source that great satisfaction is expressed at the action of the members of the *Caisse* in thus facilitating works which are considered most necessary for the public welfare. Doubtless from a purely fiscal point of view damming the Nile may be expedient, but that interference with the current in Lower Egypt should conduce to the public welfare is open to question. We have frequently alluded to the bad quality for drinking purposes of stagnant Nile water and some months ago we published tables showing an appalling death-rate among young children throughout the low-Nile season.[1] The schemes for impounding the Nile in its comparatively pure and uncontaminated upper reaches, about which so much used to be heard, are now no longer mentioned. Together

[1] THE LANCET, April 10th, 1897, p. 1040.

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with the scheme for the drainage of Cairo they seem to have been relegated to the limbo reserved for Utopian projects. To the humanitarian this abandonment of the Upper Egypt reservoirs is discouraging and depressing. The Nile is the sole source of drinking-water in the country, and until the great river can be effectually purified during the summer we cannot hope to see any sensible diminution of infantile mortality.

"TEMPORA MUTANTUR, NOS ET MUTAMUR IN ILLIS."

A LETTER with this familiar quotation as a title appeared in our columns on Dec. 11th, signed "Paterfamilias." It told a sad story in simple language and as a result a well-known surgeon has made a generous offer to the writer. "Paterfamilias," a general practitioner, after enumerating the causes that with no blame to himself had thrown him "into a position of great difficulty and distress," went on to say: "My youngest son, who is commencing his third winter [of medical study] has received notice that unless his fees, amounting to £30, are paid forthwith he will be excluded from lectures. He is an ardent and eager student and it will be heart-breaking work if I have to keep him at home, but I do not know how to get the money. I have already paid £80 to the hospital besides examination fees. What can I do?" The offer of "Paterfamilias's" unknown friend made hereby through our columns is as follows: "I presume you [i.e., THE LANCET] guarantee the facts by your insertion of the letter. If this be so I will give £5 towards paying the boy's fees if five other men will give an equal amount or the £25 in other ways be made up in time." To this we have to say that we have "Paterfamilias's" full permission to apply for information at the hospital, and that he has referred us to the senior surgeon of the hospital and to the dean for confirmation of his story. We hope under these circumstances that some of our readers will place us in the position of being able to send "Paterfamilias" a cheque for the lad's fees. A little help now may be the means of securing to him a career and a professional position for life. The time is opportune for the extension of a kindly hand towards such a case. Not so long ago a student in this position, keen at his work and the son of a medical man, could have sold his services by taking an unqualified assistancy and could thus have tided over the evil spell, but this resource is now impossible. Moreover, Christmas is upon us—the season when generosity should not stand much on the order of its giving but should give at once.

TRANSPLANTATION OF MUSCLES IN THE TREATMENT OF DEFORMITIES.

THE ingenious method of remedying loss of power and deformity from paralysis of certain muscles by attaching their tendons to those of others is of recent growth. In the *Boston Medical and Surgical Journal* of Nov. 11th, 1897, Dr. Joel E. Goldhurst describes an important advance on this method made by American surgeons in the last few years—the dissection out of the muscles and their direct re-attachment to others. In a large number of cases of infantile paralysis the sartorius escapes. Being a flexor of the knee its action is useless or harmful when extension is lost from paralysis of the quadriceps. To improve the limb and restore extension Dr. Goldhurst transplants the sartorius and attaches it to the quadriceps tendon just above the patella. He has operated on five patients with marked improvement in three and failure in two which he attributes to imperfect methods of attaching the muscle. He operates as follows. A six-inch longitudinal incision is made on the inner side of the thigh with the middle opposite the top of the patella. The sartorius is dissected out, cut off at its insertion brought forward and attached to the muscular fascia just above and a little to the inner side of the patella. The attachment must be made firmly by splitting the fascia and drawing the muscle through, so that it becomes adherent to both inner and outer surfaces. Kangaroo tendon is used for sutures, being the best material. The wound is then closed and the whole thigh is bandaged and finally a plaster-of-Paris bandage or a long splint is applied. The patient is kept recumbent for two weeks at least, gentle motion is commenced at the end of three weeks, and the plaster is entirely omitted at the end of from five to six weeks. One case was that of a woman, aged twenty-two years, paralysed from early childhood, who had no power of extension or of bearing weight on the limb unless the knee was fixed artificially, and who had a flail-like leg, flinging gait and used a crutch constantly. After the operation, though still somewhat lame, chiefly from weakness of the foot and ankle, the mechanical difficulty at the knee and the gait were almost entirely corrected, the leg was extended normally, and she was able to do housework. A very remarkable result of the operation in the successful cases was hypertrophy of the sartorius causing in one case an increase of half an inch in the circumference of the thigh with concomitant increase in the strength of the muscle until it was able to do the work of the quadriceps. The only other attempt at direct muscular attachment made by Dr. Goldhurst was in a case of infantile paralysis of the anterior tibial muscle producing marked valgus. The method of attaching the tendon of the peroneous tertius or the tendons of the common extensor of the toes to the anterior tibial being liable to failure, in consequence of the small size of the tendons which leads to their sloughing from the manipulations, he performed the following operation. A three-inch longitudinal incision was made over the middle of the anterior surface of the leg. The muscle of the common extensor was dissected out and attached to the anterior tibial muscle by quilted sutures. Some improvement followed, but less than Dr. Goldhurst hoped for.

A MEDICAL POET.

IN the "Arundines Cami" (in which the University of Cambridge took more than chronological precedence of the "Anthologia Oxoniensis" and the "Hesperidum Susurri" of Dublin) are few finer gems than the sonnet on "The Hospice of S. Bernard" and its rendering into the Ovidian distich. The two poems, English and Latin, were particularly admired by the late Dean Milman, who, in his well-known review of the "Arundines," informed his readers that the English poet was Dr. David Macbeth Moir, of Musselburgh and his Latin interpreter Dr. Samuel Butler, Bishop of Lichfield. Physician and divine are long dead, but while both have not been left without memorial it has been widely felt, particularly north of the Tweed, that something more should be done for the former than a brief biographical notice or even than the statue which adorns the old-fashioned fishing-town and golfing-centre in which he practised so honourably. On Jan. 5th, 1898, will recur the anniversary of his birth, and the day has been fitly chosen by a number of leading men in Scottish science and literature to commemorate the "beloved physician" and "tender poet" whose life was a beautiful commentary on the "Songs of the Affections" wherein he was a master. Emeritus Professor Masson, we understand, will be the orator of the occasion and, among other tributes to its hero, he will be able to announce that a "Moir prize," or scholarship, or some substantial award of that nature, will be founded for proficiency in his published writings. The project deserves every encouragement, and we would only suggest to its promoters

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that Dr. Moir besides being a poet and humourist of genuine capacity was also accomplished in the history of medicine and wrote what was for a long time the only treatise on the subject accessible to the English-speaking world. The connexion between literature and the healing art in their concurrent bearing on the evolution of humanity, its "sorrows and its aspirations," its achievements and its joys might form no inappropriate theme of the prize in contemplation and might one day inspire some exceptionally gifted competitor to embody in lasting prose or verse the spirit of the "medical poet" which breathes so warmly from his own sonnet on "The Hospice of S. Bernard":—

> So task'd to smooth stern Winter's drifting wing,
> And garb the eternal snows in more eternal Spring.

Or in the Cambridge rendering:—

> Temperat et Borem rabiem mollitque pruinas,
> Et facit Æterno Vere tepere nives.

HOSPITAL ABUSE.

A PAPER on this subject is published in the *Medical Magazine* for November by Dr. Herringham, assistant physician to St. Bartholomew's Hospital. Dr. Herringham, if we may so express it, is one of the most sceptical believers in hospital abuse. He takes nothing for granted and he has taken the trouble to go with some minuteness into the social condition of the out-patients of St. Bartholomew's Hospital. The result is that he is doubtful of the great extent of abuse, of the overwork of out-patient physicians and surgeons, and of the propriety of refusing to treat at hospitals the trivial complaints of the poor. He admits, however, that patients are treated free who ought to pay and he advises a concentration of attention on means for exposing such cases. He thinks this is best to be done by a committee of general practitioners in large towns or districts. But surely hospitals should have within themselves the means of ascertaining the fitness of patients. It seems to be a very undesirable duty for general practitioners to have to expose the sins or the shabbiness of their patients. It would be much easier for them to give a note for the admission of fit cases than to act as informants in unfit ones. But Dr. Herringham objects to the suggestion that a certificate of fitness from a medical man should be required. Such a certificate need not be a *sine quâ non* but it might be demanded in all cases which are apparently out of place in a hospital. There is, however, much force in Dr. Herringham's treatment of the subject. He admits the main point, he has no patience with those who abuse hospitals, and would refuse all aid to hospitals which do not employ an efficient and active inquiry officer.

PLAGUE AND PREVENTIVE INOCULATION IN PORTUGUESE INDIA.

WE have received the joint report drawn up by M. Haffkine and Surgeon-Major Lyons upon the recent epidemic of plague in Damaun, Portuguese India, and the effect of preventive inoculation there. The report is of the highest interest, but we have only space to mention a few of the more salient facts. The facts are collected by Professor Koch and Professor Gaffky, with M. Haffkine and Surgeon-Major Lyons, the President of the Bubonic Plague Research Committee; and their informants were His Excellency Colonel J. P. Villar, the Governor; Mr. Judge, the Assistant Collector; Shet Sorabjee, the head of the Parsee community; and six medical officers. The daily mortality from the beginning of March to May 19th, 1897, was 30 per diem—a grand total of 2325 deaths. Of this number 2093 were authenticated in the particular families where they had taken place by means of a house-to-house inquiry set on foot by Shet Sorabjee. Among the Parsee community numbering 306 persons 276 were inoculated twice and 1 once. Of these 1 only died, a woman who had only been inoculated once and that, as was afterwards seen, subsequently to infection by plague. Thus the total mortality among the inoculated Parsees was only 1 in 277—a percentage of 0·36. Among the 29 uninoculated there were 4 deaths—a mortality of 13·8 per cent. Among Shet Sorabjee's servants and labourers, numbering 200 in all, all were inoculated but one. That one was attacked on May 16th and died on May 19th, while among the inoculated 1 person, a child aged four years, was attacked and died. Of other members of the population of Damaun between March 26th and the end of May among 6033 uninoculated there were 1482 deaths, or 24·6 per cent., while among 2197 inoculated there were 36 deaths, or 1·6 per cent. If the inoculated had died in the same ratio as the uninoculated the number of deaths among them would have been 332 instead of 36. Owing to the extreme demand for lymph the latter inoculations were much weaker than those done at the commencement of the epidemic and the difference in favour of the stronger lymph was most marked, for out of 1924 inoculated with the strong lymph there were 70 cases, 3·6 per cent., with 22 deaths, 1·1 per cent., case mortality, 31·4 per cent. Out of 270 treated with weak lymph there were 21 cases, 7·8 per cent., with 14 deaths, 5·2 per cent., case mortality, 66·7 per cent. Figures such as these show the extreme value of the preventive treatment taken as they are from the course of a most virulent epidemic and during the highest stage of the outbreak.

THE Royal College of Surgeons in Ireland announces that a Barker Anatomical Prize of £26 5*s*., open to any student whose name is on the anatomical class list of any school in the United Kingdom, is offered for a dissection of the anterior triangle of the neck, with special reference to the operation of lateral pharyngotomy. The preparations entered must be placed in charge of the curator of the museum before June 1st, 1898, they must be marked with a fictitious signature and accompanied by a sealed envelope bearing outside the same signature and containing the competitor's name.

THE Philadelphia Medical Publishing Company (Box 1573, Philadelphia, Pa.) will begin the publication in January, 1898, of a weekly medical journal to be called the *Philadelphia Medical Journal*. The editorial management has been entrusted to Dr. George M. Gould, whose high reputation as a medical editor guarantees a vigorous and interesting publication.

THE Chairman of the London County Council, Dr. W. J. Collins, was entertained yesterday (Thursday) evening at a complimentary dinner at the Trocadero Restaurant by the staff and former students of St. Bartholomew's Hospital, at which school Dr. Collins received his medical education. Mr. Howard Marsh presided.

WE have received a Report to the Local Government Board on the Preparation and Storage of Glycerinated Calf Vaccine Lymph. The report is the result of a personal tour of inspection on the Continent made recently by Sir Richard Thorne and Dr. S. Monckton Copeman.

DR. H. P. HAWKINS has been appointed Physician to St. Thomas's Hospital in the vacancy caused by the retirement of Dr. W. M. Ord, and Dr. S. G. Toller has been appointed Assistant-Physician in Dr. Hawkins's room.

THE third sitting of the Royal Commission on the Water-Supply of London was held on Monday last in the Moses

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Room of the House of Lords. A report of the proceedings will appear in our next issue.

THE Licensed Victuallers' Protection Society have subscribed £1500 to the Prince of Wales's Hospital Fund.

The Lancet Special Commission

ON THE

METROPOLITAN WATER-SUPPLY.

XXII.[1]

NEW RIVER COMPANY—*Concluded.*

THE POND WATER (FOR NON-DOMESTIC SUPPLY).

THE water which is used for drinking purposes is now entirely obtained by the New River Company from the River Lee and from deep wells in the manner described in the preceding articles. In addition to these sources of supply the Company have the right of taking water from a number of ponds which are situated at Hampstead and Highgate. The water is not at the present time used for human consumption. The supply from this source forms a separate system, and is distributed partly for watering roads and other municipal purposes and partly for the supply of the City of London Cattle Market at Camden Town. Cattle, it is said, prefer water derived from ponds to that obtained from wells. Although as a matter of fact there is no doubt that cows prefer to get water from a pond to taking well water from a pail, it does not, of course, necessarily follow that they would prefer the water from the Hampstead and Highgate ponds to that derived from the New River, and with regard to the supply of the Cattle Market it may be said that when there is an insufficiency in the amount of the supply from the ponds the deficiency is made up by filtered water of the same quality as that supplied for drinking purposes to the other part of the New River Company's city district.

The ponds at Hampstead are situated on the Heath. Of those at Highgate some are in Lord Mansfield's Park, Kenwood, and some in Parliament Fields. These latter ones and those at Hampstead are well known to the public, but it is doubtful if very many people know that they are used for the supply of the Cattle Market and that they were till recently the sources of part of the drinking water supplied to Londoners.

At Hampstead Heath there is a disused well which belongs to the Company. It is situated close to the Heath-road and about 250 yards from Hampstead Heath railway station. The well house is an octagonal building and is known locally by the name of the "pepper-box." It is now used as a turncock's residence. The well has a diameter of about 8 ft. and is bricked to a depth of 60 ft. Below this there are iron cylinders which reach down to the chalk. The water in this well is not now used and the pumping engine has been removed, but the well in the past has supplied useful information with regard to the sinking of the underground water in the London district, for careful observations as to the height of the water in the well have now been taken for a long series of years. The level of the water on July 18th was 260 ft. 4 in. from the top of the grids, which is about the same as the ground level and is the point from which the measurements are always taken.

Hampstead Ponds (see Fig. 4).—Of the series of eight ponds at Hampstead one has lately ceased to exist. It has been filled up and the land taken over by the London County Council who have laid out a pleasure garden on its site. This pond, which was called No. 1, was situated between the well and Hampstead Heath railway station. The ponds which remain are all situated higher up the Heath.

Pond No. 2 is close to the well house, it has an area of about four acres.[2] It is supplied by water from the upper ponds and by surface water from the Heath. The water level therefore varies greatly according to the rainfall. The amount of variation is about 5 ft. On July 18th the pond was 4½ ft. "below mark," that is to say below normal high water mark. No water had been drawn from it for a week before this. There is a pipe guarded by a grating, which has 1 in. spaces, at the back of the well house and the water is used for the supply of Camden reservoir. Water comes from a pond No. 3 through a 4 in. iron pipe, and there is an earthenware drain-pipe to conduct the overflow water from Pond No. 3.

Pond No. 3 has an area of about three acres: it is situated to the north of the path leading to Parliament Hill-road and about 20 yards to the north of No. 2, and the level of the water in it is about 25 ft. above it.

Pond No. 4 is situated just to the north of No. 3, and divided from it by a footpath which leads from Parliament Hill to the Heath. It has an area of three acres. The top water-level is about 4 ft. above that of No. 3. At the north-east corner there is a bathing-place which is under the care of the London County Council. This pond is kept at a constant level by the New River Company, so that facilities may be afforded for bathing. The depth and capacity of these ponds are not accurately known. The water which supplies Pond No. 4 comes partly from the Heath through drain-pipes which take off the surface water and partly from the Viaduct Pond which is higher up the Heath, and is now under the guardianship of the London County Council. Some water comes also from the Vale of Health Pond (No. 5)

The Viaduct Pond is supplied by springs and surface water from the Heath.

The Vale of Health Pond (No. 5) is situated at the upper part of Hampstead Heath, about 300 yards from Spaniards-lane. It has an area of about three and a half acres, and is filled with water derived from surface drainage.

Highgate Ponds.—At Highgate there are eight ponds of which the water is used by the New River Company. Of these, the upper ones are in the grounds of Kenwood Park and the lower ones in Parliament Fields. The ponds are numbered from below upwards, the lowest being No. 1 and the highest No. 8

Pond No. 8 is in front of Kenwood House. It is about three acres in extent. From No. 8 water flows over a fixed overflow lip or through a grating. The Company's caretaker has occasionally to remove the weeds which accumulate in the grating, but no other work is necessary here, and the pond is situated in a retired part of the private grounds of of Lord Mansfield's park.

Pond No. 7 is situated at a level of about 12 ft. below No. 8. Its extent is about an acre and a half. The pond is of oblong form. The water passes by an overflow lip guarded by a grating which has one inch spaces.

Pond No. 6 is situated at the lower part of the park, near Millfield-lane, at a level of about 70 ft. below No. 7; it covers about an acre of ground. The water is conducted from No. 7 through pipes.

Pond No. 5 is situated at a level of about 12 ft. below No. 6, and the water is conducted to it through an iron pipe. Its form is more or less crescentic and its area about three acres.

Pond No. 4 is at the lower boundary of the park close to Parliament Fields. Its area is about an acre and a half and the water level is about 20ft. below that of No. 5 from which the water is conducted through a pipe. The other three ponds, Nos. 3, 2 and 1, are situated in Parliament Fields.

Pond No. 3 has an area of about four and a half acres. Its level is about 3ft. below that of No. 4, from which it receives water through an iron pipe. Water is also obtained from surface drainage. This pond is kept as full as possible and is used for model yacht sailing under restrictions imposed by the London County Council. The overflow from it passes through a 14-in. iron pipe; it is guarded by a grating and the water all goes to Pond No. 2.

Pond No. 2 has an area of about five acres and is situated at a level of 15ft. below that of No. 3; it receives also a certain amount of the surface drainage. This piece of water

[1] Nos. I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., XVII., XVIII., XIX., XX., and XXI. were published in THE LANCET of Feb. 20th and 27th, March 6th, 13th, 20th, and 27th, April 3rd, 17th, and 24th, May 1st, 8th, 15th, 22nd, and 29th, June 19th and 26th, Oct. 23rd, Nov. 6th, 13th, and 27th, and Dec. 4th respectively.

[2] The areas and levels here given are approximate only.

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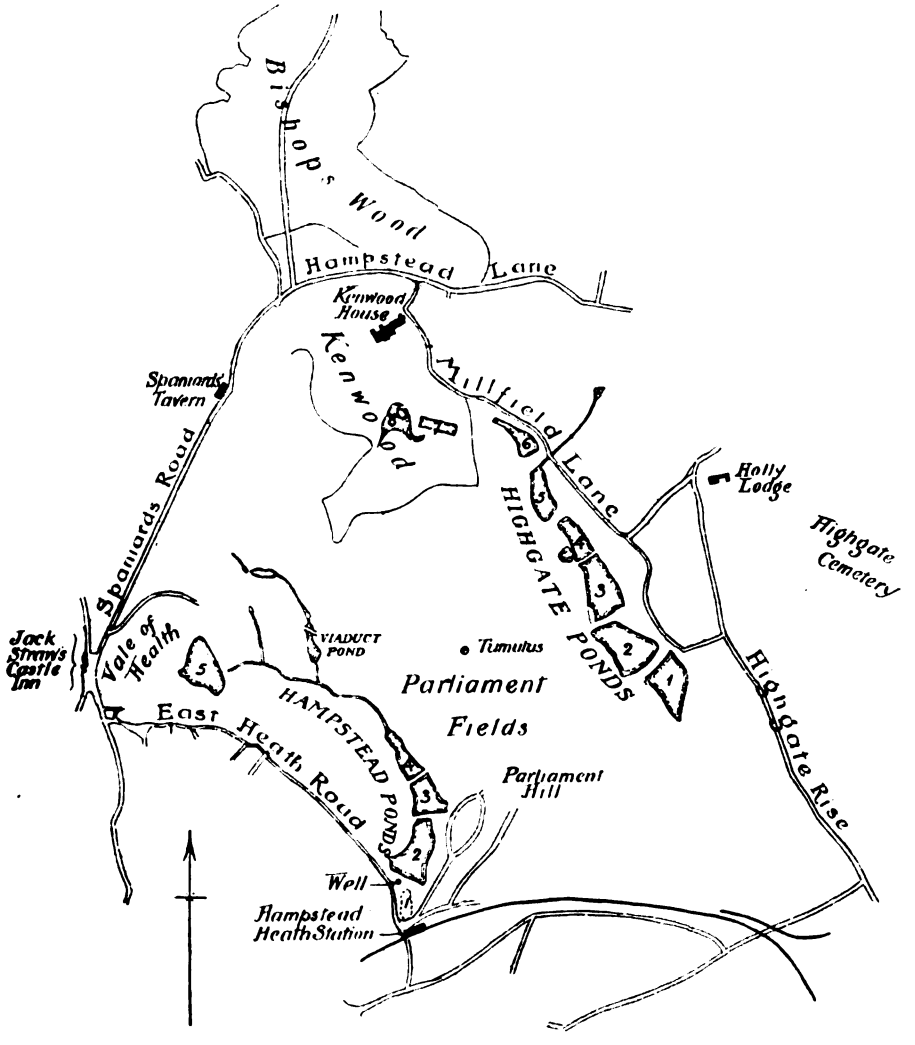
is used for bathing under the supervision of the London County Council.

Pond No. 1 has an area of about three and a half acres and is situated at a level of 20 ft. below that of No. 2. The water passes to it through an iron pipe guarded by an iron grating. The regulations with regard to keeping the ponds full may be summarised as follows: Nos. 8 and 7 are kept as full as possible; No. 3 is kept full for the convenience of people who sail model yachts; No. 2 for bathers; Nos. 4, 5 and 6 are kept as full as circumstances permit.

Cistern house.—At the southern end of Pond No. 1 there is a small house built over a cistern. The cistern is of brick rendered in cement, about 10 ft. in diameter and 15 ft. in depth, the pipe from the cistern conducts the water at a level of about 6 ft. from the top water level of the pond. The house contains a fireplace and is used for storing rakes and other tools which are used for keeping the ponds in order. A 16-in. pipe conveys the water from the cistern through a garden and then along a foot-path which leads to Highgate-road, thence it passes to the reservoir at Camden Town, a distance of about one and a half miles. Water from the Hampstead ponds is conducted in a pipe which joins this one at Gordon House lane, from which point all the pond water is conducted to Camden-road-square.

Camden Park-road reservoir (see Y on the general map of the Company's works which appeared in THE LANCET of Oct. 23rd, p. 1069).—This reservoir is uncovered. It is situated in an open space. The shape of the reservoir is somewhat peculiar; it may roughly be described as more or less triangular with rounded corners. The sides are built with brick set in cement and are nearly vertical, the slope being about 1 in 12. The top of the surrounding wall has a coping of York stone. The depth of the reservoir is 10 ft. 6 in. There is a large octagonal cock-pit for regulating the supply. The water all comes from the Hampstead and Highgate ponds and is not filtered. It is used for the supply of the Metropolitan Cattle Market. The water, however, is only used for the cattle, the buildings at the market are supplied with filtered water by a separate system of pipes. The reservoir is protected by a spiked iron fence, and a caretaker's cottage is situated here.

FIG. 4.



The Hampstead and Highgate Ponds.

GENERAL STATISTICS.

Length of new pipes.—The length of new pipes, ranging from 3 in. to 36 in. in diameter, laid by the New River Company during the year 1895 was three miles, and in the year 1896 six miles.

New hydrants.—The increase in the number of fire hydrants in use in the metropolis is as follows:—1895, public hydrants, 418; private hydrants, 142; total, 560: 1896, public hydrants, 493; private hydrants, 221; total, 714.

Communications with other companies' mains.—West Middlesex Waterworks Company (1) at the junction of Tottenham Court-road with Oxford-street, and (2) at the junction of Tottenham Court-road with Euston-road.

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Houses under constant supply.—The number of houses under constant supply on Dec. 31st, 1894, was 100 668; on Dec. 31st, 1895, 109,110; and on Dec. 31st, 1896, 126,409.

Percentage of houses under constant supply.—On Dec. 31st, 1896, the percentage of houses under constant supply was 78.

Average daily supply per head.—The average daily supply per head during the year 1896 was 30·6 gallons.

Highest supply.—The highest supply given is from the standpipe of the reservoir at Hampstead Heath, which standpipe is 486 ft. above ordnance datum.

Dates of maximum and minimum supply.—The following table gives the date of the maximum and minimum supplies and the average daily quantity supplied:—

	Year 1895.		Year 1896.	
—	Month.	Quantity in gallons.	Month.	Quantity in gallons.
Maximum	July	43,121,000	July	43,127,000 daily average.
Minimum	December	32,020,000	December	32,241,000 ,,

Table of Statistical Details compiled from information given by the New River Company for June, 1897.

SUPPLY.	Average daily supply in gallons (filtered)	34,646,498	Total 37,996,000 gallons
	Percentage delivered for other than domestic purposes, exclusive of waste	3,349,502	
	Number of houses supplied	162,169	
	Number of houses on constant supply	129,017	
	Estimated population supplied	1,176,000	
RESERVOIRS. Subsiding and storage unfiltered water	Number	20	
	Area in acres	99½	
	Available capacity in gallons	168,100,000	
Storage filtered water reservoirs	Number	11	
	Capacity in gallons	37,540,000	
ENGINES.	Number	44	
	Horse power	3,910	
	Greatest lift	590	
	Head of pressure in the district supplied	Greatest, 260; least, 40.	
WATER PIPES.	Total number of miles of water pipes	Constantly charged, 649, others, 192; total, 841.	
	Number of miles of water-pipes in the metropolis	Constantly charged, 592; others, 189; total, 781.	
	Number of miles of streets with water pipes constantly charged in the metropolis	389	
	Number of hydrants erected within the metropolis	Public fire, 6517; street watering, 618; private fire, 4296; total, 11,431; and about 12,500 fire-plugs and wash-outs.	
FILTERS.	Number of beds	20	
	Area in acres	16½	
	Depth of sand and other materials	5 ft. 7 in.	
Sources and amount of the water filtered and pumped.	Springs and wells	13,359,635 gals.	
	River Lee	21,286,863 ,,	
		Total, 34,646,498 ,,	
Sources and amount of water delivered unfiltered.	Ponds	3,904 gals.	
	Springs and wells	2,197,261 ,,	
	River Lee	1,148,337 ,,	

AREA OF SUPPLY.

The Act of 1852 authorises the New River Company to supply the following places, some of which are entirely supplied and some partly supplied:—

Supplied.—Barnard's Inn; Ely Place; Ely Rents; Gray's Inn; Hatton Garden; Highgate Hamlet; Holy Trinity; Minories; Lincoln's Inn; Middle Temple; Rolls Liberty; Saffron Hill; St. Andrew, Holborn, above the Bars; St. Clements Danes; St. George, Bloomsbury; St. George the Martyr; St. Giles in the Fields; St. James and St. John, Clerkenwell; St. John the Baptist, Savoy, Strand; St. Luke, Middlesex; St. Mary, Hornsey; St. Mary, Islington; St. Mary-le-Strand; St. Mary, Stoke Newington; St. Paul, Covent Garden; St. Sepulchre Without, Middlesex; Savoy Precincts; Staple Inn; Thavies Inn.

Partly supplied.—Christchurch, Spitalfields; City of London; St. Anne's, Soho; St. Botolph, Aldgate Without; St. James, Westminster; St. John, Hackney; St. John, Hampstead; St. Catherine Precincts (Docks); St. Leonard, Shoreditch; St. Martin in the Fields; St. Mary, Whitechapel; St. Pancras; Westminster; and Norton Folgate.

The Act also authorised the supply of "such other places, if any, in the counties of Hertford and Middlesex out of the Metropolis as the Company now [1852] supply."

The Act of 1854 authorised the supply of the following districts, one of which is entirely supplied, some are partly supplied, some not supplied at all:—

Supplied.—Edmonton.

Partly supplied.—Broxbourne, Cheshunt, Enfield, Great Amwell, Hoddesdon, St. Margarets, Tottenham, and Wormley.

Not supplied.—Little Amwell, St. John (without the Borough of Hertford), and Ware.

NEW WORKS IN PROGRESS AND PROJECTED.

Supply from the Thames.—An Act of Parliament was passed in the year 1896 (59 and 60 Vic., cap. ccxli.) to authorise the West Middlesex Waterworks, the Grand Junction Waterworks Company, and the New River Company to construct new reservoirs at Staines, "and other works for affording an additional supply of water for certain districts north of the Thames." During the last session of Parliament an Act was passed to authorise the Company to make an aqueduct to convey the Thames water into the district supplied. This Act has just been published.

White Webbs.—A new pumping station is in course of erection at White Webbs. A well 200 ft. in depth has been sunk. Below the London clay a layer of Reading or Bagshot sand was found above the chalk. The well is stated to be capable of supplying 2,000,000 gallons of water daily.

THE END.

THE PROPOSED CENTRAL HOSPITAL BOARD FOR LONDON.

A MEETING of the Charity Organisation Society was held at the Royal United Service Institution, Whitehall, on Monday last, Dec. 13th, for the purpose of receiving and adopting the first Report of the General Committee for the promotion of a Central Hospital Board for London.

The Earl of STAMFORD, who presided, in submitting the report detailed the circumstances which led up to the present meeting. On the present occasion the issue would be dealt with by a larger constituency.

The Report stated:—

"The desirability of establishing a central hospital board for London has long been felt by members of the Charity Organisation Society and by many medical men interested in the reform of the system of medical relief in the metropolis. The grounds for this opinion are stated in the opening paragraphs of the pamphlet, containing the scheme for the formation of a central hospital board, circulated in the beginning of the present year. 1. There are (the paragraphs run) in London 12 hospitals with schools, 90 hospitals without schools, 84 charitable and provident dispensaries. It is stated that the number of in-patients dealt with in the course of the past year amounts to 87,119, the number of out-patients to 1,299,132 at the hospitals alone. 2. Besides this voluntary system there are, apart from the hospital accommodation provided for infectious diseases, 26 Poor-law infirmaries dealing with about 10,500 patients daily in addition to those who are inmates of the sick wards of the workhouses; and in the course of the year more than 130,000 'permanent,' 'ordinary,' and 'midwifery' medical orders are issued in connexion with the 44 Poor-law dispensaries of the metropolis. 3. The hospitals and dispensaries are, generally speaking, placed in districts where they were required to meet the demands for medical relief during the last and the earlier part of the present century. The more newly settled population of the last forty years is often ill supplied with

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hospitals and dispensaries. 4. Any observer of the present state of medical relief in London is struck by these and other facts which indicate the necessity of better organisation. The supply of accommodation is considerable but congested. The out-patients amount to almost incredibly large numbers, showing that after making all allowances far too large a section of the population habitually receive free medical relief. There is a very large Poor-law system of medical relief parallel to that of the voluntary system, but usually working in no fixed or coöperative relation with it. There is little or no cooperation between hospitals. On the contrary, between hospital and hospital the competition is great, so that if one hospital, for instance, is careful in the administration of its out-patient relief department those rightly excluded from it find a ready refuge in a neighbouring hospital, where no questions are asked and no stress is laid on carefulness of administration. The hospitals are often deeply in debt and find it impossible to raise funds sufficient to meet their annual expenditure. New hospitals spring up, often under very doubtful auspices, in regard to the utility and administration of which the general public is unable to form a just opinion. Further, to meet the needs of larger London—to help hospitals, for instance, to extend their accommodation when such an extension is desirable, to help them to move when removal would add to their usefulness—there is no central fund that, applied in conjunction with voluntary contributions, would assist them to develop their resources. Lastly, there is no general system of supervision that while it gives free play to the individual characteristics of individual hospitals insures that defects or abuses are brought to light by inspection and remedied by the common sense of the administrators stimulated by the fear of publicity. The large general hospitals are well and carefully administered; but questions that affect the administration of medical charity in London as a whole receive at present but limited consideration in comparison with the needs and development of individual institutions."

In 1896 "a scheme for a board was elaborated by the Charity Organisation Society, ... and in January, 1897, it was submitted to a special meeting. The main features of the scheme were these—it gave to each hospital definite representation upon a general board. It proposed the formation of a fund for the large and liberal aid of hospitals for special purposes—rebuilding, &c.—on lines similar to those already adopted successfully by the Charity Commissioners in the establishment of polytechnics in the metropolis. It suggested the appointment of an executive committee for carrying out work which a large board could not possibly undertake, while the representation of each hospital upon the general board allowed of ample discussion on all general questions, the adoption of reports, &c. It depended 'not on legal compulsion, but on coöperation and publicity,' and it was drawn up, it was believed, in such a way as not to interfere with hospitals or other medical charities, but to promote coöperation on the following lines: — (1) The preservation of the voluntary system of medical relief; (2) the assistance of hospitals by means of a common fund available for special purposes; (3) the regulation and improvement of the existing voluntary system. Upon the general board representation was given both to general and to special hospitals and to dispensaries and also—a point on which stress was laid — to general practitioners. 'The scheme,' it was stated, 'was not submitted as a "cut-and-dried" proposal, but as a draft which, adopted after further consideration with, possibly, some modifications in detail, is likely to prove a thoroughly useful measure.' A very large number of members of the medical profession in the metropolis and a small number of laymen who were interested in the subject and to whom the scheme was sent gave their names as supporters of the proposal in the following terms: They 'approved generally of the proposal to establish a central hospital board for the metropolis on lines that would ensure a fair representation both of the medical staff and of the lay supporters of the medical charities.' The signatories numbered 1491.

"At the meeting held in January, 1897, the scheme was approved in general terms. ..... The resolution of April, 1896, was confirmed and the draft scheme was accepted 'as indicating a plan that, subject to further consideration, is likely to prove satisfactory.' A general committee was also appointed 'to consider, promote, and from time to time report upon the draft scheme—with power to add to their number and to appoint an executive committee.' The general committee thus appointed and an executive committee have met from time to time. ..... At first the committee discussed the scheme and on some points amended it. Subsequently in March last they issued a paper setting forth the objects of the proposal in the briefest terms as follows:—1. To maintain the voluntary system. 2. To induce coöperation among medical institutions. 3. To act as an advisory body to the public. 4. To advise medical institutions and to assist them in carrying out large improvements, if desirable, by reports to the public and by grants of money as far as the means of the board will admit. 5. To promote the consideration of the hospital and medical needs of London as a whole. The Board shall be representative of all interests. It shall not interfere with the management of individual institutions. It will act by advice and report only. It will not attempt to absorb any of the ordinary monetary resources of the medical institutions but will rely chiefly upon bequests or foundation grants. In 1892 the Select Committee of the House of Lords recommended that a Central Hospital Board for London should be established and the true spirit of their suggestions will be followed. In the scheme of the Select Committee the hospitals and dispensaries were grouped for purposes of representation. After much consideration this plan has been set aside as hardly feasible. The Board will therefore be larger than was at first proposed and it will have to carry on its work with the aid or a duly elected executive and possibly other committees.

"On Feb. 6th the Prince of Wales announced his intention of opening a hospital fund for London in commemoration of the Queen's Jubilee. His Royal Highness wrote: 'Our attention will be concentrated upon an endeavour to secure from £100,000 to £150,000 in annual subscriptions from those who have not hitherto regularly contributed'; and again, as to the distribution of the fund, His Royal Highness stated: 'I am aware that the task of distributing the funds, when collected, will not be without its difficulties. It may be desirable in the future to seek the assistance of representatives chosen by the hospitals, but for the first year we shall rely upon the coöperation of the Distribution Committee of the Hospital Sunday Fund.' Desirous of promoting the establishment of a central board in connexion with His Royal Highness's fund, if that should prove the best method of advance, the General Committee addressed a petition signed by over 1800 persons to his Royal Highness through the Comptroller of His Royal Highness's Household, General Sir Dighton Probyn, in which they prayed that His Royal Highness would distribute his Hospital Fund through a board or council truly representative of the medical charities of the metropolis and of all the interests involved. To this petition Sir Dighton Probyn conveyed by letter a gracious promise from the Prince of Wales that it should be placed before his council."

The report went on to say that with a view to a friendly discussion of the scheme with the hospital authorities deputations from the General Committee, by the courtesy of the boards of the hospitals, attended their meetings and explained the chief objects of the proposal, but the deputations did not receive much encouragement from the boards.

Though disinclined to accept the scheme of the General Committee the general hospitals with schools were moved to take the matter up and the Central Hospital Association has been formed under the title "Central Hospital Council" and consists of in all thirty-six representatives of the general hospitals with schools, three from each hospital, one being in each case a member of the medical staff. The report concludes by stating that during the past year the committee have not attempted to urge the adoption of any single scheme for the formation of a central hospital board. They have rather endeavoured to advance the establishment of such a board under the conditions which appeared most likely to prove successful as public opinion on the subject changed and developed. They propose to adhere to this policy in the future.

Sir W. BROADBENT proposed the following motion:—

"That this meeting adopts the first report of the General Committee for the promotion of a central hospital board for London and expresses its conviction of the great importance of the establishment at an early date of a hospital board representative of all the interests concerned."

This question, he said, had been under discussion for some time and certain misapprehensions had been to some extent removed. One of these was that the movement in favour of a central hospital board was in any way hostile to hospitals. That was disproved by the number of names of hospital physicians and hospital surgeons who supported the movement. The whole object of the movement was to render hospital work of the metropolis more efficient. Another of these misapprehensions had been that the whole movement was an agitation got up by the Charity Organisation Society. The question of hospital abuse had been at various times discussed long before the Charity Organisation Society took it up and there had actually been a committee of the House of Lords for the purpose of finding some means of removing the abuses. At one time anyone who had money to dispose of felt himself perfectly safe in giving that money to hospitals and almost to any hospital; but a feeling of distrust had arisen which it was the object of those who were interested in the movement to remove. It had been shown that many people resorted to hospitals who were not proper subjects for hospital relief and who could well afford to pay for relief. Others were more properly the subjects of parochial relief; and from both sides those who really ought to receive the benefit of hospitals had been hindered and to some extent excluded. He had not attached so much importance to the mere question of numbers as had been felt by some supporters of that movement. He would not care how many people were relieved by hospitals provided they were proper subjects for relief and he was quite sure that hospital physicians and hospital surgeons would be prepared to deal with any numbers so long as the assurance existed that only proper persons came forward. Certain institutions existed under the name of hospitals or dispensaries, &c., which were unnecessary and therefore useless and took money which ought to go to better purposes. The suggestion made on the part of the Charity Organisation Society was that all hospitals should be represented on the Central Hospital Board. This was not a movement on the part of the Charity Organisation Society to get control of the hospitals, to "boss the concern." It was simply a suggestion by which the hospitals should start a self-governing, a self-regulating, central institution, and even when it was so started it was not to have any coercive power or influence; such influence would be indirect. It was proposed also that general practitioners should be represented on this body. On the other hand it had been said that this was a general practitioners' movement. That again was a mistake; general practitioners were not collectively hostile to hospitals. They would sit on the board merely to afford information and assist physicians and surgeons of hospitals and dispensaries in arriving at the best way of removing abuses. He knew of no better way in

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which guidance could be afforded for the disposition of the different hospital funds than by a representative body such as had been suggested by this committee.

Mr. EDWARD BOND, M.P., who seconded the resolution, said no one could have studied the social organisation of the metropolis without noticing the fact that in many departments of social life there was a curious want of system and of method in several very important departments and he thought that all must allow that there was not very much method or system about the disposition of funds for the relief of the poor by way of medical institutions. Some impression had already been made on the public mind in favour of this scheme and the big hospitals, at all events, had recognised that it would be desirable, so far as they were concerned, that there should be some common board or committee which should consult together for the promotion of common interests. He could not conceive, however, that such a board as they proposed could have a very large or important effect on the organisation of the medical charities of London unless it had behind it some power of the purse and it was his fervent hope that the administration of the fund which the kindness and benevolence of the Prince of Wales had brought together might be entrusted to the control of some such board as had been suggested.

Sir JOSEPH FAYRER strongly supported the resolution because he was convinced that the institution proposed was supremely necessary.

Mr. VICTOR HORSLEY said that he supported the resolution most cordially. He expressed the hope that when the central board was formed it would be truly representative.

Dr. GLOVER said that it was highly desirable that that question should be settled. The present unsettled state of things was having an injurious effect upon hospitals. He also urged upon the committee the desirability of not pressing too dogmatically its views as to the exact composition of the board.

Brigade-Surgeon-Lieutenant-Colonel A. B. R. MYERS said he must oppose the motion though no doubt he was one of a very small minority at this meeting. Many of the managers of the hospitals were very strongly opposed to a central hospital board and he supposed that they felt that it was so impracticable a movement that it was not worth their while to spend their time in coming there to oppose it. In round figures the central board would consist of some 200 members and of course no business could be done. It would be necessary to reduce it by degrees to a very small number of members for practical purposes, then it would not be representative of hospitals at all. Sir William Broadbent had said that the board would not be a coercive one but only advise. Another speaker, however, had let the cat out of the bag by saying that they hoped to get money. If they got money of course they wielded the power and so it was exactly his argument that if the central board obtained those sums of money they were bound to coerce. He admitted that a central board could have many advantages and if it could control the action of the small hospitals that sprang up like mushrooms it would be doing service. He did not believe that such a board would have this control. If they once started a central board it might be the beginning of the destruction of the old hospitals and the commencement of supporting hospitals by the rates. Again, if they had a central hospital board and they controlled the funds of hospitals by one body they would lose the sympathy of the people for individual institutions. People would not subscribe to a central board but rather to institutions in the neighbourhood where they lived and whose work they knew.

Mr. F. WALKER did not think that there was any danger of the hospitals becoming subject to municipal control as an outcome of this board.

Mr. BOUSFIELD supported the motion, remarking that there was a great feeling of distrust in the public mind and that the proposed board would be the best method of dealing with the reforms which were required.

The Rev. E. J. HAND was of opinion that an effective board of the kind under discussion would have to come from Parliamentary or other sanction. The proposed board would not obtain the public confidence unless it were associated with some public body in which the public had confidence—such, for instance, as the Metropolitan Asylums Board or the London County Council. Incidentally he mentioned that the indiscriminate granting of hospital letters constituted a very grave abuse.

Mr. LOCH, the secretary of the Charity Organisation Society, reiterated the remarks of the chairman and other speakers that the Charity Organisation Society did not in any way wish to get the control of hospitals.

The motion was then carried.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Dec. 9th, 1897, the President, Sir WILLIAM MAC CORMAC, Bart., being in the chair.

A report was received from the Board of Examiners in Dental Surgery. It referred to the recommendations contained in a report of the Dental Education and Examination Committee of the General Medical Council and it pointed out that these recommendations have already been in force under the regulations dated January, 1897. The Board considered that a course of materia medica was undesirable for the reason that dental licentiates not being medical practitioners should not prescribe, and that the course adopted by the Council of the Royal College of Surgeons of England of requiring lectures on the surgery of the mouth and on pathology and of enlarging the practical side of the curriculum, which were not all included in the recommendations of the General Medical Council, are necessary and valuable additions. The Board also reported that they had recognised the Glasgow Dental Hospital as an institution the certificates of which are accepted for the examinations for the licence. The report was adopted.

A report from the Laboratories Committee was adopted. With regard to the preparation of antitoxic serum for the Metropolitan Asylums Board, it was stated that since Oct. 7th the director has supplied 4971 doses of antitoxic serum, each containing 2000 units, for the treatment of diphtheria in the hospitals of the Metropolian Asylums Board, and all the demands have been fully met. During this period, which extended over two instead of the usual three months, 9,954,000 units have been supplied, against 19,650,000 units last quarter (4 months), being a decrease of 9,696,000 units and that in fulfilment of one of the conditions of the grant from the Goldsmith's Company, that antitoxin should be, if possible, supplied for use amongst the poorer classes of the community, the director has continued the supply of antitoxic serum to various general and children's hospitals in London during the past quarter as well as to certain medical practitioners for cases fulfilling the necessary conditions.

On the recommendation of the Committee of Management the Holt Schools of Science and Art, Birkenhead, were added to the list of recognised places of instruction in Chemistry, Physics, and Practical Chemistry, and Charterhouse School, Godalming, was added to the list for Chemistry, Physics, Practical Chemistry, and Elementary Biology.

The PRESIDENT stated that, in pursuance of the resolution of the Council at the last meeting, he had consulted the President of the Royal College of Physicians of London on the question of approaching the Secretary of State for War respecting the conditions of service in the Army Medical Department and they proposed, subject to the approval of the Council, to send a letter to the Secretary of State expressing the hope that it might be possible to amalgamate the Army Medical Staff and Medical Staff Corps into an Army Medical Corps, at the same time conferring real army rank with limited command upon the medical officers and with that rank the military titles which in the army are alone respected, appreciated, and understood.

The Council proceeded to the further consideration of the letter from the Parliamentary Bills Committee of the British Medical Association asking the Council to join a deputation to the Secretary of State for War on the subject of the Army Medical Service. It was decided that the Council would not take part in the proposed deputation and that the Committee should be informed that a letter on the subject had already been sent and that the Council were much indebted to the Committee for the very full and valuable report on the subject which they had sent to the Council.

The PRESIDENT reported the proceedings at the annual

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meeting of Fellows and Members on Nov. 18th stating that in addition to seventeen members of Council there were present eleven Fellows and fifty-five Members. The Council proceeded to the consideration of the resolutions carried at the meeting and already reported in THE LANCET.

The Council resolved that the mover and the seconder of the first resolution be informed "that the greatest care was taken by the Council to set forth in the elucidatory statement adequately and impartially the question at issue and that nothing advanced at the meeting of Fellows and Members appears to the Council to justify the allegation that the statement was 'misleading and did not adequately represent the facts'"; and that the mover and seconder of the second resolution be informed "that under the existing Charters the Council represent the whole (and therefore all parts) of the corporation, and that in view of the results of the recent poll of Fellows it would be impracticable for the Council even if they thought it desirable to obtain a new charter conferring votes on the Members"; and that the mover and seconder of the third resolution be informed "that the Council are not prepared to make general pronouncement respecting the connexion of Fellows and Members of the College with medical aid associations, but are willing to consider evidence which may be submitted to them respecting the connexion of any individual Fellow or Member with an association which canvasses for patients to the injury of private practitioners and allows the well-to-do classes to take advantages of rates of payment arranged to meet the necessities of the poor."

The PRESIDENT reported the delivery of the Bradshaw lecture on Dec. 8th by Mr. Alfred Willett, the subject of the lecture being "The Correction of Certain Deformities by Operative Measures upon Bones." The Council voted their best thanks to Mr. Willett for his lecture.

The PRESIDENT reported that he had accepted on behalf of the Council the portrait of the late Sir Spencer Wells, Bart., by Rudolf Lehmann, bequeathed to the College by Sir Spencer Wells.

The SECRETARY reminded the Council that a meeting of Fellows would be held at the College on Thursday, Jan. 6th, 1898, at 4 P.M.

A letter was read from the Registrar of the University of London inviting the College by desire of the Senate to nominate representatives to attend a conference on Dec. 14th to consider what steps should be taken in relation to the proposed legislation for the University. The President and Mr. Howes were nominated.

A letter was read from Mr. Thomas Bryant reporting the proceedings of the General Medical Council at their late session. The best thanks of the Council were voted to Mr. Bryant for his services.

A letter was read from the Registrar of the General Medical Council reporting the removal from the Medical Register of a Member of the College. The matter was referred to the Discipline Committee.

A letter addressed to the President was read from Mr. A. W. Senior, M.R.C.S., of Mount House, Levenshulme, forwarding papers relating to a provident association, specifying two cases in which persons with incomes of from £600 to £800 a year and from £400 to £500 a year respectively had been admitted members of the association and asking if anything could be done. This matter also was referred to the Discipline Committee.

A letter was read from the Honorary Secretary of the Jenner Society asking the College to support a memorial to the Government respecting the administration of the Vaccination Acts and to make a contribution to the funds of the society. It was resolved to reply that it was contrary to the custom of the Council of the College to approach the Government in the manner suggested and that the Council had no funds at their disposal for the purpose.

An address was read from the Examiners in Physiology of the College stating that, in consequence of the changes introduced into the curriculum in January, 1892, the student has less time than formerly to devote to the study of physiology, and recommending that an interval of eighteen months should elapse between the First and Second Conjoint Examinations and that a student should have to attend teaching in physiology and histology during the two winter and one summer sessions after passing the First Conjoint Examination before he is allowed to present himself for the Examination in Anatomy and Physiology. The Council referred the address to the Committee of Management for consideration and report.

THE LONDON UNIVERSITY COMMISSION BILL, 1897.

AT a meeting of the Medical School of St. George's Hospital held on Dec. 13th the following resolution was unanimously adopted:—

"The Medical School of St. George's Hospital has taken the London University Commission Bill of 1897 into consideration. The school is of opinion that the provisions of the Bill will need great modification as regards the constitution of the Faculty of Medicine and its Board of Studies if it is to meet the requirements of medical education in London."

At a meeting of the school committee of St. Mary's Hospital held on Dec. 8th it was resolved to send the following letter to the Duke of Devonshire and Mr. Balfour signed by the lecturers and teachers in the medical school of St. Mary's Hospital:—

"We, the undersigned members of the medical and surgical staff of St. Mary's Hospital and lecturers and demonstrators in its medical school, beg to approach Her Majesty's Government with the expression of an earnest hope that the Government in view of the importance of a speedy settlement of the question will introduce early in the approaching session of Parliament a Bill similar to the London University Commission Bill, 1897, and pass it into law during the same session."

A resolution in the following sense was passed at meetings of the Charing-cross Medical School and of the London School of Medicine for Women:—

That the Government is begged to introduce at an early date a Bill, similar to the London University Commission Bill, 1897, for the reconstitution of the London University. Further, it is hoped that upon this occasion the Government will give sufficient time to carry this most important Bill through the House of Commons.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6120 births and 4393 deaths were registered during the week ending Dec. 11th. The annual rate of mortality in these towns which had been 20·2 and 19·8 per 1000 in the two preceding weeks rose again last week to 20·8. In London the rate was 21·8 per 1000 while it averaged 20·2 in the thirty-two provincial towns. The lowest rates in these towns were 14·4 in Cardiff, 14·9 in Newcastle-upon-Tyne, 15·3 in Bradford, and 15·4 in West Ham; the highest rates were 25·3 in Gateshead, 26·4 in Liverpool, 26·7 in Birkenhead, and 34·1 in Norwich. The 4393 deaths included 551 which were referred to the principal zymotic diseases, against 552 and 541 in the two preceding weeks; of these, 231 resulted from measles, 95 from whooping-cough, 85 from diphtheria, 48 from diarrhœa, 47 from "fever" (principally enteric), and 45 from scarlet fever. No death from any of these diseases was recorded last week in Brighton; in the other towns they caused the lowest death-rates in Derby and Cardiff, and the highest rates in Swansea, Burnley, Oldham, and Gateshead. The greatest mortality from measles occurred in Swansea, Birmingham, Burnley, Halifax, Blackburn, Oldham, and Gateshead; from whooping-cough in Bolton and Oldham; and from diarrhœa in Oldham, Burnley, and Bolton. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 85 deaths from diphtheria included 58 in London, 6 in Leeds, and 3 in Wolverhampton. No fatal case of small-pox was registered either in London or in any other of the thirty-three large towns, and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the last week was 3806, against 3792, 3818, and 3812 on the three preceding Saturdays; 319 new cases were admitted during the week, against 397, 375, and 328 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London which had been 471 and 418 in the two preceding weeks rose again to 468 last week and were 40 above the corrected average. The causes of 62, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified

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in Brighton, Bristol, Oldham, Newcastle-upon-Tyne and in eight other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns which had increased in the three preceding weeks from 18·5 to 19·6 per 1000 further rose to 20·2 during the week ending Dec. 11th, but was 0·6 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16·8 in Paisley and 17·2 in Dundee to 28·8 in Greenock and 29·0 in Perth. The 603 deaths in these towns included 20 which were referred to whooping-cough, 17 to diarrhœa, 16 to measles, 12 to scarlet fever, 6 to "fever," and 5 to diphtheria. In all, 76 deaths resulted from these principal zymotic diseases, against 74 and 73 in the two preceding weeks. These 76 deaths were equal to an annual rate of 2·5 per 1000 which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough which had been 23 and 22 in the two preceding weeks further declined to 20 last week, of which 14 occurred in Glasgow and 4 in Greenock. The 16 deaths referred to measles showed a slight further increase upon the numbers recorded in recent weeks and included 8 in Glasgow and 8 in Greenock. The fatal cases of scarlet fever which had been 12 and 9 in the two preceding weeks rose again to 12 last week, of which 7 occurred in Glasgow, 2 in Edinburgh, and 2 in Dundee. The 6 deaths referred to different forms of "fever" showed a decline of 2 from the number recorded in the preceding week and included 3 in Glasgow where 2 of the 5 fatal cases of diphtheria also occurred. The deaths from diseases of the respiratory organs in these towns, which had been 123 and 125 in the two preceding weeks, further rose to 129 last week but were 18 below the number in the corresponding period of last year. The causes of 36, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin which had been 25·4 per 1000 in each of the two preceding weeks was 25·5 during the week ending Dec. 11th. During the past ten weeks of the current quarter the death-rate in the city has averaged 23·6 per 1000, the rate during the same period being 18·6 in London and 19·0 in Edinburgh. The 171 deaths registered in Dublin during the week under notice were within one of the number in the preceding week and included 15 which were referred to the principal zymotic diseases, against 20 and 19 in the two preceding weeks; of these, 7 resulted from "fever" (principally enteric), 4 from scarlet fever, 3 from diarrhœa, 1 from diphtheria, and not one either from small-pox, measles, or whooping-cough. These 15 deaths were equal to an annual rate of 2·2 per 1000, the zymotic death-rate during the same period being 3·2 in London and 0·9 in Edinburgh. The deaths referred to different forms of "fever" which had been 12 in each of the two preceding weeks declined to 7 last week. The 171 deaths in Dublin last week included 30 of infants under one year of age and 54 of persons aged upwards of sixty years; the deaths of infants showed a slight decline, while those of elderly persons showed a further increase upon the numbers recorded in recent weeks. Six inquest cases and 4 deaths from violence were registered; and 79, or nearly one-half, of the deaths occurred in public institutions. The causes of 13, or nearly 8 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING NOVEMBER, 1897.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during November in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious diseases in the metropolis last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 12·7 per 1000 of the population, estimated at 4,463,169 persons in the middle of this year. In the three preceding months the rates had been 10·2, 13·3, and 16·0 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in St. George Hanover-square, Westminster, Hampstead, Stoke Newington, St. Martin-in-the-Fields, Strand, and City of London; while they showed the largest excess in Fulham, Poplar, Bermondsey, Rotherhithe, Battersea, Woolwich, and Plumstead. Three cases of small-pox were notified in London during November, against one in each of the three preceding months; of these 3 cases, 1 belonged to Poplar, 1 to Battersea, and 1 to the Port of London sanitary areas. No small-pox case was admitted into any of the Metropolitan Asylum Hospitals during November, and no patients remained under treatment at the end of the month. The prevalence of scarlet fever in London showed a marked decline from that recorded in the preceding month; this disease was proportionally most prevalent in Fulham, Limehouse, Poplar, St. George Southwark, Bermondsey, Rotherhithe, Battersea, Woolwich, and Plumstead sanitary areas. The Metropolitan Asylum Hospitals contained 3731 scarlet fever patients at the end of November, against 3390, 3585, and 3571 at the end of the three preceding months; the weekly admissions averaged 383, against 346, 350, and 387 in the three preceding months. The prevalence of diphtheria in London showed a decline from that recorded in the preceding month; among the various sanitary areas this disease showed the highest proportional prevalence in Fulham, Clerkenwell, St. Luke, Poplar, St. Saviour Southwark, St. George Southwark, Battersea, Lewisham, and Plumstead. There were 1042 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of November, against 1006, 1033, and 1029 at the end of the three preceding months; the weekly admissions averaged 155, against 131, 150, and 155 in the three preceding months. The prevalence of enteric fever in London during the month under notice showed a marked decline from that recorded in recent months; this disease was proportionally most prevalent in Holborn, Bethnal Green, St. George-in-the-East, and Poplar sanitary areas. The Metropolitan Asylum Hospitals contained 155 enteric fever patients at the end of November, against 133, 173, and 175 at the end of the three preceding months; the weekly admissions averaged 23, against 26, 28, and 26 in the three preceding months. Erysipelas showed the highest proportional prevalence in St. Giles, Clerkenwell, Shoreditch, Bethnal Green, and St. George-in-the-East sanitary areas. The 23 cases of puerperal fever notified in London during November included 5 in Kensington, 4 in Islington, 2 in Newington, 2 in Lambeth, and 2 in Camberwell sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas of the metropolis, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, November 27th, the deaths of 6496 persons belonging to London were registered, equal to an annual rate of 19·0 per 1000, against 23·7, 15·6, and 16·1 in the three preceding months. The lowest death-rates during November in the various sanitary areas were 9·4 in Lewisham (excluding Penge), 10·3 in Lee, 12·0 in St. George Hanover-square, 12·5 in Hampstead, 13·0 in Wandsworth, 14·1 in Plumstead, and 14·4 in St. Martin-in-the-Fields; the highest rates were 26·0 in Shoreditch, 27·5 in St. George-in-the-East, 28·3 in St. George Southwark, 28·8 in Bermondsey, 30·0 in St. Luke, and 30·1 in Limehouse. During the four weeks of November 899 deaths were referred to the principal zymotic diseases in London; of these, 358 resulted from measles, 202 from diphtheria, 108 from whooping-cough, 94 from scarlet fever, 76 from enteric fever, and 61 from diarrhœa. These 899 deaths were equal to an annual rate of 2·6 per 1000; in the various sanitary areas the lowest zymotic death-rates were recorded in Paddington, Hammersmith, St. George, Hanover-square, Hampstead, and Holborn; and the highest rates in Clerkenwell, St. George-in-the-East, Shoreditch, Limehouse, St. Saviour Southwark, St. George Southwark, and Bermondsey. The 358 fatal cases of measles were 157 above the corrected average number in the corresponding periods of the ten preceding years; this disease showed the highest proportional fatality in St. James Westminster, Hackney, Shoreditch, St. George-in-the-East, St. Saviour Southwark, St. George Southwark, and Bermondsey sanitary areas. The 94 deaths referred to scarlet fever were 14 below the corrected average number; among the various sanitary

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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS OF LONDON—NOVEMBER, 1897.

Specially compiled for THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1897.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,463,169	3	2280	1205	—	326	6	23	490	—	4342	12·7	—	358	94	202	106	—	76	—	61	899	2·6	6496	19·0	157
West Districts.																										
Paddington	126,161	—	53	32	—	3	—	1	9	—	98	10·1	—	—	1	5	—	—	2	—	1	9	0·9	149	15·4	206
Kensington	171,427	—	78	39	—	15	1	5	21	—	159	12·1	—	5	7	9	2	—	—	—	7	30	2·3	230	17·5	170
Hammersmith	105,969	—	38	15	—	2	1	—	12	—	68	8·4	—	—	—	2	—	—	—	—	3	5	0·6	134	16·5	160
Fulham	120,040	—	89	46	—	6	—	—	13	—	154	16·7	—	5	4	7	2	—	—	—	—	18	2·0	178	19·3	152
Chelsea	96,692	—	48	31	—	6	—	—	14	—	99	13·4	—	3	3	1	1	—	3	—	1	12	1·6	141	19·0	106
St. George Hanover-square	80,330	—	14	18	—	3	—	—	1	—	36	5·8	—	—	—	—	1	—	4	—	—	5	0·8	74	12·0	179
Westminster	63,027	—	12	8	—	2	—	—	3	—	25	6·1	—	4	—	3	2	—	1	—	1	11	2·7	79	19·4	301
St. James Westminster	22,576	—	12	6	—	2	—	—	3	—	23	13·3	—	5	2	—	—	—	—	—	—	7	4·0	42	24·3	109
North Districts.																										
Marylebone	140,808	—	39	26	—	13	—	—	21	—	99	9·2	—	2	1	6	2	—	1	—	4	16	1·5	201	18·6	122
Hampstead	77,275	—	28	6	—	2	—	—	2	—	38	6·4	—	—	—	1	1	—	—	—	—	2	0·3	74	12·5	83
St. Pancras	242,255	—	85	66	—	22	—	—	38	—	210	11·3	—	16	1	15	3	—	7	—	4	46	2·5	362	19·5	173
Islington	341,134	—	132	54	—	27	—	4	27	—	244	9·3	—	24	8	8	18	—	6	—	3	67	2·6	477	18·2	187
Stoke Newington	34,136	—	8	3	—	3	—	—	5	—	19	7·3	—	—	1	—	1	—	1	—	—	3	1·1	44	16·8	150
Hackney	216,698	—	137	65	—	23	1	1	18	—	245	14·7	—	37	5	9	6	—	8	—	3	68	4·1	302	18·2	132
Central Districts.																										
St. Giles	37,840	—	22	1	—	3	—	—	10	—	36	12·4	—	6	—	1	—	—	2	—	—	9	3·1	55	18·9	108
St. Martin-in-the-Fields	12,711	—	6	1	—	—	—	—	—	—	7	7·2	—	1	1	1	—	—	—	—	—	3	3·1	14	14·4	143
Strand	23,552	—	4	2	—	3	—	—	3	—	12	6·6	—	2	—	—	—	—	—	—	—	2	1·1	37	20·5	89
Holborn	30,493	—	6	8	—	5	—	—	3	—	22	9·4	—	—	—	—	—	—	—	—	—	—	—	47	20·1	158
Clerkenwell	66,162	—	21	36	—	7	—	—	11	—	75	14·8	—	4	4	7	2	—	4	—	4	25	4·9	118	23·3	181
St. Luke	41,279	—	26	15	—	2	—	1	4	—	48	15·2	—	5	1	1	1	—	1	—	1	10	3·2	95	30·0	153
City of London	30,228	—	4	6	—	—	—	—	1	—	11	4·7	—	1	1	2	—	—	1	—	—	5	2·2	58	25·0	184
East Districts.																										
Shoreditch	121,883	—	68	24	—	8	—	1	27	—	128	13·7	—	25	5	4	9	—	—	—	1	44	4·7	243	26·0	224
Bethnal Green	129,098	—	72	45	—	17	—	1	27	—	162	16·4	—	6	5	6	9	—	1	—	4	31	3·1	247	24·9	173
Whitechapel	79,724	—	20	13	—	7	—	—	13	—	53	8·7	—	6	—	2	2	—	1	—	—	11	1·8	135	22·1	147
St. George-in-the-East	47,917	—	25	13	—	11	1	—	10	—	60	16·3	—	17	3	1	1	—	—	—	1	23	6·3	101	27·5	185
Limehouse	58,508	—	39	12	—	6	—	—	4	—	61	13·6	—	11	3	1	4	—	1	—	1	21	4·7	135	30·1	160
Mile End Old Town	111,883	—	71	32	—	11	—	—	14	—	128	14·9	—	9	1	6	9	—	2	—	2	29	3·4	186	21·7	151
Poplar	169,811	1	131	79	—	27	—	1	15	—	254	19·5	—	16	5	14	7	—	3	—	2	47	3·6	278	21·3	167
South Districts.																										
t. Saviour Southwark	24,919	—	11	14	—	1	—	—	1	—	27	14·1	—	5	1	3	—	—	—	—	—	9	4·7	46	24·1	103
St. George Southwark	60,388	—	42	28	—	3	—	—	4	—	75	16·2	—	13	4	4	—	—	3	—	1	25	5·4	131	28·3	211
Newington	122,191	—	66	35	—	8	—	2	13	—	124	13·2	—	14	4	7	—	—	1	—	2	28	3·0	206	21·9	168
St. Olave Southwark	11,480	—	6	3	—	1	—	—	2	—	12	13·6	—	1	—	1	1	—	—	—	—	3	3·4	22	25·0	229
Bermondsey	85,629	—	73	29	—	7	—	—	10	—	119	18·1	—	27	3	4	3	—	1	—	2	40	6·1	139	28·8	253
Rotherhithe	40,643	—	40	7	—	4	—	—	6	—	57	18·3	—	—	3	3	—	—	—	—	—	6	1·9	50	16·0	138
Lambeth	300,048	—	171	70	—	15	—	2	26	—	284	12·3	—	31	1	13	6	—	3	—	3	57	2·5	359	15·6	90
Battersea	168,877	1	171	64	—	5	—	—	23	—	264	20·4	—	25	6	17	3	—	3	—	3	57	4·4	243	18·8	151
Wandsworth	195,612	—	102	49	—	8	—	1	23	—	183	12·2	—	1	—	13	3	—	4	—	—	21	1·4	195	13·0	129
Camberwell	257,575	—	121	84	—	16	1	2	21	—	245	12·4	—	25	3	11	6	—	4	—	3	51	2·6	341	17·3	156
Greenwich	178,367	—	43	37	—	9	—	—	15	—	101	7·4	—	4	3	3	3	—	3	—	3	19	1·4	255	18·6	191
Lewisham (excluding Penge)	86,152	—	29	40	—	6	—	—	11	—	86	13·0	—	1	1	6	1	—	1	—	—	10	1·5	62	9·4	93
Woolwich...	41,409	—	40	9	—	5	1	—	1	—	56	17·6	—	—	1	2	—	—	1	—	—	4	1·3	64	20·1	119
Lee	39,215	—	19	14	—	1	—	—	3	—	37	12·3	—	—	1	1	—	—	1	—	—	3	1·0	31	10·3	117
Plumstead	61,057	—	69	23	—	1	—	1	2	—	96	20·5	—	1	1	2	—	—	2	—	1	7	1·5	66	14·1	96
Port of London	—	1	1	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 35 cases of membranous croup.

† Including deaths from membranous croup.

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areas this disease was proportionally most fatal in Clerkenwell, St. George-in-the-East, Limehouse, St. George Southwark, and Rotherhithe. The 202 fatal cases of diphtheria exceeded by 8 the corrected average number; the mortality from this disease was highest in Clerkenwell, Poplar, St. Saviour Southwark, St. George Southwark, Rotherhithe, Battersea, Wandsworth, and Lewisham sanitary areas. The 108 deaths from whooping-cough were 7 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Shoreditch, Bethnal Green, Limehouse, and Mile End Old Town. The 76 fatal cases of enteric fever almost corresponded with the corrected average number; this disease was proportionally most fatal in St. George Hanover-square, Hackney, Clerkenwell, and St. George Southwark sanitary areas. The 61 deaths from diarrhœa were 18 below the corrected average number. In conclusion, it may be stated that the mortality in London from these principal zymotic diseases during November was nearly 16 per cent. above the average, owing principally to the excessive fatality of measles.

Infant mortality in London, measured by the proportion of deaths of children under one year of age to registered births, was equal to 157 per 1000. Among the various sanitary areas the lowest rates of infant mortality were recorded in Hampstead, Strand, St. Saviour Southwark, Lambeth, Lewisham, and Plumstead; and the highest rates in Paddington, Westminster, Shoreditch, St. George Southwark, St. Olave Southwark, and Bermondsey.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN WAY has assumed medical charge of troops and Station Hospital at Lydd. Surgeon-Major Maunsell embarks in the transport *Dilwara* at Southampton.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following promotions are made in the Bombay Medical Establishment: Surgeon-Lieutenant-Colonels to be Brigade-Surgeon-Lieutenant-Colonels: J. S. Wilkins, D.S.O., vice Brigade-Surgeon-Lieutenant-Colonel Hay, promoted, and W. A. Barren, vice Brigade-Surgeon-Lieutenant-Colonel Caldecott, promoted. The services of Surgeon-Lieutenant Wall (Madras), are replaced at the disposal of the Military Department. The services of Surgeon-Lieutenant-Colonel Martin (Bengal) are replaced temporarily at the disposal of the Military Department. The services of Surgeon-Lieutenant-Colonel Swaine (Madras), Officiating Sanitary Commissioner, Hyderabad Assigned Districts, are replaced at the disposal of the Military Department. The services of Surgeon-Captain Bidie, Officiating Civil Surgeon, Saugor, are placed at the disposal of the Government of India in the Home Department.

NAVAL MEDICAL SERVICE.

The following qualified candidates for the Naval Medical Service have been appointed to be Surgeons in Her Majesty's Fleet:—Herbert Newsome, Malcolm Cameron, James Duff Scott Milln, David Walker Hewitt, Kenneth Hurlstone Jones, Reginald Waterfield, Henry William Worth Townsend, Eric Danvers Macnamara, William James Codrington, Archibald Way Campbell, Horatio William Alexander Cowan, Samuel Henry Facey, Godfrey Taylor, Alfred Woollcombe, Francis Bolster, George Ernest Macleod, William Henry Pope, John Wilfred Bird, and James Herbert Fergusson. Surgeon Elystan O'Leary has been appointed to the *Magpie*.

VOLUNTEER CORPS.

Artillery: 1st Orkney: Surgeon-Lieutenant B. D. C. Bell resigns his commission. *Rifle:* 20th Middlesex (Artists'): Lieutenant Charles Sempill de Segundo, M.B., resigns his commission, and is appointed Surgeon-Lieutenant. 2nd Tower Hamlets: Frederic Mercer, Gent., to be Surgeon-Lieutenant.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

Under the energetic presidency of Major Andrew Maclure this school gave a very pleasant entertainment in St. Martin's town-hall on Dec. 9th. It was called a Bohemian concert and the energetic secretaries—Surgeon-Captain Sleman (of the Artists'), Sergeant Plensance (of the 1st London R.E V.), and Ambulance Sergeant Russell (of the Artists')—had provided the most varied fare. So many were the items on the programme that we cannot even mention all of them, but without being invidious we may refer to the trumpet calls given by the trumpeters of the 2nd Life Guards, the pipe music and reel dancing by members of the London Scottish Corps, and the recitation given by Quartermaster-Sergeant J. A. Smith, of the 3rd V.B. the Queen's. He gave "The Charge of the Light Brigade" and local colour was appropriately added by the presence on the platform of Sergeant Herbert, of the 1st Light Dragoons, who had ridden through the valley on that never to be forgotten 25th of October. At the conclusion of the recitation Sergeant Herbert made a most modest and happy little speech which was cheered to the echo. The prizes gained during the past year by the members of the Yeomanry and Volunteer corps of the Home District who have been under instruction in the school were distributed by Major-General H. Trotter. Major Maclure, the President, gave an interesting report of the work and stated that nearly two thousand of all ranks had passed through the school and a large number of medical officers of British and colonial corps who had obtained instruction had subsequently passed the proficiency examination conducted by the Army Medical Staff. General Trotter addressed the large company present, which included many ladies, and congratulated the instructors upon their work.

THE ALLEGATIONS AGAINST A HIRED TROOP TRANSPORT.

The *Daily Mail* has done good service in bringing prominently to notice the absence of proper arrangements for our troops on board some of the transports hired by Government. The subject is one which calls for prompt and searching inquiry, for if the allegations in connexion with the hired transport *Avoca* be well founded a disgraceful state of things existed on board that steamer on her voyage from the West Indies to Capetown. The troops on board were, it is alleged, half starved as well as thoroughly uncomfortable and they are seriously discontented at the treatment they received.

It is understood that a considerable addition to the strength of the army is to be made next year and that in order to obtain the necessary number of recruits many changes beneficial to the soldier are about to be introduced. Here is a subject ready to hand. It is impossible that the army can be a popular calling if soldiers are not better cared for than they seem to have been on board the *Avoca*. How is it if the regulations were properly carried out that such a state of things as is represented could have existed? They must have been officially reported. Who is to blame?

DEATHS IN THE SERVICES.

Surgeon-Captain James Murray (Bengal Medical Department), Professor of Pathology, Lahore Medical School, on the 8th ult., at Ripon Hospital, Simla, aged thirty-two years. He entered the service in March 1887, and served with the Hazara Expedition of 1888 (medal with clasp).

NORTHERN COUNTIES HOSPITAL FOR INCURABLES.—The friends and supporters of the Homes for Incurables at Mauldeth and Walmersley held their annual meeting at Mauldeth on the 6th inst. The report stated that the special feature of the year had been the establishment of a system of out-pensions. Up to May, 1872, the charity was simply a dispensary for out-patients. A new departure was then made: eight beds were provided, one paying patient and six free patients were admitted to what was "a home for life" for those suffering from incurable diseases; and this year, by the kindness of friends, pensions of £20 per annum were given, to which six persons have been elected, who are thus enabled to spend their last days with their friends. "The most searching inquiries were made into the conditions and surroundings of the applicants." The finances seem to be in a fairly satisfactory condition and there has been an increase in the annual subscriptions. On Oct. 31st there were 110 patients in the homes. During the year six patients were admitted on payment, seven were elected to Mauldeth, and five to Walmersley. The chairman, Sir William Houldsworth, in the course of his speech, said that the fact of their task being to care for those whose infirmities were incurable was the great distinction between their work and that of other hospitals and made it a peculiarly high expression of Christian feeling.

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Correspondence.

"Audi alteram partem."

THE HARDSHIPS AND RISKS OF THE MEDICAL PROFESSION AND THOSE ENGAGED IN THE TREATMENT OF BODILY AND MENTAL DISEASE.

To the Editors of THE LANCET.

SIRS,—Many hardships and many risks are run both by the student and the practitioner of medicine; and these hardships, these risks, are seldom thought of by the public, rarely realised by the would-be student, and certainly find no place in the estimate of the work of the profession when it is considered in its pecuniary aspect—a value often sparingly meted out. Some of the hardships and risks to life in the student's career and in that of the practitioner may be shortly mentioned. Students are forced to adopt a given course of study though some of the subjects may be of doubtful value to them in their future career, and little option of studies of almost corresponding value are allowed them. Laborious dissection, the only mode of becoming aquainted with that real groundwork of medicine—anatomy—is at first most repulsive to young students; many really suffer in health, have sore-throats, and from the slightest scratch severe dissection wounds. I have in my own experience known several promising young men die from dissection wounds and I myself have suffered severely from post-mortem poisoning. In this asylum we have made since 1867 a post-mortem on every patient who died under our care and I probably have been specially susceptible, but I have frequently suffered severely from almost imperceptible scratches or skin lesions and have at one time or other lost all the nails on my left hand.

During hospital attendance custom only inures to the sights of human suffering in operative treatment. Risks from infection during student life are great in spite of all precautions. I in my limited experience have seen four or five house physicians in one hospital laid up at the same time with typhus fever. Every now and then one notices the death of a medical student recorded—more rarely since the treatment of infectious disease is conducted in separate hospitals; but as I already alluded to it post-mortem work claims its share of victims and at times, unfortunately, renders even preserved lives miserable during their earthly sojourn by infection of specific disease. I have known several of such cases and one or two of which occurred in men now alive and of known standing in our profession. Medical men at all times run risks from post-mortem wounds, and in midwifery practice risks are often run of acquiring specific disease. Probably in the operative treatment of diphtheria as great risk is run as can be well imagined.

The exposure of the country practitioner in long cold drives, especially when art has failed to overcome nature and roads are inaccessible to covered conveyances, often really produces ill health—often premature death: and there are still both in England, Scotland, and Ireland Gideon Grays who have in their practice like him "to traverse in darkness paths which to those less accustomed to them seem formidable in daylight; through straits where the slightest aberration would plunge him into a morass or throw him over a precipice on to cabins which his horse might ride over without knowing they lay in his way, unless he happened to fall through the roofs, when he arrives at such a stately termination of his journey where his services are required either to bring a wretch into the world or prevent one from leaving it. The scene of misery is often such that, far from touching the hard saved shillings which are gratefully offered to him, he bestows his medicines as well as his attendance—for charity." This the case of Gideon Gray is still very often, I can assure you from personal knowledge, the case in many outlying districts in the present day. The mental anxiety experienced by all in the medical profession is at times almost excessive; I have known many men of great eminence, however they endeavoured to conceal it, unable even after years to prevent themselves from suffering from the effects of it. I know one surgeon of the greatest repute on account of his successes who yet feels the nervous strain of great operations.

In the Army Medical Service surgeons boldly risk their lives in field service without any of the excitement of the attack and defence, which so takes up the attention of the combatant as to do away with his feelings of terror; and navy surgeons also run great risks. We have often heard of army surgeons in India and other remote parts who during epidemics of cholera and other diseases, such as dysentery, &c. have really died in harness owing to being medically alone during an epidemic, their high sense of duty preventing them from laying up or considering their own health when that of many others needed to be cared for. The Victoria Cross is given for distinguished bravery. According to the last-published Whitaker's Almanack, there are at present on the list 260 who have gained it, and according to Churchill's Directory 15 medical men hold it. The proportion of the medical service to the combatants in the army and navy is such that we may fairly be proud of our professional brethren in the service and wonder whether jealousy has to do with withholding from them the rank and status they wish for. Professionally it is a matter that we have just reason to congratulate ourselves on that from our earliest student days our teachers inculcated on us the self-denying, self-sacrificing nature of our profession and that their teaching really bears fruit. It is happily seldom that one hears of medical men shirking duty from cowardly personal fears, and to my mind and to most reasoning and reasonable minds the courage that enables a man calmly to pursue his duty in pest-smitten houses, in battlefields where the most recent discoveries of destructive science are at play, in warships where unknown the submarine torpedo affixed on the most approved principle may be on the point of launching all in the vicinity into eternity — is of a higher character than is necessary for the boldest combatant, while the reasoning power, the decision, the courage, the intrepidity, the coolness, the manual dexterity, and the immediate power of resource required, possessed, and evidenced by most surgeons in great and critical operations demand powers, natural and acquired, greater than are required or called for in any profession that at present exists.

The public asylum service in Great Britain has many medical men engaged in its work and the risks asylum physicians run in their daily routine duties are little known, for asylum men scarcely care to talk of the evils that befal them in case force of example, love of notoriety or other causes which actuate the insane, should bring worse on their heads. In 1887 I asked for particulars about injuries, &c., to officials from some forty-five English asylums, and found that though no superintendent or medical assistant had been killed yet several had been seriously attacked. Lately two medical superintendents have had to retire from the results of injuries received from patients. During my experience a well-known and much liked commissioner, Mr. Lutwidge, was killed by a patient at Fisherton House. Dr. Wiglesworth, of Rainhill, had his internal carotid opened by a stab from a patient and nearly succumbed; while Dr. Merson, of Hull, is still suffering from the effects of a stroke from a cricket bat. I need not allude to the attacks, fatal and other, that have occurred in America and abroad, but may remind you how a foreign physician—Endden—bravely suffered death in his efforts to prevent his royal but insane king and patient from drowning himself. I myself—though I do not believe I am worse liked than most medical superintendents by my patients—have had some narrow escapes and have suffered somewhat in the flesh. I have been attacked by a patient with a scythe who tried to cut my legs through; by a patient with a knife; by a man who waited at the back of a door with a stone in his hand and who smashed my front teeth; and I have had my spectacles smashed on my face—but I still live after thirty-two years spent in an asylum.

Much of what I say equally deals with nurses and asylum attendants, and I am sure that the public if thoroughly cognisant of what is done by our profession and the nursing community would be less stingy in the matter of pay and more liberal in the granting of pensions than they are.

I am, Sirs, yours faithfully,

J. A. CAMPBELL, M.D. Glasg., F.R.S. Edin.,
Medical Superintendent of the Cumberland and Westmorland Asylum.

Dec. 13th, 1897.

HOSPITAL ABUSE AT NEWPORT INFIRMARY.

To the Editors of THE LANCET.

SIRS,—I think you will agree with me in thinking that Mr. Ensor's case is one that requires the assistance of the

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medical press. I have looked over the rules of the Newport Infirmary and I cannot find any rule giving the directors the power to dispense with the services of their honorary medical officers.

Believe me, Sirs, yours faithfully.

Dec. 8th, 1897. T. GARRETT HORDER.

[STATEMENT BY MR. ENSOR.]

For more than twelve months there has been a feeling of annoyance among the honorary medical officers of the Newport Infirmary caused by patients presenting themselves for treatment (and bringing subscribers' recommendations) when they are in a position to pay for what medical treatment they require. Many of these applicants regard the charity as a medical aid society or a club, and when asked if they regard themselves as objects of charity say that they support the infirmary and have a right to its benefits—their subscription being one or two shillings or more in the course of the year.

During the present year many subscribers' notes have been referred to the infirmary directors for inquiry, and in no instance had a reply been sent back to the writer, till the time of the present dispute which extends back to the middle of October in this year when two patients presented themselves. one the daughter of a man earning 45*s.* a week or £117 per annum. and the other a boy whose weekly earnings (including his father's) was 59*s.* per week or £153 per annum. They both came from the same works, where the firm subscribed £10 10*s.* last year and the workmen £61 2*s.* 11*d.* The writer declined to see these cases as he thought they were cases abusing the charity and they were not at all urgent; thus protesting against the action of the directors in ignoring the subscribers' notes previously sent to them.

Being refused treatment these applicants caused complaints to be made to the directors (or committee), who caused a letter to be sent to the writer, calling his attention to a previous resolution of the board, viz., "that all doubtful cases are to be referred to the house committee for investigation and inquiry but in the meantime the patient must be treated." He replied protesting at being requested to see patients earning big wages. The committee ascertained that in one case the wage earner had been laid up for a few weeks and called upon him to attend the cases (writing to the applicants that they would be seen). The writer refused again hoping that by so doing the committee would adopt a wage limit or appoint an inquiry officer, and as a result he was dismissed from his appointment as ophthalmic surgeon.

About eighteen months ago a subscriber of two guineas sent a child to the infirmary whose father had a salary of £100 per annum and was refused treatment by the house committee while the cases referred to above were deemed eligible when making £117 and £153 respectively, apparently for the reason that the works refused further contributions unless the directors sent a satisfactory explanation for the rejection of the cases.

Windsor-place, Cardiff, Dec. 8th, 1897.

THE IMPORTANCE OF HISTORY IN DIAGNOSIS.

To the Editors of THE LANCET.

SIRS,—During the winter of 1895-96 I attended a man suffering from persistent and uncontrollable vomiting for which he had been treated for some months with all the usual remedies, but without success. He was a spare looking man with an anxious, worn expression. All his organs appeared to be healthy. His urine was natural, his temperature normal. On inquiring minutely into his history I found that ten years previously he had been in the United States of America and had worked as a labourer in a district in which malaria was somewhat prevalent, though he himself had never had an attack. For the last ten years of his life he had lived in England, during which time he had not had any symptoms of malaria and had been in good health until a few months before I saw him when vomiting without any apparent reason commenced and had continued off and on ever since, entirely preventing him from working and making his life a misery. There were no other facts in his past history bearing on his complaint.

Taking this somewhat slender history into account together with the fact that all ordinary remedies for his symptom had failed, moderate doses of quinine were prescribed with the result that the vomiting absolutely stopped and the man returned to his work highly delighted with his recovery. He was told to continue the remedy as long as he found it necessary. The points I would especially draw attention to in this case are: (1) that although there could be little doubt that the vomiting was malarious in origin the patient could give no history of an attack of malaria either whilst residing in a malarious district or during his subsequent ten years' residence in a healthy locality in England; and (2) the importance of history in diagnosis and as a causal indication for treatment in otherwise somewhat obscure cases. I am, Sirs, yours faithfully,

ALEXANDER C. GURNEY, M.B. Lond.

Eastbourne, Dec. 13th, 1897.

"DR. RENTOUL'S CLAIM FOR FEES FROM THE MEDICAL COUNCIL."

To the Editors of THE LANCET.

SIRS,—With reference to a letter addressed to you by Dr. Rentoul and inserted in your last week's issue, in which he characterises as "grossly untrue" a statement of Sir Dyce Duckworth "that Dr. Rentoul had got the Chief Constable of Liverpool to measure the distance from his residence to the railway station," I am directed to request that you will be good enough to insert the following copy of a letter sent to this office by Dr. Rentoul on June 5th, 1897.

I am, Sirs, yours faithfully,

H. E. ALLEN,
Registrar.

General Medical Council Office, 299, Oxford-street, W., Dec. 14th, 1897.

[COPY.]

"Liverpool Constabulary Force, Hackney Carriage Department,
"Municipal Offices, Sir Thomas-street,
"June 2nd, 1897.

"DEAR SIR,—I am directed by the Head Constable to acknowledge receipt of your letter and in reply to inform you that the distance from 78, Hartington-road to Lime-street Station (main entrance in Lime-street) is 2 miles 370 yards and the legal cab fare is 2*s.* 6*d.*

"I am, dear sir, your obedient servant,
"(Signed) D. BREESE, Inspector.

"R. R. Rentoul, Esq., M.D., 78, Hartington-road,
"Liverpool."

THE VENTILATION OF HOSPITALS.

To the Editors of THE LANCET.

SIRS—I shall be greatly obliged if any of your readers who have practical experience of the forced (plenum) system of ventilation and heating as applied to hospitals will give me information on the following points: (1) what form of forced ventilation do you regard as the best? (2) is it easily managed and is it a thorough success? (3) does it ever get out of order, say, in frost? (4) do you know of any place where the system has been a failure so that it has been found necessary to give it up in favour of the ordinary methods by fires, hot air or steam, and windows, &c.? and (5) does its adoption add much to the initial cost of a hospital? I am, Sirs, yours faithfully,

JOHN W. BYERS.

Dreenagh House, Lower-crescent, Belfast, Dec. 11th, 1897.

*** The "plenum" system of ventilation as applied to hospitals was fully described in an article in THE LANCET of May 11th, 1895, p. 1203.—ED. L.

THE RESULT OF THE ADOPTION OF HOLMGREN'S TEST BY THE BOARD OF TRADE.

To the Editors of THE LANCET.

SIRS,—According to the reports which have been issued Holmgren's test has been used for two years and four months by the Marine Department of the Board of Trade. Let us consider whether there has been any improvement in the results obtained since the adoption of the test. The percentages of failures in colour vision since 1885 are as follows:—1885-86, 1·39; 1886-87, 1·12; 1887-88. 1·01; 1888-89, 1·03; 1889-90, 0·94; 1890-91, 1·19; 1891-92, 0·82; 1892-93, 1·17; from June, 1893, to August, 1894, 1·27; from September, 1894, to December. 1895, 1·37; and from January to December, 1896. 1·02. Holmgren's test has been used since September, 1894. One of the chief

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arguments that was used by the advocates of this test against the old tests of the Board of Trade was that, as the known percentage of colour-blind persons in the community was at least 4 per cent, a test that detected only a little over 1 per cent. must be inefficient. But it will be seen from the above figures that the percentage of those rejected has not been increased since the alteration in the method of testing.

In addition to this inefficiency to detect colour-blind persons there is another strong objection to this test—namely, that normal-sighted persons are extremely likely to be rejected by it. It was never suggested that other than colour-blind persons were rejected by the older tests. Those who criticised the tests always declared that they were not stringent enough. It will therefore be seen that the test is more inefficient than that previously used. Of those who were rejected as colour-blind in 1895 twenty-one appealed and eight were found to have been wrongly rejected. I may also mention that another passed at a date later than that of the issue of the report. Of those rejected in 1896 twelve appealed and five were found to be normal sighted.

It has always seemed to me an anomaly that in testing the colour perception of an individual we should ignore colour names as Holmgren says that we should do. I contend that it is absolutely necessary that the person to be tested should pick out the colours as colours and not as shades. It is not necessary that he should know the names applied to nondescript colours but only the names of the fundamental colours—red, yellow, green, and blue. If we test a person without making him clearly understand that he is to match the wool by its colour and not by any other quality we are very likely to reject normal sighted persons as colour-blind. A man who names a green light as red must either be colour-blind or dangerously ignorant of colours. I have never met with a case of the latter kind and doubt whether it could be met with in the class of men tested. The Board of Trade have used a test for colour ignorance for the last two years and four months, but no failure to pass the test has been reported.

Another strong objection to this test is that the range of vision to the red end of the spectrum may be considerably shortened, so much so that the person may not be able to distinguish red from black and yet be able to pass the test with ease, as it is obvious that this will not prevent him from matching a light green wool with other green wools. I am convinced that a wool test alone, though in my Classification Test I have been able to obviate many of the difficulties, can never be perfectly satisfactory, therefore I would strongly urge that supplemental tests, including a properly constructed lantern, are absolutely necessary for the efficient detection of colour blindness.

I am, Sirs, yours faithfully,

F. W. EDRIDGE-GREEN, M.D. Durh., F.R.C.S. Eng.

Hendon.

THE PROPOSED UNIVERSITY OF WESTMINSTER.

To the Editors of THE LANCET.

SIRS,—Will you permit me to state in your columns that I have withdrawn my name from the committee which is promoting the "Westminster University" scheme?

I am, Sirs, your obedient servant,

H. B. DONKIN, M.D. Oxon.

Harley-street, W., Dec. 14th, 1897.

"A NOTE ON CYCLING."

To the Editors of THE LANCET.

SIRS,—The letters which my "Note on Cycling" elicited are useful contributions to the subject. Mr. Offord asks whether the forward position may not hamper the breathing power. I do not find the vital capacity, as tested by the spirometer, to be less in this than in the upright position. Mr. Offord's suggestion that the seat should be modified so as to afford some support to the back is worth considering by those who hold that the upright position is the proper one. Dr. Clayton Jones wisely points out that there are two kinds of forward position—(1) that in which the back is kept straight, the pelvis being rotated forwards at the hip-joints; and (2) that in which the back is hunched; and he prefers the former, both from the point of view of appearance and efficiency. Mr. Gidley has no objection to this method though he seems on the whole to recommend the upright position. Like Dr. Clayton Jones he objects, and that strongly, to hunching the back. The great objection to the forward position with rigid, straight spine seems to me to be that it does not rest the back, and to my eye it is ugly. I do not, however, strongly insist upon these points in the face of so great an authority as Mr. Gidley. If one with his large experience lends his support to a particular method of sitting it is difficult to believe that it can be a wrong one. I quite recognise the danger which those who ride with the back hunched run of becoming round-shouldered, but this tendency can quite easily be overcome by suitable exercises. Finally, I would observe that the ability of a man of such great stature as Mr. Gidley to stand a long time without fatigue is no disproof of my contention that tall people are more easily fatigued by standing than short people. It is rather the exception to the rule and testifies to Mr. Gidley's exceptional physique.

I am, Sirs, yours faithfully,

Wimpole-street, Dec. 14th, 1897. HARRY CAMPBELL.

THE SMOKE NUISANCE.

To the Editors of THE LANCET.

SIRS,—Having noticed an article on the smoke nuisance in Manchester and Salford in THE LANCET of Dec. 4th I write to say that I have had it under observation by the exposure of blue litmus papers in the open air. These have been used like ozone papers placed hanging in a perforated tin can by a clip, so that the air and wind passes freely about them. The tin can is about six inches or so high and four inches broad with a deep flanged lid to which the clip is attached, and it is placed on the window sill of the bedroom and has its base weighted. The scale of 1·5 of discolouration is adopted and the papers have been recorded and re-clipped morning and evening so as to get the daily ranges. The litmus becomes nearly bleached in Manchester now and then or No. 5, but its usual degree was No. 4 and for the night exposure it came to only 2-3, depending on the weather. The decrease at night will be laid to the damping down of engine and factory fires and the cessation of railway traffic at the stations when the inferior coal only is burnt containing more sulphur than domestic coal. The nature of the adulteration of the air of manufacturing cities was investigated by Dr. Angus Smith thirty or forty years ago and papers on the subject are to be seen in the Transactions of the Literary and Philosophical Society of Manchester. More recently Dr. Bailey and Dr. Cohen have been examining the subject and they find that the air contains coal gases and sulphuric and hydrochloric acid vapours besides solid organic and mineral matters which are in due course deposited. It would be very desirable that some reports should be published of cases of illness caused or aggravated by the town smoke as there must be many such occasioned amongst suburban dwellers by travelling by underground railways. The opinions hitherto given about its unhealthiness have been of a vague class and calling it a nuisance simply without stating symptoms or organic lesions or mortality if any amongst the citizens. There can be little doubt of the deleterious effect of smoke air upon vegetation as is to be seen in the city parks and gardens in the suburbs.

I am, Sirs, yours faithfully,

W. G. BLACK, F.R.C.S. Edin., L.S.A.,

Surgeon-Major A.M.S. (retired), Member of the Sanitary

Edinburgh, Dec. 5th, 1897. Institute.

THE OPTIMUM REACTION OF CULTURE BOUILLON IN SERUM DIAGNOSIS OF TYPHOID FEVER BY THE DRIED BLOOD METHOD.

To the Editors of THE LANCET.

SIRS,—I wish to prevent readers of THE LANCET being misled by a mistake which escaped correction in some copies of a circular recently issued by the Board of Health of the Province of Quebec.[1] Instead of from 5 to 6 per cent. acid to phenol-phthaleïn, stated to be the optimum reaction of bouillon used for the typhoid test, it should read from 3 to 4 per cent. I employ myself by preference 3·5 per cent. for peptone meat bouillon. The exact reading of the end-point varies somewhat with the observer and considerably with the temperature of the solution. The proportion of peptone

[1] THE LANCET, Nov. 13th, 1897, p. 1294.

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present influences the result as it reacts acid with this indicator and not with litmus. With litmus the optimum point I find to lie at what may be called the acid edge of the amphoteric zone. The same person will have no difficulty in getting a bouillon constant in reaction at different times, but might find a different end-point from that stated to be the optimum for him. The object of fixing the titration point is to secure freedom of the bouillon from the clumps of apparently dead bacilli which form a scum or sediment in the tube and give rise to very puzzling pseudo-reactions. Their influence on the result has been considered by Widal so serious a source of experimental error that the habitual examination of a control drop to which no serum has been added is insisted on in every case. This disturbing element is even more troublesome in dealing with solutions of dried blood than with fluid serum. We have, however, been able to eliminate it permanently by paying strict attention to the culture media and the reaction here recommended is that which has been used from the first in my own observations except during two periods of a few weeks each. On both these occasions an accidental departure from the method of preparing the culture led to unsatisfactory results, which promptly disappeared when the former routine was resumed.

If the culture is less acid than 3·5 per cent. to phenol-phthalein the growth is more abundant and gives within twenty-four hours both scum and deposit in which clumps of motionless bacilli appear. On the other hand, with bouillon more acid than 3·5 per cent. the motility becomes greatly lessened and is lost at about 4 per cent. acid. The serum reaction, though still obtainable, is retarded. Between 5 and 6 per cent. it is difficult to obtain any satisfactory growth, the limit of growth varying in different races.

With serum in agar the reaction of the media has not the same degree of influence. With the colon bacillus the tendency to form clumps of motionless bacilli is greater than in the case of typhoid and the tendency to yield pseudo-reactions is correspondingly greater. We find, however, that by using a somewhat more acid bouillon than for typhoid (about 4 per cent. acid to phenol-phthalein will answer) the density of the growth can be controlled in a similar manner and the tendency to pseudo-reactions disappears.[2]

I am, Sirs, yours faithfully,

Montreal, Nov. 30th, 1897. WYATT JOHNSTON, M.D.

"PROPOSED AMENDMENTS OF THE NOTIFICATION ACT."

To the Editors of THE LANCET.

SIRS,—As you observe in your leading article of Nov. 20th and as Dr. Young and Mr. Garstang state in their letters in your issues of Nov. 6th and 20th it is generally admitted that some amendment of the present Notification Act is necessary; but surely a more general agreement of opinion is desirable before a Bill is drafted. There are two important matters which seem to have been so far omitted and which it is desirable should be included in any future legislation on the subject. The one is that certainly all cases of phthisis—preferably all cases believed to be tuberculous in origin—should be included in the schedule of diseases to be notified. The other that all cases of "fever" after childbirth and miscarriage should also be notified if occurring during the first fourteen days after delivery. With these important additions I should agree generally with Mr. Garstang's suggestions, the only great exception being that I should strongly support the present fee of half-a-crown being retained.

I am, Sirs, yours faithfully,

Braintree, Essex, Dec. 6th, 1897. THOMAS CARR.

"THE COMPARATIVELY STATIONARY DEATH-RATE IN PRIVATE OBSTETRIC PRACTICE."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 2nd you granted space to a communication from me under the above heading. Upon thinking over the matter afterwards I regretted that I had not adopted the literary methods so familiar to us all in boyhood during our researches into the writings of G. P. R. James *et hoc genus omne* and so have indicated the full scope of the matter with which I dealt by adding an alternative title. My subject would then have been expressed in some such terms as "The Comparatively Stationary Death-rate in Private Obstetric Practice or The Sorrows of carrying out Asepsis." I am firmly convinced of the tragic truth of the opening paragraph of Dr. Jellett's "Short Practice of Midwifery" which was recently so favourably reviewed in your columns: "It is not an exaggeration to say that the most essential knowledge in midwifery is the knowledge of asepsis. A practitioner who knows nothing of the science and art of midwifery, except that it is absolutely necessary that his hands and instruments be sterile, will save more life than the most accomplished obstetrician who does not practise asepsis." The overwhelming importance of the subject itself, together with the interest recently taken in the discussion upon the causes as to why, during the last twenty years, the relative positions of the great maternity hospital and private obstetric practice have been so radically altered, to the great disadvantage of the latter as regards the rate of mortality, lead me to hope that you may allow me to supplement and amplify a little my former letter. In it I attempted to show by the simple recital of an everyday experience that the difficulties to a great extent proceed from the ignorant misconception of the patient or her friends. In the case to which I referred the difficulty arose from a "nurse" objecting to my methods, firstly, because I washed and scrubbed my hands so much that I appeared over-fastidious, and secondly, because by refraining from making unnecessary vaginal examinations I did not earn my fee by "helping" the patient as I ought. A few days after my letter appeared in your columns I had, however, an equally instructive experience in which the difficulty arose from the patient herself. The case was a very tedious primipara, with contracted outlet, requiring forceps in the end, and when it was all over the patient expressed herself in most grateful terms for the care taken of her in her troubles. The nurse upon this occasion was a very intelligent and capable one and had been trained at Queen Charlotte's Hospital. Upon talking matters over with her she complained of the difficulties of carrying out asepsis. She said she was much amused by her patient after I had made my first call just at the beginning of her tedious labour expressing a hope that I would not come again. Upon the nurse asking for some explanation of this the patient had replied: "Oh, he rubbed his hands so much that they must have been very dirty beforehand, and it is such a curious thing for a doctor to have had such dirty hands as to require all that scrubbing."

As I have before said, the woman was herself in the end very grateful for services rendered, and the nurse soon removed her misconceptions as to the object of the scrubbing; but what can one think of the line of reasoning? It is such erroneous deductions, together with the old belief in empirical methods, which constitute the greatest difficulty in faithfully following asepsis in private practice. Amongst these empirical methods none can be more mischievous than the idea that an ordinary vaginal examination is made with the object of "helping" the patient out of her trouble—a belief which is practically universal amongst the women of London. It is in connexion with this that I wish to point out that the fault does not rest entirely with either the patient or her friends. It has long been one of the stock commonplaces of feeble wits that the practising of the art of medicine amounts to an infinite capacity for humbug. This criticism, however, is but an exemplification of the truth of Byron's famous lines:—

> "Believe anything that's false before
> You trust in critics who themselves are sore."

The critics in this case are simply ordinary specimens of human nature who are self-conscious of the fact that when they themselves seek medical advice they expect to be "humoured." But, granting all that can be urged on this score, surely there is no need for anything more than an explanation to the patient of the simple truth—namely, that a vaginal examination in an ordinary case

[2] The influence of the acidity or alkalinity of the culture medium has already been referred to by Bates Block and by myself before the [illegible] Association (June, 1897), and by D. MacTaggart and [illegible] at the Montreal meeting of the British Medical Association not yet published. I would emphasise the importance of paying special attention to the condition of the culture in order to get the best results where dry blood is used. A very full consideration of standardising media by phenol-phthalein is given by G. Fuller in the Journal of American Public Health Association for 1895 (October).

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is made for purposes of diagnosis and not with any idea of "helping" the patient. I have made inquiry upon this subject and I find that the experience of others amongst London women confirms the impression which I have myself formed concerning the ideas prevalent amongst the items which go to form the very numerous *clientèle* yclept "guinea midwifery." The patients, one and all, believe that if the medical man allows a single pain to pass in his presence without making a vaginal examination he is not honestly earning the aforesaid guinea. From merely silently acquiescing in these ideas it is but a step to "helping" the patient in a more active manner by stretching the cervix with the fingers, than which no procedure can be more risky if practised as a routine measure. Lacerations are then inevitable, and their risk from the septic point of view is in no way lessened, but rather increased, by the classically futile reflection, "they are but little ones." From the stretching of the cervix to the application of the forceps is but another short step. I observe that at the recent meeting of the British Medical Association at Montreal a provincial English practitioner asserted that he believed that his brethren in Lancashire resorted to the forceps in "not less than 25 or 30 per cent. of all cases, or even more." However astonishing such a statement may seem in itself, it is still more so when contrasted with the figures of the great maternity hospitals, whether abroad or at home. Some carry the craze in favour of things bearing the legend "made in Germany" even into the matter of statistics. Science of course is cosmopolitan, and in such matters merely patriotic considerations are beside the mark. It is, however, common sense to say that beyond question the rational plan would be to quote the figures of the great maternity hospitals which minister to people drawn from the population with which we ourselves are concerned in our practice. I therefore make no excuse for taking as my criterion the tables of the Rotunda Hospital during the period which I feel sure will always be looked upon as the golden age there—namely, the seven years (1889–1896) of the mastership of Dr. Smyly. Of the latter it may be well said that, like his illustrious compatriot the "Bobs" of Rudyard Kipling's Ballad, he "doesn't advertise," so his name is not so well known on this side of the Channel as that of some continental specialists. I feel sure, however, that the many Englishmen who enjoyed both the pleasure and privilege of attending the obstetric and gynæcological practice of the Rotunda during his mastership will recognise in my humble tribute nothing more than the record of an established fact, without any disparagement either expressed or implied of the long line of distinguished men who have filled that position. During these seven years Dr. Smyly, both by precept and example, unceasingly insisted upon the limitation of the use of the forceps to cases in which the following conditions were fulfilled: (1) that the greatest diameter of the head should have passed the brim; (2) that the membranes should be ruptured and retracted over the presenting part; and (3) that the os should be sufficiently dilated to allow the head to pass through without any risk of causing laceration of the cervix.

As a result of this teaching amongst the 8997 labours which occurred during the seven years recourse was had to the forceps in 267 cases, being not quite 3 per cent. We can therefore appeal as successfully and proudly as Prince Hal to the "men (and women) whose limbs were made in England (and Ireland)." I venture to ask for the powerful support of THE LANCET in helping to bring about a similar state of things in private practice and thereby to get rid of the reproach of the stationary death-rate.

I am, Sirs, yours faithfully,

M.D.

FREEMASONRY.—*The Rahere Lodge, No. 2546.*—An ordinary meeting of the Lodge was held at Frascati's Restaurant on Dec. 14th, W. Bro. Walsham, W.M., in the chair. Messrs. Hampton and Miles were admitted to the third degree and Bros. Auden, Marshall, Bill, Cripps-Lawrence, Adams, Westbrook, Trechmann, and Surgeon Folliott, R.N., to the second degree by Bro. Gilbertson. Mr. J. B. Christopherson, M.B., B.C. Cantab., was initiated into Masonry by Bro. E. C. Cripps, and Bro. Arnold Izard, of the Isaac Newton University Lodge, was elected a joining member. Forty brethren with their guests afterwards dined together.

THE EPIDEMIC OF TYPHOID FEVER AT BELFAST.

(FROM OUR SPECIAL COMMISSIONER.)

(*Continued from p. 1561.*)

IT has already been pointed out that one of the most serious defects of Belfast is the nature of the soil on which the town is built. The necessity of a good system of drainage is twofold; first, to dispose of the sewage; secondly, to keep the subsoil dry and to prevent floods. So far back as 1866 the late borough surveyor, Mr. Montgomery, drew up a scheme for intercepting all the sewers which then emptied abreast of the town into the tidal River Lagan and conveying the sewage away into the Lough. It is important to note, however, that Mr. Montgomery emphatically declared that his scheme was only suited to Belfast as it then stood and he could not answer for the future. Now it has taken thirty years of contests and squabbles to carry out this scheme and the question arises as to whether it is still suitable to the present condition of the town, for in the interval the population has just about doubled. The late Sir Joseph Bazalgette reported favourably upon this scheme when it was first presented. The Belfast Corporation promoted a Bill in 1870 to carry out these plans and also to reclaim a large area of tidal lands from the Lough. But the cost was so great that the Bill came to grief before reaching the Committee stage. The question was not revived till 1885 when the present borough surveyor, Mr. Bretland, presented an amended scheme of sewage interception to the corporation. This was also favourably reported upon by the late Sir Joseph Bazalgette and adopted by the Belfast Town Council. Finally, in 1887, the Belfast Main Drainage Act was passed by Parliament. The total cost was estimated at about £300,000. Low-level main sewers are now built on both sides of the river and connected together by a double syphon that passes under the water. The contents of this low-level section are pumped up near the northern extremity of the city into a high-level main intercepting sewer at Duncrue-street. From this point the sewage flows by gravitation to a covered storage reservoir which is designed to hold 5,000,000 gallons of sewage between high water and half ebb. It is then discharged and it was believed that the ebb current would suffice to carry the sewage out to sea. The construction of this reservoir was a matter of great difficulty on account of the unstable nature of the ground. No less than 7000 piles had to be driven down so as to make a foundation. In spite of this one of the walls of the reservoir began to give way, but it has been ingeniously consolidated by the construction of buttresses.

The discharge into the tide is through a covered timber sewer one mile in length. It is placed below the low-water level under the bed of the Lough, but the reservoir is at a sufficient height to give a working head to ensure the discharge of the sewage. Then twenty-five acres of land by the side of the reservoir have been redeemed from the sea, so that if it should be thought necessary there is room to treat the sewage before discharging it into the Lough. Whether this will have to be done or not is a matter on which opinions are at present divided. In the summer, when the wind blows from that direction, there are unpleasant odours, but is this due to sewage laid bare on mud banks by the receding tide or to the accumulation of rank vegetation? Again, is this vegetation due to the sewage? Some persons affirm that it existed before the building of the sewage outfall; others maintain that it is getting worse and worse every year. In any case there is the ground all ready at hand to establish works for the treatment of the sewage. If a nuisance has been created in the Lough the condition of the River Lagan as it passes through the town has very much improved. This is proved by the fact that sea trout now come up the river at spawning time when they want to get to the fresh water. Though these fish were formerly unknown they may now be caught in the Lagan as far up as the locks which of course they are unable to pass.

The most urgent question, however, is that of the drainage of the town itself. Has a scheme which was intended for a population of about 150,000 proved effective when applied to a population of more than 300,000, and will it long remain effective considering that this population is increasing at the rate of about 10,000 persons per annum? This is all the more

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doubtful as a most important phase of the original scheme has not been carried out. There are sundry streams that pass through Belfast bearing down the surface waters from the surrounding hills and a large tract of country. To prevent floods Mr. Montgomery had proposed to construct dams in the upper part of the town so as to intercept the water in these streams and prevent too sudden and too voluminous a down-rush during a storm. The water thus intercepted would have been very useful for flushing purposes during dry weather. Such regulating reservoirs, however, would materially interfere with riparian rights and the working of flax and other mills. If the beds of these streams were lowered, submerged weirs and other obstructions erected, the danger of flooding would in a great measure be removed. What little has been done in this direction has resulted in some benefit. That this, however, is not sufficient is proved by the fact that the sewers in the Crumlin and Shankhill roads burst under the pressure of storm-water. Such an accident occurring on the face of a hill where the water could flow down at a great velocity shows how strong the pressure must have been. Now a number of overflows have been added to the sewers built by the side of the streams. Thus these sewers, which were intended to lessen the foulness of the streams, add by their overflows to that foulness during heavy rainfalls. Still this is the lesser of two evils. The main drainage system has rendered many parts of the city free from the periodical flooding to which they were subject, but it cannot carry away the flood waters of the rivers. Mills, factories, dwellings have been recklessly built on and over these watercourses. These buildings often have open pipes or drains communicating with the streams and as the watercourse is now confined by walls, sluices, or raised by numerous weirs built from time to time without a corresponding heightening of the banks there is no protection for the surrounding low-lying buildings and streets. Then large areas over which the waters formerly spread in times of flood are now built upon and are no longer available for the storage of the water. The bridges and culverts, hardly large enough in normal times, are altogether insufficient when there is a storm, particularly as they are apt to be choked by the rubbish washed down with the water. Thus floods occur which are not only injurious to the health of the populations affected, but they entail cost and labour in clearing and cleansing. This has to be borne by the municipality and thus the public has to pay for the mischief which is brought about by those who utilise the stream for industrial and other purposes. These latter individuals have been allowed to act in their own interests and have now acquired vested rights from which they cannot be deprived except by Act of Parliament. Moreover it is not now possible to conciliate the interests of the mill-owners with those of the town. If the course or beds of these streams were so altered as to prevent the danger of floods this would materially interfere with the working of the mills. Apart from the individual interests of these mill-owners it is to the advantage of the town that their business should not be hampered but encouraged in every way, as they afford employment to many and thus contribute to the general prosperity. Still this shows what evils may arise from the want of forethought and of efficient control. The riparian rights, with which it is now so difficult to deal, should never have been allowed to come into existence. It will be necessary to obtain powers to deal with the question. The river-beds must be deepened and concreted. Automatic and movable weirs must be substituted for the present obstructions and the flood waters must be impounded outside the town and at a distance as it is no longer possible to do this nearer at hand and where first proposed.

In carrying out the main drainage scheme there were amidst many special difficulties at least two favourable circumstances that are particular to Belfast. The first is the total absence of cellars and therefore it is not necessary to lay the sewers deep down in the streets. This is a great advantage in the low lying marshy districts. The second peculiarity is the very general practice of building the closets in the back-yards, where the drains also are placed and do not pass under the houses. Therefore the connexions are short and more easily controlled. In regard to shallow sewers this is perhaps an excusable necessity in the streets that are on the same level as the river. Here water is reached at three feet below the surface and the ground is affected by the tide. It is most unfortunate that an important town should have been built on such an unsuitable site. It is no easy matter to drain a soil that is invaded by the rising tide twice every day. But further away from the river the ground rises to an altitude of more than a hundred feet. On these higher levels there is no excuse for shallow sewers, yet because these were allowed lower down they also exist in such high localities as, for instance, the Shankhill district. Of course, it costs less money and trouble not to dig deep down in laying a sewer, but this is opposed to all rules of hygiene. Also such sewers cannot help to keep the ground dry; hence in the high latitudes where the soil should be good and wholesome it is also wet. Now it is precisely some of these higher neighbourhoods, the Shankhill and Crumlin districts, which stand out as having suffered most from the present typhoid fever epidemic. Looking from a distance at the town it would have been natural to suppose that these localities would have suffered the least instead of the most. Topographically they are open high, and seem the most favoured. Socially, though there is some appalling poverty and squalor, still the worst districts of the town are not here, but in the much older Smithfield quarter which has not, however, suffered so extensively. Why, then, is the better situated and less squalid district more susceptible? One reason has already been indicated—namely, that the heavy wet clay soil, though it could be more easily drained than other parts of the town, is still very damp. The Smithfield quarter, which is the poorest district of Belfast, has a more nomad population. Many of its inhabitants are porters, costermongers, and generally earn their living out-of-doors, while the population of Shankhill and Crumlin usually work in factories and their families remain more at home. This probably accounts for their greater susceptibility to unwholesome surroundings. Then as the Smithfield district is so notoriously bad it has been easier to secure the condemnation of houses in this neighbourhood as unfit for human habitation. The authorities maintain that many such houses have been closed; if so it is difficult to conjecture what was the past condition of Belfast considering the immense number of houses that still remain open though they should have been closed long ago.

There is one peculiar feature about the prevalence of typhoid fever in these localities—namely, that it does not often attack an entire family. There may be one, two, or at most three cases, but it is very rare to hear that the whole household is down with the fever. Yet the customs of the people are such as to provide every opportunity for the spread of the disease to every member of the family. Thus it is quite usual to see a typhoid fever patient lying down in the kitchen where the housewife is engaged making bread or cooking. Sometimes as many as six persons will be found in a single room though one among them will be suffering from the fever. Nothing is changed; the other members of the household continue their usual life and habits. No precautions whatsoever are taken. The typhoid excreta are brought down from the bedroom above, carried through the kitchen where cooking is going on, and thrown into the open privy just under the kitchen window. Children are playing about, neighbours come in to have a friendly chat, yet no one is any the worse. Other cases of fever occur but in a totally different family. Nevertheless, these facts should not be taken as demonstrating the futility of the precautions generally recommended. They tend to prove rather that a large section of the population has reached the condition of immunity in consequence of its exposure to infection from childhood upwards. Thus, for instance, Dr. Whitaker, the medical officer of health, related to me that when visiting with a town councillor some exceptionally insanitary property they were surprised by the robust appearance of three children. The mother, however, explained that though the children were very healthy she had had nine other children and they were all dead. Thousands of mothers living in insanitary houses have had similarly disastrous experiences.

On the other side of the River Lagan it is in the Newtownards-road district that there are the greatest number of cases of typhoid fever. This is a water-logged district; it could not be pumped dry. Here the sewers reach their lowest point and here there is the largest accumulation of sewage. This is reclaimed land and besides the ordinary sewage there flows from the farthest end and right through the district the drainage from two big distilleries. Also there are chemical works and manure manufactories that drain into the same system, not to mention the fumes that escape from the chimneys of such works and spread bad odours far and near. Thus it will be seen that on both sides

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of the water the districts most affected by the typhoid fever epidemic likewise suffer from defective drainage.

One of the great obstacles to the carrying out of an effective scheme of drainage has been the difficulty of defining where the town began and where it ended. The first Belfast Municipal Act was passed in 1845. Then boundaries were established in 1853, which comprised 6805 acres, and to this 9448 acres have been added on Nov. 25th last. But drainage depends upon water-supply and the Water Commissioners have several times varied their boundary though it was the same as the municipal boundary up to eight or ten years ago. The gas for the town was manufactured by a private company until the year 1874, when the works were bought by the corporation, and for both gas and water powers were given to go beyond the town boundaries. Even to-day and in spite of the immense increase in the size of Belfast these two public services go beyond the new extended boundaries. But there are not only the municipal, the gas, and the water boundaries, there is also the Parliamentary boundary. At the redistribution of seats in drawing the new line the physical features of the town were utterly disregarded. In Ireland each county is divided into baronies. These are again subdivided into parishes and the parishes into townlands. The word town is somewhat misleading, for many of these townlands consist of nothing but fields. Where, however, they are thickly populated they are still further subdivided into wards. Though there is a little overlapping all these divisions are generally well defined by streams or fences and are found to be very convenient for rating purposes. The parish boundaries have generally double ditches and all is quite clear and practicable. Unfortunately the authorities who defined the boundaries for the Redistribution of Seats Act tacked on townlands which were outside the municipal boundaries without having any regard to the physical features of Belfast. Therefore there is a most fantastic line including the precipices along the Cave Hill. The corporation when it sought to extend its boundary wanted to adopt the Parliamentary boundary, but Parliament objected to precipices as part of a town and so they were excluded, and now the new municipal boundary goes beyond the Parliamentary boundary in some, and does not go as far in other, directions. But there is yet another complication. The whole of Ireland is divided into Poor-law unions. These unions have divisions, each consisting of one or more townlands, which elect the Poor-law guardians, and in towns these divisions are further sub divided in wards. These boards of guardians are the sanitary authority for rural districts and such urban portions of a town as have no urban authority. As previously explained the Poor-law guardians have cut up Belfast into ten dispensary districts and the dispensary medical officers appointed by the Dispensary Committee, which is not elected but nominated by the guardians, are the medical officers of health for these districts. On the other hand, the town council has divided the town into fifteen sanitary districts and appoints one superintendent medical officer of health who has charge so far as his limited powers will admit of the whole area. Now in planning a scheme for the drainage of Belfast, and more particularly for raising the money to defray the cost, which boundary would be most advantageous, that of the water-supply, of the gas-supply, the old or the new municipal boundary, the Parliamentary boundary, or the boundaries of the Poor-law guardians? Which of all these authorities should the engineer in devising the scheme seek to please and how could proper provision be made for the future in face of such conflicting interests? As a matter of fact, being employed by the corporation the borough engineer cannot act beyond the limits of the municipal boundary, but these limits did not and could not be expected to coincide with the physical necessities of the case. Thus, for instance, in Shore-street and Weaver-street some cottages were built 3 ft. below the water-mark. These dwellings were condemned to be constantly flooded, but the corporation protested in vain, for the district was outside their boundary and the Poor-law guardians did not care to interfere. Yet the drainage from these newly built streets should have ultimately flowed into the sewers that did belong to the corporation; but how could this be ensured if the corporation could not control the level at which the houses were to be built and drained? This incident provided a good argument when Parliament was asked to sanction the extension of the town boundaries. Now the streets mentioned are saved from periodical floods by the low-level main drainage, which, however, did not exist at the time they were built. This case also serves to show how houses have been built in the past and how both the Poor-law guardians and the owners of property disregarded the exigencies of public health.

The rule is that house drains should have a fall of 1 in 60, pipe sewers 1 in 100, brick or concrete sewers 1 in 120, and in the low-lying Ballymagarret district 1 in 180; but how many sewers were built before any attempt was made to enforce such rules? In his report for the year 1894 Dr. Whitaker says: "In the lowest districts of the city, more especially where the sewers are old and the fall almost *nil*, it is almost impossible for many of them to be otherwise than elongated cesspools." The old sewers in many cases were constructed of rough and ill-formed brick and stone work with loose, open joints. To establish a connexion with the houses a mere hole was made into these sewers and the pipe of the house drain either pushed in too far or not far enough. In the one case it caused an obstruction in the sewer, in the other case it contaminated the surrounding subsoil. To do the work cheaply unskilled labourers were employed. Alluding to the defective joining of pipes Mr. Francis Quinn, sanitary contractor of Belfast, related some of his personal experiences given by the *Belfast Health Journal* as follows: "A short time ago a case of this description came under my notice. A main sewer was laid with the very great fall of 1 in 16 through sand. Some time afterwards a branch was joined on, but without the usual junction-pipe, a hole simply having been broken in the main. The consequence was that at this spot the water left both the branch and the main sewers and formed a channel through the sand. The solids could not follow the water and in a short time they choked the pipes."

A good many of these old and defective sewers have been dug up and rebuilt, but much still remains to be done and it will be a long time before the town is purged of the consequences of past neglect and indifference.

(To be continued.)

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Unqualified Practice in Birmingham.

ON the 10th inst. the deputy coroner held an inquest on the body of a girl aged seventeen years. Some medicine and a pill were prescribed by a Mr. Freeman who kept a dispensary but admitted that he was not qualified; the girl died soon after midnight. The mixture was stated to contain one and a half drachms of opium in the six ounces, and the pill was of solid opium, one grain. This was given on the representation of the mother of the patient, not from seeing the patient herself. At the post-mortem examination it was shown that the lungs were congested and clots of blood were found in both ventricles of the heart. The primary cause of death was pneumonia, the secondary cause failure of the heart. The jury found that death was due to natural causes and the foreman expressed on their behalf the opinion that the authorities of the city ought to be sufficiently alive to close a place such as that which Freeman managed. The coroner stated that the father of Freeman was before the General Medical Council a short time ago and addressing the latter advised him to give up the dispensary as he ran a great risk in keeping it open. The remarks of the coroner must be considered as a just expression of opinion after the recent transactions of the General Medical Council.

The Musical Festival.

At a meeting of the Orchestral Committee held on the 10th inst. a cheque for £3000 was handed over to the General Hospital, which with a cheque already received makes the amount of £5000. The total receipts of the festival were £14 282 17*s.* 5*d.* and the expenditure with payments £9135 12*s.* 5*d.* This fortunate addition to the hospital funds comes but once in three years and at the present time is particularly acceptable.

Protection of Infant Life.

The board of guardians have circulated widely the provisions of the Infant Life Protection Act. This piece of legislation, though somewhat troublesome in detail, is wisely calculated in the interest of the youngest of our population and will doubtless prevent many existing evils. As growth goes on the protection is still extended in the form of an active society for the prevention of cruelty to children. The officers of the local branch have shown

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themselves anxious to meet many demands lately and to secure adequate punishment for the offenders.

Dec. 14th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Death of the Birkenhead Coroner.

MR. HENRY CHURTON, the coroner of Birkenhead, died on the 13th inst. at the age of eighty-four years. Mr. Churton was elected coroner for West Cheshire, including Birkenhead, as far back as 1841, nearly fifty-seven years ago, and was the oldest coroner in England. Upon the incorporation of Birkenhead Mr. Churton was appointed its first coroner, also retaining the coronership of West Cheshire, which latter he felt compelled to resign on March 10th last owing to his great age. About seven weeks ago by reason of increasing infirmity he asked his deputy, Mr. Tibbits, to hold the inquests in the Birkenhead district for him and then retired from the active duties of the office. Mr. Churton was born at Whitchurch in 1813 and was educated at the old Grammar School, where Bishop Heber received his early training. He was subsequently apprenticed to Dr. Gaitskill, in London. He qualified as member of the Royal College of Surgeons of England and Licentiate of the Society of Apothecaries in 1836 and commenced practice in Chester in 1837. Mr. Churton had very long distances to travel when coroner for West Cheshire; he is stated to have said that he travelled something like 9000 miles a year and he was very proud to relate to his many friends his copious and varied experiences. Mr. Churton died at the residence of his son, Mr. Percy Churton, at Birkenhead, having been taken ill there whilst on a visit. He resided at West Mount, Chester.

The Local Press and Unqualified Practitioners.

It is a matter for regret that the lay press either from ignorance or for sensational purposes cannot distinguish between the legitimate and the irregular practitioner. The death under suspicious circumstances of an unqualified assistant in the North end of Liverpool on the 6th inst. afforded an illustration of the assumption by the local press that any person practising medicine must of necessity be a "doctor." In the present instance it was all the more unfortunate that greater care was not exercised on the part of local editors in ascertaining the real status of Mr. Doré, the individual in question, as a serious charge was pending against him at the present assizes. Mr. Doré, who possessed no medical or surgical qualification and who acted as assistant to a local practitioner, died suddenly, as stated above, on Dec. 6th under circumstances which led to the suspicion that he had committed suicide, but this was proved at the inquest not to have been the case, the cause of death having been ascertained by post-mortem examination to have been double pneumonia and fatty heart. The fatuity of the public for the unqualified practitioner was amply demonstrated in Mr. Doré's case, witnesses stating at the inquest that he was intensely popular with "his patients," who preferred him to a qualified practitioner.

The Eye sight of Board School Children.

The Liverpool School Board in their triennial report allude to the condition of the eyesight of the children attending the board schools. It will be seen therefrom that the teachers, acting under instructions from the ophthalmic surgeon employed by the board, carry out the examinations of the children's eyesight by means of the tests recommended by him. The tests are applied when the children leave Standard 2 and also when in Standards 3 and 4. Should defect of vision be discovered the parents or guardians are immediately notified of the fact, but unfortunately action has only been taken by them in comparatively few cases. Out of 9038 children tested at the first examination 21 per cent. were found to have visual errors. Out of 2000 cases in which errors of vision were detected and notified to parents action was taken in only 324 cases.

Dec. 14th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

An Abortionist Sentenced.

ON Monday last, before Lord Justice Clerk Macdonald, Minnie Christina Graham was indicted on four charges of procuring abortion. This is the woman who brought a libel action against the *Sun* some two years ago on account of a series of outspoken articles published in that paper, which action she, however, lost. It appears that she has since set up as a "lady doctor" in Edinburgh under the title of Mme. Gray. The jury found her guilty and sentence of five years' penal servitude was passed.

Glasgow Western Infirmary and Professor Macewen.

It is announced to-day that the differences between the University and the Western Infirmary have been amicably settled, the joint committee representing both sides having agreed to a report that Professor Macewen should be allowed to retain the whole of the ward accommodation which he has used so efficiently since he first became connected with the infirmary. With regard to the other matters in dispute—the supply of nurses, the exclusive use of an operating theatre, and possibly the placing of direct representatives of the staff on the board of management—no announcement has been made. They can scarcely have been overlooked, however, as they are points of quite as much general interest and importance as the question of ward accommodation.

Glasgow University.

The Court has appointed Mr. Bertram C. A. Windle, M.A., M.D., D.Sc.Dub., Professor of Anatomy in the Mason College, Birmingham, to be additional examiner in anatomy until Dec. 31st, 1899. The Court has also nominated representatives on a committee to be appointed by all the Scottish universities to consider the proposed acquisition of disciplinary or penal powers over medical graduates.

Glasgow Medico-Chirurgical Society.

Mr. W. K. Hunter, B.Sc., M.D. Glasg., has been elected honorary general secretary.

Aberdeen Royal Infirmary.

By permission of the Queen two of the wards in the new medical pavilion have been named after the Queen and the late Prince Albert—names which were attached to two wards in the old hospital. One of the wards in the new surgical pavilion has also by permission been named after Princess Henry of Battenberg (Princess Beatrice) who was present at the opening of that part of the buildings. Other wards have been named after Princess Louise, Leila Countess of Erroll, the Earl of Aberdeen, Sir William Henderson, Colonel Allardyce (chairman of directors), &c. The chairman of directors has also received a letter from the Queen's private secretary in which Sir Arthur Bigge says of Miss Rachel Frances Lumsden, late hon. superintendent: "Her Majesty has learned with interest and deep appreciation of the great and valued services which during upwards of twenty years Miss Lumsden has given with untiring zeal and self-denial to the sick and suffering of the poorer classes in Aberdeen."—On the 9th inst. the portrait of Mr. William Carnie, clerk and treasurer, Royal Infirmary and Royal Asylum, Aberdeen, was, "in recognition of musical, literary, and official services," presented by the subscribers to the Aberdeen Art Gallery for preservation. Mr. Carnie in an eloquent reply gave many interesting reminiscences connected with public men and events in Aberdeen. Mr. Carnie is also the recipient of a replica painted by Mr. Archibald Reid, the portrait itself being the work of Sir George Reid, P.R.S.A.

Proposed University Medical Society at Aberdeen.

Aberdeen medical students in mass meeting assembled have resolved that a University Medical Society be formed and a committee has been appointed to draw up and submit to a future meeting a draft constitution.

Dec. 14th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Belfast Medical Students' Association.

AT the opening meeting of the Belfast Medical Students' Association held in Queen's College on Dec. 9th, Dr. McCutcheon, President, being in the chair, Dr. J. A. Lindsay, President of the Ulster Medical Society, delivered by request an address upon "The Public Services from the Medical Point of View." He said that those whom he addressed would in a short time obtain their diplomas and be called upon to choose among the many openings of professional life which presented themselves to the young medical man. They might

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seek the post of resident medical officer to a hospital, the course most likely to lead to usefulness and success in their after life, or if that should prove impracticable they might purchase a practice, or take up temporary duty as assistants, or surgeons to a ship, or start in private practice, general or special, or, finally, they might enter the public services. The various advantages, difficulties, and drawbacks of these different courses were dwelt upon and explained. The public services, the navy, the Indian medical service, and the army medical service presented certain considerable advantages. The young man entering any of these obtained at once, without the usual struggle and waiting for patients, an agreeable position, fair remuneration, pleasant society, and not too onerous work; also he had security of tenure and the prospect of a moderate pension at the conclusion of his period of service. These were great advantages, but it would be well for intending candidates to consider the other side of the question. The public services offered little prospect to any man of exceptional intellect, energy, or ambition either of the acquisition of wealth or doing original scientific work or of attaining a position comparable to that of the leaders of the profession in ordinary practice. Also it was a very serious matter for a medical man to be compulsorily retired at the age of forty-six or forty-seven years with so moderate a pension as £1 per diem. To begin private practice at this age and practically start life anew was very difficult and trying and rarely led to any considerable degree of success. Of the various services the navy was at present the most popular. It appealed to the national instincts of the race; the position of medical men in the navy was satisfactory and no more agreeable set of men existed in the world than British naval officers. The Indian medical service was also, on the whole, popular, the only serious complaint arising from the depreciation in the value of silver. It was otherwise with the army medical service, which he much regretted to be obliged to tell them was at present intensely unpopular—so much so that discontent was rife in the ranks of the service and the authorities found it quite impossible to find suitable candidates to fill existing vacancies. Dr. Lindsay then read the statistics showing the number of vacancies, number of candidates and proportion of passes at the army medical examinations during the past two years. It was a most serious matter that the number of candidates should in some cases be barely equal to the number of vacancies and that their quality should be so wretched that only about one-half of them could secure passes. It was evident that really competent men were standing aloof from these examinations and that the army was in danger of being officered medically by men of perilously inferior calibre. This constituted a public danger and one which might lead to disaster in the event of a great war. This extreme unpopularity of the army medical service was the more remarkable as no complaint whatever was made as regards pay, retiring allowances, or the like. The grounds of complaint were that medical officers had no definite or recognisable rank in the army; that their position was painful and anomalous; and that they were sneered at as "non-combatants," although, as a matter of fact, they often went into action in the discharge of their duties, they had won Victoria Crosses out of proportion to their numbers, and the mortality among their ranks exceeded that of the combatant officers. No body of educated gentlemen could tamely submit to such treatment. The remedy suggested by those most conversant with the subject was the creation of an army medical corps with substantive rank. He sincerely trusted that until the necessary reforms had been effected no Belfast student would enter the competition for the army medical service. The Irish medical schools had long been among the chief feeders of the public services. It behoved them now to show a spirt of self-sacrifice and of loyalty to their profession.

Action for False Arrest and Imprisonment against a Cork Medical Man.

A case has just been decided in Cork which exemplifies the annoyances and possible pecuniary losses a medical man may be called on to suffer owing to his having conscientiously discharged his duty towards his patients. On the 16th of last October Dr. James Joseph Tracy was hurriedly summoned to attend a Mrs. Hennessy and found her suffering from peritonitis and in a dying condition. Later in the day she was seen by Dr. Corby in consultation with Dr. Tracy and both medical gentlemen ascertained that the relations between Mrs. Hennessy and her husband were not the happiest owing to Mr. Hennessy having made unfounded charges of infidelity against her. That being so, inquiry was made with a view to discovering whether there had been any traumatic cause of the peritonitis. Having satisfied themselves that there was none the medical men concluded that in the interests of Mr. Hennessy it would be well to have an efficient record of the fact. Accordingly a constable was stationed outside the bedroom door where he could hear Mrs. Hennessy's replies to Dr. Tracy's questions. Mrs. Hennessy stated positively that she had not been struck by her husband and the constable duly made a note of her replies. Dr. Tracy visited his patient that night again and found she was still in a very collapsed condition. Her husband, who was then under the influence of drink, was standing at the door of the adjoining house and as he was disorderly some policemen were remonstrating with him. Mrs. Hennessy heard the disturbance and implored Dr. Tracy to prevent her husband from coming near her. He went round to endeavour to quieten Mr. Hennessy, but his good offices were declined and Mr. Hennessy's manner became very threatening to Dr. Tracy. He had a conversation with the police-sergeant as to what could be done. As a result Dr. Tracy went before a magistrate and swore an information that Mr. Hennessy's presence in the house was seriously calculated to jeopardise his wife's life. The magistrate granted a warrant and Mr. Hennessy was lodged in Bridewell for the night. Many days had not elapsed when Dr. Tracy was served with a writ in the Superior Courts at the instance of Mr. Hennessy. Dr. Tracy applied to the Court of Queen's Bench to have the case remitted to the Recorder's court and affidavits were filed in support of the application. The judges decided on remitting the case and Mr. Justice Murphy when giving their lordships' decision said: "If the defendant had allowed the poor woman to struggle on for existence through the night with that man near her he would have been unworthy of the high profession to which he belonged. He would have been acting with brutal indifference to the life of her whose recovery he was endeavouring to bring about. This unhappy wife recovered her life having been saved by the action of the doctor." The case came on for trial before the Recorder last Saturday and Dr. Tracy and Dr. Corby gave evidence as to the very critical condition Mrs. Hennessy had been in and the importance of having her saved from excitement. Mrs. Hennessy also gave evidence on behalf of the defendant and indignantly denied the charges of infidelity. Police-constables testified that Mr. Hennessy was drunk and violent. The Recorder in summing up told the jury that the medical men in procuring Mrs. Hennessy's dying depositions had proved themselves Mr. Hennessy's best friends. It had come out in evidence that the plaintiff's eldest son at the time of the occurrence was in the last stages of phthisis and the Recorder commented very strongly on Mr. Hennessy's conduct. He (the Recorder) considered Dr. Tracy's conduct not only justifiable but professionally necessary. The jury after a short deliberation brought in a verdict in favour of the defendant with costs.

Cork Eye, Ear, and Throat Hospital.

The formal opening of the Cork Eye, Ear, and Throat Hospital took place on Dec. 11th in presence of a large and distinguished company. The proceedings were very enthusiastic and a number of speeches were delivered, particular reference being made to the services rendered to the institution by Dr. Arthur Sandford. Eventually the mayor opened the hospital with a golden key handed to him by Lady Bandon.

Dec. 14th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Phosphorus Necrosis.

LAST year the Academy of Medicine considered very carefully the ravages caused by the use of white phosphorus among the workers in match factories. Since then M. Courtois-Suffit has not observed a single new case of phosphorus necrosis among the workmen (575 in number) employed in the works at Pantin and Aubervilliers. The process of manufacture remains the same, but great care has been used in the selection of the workmen and a much improved system of hygiene

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has been established. The ideal plan of course would be the employment of some substance, other than white phosphorus, of a non-poisonous character and any proposal to use poisonous materials of a different kind would probably only result in causing accidents of a new character. An inventor, however, is going to try the manufacture of a new kind of match in the State factories at Pantin. These matches contain no phosphorus are called "Allumettes Triomphe," and are made on a basis of plumbate of lime. They come from the works of Otto Miram of Bettenhausen in Westphalia. About 100,000,000 of these matches will shortly be distributed among the various tobacco shops, and this trial will be considered the "essais de consommation." If the two experiments—i.e., the manufacture and the sale—give good results the matches will be adopted in all the State factories. On Nov. 28th a delegation of match makers was received by M. Cochery, the Minister of Finance and the delegates assured the minister that the new matches were of excellent quality and begged him in the interests of their health to adopt them. M. Cochery replied that if the results of the experiments were satisfactory he would do his best to give satisfaction to the workers.

The Explanation and Treatment of the Eunuch like Voice.

At the time of puberty the voice breaks and sometimes assumes the character of the voice of an eunuch. Moreover this condition sometimes persists. At the meeting of the Academy of Medicine upon Dec. 8th M. Kraus said that he had abandoned the explanation generally given that this voice was due to spasms or ataxic movements of the laryngeal muscles. According to him the eunuchoid voice is due to a disproportion between the vocal cords at the time of the break. This disproportion generally disappears during the course of a normal break but sometimes it persists or only disappears partly. M. Kraus distinguishes three degrees of eunuchoid voice according to the amount of normal evolution which takes place: firstly, those who can only speak in the eunuchoid voice; secondly, those who can by making an effort speak with the chest voice but in whom the falsetto returns when the effort ceases; and thirdly, those who use the chest voice except when the voice is strained. M. Kraus by means of an apparatus which he calls the "redresseur du larynx" has been enabled to correct this faulty development and has even brought about the permanent disappearance of falsetto voices which had been treated upon the old method for some years without success. The treatment consists of a kind of "orthopædy" of the larynx and is painless.

The Number of Students of Medicine.

According to the figures furnished by Professor Brouardel to the Council of the Academy the number of students in medicine for the present year has slightly diminished. The numbers undergoing their course in the hospitals are 2437, of whom 904 are senior students and 1533 junior students. Of 897 candidates who have undergone examinations during the scholastic year 1896-97 1404 were referred. The number of readers at the library of the faculty of medicine has amounted to 142,300. Professor Brouardel further says that a new grant of funds is indispensable for the purposes of the medical library.

A Consequence of the Laporte Case.

A brewer at Amiens having heard that Dr. Laporte was sentenced to three months' imprisonment for having performed craniotomy unsuccessfully came to the logical conclusion that every medical man who had been unsuccessful in the same operation was blamenble. He remembered that eight years ago his wife had died after an operation of this sort and saw his way to getting a sum of 10,000 fr. which he demanded from the unfortunate accoucheur. The Court of Amiens, however, saw in this plea an attempt to blackmail. In vain did the brewer contend that the medical man had killed his wife and the child in order to please his mother-in-law. In vain did he assert that owing to this death he had been obliged to give back the dowry of his wife and that besides the death of the child prevented him from coming in for the estate of the mother-in-law. These arguments, evidently prompted by self-interest, did not prevent the court from condemning the brewer to fifteen days' imprisonment for attempted blackmail.

Dec. 14th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

A New Antiseptic Compound.

THE chemical factory of Bayer and Co. in Elberfeld has recently produced a new compound consisting of a combination of silver and protein in which the metal is not in the form of a salt but is in organic union with the protein molecule. This compound was discovered by Dr. Eichengrün, the chemist to the above factory, and is termed "protargol." Dr. Benario, of Frankfurt, has now examined its action and publishes his results in the *Deutsche Medicinische Wochenschrift*. He states that it is an energetic bactericide, a 1 per cent. solution destroying the bacteria of anthrax and enteric fever as well as pneumococcus, bacterium coli, staphylococcus pyogenes aureus, &c. In experiments made with rats it was found that injections of 2 c.c. of a 1 per cent. solution caused necrosis at the place of the injection but were not fatal to the animal. An injection of 1 c.c. of a 10 per cent. solution produced an infiltration and total necrosis of the skin, the animal dying in a fortnight. A 20 per cent. solution dropped on the conjunctiva of rabbits produced an increased secretion of the lacrymal glands; an application of pure protargol caused abundant swelling of the eye and the surrounding tissue. But within five days the normal state reappeared, the cornea being clear as before. Administered internally it did not produce either toxic symptoms or injury to the mucous membranes of the œsophagus and the stomach. The new compound therefore unites a strong antiseptic action with a comparative freedom from any tendency to irritate, and this induced Dr. Benario to use it for his patients, cases of gonorrhœa being especially selected. Injection of a 1 per cent. solution into the urethra caused a slight smarting, the purulent secretion nearly disappeared within a week, and in a fortnight gonococci were no longer discoverable. Professor Neisser, of Breslau, who also tried the remedy, stated that he had never before had so good, sure and prompt results in gonorrhœa. In surgical practice it was used for the dressing of wounds in about 150 cases. In phlegmonous inflammation dressings moistened with a 5 per cent. solution were applied; in recent wounds the substance was used in the form of powder. In various ulcerations it was employed as an ointment, whilst in tonsillitis a 5 per cent. solution applied to the inflamed tonsils proved useful.

Insurance of Students against Laboratory Accidents.

Since the beginning of the academical half-year all students attending the chemical and physical laboratories of the University of Heidelberg have been insured against accidents happening in the course of the lectures, of the laboratory work and of scientific excursions. The insurance premium is paid by the treasury of the University which has also made a new regulation in connexion with the subject requiring the students to pay a small sum in addition to the class fees. This step is surely deserving of imitation by other universities and such advantages ought not to be limited to laboratory work only, for medical students run much greater risk both in the dissecting rooms and as dressers in the surgical clinics and as clerks in the infection wards of the university hospitals. This fact should be considered by the other universities in the event of their imitating the example of Heidelberg.

Hirschwald's Medical Directory.

An extract from the above directory published in the *Vossische Zeitung* states that the number of medical men in the German Empire is 24 393, of whom 14 582 practise in Prussia, 2612 in Bavaria, 1785 in Saxony 977 in Baden, 826 in Würtemberg, 702 in Alsace-Lorraine, and the rest in the smaller states of the Confederation. Of the large towns Berlin has 2148 medical men, Munich 510, Hamburg 496, Breslau 432, Leipzig 379, Dresden 360, Frankfort 288, Cologne 284, Charlottenburg 247, Königsberg 234, and Hanover 218. Of the members of the profession residing in Berlin one qualified in 1830, one in 1841, two in 1842, two in 1843, and four in 1844, of whom Professor Virchow is one. The proportion of medical men to the population is 4 63 per 10 000 throughout the whole empire and 12 81 in Berlin. As a rule this proportion is greater in the western than in the eastern parts of the empire. There are 1238 registered dentists and 5254 registered pharmacists.

Dec. 14th.

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ROME.

(FROM OUR OWN CORRESPONDENT.)

The Health of the Pope.

Is change of air absolutely indispensable to maintain health and ensure longevity? The reigning pontiff's experience supports a reply in the negative. For nearly twenty years he has been an inmate of the same palace, situated in a quarter of Rome as notorious as it was in the first century for its insalubrity. True, the palace is a spacious one; its rooms are reckoned by the thousand; its passages and corridors by miles; and behind it are the famous gardens laid out with every regard to "valetudinarian promenade," winter and summer. Still, to be "a prisoner," albeit "with doors locked on the inside," in precisely the same residence and even the same suite of rooms must seem a trying ordeal to a generation which utilises all the facilities of latter day locomotion for quickly recurring change of air and scene. Within a few weeks, in fact at the close of next February, the twentieth anniversary of Leo XIII.'s accession to the pontifical throne will be celebrated with unusual pomp and in the meantime his health becomes a question of enhanced interest to all parties, friendly or hostile. Dr. Lapponi's vigilance is, if possible, intensified in behalf of his august patient, and for the last few days not without reason. On Dec. 8th His Holiness, as a "measure of precaution," was allowed to celebrate mass only in the chapel adjoining his bedroom, and none but his chaplains were privileged to be present. Neither on that day nor on the 9th were any "audiences" permitted; and the "servizio di anticamera" was suspended. On the former date, it is true, he received visits from more than one cardinal, but these, with one exception, were brief. In pursuance of Dr. Lapponi's precautions it has been decided that His Holiness will not descend to St. Peter's on New Year's Day to receive the Irish pilgrims—a decision which has caused him not a little regret.

The Climate of Erythrea.

This is an interesting topic now that Kassala is an Anglo-Egyptian possession and the Colonia Erythrea, according to more than one Italian publicist, is expected to follow suit. I have before me the meteorological tables commenced by Dr Patella at Massowah in May, 1885, and carried down by Professor Hann to May, 1893, and from these it is evident that the climate of Massowah itself is one of the most trying in that region. This is due not so much to the absolute elevation of its temperature as to the very inconsiderable variation day by day, especially when no wind blows. Naturally enough the nights under these conditions are especially "tormentose" (distressing). The absolute extremes in the period under observation were 44·5° and 18·5° C. The coldest month could still number days in which the temperature was not lower than that of the hottest months in Palermo. The bay of Arkiko in front of Massowah enjoys, on the other hand, the alternation of breezes from the land and breezes from the sea and the temperature accordingly is less unpleasant. So also Assab, although lying 22·5° more in the direction of the Equator, has a ventilation which mitigates a heat not inferior to that of Massowah. Inland the best place for sojourn is Halai at 2560 metres above sea level; its nocturnal minima oscillate between + 3° and 5° C., while its maxima do not exceed 20° C. At Asmara the cold is less perceptible; but as a place of sojourn it is not so agreeable owing to frequent high winds and hailstorms. The prevalence of the rains varies according to locality. On the seaboard they fall in greatest abundance from December to February. The same is also the case at Ghinda. The months of April, May, and June are dry. Keren has a normal rainfall from June to September. Asmara has two rainy seasons—a minor one from March to May and a major one from July to September. October and February are absolutely dry. So far as meteorological conditions in Erythrea may be modified by planting and irrigation Anglo-Egyptian occupancy and enterprise will do more for their mitigation than Italian. The colony, indeed, in its present hands offers no evidence of what it might become under Anglo-Egyptian administration. Fifteen years of this latter would possibly have seen the agricultural and mercantile resources of the region profitably developed; sanatoria or even hotels would have been established for the convenience of the Anglo-Indian traveller on the salubrious heights twenty miles in-land from Massowah, from which they would have been accessible by rail; above all the hygienic conditions, littoral and landward, would not have been Italian but British. As it is, preventable disease has prevailed far too extensively and too severely throughout the colony. Small-pox, for instance, from which both Massowah and the small centres have suffered recently ought not to have acquired a foothold in the region—certainly ought not to have spread from the black population to the white.

Dec. 13th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Lead Poisoning among Queensland Children.

AT the last meeting of the Medical Society of Queensland Dr. A Jefferis Turner read a paper in which he drew attention to the frequency with which cases of chronic lead poisoning occur among children in Queensland. He also pointed out that cases occur of a very distinct character but which do not present the classical symptoms, the poison affecting other nerve tracts than those usually affected but in a manner sufficiently characteristic for recognition. He divides the cases into four groups. The first is the paralytic group, the most easily recognised, characterised by, first, foot-drop and then by wrist-drop. In two cases he has seen paralysis of the diaphragm, both fatal. A second class is characterised by abdominal pain and pain in the limbs, and a third class by eclampsic convulsions which often precede paralytic symptoms and which are due, in Dr. Turner's opinion, to the direct effect of lead on the cerebrum. The fourth class, the most interesting, is that of cases in which the optic and oculo-motor nerves are affected and they are very likely to be mistaken for meningitis. In most of Dr. Turner's cases lead was found in the urine by careful analysis. As to the frequency of this lead poisoning the records of the Brisbane Hospital for Sick Children show the occurrence of 76 cases during six years. As to age 71 per cent. of these cases occurred between five to eight years of age and 72 per cent. were girls. As to etiology Dr. Turner is not prepared to explain the frequency of the disease, but suggests that it is due to contamination of the drinking water stored in galvanised iron tanks collected from house roofs. At the same meeting Dr. Lockhart Gibson described the cases of ocular neuritis more in detail, giving the reasons for believing them to be due to lead—viz., the discovery of lead in the urine and to a less extent in the tank water which was drunk by the patients; the fact that in one case undoubted "lead palsy" accompanied the attack and one case had "lead palsy" after the ocular neuritis; the fact that in one case the optic neuritis was unilateral and on the opposite side to the paralysed external rectus; and the fact that no case ended fatally.

New South Wales Medical Union.

At a special general meeting of the New South Wales Medical Union held recently it was resolved that new members should pay an entrance fee of one guinea. It was stated that after an existence of four and a half years the union had 230 members and a balance of funds available of nearly £800. During the past half-year four members had been threatened with actions at law. The council of the union had, after consideration, decided to accord its support in all. Two of the cases had been dropped, one was dormant and would probably never see the courts, while in the fourth case a verdict was given in favour of the member.

The New South Wales Medical Bill

On Oct. 7th the Bill to provide for the registration of medical practitioners in New South Wales was passed through the Committee stage in the Legislative Council. A few trifling amendments were made providing among other things for the continuance in office of the members of the present medical board and their gradual retirement by effluxion of time.

Suicide of a Medical Practitioner.

Mr. John Thomas Dale, L.R.C.P. and S. Edin., was found dead at his lodgings in Sydney on Oct. 26th. From the evidence at the inquest it appeared that he had committed suicide by taking prussic acid and that he had no friends in the colony. Since his arrival in the colony in

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1891 his career had been chequered and unfortunate. He is believed to be well connected in England.

Further Squabbling at the Adelaide Hospital: a Death under Ether.

An inquest was held at the Adelaide Hospital on Nov. 1st on the body of a patient who had died at the hospital under ether. The senior resident physician, Dr. Ramsay Smith, contradicted the evidence given by Dr. Humphrey Marten who made the post-mortem examination. It would appear that the patient had gangrene and it was decided to amputate the leg. Ether was administered and she died. The post-mortem examination disclosed that, in Dr. Marten's opinion, she had diabetes, albuminuria, and abscesses in the lungs and that an operation was contra-indicated. Dr. Ramsay Smith did not agree with Dr. Marten's account of the post-mortem appearances and denied that she had diabetes, but said she had blood poisoning and amputation was necessary to save her life. The jury returned a verdict that the deceased came to her death through the administration of an anæsthetic, no blame being attachable to anyone. Dr. Smith had removed several of the organs after the post-mortem examination was concluded and the coroner entered a protest against his so doing. It also appeared that no consultation had been called on the case as prescribed by the hospital rules and the jury added a rider that the hospital rules should be more strictly enforced.

University of Sydney Medical Society.

The annual address in connexion with the University of Sydney Medical Society was given this year by Dr. Angel Money who took as his subject "The Pathology, Symptoms, and Treatment of Typhoid Fever." He gave a *résumé* of the bacteriology of the subject and its morbid anatomy. He thought too much reliance had been placed on the use of antiseptics in treatment and believed in reducing the temperature by cold applications. With regard to diet there were occasions when the advisability of giving meat and not an exclusive milk diet could be taken into consideration with advantage.

Prince Alfred Hospital, Sydney.

Sir Arthur Roberts has resigned, owing to ill-health, his position as honorary secretary to the board of directors. Dr. J. F. McAlister has been appointed an honorary surgeon, and it has been decided to appoint an honorary assistant ophthalmic surgeon.

Nov. 4th.

Obituary.

CAMPBELL MORFIT, M.D. MARYLAND (*caus. hon*).

BY the death of Dr. Campbell Morfit, formerly Fellow of the Chemical Society and of the Institute of Chemistry, which took place on Dec. 8th at South Hampstead, the science of applied chemistry has suffered a severe loss. In the industrial utilisation of waste products and the chemistry of food substances his researches have been of the utmost service to both chemists and the general public. An American by birth he had for many years past been a resident in London. In 1854 he was appointed Professor of Applied Chemistry in the University of Maryland and was one of the scientific advisers of the United States Government previously to the Civil War. He was the author of several standard works on applied chemistry including "Chemical and Pharmaceutical Manipulation," "Arts of Tanning and Currying," "Oleic Soaps," and with Dr. James C. Booth was joint editor of the American "Encyclopædia of Chemistry." His loss will be deeply felt by a wide circle of scientific and literary friends.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The death of the following eminent foreign medical man is announced:—M. Théodore Henri Belval, of Brussels, Doctor of [illegible] as well as of Medicine, editor of the *Mouvement* [illegible]. He was a very active temperance reformer, [illegible] in conjunction with Dr. Martin and Dr. [illegible] Patriotic Anti-Alcoholic League. He [illegible] years of age.

Medical News.

UNIVERSITY OF LONDON.—At the M.B. Examination in October the following candidates for honours were successful in the subjects indicated:—

Medicine.—First Class: †Montague Dixon, B.Sc., University College; and *Charles Herbert Fagge, Guy's Hospital. *Third Class:* Cyril Wolrige Alford, Middlesex Hospital; Brennan Dyball, St. Thomas's Hospital; Campbell Dykes, University College; Frederick William Robertson, St. Bartholomew's Hospital; Alfred Walter Sikes, B.Sc., St. Thomas's Hospital; Francis Hugo Thiele, B.Sc., University College; Edwin Josiah Toye, B.Sc., St. Bartholomew's Hospital; and William Percival Walker, and Richard James Warrington, Owens College and Manchester Royal Infirmary.

Obstetric Medicine.—First Class: Cyril Wolrige Alford, Middlesex Hospital; †Thomas Varley Cunliffe, Owens College and Manchester Royal Infirmary; Brennan Dyball, St. Thomas's Hospital; William Tayler Milton, Guy's Hospital; Lewis Albert Smith, London Hospital; and *Edwin Josiah Toye, St. Bartholomew's Hospital. *Second Class:* Alfred Burn, St. Mary's Hospital; Montague Dixon, University College; Frederick William Robertson, St. Bartholomew's Hospital; and Alfred Walter Sikes, St. Thomas's Hospital. *Third Class:* Wilfrid Arthur Dewhirst, Yorkshire College, and Mary Nona Sharman, Royal Free Hospital.

Forensic Medicine.—First Class: *Montague Dixon, University College; Charles Herbert Melland, Owens College and Manchester Royal Infirmary; William Tayler Milton, Guy's Hospital; †Alfred Walter Sikes, St. Thomas's Hospital; and Hubert John Starling, Guy's Hospital. *Second Class:* Charles Herbert Fagge, Robert William Mayston, and G. Ernest Richmond, B.A., B.Sc., Guy's Hospital; Frederick William Robertson, St. Bartholomew's Hospital; and Lewis Albert Smith, London Hospital. *Third Class:* Edward William Adams University College, Sheffield; Thomas Varley Cunliffe, Owens College and Manchester Royal Infirmary; Charles Poulett Harris, London Hospital; Robert Wynne Charles Pierce, B.Sc., St. Thomas's Hospital; Mary Nona Sharman, Royal Free Hospital; Francis Hugo Thiele, University College; and Alexander Gordon Wilson, London Hospital.

* Scholarship and gold medal. † Gold medal.

PRESENTATION TO A MEDICAL MAN.—Mr. J. Garvie McNaughton, M.D. Edin., Turriff, was the recipient, on the 7th inst., from his "sick nursing" class of a set of instruments, including amongst others Potain's aspirator and a laryngoscope.

UNIVERSITY OF CAMBRIDGE.—MR. A. F. Stabb, M.B., formerly house physician at Addenbrooke's Hospital and now obstetric tutor at St. Thomas's Hospital, London, has been appointed to the University Lectureship in Midwifery vacant by the resignation of Mr. E. H. Douty. Mr. Stabb will lecture in the Lent and Easter terms.—On account of the incidence of Easter the examinations for the Diploma in Public Health will begin on Tuesday, April 19th (Part I.), and Tuesday, April 26th (Part II.), in 1898.—The Mercers' Company have made a handsome contribution of a thousand guineas towards the fund for rebuilding the medical schools. The family of the late Sir G. M. Humphry have given £600 and Dr. H. W. Hoffmann has contributed £100 for the same object. Other gifts have been received and paid into a university benefaction fund account, which now amounts to about £3500 At the congregation on Dec. 9th the following degrees were conferred:—*M.D.:* O. A. Browne, Trinity; H. M. Tickell, Trinity. *M.B. and B.C.:* H. J. Bumsted, S. John's; W. Thornely, Clare; L. K. Harrison, Caius; J. N. Gardiner, Trinity Hall. *B.C.:* P. R. Lowe, Jesus.

ROYAL INSTITUTION.—The following are the arrangements for lectures before Easter:—Professor Oliver Lodge, six Christmas lectures (specially adapted for young people) on the Principles of the Electric Telegraph; Professor E. Ray Lankester, eleven lectures on the Simplest Living Things; Professor Dewar, three lectures on the Halogen Group of Elements; Dr. J. Paul Richter, three lectures on Some Italian Pictures at the National Gallery; Professor J. A. Fleming, five lectures on Recent Researches in Magnetism and Diamagnetism; Professor Patrick Geddes, three lectures on Cyprus; Mr. Wm. H. Hadow, three lectures on the Structure of Instrumental Music; Mr. Lionel Cust, two lectures on Portraits as Historical Documents. Portraits as Monuments. The Friday evening meetings will begin on Jan. 21st, when a discourse will be given by the Right Hon. Sir John Lubbock, Bart., M.P., on Buds and Stipules; succeeding Discourses will probably be given by Professor C. Lloyd Morgan, Mr. A. A. Campbell Swinton, Dr. J. Hall Gladstone, Professor L. C. Miall, Captain Abney, Professor J. E. Thorpe, Mr. James Mansergh, the Dean of Canterbury, Professor Dewar, and other gentlemen. Lord Rayleigh will deliver lectures after Easter.

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THE HOSPITALS ASSOCIATION.—Two papers on the Work and Aims of the Hospital Saturday Fund and Existing Systems of Distribution were read respectively by Mr. R. B. D. Acland and Mr. Cross at the board-room of Westminster Hospital on Thursday, Dec. 9th. It is satisfactory to hear that the street collection of the Hospital Saturday Fund is to be discontinued.

MEDICAL MAYOR.—Mr. George Swithin Adee Waylen, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., has been elected mayor for Devizes. He received his medical education at St. Bartholomew's Hospital, London, and qualified as M.R.C.S. Eng. and L.S.A. in 1873; two years later he was admitted L.R.C.P. Lond. Mr. Waylen is at present joint coroner for Devizes, medical officer of health for Devizes rural district, surgeon to the Devizes Cottage Hospital, and visiting medical officer, Fiddington Asylum. He is the fourth member of the same family who has held office under the Devizes Corporation. His great-grandfather was chief magistrate and his father not only filled the office twice, but was a member of the council for fifty years.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of the above society was held on Dec. 1st, Dr. Cattle, President, being in the chair. Dr. Buckley showed for Dr. W. B. Ransom a case of Sporadic Cretinism in a girl aged eight years. Dr. Tresidder showed a woman, aged forty-six years, upon whom he had operated for Malignant Growth of the Palate, removing through the mouth the alveolar process of the right superior maxilla and the greater part of the hard and soft palates. He also exhibited the growth removed and microscopic specimen of it which showed that it had the character of a rodent ulcer. Dr. Smith showed for Mr. Thompson a boy, aged fifteen years, who had been operated on for Intussusception when the gut was found to be gangrenous and a portion ten inches long was removed, the boy making an excellent recovery; the portion of gut removed was also shown. Mr. Kingdon showed a child, aged thirteen years, with Congenital Bilateral Aniridia. Mr. Laws showed a man, aged twenty-two years, illustrating the Lymph Currents of the Lens through absorption of foreign colouring matter. Mr. Anderson read notes of two cases of Intestinal Obstruction caused in each case by a band. Dr. Handford showed a Uterus in which was demonstrated thrombosis of the lower uterine veins; in the uterus itself were the remains of a clot of blood adherent; also a portion of lung from the same case showing a pyæmic infarction which had caused pneumothorax. The woman had recently miscarried. Dr. Buckley showed—(1) Kidneys demonstrating complete obstruction of both ureters by calculi; (2) Perforated Typhoid Ulcer; and (3) Hydrosalpinx. Dr. Tresidder showed—(1) A Uterus affected by cancer of the body and a Sub-peritoneal Fibroid which he had successfully removed by the combined abdominal and vaginal method. He also showed a microscopical section of the growth, from which it was seen to be a columnar-celled carcinoma; also (2) for Mr. R. C. Chicken, a rare variety of Loose Body removed from the knee-joint; it consisted of a hard lipomatous mass affecting the synovial membrane; there were also many similar smaller masses in the neighbouring membranes.

BOOKS, ETC., RECEIVED.

CHURCHILL, J. & A., Great Marlborough-street, London.
A Text-book of Mental Diseases. By T. H. Kellogg, A.M., M.D. Illustrated. 1897. Price 25s.
Human Nature: its Principles, and the Principles of Physiognomy. By Physicist. Part I. 1898. Price 2s.

FOWLER, L. N., AND CO., Imperial Arcade, Ludgate-circus, London.
Stirpiculture, or the Improvement of Offspring through Wiser Generation. By M. L. Holbrook, M.D. 1897. Price 4s. 6d. net.
A Manual of Mental Science. By Jessie A. Fowler. Illustrated. 1897. Price 4s.

GRIFFIN, CHAS., AND COMPANY, Exeter-street, Strand, London.
A Surgical Handbook. By F. M. Caird, M.B., F.R.C.S Edin., and Chas. W. Cathcart, M.B., F.R.C.S. Illustrated. Eighth edition. 1897. Price 8s. 6d.

KENNER, W. T., COMPANY, Chicago.
The Peritoneum. By B. Robinson, B.S., M.D. Part I. Histology and Physiology. Illustrated. 1897.

LEHMANN, J. F., Munchen.
Atlas der Syphilis. Von Dr. Fr. Mracek. Band 6. 1898.

LEWIS, H. K., Gower-street, London.
A Manual of Operative Surgery. By L. A. Stimson, B.A., M.D., and J. Rogers, jun., B.A., M.D. Third edition. Illustrated. 1897. Price 12s. 6d. net.
A Practical Text-book of the Diseases of Women. By A. H. N. Lewers, M.D. Lond. Fifth Edition. Illustrated. 1897. Price 10s. 6d.

MACMILLAN AND CO., London.
A Text-book of Special Pathological Anatomy. By E. Ziegler. Translated and edited by Donald MacAlister, M.A., M.D., and H. W. Cattell, M.A., M.D. Sections 9–15. 1897. Price 17s. net.

MALOINE, A., Paris.
La Diphterie et la Serumtherapie. Par Dr. G. Variot. 1898.

MASSON ET CIE., Paris.
L'Appendicite. Par le Dr. C. Monod et J. Vanverts.
La Vaccine et la Vaccination. Par J. Delobel et P. Cozette.
Spectroscopie Biologique. Par A. Henocque.

POOR LAW OFFICERS' JOURNAL, Queen-street, Manchester.
Treatment of Imbeciles and Epileptics. Report by Dr. J. M. Rhodes and Alderman A. McDougall, J.P. to the Choriton and Manchester Joint Asylum Committee. 1897. Prices 1s. 6d. and 2s.

REBMAN PUBLISHING COMPANY, Adam-street, Strand, London.
Archives of the Roentgen Ray, November, 1897. Edited by W. S. Hedley, M.D., and S. Rowland, M.A., M.R.C.S. Price 4s. net.
Radiography in Marine Zoology: The British Echinodermata. By R. N. Wolfenden, M.D. Cantab. Supplement to the "Archives of the Roentgen Ray," illustrated. 1897. Price 4s.
On Cardiac Failure and its Treatment. By Alexander Morison, M.D., F.R.C.P. Edin. 1897. Price 10s.
Some Points in the Anatomy, Pathology, and Surgery of Intussusception. By D'Arcy Power, M.A., M.B. Oxon., F.R.C.S. Eng. 1898. Price 4s.

SCIENTIFIC PRESS, Southampton-street, Strand, London.
District Nursing on a Provident Basis. By Jamieson B. Hurry, M.A., M.D. 1898. Price 2s.

THACKER, W., AND CO., Creed-lane, Ludgate-hill, London.
Medical Hints for Hot Climates. By Charles Heaton, M.D. Brux., L.R.C.P. Lond., M.R.C.S. 1897. Price 3s. 6d.

UNIVERSITY PRESS, London.
Studies in the Psychology of Sex. By Havelock Ellis. Vol. i., Sexual Inversion. 1897.

UNWIN, T. F., Paternoster-square, London.
Sir James Young Simpson and Chloroform. 1811–1870. By H. Laing Gordon. 1897.

VOSS, LEOPOLD, Hamburg und Leipzig.
Die Hauptthatsachen der Chemie. Von E. Harnack. 2. Auflage. 1897.

Smith's Physicians' and Surgeons' Visiting List, Diary, Almanack and Book of Engagements for 1898, fifty-second year (Hazell, Watson, and Viney, Medical Stationers, Long-acre, London).—West-London Medical Journal; edited by P. Dunn, F.R.C.S., vol. ii., Nos. January, April, July, October, 1897 (John Bale, Sons, and Danielsson, Great Titchfield-street, Oxford-street, London).—Whitaker's Almanac for 1898: by Joseph Whitaker, F.S.A. (published at 12, Warwick-lane, Paternoster-row, London).

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BLUMER, F. M., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Borough of Stafford.

BOTT, H., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health by the Brentford Urban District Council.

BROWN, H. M., M.B., Ch.B. Vict., has been appointed an Assistant Medical Officer to the Fulbourn Asylum.

FOX, E. H. B., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed an Assistant House Surgeon to the Royal South Hants Infirmary, Southampton.

FRY, W. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fourth A Sanitary District of the Malling Union.

GARDNER, A., M.B., C.M. Edin., has been appointed Medical Officer of Health by the Kirby Mooreside District Council.

HARLING, R., L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the New Radnor Rural District Council.

HAWKINS, H. P., M.D., F.R.C.P. Lond., M.R.C.S., has been appointed a Physician to St. Thomas's Hospital, Albert Embankment, Westminster-bridge, vice W. M. Ord.

JOHNSON, H. H. P., M.R.C.S., L.R.C.P., has been appointed a House Surgeon to the Brighton Hospital for Women.

MACPHEE, A., M.D., F.F.P.S. Glasg., has been appointed Lecturer on Midwifery at the Glasgow Public Dispensary.

MCMURTRY, W. D., L.R.C.S., L.R.C.P. Edin., has been appointed House Surgeon to the Memorial Hospital, Jarrow-on-Tyne.

MARSHALL, G. B., M.D. Edin., F.F.P.S. Glasg., has been appointed Outdoor Medical Assistant to the Glasgow Public Dispensary.

MORETON, CHAS. P., M.R.C.S., L.S.A., has been appointed Medical Officer of Health by the Forden Rural District Council.

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MORRIS, J. H., M.R.C.S., L.S.A., has been appointed an Honorary Consulting Surgeon to the Salford Royal Hospital.

MOSS, E., M.D., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Workhouse of the Wrexham Union, vice E. Davies, deceased.

MUIR, T. R., M.B., C.M. Glasg., has been appointed Medical Officer for the Abertillery Sanitary District by the Bedwellty Board of Guardians, vice W. E. Williams resigned.

PEAKE, ARTHUR W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer by the Horfield Urban District Council.

PERROTT, CHARLES J., L.R.C.P., L.R.C.S. Irel., has been re-appointed Medical Officer of Health for Kingswood Gloucestershire.

PICKERING, GEO. W., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Fourth Sanitary District of the Malling Union.

REID, E., L.R.C.P. Lond., M.R.C.S., has been appointed Pathologist to the Swansea Hospital.

REID, G. A., M.B., C.M. Aberd., has been appointed a House Surgeon to the Royal Victoria Hospital, Bournemouth.

RISDON, G. OWEN, L.R.C.P. Lond., M.R.C.S., L.S.A., has been re-appointed Medical Officer for the No. 2 Sanitary District of the Wells (Somerset) Union

SMITH, C. B., M.B. Durh., has been appointed a Visiting Physician to the Cluny Hill Hydropathic Establishment.

SMITH, T. H., L.R.C.P. Edin., L.R.C.S., has been re-appointed Medical Officer of Health by the Reddish Urban District Council.

SOUTHEY, A. J., M.R.C.S., has been re-appointed Medical Officer of Health by the Ston Board of Guardians and Rural District Council.

STANLEY, W. E. S., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Dalwood, Kilmington, and Stockland Sanitary Districts of the Axminster Union

TATTERSALL, C. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Salford Borough Council.

THOMSON, M. E., L.R.C.S. Irel., L.R.C.P. Edin., has been re-appointed Medical Officer of Health by the Far Cotton Urban District Council.

TOLLER, SEYMOUR GRAVES, M.D. Lond., M.R.C.P., has been appointed an Assistant Physician to St. Thomas's Hospital, London, vice H. P. Hawkins.

TRUMPER, O. B., M.B., Ch.B. Vict., has been appointed Medical Officer of Health by the Market Rasen Urban District Council.

TURNELL, H. L., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health and Public Analyst for the Borough of Gravesend.

WARD, W. J. C., L.R.C.P., L.R.C.S. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Harrogate Council.

WOODHEAD, THOMAS FIELDING, M.R.C.S., L.R.C.P., has been appointed Medical Officer for the Meltham Sanitary District of the Huddersfield Union, vice T. A. Haigh, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BATH ROYAL UNITED HOSPITAL.—Resident Medical Officer for three years. Salary £100 per annum, with board, lodging, and washing. Also House Surgeon. Salary at the rate of £60 per annum, with board, lodging, and washing. Appointment until Oct. 1st, 1898.

BOOTLE BOROUGH HOSPITAL, Bootle.—House Surgeon. Salary £80 per annum, with board, washing, &c

BRIGHTON, HOVE, AND PRESTON DISPENSARY, Brighton.—House Surgeon to the Western Branch, unmarried. Salary, £140 per annum, with furnished apartments, coals, gas, and attendance (no board).

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane-square, S.W.—Honorary Visiting Surgeon for the Western District.

COUNTIES ASYLUM, Carlisle.—Junior Medical Officer. £80 and board. Apply to Dr. Campbell, Garlands, Carlisle.

COUNTY BOROUGH OF OLDHAM.—Medical Officer of Health for the Borough, and Medical Director and Attendant of the Infectious Diseases Hospitals of the Corporations. Salary first year £400, increasing by annual increments of £20 to a maximum of £500. Applications to the Town Clerk, Town Hall, Oldham.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY, Dumfries.—House Surgeon. Salary £50 per annum, with board and washing. Also an Assistant House Surgeon. Board and washing provided. No salary.

FROME UNION.—Medical Officer and Public Vaccinator for the Nunney District. Salary £90. Midwifery 10*s.* per case. Certifying lunatics 10*s.* per case. Vaccination 1*s.* 6*d.* to 3*s.* per case. Apply to the Clerk, Public Offices, Frome.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

HOSPITAL FOR EPILEPSY AND PARALYSIS AND OTHER DISEASES OF THE NERVOUS SYSTEM, 32, Portland-terrace, Regent's-park, London.—Physician to Out-patients

LEICESTER INFIRMARY.—Surgical Dresser for six months. Board and lodging provided.

NORFOLK AND NORWICH HOSPITAL, Norwich.—Honorary Surgeon and Honorary Assistant Surgeon

NORTH RIDING INFIRMARY, Middlesborough-on-Tees.—House Surgeon. Salary to commence at £100 a year, with lodging, board, and washing, and £5 a year in lieu of beer.

NORTH STAFFORDSHIRE INFIRMARY AND EYE INFIRMARY, Hartshill, Stoke-upon-Trent.—House Physician. Salary £100 per annum, increasing £10 per annum, conditionally, with furnished apartments, board, and washing.

NORTH-WEST LONDON HOSPITAL, Kentish-town-road, N.W.—Assistant Physician.

PARISH OF ST. GILES Camberwell.—Assistant Medical Officer for the Infirmary at Havil-street, Camberwell, and the Workhouse at Gordon-road, Peckham; also for Relief Duty at the Constance-road Workhouse of the parish, for one year. Salary £50, with apartments, board, and washing. Applications to the Clerk to the Guardians, Guardians' Offices, 29, Peckham-road, S.E.

PRESHORE UNION.—District Medical Officers. For the Eckington District. Salary £65 per annum. For the Fladbury District. Salary £50 per annum. For the Upton Snodsbury District. Salary £50 per annum. The salaries are exclusive of vaccination and extra medical fees, but inclusive of all drugs, medicines and appliances, and travelling expenses. Applications to the Clerk to the Guardians, Union Offices, Pershore

ROYAL HALIFAX INFIRMARY.—Assistant House Surgeon, unmarried. Salary, £50 per annum, with residence board, and washing.

ROYAL SOUTH LONDON DISPENSARY, St. George's-cross, S.E.—Surgeon in ordinary to visit patients at their own homes in the St. Saviour's district. Honorarium £20 per annum.

SALFORD ROYAL HOSPITAL.—Honorary Surgeon.

SHAFTESBURY HOUSE PRIVATE ASYLUM, Formby-street, Liverpool.—Junior Medical Officer, unmarried. Honorarium at the rate of £50 per annum, with board, lodging, and washing.

SHANGHAI.—Medical Officer of Health for three years. Salary taels 4500 (about £600) a year. Unfurnished quarters, consisting of bedroom, bath-room, and sitting-room. Means of conveyance provided. Apply to Dr. Sims Woodhead, Examination Hall, Victoria Embankment, London, W.C.

SHEFFIELD PUBLIC HOSPITAL FOR DISEASES OF THE EAR, THROAT, AND SKIN.—Honorary Physician for the Out-patient Department for Diseases of the Ear and Skin.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—House Surgeon during the month of January. Salary, £100 per annum, with board and residence.

STOCKTON UNION.—Medical Officer and Public Vaccinator for the Medical District of Stockton, and Medical Officer for the Stockton Workhouse. Salary £170 per annum as Medical Officer for the Stockton District, and £130 per annum as Medical Officer for the Workhouse, together with the usual fees for vaccination. The appointment will be subject to statutory deductions. Apply to the to the Clerk to the Guardians, Union Offices, Stockton-on-Tees.

SUNDERLAND AND NORTH DURHAM EYE INFIRMARY, Sunderland.—House Surgeon. Salary, £100 per annum, out-door.

TAUNTON AND SOMERSET HOSPITAL, Hammet-street, Taunton.—Assistant House Surgeon for six months. Board, washing, and lodging in the institution.

UNIVERSITY COLLEGE, London: Pathological Department.—Assistant in Bacteriology. Salary £150. Apply to Professor Sidney Martin.

WESTERN GENERAL INFIRMARY, Marylebone road, London.—Junior House Surgeon, unmarried. Salary, £60 a year, with board and residence.

Births, Marriages, and Deaths.

BIRTHS.

ARMIT.—On Dec. 11th, at Holmer, Babbacombe-road, Torquay, the wife of Henry William Armit, M.R.C.S., L.R.C.P. Eng., of a son.

BANKS.—On Dec. 8th, at West-hill Tower, Ryde, I.W., the wife of Alfred Banks, F.R.C.S. Eng., D.P.H., of a son.

FITCH.—On Dec. 8th, at Churchgate House, Chaddesley Corbett, Kidderminster, the wife of Dennis Fitch, M.R.C.S., of a son.

HOBHOUSE.—On Dec. 12th, at Brunswick-place, Brighton, the wife of Edmund Hobhouse, M.D., of a daughter.

SCANES SPICER.—On Dec. 9th, at 28, Welbeck-street, Cavendish-square, W., the wife of Dr. Scanes Spicer, of a son.

SMITH.—On Dec. 10th, at Strandmillis-road, Belfast, the wife of J. Lorrain Smith, M.D., of a daughter.

MCCORKINDALE.—On Dec. 9th, at University-gardens, Glasgow, the wife of Duncan McCorkindale, M.D., of a son.

MURRAY.—On Dec. 10th, at Saville-place, Newcastle, the wife of George Murray, M.D., of a son.

MARRIAGES.

CHARD—EASBY.—At St. Mark's Church, Peterborough, on Dec. 8th, by the Rev. B. de M. Egerton, M.A., Vicar, assisted by the Rev. C. W. Holdich, M.A., Vicar of Werrington, Harry Athelstan Chard, younger son of Y. Y. Chard, Esq., of Clevedon, to Annie Werstel, second daughter of William Easby, M.D., of Westgate, Peterborough.

HALL—JACKSON.—On Dec. 11th, at the British Consulate, Cairo, and afterwards at Old Cairo, Alexander Chorley Hall, M.B. Edin., M.R.C.S. and L.R.C.P. Lond., of the C.M.S. Hospital, Old Cairo, to Eva, second daughter of the late Charles J. S. Jackson, of Durley Lodge, Hants.

MARCH—HIGGINS.—On Dec. 9th, in London, Edward Gerald March, M.D., of Reading, to Margery Blanche, second daughter of Dennis Lambart Higgins, of Highgate, N.

PROCTOR—CROSS.—On Dec. 8th, at St. Peter's, Great Windmill-street, Piccadilly-circus, W., Charles E. Proctor, L.R.C.P., L.R.C.S. Edin., third son of G. Bridgeford Proctor, Esq., Arnside, Birkenhead, to Laura May Cross, eldest daughter of the late Mr. R. N. Cross.

SARGENT—BRAY.—On Dec. 7th, at St. Paul's, Shadwell, by the Rev. H. W. L. Robinson, B.A., assisted by the Rev. H. C. Dimsdale, M.A., and the Rev. J. W. Nowell, M.A., George Edward Henry Sargent, surgeon, of 309, Commercial-road, E., eldest son of the late H. E. Sargent, M.D., to Susan Hone, eldest daughter of the Rev. C. Bray, M.A., Rector of Shadwell.

DEATHS.

BERRY.—On Dec. 12th, 1897, after a short illness, at Appleton Cottage, Great George's-street, Wigan, Catherine, wife of Wm. Berry, J.P., F.R.C.S. Irel., M.O.H. for Wigan, aged 59 years.

CHURTON.—On Dec. 13th, at Ogden Lawn, Birkenhead, Henry Churton, of West Mount, Chester, Coroner for West Cheshire and Birkenhead for 57 years, aged 84 years.

GARROULD.—On Dec. 14th, at his father's residence, Walter Robert Garrould, M.R.C.S., L.R.C.P. Lond., of Upper George-street, W.

WILLIS.—On Dec. 7th, suddenly, at Clifton House, Baillieston, N.B., George Willis, L.F.P.S. Glasg., aged 71 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

***Lectures, original articles, and reports should be written on one side of the paper only*, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.**

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

FORCIBLE REDUCTION IN POTT'S DISEASE.

Le Traitement du Mal de Pott. (The Treatment of Pott's Disease.) Par le Dr. A. Chipault (de Paris). Paris: Masson et Cie. Pp. 35. 1897. Price 1 fr. 25 c. The recent discussion at the Clinical Society of London on the immediate reduction of the deformity in cases of "angular curvature" of the spine showed how few are the facts at present at our disposal for forming an opinion on this subject. This little pamphlet deals with the whole question of the treatment of caries of the spine and though advocating the treatment by immediate reduction of the deformity does not neglect the other methods of treatment with which we are better acquainted. Dr. Chipault claims that he was the first to perform immediate reduction with subsequent fixation. This was done in September, 1893, and the straightened position of the spine was maintained by ligaturing together the spinous processes of the affected vertebræ. Dr. Chipault's method differs in an important particular from that advocated by Dr. Calot in that he does not approve of the application of any violence and he considers that only those spines should be straightened which can easily be extended under chloroform. He also attaches great importance to the wiring of the spinous processes. As to the results Dr. Chipault mentioned at the Dixième Congrès Français de Chirurgie in October, 1893, that his patients have recovered without any curvature and without any trace of their spinal disease "except a little local stiffness." Time alone can show the exact value of the method.

"THE 'MASSAGE-KIDNEY.'"

To the Editors of THE LANCET.

SIRS,—An article that appeared in THE LANCET of Oct. 2nd entitled "'The 'Massage-Kidney'" seems to me to be in some respects unfair to English masseuses. It is perfectly true that their training is not what it ought to be, but that is their misfortune, not their fault. No such opportunities have ever been given them of learning "anatomy, physiology, and pathology" as the Swedish pupil masseurs and masseuses enjoy. A knowledge of those subjects obtained from pictures and diagrams must necessarily be imperfect and unsatisfactory. Place some of the advantages given in Sweden in their way, give them the facilities for seeing demonstrations in anatomy, and then if Englishwomen do not avail themselves of them it will be their own fault. I claim no special privileges for masseuses; I think that, like nurses, they should take their orders from medical men and execute them faithfully and loyally, nor do I see that a long training would be a hardship to them more than to nurses.—I am, Sirs, yours faithfully,

Dec. 6th, 1897. M. M.

"THE SCHOLAR IN MEDICINE"

To the Editors of THE LANCET.

SIRS,—With your permission I shall supplement the list of scholars in medicine who attained distinction in other walks than that of the medical profession but who are so seldom referred to by medical writers as to give rise to the thought that they are almost forgotten. To avoid trespassing too much on your space I name only those who were natives of the British Isles: John Arbuthnot, author of "Scribilerius"; Wm. Barrington, of Coleraine, founder of the Geological Society; Thomas Beddoes, the linguist; John Bell, whose work on Italy justifies his inclusion; J. Berkenhout, of Leeds, author of the "Outlines of the Natural History of Great Britain and Ireland"; Wm. Black, of Belfast, author of the "Geyser and Rikam Springs in Iceland"; George Cheyne, author of "Physiological Principles of Natural Religion"; Erasmus Darwin, author of the "Phytologia"; Samuel Garth, translator of Ovid's "Metamorphoses"; Francis Glisson, the Aristotelian scholar; Samuel Gmelin, the scientist; Oliver Goldsmith, (?) the poet; John Gerarde, the traveller and botanist; John Mason Good, the translator of "Lucretius"; William Musgrave, the antiquarian; Mungo Park, the African explorer; Thomas Percival, founder of the Manchester Philosophical Society; Sir Wm. Petty, author of the "Political Anatomy of Ireland"; Archibald Pitcairne, the mathematician; John Radcliffe, founder of the Radcliffe Library; Sir William Wilde, author of the "Valley of the Boyne"; William Withering, the mineralogist; John Wolcott, the satirist; William Woodville, author of the "Medical Botany"; Robert Willan, the antiquarian. I regret that time does not allow of my making a more exact list, but the above may interest some of your readers.

I am, Sirs, yours faithfully,

Cavendish-row, Dublin, Dec. 11th, 1897. GEORGE FOY.

Student will find all the information he wants in the ordinary books of reference, the information in which he might supplement by consulting Murchison's classical work.

THE MUNICIPALISATION OF MILK SUPPLY.

THE medical officer of health for Devonport, Mr. May, jun., thinks that it would be an excellent thing if all cowsheds were the property of the corporation, built according to the most approved plans and not of the makeshift character seen at present, the result of insecurity of tenure in many cases. It is highly desirable that such an absorbent article as milk should not run the risk of contamination from the neighbourhood of unsavoury piggeries and as there are in the borough of Devonport forty-five piggeries, of which thirty-four are kept by cowkeepers and of which only eight, we understand, are efficiently constructed, the Sanitary Committee might well give the matter their best attention.

"STONE *v.* CEMENT."

To the Editors of THE LANCET.

SIRS,—The inquiry of "S., M.D." published in THE LANCET of the 11th inst. as to whether the manufacture of cement as used in old abbeys, castles, &c., is a lost art is a point which must have occurred to many interested in ancient buildings when examining architectural work of the 12th century and earlier dates. Our forefathers made use of shell lime—that is, lime burnt from cockles and other shells mixed with sharp sand. St. Paul's Cathedral was built with this mortar. Another strong mortar was made from terra puzzolana imported from Civita Vecchia; indeed, it was this which John Smeaton employed in cementing the granite blocks of the Eddystone Lighthouse in the year 1757, which mortar I found to be in excellent state of preservation when I demolished the edifice in the year 1881.

The limes of to-day are frequently insufficiently burnt. These are mixed with road sweepings, dirty ashes and the like substances of a greasy nature; hence the setting properties of the limes are destroyed. Roman cement has given place to Portland of late years. This latter when carefully manufactured and mixed with sharp sand forms a very strong mortar or stucco greatly superior to the cement quoted by "S., M.D." The admixture of a solution of silica to the mortar will be found to be highly beneficial in excluding moisture. The architectural stone and concrete slabs manufactured by the Victoria Stone Company are steeped in silica baths with the result that disintegration is entirely obviated. Bath, Portland and other building stones are of a porous nature, are deficient in silica and admit moisture into their interstices, resulting in the stones themselves crumbling away when exposed to frost.

I am, Sirs, yours faithfully,

Victoria-street, Westminster, Dec. 15th, 1897. W. T. DOUGLASS.

Vox Clamantis.—The term suggested is a picturesque and forcible one and employed by a classical writer might pass into the medical vocabulary.

THE HOT-AIR TREATMENT OF OSTEO-ARTHRITIS.

"A. P. C.," who inquires the name of the best treatise on this subject is referred to the papers which appeared in THE LANCET on the following dates:—1895, vol. i.: p. 112 (Jan. 12th). 1896, Vol. ii.: p. 593 (Aug. 29th); p. 1057 (Oct. 10th); p. 1130 (Oct. 17th); p. 1281 (Oct. 31st) p. 1355 (Nov. 7th); p. 1453 (Nov. 14th). 1897, vol. i.: p. 88 (Jan. 10th); p. 122 (Jan. 17th); vol. ii.: p. 1119 (Oct. 30th).

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AN APPEAL.

To the Editors of THE LANCET.

SIRS,—By inserting the enclosed appeal on behalf of the Misses Ireland you will be doing a kind and most charitable action. I have known them for the past thirty years and can speak in the highest terms about them and their patient and long-enduring struggle during all that time. Theirs is a case which in every way is deserving.

I am, Sirs, yours faithfully,

E. R. TENISON, M.D. St.And., L.R.C.P. Lond., M.R.C.S. Eng., late R.N.

Uxbridge-road, London, W.. Dec. 14th, 1897.

[ENCLOSURE.]

Miss Caroline and Miss J. J. Ireland, aged respectively fifty-eight and fifty-six years, are without any means of support and have not a single relation in a position to help them. Their father was a medical man in Finsbury; he died when his daughters were quite young and they have up to now supported themselves by teaching, but are no longer able to get pupils, so their friends are making an effort to raise a sum of money to give them a small fixed income either by investment or annuity. Donations will be most thankfully received by Mrs. Stanley Brown, Cypress House, Dulwich Common, or by Mrs. John Ireland, Bourne End, Bucks.

The Proprietors of THE LANCET £5 5 0

Mr. W. Henry Hillyer is thanked for his communication.

HYGIENE FOR TRAVELLERS IN FRANCE.

"A LITTLE Hygiene, if you please." is the title under which Dr. G. Morice draws attention in the French press to a matter which closely concerns the British travelling public. In France disinfection is obligatory when animals have been transported by rail but in the case of human beings nothing of the kind is either prescribed or practised. Whether the compartments of a railway carriage are richly padded above and below or else merely cushioned they all afford lodging space for innumerable colonies of microbes; but although these and several other defects have been pointed out over and over again by Dr. Napias, Dr. Mauriac (of Bordeaux) and many more no serious attempt has ever been made by those in authority to apply a remedy. Perfunctory sweeping, or the swashing of a bucketful or two of water over the floor can scarcely be dignified as a sanitary measure but nothing more than this is ever done under the sway of the routine-ridden administrations that at present are all-powerful. Passing from railways to hotels Dr. Morice next inveighs against the sanitary shortcomings that are to be met with in pretty nearly the whole of the houses of entertainment throughout the country whether these be sumptuous palaces or humble *auberges*. Feather beds are supposed to encourage the illusion of home comforts but although suitable enough in private houses these appliances become absolutely dangerous when used by an ever-changing succession of sleepers. What the public wants is not spurious luxury but comfortable cleanliness and landlords would do well to bear the fact in mind. A well ventilated and properly lighted apartment, an iron or brass bedstead devoid of curtains and valance, sweet-smelling bed linen and coverlets, walls and floor both covered with a material that will bear frequent washing, furniture simple, unpadded and undraped—such are the chief heads under which a modern traveller's bedroom requirements may be classed. But before all the latrine accommodation should be above reproach. At present the filthiness of hotel privies in France is for the most part excessive. So much so, indeed, that in their *Revue* the Touring-Club have commenced what they call "La Croisade des W.C." "First nation in the world for touring, roads, and climate," says Dr. Morice in conclusion, "we are not yet within measurable distance of the English, the Americans, or even the Swiss as regards ordinary comfort in our retiring closets. Then put your shoulders to the wheel, French landlords, and by paying a little attention to hygiene enable your 'Golden Lions' and your 'White Horses' to at length earn the respect of their patrons." According to an anonymous writer on the same subject the people who expectorate promiscuously in railway carriages, omnibuses, &c., are the chief offenders against decency and sanitation. Until women are allowed to dispense with skirts and appear uncriticised in rational costume, says this bold hygienist, they must when making use of public vehicles continue exposed to the risk of soiling their petticoats with most offensive and dangerous filth. On a journey women, he says, are generally encumbered with babies and parcels and it thus becomes impossible for them to attend properly to their drapery when about to take their seats.

A GOLD MEDAL has been awarded to Messrs. Arnold and Sons, of 26, 30, and 31, West Smithfield and 1, 2, and 3, Giltspur-street, E.C., at the Victorian Era Exhibition for excellence in manufacture of surgical instruments.

TAKA-DIASTASE.

To the Editors of THE LANCET.

SIRS,—I do not know what the experience of the profession is with regard to taka-diastase or how far the preparation is generally known, but it may be worth while to record the results of its exhibition in a case which was typical as regards those points for which it is recommended. The patient—my son—is a lad aged sixteen years. He has during the past three or four years been subject to lengthened attacks of post-pyloric or duodenal dyspepsia. In January last he suffered from an attack of an aggravated nature. There was pain in the epigastrium, with diarrhœa and horribly fœtid stools, combined with anorexia, total inability to digest starchy foods, great loss of flesh, and general languor. Pepsine in every form and in all combinations was tried and the changes were rung upon all the best known anti-dyspeptic remedies but without any adequate result. Some time since I decided to try "taka-diastase" and administered tablets containing 2½ gr. each three times a day immediately before meals. Within four days of commencing to take this remedy the acuteness of the symptoms diminished and at the end of sixteen days they were entirely gone and the boy—save and except from the debility left by his illness—was practically well. I continued the use of the drug, however, for about a month as a matter of precaution. The languor and debility have quite left him, he eats well, and has put on flesh. I think we have in this remedy an agent which will prove of very great value in many forms of hitherto almost intractable intestinal dyspepsia combined with inability to assimilate starchy food. I am, Sirs, yours faithfully,

Dec. 14th, 1897. M.O.H.

*** A full account from THE LANCET Laboratory of the nature and properties of taka-diastase appeared in THE LANCET, May 25th, 1895, p. 1332. A further note on taka-diastase in dyspepsia and gout appeared in THE LANCET, March 13th, 1897, p. 755.—ED. L.

Colonial is advised to see the Registrar of the General Medical Council immediately and take with him the ordinary proofs of identity. If he also has a letter from the dean of his old medical school and can point out his name on the Register we are sure that facilities will be given to him for regularising his position.

ANGINA: ITS PRONUNCIATION.

A CORRESPONDENT writes:—This word is commonly pronounced "angina" but wrongly. Etymology and metrical usage, from the earliest monuments of Latin literature down to the decadence of the language, make it "angina." Derived from the Greek ἀγχόνη (a throttling, a convulsive pain), we find the originally short penult maintained in the hexameter of Lucilius (Horace's master in satiric poetry) who died at Naples 103 B.C.:—

"Insperato abiit quem unâ angina sustulit horâ"

(Unexpectedly did he depart whom quinsy carried off in one hour). Again in the "Trinummus" (v. 540), now in course of representation at Westminster School, the slave Stasimus says

"Sues moriuntur angina acri acerrume"

(Pigs die very violently of a sharp quinsy). Once more Q. Serenus Sammonicus, the celebrated physician who was murdered by the Emperor Caracalla 212 A.D., has the following hexameter in his "De Medicinâ Præcepta":—

"Angina verò sibi mixtum sale poscit acetum"

(But quinsy demands for itself vinegar mixed with salt). And yet in illustration of what a famous scholar has called the "hereditary fudge" which haunts our lexicons, such authoritative Latin dictionaries as Riddle and White's or the late Sir William Smith's perpetuate "angina" without misgiving.

*** The 1888 edition of "Smith's Smaller Latin-English Dictionary" has "anginа."—ED. L.

Enquirer.—The reason for the exception is certainly the special note in the *London Calendar*. This note was designed to mark the difference between the "doctor" and the "bachelor." Recently other universities have shown themselves desirous of emphasising the distinction, so that we should not be surprised if they published some such similar note or expression of opinion.

"A TESTIMONIAL TO DR. JOHN T. ARLIDGE."

To the Editors of THE LANCET.

SIRS,—May I ask you to insert in THE LANCET the following additional list of contributors to the Arlidge testimonial fund and much oblige Yours faithfully,

10, Upper Merrion-street, Dublin, Dec. 14th, 1897. C. F. MOORE.

	£	s.	d.		£	s.	d.
Mr. Wm. E. Bowers... ...	5	5	0	Miss E. Constance Brownfield	2	2	0
Mr. Fredk. Allen	1	1	0				
Dr. Geo. W. Balfour ...	1	1	0	Dr. Lloyd Roberts	2	2	0

P.S.—In previous lists the name "Mr. John Strick" should have been Colonel John Strick, C.B., and the name of "Mary Ford" should have appeared as Mrs. Ford.

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"AN ACTION FOR MALPRAXIS IN DENTISTRY."

To the Editors of THE LANCET.

SIRS,—In reply to your comment upon the above case in THE LANCET of Dec. 4th permit me to make the following statement of facts elicited at the trial. 1. The patient suffered from great swelling of the gums, face and neck and from severe deeply seated and widely spread pain in the right upper jaw which was unrelieved by the extraction of tooth after tooth by two different dentists. 2. Five weeks afterwards a piece of dead bone from the alveolar border of the jaw was thrown off, and it was contended that this was a proof of fracture of the jaw having taken place at the time of the first tooth extraction, whereas the medical witnesses for the defence held that the symptoms from beginning to end were not those of fracture but of periostitis with subsequent necrosis and this diagnosis was confirmed by the facts that the fossa of the extracted tooth was perfectly smooth and entire, that the other teeth in the affected jaw subsequently dropped out, and that fragments of necrosed bone continued to be discharged up to the day before the trial. Under these circumstances they had no hesitation in giving evidence for the defendant even though he was unregistered, as they were satisfied that he had not been guilty of the malpraxis with which he was charged and that the case was one of disease of the jaw and not fracture. In further justification it may be stated that the medical evidence was given upon subpœna. It is difficult to understand the verdict of the jury because had the jaw been fractured the plaintiff should have been awarded substantial damages and if it was not fractured then he was entitled to nothing.

I am, Sirs, yours faithfully,

Dec. 13th, 1897. DELTA.

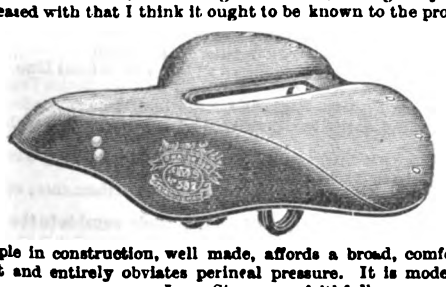
MONEY AS A MEANS OF SPREADING DISEASE.

An American health journal has recently published an interesting article on Money considered as "the chariot of disease." Although the question is treated from an extreme point of view and the article throughout is somewhat imaginative, nevertheless it must be conceded that it contains the germs of truth. Under certain circumstances it is quite possible, and even probable, that the transference of money in any form from hand to hand may be made the vehicle of infection. The article referred to traces the suppositititous career of a silver coin and draws attention to the disastrous results that are likely to attend its progress in the following words: "Watch a 25 cent piece for four days. On Wednesday it is taken from the bank bright and clean and carried for a few hours in a smart purse; it then pays a cab fare and goes into a dirty old pocket with questionable associates; it buys some tobacco, goes into a till, but very soon is given out in change to an old consumptive who ties it up in the corner of a handkerchief that is completely loaded with tuberculosis germs, where it remains over night. On Thursday morning it is given to the servant to buy milk; she holds it between her lips while she ties her handkerchief over her head, rushes out to the milk wagon, and passes it on to the dairyman who for convenience holds it in his mouth while he gets out his purse to find the required change. An hour later it is passed on and goes into a house where there is diphtheria, scarlet fever, or typhoid fever." It is pointed out that much of the danger of spreading infection by these means is due to the habit the majority of people have of placing money in the mouth just as they do a pencil or pen. A brief reference is made to paper money, showing that while it is not so frequently placed in the mouth it becomes far more filthy than coin and stating that it is doubtless quite as often the chariot of deadly virus when viewed from a health standpoint. The article ends with the suggestion that the United States Government should take steps in the matter and should enforce regulations whereby all circulating currency should be frequently fumigated and the coin chemically cleaned.

A NEW CYCLE SADDLE.

To the Editors of THE LANCET.

SIRS,—The accompanying illustration shows a cycle saddle made by Messrs. Mason and Sons, of Birmingham, which, having fully tried, I am so pleased with that I think it ought to be known to the profession.



It is simple in construction, well made, affords a broad, comfortable, firm seat and entirely obviates perineal pressure. It is moderate in price.

I am, Sirs, yours faithfully,

Finsbury-pavement, E.C., Dec. 14th, 1897. JAMES MAC MUNN.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 16th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Dec. 10	29·50	S.W.	0·20	51	51	37	38	40	Foggy
,, 11	29·32	N.W.	0·04	73	51	40	44	47	Cloudy
,, 12	29·80	N.E.	0·40	43	43	38	40	41	Raining
,, 13	29·66	S.W.	0·09	55	56	35	42	45	Overcast
,, 14	29·42	S.W.	0·29	72	53	42	50	52	Raining
,, 15	29·53	S.W.	0·01	73	54	45	47	49	Cloudy
,, 16	29·80	S.W.	...	64	57	48	53	54	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (22nd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.).

THURSDAY (23rd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2 30 P.M.).

FRIDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (25th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (21st).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. F. C. Abbott: Congenital Abnormality of the Sternum and Diaphragm with Downward Displacement of the Heart.—Mr. L. Guthrie: A Femur from a Case of Fragilitas Ossium.—Mr. H. Wellington: A Specimen of Spina Bifida.—Dr. W. Hunter: Gumma of the Pituitary Body.—Dr. T. J. Bokenham: The Immunisation of Animals against (1) Typhiod, (2) Streptococcus Infection, with an Account of the Properties acquired by the Serum of Animals thus made Immune.—Dr. G. F. Still: Congenital Cystic Kidney associated with Cystic Liver.—Mr. A. Voelcker: Ulceration of a Caseous Gland into the Bronchus, Death from Asphyxia.—Mr. Strangeways Pigg: A Case of Carcinoma Testis (card specimen). Dr. L. Freyberger will shew a specimen.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

TUESDAY (21st).—HOSPITAL FOR NERVOUS DISEASES (73, Welbeck-street).—4.30 P.M. Dr. E. Cotterell: On the Surgery of the Spinal Column.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Taylor.

During the week marked copies of the following newspapers have been received: *Glasgow Herald, Dundee Advertiser, Kentish Independent, Western Morning News, Somerset County Herald, Insurance Observer, Kendal Mercury, Northampton Daily Chronicle, Bedford Standard, Manchester Guardian, South Wales Daily News, Times of India, Newcastle Leader, Pioneer Mail, Eastern Daily News, Durham Chronicle, Grimsby News, Architect, Essex County Chronicle, Liverpool Daily Post, Grantham Journal, Builder, West Middlesex Gazette, Leicester Post, Wiltshire County Mirror, Bristol Mercury, Sussex Daily News, Worcester Chronicle, Birmingham Gazette, Leeds Mercury, Halifax Guardian, Derbyshire Courier, Hampshire Telegraph, Scotsman, Cheltenham Examiner, Yorkshire Post, Preston Herald, Evesham Journal, Brighton Gazette, Sanitary Record, Local Government Chronicle, Stratford-upon-Avon Herald, Reading Mercury, Hertfordshire Mercury, City Press, Belfast News Letter, Surrey Advertiser, Local Government Journal, Weekly Free Press and Aberdeen Herald, Mining Journal, Walsall Free Press, Western Mail, Liverpool Mercury, Putney and Wandsworth Borough News, Shields Daily News, Larne Times, Dewsbury Chronicle, Bootle Times, West Middlesex Herald, &c., &c.*

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Harveian Lectures

ON

SYPHILITIC DISEASES OF THE EYE AND ITS APPENDAGES.

Delivered before the Harveian Society on Dec. 2nd, 9th, and 16th, 1897,

BY HENRY E. JULER, F.R.C.S. ENG.,

OPHTHALMIC SURGEON TO ST. MARY'S HOSPITAL; SURGEON TO THE ROYAL WESTMINSTER OPHTHALMIC HOSPITAL; AND CONSULTING OPHTHALMIC SURGEON TO THE LONDON LOCK HOSPITALS.

LECTURE II.—*Concluded.*[1]

Delivered on Dec. 9th, 1897.

THE CHOROID.

SYPHILITIC diseases of the choroid are both numerous and varied, also somewhat difficult of classification. Putting aside syphilomata the inflammatory changes may be grouped into four separate classes: (1) disseminated choroiditis; (2) diffuse choroiditis (always associated with retinitis); (3) macular choroiditis; and (4) peripheral choroiditis. Any one of these varieties may be combined with another; in fact, it is not at all uncommon to see a transition step between the disseminated and the diffuse. So frequently is this the case that one is apt to consider the latter merely a later or a progressive condition of the former. In dealing with inflammatory changes in the choroid it will be well to bear in mind that the retina is always involved even if the lesions be focal—i.e., disseminated. If one of the patches in disseminated choroiditis happens to be present at the macula lutea there will exist a central scotoma. It is a fact of great interest that if the macula is, as it were, punched out the visual acuity of that eye is reduced to $\frac{1}{60}$ Sn. and Jaeger 16. So true is it that I am at once placed on my guard and suspect a central scotoma if the vision is reduced to that degree. In this form of choroiditis provided the macula lutea remains unharmed it is possible to map out the various scotomata in the visual field with considerable accuracy. All forms of syphilitic choroiditis are late secondary manifestations of syphilis. They belong to that group of symptoms which constitutes the intermediary stage, the period of relapses or reminders. It is true that they are often seen in the tertiary stage of syphilis and still progressing. Moreover, cases of choroiditis may follow irido-cyclitis three, four, or more years after the initial sore. The activity of the inflammation varies to some extent and, speaking generally, the earlier the choroiditis develops the more active the inflammatory reaction.

Disseminated or focal choroiditis is usually an active inflammation and occurs as early as any of the above varieties. The individual lesions are seldom seen during the period of exudation owing to the associated hyalitis. The vitreous body is turbid from inflammatory products; so densely crowded with opacities is it in some instances that only a red reflex can be obtained with the ophthalmoscope. The details are lost in a fog. In most cases, however, the coarser details can be seen through the mist and sometimes the yellow nodules or focal lesions are visible. They are dull yellow, like small patches of chamois leather, scattered about the fundus oculi. By examining the front of the vitreous with the ophthalmoscope myriads of dots can be seen floating about. Their very presence is strong presumptive evidence of syphilis. Under a judicious course of mercury and iodide of potassium the turbid media will in time be restored to their natural transparency and the cicatrising lesions become apparent. We see scattered about small white areas of exposed sclera, 1 mm. or less in diameter, surrounded by a ring of black pigment. Though frequently discrete in some places they may coalesce and produce a large atrophic area with an irregular pigmented margin. Masses of pigment are often seen on these areas and in places where complete destruction of the choroid has not taken place choroidal vessels are visible. To comprehend the nature of these lesions in the choroid it is necessary to fully understand its anatomy. If we bear in mind that the choroid is a most vascular membrane consisting of a close meshwork of large capillaries, also a second meshwork of freely anastomosing venous channels with a few comparatively small arteries supplying them, we are able to appreciate that the blood circulating within it is slow and very uniformly distributed, points of immense value when we remember that (*a*) the rods and cones are nourished by this membrane, and that (*b*) the pigment in the retinal epithelium is dependent upon it for its sustenance. If at every beat of the heart a pulse wave were transmitted through the choroidal capillaries we should be perpetually worried by flashes of light in the dark consequent on the intermittent irritation of the retinal cones. Another point which deserves special consideration is the intraocular pigment. There is a uniformly distributed layer of pigment in the epithelium between the retina and the choroid. Developmentally it belongs to the former. In the capillary layer of the choroid immediately subjacent to the lamina vitrea there is no pigment, but in the meshes of the larger and more deeply situated venous plexus there are pigmented connective tissue corpuscles. If the pigment is deficient or absent in these cells as well as that in the epithelium it is possible to see the pink choroidal vessels on a light background. This is seen in its most pronounced form in albinos; it is often seen in fair individuals. Conversely if there is excess of pigment in the meshwork of choroidal vessels without a corresponding density of pigmentation in the retinal epithelium we see orange-red choroidal vessels on a dark or dusky background, a condition from its resemblance to a tiger's skin termed *choroïde tigrée*. These are physiological variations and must not be mistaken for pathological changes. We shall find shortly that the choroidal vessels are rendered visible by disease but always in combination with other changes which are known to be pathological. I have wandered somewhat from the main subject for a purpose as I wish to describe a pathological unit and explain how it is brought about. The disseminated patches of choroiditis are allied to similar lesions in the skin. Disseminated choroiditis is, so to speak, a rash in the fundus oculi, and each spot, representing a pathological unit, means a focal inflammation set up by an irritant circulating in the blood. We have every reason to believe that it is an organism, vegetable or animal. Every spot on the skin, every mucous patch on mucous membranes, every nodule in the iris, and every choroidal spot stand silent witnesses to the dissemination of the poison. In general tuberculosis we have visible evidence in the choroid of dissemination of the tubercle bacillus. There is in a syphilitic rash active congestion and exudation in the skin and just as the cutaneous rash clears up under treatment or spontaneously so the inflammation subsides in the ocular lesions. We do not usually see the damage done in the skin though some change must take place, however slight; but in the eye it is different. Even the slightest spot in the choroid causes irritative hyperplasia of the pigmented epithelium and a pigmented patch is left. If the inflammatory focus is more active it becomes destructive and atrophy of the retinal epithelium and choroid occurs in the centre with proliferation of epithelium around. It is allied to the effects produced by a corn, *central destruction, peripheral construction.* It is easy to see similar processes in the skin; we have hyperplasia of cells in syphilitic psoriasis. It is the friction which removes them after the subsidence of inflammation. There is no intraocular friction. Also we have as evidence of atrophy a scar left in the skin after a rupial sore. We can extend this analogy still further. As a rule the patches left after disseminated choroiditis remain quiescent and permanent but discrete. Sometimes the active inflammation does not quite subside, the embers smoulder on, and a chronic serpiginous choroiditis is the result. Focal lesions coalesce and fresh foci appear until a very extensive and peculiarly mapped-out appearance of the fundus is seen. Wherever the pigmented epithelium is destroyed it may be taken for granted that the rods and cones are also destroyed or rendered functionless. Here, then, is a serpiginous choroiditis just as we sometimes see serpiginous ulceration of the skin as a late secondary or a tertiary manifestation of syphilis. The following is a typical case of disseminated choroiditis in acquired syphilis.

CASE 6.—The patient, a young married woman, consulted me owing to failure of vision in both eyes. The condition of her eyes when she

[1] Lecture I. and part of Lecture II. were published in THE LANCET of Dec. 11th and Dec. 18th, 1897.

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came to me was as follows: R.E. = $\frac{6}{6}$ Sn., Jaeger 4; there were several posterior synechiæ, vitreous opacities, and *disseminated choroiditis*. L.E. = $\frac{6}{6}$ Sn., Jaeger 4; there were vitreous opacities and *disseminated choroiditis*.

Under mercurial treatment and the use of atropine drops her vision improved in two months to—R.V. = $\frac{6}{18}$ Sn., L.V. = $\frac{6}{12}$ Sn. The present state of her right eye is shown in the drawing of her right fundus oculi. The left is much the same in appearance. It shows that the disseminated choroiditis did not remain stationary, that the retina became involved, and now we can only class it as a variety of choroido-retinitis. I believe that if she had continued with the treatment for a longer period the disease would have been arrested.

If the visual fields were mapped out in these cases it would be found that scotomata corresponded to the lesions in the fundus oculi. In the active stage, besides a failure of vision—"a mist before the eyes" as it is usually described—there are symptoms of irritation of the percipient elements of the retina, intermittent flashes of light in the dark—photopsia. This is more often noticed in the more extensive forms of choroiditis than in the disseminated. The following is an example.

CASE 7.—A middle-aged married woman consulted me simply because she saw flashes of light in the dark. She noticed it to a less extent during the day-time. Her vision was very defective (R. V. = $\frac{6}{60}$ Sn., L. V. = $\frac{6}{60}$ Sn.). With each eye she saw the flashes. There was a distinct history of syphilis. The right fundus showed general thinning of the choroid, or, in other words, the large choroidal vessels were clearly seen. Some white glistening patches, some pigmentary changes, and a few yellow spots were scattered about the fundus. The left eye showed similar changes to a less degree, but no glistening patches and but slight pigmentary changes. Her sight began to fail five years previously.

In this case the photopsia was in all probability caused by the yellow spots, which were no doubt active inflammatory foci. One of the most interesting, and certainly one of the most remarkable, cases that has come under my care was the following. It may be taken as an example of macular choroiditis.

CASE 8.—A married woman who had never been pregnant came under my care at St. Mary's Hospital, when her condition was as follows: R.V. = $\frac{6}{60}$ Sn., L.V. = $\frac{6}{60}$ Sn. Vision had been lost in the right eye during the last nine days; in the left eye it failed two or three weeks ago. She complained very much of constant flashes of light in front of her eyes. Her pupils contracted to light. There was no synechia. There was slight vitreous haze in both eyes, more so in the right. In the right macula lutea was a circular yellow spot of exudation. In the left macula were three or four smaller spots conglomerated together. A central scotoma existed in each eye, otherwise the visual fields were perfect. Under mercury and iodide of potassium her vision improved rapidly.

With respect to the syphilitic history I cannot do better than quote the facts sent by the medical attendant:—

"1. On Oct. 5th, 1893, her husband came to me with a primary chancre. 2. In 1894, Oct. 1st, I find an entry of mercurial treatment for the wife and I am *positive* that she has never shown any syphilitic symptoms other than the ocular ones, so that I fancy that must show the time when her eye trouble began; any way I sent her off to St. Mary's Hospital at once and the date on her paper will give you the information as to the length of time between the husband's chancre and her eye symptoms. 3. His syphilis ran a perfectly normal secondary course, but his wife never showed any other symptoms than the ocular ones. 4 Treatment appears to have worked wonders. She soon regained her sight. She says she used the 'stuff' she brought from 'orspital' and it did her so much good that she never came to see me again about her eye trouble, though she has been under me for other matters. On July 24th this year—i.e., nearly three years later—her condition was thus: She could see to read small print with each eye. There was no fundus change except a small yellow spot just above the right macula, one above and one below the left macula. The vitreous humour was quite clear."

The absence of any other evidence of syphilis, the small central change in each eye, the severe photopsia with central scotoma, and the rapid and complete cure by mercury and iodide of potassium are the chief features of interest in this case. Yellow spots of exudation may occur in any part of the fundus. They may even be limited to the periphery. The following is a case of peripheral changes due to syphilis.

CASE 9.—A middle-aged woman, who had been married twice, came to me owing to failure of sight. Her eyes had only troubled her the last few weeks and was due to presbyopia rather than her fundus trouble. She had had extensive necrosis in her nose, the bridge had collapsed, and her uvula and adjacent soft palate had been destroyed. Her nose was diseased two years ago and her throat was at the same time ulcerated. She had had a stillborn child fifteen years ago, followed by a miscarriage. She had slight hypermetropia; her R.V. = $\frac{6}{6}$ Sn. corrected, but the L.V. = $\frac{6}{12}$ Sn. only. The media were clear. There was visible one small yellow patch in the inner periphery of her right fundus, several circular yellow patches in the outer extreme periphery of the left fundus, no pigment, and no choroiditis more central.

I believe these patches, though yellow and resembling the active stage of choroiditis, were old-standing. So far examples have been given of central and peripheral choroiditis in the form of yellow spots. It is more usual to see pigmentary changes at the periphery, fine and granular, like a deposit of black pepper. There may be peripheral disseminated patches, involving a small area, or the whole circumference often associated with a slight ring of choroiditis around the disc. Similarly a peppery deposit, or a conglomeration of focal choroiditis, the choroiditis areolaris of Förster, may be at the site of the macula, and the rest of the fundus healthy. Though in some instances we find extensive tracts of choroidal atrophy in the fundus with heaping up or destruction of pigment, this condition must not be confused with a general or diffuse choroiditis. In focal choroiditis the alteration in the retina is scarcely, if at all, perceptible unless the tracts of destruction are extensive, in which case the disc becomes pale and the choroid around it atrophied. In general or diffuse interstitial choroiditis (if I may so call it) there is a corresponding general involvement of the retina and the condition is spoken of as choroido-retinitis. The inflammation destroys the lamina chorio-capillaris and the pigmentary epithelium and is followed by a chronic diffuse interstitial retinitis.

The ophthalmoscopic changes, even in this form, vary within wide limits. The chief features are the extensive destruction, the pigmentation in the retina, the changes in the optic disc and retinal blood-vessels. The whole fundus may be mapped out with large circular or oval pale areas with intervening pigmentation. These areas are usually most obvious in the macular region, the peripheral region presenting the appearance seen in pigmentary degeneration of the retina. It is necessary here to make a few remarks about this peculiar disease as I shall have to refer to it from time to time. It is a disease occurring in both eyes in early life, perhaps congenital, recognised usually about, or just before, puberty. It is accompanied by night-blindness, by extreme contraction of the visual fields, and peculiar changes in the fundus oculi. The ophthalmoscopic appearance is as follows: waxy pallor of the optic disc (in some cases, according to Adams Frost, plum-coloured), marked contraction of the retinal vessels, thinning of the choroid, and a peculiar deposit of pigmentation at the periphery. These deposits very often resemble the appearance of bone corpuscles or of pigmented connective tissue corpuscles; some pigment also usually is found on the walls of the blood-vessel like lichen upon a tree and its branches. It is seldom that the pigment patches are circular, hence circular deposits of pigment are strongly suggestive of a syphilitic taint. There are many cases of syphilitic choroido-retinitis so like primary pigmentary degeneration of the retina that mistakes in diagnosis have been made time after time. The following case is one of the kind:—

CASE 10.—A married woman gave a history of her sight failing ten years ago; it was perfectly good before that date. She had had nine children; all had had snuffles. There had been one miscarriage. There was a distinct history of acquired syphilis. Pigmentary changes were found in both retinæ resembling retinitis pigmentosa. Choroidal vessels were visible, but no white patches of choroidal atrophy. The patient suffered from photopsia at night, but there was no history of night-blindness. In the right visual field there was a complete ring scotoma, but only half a ring scotoma in the left visual field. R.V. = $\frac{1}{18}$ Sn., L.V. = $\frac{1}{8}$ Sn.

Let me quote a typical case of advanced choroido-retinitis for comparison.

CASE 11.—The patient was a young woman whose complaint was gradual loss of sight. "She could see perfectly well four years before, since then her sight had been gradually failing." R.V. = $\frac{1}{60}$ Sn.; fingers could be seen at 2 metres. L.V. ditto. There was a history of severe sore-throat immediately preceding her failure of sight. She had been married seven years, had had no children and no miscarriages. The right fundus oculi showed a pale, waxy-looking disc with distinct margin. The veins were of normal size, and the arteries were very thready. Fine pigmentary changes were scattered all over the fundus, but chiefly at the periphery. At the macular region large circular and ovale pale yellow patches were conglomerated together. A pale background with the choroidal vessels was visible. The media were clear. The left eye presented a similar appearance, but there were fine vitreous opacities. She suffered from night-blindness and her visual fields were much contracted. Her vision improved for a time under anti-syphilitic treatment so that she could see $\frac{6}{12}$ Sn. and read Jaeger 10; this improvement was only temporary. She is now only able to discern light from dark.

This case is one simulating pigmentary degeneration of the retina, but it differs very materially from the last in that the changes in the macular region were almost, if not quite, pathognomonic of syphilitic choroido-retinitis. There was a distinct history of syphilis. In some parts of the fundus could be seen pigment resembling bone corpuscle situated superficial to the blood-vessels. General thinning of

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the choroid was present. The disc was of a pale, uniform, salmon tint with clean-cut outline and the arteries were especially constricted. There was night-blindness and very contracted visual fields. All these facts are consistent with the signs and symptoms of "retinitis pigmentosa" (pigmentary degeneration of the retina). But syphilis is rarely a faultless imitator. Signs existed which proved conclusively that the disease was syphilitic—viz., fine vitreous opacities and areas of choroidal atrophy. These are never seen in primary pigmentary degeneration. Evidences of past iritis, though not seen in this case, is another point in favour of syphilis. In diffuse choroido-retinitis of syphilis it is not infrequent to find a ring scotoma and posterior polar cataract. The existence of the latter may occur in either affection, but the former, a ring scotoma, was at one time valued as a point in diagnosis. This has of recent years been refuted by some observers.

Though it has been necessary to dwell somewhat at length on choroiditis and to enter into a description of certain forms of retinitis intimately associated with syphilitic choroidal troubles, especially pigmentary retinitis, I must make a few remarks about syphilitic growths of the choroid before leaving the diseases of the tunica vasculosa. Gumma of the choroid is a rare syphilitic lesion. Syphilis has two sides to its nature. It either tends to the formation of growths or to the diffusion of interstitial inflammations. Other diseases—for example, leprosy—are alike in this respect, they have a double aspect. In one type of individual quite a different expression of the disease is seen to that in another. I can only find notes of one case in which I suspected a gumma of the choroid.

CASE 12.—A young married woman attended my department at St. Mary's Hospital owing to great pain in her left eye and complete loss of sight. She had no perception of light. There were old iridic adhesions, the iris was of a green colour, the anterior chamber was deep, there was slight ciliary injection and raised intra-ocular tension. No details of the fundus were visible owing to the density of the vitreous humour; some very large vitreous opacities were present. She had a gumma of the size of a pigeon's egg on the left ramus on her lower jaw. The right eye was normal. Under mercury and iodide of potassium the gumma on the jaw disappeared and simultaneously the sight returned in her left eye, the vitreous opacities cleared up, and the details of the fundus became visible, but no pathological change could be discovered. The vision was restored to $\frac{6}{9}$ Sn. She had been pregnant six times—(1) 1891, miscarriage at third month; (2) 1892, boy born in April, still alive; (3) 1893, girl, only lived ten weeks, "wasted away"; (4) 1895, girl, only lived ten days, "eight months child"; (5) 1896, miscarriage at third month; and (6) 1897, "still carrying, seven months gone."

I think you will agree with me that my diagnosis was justified.

THE RETINA.

Retinitis in association with choroiditis is the most common form of retinal inflammation we meet with in syphilis. It is a very chronic disease and its forerunner, choroiditis, passes almost imperceptibly into one of choroido-retinitis. Another variety of retinitis is the pigmentary form already alluded to, that variety which mimics "retinitis pigmentosa." In both choroido-retinitis and pigmentary retinitis of syphilis the disease is so insidious that the lesion is more an interstitial fibrosis than an active inflammation. We have atrophic changes in the papilla but no preceding papillitis. The essential features in a retinitis are the following: papillitis, varying in intensity but rarely attended with much swelling of the disc; patches of exudation, either fluffy white patches or well-defined small white spots or striæ; cloudiness of the retina, appearing as a faint haze; and hæmorrhages. The changes are practically limited to the posterior pole of the eye, at the macula, and around the optic disc. Jacobson first described a form of syphilitic retinitis accompanied by these signs. It is a comparatively rare disease, and the ophthalmoscopic signs may resemble those of albuminuric retinitis. Syphilis may be the actual cause of albuminuric retinitis by producing an interstitial nephritis; such cases are recorded. Also lardaceous disease of the kidney may be attended with retinitis or retinal hæmorrhages, so in a two-fold manner tertiary syphilis may be the cause of renal retinitis. Also in the secondary stage of syphilis a catarrhal nephritis has been observed accompanied with retinitis. The retinitis of Jacobson, however, is not in this category, it is a primary syphilitic retinitis attended with marked cloudiness of the retina, slight papillitis, distension of the retinal veins, white spots and hæmorrhages. The following is a case of neuro-retinitis in a syphilitic subject and probably the result of that disease.

CASE 13.—A man came under my care recently complaining of "fulness in his eyes and being always foggy." His vision was $\frac{6}{9}$ Sn. with each eye. He had a chancre fifteen years ago and was treated for syphilis at the Lock Hospital by Mr. Bloxam. He attributed his failure of vision to a blow on his head sustained three weeks previously. He was struck by a railway carriage door, which stunned him for a moment. He had a slight occipital headache, was not giddy, had no fits, and was only sick once after the accident. With the ophthalmoscope the optic disc was hazy, its outline was invisible and raised to the extent of one dioptre; in the right eye hæmorrhages existed just outside the macula, and in the left eye some white spots were visible outside the optic disc with a few hæmorrhages. His urine, examined three times at intervals, proved normal on each occasion. His pulse was not high tension nor was there any evidence of kidney trouble. His vision remained the same throughout his attendance.

There was nothing in his symptoms suggestive of intracranial mischief or Bright's disease nor had he had any recent illness such as influenza to account for it. If the retinal changes were consequent on syphilis it is interesting that they were symmetrical and developed so long after the chancre.

Papillitis, or inflammation of the optic nerve head, is frequently seen in syphilis. It may be unilocular, as already mentioned, in certain cases of retro-bulbar neuritis. On the other hand, it may be present in both eyes, either in association with retinitis or from the existence of some intracranial lesion. Syphilis is the cause of many intracranial troubles — pachymeningitis, thrombosis and softening, aneurysms, syphilomata, &c. Of all these syphilitic lesions the one most likely to cause double papillitis is an intracranial gumma. Cases of intracranial gummata are common; papillitis as a symptom is very constant. It behoves us, therefore, to go carefully into the history of the case, to be cautious in making a prognosis, and to treat persistently with iodides in spite of a negative history of syphilis. Only quite recently I had under my care a man with double papillitis the result, in my belief, of a syphilitic growth within his brain.

CASE 14.—The patient came under my care recently with pronounced double papillitis. He contracted syphilis in 1893 (sore on penis, big red spots all over his body, ulcerated throat, sores in the mouth, and subsequently gummata about his left knee which ulcerated). He was treated for syphilis at a military hospital; in fact, he was invalided out of the army for syphilis. Two months before he came under my observation he "became quite silly and light-headed and lost his memory. He suffered from frontal headache and was advised by his medical man to go into a cottage hospital, as he said he had a tumour in his eye." This information I gathered from his wife. It is probable that the medical man told her he had a tumour and because he examined his eyes she supposed the tumour to be in the eye. She said he improved while he was in the hospital. When I first saw him he was certainly deficient in his intellect and his memory was exceedingly bad. There were no motor or sensory disturbances. His condition improved under iodide of potassium, but whether he was completely cured or not I cannot say as I lost sight of him.

It is unwise to speculate too freely, though from the history, from the state of his mind, the absence of motor and sensory paralyses, and the presence of double optic neuritis, I was inclined to look upon the case as one of gumma in one or other of the frontal lobes.

If these syphilitic lesions yield to treatment the papillitis subsides with a varying degree of consecutive atrophy. If you come across cases of post-neuritic atrophy you will frequently elicit a history of syphilis. Many, too, are the cases of primary atrophy more or less remotely caused by syphilis. The para-syphilitic diseases of the brain and cord are so common and atrophy of the optic nerves so constant in both that I should not err very greatly if I ventured to remark that blindness developing in the course of tabes dorsalis or in that of general paralysis of the insane is without an exception the result of primary optic atrophy. The prognosis is very grave in primary atrophy. The vision gradually wanes until the sufferer is totally blind. In some cases anti-syphilitic treatment will arrest the progress for a time, but in most of these it is but temporary. Post-neuritic atrophy is not always accompanied by complete loss of sight; even good vision in one eye or both may be retained. Many, however, are the reverse of this, so that the prognosis must be guarded, but not so hopeless as in the primary form.

LECTURE III.

Delivered on Dec. 16th, 1897.

MR. PRESIDENT AND GENTLEMEN,—In my former lectures I dealt with ocular troubles due to acquired syphilis, I now claim your attention to those due to hereditary syphilis. As in acquired syphilis, the eyeball suffers more frequently and severely than the appendages. The eyelids and conjunctivæ are not, however, exempt. The former take part in the very general papular syphilide which appears on the face and rest of the body in these infants. An inflammation of the margins of the eyelids is not uncommon and it involves

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the glandular structures of the eyelids; it is called marginal blepharo-adenitis or lippitudo syphilitica neonatorum. It is to a great extent dependent on a conjunctival catarrh associated with neglect. "Snuffles," or syphilitic rhinitis, is a more serious catarrh than that of the conjunctiva and at an early stage becomes purulent. It is serious in that the nourishment of the child is gravely impaired, for the child sucks with difficulty. It is one of the earliest manifestations and may be present at birth. It is of interest to ophthalmologists in that, starting as a simple catarrh, it becomes a muco-periostitis with excessive purulent and even bloody discharge and causes extensive destruction of the turbinated bones. The inferior turbinated bone, you will remember, enters into the formation of the nasal duct; it is easy to understand how this foul inflammation may involve very considerably this lacrymal passage. Hereditary syphilis is, in my opinion, a very common cause of lacrymal obstruction and lacrymal abscess secondary to the nasal trouble.

Diseases of the orbit in hereditary syphilis are rare. Periostitis or intra-orbital gummata may at times be seen.

In my first lecture I refrained from speaking at length on the subject of ocular paralyses though their frequency in acquired syphilis was mentioned. In the hereditary form of the disease they are rare, I might say very rare indeed. I do not remember having even come across a case. Lawford reports two instances in the *Ophthalmic Review* (1890) and refers to the literature of three others reported by von Graefe, Nettleship, and Hutchinson respectively. The age at which the paralysis occurred in these few instances varied from two years to twenty-six years. Complete recovery under anti-syphilitic treatment was the result in one of Lawford's cases and marked improvement in the other. Similarly intra-orbital lesions of the optic nerve are rare. There is not, as far as I have looked up the literature of the subject, a single recorded instance of retrobulbar neuritis caused by hereditary syphilis nor have I any notes of such a case.

By far the most interesting ocular disease of congenital syphilis is interstitial (or parenchymous) keratitis. It is characterised by a diffuse cloudiness of the whole cornea which becomes opalescent until no small area remains clear. It is not always uniformly milky; some parts may be yellowish-white; these are chiefly central; other parts at the periphery become a dull maroon-red—the so-called "salmon-patch." In the most severe cases the cornea presents the colour throughout. One eye is attacked at a time, the other as a rule follows in its wake as the first proceeds. It is rare to see the two eyes start simultaneously. The second falls a victim even under orthodox treatment after a variable interval, yet rarely suffers so severely as the first. Thus the inflammation appears to be only modified not prevented by treatment.

Interstitial keratitis must be distinguished from superficial keratitis, which precedes ulceration, and from the pannus which accompanies rough granular eyelids. In superficial keratitis the photophobia is intense and the surface of the cornea is dull. In interstitial keratitis its surface is uniform and glassy; it may be likened to the smooth side of ground glass. In pannus the redness can be seen with the unaided eye to be composed of distinct branches of superficial vessels coming from the conjunctiva; in interstitial keratitis the coloured patch is seen to consist of very fine deep-seated vessels which are only visible with a magnifying lens. The inflammation is remarkable for its quietness and its chronicity. Photophobia may be present but is usually slight. Circumcorneal redness is always present, but only pronounced in severe cases. It is a curious fact that although the cornea is inflamed throughout its whole structure it never becomes ulcerated in this affection nor does suppuration ever take place. It is exceptional even to find any disturbance of the surface epithelium; sometimes, however, it shows a fine granular change due to proliferation of the cells, but there is no loss of tissue. As a rule the prominence of the symptoms are in proportion to the severity of the attack and may be considered a fairly accurate guide in giving a prognosis. At its height the vision is very much reduced, often to the perception of light only. It is only when perception of light is absent that a bad prognosis is justified.

Such, then, are the chief features to be observed in the appearances and clinical course of parenchymatous keratitis. Its cause is in two out of every three cases hereditary syphilis. There are causes assigned other than syphilis, especially tuberculosis; this as a cause of parenchymatous keratitis is strongly upheld by von Hippel and his evidence is very convincing. For all that we may positively assert that at least two-thirds of the cases of interstitial keratitis are due to hereditary syphilis. To this conclusion we are guided in the main by the collateral evidences of syphilis. 1. Symmetrical deafness. This is unattended with discharge. The membrana tympani remains intact. This manifestation, the syphilitic teeth, and interstitial keratitis are called by some American surgeons the Hutchinsonian triad. 2. Interstitial osteitis of the long bones. The tibiæ are the bones which usually suffer, though any long bone may be affected. The tibia is lengthened, curved forwards, and its sharp crest rounded off and in severe cases quite obliterated. The nature of the inflammation is considered by many a chronic sclerosing osteitis, but certainly this is not always the case, for a typical instance of this affection examined by Clutton[2] showed well-marked diffuse symmetrical osteo-porosis. 3. Symmetrical chronic synovitis. 4. Stunted growth. 5. "Café au lait" complexion. 6. Radial scars at angles of the mouth and evidences of past ulceration in the fauces, &c. 7. Depression of the bridge of the nose with increase of breadth. 8. The frontal scalp-line indefinite. A gradual instead of a sudden transition of skin of forehead into the piliferous skin of the scalp. Downy hairs are traceable to the eyebrows. 9. Hutchinsonian teeth. The central incisors in the upper jaw are the most reliable. Peg-shaped, spaced, notched, and stunted are the four characteristics. 10. Natiform skull. 11. High-arched palate. 12. Smooth atrophy at the base of the tongue. This last sign of congenital syphilis was pointed out by Virchow as being pathognomonic of hereditary syphilis and present in about 50 per cent. of the cases. I have in conjunction with Mr. Griffith examined a considerable number of congenital syphilitic children and adults, but neither by the sense of touch nor by the use of a laryngoscopic mirror have we been able to discover a single instance of this form of atrophy.

Besides the existence of collateral evidence at the time of the keratitis we have the valuable history of the patient's infantile troubles—"snuffles," rash, sores at the buccal and anal orifices; possibly a history of pemphigus, meningitis, and other early syphilitic diseases; the history of the mother having had miscarriages, stillbirths, and infants dying before they are three months old. The first pregnancy terminating in a miscarriage after the fifth month is strongly suggestive of syphilis. A succession of miscarriages and stillbirths is more valuable than many of the collateral signs above mentioned. Besides, they are so often wanting that it has produced scepticism on the part of many surgeons that hereditary syphilis is so common a cause of interstitial keratitis.

With regard to the pathology of interstitial keratitis I have little to say. It is now almost universally admitted that this form of keratitis is secondary to a primary inflammation of the ciliary zone of the eye—the sclera and the ciliary body. It is true that in the severer forms of interstitial keratitis, if not in all, keratitis punctata is present. There is also a great tendency for the uveal tract to become inflamed throughout.

What are the chief principles in the treatment of interstitial keratitis? Firstly, physiological rest; this is accomplished by paralysing the ciliary muscle and sphincter pupillæ. Secondly, the prevention of iridic adhesions. Thirdly, the relief of symptoms by local sedatives. All can be carried into effect by the use of atropine and by ordering neutral tinted dark glasses. So long as there is any inflammation present this drug must be instilled into the eye. It should, moreover, be the only drug used locally during the active stage. When the symptoms become less pronounced the keratitis may be stimulated by the use of the yellow oxide of mercury ointment combined with cocaine and atropine. Finally the yellow oxide of mercury ointment must be used by itself until the cornea is clear. Throughout the attack mercury should be given either in the form of inunctions or by hypodermic injections. Tonics may be given at the same time. It is well to intermit the mercury two, three, or four times during the attack, but never for longer than a fortnight. The diet and habits of the patient must not be overlooked. Daily exercise is very important

[2] Transactions of the Pathological Society, vol. xliv.

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and only in very exceptional cases is it necessary to confine the patient to the house.

Before leaving this subject let me say that when a patient suffering from syphilitic keratitis is brought or comes to us, be it a child or an adult, we must warn the patient or the parents that the inflammation in the eye cannot be cured under a period of two or three months, and moreover that as the affected eye is getting well the other will almost inevitably follow suit and run a similar though less protracted course. We cannot prevent the second eye from having an attack, but by the constitutional treatment we have adopted for the first eye the inflammation in the second is rendered less severe.

THE IRIS.

Iritis may occur at various periods in hereditary syphilis It is as a secondary manifestation, relatively infrequent as compared with the iritis of acquired syphilis. It may develop before birth, at birth, a few weeks or months after birth, or much later in the disease either in association with interstitial keratitis or as a part of a sero-plastic irido-cyclitis. Primary iritis occurring in infants or young children is almost always due to syphilis (Soelberg Wells).

Intra-uterine iritis is an assumption based on strong evidence—the existence of iridic adhesions to the capsule of the lens. Posterior synechia can only be caused by iritis, yet attachments of the iris to the lens may be seen as congenital anomalies from imperfect absorption of the capsulo-pupillary membrane. In this condition there is no drag on the pupillary margin of the iris, the pupil will dilate fully under atropine even if the tags are multiple, whereas in eyes which show signs of intra-uterine iritis one adhesion may, and usually does, produce a distinct drag on the iris when a mydriatic is employed. It is the exception to find a single synechia, the adhesions often extend to the whole circumference of the pupil save small points of freedom which allow pouch-like dilatations to appear if atropine is used.

Another feature of special interest is the existence of one, two, or more white spots, like small white beads, which resemble very much anterior polar cataracts, on or in the capsule of the lens differing only from a pyramidal cataract in being eccentric. Whether these spots are patches of organised lymph or capsular changes similar to those seen in anterior polar or pyramidal cataract the microscope alone can prove. I personally am inclined to the latter view and believe that as the cataract is produced by the drag on the lens-capsule after the close of a central corneal perforation, so the posterior synechia by its drag on the capsule has a similar influence upon the growth of the capsular epithelium at its point of attachment. Only does this happen at the site of the adhesions contracted early in life or prior to birth. The relationship of intra-uterine iritis to syphilis has not been very definitely established. Some of the few cases that have come under my observation lend themselves to this belief, but others discountenance the supposition that they are proof of syphilis.

Congenital iritis differs from the former in that the inflammation occurs at or a few hours after birth. With intra-uterine iritis the inflammation is a thing of the past when the child is born. There is no doubt in the minds of ophthalmic surgeons that syphilis is the essential cause of congenital iritis. I have never yet seen a case without positive evidence of syphilis either in the mother's history or from collateral signs in the child.

Hutchinson has collected a series of cases of iritis (infantile) which developed between the ages of six weeks and sixteen months. He commences his monograph "On Diseases of the Eye consequent upon Hereditary Syphilis" with the notes of twenty-three cases and concludes with an interesting summary. He mentions that the female sex is more prone to suffer than the male. Both cases quoted above happened to be females. If we accept the theory that interstitial keratitis is secondary to inflammation of the ciliary region of the uveal tract it is very remarkable that iritis as a complication is not more common than it is. It does however occur in a large number of cases and after the subsidence of the keratitis signs of iritis are evident by the presence of synechiæ or patches of pigment on the lens. It is seldom that extensive adhesions are formed, but in the worst cases this takes place, the lens becomes cataractous, the eye loses tension and is finally lost.

Iritis apart from keratitis has been described by Brailey as a tertiary phenomenon both in acquired and hereditary syphilis. In my last lecture I pointed out that these cases belong more to the class of sero-plastic irido-cyclitis than that of simple plastic iritis; it is so also with those which occur in the hereditary disease. Brailey points out that the iris in this affection is apt to become adherent at its periphery to the cornea around its whole circumference and in this manner to bring about secondary glaucoma.

THE CHOROID.

In a similar way to that seen in acquired syphilis the inflammation in the uveal tract may creep slowly backwards in hereditary syphilis and involve successively the iris, the ciliary body, and the choroid. The periods at which choroiditis is especially liable to manifest itself are, as one would expect, at those times in the course of conjunctival syphilis when active inflammatory troubles develop in other parts of the body. If I ventured to state that in quite 90 per cent. of all cases of hereditary syphilitic choroiditis the inflammation starts either within the first two years of life or during the period of puberty in association with other tertiary manifestations I should not err to any great extent, if at all, for such has been my experience. Do not for a moment misinterpret my meaning. If the tertiary manifestations appear early or late so will the late choroiditis vary. Again, a choroiditis as a secondary manifestation may smoulder on just as in acquired syphilis and extend as a chronic serpiginous choroiditis for many years, and finally prove an interstitial fibrosis of the choroid and retina similar to, and with ophthalmoscopic changes identical with, pigmentary choroido-retinitis about which I spoke in my last lecture.

Disseminated choroiditis appears as often in hereditary syphilis as in the acquired form. It presents identical changes in the fundus oculi. It may remain as a discrete eruption or by the formation of fresh foci and the spread of old lesions become confluent and map out large areas of destruction. This form of choroiditis manifests itself early in congenital syphilis in the second phase of the disease almost any time between the age of six weeks and two years.

Let me quote a severe case of choroiditis starting in infancy associated with retinitis.

CASE 1.—A lad, now aged sixteen years, has been under my care since he was an infant in arms. He was brought to the hospital when he was a year old as his parents thought he was blind owing to the aimless movements of his eyes. Any object held in front of his eyes he did not appear to notice. I found that he had choroido-retinitis seen imperfectly through a cloudy vitreous humour. I adopted a mercurial treatment. His parents have since then died and his aunt informs me that when this boy was five years old they both died within a month of each other, she thought from "consumption." He is the only child living. Thirteen months before his birth his mother had a stillborn child, subsequently she had a miscarriage and one child which only lived a month. At the age of eight and a half years he came under my care again suffering from interstitial keratitis and spent the whole of the year 1890 and part of 1891 in being treated for this trouble which was unusually severe and complicated with iritis. The right eye was first attacked and general choroido-retinitis was recorded as being present in the left eye. Subsequently the cornea of the eye became inflamed and obscured the fundus from view. The present state of his eyes is as follows. As regards the right eye he can count fingers at a distance of one metre. The pupils dilate irregularly. Atrophied vessels are seen in the cornea, white atrophic patches in the fundus oculi, and no pigment, not even at the periphery. The disc is pale and waxy-looking and the retinal vessels are thready. There is high myopia. With the left eye there is barely perception of light, total posterior synechia, and complete opacity of lens. The tension is normal. The eye is divergent. The collateral evidence of syphilis in this patient also was not very marked, but the history of his mother's miscarriages, &c., point very decidedly in this direction.

I could enumerate case after case illustrating the similarity of the changes in the fundus oculi of hereditary syphilis to that of the acquired form. Apart from the history it would be difficult to decide from the fundus changes alone which was the cause. It happens, however, that in the hereditary form we find more often than not *myopia*. We should expect myopia to develop in such cases as the tunics are diseased during the period of growth and so yield to the normal intraocular pressure. Another evidence of congenita syphilis is the presence of atrophied vessels in the cornea. If, therefore, we find associated with choroiditis or choroido-retinitis high myopia and traces of former interstitial keratitis we may safely conclude that hereditary syphilis is the cause

There is a feature in cases of choroido-retinitis, especially the pigmentary form, which I have not yet mentioned, although it is as common in the acquired as in the congenital variety. I refer to glaucoma. Many of these cases terminate in this way. The specimen shown at my last lecture was an eye excised for glaucoma secondary to syphilitic

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pigmentary choroido-retinitis. That was one due to acquired syphilis; I will give you an illustration of one due to the hereditary disease.

CASE 2.—A single woman came under my care at St. Mary's Hospital complaining of night blindness and having had bad sight since birth. She had a convergent strabismus and a slight degree of hypermetropia. Retinitis pigmentosa was diagnosed and it was discovered that the right disc had a glaucoma cup and the tension was + 1. The visual fields were very contracted; the right vision was $\frac{1}{3}$, and the left vision $\frac{1}{4}$. She was ordered quinine. On her next visit ten days later the following notes were made: "Depressed nasal bridge, marked ozæna with history of 'snuffles' as a baby. Hutchinsonian teeth, café au lait complexion. Iodide of potassium was ordered." Beyond the pigmentary changes in the fundus resembling retinitis pigmentosa the discs were atrophic and the vessels contracted to fine threads. Slight choroidal atrophy was also seen. In 1894 the vision was reduced to recognising fingers only, the cup in the right eye was deep, and the tension + 2; eserine was therefore ordered.

Occurring at so early a date we need not look upon the glaucoma as coincident, it is dependent upon the choroido-retinal disease. One day this eye will be acutely glaucomatous and have to be excised. Sometimes the evil day can be postponed by reducing the glaucoma by leeches, fomentations, and a free purge. Finally, however, the eye will find its way into a pathological collection. Operative interference is certainly not advisable in the complaint.

Papillitis is not a common manifestation of hereditary syphilis, but a sufficient number of cases of post-neuritic atrophy have come under my care to justify my belief in its existence. These cases are children ranging from six months to two years old or more. They are brought on account of nystagmus and aimless movements of the eyes. The mother thinks the child is blind. In some cases it is possible to obtain a history of fits, hydrocephalic cry, and retraction of the head, whereas in others no history of meningitis can be elicited. I am however inclined to look upon such cases as instances of double papillitis caused by a syphilitic meningitis.

The crystalline lens is largely dependent for the transparency upon the integrity of the ciliary body or secretory apparatus of the eyeball. If cyclitis is followed by atrophy of the ciliary body the lens becomes cataractous and subsequently undergoes calcification. In the worst cases therefore of uveitis in which the iris becomes glued to the lens, the ciliary processes shrunken, and the choroid and retina inseparably blended into an irregularly pigmented fibrous membrane the lens will be opaque, possibly calcified, the tension of the globe will be reduced and the function of the eyeball absolutely destroyed. There are, however, other forms of lenticular opacities. I have already referred to the small eccentric white opacities in the anterior capsule seen in cases of congenital and intra-uterine iritis. I wish now to refer to an opacity at the posterior pole of the lens. A true posterior polar cataract is not small, opaque, and well defined as it is usually depicted in text-books; it is a thin and semi-transparent or diaphanous opacity with processes radiating towards the periphery. Under the microscope it is seen to be composed of globular degeneration of the lens fibres. Posterior polar cataracts may be seen in primary pigmentary degeneration of the retina or in the pigmentary forms of syphilitic choroido-retinitis. Whether it is possible for this opacity to develop without changes in the ciliary body microscopic investigation may some day show, but as most eyes with this trouble come into the pathologist's hands owing to secondary glaucoma in which the ciliary body shows definite changes there is considerable difficulty in deciding the question. Another variety of cataract is seen in infants with hereditary syphilis, the lens is milky in appearance and varies very often in density in different parts. The following are the notes of a case I had under my care in 1890.

CASE 3.—A little girl, aged six years, has milky opacities in each lens, worse in the left eye. Small posterior synechiæ are also found in the left eye. The fundus is invisible through the opacity. The right vision = $\frac{1}{6}$ Sn. and the left vision = p. l. only; there was bad projection. She had "snuffles" as a baby. Her mother had one miscarriage and lost one child with "fits." There is a history of sore-throat and loss of hair in the mother. This child besides having double cataract had iritis either intra uterine or early in life. This is interesting as cases in which iritis occurs in infancy are more liable to develop cataract.

As to the treatment of this form of cataract I wish to speak reservedly. Though there may be no adhesions and the cataract appears soft and milky and easy to dissolve by needling such is not the case. Though the eyes are fairly tolerant of operation and show little or no inflammatory reaction you will find that cataract is tough and follows the movements of the needle. It is very difficult to break it up and assist its absorption. The after results may be fair for a time, but I have recollection of seeing several cases of blindness in which a cataract has been needled in infancy and the subject had unmistakeable signs of syphilis. If they live they grow up as a living testimony of an unsuccessful operation. The operator is often blamed instead of the sins of the father. The retina is generally found detached in such cases. I have included posterior polar cataract and cataract secondary to uveitis in this lecture on hereditary syphilitic diseases. Both may be seen in the acquired form—in fact, they are as frequent in the one as the other. The diffuse milky lenses and the opacities at the anterior pole of the lens are cataracts of the hereditary disease.

Besides the lens another medium may interfere with the projection of rays of light on the retina. The vitreous humour may be turbid owing to fine dust-like opacities, a condition called hyalitis or inflammation of the vitreous humour. It is always secondary to inflammation of the uveal tract alone or that in association with retinitis. It is a sign of inflammation in the tunics of the eye, it is not a disease *per se*.

[After referring to the value of mercury not only in existing early syphilitic manifestations but in rendering milder those which will follow later Mr. Juler continued:]

I usually commence treatment with two and a half grains of blue pill night and morning, seeing the case at least once a week, and watching for any sign of soreness of the gums, salivation, or intestinal irritation. I believe the grey powder and the biniodide of mercury mixture to be equally efficient to the blue pill. Should this internal administration produce griping pains, diarrhœa, or other digestive derangement, I resort at once to the inunction of mercurial ointment to the inside of the arms and thighs. About one drachm of this is well rubbed into the skin of these parts after a warm bath every night before going to bed; the patient may wear a woollen combination garment kept for the purpose, so as to protect the bed-clothes. In the morning another warm bath will clear away the ointment for the day, and it is renewed again each night. If the patient is able to continue in bed the ointment can remain night and day but even then I prefer to give a hot bath once in twenty-four hours. My experience of the injection of mercurial salts into the veins, the muscles, and the subcutaneous connective tissue is at the present time too limited to enable me to speak of either method with much confidence.

In the early secondary stages I prefer to give mercury alone. In the later secondary and early tertiary I prefer the combination of mercury with iodide of potassium. In advanced tertiary conditions the combination of decoction of sarsaparilla with iodide is of service. For children suffering from inherited syphilis I am convinced of the advantage of mercurial inunction combined with the internal administration of iodides. In whatever form administered the action of the drug should be jealously watched by the surgeon against the bad effects of ptyalism. A prolonged course of mercury short of salivation is in my opinion the best way of completely curing the disease and the drug should be continued for weeks or even months after all active signs of this have disappeared.

THE LIVERPOOL CREMATORIUM AND FUNERAL REFORM.—The managers of the Liverpool Crematorium have addressed a second circular to the members of the medical profession pointing out that the establishment has been open for fourteen months and that ten cremations have been satisfactorily performed. They believe that the system only requires to be better known to be largely adopted. The process of cremation is now performed with confidence; the result is cleanly and complete. They crave the assistance of the medical profession in advocating the system and in brushing away the sentimental and other prejudices which to a large extent have stood in the way of popularising this sanitary method of disposal of the dead. It is pleasing to note that here and there funerals are conducted in a sensible manner. Funeral reform though often advocated makes but little headway, especially among the poorer classes. A few days ago the body of the child of a Liverpool veterinary surgeon was enclosed for interment in a coffin composed of woven basket-work. The frame-pieces only were of oak and the rest was a basket shaped like an ordinary coffin. It is advocated for this basket-coffin that it is strong, perfectly air-tight, fulfils all sanitary requirements, and is admirably designed for speedy assimilation with the soil. It has another advantage in being much cheaper than the ordinary and more popular form of bulky wooden coffin.

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Two Lectures
ON
URINARY FEVER.

Delivered at the London Hospital on Nov. 10th, 1897,

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LECTURE II.[1]

GENTLEMEN,—In my last lecture I dealt with two of the forms of urinary fever, and showed that their real cause was the sudden entrance into the circulation of the septic products of some of the organisms growing in the urine or on the walls of the urinary passages. In this lecture I wish to deal with two other varieties, the symptoms of which are equally well marked although of an entirely different character. The first of these is by no means uncommon. During the last few months there have been several cases in the wards that will serve as illustrations.

The most characteristic examples are met with in old men suffering from chronic interstitial nephritis and atony of the bladder at the beginning of what has been called catheter life. The symptoms so far as their broader features are concerned present but little variety. The urine is clear and free from pus. There is no cystitis or suppurative pyelitis. The reaction is faintly acid. The specific gravity is low and the quantity unusually large considering that we have to deal with patients who, if not bedridden, are leading very quiet lives. The first introduction of a catheter does not, as a rule, give rise to any disturbance. Nothing even may be noticed for a week. But generally about the third or fourth day (if the catheter is passed every day) a certain degree of irritability is complained of about the neck of the bladder. There is a desire to pass water more frequently; and the call cannot be resisted. It must be obeyed at once. Then the urine is noticed to be slightly cloudy, though it still remains acid; and now there may be a small quantity of albumin present, though it was not there a few days before. The total amount passed in twenty-four hours, too, begins to fluctuate. Sometimes it falls so low that there is reason to fear that suppression may follow. Sometimes, on the other hand, it increases until there is a veritable polyuria. In one patient under my care the amount rose to between seven and eight pints in the twenty-four hours for many days together. Under the microscope there are a few hyaline casts, perhaps a blood corpuscle or two, pus corpuscles in abundance, and myriads of bacteria. If a culture is made the bacterium coli is almost always present, and in a very large proportion of cases unmixed with any other. Meanwhile the patient is feverish. There is seldom any definite rigor but there may be numerous slight chills. The pulse grows more rapid and feeble. The tongue, red and dry at first, soon becomes brown. There is complete anorexia. Delirium sets in at night and unless a change is effected at once the symptoms grow worse and worse until at the end of ten days or a fortnight the patient sinks into a semi-comatose state from which he never rallies. Of such cases I am afraid you must have seen a considerable number. One is in the wards at present in whom, thanks to early and effectual drainage of the bladder, the symptoms have entirely subsided. He is, however, a much younger man than most and his troubles, though of the same class, are due not to enlargement of the prostate but to sloughing of the urethra consequent upon extravasation of urine.

The pathological changes in these cases are always the same. Everywhere there are signs of recent acute inflammation and, underneath, the changes induced by long-continued chronic disease. The mucous membrane of the bladder is stained here and there by recent hæmorrhages. Flakes of lymph are scattered about upon it and the edges of the folds and ridges have lost their epithelial covering. The interior of the ureters and the pelvis of the kidneys is in the same state. The kidneys themselves are small, hard, and contracted. The apices of the pyramids are eroded and in places between the tubules and under the capsule there are minute collections of pus differing in shape and outline according to the anatomical arrangement at that particular spot. In other words, suppurative cystitis and ascending pyelonephritis have been added to the changes induced by long-continued obstruction to the exit of the urine. If cultures are made from the urine in the bladder or the pus that is found in the pelvis of the kidney or between the tubules the same organism, the bacillus coli, is nearly always present. As a rule when the urine is alkaline it is associated with others. I have, however, found it pure, or almost pure, in most cases in which the urine was still acid.

The symptoms in these cases are usually assigned to shock and suppression of urine caused by the suddenness with which the change is made from the natural and usual mode of micturition to the artificial one, and the method of treatment that is recommended is to empty the bladder by slow degrees instead of doing so all at once. I am convinced, however, that emptying the bladder has nothing to do with them. I do not deny for a moment that rapidly drawing off a large quantity of residual urine through a large catheter while the patient is standing upright would be followed by syncope and very likely, as patients who suffer from a large amount of residual urine are almost all of them aged and broken down in health, by sudden death; but these cases are not to the point. They present no resemblance in their clinical history or their pathology to those that I have in hand and I am happy to say they must be very rare. I have not only never seen one but I have never heard of such an instance either at hospital or in private practice.

Shock will not account for the symptoms or for the pathological changes. The shock that follows operations upon the urinary organs is always immediate in its action. It may affect either the whole nervous system or only those parts of it that are in close physiological relation with the nerves of the injured structures. In the former case the patient falls at once into a state of collapse; the functional activity of every organ in the body is suspended more or less completely and the kidneys and the bladder suffer with the rest. In the latter the kidneys and bladder suffer chiefly if not exclusively. While other organs are but little affected these lose their power of working and either suppression or retention of urine follows according as the influence of the shock falls more heavily upon the nerves that control the kidneys or those that control the bladder.

Now the troubles that are caused by the evacuation of residual urine (except in those cases which I have already excluded) never begin at once. There is always an interval—always of some days, sometimes of more than a week—and when they do set in they begin not suddenly but quietly and insidiously; they cannot therefore be due to shock. Nor are they due to suppression: in the first place because in many instances there is no suppression but exactly the opposite condition—polyuria. I have met with this on several occasions; in one case the quantity passed in twenty-four hours rose to between seven and eight pints. And, in the second place, because the symptoms that are present in these cases bear but a very remote resemblance to those that occur in true suppression of urine—such, for example, as that which is caused by obstruction of the ureters. Total suppression may continue for ten or even fifteen days before it proves fatal. In many instances there are no symptoms at all for the first seven or eight days. When they do set in there is no continued fever or rigors or delirium. Failure of muscular power and weakness of the pulse are the characteristic features, while consciousness is retained to the last. The symptoms in these cases therefore cannot be due to suppression, although it is quite possible that when there is partial suppression they are aggravated and complicated by it. Naturally if the toxins that are absorbed from the urinary passages are not excreted by the kidneys they accumulate in the blood together with the other deleterious substances that should be got rid of in the same way and produce a proportionately greater effect. On the other hand these symptoms are identical in every respect with those that occur after operations performed upon the same kind of patient if the wounds become septic. The gradual onset, the condition of the pulse and tongue, the delirium at night, and the steadily-advancing weakness without any marked degree of fever are exactly what is met with in the so-called exhaustion that proves the end of so many septic operations in the aged. The symptoms are identical, in other words, with those of

[1] Lecture I. was published in THE LANCET of Dec. 18th, 1897.

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slow septic poisoning and they are due to the gradual absorption of the toxic products of the organisms growing in the urine and on the walls of the urinary passages. They may be modified by the failure in the excretory power of the kidneys which prevents the system getting rid of the poisons as rapidly as it should; but the essential cause is the absorption.

In all these cases the first symptom is the same. Suppurative cystitis manifested by the turbidity of the urine and the irritability of the bladder is always the beginning; and this is always due to septic organisms. I have examined the urine from a very large number of these cases and septic organisms are always present, generally the bacillus coli, sometimes alone and sometimes in conjunction with others. Suppurative cystitis never occurs without them. The entry of septic organisms into the bladder is the starting-point. These organisms do not get in by themselves. Residual urine may exist for many years without their getting in or cystitis taking place. They do not get in until a catheter is passed and they get in then because they are carried in by the catheter. A catheter that has never been used is sometimes aseptic. You may fail in getting a culture from its surface. After it has been used two or three times and has been cleaned in the ordinary way it is never sterile. You will never fail with it then.

Two facts bear out this statement very strongly. One is that these consequences rarely set in if a catheter is only passed once. They do not set in until the instrument has been used three or four times—until, in other words, it has become septic. The other is that they very rarely occur at all in cases in which catheters are never passed. They do not occur when a bladder is drained through the perineum or when an aspirator is used, even if it is used four or five times successively, provided, that is to say, that at the end of that time the patient has so far regained control over his bladder that a catheter is not required afterwards. I have notes of fourteen cases of complete retention in which an aspirator was used and the bladder emptied as thoroughly as possible but no consequence of this kind followed in any one of them. The cause of the symptoms is not the emptying of the bladder. They cannot be accounted for by shock or by suppression of urine or reflex congestion of the kidneys. They are dependent upon the use of catheters and in some other way than through the reflex action of the nervous system. They are due to the entrance of septic organisms. As soon as these septic organisms enter the bladder suppurative cystitis follows. Nothing is more favourable to their growth than stagnant urine mixed with a trace of albumin and kept at the temperature of the body. In a very little while they convert the contents of the bladder from a comparatively harmless fluid into an intensely poisonous one. Under ordinary circumstances when the bladder can empty itself thoroughly and at frequent intervals their entry is not a matter of such serious moment. The frequency of micturition which is so invariable in cystitis is a perfectly adequate protection. But in these cases the bladder has lost the power of emptying itself, a certain amount of urine always remains behind, and the result is what might be expected. No sooner have the organisms begun to grow than they spread up the ureters and involve the pelvis of the kidneys. The walls of the ureters in these cases are almost always thin and flaccid. The calibre is often wider than natural. The valve at the entrance into the bladder does not act and owing to the degenerative changes already present the tissues themselves are incapable of making any effectual resistance. In a very little while the micro-organisms spread in all directions through the kidneys and suppuration and septic absorption rapidly follow. There is no rigor or conspicuous rise of temperature because the poisoning is so gradual, but in all other respects the symptoms are identical with those that occur when septic intoxication takes place from other causes in patients of a similar description.

Whose fault is it that these organisms get in? Do they come from the urethra swept in by the catheter or is the catheter septic before it enters the meatus? I am afraid in the majority of cases the fault is in the catheter. It is true that the urethra always contains germs and that they cling to it so closely that it is almost impossible to render it sterile by washing it out, but these germs are for the most part non-pathogenic. Their presence does not matter if they do happen to be carried into the bladder. As soon as the urethra becomes inflamed there are septic organisms in abundance; but inflammation of the urethra is rare under these conditions unless it has already been caused by instrumentation. In the vast majority of cases the catheter itself is to blame. No one would think of using a scalpel that had been used already on a septic case or on any case at all without having it thoroughly sterilised first. Yet though catheters are much more complicated instruments and though every case of cystitis, no matter how slight it is, is septic, catheters are used again and again with only the most perfunctory cleaning. These consequences may be avoided with almost absolute certainty if proper precautions are taken and catheters are sterilised as they ought to be even though the bladder is emptied thoroughly. I have proved this in my own practice.

I look upon the evacuation of a large amount of residual urine as a serious surgical proceeding and requiring the same precautions that are adopted in the case of any other surgical operation. The patient should be prepared in the way I have described in my last lecture. The hands, the glans penis, the prepuce, and especially the meatus are thoroughly washed with soap and water and then with a disinfectant that can be relied on. I prefer corrosive sublimate, one part in a thousand. Every instrument is boiled and wrapped in carbolised lint. The lubricant is sterilised. It is of no use to add an antiseptic. If the antiseptic is a weak one it does no good; if it is strong enough to be of any use as a germicide it injures the mucous membrane of the urethra. I prefer Melchior's catheter in combination with one of my own, made for me by Messrs. Maw, Son and Thompson, as the inner of the two. The whole of the urine is allowed to drain away quietly without using any pressure upon the bladder. If the amount is large this often takes some time as the inner catheter is only a No. 5 English. This is done twice a day until the bladder has begun to recover some degree of tone, the patient meanwhile, as in the case of every other serious surgical operation, being confined to bed. Every day a culture is made from the urine, selecting the last portion passed, and if on the following day there is the faintest suspicion of a growth (it is quite possible to detect it in twenty-four hours if the temperature is kept up) or if the urine is cloudy or if there is any sign of irritability of the bladder some nitrate of silver is injected into the neck and if this does not stop the symptoms at once the bladder is kept empty either by tying a catheter into the urethra or by incision according to the circumstances of the case. Germs are not capable of harm in a bladder that is kept empty. The real danger is not in emptying the bladder but in failing to do so. The walls are flaccid and toneless and if the urine is allowed to escape rapidly they collapse and form a number of folds between which a certain amount of urine collects ready to become a virulent poison if only the germs can enter in.

The fourth variety of so-called urinary fever need not detain us long. It is characterised by symptoms that present a superficial resemblance to those of the one that I described first—especially to that form of it in which rigors occur at intervals. In this, too, rigors are present. But they do not begin upon the first day. They occur without any definite exciting cause, sometimes irregularly, sometimes at intervals so uniform as to suggest an attack of remittent fever. They bear no relation to the act of micturition. The temperature is not normal in the intervals, and they are accompanied by other evidences of constitutional infection. These cases are fortunately rare. I am acquainted with only two, one of which however occurred in my practice only a short time since. The patient was a man fifty-eight years of age apparently healthy, who was suffering from partial retention of urine consequent upon a polypoid outgrowth situated at the neck of the bladder. This growth acted like a ball-valve falling into and completely closing the outlet long before the bladder was emptied. An opening was made in the perineum; the pedicle which was very narrow was twisted off and the growth removed without any difficulty. There was little or no external hæmorrhage but, as often happens in these instances, there was considerable oozing afterwards and coagula formed in the bladder. For the first three days everything went well. There was some difficulty in micturition owing to the coagula but not sufficient to require the passage of a catheter. Then a rigor occurred and the temperature did not fall to its former level after the shivering had passed. The next day there was another rigor and from that time until the patient died, three weeks later, the temperature chart never ceased to exhibit the most extravagant oscillations. There were on

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local symptoms, with the exception of an attack of diarrhœa lasting some days during which the motions were intensely offensive and three days before the end thrombosis of one of the popliteal veins. The wound went on well and was almost healed at the time of death. The power of voluntary micturition and of emptying the bladder was regained. The urine remained acid throughout even when the coagula were present. The quantity and the specific gravity were good and there was no albuminuria after the blood had disappeared. But the strength failed more and more. The body became extremely emaciated. The face assumed the characteristic jaundiced appearance and at last a condition of stupor supervened. Unfortunately the blood in this case was not examined, but there can be no question that the immediate cause was septic infection and that this was due to the entrance into the circulation of an exceptionally virulent form of the bacterium coli. The circumstances of the operation were such as to admit of the possibility of a large number of these bacteria entering at once. There was considerable venous hæmorrhage and owing to the obstruction caused by the coagula at the neck of the bladder the pressure in the bladder must have been raised considerably during micturition. The urine was loaded with the bacterium coli. It was examined many times but no other organisms worth mentioning were present in it. The reaction was strongly acid throughout and it contained a considerable quantity of indol. Where the bacteria came from cannot be said with any degree of certainty. The usual source is the intestine directly or indirectly and from the particularly offensive character of the stools there can be little doubt that the bacteria that inhabited the colon in this case were of an exceptionally active type. It is true that the bacterium coli does not readily give rise to septic infection such as this. The circumstances must be exceptionally favourable. An intermuscular injection, for example, in the case of rabbits is not followed by general infection. It merely gives rise to local suppuration But when the conditions are suitable the bacterium coli is capable of causing a most intense form. If other organisms are present as well or if a large amount of its own toxic products are injected into the veins at the same time there is hardly any organism that surpasses it in activity or virulence. Cases of septic infection such as this following operations upon the urinary organs are happily very uncommon. But it seems probable that many of the instances of so-called urinary fever in which prolonged illness with frequent rigors and no definite local symptoms has followed internal urethrotomy and other similar measures are really due to general infection. Either the virulence of the infecting organism is less or the resisting power of the blood and of the tissues is greater, and the patient after a time recovers.

These are the four varieties of so-called urinary fever that I wish to lay before you. I do not mean to say that every case of fever that follows operations upon the urinary organs is capable of being grouped under one or other of them, and that you will be able to say of each, This is a case of septic intoxication due to a particular organism and that of septic infection. That is certainly not the case. Very few examples are so well defined as those I have brought before you. Nearly all are complicated either by admixture with other forms of septic inflammation or by the effects of pre-existing renal disease My object is to point out to you that there is nothing special or peculiar about these troubles, that they are not examples of "neurotic fever," and that there is no need for any such name as "urinary fever" or to appeal to that last refuge of the destitute the reflex action of the nervous system for an explanation for them. They are merely ordinary septic complications that can be avoided in the vast majority of instances by strict attendance to ordinary surgical principles. The sole point in which they differ from septic troubles in general is that the organism that is most frequent instead of being a staphylococcus or a streptococcus is a bacillus, the bacillus coli, which has for its ordinary habitat the alimentary canal and which has been proved to be the immediate cause of inflammation of the bladder in quite nine cases out of ten.

HER MAJESTY THE QUEEN, who has for the past fifty years been Patron of the Royal Hospital for Diseases of the Chest in the City-road, has sent 70 lb. of cast linen for the patients.

THE DIAGNOSIS OF COUGH.[1]

BY MAYO COLLIER, M.S. LOND., F.R.C.S. ENG.,
SENIOR ASSISTANT SURGEON TO THE NORTH-WEST LONDON HOSPITAL.

COUGH as a symptom or indication of some irritation in the upper or lower respiratory tract or other parts is the commonest affection the human frame is subject to, and yet experience shows one that few medical men are taught to become sufficiently expert in the use of those special instruments requisite to properly investigate many cases that present themselves. Given any case of cough that may present itself for diagnosis and treatment I would maintain that a proper and thorough examination cannot be made nor can a correct diagnosis be arrived at in a majority of cases without the following instruments—stethoscope, laryngoscope, and nasal and ear specula. Now before I go one step further I will justify my statement by illustrations from my note-book.

CASE 1.—A boy, aged thirteen years, had a chronic cough with wasting for two years and attacks of asthma almost nightly. The physician in attendance diagnosed weak lungs. Treatment was by cod-liver oil, cough mixture, and Bournemouth. Up to the time I saw him no examination of nose, larynx or ear had been made. Examination revealed complete nocturnal nasal obstruction. The restoration of nasal respiration quickly supplanted cod-liver oil, Bournemouth, and cough mixture and effected a complete restoration of health.

This case illustrates the necessity of being able to use the nasal speculum and being versed with the more common affections of the nasal chambers.

CASE 2.—A girl aged eighteen years was deaf and had an offensive discharge from both ears. She complained of harassing cough of eleven months' duration. The lungs were normal, the throat was affected by chronic pharyngitis, the nose by chronic rhinitis, and there were fossæ on the septum on both sides opposite the lower turbinated bones. There was also perforation of both tympanic membranes and a large polypus was springing from the edge of the perforation on the right side. Violent coughing was induced by examining or syringing the ear. Polypus removed; exit cough.

Had I time I could multiply a thousandfold these illustrations, but, to return to my subject, I wish to point out that given a patient suffering from a cough the betting to start with, before any examination is made, is ten to one against the cause or source of irritation being in the lungs. Now this is another bold statement, but if I can show reasonable justification I shall be acquitted of any suspicion of being out of my mind or something worse.

A long experience extending over fifteen years in examining patients and treating affections of the upper respiratory tract has convinced me that most of the ordinary complaints found in these regions are directly due to improper, abnormal, and unphysiological methods of taking in the air so requisite to the health and vitality of the body. Catarrhal inflammation is the pathological accompaniment of this unphysiological inspiration and cough is its invariable companion. Some of the older practitioners would and do stand aghast at the heresy contained in this statement. They still are satisfied that a cough is a disease and not a symptom, that the disease is a weakness or affection of the lungs, that a stethoscope is a fad of the rising generation, and that a laryngoscope or nasal speculum is a useless and impertinent innovation.

Now what has struck me as so peculiar is this, and it may be observed in every physician's out-patient room or consulting-room in the kingdom. Given a patient complaining of cough and discomfort referable to the upper respiratory tract the physician percusses the chest and listens for abnormal sounds; he may, or he may not, find evidence of trouble sufficient to account for the cough. His examination ends here. I say that under both conditions he should examine the larynx, nasal chambers, and ear if he

[1] Abstract of a paper read before the West Kent Medico-Chirurgical Society on Dec. 3rd, 1897.

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wishes to arrive at a correct diagnosis and treat his patient efficiently.

Let me illustrate my meaning. Suppose the physician discovers bronchial catarrh or bronchitis. This is certainly sufficient to account for the cough, but bronchial catarrh and bronchitis are not diseases unto themselves, they are in the great majority of cases symptoms of something else, and that something else is unphysiological inspiration. To illustrate this condition of things I could quote you cases by the yard. One, however, will suffice.

CASE 3.—The wife of a well known London consultant was wont to suffer from chronic bronchitis and winter cough for many years necessitating a prolonged stay in the South of France during the winter months. At my suggestion the nasal chambers were examined. Complete anterior nasal obstruction was present on both sides from very enlarged lower turbinal bodies. Deep fossæ were present on both sides of the nasal septum, indicating the degree of nocturnal obstruction. The galvano cautery restored to this lady the physiological functions of her nose, which enabled her to pass the following severe winter in London without a single day's ailment from cough or bronchitis.

Now to neglect an examination of one half of the respiratory tract in cases where cough is a symptom is neither rational nor scientific. Given the whole respiratory tract what portions are liable to be first and more often exposed to irritation and consequent catarrh? Surely not those portions securely encased in thick bony and muscular walls, surrounded by a thick protective covering of fat and skin, and guarded by the ever-wakeful and sensitive straits of the larynx? Would not rather those parts be first affected that are exposed to the vicissitudes of temperature and weather, to noxious gases, to injurious particles of all sorts floating in the air, to the drying and relaxing effects of too little or too much moisture, and to the inroads of the hosts of bacilli that are ever present as resident guests in these parts? I contend it is more likely that these parts will suffer first and more often unless carefully guarded and shielded by the important offices of the nasal chambers.

Now, one word more. The throat, nasal chambers, post-nasal space, and upper larynx are in immediate and direct communication with every cranial nerve coming off from the brain or medulla, as well as the whole of the upper cervical nerves and the sympathetic. Now, with this wide and extensive nerve connexion you will not be surprised to hear that affections of the nasal chambers involving a suspense or curtailment of its physiological functions might and does affect and involve parts most distant. I will enumerate a few from my note-book and from the works of others.

A patient who had suffered from aphonia for two years was shown at a meeting of this society. Anterior nasal obstruction was found and the obstruction was removed. There was complete return of voice in fourteen days. There was not the smallest evidence of hysteria in this case. Strong faradaic currents had produced no effect.

Cases of headache from nasal obstruction are one of the commonest troubles one meets with and are a constant association of nasal obstruction.

I have shown here and published many cases of severe trigeminal neuralgia due to nasal disease which were, moreover, completely cured by removing the nasal troubles.

Cases of chorea are reported by Elsberg and others, as Bosworth and Sallinger, and cases of epilepsy by a score of authorities, all of which were cured permanently by attending to the nasal troubles.

Sallinger, Lennox Browne and others report cases of enuresis as a reflex symptom of nasal disease, and North goes so far as to state that he has never met with a case of neurasthenia without some nasal stenosis or catarrh. With this statement I cordially agree. Affections of the tonsils and post-nasal space in children are always accompanied with dyspepsia, marasmus, and neurasthenia. I would go as far as to state that dyspepsia is a constant accompaniment of chronic nasal stenosis.

Ocular troubles are, according to American authorities, frequently caused by, and associated with, nasal hyperæmia and obstruction. Gruening mentions photophobia and conjunctivitis. Beverley Robinson does the same. Cheatham mentions asthenopia. B. Bettmann, of Chicago, mentions six cases of epiphora, conjunctivitis, photophobia, and pain about the eyes and due to nasal disease.

Harley-street, W.

THE VACCINATION PROBLEM: A CONTRIBUTION TO ITS SOLUTION.[1]

BY FRANCIS T. BOND, B.A., M.D. LOND., F.R.S.EDIN.,
HONORARY SECRETARY TO THE JENNER SOCIETY.

(Concluded from p. 1583.)

A POSSIBLE DISADVANTAGE.

IT may perhaps be urged that any attempt by magistrates in courts of petty sessions acting under different conditions in different parts of the country to discriminate between objectors who have and who have not sufficient grounds for objecting to obey the prescriptions of the vaccination law might lead to undesirable variety of decisions. It must be admitted that there is some ground for this contention. But we may fairly hope that the good sense of the magistracy as a whole, acting as it will do in the light of public opinion, will allow of the practice of the courts in this matter gradually crystallising into a form which will at least prevent the perpetration of serious injustice or the exercise of unreasonable severity and will thereby remove most of the justification for complaint which at present exists.

There are some other advantages incidental to the course of procedure above advocated to which it is desirable to refer.

THE STATE'S GUARDIANSHIP OF THE CHILD WOULD BE MAINTAINED.

The proposal of the Royal Commissioners in its present form would practically involve the complete abandonment by the State of its control of the child in regard to vaccination. As has been above remarked, for all that appears to the contrary in the report, it might be claimed that a child whose parent had once signed a statutory declaration of objection to vaccination would be thereby exempted from liability to vaccination thereafter. Is there any reason for this? Suppose the recalcitrant parent were to die, say, within a month after the statutory exemption of the child; or suppose he were to see reason for ceasing to object; why should the child continue to be exempt? The simpler course and that least open to objection is to give the magistrate the power of suspending the child's vaccination with the reservation of the right of the vaccination authority to apply for a summons at any time thereafter on showing sufficient cause for so doing, as, for example, the occurrence of an outbreak of small-pox or the death of the objecting parent. The reservation of the right thus to summon would serve to show that the State had not renounced its responsibility for the protection of the child and would enable the vaccination authority to apply for the enforcement of the law in case, for instance, of an outbreak of small-pox which threatened danger to the child. Moreover, the principle of suspension is recognised at present though only on medical grounds and there would therefore be no novelty in extending it.

By making it necessary that a parent, the vaccination of whose child has been suspended, should again obtain an order for exemption on its reaching the school age we should largely relieve ourselves of difficulty with that class of parents upon whom the Commissioners specially animadvert, the indifferent and the negligent. A parent who had obtained exemption during infancy of his child but who had ceased to feel strongly on the matter would not be likely to trouble himself at the prospect of his child being vaccinated at school. The proceeding would be a part of the school routine and the great majority of those who were not actively opposed to their children being protected would be as indifferent to their being treated as the rest of their schoolmates as were the great mass of parents who do not themselves read the Bible very sedulously to their children being taught to do so. The average Briton is very accommodating in this respect and easily falls into whatever may be the fashion. It may be fairly assumed that it would be only the most obstinate dissentients who would be likely to lodge an objection. For one reason or another a considerable portion of the children to whose vaccination during infancy objection had been formally made would probably be found by the authorised vaccinator on visiting the school free

[1] Abstract of a paper read before the Sanitary Congress at Leeds on Sept. 15th, 1897.

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from any such embargo and he would be entitled to invest them with a protection against which no special *caveat* had been lodged. Whilst we should still have a remnant of unvaccinated children remaining in our schools from four years upwards it would, by one means or another, have been reduced to a minimum, without need for recourse to those stringent proceedings by which martyrs are at present manufactured and a persistent agitation against vaccination maintained.

EXTENSION OF THE VACCINATION AGE.

But there is another influence affecting materially the existing opposition to infant vaccination which has to be considered. The present English law requires that the infant shall be vaccinated within three months of birth. The Scotch law extends the period to six months, and the Commissioners recommend that the period be similarly extended in this country. But in Germany, which is in all probability the best vaccinated country in the world, the child need not be vaccinated until the end of the year after that in which he was born. Thus in the case of a child born on Jan. 1st, 1897, the law does not compel him to be vaccinated until Dec. 31st, 1898. When we come to inquire into the explanation of this much longer extension of the period of exemption from compulsory vaccination than obtains in this country we find it in the facts that the longer the period of extension the less are the risks and trouble involved and that directly the German child arrives at the school age he comes under the compulsory control of the public vaccinator if he has not been previously efficiently vaccinated. Germany, therefore, is in a position to disregard the moderate risk which the ordinary child runs of being attacked by small-pox in a fairly well-vaccinated community, within a period of at most two years from birth, in the assurance that at five years of age the whole of the juvenile flock will be brought within the fold of protection if, as is not infrequently the case, from laxity or other cause, any portion of it has not been vaccinated within the period specified for so doing by the law. Under the arrangement which has been suggested we might not be able to feel the satisfaction that our children were quite so effectually protected as those of Germany are, but we should at any rate have approached within a much nearer distance of it than we could hope to do if the recommendation of the Commissioners were legalised in its present unconditional form.

In regard to extending the period of exemption there is this important advantage—that we should lessen greatly the risk of complicating vaccination with those troubles which are incidental to the early period of infancy and would thus relieve it of a serious source of opprobrium.

OBJECTION TO EXTENSION OF THE VACCINATION AGE.

The chief objection raised to this extension of the vaccination age has been that we often lose touch with the child himself in consequence of the migration of the parents from the locality in which he was born to some other in which his vaccinal condition cannot be easily ascertained. This was a serious ground of objection in the days before compulsory school attendance and would be so still to any extension of the vaccination age if no relation were established between vaccination and school life. But if directly the child arrives at the school age he comes again in touch with the vaccination authority we have the less need to trouble ourselves about his having escaped from the purview of the vaccination officer in the period immediately succeeding birth.

But there is another objection to which it is necessary to refer. It may not unreasonably be asked to what extent would the interests of this residue of unvaccinated children as well as of the community at large be affected by their existence in it? It must be admitted that a large number of unvaccinated children in any community is a source of real danger in case of a serious outbreak of small-pox. The epidemic at Gloucester conclusively proves this. But the proportion of unvaccinated children in Gloucester at the commencement of the epidemic—the accumulation of ten years of complete neglect by the local authority to enforce the Vaccination Acts—would not be likely to be found in any place in which the law operated in the way above suggested. Moreover, the extent to which the unvaccinated children were attacked in the earlier part of the Gloucester epidemic was in some respects due to the delay which occurred in providing facilities for vaccination owing to a conflict of local authorities in regard to their respective duties in this matter, which it is to be hoped early legislation will render impossible in any future outbreak of the kind. In presence of an epidemic of small-pox all but the comparatively few parents who are "stalwarts" in their opposition to vaccination are ready to have their children vaccinated. That the not very large number of children who might reach the school age and the still smaller number who would pass beyond it unvaccinated under the proposed system would incur some risk of catching small-pox themselves and of thereby diffusing it amongst other persons cannot be denied. But we should in this respect be in no worse position than we are now in regard to them, for they form a portion only of a much larger ill-vaccinated residuum which we have with us as it is and which there is reason to think would be very materially reduced by the adoption of the course suggested.

So far as the ordinary chances of infection are concerned an infant is much less exposed to them than older persons are. In fact, as the experience of most, if not all, modern outbreaks shows, it is the adults who have been vaccinated in infancy and who have not renewed their protection by re-vaccination who supply the bulk of the attacks. In pre-vaccination times it was otherwise. Then the infant portion of the population contributed the majority of the cases of every outbreak, for the adults were mostly protected by having had small-pox. But now with our well-organised sanitary machinery for at once detecting a case of small-pox, and with the facilities which it is hoped the amended law will provide for effective isolation, for rapid vaccination and re-vaccination on the occurrence of an outbreak, and for preventing the introduction of infection into the schools, we may reasonably expect that the risk of the accumulation of any large number of unvaccinated children and of their consequent attack by small-pox as occurred at Gloucester will be small.

INSURANCE OF RE-VACCINATION BY THIS PLAN.

But perhaps the most important advantage of identifying vaccination with the school period of early life is not only that it facilitates the vaccination of the child, if he has not been efficiently vaccinated previously, but because before the child leaves school he will have arrived at an age when it is expedient to re-vaccinate him. It is this recognition of vaccination as an essential incident of school life that offers the key to the solution of the most serious complications of the vaccination problem in this country, for it removes the difficulties, which are otherwise insuperable, in the way of maintaining not only an efficient system of primary vaccination, but also of effecting what is quite as essential if we are to avoid the epidemics of small-pox which have become increasingly frequent of late years, the establishment of re-vaccination on an equally solid foundation.

RE-VACCINATION AN ESSENTIAL ELEMENT OF A NATIONAL SYSTEM.

A national system of vaccination which only protects children and exposes the adolescent and adult, in whom the protection conferred upon them in infancy has been gradually weakened, to the risk of catching small-pox, even though it may be only in a modified form, is so imperfect that it is difficult to feel much enthusiasm in its favour. Jenner and those who lived in the early part of the century had good reason for cherishing the belief that a single vaccination protected for life. But Jenner himself was disillusioned on this point before his death and the obligation which facts imposed upon him of recognising that the protective influence of even a typically good vaccination was not absolute and ineradicable was, no doubt, a severe blow to the enthusiastic hopes which he had honestly entertained and led others to cherish on the subject. There is, however, not only no room for misconception now on this point; there is every need for making re-vaccination a prominent feature of any system that has any claims to be considered a national one. The importance of so doing has been repeatedly insisted on by all the highest authorities on the subject. Unfortunately such advice must be regarded as purely academic in its character unless it can be shown how it is practicable to carry it into effect. A very little consideration will convince that in the case of those who have passed beyond the school age it is not possible to establish anything like a system of general re-vaccination such as that which we can maintain in the case of primary vaccination. We may, it is true, secure, as we do at present, through the influence of the State as the great employer of labour, the re-vaccination of important sections of the community such as the army, navy, police, and postal services; but, after all, these classes represent numerically but a small portion of the whole adult

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population and mainly include the male sex only. Something might, no doubt, be done to impress upon private employers the importance of making re-vaccination a condition of service, but in the face of the increasing difficulties of the labour question it is to be feared that any advice which the State might tender in this direction would be looked on rather as a counsel of perfection than as an embodiment of actual duty. Under these circumstances, therefore, the adoption of re-vaccination as an incident of school life and the logical complement of vaccination under the same conditions presents itself as the only solution of the vaccination problem in regard to re-vaccination, which is simple, practicable, and effective. That it is so is proved by the experience of Germany. And although the label "Made in Germany" is not one that commends itself in ordinary commercial transactions the success which has attended the German vaccination system is such as to show that it is the outcome of a well-considered and practicable scheme. Nor has this scheme been forced upon the country, as is sometimes represented, by a bureaucratic Government; it has been adopted by the national Parliament as the result of the lesson taught to the whole of Germany by the experience of the epidemic of small-pox in 1870–72. It was the experience of Frankfort in escaping epidemic small-pox when flooded with French prisoners suffering from it during the Franco-German war owing to the general vaccination and re-vaccination of its citizens which opened the eyes of Germany to the necessity of making re-vaccination a feature of her national system of protection. It is to be hoped that the result of the similar experience of Gloucester during its recent great epidemic may teach a similar lesson to the people and Parliament of Great Britain. Should it do so the citizens of Gloucester will have some compensation for the price which they have had to pay for buying this experience. It is not to be supposed that the proposal to graft vaccination and re-vaccination on to our national system of education will not meet with a certain amount of opposition. Those who object to vaccination under any conditions will, of course, oppose it energetically. Even the zealous educationalist who may have no antipathy to vaccination itself will possibly in some cases resent the introduction into the curriculum of school-life of what he may consider another disturbing element. But it may fairly be assumed that the great mass of intelligent persons when they can be made to see, as the German nation has done, that there is really no practicable alternative between this course and the abandonment of anything like a national system of protection against so dreaded a disease as small-pox will acquiesce in the necessity for adopting it. It is well to bear in mind in connexion with the re-vaccination of children in public elementary schools that children of about twelve years of age are in a stage of transition, physically, intellectually, and socially. They are not only in some respects putting on a new physique but are about to pass from the influence and control of their parents to a stage of life when they will be in a large degree their own masters and when they will not be so amenable to advice on matters that are somewhat out of their grasp as they are before leaving school.

If at the time when the end of his school life was approaching the child were to receive some information in the shape of readable literature showing the history of small-pox and vaccination and the reason why the adoption of the latter is expedient for the general good it is very probable not only that any feeling of repugnance to the operation, if such should by any means have been previously excited in the child's mind, would be allayed, but that the child himself might as the result of intelligent conviction become a useful aid in strengthening both at the time and in after years the convictions of others.

We have in this way at our hand an invaluable opportunity for influencing the rising generation and it will be extremely foolish if we throw it away. Even where through parental prejudice the child may have escaped vaccination in early life he might probably at this stage be brought within the fold of protection. Whether this course be adopted or not it is eminently desirable that more effort should be made than has been hitherto done both by the Government and by associated enterprise to diffuse information as to the evidence in favour of vaccination. If it be thought to be the duty of the State to advise much more to enforce a practice which is particularly open to misrepresentation, as vaccination unquestionably is, it is surely also a duty to spare no effort to protect the public against the misconceptions to which they are thus exposed. Why, for instance, should not every parent who receives a notice of the requirements of the law in regard to the vaccination of his child be furnished at the same time with an intelligible statement of the reasons why the law imposes this obligation upon him?

[Concerning the inequality of the present vaccination laws Dr. Bond said:] That grievances exist in connexion with vaccination procedure at present it is impossible to deny. It is more than a grievance it is a scandal that the law does not press equally upon the poor and upon the rich. The rich dissentient can contract himself out of vaccination by the payment of a fine which to the poor man may mean the breaking up of his household or imprisonment. The rich dissentient need not even appear personally in court; he can fee a lawyer to attend on his behalf. The poor man must either go himself or send his wife or run the risk of being dealt with as contumacious. The rich mother can have her child vaccinated at home, the poor one has to take hers to a public station often at a distance of some miles and through rain or snow. The rich mother can persuade a complaisant medical man to vaccinate her child with only one mark and to certify, as he legally can do, that the child has been "successfully" vaccinated. The poor man's child has to be vaccinated in four places, for which he is not thankful, as he ought to be, and which the mother resents as a grievance, as it truly is, if all children are equal before the law. If there is one thing more than another that is indispensable in any new legislation on this subject it is that all citizens, rich and poor alike, shall be treated with absolute impartiality. We cannot afford to have the benefits of vaccination whittled away by the exasperating effect of unjust social distinctions.

At any rate, during the interregnum which must necessarily continue until the Government can decide on what course they will adopt in regard to legislation on this matter the enforcement of serious and repeated penalties is much to be deprecated. It is little less than a public scandal that by one bench of magistrates a defaulter should be mulcted in a nominal fine whilst by another, which in many cases sits in the very same court, the penalty inflicted may be so heavy that to a labouring man it may necessitate its liquidation either by distress on his goods or imprisonment. Such anomalies are wholly indefensible. They bring the law into disrepute and injure the cause of vaccination itself.

There are other subjects of importance connected with the report of the Royal Commission and with the legislation which must follow on it which invite discussion, such as the questions to what authority is the administration of vaccination to be in future entrusted? Is it expedient that every medical practitioner shall be recognised as a public vaccinator? How can the certificates of vaccination and of deaths from small-pox be improved so as to make them more trustworthy records than they are at present? And how are sanitary authorities to be induced to make adequate provision for isolating small-pox and other infectious diseases as the Commissioners advise? These questions, however, though of much importance in connexion with the reorganisation of vaccination administration are subordinate to the fundamental problem which has been discussed here; they involve technical considerations which cannot be adequately dealt with in this place, and they are much less open to contention than the question whether an efficient national system of vaccination is to be maintained or not. What such a system can do when it is effectually established and maintained can be learned by studying its effects during the last twenty years in Gemany where we have an object-lesson as unimpeachable and convincing of the results to be expected from carrying the vaccination of a nation out thoroughly as the experience of Gloucester has afforded of those of its local neglect.

DONATIONS TO SWANSEA CHARITIES.—A sum of £4000 has recently reached the Swansea charities through the Guesdon bequest. Sir R. Webster, after consulting with Sir J. D. T. Llewelyn, has allocated £2000 to the Swansea Hospital, £1000 to the Deaf and Dumb Institution, and £500 each to the Blind Institution and the Orphans' Home.

SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Sir Squire Bancroft will give his reading of the "Christmas Carol" to which have been added some passages from "The Chimes" at the Coöperative Hall, Plymouth, on Jan. 26th, in aid of the South Devon and East Cornwall Hospital, Plymouth. The Earl of Morley will preside.

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THE

GUAIACOL TREATMENT OF LARYNGEAL TUBERCULOSIS ESPECIALLY BY SUB-MUCOUS INJECTIONS.

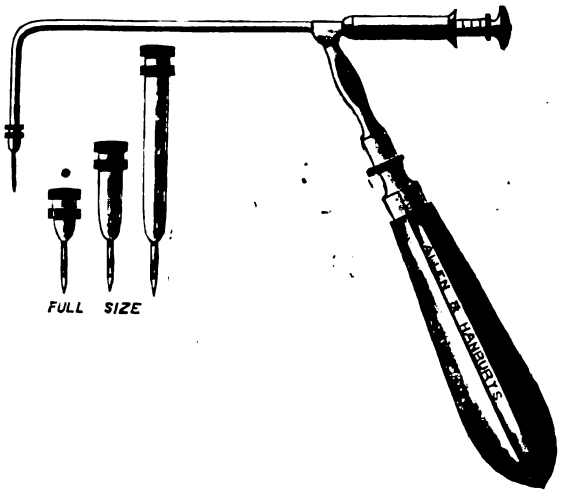
BY JAMES DONELAN, M.B. R.U.I.,
PHYSICIAN TO THE ITALIAN HOSPITAL, LONDON.

THE indisputably good results from the local use of lactic acid in the treatment of laryngeal tuberculosis have caused that drug to be looked on almost as a specific in this form of the disease. There is, however, some reason to fear that its proved superiority to a multitude of remedies has tended somewhat to exclude from trial drugs generally admitted to do good in tuberculosis affecting other portions of the respiratory system. Amongst these creosote probably stands in the front rank, especially in the form known as guaiacol.

Some years ago I was associated with the late Sir Morell Mackenzie in a series of trials of creosote as a local agent in laryngeal tuberculosis by means of sprays and applications with the cotton-wool holder and some good results were obtained in cases of superficial ulceration. A hypodermic syringe with a long curved handle was also used for submucous injections, but the difficulty at that time in obtaining a sufficiently pure form of the drug, and more especially the excellent results that continued to follow the use of lactic acid by Krause, Heryng and others, caused these experiments to be abandoned. My attention was again called to this mode of treatment by the publication two years ago of a number of cases of laryngeal phthisis treated successfully by submucous injections of guaiacol by Dr. W. F. Chappell, of New York,[1] who has also invented a special syringe for the purpose. Since that time I have had the opportunity of administering guaiacol in this manner in seven cases, six in which there were marked pulmonary complications and one in which the disease so far appears to be primary. The results have been uniformly satisfactory as regards the local affection. The method pursued was that suggested by Dr. Chappell [2] with some slight modifications in individual cases. Treatment commenced by thoroughly cleansing the larynx at least once a day by means of antiseptic sprays and especially by a mixture of guaiacol in paroleine or castor oil with or without the addition of menthol. The effect of these applications was to reduce œdema and in the case of newly-formed superficial ulcers to heal them. The larynx was then cocainised, the needle of the submucous syringe guided by the laryngeal mirror inserted in the desired site, and the dose, usually one minim, of pure guaiacol injected beneath the mucous membrane in the floor of an ulcer or into the most prominent part of an infiltration. The local reaction was always slight and easily controlled by rest and sucking ice. On one occasion a patient who had no previous or subsequent hæmoptysis used his voice rather loudly shortly after the injection was made and coughed up small quantities of blood for about half an hour afterwards, but this was the only instance of bleeding following the use of the needle. In no case, however, did any serious inconvenience, much less danger, follow the treatment. The injections were continued at intervals of a week and in two cases for part of the time every four days. In one of these there was a very obstinate ulcer in the inter-arytenoid fold which had resisted all previous treatment by curetting and lactic acid. So great was the dysphagia that the patient though hungry had such a dread of every form of food that rectal alimentation had to be used. After one week's treatment with the guaiacol spray and two injections of one minim of guaiacol in the floor of the ulcer the dysphagia practically disappeared and the ulcer completely healed shortly afterwards. I am indebted to Sir Felix Semon for the opportunity of testing this treatment in another case with somewhat similar history in which an equally good local result was obtained and though the patient subsequently succumbed to pulmonary complications the ulcer did not recur.

[1] Journal of Laryngology, 1895, p. 355.
[2] Loc cit.

It is in the speedy relief of the dysphagia that the good results of this treatment are most manifest and in this respect it is far superior to lactic acid which especially when associated with the curette usually temporarily aggravates this distressing symptom. It is not suggested here that spraying and injecting guaiacol for a few weeks is enough to cure every case of laryngeal tuberculosis. There are, however, many cases in which the pulmonary lesions are slight and stationary and in which much may be hoped from the "self-limiting" character of the disease if the vital force is not too far reduced by persistent cough and dysphagia. These are the cases in which the best results are to be hoped from the guaiacol treatment. To be of any use, however, it must be perseveringly carried out and



where ulceration is at all firmly established the larynx should be carefully cleansed with the spray at least once a day. These measures, which do not require any special skill, will often be found to heal even well-established ulcers. The injections will be found a powerful auxiliary in the case of considerable infiltration or extensive ulceration. They do not appear to be contra-indicated by the presence of even a considerable amount of œdema, as in my experience the œdema was certainly not increased and generally somewhat diminished shortly after the injections were commenced. The diminished blood-supply and consequent lowered vitality of the affected parts may account for the absence of serious local reaction.

As it was found that the original adapted hypodermic syringe was unsatisfactory through want of rigidity and especially through the influence of the guaiacol on the piston leathers I designed the syringe shown on a reduced scale in the accompanying illustration. It is made entirely of steel and is therefore completely sterilisable. It consists of a barrel mounted on a modified pistol handle, a long steel tube with a rectangular laryngeal curve at the end of which is a thread coarse enough to safely carry the different nozzles. These are three in number and vary in length according to the depth in the larynx at which it is desired to inject. Each nozzle ends in a smoothly rounded shoulder which prevents the needle penetrating too far. The needle projects a quarter of an inch from the shoulder, that being found to be the depth necessary to ensure retention of the fluid. The special feature of the syringe is that it introduces for the first time, I think, the application of the plunger pump to these instruments. Instead of a piston rod and leathers there is a steel plunger graduated in minims and fitting the barrel with sufficient accuracy to ensure the propulsion of fluids. The syringe is filled by withdrawing the plunger and pouring pure guaiacol into the barrel until it fills it and begins to drip from the needle. The plunger is then replaced and pressed in until only the dose required is left in the barrel. The needle having been inserted in the mucous membrane the plunger is pressed home quickly with the thumb. The needle should, if possible, be retained *in situ* for a second or two to ensure retention of the fluid. I should add that the design has been very well carried out by Messrs. Allen and Hanburys, who are now making these instruments.

Upper Wimpole street, W

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

WEST LONDON HOSPITAL.

A CASE OF "ANTITOXIN FEVER."

(Under the care of Dr. SEYMOUR TAYLOR.)

IN numerous instances after the injection of diphtheria antitoxin rashes have been observed, chiefly erythematous and urticarial in nature; pain and effusion in the joints have also been noticed in many cases, and in these points the interesting case described below is not unlike the results of an antitoxin injection, but at least a week seems to have elapsed between the injection and the first appearance of the symptoms and this fact cannot but throw some doubt on a causal connexion between the two. For the notes of this case we are indebted to Dr. Henry J. Davis, late house physician.

Whilst nursing a case of tracheotomy the patient, aged twenty-four years, contracted a mild faucial attack of diphtheria. She was admitted to the West London Hospital under the care of Dr. Seymour Taylor on Sept. 10th, having been previously indisposed for five days with sore throat and general malaise. The uvula was pendulous and œdematous, the tonsils were red and swollen, and their inner surfaces were covered with a white, glistening membrane which extended on to the left palatal arch; some adenitis was present. Cultivation showed the presence of diphtheria bacilli. 20 c.c. of antitoxin from the British Institute of Preventive Medicine were injected in the loin and twenty-four hours later 10 c.c. were injected in the buttock. Beyond some local pain following the lumbar subcutaneous injection no constitutional disturbance followed. The membrane rapidly disappeared, leaving some follicular distension which cleared on the third day. The temperature remained normal for seven days and the patient appeared to be making a rapid recovery. The adenitis had quite subsided by Sept. 15th. On the 18th there was some elevation of temperature coincidently with enlargement and tenderness of the infracondylar and cervical glands. The tonsils, especially the right, again became swollen and two days later a well-marked scarlatiniform rash appeared on the buttocks, thighs, and legs together with tenderness and effusion in all the principal joints. Constitutional disturbance was now considerable. There were headache, fever, drowsiness, nausea, and severe pains in the joints, back, and limbs. A papular rash appeared on the face and neck and with the fading of the erythematous rash a raised, blotchy, serpiginous eruption broke out on the trunk. The rash itched considerably. The effusion in the joints increased, the knees and ankles being exquisitely tender. The joint pains were relieved by salicylates, phenacetin, and bromides, the knees, elbows, and ankles being painted with equal parts of the liniments of aconite, belladonna, and chloroform and wrapped in cotton-wool. On the 23rd the rash had quite faded and the temperature was normal; all the symptoms rapidly disappeared, the patient made an uninterrupted recovery, and left the hospital for home on Oct. 16th. There was no albumin in the urine, peeling, cardiac complication, or paralysis throughout the illness.

Remarks by Dr. DAVIS.—The sudden onset with tonsillitis, adenitis, headache, rash, and joint pain suggested at one time the possibility of scarlet fever and acute rheumatism, but with the disappearance of the rash all the symptoms rapidly subsided. The antitoxin was obtained from the Institute.

Medical Societies.

HUNTERIAN SOCIETY.

Exhibition of Cases and Specimens.

A CLINICAL meeting of this society was held at the London Institution on Dec. 8th, the President, Dr. G. E. HERMAN, being in the chair.

Dr. APPLEFORD showed a man, aged forty-nine years, who was the subject of a Curious Deformity of the Right Hand. The thumb and first finger were remarkable for their size, the latter being 5¾ in. in length and tuberculated. The second finger at the age of seven years had been removed on account of its bulk. The hand was a very useful one.

Dr. ARTHUR DAVIES showed a woman, aged twenty-six years, who had been treated seven years ago by Koch's Tuberculin, since which time the physical signs of phthisis had remained practically stationary. Owing to a contracting cavity at the left base the heart had been drawn into the post-axillary region.

Mr. POLAND exhibited a rare case of Acute Rachitic Curvature of the Tibia Backwards (just before the anterior tubercle) upon which he had performed osteotomy with success. The patient, a girl aged seventeen years, had fairly severe rickets from infancy, the ends of the long bones being still bulky and the femora much curved. The bend at the upper end of each tibia was at the lower level of the tubercle and presented an appearance not unlike dislocation of the knee. The rest of the bone in each limb appeared quite normal. At this point the operation was performed. The right tibia and fibula were carefully and gradually divided and their diaphyses forcibly bent backwards (bringing them into a straight line with their upper epiphyses) and the limb was placed on a double inclined plane. Firm consolidation took place readily in the corrected position. Radiographs of the left leg and knee were shown as illustrating the contrast between the two limbs.

Dr. KELSON showed a Rhinolith removed from a woman, aged sixty-two years, who had suffered from foul-smelling breath and some fœtid discharges from the nose. The rhinolith was easily removed and all the symptoms ceased.

Mr. A. H. TUBBY showed a case of Syphilitic Curvature of both Tibiæ. The patient, a girl, aged twelve years, with a history of snuffles and a rash about two weeks after birth, was a stunted child of pallid and syphilitic aspect. The legs were remarkably curved forwards, which condition, existing since four years of age, had been gradually getting worse. The tibiæ were longer than the femora and were very tender, much hypertrophied, with rounded crests and uneven sides; their curve was entirely anterior, not lateral, thus being in distinct contrast to rachitic curvature. The condition was osteoporotic, similar to that found in Parrot's nodes. The teeth were not pegged or notched, but the palate was very highly arched.

Mr. COTMAN exhibited a boy, aged twelve years, who for about six months had had a persistent ring of erythema round his mouth caused by sucking his lips during and on waking from sleep. Remedies applied and watching him for a few nights effected a cure, but the trouble invariably returned as soon as these were discontinued.

Remarks on these cases were made by the PRESIDENT, Mr. TREGELLES FOX, and Mr. LAMPLOUGH.

BRITISH GYNÆCOLOGICAL SOCIETY.

Hæmorrhagic Endometritis.—Exhibition of Specimens.

A MEETING of this society was held on Dec. 9th, Dr. GRANVILLE BANTOCK, the Vice-President, being in the chair.

Dr. J. A. SHAW-MACKENZIE read an adjourned paper on Hæmorrhagic Endometritis. In pointing out the difficulties of differential diagnosis between chronic inflammatory conditions of the endometrium and commencing adeno-carcinoma in curetted fragments he exhibited and contrasted microscopic sections of the same. He showed two uteri with microscopic sections removed by Dr. Bantock and

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Mr. Skene Keith for continuous and severe bleeding rebellious to usual medication and repeated curetting in women at the menopause. In both hæmorrhage had endangered life and both since the operation—four years in the first case and nine months in the second—were in good health. He associated these cases with the case of the late Sir Spencer Wells and Dr. Sims Woodhead's pathological report published in 1893[1] in which the patient had died after hysterectomy from exhaustion consequent on intractable hæmorrhage which previous curetting and removal of the tubes had failed to check. He exhibited the uterus which the late Sir Spencer Wells had later kindly given to him and pointed out that the microscopic sections were the same as in Dr. Bantock's and Mr. Skene Keith's cases. He considered the term hæmorrhagic endometritis clinically expressed bleeding from the uterus from various enumerated general and local causes while the microscopic appearances of the endometrium were those of chronic inflammation of different degrees. He considered menorrhagia in many cases was due to gonorrhœa and unsuspected syphilis usually associated with ovarian and tubal disease in single women, especially in parous women after abortion and delivery with sub-involution of uterus and also in young adult women the subject of inherited syphilis several cases of which, including sisters, were at the present time under his care. He briefly referred to the clinical and microscopical differentiation between epithelioma, adeno-carcinoma, and syphilitic disease of the cervix and os uteri.

Dr. MACNAUGHTON JONES observed that the subject was one of great importance as it involved questions of both diagnosis and treatment. As to diagnosis the clinical features taken alone were sometimes ambiguous; whilst the evidence supplied by the microscope was often conflicting. Many years ago he published a section of a case of hæmorrhagic endometritis, in which the ultimate ending of the case showed it to be one of sarcoma. A great many different conditions had been described under the name "hæmorrhagic endometritis," which was not a very scientific term. In one such case where the patient had profuse hæmorrhage a small raspberry-like projection was found in the uterus which was reported on by the pathologist as being malignant; yet the patient was at present alive and well. He then related two cases on which he had recently operated, one a woman aged twenty-four years and the other a woman aged thirty-two years. Both were treated by dilatation, curetting, and swabbing out of the uterine cavity with chromic acid. When hæmorrhage persisted in spite of treatment hysterectomy was the only resource.

Dr. CLEMENT GODSON said that he first saw, five years ago, the patient mentioned by Dr. Shaw-Mackenzie as having been operated on by Mr. Keith. When he saw her again at Mr. Keith's request he was much struck by the change in her appearance; she looked as if another flooding must prove fatal. He entirely concurred in the treatment adopted—hysterectomy.

Dr. HERBERT SNOW agreed with what had been said as to the variability of pathologists' reports. Each one had his own views and methods, and even the terms employed were vague. Carcinoma of the body of the uterus resulted from proliferation of the utricular glands which first became branched, then ulceration took place and all trace of tubular arrangement was lost. But this disease was at first encapsuled and tended to spread towards the free surface, he therefore thought that if taken early enough a free scraping might be effective in curing the cancer. The fact that there was no return was no proof that it was not malignant.

Dr. F. EDGE thought that in performing hysterectomy for these conditions they were often in danger of going too far, for the hæmorrhage might be due to constitutional conditions, and it was a question whether they might not sometimes be removing an organ that was suffering but not to blame. Taking 100 cases of hæmorrhage lasting some years were they justified in doing hysterectomy in every case because in ten of them malignant disease developed? It was possible that even in these ten the malignant change might have been averted by earlier treatment, for cancer was largely due to continued irritation. He thought that to advise hysterectomy for hæmorrhagic endometritis was to open the door of surgical intervention much wider than some of them would intend.

Dr. C. H. F. ROUTH doubted if the diagnosis of these cases was any more advanced now than it was thirty years ago. Three competent men might see a case and diagnose it respectively as carcinoma, sarcoma, and benign disease. They must look to other guides than the microscope; and the chief thing was to take the *tout ensemble* of the patient and not to confine their attention to the uterus. Of local conditions the two most important indications of cancer were induration and enlargement of glands and fixation of the uterus.

Dr. GRANVILLE BANTOCK admitted that he also had very little confidence in the microscope—cases pronounced to be malignant lived for years, and *vice versâ*. He had only seen three cases in which he thought it necessary to remove the uterus for hæmorrhage. The first was a married woman, aged twenty-seven years, who had had numerous curettings done. On dilating the uterus he removed a table-spoonful of softened endometrium; and when he had removed the uterus, there was a further tea-spoonful of the same material. She was now quite well. The other two patients had passed the menopause; one died twelve months later apparently from cancer of the liver; the other was alive and well. Dr. Shaw-Mackenzie attributed the origin of the disease in many cases to syphilis; he thought that if this were so they would meet with the condition much more often than was the case.

Dr. SHAW-MACKENZIE briefly replied.

Dr. R. D. PUREFOY (Dublin) showed the following specimens: (1) A Myoma of the Uterus removed by Panhysterectomy; (2) a Myoma of the Uterus removed by Myomectomy; (3) Ruptured Tubal Gestation coincident with Uterine Pregnancy; (4) a Fibroid Uterus removed by Morcellement; and (5) a Dermoid Cyst removed by Vaginal Colpotomy.

Dr. F. EDGE (Wolverhampton) showed (1) a Myomatous Uterus removed by Panhysterectomy; and (2) a Double Hydrosalpinx.

Mr. O'CALLAGHAN showed (1) A Cancer of the Uterus removed by Vaginal Hysterectomy; and (2) a Double Pyosalpinx.

[1] Brit. Med. Jour., Feb. 25th, 1893.

LIVERPOOL MEDICAL INSTITUTION.

Chloroform in Removal of Tonsils.—Cleft Palate and Hare-lip Operations.—Pneumothorax.—Traumatic Cyst of the Iris.

A MEETING of this society was held on Dec. 16th, Dr. RICHARD CATON, President, being in the chair.

Dr. PERMEWAN read a note upon the Use of Chloroform in Removal of Tonsils. He considered it to be dangerous and unwarrantable to use chloroform for the removal of tonsils. He felt convinced that in the large majority of cases the use of any anæsthetic was quite unnecessary and in the few remaining cases when an anæsthetic might be advisable he strongly recommended the use of nitrous oxide. The disadvantages of an anæsthetic were considerable both to the patient and the operator; these disadvantages were fully considered under the following heads: (1) the risk of general anæsthesia itself; (2) blood in the trachea; (3) shrinking of the tonsils under an anæsthetic; (4) the recumbent position not convenient; and (5) the tongue apt to get in the way. After consideration of the various advantages and disadvantages Dr. Permewan strongly recommended the removal of tonsils without any anæsthetic.—Mr. RAWDON had removed a number of tonsils from both children and adults, the latter sometimes under chloroform, especially when post-nasal adenoids were removed at the same time. He had had no anxiety with the anæsthetic; he took special care that the patients were under but not deeply under the chloroform.—Mr. BARK could not understand anyone using chloroform for the removal of tonsils only; enlarged tonsils in young children were almost invariably accompanied by post-nasal growths and it was more important to remove these than the tonsils.—Mr. FINGLAND deprecated the practice of administering chloroform to patients in the upright position.—Dr. HUNT, Dr. CARTER, Mr. HOLLAND, Dr. O'HAGAN, Dr. RAW, Mr. BURNS GEMMELL, Mr. MURRAY, Mr. LARKIN, and Mr. NEWBOLT also took part in the discussion.—Dr. PERMEWAN replied.

Mr. R. W. MURRAY brought forward some children upon whom he had operated for Cleft Palate and Hare-lip. He urged the importance of closing the cleft palate before the child had learned to talk. In several cases where this had been done the children, speaking quite naturally, were shown to the society.

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Dr. BUSHBY read some short notes on five cases of Pneumothorax which had come under his notice during the last twelve months. The first case was one of tuberculous disease of the lung in which the pneumothorax was recovered from without effusion of fluid. The second was a case of hydro-pneumothorax of long-standing which came under notice a few weeks before death. The third was a case of pneumothorax arising in a strong, healthy man without evidence or history of tuberculous disease. The condition in this case was completely recovered from without effusion of fluid. The fourth case originated in a left-sided pneumonia passing into gangrene which broke down into the pleural cavity. At the necropsy the husk of a grain of wheat was found in the gangrenous patch. In this case the patient himself had ascribed his illness to the inhalation of dust from grain. The fifth case was in a man whose left lung was almost destroyed by tuberculous disease. Death resulted from the rupture of a vessel in a small cavity in the apex of the right lung which was otherwise not diseased.

Mr. SHEARS showed a man, aged thirty-five years, suffering from a Traumatic Implantation Cyst of the Iris.

BIRKENHEAD MEDICAL SOCIETY.

Operation for Subluxation of the Knee-joint.—Death from Uræmic Convulsions following Parturition—Anti-Streptococcic Serum in Post partum Peritonitis and Septicæmia—Bicornate Uterus—Rigid Os with Complications.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Dec. 10th, Dr. R. S. MARSDEN, President, being in the chair.

Mr. A. H. BUTCHER showed a man and read the following notes of an operation he had performed in order to fix the knee-joint in a case of Subluxation. He said that there were certain cases not very frequent which come before surgeons for alleviation and which were not referred to in the ordinary works on surgery and this was his excuse for making a few remarks on the cause and result of an operation he had performed at the man's express desire so that he might be able to follow his employment with greater confidence and safety. The case was one of constantly recurring subluxation due to extreme laxity of the joint structures, so much so that the man could subluxate his joint at will. The result of this laxity was instability, so that the following of his employment as a dock labourer was attended with considerable risk, for when any extra strain was put upon the joint it gave way and the man would fall. He was under treatment at the Borough Hospital and various methods were tried in the hope of causing some contraction of the surrounding structures of the joint; knee-caps, caustics, &c., were used, but without success. An operation was performed in the hope of anchoring the patella in position, but this also failed; the patient then migrated elsewhere where excision was suggested, but to this he would not agree on account of the inevitable shortening. The man returned to him (Mr. Butcher) in the hope that he might be able to give him a stiff knee, as he declared that a stiff knee would be more useful to him than the knee in its then lax condition. This Mr. Butcher agreed to do and operated in the following manner. A slightly incurved incision was made across the front of the joint from the back portion of the internal to the back portion of the external condyle of the femur, dividing all the structures down to the bone and cutting through the ligamentum patellæ, which was turned up, the joint was forcibly flexed, the lateral ligaments were divided together with the crucial ligaments, which were quite healthy, and the joint was brought well into view. With a sharp gouge the semilunar cartilages were removed and the condyles of the femur were thoroughly denuded of all the articular cartilage, taking care to remove the portions well back and also the patellar portion in front; then the tibia was treated in the same manner with the exception that the tuberosities were slightly gouged out so as to make a cup-shaped surface into which to place the convex femur. The cartilage surface of the patella was next removed and the ligamentum patellæ sutured. The femur was now placed into the hollowed out tibia and the whole limb placed on a McIntyre splint. The bones were now secured in position by two ivory pegs about four inches long, one being driven through the external condyle of the femur into the internal tuberosity of the tibia and the other from the internal to the external. A few strands of silkworm gut were left in one corner of the wound, the rest being drawn into perfect apposition and the whole covered with sulphocyanide gauze and wool. At the end of twenty-four hours the wound was dressed and at no time did the temperature rise above 101° F. The limb was placed in plaster-of-Paris at the end of four weeks and a week later the patient was discharged. The plaster was removed in nine weeks from the date of the operation and he was now able to go about without support and with a limb practically no shorter than its fellow, for on very careful measurement one-eighth of an inch could scarcely be detected. Mr. Butcher was of opinion that the result was far preferable to any that could have been attained by the ordinary method of excision, where the patient would have had a couple of inches shortening and would have been obliged to wear a special boot. It is not often that one is called upon to operate on a perfectly healthy joint in order to procure fixation, but for diseased joints the matter is different, for there are then removed not only cartilage and synovial membrane but almost invariably certain portions of diseased bone.

Dr. W. FLOYD read notes (1) of a case of Death after Parturition from Uræmic Convulsions; and (2) Post-partum Peritonitis and Septicæmia in which the Anti-streptococcic Serum had been used.

Mr. WILKINSON read notes (1) of a case of Bicornate Uterus; and (2) a case of Rigid Os where the vertex of the fœtus was bound down by adhesions to the lower zone of the uterus.

In the discussions which ensued on the various cases shown the PRESIDENT, Dr. F. JOHNSTON, Mr. WILKINSON, Dr. GIBSON, Dr. BRIEN, and Dr. W. FLOYD took part.

Dr. STANSFIELD exhibited (1) a case of Hemianæsthesia affecting the right side of the body; and (2) a man suffering from a Tumour of the Ethmoid Bone most probably of a sarcomatous nature.

Dr. W. FLOYD showed an Acephalic Fœtus.

Dr. STANSFIELD showed a large Meningocele.

Dr. CARDEN PEARSON showed (1) a pair of Contracted Kidneys; and (2) a Perforated Ulcer of the Colon.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Suppurative Middle-ear Disease.

A MEETING of this section was held on Nov. 12th, Sir WILLIAM THOMSON, the President, being in the chair.

Mr. ROBERT H. WOODS read a paper on a case of Suppurative Middle-ear Disease complicated by lateral sinus thrombosis, extra-dural cerebellar abscess, and temporo-sphenoidal abscess. The patient, a man, aged twenty-seven years, was admitted to the Hardwicke Hospital suffering from symptoms of typhoid fever. He had had chronic otorrhœa for seven years, the discharge ceasing seven days before admission. Lateral sinus thrombosis was diagnosed and an operation performed. The mastoid antrum was opened and cleared out and the bony meatus extended back to the groove from the lateral sinus, in which a septic thrombus was found. An extra-dural abscess on the posterior aspect of the temporal bone was evacuated. Two days later, symptoms of brain abscess persisting, a second operation was undertaken with the result that a temporo-sphenoidal abscess was tapped and four drachms of pus were removed. The patient made an uninterrupted recovery.

The PRESIDENT congratulated Mr. Woods on the result which had attended his operation. Such cases, so far, had not always been so satisfactory.

Mr. M'ARDLE said that he had seen Mr. Woods use the mallet and gouge and he himself preferred the gouge. There was a great difficulty in guiding the electric burr.

Mr. FITZGIBBON said that the question as to the use of the gouge or the use of a burr or the use of a trephine must depend to a great extent on what is found after the incision.

Several other members having spoken Mr. WOODS said, in reply, that in these cases there was the greatest difficulty in getting through the bone because there was a sclerosing osteitis set up which eburnated the mastoid process and made it exceedingly difficult to get through and it was in these cases that the burr was so useful. It was not at all

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probable that concussion of the brain could be caused by blows of the mallet on a chisel.

SECTION OF PATHOLOGY.

Exhibition of Specimens.

A MEETING of this section was held on Dec. 3rd, Dr. J. M. PURSER, President, being in the chair.

Mr. A. H. BENSON showed an Eye in which a splinter of iron had been embedded for fourteen years.

Mr. WERNER gave details of (1) Sarcoma of the Choroid; (2) Glioma of the Retina; and (3) Myxo-Sarcoma of the Lacrymal Gland.

Dr. MCWEENEY showed two Hydatid Cysts, one from the lower lobe of the left lung and the other from behind the right lobe of the liver.

Dr. J. B. COLEMAN exhibited two specimens of Hearts illustrating infective endocarditis and villous pericarditis respectively.

Reviews and Notices of Books.

John Hunter: Man of Science and Surgeon, 1728–93. By STEPHEN PAGET. London: T. Fisher Unwin. 1897. Pp 272. Price 3*s.* 6*d.* Vol. I. of "Masters of Medicine": Edited by ERNEST HART, D.C.L.

THIS work promises well for the success of the "Masters of Medicine" series, for the sketch of John Hunter which is so admirably given by Mr. Stephen Paget should be as much appreciated by the public as by the profession. Partial views of Hunter's work and character have been presented to us in many Hunterian orations, but it is from this book that we learn in a short compass the completeness of the man. As Sir James Paget says in an interesting preface, Hunter was a born "collector of everything" and "he studied his collection in its widest range and thus became as no one in his time was—a comparative anatomist and a pathologist, and he brought the knowledge of all he acquired into union with his knowledge of medical and surgical practice. He was a scientific observer rather than a thinker and insisted that all thinking should be patiently and carefully tested by experiment and observation and thus brought from the domain of "general principles" into that of fact so that it could then be safely used for further guidance. His advice to Jenner is the keystone of his whole life: "Don't think—try; be patient, be accurate."

John Hunter came of a very old Scotch family, probably of Norman origin—the Hunters of Hunterston, in Ayrshire, whose history goes back to the thirteenth century. The Hunters of Long Calderwood, in Lanarkshire, were a younger branch of this family. Long Calderwood is a small estate seven miles from Glasgow and one mile north of the village of East Kilbride. John Hunter was born here, according to the parish register, on Feb. 13th, 1728, being the last of the ten children of his father, John Hunter. Curiously enough he always celebrated his birthday as on the 14th and this is the day on which the Hunterian Oration is annually delivered at the Royal College of Surgeons of England. Most of his brothers and sisters died comparatively early in life, William, Dorothea, and John being the only ones who lived beyond the prime of life. Dorothea married the Rev. James Baillie, the minister of Hamilton, near Kilbride, and was the mother of Matthew Baillie, the great physician, of "the immortal Joanna," to quote Sir Walter Scott, and of Agnes who lived over 100 years.

William Hunter, ten years older than John, went with a bursary to Glasgow College, afterwards assisted Cullen in a country practice, then attended Alexander Monro's lectures at Edinburgh in 1740, in 1741 came to London, and in 1748 followed Samuel Sharpe in Covent-garden as a lecturer on operative surgery to which he added a course of anatomical lectures. In 1748 John Hunter, then twenty years of age, joined his brother in London. His early life is brought before the reader in this exquisite passage: "Throughout his boyhood he was good at such games as the village afforded to boys and observant of nature, but deficient in self-control, idle, and ignorant, a great disgrace for a Scots boy living within walking distance of Glasgow College, whose father was a gentleman, whose brothers were studying law and medicine." He afterwards said of himself: "When I was a boy I wanted to know all about the clouds and the grasses and why the leaves changed colour in the autumn; I watched the ants, bees, birds, tadpoles, and caddie-worms; I pestered people with questions about what nobody knew or cared anything about." He hated his school-books, nor did he see the good of learning even at Oxford in the couple of months that he wasted there long after boyhood was over. "They wanted to make an old woman of me, or that I should stuff Latin and Greek at the University; but these schemes I cracked like so many vermin as they came before me."

The brothers, William and John, began work together in September, 1748, but their portraits distinctly show their differences in appearance and temperament. William Hunter was a fine gentleman, well dressed and carefully posed. His hands were delicate, his features were regular and remarkably handsome, his mouth was thin and very sensitive, and his whole look was sharpened and restless. In striking contrast is John in his working dress, a loose dissecting apron with long sleeves; the cuffs turned back, the garment caught round him with a single button; attitude clumsy, as if in a hurry to be gone; features lacking fineness, but the whole face and figure full of indomitable strength. For the three next winters he was working at anatomy from the "rising to the setting of the sun" and became demonstrator to his brother. In the summer sessions he enjoyed company, went to theatres, hobnobbed with resurrection men, and followed Cheselden's practice at the Chelsea Hospital. In 1751 he became a surgeon's pupil at St. Bartholomew's Hospital under Percival Pott; in 1754 he entered at St. George's Hospital, and in the next year spent two months at Oxford. At this time the brothers were almost equal in the school John lecturing if William were absent, and this work necessitated his resigning the house-surgeoncy at St. George's Hospital after holding it for only five months. It was now when he was twenty-nine years of age that human anatomy was taking a place in his mind as being only a part of all anatomy, and he began to institute an inquiry into the various organisations by which the functions of life are performed that he might thereby acquire some knowledge of general principles. In 1759 he was threatened with phthisis; in October he was appointed staff surgeon in the army and he was at the capture of Belleisle and also served in Spain, and on this experience is founded the last chapters of his great "Treatise on the Blood, Inflammation, and Gunshot Wounds."

In 1762 peace was declared and in 1763 John Hunter started practice in Golden-square as a surgeon. William Hunter was now in the zenith of his fame working hard at the school, at his hospital appointments, at his large private practice, as well as at literary work and in defending his brother's discoveries in anatomy. In the controversies between them and Percival Pott on congenital hernia and the Monros on other anatomical points it is needless now to enter. As Mr. Paget says, the controversies were fierce after the fashion of the time—William irritable and suspicious, John obdurate and conscious of his strength, and neither of them permitting the least infringement of his rights. William Hunter died in 1784, but in 1780 John Hunter communicated to the Royal Society that remarkable and astounding paper on the Structure of the Placenta which

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was a direct challenge of his brother's knowledge. Estrangement necessarily followed and although John attended to his brother as a surgeon when William was dying from paralysis no reconciliation took place. "He did not make his brother his executor and left nothing to him, neither money nor the care of the museum nor the old home at Long Calderwood."

John Hunter started practice in Golden-square at the age of thirty-five years, and lived to the age of sixty-five years. His beginning did not suggest a great success. "He had no hospital appointment; he had already lived twelve years in London, but in all that time had not published one word of writing." "He had not the art of making patients." To the profession he was known as a good anatomist subordinate to his brother; to the people around Golden-square he was a zealous student of the human body who might or might not restore you to health but would certainly anatomise you after death. To himself practice was subordinated to anatomy and pathology and every possible moment was devoted to scientific work and to adding to his museum. He now began to study living animals both by experiment and by observation of their habits and in 1764 bought a small house and two acres of land at Earl's-court, then at some little distance from London. He made it a farm, a menagerie, an institute of anatomy and physiology, and a villa decorated in the fashion of the period. Dr. Merriman, aided by Frank Buckland, gives us a most life-like picture of Hunter's life and surroundings at that period. At the east end of the grounds was an artificial mound of earth having an opening in its side which led into three small vaults beneath it. This mound was the "lion's den"; here he kept such animals as were most dangerous. In a field facing his sitting-room was a pond where he kept his fishes, frogs, leeches, eels, and river-mussels, and it is said the pond was ornamented with the skulls of animals. He kept fowls, ducks, geese, pigeons, rabbits, pigs, and made experiments on them. Also, opossums, hedgehogs, and rare animals—a jackal, a zebra, an ostrich, buffaloes, even leopards; also dormice, bats, snakes, and birds of prey. In the conservatory were several hives of bees, and the wall-fruit in the garden was their sole property. Here he prepared the skeleton of the Irish giant Byrne or O'Brien. His treatment of his own case of a fractured tendo Achillis was marked by his originality of idea as to causation and his bold line of treatment. In 1767 he was elected a Fellow of the Royal Society and in 1768 one of the surgeons to St. George's Hospital. He was now able to take "house pupils" and among them the famous Dr. Edward Jenner to whom a large number of letters showing their good fellowship were written by Hunter and one may be given here as a typical specimen. It shows most characteristically the born investigator and collector.

"DEAR JENNER,—I received your salmon, and very fresh, and just examined enough to want another, but will wait until another season. If I was to have another it should be one that had just spawned; I will take a cock salmon when you please. If you catch any bats let me have some of them, and those you try yourself observe the heat, observe the fluidity of the blood. Do all this in a cold place. See if you can catch the number of pulsations and breathing in a bat without torture. If the frost is hard see what vegetables freeze; bore holes in large trees and see whether the sap runs out, which will show it is not frozen. I am afraid you have not a proper thermometer. I will send you one.

"Your very much obliged servant,

"J. HUNTER."

The thermometer was a small one, like the present clinical thermometer. Within the years 1768–74 he was made a member of the Corporation of Surgeons, was married to Miss Anne Home, and published the first part of his "Treatise on the Natural History of the Human Teeth." In 1768 John Hunter took over his brother's house in Jermyn-street and he then came into prominence as a leading metropolitan surgeon. In 1773 he suffered from his first attack of angina pectoris and we have a most graphic account of his sensations and the thoughts that passed through his mind during this attack. He remained free from further attacks until 1776 and even after that he had long intervals of freedom, but at last he came to be in pain every day. In 1773 he gave his first course on the principles of surgery at St. George's Hospital, although the giving of lectures was particularly unpleasant to him and he never gave the first lecture of his course without taking thirty drops of laudanum to take off the effects of his uneasiness. He read his manuscript, and the principles of surgery were to him not questions of practice but embryology, physiology, and animal chemistry, the properties of matter, the vital principle, the life of the blood. Ottley's sketch of his daily life at this period is full of interest. "He could do with only five hours of sleep. He was in the dissecting-room from six till nine, when he breakfasted; he then saw patients at home until twelve, when he set forth on his rounds, returning to dinner at four. He was a very moderate eater and drank no wine during many of the latter years of his life. He then slept for about an hour, and the evening was spent in preparing or delivering lectures, in dictating to an amanuensis (Mr. Wm. Bell) the records of particular cases, or in committing to paper the substance of any work on which he chanced to be engaged. At twelve the family went to bed, but Hunter worked on until one or two in the morning or even later in winter. He had no home amusements (no cards) for the relaxation of his mind and the only indulgence he enjoyed consisted in an evening's ramble amongst the various denizens of earth and air which he had congregated at Earl's-court." Such was the daily routine of the man who knew that he might die at any moment from angina pectoris.

In 1776 he was appointed Surgeon Extraordinary to the King and in 1777 he had a severe illness apparently of an epileptiform character. On recovery he went to Bath; but he could not stay away from London and work for more than three months. Notwithstanding his large practice, his appointments, and his reputation John Hunter could not save money. He was always adding to his museum and spent £70,000 on it and he died scarcely able to pay his debts. In 1783 John Hunter's lease of the house in Jermyn-street came to an end and so he bought the twenty-four years' lease of a large house in Leicester-square, the ground behind it, and a house in Castle-street, now part of Charing Cross-road. It was a ruinous bargain and he spent £6000 on vast premises that would not sell for half that money. He kept a costly establishment for he liked things done in grand style. William Clift, his museum attendant and amanuensis, has well described the lavishness of his establishment consisting of at least forty-nine persons in Leicester-square, in Castle-street, and at Earl's-court, together with outdoor tradesmen in nearly constant employ. In 1792 he would keep Clift writing while he dictated from seven to eleven at night, "and sometimes an hour or two later." Such was the indomitable energy of John Hunter even late in his life and when enfeebled by ill-health. In 1785 (December) Hunter performed for the first time the operation for aneurysm which will always be associated with his name and marks the zenith of his surgical fame—tying the main artery high up above the disease and allowing the collateral circulation to nourish the parts beyond the ligature. As is well said by Mr. Stephen Paget this operation, which has saved thousands of limbs and lives, was the result of work in many fields of thought; in it he united a whole multitude of facts from anatomy, physiology, clinical experience, post-mortem examinations, and experiments on animals; it remains one of the best deductions ever made in surgical practice." From 1788 there was constant wa

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between Hunter and his colleagues at St. George's Hospital which was the more embittered by the selection of Keate as surgeon over Everard Home, Hunter's nephew. In March, 1793, a special Court of Governors was summoned to consider a question as to fees which had led to a fierce altercation and was decided against Hunter, and on Oct. 16th, on the occasion of another dispute at the board, he was flatly contradicted by one of his colleagues. Then came the end, angina seized him, he went a few steps, groaned, and fell into Dr. Robertson's arms and died.

A strikingly dramatic end to a remarkable life. We have endeavoured to give our readers a meagre sketch of John Hunter as he lived and worked and we cannot too strongly recommend a perusal of the book itself. Hunterian orations have again and again pointed out the scientific value of his researches and writings and the grand museum of the Royal College of Surgeons of England will ever remain as a monument of his variety of interest and indefatigable industry. The history of his collection after his death and the account of the destruction of his MSS. by Sir Everard Home as given by Mr. Clift in 1834 when he gave evidence before the Parliamentary Committee on medical education are well known to the profession and an abstract of this evidence we published on July 11th, 1835. Mr. Stephen Paget cannot be too highly congratulated on the literary skill which he has shown in giving this most readable sketch of Hunter to the public and the profession, and to Mr. Fisher Unwin the thanks of the readers will be given for the excellent manner in which the book has been printed and published.

Annual of the Universal Medical Sciences and Analytical Index. 1896. A Yearly Report of the Progress of the General Sanitary Sciences throughout the World. Edited by CHARLES E. SAJOUS, M.D. Paris, and 70 Associate Editors assisted by over 200 Corresponding Editors, Collaborators, and Correspondents. Illustrated with Chromo-lithographs, Engravings, and Maps. Vol I., pp. xvi. and 691; Vol. II., pp. 590; Vol. III., pp. 721; Vol. IV., pp. 611; and Vol. V., pp. 685.

WORKS of reference such as this are not merely useful, they are absolutely necessary. Year by year the area covered by the medical sciences grows wider and the number of facts accumulating daily becomes greater and greater; it is impossible for any individual member of the medical profesion to make himself acquainted with the material contained in even a tithe of the professional journals and yet it is essential that every medical man who would keep up with the onward progress of knowledge should be acquainted with all the important advances of the sciences of medicine and surgery. The work cannot be done by each man for himself; it needs extensive arrangements and elaborate collaboration to put together into one work all the important new facts, new methods, and new remedies which have become available during the past year. Since 1888 Sajous' Annual has appeared regularly; each year has seen introduced such improvements as experience has shown are desirable and practicable, so that it comes to pass that to-day we have such a work as that which now lies before us in which can be found with ease any and every addition of importance to our knowledge. To authors the value of the book is great, but perhaps it is the general practitioner who will appreciate most this wonderful work of reference.

A very convenient system of paging is employed. Each volume is divided into sections distinguished by the letters of the alphabet; in the edition of every year the same sections are devoted to the same subjects so that anyone who wishes to look up any disease—for instance, diabetes—knows that he will find what he wants in Volume I., Section F, without needing to refer to the index. Each section is paged separately and this also facilitates reference. The contents of each volume are given on the back of the cover, so that the subject required can be found easily. The references quoted in the articles are distinguished by numbers and at the end of each volume is a list of the works quoted from in numerical order. Altogether 1214 journals and 170 books, monographs, and theses are laid under contribution. As to the accuracy of these references we can speak from an extensive experience with former issues of the work; they are surprisingly accurate considering the very extensive range of the subjects dealt with and the enormous number of the quotations; only very occasionally have we met with an error and even then the error has been slight.

Every year alterations are made, as we have mentioned, in the work and these always have for their aim increased facility of reference. In the present edition of the Annual several important changes have been introduced. In order to increase the usefulness of the abstracts it has been thought advisable to increase their length so as to convey fully the authors' meaning. It has been deemed advisable to re-arrange the entire text in order to obtain a more logical sequence of the subjects discussed and this has been done by the aid of the editor's immediate assistants who prepared the majority of the articles introducing the best work done during the year; each of these articles was then submitted to the associate editor for that subject who erased, changed, or added anything he chose, and further inserted personal comments which are distinguished by his initials. Those comments which are not so distinguished are due to the editor in chief. More than half a million words have been added to this issue and the editor felt that the additions to the vast field of medical knowledge should be presented in a form more easily grasped than is possible in the body of the work; he has therefore prepared and inserted in the fifth volume an "Analytical Index and Cyclopædia of Treatment," in which is given a summary of every practical article quoted in the Annual proper and of all the criticisms introduced by the associate editors. Each subject is sub-divided into sections, with the excerpts arranged in logical sequence, each phase of the disease being dealt with in turn; and when the literature of the year does not cover the subject a brief outline of the treatment of each disease thus overlooked has been introduced. This Analytical Index and Cyclopædia of Treatment occupies only about 350 pages and reference numbers are given at the end of each extract enabling the reader to find easily the further information contained in the body of the work.

Other improvements are to be found in this edition: headings and side-headings are in a heavy black type which is much more striking than the small capitals and italics formerly employed. The number of coloured plates has been increased and they attain a high degree of excellence. Though the work has been much enlarged there has been no increase in the price. Limits of space prevent us from attempting to deal with the substance of the book; the subjects treated are too numerous for any adequate discussion and it would be useless to note any occasional statements with which we may happen to disagree. We hope that future editions will maintain the high standard reached by the present issue.

The Origin of Disease. By ARTHUR V. MEIGS, M.D. Philadelphia and London: J. B. Lippincott Co. 1897. Price 21*s.* net.

THE pathological doctrine or thesis of arterio-capillary fibrosis enunciated by the late Sir William Gull and Dr. H. G. Sutton was the direct outcome of their researches into the morbid anatomy of chronic Bright's disease. They

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established the fact, which is now hardly disputed in any quarter, that the renal changes in "granular kidney" are but part and parcel of a more or less universal fibrosis having for its point of departure the periphery of the vascular area. The service rendered by these eminent physicians, both of whom were gifted with the philosophic spirit, has been far-reaching. It has emphasised the point that the morbid changes which characterise chronic disorders are not limited to this or that organ which may during life have exhibited the most evidence of functional derangement; it has also brought pathology into line with physiology by the suggestion that fibrosis is of the nature of senile change—the natural outcome of the wear and tear of the bodily machine—exemplifying the axiom that age is to be told by the state of the tissues and not by years; and it further suggested that the inroads of acute disease may be favoured, and their gravity to a certain extent measured, by the degree to which these unseen conditions prejudicial to the efficient working of the organism are present in the individual attacked. The work before us may be regarded as in the main a demonstration of the minute changes that take place in all organs in the process of fibrosis. It is based on very extensive microscopical examinations and abounds in carefully executed drawings of the appearances observed. As a contribution to morbid histology the book deserves to be appreciated and had the author been content with this—the main portion of his work—there would be little to take exception to. It is, however, in those chapters in which the attempt is made to justify the title—at first sight not very descriptive of the contents of the book—and especially in the arguments adduced respecting intrinsic, as opposed to extrinsic, etiology, that the work fails to impress the reader with the conviction of the author's grasp of the subject. Indeed, the teaching on some points is distinctly retrograde, as if being possessed of the idea that most diseases do arise from intrinsic causes the author has allowed this to sway his judgment. Thus in the chapter that gives the title to the book there is a curious parallel drawn between the tendency of malignant disease to dissemination and that of fibroid degeneration to spread, and it is said that "if it were conceded that malignant disease and fibroid degeneration spread as they do owing to similar causes and that the spreading of fibroid degeneration is not the result of infection it would follow as a necessary corollary that the metastasis of malignant disease cannot be of the nature of an infection" (p. 21). There is in truth great virtue in an "if," but how any pathologist with the facts of lymphatic and blood-vascular metastasis before him can gravely suggest that fibroid degeneration spreads like cancer passes comprehension. The philosophical view of Gull and Sutton as to fibrosis cannot be applied to explain the distribution of malignant growths. Again in dealing with tuberculosis or, rather, with the more restricted field of "pulmonary consumption" Dr. Meigs reverts to the teachings of Niemeyer—and no one can dispute their admirable lucidity or excellence—that tuberculous infection is secondary to caseous inflammatory changes. The arguments that were then possible and cogent have been put out of court since the views of Laennec as to the unity of phthisis have been re-established by the bacillary doctrine. As the author rejects that doctrine it is not surprising to find him asserting that syphilis which produces lesions that ultimately closely resemble those due to tubercle is opposed to the latter in its origin since it—i.e., syphilis—can only "arise in consequence of the introduction into the body of a specific material poison." He affirms also that no advance has been made in our knowledge of the etiology of typhoid fever since Murchison's affirmation of its *de novo* origin; nor does he apparently admit that diphtheria also has been proved to be of specific origin "although," he adds, "most persons at the present time believe it to be caused by a bacillus." We cannot but consider that views of this nature are likely to cause the author to be regarded as somewhat behind the times; yet it would be churlish to withhold recognition of the amount of labour that the production of such a work must have entailed and of the general utility of its main object—namely, the demonstration of the importance of general tissue change as an underlying factor of most diseases.

Sir Ranald Martin. By Sir JOSEPH FAYRER. London: A. D. Innes and Co. Pp. 203. Price 6*s*.

IN his preface to this biography, Sir Joseph Fayrer remarks that in undertaking the task he was actuated by the feeling that such valuable services as those rendered by Sir Ranald Martin should not be left unrecorded. In some sense the services have not been unrecorded for the materials from which the memoir has been compiled are for the most part collected from official records, the medical journals, and Sir Ranald Martin's published works. We are, however, indebted to the writer of the present volume for having brought vividly before us the life story of a strong man, upright and honourable in every relation—a man of marked and known ability and of unremitting energy.

The period during which Mr. Martin was employed in India extends from 1817 when, at the age of twenty-one years, he arrived at Calcutta after a voyage of nearly six months until 1839 when, owing to failure of health from frequent recurrences of the malarial fever which he had contracted in Gondwana and Burmah combined with the constant strain of unceasing professional work, he was compelled to resign. The history of these twenty-two years is one of almost continuous service of conspicuous utility and of devotion to the interests of the service and of medical and sanitary science. In 1830 he accepted the appointment of Presidency Surgeon. Officers holding this appointment received only a small official salary, but to it were not unfrequently added other Government appointments and the medical practice of Calcutta was mainly in their hands.

In those days the practices of the leading men in Calcutta were very extensive. At that particular time £9000 per year was said to be the greatest amount realised by anyone, but in the Marquis of Wellesley's time as much as £12,000 and £15,000 per annum was said to have been made. In 1833 Mr. Nicholson, who had been the leader of medical practice in Calcutta for some years, was compelled by ill-health to go to the Cape of Good Hope. During his absence which lasted for two years Mr. Martin performed not only his own duties but those of his friend. The labour and strain involved in this work, to which were added a variety of self-imposed public duties, told even upon Mr. Martin's vigorous constitution, and probably hastened that gradual decline of health which ultimately obliged him to the great regret of the public and of his friends to leave India, which he did in 1840. Upon his arrival in England he was received with the most cordial welcome by all grades of the medical profession in London and he established himself in Grosvenor-street. The record of his professional life in London is, however, chiefly remarkable for the interest he continued to display in the welfare of the public service with which he had been so long connected and for which he had done so much. His suggestions and advice were frequently sought by the Government. To Sir Ranald Martin is due the foundation of the great civil hospital in Calcutta which has since become one of the largest clinical schools in the world. It was in the early days of this hospital that he devised and performed the

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simple operation for the radical cure of hydrocele by the injection of tincture of iodine.

A subject which he had warmly at heart and on which he was a constant contributor to THE LANCET was the position and claims of the service medical officer, and the "Summary" published in our columns on Sept. 22nd, 1849, was written by him although his name was not given. To him the medical service is indebted for his assiduous and ultimately successful efforts to improve its status and the present biography will on that account alone be read with much interest by members of that service. In it they will find the expression of the views put forward by Sir Ranald Martin (then Mr. Martin) when in May, 1857, he was appointed by the Queen to serve upon a Royal Commission to inquire into the organisation, government, and direction of the Medical Department of Her Majesty's Army. In a memorandum presented to this Commission he said, "The grant of the military division of the Order of the Bath and that of the Victoria Cross to medical officers would appear to settle their status in the army, but their actual position ought not to rest upon chance, or upon the mere occasional circumstance of a decoration. It should be ordered and fixed by a royal ordinance as one of the permanent scientific corps of the army." The position of the service medical man is in some ways better than it was forty years ago, but the Royal Medical Corps yet awaits constitution.

When we remember Sir Joseph Fayrer's own connexion with India, his twenty-four years in the Bengal medical service, his intimate acquaintance with the country, owing to which he was subsequently chosen to accompany the Duke of Edinburgh and at a still later date the Prince of Wales; when we think moreover of his many contributions to our knowledge of medical subjects in connexion with the East, it is an additional satisfaction to receive from his hands the record of a life which he of all men could best understand and appreciate and one to which he is particularly able to do justice.

HOSPITAL ECONOMY.

To the Editors of THE LANCET.

SIRS,—As one who was for several years connected with the out-patient department of a metropolitan hospital, I trust you will allow me a portion of your space in order to discuss the question of hospital management which continues to attract an increasing share of the public attention. Unfortunately we do not yet seem to have come within sight of any practical solution. On the contrary, the din of discord is louder than ever. To look throughout the conflict of opinions for agreement on any point in this controversy is well-nigh futile. If, however, we shall find it anywhere it is in the pretty generally admitted fact of hospital abuse, and this abuse as a rule is in the out-patient department. It is here that pressure upon the funds of charity has been most resented and that the much-debated pay-system has arisen. Here, too, have been witnessed the beginnings of a rational and healthy reform in the selection of applicants for treatment. This brings us at once in contact with the subjects at issue. Congestion of work is really the cause of that decay in funds and that inefficiency from which most, if not all, of our hospitals are suffering. How to relieve this is the first point for practical consideration. I do not of course pretend that hospital poverty is the result solely of expenditure in the out-patients' department. It is in a great degree the consequence of expenses incurred as a natural consequence of the greatly increased cost of treatment within the hospital ward. This cost, however, though doubtless in certain cases open to economical regulation is less controllable and it is certainly less open to challenge on the score of abuse because of the social standing of the patients. The number of beds being necessarily limited there need be little fear, at all events in the larger hospitals, that they will be occupied by undeserving cases. In the out-patient room there is practically no limitation unless it has been deliberately imposed in the interest of economy and professional fair dealing. I confess it would please me to see this practice of restriction carried much further than it now is. I even go so far as to hold that the most satisfactory solution of the problems attributed to hospital abuse will be found not in a merely palliative reform but in an actual reconstruction of the out-patient system. What, I would ask, is the real purpose of a hospital? Is it not the treatment of the poor for those diseases which cannot be treated in their own homes? If it is so then clearly hospitals in our day are made, or allowed, to take upon them far more than their natural duty. In the days of Rahere and even of Guy there was doubtless an absolute necessity for the out-patient clinic. How far otherwise is it now that medical advice of excellent quality may be obtained in half-a-dozen or more of reliable public dispensaries within easy distance of the greater but also relatively poorer institutions? Surely there is no sufficient reason why these lesser foci of medical skill should not be utilised in relieving the stasis of hospital attendance. By such an arrangement which is already in more or less perfect operation in some other parts of the country the pressure of overwork and expense which now fall upon the hospitals would be greatly relieved. Under it the junior members of hospital staffs would, of course, be eligible for dispensary appointments and should have greater facilities than they now possess for following the course and treatment of disease. Students at the hospital schools would not be losers by an arrangement which merely removed to a short walking distance the objects of their clinical study. This method of utilising local dispensaries possesses distinct and peculiar advantages. It does away with the necessity for a paid staff of porters and ward assistants; a resident caretaker paid by the gift of his house rent and a non-resident dispenser engaged at a small salary suffice for all purposes of ordinary service. No imposing suite of rooms is needed. The contributions of charity are at the same time reliable in proportion to the local reputation which invariably attends upon successful treatment. Abuse by comparatively well-to-do persons is more easily checked since the aid of local knowledge is available. For cases which cannot be treated at home the hospital is always open and for such it is really intended. Under the present system it is difficult if not impossible to place any limit upon an ever-increasing expenditure. The recent establishment of a Central Hospital Council is, indeed, a step in the right direction for which we should be thankful. It constitutes at least a reasonable palliative of existing evils. The proposal which I have brought forward has the further advantage of cutting those evils at the root. If radical, however, it is rational also, and I believe that it is equal to the test of practice. I consider therefore that it ought not to lose the opportunity of experimental proof merely because it will necessitate some reorganisation of existing methods which, however capable otherwise, are associated with financial auguries which are certainly not encouraging.

I am, Sirs, yours faithfully,

Dec. 15th, 1897. B. G. MORISON.

MUNICIPAL MATTERS.—Mr. Maurice John Doidge, M.D. Brux., M.R.C.S. Eng., L.S.A., has been elected on the Glastonbury Town Council.—Mr. John McGinn, L.R.C.P. and S. Edin., L.F.P.S. Glasg., has been elected a member of the Newport (Mon.) Corporation.

MEDICAL CLUBS IN SOUTH MANCHESTER.—A meeting of medical men practising in South Manchester was held on Dec. 13th to consider a circular which had been issued inviting persons "of any station in life and of any age from two to sixty years" to join the "Cavendish Provident Clubs for Men, Women, and Children." Mr. Saberton, who presided at the meeting, expressed the opinion that no medical man of respectability would undertake the work of such clubs and said that the only means open to the medical profession for protecting itself against such degrading competition was the formation of a union which would include the younger members.—Dr. Sinclair moved a resolution to the effect that the interference of laymen between patients and medical men is injurious both to the public and to the medical profession.—The motion was seconded by Mr. Stanmore Bishop and carried unanimously.

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THE LANCET.

LONDON: SATURDAY, DECEMBER 25, 1897.

THE ANNUS MEDICUS 1897.

Medicine.

IT is obviously impossible to give here anything approaching an adequate review of the progress of medicine during the past twelve months. That task must be left to the able hands of those who contribute to the "annuals" and "Jahresberichten" that will appear at intervals throughout the coming year. Our part is a far humbler one. We endeavour only to direct attention to the general tendency of our art and science—to ascertain what have been the most characteristic lines of advance and what the chief gains. The year has perhaps been more than usually prolific in contributions to medicine. It has been marked by assemblages of congresses and associations in which many burning questions have been discussed. It has also witnessed the output in exceptional number, and in almost every civilised country, of encyclopædic works on medicine for which there must be an insatiable demand. Nevertheless it would be difficult to state precisely in what respects the medicine of to-day is superior to that of the corresponding day of 1896. The advance—such as it is—cannot be measured in this manner, and although in deference to long established custom it is perhaps well to indicate in what direction medical thought and practice are mainly extending it must be left to the future to decide how far the apparent gains are real and substantial. It may, however, be granted that progress is less evident in applied medicine—in what we term the "art of healing"—than in the experimental direction. For some years past we have been accustomed to look for the chief additions to knowledge from the laboratory rather than from the bedside. Clinical observation, aided as it has been by scientific instruments and appliances, is of course not exhausted, but its sphere of novelty is certainly much more restricted than it was when the stethoscope and ophthalmoscope were first placed in the physician's hands. But on the other hand the field open to the laboratory investigator is still of wide extent, the fruits of his labours to practical medicine, although yearly increasing, being yet comparatively limited. Amongst examples of recent work which illustrates progress in this direction may be cited that by HAFFKINE on the bubonic plague, the prevalence of which in Bombay and other parts of India has been the most striking epidemiological fact of the year; the discovery by SANARELLI of the bacillus of yellow fever; the extension given to serum-therapeutics, especially in the use of anti-streptococcic serum in septic diseases and of antitoxin in diphtheria; and the application of the "agglutination test" to the early diagnosis of typhoid fever. The manner of origin and spread of local epidemics and the conditions that favour them have been exemplified only too well in the outbreaks of typhoid fever which have occurred in various parts of this country during the autumn, in the extension of diphtheria in London (probably through school infection), and in the outbreak of beri-beri in the Richmond Asylum, Dublin. The nature of the febrile process has been well discussed by HALE WHITE and has formed the subject of a valuable monograph by LÖWIT; whilst the treatment of fever, especially from the side of the external application of cold rather than that of the internal administration of antipyretic drugs, has been the subject of many contributions, mainly in America. In other directions the gains to knowledge—pathological rather than therapeutical—have been shown in the ever-advancing department of neurology where, as Sir W. GOWERS has shown, the new conceptions arising out of deeper knowledge of the intimate structure of the nervous system bear directly on the interpretation of its disorders. The studies upon aphasia by CHARLTON BASTIAN and BYROM BRAMWELL exemplify the profundity and intricacy of cerebral functions, whilst, too, attention is being daily directed to the phenomena of the so-called "functional" disturbances of the nervous system such as hysteria and neurasthenia. Gout and rheumatism, as of yore, have claimed a no small share of attention. Chronic rheumatic disorders were discussed fully at the Berlin meeting of the Association of Internal Medicine in the spring and again at the Montreal meeting of the British Medical Association, whilst Dr. LUFF'S lectures at the Royal College of Physicians of London dealt with some moot points in the chemical pathology of gout, and a welcome addition to its literature has been made by Dr. W. EWART. Cardiac diseases have also been fully dwelt upon—although there has been a not unwelcome respite from the advocacy of special therapeutic measures that within recent years have rather monopolised attention. The publication of Sir W. BROADBENT'S work is noticeable for the reasonableness and lucidity with which the subject of heart-disease is expounded in it. The subject of tuberculosis has gained a new impetus from the institution of the Weber-Parkes Prize at the Royal College of Physicians of London; and yet, unless we include the "new tuberculin," no material addition has been made to the well-recognised principles of treatment of the local manifestations of this widespread infective disease. Prophylaxis has been urged and in some places carried out with no little rigidity, although the task of attempting to control the prevalence of human tuberculosis under the conditions of life that prevail in overgrown and crowded cities might well appal all but the most sanguine enthusiasts. Gastro-intestinal disorders and their secondary effects afford ample scope for further observation, and we may gratefully recognise the gains to practice which are accruing from the recognition of the part played by the ingesta in determining many of those catarrhal and ulcerative conditions that depend on bacterial agencies. Lastly, note should be taken of the still increasing scope for relief of abdominal affections that are beyond the aid of purely internal medication which is afforded by surgery, as witnessed in the suture of gastric ulcers, and the relief of intussusception, the removal of gall-stones and of abdominal cysts and tumours.

Surgery.

During the past year the progress of surgery, if not so exceptionally great as in some other years, has been evident. In the surgery of the abdomen the question of the

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best method of uniting a divided bowel is still unsettled. Murphy's buttons, while not perhaps retaining all the favour which they had on their first introduction, are still looked upon by many as on the whole the safest as well as unquestionably the most rapid method of effecting intestinal anastomosis. That some at least of the unfortunate results which have followed the use of the button have been due to its incorrect application is extremely probable, as the best results have been obtained by those who employ it most frequently. One danger from the use of the anastomotic button is the tendency it has to remain in the bowel. This has happened many times and generally without ill effect, but occasionally symptoms of intestinal obstruction have resulted. To obviate this danger Dr. MARTIN GIL, of Malaga, has devised a button which resembles Murphy's in some respects, but it consists of decalcified ivory, so that it can be dissolved by the digestive juices after having accomplished its work of uniting the bowel. Dr. GIL has employed the method with success in dogs, but the button has not yet been used on the human body. Those who decline to avail themselves of the anastomotic button either employ some form of "bone bobbins" such as that invented by Mr. MAYO ROBSON or trust to simple stitching without mechanical aids. The fact that every one of the methods mentioned gives excellent results and is extensively employed shows that a skilful and experienced surgeon can safely unite divided intestine by any of them and that he may be expected to attain the greatest success by using that method with which he is most acquainted. Even in the future we must not look for a complete discarding of any of these methods unless some new modification may render one of them unquestionably superior to its rivals.

The question of the treatment of intussusception is of exceeding importance. In days before aseptic operations were possible it was natural that the surgeon should endeavour to avoid if possible opening the peritoneal cavity and therefore heroic efforts were made to reduce the intussusception without operation. Injection and inflation were extensively and in fact practically exclusively used, but the results were by no means satisfactory; it was found that a very large proportion of the children died; and indeed it is now obvious from a closer study of the anatomy of the disease that in many of the cases it is utterly impossible that injection or inflation should reduce the invaginated bowel. All intussusceptions confined to the small intestine and all those of the ileo-colic variety cannot possibly be returned by either of these methods, and even if the intussusception should involve only the large intestine or be of the ileo-cæcal form it frequently happens that it cannot be completely reduced though apparently it has all been returned and consequently the condition recurs a few hours later. It is, moreover, only in cases seen at an early date in which injection or inflation can be of any use, for nearly always inflammatory adhesions have formed within thirty-six hours of the onset. It is not therefore surprising that laparotomy should have been resorted to in the hope that it would prove a more satisfactory form of treatment. Laparotomy for intussusception is, however, no new introduction, for it was performed in 1828 by GERSON, of Hamburg. Unfortunately the child died from rupture of the gangrenous bowel. During the past year a large number of interesting papers on the subject have appeared in the columns of THE LANCET. The Hunterian lectures by Mr. D'ARCY POWER on the Pathology and Surgery of Intussusception were a valuable contribution to the subject and a paper by Dr. F. H. WIGGIN, of New York, contained notes of 103 cases which he had collected of intussusception in children. These were classified according to the treatment adopted and the irresistible conclusion was arrived at that the delay resulting from attempts at reduction by injection or inflation was often responsible for the fatal result of a laparotomy and that the best chance for the child was obtainable by an early laparotomy. In this opinion most surgeons will concur. Mr. R. LAWFORD KNAGGS, of Leeds, described two successful cases of laparotomy for this condition; Mr. BERNARD PITTS recorded seven consecutive cases of intussusception in infants treated by abdominal section with six recoveries; and Mr. A. E. BARKER read a paper before the Clinical Society of London on fifteen consecutive cases of this morbid condition. The conclusion to be gathered from all the cases is that in patients seen early and untreated by injection or inflation laparotomy offers a great probability of a successful result.

The prognosis in cases of perforation in typhoid fever is extremely grave; without surgical interference death is almost certain, but laparotomy offers a chance of recovery. Dr. J. M. T. FINNEY, of Baltimore, has collected forty-seven cases of perforation from typhoid ulceration in which abdominal section has been performed; of these thirteen patients recovered, and though this proportion is probably too high, as successful cases are always more frequently recorded than those which have proved fatal, yet even after allowing for this the result is very good. The best time for operating seems to be when the patient has recovered from the shock attending the perforation.

A successful case of surgical treatment for rupture of the liver has been recorded by Mr. CHRISTOPHER MARTIN, of Birmingham. The patient, a coal-miner, nineteen years old, was crushed between two trucks and apart from the shock of the injury no abdominal symptoms appeared for sixteen hours, when he had severe abdominal pain, a distended abdomen, and dyspnœa. Thirty hours after the accident laparotomy was performed and a very large quantity of blood-clot was found in the peritoneal cavity and a tear between one and two inches deep was seen on the under surface of the right lobe of the liver. The abdomen was washed out and drained with a glass tube, a second drainage tube also being inserted just above the pubes. The patient developed symptoms of pneumonia but ultimately he recovered completely.

There is considerable diversity of opinion as to the best method of treatment of general suppurative peritonitis. Some surgeons think that no surgical procedure is of any value in the treatment of this condition and that a fatal result is certain. Flushing the peritoneal cavity finds favour with others, while incision and evacuation of the fluid, with or without drainage, are also advocated. It has been pointed out that the heavy mortality which follows flushing is in part due to the fact that the septic exudation on the peritoneum cannot be removed by a

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stream of water, and therefore Dr. FINNEY has practised systematic cleansing of the whole of the peritoneum by pledgets of gauze wrung out of hot salt solution. The method has proved successful in five consecutive cases and is deserving of consideration and trial.

Mr. W. H. BATTLE has pointed out a symptom of peritonitis which has hitherto not been described. It consists of an œdema with tenderness in the groins extending to the scrotum but not extending down the thighs. He has observed it in two patients and another case has been reported by Mr. D. R. P. STEPHENS, of Hove. The symptom seems likely to be of use in some obscure cases.

Probably the most sensational surgical novelty of the year has been the re-introduction of the treatment by forced reduction of spinal curvature due to caries. Though employed from time to time for many years it is only recently that the method has been extensively tried. Dr. CHIPAULT and Dr. CALOT, two French surgeons, are the chief advocates of the method, though the former would limit it to those cases in which the reduction can be effected with the exercise of but little force. Dr. CALOT has performed "forcible reduction" in a large number of cases and at the Moscow Congress he demonstrated the process by reducing and putting up in plaster six cases in the space of an hour and a quarter. Mr. ROBERT JONES and Mr. A. H. TUBBY performed the operation many times at Liverpool and read a paper on the subject at the Clinical Society of London in November. It cannot be said that the method has met with a very wide acceptance at present in this country; there is a great disposition to await the results of the treatment in those cases to which it has already been applied. There seems to be no doubt that in many instances a very marked spinal curvature may be immediately reduced unless firm bony ankylosis has taken place with very little immediate risk. Paraplegia if present often disappears after the operation and does not seem to have followed the reduction. Paralysis has occurred in at least three cases after the operation, but there has been very little reason to think it has been directly due to the operation, for in cases of caries of spine treated by ordinary methods paralysis occurs in a large percentage, some say 20 per cent. These facts must be freely admitted, but it is quite another thing to acknowledge that these cases are really benefited. The separation of the vertebræ produced by the extension must leave a large gap, which has to be subsequently filled with bony tissue if any real recovery is to result. For this to occur an extended period of fixation is required and until many months have elapsed and there is an opportunity of seeing the final results it would be premature to declare the method a success.

The treatment of chronic enlargement of the prostate by castration or by division of the vas deferens is steadily gaining ground and though untoward results occasionally follow yet it is indisputable that in the majority of cases atrophy of the prostate ensues and the difficulty in micturition is greatly lessened. A further knowledge of the exact pathology and varieties of the enlargement of the gland will doubtlessly enable us to apply this treatment only to those cases to which it is best suited.

It is only of recent years that success in the treatment of tuberculous ulceration of the bladder has been possible and even now cases are rare. An interesting instance of this condition treated by suprapubic cystotomy and curetting was recorded by Mr. EDWARD COTTERELL; recovery was rapid and perfect.

Wounds of the heart are almost always rapidly fatal, but we have recorded two instances during the past year in which life has been saved. In the first a man who was under the care of Dr. PARROZZANI, of Rome, was stabbed in the left side and five hours later he was brought to the hospital extremely pallid and with a heart beat barely perceptible. An operation was performed at once. A flap was marked out comprising the whole thickness of the thoracic wall and containing portions of the fifth, sixth, seventh, and eighth ribs. This was turned inwards and the left pleural cavity was found to be filled with blood and an opening an inch in length was seen in the pericardium; the stab had also penetrated the left ventricle and a finger was passed into the cavity. Blood was flowing at each heart-beat from the wounded ventricle. This wound was closed with four stitches and then the pericardial wound was sutured and the skin incision also. The patient recovered completely. The second case was under the care of Dr. S. PRIOR, of Woodilee Asylum, Lenzie, Glasgow. A man, aged forty-three years, had tried to kill himself previously, and his second attempt was made by pushing an iron pin through the chest-wall a little below and internal to the left nipple; the portion of the pin within the chest measured three inches and the part outside moved up and down every time the heart beat. The pin was withdrawn and no ill-effects followed, the wound healing by first intention.

An account of the surgery of the past year would be incomplete without some account of the present use of the Roentgen rays. Though it is still doubtful what their exact nature may be, yet we can obtain them with more ease and certainty than before. An adjustable vacuum tube has proved very useful. Dr. J. MACKENZIE DAVIDSON has devised and described in THE LANCET of Oct. 16th a very ingenious apparatus by which the exact position of an object photographed by the aid of the Roentgen rays can be determined within a few minutes after the negative is taken. The description of the apparatus is too lengthy for insertion here, but it is very simple in use. It has been fully tested on the living subject and has proved very accurate. It has become almost a routine practice to use the x rays in cases of fracture or dislocation in which any doubt exists as to the exact lesion present. Skiagraphy has been also utilised to some extent for renal and vesical calculi and we published a plate from photographs by Dr. A. P. LAURIE and Dr. J. T. LEON of a case of a calculus in the bladder of a boy nine years old; the stone was clearly visible and a plate taken after litholapaxy showed the absence of the calculus. Dr. W. J. COLLINS removed from the thigh a bullet recognised by the aid of the x rays; it had been embedded three years. Dr. W. S. HEDLEY has shown that if paper or other flexible sensitised surface is used to obtain the skiagram it must be kept quite flat and not bent round the limb or distortions will be shown which do not exist. The Roentgen

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Ray Society, established a few months ago, should advance our knowledge of the scientific and practical aspects of the rays.

Obstetrics and Gynæcology.

At the Obstetrical Society of London several papers of considerable interest have been read during the year. At the January meeting a note on the Etiology of Eclampsia was read by Dr. MACNAUGHTON JONES based on a case in which he had induced abortion for albuminuria. Injections of pilocarpine had also been given in the case. In the course of the discussion on the paper the risks of the use of pilocarpine in the treatment of puerperal eclampsia were pointed out and especial stress was laid on the danger to the patient from the pulmonary œdema that is caused by the use of the drug in question. At the same meeting a paper on Breech Presentation with Extended Legs was read by Dr. W. S. A. GRIFFITH and Dr. A. W. LEA. Among other points of interest in the paper may be mentioned (1) the statement that the position in question is most frequently met with in primiparæ and (2) the conclusion arrived at by the authors—that most cases of the kind do not require interference—which appears to require confirmation. Incidentally Dr. CHAMPNEYS insisted on the value of pressure from above in breech cases, the patient being in the lithotomy position. The President of the Obstetrical Society (Dr. CULLINGWORTH) selected as the subject of his inaugural address the Undiminished Mortality from Puerperal Fever in England and Wales, in which he showed that "notwithstanding the introduction of antiseptics the almost complete banishment of the disease from our lying-in hospitals and the general advance in our obstetrical knowledge the death-rate (from puerperal fever) has not only not diminished but in some districts has actually increased during the past few years." He formulated the conclusion of his careful inquiry into the matter by insisting that "either the profession is not convinced of the possibility of stamping out puerperal fever by the methods that have been proposed or it has failed to carry out those methods with the thoroughness that can alone ensure success." His general conclusion was that the high death-rate from puerperal fever in this country is attributable mainly to the large number of confinements attended by ignorant and untrained midwives and to laxity and half-heartedness in the use of antiseptic precautions in private practice. At the same meeting Dr. GILES read a paper on the Cyclical or Wave Theory of Menstruation based on observations on the temperature and the pulse before, during, and after menstruation. In April Dr. G. F. BLACKER read an interesting paper on the Treatment of Placenta Prævia by Champetier de Ribes's bag. This method of treatment was recommended instead of version in the more serious cases of hæmorrhage due to placenta prævia, the bag being introduced into the amniotic cavity after the membranes are ruptured. Among the advantages claimed for this method of treatment were that it arrested the hæmorrhage, that the bag dilated the cervix, that the bag was a very powerful stimulus to uterine action, and that the fœtal mortality was lessened in the cases where it was used in preference to version. At the meeting in May Dr. THOMAS WILSON read a paper on a case of Chronic Axial Rotation of an Ovarian Cyst giving rise to extreme twisting of the elongated uterus; and Mr. JOHN W. TAYLOR read a paper on a case illustrating the treatment of (so-called) abdominal pregnancy at full term in which he had operated at the twelfth month with recovery of the patient. A remarkable point in the case was that the patient felt exactly as she had done in former pregnancies except that the movements of the child were unusually distinct and painful. At no period of the pregnancy had there been any acute pain, sudden illness, or fainting. Mr. TAYLOR said he would always prefer to operate at term and that he would never purposely wait for the death of the child before operating. At the June meeting a paper was read by Dr. AMAND ROUTH on Parturition during Paraplegia, based on a case in which there was complete paraplegia below the level of the sixth dorsal vertebra due to an accident occurring at the seventh month of pregnancy. Labour did not come on till two months afterwards and pursued a fairly normal course. During "a pain," however, the patient only experienced a tight feeling at the epigastrium with a desire to hold her breath without any painful sensation. At the July meeting a paper was read by Dr. GILES and Dr. MACLEAN on two unusual cases of Tubal Gestation, one causing chronic intestinal obstruction and associated with hæmatosalpinx of the non-gravid tube and the other simulating retroversion of the gravid uterus. At the same meeting Dr. LEWERS read a paper on a case of Primary Sarcoma of the Body of the Uterus (Deciduoma Malignum) in a patient twenty-four years of age treated by vaginal hysterectomy. There was a strong probability that she had not been pregnant. Mr. DORAN at the October meeting read a paper on the Management of True and False Capsules in Ovariotomy, which gave rise to an interesting discussion in which the use of iodoform gauze for drainage and the possibility of intestinal obstruction occurring from adhesion of intestine to the stump some time after ovariotomy were alluded to. At the November meeting Mr. BLAND SUTTON read a paper on Abdominal Hysterectomy for Myoma of the Uterus with brief notes of twenty-eight cases. His view that "it was becoming a plain duty to point out to patients with uterine myomata—as was done when they had ovarian tumours—that the earlier the tumours were removed the less the operative dangers and therefore a diminished peril to life" gave rise to considerable criticism. Many of those present were of opinion that in a large proportion of cases uterine fibroids do not need to be operated on either by hysterectomy with the extra-peritoneal method or the intra-peritoneal method, or indeed by any other method, but are best left alone. Another point of importance mentioned in the discussion may be briefly referred to. In comparing the results of hysterectomy for fibroids by two different operators it makes a great deal of difference whether the series compared are both series of *severe* cases of fibroids or whether in the one series there is a large proportion of simple cases while in the other most of the cases are severe. At the last meeting of the year Dr. WALTER W. H. TATE read a paper on three cases of Pyometra complicating Cancer of the Cervix; and Dr. R. G. MCKERRON one on the Obstruction of Labour by Ovarian Tumours in the Pelvis, the discussion on which was adjourned to the next meeting.

During the past year at the British Gynæcological Society

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the then President, Dr. GODSON, delivered an address on Antiseptic Midwifery and Mr. J. W. TAYLOR read a communication on Two Cases of Pan-Hysterectomy after Previous Treatment by the Clamp Operation. Dr. BEATSON, of Glasgow, read a paper on his method of Treatment of Inoperable Carcinoma. In one case—one of recurrence after removal of the breast for cancer—removal of the ovaries and tubes with the administration of thyroid extract had apparently resulted in restoring the patient to good health. In his later cases, five of cancer of the breast and four of uterine cancer, the results of the above treatment had not been satisfactory. Dr. HERBERT SNOW read a paper on the Value of Exploratory Laparotomy *per se* in (*a*) Real and (*b*) Supposed Malignant Disease of the Abdominal Organs. Professor HECTOR TREUB, of Amsterdam, read a paper on the Mechanism of Inversion of the Uterus. Mr. SKENE KEITH read a paper on Dysmenorrhœa which was limited to the treatment of uterine dysmenorrhœa. In his opinion the pain was caused not by a stricture but by the bending of the uterus *plus* the thickening of the mucous membrane and the congestion naturally present at the commencement of menstruation. Dr. SMITH read a paper on a case of Puerperal Peritonitis treated with the ant-streptococcic serum.

A large number of original communications on Obstetrical and Gynæcological subjects have appeared in our columns during the year to some of which we may very briefly allude. Thus Dr. MORE MADDEN contributed a paper entitled a Plea for the Larger Use of Ergot in Obstetrics; papers have appeared bearing on the treatment of puerperal fever by the anti-streptococcic serum, among which may be named one by Dr. J. D. RAWLINGS entitled a Case of Puerperal Septicæmia treated with Anti-streptococcic Serum; Death; and another by Mr. EUSTACE SWANWICK on Puerperal Septicæmia treated without Streptococcic Serum; Recovery. Several papers on points of interest and importance connected with ovarian tumours have been published during the year, among which we may especially mention the Cavendish lecture on Ovarian Tumour with Pregnancy, by Sir JOHN WILLIAMS; Deaths after Ovariotomy, with remarks on the Value of Flushing without Subsequent Drainage of the Peritoneal Cavity, by Mr. MEREDITH; and a paper entitled Some Notes on Ovarian Tumours, with a first series of Fifty Ovariotomies, by Dr. GOW. In addition to the papers on the operative treatment of fibroids already referred to above there is one by Dr. W. DUNCAN on Eighteen Consecutive Cases of Intra-abdominal Hysterectomy for Fibroids. Among the shorter communications of special interest we may particularly mention one on a remarkable case of Avulsion of the Uterus, by Mr. E. HICKSON SMITH. In that case immediately after delivery at term the uterus was torn away by a midwife, but the patient made a good recovery.

Therapeutic Progress.

Although the publications connected with the treatment of disease have, as usual, been very numerous during the past year interest continues to centre round the different applications of various forms of serum treatment. The record of cases of diphtheria treated with antitoxic serum has fallen, or at least the number of publications is less than in the previous year, but this appears to be due to the more general acceptance of antitoxin. The cases which are published include a series of triumphs and, as usual when the majority are agreed upon any given point, there is less room for debate and less need for the record of experiences. More recently greater attention appears to have been directed to the use of tetanus antitoxin, and in spite of the value of experimental work it must be admitted that the clinical results have been frequently disappointing. Side by side with these investigations much valuable work has been done in connexion with many of the older remedies.

The list of new drugs to be enumerated is this year comparatively small, and even in this list, with one or two exceptions, the novelties do not seem to be of any great importance. Questions connected with therapeutics have been freely discussed and the best indication of the tendency of the views of modern physicians was perhaps afforded by the debate on the treatment of insomnia at Montreal. We have in these pages long protested against the continuous administration of hypnotics, and from time to time have sounded a warning note of the dangers connected with many of the newer hypnotics. Hence, we are entirely in accord with the discussion at Montreal, since it showed that most of the speakers were far from being content with the routine employment of any particular drug. The discussion in many ways served to indicate the limits of utility of different hypnotics, such as sulphonal, paraldehyde, urethane, and the like. Some of the speakers mentioned comparatively new remedies such as pellotin, trional, and chloralamide, but the whole tendency of the discussion indicated that causes of insomnia, rather than new remedies, should be sought for.

Perhaps the greatest amount of literature in connexion with new remedies deals with the search for a satisfactory local anæsthetic. It is not so many years since cocaine was introduced with such extremely laudatory notices that it was perhaps somewhat too indiscriminately used and soon claimed a fairly large percentage of undesirable effects. Most of these effects were absent, or at least were thought to be absent, with eucaine, a remedy which was fairly largely employed in 1895 and 1896. From the first some patients complained bitterly of the smarting or burning pain which resulted from the local application of eucaine and, although the subsequent anæsthesia was sufficiently satisfactory, it was felt that it had been rather dearly purchased. It is perhaps yet too early to determine the future position of eucaine in medicine, but nearly all the published accounts during the year have shown dissatisfaction with the drug, even although its anæsthetic powers are fully recognised. On the other hand, in its favour it may be stated that it appears to produce toxic symptoms comparatively rarely and that the toxic dose is greater than that of cocaine. Another local anæsthetic—which in composition is said to be closely allied to phenacetin—is holocain. This also causes some transient sense of burning when applied to the conjunctiva, but it has been claimed for this drug that it has no effect on the pupil, on accommodation, or on the blood-vessels. Inasmuch as this drug has only very recently been employed, the published accounts so far are purely laudatory. Orthoform and anesin are two other local

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anæsthetics of recent introduction, of which, however, very little is yet known. Some interesting experiments have been made with the view of determining the activity and the purity of cannabinol, which seems to produce symptoms practically identical with those of Indian hemp; while further experiments have been made with mescal, which obviously possesses a somewhat dangerous power of producing subjective visionary sensations. The accounts of the effects produced by this drug written by Dr. WEIR MITCHELL and Mr. HAVELOCK ELLIS will probably be read as interesting contributions to medical literature, even although they do not pretend to have any therapeutic application.

The position of quinine in medicine appears to be established on such a firm basis that it is rather a shock to find recommendations of substitutes for it. The claims of the substitutes are invariably that they produce less giddiness and tinnitus, while they are credited with similar powers of lowering the temperature. Euchinine has been recommended on these grounds, and from many accounts it appears to have given satisfaction both as an antipyretic and anti-neuralgic. It shares with quinine the disadvantage of extreme insolubility. Another anti-neuralgic or antipyretic is a glucoside named kolanine, derived from the kola nut. Other antipyretics which have been described are kryofin and pyramidon. The former is said to be at least as useful as phenacetin or antipyrin, but like these it is not free from the charge of occasionally producing undesirable effects. Pyramidon has been used in typhoid fever and also in some cases of locomotor ataxy. In spite of the introduction of two new antipyretics there can be no doubt that the older methods of cold sponging and baths still remain in favour. The group of antiseptics has not been materially enlarged. The older remedies are still found efficient and free from objection. Acetanilide has, however, been recommended for local application while chinosol and airol have also been used as antiseptics. Juniper tar oil, or oil of cade, was not long since recommended as a disinfectant in cholera; careful and extended research has, however, demonstrated that although an alkaline solution has a marked disinfecting action it has relatively weak powers. It has been suggested that in the local treatment of rheumatism oil of wintergreen is preferable to salicylate of sodium, and apart from the greater rapidity of action obtained from the former drug it is said to be free from the liability to produce tinnitus.

Several valuable papers have been published in connexion with the treatment of the cardio-vascular system. Foremost amongst these stands an interesting account by Dr. C. R. MARSHALL of the antagonistic action of digitalis and the members of the nitrate group. In this he furnishes a very useful summary of the actions of digitalis and from the experimental side appears to have shown that there is an antagonistic effect on the muscle cells when these substances are used in combination. Further experiments have also been made with digitoxin which, however, appears to be almost too active for safety. Erythrol tetranitrate, which was introduced by Dr. BRADBURY in his Bradshaw Lecture, has in some cases given satisfaction in procuring relief of asthmatic attacks and also of cardiac pain. Pilocarpine has been used for the relief of excessive sweating although it generally acts as a diaphoretic. Much of a contradictory nature has been written of its value in the treatment of puerperal eclampsia. Many observers maintain that it is a dangerous drug since it provokes excessive bronchial secretion. It has been suggested that this might be counteracted by the simultaneous employment of atropine.

Creosote, which was formerly much used in the treatment of phthisis, has gradually lost favour owing to its effects upon the stomach and intestines; these discomforts are said to be avoided by the employment of creosotal, which reduces the bronchial secretion, cough, and night-sweats. Hydrastis Canadensis has been employed in cases of early phthisis and has been found to be an efficient expectorant, while satisfactory results in the treatment of whooping-cough have been claimed for both naphthalene and resorcin. In the paper by Dr. MARSHALL referred to above the diuretic influence of digitalis was considered. It is somewhat curious to find that strophanthus has lately been recommended as a diuretic, and it is stated that it possesses greater rapidity of action and more powerful diuretic effect, while it is free from the disadvantage of cumulative action or of producing digestive disturbance. The discussion upon diuretics at Montreal was prefaced by two admirable papers which dealt respectively with the clinical and pharmacological aspects and left but little scope for subsequent debate. At the same meeting the diuretic action of apocynum cannabinum, the Canadian hemp, was favourably considered, although it was admitted that it might produce violent emesis and catharsis. These undesirable results were, however, attributed to the admixture of the bitter fibre of the wood with the bark of the root. Salicylate of sodium and caffeine have also been employed for their action on the kidney; the former has been found to check the diuretic action induced by the latter. Small doses of cantharides have been recommended in acute infectious nephritis, though they are contra-indicated in cases of interstitial nephritis. Uræmic dyspnœa has been treated with ether administered by the mouth and subcutaneously, but it seems only to be of service in cases associated with much pulmonary engorgement. As a laxative for the treatment of chronic constipation in children olive oil has long held a certain degree of favour in domestic medicine; recently however it has been urged that it should be employed with a free hand in typhoid fever. Rectal injections of a quarter to half a pint are, if necessary, supplemented by a large breakfast-cupful given by the mouth, and the results claimed for this treatment appear to merit further investigation.

Early in the year we published an account of the treatment of dysentery with monsonia ovata, which is said to exert a specific action distinct from mere astringency. Taka diastase has been recommended in our columns for some forms of indigestion, and chinaphthol is said to escape change within the stomach and to split up into its constituents in the intestine, where it is credited with local action. Of the list of drugs which have been used in affections of the skin permanganate of potassium in the treatment of lupus, thyroid extract in prurigo, and hypodermic injections of thiosiamine in keloid deserve mention. Tuberculous peritonitis is said to have yielded to the use of

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creosote in the form of enemata, while injections of glycerine and iodoform into the synovial cavity of the knee-joint are believed to have produced satisfactory results in tuberculous disease of the knee. Thyroid extract has been used with apparent benefit in a large number of different diseases, many of which are devoid of definite pathology. The treatment of syphilis was discussed at some length at the Montreal meeting and allowed scope for detailed remarks on the relative value of different preparations of mercury.

Finally we may remark that the new edition of the British Pharmacopœia is, we understand, approaching completion and is likely to be issued at no very distant date.

Ophthalmology.

Two important ophthalmological congresses have been held this year; one in connexion with the meeting of the British Medical Association at Montreal and the other at Moscow as a section of the twelfth meeting of the International Congress. In the latter the subject of Trachoma was taken up by M. HIRSCHBERG who gave a list of towns in which it is prevalent and discussed the preventive and curative measures that should be adopted for its suppression. In the more serious cases surgical proceedings are required whilst in the slighter cases the usual remedies, such as copper sulphate and silver nitrate, are sufficient. He, as well as M. NENADOVIC, thought that with Government aid and the enlightenment of the public mind in regard to the importance of ablutions and the use of pure water the disease, like leprosy, might be stamped out in Europe. Professor KNAPP and Professor DOHNBERG recommend for the expression of the trachomatous granulations the use of modifications they have devised of the forceps, which can be very readily and effectively applied, whilst a special form of crayon made of caoutchouc has been suggested for the same purpose by M. DEBAGORY-MOCRIÉVITCH. Another mode of treatment of this troublesome affection is the application of solution of potassium iodide practised by M. ROSELLI, of Rome, with the immediately subsequent application of oxygenated water. M. DARIER removes the granulations, if few in number, with scissors; if numerous by careful curettage. M. NIESNAMOV employs a saturated solution of iodine in ether, others itrol or silver citrate, others formol; others again resort to galvano-cautery; whilst M. GERMANN, of St. Petersburg, believes that in many instances the focus of the disease is situated in the lacrymal sac which must be attacked or extirpated to effect a permanent cure. Attention may be called to the recently issued Blue-book which contains a report by Mr. SYDNEY STEPHENSON on the Ophthalmic State of Poor-law Children, in which will be found an excellent summing up of the methods adopted in England for the prevention of the spread of this disease, including the arrangements that should be made for class-rooms, dormitories, infirmaries, and for general and local hygienic treatment.

The subject of Trachoma was also earnestly discussed at the Montreal meeting, Dr. GEORGE STEVENS adducing evidence to show that the disease is particularly prevalent amongst those nations which present the extreme meso-cephalic form of skull when the head is high in proportion to its width and length, such as the Irish, Italians, Jews, and Japanese; whilst it is rare in dolichocephalic peoples like the negroes and in brachycephali. It is in his opinion particularly associated with anophoria, both visual planes tending to rise above the plane of the horizon. The disease seems to be very rare amongst the North-American Indians.

At the Moscow meeting another burning question was introduced—viz., the operative treatment of high myopia, the discussion being opened by one of the strongest supporters of the plan of treating it by the removal of the lens, M. FUKALA. The number of cases thus treated has now reached 2000. The plan which M. FUKALA and M. DARIER have adopted and which appears to give excellent results consists in the operation of discission followed by extraction, but M. VACHER, of Orleans, prefers the ordinary operation of extraction. The lower limit of myopia for which the operation should be undertaken seems to be that degree which is rectified by the concave glasses named 10 D. One successful case operated on by M. FUKALA had a myopia of 31 D. There are dangers attending the operation which should not be overlooked, such as iritis and corneal troubles as well as suppuration of the globe, whilst it may be remarked it is found not to exercise any preventive action on the occurrence of detachment of the retina which is a frequent concomitant of high degrees of myopia especially in cases where there is extensive posterior staphyloma with atrophy of the choroid. The vision is in general but not always improved. The results of the operation in regard to the subsequent refraction of the eye are rather surprising since M. SCHLEICH has obtained emmetropia or normal vision, the patient requiring no glass for distance after extraction of the lens in all degrees of myopia from 12 D. to 22 D. The operation is contra-indicated in cases of extensive choroiditis and optic nerve complications. The etiology of the disease known as the ulcus corneæ serpens or Saemisch's ulcer has been investigated by M. UHTHOFF and M. AXENFELD who have satisfied themselves that in almost all instances the Fränkel - Weichselbaum's diplococcus or pneumococcus is to be found, generally alone but sometimes associated with staphylococci and xerosis bacilli; and from their inquiries it follows that if on examination the pneumococcus be recognised immediate and energetic treatment should be commenced, the use of the galvano-cautery affording the best hope of a successful issue Neuralgia of the eye and temple, though often dependent upon errors of refraction and capable of relief or cure by the employment of appropriate glasses, sometimes proves recalcitrant, and in such cases much benefit can be obtained, according to Professor BENEDIKT, by the application of induced electric currents, one pole of which represented by the finger of the operator is applied to the lid, whilst the other pole is placed on the temple. The strength of the current can thus be pretty accurately gauged. The employment of intravenous injections of mercury in the treatment of syphilitic diseases of the eye has been strongly recommended by Dr. JEHIN-PRUMB, of Montreal, who considers this method superior to the employment of mercury by the mouth, by frictions, fumigations, or by subcutaneous or sub-conjunctival injections. The quantity he injects is about a centigramme or less of a 1 per cent. solution of cyanide of mercury and the vein should be full.

An important discussion on Retro-ocular Neuritis was opened at the Ophthalmological Society of the United

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Kingdom by Mr. MARCUS GUNN and Dr. BUZZARD. The former pointed out that cases of this form of disease were characterised by rapid failure of vision often in one eye alone, accompanied by pain and tenderness in neighbouring parts, absence of early ophthalmoscopic changes and with a tendency to recovery, and summed up their etiology under the heads of orbital cellulitis, inflammatory and other affections of the sinuses and nasal mucous membrane, toxic affections, and various local manifestations of general diseases such as syphilis, tubercle, gout, and rheumatism, whilst Dr. BUZZARD particularly dwelt on the connexion of the disease with disseminated sclerosis. The discussion, in which many speakers took part, seems to show that several distinct affections are included under the term retrobulbar neuritis which are at present insufficiently diagnosed from one another.

The treatment of toxic amblyopia by means of subcutaneous injections of serum has been advocated by M. DE WECKER at a meeting of the French Ophthamological Society, the serum employed being that known as Chéron's, which contains 1 per cent. of carbolic acid, 2 per cent. of sodium chloride, 4 per cent. of sodium sulphate, and 8 per cent. of sodium phosphate, and the quantity injected varying from 60 to 150 grammes per diem. From the discussion which followed it appeared that this plan of treatment is more freely practised in France than in this country and if the satisfactory results obtained prove persistent it might with advantage be more largely adopted. The usual mode of dealing with wounds of the cornea accompanied by protrusion of the iris in this country is to enlarge the wound with a Graefe's knife or keratome, to remove the prolapsed portion of iris, taking special care to free the iris at the angles of the wound, and to keep the parts at rest with a pad and bandage. To effect the removal of the prolapsed iris is, however, not infrequently extremely difficult, and where the lens though uninjured is in very close relation with the inner surface of the cornea the introduction of a knife, however carefully executed, leads to injury of the capsule of the iris followed by cataract. In such cases M. ROHMER, of Nancy, supporting his views by reference to cases reported by Dr. MEYER and others, recommends instead of the performance of the iridectomy the conversion of the open wound or at least of the wound in which the iris has only an investment of epithelium into a subcutaneous one by freeing the conjunctiva round the whole periphery of the cornea and bringing the cut edge together by means of a suture in the fashion of a purse. The results he has obtained are good and the removal of prolapsed iris is not therefore always to be adopted.

The operation known as Mules's operation, in which instead of removal of the entire globe the sclerotic is eviscerated and its contents replaced with a glass or silver ball, has been largely practised by Dr. BULLER, of Montreal, and with much success. Failures are probably due to want of sufficient care in the technique of the operation, such as the introduction of too large a ball or imperfect sterilisation of the instruments and tissues; but Mr. CROSS, of Bristol, made a more serious charge against it in a paper read before the Ophthalmological Society of Great Britain—that it is apt to induce sympathetic ophthalmia.

Only experience can decide this point. Coming to a somewhat secondary matter, the question of the effect of the Auer incandescent light on the eye has been a subject of discussion. The light emitted from the Welsbach mantle, which is a net saturated with thorium and cerium oxides, contains a large proportion of ultra violet or actinic rays, but there is no evidence that it exerts an injurious action on the retina. Direct inspection of the brilliant light of the electric light has indeed been known to set up retinitis or optic neuritis, but in the ordinary modes of lighting in dwelling houses little danger is to be apprehended.

Good results have been obtained in cases of ptosis both in this country and abroad by utilising the fibres of the frontalis muscle.

An interesting series of lectures on the syphilitic diseases of the eye and its appendages were delivered before the Harveian Society by Mr. HENRY JULER.

A very complete system of diseases of the eye in five volumes is in course of publication, chiefly by American authors, under the able editorship of Messrs. WILLIAM NORRIS and CHARLES OLIVER of Philadelphia. Two volumes have already appeared, the first dealing with the Embryology, Anatomy, and Physiology of the Eye, and the second with the more general subjects of School Hygiene, the Examination of the Eye, Statistics of Blindness, and Antisepsis.

Forensic Medicine.

With the exception of the case of the murder of a husband in Japan by arsenic—a case which recalled the worst features of the MAYBRICK case—there has been no *cause célèbre* during the year to add to the annals of this revolting form of crime as affecting British subjects. It is with satisfaction that we have to record a marked diminution in the number of deaths from anæsthetics administered for the purpose of surgical operations. We have endeavoured to minimise the dangers incidental to anæsthetic dental surgery by insisting that whenever chloroform or other agent is required to produce prolonged insensibility that the utmost attention should be paid to the preparation of the patient, posture, and freedom from restraint by dress. Possibly the default of these precautionary measures taken collectively had much to do with the fatal result of chloroformisation which occurred at Rhyl. A healthy woman was anæsthetised for a protracted dental operation and before this was completed life became extinct. We have emphasised the importance in this form of "artificial sleep" of the anæsthetist giving an undivided attention to his special duty, for the life of the patient is for the time being so delicately poised that the least adverse circumstance may occasion imminent danger to existence, or death itself. The advice given by a late operating surgeon, "never interfere with the man at the wheel," cannot be too strongly endorsed. For the safety of patients it should be assumed that danger lies more in the act of anæsthetisation than in the agent itself or in a supposed abnormal susceptibility of the individual to its lethal properties. It is commonly supposed that dogs are peculiarly prone to succumb to chloroform, but recent experience shows that the grounds for the belief have been misinterpreted, for out of between 300 and 400 consecutive cases of chloroform anæsthesia only one had a fatal issue.

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A death from nitrous oxide and ether reported in our columns was in our opinion due not to nitrous oxide anæsthesia but to obstructed pulmonary and cardiac circulation. Once more the neglect of the necessary precaution to test the air of wells before descending has resulted in loss of life. A workman entered a well at Brede belonging to the Hastings Corporation and was suffocated by carbon dioxide. After the accident it was discovered that a candle was extinguished at a depth of twenty feet from the surface. The suggestion that the gas was "suddenly generated" in a metal cylindered and brick walled well we considered improbable. Whilst writing of poisons, gases, and vapours we may refer to the tendency on the part of municipal bodies to utilise water-gas, which contains a large percentage of carbon monoxide, for the purposes of illumination. This was pointed out by a deputation to the Manchester and Salford authorities who had resorted to an admixture of water-gas and coal-gas for public service.

Fashion has added to her long list a method of securing victims. The sad death of a lady caused by the ignition of the vapour of petroleum hair-wash caused a thrill of horror in the community, and yet we are informed that the system in question for giving artificial grace and adornment has been more sought after than ever. It is of paramount importance that legal restraint should be put on the sale and use of this dangerous agent. Two theories were advanced to explain the explosion in the above case: (1) a flash from a distant light igniting the highly diffusible vapour, and (2) firing by an electric spark emitted by friction of the hair. We recorded our adoption of the latter.

An interesting trial took place in which a quack was indicted for manslaughter by supplying an advertised arsenical plaster which was to be applied for fourteen days to the skin previously blistered. The victim continued its use for three weeks and died from the effects of arsenic absorbed into the system. An acquittal followed.

We have had to chronicle numerous prosecutions under the Pharmacy Act. At Heywood a chemist and druggist was fined for selling vermin killer containing strychnine. The purchaser asked for rat paste which is not scheduled, whereas vermin killer is. It is evident that further restrictions should be placed on the sale of poisons and the schedule be made more inclusive. A conviction has been obtained under the Food and Drugs Act for selling laudanum of illicit quality. The official analysis showed 63 per cent. deficiency of alcohol and 90 per cent. of morphine.

A lad, aged sixteen years, died at Felling, near Gateshead, from "nicotine" poisoning through excessive cigarette smoking. We raised the question of adulteration so extensively practised in the manufacture of cheap tobacco. Two cases of acute alcoholic poisoning have been reported. In the former a man, aged twenty years, swallowed a quart of whisky for a wager and died in eight hours. In the latter a child, aged three years, took twelve ounces of whisky. The infant completely recovered after four months, having suffered from hemiplegia, strabismus, and other nerve symptoms. Acute poisoning from cocaine is becoming much less common. This is explained partly by careful dosage and partly by the fact that other local anæsthetics—e.g., orthoform—of lower toxic power have been employed as substitutes.

In Cawnpore a native professional poisoner named BHADARYAN KORI was convicted. He had used dhatura, the favourite poison of such malefactors. There is an immense field for research as to the nature, effects, and antidotes of animal poisons whether the product of gland secretion or of fermentative processes. It is well known that in India snake poison is often administered to cattle for illegal killing. Professor HANKIN investigated some cases at Agra. From cloths found in the intestines of some cows he prepared an extract which when injected into a rabbit soon killed it but when mixed with Calmette's "serum antivenimeux" it had no such lethal effect.

In order to push articles for financial gain a common device is to describe them as "non-poisonous" and this is notably the case with so-called disinfectants. At Huddersfield a woman was poisoned by taking "germol" labeled non-poisonous. It is true that these alkaline mixtures of the phenol derivatives of coal tar are less caustic and toxic than carbolic acid but still it is a question of degree and not complete immunity. On three occasions we have animadverted on the system of quackery called "Wallace-ism." It is a satisfaction to know that this panderer to the public taste for the mystical and wonderful has been publicly rewarded by the infliction of heavy fines in a Police-court. Such a requital is all the more gratifying when we consider the imperfections of the Government licensing of patent medicines.

A Pharmacy Act has been passed for Jersey. In that island carbolic acid is a scheduled poison but we find no reference to the admixture of soot or indigo with arsenic which is authorised in England.

The "sanitary oath" is slowly growing in favour and we trust ere long the Scotch method of "swearing" will entirely supersede the objectionable one which long usage has so deeply rooted amongst us and with regard to which nothing can be said in favour of its retention. It has been established by judicial authority that the Notification of Diseases Act requires that where two or more medical men attend—even though only in consultation—a case of infectious disease included in the Act each one is bound to notify to the district sanitary authorities. This is in accordance with the common sense demands for the protection of the community, otherwise singular notification of a case transported to another district would be to let loose on the invaded area an infecting medium which might do incalculable harm.

There have been several noteworthy investigations affecting medical practitioners before judicial tribunals. Mr. W. R. H. HAINS had to undergo the ordeal of a criminal trial at the Old Bailey for conspiracy to procure abortion. Happily the case for the prosecution utterly collapsed, and our unfortunate *confrère* had the satisfaction of establishing his right to retain the title to professional integrity which he had so long and worthily held. Dr. GREY-EDWARDS of Carnarvon was sued for damages on the alleged ground that he had by his carelessness and negligence failed to diagnose a case of diphtheria and so to prevent by suitable precautions communication of the disease to other members of a family, whereby the head was put to pecuniary expense. The jury found for the defendant. We are happy to say that the verdict was in accord with the direction of Mr. Justice GRANTHAM who presided at the

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trial of the cause. In the case BEATTY *v.* CULLINGWORTH it will be remembered that Dr. CULLINGWORTH was sued for damages on the ground that he had performed an operation on the plaintiff without consent. Rightly Dr. CULLINGWORTH gained the day and an order for a new trial was refused by the Court of Appeal. The plaintiff sought to appeal to the House of Lords *in formâ pauperis* but the Appeal Committee rejected the petition. The "Peculiar People" have had a much-needed lesson taught them by the verdict of guilty of manslaughter returned at the Old Bailey against the parents of a child who had died without medical aid having been sought. Mr. Justice RIDLEY, whilst admitting that the accused acted conscientiously, granted a release on their giving sureties for good behaviour; he said he did not want to make martyrs of them but they must understand that they must not trifle with human life by refusing to do that which the law imposed. We took occasion to subscribe entirely to his lordship's deliverances.

In the *Montreal Medical Journal* Dr. WYATT JOHNSON and Dr. VILLENEUVE have recorded some extremely interesting observations on Medico-legal Entomology. They have shown that the cadaver is attacked at different periods of decay by different insects. This opens up a new field for the investigation of the probable date of death, but as yet the results are not sufficiently precise to be put forward as corrobative evidence of facts attainable by physico-chemical research. The subject of premature burial which had undergone lively discussion in France, America, and this country was commented on by us. The conclusion we arrived at was that there was no need for the "reform" advocated by those who believed that live burial was a by no means uncommon event.

The murderers of Miss CAMP in a railway train and of a servant girl near Windsor still remain undiscovered. These crimes caused universal horror and dismay, but their effect upon the public mind must pall before the tragedy which has lately removed from our midst a man universally admired, respected, and beloved—we refer to the melancholy death of Mr. WILLIAM TERRISS. Concerning the assailant's mental condition in this last case it would clearly not be right for us to say anything while the case is *sub judice;* the other two crimes bore every appearance of having been the purposeless acts of a homicidal maniac.

Dental Surgery and the Practice of Dentistry.

In the practice of dental surgery fair progress has been made during the past year. From a purely scientific point there is but little new to record, although the year has been by no means a barren one. Several excellent papers have appeared in the columns of the various dental publications, some of which were of great value from a practical point of view. Mr. J. H. BADCOCK contributed a paper on Copper Amalgam, which was an admirable *résumé* of the opinions held by the various operators on the merits and demerits of this filling material. Mr. ALLAN GOADBY also contributed a note on the Discolouration of Copper Amalgam. In a paper on Nasmyth's Membrane, which appeared at the beginning of the year, Professor PAUL showed that this membrane could no longer be regarded as a thin layer of cementum and that it was composed of an outer layer of large flattened epithelial cells and an inner thin translucent layer usually marked with hexagonal impressions derived from the ends of the enamel prisms. Another paper worthy of note was published by M. CHOQUET on the leptothrix buccalis. Mr. HOPEWELL SMITH'S communication on the Microscopical Aspect of Certain Lesions induced by Caries has added considerably to our knowledge of the pathological changes which occur in the dental pulp induced by caries. A paper showing much careful investigation has appeared from the pen of Dr. GREVERS on the various forms of occlusion of the teeth. The author has attempted to classify the various forms of articulation, with the result that he has placed on record much valuable information. In operative dentistry progress has been made in several directions. Cataphoresis has attracted the attention of many operators and although the methods of employing it have improved much requires to be done before it is likely to take its place as a general method of producing local anæsthesia. The system of inserting amalgam fillings in combination with oxy-phosphate cement has gained ground rapidly and there is little doubt that by this method a most efficient filling can be obtained and the time does not seem far distant when it will be possible with this material to make fillings as satisfactory as those obtained by the use of gold. The immediate regulation of teeth has excited a certain amount of interest and it seems probable that it will prove of some value in certain types of irregularities of the teeth. The use of "crowns" in the treatment of teeth beyond the stage of filling has increased and improvements have been made in the more extended use of porcelain in their manufacture; this has been mainly brought about by the introduction of small electrical furnaces. "Porcelain inlays" for cavities in conspicuous situation have been more extensively used. The x rays as an aid to dental diagnosis have proved of some use and when some of the difficulties attending their employment in the mouth have been overcome they will undoubtedly prove of great value in solving many difficult cases where the treatment depends upon the presence or absence of teeth. Several deaths from chloroform given for dental operations have been recorded. This is extremely unsatisfactory when such safe anæsthetics as nitrous-oxide gas and ether are available. With regard to nitrous-oxide its use with oxygen has greatly increased, a fact easily accounted for on account of the much more satisfactory anæsthesia obtained by the use of the two combined. Of local anæsthetics eucaine has perhaps made slight headway, it being found to be a more harmless drug than cocaine.

In literature several new works have to be recorded, the most important being the fourth edition of TOMES' Dental Surgery. A seventh edition of RICHARDSON'S Mechanical Dentistry has made its appearance and EVANS'S Crown and Bridge Work has reached its fifth edition. A new work on Mechanical Dentistry by ESSIG has been published, and a text-book on Operative Dentistry edited by Dr. KIRK.

The British Dental Association, which is so intimately bound up with dentistry in England, held a most successful meeting in Dublin under the presidency of Dr. THEODORE STACK. Under the ægis of this body several important prosecutions in connexion with the Dentists Act have been undertaken with the result that

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Clause 3 has been shown to be capable of wider interpretation than was generally thought. A number of other prosecutions conducted by private individuals have also taken place, but not in all instances with successes, and the failures seem on looking carefully at some of the cases to have been due to want of care on the part of those conducting the prosecutions. If prosecutions are undertaken by private individuals every possible care should be taken in conducting the case, since one failure discounts many successes. Dental education has made fair progress and some radical changes have taken place in the curriculum of the Royal College of Surgeons of England—changes which will ensure a sounder and better education of the dental student and therefore a more reliable and useful practitioner. The consideration of the various reports submitted by Mr. C. S. TOMES as inspector of the dental examination have been under the notice of the General Medical Council during the year and there can be little doubt that the effect of these reports will be a "levelling up" of the examinations held by various examining bodies. Dental surgery has during the year been deprived by death of several eminent workers. In England we have lost Mr. JAMES SALTER, a man whose researches into the pathology of teeth have had an important influence on every-day practice. The deaths of M. MAGITOT, of France, and Dr. HOLLAENDER, of Germany, will leave gaps not easily to be filled.

Biology and Physiology.

In the domain of biology and physiology no discovery of capital importance has to be recorded, yet it may fairly be said that there has been an advance along the whole line. The number of students of biology, as of other branches of natural science, is increasing but even now though the field is wide the reapers are few. The opinions of several experienced teachers and lecturers on the best mode of giving instruction in anatomy were elicited at the annual meeting of the British Medical Association which met in Montreal. It was agreed on all hands that dissection was of the highest practical importance and that familiarity with topographical anatomy could hardly be pushed too far but that there were certain advantages to be derived from lectures and from various accessory means of instruction which ought not to be neglected. It was pointed out that a well thought out scheme of lectures should supply the learner with facts derived from comparative anatomy and from histology which should enable him to gain a clearer conception than can be obtained from text-books of the structure, use, and fitness of the several parts and organs of the body and, so far as is known, the reasons for the existing conditions. A good course of instruction should also include the exhibition of accurate diagrams and lantern slides, carefully made models, dissected and frozen sections, and the mapping out upon the skin of the disposition of the parts in different regions by means of coloured pencils. It is only in well-appointed schools that all these means can be used, but each in their turn have been found serviceable to certain classes of students. The difficulty of giving in a short space even the barest outline of the progress made in such subjects as anatomy and physiology consists in the immense amount of material that accumulates year by year and which it is impossible to read through, much less to digest. No better evidence of this can be afforded than the fact that whereas quite within the memory of the older members of the profession the number of periodicals lying on the tables of the Royal College of Surgeons of England did not exceed 30 or 40, there are now no less than 500, most of which though ostensibly devoted to medicine yet often contain articles, accounts of experiments and statements of facts that throw a vivid light on biological problems.

Among the remarkable recent experiments—remarkable, because it profoundly modifies our ideas of life—is that performed by Mr. H. T. BROWN and Mr. F. ESCOMBE, who have exposed seeds in liquid air but protected from its direct action by glass globes at a temperature of 180° to 190° C. below zero for hours and have found that if slowly thawed their vitality is preserved without impairment and that under appropriate conditions they germinate easily and well, producing healthy plants. This is entirely in accordance with KOCH'S experiment showing that the vitality of seeds might be long preserved when they were kept in a Geissler's vacuum tube and with the experiments of GIGLIOLI, recorded a year or two ago, in which seeds proved active after exposure for sixteen years to pure nitrogen, chlorine, hydrogen, arseniuretted hydrogen, and nitrous oxide gases and, after immersion for the same space of time, to strong alcohol and even to an alcoholic solution of bichloride of mercury. If life be synonymous with change it must be acknowledged that at such a temperature and under such conditions the change, if not altogether arrested, must take place exceedingly slowly, and again it may be asked, if life can be rendered latent for a little while why not permanently? The observations of M. LOUKINOW reported to the Biological Section at the Moscow Congress on the effects of inanition on cells show that whilst the cells of various organs are diversely affected the nutrition and multiplication of the nuclei remain comparatively unchanged thus appearing to retain to a large extent their autonomy. The researches of Mr. W. GARDINER on the endosperm of the seeds of many plants as well as those of MM. BIZZOZERO, PFLÜGER, HEITZMANN, SCHÄFER, and ROBINSON on stratified epithelium and those of Mr. J. B. MACALLUM on the histogenesis of the muscle cells of the heart demonstrate that numerous threads, sometimes scattered, sometimes collected into groups, form bands and bridges which establish direct communication between the protoplasm of neighbouring cells, and thus, whilst each cell represents from some points of view an isolated microcosm having its own special organisation and functions, every cell stands in direct continuity with others which it influences and by which it is influenced. Such communicating protoplasmic threads have not been observed to exist in all cells, but their very general presence is a noteworthy fact.

The ubiquity of micro-organisms in air, water, and the bodies of animals has led to the question whether life would be possible in the absence of bacteria, a question which the experiments of MM. NUTTALL and THIERFELDER in the Hygienic Institute of the Berlin University have answered in the affirmative, since young guinea-pigs placed in a sterilised chamber supplied with sterilised air and fed exclusively on sterilised milk and in the alimentary canal of which no

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trace of bacteria could be discovered after they had been killed appeared to be, so long as they were permitted to live, in perfect health.

Mr. C. DAVENPORT and Miss HELEN PERKINS have endeavoured with ingenuity to determine the influence of gravity on the movements of highly organised animals, selecting the slug as a good subject for experiment, and they conclude from their observations that gravity acts as an excitant to which the organism responds. Their elaborate experiments show the extent of the movement effected by this agency.

New morphological elements have been observed in the blood. Dr. H. F. MÜLLER, for example, describes minute spherical or rod-shaped bodies which present lively molecular movement and in addition immeasurably fine dust-like particles which are soluble neither in acetic acid nor in ether and are not blackened by osmic acid. Pigment particles and colourless flakes have been seen and described by Dr. LATSCHENBERGER. The reducing substance in the blood has been isolated by Dr. VON HENRIQUES and proves to be jecorin-sugar. A curious mode of determining the relative proportions of blood corpuscles and plasma has been suggested by two Russian naturalists which consists in determining the conductivity of the blood for electrical currents. A new hæmoglobinometer on the principle of the tintometer and a new hæmocytometer have deen devised by Dr. GEORGE OLIVER, both apparently of great delicacy and giving accurate results. Dr. T. G. BRODIE and Mr. A. E. RUSSELL have endeavoured to determine with greater approach to accuracy than has hitherto been possible, the time at which coagulation of blood takes place after being withdrawn from the vessels, and have devised an ingenious apparatus for the purpose.

A discussion took place at Montreal on the Heart-beat and from the reports it would appear that physiologists are divided on the question of the cause of the movements of the heart—some, with Dr. GASKELL who initiated the discussion, maintaining that all parts of the heart are endowed with the power of rhythmical contraction independently of nerve cells and fibres. In his opinion the cells and fibres found in the heart seemed to merely correspond with those that would be found in the segment of the vascular system which dilated constitutes the heart, the contraction being of the nature of a rhythmical muscular and not a ganglionic phenomenon. Another theory advanced was that the rhythmical action of the heart is due to the cyclical action of the calcium and potassium salts; another that whether the heart responds to stimulation of nerves inducing or inhibiting contraction, these nerves act alternately. Our knowledge of nerve and muscle is obviously at present too incomplete to permit the question to be solved.

The publication of various treatises and of numerous special articles on foods and the changes their constituents undergo in the body shows that physiological chemistry is pursued with unremitting activity both here and abroad. Thus we may refer in particular to the elaborate work of Dr. GRIESSMAYER on the proteids of the various cereals, legumes, and oleaginous seeds, and to Dr. G. RUPP'S researches on foods; to Dr. BURIAN and Dr. SCHURS investigations on the formation of nuclein in the body; to Dr. KUTSCHER'S investigations in regard to the first products resulting from the digestion of albumen; to Dr. GEELMUYDEN on acetone, diacetic acid, and other products of animal chemistry; to the researches of Dr. THESEN on isokreatinin, of Dr. SOHUTZEN on the metamorphosis of albuminous compounds in living plants, and many other articles distributed in various journals, which severally deal either with the nature or the composition or the metamorphoses of food.

The experiments of Dr. VAUGHAN HARLEY on the breaking up of fat in the alimentary canal are of interest as showing that the stomach is capable of splitting up neutral fat into free fat acids and glycerine and that free fat acids are to some extent capable of finding alkalies in the stomach itself wherewith to form soaps. Both these changes are observed alike in normal dogs and in dogs from which the pancreas has been removed. The fat-splitting action takes place actively in the intestines even in the absence of the pancreas so that the quantity of free fat acids and of soaps in the large intestines is not materially different in normal animals and those destitute of a pancreas. The experiments of Mr. MOORE and Mr. ROOKWOOD seem to show also that a large proportion of the fats ingested are absorbed as dissolved fatty acids the remainder being taken up in the form of soaps, the proportion absorbed in the two conditions varying with the animal. The effects of ablation of the pancreas in birds have been studied by Dr. W. KAUSCH with the result that the animals after becoming lean die in less than fifty days, that the blood contains at first more sugar and then less, and that the urine contains none. In dogs glycogen entirely disappears. The development of the pancreas has been worked at by LAGUESSE, of the liver by HAMMAR, and of the pancreas and liver by BRACHET. The presence of the liver has been demonstrated by MM. E. HÉDON and C. DELEZENNE to be requisite in order that the intravenous injection of peptone should exert its anti-coagulating power, since if the vena portæ be connected with the vena cava directly no such influence is observed; there was however great diminution of the blood pressure. Two new pigments have been obtained from the bile by MM. DASTRE and FLORESCO which occupy an intermediate position between bilirubin and biliverdin. The experiments of Dr. A. L. GILLESPIE show that the contents of the alimentary canal in the dog and calf as well as probably in man are acid throughout, the acidity being due to acids formed in part by micro-organisms acting on the constituents of the food, in part to hydrochloric acid in combination with proteids and proteid derivatives and in part to acid salts. There appear to be two classes of bacteria—those which occasion an acid reaction and which are usually unable to liquefy gelatin and those which lead to an alkaline reaction and are capable of liquefying gelatin. These two classes are antagonistic; if the acid forms predominate there are but few putrefactive changes; if the alkaline there is much disposition to putrefaction.

M. E. CYON believes he has discovered a new function discharged by the thyroid gland, for, finding that iodine exerts a paralysing action on the depressor and vagi nerves and therefore upon the heart, he has ascertained that it is withdrawn from the circulation in the thyroid gland and enters into the formation of an organic compound to which he has

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given the name of iodothyrin. In addition he remarks that the thyroid gland is an organ which, being situated on the carotid arteries just before their entry into the skull, protects the brain from the sudden afflux of blood acting like a secondary current. Mr. S. VINCENT, from his observations on the comparative physiology of the suprarenal capsules, has satisfied himself that suprarenals of some sort are probably present in most if not all vertebrate animals, and from many experiments of the intravenous injection of the medullary substance of the adrenals of fish he found very striking evidence of contraction of the arterioles throughout the body, and he believes that the effect of the active principle upon the arterioles is due to a direct action upon the muscular tissue of the blood-vessels and is not in any way connected with its action on the central nervous system. The secretory activity of the skin has been the subject of inquiry by Mr. BARRATT who finds the proportion of carbonic acid gas eliminated as compared with watery vapour to be one to two hundred for the upper limb, varying to some extent with the temperature and the degree of fulness of the vessels of the part. The toxic effects of human sweat which have been alternately admitted and denied have been demonstrated by M. S. ARLOING to be undoubtedly well marked when injected into the veins of dogs and rabbits, the effects on the blood in producing hypoglobulin, on the heart in reducing the force and frequency of its action, on the respiration in rendering it feeble, shallow, and hurried, on the intestines in causing vomiting, pain, and diarrhœa, and on the nervous system in exercising a depressing influence on its action, being very distinct.

The observations of Mr. A. SUTHERLAND on the temperatures of reptiles, monotremes, and marsupials carried on in Australia are of great interest, showing that the lowest vertebrata resemble the reptilia to which their organisation presents so many points of analogy in their heat-producing faculty. The temperature of the platypus, for example, in cold air may fall to 24·8° C. and of the echidna to 22° C., whilst that of the latter exposed to a hot sun rose to 36·6° C.—the temperature, in fact, varying just like that of a reptile with the temperature of the air. The temperature of marsupials is much more uniform but still may vary several degrees with the external medium. In the higher vertebrata it is nearly constant.

Dr. WALLER has delivered at the Royal Institution a set of lectures in which he gives the results of his observations on the causes modifying electrotonus and shows that both the anodic and cathodic electrotonic currents are temporarily abolished or at least are materially diminished by raising the temperature of the nerve to about 40° C. He has also very clearly and beautifully shown the regular and typical action of carbon dioxide on nerve, a subject of great interest in regard to the function of respiration and for which he has been awarded the Prix Parkin of the Academy of Sciences of the Institute of France. Professor SHERRINGTON has done some good work in mapping out the areas of distribution of certain sensory nerve roots, the sensory nerve roots on which he experimented being those extending from the fifth cervical to the lower end of the brachial region and upon those of the fifth cranial nerve. He has also made some interesting observations on some peculiar cataleptoid reflexes that can be induced by appropriate stimulation in monkeys from which the cerebral hemispheres have been removed. Dr. STEINACH, an able physiologist, recently endeavoured to show that efferent fibres proceed to various parts of the viscera through the posterior roots of the spinal nerves. The subject has been re-investigated by Mr. A. J. HORTON SMITH who finds that there are indeed efferent fibres in the posterior roots of the spinal nerves in some frogs but that these fibres are distributed not to the viscera but to the skeletal muscles. MM. MORAT and BONNE on experimental and histological grounds, as well as from results obtained by the method of degeneration, have also arrived at the conclusion that there are centrifugal fibres in the posterior roots of the spinal nerves distributed to the lower limbs which have their trophic centres in the spinal cord. The nerves particularly examined were the sixth and seventh lumbar nerves and the first sacral in the dog. Some of the centrifugal nerves referred to were vaso-dilators, so that vaso-inhibiting fibres emerge from the cord both by the anterior and posterior roots of the spinal nerves. The reflexes which start from the peritoneum and which closely resemble those of the condition known as shock have been shown by MM. GUINARD and TIXIER to occur even in animals that are deeply anæsthetised. The force and frequency of the heart's action are reduced and the respiratory acts are accelerated. The reflex effects are more strongly and quickly accentuated in cases where the peritoneum has been previously inflamed.

Dr. PAGE MAY has investigated the segmental representation of movements in the lumbar region of the spinal cord, and shows amongst other facts that any reflex centre derives its chief afferent impulse from a nerve root entering the cord about two segments higher. Dr. FERRIER in association with Dr. W. A. TURNER has endeavoured with much success to follow by the Wallerian method of degeneration the paths by which impressions of general and special sensibility are conveyed to the cortex of the brain. The Lumleian Lectures at the Royal College of Physicians of London were delivered by Dr. BASTIAN who discussed with great originality and research some problems in connexion with aphasia and other defects of speech. The sympathetic system of nerves has been studied by Dr. C. H. HUBER. Dr. RISIEN RUSSELL has continued his investigations upon the origin and destination of certain afferent and efferent tracts in the medulla oblongata and has satisfied himself by the degeneration method that whilst paths derived from the spinal cord can be traced directly to the cerebellum, no direct path can be traced from the cerebellum to the spinal cord. There is, however, he has shown, an indirect path which was formerly regarded as a sensory tract passing from the medulla oblongata to the cerebellum but which is in reality a path from the cerebellum to the special group of nerve cells in the medulla known as Deiters' nucleus; from this another tract of fibres originates which can be traced throughout the whole length of the spinal cord and which becomes connected with the anterior cornu of the same side and to a less degree with that of the opposite side. An important contribution to our knowledge of the structure of cross striated muscle has been made by Dr. W. MCDOUGALL, who also advances a suggestion as to the nature of its contraction.

In embryology the curious experiments of Mr. WALTER

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HEAPE deserve mention. The uterus of one variety of rabbit was employed as a medium for the growth and complete fœtal development of fertilised ova of another variety of rabbit. Thus ova obtained from an Angora doe rabbit inseminated thirty-two hours previously by an Angora buck were inserted into the Fallopian tube of a Belgian hare doe inseminated three hours before by a buck of the same breed as herself. In due course the Belgian hare doe littered six young four of which were Belgian hares while the other two were Angoras. Both sets were true-bred.

The observations of Dr. BOTTAZZI on the oscillations of tonus in various forms of muscle have an important bearing on the physiology of muscular contractility, for they seem to show that in muscular organs in which the tissue has not undergone a high degree of differentiation the sarcoplasm must be regarded as the really irritable and contractile substance conferring upon it the automatic and rhythmic properties In the skeletal muscles the sarcoplasm is represented by the singly refracting substance which alone possesses the power of transmitting excitation, whilst the doubly refracting and more highly differentiated substance, though it can contract swiftly and vigorously on the application of a stimulus, is yet destitute both of automaticity and rhythmical power.

Two comprehensive treatises, one on Anatomy and one on Physiology, are in course of publication. The former, entitled the "Handbuch der Anatomie," is edited by Dr. KARL VON BARDELEBEN and is to run to eight volumes; seven parts have been already published. The latter is the "Dictionnaire de Physiologie," by M. RICHET, of which two volumes have been completed. Lastly, Professor MINOT has published a large and important book on Human Embryology, which presents in a readable form all that is definitely known up to the present time on this subject.

Anæsthetics.

The year just coming to a close is the fiftieth anniversary of the introduction of chloroform as an anæsthetic and the occasion was duly honoured by the Society of Anæsthetists with a conversazione at which an interesting oration on the progress of our knowledge of anæsthetics was delivered by the President, Dr. DUDLEY BUXTON. Professor SIMPSON gave an address in Edinburgh in commemoration of the first use of chloroform in midwifery by Sir JAMES Y. SIMPSON. In Tokio, also, the jubilee of anæsthetics was marked by a special meeting and an address by S. SATO, while ISHIGURO spoke of the history of the uses of anæsthetics in Japan.

Many valuable and voluminous papers on anæsthetics have appeared during the year notably one in which HILL carried further his research published this year in the *Journal of Physiology* for May, p. 323. He pointed out that the circulation of the blood depends upon the vaso-motor mechanism being intact. The abdominal wall is able to support the veins and so prevents their distension under the hydrostatic pressure of gravity. Muscular contraction during expiration compresses the hepatic and other veins helping to fill the right heart. When the vaso-motor tonus is maintained the splanchnic area abrogates the effects of gravity. In vaso-motor paralysis gravity at once causes accumulation of blood in the abdominal vessels. This leads to anæmia of the brain and the respiratory centre is driven to greater activity. Powerful muscular movements take place and blood again enters the right heart. Contraction of the abdominal muscles limits the outflow from the splanchnic vessels. When both the vaso-motor tonus and the respiratory pump are paralysed the circulation cannot be maintained in the "feet down" position. Chloroform paralyses both these factors of the circulation. No amount of compression of the abdominal veins will produce paralytic distension of the heart. Both chloroform and asphyxia will do so. HILL finds that such a condition is at once relieved by dropping the patient into the "feet down" position, as the blood at once flows from the right heart by the force of gravity. The teaching of physiology thus has a practical value and tells us that vaso-motor paralysis is a danger to be looked for and provided against as well as the always accepted danger from respiratory paralysis—a condition which HILL finds may arise both from anæmia of the brain centres as well as from accumulation of the drug. In the former case the failure of respiration is secondary to the primary cardiac failure.

WOOD and CARTER[1] undertook a research upon somewhat similar lines and came to rather different conclusions. The fall of arterial pressure, they think, does not, unless very profound, affect the respiratory centre. They admit that if the fall is extreme the respiration will fail, but not otherwise. At first excessive fall of pressure stimulates the vaso-motor centre. The circulation recovers itself more slowly after ether than after chloroform. Ether as well as chloroform may cause death some hours after the administration has been discontinued and even after consciousness is present. They regard the effect of chloroform as being more a drug effect than one the result of vaso-motor influence; and they further think that the after-depression of ether is more severe than that of chloroform. It seems probable, however, that these findings are the result of a fallacy, for they worked with excessive doses of ether when compared with those of chloroform. HARE[2] contends that chloroform kills by vaso-motor paralysis. He advocates the use of atropine, bandaging the extremities, compression of the abdomen, and inversion in the event of syncope. SCHLEICH, if we are to accept the evidence of MADURO,[3] has suggested a new and valuable method. His theory is that the anæsthetic should have a boiling point as near the body temperature as possible. He has accordingly made three mixtures which have boiling points respectively of 38° C., 40° C., and 42° C. by combining chloroform, ether, and petroleum ether (benzine). The first mixture when inhaled causes a light and transient sleep, the second and third greater and greater depth of anæsthesia. The patients are said to be spared all or most of the after-effects of narcosis. No doubt so careful an observer as SCHLEICH has made sure of his ground before he has allowed publication. MEYER (New York) also has employed the method of SCHLEICH for general anæsthesia and speaks of its value. It obviates cyanosis, bronchial troubles, and, it is said, does not affect the heart as much as chloroform.

[1] Journal of Experimental Medicine, March, 1897.
[2] New York Medical News, March, 1897.
[3] A New Method of General Anæsthesia, Medical News, New York, November, 1897.

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An attempt has been made[4] to trace a causal relation between the temperature, the dampness of the atmosphere, and the death-rate under anæsthetics, but it must be confessed that the views enunciated are more theory than proved fact. The subject of anæsthetics in obstetric practice has received considerable attention, several papers having been read. BALLANTYNE draws attention to the fact that the physiological condition of parturition is one marked by hypertrophy of the heart, while the constant contraction of the abdominal and other muscles during labour helps to maintain the circulation. Blood-pressure is thus kept up and even increased and the respiration is excited. The results of DOENKOFF working with SCHATZ'S toko-dynamometer show that although deep chloroformisation does lessen the uterine contractions ordinary narcosis has no effect whatever in that way.

WALLER has carried further his important research work commenced some time back and dealing with the behaviour of detached nerve when exposed to the vapours of various anæsthetics. Prolonged series of action-currents caused by tetanisation at regular intervals exhibit no diminution—i.e., nerve is practically inexhaustible. When the nerve is exposed to the anæsthetics, ether or chloroform, the active currents are temporarily suppressed—i.e., the anæsthetics temporarily abolish excitability. Chloroform causes more prolonged suppression than ether and the suppression is finally absolute—i.e., no recovery takes place. WALLER has come to the conclusion that the relation of safety of these two anæsthetics is as one to seven—i.e., chloroform is seven times more deadly to nerve-tissue than is ether. The clinical evidence upon this point is usually taken to show that for every one death under ether thirteen under chloroform take place. There seems no reason, however, to regard these figures as necessarily discrepancies, since in the first place the clinical statistics are far from being exact, while there must be obvious differences between the behaviour of detached nerve and the nervous system as a whole. WALLER'S conclusions led him to what he regards as "the chloroform paradox." If, he says, chloroform is a dangerous agent it should only be used in exceptional cases, but if it is as safe as ether, which he denies, any deaths which take place under it ought not to occur and the persons who are responsible for them must be held to be guilty of culpable carelessness. WALLER further examined other bodies with regard to their action upon nerve: 4 per cent. carbon dioxide increased nerve excitability; in larger quantity caused it diminution or abolition followed by augmentation—i.e., it behaves like ether. Oxygen, nitrogen, hydrogen, nitrous-oxide, and carbon monoxide have no effect upon the nerve currents. In reference to the action of carbon-dioxide WALLER points out that the danger of asphyxial states during the giving of chloroform lies not in the presence of an accumulation of carbon dioxide but in the accumulation of the chloroform itself. L. GUTHRIE[5] reviewing the subject of Chloroform Narcosis in Children, finds that children, as far as his experience goes, are affected in precisely the same way as adults and are therefore quite as liable to the accidents associated with chloroform. Deaths of very young children are perhaps less common than is the case with adults, but it is so simply because children are more easily brought round after over-dosage than adults. Their chest walls are more resilient and their hearts are not as a rule affected by fatty or other degeneration and hence they respond more effectually to artificial respiration. He gives his experience upon various points. He has never succeeded in chloroforming a sleeping child without awakening it—an important point in medico-legal practice and one illustrated by a recent case of burglary when several persons were stated to have been successfully chloroformed during sleep by the burglar. The conjunctival reflex is not, GUTHRIE thinks, reliable as a sign of anæsthesia in children. Nor does he accept the eye movements as a guide. A moderately contracted pupil, slowly rolling eyeballs, full, deep, regular, somewhat stertorous respiration, slight congestion of the face and lips, regular slow pulse, and no change of these during the progress of the operation are, he thinks, the only reliable signs upon which it is safe to rely. GUTHRIE also insists that the degree of anæsthesia should be varied accordingly as the different steps of the operation are more or less likely to produce shock. At a meeting of the Harveian Society (April 29th) the subject of giving anæsthetics to children was dealt with and several speakers referred to the difficulty of judging when a young child was anæsthetised. It was pointed out that this drawback did not exist in the case of ether and its use for young children was recommended. POLLOCK and WARRINGTON HAWARD urged the use of ether for children many years ago and their experience is confirmed by later workers. The employment of the A.C.E. mixture has again been advanced as a useful method in the case of children and others advocate it both for adults and children as a means of inducing anæsthesia, while that condition is maintained by the inhalation of ether well diluted with air. CLEMENT LUCAS drew attention to the possible source of infection arising from patients inhaling anæsthetics from a dirty facepiece. He believed that pneumonia occurred from this cause. The challenge thus given was taken up by several anæsthetists who discussed the subject at a meeting of their society in March. It was pointed out that pneumonia was a not uncommon complication of surgical procedure in the days before anæsthetics came into use. At the present time such cases were very rare and were probably not traceable to the anæsthetic at all. SILK points out that in the years 1894 and 1895 out of 5000 cases published in hospital reports only 13 cases of pneumonia are noted. All these except one were of septic origin. PRESSCOTT, of Boston, had met with 3 cases of pneumonia out of 40,000 etherisations. Further, both ether and chloroform are destructive to bacillary life. Again, nitrous oxide gas, which is the most commonly given anæsthetic, is never the cause of this disease. With regard to the question of pneumonia following the use of ether WITNEY has found that the pneumonia which occurs is not a peculiar form of the disease, the ordinary pathogenic organisms are present, and the disease following the normal course. STEINBERG holds that the pneumococcus is normally found in the mouth. WITNEY further suggests that the prolonged use of ether may lower the vitality of the epithelium and enable the organism to exert a specific action. As a prevention he advises that the mouth of

[4] Evans: Medical Record, June, 1897.
[5] Clinical Journal, March, April, 1897.

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the patient and his nose and pharynx should all be carefully sterilised before the anæsthetic is given.[6] It is of no small interest to find that two observers, LEMOINE and GALLOIS, have employed ether both taken internally and hypodermically for the treatment of uræmia and nephritis and have met with success. If their results should be confirmed it may prove that the action of ether is after all not so deleterious as has been held by some. VON LERBER[7] has examined the condition of the blood after ether has been inhaled with the following results. In 101 cases the blood was examined and the hæmoglobin was in the majority of instances unaltered, the corpuscles were found to be but little changed either in number or in appearance although some leucocytosis was present. Spectroscopic examination of the urine showed no increase of the urobilin. He concludes therefore that ether does not exert any deleterious effect upon the blood. The statistics of GURLT for the year are of interest. They comprise 58,769 cases. Of these 27,029 refer to the use of chloroform with 29 deaths; 19,856 to ether with 3 deaths; 5000 to Billroth's mixture (chloroform, ether, and morphine); 1000 to brom-ethyl; 600 to ether-chloroform with no deaths. The figures for seven years are: 327,500 cases with 134 deaths—i.e., 1 in 2444; and 1 death in 2039 from chloroform.

The Mirror of Hospital Practice.

We have been able during the past year to put before our readers in this department of THE LANCET records of a large number of extremely interesting cases which have been under treatment in the hospitals both at home and abroad and they represent graphically the progress of medicine and surgery in some of its latest manifestations.

The value of diphtheria antitoxin is so well established that we have not thought it necessary to record in the Mirror of Hospital Practice any instances of its employment except in one case of diphtheritic conjunctivitis, but with tetanus antitoxin the case is far otherwise. The disease itself is rare and so our opportunities of using the antitoxin are not so numerous as in the case of diphtheria. In each of the four cases we have recorded the patient was a boy; in two the spasms did not come on for a long time after the infliction of the wound; in one of these it was twelve days and in the other fourteen days. It is generally recognised that the longer the period of incubation the less severe is the attack and therefore the fact that the patients both recovered cannot be considered to be positive proof that the antitoxin was the cause of the recovery, especially as in one of the cases the wounded part was also treated with a bath of a solution of the red iodide of mercury; in the two other cases the patients showed symptoms more quickly after the injury, but these also recovered. In all four cases chloral was used and its value symptomatically in controlling the fits was obvious. There are several morbid conditions due to the entrance of streptococci into the blood and their rate of mortality is very high; the introduction of the anti-streptococcic serum raised great expectations as to its curative value, and to some extent these expectations have been confirmed by experience. We have published notes of four cases of the use of this serum; in two cases the disease was ulcerative endocarditis; in one of these the patient, though for a time apparently improved by the injections, ultimately died and streptococci were found in the vegetations at the necropsy; in the second case of endocarditis the symptoms and signs were very characteristic, but no bacteriological examination of the blood was made until sixteen days after the commencement of the serum treatment and then no organisms were found; this patient recovered. The two other cases in which the serum was employed were cases of pyæmia with involvement of joints; in one the pus from a joint gave a pure culture of streptococci and the patient died, apparently not having been benefited in any way by the injections; in the other case of pyæmia there was no bacteriological evidence of the presence of streptococci, but the injections were followed by recovery; in one point this case was especially noteworthy, the pyæmic joints completely recovered after having been treated by incision, flushing, and drainage.

The pancreas was at one time rather neglected pathologically, but it is now recognised that disease of the organ is not very rare, but the diagnosis is frequently extremely difficult. The symptoms in acute cases bear a close resemblance to those of intestinal obstruction. We have recorded three cases of acute pancreatitis; in two of these extensive hæmorrhages were found into the substance of the pancreas at the necropsy. The third patient recovered, but the symptoms were very characteristic and there can be practically no doubt that the case was one of acute pancreatitis. A case of pancreatic cyst was recorded in which the cyst appeared to be due to the pressure exerted by a gall-stone in the common bile-duct.

Recovery after traumatic rupture of the diaphragm and escape of the stomach into the pleural cavity is exceedingly rare; we have recorded a case in which the diagnosis seems quite certain. A boy, five years old, was knocked down by a heavy iron gate falling on him; he was much collapsed and cyanotic and was given some brandy and water. The left side of the chest was almost motionless and tympanitic in resonance; it was at first supposed to be a case of pneumothorax, but an exploring needle passed in the fifth left interspace behind drew off brandy and water instead of air. When he was given liquids to swallow distant metallic sounds could be heard in the chest. The physical signs did not change, but he recovered so that he was able to get about without much dyspnœa.

Among other interesting surgical and medical points of all sorts which have been illustrated during the year by this department of our work we may mention the following: Four cases of "typhoid" abscess of the liver show the chief varieties of the condition; in one complete adhesion had formed between the liver and the abdominal wall over the abscess, so that the operation of evacuating the contents was quite simple; in the three other cases the abscesses were emptied by incisions passing through the pleura and they exemplified well the difficulties and dangers of trans-thoracic hepatotomy. When at the necropsy of a case diagnosed as typhoid fever no intestinal ulceration was found it was formerly usually assumed that the diagnosis was mistaken, but the serum test afforded a satisfactory proof in a case we published that the disease had really been typhoid fever though no intestinal ulceration was present. In

[6] Boston Medical and Surgical Journal.
[7] Inaugural dissertation, Basel, Schweiz.

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cases of injury to the spinal cord a knowledge of the exact lesion present would be invaluable in deciding the question whether an operation should be undertaken or not and in a case in the Mirror careful observations of the symptoms made it clear that there was a hæmatomyelia and so prevented a useless laminectomy. The diagnosis was confirmed by the post-mortem examination of the body. The trans-peritoneal method of ligature of the iliac arteries is becoming more extensively practised and the case we published in which the external iliac artery was tied for aneurysm at the junction of the external iliac and femoral arteries showed that in such a case the trans-peritoneal operation was much easier than the older operation. Of course there is the additional risk of septic peritonitis, but this should be very small if ordinary care be taken. It would be thought that removal of many inches of the great sciatic nerve would lead to so extensive a paralysis of the muscles of the thigh and leg that walking would be impossible, but we have included in the Mirror the notes of a case in which, though nearly the whole of the sciatic nerve was excised for a sarcoma affecting it, after a few weeks the patient, a young woman, could walk without any help. The power of flexing the knee was due to the sartorius.

Fracture of the roof of the orbit by a stick or a similar body is not rare, but death usually ensues; we have, however, published a case in which a joint of a fishing-rod penetrated the inner part of the right orbit and fractured the orbital plate of the frontal bone. The wound was enlarged but no loose pieces of bone were felt. As the patient did not improve and had a high temperature four days later the frontal bone was trephined and the dura mater having been punctured some fœtid pus escaped. The patient recovered completely. This case is a good proof that these punctured wounds of the orbit should be treated like any other septic punctured wounds—that is, they should be laid open, cleansed, and drained.

The Public Medical Services.

The year that has passed has been full of stirring and memorable events, especially as regards our Indian Empire. What with war, plague, pestilence, famine, and earthquake India has been sorely tried. There remains indeed little if anything that could be added to the list of catastrophes, natural and political, that have befallen that country. The widespread revolt of the border tribes on the north-west frontier has given rise to a large military expedition for its suppression. Taking the frontier tribal war as that which at the present moment most vividly impresses itself upon the public imagination, what do we see? The inimical conditions of climate, weather, and geography have been powerfully opposed to the Indian army whilst campaigning in a comparatively unknown and most inhospitable country. It may be safely said that the expeditionary force has encountered such difficulties and dangers and been exposed to such privations and hardships as probably no European army of the present day has had to encounter. The losses which the Anglo-Indian army have sustained have in the aggregate been deplorable and it speaks volumes for the great bravery and steadiness of the troops that these have not been greater and that no serious disaster has occurred under such circumstances as the fierce and sudden attacks to which the rearguards of the different columns have been repeatedly exposed. The officers and men of both the British and native armies have behaved magnificently and their fortitude as well as their gallantry have been conspicuous. As medical journalists we may proudly point to the conduct of the medical officers. They have shared all the dangers and hardships of the campaign, in addition to those of their own calling, and it may be truly said that they have acquitted themselves well; many of them have greatly distinguished themselves by their gallantry, coolness, and devotion to their duties. The medical service in this exceptionally trying campaign has shown itself efficient: the hospital arrangements have been good and the succour and transport of the sick and wounded have often been carried out under the most difficult conditions. We are not concerned with questions of policy, but we may nevertheless state that it is quite inaccurate to represent the latest movements of troops as a retreat, for it was nothing of the kind. The preconcerted plan of the campaign has so far been carried out. The Anglo-Indian forces have penetrated and traversed the enemy's country in the directions originally intended and have returned to the Khyber, the pass of which will now be reopened. One brigade will remain at Jamrud and another at Bara fort and in the Bara valley. It was known before the expedition started that it would be impossible to occupy advanced positions during the winter and it was never proposed to do so. But the invasion of the Afridi country has, it must be confessed, failed to bring about the submission of the tribes up to the present time.

We need only refer to the Greco-Turkish war to remark that it was a disastrous one for Greece and has greatly rehabilitated the power and influence of the SULTAN of TURKEY. A number of medical men and nurses from this country proceeded to the scene of warfare. There have also been military operations in North Africa—Egypt and the Soudan—which have still to be completed during the ensuing year, as well as in other parts of the African continent; to the medical arrangements for these we have from time to time referred. The medical element has of necessity played a more or less prominent part in all these expeditions and it may be legitimately added that it has never failed in the performance of its special duties. Whether we turn to our military operations in the Soudan or to the present terribly difficult campaign on our Indian frontier the sanitary, medical, and hospital transport arrangements will contrast very favourably with those of the French in their Madagascar expedition.

Returning to India, however, we regret to say that the plague continues and is by all accounts spreading in that country. It is a very serious matter for the Indian Government, following as it does in the rear of the famine. The most active measures for its repression are being enforced; the officers of the medical services in India have been very hardly worked and have done excellent service during the epidemic. They have been well aided by members of the native profession and others in that country. The India Office appears to be fully impressed with the responsibility of the situation if we may judge from the number of medical men and nurses the authorities have sent out to India for special service during the epidemic of plague.

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The health of the army in India has, as it was bound to do, attracted a large amount of attention, for the terrible extent and increasing prevalence of venereal disease in that country is a scandal which seriously impairs the physical efficiency of the European force and even threatens to endanger the safety of our Imperial sway in that country. The lamentable state of things brought to light by the report of Lord ONSLOW'S committee created a great impression. Lord GEORGE HAMILTON—strongly backed by the medical profession, the press, and the force of a more enlightened public opinion—has extended the powers of the Indian Government for dealing with this evil. Whether the steps which have already been inaugurated for its repression are adequate or not still remains to be seen. The question is one of great urgency, but, it must be confessed, of great difficulty also. The most fatal disease among the European troops serving in India is enteric fever and it seems to be increasing in prevalence. It is understood that the Indian Government have applied for Professor WRIGHT, of Netley, to proceed to India in order to introduce his system of a protective "vaccination" against that disease. The amount of sickness and mortality caused by enteric fever in India during the past year has been lamentable.

We wish that we were warranted in stating that members of the Army Medical Department were satisfied with the position in which they find themselves at the end of the year 1897, but this is clearly not the case. The War Office has redressed many of their grievances, but the dearth of candidates for the medical service still continues and is likely to continue until the real cause is dealt with. The medical officers are not satisfied with their rank and position in the army. They desire to see their service constituted as a Royal Medical Corps officered by themselves. There have been numerous rumours about an immediately forthcoming new Royal Warrant for the Medical Department, but it has not yet appeared. We have so often dealt with the subject that there is no need to dwell upon it now. During the next session of Parliament the question of the increase and reorganisation of the army will have to be thoroughly debated and threshed out in the House of Commons and we shall then learn what the Minister for War proposes to do, for something will have to be done. The Naval Medical Service, which is differently situated to the army in many respects, appears to be contented with its position if we may judge from the relative absence of all complaints on the part of naval medical officers and the number of candidates who present themselves. The Indian Medical Service, which is not altogether free from grievances, is a much more popular service than the Army Medical Staff and continues to maintain a good competition for its appointments. We may incidentally remark that the first dinner of members of this service in London was instituted and took place in 1897 and that the Minister for India was present at it. We have to congratulate Surgeon-Major-General JAMESON, C.B., the present Director-General of the Army Medical Department, on his appointment as Honorary Surgeon to the QUEEN in place of the late Sir WILLIAM MACKINNON, K.C.B. During the past year there is a lamentable record of deaths among officers of the public medical services. We may mention those of Dr. MOUAT, Deputy-Surgeon-General VANDYKE CARTER, and Surgeon-General CORNISH of the Indian Medical Service, and of Surgeon-General READE, V.C., and of a very notable personality the late Director-General, Sir WILLIAM MACKINNON, K.C.B., of the Army Medical Staff.

Chemistry.

The field of inquiry in chemical science this year has been somewhat broad. Alchemy has been revived and hot has been the pursuit after a solvent for carbon which shall yield on evaporation or solidification carbon in the pure crystalline form of the diamond. Professor CROOKES, who has recently paid a visit to the Kimberley fields, is led to think that iron at a high temperature and under great pressure will serve, and has served probably in nature, as the long sought solvent for carbon and will allow it to crystallise out on cooling in the form of diamond. This view is confirmed by experiments in the laboratory, in which carbon has been dissolved in iron at the high temperature of the electric furnace, the mass on cooling actually yielding microscopic diamonds of beauty and lustre equal to the natural gem. The transmutation of metals is said to have been effected by simply applying enormous pressure and conducting the operation in extreme cold. The announcement came from America, where it was stated that a chemist had converted silver—Mexican dollars he preferred—into a mixture containing a large proportion of gold. The product known as "argentaurum" is advertised for sale as a curiosity at the price of 75 cents. per gramme. "It may be had in sheets." A mixture of gold and silver at this price is a costly thing. Pure gold is cheaper, while there is no guarantee, it seems to us, of "argentaurum" having actually been produced in the way described. Experts have of course rejected this announced achievement, but the case is of interest in showing that alchemy is still considered a practical possibility. PROUT'S hypothesis, which holds that the elements are different elaborations of the same primordial substance, is largely responsible for this belief and curiously enough just at this time many researches on the rare elements are tending to establish the correctness of the materia prima theory. Correct as the conjecture may be, the agencies which effect the translation of one element to another are unknown to us and possibly will remain for ever unknown, or at any rate beyond our power to employ. The elaboration of seventy different elements from the same elementary substance as starting point is probably the work of ages and ages just as the development of man has been. Mendeléff's beautiful periodic law leads again to the conclusion that the elements are after all entities of the same elementary body. Recent researches have shown more especially with the rarer elements that the atomic weight, which is a function of the atom, appears in certain cases to waver between two values as though doubtful as to what properties to exhibit and therefore as to what element it shall be.

Professor RAMSAY has continued his researches on the bodies argon and helion, but beyond what is already known he has found it difficult to declare any new properties except of a negative character. He has found, however, that helion may apparently be split up by means of diffusion into two bodies of varying density. The only widely-distributed element that has until quite recently resisted all attempts

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at liquefaction is that remarkable element fluorine, but not only has it now been obtained in the free state but liquefied into a clear, sherry-coloured liquid. Thus the nearest approach to the properties of the universal solvent of the alchemist has been realised, for fluorine attacks at ordinary temperatures all known substances. But, as Professor MOISSAN and Professor DEWAR have recently shown, fluorine, which has the most powerful chemical activity of all the elements, may be held in abeyance by preparing it at exceedingly low temperatures. Caoutchouc, however, takes fire on the surface of the liquid thus obtained, running about like sodium on water and giving a very intense light. Further developments of this achievement will be watched with considerable interest. In the meantime considerable credit is due to Professor MOISSAN and Professor DEWAR for successfully accomplishing a most hazardous experiment. We have often expressed wonder that in Professor DEWAR'S classical experiments on the liquefaction of air he has not encountered argon and perhaps helion seeing that for the purpose of liquefaction a very large volume of air is dealt with. Apparently failing to separate argon or helion in air Professor DEWAR soon detected an impurity, if we may so regard it, in a sample of gas evolved from the Bath spring. He found it possible by liquefaction to separate helion as gas when it is only present to the extent of a thousandth part. By this means it is probable that a good yield of helion will be obtained. In this experiment apparently no argon was separated so that the conclusion is that argon liquefies simultaneously with the air.

A note on the distribution of carbonic acid in the air has been made by Professor CARLETON WILLIAMS. Contrary to what is commonly accepted—namely, that the carbonic acid of respiration is equally diffused through the air of a room—this investigator found that the air near the ceiling is generally the worst in this respect. In other words, the distribution of the carbonic acid in the air of an inhabited room is not uniform and as a matter of fact the air near the ceiling of the room, especially if it be not lofty, is as a rule appreciably less pure than the air four or five feet above the floor. The question of the quantity of, and the part played by, ozone in air is an important one and some interesting work has been done in this direction. M. MAURICE DE THIERRY, for instance, has made the interesting observation that the quantity of ozone increases with the altitude. His experiments were conducted on varying heights on Mont Blanc. It is well known that as the altitude increases so does the number of micro-organisms diminish and this after all is what might have been anticipated since ozone cannot exist long where easily oxidised matter occurs, nor is ozone favourable to the existence of micro-organisms. These observations may have an important bearing upon the hygiene and climatology of high altitudes. During the past year we have more than once recorded the important *rôle* played by micro-organisms in the development of quality in many articles of consumption. It has thus been demonstrated that the flavour of tobacco or a cigar is due to the operation of a specific micro-organism and that if the growth of this particular species could be induced a product of constant and agreeable qualities would always be obtained. The probability of this process being adopted on a commercial scale has at least been demonstrated in the case of butter. Thus a species of bacterium has been isolated which may be used with extraordinary success in the production of good-flavoured butter. In this way cultures may be employed which will ripen a cream and produce generally better butter than the same cream ripened in the usual way. This affords an admirable illustration of the fact that in the countless number of ubiquitous microbes we must reckon with friends as well as enemies.

Organic chemistry proceeds apace, although on the score of importance it does not on the face of it appear to have accomplished much this year that is intimately concerned with the advances of medical science. More coal-tar derivatives and synthesised compounds have of course been added to the list of medicaments, most of which have been of the antipyretic type. Much as the continual addition of antipyretics may be discountenanced, yet there is a redeeming feature connected with the enthusiasm of the chemist in searching for new compounds of this order since in so doing he is adding considerably to our knowledge of the constitution of compounds and thus enabling us to remark the specific therapeutic differences existing between compounds of different yet of definite structure.

Public Health.

The year now upon the point of closing has been an important one in several respects which have a bearing on public health. The first six months gave evidence of that continuing decrease in general mortality which has now for many years gone hand-in-hand with steadily increasing measures having for their object the promotion of health and the prevention of disease. But with the third quarter a change set in which conveys some useful lessons. The general mortality underwent a substantial increase and exhibited a distinct excess on the average for a considerable term of years. And not only so, but this increase was mainly due to causes which are everywhere recognised to be largely within the control of efficient sanitary administration. Diarrhœa, diphtheria, and measles were among the essential causes of the heavier death-rate. As regards diarrhœa it may be said that the meteorological conditions were unfavourable and that whenever there is increase of temperature combined with diminution of rainfall there is also an increase in the mortality from infantile diarrhœa. This is true and these were the meteorological circumstances of the third quarter of the year. But they alone cannot cause infantile diarrhœa and until the authorities of our towns and cities learn that so long as they allow the soil on which their populations live to be constantly contaminated by soakage from midden-privies and from leaky drains and by reason of the deposit of refuse and slop-water on the surface-soil, so long are they producing and maintaining a condition of things which needs but some periodically expected meteorological conditions to turn that soil into a breeding-ground for pathogenic organisms.

The increase which was due to diphtheria likewise raises an important question. We have now for some years past watched the change of incidence of diphtheria mortality from rural to urban districts and we find this year that the excess of death from this cause is essentially an urban

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matter. No one, for example, can have watched the recent weekly returns of the Registrar-General as regards the metropolis without feeling that the waste of child life which is going on in London is a matter calling for the most careful inquiry. Nearly everyone who is conversant with this subject is convinced that the increase has taken place not only synchronously with, but consequent on, the increasing aggregation of children at the most susceptible age for diphtheria in our elementary schools. Indeed, it is hardly conceivable that so infective a disease should not be increased as the means for personal infection increased. But there are a few persons who are particularly identified with school work who pronounce a different opinion on the subject and whether they are correct or not the matter has become one that should if possible be settled one way or another. If they are correct we are face to face with a nearly inexplicable problem; if they are wrong the attitude they assume is one which tends to promote instead of to diminish the excess of death which year by year we are compelled to witness. Measles has once again exhibited an increase of mortality. This disease is unfortunately looked upon as a necessary accompaniment of infancy and childhood and so long as this is the case so long will it be all but impracticable to do anything effectual towards saving some of the 10,000 or 12,000 children whose lives are annually sacrificed to it. We cannot pretend that isolation in hospital will in the majority of cases be of much avail; but we can look to the elimination from school of children living in houses where measles exists as likely to be of the greatest use if the action taken be systematic and be rendered promptly on the occurrence of the first attacks. To this end alone the notification of measles would seem to serve a really useful purpose.

The end of the third quarter and the beginning of the fourth one brought us face to face with a still more serious matter. It has long been somewhat obvious that the steady decrease in mortality from typhoid fever which has long been in progress in this country was on the wane, if indeed it had not ceased. A principal reason why our progress in this matter has received some check lies in the fact that periodically some of our large water-services become specifically polluted and then the infection is diffused on a wide scale amongst the general body of the water consumers. This autumn we have seen two typical instances of this sort in the occurrences of water-borne typhoid fever in Maidstone and in Lynn. We have already given full accounts of these outbreaks and we do not propose to refer to them in any detail here. But there is advantage in recalling one or two lessons to which such outbreaks give rise. One is that infinitely more care is needed in the selection of sources of water for our urban communities than has heretofore been given to the subject. As a rule, engineering considerations govern the whole matter. If the schemes have their basis in an Act of Parliament powers are conferred whereby vast populations are handed over to companies and other bodies in the matter of their water-supply without the slightest attempt on the part of those who give these powers to make themselves personally acquainted with the risks of pollution that may arise. Then, again, when once a population has been thus handed over to a company, even the sanitary authorities responsible for the health of the communities in question have no rights conferred upon them to watch over the water-supplies, and if they seek to ascertain what is going on at the sources of the supply they are warned off as intruders by the agents of the commercial companies who have acquired a monopoly as purveyors of water. And, lastly, little or no responsibility can be made to attach to these water purveyors when by their failure to take proper precautions they distribute disease and death amongst the consumers of the ware by the sale of which they make a pecuniary profit. These are matters which should receive careful consideration and which should be strongly pressed upon members of our legislature. If this is done then the serious warnings of the now closing year will not have been in vain.

The year 1897 will also be remembered in connexion with the fourth of a series of International Sanitary Conferences. The first three conferences were concerned with cholera; the fourth, which was held at Venice early this year, was concerned with preventing the extension from the east of bubonic plague, whether by sea traffic from India into the Mediterranean or by means of the Mecca pilgrimage. Notwithstanding the panic which prevailed amongst a majority of the people inhabiting the littoral of the Mediterranean the conclusions which were arrived at by the conference, and which were reached on much the same lines as those which had been adopted for cholera, exhibited a further advance in the direction of our English sanitary measures for preventing the importation of infection from abroad. This is a matter for considerable satisfaction; indeed, if nothing else be considered, yet it must be remembered that many thousands of pounds will be saved to our shipping by the single point which was attained of allowing vessels from India to pass at once into the Suez Canal and the Mediterranean, although they have not completed the incubation period of plague since leaving the last infected port. One other point deserves mention—namely, that for the first time in the history of our Indian Empire the Government prohibited the departure of pilgrims for Mecca and that they did so with great success. The conference was one of great importance to this country and technical delegates were sent out to represent the home Government, the Indian Government, and the Army Medical Service. With regard to the prospects of plague in India itself it is difficult to speak with any assurance. The conditions which exist in in the native parts of some of the large Indian cities and which have unfortunately grown up under European control are such as to lend themselves largely to the spread of a filth disease of this sort and it is this which presents one of the greatest difficulties which has to be contended with by those who are labouring so diligently to check the further diffusion of the malady. Three cases of plague were imported into the Thames by means of shipping but the disease happily found no means for diffusing itself in this country.

During a considerable part of the year a Royal Commission has been sitting to report on the administrative measures which should be adopted to control the spread of tuberculosis through the use by man of meat and milk as articles of diet and we learn at the last moment that a

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considerable portion of the final report has been discussed by the Commission who are expected to report finally early in the ensuing session of Parliament. Perhaps the two most pressing matters to be dealt with are, firstly, how best to prevent the milk-supply of our child population from serving as a means for conveying tuberculosis, and, secondly, how far the demand for compensation for carcases and for milch cows seized because they are tuberculous is to be conceded to butchers and dairymen. On these two points it is to be hoped a very definite opinion will be expressed.

We have but little to say on the question of legislation as it affects England and Wales, but the passing of the Scotch Public Health Act which comes into operation on Jan. 1st next is a matter of importance. It will place Scotland much on the same footing in public health respects as England and Wales and we are glad to congratulate Scotch medical officers of health at their success in resisting the proposal to place sanitary inspectors on an equality with themselves in matters essentially involving medical judgment. For England and Wales public health legislation is prospective. It is clear from all that has transpired during the past year that all classes will expect a new Vaccination Bill which shall bring to an end the very grave period of transition into which vaccination authorities have drifted to the danger of the State. It is also likely that both the public and the better part of those concerned in the trade of the sale and culture of oysters will not be content unless some effort is made to free this valuable mollusc from the risk of being sold to the community in a condition involving danger to health and to life.

The General Medical Council.

The year has been eventful and active so far as the General Medical Council is concerned. The wonderful health of the President, Sir RICHARD QUAIN, failed in the early part of the year, but after grave illness he succeeded in presiding at the May meeting. At the November meeting he was unable to be present and requested that Sir WILLIAM TURNER might fill the chair for him. The Council readily adopted this suggestion and Sir WILLIAM TURNER conducted the business with great ability and success. There are several changes in the *personnel* of the Council. Dr. RENTOUL and Mr. BROWN at the May meeting took their seats for the first time after their election as Direct Representatives. Dr. RENTOUL surprised his supporters and his critics alike by a sudden resignation conveyed in a letter to Sir RICHARD QUAIN dated Sept. 1st. The vacancy was filled by the election of Mr. VICTOR HORSLEY. Sir CHRISTOPHER JOHN NIXON, M.D., appeared at the November meeting in the place of Sir JOHN BANKS, K.C.B., resigned. At the end of the late meeting the Council received intimation of the appointment of Dr. JAMES LITTLE as Crown member for Ireland in the place of Dr. WILLIAM MOORE, who had resigned a few weeks before. Another event of the year was the resignation in May of the Registrar, Mr. W. J. C. MILLER, after twenty-one years of good service. His place was filled by the promotion of Mr. HENRY E. ALLEN, LL.B., B.A., previously Assistant Registrar. Mr. ALLEN well deserved the appointment which henceforth is to be an annual one.

Three pieces of work stand out in the history of the Council. The first was the Report of the Education Committee on the standard of preliminary examinations in general education, which will be found in Appendix II. in the November minutes, and the adoption of the following resolution by the Council itself:—

"That the Council intimate to all the examining bodies whose examinations in general education are recognised by the Medical Council as qualifying for the registration of medical students that on and after the first day of January, 1899, no certificate of lower standard than that of the matriculation or entrance and the junior local examinations of the Universities of the United Kingdom will be accepted for registration."

The Education Committee by another resolution is instructed to remove from the list of examinations on Jan. 1st, 1899, those examinations which are of a lower standard than that indicated in the above resolution. Many would approve of a still more sharp raising of the standard; but this, as was shown by Dr. MACALISTER, will suffice to remove certain examinations which pass several hundreds into the study of the profession. There is every prospect that the supplies under this turn of the screw will be ample, and that ere long another turn will be called for.

The next important work of the Council which will make the year somewhat memorable is the issue of a new Notice by the Council on the subject of the employment by registered practitioners of unqualified assistants. Henceforth the use of such persons in the treatment of disease save as *bonâ fide* pupils or as "nurses, midwives or dispensers" in a "legitimate" way will be treated as an offence by the General Medical Council and "may be regarded as infamous conduct in a professional respect"—that is, conduct that may be punished by the Council with removal of the offender's name from the Medical Register. The effects of this action on the part of the Council may be very far reaching. Cases before the Council, at both of its sessions this year, show how extensive the employment of unqualified assistants is still and how little many practitioners in remote districts and even in the metropolis realise that in employing them they are offending against the regulations of the General Medical Council. They will, however, have to realise the fact in future. Every week shows that the public take such unqualified persons seriously, either regarding them as the principal or as having the same legal sanction as the principal. It is felt that in such a state of matters the public and especially the poor are deceived and that even when they are not so the profession itself is compromised by supplying unqualified attendance. We warn practitioners to put the strictest construction on the words of the Notice if they would avoid the annoyance of appearing as offenders under the Medical Acts and even the risk of removal from the Register. We do so the more as there is still some remaining vagueness in the language of the General Medical Council upon which some may presume.

The third event in the work of the Council is the practical completion of the Pharmacopœia. Its value has yet to be tested by criticism and experience. Perhaps the most significant feature in it is the new preparation "Liq. Thyroidei," suggesting a new access of light in the region alike of physiology and therapeutics.

The case of the Apothecaries' Hall of Dublin calls for notice, with the incidental appearance of the Privy Council as the ultimate authority in dealing with medical bodies

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whose examinations do not satisfy the demands of the General Medical Council was an interesting development. Though their lordships had to direct the Council to do what was evidently very distasteful to it—viz., to appoint surgical examiners for the Hall—it is satisfactory to know that in doing so they acted, as in other questions, with great deference to the feelings and authority within its own prescribed limits of the General Medical Council. The Council felt bound to erase from the Register at the May meeting the name of one practitioner and at the November meeting the names of three practitioners. Various "medical authorities" under the action of the General Medical Council have been led to consider their own disciplinary duties towards their graduates and diplomates, and though there is still a tendency to shirk these and to throw all the disciplinary work of the profession on the Council some progress has been made. But it is satisfactory to note that the Scottish universities which are large qualifying bodies have displayed a keener sense of their responsibilities in this matter. The Council has instructed its lawyers to commence prosecutions against practitioners who continue to practise after removal from the Register.

The question of Medical Aid Associations was again relegated to a committee which has taken a good departure in attempting by conference with the leading friendly societies through their Registrar to acquaint themselves better with the points in dispute with a view to their adjustment. Only an interim report, to this effect, was presented at the November meeting.

Direct Representation on the General Medical Council.

The friends and the enemies of Direct Representation in the General Medical Council have been much exercised in the course of the year. At the May meeting, as we have said, Dr. RENTOUL and Mr. GEORGE BROWN took their seats for the first time. Dr. RENTOUL naturally was placed by the Council on the committee to consider the Midwives Registration Bill towards which he had displayed such a hostile attitude for many years. Just when it seemed he was to have an opportunity of expounding his views in a way that might influence legislators he suddenly resigned the seat to which he had so recently been elected. A sharp contest for the seat ensued in which it was soon seen that the chances were confined to two candidates, Mr. VICTOR HORSLEY and Sir WALTER FOSTER. Mr. HORSLEY was the successful candidate. The damage done to the cause of Direct Representation by the vacillating conduct of Dr. RENTOUL was considerable. But it has been much repaired by the election of Mr. HORSLEY, who has already shown himself an efficient member of the Council and has announced his intention to again submit himself to election when the five years of his colleagues shall have expired so as to save the Council the expense and trouble of a double election. This action on the part of Mr. HORSLEY is to be commended. The process of a popular election to a professional post is new to the profession. There is no need why it should be distasteful. But clearly once in five years is often enough and we should all like to see it conducted with as few of the arts of political contest as possible. The critics of Direct Representation somewhat rejoiced over the fact that in the end the contest lay between two gentlemen who were consultants. But this only shows the sound judgment of the profession. *Cæteris paribus* it might prefer a general practitioner, but the necessity for the best candidate to be chosen is imperative and if a consultant has special knowledge or capacity for dealing with questions affecting general practitioners it is too wise to insist upon any fine distinctions. It is quite evident that the cause of Direct Representation is to be advanced more by the fitness of the men whom it puts forward than by their exact place in the ranks of the profession.

The British Medical Association.

The year will be memorable in the annals of the British Medical Association as having been signalised by the holding outside the British Islands of the sixty-fifth annual meeting. The strictly business part of the meeting was transacted in London in the month of July, but the scientific and social portions were held in Montreal from Aug. 31st to Sept. 4th. From every point of view this meeting was most successful, although had it not been for the counter-attraction at Moscow the numbers attending it from this side the Atlantic would doubtless have been larger than they were. Those who did go were amply repaid, whilst the welcome they received was of the most cordial and hospitable description. The President, Dr. T. G. RODDICK, in his opening address, spoke of the history of the Association, of Canada and its health resorts, and of medical education and legislation in the Dominion. The Address in Medicine was given by Professor OSLER, of Baltimore, whose former connexion with the McGill University and his English education rendered his choice for this office a specially appropriate one. He dealt with his subject, "Medicine in Greater Britain," in a manner and style that made his address one of the chief features of the meeting. Mr. MITCHELL BANKS, of Liverpool, delivered the Address in Surgery—recalling from old chronicles the life-work of men who illustrated his theme of "The Surgeon in Time of War." The Address in Public Medicine, by Dr. HERMANN M. BIGGS, of New York, was a remarkable exposition of the sanitary organisation of that city and of the gains which have accrued to the public health through the measures adopted. The various sections, eleven in number, assembled in the buildings of the McGill University and the business transacted in them was more than usually attractive, the attendances being extremely well maintained. They were presided over by Dr. STEPHEN MACKENZIE, Mr. CHRISTOPHER HEATH, Dr. E. P. LACHAPELLE, Dr. W. J. SINCLAIR, Dr. D. J. LEECH, Mr. WATSON CHEYNE, Dr. R. M. BUCKE, Mr. E. NETTLESHIP, Dr. GREVILLE MACDONALD, Dr. AUGUSTUS WALLER, and Mr. MALCOLM MORRIS, and in every section special subjects were set down for discussion, as well as the usual readings of papers. Many of these debates excited considerable interest, and amongst those sharing in them were several visitors from the United States whose presence enhanced the value and importance of the meeting. In the Section of Medicine discussions took place on the Dietetic Treatment of Diabetes, on Arthritis Deformans, and on Cholelithiasis; in that of Surgery on Appendicitis and on Kraske's Operation for Rectal Cancer; in Public Medicine on Quarantine; in Obstetrics and Gynæcology on Hyperemesis Gravidarum, on the Operative Treatment of Pelvic Inflammation and Tumours, and on

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Uterine Flexions; in Pharmacology and Therapeutics on Insomnia, on the Treatment of Syphilis, and on Diuretics; in Pathology on Serum Diagnosis and on Immunisation; in Ophthalmology on Colour Vision and on Antiseptics in Eye Surgery; in Laryngology on Turbinotomy and on Laryngeal Paralysis; in Anatomy and Physiology on the Teaching of Anatomy, on Anæsthetics, and on the Heart Beat; in Dermatology on Vesicular Skin Diseases. As regards the social side of the meeting the reception accorded to the Association on all hands was of the warmest character, whilst the excursions with which the week closed comprised visits to some of the most interesting parts of Canada, including a trip across the continent to Victoria, British Columbia, which was enjoyed by some of the members through the kindness of the president of the Canadian Pacific Railway Company, Sir W. VAN HORNE. The fact that in the preceding week the British Association had held its annual meeting at Toronto with similar success and cordiality of reception affords further proof of the warmth of feeling towards the mother country entertained in the great Canadian dominion whose welcome to the two associations was gracefully expressed by the Governor-General (Lord ABERDEEN), the High Commissioner (Lord STRATHCONA AND MOUNT ROYAL), and many of Canada's leading statesmen and citizens. Finally, as regards the Montreal meeting we note with pleasure the daily publication of a very complete journal of the proceedings.

We may perhaps add that on this occasion we issued a Special Canadian Supplement to THE LANCET (which was produced wholly in Montreal) containing reports of the addresses, discussions, &c., at the various meetings; and we avail ourselves of this opportunity to gratefully acknowledge the assistance rendered to us by many in its production.

The Prince of Wales's Hospital Fund.

The Diamond Jubilee of HER MAJESTY'S great reign has made her children and her people inventive of schemes for its commemoration. Naturally such schemes in many cases have largely taken the form of funds for the benefit of hospitals or of convalescent homes and conspicuous among these stands out the fund initiated by the PRINCE OF WALES for the advantage of the hospitals of London. His Royal Highness contemplated not only a gift that would immediately reduce, if not remove, the debt which weighs so heavily on the London hospitals, but the initiation of a scheme of annual subscriptions in which whole classes that have hitherto not given to hospitals would become regular subscribers. As the fund is not yet closed it is impossible to say what its exact amount will be, but the sum was £187,000 odd when the first meeting of the Distribution Committee was held on Monday, Dec. 20th. Even the Prince here is only a competitor against others with similar objects and under the same powerful stimulus. His fund may not realise the sum required. But it will doubtless furnish the largest sum for hospitals which has ever been raised in one year. The interest felt in its distribution is equal to that felt in its amount. For the present year the Prince will be guided by the advice of the Distribution Committee of the Hospital Sunday Fund, but the public rely much on the sound sense of His Royal Highness personally and feel sure that he will use his great influence in favour of sound principles of hospital administration.

The Metropolitan Hospital Sunday Fund.

The Metropolitan Hospital Sunday Fund continues to enjoy the confidence of the religious public and places of worship contributing to the collection now number 1800. The total receipts for the year amount to £41,003 13*s.* 1*d.* This sum includes legacies, special donations, and dividends to the amount of £3607 10*s.* 1*d.* The whole sum is less by £5000 than in the previous year. The difference is not perhaps remarkable when the competition of the PRINCE OF WALES'S Fund and other special movements of this historical year are considered. The Council of the Fund has a claim on the gratitude of the profession and of all who have the interests of the hospitals at heart by reason of the step which it has taken with regard to the question of abuses of the out-patient department. It has induced the constituents of the Fund to accept a Rule for the guidance of the Distribution Committee under which it will be a point of "merit" in a hospital having an out-patient department to have "a special and efficient" officer for detecting abuses. Hitherto the Council has refused to deal with this question but it now wisely sees its urgency.

The Benevolent Agencies of the Profession.

The list of candidates of the Royal Medical Benevolent (Epsom) College showed that for six vacancies in foundation scholarships there were forty-two candidates, and that for one vacant pensionership there were twenty-seven candidates. Dr. HOLMAN pleaded powerfully in our columns for a few hundred pounds to assist foundationers of the College who had won university scholarships and were too poor to take them up. The subscriptions and donations for 1896 to the British Medical Benevolent Fund were £141 less than for 1895. The Society for the Relief of Widows and Orphans shows that there are now on its funds fifty-three widows and eleven children of deceased members. The society has an accumulated capital of £97,300. This valuable society is practically open to every registered medical practitioner residing within a radius of twenty miles from Charing-cross. The report of THE LANCET Relief Fund will be published next month. Our experience enables us to testify that there is greater need than ever in the profession for the generous support of its own charities.

The Royal College of Physicians of London.

The conferment of a baronetcy upon the President of the Royal College of Physicians of London was everywhere acknowledged to be a fitting recognition by the Crown of the merits of one of the most highly-esteemed leaders of the medical profession in this country. Sir S. WILKS had the gratification in this his second year of office of admitting H.R.H. the PRINCE OF WALES to the Honorary Fellowship of the College, an event upon which the profession as well as the College is to be congratulated, for it shows how great is the interest taken in medical matters by His Royal Highness. As regards the distinctions conferred by the College during the past year it may be mentioned that the Moxon Medal was bestowed on Sir S. WILKS and the Baly Medal on Professor SCHÄFER. The first award of the Weber-Parkes prize and medal was made to Dr. ARTHUR RANSOME, a second medal being awarded to Dr. P. PATERSON. The Murchison scholarship was gained by Mr. T. B. HERRING, M.B.,

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B.Ch. Edin. Several subjects of importance—educational and ethical—have been considered at the meetings of the College. It has been decided to include the subject of bacteriology under that of pathology in the curriculum and examinations; and at the last Comitia a committee was appointed to consider the question of the subject of biology which five years ago replaced that of elementary physiology in the first examination for the conjoint diplomas. On two occasions during the year—and not, we imagine, for the last time—the College has expressed its opinion upon the question of a teaching university for London. The last occasion was that on the introduction of the University of London Commission Bill (1897) into the House of Commons the College passed a resolution in support of it, but the withdrawal of the Bill rendered this action without avail. The question of medical aid institutions was pressed on the attention of the College by memorials from Norwich, Yarmouth, and Portsmouth, but after inquiry the College found itself unable to accede to the request of the memorialists to forbid its Licentiates, Members or Fellows holding such offices or having consultations with those who do hold offices in these institutions. Nor was the College inclined to undertake an inquiry into hospital abuse to which it had been invited by a memorial from the Hospital Reform Association. A valuable and temperate, but decided, report on the question of contagious diseases in the Indian army was presented by a committee of the College and forwarded to the Secretary of State for India. The following were the lectures delivered during the year: The Milroy, by Dr. W. COLLINGRIDGE, on Quarantine; the Goulstonian, by Dr. A. P. LUFF, on the Chemistry and Pathology of Gout; the Lumleian, by Dr. H. C. BASTIAN, on Some Problems in Connexion with Aphasia and other Speech Defects; and the Croonian, by Dr. HALE WHITE, on the Means by which the Temperature of the Body is Maintained in Health and Disease. Dr. PAVY gave a lecture on Diabetes supplementary to his previous Croonian lectures on the subject. Dr. MARKHAM SKERRITT was the Bradshaw lecturer, choosing for his subject Prognosis in Heart Disease; whilst the Harveian Orator of the year was Sir W. ROBERTS.

The Royal College of Surgeons of England.

At the February meeting of the Council of the College the result was announced of the poll of the Fellows which had been taken to ascertain their opinion as to the desirability of granting to the Members representation on the Council. 1150 circulars were sent out, but only 686 valid answers were received; of these 485 negatived the proposal to give direct representation to the Members. Of the minority of 201 who voted in favour of according representation to the Members 42 considered that the representation should be by Members only, 40 by Fellows only, and 119 thought it might be by Members or by Fellows indifferently. This adverse vote has certainly raised a great barrier to the further progress of the Members' claims and the result was a surprise to many, for at the meeting of Fellows in January, 1896, a resolution had been carried by a large majority to the effect that it was desirable to give to the Members direct representation on the Council. However, the inherent moral right of the Members to representation must in the end triumph. The result of the poll of the Fellows was attributed to a lack of impartiality in the "elucidatory statement" which accompanied the questions sent to the Fellows, and this idea was expressed in one of the resolutions brought forward and carried at the annual meeting of Fellows and Members. It may be remembered that in March, 1896, the Council passed a resolution that as they represented "the body corporate of this Royal College and consequently its Members as well as its Fellows" "no further representation of the Members was desirable." At the November meeting of the Fellows and Members Mr. GEORGE BROWN moved a resolution to the effect that the meeting repudiated this claim of the Council and the meeting carried it by 37 votes to 1. No further steps have been taken during the year to advance the Members' claims and it is difficult to see what can be done unless the Fellows again pass a resolution in favour of granting representation to the Members.

One of the most important matters with which the medical world has been concerned during the past year has been the subject of Medical Aid Associations; the harmful effect of these trading bodies on general practitioners is notorious and those medical men who are Members of the College of Surgeons naturally looked to their own College to guide and help them in their difficulties. Memorials were addressed to the Council by bodies of Fellows and Members in various parts of the country. Norwich, Portsmouth and Plymouth, Devonport and Stonehouse, all asked the Council if anything could be done; should Fellows and Members of the College decline to meet in consultation medical men serving under medical aid associations? These and other similar questions were asked. The replies received from the Council can hardly be described as satisfactory. The Council stated that the disciplinary powers provided by Section XVI. of the by-laws did not entitle them to question the legality of Fellows and Members of the College holding the appointment of medical officer to a medical aid association and that they could not endorse the refusal of any Fellow or Member of the College to meet in consultation (particularly in urgent cases) registered practitioners when acting in conformity with their legal rights. They, however, expressed their willingness to consider any evidence submitted to them respecting canvassing for patients, either directly or indirectly, by any individual Fellow or Member of the College with a view to determining whether or not such Fellow or Member had been guilty of a breach of the by-laws. The matter was brought forward at the annual meeting by Mr. W. G. DICKINSON in a resolution asking the Council to make a clear pronouncement that "the acting by qualified medical practitioners as the paid officials of any institutions which tout and canvass for patients is disgraceful in a professional respect and deserving of censure." Though the motion was carried the Council at their next meeting declined to make any general statement, but expressed their willingness to consider evidence relating to any individual case. The Royal College of Physicians of Ireland has expressed its disapproval of its Licentiates accepting appointments to medical aid associations and it is a little difficult to see why the Royal College of Surgeons of England should not do likewise. We believe that in this matter of medical aid

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associations the Council could enormously benefit the medical profession and earn for itself the lasting gratitude of the Members of the College.

The case of Mr. R. B. ANDERSON, F.R.C.S., which is now, doubtless, well known to our readers, came before both the January and the July meetings of the Fellows, and though every Fellow sympathised deeply with him in the sufferings he has undergone yet it was felt and expressed in a resolution which was carried that the case was not one in which the Council could afford pecuniary assistance.

At the election for members of council in July there were eleven candidates and five vacancies; Mr. H. G. HOWSE and Dr. J. WARD COUSINS were re-elected and Mr. EDMUND OWEN, Mr. RICKMAN J. GODLEE, and Mr. W. WATSON CHEYNE were elected. 609 Fellows voted by proxy and only 46 Fellows voted in person. Sir WILLIAM MAC CORMAC was re-elected President and Mr. ALFRED WILLETT and Mr. H. G. HOWSE were appointed Vice-Presidents.

The Honorary Medal of the College was presented to Sir JAMES PAGET and to Lord LISTER. The Hunterian Oration was delivered by Mr. CHRISTOPHER HEATH, Past President of the College, and the Bradshaw Lecture by Mr. ALFRED WILLETT, senior Vice-President. Two Past-Presidents of the College, Sir J. ERIC ERICHSEN and Sir T. SPENCER WELLS, died during the year and the deaths of Sir GEORGE M. HUMPHRY, a past member of the Council, Mr. OLIVER PEMBERTON, and Mr. WALTER RIVINGTON, members of the Council, have also to be recorded.

Mr. J. B. BAILEY, the Librarian of the College, who had done so much for the arrangement of the Library and the convenience of the readers, died in April. Mr. V. G. PLARR, B.A. Oxon., late librarian to King's College, has been appointed to succeed him. The Pathological Curator, Mr. J. H. TARGETT, having resigned, Mr. S. G. SHATTOCK has been appointed as his successor. The Jacksonian prize was awarded to Mr. COZENS BAILEY for his essay on the Pathology, Diagnosis, and Treatment of the Diseases of the Prostate Gland. The subject for the Jacksonian prize in 1898 is Hydrophobia.

We have to record a valuable alteration in the regulations for the Museum. In future it will be opened at 10 A.M. instead of at 11 A.M. Gratitude will be felt for this concession on the part of the Council, but we would urge that the Library should be opened at 10 A.M. also and that it is surely not necessary to close both the Library and the Museum during the whole of September. It is, of course, necessary to clean the Library annually but surely a few days should suffice for this purpose.

The Analytical and other Commissions of THE LANCET.

One interesting fact to record this year in connexion with this department is the enlargement and remodelling of THE LANCET Laboratory. In order to keep pace with increasing demands upon the work required of it this was commenced at the beginning of the year and finished by the end of March. This needful step led of course to a temporary suspension of practical work. Nevertheless the work done this year in the Laboratory compares favourably both in regard to its interest and amount with that recorded last year.

The first inquiry relating to the use of antiseptics in food appeared in THE LANCET of Jan. 2nd. In this report we printed the views of several medical men who are regarded as authorities on the subject and their evidence showed some diversity of opinion as to whether antiseptics in the quantities used for preserving food are injurious to health and upon the point as to whether legislation could be satisfactorily applied. Provided, however, that certain restrictions were made the general opinions expressed appeared to be in favour of the use of preservatives being in some instances permitted. For ourselves we think that legislation should be directed against the abuse of antiseptics whilst specifying also the amount of a preservative permissible and in what articles of food its use is justified.

In this number of THE LANCET appeared an account of a process for softening and sterilising water. The apparatus was tested in the Laboratory both chemically and bacteriologically with the results which appeared to justify the claims of the inventors.

Some interesting experiments were made in the Laboratory upon fur collarettes which had been known to cause acute dermatitis. We could find no evidence in support of the view that chemical irritants were the cause of the eruption. We expressed the opinion that it was due rather to a mechanical effect. Thus it was found that when a fur which had been known to produce irritation was gently pressed upon a slab of soft grease the hairs penetrated into the fat, while the hairs of another fur which had not produced irritation did not penetrate but curled round. Microscopical examination confirmed this view. The irritating collarettes were, as a rule, found to consist of the fur of old animals while the non-irritating collarettes were generally composed of the furs of young animals. The hairs of the former are thick and rigid with a fine point at the tip while the hairs of the latter are of uniform thickness and yielding. Confirmatory evidence that this was the true explanation appeared in clinical reports of cases.

In THE LANCET of April 24th was published a full analysis of the new water-supply to Worthing which was made available for domestic use for the first time in April last. The results were excellent. This step at Worthing marks the close of a bitter experience in the history of the town which as our readers will remember was visited with a severe epidemic of typhoid fever as a result of a polluted water-supply. Our representatives were present at the inaugural ceremony.

The first of a series of articles on Sicily as a Health Resort, to which further allusion is made, appeared in THE LANCET of June 5th. This inquiry involved a considerable number of analyses of water which were carried out in the Laboratory. The results appeared in THE LANCET of July 24th. The waters thus examined showed exceptional purity.

The simplification of the analysis of potable waters so as to bring within the reach of medical officers of health an easy yet fairly reliable means of differentiating the quality of water-supplies was the subject of criticism in THE LANCET of July 10th. The results of analysis of a certain sample of water given by this simple process were placed side by side with the results obtained in the Laboratory in the ordinary way so that the

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merits of the simple process could be at once seen. The comparison was satisfactory.

Our Commissioners again visited Henley this year on the occasion of the annual regatta. Their report appeared in THE LANCET of July 24th. While they had evidence of the greater attention paid to the sanitary condition of the river during regatta week yet they expressed the opinion that something more might be done to prevent the pollution of the river with discarded remnants of food. The nooks all along the course were found to be full of floating pieces of bread, cucumber, tomato, eggs, and so on, which though not seriously defiling the river must be counted as offensive.

In the special inquiries just epitomised the number of analyses involved and made in THE LANCET Laboratory was 136.

The number of samples of foods, drugs, and beverages, examined in the Laboratory during the year was 120, an advance of twenty over the previous year. The number of analytical determinations made in connexion with this work amounted to 300, an advance of fifty over the number last year. As is well known the results of the work of this department are published in our columns under the heading of "Analytical Records from THE LANCET Laboratory," and no sample is reported upon without careful practical examination and inspection both chemical and microscopical. In this way we hope as we believe that our reports afford a reliable guidance to our readers.

THE LANCET *Commission on the Metropolitan Water-Supply.*

We have this year placed before our readers a wealth of material on the very important subject of the Metropolitan Water-supply. We have felt that, despite the great number of official inquiries and Royal Commissions that have been held on water-supply, not in the reports of any of these inquiries are to be found, at least compiled in a convenient way, facts and statistics relating in detail to the undertakings of the companies beginning with the intake and ending with the means of distribution. At any rate we do not know of an independent inquiry ever having been made on these points. It is exactly this omission which the articles that have appeared in THE LANCET this year are believed to repair. Over twenty articles have been contributed upon these important points and our readers, and those who running may read, have now placed before them just those facts which will enable them to understand what the whole water undertaking of London is and to comprehend its scope and ramifications. To take such a reliable and perfectly independent inventory, so to speak, of London's water undertakings was, as our readers may readily imagine, no easy task, yet we venture to think our Commissioner has carried out his quest so thoroughly and concisely as to have been able to present us with a plain, accurate, unbiased, and independent description of the whole plant and machinery upon the efficiency of which the inhabitants of London depend for the quality and quantity of their present and future water-supply. The inquiry is all the more important inasmuch as the subject with which it deals is again before a Royal Commission. Previous Royal Commissions have dealt mainly with the questions of the quality of supply and of the availability for future needs of the present sources. A definite pronouncement upon these momentous points has been made, the most important contribution of this kind being that of the report of the last Royal Commission which sat under the chairmanship of Lord BALFOUR of BURLEIGH. But this report had little to do with the value and worth of the London companies' undertakings, although this question was obviously one which would have to be seriously faced when the question of transferring the stock and goodwill of the London water companies to a municipal body came up for consideration. That the water administration of London will before long be placed under the control of a public body admits of little doubt, and therefore it is but right that the public should know with some preciseness what it contemplates buying—if that be decided upon—before purchase is eventually made and acquirement becomes an accomplished fact. On this head we venture to think that our recent inquiries will afford distinct assistance leading our legislators to decide the real value of the machinery and plant, distribution area, &c., which at present comprise the property of the eight London water companies and which represent, according to Lord BALFOUR'S Commission, the means with which London is to be provided with water for the next forty years. Time and energy have not been spared to make this inquiry as complete as possible and a reference to the series of articles to which we refer will convince the reader that this is so.

Our Commissioner has described every pipe, main, reservoir, and distributing service connected with the particular company concerned. All these, together with the area of distribution, are shown in a series of maps which were drawn expressly for this purpose. From this description it is possible to proceed to the exact locality of the various parts of the plant and machinery from intake to distribution of each and all of the London water companies' undertakings. It is thus possible therefore to gauge with accuracy the value of the undertakings not only in regard to present and future requirements but in regard also to the defects which seriously need attention and to the improvements which in the interest of public health are necessary. It is quite obvious to us that in view of the scope of inquiry of the Royal Commission recently appointed our field of inquiry must appeal as an important piece of evidence worthy of the first consideration to the members of this Commission. The Commission is asked to inquire (1) "whether, having regard to financial considerations and to present and prospective requirements as regards water-supply in the districts within the limits of supply of the metropolitan water companies, it is desirable in the interests of the ratepayers and water consumers in those districts that the undertakings of the water companies should be acquired and managed either (*a*) by one authority or (*b*) by several authorities; and, if so, what should be such authority or authorities. To what extent physical severance of the works and other property and sources of supply of the several companies and the division thereof between different local authorities within the limits of supply are practicable and desirable and what are the legal powers necessary to give effect to any such arrangements; (2) if the undertakings are not so acquired, whether additional powers of control should be exercised by local or other authorities; and, if so, what those powers should be; (3) whether it is practicable to

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connect any two or more of the different systems of supply now administered by the eight metropolitan companies; and, if so, by whom, and in what proportion, should the cost of connecting them be borne and what are the legal powers necessary to give effect to any such arrangement."

We venture to submit that the report of THE LANCET Commission is full of relevant points involved in the consideration with which it is the business of the Royal Commission to deal. We take it that above all they must consider the question of the efficiency and size of the undertakings. Whether there are defects in the systems of intake and supply at any of the companies works should be apparent from the detailed description of these undertakings by our Commissioner. So far we have abstained from criticism on the facts brought to light, but we submit them for what they are worth and their significance either for good or evil will readily appear. After all it is largely the important question of the public health that is concerned and this primarily is our reason for instituting the inquiry. It will be evident to those reading these articles with ordinary intelligence where the defects lie and where in the interests of the public health alterations or improvements are imperative. Obviously the purchase value of undertakings so described should depend largely upon these conditions. For ourselves we believe we have printed a faithful record of facts, as otherwise the immense trouble we have taken would be futile. The question of the acquirement of the water companies' undertakings promises soon to be decided and this decision cannot be arrived at fairly and completely without a consideration in the most minute detail of the appliances of those undertakings from intake to distribution. This necessarily includes the whole plant and machinery of the company and the efficiency of such plant and machinery, be they mains, filtering beds, storage reservoirs or pumps. In a word, the community should know what it is purchasing or taking over with a view of control and we venture to think we have placed such knowledge in its hands which should materially assist it in coming to fair and equitable terms on the question of acquirement. Further and lastly, a not unimportant point bearing upon the question of acquirement is the interesting history and evolution of the companies concerned and upon these points also we think our inquiry affords valuable and relevant information which has not been hitherto publicly afforded.

THE LANCET *Special Commission on Sicily as a Health Resort.*

The climate of Sicily belongs to the warm marine class. It is characterised by great equability and freedom from extremes, either annual or diurnal, a high proportion of warm, bright, sunny days, moderate humidity, a moderate rainfall, a considerable amount of wind, and comparative exemption from fog, mist, or severe cold. Warmth, mildness, brightness, and equability are the predominant notes of the Sicilian climate. With the exception of an occasional day of sirocco, when the temperature may rise to 100° F. in the shade or upwards, extreme heat is very rare, and in the lowlands and upon the coast-line extreme cold is unknown. Snow rarely falls at the sea level and the thermometer only very exceptionally—perhaps four or five times in the year—touches freezing-point. The lowest recorded temperature at Palermo or Catania rarely in any year falls below 28° or 30°, and in many winters never reaches freezing-point. The mean temperature of the warmest month (July) at Palermo is 78·85° and at Catania 79·9°, while the mean temperature of the coldest month (January) at Palermo is 51·6° and at Catania 49·5°. The mean daily range is 12° at Palermo and 13·8° at Catania. These figures indicate a very high grade of equability, annual and diurnal. The mean annual temperature is 64·67° at Palermo and 64·4° at Catania. Palermo has an average of 167 "giorni sereni"—i.e., days of cloudless sunshine—in the year and 62 "giorni misti"—i.e., "mixed days" or days of partial cloud and partial sunshine. Catania has an annual average of 164 "serene" days and 118 "mixed" days. We may say that Palermo has, on an average, 229 fine days in the year and Catania no less than 282 fine days. Palermo has a mean annual rainfall of 29·87 inches, which falls upon 116 days. Catania has a mean of 21·37 inches, which falls upon 86 days. The mean relative humidity of the air is 65·4 at Palermo and 61 at Catania. These figures show that while the climate of Sicily may be described as "damp" if compared with that of Cairo, where the mean relative humidity is only 58·4, it may be described as "dry" if compared with that of England, the mean relative humidity of the air at Greenwich being 87. In truth, the humidity of the air in Sicily, like so many other Sicilian characteristics, is intermediate between the extremes of Africa and some parts of northern and western Europe. As regards the seasonal prevalence of rain, Sicily belongs to the region of winter rains. June, July and August are practically rainless, and the heaviest rainfalls occur in November, December and January. Sicily has a considerable amount of wind, though strong winds and storms are not frequent. Palermo has an average of only thirty-three days designated "ventosi" (windy) in the year. The sirocco is one of the most serious drawbacks to the Sicilian climate. It is most frequent at the equinoxes and is rare in winter. It is a south-easterly wind from the southern deserts, and it is a hot, dry wind obscuring the sky and bringing clouds of dust. It lasts one, two, or at most three days and is usually followed by refreshing rains. Its enervating effects are more felt by the healthy than by the ailing. Though disagreeable, it is not an unhealthy wind and does not aggravate existing disease or raise the general rate of mortality.

All the important resorts in Sicily are upon the coast and the meteorological differences which subsist between them are comparatively unimportant. Palermo has a larger rainfall and a higher proportion of wet and cloudy days than Girgenti, Catania, Taormina or Syracuse. On the other hand, the equability of its climate is more marked than that of the other places in question. Catania excels in warmth, brightness and large proportion of fine days but is somewhat less equable. Syracuse has a bright climate with a small rainfall but it is a windy place. The Sicilian climate is intermediate in character between the extremes of heat and cold, dryness and humidity, and it would appear antecedently probable that its *aurea mediocritas* would be found somewhat widely applicable to various states of debility and disease. Its general influence may be described as (1) *moderately tonic* and (2) *sedative*.

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It may be expected to prove useful in the following classes of affections: 1. Bronchial affections, especially the dry and irritable varieties and including bronchial asthma. 2. Laryngeal affections of the same type as the foregoing. 3. Impaired convalescence after wasting diseases, the after-effects of the specific fevers, malaria, bone, and joint diseases, pneumonia, pleurisy, &c. 4. "Scrofula" and "lymphatisme." 5. Senile affections. 6. Anæmia and chlorosis. 7. Irritable nerve affections, including hysteria and neurasthenia. 8. Certain varieties of phthisis, especially early phthisis complicated by anæmia, low vascular tone or nervous irritability, and catarrhal phthisis. Among the diseases upon which the influence of the Sicilian climate is, on the whole, injurious may be mentioned rheumatism and renal affections. Ophthalmia in many of its forms might also be mentioned.

Sicily has undoubtedly been unduly neglected as a health resort and presents many advantages and attractions to the invalid and health seeker.

The Typhoid Fever Epidemics at Maidstone, Lynn, and Belfast: THE LANCET *Special Investigations.*

By special investigations, conducted on the spot, we were able to give early and full information concerning the history of these epidemics and the general sanitary conditions of the towns in question. Though there can be no doubt that the epidemics in Maidstone and Lynn were spread by contaminated water-supplies many other conditions also prevailed which facilitated the diffusion of the disease. In Belfast these other conditions likewise existed and to an appalling extent; the consequence was that, though there was not a sensational epidemic like that of Maidstone and the water does not seem to have been contaminated, there was in reality a worse state of affairs. At Belfast typhoid fever is endemic and, in the long run, occasions a greater proportion of sickness and deaths than have occurred at Maidstone. It is therefore most necessary that the very important question of water supply should not efface those other considerations which render a population liable to epidemic disease—even in those districts of Maidstone which received the contaminated water-supply the incidence of disease varied considerably and its prevalence seemed to be dominated by other factors besides the water-supply. A map which we published giving the levels of the town showed that it was the higher districts that suffered most; and this may have been due to the fact that branch sewers, acting as ventilating shafts for the main sewers which are placed at the lowest levels, delivered a greater amount of sewer air in the higher portions of the town. At Lynn and at Belfast it was seen that though there were cases of typhoid fever in all directions still these cases clustered together in greater numbers in those districts where the drainage is more particularly defective or where the subsoil is especially foul and contaminated. Undoubtedly a pure water-supply is a primary necessity, but with the purest of supplies there will still be typhoid fever while uncovered privies, untrapped drains, or a foul subsoil are to be found close to kitchens. If the germ must obtain admission to the human body to cause the fever it can easily obtain admission otherwise than by drinking a glass of water, and our reports on the three towns which have most suffered from typhoid fever show how widespread are the causes of pollution which may produce mischief quite independently of the water-supply. That such defects still exist is due in part to the ignorance and indifference of the populations concerned and in part to the fact that persons owning insanitary property or indirectly interested in such property have obtained seats on the town councils where they have strenuously and too successfully resisted the attempts made to carry out measures of sanitary reform. By a direct vote the ratepayers of Maidstone refused to allow the town council to take over the water-works and by more than one direct vote the ratepayers of Lynn refused to sanction the scheme for obtaining a new water-supply proposed by the town council of that town. Thus the primary blame falls upon the ratepayers themselves. By their votes they have paved the way for the advent of epidemic diseases and thus courted the punishment which has now fallen upon them. The full and detailed exposition of this situation given in our columns should help to spread a better knowledge of the principles of sanitation and we trust the electors will be inspired with a truer sense of their own interests and their duty to the community.

Hospital Abuse.

The series of special investigations on the vexed question of hospital abuse which we commenced in the autumn of 1896 has been continued throughout the present year. From the south-west of England, Plymouth and Exeter being first visited, our Special Commissioner proceeded to such densely populated manufacturing and commercial centres as Manchester, Liverpool, Leeds, and Birmingham. At Manchester at least the profession is not indifferent to the grievance but have made a virile attempt to deal with the question. First, there is the medical guild which as an active combative body has done much to spread a knowledge of the difficulties which beset the general practitioner. Secondly, the principal hospitals of that town have not only established a wage limit but, with the aid of the Charity Organisation Society, have instituted a system of inspection by which inquiries are made at the homes of all patients so as to ascertain whether they are fit subjects for the receipt of gratuitous medical relief.

At Leeds our Commissioner was first able to point out the consequences, which can scarcely be qualified as otherwise than revolutionary, that are likely to accrue from the growing practice of compelling workmen to subscribe to the hospitals. Theoretically, of course, the subscriptions are voluntary and confer no rights. In practice they become obligatory and therefore the workmen conclude that as old subscribers to the hospitals they have the right to claim treatment when ill. In practice also the hospitals are now so largely dependent on working-class subscriptions that they dare not draw a hard-and-fast line which might give offence to their principal financial supporters. Thus the average annual expenditure of the Leeds Infirmary during the previous five years had been £23,179, and towards this sum the workmen now contribute about £7000. This, they might claim, should place in their hands more than a quarter of the voting power for the management of the infirmary. If their £7000 were withdrawn such an act would spell bankruptcy for this excellent hospital. Already the workmen, being dissatisfied

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with the management of the convalescent home attached to the infirmary, have resolved to withdraw a part of their subscriptions so as to establish a convalescent home of their own. Our Commissioner pointed out that the workmen might under certain circumstances be tempted to withdraw the whole of their subscriptions and to open a hospital of their own. This suggestion caused great indignation and many and loud were the protests made, notably by the *Yorkshire Post*.

But on reaching Birmingham our Commissioner found a still more menacing state of affairs. Here the workmen help to defray the cost of the hospitals first by the payment of a registration fee on being admitted, which payment is enforced by most of the hospitals. Then the workmen subscribe directly to the hospitals about £6000 annually, and they also subscribe more than £13,000 to the Hospital Saturday Fund. With this money they maintain several convalescent homes of their own and make a free gift of £10,000 to the hospitals. The expenses of the latter average £45,000 per annum and it is calculated that what with the sums mentioned and the registration fees the workmen provide from their own pockets half this expenditure. There is nothing to prevent their withdrawing all this money and establishing instead hospitals and dispensaries governed exclusively by themselves. Such a possibility had never before been foreseen and our Commissioner has been the first to call attention to this new complication.

At Leeds, Manchester, and Birmingham many medical men testified to the effect of hospital abuse upon the general practitioner. The artisan class, the clerks, and shop assistants who can well afford the small fees charged for ordinary consultations now frequent the hospitals, where they imagine they will obtain better advice. That this class may claim to be admitted to the hospitals when it is a question of an expensive surgical operation or lengthy medical treatment is very generally conceded. But, on the other hand, the general practitioner thus finds that he has only trivial cases to deal with,' and even the trivial cases now also gravitate towards the hospitals.

The competition of the hospitals against the general practitioner is a grievance that extends to other countries and the medical men of Paris have formed a strong medical syndicate or union to deal with this and other kindred subjects. Courteously received by the committee of this medical syndicate, our Special Commissioner was able to describe fully its organisation and the grievances of our Parisian colleagues. In Paris the position is just the reverse to what obtains in England. There is not the same competition between the hospitals because they are nearly all state or municipal institutions. Though they are intended for the poor still the principle is that every patient must pay for his maintenance. If the patient declares he is unable to pay then full inquiries are made at his domicile to ascertain whether this is really the case. The abuse arises with those who do pay for they are admitted without question or inquiry though many of them could well afford to remain at home and give full fees to their private medical attendants.

In Nottingham, Leicester, Coventry, and Southampton the evidence as to the prevalence of hospital abuse has also been carefully collected, and in Nottingham and Coventry the cheering fact was noted that the medical profession of those towns had formed well organised unions to deal with such ethical and economical questions.

Honours to Medical Men.

The annual task of recording the names of those members of the profession who have been signalled out for honours by the Queen during the current year is always a pleasant one, but on this occasion, the year of HER MAJESTY'S Diamond Jubilee, our pleasure is greatly increased by reason of the fact that our list must be headed by the name of LISTER, the first medical man who has had the honour of being raised to the peerage. The services which he has rendered not only to the medical profession but to the public in general, and indeed to the whole world, richly deserved such a reward—a reward which redounds greatly to the honour of our country.

Among the other recipients of New Year honours were Dr. RICHARD DOUGLAS-POWELL, who received a baronetcy, and the Hon. WM. RICHARD KYNSEY, C.M.G., who received a knighthood. Deputy-Surgeon-General CHARLES BENJAMIN MOSSE, C.B., was made a Companion of the Order of St. Michael and St. George, and Dr. WILLIAM ALLEN STURGE, of Nice, a Member of the Fourth Class of the Royal Victorian Order.

Naturally the larger list of honours which were bestowed upon the medical profession this year were received at the time when the whole of the British Empire was rejoicing over the remarkable reign of Her Majesty the QUEEN. Dr. SAMUEL WILKS, the President of the Royal College of Physicians of London, received a baronetcy, an honour which his eminent services to science and to the practical philanthropy of Guy's Hospital so well merited. Sir WILLIAM MACCORMAC, the President of the Royal College of Surgeons of England, also received the well-earned reward of a baronetcy, as did Mr. THOMAS SMITH, whose operative skill is as widely recognised as are his amiable qualities. Dr. W. R. GOWERS'S knighthood was hailed by the profession as a recognition of valuable work, and like honours were conferred upon Dr. FELIX SEMON; Dr. GEORGE F. DUFFEY, the President of the Royal College of Physicians of Ireland; and Dr. WILLIAM THOMSON, the head of the corresponding surgical corporation. In the list of the promotions in, or selections for, the Order of the Bath the following names appeared: Dr. RICHARD THORNE THORNE, C.B., now Sir RICHARD THORNE, by virtue of his promotion to K.C.B. (Civil); Inspector-Generals of Hospitals Dr. H. F. NORBURY, R.N., Mr. J. J. L. DONNET, R.N., Mr. H. MACDONNEL, R.N., and Surgeon-General C. A. GORDON, who were promoted to K.C.B. (Military); Dr. T. GRIMSHAW, Registrar-General of Ireland; Dr. DAVID NICOLSON, one of the Lord Chancellor's Visitors in Lunacy; Surgeon-Major-General J. JAMESON, Director-General of the Army Medical Department, and Mr. HUGH ADCOCK, Consulting Physician to H.I.M. the SHAH OF PERSIA, who received the C.B. (Civil); Surgeon-Major-General C. SIBTHORPE and Brigade-Surgeon-Lieutenant-Colonel G. W. MCNALTY the C.B. (Military). Surgeon-Major-General W. R. HOOPER, President of the Medical Board, India Office, and Surgeon-Major-General J. CLEGHORN, Director-General of the Indian Medical Service, received the honour of C.S.I.; and Messrs. W. M. HAFFKINE, A. F. R. HŒRNLE, and

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J. HUSBAND that of C.I.E. Dr. J. MACKIE, the President of the Egyptian Quarantine Board, and Dr. C. GAGE BROWN, the Medical Adviser to the Colonial Office, were promoted to K.C.M.G.; and Dr. S. W. BUSHELL received the C.M.G. Deputy-Inspector-General of Hospitals H. C. WOODS received the Royal Victorian Order (fourth class) In addition to this list of Jubilee honours HER MAJESTY THE QUEEN subsequently conferred the dignity of a baronetcy upon Sir JAMES REID, K.C.B., Resident Physician in Ordinary to Her Majesty. A knighthood was also conferred upon Mr. THOMAS FITZGERALD, F.R.C.S. Irel., senior surgeon of Melbourne Hospital. The name of His Highness Sir BHAGVAT SINHJEE, G.C.I.E., M.D., F.R.C.P. Edin., LL.D., Thakore Sahib of Gondal, Kattiawar, whose beneficent rule over a contented, happy, and prosperous state has earned for him the well-deserved reward of Grand Commander of the Indian Empire, must not be omitted.

Obituary.

And now we have to perform the sad task of passing in review the names of some of those who have been removed from our ranks by the hand of death. One of the first was Dr. F. J. MOUAT, LL.D., F.R.C.S. Eng., a distinguished member of the Indian Medical Service and an ardent educational reformer; and although his actual presence has been greatly missed by all who knew him personally his name will survive not only as one of the benefactors of our Indian possessions, but as a statistician who has rendered inestimable service to the medical profession and to the country generally. EDWARD BALLARD, M.D., F.R.C.P. Lond., F.R.S., a man of sterling character and a devoted member of his profession, was also called from us in the early part of the year, and he too, like Dr. MOUAT, did great service to both the profession and the public. Of the result of his investigation into effluvium nuisances arising from manufacturing processes Sir JOHN SIMON, his chief on the Local Government Board, has said the information is, "I believe, not only without equal in its own branch of subject matter, but certainly without superior as to thoroughness of work in any sanitary publication known to me." Sir THOMAS SPENCER WELLS, Bart., F.R.C.S. Eng., though dead still exerts a living influence in the special department of surgery in which he excelled. But for him it is questionable whether ovariotomy would not have been abandoned as a hopeless operation, but his indomitable perseverance prompted by his undoubted genius has established it as a useful and justifiable operation. GEORGE DAVID POLLOCK, F.R.C.S. Eng., renowned for the care with which he examined his cases and formed his diagnoses and for the minute attention he bestowed upon after treatment, was a gentleman of the old school of manners. As a leader of the profession he has left a blank which it will be difficult to fill. The mention of the name of CHARLES ELLIOTT LEOPOLD BARTON HUDSON, F.R.C.S. Eng., will cause a sigh of regret not only among members of our own profession who had the pleasure of knowing him personally, but also among his many patients, rich and poor alike. Among the latter indeed at the Middlesex Hospital he was well beloved for his patient and gentle treatment, for his kindliness of manner and thought, as well as for the skill he displayed in treating his cases. Surgeon-Major-General Sir W. A. MACKINNON, K.C.B., F.R.C.S. Edin., late Director-General of the Army Medical Department, will never be forgotten among members of the Army Medical Service and his long, varied, and distinguished career will be looked upon with pride by all members of the services. JAMES CAGNEY, M.D. R.U.I., whose sad death at the early age of thirty-eight years is still fresh in our minds, was a man of culture and high intellectual capacity. He rendered a most important service to the profession by clearly demonstrating that the hanging posture which was at one time so much in vogue in the treatment of locomotor ataxy had the effect of relaxing and not that of stretching the spinal cord.

To mention the names of all the prominent practitioners who have been removed from our Register by death would be impossible in the short space at our disposal, but attention must be called to Surgeon-General HERBERT TAYLOR READE, C.B., V.C., who received the Victoria Cross for a daring act of bravery at the siege of Delhi. JABEZ SPENCE RAMSKILL, M.D. Lond., was a notable figure in connexion with the early days of the National Hospital for the Paralysed and Epileptic. Sir JOHN CHARLES BUCKNILL, M.D., F.R.C.P. Lond., F.R.S., J.P., was a high authority on psychological medicine. He did yeoman's service in the cause of the insane, but will also be remembered as one to whom the great volunteer movement of 1852 in no small degree owed its origin. Surgeon-General WILLIAM ROBERT CORNISH, C.I.E., F.R.C.S. Eng., was prominent in Indian medical politics. The active part which he took in compelling the Government of India to alter the ration which he considered inadequate for the starving natives in the famine year of 1877 will never be forgotten though it is to be regretted that for all his meritorious work which resulted in saving countless lives he was only rewarded with a Companionship of the Order of the Indian Empire. THOMAS BELL FLETCHER, M.D. Paris, F.R.C.P. Lond., took a great interest in medical education. HENRY THOMPSON, M.A., M.D. Cantab., F.R.C.P. Lond., was the senior Fellow of St. John's College, Cambridge, Consulting Physician to the Middlesex Hospital, an elegant scholar and a sound clinician, JOHN BRAXTON HICKS, M.D., F.R.C.P., F.R.S., was a famous obstetrician. ALFRED HALL, M.D. Edin., F.R.C.P. Lond., was a model general practitioner, kind, frank, cheerful, and well up in the latest improvements of medicine. Record must also be made of the following names: CHARLES SMART ROY, M.A. Cantab., M.D. Edin., F.R.S., professor of pathology at Cambridge; the numerous instruments which his genius created for registering and recording graphically the results of his researches remain as memorials of his ingenuity and inventive power: OLIVER PEMBERTON, J.P., F.R.C.S. Eng.: JAMES ANDREW, M.D. Oxon., F.R.C.P. Lond., a good scholar and a man of thoroughly cultured mind.: WALTER RIVINGTON, M.B., M.S. Lond., F.R.C.S. Eng., an ardent advocate of medical reform: ADOLPHUS JOSEPH RICHARDSON, M.D. Cantab. JAMES GREIG SMITH, M.A., M.B. Aberd., F.R.S. Edin.: CHARLES ALEXANDER LOCKHART ROBERTSON, M.D. Cantab. and St. And., F.R.C.P. Lond.: MATTHEW CHARTERIS, M.D. Edin., F.R.S. Edin.; FRANK CHANCE, M.B. Cantab., F.R.C.P. Lond.

In other countries the medical profession has lost

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MAX JOSEPH OERTEL: VICTOR MEYER: MARC OLIVET, Professor of Psychiatry in the University of Geneva; NIKOLAI ZDEKAUER, the distinguished Russian physician and sanitarian; and KARL REMIGIUS FRESENIUS, director of the chemical laboratories at Wiesbaden, whose name will ever be remembered in connexion with his system of chemical analysis.

Annotations.

"Ne quid nimis."

THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

A GENERAL meeting of the Prince of Wales's Hospital Fund for London was held on Dec. 20th, at Marlborough House, H.R.H. the Prince of Wales, President of the Fund, being in the chair. Lord Rothschild, the treasurer, read the financial statement from which it appeared that a sum of £187,000 had been collected, of which £99.000 had been invested. Of the £187,000 the sum of £20 500 had been received in annual subscriptions and £1500 as interest, so that the income of the fund so far was about £22,000. This sum will be available, it is hoped, in perpetuity, but in addition there is to be divided this year as a special Jubilee gift the sum of from £38,000 to £40,000 accruing from the sale of the special Hospital Stamps. Altogether, then, some £60,000 are available for this year and this sum is to be divided mainly among the larger hospitals, though the many smaller institutions will also receive grants. The Council confirmed the resolution of the executive committee passed upon Nov. 9th, 1897, "that in view of the controversial character of the proposition of the Charity Organisation Society to establish a Central Hospitals Board for London, it is inexpedient that the Prince of Wales's Hospital Fund for London be associated with the movement." We cannot but recognise that there is force in this decision much as we may regret the circumstances which have led to it. At present the Central Hospitals Board has not only no existence but those who are most eager for its inception have not come to any agreement among themselves as to what shall be its constitution. Altogether we consider that the proposed distribution of the fund for this year shows a wise discretion. As Lord Lister said, it is but a tentative method, but every care seems to have been taken to adopt fair measures and to show to the public that their money is under sound stewardship.

CONFLICTING REGULATIONS AND SANITARY DILEMMAS.

WITHOUT admitting the anarchist contention that all crime, vice, and misery has its origin in the restriction of the spontaneity and aspirations of the individual by man-made law, we cannot deny that excessive legislation and the multiplication of authorities often fail to fulfil their purpose and create difficulties which would not otherwise have arisen. This is forcibly illustrated in a question at present agitating the London vestries and the members of certain trades and which will, not without justification, be urged as a reason for extending the area of the metropolis so as to bring within the jurisdiction of the London County Council such populous and contiguous districts as Tottenham and West Ham. The latter, as all know, has long been the refuge of those offensive trades that are prohibited within the so-called metropolitan area, although the boundary is purely arbitrary. Among the most offensive of offensive trades is the manufacture of fish manure and superphosphates, the process consisting in the boiling down of fishmongers' offal and coprolites with sulphuric acid, &c., the mass being subsequently evaporated to dryness and ground into a sort of artificial guano. The proprietors of these works, besides providing a product of great value to the agriculturist, fulfil sanitary functions of an important nature in the daily and gratuitous removal of offal of the very worst kind from every part of the metropolis, the suspension of which for but a few days would be productive of the gravest inconvenience and danger to health. To minimise the nuisance incident to the traffic the health authorities of West Ham had very properly restricted the transport of fish offal through the streets to the hours from 12 P.M. to 6 A.M., but for some unaccountable reason the recent by-laws of the London County Council have fixed those of 4 A.M. to 10 A.M. in the summer and 6 A.M. to 12 noon in the winter months, and the consequence of these incompatible regulations has been that the carmen on arriving at the borders of West Ham have been given in charge for driving within prohibited hours. An appeal to the officers of the County Council was met by a reference to Section 33 of the London Public Health Act, which, so far from offering a solution of the difficulty, introduces further complications, for if the sanitary authorities themselves undertook the removal of the offal their servants would be no less liable to be stopped by the West Ham sanitary officers, and should they dispose of it otherwise within the metropolitan area an important industry would suffer by the cutting off of the supply of raw material from all but the riverside districts. Again, while the manufacturers can afford to collect gratuitously that for which they pay nothing and which the tradesmen are always anxious to get rid of, the local authorities could not do so without adding to the rates, and the fishmongers declare that the exaction of a charge, however small, would be to many of them an intolerable tax. Of course the immediate difficulty would, and probably will, be removed by the assimilation of the regulations as to hours, those in West Ham being undoubtedly the more suitable, but the discussion of Section 33 has already raised fresh issues. The corresponding section in the Metropolis Management Act was enabling only, whereas this is compulsory, and though this may be well enough in the case of trade refuse of a kind likely to cause nuisances, it would be intolerable that the sanitary authorities should be called on to remove other kinds such as furnace slag and builders' materials, with which indeed in one district they have been threatened.

THE WESTMINSTER PLAY.

"INTERPRETATION" of the antique scenic masterpieces has a wider significance than that conveyed by the dictionary, and nineteenth century scholarship finds on the stage, whether at school or college, a yet more vivid and perfect realisation of the *chefs d'œuvre* of an Aristophanes or a Plautus than that possible in the class-room. To the honour of Westminster be it reiterated its dramatic representation of Roman comedy, dating from Queen Elizabeth, has been steadier as well as of longer continuance than at any other school, insomuch that imitation ("the sincerest form of flattery") has carried the practice into other "foundations" or seats of learning until the Greek or Latin play rendered with all due scenic and even musical accompaniment has become a standing feature of the academic year. Even the modern commentator admits the superior interpreting power of gesture over mere voice in many

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passages of the ancient drama and one of the latest as well as best editors of Plautus—Professor Cocchia, of Naples—in his annotations on vv. 60 and 483 of the *Trinummus*, for instance, says: "These and such like phrases are always accompanied by the gesture of the individual who pronounces them which serves to reveal their true meaning." Indeed, if the classics are worth retaining at all as a means of mental culture the reinforcement their study derives from dramatic representation must be welcomed by all their votaries and for this reason we are glad to notice this year's "Westminster Play" as perpetuating the traditions of the school with unabated vigour and effect. There is no need to point out the claims of the *Trinummus* to the favour implied in its frequent performance. Our only regret is that the Plautine repertory is not more largely drawn upon. What light would not be shed, for example, on the medical art in ancient Rome, its practitioners and their patients, by a judicious representation of the *Menaechmi*? This is an old suggestion of THE LANCET, but it will bear repetition now that the *Menaechmi* has been ably edited for schools by English as well as continental Latinists. Ancient practice, as given in the fifth act of that play, had apparently ceased to carry the patient to the temple of Æsculapius for treatment; but the medical man had begun to pay his visits at the house to which he was professionally called. What an object-lesson in the *vie intime* of antiquity might not be given to the modern world in the capital pulse-feeling scene with its local surroundings ("cur apertas bracchium," &c.)? Or, again, take that excellent acting play, the *Mercator*, with its prescription (Act I., scene 2, v. 31) for hæmoptysis:—

"Recinam ex meile Ægyptiam vorato: salvom fecerís."

Or yet, again, what pictures of the ancient city life might not be presented in a performance of the *Amphitryon* or the *Epidicus* with their "tabernæ medicinæ" and all their frequenters? Even those to whom the original text of the comedy was a sealed book might carry away from its scenic reproduction and interpretation a far more vivid impression of its contents than has hitherto been possible to the mere scholar however philologically "sound." For archæology is lifting the veil from many a dark corner of antiquity and lighting up ancient literature itself by treasure-trove which must make it not only more intelligible but more attractive, particularly when susceptible of treatment on the stage.

THE MORTALITY OF OCCUPATIONS.

WE have received a copy of Dr. Tatham's recently published essay on the mortality of males employed in certain occupations. The book, which extends to some 360 pages, forms Part 2 of the Supplement to the Fifty-fifth Report of the Registrar-General, Part 1 having been issued in the course of last year. The work deals exhaustively and in some respects after a novel fashion with the subject of occupational mortality and as it is based on the total deaths occurring in England and Wales during the three years 1890-91-92 it will be seen that the facts dealt with are sufficiently numerous to secure satisfactory results. Not only is the mortality given in all useful detail for each of 100 occupations, but in several instances the mortality in certain industries is given for local sub-divisions of those industries, and thus the aggregate number of occupations dealt with is still further increased. A specially interesting section of the work is that which treats of the mortality of unoccupied persons and this section will be found worthy of consideration by the statesman not less than by the sanitary reformer. A new Life Table for the Healthy Districts of England and Wales in 1881-90 completes the present volume which forms a valuable contribution to the series of essays on vital statistics emanating from the General Register Office the first of which was penned more than thirty years ago by Dr. William Farr. The subjects dealt with in this volume are replete with interest to all members of our profession whether engaged in the practice of State medicine or not. We therefore purpose shortly to notice the more important points of the work in consecutive numbers of THE LANCET for the information of those of our readers who do not possess the original.

DINNER TO DR. W. J. COLLINS.

ON Thursday, Dec. 16th, Dr. W. J. Collins, the chairman of the London County Council, was entertained at dinner at the Trocadero Restaurant by the staff and a number of past students of St. Bartholomew's Hospital. Mr. Howard Marsh was in the chair and about 130 were present in all. The provinces were well represented, a prominent figure being Sir Robert Craven, F.R.C.S., of Hull. Mr. Marsh proposed the health of the guest of the evening, who replied in an admirable speech, and Mr. Alfred Willett gave the health of the three secretaries who had worked hard to make the occasion worthy of its object with complete success. Altogether the festivity was a happy conception and equally happy in the carrying out thereof.

THE Medical School of St. Thomas's Hospital has passed the following resolution:—

"That the Medical School of St. Thomas's Hospital earnestly requests Her Majesty's Government to introduce into Parliament a Bill similar to the London University Commission Bill of 1897 and to pass it into law during the ensuing session."

WE understand that Dr. Bruce of Dingwall will be in attendance on His Royal Highness the Duke of Edinburgh during his stay in Egypt and that Helouan will be the place selected for the visit.

SURGEON-MAJOR-GENERAL JAMES JAMESON, M.D., C.B., Director-General of the Army Medical Department, has been appointed Honorary Surgeon to the Queen in the place of the late Sir William Mackinnon.

MR. ARTHUR TREHERN NORTON, F.R.C.S. Eng., Surgeon-Lieutenant-Colonel, Volunteer Medical Staff Corps, has been appointed by Her Majesty a Companion of the Bath.

THE Court of the Fishmongers' Company have resolved to contribute £1000 per annum for five years to the Prince of Wales's Hospital Fund for London.

SIR RICHARD THORNE'S report as principal medical officer has been published as a supplement to the annual report of the Local Government Board.

DR. ROBERT BARNES has resigned the Fellowship and the office of Trustee of the Obstetrical Society of London.

AT a recent meeting of the Lancashire and Cheshire Branch of the British Medical Association Mr. R. B. Anderson delivered an address in which he recapitulated the story of his wrongs and maintained that in his prolonged struggles against injustice and misinterpretation of the law he had been fighting a battle, as far as one man could, in behalf of the interests and honour of the profession. A resolution was carried, with one dissentient voice, expressing sympathy with Mr. Anderson and a hope that "the representatives of this branch on the Council of the Association will use the strongest efforts to induce that body to take action to defend the rights of the medical profession as affected by Mr. Anderson's case."

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THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE third meeting of the Royal Commission on the Metropolitan Water-supply was held in the Moses Room of the House of Lords on Monday, Dec. 13th. The names of the Commissioners were given in THE LANCET on Nov. 27th. With the exception of Sir George Barclay Bruce they were all present at the meeting. The London County Council, the water companies, and the Hertfordshire and Middlesex county councils were represented by counsel and the Corporation of the City of London by the Remembrancer.

The continuation of the examination of Mr. H. L. Cripps, the Parliamentary agent for the London County Council, occupied the whole of the sitting. Mr. Cripps said that no scheme for putting the water companies under the control of a board seemed feasible to the London County Council. He was not prepared to say that the London County Council were opposed to any practical and efficient scheme if such could be provided. He felt a difficulty in speaking definitely as to control because he did not understand exactly what was meant by the term. He was not authorised on behalf of the Water Committee of the London County Council to suggest any additional powers of control which might be added to those which at present existed over the various water companies. The Water Committee of the London County Council were of opinion that a final settlement of the question could not be arrived at by any system of control and they were unable to suggest any proposal as to what the powers of control should be. They were, however, ready to give their most serious consideration to any definite proposals that might be made and in case any should be brought before the Commission they would be glad to express their opinion concerning them.

Mr. Cripps gave some information concerning suggestions which had already been made with regard to control by Parliamentary Committees, by Commissions, and by various provisions contained in Bills which had been brought before Parliament. Sir George Gray's Bill in 1851 provided that all the water companies should be amalgamated and a common stock formed of the capital; that the dividend of the consolidated stock should not exceed 5 per cent.; and that the sources of supply should be placed under control. This Bill was not passed and is now out of print. In the year 1852 Sir Benjamin Hall introduced a Government Bill which proposed the transfer of the various water businesses to a representative body.

The Royal Commission which was presided over by the Duke of Richmond recommended that a constant supply of water should be introduced and gave the opinion that it was of vital importance that the water-supply of London should not remain in the hands of private companies but that it should be entrusted to a responsible body. The Bill introduced by Mr. Shaw Lefevre in 1871 provided for a constant service and for the efficient filtration of the water supplied. A water analyst was also to be appointed and the accounts of the companies were to be audited by a public auditor. It was provided also that the arrangement for the water-supply should be improved and that in default of the companies submitting to the conditions prescribed the Metropolitan Board of Works should have the power to purchase any or all the various undertakings. The Bill was strongly opposed and was withdrawn. Another Bill was introduced which omitted the purchase clauses and this Bill ultimately became the Metropolis Water Act of 1871.

A Select Committee on the Metropolitan Fire Brigade, which sat in 1877, advised that the water-supply could not "be made to afford the full measure of protection which the metropolis should possess until it is consolidated in the hands of a single authority conducting the business not for immediate profit but for public convenience." The committee, however, declined to express an opinion as to the conditions on which the transfer of the undertakings of the water companies should be made to a new water authority. They, however, insisted that the changes which they deemed necessary would be most effectively carried out if by "unity of control consolidation of public interests were allowed to supersede the separate action of the various water companies." Sir William Harcourt's committee dealt amongst other things with the supply of water by meter. Such a method of supply would not be likely to be satisfactory and Mr. Cripps thought that the metropolitan governing bodies would not assent to the general supply of water to London by meter. With regard to the question as to whether the cost to the consumer would be lower or higher if such a method of supply were adopted Mr. Cripps said he could not express any opinion unless a definite plan was submitted. Sir Matthew White Ridley's Commission dealt exclusively with the question of the purchase of the water undertakings. Lord Balfour's Commission had made a number of recommendations with regard to control; of these none had yet been carried into effect. Mr. Plunkett's committee in the year 1895 had discussed various proposals as to control, but no definite recommendation had been made. Lord James of Hereford had introduced a Metropolis Water Bill which vested the control in a new representative board. The Bill was modified to allow the neighbouring county authorities to become independent. The Government had, in fact, yielded to the same pressure that had been brought to bear on the London County Council by the country districts immediately surrounding the metropolitan area. Mr. Chaplin's Act of the present year enabled any local authority or water consumer to complain to the Railway and Canal Commission in the case of failure on the part of water companies to supply a sufficient amount of water. In answer to General Scott Mr. Cripps said the County Council were considering what powers they had under this Act of dealing with the complaints of water consumers. Mr. Cripps, Q.C., examined the witness at some length with regard to the recommendations of the Duke of Richmond's committee apparently with a view of bringing out clearly the conclusions to which they had come—namely, that the water-supply ought to be in the hands of a public responsible body and that such a transfer was necessary for reasons of public health. The witness admitted that the effect of the arrangement made by the late Metropolitan Board of Works with regard to gas had resulted in the supply of a purer as well as a cheaper article having a greater illuminating power. The regulations made had, moreover, been attended with great financial success to the companies themselves. The supply of gas could not, however, fairly be compared with that of water; water was a necessity of life and it was not only necessary that it should be laid on to every house, but a householder was obliged to get his supply from the particular company which supplied the district in which he lived. With regard to gas the matter was obviously different; no one was obliged to use gas—there were other illuminants, electric light, oil, and candles.

In the interests of the people of London the witness thought it would be well for them to obtain an independent water-supply entirely distinct from that of the present water companies. He admitted that this course would not be submitted to by the water companies without the most severe fight ever known (with which statement the counsel of the water companies appeared to be in hearty agreement). He thought that the County Council might obtain the businesses of one or two companies if it were not for the fact that an agreement existed between the various companies that none should sell their undertakings unless the whole of the businesses were bought.

During the course of the examination reference was again made to the unsatisfactory conditions under which the official auditor of the water companies worked—viz., that no provision was made by which he could obtain legal assistance should there be a difference of opinion with regard to the way in which the accounts were kept. In the year 1887, Mr. Cripps stated, the Official Auditor went to arbitration in a case in which he had a difference with the accountant of the West Middlesex Company and found that he could only employ counsel at the risk of having to pay the expenses out of his own pocket.

With regard to the varying charges made by the different companies Mr. Mellor asked some questions with reference to those of the Lambeth Company, which charged their full statutory rates. A customer supplied by this company living in a house of which the rent is £30, which is rated at £24, has, roughly speaking, to pay a water rent of £3 a year. With regard to the amount paid by the people of London for water rentals it was incidentally mentioned that water consumers benefited considerably by the decision in the celebrated Dobbs case, the effect of which was that certain illegal charges which had been persistently made by the water companies were prevented for the future.

The next meeting of the Commission will take place on Jan. 17th, 1898.

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LEICESTER AND SMALL-POX.

(*Concluded from p. 1477.*)

WE have seen how under the "perfected" Leicester method instead of small-pox being treated in the same hospital with other infectious diseases, under the same nurses, and with the use of the same ambulance waggon, all as set forth by Mr. Biggs, the hospital was emptied of scarlet fever almost immediately after the outbreak began, and how within two months the number of cases of scarlet fever in the town had doubled, and how in 1893 over 2300 cases of that disease were notified, in addition to un-notified cases which are estimated to have raised the total to 4000 or thereabouts. But even with regard to small-pox itself the hospital exercised a very direct influence for evil. Before the British Institute of Public Health in 1894 Dr. Priestley read a paper on the Aerial Diffusion of Small-pox from the Leicester Hospital.[1] He began as follows: "The subject for discussion to-day is an important one and I am tempted to give you my own experience somewhat in detail, firstly, because I was at one time *against* the aerial theory of the spread of small-pox from hospitals, and, secondly, because the Leicester experience is practically unique. Whilst admitting all the arguments that may be brought against the aerial theory I am bound to confess that some at least of the facts that I have met with during the Leicester epidemic are only explainable on such a theory." In Newfoundpool, the suburban district in which the hospital is situated, there were fifty-five cases of small-pox, the ratio to population being eleven times as much as in the rest of the town. Minute inquiry showed that twenty of these cases might be attributed to other than hospital infection. Deducting these and making a similar deduction for the rest of the town Dr. Priestley found that the ratio of prevalence in Newfoundpool was twenty-fold that in Leicester exclusive of Newfoundpool. He points out that the greatest infection from the hospital was in the month of June when the weekly average of small-pox cases in the wards was 49. Regarding this inquiry by the medical officer of health Dr. Coupland says: "The thorough investigation made by Dr. Priestley into the origin of the outbreak points strongly to aerial infection from the small-pox wards." We do not for a moment argue that aerial diffusion and other hospital influences are confined to Leicester. They have been shown to exist in much better vaccinated places. It is obvious, however, that they are of very special consequence in a town which trusts to hospital isolation as its mainstay in the prevention of small-pox at the same time that it leaves the surrounding population unvaccinated and open to attack. In Germany, with vaccination and re-vaccination compulsory, hospital infection can afford to be neglected, but not so in Leicester, and the amount of attention requiring to be given to it in any community will, *cæteris paribus*, be in proportion to the neglect of vaccination and re-vaccination in that community.

Looking to all the facts connected with Leicester and its hospital it is not surprising that efforts were ultimately made by the town council to acquire a suitable site for a new structure, but the very circumstances of Leicester were against its success in such a project. There was no ambition on the part of surrounding rural districts to provide a dumping-ground for Leicester small-pox cases, and the experiences of Newfoundpool were not likely to rouse in any neighbourhood a popular agitation in favour of such a scheme. The straits to which the Town Council were driven in this matter are evidenced by the fact that a proposal was seriously debated to build a small-pox hospital on the town sewage farm. The conception of the joint treatment of small-pox cases and sewage is probably unique. In the end the notion was abandoned and Leicester hospital remains where it was. When next small-pox prevails in Leicester it will be interesting to note whether the hospital will furnish the scapegoat for the failure of the method to prevent the prevalence of the disease.

Mr. Biggs insists that quarantine was entirely voluntary and was not universally carried out. At the same time it is not denied that vaccination was more or less practised. Both being optional it seems unquestionable that both must stand or fall together as part of the Leicester procedure. But Mr. Biggs and the *Vaccination Inquirer* take up the paradoxical position that quarantine is to be looked on as an essential and outstanding feature of the alleged "system," but that vaccination, on the other hand, was altogether outside of it. Of course it is open to any anti-vaccinationist to argue that vaccination being powerless it could be no part of any system. That, however, would be too obviously a begging of the question. As a part of Leicester's ways in dealing with small-pox voluntary quarantine and voluntary vaccination must stand or fall together. In view of the strenuous insistence of Mr. Biggs that quarantine was voluntary and that quarantine was of the very essence of the "system" it is utterly useless for him to insist at the same time that vaccination, also voluntary, was no part of the system.

Whether there ever has been in Leicester anything to call a "method" or a "system" is indeed more than doubtful. The system is said to have been begun in 1877. It was not, however, till September 1879 that the town followed the example of Huddersfield, Bolton, Greenock, Nottingham, Jarrow, and Burton-on-Trent in obtaining a local compulsory Notification Act—a most useful thing to do notwithstanding its involving the principle of compulsion which is alleged to be so abhorrent to Leicester as regards both quarantine and vaccination. Dr. Johnston's reports (1877–84 inclusive) throw very little light on the question of whether or not there was a "system." It is true that in his report for 1877, as quoted by Dr. Coupland, Dr. Johnston writes: "As the plan which I adopted in the removal of these cases is novel and may be found useful by officers of health in other towns for preventing the spread of the disease I may be pardoned if I again draw attention to it. In every house where a small-pox case occurred I endeavoured to impress the inmates with the fact that the removal of *all* the members of the family to the hospital was the best course to adopt, not only as regarded their individual welfare, but also that of the town at large, and I am glad to say that all complied with my request, left their infected habitations, and became inmates of the hospital. Altogether twenty-two unaffected cases were thus admitted into quarantine and of these three after admission sickened." Dr. Johnston speaks here of *all* the members of the family—not all exposed persons—being removed and in 1884, writing reminiscently, he says that "all the other members of each infected house" had been removed during the previous eight years. Curiously, however, in his report for 1883 he attributes the town's freedom from small-pox, not to removal of quarantined persons but to the removal of the patients—"not only the immediate reporting, but also the prompt removal to hospital of all the cases as they came under notice." A perusal of his reports year by year does not yield much information, though his belief in vaccination and re-vaccination becomes evident incidentally. Notwithstanding Dr. Johnston's advice as given in 1877, that quarantine should be used for all members of infected families, it is clear that his guidance was not followed. Mr. Biggs explicitly insists that quarantine was voluntary and was not always carried out. He told Dr. Coupland that from 1877 to 1885 inclusive 128 persons were quarantined, but Dr. Coupland remarks that there was no official record, and with regard to the fourteen years 1877–91, during which there were 103 small-pox cases, Dr. Coupland notes that if, as was said, there were only 183 persons quarantined, then the figures "cannot include all those who were exposed to the possibility of infection. ....."

When we come to the small-pox outbreak of 1892–93 the information as to the extent to which vaccination came to be practised is about as vague as this information regarding quarantine. On April 7th, 1893, by which time there had been intimated 157 cases of small-pox, a curiously worded minute was adopted by the Health Committee: "We are also of opinion that all persons who are frequently brought into contact with small-pox patients should adopt all protective measures known to science." The earlier part of this minute indicates by exclusion what is referred to here. Immediate removal of the patient to hospital, quarantine of the other occupants of the house, disinfecting baths, disinfection of clothing, disinfection of the dwelling house and everything in it—all these are specifically dealt with, and these, provided only the hospital isolation and the quarantine are voluntary, constitute what has been called the Leicester system as applied in cases of small-pox. What, then, are the "protective measures known to science" which are "also" recommended to "all persons" specially exposed to infection? Obviously not municipal schemes of drainage and

[1] THE LANCET, Aug. 6th 1894.

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water-supply which under the heading of sanitation are sometimes mentioned as having to do with Leicester's proceedings. Such measures would hardly be open for immediate application by persons who in the course of the outbreak were being "frequently brought into contact with small-pox." The plain fact is that under the euphemism of "protective measures known to science" the Leicester Sanitary Committee was advising vaccination and re-vaccination. And the vaccination and re-vaccination, be it noted, were to be practised by "all persons ..... frequently brought into contact with small-pox patients." But who in particular are included under this description? Surely the small-pox nurses, and the hospital attendants, and the ambulance men, and the disinfectors and inspectors, and all the municipal staff who had to do with the epidemic. Thus we find that though in the absence of small-pox Mr. Biggs had scouted and derided our Commissioner's conclusion that Leicester largely owed its protection to the existence of a cordon of vaccination round every case of small-pox, yet when small-pox did attain a serious prevalence in the community this committee (of which Mr. Biggs was a member—he may have been a dissenter from its findings)—this committee recommended that if there were any defects in the cordon they should at once be remedied. There was abundant justification for this action. Before the minute was adopted four attacks and one death had occurred among the six members of the hospital staff who had refused revaccination. The fifth was attacked shortly afterwards (on May 1st). How many of the total staff of forty were appointed after this period we know not (though they cannot have been more than twelve), but all were re-vaccinated and all escaped small-pox. The phrase used in the minute, "all persons who are frequently brought into contact with small-pox patients," covers, of course, more than the municipal service. It seems generally accepted that throughout the town the vaccinations mounted into thousands, but no precise data are available as to how many thousands there were of them. Their value would be all the greater in so far as they included persons under exposure to infection, as recommended by the committee.

Looking to all the facts of the case we are justified in refusing to the various measures taken in Leicester between 1877 and 1894 any name signifying "method" or "system." The proceedings were equally unmethodical and unsystematic. Sir Richard Thorne and Dr. Tomkins gave excellent advice regarding the hospital but it was not followed. Dr. Johnston advocated the quarantine of all exposed persons but it is the boast of Leicester anti-vaccinationists that only some exposed persons were quarantined. All three medical officers, Dr. Johnston, Dr. Tomkins, and Dr. Priestley, recommended vaccination, but here also the recommendation was in part neglected, even as to the hospital staff, until that remarkable minute of the Sanitary Committee was passed. When small-pox attacked Leicester in 1892-93 that which in the absence of small-pox had been described as a method, and a perfected method, and a successful method, was found not to be methodical or perfect or successful. One after another the points were yielded. Payment of wages was made for quarantine, hospital quarantine was abandoned, other diseases were excluded from the hospital, scarlet fever was permitted to work its will in the town, and vaccination, under the cognomen of a protective measure known to science, was recommended by the Sanitary Committee and was practised to an unknown extent in the community.

Without either method or system Leicester had no small-pox in the three years 1889-91 and without either method or system it had 357 cases of small-pox in the years 1892-93. Had it not been for vaccination, even partial and incomplete, and for quarantine, also partial and incomplete, Leicester would probably have had much more small-pox than this. Small-pox, however, as Dr. Collins and Mr. Picton urge in their dissent from the findings of the Royal Commission, is a disease that varies greatly in different epidemics, its fatality-rate as a measure of its intensity showing a very wide range. It happened that Leicester was attacked by what the physicians of last century would have called a mild small-pox, such, perhaps, as they would have used for purposes of inoculation, and this is not to be forgotten in considering the outbreak of 1892-93.

One other important fact has to be mentioned. In his Gloucester report, in the course of a comparison of Leicester and Gloucester, Dr. Coupland says (p. 11): "I believe I am right in saying that during the Leicester outbreak the one thing that gave rise to most anxiety on the part of the authorities was lest the disease should be imported into the public elementary schools. Had this happened, and it was accident rather than foresight that prevented its happening, there is no reason at all for doubting that the larger, better equipped and better organised community might not have suffered to a parallel extent." That is to say, but for this fortunate accident Leicester might have suffered as Gloucester did. And yet, notwithstanding the mildness of the epidemic type, notwithstanding the accidental escape of the schools, notwithstanding the exclusion at the cost of a scarlet fever disaster of all other diseases than small-pox from the hospital, and notwithstanding the ungrudging and ceaseless devotion to duty of Dr. Priestley and his staff, Leicester had 357 cases of small-pox.

Such as it is opponents of vaccination even yet continue to talk of the success of what they continue to denominate the Leicester system. A favourite habit has been to compare the outbreak in Leicester in 1892-93 with the small-pox which Leicester suffered from during the pandemic of 1870-73. These comparisons began very early, long before the end of the 1892-93 outbreak. By March 1st, 1893, the cases known of by the *Vaccination Inquirer* were 123. There had been more, but the editor's latest news was hardly up to date. Regarding the 123 he writes, "That is to say, there have been only little more than one-third of the total number of cases in this outbreak that there were of deaths in the year 1872 when Leicester was a well-vaccinated city." Of course, according to Mr. Biggs' version of the Local Government Board's views on vaccination, Leicester was not a well-vaccinated city in 1872. All whose vaccination was more than ten years old were to be looked on as having reached the end of their protection. But, on the other hand, according to Mr. Biggs in the London *Star*, even those who had not been vaccinated for four-and-forty years were still to be described as well vaccinated. And so the *Inquirer* selects the view that Leicester was well vaccinated in 1872. Later in the outbreak of 1892-93 the cases had reached 146. Mr. A. W. Hutton got hold of this figure somehow and after the outbreak was over inserted it in a booklet addressed in the form of a letter to the Home Secretary as representing the total cases of the outbreak. After this error had been pointed out in a review of the booklet he corrected it in a second edition. Still later the cases were 200 and Mr. Biggs, writing to a local newspaper,[2] went on to calculate that this 200 was "very little more than half the number of deaths in 1872." Finally we reach the end of the epidemic with its 357 cases, and the calculations are altered to suit, it being once more pointed out that there was much less small-pox in Leicester in 1892-93 than in the epidemic of 1870-73. Surely, however, the question ought to be considered as to the proportion between the Leicester contribution to the total small-pox of the earlier epidemic and its corresponding contribution in the later epidemic. All over England there was much more small-pox in the earlier epidemic than in the later. In London, for example, which, like Leicester, suffered from small-pox in both epidemics, the diminution in mortality as between 1871 and 1893 was very considerably greater than the Leicester diminution between 1872 (the epidemic attacking Leicester later than London) and 1893, and this though the disease in 1893 was of a more fatal type in London than in Leicester.

It is not our purpose to follow Dr. Coupland in the many interesting details which he gives as to the behaviour of small-pox among the vaccinated and the unvaccinated in Leicester. As in other outbreaks all over the world the disease differentiated between the two classes in many ways. It attacked much fewer of the former than of the latter in proportion to their numbers in infected households. Among those attacked, comparing age with age, it killed much fewer of the vaccinated than of the unvaccinated, especially at the earlier ages. Such facts were dealt with by us in a series of articles published in the latter part of 1896 following on the issue of the Final Report of the Royal Commission. Nor do we propose to point out how, in spite of its neglect of vaccination, diseases which are often attributed to vaccination—as syphilis and erysipelas—have flourished

[2] Quoted in the Vaccination Inquirer for August, 1893.

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much more abundantly in Leicester since it neglected vaccination or have shown an alteration much less favourable in Leicester than have the same diseases in England in corresponding periods. That also we have referred to before.[3] Our present purpose has been to read the writings and the evidence of Leicester antivaccinationists in the light of the facts elicited by Dr. Coupland in the course of his investigations made on the spot at the instance of the Royal Commission and now published as presented to Parliament.

Having seen how the Leicester Myth—usually mis-named the Leicester Method—sped in the town to which it owes its misnomer we shall next see how it sped in Gloucester.

THE INDIAN FRONTIER EXPEDITION.

A STAGE has now been reached which the Indian Government had hoped might have been the final act of the campaign. Sir William Lockhart at the head of his division has marched into General Hammond's camp and joined hands with the Peshawar expeditionary column. As was confidently expected the rear-guards of the returning army did not escape attacks from the Afridi tribes and the march of the troops of General Westmacott's command into the Sturi Khel country was a more or less continuous fight *en route*. We do not hear, however, that the Afridis have shown any sign of submission or that they have accepted the terms offered them in Sir William Lockhart's proclamation. The Afridi campaign under General Lockhart which may be said to have closed for the present by the return of the force to Barkai, its winter quarters on the Bara river, has lasted from October to the present time and has proved one of the most arduous expeditions ever undertaken. Guerilla mountain warfare is always difficult and unsatisfactory, but people in this country can have no idea of the difficulties of this campaign owing to the nature of the country and to the fact that the Indian army has for the first time on record penetrated into parts of the Tirah country.

Our casualties have in the aggregate been heavy, especially of officers, although owing to the enemy's tactics they have not been large at any one time and the two principal passes were taken with a relatively small number of killed and wounded. The health of the large expeditionary force has, on the whole, been very good, although the number of British soldiers invalided from wounds or sickness during the field service has required special arrangements to be made for sending them home during the present trooping season. The medical and hospital arrangements during the frontier campaign have been very satisfactory, but the work of the medical officers has been of an exceptionally hard and anxious character. The difficulties of transport have been immense and the safety and care of the wounded in this respect have occasionally proved very embarrassing to the troops. The effects of the Lee-Metford missile as modified at Dum Dum on bones are described as very severe. The cold in the hills is extreme at night and in the early morning.

According to the latest intelligence General Lockhart's headquarter force, 1st Division, is now concentrated at Baia; General Kempster's brigade at Ilamgude; and the 2nd Division at Mamani. The sick and wounded of these divisions are progressing satisfactorily. There is at present a lull on the Indian frontier; the Kyber pass is quiet and deserted by the enemy; the Oraksais have paid the fines imposed upon them, but the Afridis have as yet manifested no signs of submission.

[3] THE LANCET, Dec. 26th, 1896, p. 1849.

INFIRMARY MEDICAL SUPERINTENDENTS' SOCIETY.—A meeting was held on December 18th at Paddington Infirmary, Harrow-road, W., Dr. T. Ernest Hillier, the medical superintendent, being in the chair. The wards were visited and Dr. Hillier exhibited cases, among others, of Amnesia Verbalis, Post-Hemiplegic Hemichorea, Spastic Paraplegia, Myxœdema, Insular Sclerosis with Optic Atrophy, &c., Male Hysteria, Icterus due to Malignant Disease. After a pleasant and instructive meeting a hearty vote of thanks was given to Dr. Hillier.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Manchester Urban District.—The marriage-rate in Manchester during 1896 reached 18·3 per 1000—the highest rate since 1882, and Dr. Niven thinks that the increased prosperity of the city of which this high marriage-rate is a symptom is due to the augmentation in the amount of shipping passing up the Ship Canal and to the growth of Manchester as a distributing centre. This increased prosperity has resulted in an influx of population and some overcrowding, and Dr. Niven points out that as a consequence the usual estimates of population are probably too low. The general death-rate for 1896 was 22·0 per 1000, the lowest rate on record with the exception of 1894. Although, however, this is so, the position of Manchester relatively to other large towns is in no sense one for congratulation, there being but two towns, Liverpool and Salford, which had during 1896 higher death-rates than Manchester. Dr. Niven, however, points out that in judging of the value of the death-rate of the city it has to be borne in mind that there exist there certain public institutions which attract persons likely to die from the surrounding rural districts. When an analysis is made of the deaths in Manchester during 1896 it is found that there has been a diminution in the number of those from diphtheria, influenza, diarrhœa, tuberculous disease, brain and nervous diseases, bronchitis and other respiratory diseases. In discussing the death-rates in groups of ages Dr. Niven deplores the fact that each town selects its own age groupings and that, as uniformity does not obtain, no comparison is possible. It would seem, however, from a comparison of the Manchester figures with those of London and of England and Wales, that the excess of mortality in Manchester becomes prominent in a marked degree after the age of twenty-five years—i.e., amongst the adult population. Some interesting figures are given in the report before us as to the sanitary condition of closets in houses in which untraced cases of scarlet fever occurred and in commenting upon them Dr. Niven, whose views as to the possible relation between scarlet fever and polluted soil are well known, observes that, whether they show any connexion between scarlet fever and defective closets or not, they manifest a fouling of the ground which should no longer be tolerated. Further observations were made by Dr. Niven in 1896 as to the return cases of scarlet fever and his views that such cases are in the main hospital phenomena—i.e., due to the inhalation and retention of a highly infected atmosphere—would seem to receive further confirmation. The sanitary committee, accepting Dr. Niven's views, utilised certain pavilions for the housing of cases about to be discharged and in the first instance only such cases as were free from such complications as otorrhœa, &c., were admitted. The patients selected for the pavilions in question were anointed with carbolic oil and clothed in uninfected garments before leaving hospital; they were bathed every second day and after bathing rubbed over with carbolic oil. The nose, ears and mouth of each patient were cleansed daily. Dr. Niven entertains little doubt but that these precautions were attended with good results. The medical practitioners of Manchester are fortunate in being enabled by the liberality of the corporation to submit doubtful cases of enteric fever to the Widal test at the hands of Professor Delépine, and we note with pleasure that they have taken full advantage of the opportunity. In this particular the medical men of Manchester are better off than those of London. An interesting inquiry was undertaken by Dr. Niven in 1896 as to the food and feeding of infants, and in this connexion very valuable assistance was afforded by the visitors of the Ladies' Health Committee Society. It was found as a result of the investigation that children living in the poorer districts ceased to be breast-fed at an earlier age than throughout the city generally and that the boiling of milk took place to a greater extent than was anticipated, although it seems that the usual practice is to add unboiled milk to bread boiled in water. In other words, there is no boiling of the milk at all. In the matter of milk Dr. Niven gives an account of the supply of

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the city. The annual amount of milk supplied to the city is estimated at 8,640,076 gallons, or 16¼ gallons per head, and a third of this total amount is produced in Manchester. As to the milk produced there it is interesting to observe that from that of cows selected as being markedly tuberculous Professor Delépine succeeded in 25 per cent. of the samples in communicating tubercle to guinea-pigs. Selections such as these are, as Dr. Niven observes, merely indications of the reality of the danger, but they afford no true index of its extent. The Manchester Corporation, however, strive to practise what they preach and we note that the milk for the Monsall Hospital is procured from a herd of cows guaranteed to be free from tuberculosis. Back-to-back houses continue to receive attention in Manchester and they are either closed or altered. There has it appears been of late some dissatisfaction at the action of the sanitary committee in this particular though, as far as we can understand the situation, such dissatisfaction appears to be unreasonable. Obviously the condemnation of this style of house must cause inconvenience to the displaced tenants, more especially when, as at the present time of increased prosperity, houses are in great demand. It is however under these circumstances matter for congratulation that schemes for the erection of labourers' dwellings and for a model common lodging-house in Manchester are now before the Local Government Board. Throughout Dr. Niven's very detailed and highly interesting report one object is kept prominently in view—namely, the substitution of a water-closet system of excrement disposal for that now obtaining which gives rise to much nuisance and also in all probability to sickness and an increased death-rate. It will not be Dr. Niven's fault if a reform in this particular is not soon forthcoming.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6638 births and 4352 deaths were registered during the week ending Dec. 18th. The annual rate of mortality in these towns which had been 19·8 and 20·8 per 1000 in the two preceding weeks declined again last week to 20·6. In London the rate was 21·0 per 1000, while it averaged 20·4 in the thirty-two provincial towns. The lowest rates in these towns were 14·1 in West Ham, 14·2 in Croydon, 14·4 in Cardiff, and 14·6 in Portsmouth; the highest rates were 24·0 in Birmingham, 25 3 in Sunderland, 26·2 in Blackburn, and 27·9 in Norwich. The 4352 deaths included 561 which were referred to the principal zymotic diseases, against 541 and 552 in the two preceding weeks; of these, 247 were referred to measles, 94 to diphtheria, 93 to whooping-cough, 58 to "fever" (principally enteric), 42 to scarlet fever, and 27 to diarrhœa. No death from any of these diseases was recorded last week in Preston; in the other towns they caused the lowest death-rates in Huddersfield, Cardiff, Nottingham, and Bradford, and the highest rates in London, Bristol, Sunderland, Swansea, and Blackburn. The greatest mortality from measles occurred in London, Brighton, Bristol, Swansea, Blackburn, and Oldham, and from whooping-cough in Norwich and Sunderland. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 94 deaths from diphtheria included 63 in London, 6 in Liverpool, 4 in Birmingham, and 3 in Leeds. No fatal case of small-pox was registered last week either in London or in any other of the thirty-three large towns, and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals on Saturday last, the 18th inst. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on the same date was 3733, against 3818, 3812, and 3806 at the end of the three preceding weeks; 260 new cases were admitted during the week, against 375, 328, and 319 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London which had been 418 and 468 in the two preceding weeks declined last week to 457 but were 19 above the corrected average. The causes of 69, or 1·6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Nottingham, Newcastle-upon-Tyne, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in Leicester, Liverpool, Preston, Halifax, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns which had increased in the four preceding weeks from 18·5 to 20·2 per 1000 further rose to 20·3 during the week ending Dec. 18th, but was slightly below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·6 in Perth and 15·2 in Leith to 21·0 in Glasgow and 31·3 in Greenock. The 606 deaths in these towns included 29 which were referred to whooping-cough, 14 to diarrhœa, 11 to measles, 10 to scarlet fever, 5 to "fever," and 3 to diphtheria. In all, 72 deaths resulted from these principal zymotic diseases, against 73 and 76 in the two preceding weeks. These 72 deaths were equal to an annual rate of 2·4 per 1000, which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough which had declined from 23 and 20 in the three preceding weeks rose again to 29 last week, of which 16 occurred in Glasgow and 8 in Greenock. The 11 deaths referred to measles showed a decline of 5 from the number in the preceding week and included 8 in Glasgow and 3 in Greenock. The fatal cases of scarlet fever which had been 9 and 12 in the two preceding weeks declined again to 10 last week, of which 6 occurred in Glasgow and 3 in Edinburgh. The 5 deaths referred to different forms of "fever" showed a slight further decline from those recorded in recent weeks and included 2 in Glasgow and 2 in Dundee. Of the 3 fatal cases of diphtheria 2 occurred in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 125 and 129 in the two preceding weeks, further rose to 138 last week, but were 32 below the number in the corresponding period of last year. The causes of 46, or nearly 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin which had been 25·4 and 25·5 per 1000 in the two preceding weeks further rose to 28·5 during the week ending Dec. 18th. During the past eleven weeks of the current quarter the death-rate in the city has averaged 24·1 per 1000, the rate during the same period being 18·8 in London and 19·1 in Edinburgh. The 191 deaths registered in Dublin during the week under notice showed an increase of 20 upon the number in the preceding week, and included 19 which were referred to the principal zymotic diseases, against 19 and 15 in the two preceding weeks; of these, 10 resulted from "fever," 4 from scarlet fever, 2 from diphtheria, 2 from whooping-cough, 1 from diarrhœa, but not one either from small-pox or measles. These 19 deaths were equal to an annual rate of 2·8 per 1000, the zymotic death-rate during the same period being 3·4 in London and 1·1 in Edinburgh. The deaths referred to different forms of "fever" which had been 12 and 7 in the two preceding weeks rose again to 10 last week. The 4 fatal cases of scarlet fever corresponded with the number registered in the preceding week. The mortality both from diphtheria and from whooping-cough showed an increase upon that recorded in the preceding week. The 191 deaths in Dublin last week included 29 of infants under one year of age and 51 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a slight decline from the numbers in the preceding week. Six inquest cases and 3 deaths from violence were registered, and 77, or more than a third, of the deaths occurred in public institutions. The causes of 7, or nearly 4 per cent., of the deaths in the city last week were not certified.

THE EPIDEMIOLOGICAL SOCIETY.—A meeting of this society was held on Dec. 17th, Professor J. Lane Notter, the President, being in the chair. Dr. James Cantlie read a paper on the Physical and Ethnological Conditions under which Leprosy occurs in China, the East Indian Archipelago, and Oceania, his information being the result of personal or postal inquiries made when he was resident in Hong-Kong into the conditions under which the disease occurs throughout this great area.

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THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN EDYE has embarked for service in Ceylon and Surgeon-Captain Hughes has been appointed to the 1st Life Guards as an attached medical officer.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Major Gimlette (Bengal), Agency Surgeon in Baghelkhand, is appointed to be Residency Surgeon at Indore, vice Surgeon-Colonel Caldecott, whose services have been replaced at the disposal of the Military Department. Surgeon-Lieutenent-Colonel Weir (Bengal), Residency Surgeon and *ex-officio* Assistant to the Resident in Nepal, and Officiating Medical Officer, Kotah and Jhalrapatan, is appointed to be Agency Surgeon in Baghelkhand, vice Surgeon-Major Gimlette. The services of Surgeon-Captain Bidie (Madras), are replaced at the disposal of the Military Department.

THE ARMY MEDICAL SERVICES.

We have already published the purport of the new regulations for admission to the Army Medical Staff, but we may call attention to the subject again because of its importance to intending candidates. There will be in future a combined examination, and a candidate, if successful, will be allowed to take his choice of the medical services—British or Indian—he desires to enter. The regulations state that the examinations for the Army Medical Staff and for the Indian Medical Service will be identical and simultaneous. A candidate will be allowed to enter for both services and if successful to choose according to his place on the list, subject to his being qualified under the regulations special to each service.

THE TROOPSHIP "AVOCA."

Further telegraphic intelligence from the correspondent of the *Daily Mail* states that the troopship *Avoca* had arrived at Natal with 1000 soldiers on board. The correspondent says that according to the statements of the men themselves the treatment meted out to them was better after the vessel had left Capetown, but there was still a marked scarcity of rations. The troops appear to have been packed like herrings in a barrel.

DEATHS IN THE SERVICES.

Surgeon-Lieutenant-Colonel Joseph Wilson, M.D., Indian Medical Service, at Southsea, on the 13th inst, aged forty-nine years.

Correspondence.

"Audi alteram partem."

MR. HALL HAINS'S DEFENCE FUND.

To the Editors of THE LANCET.

SIRS,—The case of Mr. Hall Hains, of Shepherd's Bush, who was recently tried at the Central Criminal Court on an unfounded charge of performing an illegal operation, is doubtless within the recollection of the profession. We have followed the case throughout and were convinced from the first of the falsity of the charge. It will probably be remembered that the jury stopped the case by the direction of Mr. Justice Ridley, Mr. Hains leaving the court without a stain on his character. Unfortunately he has been put to very great expense in defending this charge, his costs amounting to over £800. A meeting was held at the address below on Dec. 10th and it was then determined to form an influential committee to aid in raising a fund to help Mr. Hains to defray part of the heavy costs he has had to meet. It is a noteworthy fact that the principal members of the staff of the Westminster Hospital, where Mr. Hains was formerly house surgeon, have joined the committee and subscribed to the fund. An important letter from Sir Edward Clarke, Q.C., M.P., who defended Mr. Hains, which is enclosed by his permission, bears out the utter groundlessness of the charge. We therefore make an earnest appeal to the profession in general for Mr. Hains, who has been shamefully treated and who has been financially embarrassed by having to find this large amount. We append a full list of the committee and subscriptions received or promised up to this date, and

We beg to remain, Sirs, yours sincerely,

JOSEPH SMITH,
Chairman of Committee.

HERBERT CARRE-SMITH,
Hon. Sec. and Treasurer to the Fund.

15, Bath-road, Bedford-park, W., Dec. 20th, 1897.

Committee.

Mr. Joseph Smith, M.R.C.S. Eng. (Chairman).
Mr. W. H. Allchin, M.D., F.R.C.P. Lond.
Mr. J. B. Ball, M.D., M.R.C.P. Lond.
Mr. Alfred Boyce Barrow, F.R.C.S. Eng.
Mr. G. Vere Benson, M.A., M.R.C.S. Eng., L.R.C.P. Lond.
Mr. Henry Disney, B.A., M.D. Dub.
Mr. H. B. Donkin, M.D. Oxon., F.R.C.P. Lond.
Mr. F. de Havilland Hall, M.D., F.R.C.P. Lond.
Mr. J. B. Potter, M.D. Edin., F.R.C.P. Lond.
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Mr. G. Danford Thomas, M.D. Brux.
Mr. James Wilson, M.D. Aberd.
Mr. Alfred Wills, M.D., M.R.C.P. Lond.
Mr. A. P. Woodforde, M.R.C.S. Eng.

Mr. Herbert Carre-Smith, L.R.C.P. Lond., M.R.C.S. Eng., Honorary Secretary and Treasurer,
3, Turnham-green-terrace, Chiswick, W.,
to whom subscriptions should be sent. Cheques should be crossed London and South-Western Bank, Shepherd's Bush Branch.

The following is a copy of the letter received from Sir Edward Clarke, Q.C., M.P., and is published with his permission.

"Royal Courts of Justice, Dec. 8th, 1897.

"DEAR SIR,—I am not at all surprised that Mr. Hall Hains's brethren in the medical profession should desire to relieve him to some extent from the costs of the recent trial. Each of them is exposed to the danger of having an absolutely false and groundless charge brought against him; of suffering the anxieties of a criminal trial; of having to incur large costs; and of carrying through life the painful recollection of having been the subject of a serious accusation.

"Mr. Hains has fortunately been cleared from every suspicion of wrong-doing and it has been shown that there was not even indiscretion on his part which suggested or framed an excuse for the charge against him.

"I think he deserves the assistance of the medical profession and shall be glad to be allowed to evidence my feeling upon the subject by contributing towards the fund you propose to raise the enclosed cheque for twenty-five guineas.—I am, dear Sir, faithfully yours,

"Mr. Herbert L. Carre-Smith." "EDWARD CLARKE.

List of Subscriptions received or promised.

	£	s.	d.
Mr. S D. Clippingdale, M.D. Aberd, F.R.C.S. Eng.	1	1	0
Mr. James Browne, M.B. R.U.I.	1	1	0
Mr. A. P. Woodforde, M.R.C.S. Eng	1	1	0
Sir Edward Clarke, Q.C., M.P.	26	5	0
Mr. P. O'H. Brady, M.R.C.S. Eng.	2	2	0
Mr. A. H. Walker, M.B. Edin.	0	10	6
Mr. E. H. Lendon, M.B. Oxon.	1	1	0
Mr. H. B. Donkin, M.D. Oxon., F.R.C.P. Lond.	3	3	0
Mr. James Wilson, M.D. Aberd.	1	1	0
Mr. F. de Havilland Hall, M.D., F.R.C.P. Lond.	1	1	0
Mr. Charles Stonham, F.R.C.S. Eng.	1	1	0
Mr. G. Danford Thomas, M.D. Brux.	2	2	0
Mr. W. A. Wills, M.D., M.R.C.P. Lond.	1	1	0
Mr. J. Brisbane, M.D. Glasg.	1	1	0
Mr. James Barry Ball, M.D., M.R.C.P. Lond.	5	5	0
Mr. Joseph Smith, M.R.C.S. Eng.	1	1	0
Mr. W. H. Allchin, M.D., F.R.C.P. Lond.	5	5	0
Mr. G. Vere Benson, L. R. C. P. Lond., M.R.C.S. Eng.	0	10	6
Mr. Henry Disney, M.D. Dub.	0	10	6
Mr. John Baptiste Potter, M.D. Edin., F.R.C.P. Lond.	2	2	0
Mr. J. Mitchell Bruce, M.D., F.R.C.P. Lond.	2	2	0
Mr. William Wilson, M.B. Edin.	1	1	0
Mr. F. Dingley Pitt, L.R.C.P. Edin.	0	10	6
Mr. A. Hill-Wilson, L. R. C. P. Lond., M.R.C.S. Eng.	0	10	6
Mr. Herbert Carre-Smith, L.R.C.P.Lond., M.R.C.S. Eng.	1	1	0

THE EPIDEMIC OF TYPHOID FEVER AT BELFAST.

(FROM OUR SPECIAL COMMISSIONER.)

(*Concluded from p. 1625.*)

To sum up the position at Belfast it has been seen that the water-supply, though exposed to contamination on the gathering grounds, is very carefully stored and filtered. It may therefore be said that the water-supply of Belfast is not more dangerous than that of London. Both depend for their purity on prolonged storage and efficacious filtration. Nevertheless this water-supply will soon be abandoned and it has been decided to collect water from the Mourne Hills.

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These range from the sea level to a height of 2500 feet and stretch across the direction of the prevailing rain-bearing winds. From three collecting districts on these hills it is calculated that 25,500,000 gallons of water could be obtained per day. A conduit thirty-eight miles in length will have to be constructed comprising a tunnel three-quarters of a mile in length, twenty-seven miles of cut and cover, and ten and a quarter miles of iron piping. The gathering ground is considered one of the finest that could possibly be found, consisting of clean, steep, rocky slopes, carrying only a scanty vegetation and remarkably free from peat bog. The reservoirs will be of great depth and therefore will prevent the growth of water weeds. The cost of these works is estimated at £610,000, or £61,000 for each million gallons supplied daily, and the water is so pure that it will not require filtration. Indeed, the only fear is that in consequence of its great purity it may affect the lead pipes. As soon as, however, the pipes have been in use for a little while it is thought that this action will cease. Also as the water has to pass through cut and covered conduits contact with mineral matter containing lime will thus be established and the solvent effect upon the lead will be prevented. This, it is pointed out, resulted when the Loch Katrine water was conveyed to Glasgow. In any case the water could be rapidly passed through some slightly calcareous sand, not for the purpose of purification, but to add about a degree of hardness to the water and thus render it inactive on fresh surfaces of lead. Of the three gathering areas the first or Annolong area comprises 5870 acres and has a population of 150 persons with 20 head of cattle. The making of the reservoir on this site will cause the removal of the whole of the population and their cattle. On the Kilkeel area, which is of 5250 acres, there are no cattle and no inhabitants and on the third or Eagle Mountain area, which extends over 5570 acres, there are 250 inhabitants and 40 head of cattle. This latter area is the farthest from Belfast and the last to be appropriated and by that time doubtless measures will be adopted for dealing with its inhabitants. With these facts before us there remains but little more to be said on this subject. No one disputes the purity of the new water-supply which is about to be brought to the town and it may therefore be said that the water question is settled so far as the supply is concerned. This is not the case with regard to the detail of its delivery in the houses.

There are still innumerable cisterns in Belfast so placed that the water they contain could easily be contaminated. Thus but a few days ago a large accumulation of putrid matter, including some decomposed rats, was found in the cistern which provided the drinking-water of a restaurant situated in a central and much frequented part of the town. This cistern was placed under the roof and it is supposed that rats in trying to reach the water accidentally fell in and were not able to climb out again. As already mentioned many cisterns are placed just over privies and ashpits and as there is no covering the dust blown out of the ashpits falls into the water. But in the building of houses the object is too often to save money rather than human lives. Ever since 1840 there has been water enough to provide water-closets, but privies are much cheaper. Nor was there at any time any serious difficulty in augmenting the water-supply if the general adoption of the water-closet system had occasioned an increased demand. But it must be borne in mind that the water commissioners are elected directly by the ratepayers and that they levy their own water-rates. This authority is quite independent of the municipality but, like the municipality, has been composed in a large measure of persons interested in household property and therefore opposed to such reforms as might entail extra expenses. Thus strenuous opposition was made against proposed by-laws which insisted on the employment of only the highest class water fittings. The purpose was to prevent water waste, but indirectly such regulations have a good effect on the public health. Cheap closets get out of order and are therefore not only wasteful of water but dangerous to health. Nevertheless as some master plumbers were elected as water commissioners they objected to the interference in their work which the proposed by-laws would bring about and they succeeded in retarding the adoption of these reform measures for several years. Thus it is that the by-laws in question have been in force for only five years and the town consequently suffers greatly from the bad plumbing work and the inferior fittings to be found in the houses built before these new enactments. Thus, for instance, to ventilate soil-pipes in many cases an inch-pipe only has been introduced and carried up to the roof. Of course this is too small to be of any good.

Before leaving this question it may not be out of place to mention that my description of Dr. Percy Frankland's reports on the water-supply of Belfast has been utilised at Lynn by the adversaries of the new water-supply scheme for their town. It is urged that as the water-supplies of both London and Belfast are liable to contamination but are rendered safe by storage and careful filtration, so also might the polluted waters of the Gaywood River at Lynn be rendered pure by similar measures. Yet, as I remarked at the time, there can be no doubt that Londoners would very much prefer to obtain, were it possible, a water-supply that is pure at its origin and stands in no need of filtration. That is precisely what, in spite of strenuous opposition, is going to be done at Lynn and what the town of Belfast is going to spend £610,000 to achieve. At Lynn there are no storage reservoirs or filters; at Belfast there are reservoirs and filters as perfect as those used for the London supply, yet these are to be abandoned and at great cost water is to be brought to the town from a distance of thirty-eight miles that shall be so pure as not to need filtration. The action taken by the town of Belfast is a sufficient answer to the objections raised in Lynn. No town would voluntarily depend on filters for its safety. There is always the possibility of an accident such as is described by Koch as having occurred at Altona.

With regard to the general sanitary condition of Belfast its defects are proved by the fact that after strong rains there is a general improvement in the health of the population. This shows that there must be a great accumulation of filth which is not otherwise removed. That this should be so is only natural if we bear in mind that the sanitary staff is altogether undermanned. Dublin, with a smaller population, has a much larger staff. Also, it must be acknowledged that some of the sanitary inspectors, &c., at Belfast were not always selected for their technical competence, but rather because they held a prominent position in church or chapel and had been able to render eminent service at election times. This grievance has now, however, been remedied by compelling all inspectors to pass an examination, but its evil effects in the past are felt to this day. It may, however, be pointed out that in certain districts where theoretically the population should be very unhealthy there is comparatively little sickness. On inquiry it will be seen there is a good explanation of this fact. The men who live here are generally in the prime of life, they are engaged in shipbuilding, and are earning good wages. One or more such districts are built on the former dumping ground for the contents of privies and ashpits, but they are also particularly exposed to fresh sea breezes. Then the ground on which the houses stand has been carefully cemented over and as these houses are of recent construction the cement has not yet had time to crack. Nevertheless I have pointed out that the general death-rate and more particularly the zymotic death-rate of Belfast is particularly high. Mr. A. H. Smee, chief medical officer of the Gresham Life Assurance Company, has published statistics setting forth the proportion of deaths from typhoid fever which have occurred in 82 of the largest towns of Europe during the first nine months of the current year. Belfast stands far and away at the head of the list with 965 deaths per million of the population. Namur, in Belgium, comes next with a proportion of 434 per million; then Malines with 351; and Borgerhout, a suburb of Antwerp which suffered greatly during the last cholera epidemic, follows with 310 per million. In the United Kingdom, after Belfast, Dublin comes next with 290 and is followed closely by Havre in France with 277 deaths per million. Then it may be noted that the proportion of deaths from typhoid fever per million of the population is 210 for Salford; 185 for Portsmouth; 182 for Sheffield, Sunderland, and Norwich; 180 for Glasgow; 79 for London; 77 for West Ham; 72 for Edinburgh; and 71 for Paris. Lynn and Maidstone being but small towns are not included in this calculation.

Standing thus in such unenviable prominence Belfast well deserves to be called to order by the united voice of civilisation. The 20,000 houses that have no back passages and where it is necessary to carry the contents of the privies and ashpits through the inhabited rooms are a disgrace to the

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century in which we live. Such barbarism should at once be abolished. But this is only the most sensational aspect of a general and revolting condition of filth and neglect, of weak administration and of corrupt authority. While the jerry-builder, the land-grabber and speculator in unhealthy dwellings govern the elections such evils must of necessity arise. But there has been some awakening on the part of the population. The newly-elected town council contains strong reforming spirits, and it is possible to hope that effective measures will be adopted and enforced.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Forthcoming Meeting of the British Medical Association in Edinburgh

MUCH of what might be called the intra-professional activity of the profession in Edinburgh this winter is occupied with arrangements for the meeting of the British Medical Association in July next year. These promise to be made in good time, for the various committees have set to work with much energy and with the determination to make the meeting worthy of the city.

Anderson's College Medico-Chirurgical Society, Glasgow.

Professor John Edgar presided at the fiftieth annual dinner of Anderson's College Medico-Chirurgical Society held in the Windsor Hotel, Glasgow, one evening last week. In giving the toast of the evening the chairman said they had assembled to celebrate the jubilee of the society. In the year 1847 the society first saw the light, and was called by the pretentious title of "The Medical and Surgical Institute of Glasgow."

Glasgow University.

At the forthcoming conference of the Students' Representative Councils (Scottish Universities) to be held at Glasgow resolutions are to be submitted in favour of the establishment of a single qualification entitling to medical practice and recommending that fifth-year students who have passed their examinations shall be granted the status of qualified assistants. The Councils will also be asked to vote for an increase of the restrictions upon the sale of patent medicines and for the compulsory prohibition of prescribing by chemists and dispensing by medical men.

Glasgow Maternity Hospital.

Mr. J. M. Munro Kerr, M.B., C.M. Glasg., has been appointed assistant obstetric physician to the hospital. His promotion leaves a vacancy in the medical charge of the West-end branch and the directors have decided to divide the duties into an in-door and an out-door department. Candidates for the latter are to be "lady graduates." In this way the convenience of the Queen Margaret College students will, it is hoped be met.

Aberdeen Medico-Chirurgical Society.

The annual dinner, which took place in the society's hall on the 17th inst., was well attended and proved to be a pleasant meeting. Dr. J. Mackenzie Booth presided, and Dr. Alexander F. Proctor was croupier. Professor Stephenson replied to the toast of The University and Medical School.

Dec. 21st.

FREEMASONRY: *The Sancta Maria Lodge.*—At the first meeting of the Sancta Maria Lodge, No. 2682, held at Mark Masons' Hall on Dec. 13th, W. Bro. E. Owen, Deputy Master in the chair, the following gentlemen were initiated into Freemasonry:—Mr. George P. Field, Dr. J. P. B. Wills, Dr. W. J. Harris, Mr. A. Thorn, Mr. G. Murray, Mr. H. A. Kidd, Mr. H. S. Collier, Mr. R. H. Powers, Dr. R. P. Smallwood, and Mr. G. W. Ridewood.

LITERARY INTELLIGENCE.—The *Laryngoscope*, a monthly journal devoted to diseases of the nose, throat, and ear, will be issued simultaneously in Great Britain and America commencing in January next. The European edition will be under the charge of Dr. St. Clair Thomson. The journal contains sixty-four pages and devotes much space to original communications on practical subjects. The price is 1*s.* per month or 10*s.* per annum. The European agents are Messrs. John Wright and Co., Bristol.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Ulster Medical Society.

THE second public meeting was held on Dec. 9th, the President, Dr. J. A. Lindsay, being in the chair, when Dr. Austin and Dr. John Campbell read communications constrasting the results of midwifery practice as seen by the former in private and by the latter in hospital practice. An interesting discussion followed in which Professor Byers, Dr. Kevin, Dr. Rusk, and Dr. Wadsworth took part.—Dr. Mitchell read notes on Thiersch's method of skin-grafting and showed three cases treated in this way.—Dr. Kirk read notes of a case of Patent Vitello-Intestinal Duct and Dr. Tennant showed microscopic specimens from a peculiar case of Cancer of the Breast.

Accident to Dr. Thompson of Omagh.

On Nov. 8th, as Dr. Thompson was driving home in his own vehicle from the Omagh station, close to eleven o'clock at night, the horse bolted and smashed one of the wheels of the carriage. As a result Dr. Thompson and his man were thrown to the ground. The man was only slightly injured but Dr. Thompson received several cuts on the face and a lacerated wound extending from the right eye to the top of the head. After remaining for several hours in Mr. Stone's house, where he was at first taken, Dr. Thompson was able to proceed home. It is hoped he will soon be able to resume practice.

Ballymena Cottage Hospital.

The annual meeting was held on Nov. 9th and from the report I find that £382 has been subscribed to build a suitable surgery in connexion with the hospital. Ninety-seven intern and fourteen extern cases were treated during the past year. There were thirty cases of operation. The total increase was £507 (an increase of £50 on the previous year), the expenditure being £437.

Londonderry Lunatic Asylum.

Dr. O'Farrell, Inspector of Lunatics, reports favourably on the management of the asylum, which, he writes, is at once efficient and exemplary. He says the asylum is most seriously overcrowded, while the amount of ground attached to it is so limited as to interfere in some respects with the patients' proper employment and recreation. He hopes the new block will be ready for patients early next summer when he trusts the new asylum will have been commenced.

Death of Mr. Michael M'Gee, M.D. Glasg., J.P.

I regret to announce the death of one of the older practitioners of Belfast, which took place at his residence in that city on Dec. 13th. Dr. M'Gee graduated M.D. of Glasgow in 1846 and practised for a lengthened period in Belfast where he was a prominent figure. He was a J.P. for the city and presided regularly at the police courts. For a considerable time he has been in delicate health.

Dec. 20th.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations and conformed to the by-laws and regulations, have been admitted Fellows of the College in order of their seniority as Members in accordance with the provisions of the charters:—

Freeland, Ernest Harding; Membership dated April 28th, 1884.
Blair, Charles Samuel; Oct. 24th, 1884.
Barnett, John Edward Sewell; Aug. 2nd, 1888.
Cholmeley, William Frederick; Nov. 8th, 1888.
Morland, Charles Henry Duncan; Nov. 8th, 1888.
Manning, Guy Eugene; Jan. 8th, 1889.
Martin, Albert Edward; Nov. 14th, 1889.
Bowring, Walter Andrew; May 12th, 1892.
Strange, Arthur; July 28th, 1892.
Hayes, George Constable; Nov. 10th, 1892.
Phillips, Llewellyn Caractacus Powell; July 30th, 1894.
Dickinson, Harold Bertie; Nov. 8th, 1894.
Miskin, Leonard John; May 9th, 1895.
Pearson, Maurice Grey; May 9th, 1896.
Ashdowne, Wallace Charles George; July 29th, 1895.
Evans, Arthur Henry; July 29th, 1895.
Dyball, Brennan; Nov. 14th, 1895.
Maxwell, John Preston; Feb. 13th 1896.
Smith, James; Feb. 13th, 1898.
Christopherson, John Brian; March 12th, 1896.
Pendlebury, Herbert Stringfellow; Nov. 12th, 1896.

Three other gentlemen passed the examination, but not having

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attained the legal age of twenty-five years will receive their diplomas as Fellows at future meetings of the Council. Nineteen gentlemen were referred—thirteen for six months and six for one year.

The following gentlemen having passed the necessary examinations have been admitted Licentiates in Dental Surgery:—

Alder, James Urquhart.
Ashby, Cecil.
Betts, George Owen.
Bevington, Ernest.
Billing, Fred.
Bonnalie, Stanley.
Bradford, Sydney.
Bromley, Thomas William.
Butler, Hubert Arnold George.
Canning, Henry Albert Ellis.
Clark, John Kenneth.
Corin, Frederick Ernest.
Crombie, James Melville Paterson, M.B. and M.S. Aberd.
Dorrell, Harry Leonard
Dowsett, Ernest Blair.
Drake, Arthur.
Gudgeon, Henry Halliday.
Harris, Aubrey Hasting.
Hislop, John William.
Holford, Sidney John.
Hulme, Thomas Haylock.
Joseph, Edgar.
Kempe, Arthur Marshall.
Kendrew, Augustus.
Kenyon-Jeffes, Harry.
Manning, Robert Harris.
Marshall, Graham.
Miller, Thomas Henry, M.B., Ch.B. Vict.
Moore, Robert Henry.
Morris, Henry James.
Murphy, James Montague.
Musgrove, Edward Hugh.
Parrott, Arthur Hughes.
Peck, Alfred Gerard.
Pedley, George Aston, M.R.C.S. Eng.
Pettey, James Bertie.
Preston, Charles Henry, F.R.C.S. Eng.
Redpath, Stuart James.
Round, John Cornwall, M.R.C.S. Eng.
Schlesinger, William Augustus.
Shields, Ernest Thompson.
Smith, Victor George.
Stainer, Courtenay Biffin.
Storey, George William.
Sumerling, Bertram James.
Thomas, Charles Browne.
Tilley, Edgar.
Trembath, William James.
Turner, Edward Ernest.
Walker, Alfred William.
Walker, Arthur West.
Ward, Frank.
White, Maurice.
Wilmore, Walter.
Wing, John Clifford.
Wood, Charles Carey.

Twenty gentlemen were referred to their professional studies for six months and one for one year.

UNIVERSITY OF CAMBRIDGE.—At the examinations for medical and surgical degrees, Michaelmas term, the following candidates were successful:—

FIRST EXAMINATION.

Part I. Chemistry and Physics.—Aldridge, Christ's; Armitage, Emmanuel; Beddow, Christ's; Bulley, Emmanuel; Butterworth, B.A., Christ's; Causton, B.A., Emmanuel; Cleminson, Gonville and Caius; Collingham, King's; Colt, Sidney-Sussex; Cooper and Cotes-Preedy, Emmanuel; Cutler, B.A., Clare; S. Dixon, Trinity; Drapes, Sidney-Sussex; Drew, R. S. Pembroke; Droop, Trinity; Ellett, Catharine; Ellis, Downing; H. Falk, King's; Frankenburg, Emmanuel; D. H. Fraser, Gonville and Caius; Gardner-Medwin, Trinity; Ghosh, St. John's; Gibb, Sidney-Sussex; M. F. Grant and Everard Harrison, Trinity; P. Harrison, B.A., Christ's; Harry, Jesus; A. G. Harvey, B.A., St. John's; Heath, Trinity; W. R. Higgins and Horsley, Gonville and Caius; Kerr, Christ's; Luker, Pembroke; O. May, St. John's; Mollison, King's; Mull, B.A., Gonville and Caius; Murphy and Neatby, M.A., St. John's; Owen, Gonville and Caius; Page, Corpus Christi; Plowright, St. John's; R. M. Ranking and G. L. Ranking, Pembroke; Rees, Downing; Slade, Clare; Thresher, Gonville and Caius; Ticehurst, St. John's; Toppin, Gonville and Caius; A. C. Warren, Emmanuel; West, St. John's; Western, Pembroke; and Wiltshire, Clare.

Part II. Elementary Biology.—Akerman, Gonville and Caius; Bacon, Christ's; Bulley, Emmanuel; Butterworth, B.A., Christ's; J. G. Castellain, Trinity; Cleminson, Gonville and Caius; Colt, Sidney-Sussex; Crowfoot, Emmanuel; Curl, Christ's; Day and Donnell, Gonville and Caius; Drapes, Sidney-Sussex; Ellett, Catharine; Fox, B.A., Emmanuel; D. H. Fraser, Gonville and Caius; Ghosh, St. John's; Gibb, Sidney-Sussex; Graham, Jesus; M. G. Grant, Trinity; Griffin, Peterhouse; Hall, Pembroke; P. Hardy, Trinity Hall; Harris and P. Harrison, B.A., Christ's; Hepburn and W. H. Hills, Pembroke; Hirst, Gonville and Caius; Hudson, Clare; Irving, St. John's; Leech, Clare; Leslie, Pembroke; Littlejohns, Gonville and Caius; C. G. Martin, Downing; O. May, St. John's; Molteno, Pembroke; Newington, Gonville and Caius; Page, Corpus Christi; Panton, Trinity; Patrick, Christ's; Pellow, St. John's; Pope, Trinity; Prince, Emmanuel; Skene, St. John's; Toppin, Gonville and Caius; Western, Pembroke; C. F. O. White, Trinity; E. K. Williams, Gonville and Caius; W. V. Wood, B.A., and Worthington, Clare; S. L. O. Young, Christ's; and Young, B.A., Emmanuel.

SECOND EXAMINATION.

Part I. Pharmaceutical Chemistry.—H. Ackroyd, Gonville and Caius; Barton, B.A., Pembroke; Beckett, B.A., H. Selwyn; Burroughes, Trinity; Butler, B.A., Emmanuel; H. J. Cardew, Clare; Carey, B.A., Emmanuel; F. J. Child, B.A., Christ's; Cooper, Jesus; Crowther and Dally, St. John's, Davies-Colley, B.A., Trinity; Dodd, Gonville and Caius; Dudley, H. Selwyn; Elliott, Emmanuel; W. I. Evans, St. John's; Freshwater, Trinity; Geoghegan, B.A., Gonville and Caius; Goss, Jesus; Goyder, St. John's; Greene, Downing; C. H. Gregory, Emmanuel; Guthrie, King's; Harnett and A. W. Harvey, St. John's; H. G. L. Haynes, Downing; Henderson, B.A., Gonville and Caius; Hocken, Clare; Holtzmann, Christ's; A. C. Ingram, St. John's; E. G. Kelgreen, Kidd and Ledward, Trinity; Leighton Leveaux, and Lloyd-Jones, St. John's; Loveday and Lucas, Gonville and Caius; Matthews, Downing; Murray, B.A., St. John's; Muspratt, Christ's; Nicholson, King's; Norman, B.A., St. John's; Paton, B.A., Gonville and Caius; Pellier, B.A., Clare; Ricketts, King's; Riddle, Peterhouse; H. J. Robinson, St. John's; Rolfe, Clare; R. N. Salaman, B.A., Trinity Hall; Scarborough, St. John's; C. A. St. J. Scott, B.A., Trinity; Sephton, B.A., Gonville and Caius; Simpson, King's; Snell, B. Spearman, and Spurrier, Gonville and Caius; W. M. Strong, B.A., Trinity; Tuck, Emmanuel; Ward, Clare; L. Wigram, Trinity; A. G. E. Wilcock, Gonville and Caius; H. C. Williams, B.A., Pembroke; H. M. Wilson, Trinity Hall; Woolley, King's; and Wylie, Pembroke.

THIRD EXAMINATION.

Part I.—W. C. Ambrose, M.A., Clare; Brincker, B.A., St. John's; Carsberg, B.A., Gonville and Caius; F. P. Cayley, B.A., Trinity; Collingwood, B.A., Gonville and Caius; Corner, B.A., Sidney-Sussex; Delbruck, B.A., King's; R. R. Hunt, B.A., Trinity; M. B. Johnson, B.A., Trinity Hall; E. K. Le Fleming, B.A., Clare; Levick, B.A., Jesus; Lidderdale, Trinity; C. S. Myers, B.A., Gonville and Caius; Peatling, B.A., Magdalene; Percival, B.A., and Reissmann, B.A., St. John's; Sandilands, B.A., Trinity; Sargent, B.A., St. John's; and Tucker, B.A., Gonville and Caius.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the subjects indicated:—

Surgery.—M. E. Bennett (Section I.), Royal Free Hospital; J. C. B. Curtis, University College Hospital; R. H. Hill, New York and Middlesex Hospital; E. J. Jennings, Edinburgh; and P. D. Pywell, St. Thomas's Hospital.

Medicine.—F. M. Aldred, Liverpool; C. J. Barnes, King's College Hospital; A. L. Bartram, Cambridge; M. E. Bennett (Section I.), Royal Free Hospital; A. D. Evans, Edinburgh; J. H. C. Fegan, Charing-cross Hospital; M. P. Gabe, Middlesex Hospital; B. Lewitt, St. Mary's Hospital; P. C. Maitland, Middlesex Hospital; G. L. Meredith, London Hospital; H. Munro, Guy's Hospital; and G. C. Walker, Liverpool.

Forensic Medicine.—C. J. Barnes, King's College Hospital; A. L. Bartram, Cambridge; M. E. Bennett, Royal Free Hospital; A. D. Evans, Edinburgh; J. H. C. Fegan, Charing-cross Hospital; B. Lewitt, St. Mary's Hospital; P. C. Maitland, Middlesex Hospital; G. L. Meredith, London Hospital; H. Munro, Guy's Hospital; B. J. Nolan, Dublin; A. H. Turner, London Hospital; and G. C. Walker, Liverpool.

Midwifery.—A. D. Evans, Edinburgh; J. H. C. Fegan, Charing-cross Hospital; E. J. Jennings, Edinburgh; G. L. Meredith, London Hospital; B. J. Nolan, Dublin; C. C. Pratt, St. George's Hospital and Bristol; and G. C. Walker, Live pool.

The diploma of the Society was granted to the following candidates entitling them to practise Medicine, Surgery, and Midwifery:—Messrs. R. H. Hill, E. J. Jennings, G. L. Meredith, P. D. Pywell, and A. H. Turner.

A CHEQUE for £1000 from Mr. Alexander Peckover, Lord-Lieutenant of the county of Cambridgeshire, has been received by the Vice-Chancellor of Cambridge University for the fund for re-building the School of Medicine and Surgery attached to the University.

PRESENTATIONS TO MEDICAL MEN.—Mr. George C. Milligan, M.B. Aberd., of Forres, has been the recipient of a cheque for £127 and an album containing the autographs of the subscribers on the occasion of his leaving Forres to recruit his health abroad. He has practised there for upwards of eight years and during that period has gained the esteem and affection of all classes of the community.—At a numerously attended meeting at the Memorial Hall, Wandsworth, on the 9th inst. Mr. T. E. Hughes, M.D. Edin., of Wandsworth, was presented with a gold watch which bears a suitable inscription and an illuminated address by the members of the Wandsworth Provident Dispensary as tokens of their appreciation of the services rendered by him during the five years of his medical superintendentship. This testimonial was subscribed to by every member of the dispensary, including the poorest inhabitants of Wandsworth.—Dr. and Mrs. Hall, of Bodenham, near Leominster, were on Dec. 8th presented with a silver salver and illuminated address by the parishioners and people of the neighbourhood on the occasion of their departure.—At the monthly meeting of the Bristol Medico-Chirurgical Society held at University College, Bristol, last week Mr. Shaw, M.B. Edin., the president, presented an address to Mr. D. S. Davies, M.D. Lond., the medical officer of health for the city and port of Bristol, and to Mr. J. C. Heaven L.R.C.P. Lond., M.R.C.S. Eng., D.P.H., assistant medical officer of health for Bristol port. The address, which was illuminated and handsomely bound, was signed by 172 members of the profession residing in Bristol and Clifton who were anxious to express their high appreciation of the excellent services rendered by the medical officers of health during the late epidemic of typhoid fever. Dr. E. Long Fox read the address which was feelingly acknowledged by both gentlemen.—Mr. C. Angus, M.B., C.M. Aberd., superintendent of the Royal Infirmary, Aberdeen, and for many years senior assistant of the Royal Asylum, Aberdeen, was presented, on the 14th instant, by the officials and nurses of the asylum on the occasion of his approaching marriage with a silver tea and coffee service as a token of their esteem and good wishes.

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PLYMOUTH MEDICAL SOCIETY.—At the meeting of this society on Dec. 8th, Dr. Aldridge, President, being in the chair, Mr. Aldous, assistant surgeon to the South Devon and East Cornwall Hospital, read a paper on Organic Urethral Stricture. After describing the anatomy of the urethra in its healthy state he discussed the pathological condition consequent upon attacks of urethritis; with regard to the white race he stated that stricture resulted as a sequela to urethritis in the proportion of 1 in 8, whilst in the negro race it was about 1 in 23. As to treatment Mr. Aldous urged a plea for internal urethrotomy in certain cases which, unsuitable for slow or continuous dilatation, were often treated by external urethrotomy; given the strictest surgical cleanliness the mortality of internal urethrotomy should not exceed 2 per cent. Mr. Aldous advised division of the stricture when situated in the deep urethra by incising the roof and quoted cases in which he had performed the operation both under a general anæsthetic and with cocaine 20 per cent. injected per urethram. Only trifling hæmorrhage followed. Cases had been recorded where severe bleeding followed owing to wounding the dorsal vein of the penis or the plexus of Santorini, but he thought that this accident was not likely to happen if the handle of the urethrotome were not unduly depressed. With regard to the treatment by electrolysis the great drawback was the length of time, extending over some weeks, necessary for dissolving the stricture so that few patients would submit to the process.—The paper was discussed by Dr. Fox, Dr. Webber, Mr. Woollcombe, and Mr. Whiteford.—Mr. Woollcombe proposed, and Dr. Fox seconded, a vote of thanks to Mr. Aldous, which was carried by acclamation.

DIPHTHERIA IN LONDON. — During the four-weekly period ended on Dec. 4th—the November period—there was a considerable decline alike in number of notified cases of diphtheria and of registered deaths from the disease in the county of London as compared with the four-weekly—October—period ended on Nov. 6th. In the October period all the forty-three sanitary areas were invaded and all save one in the November period. In the former 1336 notified cases yielding a weekly average of 334 (with successive weekly numbers of 351, 363. 319, and 303) gave place to 1119 notified cases in the November period, with a weekly average of 280 cases and successive weekly totals of 279, 301, 287, and 252. In the October period there were ten districts with 50 cases and upwards each and an aggregate of 700 notifications; in November there were 8 such districts with an aggregate of 513 cases, whilst other 8 districts had only 31 notified attacks in all. The 224 registered deaths in the October period, yielding a weekly average of 56 and a case mortality on notifications of 16 8 per cent, gave place to 198 registered deaths or 49 weekly in the November period, and the case mortality became 17 7 per cent., a higher rate on fewer cases. In the Outer Ring of the Metropolis the registered deaths from diphtheria in the October period were 20, 16, 21, and 17 in the successive weeks, making a total of 74; and in the several weeks of the November period 26, 11, 14 and 15, making a total of 66. In the week ended on Dec. 11th, there were 294 notified cases of diphtheria in London county area and 58 registered deaths; whilst in the Outer Ring there were other 20 deaths registered from the disease.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A meeting of this society was held on Dec. 1st, the President, Dr. William Vickary Snow (Bournemouth), being in the chair.—Dr. W. S. Hedley (London) exhibited an Electrical Radiant Heat Apparatus used for treatment of neuralgia, arthritis, and gout by which any part of the body could be subjected to the influence of dry heat.—Dr. John A. Shaw-Mackenzie read a paper on the External Methods of Administration of Mercury in the Treatment of Syphilis systematically advocated and practised in this country during the last forty years by Mr. Henry Lee. He also drew attention to the unsuspected syphilitic factor in some of the pelvic conditions and invalidism in parous women as also in single women the subjects of inherited syphilis, emphasising the value of mercurial treatment in certain cases, especially in subinvolution after abortion and delivery.—Dr. Septimus Sunderland (London) said that obscure pelvic exudations in women were often treated by mercury and iodine as resolvents without syphilis being suspected and the deposits often disappeared; it was therefore possible that in some cases the effect was produced by those drugs acting on syphilitic poison.—In reply Dr. Shaw-Mackenzie pointed out that it was not the sweat bath but the fumigation bath which he used, so that the skin should be able to absorb the calomel vapour.—Dr. Solly (Harrogate) read a paper on the Treatment of Syphilis at Harrogate, the chief points to which attention was drawn being (1) that treatment by the external use of mercury (especially by inunction) combined with sulphur baths and water, known as the Aachen (Aix-la-Chapelle) System, had been for many years successfully carried out at Harrogate; and (2) that by reason of the variety of diseases treated at Harrogate a patient going there did not stigmatise himself as the victim of syphilis as he practically did if he went to Aachen.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAMS, E. W., L.R.C.P. Lond., M.R.C.S., D.P.H., has been re-appointed Medical Officer by the Slough Urban District Council.

ADAMS, J., M.B., C.M. Glasg., has been appointed Medical Officer for the parishes of Dyke and Moy.

ARBUCKLE, H. W., M.D. Aberd., L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Thorne District Council.

BUTCHER, H. O. F., M.R.C.S., has been re-appointed a District Medical Officer for the Ware Union.

CAMPBELL, H. J., M.D. Lond., M.R.C.P., M.R.C.S., has been appointed to the joint Lectureship in Forensic Medicine in the Medical Department of the Yorkshire College.

DALBY, A. WILLIAM, L.R.C.P., L.R.C.S. Edin., has been appointed Deputy Medical Officer *pro tem.* for the Nunney District by the Frome Board of Guardians.

FRASER, P., M.D. Edin., B.Sc. (Public Health), has been appointed Medical Officer of Health by the Llanrwst Urban District Council.

GARSTANG, T. W. H., M.R.C.S., has been re-appointed Medical Officer by the Northwich Council.

GERVIS, CHARLES B., M.R.C.S., L.R.C.P., has been appointed Assistant Medical Officer for the Colney Hatch Asylum, N.

HULKE, S. BACKHOUSE, F.R.C.S. Eng., has been appointed Surgical Registrar to the Middlesex Hospital, vice Mr. T. H. Kellock, appointed Assistant Surgeon.

MATHEW, G. PORTER, M.B, B.C. Cantab., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Registrar to the Chelsea Hospital for Women, Fulham-road, S.W.

SIMPSON, G. A. G., M.R.C.S., has been re appointed Medical Officer of Health by the Acton District Council.

SMITH, LEWIS A., M.B., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Tutor to the London Hospital.

SKINNER, STEPHEN, M.B., C.M. Aberd., M.R.C.S., has been appointed Medical Officer of Health *pro tem.* for the Bedminster Rural District, vice George Adams, deceased.

WESTCOTT, W. G., L.R.C.P., M.R.C.S., has been appointed a House Surgeon to the Chichester Infirmary.

WILSON, GEORGE R., M.B, C.M. Edin., has been appointed District Medical Officer and Public Vaccinator for the No. 1 District of the Blackburn Union, vice T. W. Gregson, deceased.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane-square, S.W.—Honorary Visiting Surgeon for the Western District.

COUNTIES ASYLUM, Carlisle.—Junior Medical Officer. £80 and board. Apply to Dr. Campbell, Garlands, Carlisle.

COUNTY BOROUGH OF OLDHAM.—Medical Officer of Health for the Borough, and Medical Director and Attendant of the Infectious Diseases Hospitals of the Corporations. Salary first year £400, increasing by annual increments of £20 to a maximum of £500. Applications to the Town Clerk, Town Hall, Oldham.

FROME UNION.—Medical Officer and Public Vaccinator for the Nunney District. Salary £90. Midwifery 10*s.* per case. Certifying lunatics 10*s.* per case. Vaccination 1*s.* 6*d.* to 3*s.* per case. Apply to the Clerk, Public Offices, Frome.

GENERAL INFIRMARY, Leeds.—Resident Casualty Officer. Salary £100 a year, with board, lodging, and washing.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

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JERSEY PUBLIC LUNATIC ASYLUM.—Medical Superintendent for three years. Salary £300 per annum, with house and garden. Applications to the President of the Committee for the Public Lunatic Asylum, Greffe Office, Jersey.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle-street.—House Surgeon, Salary £85 per annum, with board and lodging.

NORFOLK AND NORWICH HOSPITAL, Norwich.—Assistant to House Surgeon for six months. Board, lodging, and washing provided.

NORTH RIDING INFIRMARY, Middlesborough-on-Tees.—House Surgeon. Salary to commence at £100 a year, with lodging, board, and washing, and £5 a year in lieu of beer.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill-Stoke-upon-Trent.—House Physician. Salary £100 per annum, increasing £10 per annum, conditionally, with furnished apartments, board, and washing.

NORTHUMBERLAND COUNTY ASYLUM, Morpeth.—Clinical Assistant. Board and residence provided.

NORTH-WEST LONDON HOSPITAL, Kentish-town-road, N.W.—Assistant Physician.

PARISH OF NEWABBEY, DUMFRIES.—Medical Officer and Public Vaccinator. Salary £50 per annum, to provide medicine and surgical appliances to pauper patients gratis. Applications to the Chairman, Captain Stewart, of Shambellie.

ROYAL HALIFAX INFIRMARY.—Assistant House Surgeon, unmarried. Salary, £50 per annum, with residence, board, and washing.

ROYAL UNITED HOSPITAL, Bath.—House Surgeon. Salary at the rate of £60 per annum, with board, lodging, and washing. The appointment will be until Oct. 1st, 1898.

SALFORD ROYAL HOSPITAL.—Honorary Surgeon.

SHAFTESBURY HOUSE PRIVATE ASYLUM, Formby, near Liverpool.—Junior Medical Officer, unmarried. Honorarium at the rate of £50 per annum, with board, lodging, and washing.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—House Surgeon during the month of January. Salary, £100 per annum, with board and residence.

STOCKTON UNION.—Medical Officer and Public Vaccinator for the Medical District of Stockton, and Medical Officer for the Stockton Workhouse. Salary £170 per annum as Medical Officer for the Stockton District, and £130 per annum as Medical Officer for the Workhouse, together with the usual fees for vaccination. The appointment will be subject to statutory deductions. Apply to the Clerk to the Guardians, Union Offices, Stockton-on-Tees.

SUNDERLAND AND NORTH DURHAM EYE INFIRMARY, Sunderland.—House Surgeon. Salary, £100 per annum, out-door.

SUSSEX COUNTY HOSPITAL, BRIGHTON.—House Physician; unmarried. Salary commencing at £50 per annum, with board and residence in the hospital, and washing.

WESTERN GENERAL DISPENSARY, Marylebone-road, London.—Junior House Surgeon, unmarried. Salary, £60 a year, with board and residence.

Births, Marriages, and Deaths.

BIRTHS.

FRY.—On Dec. 21st, the wife of Walter E. Fry, M.R.C.S., L.R.C.P. Lond., of Wateringbury, Kent, of a daughter.

McCOY.—On Dec. 11th, at North-side, Clapham-common, S.W., the wife of M. J. McCoy, L.R.C.P.I., of a daughter.

MARRIAGES.

BURRELL—WALKER-ARNOTT.—On Dec. 14th, at St. Thomas's Church, Edinburgh, Lionel Cottingham Burrell, M.A., M.B., B.C. Cantab., of Arlarie, Kew, to Esther, only surviving daughter of the late David Walker-Arnott, of Arlary, Kinross shire.

DICKSON—MARSHALL.—On Dec. 18th, at St. Stephen's Church, Gloucester-road, John William Dickson, M.B., of 3, Hertford-street, Mayfair, to Lucy Margaret, daughter of James Archibald Marshall, of 29, Queen's-gate-gardens.

HARGREAVES—JESSOP.—On Dec. 18th, at St. Michael's, Christchurch, Walter Herbert Hargreaves, M.R.C.S., L.R.C.P. Eng., of Akarea, N.Z., to Alice, third daughter of Zebedee Jessop, Cavendish-crescent, Nottingham.

McCAUSLAND—BROWN-SÉQUARD.—On Dec. 16th, at Holy Trinity Church, Killiney, Co. Dublin, Richard Bolton McCausland, M.D., F.R.C.S.I., second son of Sir Richard Bolton McCausland, to Charlotte Maria, only child of the late Dr. Brown-Séquard, of Paris.

ROBSON—GLARDON.—On Dec. 20th, at Bombay, Robert George Robson, M.A., M.B., C.M. Edin., Beawar, Rajoutana, to Helene, fourth daughter of M. Auguste Glardon, Tour de Peilz, Switzerland.

YEO—SPYERS.—On Dec. 16th, at St. James's Church, Weybridge, I. Burney Yeo, M.D., F.R.C.P. Lond., of Hertford-street, W., to Winifred Helen (Daisy), only daughter of the late T. C. Spyers, M.D., of Faversham.

DEATHS.

FOX.—On Dec. 15th, at Santiago, Muswell-hill, N., Joseph John Fox, M.R.C.S., late of Stoke Newington, aged 76 years.

LATHAM.—On Dec. 14th, at Oakfield Cottage, Sandbach, suddenly, W. H. Latham, M.R.C.S., aged 49 years.

WILSON.—On Dec. 13th, at Waverley-road, Southsea, Surgeon-Lieutenant-Colonel Joseph Wilson, M.D., Indian Medical Service, retired, aged 49 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 22nd, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Dec. 16	29·80	S.W.	...	64	57	48	53	54	Raining
,, 17	30·10	S.	...	69	56	50	50	51	Cloudy
,, 18	30·30	S.W.	...	66	56	44	44	44	Foggy
,, 19	30·33	E.	...	48	47	41	41	41	Raining
,, 20	30·33	S.E.	...	47	45	41	42	44	Overcast
,, 21	30·50	S.E.	...	44	41	38	38	40	Overcast
,, 22	30·63	S.E.	...	47	41	35	35	36	Foggy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1897, which is completed with the issue of to-day, will be given in the next number of THE LANCET.

BOARDS OF GUARDIANS AND THE VACCINATION LAW.

THE increasingly prevalent practice of boards of guardians to evade the responsibilities imposed on them by the Vaccination Acts by referring to the recommendations of the Recent Royal Commission shows the need for fresh legislation which it may be hoped will relieve these authorities altogether from their responsibilities. As typical of the attitude now so often taken may be cited the following resolution lately passed at a meeting of the Stow Guardians at Stowmarket, the resolution being carried by fifteen to six. It runs: "That as the Royal Commission on Vaccination had recommended that parents who conscientiously objected to vaccination should not be compelled to have their children vaccinated this Board declines to prosecute any parent who avows such conscientious objection."

L. G.—"Neale's Digest" is published by Ledger, Smith, and Co., St. Mary Axe. "The Science and Practice of Midwifery," by W. S. Playfair, M.D. Edin., and "A Manual of Midwifery," by A. L. Galabin, M.D. Camb. Our correspondent should consult the last Student's Number of THE LANCET.

Mr. E. W. Robinson.—A medical man has the same right to choose his patients as the patients have to choose their medical man. We think our correspondent will be well advised to let the matter drop, but anyway it is a solicitor's advice not ours that he wants.

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A SYRINGE FOR LOCAL ANÆSTHESIA.

IN the *Deutsche Medicinische Wochenschrift* of Dec. 2nd Dr. Wullenweber, of Tandslet in Alsen, describes a syringe which he has devised for the purpose of easily overcoming the resistance encountered when Schleich's solution is injected into dense structures such as the matrix of the nail, the palm of the hand, the sole of the foot, &c. The piston-rod has a screw thread and carries a small loose nut which is provided with two small lateral projections at opposite points of its circumference. The metal mount at the upper end of the body of the syringe has two projecting arms with the help of which the instrument can be securely held. This mount has the usual circular central aperture through which the piston-rod moves freely. At opposite points of this aperture there are two small notches corresponding to the projections on the nut, so that in one position of the nut it can be passed through the aperture and then by giving it a quarter turn it can be firmly fixed to the mount. Turning the knob at the top of the piston-rod now brings the screw into action and the solution is expelled with an easily regulated force which is capable of overcoming any resistance. Obviously the syringe can be used according to circumstances either with the screw motion or with the ordinary direct pressure exerted by the thumb or finger.

S.—Books upon house building treat mostly of one section of construction only. A reference to the catalogue of Crosby, Lockwood, and Sons, 7, Stationer's Hall-court, E.C., would furnish the information desired. "The Dwelling House," by Dr. G. Vivian Poore, published by Longmans, Green, and Co., 39, Paternoster-row, contains many useful hints. The reprint of THE LANCET Commission upon the Relative Efficiency and Cost of Plumbers' Work, illustrated with plans, &c., will be found useful with regard to drainage. "Electric Lighting," by J. W. Urquhart, also published by Crosby, Lockwood, and Sons, will be found of practical value. Though published in 1879 "Warming Buildings by Hot Water, Steam, and Hot Air, with Notes on Ventilation," by C. Hood, F.R.S., &c., so far as the principles to be observed are concerned, is a standard work, but many improvements have since been made in radiators, boilers, and stoves. We cannot recommend any individual firms among so many good firms of equal merit.

SOME ALTERNATIVES TO DROWNING.

To the Editors of THE LANCET.

SIRS,—There is always, I fancy you will admit, a freshness in the method wherewith the juvenile intellect applies itself to important questions. It occurs to me that you may be interested in two replies which were sent in to the query, "If summoned to a person just rescued from drowning how would you act? Describe fully artificial respiration." The occasion being an examination for ambulance certificates for the Boys' Brigade. The answers were: 1. "Put him flat on his stomach with his coat below him and squeeze all the water out of him; then apply artificial respiration by putting his arm over his head and back to his stomach." 2. "Lay the drowning man down in the most comfortable place you can get. Put a pad under his shoulders and then turn him over putting the pad on the stomach. Press on his back with the knee till you pump all the water up out of his stomach. Then turn him on his back again taking care to tie the tongue back to keep him from chocking. Begin artificial respiration by pulling the arms above the wet man's head and then drawing them over and then in."

I am, Sirs, yours faithfully,

Dec. 13th, 1897. J. W. W.

A Young Practitioner.—It would be preferable to have the subscriptions collected by a private employé. The agent in question might be instructed not to canvass, but as he would be entering the houses of possible patients of other medical men on other business he might appear to be touting. This is a censorious world and a young practitioner must avoid the appearance of evil.

THE PHONOGRAPHIC RECORD.

IN the *Phonographic Record* for December, whilst Dr. Spooner's Phonographic Notes and Miss Hodgson's account of Shorthand in the Army, deal with shorthand, the articles of Sir W. R. Gowers on the Diagnosis of Hysterical Hemiplegia and Mr. Norman Porritt on Cellulitis of the Neck causing Fatal Spasm of the Glottis supply the medical element. In pointing out the features of hysterical affections Sir William Gowers observes: "The least important are the age and sex of the sufferer and presence of other symptoms of hysteria. Yet these least important symptoms are those which generally receive most weight, are first grasped, and often allowed to mislead the observer's mind in all his subsequent reasoning." The mistake of regarding organic disease as hysterical Sir William Gowers believes to be ten times as common as that of mistaking hysterical disease for organic.

A SANITARY SEAT COVER.

WE need not dilate upon the risks of infection from the use of public water-closets and a little invention by Mr. Joseph Wood, of 52, Preston-street, Barrow-in-Furness, seems to be worthy of notice. It is simply a sheet of paper with a hole cut in it corresponding to the opening in the w.c. seat. From the inside edge of the opening in the paper perforations radiate so that pressure causes the paper to shape itself to the seat.

Salt.—The treatment of the service is on the whole good and the pay fair.

LABOUR COMPLETED WITHOUT RUPTURE OF MEMBRANES.

To the Editors of THE LANCET.

SIRS,—I believe these cases are sufficiently rare to warrant their being recorded. On Oct. 30th I was called at about 3.30 P.M. to a woman said to be in labour for the second time. On examination I found that dilatation of the os had scarcely commenced. I left, saying I would call in two or three hours. On my return I found the os about the size of a half-crown with the membranes unruptured. Half an hour later as the patient was walking round the room she suddenly complained that she felt something coming away. She had just time to get to the bed when membranes, fœtus, and placenta were suddenly expelled together. The membranes were unruptured. I quickly ruptured them but my efforts to resuscitate the child were without avail. It was a seven months' fœtus. The after-history of the mother was uneventful.

I am, Sirs, yours faithfully,

East-road, Hoxton, N., Dec. 20th, 1897. THOMAS C. PENFOLD.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (29th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.).

THURSDAY (30th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2 30 P.M.).

FRIDAY (31st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (1st).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received: *Eastern Morning News, Manchester Guardian, Hull Daily News, Glasgow Herald, Tamworth Herald, Bradford Observer, Wigan Examiner, Devon Weekly Times, Torquay Times, Figaro, Times of India, Pioneer Mail, Yarmouth Independent, Oban Times, Bridgwater Independent, Architect, Cambs. Times, Colchester Gazette, Warrington Examiner, Scotsman, Builder, Sheffield Telegraph, Newcastle Leader, North British Mail, Yorkshire Post, Midland Free Press, Halifax Guardian, Chester Chronicle, Herald of Wales, Liverpool Daily Post, Hereford Times, Somerset County Herald, Leicester Post, Birmingham Post, Leeds Mercury, Portsmouth Times, Kettering Guardian, Cheltenham Free Press, Worcester Chronicle, Cromer Post, Bristol Mercury, Norfolk Chronicle, Lincoln Mercury, Carnarvon Herald, Sanitary Record, Hertfordshire Mercury, City Press, St. Mary's Hospital Gazette, Friendly Societies' Recorder, Reading Mercury, Mining Journal, Public Health, Engineer, Local Government Chronicle, Weekly Free Press [and Aberdeen Herald, Local Government Journal, Surrey Advertiser, Western Morning News, Berrows' Worcester Journal, Kerry Weekly Reporter, Bath Daily Chronicle, Sussex Daily News, &c., &c.*

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Communications, Letters, &c., have been received from—

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B.—Senor Miguel Bethencourt, Curaçoa; British Institute of Preventive Medicine, Lond., Hon. Secretary of; Messrs. Brady and Martin, Newcastle-on-Tyne; Messrs. Baiss Bros. and Co., Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Messrs. P. B. Burgoyne and Co., Lond.; Messrs. Blondeau et Cie, Lond.; Messrs. E. G. Berryman and Sons, Lond.; B. M., Lond.; Dr. J. Barr, Liverpool; Messrs. W. H. Bailey and Son, Lond.; Mr. C. Birchall, Liverpool; Dr. Bowlan, Lond.; Dr. W. T. Brooks, Oxford.

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I.—Mr. Ingram, Yeovil.

J.—Mr. T. H. Johnson, Doncaster; Mr. H. Juler, Lond.; *Journal of Balneology and Climatology*, Lond.; Messrs. W. and A. K. Johnston, Edinburgh; Mr. Clayton Jones, Ottery St. Mary.

K.—Mr. P. A. Karkeek, Torquay.

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T.—Dr. C. B. Taylor, Nottingham; Dr. T. Telford-Smith, Lancaster; Dr. H. G. Turney, Lond.

V.—Vectis, Lond.

W.—Mr. W. P. Walker, Birmingham; Western General Dispensary, Lond., Secretary of; Messrs. Widenmann, Broicher, and Co., Lond.; *Wiltshire County Mirror* Newspaper Co., Salisbury; Dr. R. M. Wyckoff, Brooklyn, U.S.A.; Dr. W. D. Warde, Knowsley; Mr. S. L. Woolmer, Concordia, Argentine Republic; Dr. J. R. Williams, Penmaenmawr.

X.—X, Clapton.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. R. R. Anderson, Fern Hill; Mr. W. Anderson, Lond.; A. B. C., Lond.; Assistant, North Seaton.

B.—Dr. M. D. Berry, Lond.; Messrs. J. B. Brooks and Co., Birmingham; Messrs. Brown, Gould, and Co., Lond.; British Medical Temperance Assn., Lond., Treasurer of.

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L.—Dr. W. Lawton, Worthing; Mr. T. W. M. Longmore, Luxor, Upper Egypt; Mr. R. E. Landers Southampton.

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N.—Nottingham General Hospital, Secretary of.

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U.—University of Glasgow, Factors of.

W.—Mr. W. Webb, Woking; Dr. J. G. Williamson, Wye; Mr. T. J. Walker, Leeds; Dr. J. W. White, Glasgow; Mr. J. White, Lond; Mr. A. Wilson, Manchester; Mr. F. Wilson, Lond.; Worcester Union, Clerk of.

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Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

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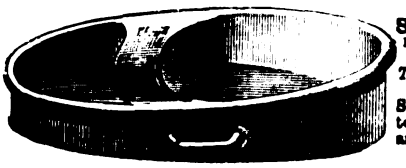
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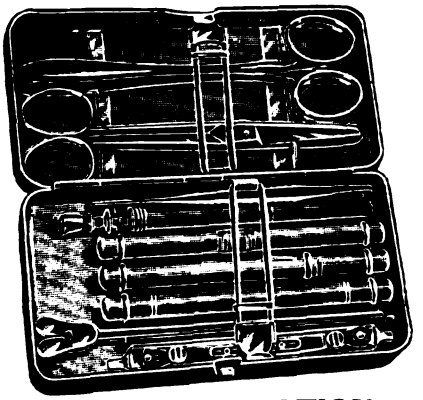
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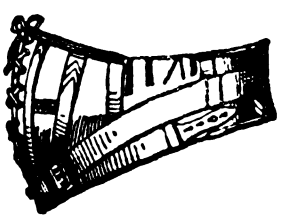
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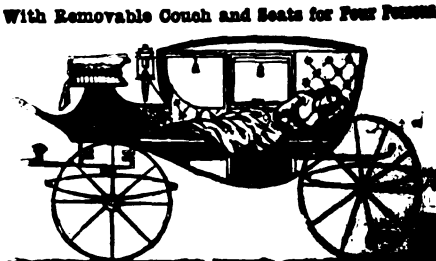
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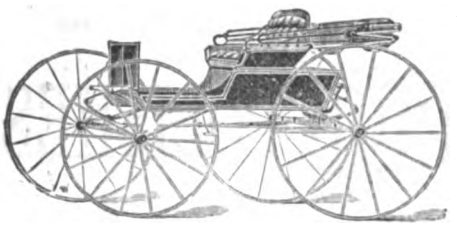
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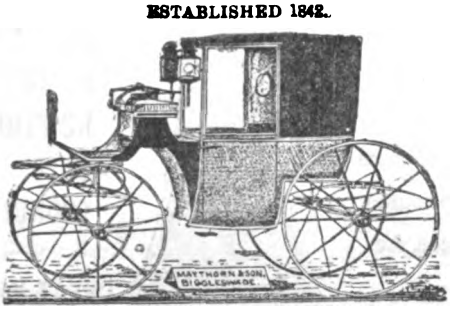
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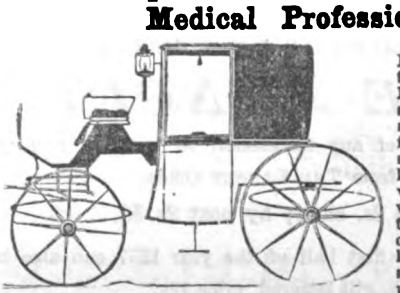
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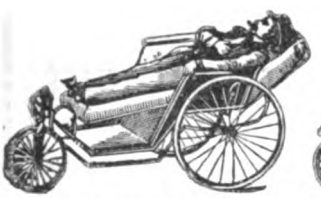
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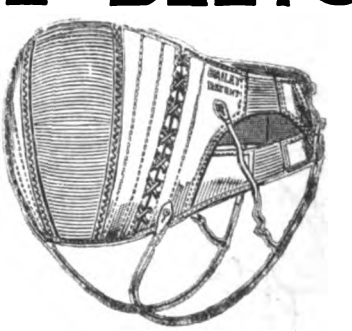
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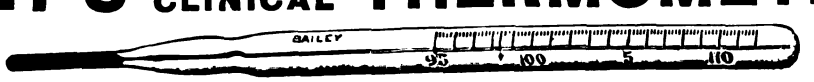
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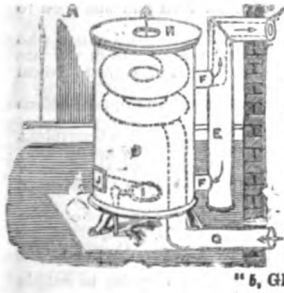
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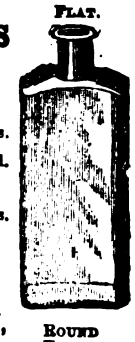
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Vardon, Hugh E., Esq.
Watson, Sir Arthur T., Bart., Q.C.
Watson, Col. Gordon.

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Secretary.—J. BERNARD LAMB, Esq. | **Bursar.**—W. D. CROSSLEY, Esq.

The Foundation consists of 50 boys, chiefly necessitous orphans of Medical Men, and is mainly supported by voluntary contributions: Foundation Scholars have the same privileges as the other boys, and have none but a few voluntary expenses.

In addition to the 50 Foundation Scholars in the College there are Nine Presentations for Female Orphans of Medical Men and one open to those not orphans, in connexion with the College, at the School of St. Anne's Society.

There are Fifty Pensioners. All these now receive annuities of £30, with the exception of a few still occupying rooms in the Asylum, who receive £21. The Council were enabled to increase the pensions of those not residing in the College owing to a munificent legacy from the late Dr. T. A. Bowen, of Melbourne. There are also Nine Pugh Pensioners who receive £30 a year each. Pensioners must be legally qualified Medical Men who have been registered Medical Practitioners for five years, or the Widows of such.

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The Pensioners and Foundation Scholars are elected by the Governors voting by ballot and having votes in proportion to the amount of their contributions. The elections take place every May. Donors of ten guineas in not more than two payments and collectors of twenty guineas are Life Governors of the College. Subscribers of one guinea annually are Governors during the continuance of their subscriptions. Contributions of a less amount than one guinea are most welcome.

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Any information regarding the Institution will gladly be communicated to parties addressing enquiries to the Head Master, to the Bursar (for school business) at the College, Epsom, or to the Secretary at the office, 37, Soho-square, W.

Royal College of Physicians of LONDON.

The next PROFESSIONAL EXAMINATION for the MEMBERSHIP will commence on Tuesday, January 18th.

Candidates are required to give fourteen days' notice in writing to the Registrar of the College, with whom all certificates and testimonials required by the by-laws are to be left at the same time.

Pall Mall East, S.W. EDWARD LIVEING, M.D., Registrar.

Society for the Study of Inebriety.

A Quarterly Meeting will be held in the rooms of the Medical Society of London, 11, Chandos-street, Cavendish-square, W., on Thursday afternoon, January 13th 1898. Paper by W. L. BROWN, L.R.C.P., L.R.C.S. (Edin.), &c., "Inebriety and its 'Cures' among the Ancients" (with Lantern Illustrations). Communication—Surgeon-General the Hon. F. L. LOWELL, M.G., Trinidad, "Reduced Alcoholic Prescription."

Chair to be taken at 4 o'clock by the President, NORMAN KERR, M.D., F.L.S.

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WEST LONDON POST-GRADUATE COURSE.

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ARMY MEDICAL STAFF.

An Examination of Candidates for

Forty COMMISSIONS in the Army Medical Staff will be held at the Examination Hall, Victoria Embankment, W.C., on the 4th February next and following days.

Applications for admission to the Competition should be made in writing, without delay, to the Director-General, Army Medical Department, 18, Victoria-street, London, S.W.

The list will be closed on the 27th January.

(Signed) J. JAMESON, Director-General.

War Office, London, Nov., 1897.

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MACLEOD YEARSLEY, F.R.C.S.—Wednesday 3 P.M.
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Guy's Hospital Trained Nurses' INSTITUTION.—Fever, Medical, Surgical, and Midwifery NURSES supplied.—Address, Lady Superintendent, 14, St. Thomas's-st., S.E. Telegrams: Guy's Institution, London. Telephone No. 882 Hop.

THE SOCIETY OF TRAINED MASSEUSES, TRAINED NURSES CLUB,

12, BUCKINGHAM STREET, STRAND, W.C.,

supplies Qualified and Competent MASSEUSES holding Society's Certificate, for either town or country.—Apply, Secretary. Telegrams, "Fregare," London.

GENERAL NURSING INSTITUTE.

5, Mandeville Place, Manchester Square, W.

ESTABLISHED 1862 at Henrietta-street, Covent-garden.

Thoroughly experienced Hospital-trained NURSES supplied at a moment's notice, being resident in the Home.

Also, specially-trained NURSES for Mental and Nerve Cases.

Terms fixed and moderate. Particulars forwarded.

Apply to the SUPERINTENDENT.

Telegrams: "Nutrix London." Telephone, Paddington 55.

CURHAUS MONTE GENEROSO, ROVIO, Italian Switzerland 1650 ft. above the sea. An unrivalled Alpine Health Resort, offering excellent climatic conditions and a splendid lake, mountain & sylvan scenery. Most successful treatment and care of a limited number (20) of patients. Special indications: Anæmia, Chlorosis, Hysteria, Obesitas, Laryngitis and Bronchitis Chronica, Emphysema, Nephritis Chronica, Diabetes Mellitus, and such cases of Tuberculosis that by reason of complications (Gout, Chronic Rheumatismus, Vitium Cordis, Cachexia Senilis, Syphilitica or Malaria, Intestinal Tuberculosis, &c.) cannot be sent into the very alterative and exciting air of the High Alps. Comfortable board and residence 35 sh. weekly, including medical attendance.—For Prospectus, apply to the Resident Proprietor and Medical Superintendent—E. T. BLANK-JAQUET.

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Exeter Asylum.—Private Patients are admitted into this Asylum at a uniform rate of 25s. a week. This sum includes everything except clothing. For further information, printed forms of certificates, &c., apply, R. L. Rutherford, M.D., Medical Superintendent.

"The wards are in excellent order, bright and cheerful, and those occupied by the patients of the private class should attract many whose means are limited from all parts of England."—Extract from the Forty-eighth Report of the Commissioners in Lunacy.

SPRINGFIELD HOUSE PRIVATE ASYLUM, BEDFORD.

Fitted up and conducted on the most modern principles, special attention being paid to the promotion of the cure and comfort of the patients by varied employments and amusements suited to their mental condition. No restraint has been used.

Recent enlargements and reconstruction allows

A SEPARATE BEDROOM

to each patient whose mental condition permits.

For forms of admission, address DAVID BOWER, M.D., as above.

(Dr. B. attends at 5, Duchess-street, Portland-place, W., on Tuesdays, from 3 to 4.)

Term 2½ guineas per week.

There are now vacancies for both ladies and gentlemen.

THE COPPICE, NOTTINGHAM.
HOSPITAL FOR MENTAL DISEASES.

President: The Right Hon. the Earl MANVERS.

This Institution is for the reception of a limited number of Private Patients of Both Sexes, of the Upper and Middle Classes only, at moderate rates of payment. It is pleasantly situated on an eminence a short distance from Nottingham, and commands an extensive view of the surrounding country; and from its singularly healthy position affords every facility for the relief and cure of those mentally afflicted.

Particulars as to terms, &c., may be obtained from Dr. TATE, the Medical Superintendent.

Private Home for the Treatment of INSANE LADIES, ASHBROOK HALL, HOLLINGTON, within half an hour's walk of St. Leonards-on-Sea, conducted by the Widow of the late Samuel Hitch, M.D., formerly of Sandywell-park, near Cheltenham, for many years Physician to the General Lunatic Asylum for the County of Gloucester.

Station: Warrior-square, St. Leonards. Telegraph Office: Hollington.

For particulars and terms apply to Mrs. LETITIA A. HITCH or Miss ADAMS, Co-Licensee.

Stretton House, Church Stretton, Salop. A Private Institution for Insane Gentlemen. Estab. 1853. Church Stretton lies among the hills 600 ft. above sea level; climate very healthy and bracing. Excellent facilities for recreation and employment. A few voluntary cases received. Express train service from London (4½ hours) and other parts. For further information see Medical Directory, p 1943, or apply for prospectus to Resident Medical Officer.

Telegrams: Campbell-Hyalop, Church Stretton.

THE MOAT HOUSE,
TAMWORTH, STAFFORDSHIRE.

A HOME for NERVOUS and MENTAL CASES. Stations, L. & N. West. and Mid. Railways.

The House stands in grounds of ten acres (within 5 minutes' drive of either station), and is devoted to the care and treatment of a few Ladies suffering from Nervous and Mental Disorders, who enjoy the comforts, privacy, and occupations of home life. Voluntary patients are received without certificates.

Medical Attendants—J. HOLMES JOY, M.A., M.D., and H. H. RUBRA. L.R.C.P. Lond. For terms, &c., apply to the Resident Proprietor, E. HOLLINS, M.A. Camb., J.P.

Barnwood House Hospital for MENTAL DISEASES, Barnwood, near Gloucester. Exclusively for Private Patients of the Upper and Middle Classes. This Institution is devoted to the Care and Treatment of persons of both sexes at moderate rates of payment. The terms vary according to the requirements of the patients, who can have private rooms and special attendants, or be accommodated in Detached Villas and in the Branch Convalescent Establishment on the hills. Under special circumstances the rates of payment may be greatly reduced by the Committee.—For further information apply to J. G. Soutar, M.B., the Med. Supt.

St. Luke's Hospital, London, E.C.
Established 1751.

This Hospital was established for the Treatment of Mental Diseases of the Middle Classes. Preference is given to acute cases, and these are admitted either gratuitously or on payment of a weekly sum varying from 14s. to 30s., according to the circumstances of each. Patients are eligible for admission from any part of the United Kingdom.

The Convalescent Establishment in connexion with the Hospital is at St. Lawrence, Ramsgate.

Forms of application may be had from, and inquiries addressed to, the Secretary, at the Hospital, Old-street, London, E.C.

Aug. 31st, 1896. W. H. BAIRD, Secretary.

NERVOUS & MENTAL AFFECTIONS.

The Grove, Catton, near Norwich.—A quiet HOME for the Special Treatment of a limited number of Ladies suffering from Nervous and Mental Affections. The house stands in beautiful grounds of about ten acres in extent, is situated a mile and a half from the City of Norwich, and contains the most modern requirements and comforts.

Carriage drives and amusements of all kinds are provided for patients. Boarders are also received without certificates.

For further particulars apply to the Resident Physician, CECIL A. P. OSBORNE (formerly Medical Attendant, Grove House Asylum, Church Stretton, and The Oaks Sanatorium, Hythe).

INEBRIETY.
MELBOURNE HOUSE, LEICESTER.
PRIVATE HOME FOR LADIES.

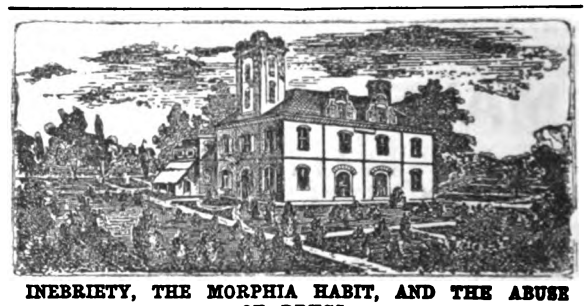
Medical Attendant: CHAS. J. BOND, F.R.C.S.Eng., L.R.C.P.Lond.
Principal: H. M. RILEY, Assoc. Soc. Study of Inebriety.
Thirty Years' Experience. Excellent Medical References.
For terms and particulars apply Miss RILEY, or PRINCIPAL.

Grove House, All Stretton, Church STRETTON, SHROPSHIRE.

A PRIVATE HOME for the Care and Treatment of a limited number of Ladies mentally afflicted. Climate healthy and bracing.

Apply to Mrs. McLintock (widow of the late Dr. McLintock), the Resident Proprietress, or to the Medical Superintendent.

"Northlands," 10 and 12, North-street, Old Wandsworth, Surrey.—HOME for Ladies requiring rest, care, or supervision; cases of Inebriety, Epilepsy, &c., received. Established thirty years. Large garden, situation cheerful and healthy, near several parks and commons. Six miles from London on L. & S.W.R. Medical references. Moderate terms. Mrs. Blackmore.



INEBRIETY, THE MORPHIA HABIT, AND THE ABUSE OF DRUGS.

A PRIVATE HOME, ESTABLISHED 1864, for the Treatment and Cure of Ladies of the Upper and Higher Middle Classes suffering from the above. Highly successful results. Medical Attendant: Dr. J. St. T. CLARKE, Leicester.—For terms, &c., apply, Mrs. THEOBALD, Tower House, Leicester.

Telegraphic Address: "Theobald, Leicester."

St. Andrew's Hospital for Mental DISEASES.
NORTHAMPTON.

FOR THE UPPER AND MIDDLE CLASSES ONLY.

President—The Right Honble. the EARL SPENCER, K.G.

The Institution is pleasantly situated in a healthy locality, one mile from the London and North-Western or Midland lines, and one and a half hour only from London.

It is surrounded by more than 100 acres of pleasure grounds.

Great care is exercised in the classification of the Patients according to their habits and different degrees of mental aberration, so that those who are quiet or convalescent may not associate with those whose minds are more affected.

Ample means of occupation and amusement are provided, includin Cricket, Croquet, Lawn Tennis, and Archery. There are also Billiard Rooms, and a large Recreation Hall and Theatre.

The terms vary from 25s. to £4 4s. week, according to the requirements of the case.

Patients paying higher rates can have Special Attendants, Horses, and Carriages; and Private Rooms in the hospital; or in detached villas in the grounds of the hospital; or at Moulton Park, a branch establishment, two miles from the hospital.

There is also a Seaside House, to which Patients may be sent.

For further information apply to the Medical Superintendent.

Warneford Asylum, Oxford.—This Asylum, for the care and treatment of the Insane of both sexes of the Middle and Upper Classes, is pleasantly situated on Headlington-hill, near Oxford, and has been recently enlarged. The grounds are extensive, and cricket, tennis, billiards, dances, and other amusements are amply provided. There are now vacancies for patients at moderate charges. Voluntary patients can also be received.—For particulars apply to the Medical Superintendent, Dr. NEIL.

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WEST MALLING PLACE, KENT, for MENTAL and NERVOUS DISORDERS. An easy distance from LONDON, between SEVENOAKS and MAIDSTONE. A commodious country residence, beautifully situated in a retired position, on its own ample grounds, in one of the healthiest localities in England. It is old-established, reconstructed. Most modern nursing and other requirements; HOME-LIKE. Dr. ADAM, Resident Physician, formerly Physician-Superintendent Crichton Royal and Metropolitan Public Institutions London address, 64, Welbeck-st., Cavendish-sq., W. (Wednesday mornings). Voluntary boarders received. Teleg. ad.: "Adam, West Malling."

HAYDOCK LODGE, NEWTON-LE-WILLOWS, LANCASHIRE,

Is charmingly situated in a healthy and retired neighbourhood, midway between Liverpool and Manchester, about two miles from Newton-le-Willows Station on the London and North-Western Railway. It is a comfortably-furnished country mansion, especially adapted for the care and treatment of persons of unsound mind. Besides the use of the general sitting-rooms, &c., patients of both sexes can have private apartments and special attendants at moderate rates of payment. *Information as to terms, &c., may be obtained on application to the Resident Medical Superintendent*—CHARLES T. STREET, L.R.C.P.Lond., M.R.C.S.Eng., who attends at 49b, Rodney-street, Liverpool, every Thursday, from 2 to 4.
Telegrams: Street, Ashton-in-Makerfield. Telephone (National) No. 3, Ashton-in-Makerfield.
Visiting Physician: **ALEXANDER DAVIDSON, M.D., F.R.C.P., Physician to the Liverpool Royal Infirmary.**

"PERITEAU."—A Private Asylum for five mentally afflicted Ladies conducted on the system of a private family, with an utter absence of anything that could remind the invalids that they are under care. A special feature of this establishment is the employment of ladies only as attendants, and numerically being one in excess of the patients. Medical Superintendent, E. W. SKINNER, M.D.—Address, Proprietress (Mrs. SKINNER, Senr.), "Periteau," Winchelsea, Sussex. Personal interview from 2 to 3.30 second Wednesday in every month.—33, Wimpole Street, Cavendish Square, W.

TREATMENT OF INEBRIETY.

KINGSWOOD PARK, near BRISTOL.

"LICENSED UNDER THE INEBRIATES ACTS."

Resident Medical Superintendent—HENRY SUMMERHAYES, B.A. Lond., M.R.C.S., L.S.A.

A Home for the reception of Gentlemen suffering from the abuse of Alcohol, Opium, or other Drugs, under the Acts or privately. The house is situated nearly 400 ft. above sea-level, between Clifton and Bath.

For particulars apply to **T. WALTER BRIMACOMBE (Licensee).**

KIMBERLEY SANATORIUM.

The **KIMBERLEY SANATORIUM**, founded by the **Right Hon. C. J. RHODES** (Chairman of De Beers Consolidated Mines, Ltd.), as a Health Resort for those suffering from Incipient Disease of the Chest and Throat, will be opened on 1st September, 1897, for the reception of visitors.

The management is under a Committee consisting of the following gentlemen nominated by the Founder to administer the trust:—

THE HON. MR. JUSTICE J. H. LANGE (*Chairman*).
J. B. CURREY, Esq., Manager London and South African Exploration Company, Ltd
F. RUTHERFOORD HARRIS, Esq., M.D.
JAMES LAWRENCE, Esq., Member Legislative Assembly.
H. ROBINOW, Esq., J.P., Director De Beers Consolidated Mines, Ltd.
W. SMART, Esq., Manager Standard Bank of South Africa.
RICHARD SOLOMON, Esq., Q.C., Member Legislative Assembly.
Capt. T. TYSON, Secretary Kimberley Club.
ARNOLD H. WATKINS, Esq., M.D
GARDNER F. WILLIAMS, Esq., General Manager De Beers Consolidated Mines, Ltd.

Bankers—THE STANDARD BANK OF SOUTH AFRICA, LTD., Kimberley; and 10, Clement's Lane, London, E.C.

Kimberley is situated on the high inland plateau of South Africa, 650 miles from Cape Town; height above sea level, 4100 feet; rainfall, 18 inches per annum; mean annual humidity of atmosphere, 55 per cent. of saturation; mean temperature, Summer October to March) 72°—Winter (April to September) 56°. The period of sunshine during the year is very great, and is not exceeded in any other part of the world.

Easy rail communication with Cape Town. Dining and sleeping saloons.

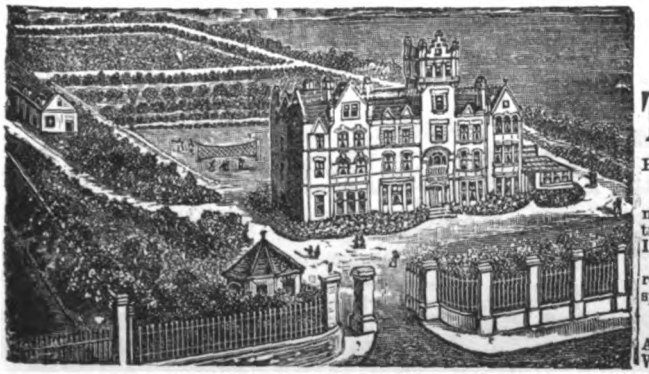
Kimberley, in addition to being the site of the South African Diamond Mines, and possessing in this respect a peculiar interest to visitors, has an excellent Club, Public Library, Theatre, Golf-links, Tennis, Cricket, and Football Clubs, &c.

The Sanatorium, which is situated half a mile from the town, is on the tram line which runs between Kimberley and Beaconsfield, stands in some seven or eight acres of ground on the brow of a hill overlooking the latter township and the neighbouring Free State Hills, and possesses every comfort to be found in a first-class hotel. Spacious dining room, drawing-room, ladies' morning-room, about thirty bedrooms, several of which can be placed *en suite* if desired, smoking and billiard-rooms, and well laid out tennis and croquet grounds. It will be found to be cool in summer, well warmed in winter, and provided with excellent sanitary arrangements.

The building and appointments are those of a first-class hotel, and are not intended for the reception of cases of advanced disease, but only of those early and curable cases for which the climate has proved so beneficial.

The institution is in no way a business speculation, and the scale of prices charged is fixed on the basis of allowing the Committee to secure to visitors a first-class cuisine with thoroughly good attendance; there being absolutely no capital charges to repay; all that is required is to make the Institution self-supporting.

Those desirous of engaging rooms should apply to the Secretary, Kimberley Sanatorium, sending Bankers' references and stating requirements. Tariff will be at the rate of 15s. to £1 per diem, according to rooms selected, with special rates by the week or month.



INEBRIETY.

TOWER HOUSE RETREAT & SANATORIUM (Ld.), Westgate-on-Sea, Kent.

Principal and Licensee—ALFRED F. STREET, M.A., M.D., B.C. Cantab

Licensed under the Inebriates' Acts, 1879-88. The only establishment in the United Kingdom specially erected for the reception and treatment of Ladies and Gentlemen desirous of overcoming habits of Intemperance or of the abuse of Narcotic Drugs.

The house stands in its own grounds of nearly three acres, and is replete with every convenience, containing a large Billiard-room, spacious Drawing-rooms, Smoking-rooms, Bath-rooms, &c.

Patients can be received under the Act or privately.

For prospectus, forms (when required) for signature under the Act, and further particulars, address Principal, Tower House, Westgate-on-Sea.

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INTEMPERANCE.

CAPEL LODGE, NEAR FOLKESTONE.

Licensed under the Inebriates Acts, 1879, 1888.

Resident Proprietor and Licensee—E. NORTON, M.D., L.R.C.P., M.R.C.S.

The only Private RETREAT and HOME on the South Coast for the care and treatment of GENTLEMEN suffering from Inebriety or the abuse of drugs. The HOUSE has been specially designed and built to carry out the requirements of the Act. It stands in its own extensive grounds on the high chalk cliffs between Folkestone and Dover. This unique situation ensures privacy, while the bracing and tonic properties of the sea air are most beneficial in these cases. Billiard Room, Library, occupations, and amusements. Home Dairy. Patients received under the Act, or privately. For prospectus and terms apply, Dr. NORTON, Capel Lodge, near Folkestone.

MONTREUX. HOTEL et VILLA BELMONT.

CELEBRATED AUTUMN, WINTER, & SPRING HEALTH RESORT.

A fine First-class English Family Hotel, modern comforts, latest sanitary and heating arrangements, in the **healthiest** most **quiet** and **charming** part, stands well up from the lake, surrounded by shady **terraces, Park**, splendid panoramic views. **Easy** access from town. **Charming Residence for change and rest. Lift. Bath rooms. Electric light. Dark room. Balconies. Tennis.** Omnibus (use of omnibus for churches and Kursaal).

Resident Patients. — Margate. —

M.D. Lond., F.R.C.S. Eng. (married), residing in a commodious house facing the sea, in best position, with tennis lawn in front, has accommodation from one or two of the above. Drainage guaranteed perfect. Terms moderate, according to requirements.—Address, Dr. Crook, Dalby-square, Margate.

Resident Patients. — A List of

Medical Men in all parts willing to receive into their houses Resident Patients, together with a full description of the accommodation offered, terms, &c., can be had without charge from Mr. G. B. Stocker, 8, Lancaster-place, Strand, W.C.

Resident Patients.—A Physician of

special experience in cases of Dipsomania and other Nervous Diseases has a vacancy for One Patient, with or without attendant. Comfortable house in good sporting country, with dry, healthy climate. Terms from 4 guineas a week.—Address, W. H. H., THE LANCET Office, 423, Strand, W.C.

Resident Patient.—Vacancy for

good-class Patient (only one received) in house of Medical Man. Married; no family. Comfortable old house, in own grounds, North of London, ten miles from town. Carriage if required. Bracing air.—Address, B M., THE LANCET Office, 423, Strand, W.C.

Home for Delicate Girls deficient in

brain power. Refined, comfortable home, with kind care.—Principal, 12, Marine-parade, Worthing.

The Women's Temperance Home at

Sydenham receives a limited number of LADIES desirous of overcoming habits of Intemperance. Terms moderate, varying according to requirements.—For particulars, apply The Matron, The Tor, Silverdale, Sydenham.

DORCHESTER ASYLUM.

PRIVATE PATIENTS.

The Special and Separate Departments for Private Patients contain large Dining-and Drawing-rooms of Fireproof Construction and lighted by Electricity. Situation elevated and healthy, with extensive recreation gardens. Every kind of amusement, including Golf Course. Charge from £1 1s. per week.

Letters: HERRISON, DORCHESTER. Telegraphic Address: HERRISON, CHARMINSTER. (About three-and-a-half hours from London.) Full particulars on application to Dr. MacDonald.

DUNAIN PARK.

(THREE MILES FROM INVERNESS.)

For the Care and Treatment of One or Two Nervous Invalids, or Patients under certificates but not requiring asylum supervision.

Apply to Dr. S. L. DOBIE.

WONFORD HOUSE.

HOSPITAL FOR THE INSANE, near EXETER.

A REGISTERED HOSPITAL FOR THE UPPER AND MIDDLE CLASSES.

This Institution is situated in a beautiful and healthy locality, within a short distance of the City of Exeter.

There is comfortable accomodation at moderate rates, both in the Hospital itself and at Plantation House, Dawlish, a seaside residence on the South Devon Coast, affording more privacy, with the benefits of sea air and a mild and salubrious climate.

Private Rooms and Special Attendants provided, if required.

Voluntary Patients or Boarders also received without certificates.

For terms &c., apply to

F. MAURY DRAS, M.B., M.S. Lond.,
Resident Medical Superintendent.

Paying Guests or Resident Patients

(two only taken).—Medical Man, M.D., can receive above in his well appointed house, situated in good residential town, South Midlands. Good table. Terms from 3 guineas.—Address, F.R.C.S., THE LANCET Office, 423, Strand, W.C.

INEBRIETY, &c.

THE ROYAL VICTORIA HOME, BRISTOL.

(LICENSED UNDER THE ACTS)

The only home in the United Kingdom specially erected for the treatment of poor inebriate women. Terms 3s. 6d., 7s., & 10s. 6d.—For particulars write, The Warden.

TREATMENT OF INEBRIETY.

DALRYMPLE HOME,

RICKMANSWORTH, HERTS.

For Gentlemen under the Act and privately. Terms—2 to 5 guineas.

Apply to the Medical Superintendent.

Mrs. A. M. CAMPBELL'S

PRIVATE ESTABLISHMENT FOR ACTIVE AND PASSIVE GYMNASTICS, MASSAGE, ELECTRICITY, AND MINERAL BATHS.

HAUHEIM, 58, Leinster Square, Kensington Gardens, W.

Telegrams:—"HAUHEIM, LONDON."

OVERDALE ASYLUM

(Late CLIFTON HALL), WHITEFIELD, LANCASHIRE.

Licensed for a limited number of PATIENTS of the Upper and Middle Classes. It is beautifully situated in a retired neighbourhood, and has all the comforts of home life.—For terms, &c., apply to J. HOLMES, M.D. Resident Medical Superintendent.

FLOWER HOUSE,

CATFORD, S.E.

A Sanatorium of the highest class for the Treatment and Care of Gentlemen of Unsound Mind.

N.B.—Under the New Act voluntary boarders can be received on their own personal application.

Apply to Dr. MERCIER, Resident Medical Superintendent.

WYKE HOUSE,

ISLEWORTH, MIDDLESEX.

A Private Asylum for Ladies and Gentlemen mentally afflicted. Voluntary Boarders are received. The grounds are very extensive and various amusements are provided. For terms apply to

F. MURCHISON, M.A. M.B., Resident Proprietor.

TREATMENT OF INEBRIETY AND ABUSE OF DRUGS.

HIGH SHOT HOUSE,

ST. MARGARETS, TWICKENHAM.

For Gentlemen under the Acts and Privately

For terms, &c., apply to

F. H. BROMHEAD, M.B. Camb., M.R.C.S. Eng., &c.,
Resident Medical Superintendent.

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Private Home for the Care, Instruction, and Training of Backward, Delicate, and Feeble-minded Children, under Medical management. Special department for elder Girls and Boys. Resident Teachers. Home comforts. Cycling, gardening, basket-making, &c. taught. Seventeen years' experience. Large secluded grounds.—Apply, Lady Superintendent or Medical Director, Woodside Court, East Croydon. N.B.—Tram car from station to Addiscombe.

Medical Man of considerable experience, residing in a charming situation on South Coast, six minutes' walk from sea, is open to receive into his well-appointed house a Gentleman for Treatment.—Address, Peritus, THE LANCET Office, 423, Strand, W.C.

Wye House Asylum, Buxton, Derbyshire, for the middle and upper classes of BOTH SEXES is beautifully situated in the healthy and bracing climate of the Derbyshire hills, and is directly accessible by the Midland and the London and North-Western Railways.—For terms and other particulars, address the Resident Physician and Proprietor, Dr. F. K. DICKSON.

Widow of Medical Man, with large experience in the care of patients suffering from Epilepsy, Paralysis, Hysteria, &c., can receive Four Residents. House large, standing in its own grounds, twelve miles from London, high situation, gravel soil. Every comfort, resident physician and surgeon.—Address, Alpha, THE LANCET Office, 423, Strand, W.C.

Nice.—Villa Berthe, 14, rue d'Italie, Nice, BOARDING HOUSE, highly recommended. Full South, centre of the town. Large garden. Well sheltered. Suitable in every way for persons in delicate health. All English comforts.—Directors, Mesdames Torelli and Cason.

Brighton.—Establishment for those requiring Medical, Surgical, Nursing care, or Change and Rest after Illness. Medical Baths, Massage, Electricity. Resident and Visiting Doctors. Patients' own doctors can attend if desired; also friends can remain if wished. House is large, close to sea, overlooking ornamental gardens. Every attention to comfort, nursing, and diet. Terms from £2 2s.—Apply, Dr. Pendleton, Sellwood Lodge, Brighton.

A Medical Man of lengthened and very successful experience in the treatment of Mental Diseases and Hysteria has a vacancy for a RESIDENT PATIENT. The house is beautifully situated in an attractive country district, and within a convenient distance of London. The domestic arrangements are liberal and refined. References to relatives of former patients.—Address, M. B. G., THE LANCET Office, 423, Strand, W.C.

ACCOUCHEMENT.

Ladies received in the houses of a Medical Man—one house in London, the other in a quiet country village, within one hour of Town—whose wife is a skilled and practised Obstetrician.—For terms, &c., address M. O. S., care of Messrs. Gale & Co., 15, Bouverie-street, London, E.C.

ACCOUCHEMENT, &c.

St. John's Nursing Institute.—Ladies received in large, pleasant house by certificated Midwife and Trained Nurse (under medical supervision). Every attention and home comfort. Bath. Highest medical and patients' references.—Apply, Lady Superintendent, 21, Pemberton-gardens, Holloway, N.

THE HUGUENOTS,

EAST HILL, WANDSWORTH.

A HOME FOR THE TREATMENT OF LADIES OF UNSOUND MIND.

TWELVE LADIES are received either under certificates or as Voluntary Boarders. The house has large grounds and is healthily situated near several commons. A Mental Specialist visits.

Resident Licensee, Mrs. LEECH.

SOUTHPORT PRIVATE CONVALESCENT HOME FOR LADIES.

Invalids Nursed. Chronic Cases taken. Bright Home for Convalescents. Massage under Medical Supervision. Weir-Mitchell Treatment.

Misses MARRIOTT & BROWNE (Trained Nurses), Knypersley House, 44, Park-road.

ASHWOOD HOUSE, KINGSWINFORD, STAFFORDSHIRE.

An old-established and modernised Institution for the Medical Treatment of Ladies and Gentlemen mentally afflicted.

The House, pleasantly situated, stands in picturesque grounds of forty acres in extent, with a surrounding country noted for the beauty of its walks and drives. The climate is genial and bracing. Occupation, in-door and out-door amusements, and carriage and other exercise amply provided.

Terms range from 2½ to 6 guineas per week, inclusive, according to requirements as to accommodation, special attendance, &c.

Railway Stations: Stourbridge Junction (G.W.R.), 3½ miles; Dudley (L. & N.W.R.), 4 miles; Wolverhampton (G.W.R. or L. & N.W.R.), 7 miles. Intending visitors can be met at any of these stations.

For further particulars apply to the Medical Superintendent.

INTEMPERANCE.

ASTON HALL, SUTTON COLDFIELD, WARWICKSHIRE (late Old Park Hall, Walsall).

Sixty-four acres of Grounds for Recreation, nine-hole Golf Course, Lakes of twelve acres.

For terms, forms (if required), &c., apply, The Secretary, ASTON HALL, SUTTON COLDFIELD.

Telegrams: "REST, ALDRIDGE."

NORTHWOODS HOUSE,

Winterbourne, near Bristol.

PRIVATE ASYLUM for Ladies and Gentlemen, situated in a large Park in a healthy picturesque locality easily accessible by rail via Bristol, Patchway, or Yate Stations.

Voluntary Boarders can now be received. For further information, see "Medical Directory," page 2013; and for terms, &c., apply to Dr. BAGER, Resident Physician.

CLAPHAM COMMON HOME FOR PAYING PATIENTS & NURSING INSTITUTION

(In connexion with 210, CLAPHAM ROAD).

PATIENTS received and TRAINED NURSES sent to all cases.

Apply, MRS. CHAPMAN, NIGHTINGALE HOUSE, 43 SOUTH SIDE, CLAPHAM COMMON, LONDON, S.W.

Winter in the West Indies.—SPECIAL TOURS.—Sixty-five days for £65 by magnificent vessels of the ROYAL MAIL STEAM PACKET COMPANY.—For particulars apply 18, Moorgate-street; or 29, Cockspur-street (West-end), London.

New Zealand, Australia, Cape TOWN, TENERIFFE, by the NEW ZEALAND SHIPPING COMPANY'S Royal Mail Steamers. Monthly Sailings from London (Plymouth two days later).

Ruahine ...	6127 tons	Capt. J. H. Bone ...	Jan. 6th.
Rimutaka ...	4516 tons	Capt. H. E. Greenstreet	Feb. 3rd.

Low fares, single and return. Superior accommodation. Liberal cuisine, and every comfort for a long voyage. Special terms for Families, and Round the World Health and Pleasure Tours.

Apply to Gray, Dawes & Co., Craven House, Northumberland-avenue, or to J. B. Westray & Co., 138, Leadenhall-street, E.C.

To Physicians &c.—Miss Eveline BURNE, M.R.B.N.A., Certificated Masseuse, attends patients and carries out minutely instructions given by doctors. Medical Electricity and the Nauheim Treatment a speciality. Highest references.—8, Upperton-gardens, Eastbourne.

To Nurses. — Wanted, Charge NURSES, who must be at least twenty-five years of age and possess a certificate of three years' training. Salary, £36, rising to £40, with board, lodging, washing, and uniform, at the following institutions under the Metropolitan Asylums Board:—

GORE FARM CONVALESCENT FEVER HOSPITAL, Darenth, near Dartford, Kent. BROOK FEVER HOSPITAL, Shooter's Hill, Kent. EASTERN FEVER HOSPITAL, The Grove, Homerton, N.E.

The Appointment is in each case subject to the provisions of the Poor-law Officers Superannuation Acts, 1896 and 1897.

Apply to the Matrons at the Hospitals, either by letter, with copies of testimonials, or (except in the case of the Gore Farm Hospital) personally (10 to 1).

Dec. 21st, 1897.

Stockton Union.—Appointment of MEDICAL OFFICER and PUBLIC VACCINATOR.—The Guardians of this Union will, at their meeting to be held at the Union Board-room, Stockton-on-Tees, on Wednesday, the 29th day of December instant, proceed to the election of a Medical Officer and Public Vaccinator, who will be required to discharge the duties of the several offices of Medical Officer, also Public Vaccinator, for the Medical district of Stockton, and Medical Officer for the Stockton Workhouse.

The remuneration of the several offices will be as follows—viz.: a salary of £170 per annum for the discharge of the duties of Medical Officer of the Stockton district; a salary of £130 per annum for the discharge of the duties of Medical Officer for the Workhouse, together with the usual fees for Vaccination, which last year amounted to about £22.

The person appointed must be duly qualified as required by the Orders of the Local Government Board, and will be required to devote the whole of his time to the discharge of the duties of the respective offices, to reside within the borough, and provide a Surgery approved by the Guardians.

All drugs will be provided by the Guardians.

The appointments will be made subject to the Poor Law Officers Superannuation Act, 1896, and to the approval of the Local Government Board.

Applications, stating age, qualification, &c., with copies of testimonials of recent date, to be sent to me not later than 10 o'clock in the forenoon on Tuesday, the 28th instant.

Canvassing the Guardians will be deemed a disqualification.

By order.

THOS. E JOBSON, Clerk to the Guardians.

Union Offices, Stockton-on-Tees, Dec. 15th, 1897.

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Resident House Physicians.

Vacancies having occurred in the HOSPITAL for CONSUMPTION and DISEASES of the CHEST, those gentlemen desirous of becoming candidates for the vacant offices are requested to send in their applications, with testimonials, on or before Wednesday, December 29th, and to attend the Medical Committee on the following Wednesday, January 5th, 1898, at 4 o'clock.

Testimonials as to moral character, as well as to medical qualifications, are required.

Further particulars may be obtained at the Hospital.

Brompton, Dec. 8th, 1897. WILLIAM H. THEOBALD, Secretary.

North-West London Hospital,

Kentish-town-road, N.W.—There is a vacancy in the office of ASSISTANT PHYSICIAN. Candidates must be Graduates in Medicine of a University of the United Kingdom, or Members of the Royal College of Physicians of London, not practising Midwifery or Pharmacy, and must undertake to reside within three miles of the Hospital and within the four mile cab radius of Charing Cross.

Applications, with copies of testimonials, should be sent to me not later than Friday, Jan. 7th.

By order.

ALFRED CRASKE, Secretary.

Chelsea, Brompton and Belgrave

DISPENSARY, 41, Sloane-square, S.W.—A vacancy having occurred for an HON. VISITING SURGEON to the Western District of the above institution, gentlemen desirous of becoming candidates for the post are requested to forward their applications, accompanied by copies of testimonials, to the undersigned on or before December 31st, 1897, and will be required to attend before the Committee of Management on Thursday, January 6th, 1898, at 6 o'clock P.M.

(Signed)

Dec. 12th, 1897. AUSTIN E. COOPER, B.A., M.D., Secretary.

Junior House Surgeon wanted at

the WESTERN GENERAL DISPENSARY, Marylebone-road.—He must be an unmarried man, duly qualified and registered according to Act of Parliament. Salary £60 a year, with board and residence. Candidates to send in their applications, with testimonials, stating age and previous experience, to the Hon. Sec., at the Institution, on or before the 28th instant. Selected candidates will be notified when to attend before the Board.

Frome Union.—Appointment of

MEDICAL OFFICER.—The Guardians are prepared to receive applications from Gentlemen duly qualified for post of Medical Officer and Public Vaccinator for the Nunney District. Five parishes; area 13,881; population 2072.

Salary £90 (to include giving certificates under Elementary Education Act). Midwifery 10s. per case. Certifying lunatics 10s. per case. Cod-liver oil and quinine provided. Vaccination 1s. 6d. to 3s. per case.

Applications, stating age and past engagements, with copies of testimonials and list of diplomas, &c. (or originals of both), to be sent to the undersigned on or before the 1st day of January, 1898.

By order of the Board.

GEO. W. BRADBURY, Clerk.

Public Offices, Frome, Dec. 15th, 1897.

North Riding Infirmary, Middles-

borough-on-Tees.—A Special Court of Governors will be held at the Infirmary on Thursday, January 13th, 1898, at 11 o'clock in the forenoon, to elect a HOUSE SURGEON in the room of Dr. Longbotham, resigned. By the Statutes for the Government of the Infirmary, every candidate for this office must be possessed of a Medical and Surgical qualification recognised by the Medical Board. He must also be free from the burden of a family, and strictly observe and carry out the statutes and rules provided for his guidance. Three months' notice must be given or received before the termination of his services. Salary to commence at £100 a year, with lodging, board, and washing, and £5 a year instead of beer. The successful applicant must enter on his duties not later than February 1st, 1898.

Applications, accompanied by testimonials, addressed to the Secretary, marked "Applications for post of House Surgeon," must be sent in not later than January 3rd, 1898.

ANGUS MACPHERSON, Secretary.

County Borough of Oldham.

APPOINTMENT OF MEDICAL OFFICER OF HEALTH.

The Corporation of Oldham are prepared to receive applications from duly qualified Practitioners for the combined offices of Medical Officer of Health for the Borough and Medical Director and Attendant of the Infectious Diseases Hospitals of the Corporation. A statement of the duties and conditions appertaining to the offices can be obtained from the undersigned. The salary for the first year will be £400, increasing by annual increments of £25, to a maximum of £500. The gentleman appointed will not be allowed to practise privately, or to undertake any services other than those assigned to him by the Corporation, and he will be required to enter into a bond to remain in the service of the Corporation for a period of five years. Applications, with particulars of qualifications, to be sent to the undersigned, endorsed "Medical Officer," not later than the 31st inst. Candidates canvassing members of the Town Council will be disqualified.

By order.

A. NICHOLSON, Town Clerk.

Town Hall, Oldham, 10th December, 1897.

80

Sunderland and North Durham Eye

INFIRMARY, Sunderland.—Wanted, a HOUSE SURGEON. Salary £100 per annum, out-door. State experience in Eye cases.—Copies of the rules relating to the office may be had from Jas. F. Potts, Secretary, 13, Eden Vale, Sunderland.

Counties Asylum, Carlisle.—

Wanted, JUNIOR MEDICAL OFFICER. £80 and board.—Apply, stating nationality, qualifications, and age, to Dr. Campbell, Garlands, Carlisle.

Royal United Hospital, Bath.—The

office of HOUSE SURGEON will be vacant Jan 4th. Candidates must be M.R.C.S. Eng. and registered. Salary at the rate of £80 per annum, with board, lodging, and washing. The appointment will be until 1st Oct., 1898. Applications and testimonials must be forwarded to the undersigned on or before Wednesday, 29th Dec.

W. STOCKWELL, Secretary.

Norfolk and Norwich Hospital,

Norwich.—ASSISTANT to House Surgeon required. Must possess a double qualification.

Appointment for six months; board, lodging and washing provided. No salary. Send application with testimonials to the undersigned before Tuesday, 4th January, 1898.

Dec 21st, 1897. POOLE GARRETT, Secretary

Liverpool Infirmary for Children,

Myrtle-street.—There is a vacancy for a HOUSE SURGEON at the above institution. Salary £85 per annum, with board and lodging.—Applications, with testimonials (copies), to be sent in on or before 3rd January, 1898. The appointment will be made as soon after this date as possible. C. W. CARVER, Hon. Sec.

Northumberland County Asylum,

Morpeth.—The appointment of CLINICAL ASSISTANT is about to fall vacant in this Asylum. Board and residence provided. Senior students or gentlemen recently qualified are eligible.—Applications to be sent to Dr. McDowall, Northumberland County Asylum, Morpeth.

December 6th, 1897.

Royal Halifax Infirmary.—Wanted,

an ASSISTANT HOUSE SURGEON, who must be unmarried, doubly qualified and registered. Salary £50 per annum, with residence, board, and washing.

Particulars of the duties, &c., may be obtained from the undersigned, to whom applications, with copies of testimonials, must be sent not later than Wednesday, December 29th, 1897.

OATES WEBSTER, Secretary.

Royal Halifax Infirmary, Halifax, Dec. 13th, 1897.

South Devon and East Cornwall

HOSPITAL, Plymouth (130 beds).—The election of a qualified HOUSE SURGEON for this Hospital will be held at the Hospital during the month of January.

Salary £100 with board and residence.

Special consideration will be given to candidates who have held an appointment in a large hospital.

Canvassing for votes, either directly or indirectly, is prohibited.

Candidates should send copies of testimonials (not exceeding six in number) on or before Friday, 31st December, 1897, to,

HEMSLEY H. SHANKS, R.N., Hon. Secretary.

Plymouth, Dec. 14th, 1897.

North Staffordshire Infirmary and

EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Wanted, a HOUSE PHYSICIAN.—Salary £100 per annum, increasing £10 per annum at the discretion of the Committee, with furnished apartments, board, and washing. Candidates must be duly registered and possess a diploma or degree in Surgery from the College of Surgeons of London, Edinburgh, or Dublin, or from one of the Universities, and a diploma, degree, or Licence in Medicine from a University or duly recognised licensing body of Great Britain or Ireland.

Applications, with not more than six testimonials, to be sent to the Secretary on or before Thursday, the 20th of January, 1898.

Those candidates selected will be required to attend before the General Committee on Thursday, Feb. 3rd, 1898, the day fixed for the election.

By order of the Committee.

RALPH HORDLEY, Secretary and House Steward.

Salford Royal Hospital.—There is a

vacancy for an HONORARY SURGEON at this Hospital.

Extract from the rules:—

"Every candidate for the office of Surgeon or Assistant Surgeon, shall be a Fellow of one of the Royal Colleges of England, Edinburgh, or Ireland, or a member of the Royal College of Surgeons of England, or a Master of Surgery of the Victoria University, and shall be on the Medical Register.

"No Surgeon or Assistant Surgeon shall practise pharmacy.

"The surgeons and assistant surgeons shall reside within two miles of the Hospital."

The present Honorary Assistant Surgeon is a candidate, and in the event of his being appointed there will be a vacancy for an HONORARY ASSISTANT SURGEON.

Applications, accompanied by testimonials and a certificate of age and registration, to be delivered to the Secretary at the Hospital on or before the 2nd day of January, 1898.

By order of the Board.

Board-room, Dec. 8th, 1897. ALEXANDER HAY, Secretary.

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Junior Medical Officer required at once at SHAFTESBURY HOUSE PRIVATE ASYLUM, Formby, near Liverpool.

Must be qualified, registered, and unmarried. Honorarium at the rate of £20 per annum, with board, lodging, and washing.

Apply, with recent testimonials, to

STANLEY A. GILL, M.D., M.R.C.P. Lond., Resident Physician.

A Medical Officer and Public Vac- CINATOR wanted for the Parish of Newabbey. Salary £50 per annum, to provide medicine and surgical appliances to pauper patients gratis. Application, with testimonials, to be sent to the Chairman, Captain Stewart, of Shambellie, not later than January 1st, 1898.

Newabbey, Dumfries, Dec. 13th, 1897.

The General Infirmary at Leeds.— Wanted, a RESIDENT CASUALTY OFFICER, who must be legally qualified and registered. He will receive a salary of £100 a year, in addition to board, lodging, and washing.

Further information as to duties, &c., may be obtained from the Secretary to the Faculty, General Infirmary, Leeds, to whom applications and testimonials must be sent not later than Saturday, Jan. 8th, 1898. By order.

Infirmary, Dec. 20th, 1897. THOMAS BLAIR, General Manager.

States of the Island of Jersey. Committee for the JERSEY PUBLIC LUNATIC ASYLUM.—MEDICAL SUPERINTENDENT.—This office being on the point of becoming vacant, the States will proceed next month to appoint a Medical Superintendent for the above establishment, who will be required to enter upon his duties about the end of April or beginning of May, 1898.

The appointment is for three years, at a salary of £300 per annum, with house (and garden), in which the person appointed will be required to reside. The Medical Superintendent must devote the whole of his time to the duties of his office. Candidates must be Members or Licentiates of one of the Faculties of Medicine and Surgery of Great Britain or Ireland, or of the University of France.

Sealed applications, stating qualifications, with testimonials, to be sent on or before the 5th January, 1898, addressed to the President of the Committee for the Public Lunatic Asylum, Greffe Office, Jersey.

ERNEST LE SUEUR, Greffier.

Greffe Office, Jersey, 15th December, 1897.

Sussex County Hospital, Brighton.— Notice is hereby given that a special meeting of the Committee of Management will be held in the Board room, on Wednesday, the 26th of January, 1898, at one o'clock p.m., for the purpose of electing a HOUSE PHYSICIAN in the room of S. P. Huggins, Esq., who has resigned that appointment, and such Special Meeting of the Committee of Management is hereby convened accordingly.

No person is eligible for the Office unless he have a Medical and Surgical qualification of the United Kingdom, and be duly Registered under the Medical Acts. He must be unmarried, and, when elected, under thirty years of age. Candidates must send in their applications, with testimonials and certificates of registration, addressed to the Secretary, at the Hospital, at or before noon on Wednesday, the 12th of January, 1898.

The emoluments are board and residence in the Hospital, with washing, and a salary commencing at £50 per annum.

By order of the Committee of Management.

December 15th, 1897. W. H. ORTON, M.A., Secretary.

Harrogate. — To Let unfurnished or Sell, commodious HOUSE, situate at corner of Valley-drive and Valley road, and overlooking the Valley-gardens (band plays daily), near wells and baths. Contains dining, drawing- and breakfast-rooms, eight bedrooms, lavatory, bath-room, two w.c.'s, good kitchen, and spacious entrance-hall. Hassell's patent drainage; every modern convenience, including electric light. South-west aspect. Handsome tower elevation (stone). Well adapted for Medical Man.—T. H. Johnson, 6, Priory-place, Doncaster.

Adjoining Harley-street.—Consult- ING ROOM, with use of Waiting-room, to be Let.—Address, Consultant, THE LANCET Office, 423, Strand, W.C.

Poplar.—To be Let or Sold, com- modious FREEHOLD PREMISES, lately in the occupation of a Doctor, and with all fittings, &c., for that profession. Excellent district. Full particulars.—Apply, A. J. Sheffield, Auctioneer, 218, East India-road, Poplar, and 16, Eastcheap, E.C.

Surgeons. — Sea. — Abroad. — Surgeons with families or friends going abroad will find an immense saving by obtaining their passages through MOORE & CO. All passages booked free of charge. Surgeons as medical officers to ships or for the outward voyage only to the Colonies are all obtained through MOORE & CO., the recognised agents to all shipping firms.

LOCUM TENENS and ASSISTANTS provided to practitioners requiring substitutes. Thoroughly reliable men, personally known to Mr. Moore.

Stamped envelope to MOORE & CO., Medical Agents, Wholesale Druggists, 125, Houndsditch, E.C.

MEDICAL PARTNERSHIP AND CONVEYANCING AGENCY.

1, ADAM-STREET, ADELPHI, W.C.

Notice.—Mr. J. C. Needes' offices will be CLOSED on Christmas Day and Boxing Day, Dec. 25th and 27th.

Quasi-Death Vacancy.—A gentle- man who purchased for £450 in September last an unopposed Practice in Somerset is now suffering from an incurable illness, and an immediate SUCCESSOR is required. Picturesque district. Nearest opposition three miles. Good house with stabling, garden and orchard. Rent £28. Premium £150, and a further sum of £150 if the union appointment (worth about £100 a year) is secured, of which there is believed to be no doubt.—Apply to J. C. Needes, 1, Adam-street, Adelphi, W.C.

Lucrative Investment.—A Cash PRACTICE in the North of London averaging over £25 per week ready money. It could be conducted without the proprietor residing on the premises if a qualified assistant were kept. Horse not required; rent £40 a year Premium £1200.—Apply to J. C. Needes, 1, Adam-street, Adelphi, W.C.

Seaside.—A small Practice worth about £300 a year, situated in a rising watering-place seventy miles from London. Appointments yield £50 per annum. There are good prospects of increase in the near future as building is going on.—Apply to J. C. Needes, 1, Adam-street, Adelphi, W.C.

Christmas Vacation.—Mr. Percival Turner's Offices will be CLOSED from Friday afternoon until Tuesday morning. Urgent messages will be attended to at any time. December List of Practices and Partnerships now ready, free on application, at 4, Adam-street, Adelphi, London, W.C.

MEDICAL TRANSFER AGENCY AND ACCOUNTANCY OFFICES,

19, Craven-street, Strand, W.C.

Notice.—Messrs Peacock & Hadley's Offices will be CLOSED from Friday evening the 24th instant, until Tuesday morning, December 28th.

THE

MANCHESTER CLERICAL, MEDICAL, & SCHOLASTIC

ASSOCIATION, LIMITED,

8, KING STREET, MANCHESTER.

Telegrams: "Student, Manchester."

The Association negotiates the TRANSFER of MEDICAL PRACTICES, PRIVATE HOSPITALS, HOMES, &c.; introduces PARTNERS, ASSISTANTS, LOCUM TENENS, NURSES, &c.; undertakes ACCOUNTANCY, INVESTIGATIONS, VALUATIONS, COLLECTION of DEBTS, &c. WELSH ASSISTANTS, &c., provided.—Prospectus, containing names of Directors (Medical and Scholastic) on application.

MEDICAL ACCOUNTANCY.

In connexion with the S. C. and Medical Association, Limited.

INVESTIGATION OF PRACTICES.
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PARTNERSHIP ACCOUNTS ADJUSTED.

Mr. MORRIS, F.S.A.A., 8, Lancaster-place, W.C.

MEDICAL TRANSFER AND PARTNERSHIP,

32, Ludgate-hill.

Messrs. Orridge & Co., Medical Transfer Agents, Referees, and Valuers, in offering their services to the Profession, have pleasure in referring to the fact that for ABOUT HALF A CENTURY the name of Mr. ORRIDGE has been known in the advertising columns of the leading medical journals, and that a very large proportion of the Medical Men throughout the kingdom have confided their interests in the adjustment of PARTNERSHIPS and TRANSFERS to their care.

Purchasers who will communicate (confidentially) the NATURE and EXTENT of their wishes regarding investment can be apprised of appropriate opportunities as they occur.

On occasions where ADVICE is required in forming a correct conclusion as to the worth or eligibility of a Practice, Messrs. ORRIDGE & Co. trust that their familiarity with the various contingencies that govern value will be found of considerable service to those by whom they are employed. N.B.—No charge is made to purchasers.

MEDICAL TRANSFER AGENCY (ESTAB. 1860),

168, EUSTON-ROAD, N.W.

Mr. Herbert Needes (son of the late Mrs. Needes, and for more than ten years associated with her in the management of this old Agency) is still carrying on the Business, and will be glad to negotiate the Transfer of PRACTICES and PARTNERSHIPS on the usual terms. No connexion with any other office.

LOCUM TENENS.—Reliable Gentlemen always on the Books.

ASSISTANTS provided free of charge to Principals.

Telegrams: "CURANDUS," LONDON.

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THE SCHOLASTIC, CLERICAL, & MEDICAL ASSOCIATION, LTD.

MEDICAL DEPARTMENT.

This Association was established in 1890 as a Limited Liability Company under the direction of professional men, its object being the creation of a RESPONSIBLE and THOROUGHLY TRUSTWORTHY Agency. The Medical Department has met with so great success that it has been found necessary for one of the Managing Directors (Mr. G. B. Stocker) to devote his whole attention thereto; and he has the assistance of an experienced Medical Accountant and a large staff of clerks. Further, a Board composed entirely of gentlemen of high standing in the Medical Profession has been appointed, and to them matters of dispute and complaint are referred.

The Association undertakes the SALE of PRACTICES and PARTNERSHIPS; the Introduction of LOCUM TENENS and ASSISTANTS; MEDICAL ACCOUNTANCY (by a duly qualified Medical Accountant); INVESTIGATION and VALUATION of Practices, &c.; POSTING BOOKS and sending out Bills, &c., &c.

A Pamphlet relating to the Medical Department, with the names of the "Directors" and "The Medical Advising Board," and terms, will be sent on application to—MR. G. B. STOCKER,* MANAGING DIRECTOR, 8, LANCASTER PLACE, STRAND, W.C.

Telegraphic Address—"Triform, London." Telephone No. 1854 (Gerrard).

FOR SALE.

(1) LONDON, W.—PARTNERSHIP with view to Succession after six to twelve months in good class practice. Cash receipts for 1896 £1327 including an appointment of £150. Only seven cases of midwifery in 1896. Very good house. Beneficial lease. £90 per annum. Premium £2050 and £300 for lease.

(2) PARTNERSHIP in a PRACTICE of over £2000 per annum (for 1896 £2250) in a large hospital town in the North of England. Visiting fees 2s. 6d. to 15s. A one-half share would be sold for £1600.

(3) HOME COUNTIES.—Short PARTNERSHIP with Succession to country town Practice, worth at present over £700 per annum. Premium one and a half year's purchase. A Graduate and D.P.H. preferred.

(4) YORKS, WEST RIDING.—PRACTICE in a small town. Bookings for 1897 to Nov. 30th £543. Capable of increase. Small house; rent only £18. Premium £450, to include a horse and trap and stable fittings.

(5) WEST OF ENGLAND.—Close to a large town. Mostly working-class. Cash receipts for 1897 will be between £750 and £800 including appointments of over £350. House with garden and stabling. Rent £50. Premium £1050 to include all outstanding accounts at end of introduction.

(6) LARGE NORTHERN CITY.—PRACTICE of nearly £1000 per annum. House (rent £65) in a good residential district. Fees 2s. 6d. to 7s. 6d. Midwifery £1 1s. to £5 5s. First-rate educational advantages. Six months' introduction. Premium only £700.

(7) EASTERN COUNTIES.—PRACTICE in a small country town Cash receipts for 1893 £453, including appointments of about £80 per annum. One horse or cycle. Well situated house. Rent £30. Premium £470.

(8) KENT.—Unopposed Country PRACTICE of about £400 per annum, including appointments of over £100. Very good house, with stabling, and about five acres of land; rent £80. Premium £420.

(9) EASTERN COUNTIES.—PARTNERSHIP in a middle and working class PRACTICE doing at the rate of about £1000 per annum, including appointments of £320. Visiting fees 2s. 6d. to 3s. 6d. A one-third share would be sold for one and a half year's purchase upon the gross bookings.

(10) SOUTH-WEST OF ENGLAND.—SMALL SEASIDE TOWN.—Cash receipts for last three years have averaged about £650, including Appointments. One horse. Exceptionally good house, overlooking the Sea, which must be purchased. Price £4000 (part could remain on mortgage). Premium for goodwill £800.

(11) LANCS.—PARTNER required in a Practice doing about £1700 in a populous country district (mining, &c.) near a large town. Premium required for one-fourth share only £650.

(12) YORKS, WEST RIDING.—Rising Manufacturing Town. Established twelve years ago. Cash receipts for 1896 £874. Visiting fees 2s. 6d. upwards. One horse. Three months' introduction. Premium £874. Rent £65.

(13) LANCS.—Large Manufacturing Town. Established eleven years. Cash receipts for last three years average £705. Carriage not necessary. Rent £40. Premium, to include horse and trap, drugs, and surgery fixtures, £700. Part by instalments or £650 cash.

(14) LONDON, N.W.—Cash PRACTICE of over £800. Fees 6d. to 2s. Rent £30. Part let off for about £60. Premium inclusive £650.

(15) LARGE MIDLAND TOWN.—CASH PRACTICE.—Receipts for 1896 £431, including appointments of £40. House situated in main thoroughfare, rent £40. Premium £400.

(16) SOUTH-WESTERN COUNTY.—Old-established PRACTICE in a small country town. Cash receipts for last two years have averaged £364 per annum, including appointments of £140. One horse. One opponent. Very good house, with large garden. Rent £50. Premium £550. The practice is capable of considerable increase.

(17) LARGE HOSPITAL TOWN IN YORKS.—Middle- and Working-class PRACTICE of £800 per annum. Fees 2s. 6d. upwards. Increasing. Rent of house £40. Premium £800. Six months' introduction if required.

(18) SOMERSET.—Country Village near the sea. Income cash year about £250. Visiting fees mostly 2s. 6d. Well situated house, with stabling and garden; rent £35. Premium £300.

(19) NEW ZEALAND—PARTNERSHIP in a Practice in a leading town. A One-third Share is offered, and a minimum income of £400 guaranteed the first year. Premium £400.

(20) AUSTRALIA.—Important and rapidly increasing city PARTNERSHIP in a Practice of about £1400 per annum. Visiting fees 7s. 6d. and 10s 6d. Excellent climate. A one-half share would be sold for £850, or one-third share for £580. Great scope.

FOR SALE (*continued*).

(21) AUSTRALIA.—A Non-dispensing PRACTICE in one of the chief seaport towns. Average cash takings £20 a week. Rent £65 per annum, no assistant or horse. Premium £500, to include furniture, book debts, &c.

(22) SCOTLAND.—LARGE TOWN.—A non-residential Cash PRACTICE. Cash takings for 1896 £419 (for 1897 to Oct. 31st £580). Rent £16 per annum. Premium £420, to include fixtures, furniture, and drugs.

(23) WINTER RESORT (ABROAD).—A Non-dispensing PRACTICE. Cash receipts last twelve months £277. Premium £280.

(24) LONDON, E.—In a good part, PRACTICE of £500; £400 of which is from ready money payments and appointments. House in main road; rent £50. Six or twelve months' introduction.

(25) LONDON, E.—Cash and private PRACTICE. Receipts for 1897 will be about £1000. Price for one-third £350. Up to half in two years. Rent £32.

WANTED TO PURCHASE.

(26) WANTED, a Country or Country Town PRACTICE of £500 per annum upwards. Preferably within two hours' rail of London. Purchaser is B.A. Oxon., M.R.C.S., &c., and has the necessary capital.

(27) WANTED, a Country PRACTICE or PARTNERSHIP in the South of England. Good introduction required. Purchaser is M.R.C.S., L.R.C.P., and can invest £1000.

(28) WANTED, a PRACTICE in a good residential London Suburb or in a Country Town within forty miles of London. Purchaser is experienced and has ample capital.

(29) Wanted, a PRACTICE of £600 to £800 per annum, in a good sporting district. Purchaser is M.R.C.S., &c., and can invest £1500.

(30) Wanted, a PRACTICE or PARTNERSHIP in a large Country or Provincial Town (not North of England). Purchaser is M.R.C.S., L.R.C.P., experienced, and can invest £1200.

(31) WANTED, a good PARTNERSHIP or PRACTICE in Nottingham or immediate neighbourhood. Purchaser is an F.R.C.S. Eng. and has had large hospital experience and can invest £2000 or more if necessary.

N.B.—There are several hundred purchasers on the books of the Association, so that the sale of any good Practice or Partnership within a reasonable time is virtually certain.

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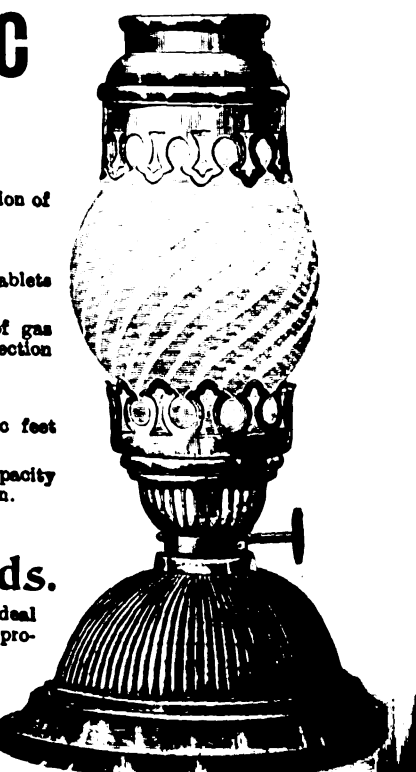
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"I am distinctly of opinion that the modern tendency to add to Cocoa other substances, mostly of a stimulating nature, is a dietetic mistake, a practice to be thoroughly discouraged. **If you have a pure Cocoa you want nothing else in the way of constituting it a food, for it contains in itself all the principles which go to make up a perfect article of diet.** When people begin to add to Cocoa. Hops and Kola and other things, they are interfering with and altering its dietetic value. Cocoa thus treated is not Cocoa but something else. and I have declined for my part, in all my long advocacy of Cocoa as a food, to recognise that **anything but pure unadulterated Cocoa can correspond with this definition of a perfect and desirable diet.** I hope the time is not far distant when the public will awaken to a knowledge of the fact that 'doctored' cocoa is not a thing to be recommended or advised as a food. To add other matters to Cocoa is 'to gild the lily' (in a nutritive sense), and we all know how offensive and needless a practice is the attempt to improve on the Chemistry of Nature's own Food."

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It has been stated in a recently published work on Chronic Diseases of the Heart, as the result of experiment, that the Mineral Waters of Llangammarch, employed as baths as well as taken internally, exercise healing effects similar to those of the celebrated springs of Nauheim and Kreuznach in Germany. The Proprietors of the Llangammarch Wells have, therefore, secured the attendance at the Pump Room and Bath House, during the season, 9th March to October, of a Physician, who is practically acquainted with the various methods employed for the relief of Gout, Rheumatism, and Heart Affections, including those advocated by Dr. Schott at Nauheim.

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Chloride of Sodium	189·66
Chloride of Calcium	84·66
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CHLORIDE OF BARIUM	6·26
Carbonate of Calcium	2·80
Silicia	1·40
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"The characteristic feature of the water is the presence of a notable quantity of **BARIUM CHLORIDE** and a consequent total absence of sulphates. **BARIUM** is a rare constituent of Mineral Waters.

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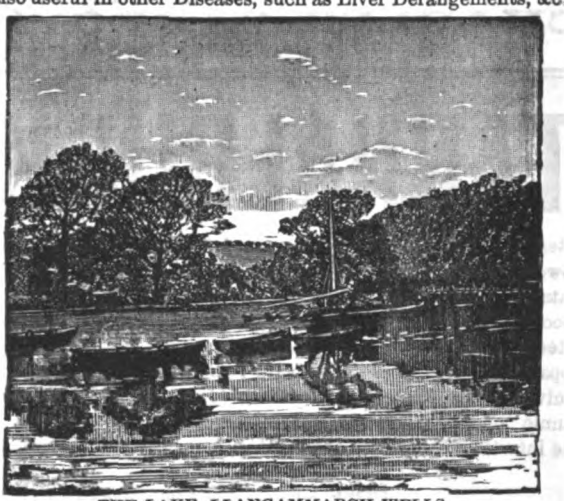
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	No. 1.		No. 2.
Chloride of barium	6·749	.....	6·490
Chloride of sodium	186·200	.....	185·900
Chloride of calcium...	85·160	.....	85·470
Chloride of magnesium	20·100	.....	20·315
Chloride of lithium	0·847	.....	0·910
Chloride of ammonium	0·262	.....	0·262
Alumina and silica	3·340	.....	3·100
Bromine as bromide...	Distinct traces	.....	Distinct traces
Total mineral matters ...	302·658	.....	302·447

"It is important and interesting to observe that the quantity of barium salt has varied only within very small limits during the last ten years, as in 1883 Dr. Dupré made an analysis, in which he found 6·26 grains of barium chloride per gallon. The amount of chloride of barium may therefore be fairly regarded as constant—a fact which is of especial importance in view of the powerful action of barium salts. ..... The quantity of barium present renders the internal administration of the Llangammarch waters quite safe, and no harm could result from drinking the water in reasonably large amounts. One tumblerful is a sufficient dose in most cases and two tumblerfuls should seldom, if ever, be exceeded though the dose may be repeated three or four times a day."



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FERRO-MANGAN-IODO-PEPTONATE DIETERICH.

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GLUE BANDAGES with: Boric Acid, 3 per cent.; Ichthyol, 5 per cent.; Iodide of Potash, 2 per cent.; Iodoform, 5 per cent; Sublimate, 0·1 per cent.; Mercury, 20 per cent.; Zinc., 25 per cent., &c.

SOAP-GLUE BANDAGES (Patented) with: Carbolic Acid, 5 per cent.; Ichthyol, 5 per cent.; Iodide of Potash, 2 per cent.; Sulphur, 10 per cent.; Tar and Sulphur, 5 per cent. of each, &c.

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A perfect Intestinal Astringent which is non-soluble in the gastric juice and therefore passes unchanged, and without causing any gastric disturbance, into the intestines, where it undergoes gradual decomposition, setting free its tannin constituents on the way. It is a dark-brownish powder, tasteless and odourless, readily taken by patients. It is indicated in chronic intestinal affections such as Chronic Catarrh, Tuberculous and Nephritic Diarrhœas, Congestive Catarrh, &c. The excellent results obtained in Children deserve special attention. Dr. von ENGEL, Bruenn (*Deutsche Medicin. Wochenschrift*, No. 11, 1896), says:—"Tannalbin is an intestinal astringent possessing all the properties of tannin but free from any detrimental effect on the gastric-secreting apparatus. It is a perfectly safe remedy, with the advantage of being quite tasteless. Prof. Dr. O. VIERORDT, of the University Policlinique, Heidelberg (*Deutsche Med. Wochenschrift*, 1896, No. 25) places Tannalbin at the head of all the tannic acid preparations yet introduced. He describes it as a perfectly safe remedy which exerts its effects on the intestinal canal with the greatest certainty and energy.

DOSE.—Fifteen grains three times a day for Adults; eight grains three times a day for Children.

PAPAÏN-FINKLER.

The ideal purely vegetable digestive ferment is largely used in the curative treatment of Gastric Ulcer (THE LANCET, Feb. 9th, 1895, p. 333), and as an aid to the nutrition of patients suffering from Phthisis, its value cannot be overrated (see THE LANCET, April 27th, 1895, page 1050). The solvent action of Papaïn on albuminous bodies is also turned to account in Diphtheria. Under the application of a 5 per cent. aqueous mixture the false membranes promptly disappear, leaving the mucous membrane accessible to the action of suitable antiseptics. The importance of this effectual local treatment is in no wise diminished by the constitutional effects of the Antitoxin treatment. Papaïn is further indicated in all forms of dyspepsia, its action being fully maintained in acid, alkaline, and neutral medium, exhibiting at the same time a tonic and antiseptic effect.

Sold by all Wholesale and Retail Chemists, or where not obtainable apply direct to

B. KÜHN, 36, St. Mary-at-Hill, LONDON.

SAMPLES AND LITERATURE FREE TO THE MEDICAL PROFESSION ON APPLICATION.

16

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Lactopeptine

In Powder and in Tablets.

The most approved remedy in Dyspepsia, Anæmia, Intestinal and Wasting Diseases, Cholera Infantum, Vomiting in Pregnancy.

Press Opinions.

"We have proved its digestive powers."—THE LANCET.

"Fully up to date."—BRITISH MEDICAL JOURNAL.

"We can highly recommend this new form."—MEDICAL PRESS AND CIRCULAR.

"Everything that the science of pharmacy can do for the improvement of the manufacture of pepsin, pancreatine, and diastase has been quietly applied to these ferments as compounded in Lactopeptine." — MEDICAL TIMES & HOSPITAL GAZETTE.

"The most convenient form for administering this most valuable medicine."—EDINBURGH MEDICAL JOURNAL.

"Lactopeptine Tablets, a convenient form of this undoubtedly valuable preparation."—BIRMINGHAM MEDICAL REVIEW.

LACTOPEPTINE

is the most active combination of Digestive Ferments ever brought before the Medical Profession. It is an entire digestive, capable of digesting all human aliment.

No pepsin or "peptic compound" in the market has anything like the evidence of established professional confidence and acceptance (extending over more than 20 years) which LACTOPEPTINE possesses.

The testimony of the Medical Profession, confirmed by the unanimous opinions of the Medical Journals of the whole world, prove LACTOPEPTINE superior to all other digestive remedies whatever.



Prices of Lactopeptine, whether in Powder or Tablets, to the Medical Profession: 1-oz. bottles (retailed at 4/6), 45/- per dozen; 1-oz. bottles (unstamped), for Dispensing, 39/- per dozen; postage on a single ounce (extra), 3d; 4-oz. bottles (unstamped), for Dispensing, 10/6 each, carriage paid, 10/9; 8-oz. bottles (unstamped), for Dispensing, 20/6 each, carriage paid, 20/11. JOHN MORGAN RICHARDS, 46, Holborn Viaduct, London, E.C. Telegrams: "ADRIATIC, London."

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Milkmaid



BRAND

Milk

Largest Sale in the World.

See that the MILKMAID Trade Mark is on every Tin.

The Anglo-Swiss Condensed Milk Co. are the **largest manufacturers** of Condensed Milk in the world, having **ten Factories** and condensing **daily** the milk of **40,000 Cows.** Their **"Milkmaid" Brand is the original** Condensed Milk introduced into England thirty years ago.

The **English "Milkmaid" Brand** of Condensed Milk was selected by Dr. NANSEN for the use of himself and his companions on their famous expedition, and **more than two and a half tons** of the milk were included in the stores of the "Fram."

When recommending Condensed Milk to your patients, always be careful to specify the **"Milkmaid" Brand,** which is guaranteed to contain all the cream of the original milk.

SAMPLES FREE TO THE PROFESSION.

ANGLO-SWISS CONDENSED MILK CO., 10, MARK LANE, LONDON, E.C.

PALATABLE. NUTRITIOUS. SELF-DIGESTIVE.

Hovis Bread.

Hovis Bread is baked and delivered daily by all leading Bakers, and no difficulty will be experienced in obtaining it. For nutritive properties with which to sustain the mind and body when sorely tried it is unique, as it contains the substance which no liquid can, and for which the stomach craves.

6d. & 1s. Samples of Bread and Biscuits sent on receipt of stamps by

S. FITTON & SON, MILLERS, MACCLESFIELD.

SEE THAT EACH LOAF IS STAMPED "HOVIS."

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Hunyadi János

A VERY INTERESTING and important contribution on Natural Mineral Waters of the purgative saline type was published in the report of a Special Analytical Commission in THE LANCET of December 5th, 1896. This report is made all the more interesting and reliable from the fact that a LANCET Commissioner personally visited the Saxlehner Springs, near Buda Pesth, and obtained samples on the spot, which were subsequently analysed in THE LANCET Laboratory, and the results obtained compared with samples purchased at a number of shops in London. The results showed that **HUNYADI JÁNOS, the Prototype of all Bitter Waters,** was, wherever it might be obtained, a water showing a **perfect uniformity of composition,** and one that could be **relied upon absolutely as at all times being identical** with that drawn from the Spring and fountain head. The numerous analyses in THE LANCET Report give very striking evidence not only of the **honesty of the water,** but bear out also the **remarkable uniformity of composition** that has characterised **HUNYADI JÁNOS** for a **third of a century.** Thus, the results recently obtained in THE LANCET Laboratory accord exactly with those obtained in Liebig's Laboratory over thirty years ago. **Nothing could be more satisfactory than this from the therapeutic point of view. Practitioners can thus depend** upon the water they prescribe, and may be assured that when **HUNYADI JÁNOS** is administered the **medicinal effects will always be the same,** and **with the same good results.** As is pointed out in the Report, an important feature in **HUNYADI JANOS** Water is the constancy of ratio of the active saline constituents to each other. The sodium and magnesium sulphates are together in almost exactly equal proportions, so **that what therapeutic property is lacking in the one is balanced by the other.** Neither the sodium sulphate nor the magnesium salt are in excess of each other. **In this way the purgative effect is not drastic,** but **mildly yet decidedly effective.** Again, besides these chief medicinal salts there are present in important quantity also in **HUNYADI JÁNOS** Water, Sodium Chloride, **Sodium Carbonate,** and **Lithium Chloride.** It cannot be doubted that each of these constituents contributes towards the **favourable action of the water,** which has for so long been a **distinctive and satisfactory feature attending its administration.** Last, but by no means least, the report of THE LANCET Commission shows that **HUNYADI JÁNOS** Water is bottled under **admirable sanitary precautions.** In the details of the analyses given there was not the slightest indication that **HUNYADI JÁNOS** Water contained any objectionable organic matter from whatever source. While therefore the medicinal properties of **HUNYADI JÁNOS** as a natural aperient are **sure and reliable,** it is **safe** also from the very important fact of its **extreme organic purity.**

Hunyadi János

PROPRIETOR

ANDREAS SAXLEHNER, BUDAPEST.

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Duotal (Guaiacol Carbonate)
Creosotal (Creosote Carbonate)

Dr. DUJARDIN-BEAUMETZ, Member of the Academy of Medicine and of the Hygienic Council, Hospital Physician, &c., in his "SUPPLEMENT TO THE DICTIONARY OF THERAPEUTICS," the latest work of this eminent author, says:—

"'Creosotal' is decomposed in the system, and the creosote absorbed is eliminated, partly in the urine, and partly by the lungs. The breath often assumes a slight aromatic odour of creosote, and after very strong doses the urine generally becomes dark in colour. This medicament produces neither nausea nor irritation in the stomach or intestines nor does it occasion sickness or diarrhœa.

"Its first effects are to stimulate the appetite and invigorate the system. The cough diminishes, and the purulent bronchial secretion gradually ceases. At the same time the physical symptoms, which are characteristic of pulmonary affections, will gradually diminish and disappear. In the early stages of tuberculosis, cicatrisation may ensue. Simultaneously with the increase of appetite and the disappearance of symptoms of pulmonary disease, there is a perceptible increase in weight."

For patients who on taking creosote under ordinary conditions are subject to sickness, the dose is five drops Creosotal from two to four times daily, emulsified with the yolk of an egg, or milk, or cod liver oil; the dose being increased up to fifty drops daily. For less sensitive patients, begin with one-half to one teaspoonful Creosotal daily.

Owing to the greater facilities in the manufacture of the above preparation we beg to draw attention to the following considerably reduced prices:—

DUOTAL (Guaiacol Carbonate)		CREOSOTAL (Creosote Carbonate)	
3s. 9d. oz.	58s. lb.	1s. 6d. oz.	18s. 6d. lb.

FREE SAMPLES and LITERATURE will be sent on application to

Sole Agents in England—**BURGOYNE, BURBIDGES & CO.**, 12 & 16, Coleman Street, London, E.C.

EVERY PHYSICIAN

Has a certain class of patients who worry him a good deal, for while not being exactly ill or confined to their beds, they are always complaining of a feeling of depression, loss of energy, restlessness, insomnia and a general feeling of "Je ne sais quoi;" and while these symptoms may indicate a certain form of neurosis or nervous debility, he is at a loss as to what to prescribe, for while there are numerous remedies for nervous diseases, he is often puzzled as to which to use. It is in this class of cases that CELERINA, a combination of Celery, Coca, Kola and Viburnum, is indicated, for while not acting as an unnatural stimulus, it soon restores the tired and jaded nervous system to its normal condition, and brings about a feeling of buoyancy and energy that will be pleasing and surprising to both physician and patient, and will induce him to confirm the verdict of his brethren all over the world as to the virtues of this preparation. It is put up in elegant and palatable form, and being made of the best material in large quantities, it is always uniform and certain in its results.

RIO CHEMICAL CO., St. Louis, Mo., U.S.A.

The above Preparation is prepared exclusively for the prescriptions of Medical Men. A Sample will be sent free to any Medical Man who desires to test it on application to

RIO CHEMICAL CO., 36, Basinghall St., E.C.

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Eminent Medical Men,

Officers of Health, and Trained Nurses, recommend Lifebuoy Soap for use during Epidemics. Read what Dr. Karl Enoch, Chemisch Hygienisches Institut, Hamburg, says in his report of Experiments made with Lifebuoy Soap:—

"The examination of the sample of LIFEBUOY ROYAL DISINFECTANT "SOAP furnished to me by the Hamburg Agents of Messrs. Lever Brothers, "Limited, of Port Sunlight, England, gives the following results as to its "action as a disinfectant.

"Solutions of one, two, and five per cent. of LIFEBUOY ROYAL DISIN- "FECTANT SOAP in water were made. These solutions were brought to bear "on a variety of clean cultivated germs or microbes (*Bacillus*), in each case a "certain exact time being allowed for the operation; and thus the capacity of "this soap for destroying the various live and growing germs was proved. To "carry out this the following species of germs or microbes, amongst others, "were used:—

"1. Typhoid Microbe. 2. Cholera Microbe, taken from Hamburg water. "3. Diphtheria Microbe. 4. Carbuncle or Boil Microbe.

The results were as follows:—

"1. The obstinate Typhoid Microbes, with the five per cent. solution, were dead "within two hours.

"The operation of this soap on the Cholera Microbes was very remarkable, and "showed this soap to be in the highest degree a disinfectant. These were taken "from Hamburg water, and showed a result as follows:—

"With the two per cent. mixture, Cholera Microbes were dead within fifteen "minutes.

"With the five per cent. same were dead within five minutes.

"3. The Diphtheria Microbes were killed after two hours, with the five per "cent. solution.

"4. The five per cent. solution was tried on fresh Carbuncle germs, and the "result showed that the Microbe life was entirely extinct after four hours."

GUARANTEED PERFECTLY PURE, and FREE FROM ANY INJURIOUS CHEMICALS.

LIFEBUOY ROYAL DISINFECTANT SOAP.

Manufactured by LEVER BROTHERS, LIMITED, PORT SUNLIGHT, NEAR BIRKENHEAD.

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DIGESTIVE DERANGEMENTS.

By JOSEPH F. EDWARDS, A.M., M.D.

EVERY thoughtful, intelligent, observant physician must necessarily be constantly impressed with the almost universal existence of digestive derangements amongst those who seek his advice, yet there are but few who fully and correctly appreciate their significance. When the great Abernethy told his gouty and lithæmic client to live on a shilling a day and *earn* it, it is clearly evident that he had in mind the correction of the digestive derangement which he recognised as the first cause of the systemic trouble.

When we reflect upon the fact, we realise that the digestion is the first, most important, and absolutely essential physiological condition for the perpetuation of animal life, which will be influenced by the measure of fidelity with which the digestive organs are capable of doing their duty.

It may be said with confidence that *perfect* digestion means *perfect* health and that just in proportion as the digestive function departs from the standard of perfection, so will the standard of general health depart from that of perfection. Unquestionably, long continued "Indigestion" is the starting point of many chronic, organic diseases, while conversely the acute diseases do undoubtedly exert at least a temporarily deleterious effect upon the function of digestion. In long continued acute diseases, such as Typhoid Fever, &c., the powers of digestion are weakened; this fact is recognised and met by the exhibition of easily digestible nourishment in limited amount, which, however, has the undesirable result of still further adding to the weakness that is caused by the disease itself. It seems to me but rational to contend that in all acute diseases, it is good policy to recognise the lessened digestive power, and endeavour to assist and strengthen it.

There seems little room to doubt that chronic indigestion is a most prolific cause of pulmonary tuberculosis in those predisposed thereto, and that in all such cases it is of the utmost importance to correct any digestive disturbances that may exist.

As confirmatory of the assertion in reference to the great prevalence of digestive disturbances, I note that in the course of an article in the BOSTON MEDICAL AND SURGICAL JOURNAL for April 23rd, 1896, Dr. R. W. Greenleaf states that of the total number of patients treated at the Boston City Dispensary, fully 60 per cent. of the entire number complained of defective digestion, while 26 per cent. of all who applied for treatment were suffering from this disorder alone. The point that I wish to bring out and emphasise, is that, if inquired into, digestive derangement will be found to be a factor, or a concomitant, in the condition presented by a large number of our patients, and that even when it is not found, or when it is not marked, *treatment looking towards an improvement or a strengthening of the digestive function, will prove a valuable adjunct to any special treatment for any special condition that may exist;* in other words, no matter what may be the disorder calling for remedy, we will have better results if we help the function of digestion, whether the disease in question be chronic or acute. Can we do this in all cases? Yes; by the use of a remedy that I feel justified in speaking of as "Classical."

In 1879, now eighteen years ago, Professor Roberts Bartholow, in his famous work on "Materia Medica and Therapeutics," thus wrote: "Ingluvin has the remarkable property of arresting certain kinds of vomiting—notably, the *vomiting of pregnancy*. It is a stomachic tonic, and relieves *indigestion, flatulence*, and dyspepsia." Ten years later, in the 1889 edition of his book, after repeating these same words, Professor Bartholow adds: "The successful use of this agent and the apparent sincerity of the composition as given to the public would seem to justify its mention here." Professor Bartholow's work is "*classical*" and the fact that Ingluvin finds favourable mention there in two editions, at intervals of ten years, justifies, I think, the claim that Ingluvin is a "classical" remedy for indigestion and the vomiting of pregnancy. In these days of infinite therapeutic suggestions, when the remedy of to-day is forgotten to-morrow, it is refreshing and consoling to be able to lean upon a remedy that has stood the test of years of clinical experience and that stands prominently out from the great mass of therapeutic wreckage. Such a remedy is Ingluvin, which, while extensively prescribed, is not yet in such universal use as its indisputable merits warrant.

We all know how unsatisfactory pepsin is; sometimes it works; and more frequently it does not. From all over the world comes testimony favourable to Ingluvin, while I have yet to see the first adverse report. Ingluvin is new in its present shape. It is made from the gizzard of the chicken; and from time immemorial Chinese writers have recommended the gizzards of chickens and ducks as a sovereign treatment or dyspepsia, weak stomach and vomiting. It would seem as if Ingluvin played a double part, exercising the functions of the pytalin of the saliva, as well as the pepsin of the stomach, while, unlike pepsin, it is not incompatible with alkalies.

Ingluvin is a powder of a yellowish-grey colour, and the dose is from five to twenty grains. It can be administered in a tablespoonful of water, wine, milk, or tea.

Dr. Geo. F. Meeser of Philadelphia reports a case of "vomiting in pregnancy" that had resisted everything. He finally gave: ℞ Ingluvin, 1 dr.;
Bismuth Subnit., ½ dr.
M. Div. in Chart. No. XII. S. one every three hours.
After the fifth powder the vomiting was under complete control.

Very many similar reports lead me to believe that in Ingluvin we have what might be called a specific for this obstinate and distressing condition. So also has it been highly recommended in Sea-sickness. In Reflex Vomiting due to Uterine Disease, in Tabeo-mesenteric Disease, in Cholera Infantum and Diarrhœa it produces the most satisfactory results. Dr. Shelly reports a case of Marasmus successfully treated with Ingluvin.

The evidence in favour of this article in all cases of gastric disturbance is overwhelmingly convincing as to its superior efficacy over pepsin, and its use should never be neglected in any case of gastric irritability, no matter what may be the cause.

To epitomise the thought that suggested this article, it would seem that if we would add to our other treatment some remedy calculated to improve the digestive function, the results derived would be more satisfactory in all cases, and the accumulated experience of many observers in all parts of the world bears abundant testimony to the fact that we have no more effective remedy than Ingluvin for the accomplishment of this purpose.

INGLUVIN is prepared by WM. R. WARNER & CO., Pharmaceutical Chemists. It is made from selected gizzards, and is free from all foreign organic bodies.

This Preparation is not more expensive than high test pepsin. Per oz., 4/-.

Samples for Trial free on request to any member of the Medical Profession.

A SPECIFIC FOR SICKNESS IN GESTATION.

It is regularly dispensed by leading Pharmacists in the United Kingdom and chief Continental cities.

F. NEWBERY & SONS, Agents,
1 & 3, KING EDWARD STREET, LONDON, E.C.
Established 150 Years.

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THE NEW INVALID FOOD.

A new peptonised food has recently been introduced into this country by Liebig's Extract of Meat Company, Limited, which satisfactorily combines all the essential qualities of Invalid Diet—it is highly nourishing, easy of digestion, and palatable. Of

PEPTARNIS

THE LANCET of 11th October, 1895, says: "If reference be made to the analysis it will be seen what a *powerful food* this Liebig's new beef peptone is. Quite one-half of the extract, in fact, consists of the products of peptonic digestion, while albumen, coagulable on boiling, which, together with water and salts, is able alone to support the vital processes, occurs in important quantity. The presence of a notable proportion of soluble phosphatic constituents is calculated to further add to the beneficial influence of this preparation upon nutrition."

INVALUABLE FOR

INVALIDS AND CONVALESCENTS AND FOR CASES OF DYSPEPSIA OR WEAK DIGESTION.

SAMPLES FOR TESTING FREE

TO MEDICAL MEN AND HOSPITALS,

on application to LIEBIG'S EXTRACT OF MEAT COMPANY, Limited, 9, Fenchurch Avenue, London, E.C.

SCIENTIFIC BOARD—

SIR HENRY E. ROSCOE, F.R.S., D.C.L.,

DR. MAX VON PETTENKOFER. DR. CARL VON VOIT.

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A PERFECT MALT EXTRACT.

"D.C.L." MALT EXTRACT

THE DISTILLERS COMPANY, LIMITED, having exceptional experience of malting, and commanding the services of highly-trained Analytical Chemists, together with the choice of the finest grain procurable, consider that they occupy an unusually favourable position for the manufacture of a PERFECT MALT EXTRACT, which they claim "**D. C. L.**" to be. It is, of course, concentrated *in vacuo*, and the temperatures at which the malted barley grist is mashed and the wort subsequently concentrated are carefully regulated, so as to ensure the production of a Pure Extract of Malted Barley of unusually high Diastasic strength and nutritive value.

"D.C.L." MALT EXTRACT has been submitted for analysis to a high scientific authority, who reports as follows:—

"REPORT ON THE 'D.C.L.' MALT EXTRACT.

"Composition in 100 parts:—

"Maltose	56·50
Dextrin	12·18
Albuminoid Matter	7·71
Ash (chiefly Phosphates)	1·92
Moisture, &c. (including Diastase)	21·69

"RELATIVE STARCH-CONVERTING POWER.—The diastasic or starch-converting power gives Malt Extract its chief value as an adjunct of food. A smaller quantity of this brand is required for such a purpose than of any brand known to me. Hitherto the four best brands in the market are required in the following proportions for the purpose just mentioned: Brand A, 100 parts; B, 95½; C, 91¼; D, 56½. I find that only 54 parts of THE DISTILLERS CO.'S Brand are required to do the same starch-converting work. The samples of three different batches I have examined varied very slightly from this average of 54, the exact figures being 52, 54½, 55½. Each was of good flavour and was well prepared."

SAMPLES SENT FREE TO MEDICAL MEN ON APPLICATION.

"D.C.L." MALT EXTRACT is put up in Bottles and specially prepared lever lid Tins.

Sole Manufacturers: **THE DISTILLERS COMPANY, LTD., EDINBURGH.**

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CAFÉ ZYLAK

PEPTONIZED MILK AND COFFEE

(Concentrated).

Messrs. SAVORY & MOORE have pleasure in calling attention to their **NEW PREPARATION OF COFFEE WITH PEPTONIZED MILK.**

It has been frequently suggested to them that a preparation of the kind would meet a largely-felt want in the case of invalids and delicate people, and the matter has engaged their attention for some considerable time. There were many practical difficulties in the way of obtaining a preparation which sufficiently conserved the aroma of coffee, but after continued experiment and the use of specially devised machinery, these have been successfully overcome.

The resulting preparation will be found a most valuable addition to the Condensed Peptonized Milk Foods which have met with such complete approval from the Medical Profession, and which, recent improvements in their manufacture have made, more than ever, available in the dietary of the invalid and convalescent, and of delicate people.

PEPTONIZED MILK (Concentrated).

PEPTONIZED COCOA & MILK (Concentrated).

All the above preparations are sold in tins at **1s. 6d.** and **2s. 6d.**, and are obtainable everywhere.

SAVORY & MOORE,

Chemists to the Queen, H.R.H. the Prince of Wales, H.H. the Khedive of Egypt, &c.,

143, NEW BOND STREET, LONDON.

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THE

Aylesbury Dairy Company's

Life Belt Brand,

PREPARATIONS OF MILK

FOR

INFANTS and INVALIDS.

SEVEN SILVER MEDALS AND OTHER HIGHEST AWARDS.

HUMANIZED MILK.

PEPTONIZED MILK.

WHEY.



STERILIZED MILK.

STERILIZED CREAM.

&c., &c., &c.

Beware of Spurious Imitations.

HUMANIZED MILK,

The only Genuine is supplied in glass bottles only, bearing the Aylesbury Dairy Company's Registered Trade Mark of a LIFE BELT and also the words

Life Belt Brand,

Can only be obtained at the Company's

Chief Office: 31, ST. PETERSBURGH PLACE, BAYSWATER, LONDON, W.

AND BRANCHES.

N.B.—The Company have no Agents, and the Public are cautioned against Imitations.

SAMPLE CASES SENT FREE OF CHARGE TO MEMBERS OF THE MEDICAL PROFESSION ONLY.

Telegraphic Address, "AYLESBURY COMPANY, LONDON."

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AWARDS.

GOLD MEDAL, International Health Exhibition, London, 1884.
FIRST ORDER OF MERIT AND MEDAL (Highest Award), Adelaide, 1887.
HIGHEST AWARD, Medical and Sanitary Exhibition, London, 1882.
FIRST ORDER OF MERIT AND MEDAL, Melbourne, 1888.

THE FOLLOWING LETTER IS PUBLISHED BY SPECIAL PERMISSION OF THE RUSSIAN COURT:—

"BALMORAL CASTLE,
"SCOTLAND, 25th Sept., 1896.

"SIRS,—

"Please forward to Balmoral Castle one dozen 2/6 Tins of BENGER'S FOOD, for H.I.M. the EMPRESS of RUSSIA, addressed to Miss Coster. We have received the box ordered from Peterhoff.

"Yours truly,

"F. COSTER.

"To Messrs. F. B. BENGER & CO., Ltd."

The Lancet describes it as "Mr. Benger's admirable preparation."

The London Medical Record says:—"It is retained when all other foods are rejected. It is invaluable."

The British Medical Journal says:—"Benger's Food has by its excellence established a reputation of its own."

The Illustrated Medical News says:—"Infants do remarkably well on it. There is certainly a great future before it."

A Government Medical Officer writes:—"I began using your Food when my son was only a fortnight old, and now (five months) he is as fine a boy as you could wish to see."

From an Eminent Surgeon:—"After a lengthened experience of Foods, both at home and in India, I consider Benger's Food incomparably superior to any I have ever prescribed."

A Lady writes:—"Really I consider that, humanly speaking, Benger's Food entirely saved baby's life. I had tried four other well-known Foods, but he could digest nothing until we began the 'Benger.' He is now rosy and fattening rapidly."

BENGER'S FOOD may be obtained in Tins, at 1/6, 2/6, & 5/-, of leading Chemists, &c., everywhere; wholesale of all wholesale houses, or of

F. B. BENGER & CO., Limited, OTTER WORKS, MANCHESTER.

Telegraphic Address: "*BENGER'S, MANCHESTER.*"

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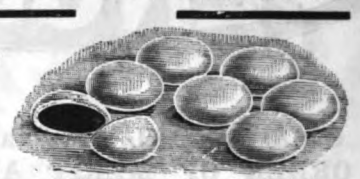
☛ *Physicians Prescribing*

The "Allenburys" Tablets or Tabellæ





WILL FIND THEM



CASCARA TABELLÆ (SUGAR COATED).

Accurate in Dose.

Perfect in Finish.

Unique in Rapidity of Disintegration and consequent absorption where a sparingly soluble drug is used.

Beautifully Sugar-coated where the drug is bitter and intended to be swallowed.

Conveniently put up in superior metal-capped bottles for the pocket, at the uniform retail prices of 1/-, 2/6, and 4/6 each; or 8/-, 21/-, and 40/- per doz. to the Profession.

Supplied in bulk, where so desired, in over 200 varieties, of which a *detailed list can be had on application.*

Easily Designated, as the initials "A. & H." are registered as a Trade Mark, thus:

℞. Tab. cascara sagrada A & H.

☛ *Physicians Using*

The "Allenburys" Hypoderms



WILL FIND THEM

Accurate in Dose.

So Readily Soluble that they can be dissolved in the barrel of the "Allenburys" Hypodermic Syringe.

Hermetically Sealed in small amber tubes, in which they will keep good for an indefinite period.

Supplied in Single Tubes, or put up in either an Aluminium or Leather "Allenburys" Hypodermic Case.

☛ *A Sample of any Tablet or Hypoderm sent free on application to*

Allen & Hanburys Ltd., London.

Offices, Laboratories, and Warehouse: BETHNAL GREEN, E.
City House: PLOUGH COURT, LOMBARD STREET, E.C. *West End House:* VERE ST., W.
Infants' Food Manufactory: WARE MILLS, HERTFORDSHIRE.
Cod-liver Oil Factories: LOFODEN, LONGVA, and KJERSTAD, NORWAY.
Depôt for Australia: 484, COLLINS STREET, MELBOURNE.

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DIGESTIVE. TONIC. NUTRITIVE.

Byno-Hypophosphites.

"One of the most popular tonics of the day."

—*British Medical Journal.*

ADVANTAGES:

The inert sugar of the ordinary syrupy preparations is in BYNO-HYPOPHOSPHITES replaced by the active Malt Extract BYNIN. Hence BYNO-HYPOPHOSPHITES is DIGESTIVE and NUTRITIOUS, containing as it does the diastasic ferment of Carbo-hydrates and also the soluble Phosphates and Albumenoids of the finest malted barley.



BYNO-HYPOPHOSPHITES is a Tonic not only to the nervous system but also to the heart muscle and digestive apparatus.

With **BYNIN** (a very active and by far the most palatable Malt Extract on the market) as a vehicle, it contains the Hypophosphites of Iron, Manganese, Calcium, and Potassium, together with the Alkaloids of Cinchona and Nux Vomica in combination with their natural acids, in which form they are more readily assimilated. The quantity of Alkaloid is carefully standardised, there being the equivalent of 1-40th grain of Strychnine in each ounce.

☛ *The presence especially of Iron and Manganese in this preparation indicates its value as a direct hæmopoietic agent.*

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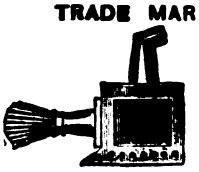
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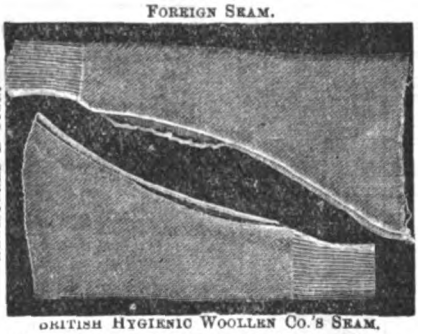
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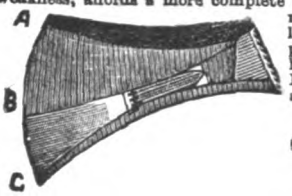


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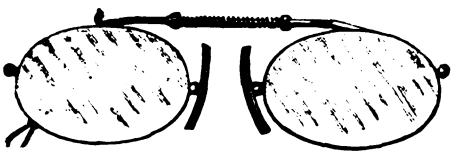
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